



Site Investigation Report

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Union Pacific Railroad

PCB Areawide – N. Bradford Street Right-of-Way, Portland, Oregon

March 2023





Site Investigation Report

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Photograph

- 1 Extensive Ponding adjacent to the Site and along the Railroad ROW.....Error! Bookmark not defined.

Acronyms and Abbreviations

bgs	below ground surface
DU	decision unit
EPA	U.S. Environmental Protection Agency
ISM	incremental sampling methodology
mg/kg	milligram(s) per kilogram
mm	millimeter(s)
ODEQ	Oregon Department of Environmental Quality
PCB	polychlorinated biphenyl
PIW	Peninsula Iron Works, Inc.
QA/QC	quality assurance/quality control
ROW	right-of-way
RPD	relative percent difference
UPRR	Union Pacific Railroad
VCP	Voluntary Cleanup Program

1. Introduction

On behalf of Union Pacific Railroad (UPRR), Jacobs has prepared this Site Investigation Report (report) to document the activities and results associated with a 2022 site investigation conducted at the N. Bradford Street right-of-way (ROW) in Portland, Oregon (site) (Figure 1-1). UPRR operates within a narrow limited right-of-use within the site (Section 1.2). The purpose of the investigation was to evaluate the current concentrations of polychlorinated biphenyls (PCBs) in surface and shallow subsurface soil. Site investigation activities were conducted in accordance with the Revised Investigation Work Plan (JSI 2022a) and Response to Comments on the Revised Investigation Work Plan (JSI 2022b). The Oregon Department of Environmental Quality (ODEQ) approved the Revised Investigation Work Plan on June 17, 2022 (ODEQ 2022a).

1.1 Site Location

The sit (that is, the investigation area) is the N. Bradford Street ROW in north Portland, Oregon approximately 500 feet from the east bank of the Willamette River. It is bounded to the north by N. Baltimore Avenue and to the south by N. Pittsburg Avenue. The site, including active railroad tracks, is approximately 65 feet wide and located along N. Bradford Street ROW, which separates Peninsula Iron Works, Inc. (PIW) to the east from Cathedral Park to the west (Figure 1-2). The investigation area is referred to as the site in this report for ease of reference. The extent of PCBs in this area has not been fully characterized. PIW has operated as a foundry and machining shop at this location for more than 100 years (City of Portland 2011).

1.2 Site Background

The City of Portland (City) owns the portion of the N. Bradford Street ROW that falls within the site and allows UPRR to operate along the railroad tracks under a limited right-of-use within the wider public ROW pursuant to a Memorandum of Agreement dated June 1901 (County of Multnomah 1901). The agreement providing the limited right-of-use to UPRR, which was transferred to the City when it became the owner of the public ROW, is a limited and defined grant that only allows UPRR to perpetually “construct and maintain the main line of its proposed branch” (County of Multnomah 1901) along the centerline of N. Bradford Street. Under this agreement, UPRR maintains the responsibility for maintenance only of the railroad area “between the tracks, between the rails, and for a distance of one foot outside of the outer rail” (County of Multnomah 1901). Other than the constructed railroad transportation line, there have been no known additional railroad activities conducted within the site.

The City investigated PCB contamination at the site in 2011 as part of its source tracing activities for Outfall Basin 52 design and construction. During the 2011 investigation, composite and discrete surface soil samples were collected along N. Bradford Street and areas within Cathedral Park. Subsurface soil samples were collected from soil borings under pavement in a City-owned parking lot directly southeast of PIW, adjacent to the site (Figure 1-2). Total PCB aroclor concentrations in surface soil ranged from 0.147 milligram per kilogram (mg/kg) to 21.7 mg/kg, and concentrations in soil borings ranged from nondetect to 1.05 mg/kg. PCBs were also detected in catch basin, manhole, and inline solids at concentrations ranging from 0.011 to 8.16 mg/kg. Accumulated solids were subsequently removed from stormwater conveyance lines along N. Bradford Street between N. Baltimore Avenue and N. Alta Avenue.

On October 11, 2021, ODEQ issued a letter to UPRR outlining options related to PCB contamination in soil along N. Bradford Street and identified UPRR as a potential responsible party for historical and/or ongoing releases of hazardous substances at the site (ODEQ 2011). Options included (1) to conduct a site investigation and remedial action under the ODEQ Voluntary Cleanup Program (VCP), or (2) wait for ODEQ to place UPRR under an enforcement order. In the letter, ODEQ assigned the site as high priority for further investigation and remedial action. As a proactive and cooperative step, UPRR entered into the VCP (ECSI No. 6480) on January 18, 2022 (ODEQ 2022b) and performed sampling in October and November 2022.

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On January 13 and 31, 2023, two unrelated petroleum releases occurred from a railroad locomotive along the railroad tracks within and extending from the site. The releases resulted in stained surface material immediately adjacent to the railroad tracks. These incidents, which occurred after the 2022 site investigation, are being evaluated as separate, unrelated spill cases in accordance with the ODEQ emergency response program.

2. Field Investigation Activities

This section presents the site investigation activities conducted in October and November 2022. Work was performed in general accordance with the Revised Investigation Work Plan as approved by ODEQ (JSI 2022a) including sampling procedures, sample handling, and subsequent analysis, except as noted in Section 2.6. Appendix A includes site photographs of sampling locations.

2.1 Scope of Work

The scope of work included the following:

- Soil borings at 16 locations to 3 feet below ground surface (bgs) for soil sampling at 0-, 1-, and 2.5-foot bgs depth intervals (Figure 2-1). There are a total of 48 discrete sample locations. All samples were obtained with the public ROW.
- Incremental sampling methodology (ISM) conducted adjacent to the UPRR tracks within the N. Bradford Street ROW from N. Baltimore Avenue to N. Pittsburg Avenue (Figure 2-2). Fifty incremental soil subsamples were collected from within each of the eight decision units (DUs) and composited to create one sample representative of each respective DU. A total of eight composite ISM samples were obtained.

2.2 Preparation Activities

The following activities were completed before fieldwork began:

- Updated the site-specific health and safety plan to identify the chemical and physical hazards associated with the field activities and present methods for maintaining worker safety
- Contacted Oregon Utility Notification Center for utility clearance ticket (Ticket No. 22287737)
- Contacted the UPRR fiber-optic hotline to complete UPRR fiber-optic notifications (Ticket No. 20220928070)
- Conducted a subsurface utility survey to identify and mark underground utilities near the proposed locations
- Coordinated with Pace Analytical Services, LLC, for laboratory analysis and sample bottles

Field team members were appropriately chartered before mobilization to ensure their readiness and understanding of the scope and objectives.

2.3 Soil Boring Sampling

Soil sampling was conducted as follows:

- Samples were collected using a hand-auger at 16 soil sampling locations generally spaced at 60-foot intervals along 2 parallel transects along the eastern and western sides of the UPRR tracks (Figure 2-1). Nine samples were located along the eastern transect and seven samples were located along the western transect.
- Samples were collected from soil boring locations adjacent to the tracks from N. Baltimore Avenue at the north end and to N. Pittsburgh Avenue at the southern extent. Samples were located 10 to 15 feet away from the centerline of the UPRR tracks and within the N. Bradford Street ROW.
- At each boring location, grab soil samples were collected from specific depth intervals (0.0 to 0.5 foot bgs, 1 to 1.5 feet bgs, and 2.5 to 3 feet bgs). Grab sample locations were designated SB1-XX (XX = depth interval) through SB-16-XX.

- If gravel was present, it was first scraped aside and the augur was advanced to depth. Target material was collected while taking care to avoid larger pebbles and rocks (that is, material consisting primarily of fine-grained particles and 2 millimeters [mm] or less in diameter).
- Following sampling activities, the soil borings were backfilled with the removed material.

2.4 Incremental Sampling Methodology Sampling

The ISM method is a composite sampling technique that addresses heterogeneous soil contamination, increases sample representativeness, and reduces data variability (EPA 2019). A well-homogenized composite sample obtained from each DU provides a reasonably unbiased estimate of mean contaminant concentrations representative of a volume of soil targeted for sampling. Figure 2-2 shows the DUs evaluated in this investigation. Each DU was approximately 100 feet long and 20 feet wide. Eight DUs were investigated and the composited ISM samples from each DU were designated as ISM-01 through ISM-08.

2.4.1 Sampling Procedures

Sampling procedures were carried out as follows:

1. A systematic evenly spaced sampling grid (10 feet by 4 feet) was established within each DU to identify 50 subsampling (increment) locations. The DUs were 100 feet long by 20 feet wide.
2. The placement of the initial increment in the first grid was a random location. That same location within the grid was used within all subsequent grids to collect subsamples. Approximate 30-gram increment samples were collected from 0 to 2 inches bgs using a hand trowel and placed in new double-zip type bags. A scale was used to measure the initial increment sample to estimate the final mass of the total number of increments needed to achieve 1 kilogram (as close to 1 kilogram as possible based on site conditions).
3. Duplicate and triplicate quality assurance/quality control (QA/QC) samples were collected from one of the eight DUs. Increment locations were identified within each grid, ensuring that they were located no closer than 3 feet from the original increment locations. The systematic random collection approach was maintained over the collection of the duplicate and triplicate QA/QC samples.

2.4.2 Laboratory Procedures

Laboratory procedures were carried out as follows:

1. The weight of each DU sample was recorded by the laboratory upon sample receipt to confirm at least 1 kg of soil was collected.
2. The contents of each sample bag was emptied onto a drying tray and spread evenly into a "sheet cake" shape for efficient and uniform drying.
3. Once dried, samples were sieved using a No. 10 sieve (less than 2 mm) to create the final sample fraction.
4. The final sample fraction was composed of less than 2 mm soil particles. No grinding or milling was conducted.
5. The final sample fraction was laid out in a cake slab shape on a tray and dried. The tray of soil was divided into 50 equal grids. Fifty sieved increments were collected from the slab cake. The mass of each increment was approximately equal and sized to allow for the final mass needed by the laboratory for the analysis of the PCB method.
6. Samples were analyzed for PCBs in accordance with U.S. Environmental Protection Agency (EPA) Method 8082.

2.5 Laboratory Analysis and Data Validation

Soil samples collected from the 16 soil boring locations and the 8 ISM locations were placed in a cooler with ice and shipped to Pace Analytical Services, LLC, of Mount Juliet, Tennessee, under chain-of-custody documentation. The samples were analyzed for the following:

- PCBs by EPA Method 8082, expressed as concentrations as specific aroclors (1016, 1221, 1232, 1242, 1248, 1254, and 1260) and Total PCBs
- PCB congeners by EPA Method 1668 for six soil borings; two soil boring samples each at the high, medium, and low range of detected total PCBs as determined by EPA Method 8082

Data validation was provided by GHD Services Inc. Appendix B includes data quality assessment and validation memorandums. The following is a summary of the data validation qualifiers:

- Samples were prepared and analyzed within the required holding times.
- All method blank results were nondetect, indicating that laboratory contamination was not a factor for this investigation, with the exception of two analytes present at low concentrations. The associated sample results with concentrations similar to the blanks were qualified as nondetect because of contamination as evidenced by the blanks.
- Surrogate recoveries were assessed against the control limits. All surrogate recoveries met the associated criteria.
- All laboratory control sample and laboratory control sample duplicate recoveries and relative percent differences (RPDs) were within associated control limits, thus demonstrating acceptable analytical accuracy and precision (where applicable).
- All equipment blank results were nondetect for the analytes of interest.
- All duplicate analyses performed were acceptable, demonstrating acceptable analytical precision with two exceptions. The associated sample results and their duplicates were qualified as estimated due to variability.
- The matrix spike/matrix spike duplicate samples were spiked with the analytes of interest. All percent recoveries and RPD values were within the associated control limits, demonstrating acceptable analytical accuracy and precision, with the exception of two high recoveries of PCB 114 (2,3,4,4',5-pentachlorobiphenyl). The associated sample result was qualified as estimated because of the implied high bias.

2.6 Field Variances

Deviations from the approved Revised Investigation Work Plan (JSI 2022a) included the following:

- Soil boring SB08 was moved approximately 5 feet southwest to avoid the asphalt surface.

2.7 Waste Management

Waste generated during this investigation consisted primarily of decontamination water, personal protective equipment, and disposable materials used for sample collection and processing. Soil from boreholes was placed back into the boreholes following approval from ODEQ (Landes, pers. comm. 2022). Containerized liquid waste was placed in a labeled steel 55-gallon drum. Following completion of the investigation, waste containers were placed in the waste staging area of the UPRR Albina railyard. Liquid waste was disposed of at the Hillsboro Landfill as nonhazardous waste. Personal protective equipment and disposable sampling materials were placed into containers and disposed of as municipal waste.

3. Site Investigation Results

Tables 3-1 and 3-2 present the PCB results (aroclor and total) for samples collected from soil boring and ISM locations, respectively. The only aroclor detected was Aroclor-1260. Figures 2-1 and 2-2 present total PCB results for samples collected from soil boring and ISM locations, respectively. In addition, historical site data reported by others from 2008 to 2011 are included for reference.

PCBs were detected in almost all grab samples (more than 95 percent) and all ISM composite samples (100 percent) collected during the investigation. The higher total PCB concentrations are from soil boring samples obtained immediately adjacent to PIW. The highest total PCB concentration (124 mg/kg from 0 to 0.5 foot bgs at SB10) was from a sample collected from the closest non-paved surface adjacent to PIW nearest the solvent tank and machine pit. Total PCB concentrations generally decrease with depth and distance from PIW. One exception is at sample locations SB01 and SB02, where total PCB concentrations from 0 to 0.5 foot bgs were up to 18.9 and 11.5 mg/kg, respectively. These sample locations are adjacent to the former Portland Woolen Mills operation.

Similar to the grab soil sample results, the highest total PCB concentrations from ISM samples are from samples adjacent to PIW with the highest total PCB concentration (12.6 mg/kg) from ISM03. Additionally, total PCB concentrations are more elevated on the northeastern (topographically upgradient) side of the railroad tracks than samples obtained from the south side of the railroad tracks within the N. Bradford Street ROW. Total PCB concentrations from ISM samples decrease with distance from PIW.

Table 3-3 provides a comparison of the total PCB congener and total PCB aroclor results for the six soil boring samples analyzed using both methods. The total PCB congener results in 5 of the 6 samples were lower than the PCB aroclor results (16 to 35 RPD). The sixth sample had a total PCB congener result that was 4 percent higher than the reported value for total PCB aroclors. The PCB congener analyses on the subset of samples were performed at the request of ODEQ. The PCB aroclor data were used to characterize the site (Section 4).

Appendix B includes laboratory reports and data validation reports.

4. Source Evaluation

This section includes a discussion of the potential sources of PCBs detected at and surrounding the site. This evaluation included a review of historical records to identify operations that may have used or lead to releases of PCB-containing materials.

4.1 Railroad Sources

The UPRR review of available historical records for its operations at the site and in the Portland area indicates that there was no known storage or use of PCBs that could have resulted in releases at the site of a magnitude that would result in the widespread PCB contamination observed to date. Dielectric and hydraulic oils containing PCBs have not been used on UPRR locomotives operating on the West Coast. Furthermore, UPRR has not historically operated fueling, locomotive maintenance, or car repair facilities in this area that could lead to high volume, long-term releases. UPRR records also do not indicate that the staging of electric locomotives occurred in this area.

In addition to no PCB sources associated with documented UPRR activities in the area, there are also no records of historical derailments, spills, or leaks of PCBs from UPRR trains. According to UPRR records, no derailments occurred in this area prior to the 2022 sampling activities. In addition, UPRR and ODEQ records do not list any environmental releases from locomotives or rail cars in this area prior to 2023. The PCB concentrations observed in the N. Bradford Street ROW are not common on UPRR properties and rarely observed along railroad tracks. There continues to be no direct or archival records evidence of any potential PCB sources correlated with UPRR operations or activities in the area.

PIW asserted UPRR's use of lube oil on a rail switch near PIW was a source of PCBs in a letter dated November 17, 2021, submitted by its consultant EVREN Northwest, Inc. An email dated January 7, 2022 from UPRR's counsel Tod Gold to Franziska Landes with ODEQ explained that the assertion was unfounded because it was unlikely UPRR used lubricating oils containing PCBs and that historical aerial photos indicate the switch near PIW was removed prior to construction of the St. John's Bridge in the late 1920s, well before PCBs became widely used in commercial products such as lubricating oils.

4.2 Probable Sources

Based on the data collected and surface topography in this area (Figure 4-1), PCB impacts in soil decrease with depth, indicating that sources can be related to surface spills or stormwater transport mechanisms. The following indicate there is one likely primary and potentially one other upland source to the observed PCB contamination:

- The direction of stormwater sheet flow from the east toward N. Bradford Street
- Historical uses of upland properties
- Contaminant concentration patterns observed within the N. Bradford Street ROW.

In 2011, the City concluded that PIW is a likely current and/or historical source of PCBs detected in the Basin 52 conveyance system (City of Portland 2011).

4.2.1 Peninsula Iron Works

The most elevated PCB concentrations are adjacent to PIW, and at a significant margin from a sample collected nearest to the solvent tank and machine pit. PIW has a long history (approximately 100 years) of industrial activities that likely involved the use of PCBs (Table 4-1). Records indicate that operations also extended onto other parcels adjacent to the N. Bradford Street ROW (City of Portland 2011). Potential sources of PCB releases by PIW are as follows:

- **Foundry:** PIW is known to have operated a foundry and machining operations. Foundry operations are well known sources associated with PCBs. The City identified two foundry sites¹ in Portland investigated under the ODEQ Cleanup Program oversight that identified PCBs onsite at concentrations warranting control (City of Portland 2011).
- **Lubrication of machinery:** PIW currently uses four types of petroleum-based oils and coolants in its machining operations: water soluble coolant, machine oil, “way” oil, and hydraulic oil. According to EPA (1995), the process wastewater and solid wastes generated from machining operations likely contained hazardous substances in cutting oils, degreasing and cleaning solvents, waste oils, and heavy metals. PCBs were widely used in industrial and commercial applications within the United States from 1929 until 1979 when their manufacture was banned by EPA. PCBs were often found in items such as lubricants, hydraulic fluids, paint, and electrical equipment such as transformers, capacitors, regulators, and switches. It is likely that historical spills of these materials occurred at PIW. Additionally, equipment or product “washdown can produce metal-bearing wastewaters” including lubricating oil.
- **Cutting and welding:** New equipment or repair work on parts occurred at the facility. Historically, metalworking fluids are used to control the temperature of tools and machinery, aid in lubrication, and inhibit corrosion or surface oxidation. Metal forming and cutting operations are well known to historically use PCB-containing cutting oils to reduce heat and friction during machining processes.

Topography, historical imagery, and site observations indicate significant ponding of stormwater runoff from the PIW since the development of the property in 1911. PIW has disputed that any of their processes could have contained PCBs in the *Letter Response – Summary of Findings, PCB Areawide N Bradford Street ROW, Portland, Oregon* (letter report) (EVREN 2021). However, Jacobs’ review of the claims indicates that several conclusions presented in the letter report are overly broad and under-supported by direct evidence of PCB sources on PIW and within the N. Bradford Street ROW. Thus, many claims are considered unsubstantiated and inconclusive. Furthermore, the letter report does not fully consider other potential sources of PCBs (ODEQ 2003) from the PIW facility or other offsite sources, such as the following:

- Components common in industrial settings such as machinery and electrical systems containing hydraulic fluids
- Machinery gear oils
- Cutting oils
- Gaskets
- Casting waxes
- Insulation
- Ballasts
- Capacitors
- Switch gears
- Caulking (up to 40 percent PCBs by weight).

In addition, pole-mounted transformers are located in the immediate area of the PIW site.

The elevated PCB levels found adjacent to PIW facilities by ODEQ and UPRR clearly suggest that either PIW facilities substantially contributed to PCB loads in the Outfall Basin 52 area in general and within the N. Bradford Street ROW.

4.2.2 Former Portland Woolen Mills

North of PIW, near sample locations SB01 and SB02, elevated PCBs were observed adjacent to the location where the former Portland Woolen Mills operated from 1905 through approximately 1960 (Figure 1-2). A large fire in 1916 damaged much of the mill, but it was rebuilt soon after. The mill operation included the following processes:

- Sorting and mixing

¹ PECO, Inc. (ECSI No. 1973) and SFI Property (ECSI No. 5103).

- Scouring (washing) and carbonizing to remove wool grease and organic matter
- Drying
- Picking and oiling
- Dyeing
- Carding and burling
- Washing to remove the spinning oil

A large electrical transformer was located outside the main structure near the southwestern corner of the facility. Transformers are known to have used dielectric fluids containing PCBs. During World War II, the United States government granted the Portland Woolen Mills contracts for wool blankets. Wool felt containing PCBs has been known to be used by the U.S. Navy (EPA 2012). It is unknown whether these products were produced by the former Portland Woolen Mills. Former site features that may have contained PBC oils include a machine shop, a boiler house, and a fuel house (Figure 1-2).

4.2.3 Other Sources

Given the long history of industrial activities in the site vicinity, there are likely other contributing offsite sources (Figure 1-2) and potentially unrecognized sources in addition to PIW. While there is significant evidence that the source of PCBs is associated with PIW, other potential sources may include:

- Dust control oil used on dirt streets
- Staging foundry products and debris within the N. Bradford Street ROW
- Staging construction material and debris from St. Johns bridge construction
- Local industrial complexes (Portland Woolen Mills complex and St. Johns ship building yards to the north, northeast, and east)

In addition, the Willamette River has a history of flooding in this area and is a suspected source of PCBs in debris and soils left after the flooding resends (EVREN 2021).

Building products (for example, paints, roofing, siding, coatings, and Galbestos) could also have contained PCBs that weathered and were dispersed to surrounding ground surfaces by atmospheric deposition (wind and rain) and transported by open stormwater sheet flow to surface soil, and the existing stormwater collection system and catch basins.

4.3 Contaminant Transport from Offsite Sources

The most likely transport mechanism for such contamination is stormwater sheet flow, with pooling and subsequent settling of solids and infiltration adjacent to the railroad tracks. Review of topography surrounding the site indicates that the railroad tracks and N. Bradford Street ROW in the site area are in a low spot in Outfall Basin 52 and subject to stormwater accumulation (Figure 4-1). Stormwater sheet flow from PIW and surrounding asphalt paved streets and parking areas moves toward the railroad tracks from the east on both sides of the PIW building. Significant pooling has been observed as evidenced by the photographs included in the 2012 City of Portland *Industrial Source Control Memo* (City of Portland 2012) (Photograph 1).



Photograph 1: Extensive Ponding Adjacent to the West Side of the PIW Building and Along the N. Bradford Street ROW circa 2012

Source: City of Portland 2012

The railroad tracks and ballast reduce stormwater sheet flow from the northeast side to the southwest side of the tracks, causing stormwater to pool beside the tracks. The stormwater observed in the 2012 event was noted to have infiltrated into the N. Bradford Street ROW. Stormwater ponding has been observed at times of heavy rainfall since the development of the PIW property, as documented in aerial photography dating from 1956 and by recollection of facility owners (EVREN 2021). Some stormwater sheet flow is captured by catch basins and manholes from the PIW property and properties to the northeast including paved parking lots and streets and routed through the N. Bradford Street ROW and eventually discharged to the Willamette River.

The highest PCB concentration observed in this sampling report was collected near the middle-right portion of this photo.

5. Conclusions

The 2022 site investigation identified elevated levels of PCBs within shallow soil within the N. Bradford Street ROW portion of the site. The highest concentrations are adjacent to PIW and generally decrease with depth and distance from PIW, with the exception of two sample locations adjacent to the former Portland Woolen Mills industrial complex. The investigation and source evaluation presented in this report demonstrate that elevated PCB concentrations at the site are likely associated with offsite releases from former and/or current PIW operations and other potential offsite sources. There is no evidence that UPRR is the source based on historical records (including spill/release history), current UPRR operations, and lack of PCBs use in historic UPRR locomotives. Specifically, the highest PCB concentrations are directly adjacent to PIW and the former Portland Woolen Mills (formerly located one block north of PIW). Both facilities likely generated and released PCBs during their long histories of industrial activities. If not connected, these two "hot-spot" areas suggest the PCBs are not associated with UPRR operations and are likely the result of industrial activities conducted outside of the N. Bradford Street ROW. Based on surface topography in this area and field observations during rain events, it is highly likely that observed stormwater sheet flow is the predominant contaminant transport mechanism onto the N. Bradford Street ROW. Some stormwater sheet flow is captured from PIW and upland properties including parking lots and streets into catch basins and manholes.

The N. Bradford Street ROW is not owned by UPRR. The City of Portland owns N. Bradford Street within this area, including the area where soil samples were collected, and allows UPRR to operate railroad tracks within the ROW under a limited right-of-use. Accordingly, given the extent of PCBs detected wholly outside the narrow limited right-of-use corridor (that is, 1 foot on either side of the tracks) and the source evaluation presented, UPRR is not a responsible party to conduct further investigation or cleanup, if warranted.

UPRR understands an additional soil investigation was completed by PIW on their property outside of the building at the request of ODEQ in 2022. The results of PIW investigation are currently not available but should be reviewed and included in the current data set to get a better understanding of possible source areas and development of a conceptual site model for the site and surrounding impacted areas. Additional data collection from areas inside the PIW building may also be helpful in understanding the potential sources of PCBs associated with PIW's operations. In addition, stormwater catch basin sampling completed in 2011 indicated elevated concentrations of PCBs within the N. Bradford Street ROW. A better understanding of the stormwater conveyance system and what current or historic industrial facilities contribute stormwater to the system, including catch basin solids analytical results, would benefit the overall site conceptual site model.

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Tables

Table 3-1. Analytical Results, Soil Borings
PCB Areawide – N. Bradford Street
Right-of-Way, Portland, Oregon

Location:	SB01			SB02				SB03				
Sample Name:	SB01-0.0-0.5-1022	SB01-1.0-1.5-1022	SB01-2.5-3.0-1022	SB02-0.0-0.5-1022	SB02D-0.0-0.5-1022	SB02-1.0-1.5-1022	SB02-2.5-3.0-1022	SB03-0.0-0.5-1022	SB03D-0.0-0.5-1022	SB03-1.0-1.5-1022	SB03-2.5-3.0-1022	SB04-0.0-0.5-1022
Sample Date:	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022
Sample Depth (feet bgs):	0-0.5	1-1.5	2.5-3	0-0.5	0-0.5	1-1.5	2.5-3	0-0.5	0-0.5	1-1.5	2.5-3	0-0.5
PCB Aroclors (mg/kg)												
Aroclor-1016	0.0202 U	0.0210 U	0.0211 U	0.0211 U	0.0206 U	0.0211 U	0.0210 U	0.0211 U	0.0206 U	0.0210 U	0.0208 U	0.0207 U
Aroclor-1221	0.0330 U	0.0342 U	0.0344 U	0.0344 U	0.0336 U	0.0344 U	0.0342 U	0.0344 U	0.0335 U	0.0343 U	0.0339 U	0.0337 U
Aroclor-1232	0.0282 U	0.0293 U	0.0294 U	0.0295 U	0.0287 U	0.0295 U	0.0293 U	0.0295 U	0.0287 U	0.0293 U	0.0290 U	0.0289 U
Aroclor-1242	0.0295 U	0.0306 U	0.0308 U	0.0308 U	0.0301 U	0.0308 U	0.0307 U	0.0308 U	0.0300 U	0.0307 U	0.0304 U	0.0302 U
Aroclor-1248	0.0244 U	0.0253 U	0.0254 U	0.0254 U	0.0248 U	0.0254 U	0.0253 U	0.0254 U	0.0248 U	0.0253 U	0.0250 U	0.0249 U
Aroclor-1254	0.0238 U	0.0247 U	0.0248 U	0.0248 U	0.0242 U	0.0248 U	0.0247 U	0.0248 U	0.0242 U	0.0247 U	0.0175 U	0.0243 U
Aroclor-1260	18.9	2.44	0.073	11.5 J	6.74	1.12	0.477	0.161	0.262	0.250	0.0175 U	0.433 J
Aroclor-1262	0.0314 U	0.0326 U	0.0327 U	0.0328 U	0.0320 U	0.0328 U	0.0326 U	0.0328 U	0.0319 U	0.0326 U	0.0323 U	0.0321 U
Aroclor-1268	0.0229 U	0.0238 U	0.0239 U	0.0239 U	0.0233 U	0.0239 U	0.0238 U	0.0239 U	0.0233 U	0.0238 U	0.0236 U	0.0234 U
Total PCBs ^a	18.9	2.44	0.073	11.5 J	6.74	1.12	0.477	0.161	0.262	0.250	0.0339 U	0.433 J

^a Total PCBs is the sum of all detected PCB aroclors. Nondetect results are not included in the sum.

Notes:

Bold = detected concentrations

bgs = below ground surface

J = estimated result

mg/kg = milligram(s) per kilogram

PCB = polychlorinated biphenyl

U = Detected result is above the indicated laboratory reporting limit.

Table 3-1. Analytical Results, Soil Borings
PCB Areawide – N. Bradford Street
Right-of-Way, Portland, Oregon

Location:	SB04			SB05			SB06			SB07			
Sample Name:	SB04D-0.0-0.5-1022	SB04-1.0-1.5-1022	SB04-2.5-3.0-1022	SB05-0.0-0.5-1022	SB05-1.0-1.5-1022	SB05-2.5-3.0-1022	SB06-0.0-0.5-1022	SB06-1.0-1.5-1022	SB06-2.5-3.0-1022	SB07-0.0-0.5-1022	SB07-1.0-1.5-1022	SB07-2.5-3.0-1022	SB08-0.5-110322
Sample Date:	10/17/2022	10/17/2022	10/17/2022	10/18/2022	10/18/2022	10/18/2022	10/17/2022	10/17/2022	10/17/2022	10/18/2022	10/18/2022	10/18/2022	11/3/2022
Sample Depth (feet bgs):	0-0.5	1-1.5	2.5-3	0-0.5	1-1.5	2.5-3	0-0.5	1-1.5	2.5-3	0-0.5	1-1.5	2.5-3	0-0.5
PCB Aroclors (mg/kg)													
Aroclor-1016	0.0210U	0.0211U	0.0206U	0.0211 U	0.0211 U	0.0210 U	0.0212U	0.0209U	0.0211U	0.0210 U	0.0204 U	0.0210 U	0.0207 U
Aroclor-1221	0.0342U	0.0344U	0.0336U	0.0344 U	0.0344 U	0.0342 U	0.0345U	0.0337U	0.0344U	0.0342 U	0.0333 U	0.0343 U	0.0338 U
Aroclor-1232	0.0293U	0.0295U	0.0288U	0.0294 U	0.0294 U	0.0293 U	0.0296U	0.0288U	0.0294U	0.0293 U	0.0285 U	0.0294 U	0.0289 U
Aroclor-1242	0.0307U	0.0308U	0.0301U	0.0308 U	0.0308 U	0.0306 U	0.0309U	0.0301U	0.0308U	0.0307 U	0.0298 U	0.0307 U	0.0302 U
Aroclor-1248	0.0253U	0.0254U	0.0249U	0.0254 U	0.0254 U	0.0253 U	0.0255U	0.0249U	0.0254U	0.0253 U	0.0246 U	0.0253 U	0.0250 U
Aroclor-1254	0.0247U	0.0249U	0.0243U	0.0248 U	0.0248 U	0.0247 U	0.0249U	0.0243U	0.0248U	0.0247 U	0.0240 U	0.0248 U	0.0244 U
Aroclor-1260	0.244	2.66	0.434	0.920	0.335	0.0177 U	4.67	10.5	0.199	1.85	0.178	0.0341 J	15.2
Aroclor-1262	0.0326U	0.0328U	0.0320U	0.0327 U	0.0327 U	0.0326 U	0.0328U	0.0320U	0.0327U	0.0326 U	0.0317 U	0.0327 U	0.0321 U
Aroclor-1268	0.0238U	0.0240U	0.0234U	0.0239 U	0.0239 U	0.0238 U	0.0240U	0.0234U	0.0239U	0.0238 U	0.0231 U	0.0239 U	0.0235 U
Total PCBs ^a	0.244	2.66	0.434	0.920	0.335	0.0342 U	4.67	10.5	0.199	1.85	0.178	0.0341 J	15.2

^a Total PCBs is the sum of all detected PCB aroclors. Nor

Notes:

Bold = detected concentrations

bgs = below ground surface

J = estimated result

mg/kg = milligram(s) per kilogram

PCB = polychlorinated biphenyl

U = Detected result is above the indicated laboratory rep

Table 3-1. Analytical Results, Soil Borings
PCB Areawide – N. Bradford Street
Right-of-Way, Portland, Oregon

Location:	SB08		SB09			SB10			SB11				
Sample Name:	SB08-1-110322	SB08-2.5-110322	SB09-0.0-0.5-1022	SB09-1.0-1.5-1022	SB09-2.5-3.0-1022	SB10-0.0-0.5-1022	SB10-1.0-1.5-1022	SB10-2.5-3.0-1022	SB11-0.0-0.5-1022	SB11D-0.0-0.5-1022	SB11-1.0-1.5-1022	SB11-2.5-3.0-1022	SB12-0.0-0.5-1022
Sample Date:	11/3/2022	11/3/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/18/2022
Sample Depth (feet bgs):	1-1.5	2.5-3	0-0.5	1-1.5	2.5-3	0-0.5	1-1.5	2.5-3	0-0.5	0-0.5	1-1.5	2.5-3	0-0.5
PCB Aroclors (mg/kg)													
Aroclor-1016	0.0212 U	0.0210 U	0.0210 U	0.0211 U	0.0210 U	0.0204 U	0.0211 U	0.0207 U	0.0208 U	0.0209 U	0.0205 U	0.0207 U	0.0211 U
Aroclor-1221	0.0345 U	0.0343 U	0.0343 U	0.0344 U	0.0342 U	0.0332 U	0.0344 U	0.0338 U	0.0340 U	0.0342 U	0.0335 U	0.0338 U	0.0345 U
Aroclor-1232	0.0296 U	0.0294 U	0.0294 U	0.0295 U	0.0293 U	0.0284 U	0.0295 U	0.0289 U	0.0291 U	0.0293 U	0.0287 U	0.0290 U	0.0295 U
Aroclor-1242	0.0309 U	0.0307 U	0.0307 U	0.0308 U	0.0307 U	0.0297 U	0.0308 U	0.0303 U	0.0304 U	0.0306 U	0.0300 U	0.0303 U	0.0309 U
Aroclor-1248	0.0255 U	0.0253 U	0.0253 U	0.0254 U	0.0253 U	0.0245 U	0.0254 U	0.0250 U	0.0251 U	0.0252 U	0.0247 U	0.0250 U	0.0255 U
Aroclor-1254	0.0249 U	0.0248 U	0.0248 U	0.0248 U	0.0247 U	0.0240 U	0.0248 U	0.0244 U	0.0245 U	0.0247 U	0.0242 U	0.0244 U	0.0249 U
Aroclor-1260	4.55	0.29	9.44	0.893	0.226	124	35.1	0.305	4.11	3.21	0.482	0.103	30.8
Aroclor-1262	0.0328 U	0.0327 U	0.0327 U	0.0328 U	0.0326 U	0.0316 U	0.0328 U	0.0322 U	0.0323 U	0.0325 U	0.0319 U	0.0322 U	0.0328 U
Aroclor-1268	0.0240 U	0.0239 U	0.0239 U	0.0239 U	0.0238 U	0.0231 U	0.0239 U	0.0235 U	0.0236 U	0.0238 U	0.0233 U	0.0235 U	0.0240 U
Total PCBs ^a	4.55	0.29	9.44	0.893	0.226	124	35.1	0.305	4.11	3.21	0.482	0.103	30.8

^a Total PCBs is the sum of all detected PCB aroclors. Nor

Notes:

Bold = detected concentrations

bgs = below ground surface

J = estimated result

mg/kg = milligram(s) per kilogram

PCB = polychlorinated biphenyl

U = Detected result is above the indicated laboratory rep

Table 3-1. Analytical Results, Soil Borings
PCB Areawide – N. Bradford Street
Right-of-Way, Portland, Oregon

Location:	SB12			SB13			SB14			SB15			
Sample Name:	SB12D-0.0-0.5-1022	SB12-1.0-1.5-1022	SB12-2.5-3.0-1022	SB13-0.0-0.5-1022	SB13-1.0-1.5-1022	SB13-2.5-3.0-1022	SB14-0.0-0.5-1022	SB14-1.0-1.5-1022	SB14-2.5-3.0-1022	SB15-0.0-0.5-1022	SB15-1.0-1.5-1022	SB15-2.5-3.0-1022	SB16-0.0-0.5-1022
Sample Date:	10/18/2022	10/18/2022	10/18/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022
Sample Depth (feet bgs):	0-0.5	1-1.5	2.5-3	0-0.5	1-1.5	2.5-3	0-0.5	1-1.5	2.5-3	0-0.5	1-1.5	2.5-3	0-0.5
PCB Aroclors (mg/kg)													
Aroclor-1016	0.0208 U	0.0207 U	0.0210 U	0.0211 U	0.0208 U	0.0210 U	0.0206 U	0.0211 U	0.0208 U	0.0209 U	0.0204 U	0.0210 U	0.0201U
Aroclor-1221	0.0339 U	0.0338 U	0.0343 U	0.0344 U	0.0340 U	0.0343 U	0.0336 U	0.0344 U	0.0339 U	0.0342 U	0.0333 U	0.0342 U	0.0329U
Aroclor-1232	0.0290 U	0.0289 U	0.0294 U	0.0295 U	0.0291 U	0.0294 U	0.0288 U	0.0294 U	0.0290 U	0.0293 U	0.0285 U	0.0293 U	0.0281U
Aroclor-1242	0.0303 U	0.0303 U	0.0307 U	0.0308 U	0.0304 U	0.0307 U	0.0301 U	0.0308 U	0.0303 U	0.0306 U	0.0298 U	0.0307 U	0.0294U
Aroclor-1248	0.0250 U	0.0250 U	0.0254 U	0.0254 U	0.0251 U	0.0254 U	0.0248 U	0.0254 U	0.0250 U	0.0252 U	0.0246 U	0.0253 U	0.0243U
Aroclor-1254	0.0244 U	0.0244 U	0.0248 U	0.0249 U	0.0245 U	0.0248 U	0.0242 U	0.0248 U	0.0244 U	0.0247 U	0.0240 U	0.0247 U	0.0237U
Aroclor-1260	38.6	2.81	0.162	0.224	0.0526	0.0193 J	0.296	0.124	0.163	0.339	0.0652 J	0.175	0.260
Aroclor-1262	0.0322 U	0.0322 U	0.0327 U	0.0328 U	0.0323 U	0.0327 U	0.0320 U	0.0327 U	0.0322 U	0.0325 U	0.0317 U	0.0326 U	0.0313U
Aroclor-1268	0.0236 U	0.0235 U	0.0239 U	0.0240 U	0.0236 U	0.0239 U	0.0234 U	0.0239 U	0.0236 U	0.0238 U	0.0231 U	0.0238 U	0.0229U
Total PCBs ^a	38.6	2.81	0.162	0.224	0.0526	0.0193 J	0.296	0.124	0.163	0.339	0.0652 J	0.175	0.260

^a Total PCBs is the sum of all detected PCB aroclors. Nor

Notes:

Bold = detected concentrations

bgs = below ground surface

J = estimated result

mg/kg = milligram(s) per kilogram

PCB = polychlorinated biphenyl

U = Detected result is above the indicated laboratory rep

Table 3-1. Analytical Results, Soil Borings
PCB Areawide – N. Bradford Street
Right-of-Way, Portland, Oregon

Location:	SB16	
Sample Name:	SB16-1.0-1.5-1022	SB16-2.5-3.0-1022
Sample Date:	10/19/2022	10/19/2022
Sample Depth (feet bgs):	1-1.5	2.5-3
PCB Aroclors (mg/kg)		
Aroclor-1016	0.0208U	0.0209U
Aroclor-1221	0.0339U	0.0341U
Aroclor-1232	0.0290U	0.0292U
Aroclor-1242	0.0304U	0.0305U
Aroclor-1248	0.0250U	0.0252U
Aroclor-1254	0.0245U	0.0246U
Aroclor-1260	0.104	0.389
Aroclor-1262	0.0323U	0.0324U
Aroclor-1268	0.0236U	0.0237U
Total PCBs ^a	0.104	0.389

^a Total PCBs is the sum of all detected PCB aroclors. Nor

Notes:

Bold = detected concentrations

bgs = below ground surface

J = estimated result

mg/kg = milligram(s) per kilogram

PCB = polychlorinated biphenyl

U = Detected result is above the indicated laboratory rep

Table 3-2. Analytical Results, Incremental Sampling Methodology Samples
PCB Areawide – N. Bradford Street Right-of-Way, Portland, Oregon

Location:	ISM01	ISM02	ISM03	ISM04	ISM05	ISM06		ISM07		ISM08
Sample Name:	ISM01-0.0-0.2-1022	ISM02-0.0-0.2-1022	ISM03-0.0-0.2-1022	ISM04-0.0-0.2-1022	ISM05-0.0-0.2-1022	ISM06-0.0-0.2-1022	ISM07-0.0-0.2-1022	ISM07T-0.0-0.2-1022	ISM07TT-0.0-0.2-1022	ISM08-0.0-0.2-1022
Sample Date:	10/17/2022	10/19/2022	10/17/2022	10/18/2022	10/18/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/20/2022
Sample Depth (inches bgs):	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2
PCB Aroclors (mg/kg)										
Aroclor-1016	0.0210U	0.0205U	0.0208U	0.0210 U	0.0211 U	0.0209U	0.0206U	0.0210U	0.0208U	0.0211 U
Aroclor-1221	0.0342U	0.0334U	0.0340U	0.0343 U	0.0344 U	0.0341U	0.0336U	0.0343U	0.0340U	0.0344 U
Aroclor-1232	0.0293U	0.0286U	0.0291U	0.0294 U	0.0295 U	0.0292U	0.0287U	0.0293U	0.0291U	0.0295 U
Aroclor-1242	0.0306U	0.0299U	0.0304U	0.0307 U	0.0308 U	0.0305U	0.0301U	0.0307U	0.0304U	0.0308 U
Aroclor-1248	0.0253U	0.0247U	0.0251U	0.0254 U	0.0254 U	0.0252U	0.0248U	0.0253U	0.0251U	0.0254 U
Aroclor-1254	0.0247U	0.0241U	0.0245U	0.0248 U	0.0248 U	0.0246U	0.0242U	0.0247U	0.0245U	0.0249 U
Aroclor-1260	5.73	0.267	12.6	11.1	5.88	0.631	0.189	0.179	0.185	0.122
Aroclor-1262	0.0326U	0.0318U	0.0324U	0.0327 U	0.0328 U	0.0324U	0.0320U	0.0326U	0.0323U	0.0328 U
Aroclor-1268	0.0238U	0.0233U	0.0236U	0.0239 U	0.0239 U	0.0237U	0.0233U	0.0238U	0.0236U	0.0240 U
Total PCBs ^a	5.73	0.267	12.6	11.1	5.88	631	0.189	0.179	0.185	0.122

^a Total PCBs is the sum of all detected PCB aroclors. Nondetect results are not included in the sum.

Notes:
Bold = detected concentrations
bgs = below ground surface
ISM = incremental sampling methodology
mg/kg = milligram(s) per kilogram
PCB = polychlorinated biphenyl
U = Detected result is above the indicated laboratory reporting limit.

Table 3-3. Total PCB Congener Results and Corresponding Total PCB Aroclor Results

PCB Areawide – N. Bradford Street Right-of-Way, Portland, Oregon

Sample Name	Total PCB Congeners (mg/kg)	Total PCB Aroclors (mg/kg)
SB10-0.0-0.5-1022	104	124
SB12-0.0-0.5-1022	20.1	30.8
SB08-0.5-110322	12.8	15.2
SB06-1.0-1.5-1022	6.21	10.5
SB13-0.0-0.5-1022	0.234	0.224
SB14-1.0-1.5-1022	0.0961	0.124

Notes:

Total PCB congeners is the sum of all detected PCB congener groups reported by the laboratory. Nondetect results are not included in the sum.

Total PCB aroclors is the sum of all detected PCB aroclors. Nondetect results are not included in the sum.

mg/kg = milligram(s) per kilogram

PCB = polychlorinated biphenyl

Table 4-1. Peninsula Iron Works Historical Land Use Narrative*PCB Areawide – N. Bradford Street Right-of-Way, Portland, Oregon*

Period	Land Use / Activity Summary
Pre-1910	Vacant except horse stable. Portland Woolen Mills complex one block north.
1910s	PIW initially developed with foundry, machine shop, blacksmith shop. Shipbuilding industry appears to north and northwest.
1920s	PIW expansion/built out over entire site adding machine shops, air compressor, oil house, coke ovens, and parts and manufacturing operations, including expansion of PIW facilities to adjacent property to the south. Wood working facility developed further to the south.
1930s	PIW pattern storage building, other facilities on adjacent southeastern parcel removed, now vacant with grass cover. Woolen mill complex developed to north, timber facility to the south.
1940s	PIW foundry casting noted in high production mode supporting cast items for World War II.
1950s	Foundry/machine shop remains active. Large city sanitary sewage station located across the UPRR tracks to west, still present today. Shipbuilding facilities expanded nearby. Woolen mill complex and timber facility no longer present.
1960s	Open storage of materials and debris noted onsite and adjacent parcel to south where current parking lot for Cathedral Park is located. Paint and oil storage shed noted to south, adjacent to UPRR ROW. Scattered debris and refuse, and autos noted in the areas between the UPRR track and the Willamette River.
1970s	PIW extensively remodeled to present day footprint. Open storage areas placed under roof. Many industrial activities have ceased in the surrounding areas.

Notes:

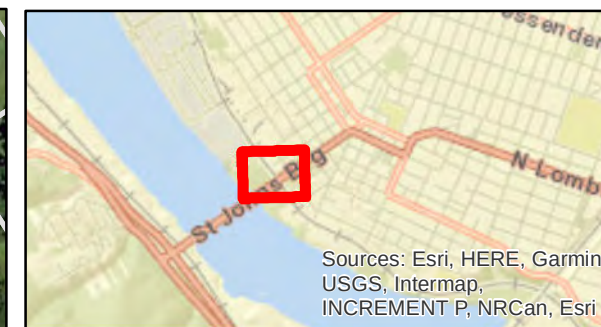
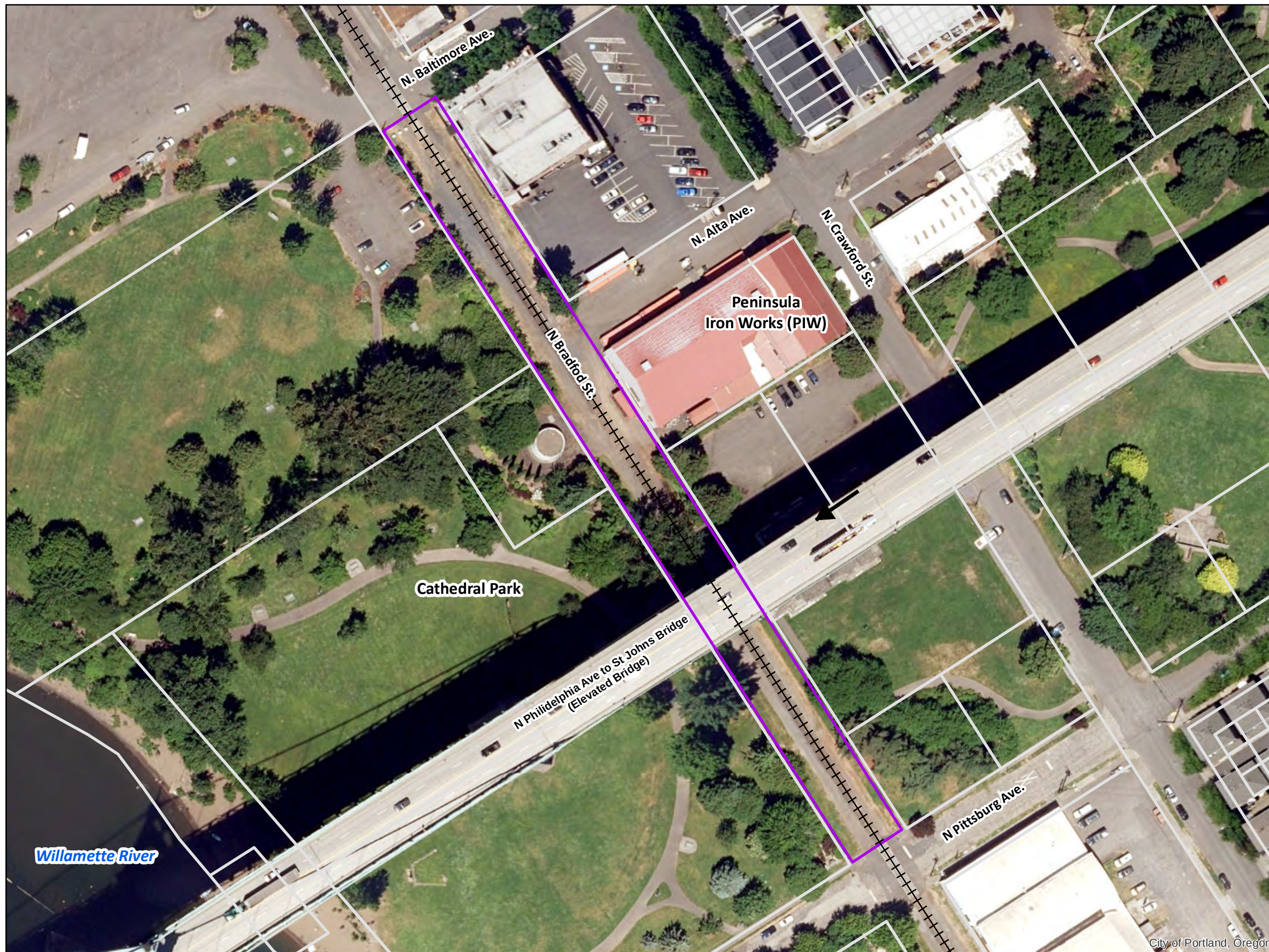
Summary compiled from information presented in the *Letter Response – Summary of Findings PCB Areawide N. Bradford Street ROW, Portland, Oregon* (EVREN 2021).

PIW = Peninsula Iron Works

ROW = right-of-way

UPRR = Union Pacific Railroad

Figures



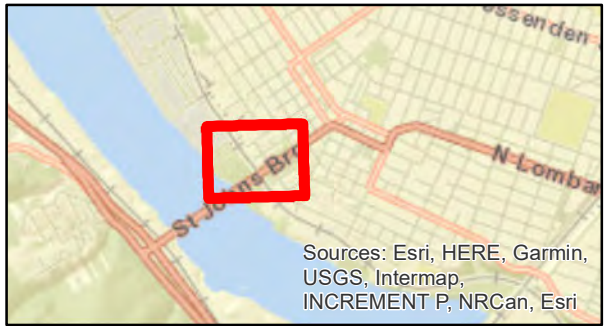
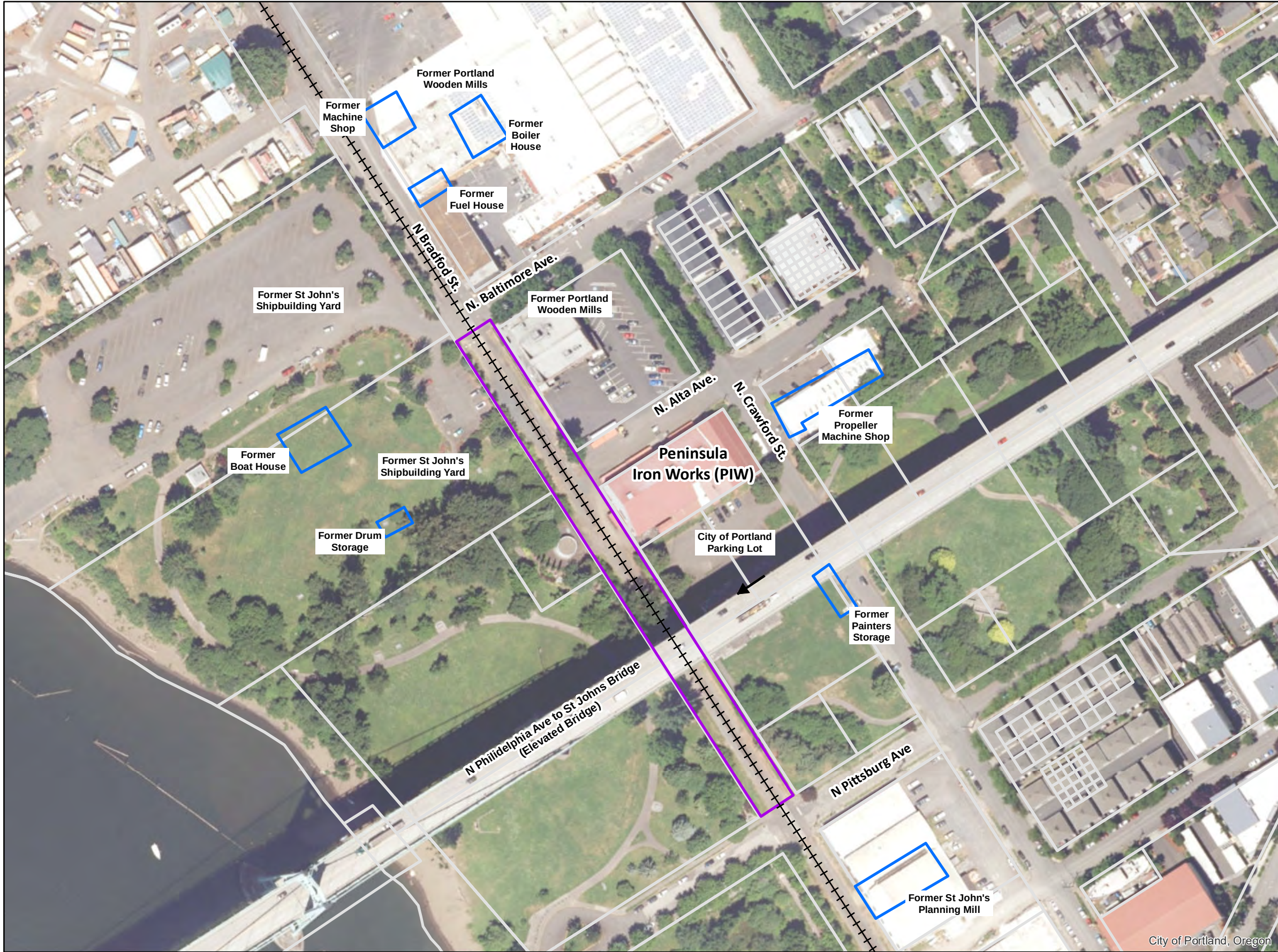
Legend

- Investigation Area
- Railroad Tracks
- Taxlot



0 50 100 200 Ft

Figure 1-1
Project Area
N. Bradford Street Right-of-Way
Portland, Oregon



Legend

- Investigation Area
- Former Features of Interest
- Railroad Tracks
- Taxlot

Notes:

1. All buildings, street and feature locations are approximate
2. Symbols represent location and do not always represent exact shape, size or orientation
3. Historical features presented in EVREN Northwest, Inc. 2021. Letter Response – Summary of Findings, PCB Areawide – N Bradford St ROW, Portland, Oregon. November 17.

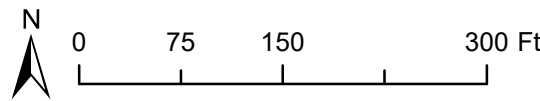
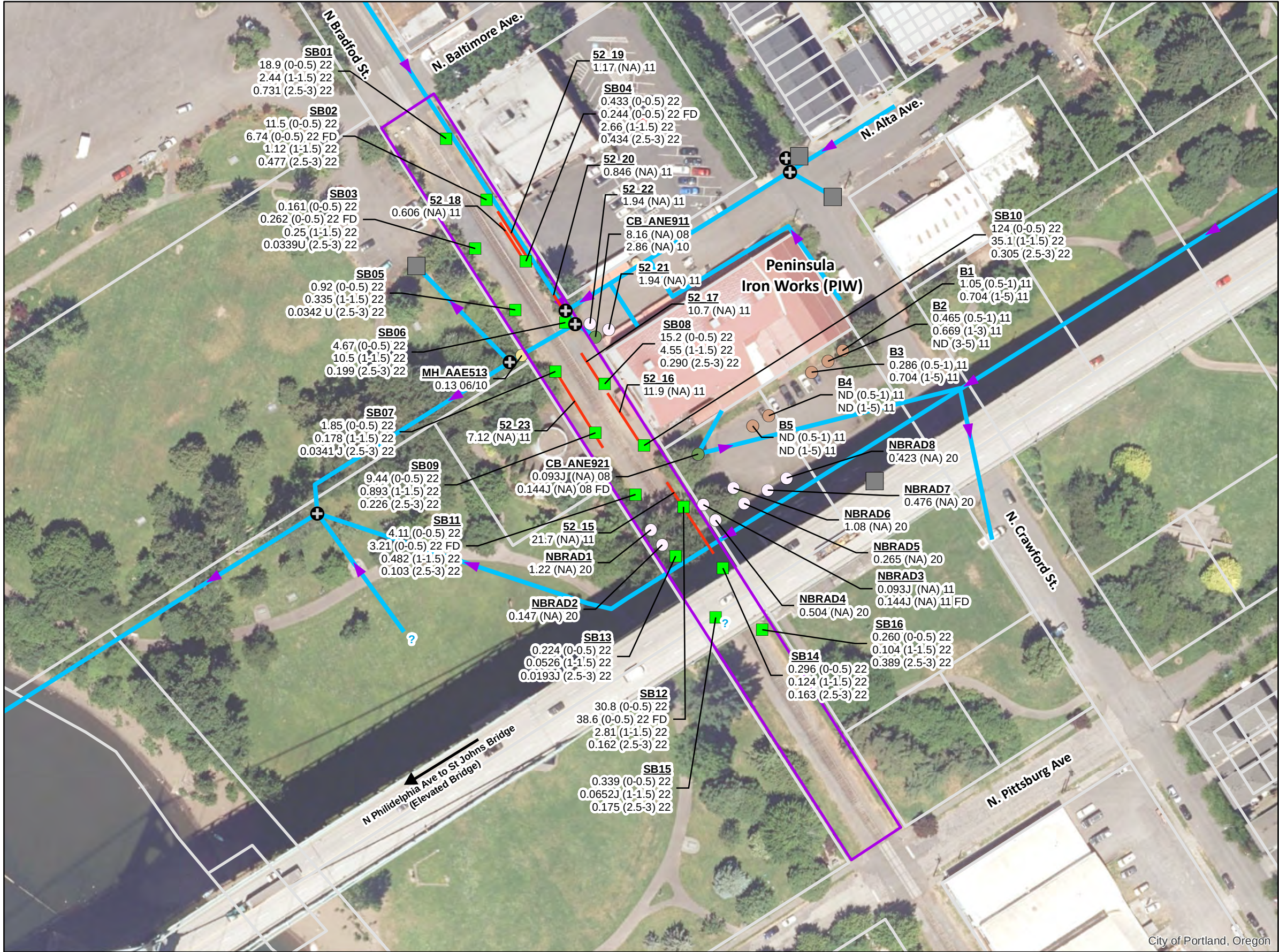


Figure 1-2
Features of Interest
N. Bradford Street Right-of-Way
Portland, Oregon



Legend

- Investigation Area
- Catch Basin
- Manhole
- Storm Line
- Taxlot

Sample Locations (2022)

- Subsurface Soil Sample

Sample Locations (2008 -2011)

- Inline Solids Sample
- Sediment Trap Sample
- Subsurface Soil Sample
- Surface Soil Sample
- Composite Surface Soil Sample

Location ID _____ **SB11**
PCBT Concentration (mg/kg) _____ 3.21 (0-0.5) 22 FD
Sample Depth (ft) _____
Sample Date (year) _____
Field Duplicate _____

Notes:
mg/kg = milligrams per kilogram
FD = Field Duplicate
ft = feet
J = estimated result
NA = not available
ND = not detected
PCBT = Total Polychlorinated Biphenyls (PCBs)
U = not detected above the indicated reporting limit

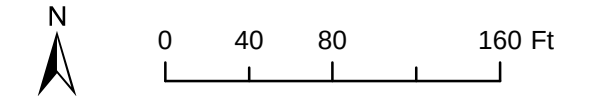
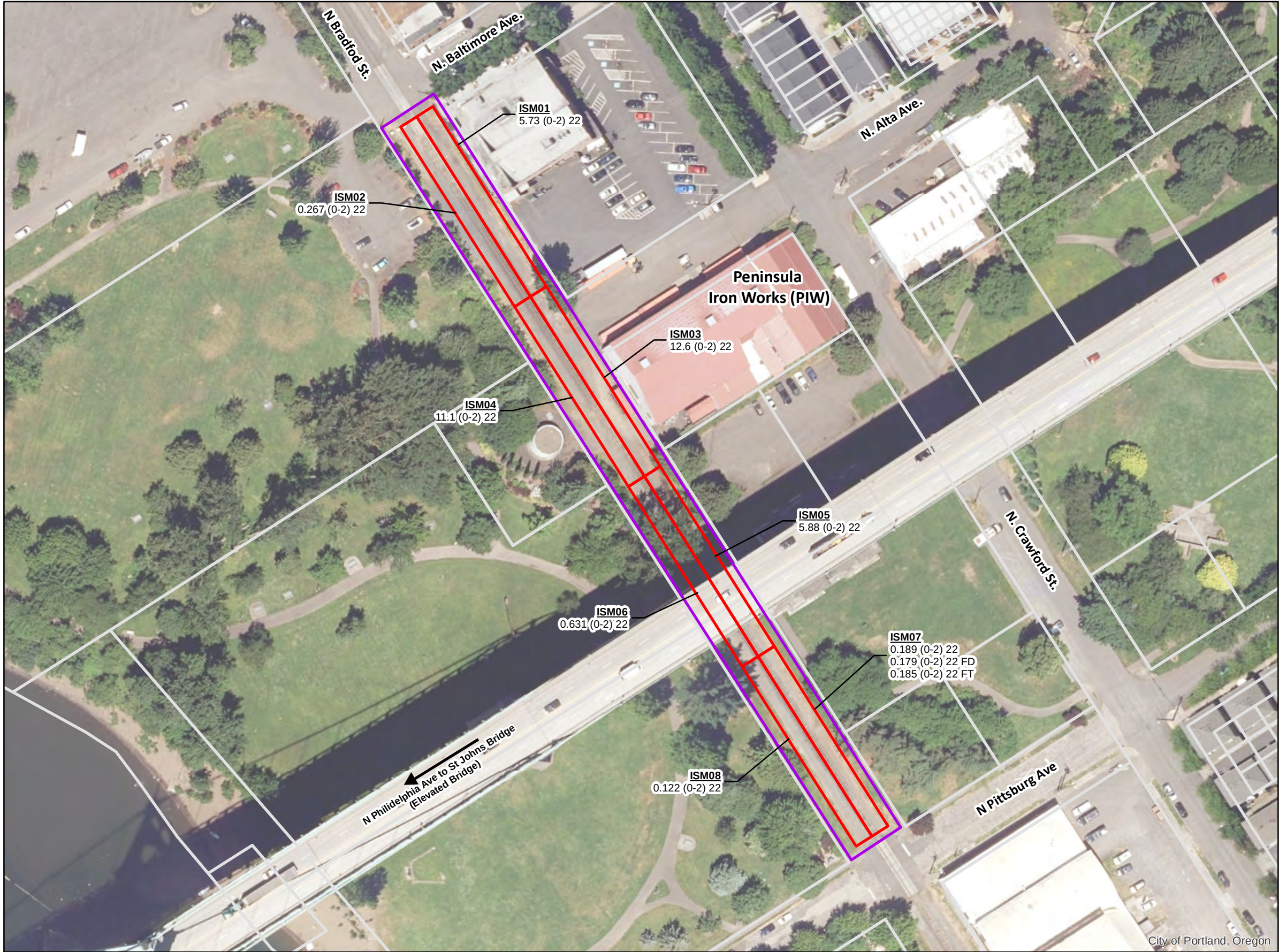


Figure 2-1
Total PCBs Concentrations in Soil and Sediment Samples
N. Bradford Street Right-of-Way
Portland, Oregon



- Legend**
- Investigation Area
 - Incremental Sampling Methodology Locations
 - Taxlot

Location ID **ISM07**
PCBT Concentration (mg/kg) 0.185 (0-2) 22 FT
Sample Depth (in)
Sample Date (year)
Sample Duplicate/Triplicate

Notes:
in = inches
FD = Field Duplicate
FT = Field Triplicate
mg/kg = milligrams per kilogram
PCBT = Total Polychlorinated Biphenyls (PCBs)

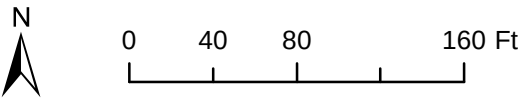
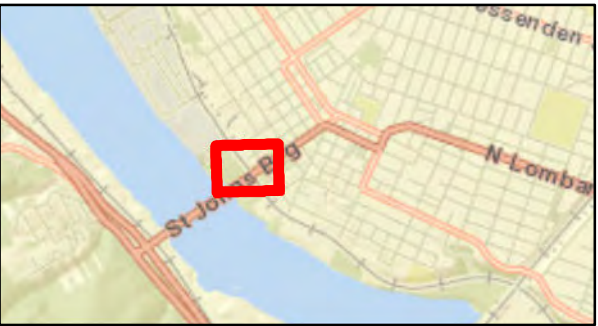
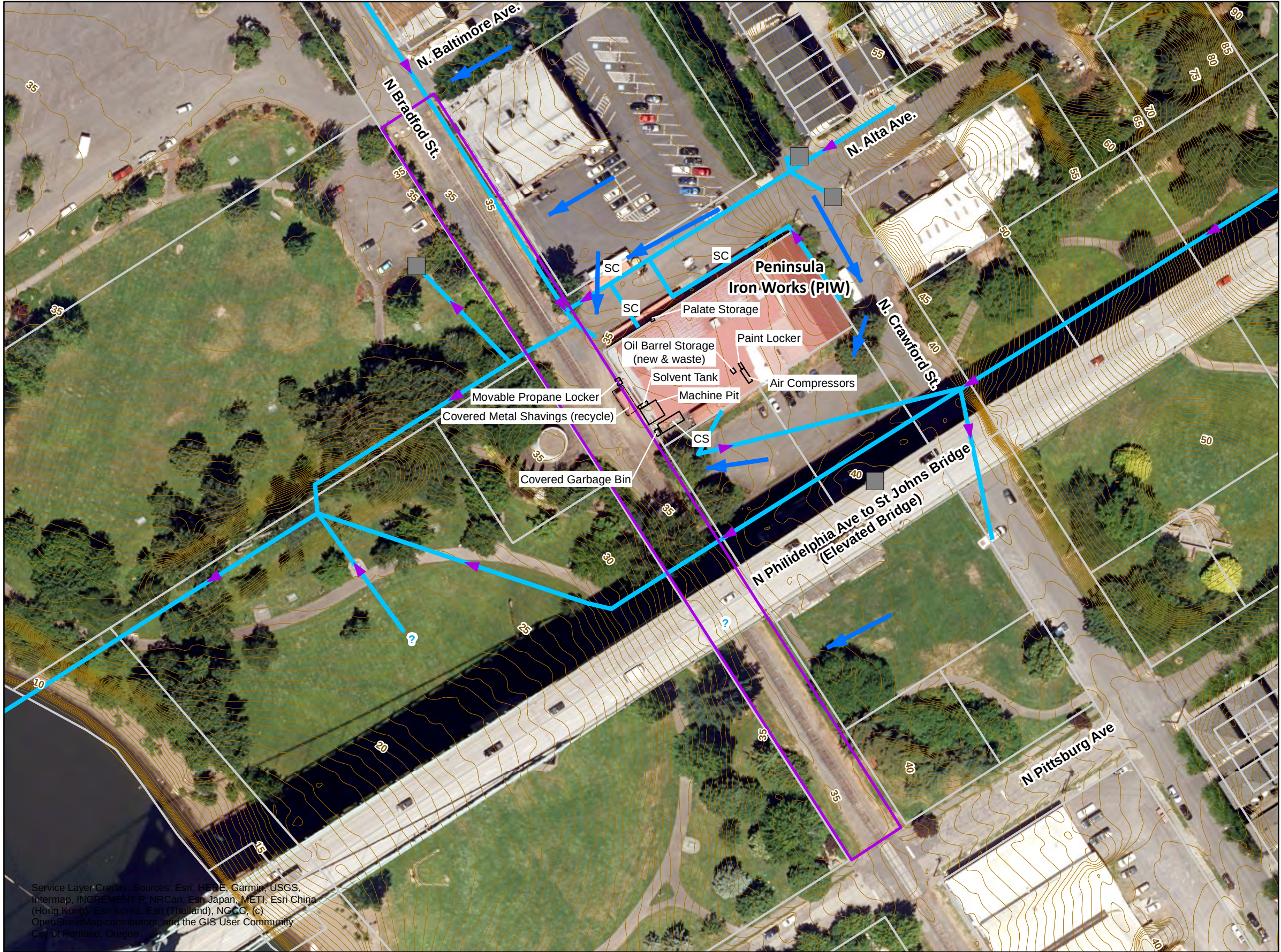


Figure 2-2
Total PCBs Concentrations in Incremental Sampling Methodology Samples
*N. Bradford Street Right-of-Way
Portland, Oregon*



Legend

- Investigation Area
- CS
- Other
- Metal Recycle
- Catch Basin

**Storm Line For Legend
LEGEND**

- Storm Line
- Inferred Storm Line
- Direction of Slope
- 0.5ft Elevation Contour
- Taxlot

Notes:

- CS = covered storage area used for machine fixtures, raw steel and trash bins.
- SC = Shipping container used for storage or steel parts
- 1. All buildings, street and feature locations are approximate
- 2. Symbols represent location and do not always represent exact shape, size or orientation
- 3. Elevation contoured are based on DOGAMI Lidar data using 10ft PAEK smoothing.
- 4. Site features provided in Evrennorthwest, Inc., 2021. Letter Response - Summary of Findings, PCB Areawide - N Bradford St ROW, Portland, Oregon. November 17.

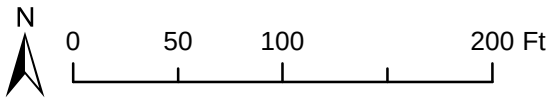


Figure 4-1
Topography and Relevant Site Features
N. Bradford Street Right-of-Way
Portland, Oregon

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
City of Portland, Oregon

Appendix A

Photographs

Project Title: PCB Areawide – N. Bradford Street Right-of-Way, Portland, Oregon



Photograph 1: SB-01



Photograph 3: SB-03



Photograph 2: SB-02



Photograph 4: SB-04

Photo Log



Photograph 5: SB-05



Photograph 7: SB-07



Photograph 6: SB-06



Photograph 8: SB-08

Photo Log



Photograph 9: SB-09



Photograph 11: SB-11



Photograph 10: SB-10



Photograph 12: SB-12

Photo Log



Photograph 13: SB-13



Photograph 15: SB-15



Photograph 14: SB-14



Photograph 16: SB-16

Photo Log



Photograph 17: ISM-01



Photograph 19: ISM-03



Photograph 18: ISM-02



Photograph 20: ISM-04



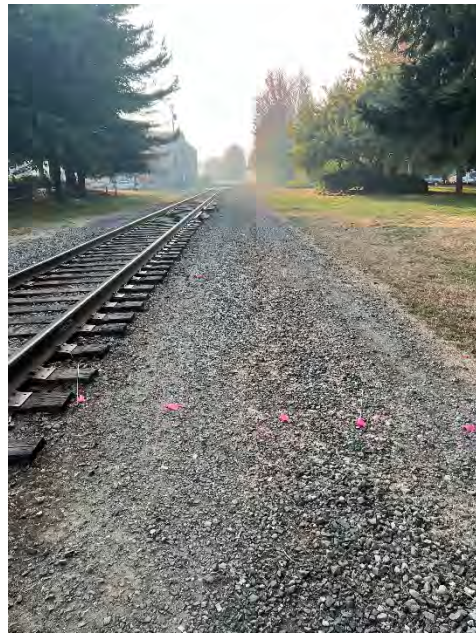
Photograph 21: ISM-05



Photograph 23: ISM-07



Photograph 22: ISM-06



Photograph 24: ISM-08

Appendix B

Analytical Laboratory Reports and Data Validation Memorandum

November 08, 2022

David Hodson
Jacobs
2020 SW 4th Avenue
Suite 300
Portland, OR 97201

RE: Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630317

Dear David Hodson:

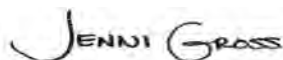
Enclosed are the analytical results for sample(s) received by the laboratory on October 19, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Minneapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jennifer Gross
jennifer.gross@pacelabs.com
(612)607-1700
Project Manager

Enclosures

cc: UPRR-Sysdat@ghd.com, UPRR



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630317

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab

A2LA Certification #: 2926.01*
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009*
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014*
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605*
Georgia Certification #: 959
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086*
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064*
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137*
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240*
Mississippi Certification #: MN00064

Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081*
New Jersey Certification #: MN002
New York Certification #: 11647*
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification (A2LA) #: R-036
North Dakota Certification (MN) #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Ohio VAP Certification (1800) #: CL110*
Oklahoma Certification #: 9507*
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001*
Pennsylvania Certification #: 68-00563*
Puerto Rico Certification #: MN00064
South Carolina Certification #: 74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192*
Utah Certification #: MN00064*
Vermont Certification #: VT-027053137
Virginia Certification #: 460163*
Washington Certification #: C486*
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01
USDA Permit #: P330-19-00208
Please Note: Applicable air certifications are denoted with an asterisk ().

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630317

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10630317001	ISM04-0.0-0.2-1022	Solid	10/18/22 09:45	10/19/22 10:00
10630317002	ISM05-0.0-0.2-1022	Solid	10/18/22 12:05	10/19/22 10:00
10630317003	SB10-0.0-0.5-1022	Solid	10/18/22 11:15	10/19/22 10:00
10630317004	SB10-1.0-1.5-1022	Solid	10/18/22 11:20	10/19/22 10:00
10630317005	SB10-2.5-3.0-1022	Solid	10/18/22 11:25	10/19/22 10:00
10630317006	SB09-0.0-0.5-1022	Solid	10/18/22 10:30	10/19/22 10:00
10630317007	SB09-1.0-1.5-1022	Solid	10/18/22 10:35	10/19/22 10:00
10630317008	SB09-2.5-3.0-1022	Solid	10/18/22 10:40	10/19/22 10:00
10630317009	SB07-0.0-0.5-1022	Solid	10/18/22 09:00	10/19/22 10:00
10630317010	SB07-1.0-1.5-1022	Solid	10/18/22 09:05	10/19/22 10:00
10630317011	SB07-2.5-3.0-1022	Solid	10/18/22 09:10	10/19/22 10:00
10630317012	SB05-0.0-0.5-1022	Solid	10/18/22 08:30	10/19/22 10:00
10630317013	SB05-1.0-1.5-1022	Solid	10/18/22 08:35	10/19/22 10:00
10630317014	SB05-2.5-3.0-1022	Solid	10/18/22 08:40	10/19/22 10:00
10630317015	SB12-0.0-0.5-1022	Solid	10/18/22 12:30	10/19/22 10:00
10630317016	SB12D-0.0-0.5-1022	Solid	10/18/22 12:35	10/19/22 10:00
10630317017	SB12-1.0-1.5-1022	Solid	10/18/22 12:40	10/19/22 10:00
10630317018	SB12-2.5-3.0-1022	Solid	10/18/22 12:45	10/19/22 10:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630317

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10630317001	ISM04-0.0-0.2-1022	EPA 8082A	RAG	11	PASI-M
10630317002	ISM05-0.0-0.2-1022	EPA 8082A	RAG	11	PASI-M
10630317003	SB10-0.0-0.5-1022	EPA 8082A	RAG	11	PASI-M
10630317004	SB10-1.0-1.5-1022	EPA 8082A	RAG	11	PASI-M
10630317005	SB10-2.5-3.0-1022	EPA 8082A	RAG	11	PASI-M
10630317006	SB09-0.0-0.5-1022	EPA 8082A	RAG	11	PASI-M
10630317007	SB09-1.0-1.5-1022	EPA 8082A	RAG	11	PASI-M
10630317008	SB09-2.5-3.0-1022	EPA 8082A	RAG	11	PASI-M
10630317009	SB07-0.0-0.5-1022	EPA 8082A	RAG	11	PASI-M
10630317010	SB07-1.0-1.5-1022	EPA 8082A	RAG	11	PASI-M
10630317011	SB07-2.5-3.0-1022	EPA 8082A	RAG	11	PASI-M
10630317012	SB05-0.0-0.5-1022	EPA 8082A	RAG	11	PASI-M
10630317013	SB05-1.0-1.5-1022	EPA 8082A	RAG	11	PASI-M
10630317014	SB05-2.5-3.0-1022	EPA 8082A	RAG	11	PASI-M
10630317015	SB12-0.0-0.5-1022	EPA 8082A	RAG	11	PASI-M
10630317016	SB12D-0.0-0.5-1022	EPA 8082A	RAG	11	PASI-M
10630317017	SB12-1.0-1.5-1022	EPA 8082A	RAG	11	PASI-M
10630317018	SB12-2.5-3.0-1022	EPA 8082A	RAG	11	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630317

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10630317001	ISM04-0.0-0.2-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	11100	ug/kg	497	11/07/22 10:38	P6
10630317002	ISM05-0.0-0.2-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	5880	ug/kg	249	11/08/22 07:37	
10630317003	SB10-0.0-0.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	124000	ug/kg	4810	11/07/22 11:41	
10630317004	SB10-1.0-1.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	35100	ug/kg	2490	11/07/22 11:57	
10630317005	SB10-2.5-3.0-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	305	ug/kg	48.9	11/04/22 17:23	
10630317006	SB09-0.0-0.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	9440	ug/kg	497	11/07/22 12:12	
10630317007	SB09-1.0-1.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	893	ug/kg	49.8	11/04/22 17:55	
10630317008	SB09-2.5-3.0-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	226	ug/kg	49.6	11/04/22 18:11	
10630317009	SB07-0.0-0.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	1850	ug/kg	49.6	11/04/22 15:01	
10630317010	SB07-1.0-1.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	178	ug/kg	48.2	11/04/22 18:58	
10630317011	SB07-2.5-3.0-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	34.1J	ug/kg	49.7	11/04/22 19:14	
10630317012	SB05-0.0-0.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	920	ug/kg	49.8	11/04/22 19:30	
10630317013	SB05-1.0-1.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	335	ug/kg	49.8	11/04/22 19:45	
10630317015	SB12-0.0-0.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	30800	ug/kg	2500	11/07/22 11:09	P6
10630317016	SB12D-0.0-0.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	38600	ug/kg	2450	11/07/22 12:28	
10630317017	SB12-1.0-1.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	2810	ug/kg	245	11/07/22 12:44	
10630317018	SB12-2.5-3.0-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	162	ug/kg	49.7	11/04/22 20:48	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630317

Method: EPA 8082A
Description: 8082A GCS PCB
Client: UPRR_Jacobs
Date: November 08, 2022

General Information:

18 samples were analyzed for EPA 8082A by Pace Analytical Services Minneapolis. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 851301

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s):
10630317001, 10630317009, 10630317015

P6: Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

- MS (Lab ID: 4501642)
 - PCB-1260 (Aroclor 1260)
- MS (Lab ID: 4501646)
 - PCB-1260 (Aroclor 1260)
- MSD (Lab ID: 4501643)
 - PCB-1260 (Aroclor 1260)
- MSD (Lab ID: 4501647)
 - PCB-1260 (Aroclor 1260)

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630317

Method: EPA 8082A

Description: 8082A GCS PCB

Client: UPRR_Jacobs

Date: November 08, 2022

Analyte Comments:

QC Batch: 851301

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- MS (Lab ID: 4501642)
 - PCB-1260 (Aroclor 1260)
- MS (Lab ID: 4501644)
 - PCB-1260 (Aroclor 1260)
- MS (Lab ID: 4501646)
 - PCB-1260 (Aroclor 1260)
- MSD (Lab ID: 4501643)
 - PCB-1260 (Aroclor 1260)
- MSD (Lab ID: 4501645)
 - PCB-1260 (Aroclor 1260)
- MSD (Lab ID: 4501647)
 - PCB-1260 (Aroclor 1260)

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630317

Sample: ISM04-0.0-0.2-1022 **Lab ID:** 10630317001 Collected: 10/18/22 09:45 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.0	ug/kg	49.7	21.0	1	11/03/22 13:44	11/04/22 14:14	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.3	ug/kg	49.7	34.3	1	11/03/22 13:44	11/04/22 14:14	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.4	ug/kg	49.7	29.4	1	11/03/22 13:44	11/04/22 14:14	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.7	ug/kg	49.7	30.7	1	11/03/22 13:44	11/04/22 14:14	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.4	ug/kg	49.7	25.4	1	11/03/22 13:44	11/04/22 14:14	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.8	ug/kg	49.7	24.8	1	11/03/22 13:44	11/04/22 14:14	11097-69-1	
PCB-1260 (Aroclor 1260)	11100	ug/kg	497	178	10	11/03/22 13:44	11/07/22 10:38	11096-82-5	P6
PCB-1262 (Aroclor 1262)	<32.7	ug/kg	49.7	32.7	1	11/03/22 13:44	11/04/22 14:14	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.9	ug/kg	49.7	23.9	1	11/03/22 13:44	11/04/22 14:14	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	100	%.	53-125		1	11/03/22 13:44	11/04/22 14:14	877-09-8	
Decachlorobiphenyl (S)	78	%.	41-125		1	11/03/22 13:44	11/04/22 14:14	2051-24-3	

Sample: ISM05-0.0-0.2-1022 **Lab ID:** 10630317002 Collected: 10/18/22 12:05 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.1	ug/kg	49.8	21.1	1	11/03/22 13:44	11/04/22 16:36	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.4	ug/kg	49.8	34.4	1	11/03/22 13:44	11/04/22 16:36	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.5	ug/kg	49.8	29.5	1	11/03/22 13:44	11/04/22 16:36	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.8	ug/kg	49.8	30.8	1	11/03/22 13:44	11/04/22 16:36	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.4	ug/kg	49.8	25.4	1	11/03/22 13:44	11/04/22 16:36	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.8	ug/kg	49.8	24.8	1	11/03/22 13:44	11/04/22 16:36	11097-69-1	
PCB-1260 (Aroclor 1260)	5880	ug/kg	249	89.0	5	11/03/22 13:44	11/08/22 07:37	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.8	ug/kg	49.8	32.8	1	11/03/22 13:44	11/04/22 16:36	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.9	ug/kg	49.8	23.9	1	11/03/22 13:44	11/04/22 16:36	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	101	%.	53-125		1	11/03/22 13:44	11/04/22 16:36	877-09-8	
Decachlorobiphenyl (S)	93	%.	41-125		1	11/03/22 13:44	11/04/22 16:36	2051-24-3	

Sample: SB10-0.0-0.5-1022 **Lab ID:** 10630317003 Collected: 10/18/22 11:15 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.4	ug/kg	48.1	20.4	1	11/03/22 13:44	11/04/22 16:52	12674-11-2	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630317

Sample: SB10-0.0-0.5-1022 **Lab ID: 10630317003** Collected: 10/18/22 11:15 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1221 (Aroclor 1221)	<33.2	ug/kg	48.1	33.2	1	11/03/22 13:44	11/04/22 16:52	11104-28-2	
PCB-1232 (Aroclor 1232)	<28.4	ug/kg	48.1	28.4	1	11/03/22 13:44	11/04/22 16:52	11141-16-5	
PCB-1242 (Aroclor 1242)	<29.7	ug/kg	48.1	29.7	1	11/03/22 13:44	11/04/22 16:52	53469-21-9	
PCB-1248 (Aroclor 1248)	<24.5	ug/kg	48.1	24.5	1	11/03/22 13:44	11/04/22 16:52	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.0	ug/kg	48.1	24.0	1	11/03/22 13:44	11/04/22 16:52	11097-69-1	
PCB-1260 (Aroclor 1260)	124000	ug/kg	4810	1720	100	11/03/22 13:44	11/07/22 11:41	11096-82-5	
PCB-1262 (Aroclor 1262)	<31.6	ug/kg	48.1	31.6	1	11/03/22 13:44	11/04/22 16:52	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.1	ug/kg	48.1	23.1	1	11/03/22 13:44	11/04/22 16:52	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	98	%.	53-125		1	11/03/22 13:44	11/04/22 16:52	877-09-8	
Decachlorobiphenyl (S)	94	%.	41-125		1	11/03/22 13:44	11/04/22 16:52	2051-24-3	

Sample: SB10-1.0-1.5-1022 **Lab ID: 10630317004** Collected: 10/18/22 11:20 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.1	ug/kg	49.8	21.1	1	11/03/22 13:44	11/04/22 17:08	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.4	ug/kg	49.8	34.4	1	11/03/22 13:44	11/04/22 17:08	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.5	ug/kg	49.8	29.5	1	11/03/22 13:44	11/04/22 17:08	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.8	ug/kg	49.8	30.8	1	11/03/22 13:44	11/04/22 17:08	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.4	ug/kg	49.8	25.4	1	11/03/22 13:44	11/04/22 17:08	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.8	ug/kg	49.8	24.8	1	11/03/22 13:44	11/04/22 17:08	11097-69-1	
PCB-1260 (Aroclor 1260)	35100	ug/kg	2490	890	50	11/03/22 13:44	11/07/22 11:57	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.8	ug/kg	49.8	32.8	1	11/03/22 13:44	11/04/22 17:08	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.9	ug/kg	49.8	23.9	1	11/03/22 13:44	11/04/22 17:08	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	102	%.	53-125		1	11/03/22 13:44	11/04/22 17:08	877-09-8	
Decachlorobiphenyl (S)	112	%.	41-125		1	11/03/22 13:44	11/04/22 17:08	2051-24-3	

Sample: SB10-2.5-3.0-1022 **Lab ID: 10630317005** Collected: 10/18/22 11:25 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.7	ug/kg	48.9	20.7	1	11/03/22 13:44	11/04/22 17:23	12674-11-2	
PCB-1221 (Aroclor 1221)	<33.8	ug/kg	48.9	33.8	1	11/03/22 13:44	11/04/22 17:23	11104-28-2	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630317

Sample: SB10-2.5-3.0-1022 **Lab ID: 10630317005** Collected: 10/18/22 11:25 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1232 (Aroclor 1232)	<28.9	ug/kg	48.9	28.9	1	11/03/22 13:44	11/04/22 17:23	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.3	ug/kg	48.9	30.3	1	11/03/22 13:44	11/04/22 17:23	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.0	ug/kg	48.9	25.0	1	11/03/22 13:44	11/04/22 17:23	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.4	ug/kg	48.9	24.4	1	11/03/22 13:44	11/04/22 17:23	11097-69-1	
PCB-1260 (Aroclor 1260)	305	ug/kg	48.9	17.5	1	11/03/22 13:44	11/04/22 17:23	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.2	ug/kg	48.9	32.2	1	11/03/22 13:44	11/04/22 17:23	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.5	ug/kg	48.9	23.5	1	11/03/22 13:44	11/04/22 17:23	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	104	%	53-125		1	11/03/22 13:44	11/04/22 17:23	877-09-8	
Decachlorobiphenyl (S)	85	%	41-125		1	11/03/22 13:44	11/04/22 17:23	2051-24-3	

Sample: SB09-0.0-0.5-1022 **Lab ID: 10630317006** Collected: 10/18/22 10:30 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.0	ug/kg	49.7	21.0	1	11/03/22 13:44	11/04/22 17:39	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.3	ug/kg	49.7	34.3	1	11/03/22 13:44	11/04/22 17:39	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.4	ug/kg	49.7	29.4	1	11/03/22 13:44	11/04/22 17:39	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.7	ug/kg	49.7	30.7	1	11/03/22 13:44	11/04/22 17:39	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.3	ug/kg	49.7	25.3	1	11/03/22 13:44	11/04/22 17:39	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.8	ug/kg	49.7	24.8	1	11/03/22 13:44	11/04/22 17:39	11097-69-1	
PCB-1260 (Aroclor 1260)	9440	ug/kg	497	177	10	11/03/22 13:44	11/07/22 12:12	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.7	ug/kg	49.7	32.7	1	11/03/22 13:44	11/04/22 17:39	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.9	ug/kg	49.7	23.9	1	11/03/22 13:44	11/04/22 17:39	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	106	%	53-125		1	11/03/22 13:44	11/04/22 17:39	877-09-8	
Decachlorobiphenyl (S)	98	%	41-125		1	11/03/22 13:44	11/04/22 17:39	2051-24-3	

Sample: SB09-1.0-1.5-1022 **Lab ID: 10630317007** Collected: 10/18/22 10:35 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.1	ug/kg	49.8	21.1	1	11/03/22 13:44	11/04/22 17:55	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.4	ug/kg	49.8	34.4	1	11/03/22 13:44	11/04/22 17:55	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.5	ug/kg	49.8	29.5	1	11/03/22 13:44	11/04/22 17:55	11141-16-5	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630317

Sample: SB09-1.0-1.5-1022 **Lab ID: 10630317007** Collected: 10/18/22 10:35 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1242 (Aroclor 1242)	<30.8	ug/kg	49.8	30.8	1	11/03/22 13:44	11/04/22 17:55	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.4	ug/kg	49.8	25.4	1	11/03/22 13:44	11/04/22 17:55	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.8	ug/kg	49.8	24.8	1	11/03/22 13:44	11/04/22 17:55	11097-69-1	
PCB-1260 (Aroclor 1260)	893	ug/kg	49.8	17.8	1	11/03/22 13:44	11/04/22 17:55	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.8	ug/kg	49.8	32.8	1	11/03/22 13:44	11/04/22 17:55	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.9	ug/kg	49.8	23.9	1	11/03/22 13:44	11/04/22 17:55	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	101	%.	53-125		1	11/03/22 13:44	11/04/22 17:55	877-09-8	
Decachlorobiphenyl (S)	95	%.	41-125		1	11/03/22 13:44	11/04/22 17:55	2051-24-3	

Sample: SB09-2.5-3.0-1022 **Lab ID: 10630317008** Collected: 10/18/22 10:40 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.0	ug/kg	49.6	21.0	1	11/03/22 13:44	11/04/22 18:11	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.2	ug/kg	49.6	34.2	1	11/03/22 13:44	11/04/22 18:11	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.3	ug/kg	49.6	29.3	1	11/03/22 13:44	11/04/22 18:11	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.7	ug/kg	49.6	30.7	1	11/03/22 13:44	11/04/22 18:11	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.3	ug/kg	49.6	25.3	1	11/03/22 13:44	11/04/22 18:11	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.7	ug/kg	49.6	24.7	1	11/03/22 13:44	11/04/22 18:11	11097-69-1	
PCB-1260 (Aroclor 1260)	226	ug/kg	49.6	17.7	1	11/03/22 13:44	11/04/22 18:11	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.6	ug/kg	49.6	32.6	1	11/03/22 13:44	11/04/22 18:11	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.8	ug/kg	49.6	23.8	1	11/03/22 13:44	11/04/22 18:11	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	97	%.	53-125		1	11/03/22 13:44	11/04/22 18:11	877-09-8	
Decachlorobiphenyl (S)	90	%.	41-125		1	11/03/22 13:44	11/04/22 18:11	2051-24-3	

Sample: SB07-0.0-0.5-1022 **Lab ID: 10630317009** Collected: 10/18/22 09:00 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.0	ug/kg	49.6	21.0	1	11/03/22 13:44	11/04/22 15:01	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.2	ug/kg	49.6	34.2	1	11/03/22 13:44	11/04/22 15:01	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.3	ug/kg	49.6	29.3	1	11/03/22 13:44	11/04/22 15:01	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.7	ug/kg	49.6	30.7	1	11/03/22 13:44	11/04/22 15:01	53469-21-9	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630317

Sample: SB07-0.0-0.5-1022 **Lab ID: 10630317009** Collected: 10/18/22 09:00 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1248 (Aroclor 1248)	<25.3	ug/kg	49.6	25.3	1	11/03/22 13:44	11/04/22 15:01	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.7	ug/kg	49.6	24.7	1	11/03/22 13:44	11/04/22 15:01	11097-69-1	
PCB-1260 (Aroclor 1260)	1850	ug/kg	49.6	17.7	1	11/03/22 13:44	11/04/22 15:01	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.6	ug/kg	49.6	32.6	1	11/03/22 13:44	11/04/22 15:01	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.8	ug/kg	49.6	23.8	1	11/03/22 13:44	11/04/22 15:01	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	101	%	53-125		1	11/03/22 13:44	11/04/22 15:01	877-09-8	
Decachlorobiphenyl (S)	101	%	41-125		1	11/03/22 13:44	11/04/22 15:01	2051-24-3	

Sample: SB07-1.0-1.5-1022 **Lab ID: 10630317010** Collected: 10/18/22 09:05 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.4	ug/kg	48.2	20.4	1	11/03/22 13:44	11/04/22 18:58	12674-11-2	
PCB-1221 (Aroclor 1221)	<33.3	ug/kg	48.2	33.3	1	11/03/22 13:44	11/04/22 18:58	11104-28-2	
PCB-1232 (Aroclor 1232)	<28.5	ug/kg	48.2	28.5	1	11/03/22 13:44	11/04/22 18:58	11141-16-5	
PCB-1242 (Aroclor 1242)	<29.8	ug/kg	48.2	29.8	1	11/03/22 13:44	11/04/22 18:58	53469-21-9	
PCB-1248 (Aroclor 1248)	<24.6	ug/kg	48.2	24.6	1	11/03/22 13:44	11/04/22 18:58	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.0	ug/kg	48.2	24.0	1	11/03/22 13:44	11/04/22 18:58	11097-69-1	
PCB-1260 (Aroclor 1260)	178	ug/kg	48.2	17.2	1	11/03/22 13:44	11/04/22 18:58	11096-82-5	
PCB-1262 (Aroclor 1262)	<31.7	ug/kg	48.2	31.7	1	11/03/22 13:44	11/04/22 18:58	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.1	ug/kg	48.2	23.1	1	11/03/22 13:44	11/04/22 18:58	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	95	%	53-125		1	11/03/22 13:44	11/04/22 18:58	877-09-8	
Decachlorobiphenyl (S)	96	%	41-125		1	11/03/22 13:44	11/04/22 18:58	2051-24-3	

Sample: SB07-2.5-3.0-1022 **Lab ID: 10630317011** Collected: 10/18/22 09:10 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.0	ug/kg	49.7	21.0	1	11/03/22 13:44	11/04/22 19:14	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.3	ug/kg	49.7	34.3	1	11/03/22 13:44	11/04/22 19:14	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.4	ug/kg	49.7	29.4	1	11/03/22 13:44	11/04/22 19:14	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.7	ug/kg	49.7	30.7	1	11/03/22 13:44	11/04/22 19:14	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.3	ug/kg	49.7	25.3	1	11/03/22 13:44	11/04/22 19:14	12672-29-6	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630317

Sample: SB07-2.5-3.0-1022 **Lab ID: 10630317011** Collected: 10/18/22 09:10 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1254 (Aroclor 1254)	<24.8	ug/kg	49.7	24.8	1	11/03/22 13:44	11/04/22 19:14	11097-69-1	
PCB-1260 (Aroclor 1260)	34.1J	ug/kg	49.7	17.7	1	11/03/22 13:44	11/04/22 19:14	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.7	ug/kg	49.7	32.7	1	11/03/22 13:44	11/04/22 19:14	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.9	ug/kg	49.7	23.9	1	11/03/22 13:44	11/04/22 19:14	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	98	%.	53-125		1	11/03/22 13:44	11/04/22 19:14	877-09-8	
Decachlorobiphenyl (S)	102	%.	41-125		1	11/03/22 13:44	11/04/22 19:14	2051-24-3	

Sample: SB05-0.0-0.5-1022 **Lab ID: 10630317012** Collected: 10/18/22 08:30 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.1	ug/kg	49.8	21.1	1	11/03/22 13:44	11/04/22 19:30	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.4	ug/kg	49.8	34.4	1	11/03/22 13:44	11/04/22 19:30	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.4	ug/kg	49.8	29.4	1	11/03/22 13:44	11/04/22 19:30	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.8	ug/kg	49.8	30.8	1	11/03/22 13:44	11/04/22 19:30	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.4	ug/kg	49.8	25.4	1	11/03/22 13:44	11/04/22 19:30	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.8	ug/kg	49.8	24.8	1	11/03/22 13:44	11/04/22 19:30	11097-69-1	
PCB-1260 (Aroclor 1260)	920	ug/kg	49.8	17.8	1	11/03/22 13:44	11/04/22 19:30	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.7	ug/kg	49.8	32.7	1	11/03/22 13:44	11/04/22 19:30	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.9	ug/kg	49.8	23.9	1	11/03/22 13:44	11/04/22 19:30	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	102	%.	53-125		1	11/03/22 13:44	11/04/22 19:30	877-09-8	
Decachlorobiphenyl (S)	95	%.	41-125		1	11/03/22 13:44	11/04/22 19:30	2051-24-3	

Sample: SB05-1.0-1.5-1022 **Lab ID: 10630317013** Collected: 10/18/22 08:35 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.1	ug/kg	49.8	21.1	1	11/03/22 13:44	11/04/22 19:45	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.4	ug/kg	49.8	34.4	1	11/03/22 13:44	11/04/22 19:45	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.4	ug/kg	49.8	29.4	1	11/03/22 13:44	11/04/22 19:45	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.8	ug/kg	49.8	30.8	1	11/03/22 13:44	11/04/22 19:45	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.4	ug/kg	49.8	25.4	1	11/03/22 13:44	11/04/22 19:45	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.8	ug/kg	49.8	24.8	1	11/03/22 13:44	11/04/22 19:45	11097-69-1	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630317

Sample: SB05-1.0-1.5-1022 **Lab ID: 10630317013** Collected: 10/18/22 08:35 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1260 (Aroclor 1260)	335	ug/kg	49.8	17.8	1	11/03/22 13:44	11/04/22 19:45	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.7	ug/kg	49.8	32.7	1	11/03/22 13:44	11/04/22 19:45	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.9	ug/kg	49.8	23.9	1	11/03/22 13:44	11/04/22 19:45	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	98	%.	53-125		1	11/03/22 13:44	11/04/22 19:45	877-09-8	
Decachlorobiphenyl (S)	96	%.	41-125		1	11/03/22 13:44	11/04/22 19:45	2051-24-3	

Sample: SB05-2.5-3.0-1022 **Lab ID: 10630317014** Collected: 10/18/22 08:40 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.0	ug/kg	49.5	21.0	1	11/03/22 13:44	11/04/22 20:01	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.2	ug/kg	49.5	34.2	1	11/03/22 13:44	11/04/22 20:01	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.3	ug/kg	49.5	29.3	1	11/03/22 13:44	11/04/22 20:01	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.6	ug/kg	49.5	30.6	1	11/03/22 13:44	11/04/22 20:01	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.3	ug/kg	49.5	25.3	1	11/03/22 13:44	11/04/22 20:01	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.7	ug/kg	49.5	24.7	1	11/03/22 13:44	11/04/22 20:01	11097-69-1	
PCB-1260 (Aroclor 1260)	<17.7	ug/kg	49.5	17.7	1	11/03/22 13:44	11/04/22 20:01	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.6	ug/kg	49.5	32.6	1	11/03/22 13:44	11/04/22 20:01	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.8	ug/kg	49.5	23.8	1	11/03/22 13:44	11/04/22 20:01	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	83	%.	53-125		1	11/03/22 13:44	11/04/22 20:01	877-09-8	
Decachlorobiphenyl (S)	84	%.	41-125		1	11/03/22 13:44	11/04/22 20:01	2051-24-3	

Sample: SB12-0.0-0.5-1022 **Lab ID: 10630317015** Collected: 10/18/22 12:30 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.1	ug/kg	49.9	21.1	1	11/03/22 13:44	11/04/22 15:49	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.5	ug/kg	49.9	34.5	1	11/03/22 13:44	11/04/22 15:49	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.5	ug/kg	49.9	29.5	1	11/03/22 13:44	11/04/22 15:49	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.9	ug/kg	49.9	30.9	1	11/03/22 13:44	11/04/22 15:49	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.5	ug/kg	49.9	25.5	1	11/03/22 13:44	11/04/22 15:49	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.9	ug/kg	49.9	24.9	1	11/03/22 13:44	11/04/22 15:49	11097-69-1	
PCB-1260 (Aroclor 1260)	30800	ug/kg	2500	892	50	11/03/22 13:44	11/07/22 11:09	11096-82-5	P6

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630317

Sample: SB12-0.0-0.5-1022 **Lab ID: 10630317015** Collected: 10/18/22 12:30 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1262 (Aroclor 1262)	<32.8	ug/kg	49.9	32.8	1	11/03/22 13:44	11/04/22 15:49	37324-23-5	
PCB-1268 (Aroclor 1268)	<24.0	ug/kg	49.9	24.0	1	11/03/22 13:44	11/04/22 15:49	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	88	%.	53-125		1	11/03/22 13:44	11/04/22 15:49	877-09-8	
Decachlorobiphenyl (S)	91	%.	41-125		1	11/03/22 13:44	11/04/22 15:49	2051-24-3	

Sample: SB12D-0.0-0.5-1022 **Lab ID: 10630317016** Collected: 10/18/22 12:35 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.8	ug/kg	49.0	20.8	1	11/03/22 13:44	11/04/22 20:17	12674-11-2	
PCB-1221 (Aroclor 1221)	<33.9	ug/kg	49.0	33.9	1	11/03/22 13:44	11/04/22 20:17	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.0	ug/kg	49.0	29.0	1	11/03/22 13:44	11/04/22 20:17	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.3	ug/kg	49.0	30.3	1	11/03/22 13:44	11/04/22 20:17	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.0	ug/kg	49.0	25.0	1	11/03/22 13:44	11/04/22 20:17	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.4	ug/kg	49.0	24.4	1	11/03/22 13:44	11/04/22 20:17	11097-69-1	
PCB-1260 (Aroclor 1260)	38600	ug/kg	2450	876	50	11/03/22 13:44	11/07/22 12:28	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.2	ug/kg	49.0	32.2	1	11/03/22 13:44	11/04/22 20:17	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.6	ug/kg	49.0	23.6	1	11/03/22 13:44	11/04/22 20:17	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	95	%.	53-125		1	11/03/22 13:44	11/04/22 20:17	877-09-8	
Decachlorobiphenyl (S)	98	%.	41-125		1	11/03/22 13:44	11/04/22 20:17	2051-24-3	

Sample: SB12-1.0-1.5-1022 **Lab ID: 10630317017** Collected: 10/18/22 12:40 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.7	ug/kg	48.9	20.7	1	11/03/22 13:44	11/04/22 20:33	12674-11-2	
PCB-1221 (Aroclor 1221)	<33.8	ug/kg	48.9	33.8	1	11/03/22 13:44	11/04/22 20:33	11104-28-2	
PCB-1232 (Aroclor 1232)	<28.9	ug/kg	48.9	28.9	1	11/03/22 13:44	11/04/22 20:33	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.3	ug/kg	48.9	30.3	1	11/03/22 13:44	11/04/22 20:33	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.0	ug/kg	48.9	25.0	1	11/03/22 13:44	11/04/22 20:33	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.4	ug/kg	48.9	24.4	1	11/03/22 13:44	11/04/22 20:33	11097-69-1	
PCB-1260 (Aroclor 1260)	2810	ug/kg	245	87.4	5	11/03/22 13:44	11/07/22 12:44	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.2	ug/kg	48.9	32.2	1	11/03/22 13:44	11/04/22 20:33	37324-23-5	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630317

Sample: SB12-1.0-1.5-1022 **Lab ID: 10630317017** Collected: 10/18/22 12:40 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1268 (Aroclor 1268)	<23.5	ug/kg	48.9	23.5	1	11/03/22 13:44	11/04/22 20:33	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	88	%.	53-125		1	11/03/22 13:44	11/04/22 20:33	877-09-8	
Decachlorobiphenyl (S)	98	%.	41-125		1	11/03/22 13:44	11/04/22 20:33	2051-24-3	

Sample: SB12-2.5-3.0-1022 **Lab ID: 10630317018** Collected: 10/18/22 12:45 Received: 10/19/22 10:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.0	ug/kg	49.7	21.0	1	11/03/22 13:44	11/04/22 20:48	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.3	ug/kg	49.7	34.3	1	11/03/22 13:44	11/04/22 20:48	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.4	ug/kg	49.7	29.4	1	11/03/22 13:44	11/04/22 20:48	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.7	ug/kg	49.7	30.7	1	11/03/22 13:44	11/04/22 20:48	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.4	ug/kg	49.7	25.4	1	11/03/22 13:44	11/04/22 20:48	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.8	ug/kg	49.7	24.8	1	11/03/22 13:44	11/04/22 20:48	11097-69-1	
PCB-1260 (Aroclor 1260)	162	ug/kg	49.7	17.8	1	11/03/22 13:44	11/04/22 20:48	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.7	ug/kg	49.7	32.7	1	11/03/22 13:44	11/04/22 20:48	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.9	ug/kg	49.7	23.9	1	11/03/22 13:44	11/04/22 20:48	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	83	%.	53-125		1	11/03/22 13:44	11/04/22 20:48	877-09-8	
Decachlorobiphenyl (S)	90	%.	41-125		1	11/03/22 13:44	11/04/22 20:48	2051-24-3	

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QUALITY CONTROL DATA

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630317

QC Batch:	851301	Analysis Method:	EPA 8082A
QC Batch Method:	EPA 3546	Analysis Description:	8082A GCS PCB
		Laboratory:	Pace Analytical Services - Minneapolis
Associated Lab Samples:	10630317001, 10630317002, 10630317003, 10630317004, 10630317005, 10630317006, 10630317007, 10630317008, 10630317009, 10630317010, 10630317011, 10630317012, 10630317013, 10630317014, 10630317015, 10630317016, 10630317017, 10630317018		

METHOD BLANK:	4501640	Matrix:	Solid
Associated Lab Samples:	10630317001, 10630317002, 10630317003, 10630317004, 10630317005, 10630317006, 10630317007, 10630317008, 10630317009, 10630317010, 10630317011, 10630317012, 10630317013, 10630317014, 10630317015, 10630317016, 10630317017, 10630317018		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<21.2	50.0	21.2	11/04/22 13:43	
PCB-1221 (Aroclor 1221)	ug/kg	<34.5	50.0	34.5	11/04/22 13:43	
PCB-1232 (Aroclor 1232)	ug/kg	<29.6	50.0	29.6	11/04/22 13:43	
PCB-1242 (Aroclor 1242)	ug/kg	<30.9	50.0	30.9	11/04/22 13:43	
PCB-1248 (Aroclor 1248)	ug/kg	<25.5	50.0	25.5	11/04/22 13:43	
PCB-1254 (Aroclor 1254)	ug/kg	<24.9	50.0	24.9	11/04/22 13:43	
PCB-1260 (Aroclor 1260)	ug/kg	<17.8	50.0	17.8	11/04/22 13:43	
PCB-1262 (Aroclor 1262)	ug/kg	<32.8	50.0	32.8	11/04/22 13:43	
PCB-1268 (Aroclor 1268)	ug/kg	<24.0	50.0	24.0	11/04/22 13:43	
Decachlorobiphenyl (S)	%	105	41-125		11/04/22 13:43	
Tetrachloro-m-xylene (S)	%	99	53-125		11/04/22 13:43	

LABORATORY CONTROL SAMPLE: 4501641

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	1000	1020	102	68-125	
PCB-1260 (Aroclor 1260)	ug/kg	1000	1030	103	70-125	
Decachlorobiphenyl (S)	%			108	41-125	
Tetrachloro-m-xylene (S)	%			96	53-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4501642 4501643

Parameter	Units	10630317001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<21.0	997	993	1060	1040	106	104	53-125	2	30	
PCB-1260 (Aroclor 1260)	ug/kg	11100	997	993	9580	8450	-156	-271	30-143	13	30	E,P6
Decachlorobiphenyl (S)	%						82	80	41-125			
Tetrachloro-m-xylene (S)	%						108	104	53-125			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630317

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:												
4501644					4501645							
Parameter	Units	10630317009	MS	MSD	MS	MSD	MS	MSD	% Rec	RPD	Max	Qual
		Result	Spike	Spike								
PCB-1016 (Aroclor 1016)	ug/kg	<21.0	960	1000	1040	1040	108	104	53-125	1	30	
PCB-1260 (Aroclor 1260)	ug/kg	1850	960	1000	2600	2680	79	84	30-143	3	30	E
Decachlorobiphenyl (S)	%						103	102	41-125			
Tetrachloro-m-xylene (S)	%						102	103	53-125			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:											
4501646					4501647						
Parameter	Units	10630317015	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Spike	Spike							
PCB-1016 (Aroclor 1016)	ug/kg	<21.1	985	996	924	1020	94	102	53-125	10	30
PCB-1260 (Aroclor 1260)	ug/kg	30800	985	996	25700	26100	-523	-471	30-143	2	30 E,P6
Decachlorobiphenyl (S)	%						91	92	41-125		
Tetrachloro-m-xylene (S)	%						88	91	53-125		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALIFIERS

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630317

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E Analyte concentration exceeded the calibration range. The reported result is estimated.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630317

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10630317001	ISM04-0.0-0.2-1022	EPA 3546	851301	EPA 8082A	851450
10630317002	ISM05-0.0-0.2-1022	EPA 3546	851301	EPA 8082A	851450
10630317003	SB10-0.0-0.5-1022	EPA 3546	851301	EPA 8082A	851450
10630317004	SB10-1.0-1.5-1022	EPA 3546	851301	EPA 8082A	851450
10630317005	SB10-2.5-3.0-1022	EPA 3546	851301	EPA 8082A	851450
10630317006	SB09-0.0-0.5-1022	EPA 3546	851301	EPA 8082A	851450
10630317007	SB09-1.0-1.5-1022	EPA 3546	851301	EPA 8082A	851450
10630317008	SB09-2.5-3.0-1022	EPA 3546	851301	EPA 8082A	851450
10630317009	SB07-0.0-0.5-1022	EPA 3546	851301	EPA 8082A	851450
10630317010	SB07-1.0-1.5-1022	EPA 3546	851301	EPA 8082A	851450
10630317011	SB07-2.5-3.0-1022	EPA 3546	851301	EPA 8082A	851450
10630317012	SB05-0.0-0.5-1022	EPA 3546	851301	EPA 8082A	851450
10630317013	SB05-1.0-1.5-1022	EPA 3546	851301	EPA 8082A	851450
10630317014	SB05-2.5-3.0-1022	EPA 3546	851301	EPA 8082A	851450
10630317015	SB12-0.0-0.5-1022	EPA 3546	851301	EPA 8082A	851450
10630317016	SB12D-0.0-0.5-1022	EPA 3546	851301	EPA 8082A	851450
10630317017	SB12-1.0-1.5-1022	EPA 3546	851301	EPA 8082A	851450
10630317018	SB12-2.5-3.0-1022	EPA 3546	851301	EPA 8082A	851450

REPORT OF LABORATORY ANALYSIS

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44253350

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>.

Page : 1 of 2

Invoice Information:

Attention:	John DeJong
Company Name:	UPRR
Address:	4315 E Sprague Ave, Spokane Valley, WA 99212
Pace Quote:	4700001441 (MA-000166-2022)
Pace Project Manager:	jennifer.gross@pacelabs.com,
Pace Profile #:	45173

OR / Portland - Multnomah County

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Include 1262 & 1268	Jadyn Warren / Jacobs	10/18/22	1400				
Methods 8082 & 1668 - Require chromatograms	Fedex	10/19/22	1000	Samy Gall	10/19/22	1000	
Pack							

TEMP in C

Received on

 (N/N)

Custody

Sealed

Cooler
 $\propto m^n$

Sample

untact
samples

Page 21 of 62

4053359

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>.

Page : 2 Of 2

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	Page: 2 Of 2
Company: Jacobs for UPRR	Report To: Hodson, David	Attention: John DeJong	Regulatory Agency State of Oregon OR / Portland - Multnomah County
Address: 2020 SW 4th Avenue, Suite 300	Copy To:	Company Name: UPRR	
Portland, OR 97201		Address: 4315 E Sprague Ave, Spokane Valley, WA 99212	
Email: david.hodson@jacobs.com	Purchase Order #: 2903-01	Pace Quote: 4700001441 (MA-000166-2022)	
Phone: (510)316-2323 Fax:	Project Name: Portland OR-Peninsula Iron Works	Pace Project Manager: jennifer.gross@pacelabs.com,	
Requested Due Date:	Project #:	Pace Project #: 45173	

[illegible]

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Include 1262 & 1268	Bridyn Warren / Jacobs	11/1/22	1900				
Methods 8082 & 1668 - Require chromatograms	Fedex	6/19/22	1000	Sam Jones	6/9/22	1000	
Patient							

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER: Jacklyn Warren					
SIGNATURE of SAMPLER: 	DATE Signed: 10/18/22				

Effective Date: 8/16/2022

Client Name: Pace MW

Sample Preservation Receipt Form

Project # 10253359

All containers needing preservation have been checked and noted below:

☐ Yes☐ No☒ N/A

Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Initial when
completed:Date/
Time:

Pace Lab #	Glass						Plastic						Vials					Jars				General				VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JG9U	JG9U	WGFU	WPFU	SP5T	ZPLC	GN 1	GN 2					
001																																2.5 / 5
002																																2.5 / 5
003																																2.5 / 5
004																																2.5 / 5
005																																2.5 / 5
006																																2.5 / 5
007																																2.5 / 5
008																																2.5 / 5
009																																2.5 / 5
010																																2.5 / 5
011																																2.5 / 5
012																																2.5 / 5
013																																2.5 / 5
014																																2.5 / 5
015																																2.5 / 5
016																																2.5 / 5
017																																2.5 / 5
018																																2.5 / 5
019																																2.5 / 5
020																																2.5 / 5

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other:

Headspace in VOA Vials (>6mm): ☐ Yes ☐ No ☒ N/A

*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of 3

Sample Condition Upon Receipt Form (SCUR)

Client Name: PALE mn

Project # LH253359

Additional Comments/Resolution: _____

① SB-10-1.0-1.5-1022

SB-10-2.5-3.0-1022

SB12-0.0-0.5-1022

SB12-1.0-1.5-1022

SB12D-0.0-0.5-1022

SB10-0.0-0.5-1022

① Samples have melt water in them

Sample Condition Upon Receipt Form (SCUR)

Project #:

Client Name: Pace MN

Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco
☐ Client ☐ Pace Other: _____

Tracking #: 5923 7141 9830 ①

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other _____

Thermometer Used SR - 9 Type of Ice: Wet Blue Dry None ☐ Meltwater Only

Cooler Temperature Uncorr: 3 / Corr: 3.5 ②

Temp Blank Present: ☒ yes ☐ no

Biological Tissue is Frozen: ☐ yes ☐ no

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:

Date: 10/19/22 Initials: SB

Labeled By Initials: NK

Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☒ Yes ☐ No ☐ N/A	2.
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC:	☐ Yes ☐ No ☒ N/A	4. <u>IRWD</u> <u>10/19/22 SB</u>
Samples Arrived within Hold Time:	☒ Yes ☐ No	5.
- DI VOA Samples frozen upon receipt	☐ Yes ☐ No	Date/Time:
Short Hold Time Analysis (<72hr):	☐ Yes ☒ No	6.
Rush Turn Around Time Requested:	☐ Yes ☒ No	7.
Sufficient Volume:		8.
For Analysis: ☒ Yes ☐ No MS/MSD: ☒ Yes ☐ No ☐ N/A		
Correct Containers Used:	☒ Yes ☐ No	9.
Correct Type: Pace Green Bay, Pace IR, <u>Non-Pace</u>		
Containers Intact:	☐ Yes ☒ No	10. <u>See other SCUR page</u> <u>10/19/22 SB</u>
Filtered volume received for Dissolved tests	☐ Yes ☐ No ☒ N/A	11.
Sample Labels match COC:	☒ Yes ☐ No ☐ N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>S</u>		
Trip Blank Present:	☐ Yes ☐ No ☒ N/A	13.
Trip Blank Custody Seals Present	☐ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted: David Hodson

Date/Time: 10/19/22

Comments/ Resolution: ① other tracking #s 5923 7141 9829, 5923 7141 9807, 5923 7141 9818

② other temps in order according to ①: 2.5 → 3, 0.5 → 2, 1 → 1.5
Client notified of samples received with holes in the bags and ice melt in the samples. Lab instructed to proceed with prep and analysis on all samples. JMG

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logir

Page 2 of 3

Internal Transfer Chain of Custody

40253359



☒ Samples Pre-Logged into eCOC.

State Of Origin: OR

Cert. Needed: ☐ Yes ☐ No

Workorder: 10630317 Workorder Name: Portland OR-Peninsula Iron Wor

Owner Received Date: 10/19/2022 Results Requested By: 10/28/2022

Report To:		Subcontract To:		Requested Analysis:					
Jennifer Gross Pace Analytical Minnesota 1700 Elm Street Minneapolis, MN 55414 Phone (612)607-1700		Pace Analytical Green Bay 1241 Bellevue Street Suite 9 Green Bay, WI 54302 Phone (920)469-2436		WO#: 10630317 10630317					
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	MTSC / ISM (50 Increments) (PACE-)	MTSC / Sieving (<2mm) (PACE-GB)	LAB USE ONLY
1	ISM04-0.0-0.2-1022	RQS	10/18/2022 09:45	10630317001	Solid	1	X		001
2	ISM05-0.0-0.2-1022	PS	10/18/2022 12:05	10630317002	Solid	1	X		002
3	SB10-0.0-0.5-1022	PS	10/18/2022 11:15	10630317003	Solid	1		X	003
4	SB10-1.0-1.5-1022	PS	10/18/2022 11:20	10630317004	Solid	1		X	004
5	SB10-2.5-3.0-1022	PS	10/18/2022 11:25	10630317005	Solid	1		X	005
6	SB09-0.0-0.5-1022	PS	10/18/2022 10:30	10630317006	Solid	1		X	006
7	SB09-1.0-1.5-1022	PS	10/18/2022 10:35	10630317007	Solid	1		X	007
8	SB09-2.5-3.0-1022	PS	10/18/2022 10:40	10630317008	Solid	1		X	008
9	SB07-0.0-0.5-1022	RQS	10/18/2022 09:00	10630317009	Solid	1		X	009
10	SB07-1.0-1.5-1022	PS	10/18/2022 09:05	10630317010	Solid	1		X	010
11	SB07-2.5-3.0-1022	PS	10/18/2022 09:10	10630317011	Solid	1		X	011
12	SB05-0.0-0.5-1022	PS	10/18/2022 08:30	10630317012	Solid	1		X	012
13	SB05-1.0-1.5-1022	PS	10/18/2022 08:35	10630317013	Solid	1		X	013
14	SB05-2.5-3.0-1022	PS	10/18/2022 08:40	10630317014	Solid	1		X	014
15	SB12-0.0-0.5-1022	RQS	10/18/2022 12:30	10630317015	Solid	1		X	015
16	SB12D-0.0-0.5-1022	PS	10/18/2022 12:35	10630317016	Solid	1		X	016
17	SB12-1.0-1.5-1022	PS	10/18/2022 12:40	10630317017	Solid	1		X	017
18	SB12-2.5-3.0-1022	PS	10/18/2022 12:45	10630317018	Solid	1		X	018

41253359

					Comments
Transfers	Released By	Date/Time	Received By	Date/Time	
1	Feder	10/19/22 1800	Sym	10/19/22 1800	Forward prepped volume to Pace Mnpls, methods 8082 & possibly 1668.
2	Tamm	11/11/22 1700			Hold all additional volume for six months.
3					
Cooler Temperature on Receipt 3.5, 25°C		Custody Seal Y or N		Received on Ice Y or N	Samples Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

0.4, 1.4, 7.2, 10.9

M Pau

15:30

WMM

Forwarding all Volume that was
Sieved.

ISM sample is 403 jms.

Car 11/1/22

DC#_Title: ENV-FRM-MIN4-0150 v10_Sample Condition Upon Receipt (SCUR)

Effective Date:

Sample Condition
Upon Receipt

Client Name:

Project #:

WO#: 10630317

PM: JMG

Due Date: 11/16/22

CLIENT: UPRR_Jacobs

Courier: ☐ FedEx ☐ UPS ☐ USPS ☐ Client☐ Pace ☐ Speedee ☒ Commercial *Walter*☐ See Exceptions

Tracking Number: _____ ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ NoBiological Tissue Frozen? ☐ Yes ☐ No ☒ N/APacking Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ OtherTemp Blank? ☒ Yes ☐ NoThermometer: ☐ T1 (0461) ☐ T2 (1336) ☒ T3 (0459) ☐ T4 (0254) ☐ T5 (0178)Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☐ None☐ T6 (0235) ☐ T7 (0042) ☐ T8 (0775) ☐ 01339252/1710☐ MeltedDid Samples Originate in West Virginia? ☐ Yes ☐ NoWere All Container Temps Taken? ☐ Yes ☐ No ☐ N/A

Temp should be above freezing to 6 °C

Cooler temp Read w/Temp Blanks: *04.14.22 0.9*

Average Corrected Temp

(no temp blank only): _____ °C

Correction Factor: *1.00* Cooler Temp Corrected w/temp blank: *04.14.22 0.9*☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 ContainerUSDA Regulated Soil: ☐ N/A, water sample/other: _____Date/Initials of Person Examining Contents: *01/12/22*Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? ☐ Yes ☒ NoDid samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

Location (Check one): ☐ Duluth ☒ Minneapolis ☐ Virginia	COMMENTS
Chain of Custody Present and Filled Out?	1. ☒ Yes ☐ No
Chain of Custody Relinquished?	2. ☒ Yes ☐ No
Sampler Name and/or Signature on COC?	3. ☒ Yes ☐ No ☒ N/A
Samples Arrived within Hold Time?	4. If fecal: ☐ <8 hrs ☐ >8 hr, <24 ☐ No
Short Hold Time Analysis (<72 hr)?	5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E.coli ☐ BOD/cBOD ☐ Hex Chrom ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	6. <i>late</i>
Sufficient Sample Volume?	7. ☒ Yes ☐ No
Correct Containers Used?	8. ☒ Yes ☐ No ☐ N/A
-Pace Containers Used?	9. ☐ Yes ☒ No
Containers Intact?	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Field Filtered Volume Received for Dissolved Tests?	11. If no, write ID/Date/Time of container below: ☐ See Exceptions ENV-FRM-MIN4-0142
Is sufficient information available to reconcile the samples to the COC? Matrix: ☐ Water ☒ Soil ☐ Oil ☐ Other	12. Sample # ☐ NaOH ☐ HNO3 ☐ H2SO4 ☐ Zinc Acetate Positive for Residual Chlorine? ☐ Yes ☐ No ☐ See Exceptions ENV-FRM-MIN4-0142 pH Paper Lot # Residual Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
All containers needing acid/base preservation have been checked?	13. ☐ Yes ☐ No ☒ N/A
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH >10 Cyanide)	14. ☐ Yes ☐ No ☒ N/A
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS (*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)	15. ☐ Yes ☐ No ☒ N/A
Headspace in Methyl Mercury Container?	16. ☐ Yes ☐ No ☒ N/A
Extra labels present on soil VOA or WIDRO containers?	17. ☐ Yes ☐ No ☒ N/A
Headspace in VOA Vials (greater than 6mm)?	18. ☐ Yes ☐ No ☒ N/A
3 Trip Blanks Present?	19. ☐ Yes ☐ No ☒ N/A
Trip Blank Custody Seals Present?	20. ☐ Yes ☐ No ☒ N/A

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: _____

Date/Time: _____

Comments/Resolution: _____

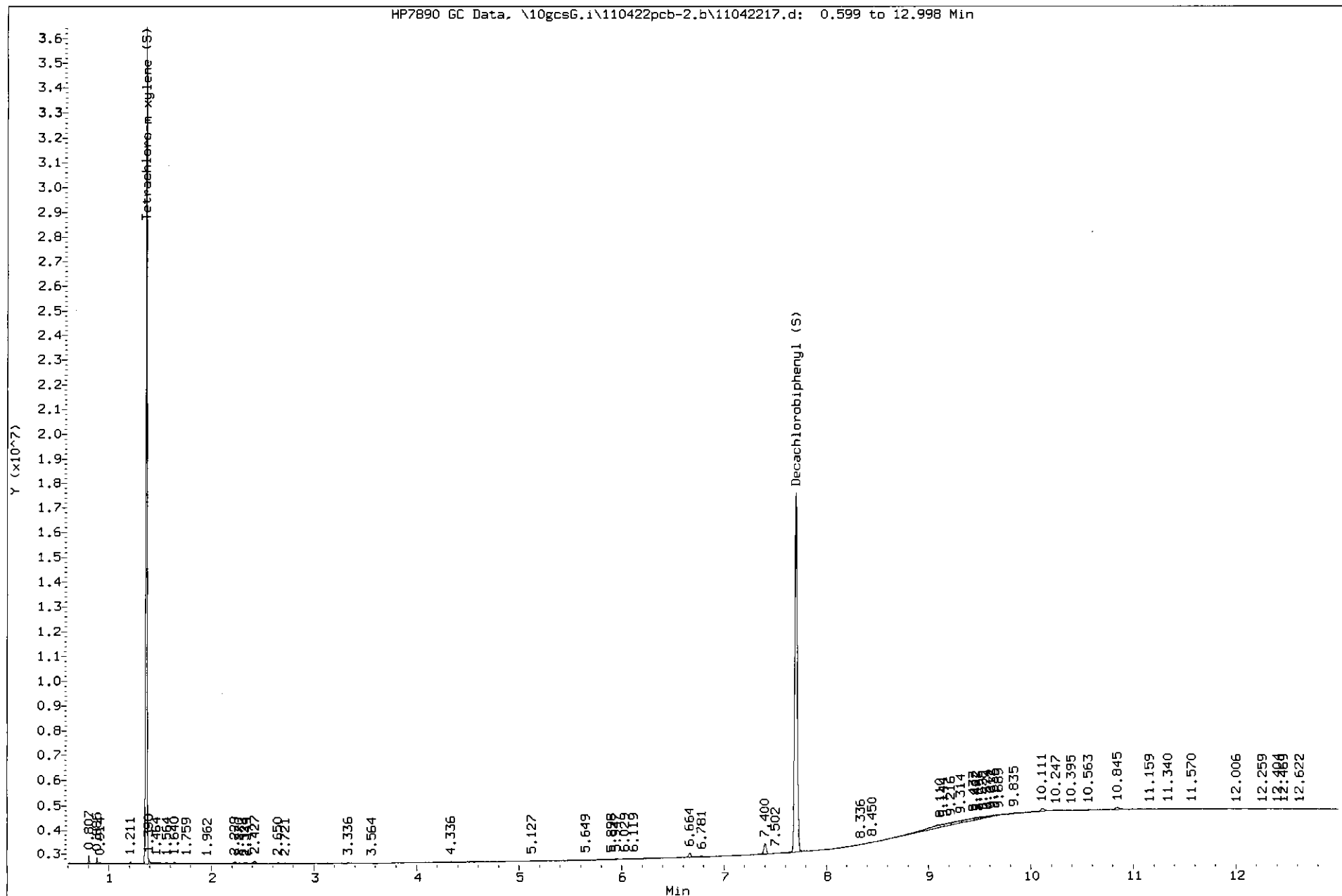
Field Data Required? ☐ Yes ☐ NoProject Manager Review: *Jenni Gross*

Date: 11/2/22

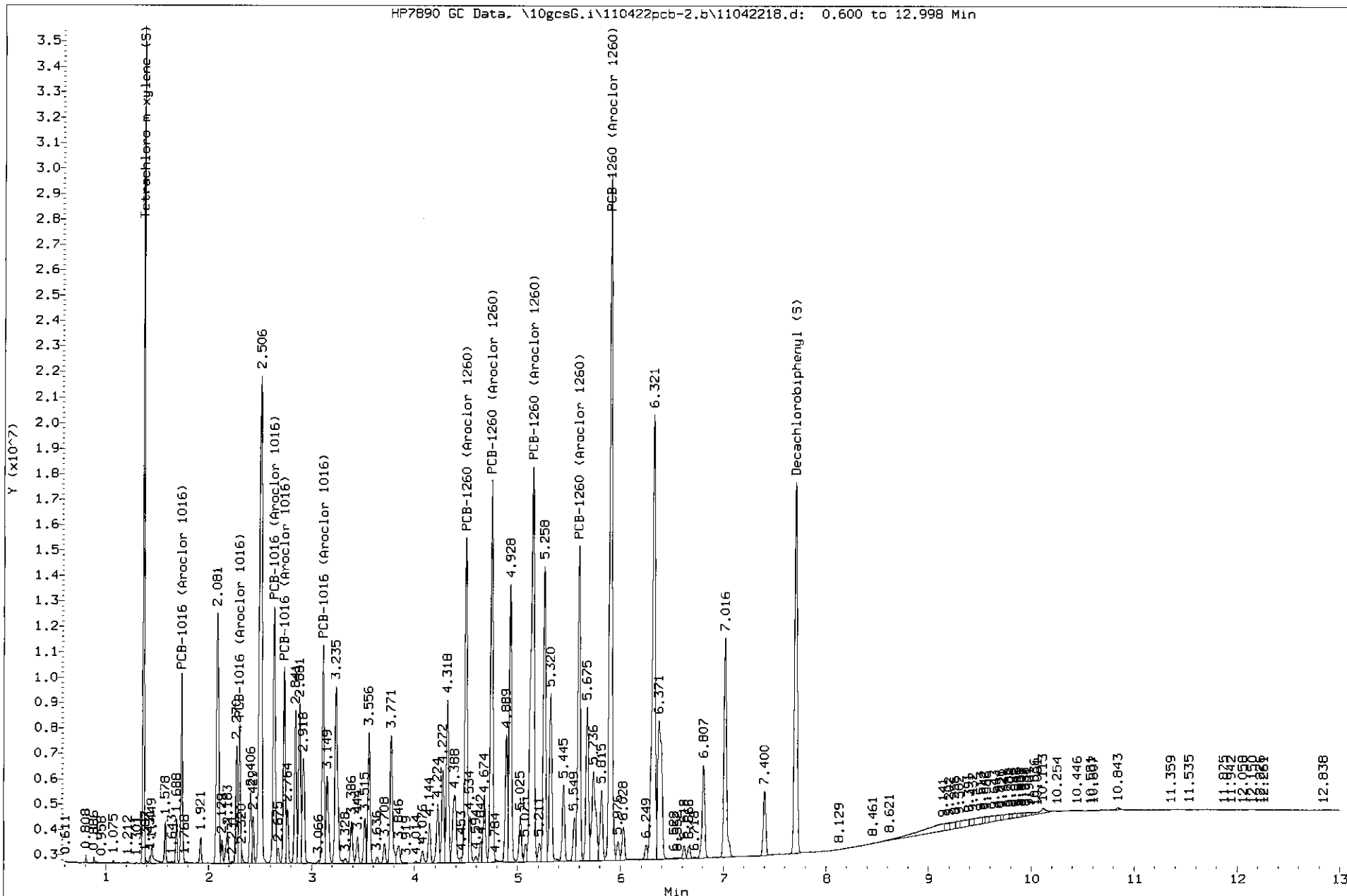
NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled By: *NF*Line *8* Page 28 of 62

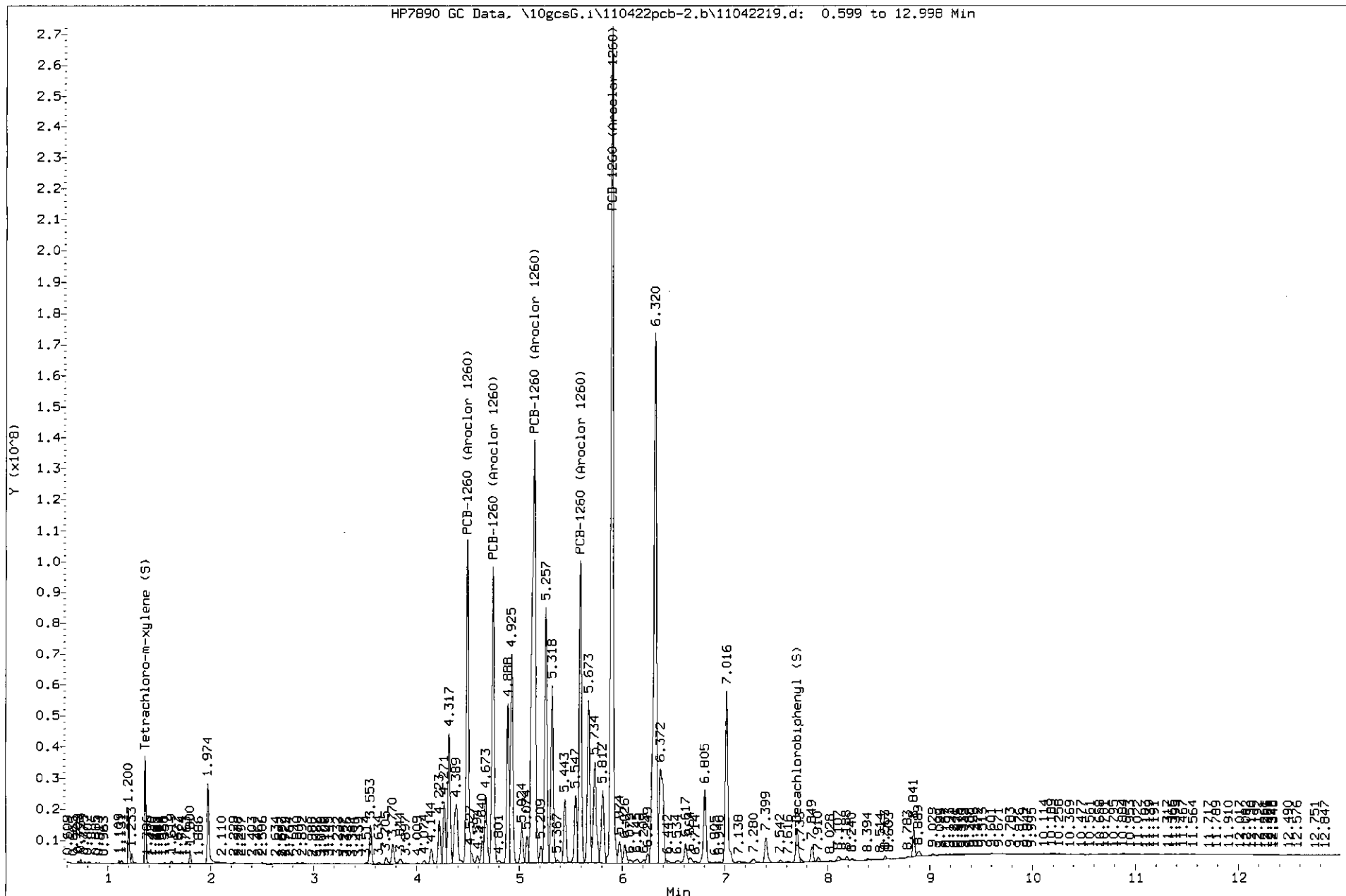
Batch 40935-851450
Blank 4501640



Batch 40935-851450
LCS 4501641

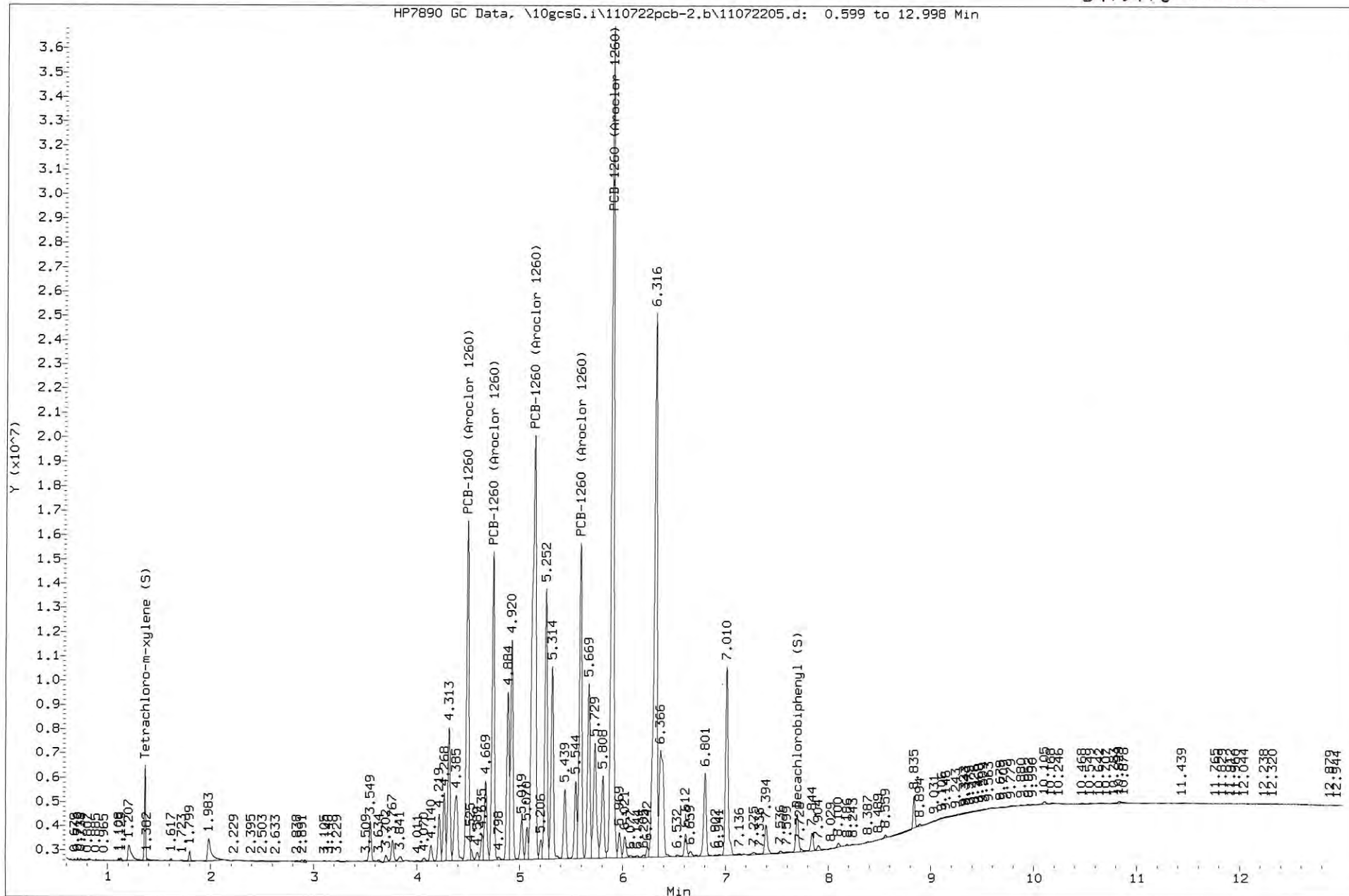


Batch 40935-851450
10630317-001



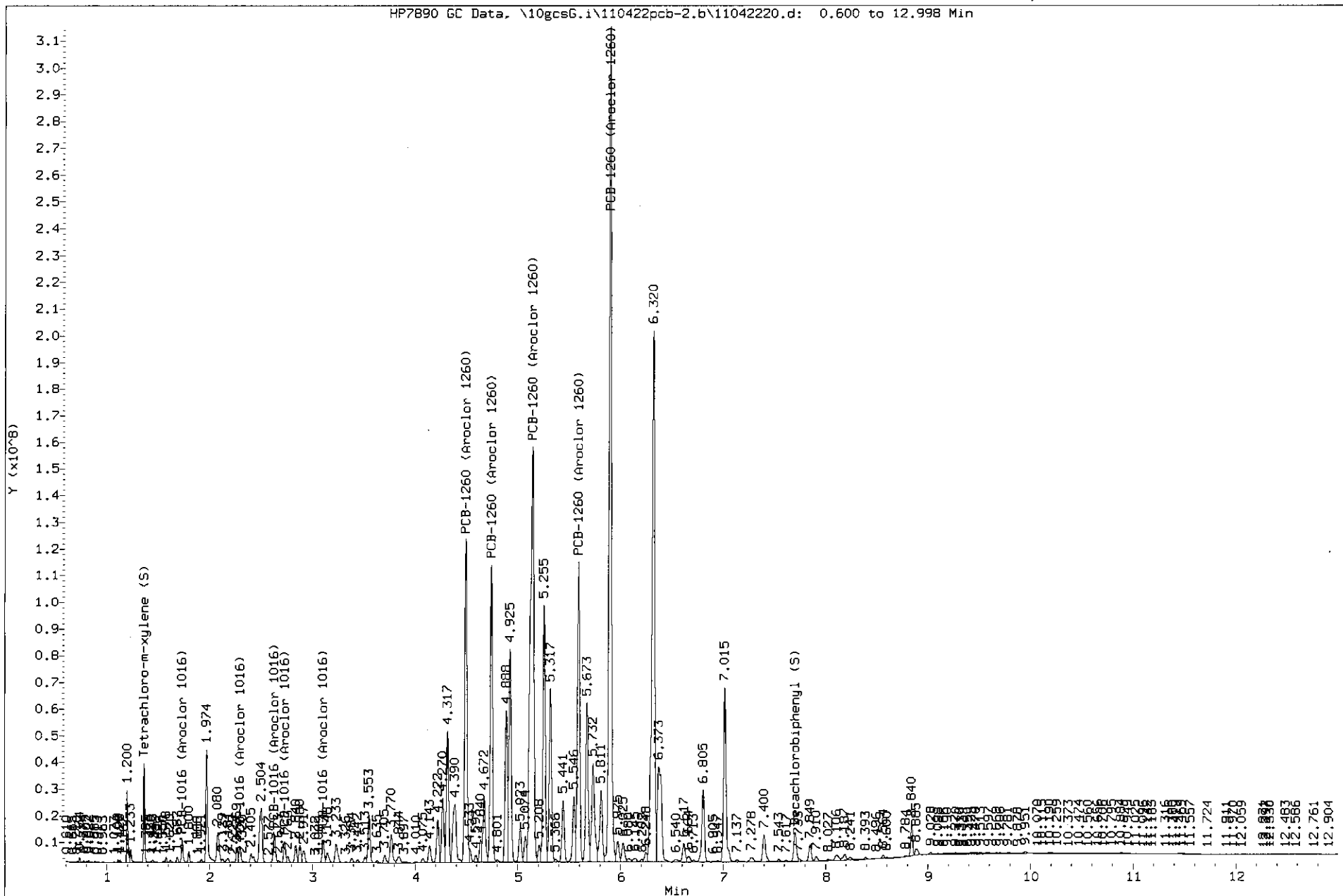
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Injection Date: 07-NOV-2022 10:38
Instrument: 10gcsG.i
Client Sample ID: ISM04-0.0-0.2-1022

Batch 40935-851450
10630317-001
Dilution: 10x



Data File: \\v10wintarget\chem\10gcsG.i\110422pcb-2.b\11042220.d
Injection Date: 04-NOV-2022 14:30
Instrument: 10gcsG.i
Client Sample ID: ISM04-0.0-0.2-1022M

Batch 40935-851450
MS 4501642

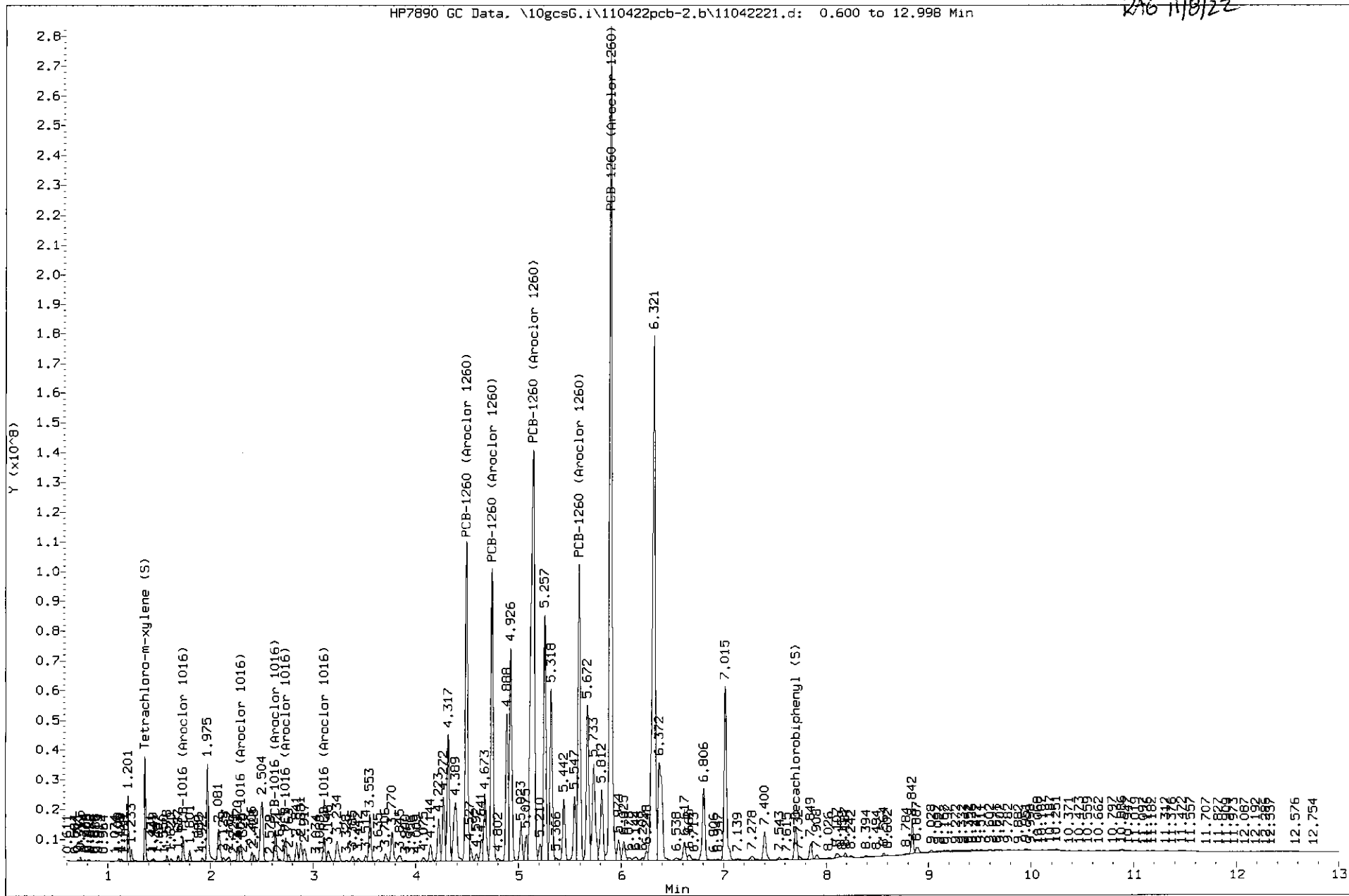


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Injection Date: 04-NOV-2022 14:46
Instrument: 10gcsG.i
Client Sample ID: ISM04-0.0-0.2-1022M

MSD ~~440~~ 4501643

~~246 11/8/22~~

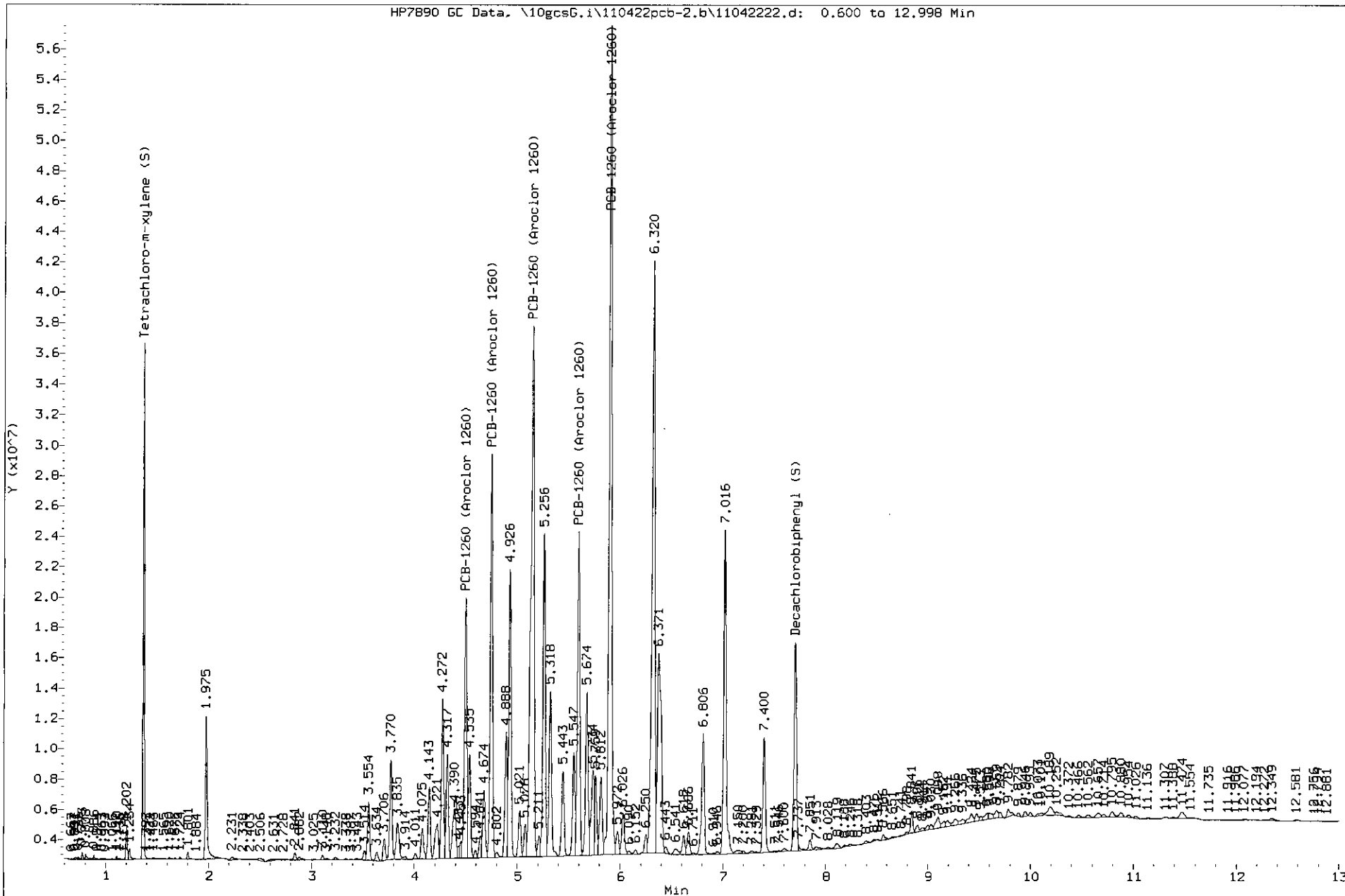
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Injection Date: 04-NOV-2022 15:01
Instrument: 10gcsG.i
Client Sample ID: SB07-0.0-0.5-1022

Batch 40935-85/450
10630317-009

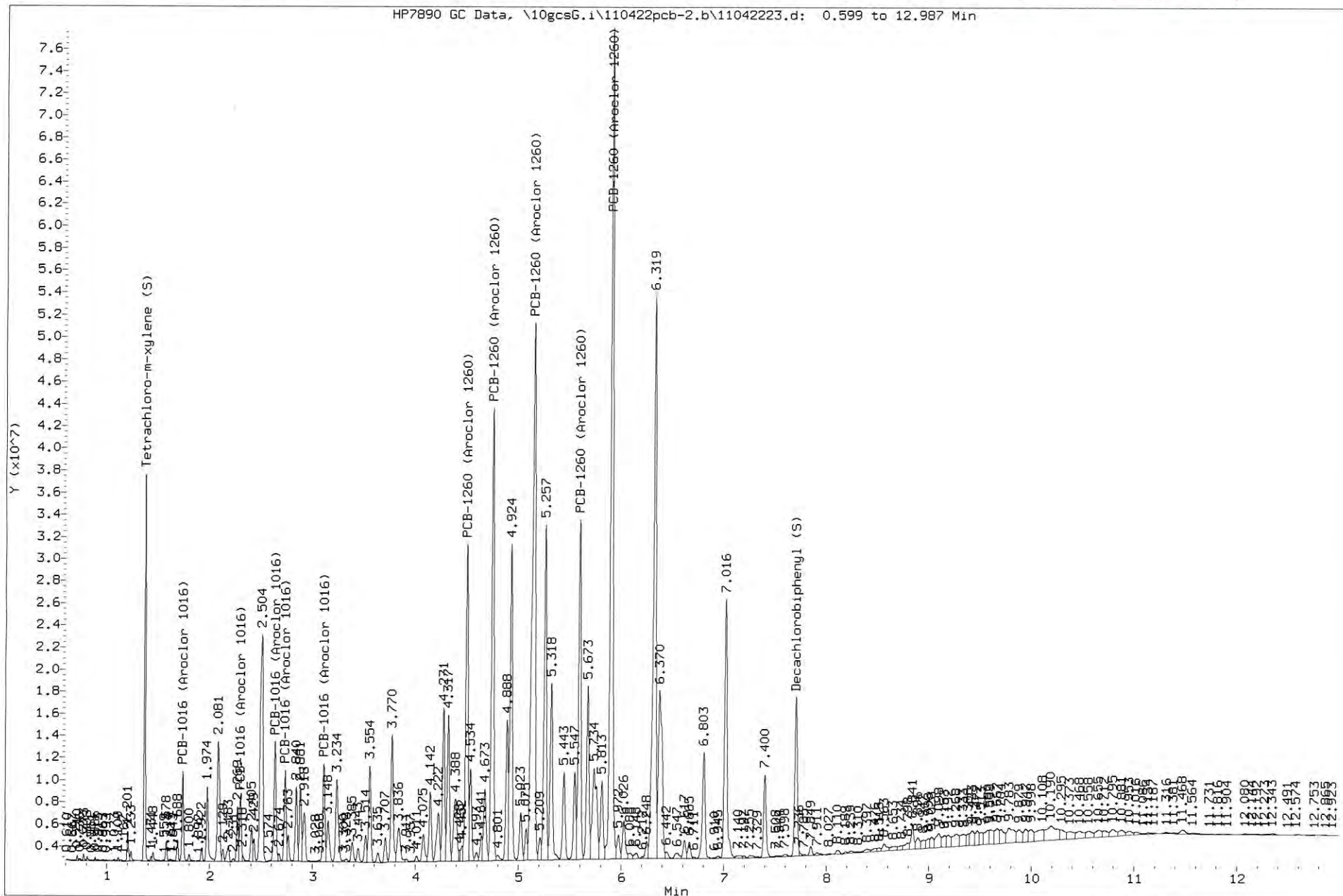
Page 35 of 62



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Injection Date: 04-NOV-2022 15:17
Instrument: 10gcsG.i
Client Sample ID: 5B07-0.0-0.5-1022M5

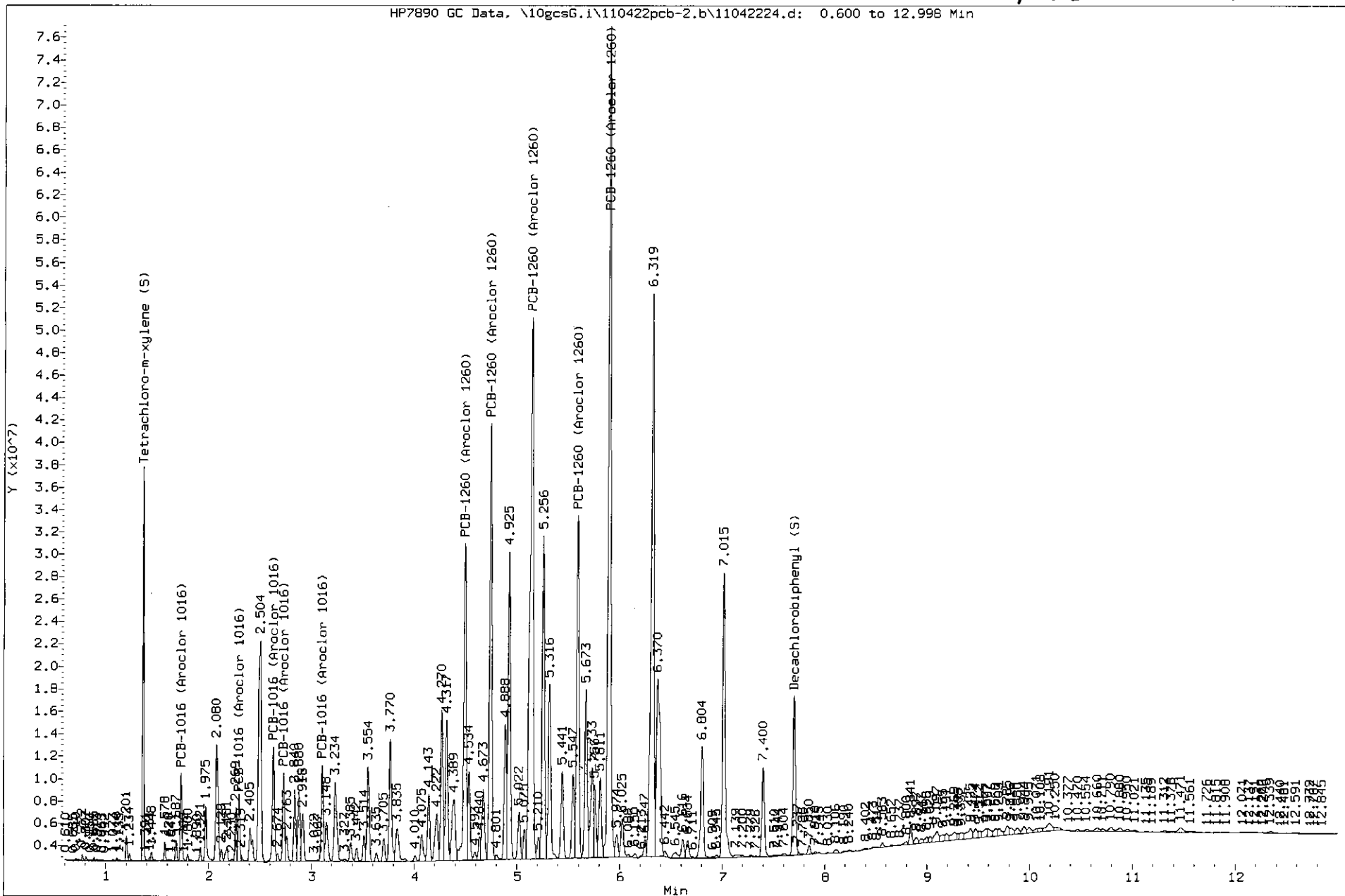
Batch 40935-851450
MS 4501644

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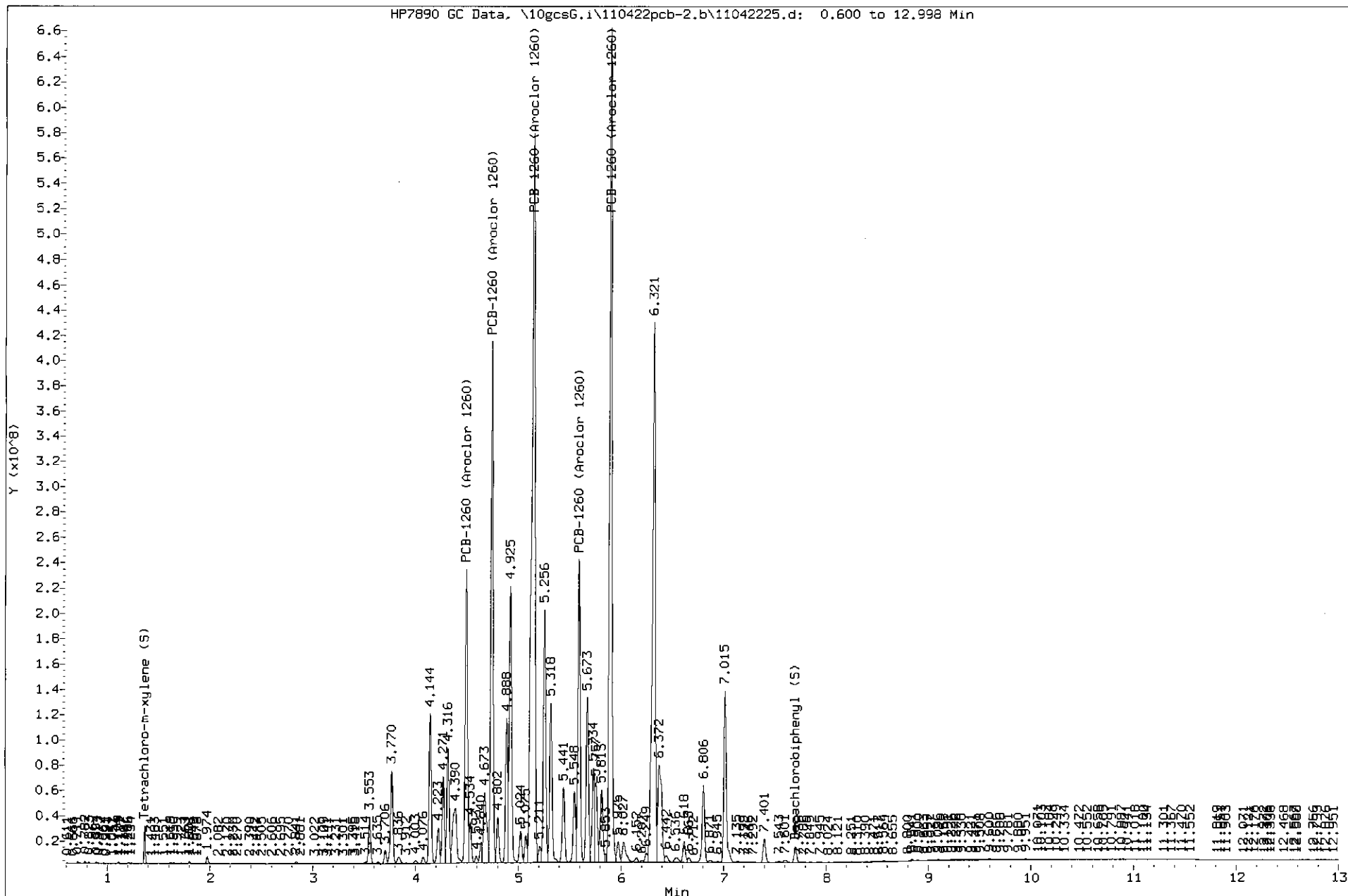


Data File: \\vi0wintarget\chem\10gcsG.i\110422pcb-2.b\11042224.d
Injection Date: 04-NOV-2022 15:33
Instrument: 10gcsG.i
Client Sample ID: SB07-0.0-0.5-1022MS

Batch 40935-851450
MSD 4501645



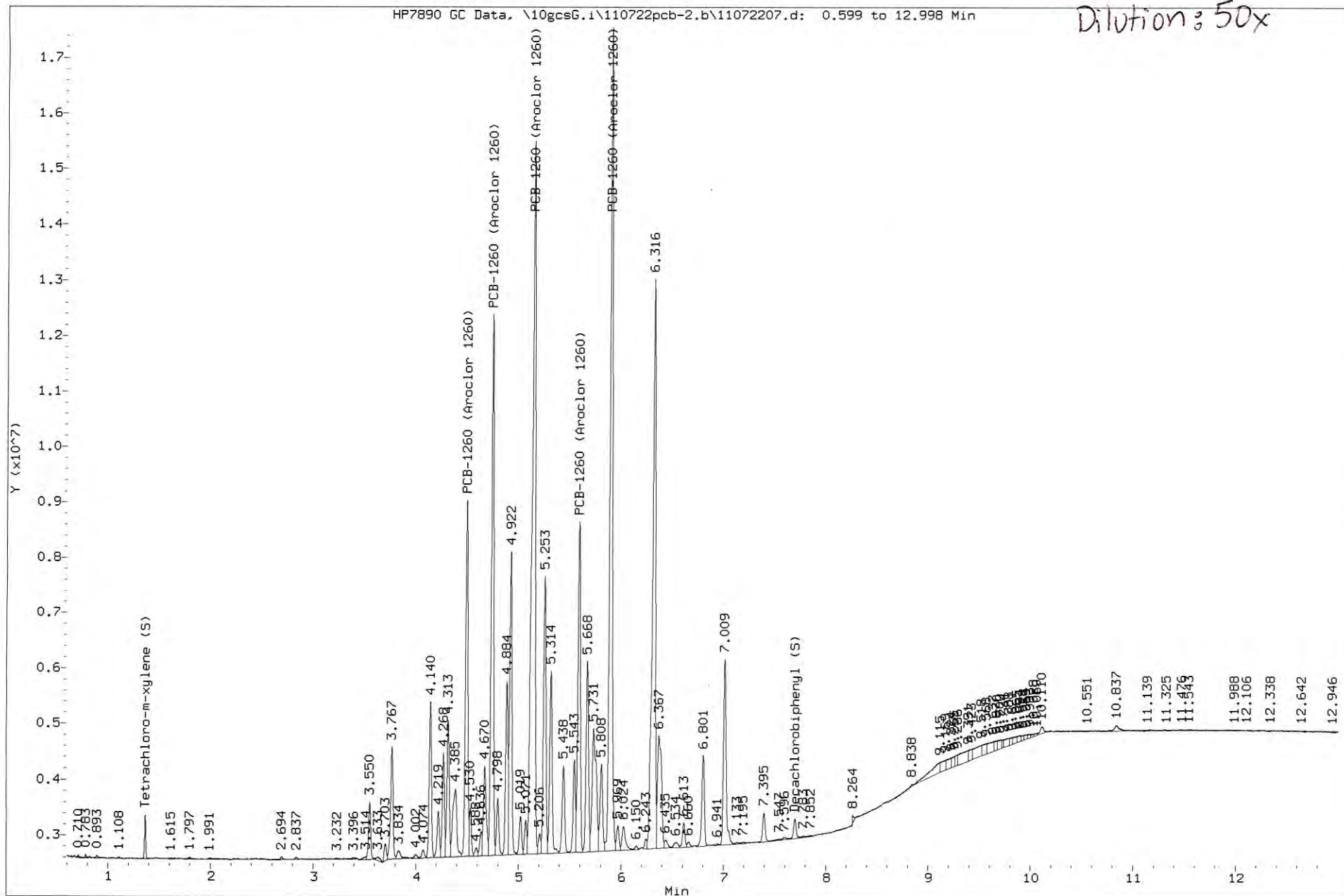
Batch 40935-851450
10630317-015



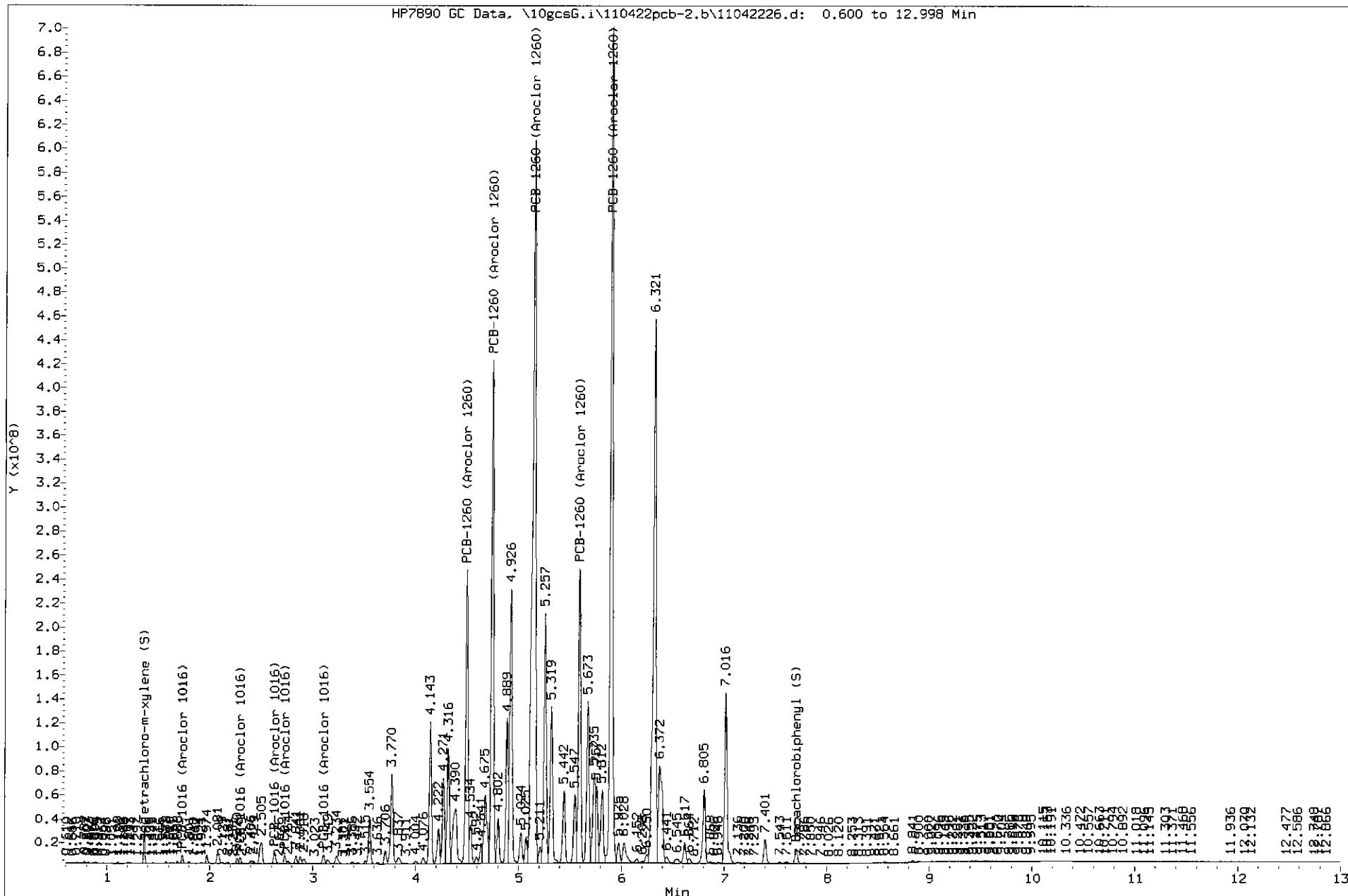
Batch 40935-851450
10630317-015

Dilution: 50x

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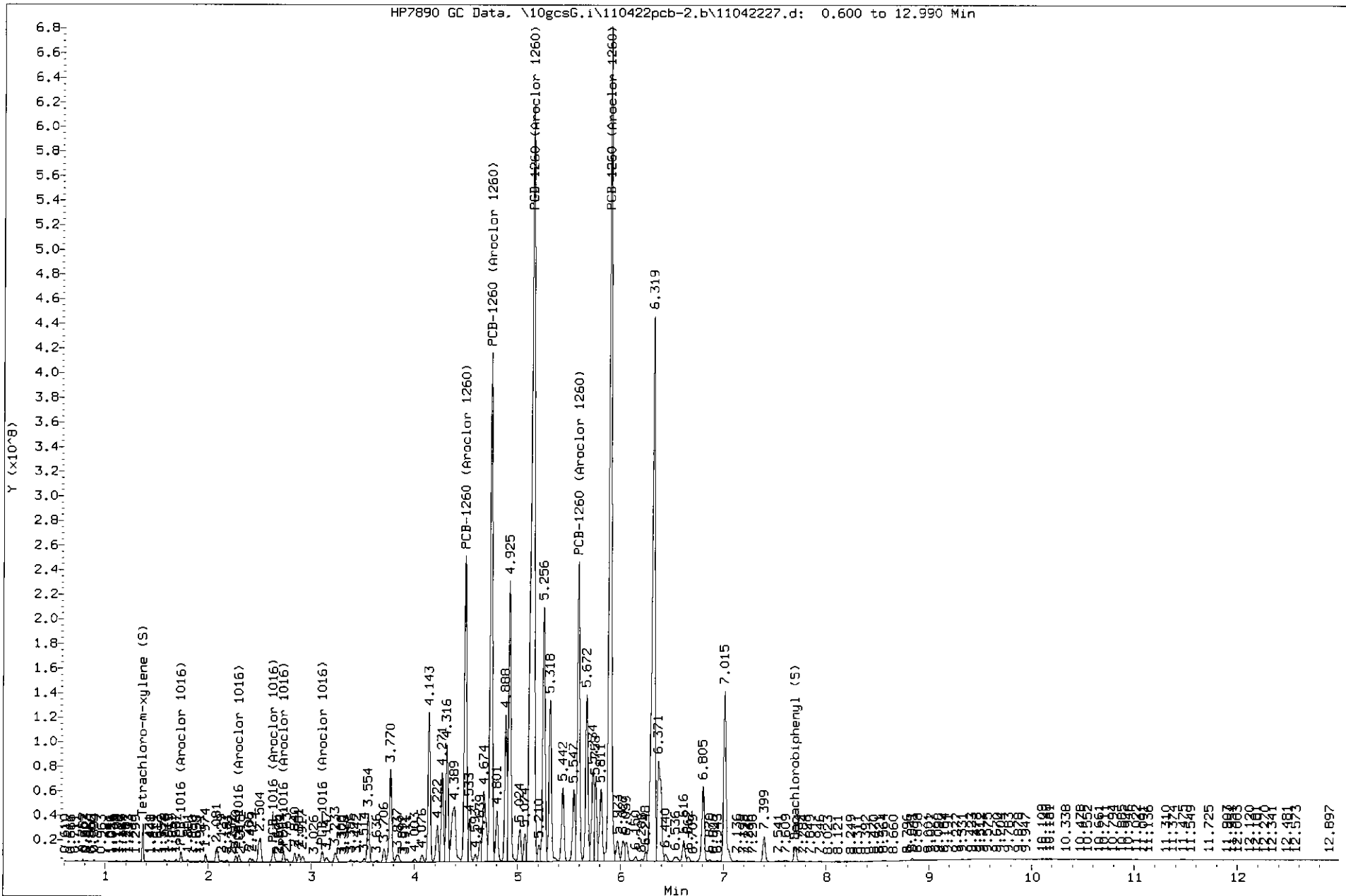
Batch 40935-851450
MS 4501646



Data File: \\v10wintarget\chem\10gcsG.i\110422pcb-2.b\11042227.d
Injection Date: 04-NOV-2022 16:20
Instrument: 10gcsG.i
Client Sample ID: 5B12-0.0-0.5-1022MS

Batch 40935-851450
MSD 4501647

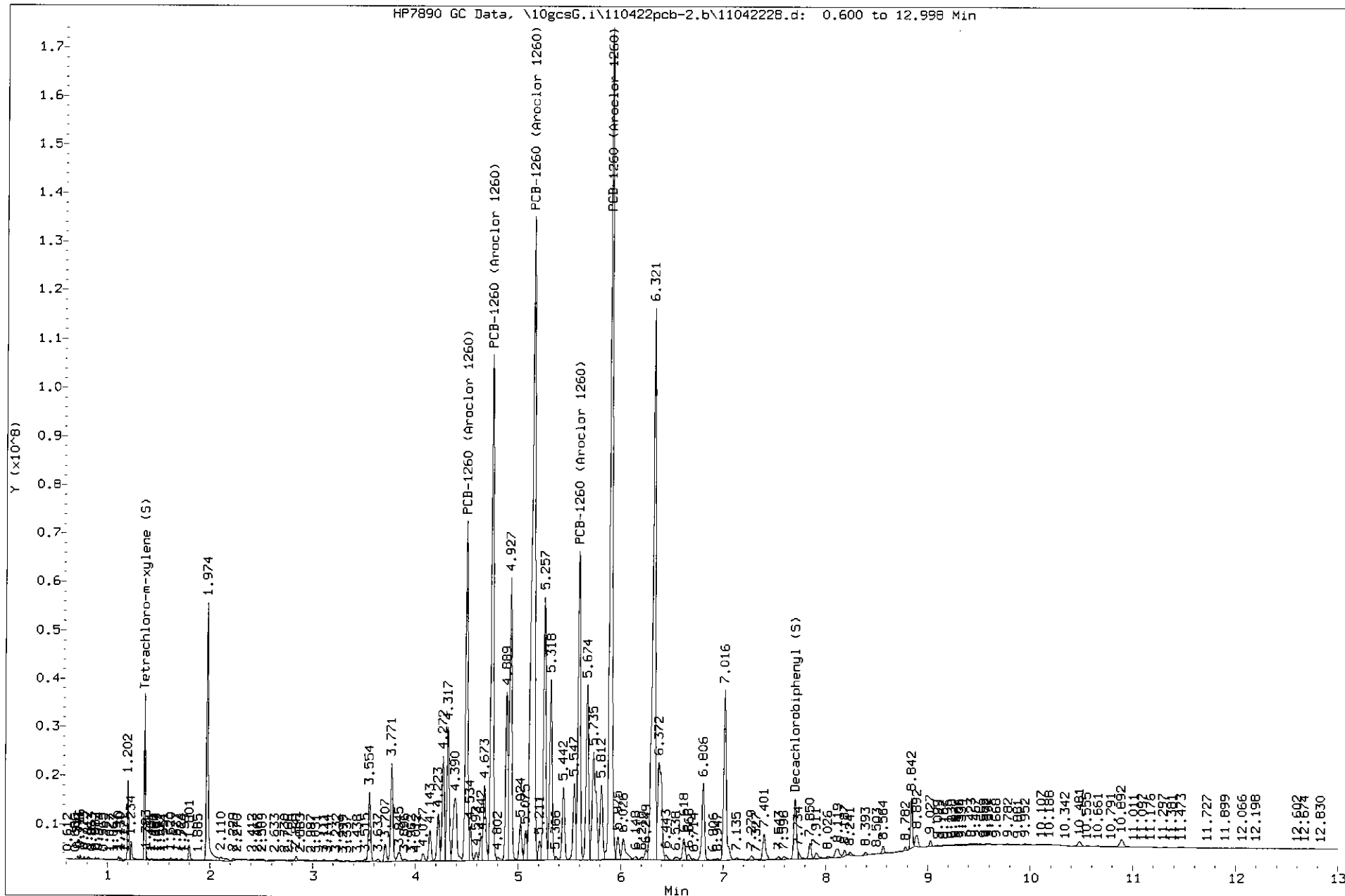
Page 41 of 62



Data File: \\v10wintarget\chem\10gcsG.1\110422pcb-2.b\11042228.d
Injection Date: 04-NOV-2022 16:36
Instrument: 10gcsG.1
Client Sample ID: ISM05-0.0-0.2-1022

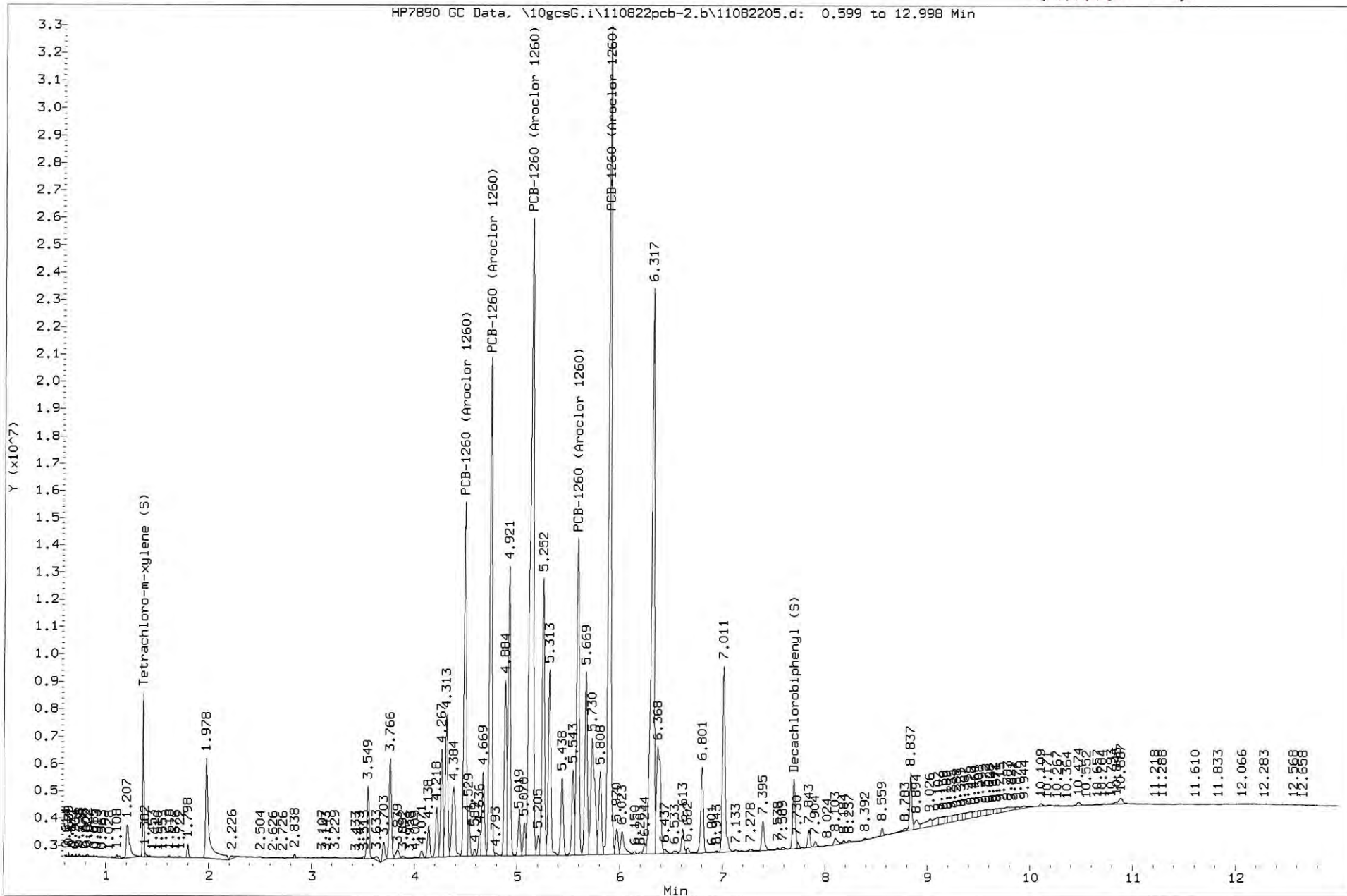
Batch 40935-851450

10630317-002



Data File: \\v10wintarget\chem\10gcsG.i\110822pcb-2.b\11082205.d
Injection Date: 08-NOV-2022 07:37
Instrument: 10gcsG.i
Client Sample ID: ISM05-0.0-0.2-1022

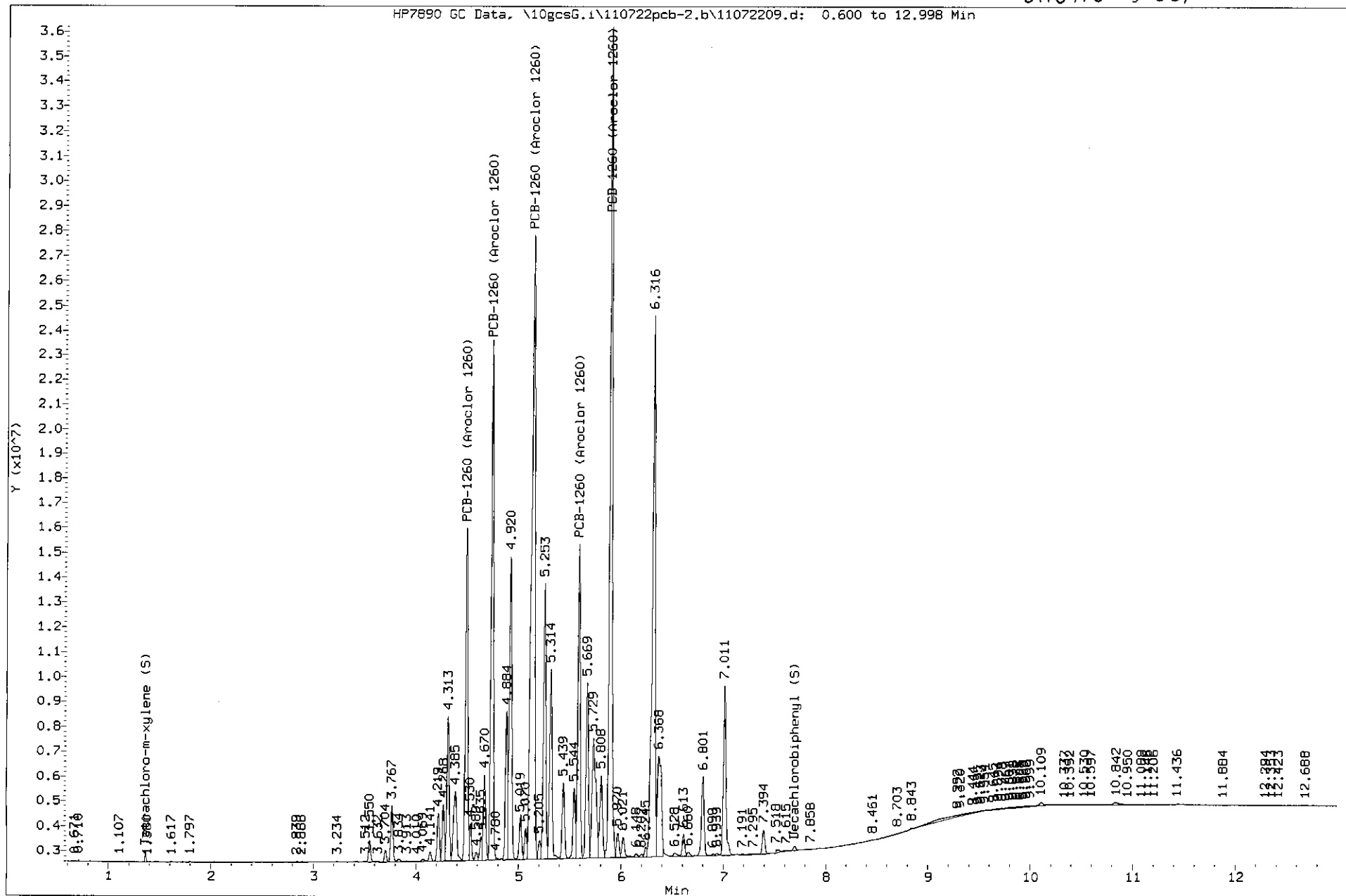
Batch 40935-851450
10630317-002
Dilution: 5x



Batch 40935-85145
10630317-003

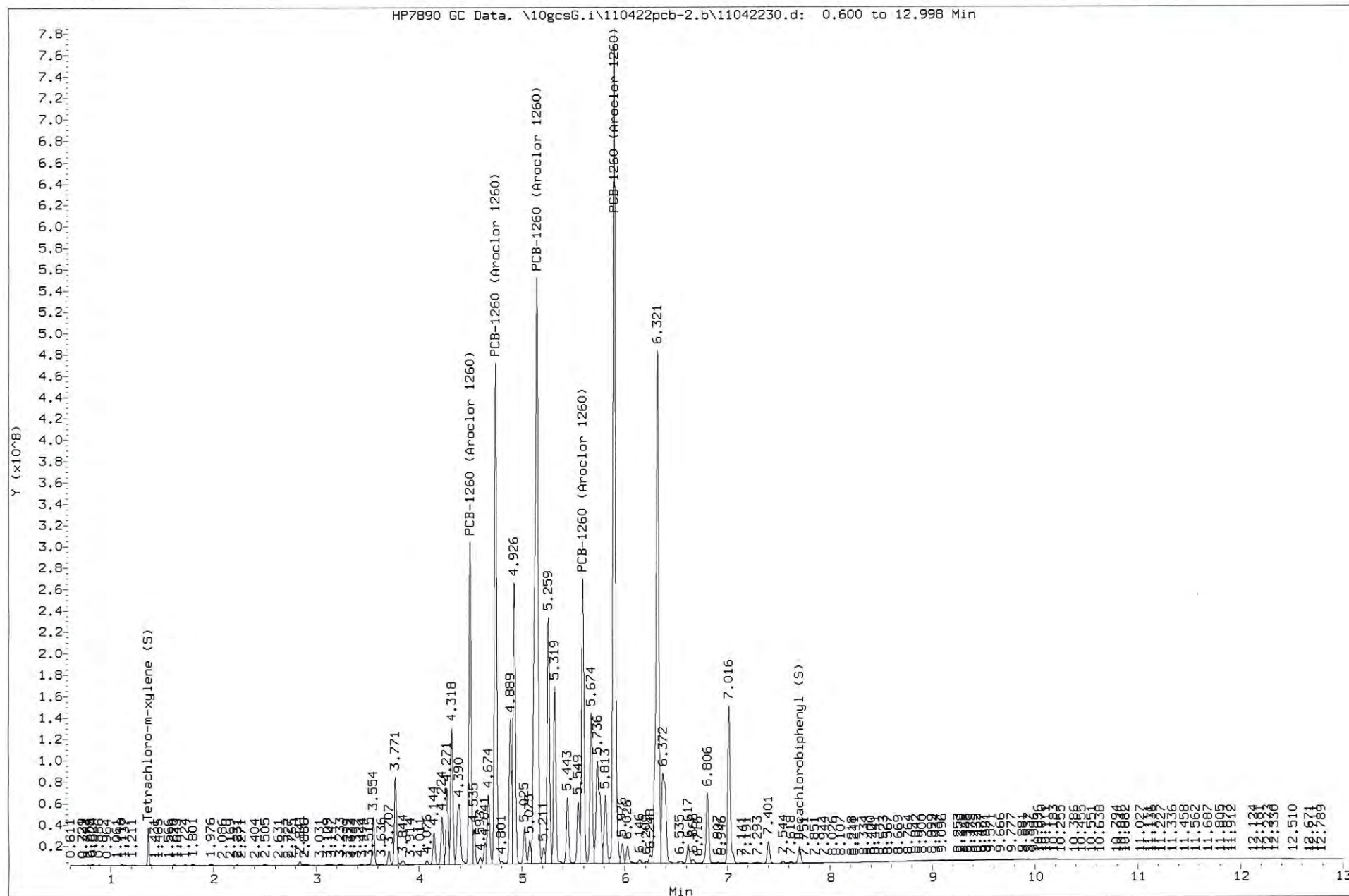
Batch 40935-851450
10630317-003
Dilution: 100x

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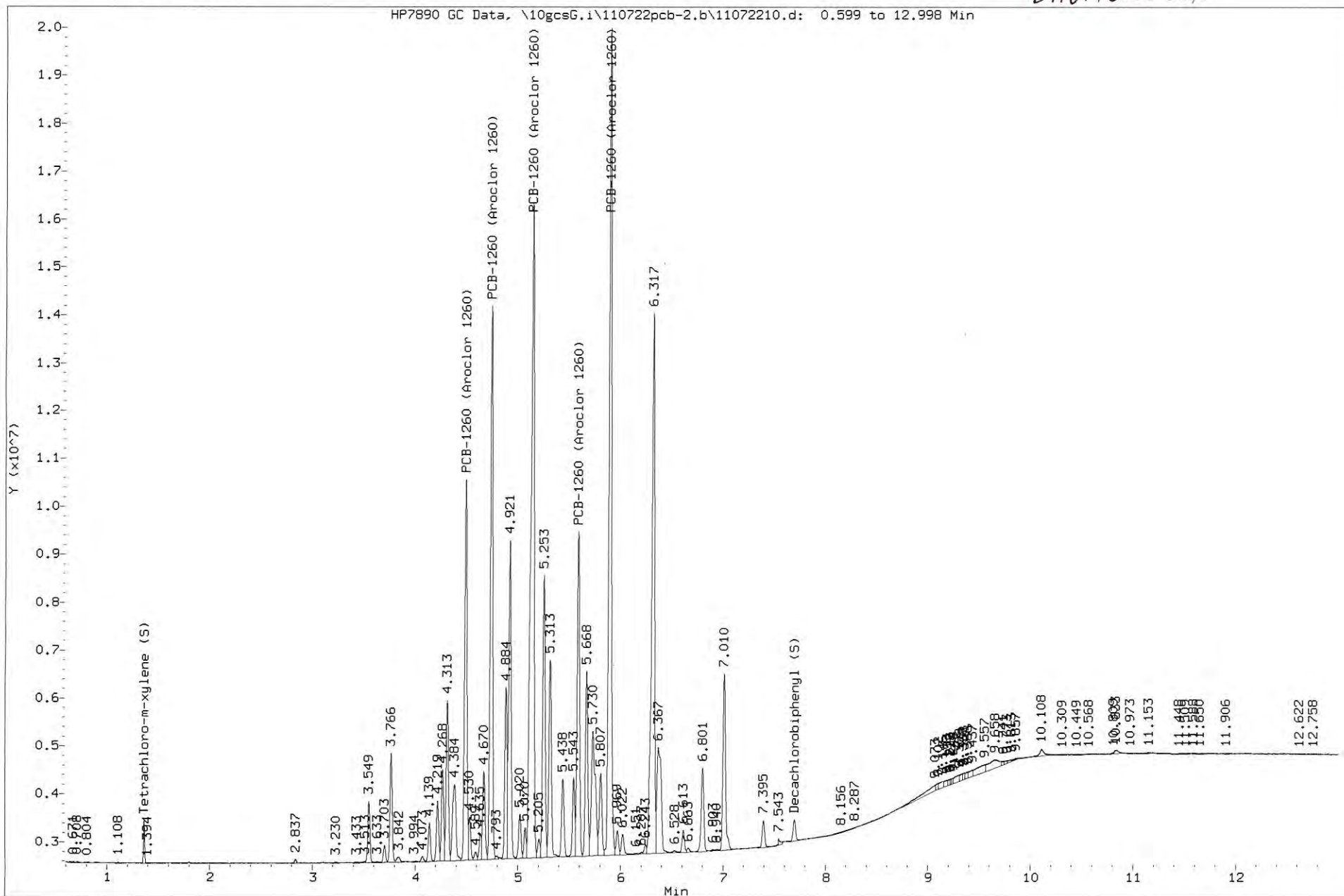
Batch 40935-851450
10630317-004

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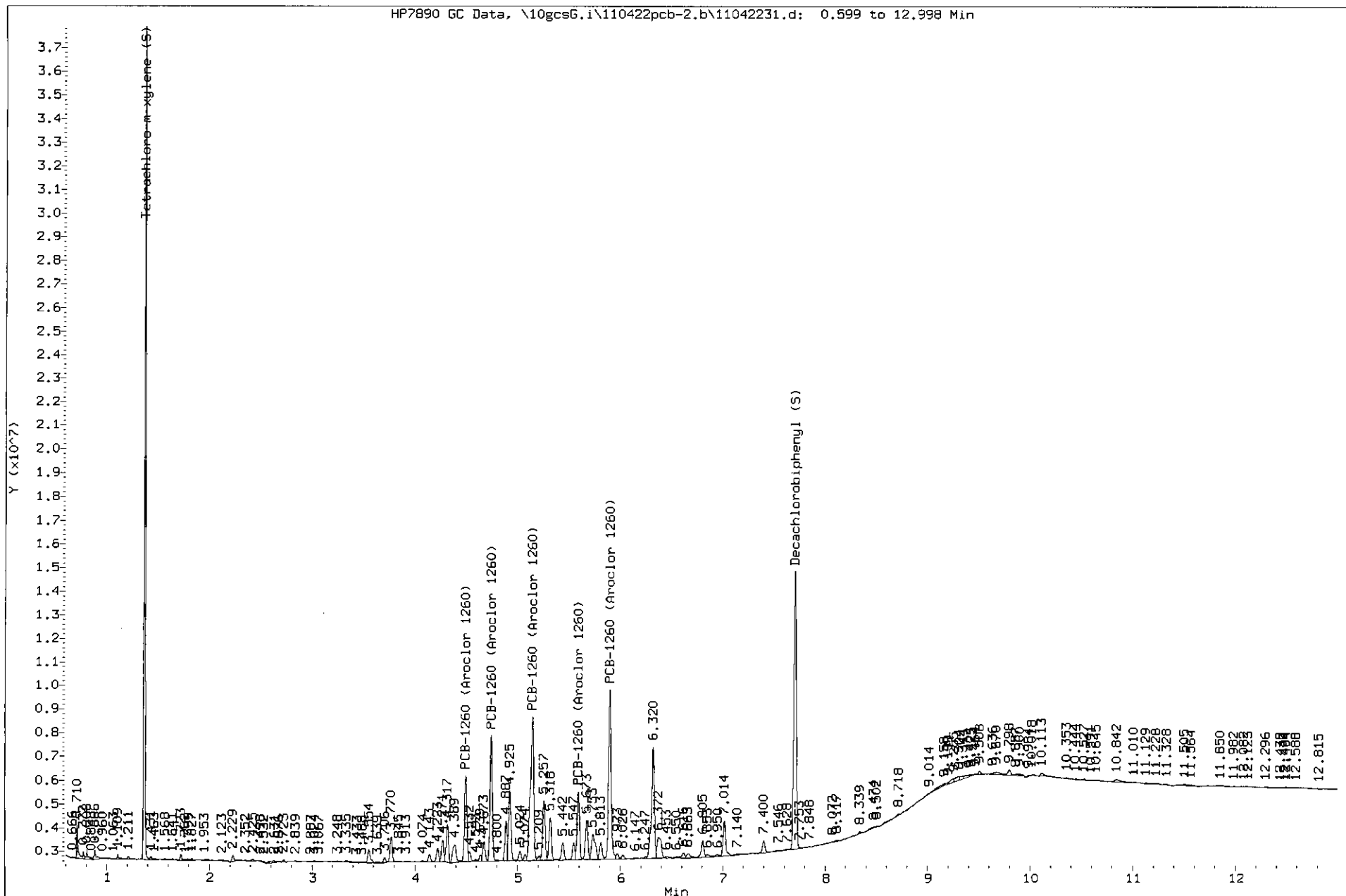


Data File: \\v10wintarget\chem\10gcsG.i\110722pcb-2.b\11072210.d
Injection Date: 07-NOV-2022 11:57
Instrument: 10gcsG.i
Client Sample ID: SB10-1.0-1.5-1022

Batch 40935-851450
10630317-004
Dilution: 50x



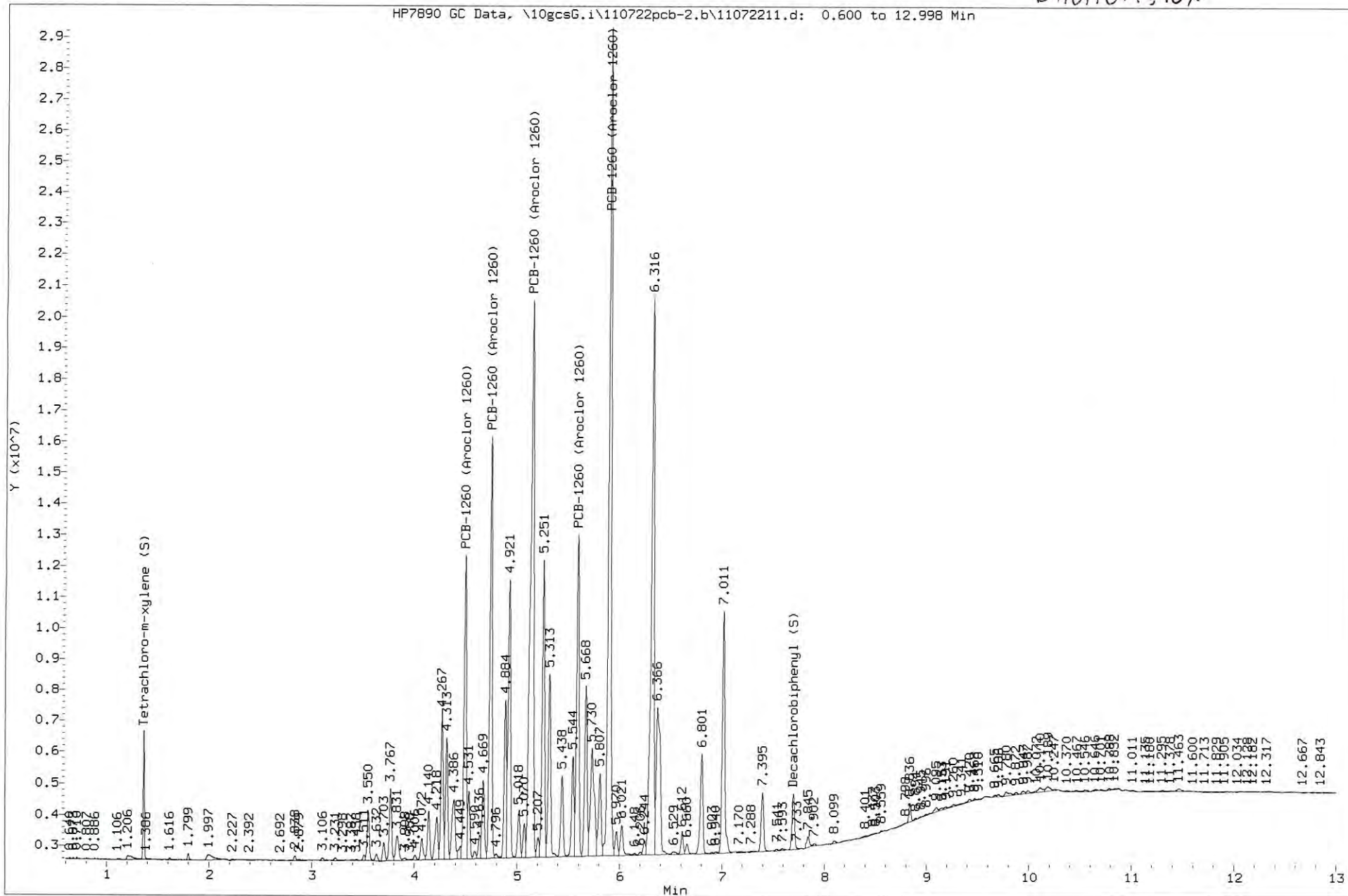
Batch 40935-851450
10630317-005



Batch 40935-851450
10630317-006

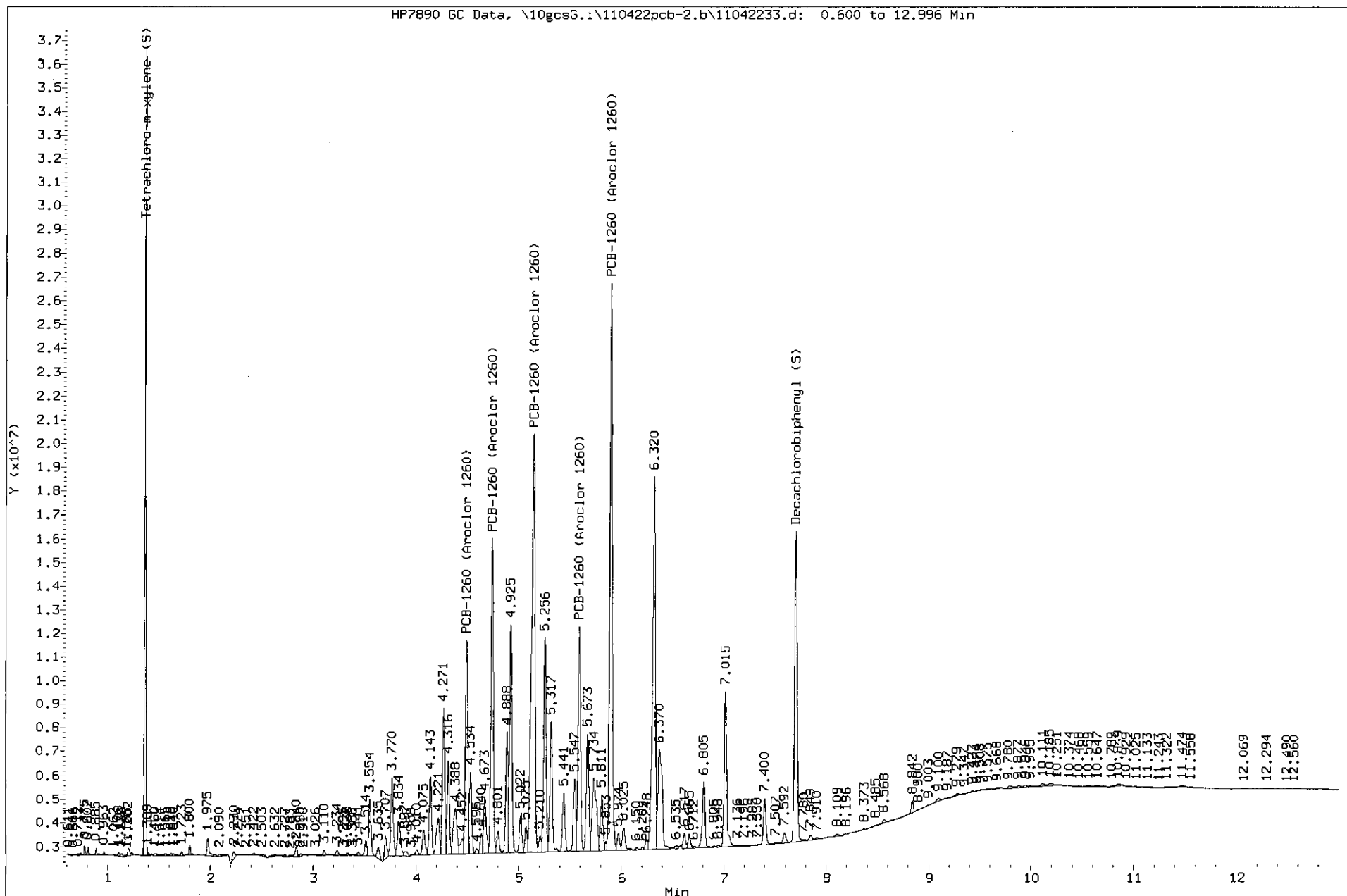
Data File: \\v10wintarget\chem\10gcsG.i\110722pcb-2.b\11072211.d
Injection Date: 07-NOV-2022 12:12
Instrument: 10gcsG.i
Client Sample ID: SB09-0.0-0.5-1022

Batch 40935-851450
10630317-006
Dilution: 10x



Data File: \\v10wintarget\chem\10gcsG.i\110422pcb-2.b\11042233.d
Injection Date: 04-NOV-2022 17:55
Instrument: 10gcsG.i
Client Sample ID: SB09-1.0-1.5-1022

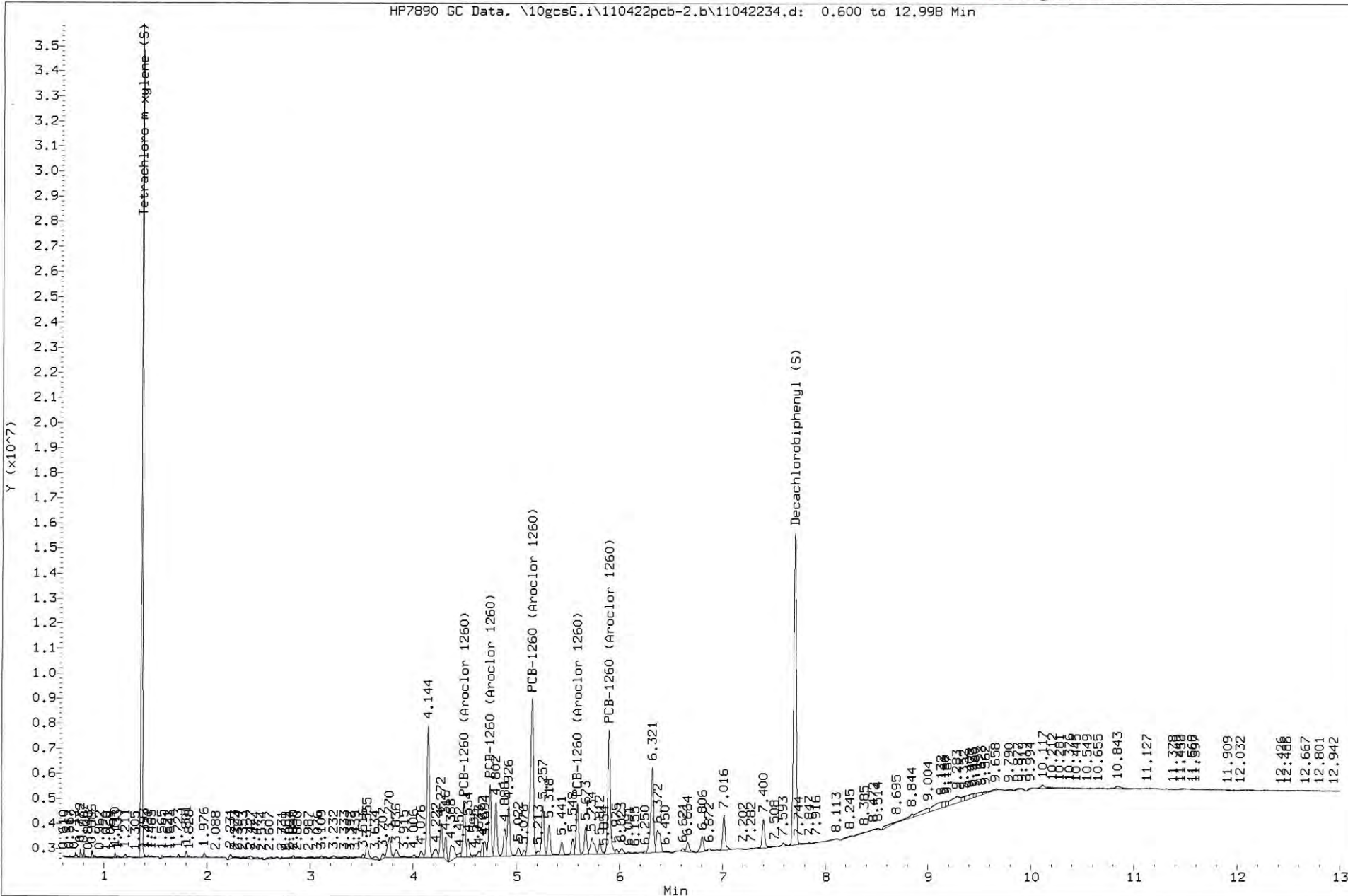
Batch 40935-851450
10630317-007



Client Sample ID: SB09-2.5-3.0-1022

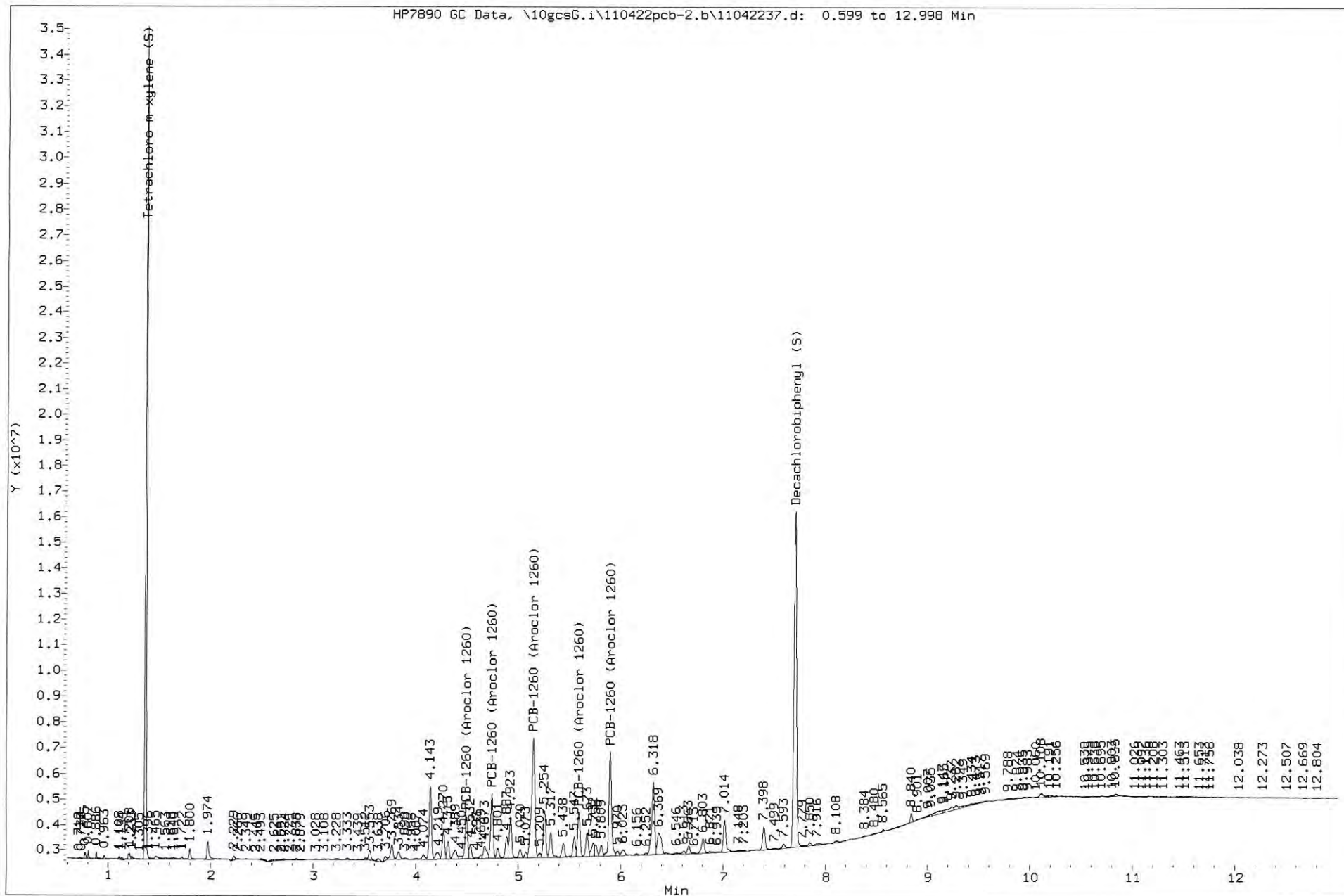
10630317-008

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Data File: \\v10wintarget\chem\10gcsG.i\110422pcb-2.b\11042237.d
Injection Date: 04-NOV-2022 18:58
Instrument: 10gcsG.i
Client Sample ID: SB07-1.0-1.5-1022

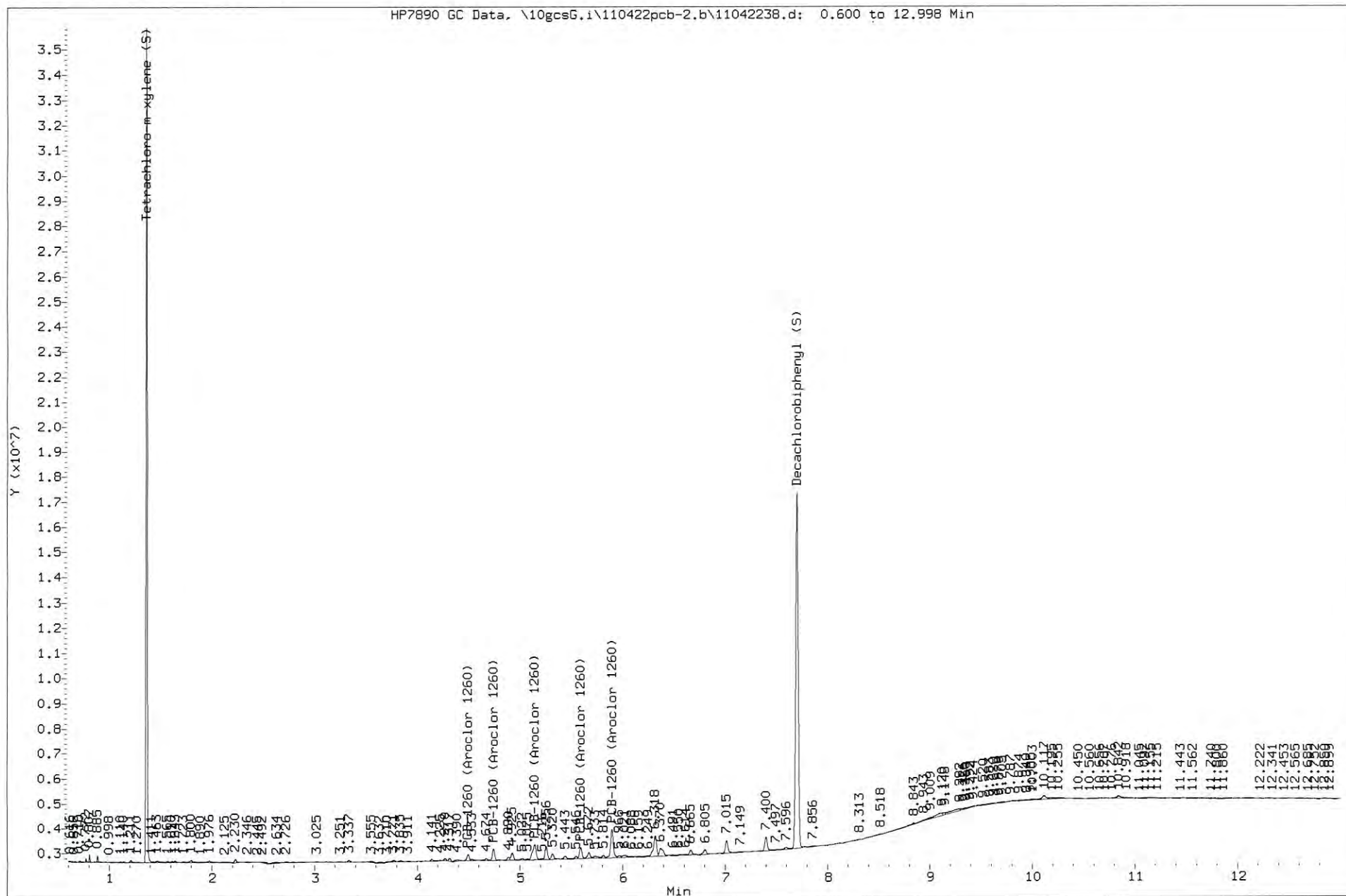
Batch 40935-851450
10630317-010



Data File: \\vi0wintarget\chem\10gcsG.i\110422pcb-2.b\11042238.d
Injection Date: 04-NOV-2022 19:14
Instrument: 10gcsG.i
Client Sample ID: SB07-2.5-3.0-1022

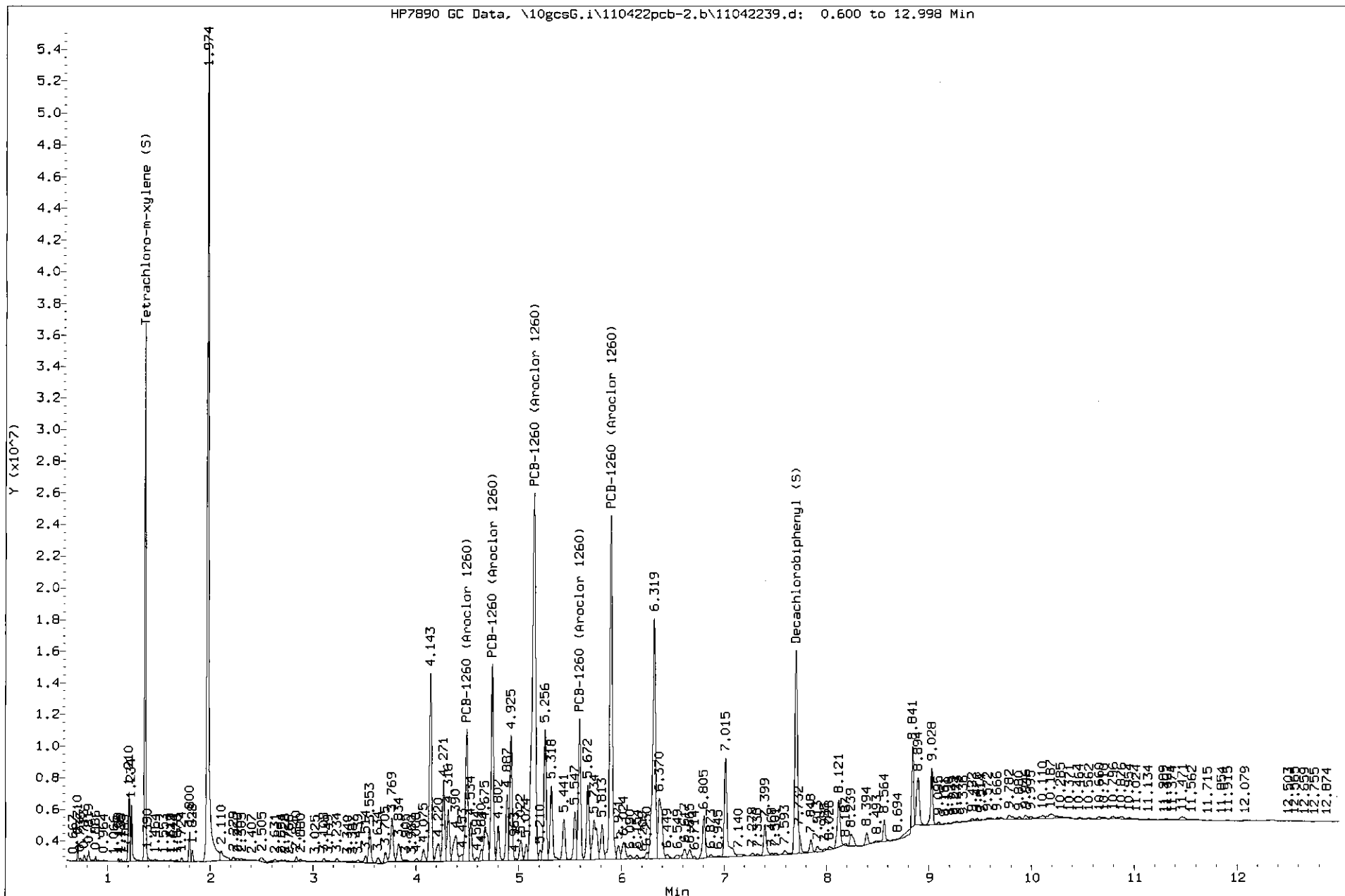
Batch 40935-851450
10630317-011

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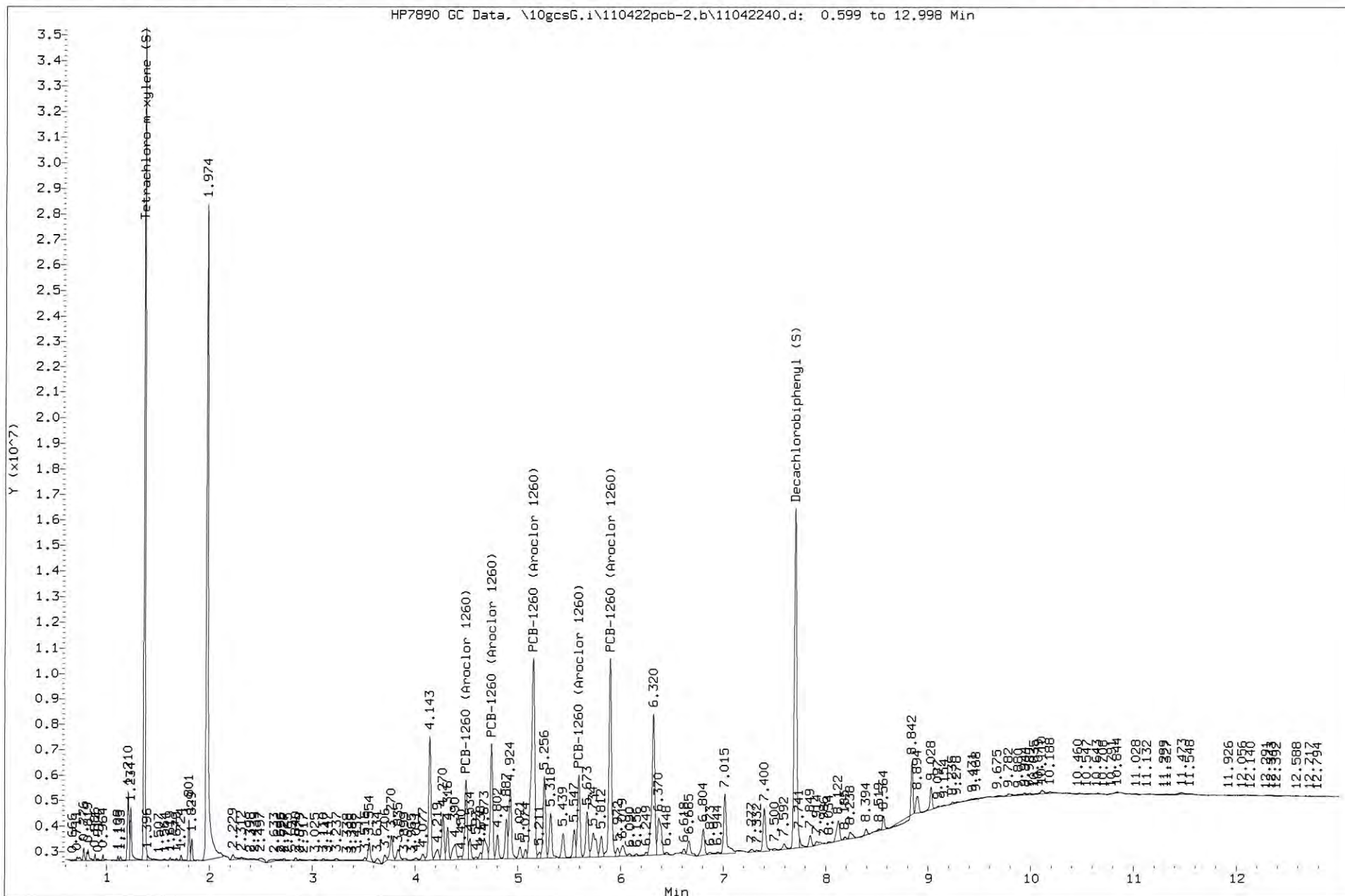
Data File: \\v10wintarget\chem\10gcs6.i\110422pcb-2.b\11042239.d
Injection Date: 04-NOV-2022 19:30
Instrument: 10gcs6.i
Client Sample ID: SB05-0.0-0.5-1022

Batch 40935-851450
10630317-012



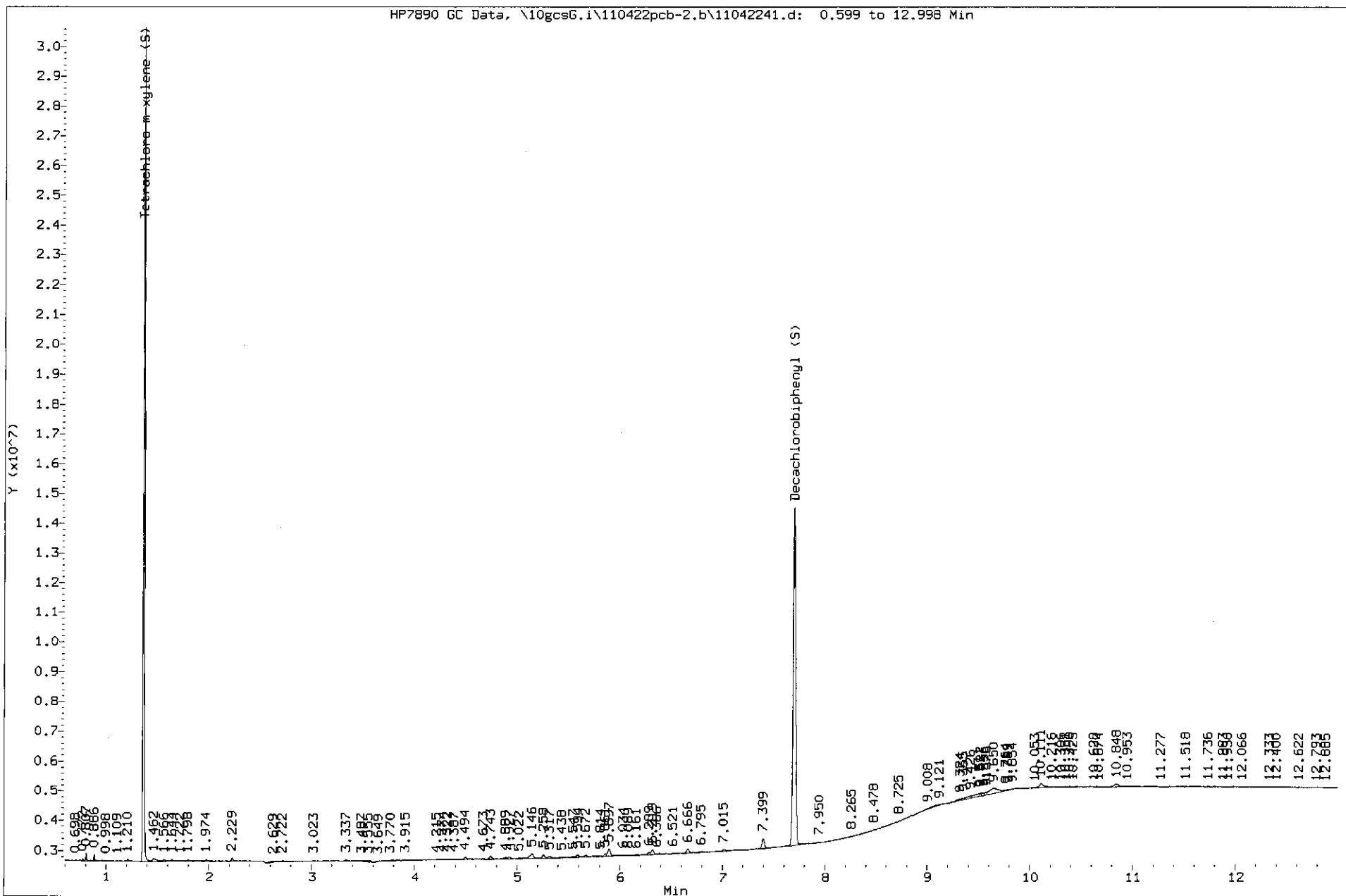
Data File: \\v10wintarget\chem\10gcsG.i\110422pcb-2.b\11042240.d
Injection Date: 04-NOV-2022 19:45
Instrument: 10gcsG.i
Client Sample ID: SB05-1.0-1.5-1022

Batch 40935-851450
10630317-013

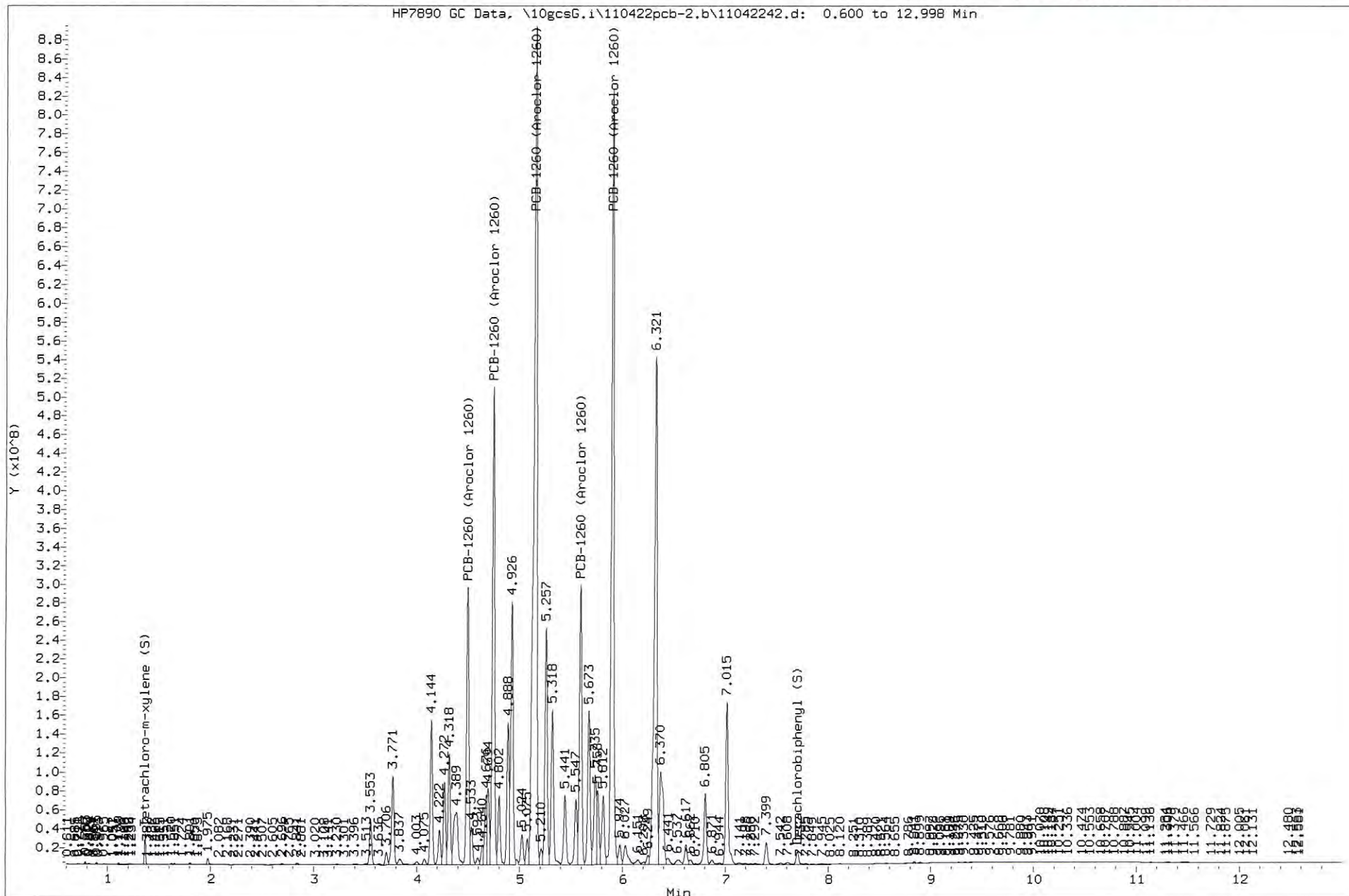


Data File: \\v10wintarget\chem\10gcsG.i\110422pcb-2.b\11042241.d
Injection Date: 04-NOV-2022 20:01
Instrument: 10gcsG.i
Client Sample ID: 5805-2.5-3.0-1022

Batch 40935-851450
10630317-014



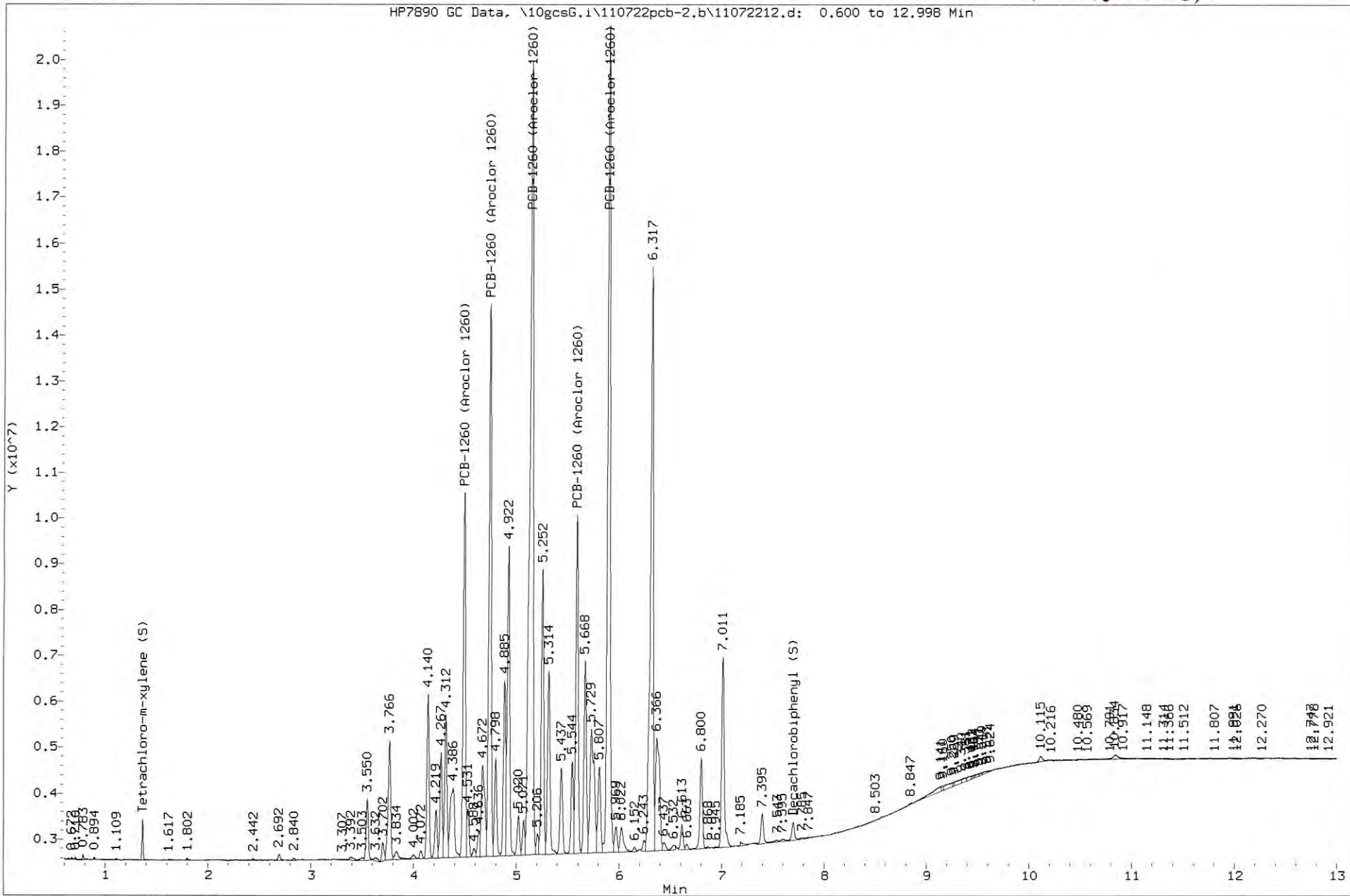
Batch 40935-851450
10630317-016



Data File: \\v10wintarget\chem\10gcsG.i\110722pcb-2.b\11072212.d
Injection Date: 07-NOV-2022 12:28
Instrument: 10gcsG.i
Client Sample ID: SB12D-0.0-0.5-1022

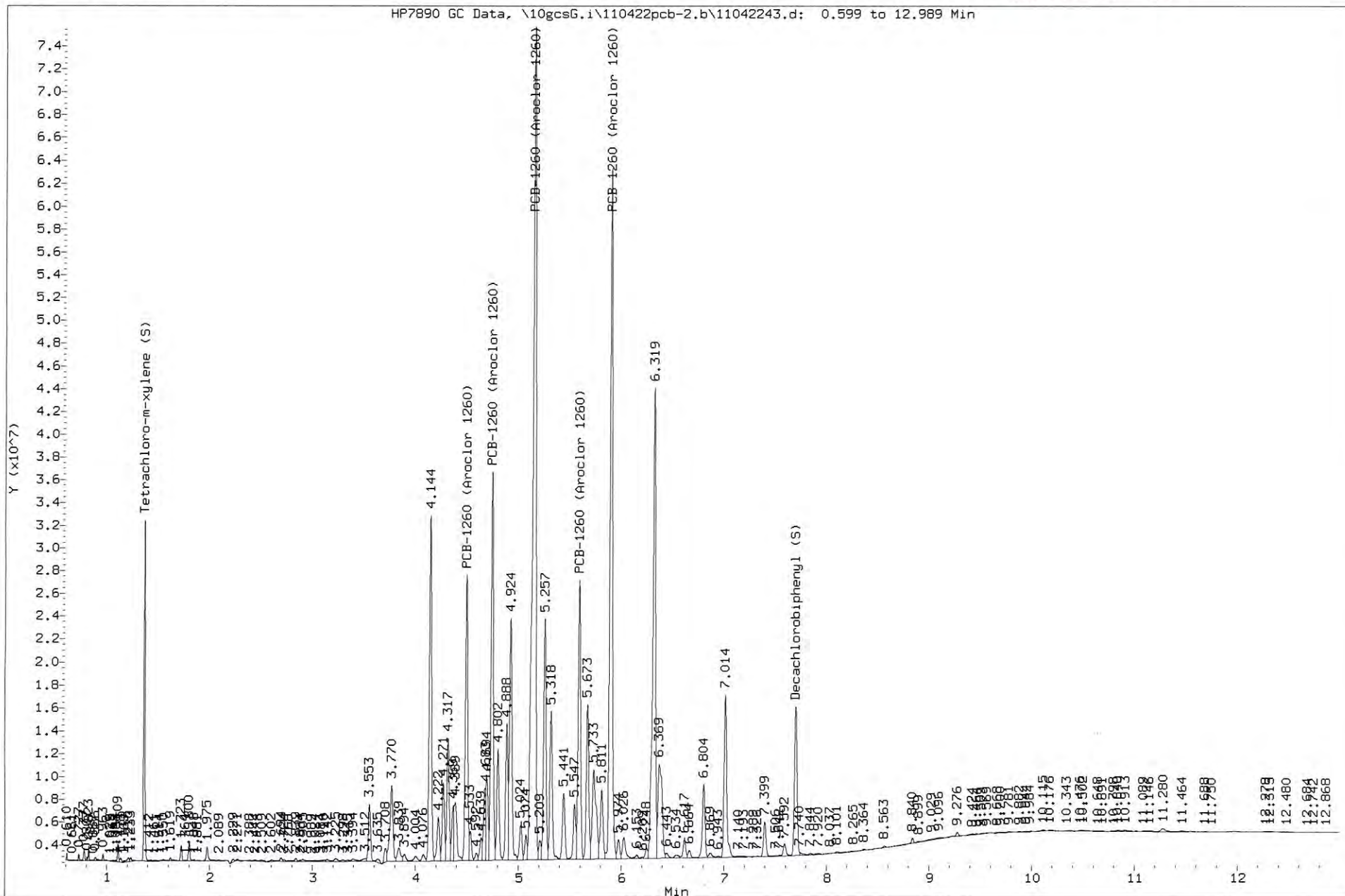
Batch 40935-851450
10630317-016
Dilution: 50x

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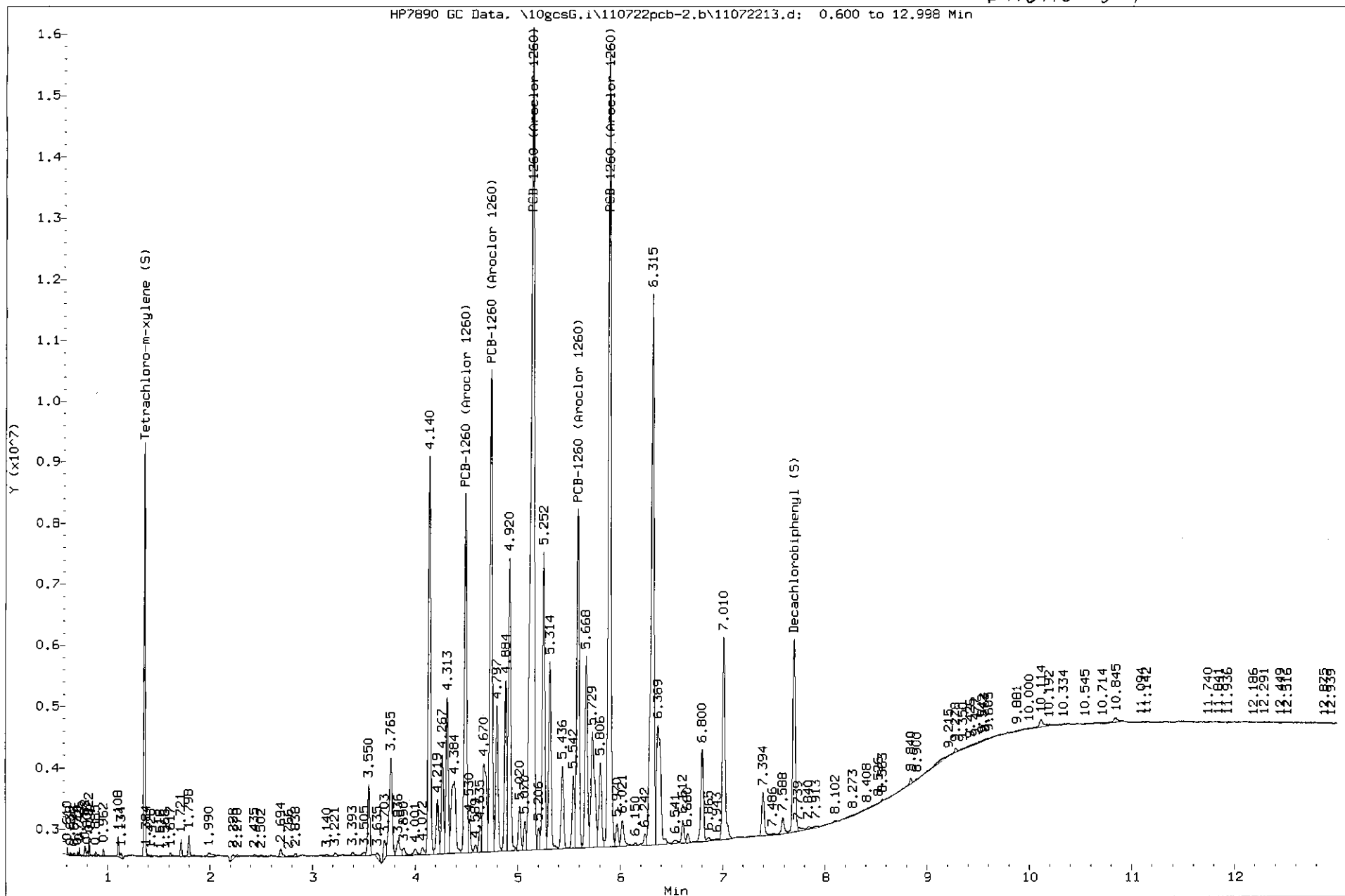


Data File: \\v10wintarget\chem\10gcsG.i\110422pcb-2.b\11042243.d
Injection Date: 04-NOV-2022 20:33
Instrument: 10gcsG.i
Client Sample ID: SB12-1.0-1.5-1022

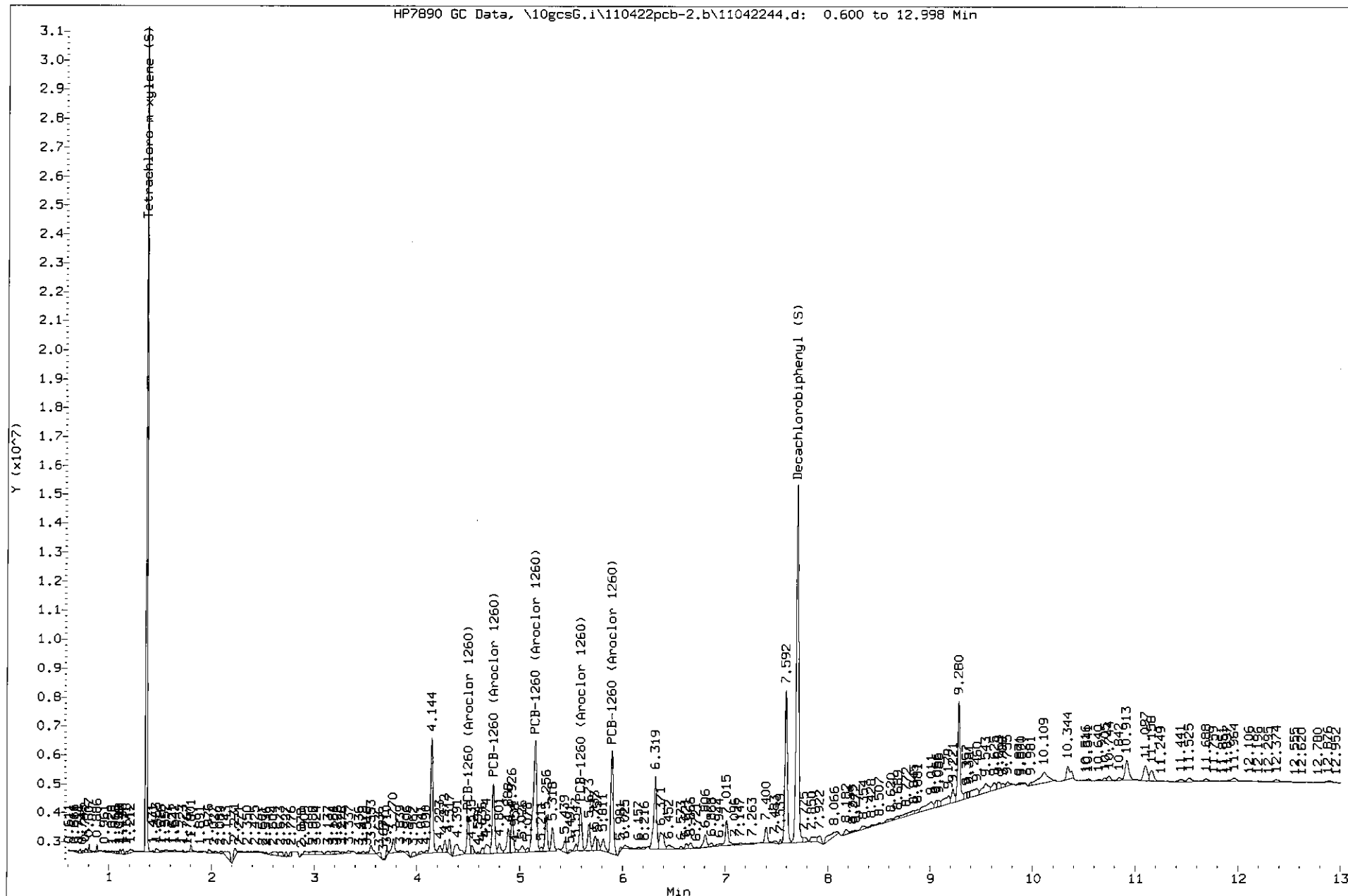
Batch 40935-851450
10630317-017



Batch 40935-851450
10630317-017
Dilution₃ 5x



Batch 40935-851450
10630317-018



December 21, 2022

David Hodson
Jacobs
2020 SW 4th Avenue
Suite 300
Portland, OR 97201

RE: Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630039

Dear David Hodson:

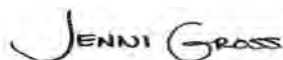
Enclosed are the analytical results for sample(s) received by the laboratory on October 18, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Minneapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jennifer Gross
jennifer.gross@pacelabs.com
(612)607-1700
Project Manager

Enclosures

cc: UPRR-Sysdat@ghd.com, UPRR



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630039

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414

A2LA Certification #: 2926.01*

1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009*

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014*

Arkansas DW Certification #: MN00064

Arkansas WW Certification #: 88-0680

California Certification #: 2929

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137

Florida Certification #: E87605*

Georgia Certification #: 959

GMP+ Certification #: GMP050884

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: AI-03086*

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064*

Maryland Certification #: 322

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137*

Minnesota Dept of Ag Approval: via MN 027-053-137

Minnesota Petrofund Registration #: 1240*

Mississippi Certification #: MN00064

Missouri Certification #: 10100

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081*

New Jersey Certification #: MN002

New York Certification #: 11647*

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification (A2LA) #: R-036

North Dakota Certification (MN) #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification (1700) #: CL101

Ohio VAP Certification (1800) #: CL110*

Oklahoma Certification #: 9507*

Oregon Primary Certification #: MN300001

Oregon Secondary Certification #: MN200001*

Pennsylvania Certification #: 68-00563

Puerto Rico Certification #: MN00064

South Carolina Certification #: 74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192*

Utah Certification #: MN00064*

Vermont Certification #: VT-027053137

Virginia Certification #: 460163*

Washington Certification #: C486*

West Virginia DEP Certification #: 382

West Virginia DW Certification #: 9952 C

Wisconsin Certification #: 999407970

Wyoming UST Certification #: via A2LA 2926.01

USDA Permit #: P330-19-00208

Please Note: Applicable air certifications are denoted with an asterisk ().

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630039

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10630039001	SB06-0.0-0.5-1022	Solid	10/17/22 15:15	10/18/22 09:45
10630039002	SB06-1.0-1.5-1022	Solid	10/17/22 15:20	10/18/22 09:45
10630039003	SB06-2.5-3.0-1022	Solid	10/17/22 15:25	10/18/22 09:45
10630039004	SB04-0.0-0.5-1022	Solid	10/17/22 14:30	10/18/22 09:45
10630039005	SB04D-0.0-0.5-1022	Solid	10/17/22 14:35	10/18/22 09:45
10630039006	SB04-1.0-1.5-1022	Solid	10/17/22 14:40	10/18/22 09:45
10630039007	SB04-2.5-3.0-1022	Solid	10/17/22 14:45	10/18/22 09:45
10630039008	SB01-0.0-0.5-1022	Solid	10/17/22 11:00	10/18/22 09:45
10630039009	SB01-1.0-1.5-1022	Solid	10/17/22 11:05	10/18/22 09:45
10630039010	SB01-2.5-3.0-1022	Solid	10/17/22 11:10	10/18/22 09:45
10630039011	SB03-0.0-0.5-1022	Solid	10/17/22 12:00	10/18/22 09:45
10630039012	SB03D-0.0-0.5-1022	Solid	10/17/22 12:05	10/18/22 09:45
10630039013	SB03-1.0-1.5-1022	Solid	10/17/22 12:10	10/18/22 09:45
10630039014	ISM01-0.0-0.2-1022	Solid	10/17/22 12:15	10/18/22 09:45
10630039015	ISM03-0.0-0.2-1022	Solid	10/17/22 12:28	10/18/22 09:45
10630039016	SB02-0.0-0.5-1022	Solid	10/17/22 13:45	10/18/22 09:45
10630039017	SB02D-0.0-0.5-1022	Solid	10/17/22 13:50	10/18/22 09:45
10630039018	SB02-1-1.5-1022	Solid	10/17/22 13:55	10/18/22 09:45
10630039019	SB02-2.5-3.0-1022	Solid	10/17/22 14:00	10/18/22 09:45
10630039020	SB03-2.5-3.0-1022	Solid	10/17/22 12:15	10/18/22 09:45

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630039

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10630039001	SB06-0.0-0.5-1022	EPA 8082A	RAG	11	PASI-M
10630039002	SB06-1.0-1.5-1022	EPA 8082A	RAG	11	PASI-M
10630039003	SB06-2.5-3.0-1022	EPA 8082A	RAG	11	PASI-M
10630039004	SB04-0.0-0.5-1022	EPA 8082A	RAG	11	PASI-M
10630039005	SB04D-0.0-0.5-1022	EPA 8082A	RAG	11	PASI-M
10630039006	SB04-1.0-1.5-1022	EPA 8082A	RAG	11	PASI-M
10630039007	SB04-2.5-3.0-1022	EPA 8082A	RAG	11	PASI-M
10630039008	SB01-0.0-0.5-1022	EPA 8082A	RAG	11	PASI-M
10630039009	SB01-1.0-1.5-1022	EPA 8082A	RAG	11	PASI-M
10630039010	SB01-2.5-3.0-1022	EPA 8082A	RAG	11	PASI-M
10630039011	SB03-0.0-0.5-1022	EPA 8082A	RAG	11	PASI-M
10630039012	SB03D-0.0-0.5-1022	EPA 8082A	RAG	11	PASI-M
10630039013	SB03-1.0-1.5-1022	EPA 8082A	RAG	11	PASI-M
10630039014	ISM01-0.0-0.2-1022	EPA 8082A	RAG	11	PASI-M
10630039015	ISM03-0.0-0.2-1022	EPA 8082A	RAG	11	PASI-M
10630039016	SB02-0.0-0.5-1022	EPA 8082A	RAG	11	PASI-M
10630039017	SB02D-0.0-0.5-1022	EPA 8082A	RAG	11	PASI-M
10630039018	SB02-1-1.5-1022	EPA 8082A	RAG	11	PASI-M
10630039019	SB02-2.5-3.0-1022	EPA 8082A	RAG	11	PASI-M
10630039020	SB03-2.5-3.0-1022	EPA 8082A	RAG	11	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630039

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10630039001	SB06-0.0-0.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	4670	ug/kg	250	12/19/22 07:58	M1
10630039002	SB06-1.0-1.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	10500	ug/kg	487	12/19/22 08:13	
10630039003	SB06-2.5-3.0-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	199	ug/kg	49.8	12/16/22 17:30	
10630039004	SB04-0.0-0.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	433	ug/kg	48.8	12/16/22 17:45	
10630039005	SB04D-0.0-0.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	244	ug/kg	49.6	12/16/22 18:01	
10630039006	SB04-1.0-1.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	2660	ug/kg	99.7	12/19/22 08:29	
10630039007	SB04-2.5-3.0-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	434	ug/kg	48.7	12/16/22 18:33	
10630039008	SB01-0.0-0.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	18900	ug/kg	477	12/19/22 08:45	
10630039009	SB01-1.0-1.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	2440	ug/kg	99.0	12/19/22 09:01	
10630039010	SB01-2.5-3.0-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	73.1	ug/kg	49.8	12/16/22 19:20	
10630039011	SB03-0.0-0.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	161	ug/kg	49.8	12/16/22 19:36	
10630039012	SB03D-0.0-0.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	262	ug/kg	48.5	12/16/22 19:52	
10630039013	SB03-1.0-1.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	250	ug/kg	49.6	12/16/22 20:08	
10630039014	ISM01-0.0-0.2-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	5730	ug/kg	248	12/19/22 11:07	
10630039015	ISM03-0.0-0.2-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	12600	ug/kg	492	12/19/22 11:23	
10630039016	SB02-0.0-0.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	11500	ug/kg	498	12/19/22 11:39	
10630039017	SB02D-0.0-0.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	6740	ug/kg	243	12/19/22 11:55	
10630039018	SB02-1-1.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	1120	ug/kg	49.8	12/19/22 10:20	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630039

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10630039019	SB02-2.5-3.0-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	477	ug/kg	49.6	12/19/22 10:36	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630039

Method: EPA 8082A
Description: 8082A GCS PCB
Client: UPRR_Jacobs
Date: December 21, 2022

General Information:

20 samples were analyzed for EPA 8082A by Pace Analytical Services Minneapolis. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 858753

S0: Surrogate recovery outside laboratory control limits.

- SB01-0.0-0.5-1022 (Lab ID: 10630039008)
- Decachlorobiphenyl (S)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 858753

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10630039001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 4538140)
- PCB-1260 (Aroclor 1260)

Additional Comments:

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PROJECT NARRATIVE

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630039

Method: EPA 8082A

Description: 8082A GCS PCB

Client: UPRR_Jacobs

Date: December 21, 2022

Analyte Comments:

QC Batch: 858753

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- MS (Lab ID: 4538140)
 - PCB-1260 (Aroclor 1260)
- MSD (Lab ID: 4538141)
 - PCB-1260 (Aroclor 1260)

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630039

Sample: SB06-0.0-0.5-1022 **Lab ID: 10630039001** Collected: 10/17/22 15:15 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.2	ug/kg	50.0	21.2	1	12/15/22 14:57	12/16/22 16:26	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.5	ug/kg	50.0	34.5	1	12/15/22 14:57	12/16/22 16:26	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.6	ug/kg	50.0	29.6	1	12/15/22 14:57	12/16/22 16:26	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.9	ug/kg	50.0	30.9	1	12/15/22 14:57	12/16/22 16:26	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.5	ug/kg	50.0	25.5	1	12/15/22 14:57	12/16/22 16:26	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.9	ug/kg	50.0	24.9	1	12/15/22 14:57	12/16/22 16:26	11097-69-1	
PCB-1260 (Aroclor 1260)	4670	ug/kg	250	89.2	5	12/15/22 14:57	12/19/22 07:58	11096-82-5	M1
PCB-1262 (Aroclor 1262)	<32.8	ug/kg	50.0	32.8	1	12/15/22 14:57	12/16/22 16:26	37324-23-5	
PCB-1268 (Aroclor 1268)	<24.0	ug/kg	50.0	24.0	1	12/15/22 14:57	12/16/22 16:26	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	84	%.	53-125		1	12/15/22 14:57	12/16/22 16:26	877-09-8	
Decachlorobiphenyl (S)	82	%.	41-125		1	12/15/22 14:57	12/16/22 16:26	2051-24-3	

Sample: SB06-1.0-1.5-1022 **Lab ID: 10630039002** Collected: 10/17/22 15:20 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.6	ug/kg	48.7	20.6	1	12/15/22 14:57	12/16/22 17:14	12674-11-2	
PCB-1221 (Aroclor 1221)	<33.7	ug/kg	48.7	33.7	1	12/15/22 14:57	12/16/22 17:14	11104-28-2	
PCB-1232 (Aroclor 1232)	<28.8	ug/kg	48.7	28.8	1	12/15/22 14:57	12/16/22 17:14	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.1	ug/kg	48.7	30.1	1	12/15/22 14:57	12/16/22 17:14	53469-21-9	
PCB-1248 (Aroclor 1248)	<24.9	ug/kg	48.7	24.9	1	12/15/22 14:57	12/16/22 17:14	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.3	ug/kg	48.7	24.3	1	12/15/22 14:57	12/16/22 17:14	11097-69-1	
PCB-1260 (Aroclor 1260)	10500	ug/kg	487	174	10	12/15/22 14:57	12/19/22 08:13	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.0	ug/kg	48.7	32.0	1	12/15/22 14:57	12/16/22 17:14	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.4	ug/kg	48.7	23.4	1	12/15/22 14:57	12/16/22 17:14	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	98	%.	53-125		1	12/15/22 14:57	12/16/22 17:14	877-09-8	
Decachlorobiphenyl (S)	105	%.	41-125		1	12/15/22 14:57	12/16/22 17:14	2051-24-3	

Sample: SB06-2.5-3.0-1022 **Lab ID: 10630039003** Collected: 10/17/22 15:25 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.1	ug/kg	49.8	21.1	1	12/15/22 14:57	12/16/22 17:30	12674-11-2	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630039

Sample: SB06-2.5-3.0-1022 **Lab ID: 10630039003** Collected: 10/17/22 15:25 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1221 (Aroclor 1221)	<34.4	ug/kg	49.8	34.4	1	12/15/22 14:57	12/16/22 17:30	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.4	ug/kg	49.8	29.4	1	12/15/22 14:57	12/16/22 17:30	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.8	ug/kg	49.8	30.8	1	12/15/22 14:57	12/16/22 17:30	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.4	ug/kg	49.8	25.4	1	12/15/22 14:57	12/16/22 17:30	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.8	ug/kg	49.8	24.8	1	12/15/22 14:57	12/16/22 17:30	11097-69-1	
PCB-1260 (Aroclor 1260)	199	ug/kg	49.8	17.8	1	12/15/22 14:57	12/16/22 17:30	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.7	ug/kg	49.8	32.7	1	12/15/22 14:57	12/16/22 17:30	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.9	ug/kg	49.8	23.9	1	12/15/22 14:57	12/16/22 17:30	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	94	%.	53-125		1	12/15/22 14:57	12/16/22 17:30	877-09-8	
Decachlorobiphenyl (S)	106	%.	41-125		1	12/15/22 14:57	12/16/22 17:30	2051-24-3	

Sample: SB04-0.0-0.5-1022 **Lab ID: 10630039004** Collected: 10/17/22 14:30 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.7	ug/kg	48.8	20.7	1	12/15/22 14:57	12/16/22 17:45	12674-11-2	
PCB-1221 (Aroclor 1221)	<33.7	ug/kg	48.8	33.7	1	12/15/22 14:57	12/16/22 17:45	11104-28-2	
PCB-1232 (Aroclor 1232)	<28.9	ug/kg	48.8	28.9	1	12/15/22 14:57	12/16/22 17:45	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.2	ug/kg	48.8	30.2	1	12/15/22 14:57	12/16/22 17:45	53469-21-9	
PCB-1248 (Aroclor 1248)	<24.9	ug/kg	48.8	24.9	1	12/15/22 14:57	12/16/22 17:45	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.3	ug/kg	48.8	24.3	1	12/15/22 14:57	12/16/22 17:45	11097-69-1	
PCB-1260 (Aroclor 1260)	433	ug/kg	48.8	17.4	1	12/15/22 14:57	12/16/22 17:45	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.1	ug/kg	48.8	32.1	1	12/15/22 14:57	12/16/22 17:45	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.4	ug/kg	48.8	23.4	1	12/15/22 14:57	12/16/22 17:45	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	99	%.	53-125		1	12/15/22 14:57	12/16/22 17:45	877-09-8	
Decachlorobiphenyl (S)	105	%.	41-125		1	12/15/22 14:57	12/16/22 17:45	2051-24-3	

Sample: SB04D-0.0-0.5-1022 **Lab ID: 10630039005** Collected: 10/17/22 14:35 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.0	ug/kg	49.6	21.0	1	12/15/22 14:57	12/16/22 18:01	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.2	ug/kg	49.6	34.2	1	12/15/22 14:57	12/16/22 18:01	11104-28-2	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630039

Sample: SB04D-0.0-0.5-1022 **Lab ID: 10630039005** Collected: 10/17/22 14:35 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1232 (Aroclor 1232)	<29.3	ug/kg	49.6	29.3	1	12/15/22 14:57	12/16/22 18:01	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.7	ug/kg	49.6	30.7	1	12/15/22 14:57	12/16/22 18:01	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.3	ug/kg	49.6	25.3	1	12/15/22 14:57	12/16/22 18:01	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.7	ug/kg	49.6	24.7	1	12/15/22 14:57	12/16/22 18:01	11097-69-1	
PCB-1260 (Aroclor 1260)	244	ug/kg	49.6	17.7	1	12/15/22 14:57	12/16/22 18:01	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.6	ug/kg	49.6	32.6	1	12/15/22 14:57	12/16/22 18:01	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.8	ug/kg	49.6	23.8	1	12/15/22 14:57	12/16/22 18:01	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	93	%	53-125		1	12/15/22 14:57	12/16/22 18:01	877-09-8	
Decachlorobiphenyl (S)	102	%	41-125		1	12/15/22 14:57	12/16/22 18:01	2051-24-3	

Sample: SB04-1.0-1.5-1022 **Lab ID: 10630039006** Collected: 10/17/22 14:40 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.1	ug/kg	49.9	21.1	1	12/15/22 14:57	12/16/22 18:17	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.4	ug/kg	49.9	34.4	1	12/15/22 14:57	12/16/22 18:17	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.5	ug/kg	49.9	29.5	1	12/15/22 14:57	12/16/22 18:17	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.8	ug/kg	49.9	30.8	1	12/15/22 14:57	12/16/22 18:17	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.4	ug/kg	49.9	25.4	1	12/15/22 14:57	12/16/22 18:17	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.9	ug/kg	49.9	24.9	1	12/15/22 14:57	12/16/22 18:17	11097-69-1	
PCB-1260 (Aroclor 1260)	2660	ug/kg	99.7	35.6	2	12/15/22 14:57	12/19/22 08:29	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.8	ug/kg	49.9	32.8	1	12/15/22 14:57	12/16/22 18:17	37324-23-5	
PCB-1268 (Aroclor 1268)	<24.0	ug/kg	49.9	24.0	1	12/15/22 14:57	12/16/22 18:17	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	86	%	53-125		1	12/15/22 14:57	12/16/22 18:17	877-09-8	
Decachlorobiphenyl (S)	105	%	41-125		1	12/15/22 14:57	12/16/22 18:17	2051-24-3	

Sample: SB04-2.5-3.0-1022 **Lab ID: 10630039007** Collected: 10/17/22 14:45 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.6	ug/kg	48.7	20.6	1	12/15/22 14:57	12/16/22 18:33	12674-11-2	
PCB-1221 (Aroclor 1221)	<33.6	ug/kg	48.7	33.6	1	12/15/22 14:57	12/16/22 18:33	11104-28-2	
PCB-1232 (Aroclor 1232)	<28.8	ug/kg	48.7	28.8	1	12/15/22 14:57	12/16/22 18:33	11141-16-5	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630039

Sample: SB04-2.5-3.0-1022 **Lab ID: 10630039007** Collected: 10/17/22 14:45 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1242 (Aroclor 1242)	<30.1	ug/kg	48.7	30.1	1	12/15/22 14:57	12/16/22 18:33	53469-21-9	
PCB-1248 (Aroclor 1248)	<24.9	ug/kg	48.7	24.9	1	12/15/22 14:57	12/16/22 18:33	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.3	ug/kg	48.7	24.3	1	12/15/22 14:57	12/16/22 18:33	11097-69-1	
PCB-1260 (Aroclor 1260)	434	ug/kg	48.7	17.4	1	12/15/22 14:57	12/16/22 18:33	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.0	ug/kg	48.7	32.0	1	12/15/22 14:57	12/16/22 18:33	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.4	ug/kg	48.7	23.4	1	12/15/22 14:57	12/16/22 18:33	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	64	%	53-125		1	12/15/22 14:57	12/16/22 18:33	877-09-8	
Decachlorobiphenyl (S)	76	%	41-125		1	12/15/22 14:57	12/16/22 18:33	2051-24-3	

Sample: SB01-0.0-0.5-1022 **Lab ID: 10630039008** Collected: 10/17/22 11:00 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.2	ug/kg	47.7	20.2	1	12/15/22 14:57	12/16/22 18:49	12674-11-2	
PCB-1221 (Aroclor 1221)	<33.0	ug/kg	47.7	33.0	1	12/15/22 14:57	12/16/22 18:49	11104-28-2	
PCB-1232 (Aroclor 1232)	<28.2	ug/kg	47.7	28.2	1	12/15/22 14:57	12/16/22 18:49	11141-16-5	
PCB-1242 (Aroclor 1242)	<29.5	ug/kg	47.7	29.5	1	12/15/22 14:57	12/16/22 18:49	53469-21-9	
PCB-1248 (Aroclor 1248)	<24.4	ug/kg	47.7	24.4	1	12/15/22 14:57	12/16/22 18:49	12672-29-6	
PCB-1254 (Aroclor 1254)	<23.8	ug/kg	47.7	23.8	1	12/15/22 14:57	12/16/22 18:49	11097-69-1	
PCB-1260 (Aroclor 1260)	18900	ug/kg	477	170	10	12/15/22 14:57	12/19/22 08:45	11096-82-5	
PCB-1262 (Aroclor 1262)	<31.4	ug/kg	47.7	31.4	1	12/15/22 14:57	12/16/22 18:49	37324-23-5	
PCB-1268 (Aroclor 1268)	<22.9	ug/kg	47.7	22.9	1	12/15/22 14:57	12/16/22 18:49	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	89	%	53-125		1	12/15/22 14:57	12/16/22 18:49	877-09-8	
Decachlorobiphenyl (S)	139	%	41-125		1	12/15/22 14:57	12/16/22 18:49	2051-24-3	S0

Sample: SB01-1.0-1.5-1022 **Lab ID: 10630039009** Collected: 10/17/22 11:05 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.0	ug/kg	49.5	21.0	1	12/15/22 14:57	12/16/22 19:04	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.2	ug/kg	49.5	34.2	1	12/15/22 14:57	12/16/22 19:04	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.3	ug/kg	49.5	29.3	1	12/15/22 14:57	12/16/22 19:04	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.6	ug/kg	49.5	30.6	1	12/15/22 14:57	12/16/22 19:04	53469-21-9	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630039

Sample: SB01-1.0-1.5-1022 **Lab ID: 10630039009** Collected: 10/17/22 11:05 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1248 (Aroclor 1248)	<25.3	ug/kg	49.5	25.3	1	12/15/22 14:57	12/16/22 19:04	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.7	ug/kg	49.5	24.7	1	12/15/22 14:57	12/16/22 19:04	11097-69-1	
PCB-1260 (Aroclor 1260)	2440	ug/kg	99.0	35.4	2	12/15/22 14:57	12/19/22 09:01	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.6	ug/kg	49.5	32.6	1	12/15/22 14:57	12/16/22 19:04	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.8	ug/kg	49.5	23.8	1	12/15/22 14:57	12/16/22 19:04	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	59	%	53-125		1	12/15/22 14:57	12/16/22 19:04	877-09-8	
Decachlorobiphenyl (S)	67	%	41-125		1	12/15/22 14:57	12/16/22 19:04	2051-24-3	

Sample: SB01-2.5-3.0-1022 **Lab ID: 10630039010** Collected: 10/17/22 11:10 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.1	ug/kg	49.8	21.1	1	12/15/22 14:57	12/16/22 19:20	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.4	ug/kg	49.8	34.4	1	12/15/22 14:57	12/16/22 19:20	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.4	ug/kg	49.8	29.4	1	12/15/22 14:57	12/16/22 19:20	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.8	ug/kg	49.8	30.8	1	12/15/22 14:57	12/16/22 19:20	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.4	ug/kg	49.8	25.4	1	12/15/22 14:57	12/16/22 19:20	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.8	ug/kg	49.8	24.8	1	12/15/22 14:57	12/16/22 19:20	11097-69-1	
PCB-1260 (Aroclor 1260)	73.1	ug/kg	49.8	17.8	1	12/15/22 14:57	12/16/22 19:20	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.7	ug/kg	49.8	32.7	1	12/15/22 14:57	12/16/22 19:20	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.9	ug/kg	49.8	23.9	1	12/15/22 14:57	12/16/22 19:20	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	93	%	53-125		1	12/15/22 14:57	12/16/22 19:20	877-09-8	
Decachlorobiphenyl (S)	108	%	41-125		1	12/15/22 14:57	12/16/22 19:20	2051-24-3	

Sample: SB03-0.0-0.5-1022 **Lab ID: 10630039011** Collected: 10/17/22 12:00 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.1	ug/kg	49.8	21.1	1	12/15/22 14:57	12/16/22 19:36	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.4	ug/kg	49.8	34.4	1	12/15/22 14:57	12/16/22 19:36	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.5	ug/kg	49.8	29.5	1	12/15/22 14:57	12/16/22 19:36	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.8	ug/kg	49.8	30.8	1	12/15/22 14:57	12/16/22 19:36	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.4	ug/kg	49.8	25.4	1	12/15/22 14:57	12/16/22 19:36	12672-29-6	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630039

Sample: SB03-0.0-0.5-1022 **Lab ID: 10630039011** Collected: 10/17/22 12:00 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1254 (Aroclor 1254)	<24.8	ug/kg	49.8	24.8	1	12/15/22 14:57	12/16/22 19:36	11097-69-1	
PCB-1260 (Aroclor 1260)	161	ug/kg	49.8	17.8	1	12/15/22 14:57	12/16/22 19:36	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.8	ug/kg	49.8	32.8	1	12/15/22 14:57	12/16/22 19:36	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.9	ug/kg	49.8	23.9	1	12/15/22 14:57	12/16/22 19:36	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	81	%.	53-125		1	12/15/22 14:57	12/16/22 19:36	877-09-8	
Decachlorobiphenyl (S)	88	%.	41-125		1	12/15/22 14:57	12/16/22 19:36	2051-24-3	

Sample: SB03D-0.0-0.5-1022 **Lab ID: 10630039012** Collected: 10/17/22 12:05 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.6	ug/kg	48.5	20.6	1	12/15/22 14:57	12/16/22 19:52	12674-11-2	
PCB-1221 (Aroclor 1221)	<33.5	ug/kg	48.5	33.5	1	12/15/22 14:57	12/16/22 19:52	11104-28-2	
PCB-1232 (Aroclor 1232)	<28.7	ug/kg	48.5	28.7	1	12/15/22 14:57	12/16/22 19:52	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.0	ug/kg	48.5	30.0	1	12/15/22 14:57	12/16/22 19:52	53469-21-9	
PCB-1248 (Aroclor 1248)	<24.8	ug/kg	48.5	24.8	1	12/15/22 14:57	12/16/22 19:52	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.2	ug/kg	48.5	24.2	1	12/15/22 14:57	12/16/22 19:52	11097-69-1	
PCB-1260 (Aroclor 1260)	262	ug/kg	48.5	17.3	1	12/15/22 14:57	12/16/22 19:52	11096-82-5	
PCB-1262 (Aroclor 1262)	<31.9	ug/kg	48.5	31.9	1	12/15/22 14:57	12/16/22 19:52	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.3	ug/kg	48.5	23.3	1	12/15/22 14:57	12/16/22 19:52	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	100	%.	53-125		1	12/15/22 14:57	12/16/22 19:52	877-09-8	
Decachlorobiphenyl (S)	105	%.	41-125		1	12/15/22 14:57	12/16/22 19:52	2051-24-3	

Sample: SB03-1.0-1.5-1022 **Lab ID: 10630039013** Collected: 10/17/22 12:10 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.0	ug/kg	49.6	21.0	1	12/15/22 14:57	12/16/22 20:08	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.3	ug/kg	49.6	34.3	1	12/15/22 14:57	12/16/22 20:08	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.3	ug/kg	49.6	29.3	1	12/15/22 14:57	12/16/22 20:08	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.7	ug/kg	49.6	30.7	1	12/15/22 14:57	12/16/22 20:08	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.3	ug/kg	49.6	25.3	1	12/15/22 14:57	12/16/22 20:08	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.7	ug/kg	49.6	24.7	1	12/15/22 14:57	12/16/22 20:08	11097-69-1	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630039

Sample: SB03-1.0-1.5-1022 **Lab ID: 10630039013** Collected: 10/17/22 12:10 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1260 (Aroclor 1260)	250	ug/kg	49.6	17.7	1	12/15/22 14:57	12/16/22 20:08	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.6	ug/kg	49.6	32.6	1	12/15/22 14:57	12/16/22 20:08	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.8	ug/kg	49.6	23.8	1	12/15/22 14:57	12/16/22 20:08	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	89	%.	53-125		1	12/15/22 14:57	12/16/22 20:08	877-09-8	
Decachlorobiphenyl (S)	106	%.	41-125		1	12/15/22 14:57	12/16/22 20:08	2051-24-3	

Sample: ISM01-0.0-0.2-1022 **Lab ID: 10630039014** Collected: 10/17/22 12:15 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.0	ug/kg	49.5	21.0	1	12/15/22 14:57	12/19/22 09:17	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.2	ug/kg	49.5	34.2	1	12/15/22 14:57	12/19/22 09:17	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.3	ug/kg	49.5	29.3	1	12/15/22 14:57	12/19/22 09:17	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.6	ug/kg	49.5	30.6	1	12/15/22 14:57	12/19/22 09:17	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.3	ug/kg	49.5	25.3	1	12/15/22 14:57	12/19/22 09:17	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.7	ug/kg	49.5	24.7	1	12/15/22 14:57	12/19/22 09:17	11097-69-1	
PCB-1260 (Aroclor 1260)	5730	ug/kg	248	88.5	5	12/15/22 14:57	12/19/22 11:07	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.6	ug/kg	49.5	32.6	1	12/15/22 14:57	12/19/22 09:17	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.8	ug/kg	49.5	23.8	1	12/15/22 14:57	12/19/22 09:17	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	96	%.	53-125		1	12/15/22 14:57	12/19/22 09:17	877-09-8	
Decachlorobiphenyl (S)	115	%.	41-125		1	12/15/22 14:57	12/19/22 09:17	2051-24-3	

Sample: ISM03-0.0-0.2-1022 **Lab ID: 10630039015** Collected: 10/17/22 12:28 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.8	ug/kg	49.2	20.8	1	12/15/22 14:57	12/19/22 09:33	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.0	ug/kg	49.2	34.0	1	12/15/22 14:57	12/19/22 09:33	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.1	ug/kg	49.2	29.1	1	12/15/22 14:57	12/19/22 09:33	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.4	ug/kg	49.2	30.4	1	12/15/22 14:57	12/19/22 09:33	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.1	ug/kg	49.2	25.1	1	12/15/22 14:57	12/19/22 09:33	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.5	ug/kg	49.2	24.5	1	12/15/22 14:57	12/19/22 09:33	11097-69-1	
PCB-1260 (Aroclor 1260)	12600	ug/kg	492	176	10	12/15/22 14:57	12/19/22 11:23	11096-82-5	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630039

Sample: ISM03-0.0-0.2-1022 **Lab ID:** 10630039015 **Collected:** 10/17/22 12:28 **Received:** 10/18/22 09:45 **Matrix:** Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1262 (Aroclor 1262)	<32.4	ug/kg	49.2	32.4	1	12/15/22 14:57	12/19/22 09:33	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.6	ug/kg	49.2	23.6	1	12/15/22 14:57	12/19/22 09:33	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	104	%.	53-125		1	12/15/22 14:57	12/19/22 09:33	877-09-8	
Decachlorobiphenyl (S)	111	%.	41-125		1	12/15/22 14:57	12/19/22 09:33	2051-24-3	

Sample: SB02-0.0-0.5-1022 **Lab ID:** 10630039016 **Collected:** 10/17/22 13:45 **Received:** 10/18/22 09:45 **Matrix:** Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.1	ug/kg	49.8	21.1	1	12/15/22 14:57	12/19/22 09:48	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.4	ug/kg	49.8	34.4	1	12/15/22 14:57	12/19/22 09:48	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.5	ug/kg	49.8	29.5	1	12/15/22 14:57	12/19/22 09:48	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.8	ug/kg	49.8	30.8	1	12/15/22 14:57	12/19/22 09:48	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.4	ug/kg	49.8	25.4	1	12/15/22 14:57	12/19/22 09:48	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.8	ug/kg	49.8	24.8	1	12/15/22 14:57	12/19/22 09:48	11097-69-1	
PCB-1260 (Aroclor 1260)	11500	ug/kg	498	178	10	12/15/22 14:57	12/19/22 11:39	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.8	ug/kg	49.8	32.8	1	12/15/22 14:57	12/19/22 09:48	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.9	ug/kg	49.8	23.9	1	12/15/22 14:57	12/19/22 09:48	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	99	%.	53-125		1	12/15/22 14:57	12/19/22 09:48	877-09-8	
Decachlorobiphenyl (S)	116	%.	41-125		1	12/15/22 14:57	12/19/22 09:48	2051-24-3	

Sample: SB02D-0.0-0.5-1022 **Lab ID:** 10630039017 **Collected:** 10/17/22 13:50 **Received:** 10/18/22 09:45 **Matrix:** Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.6	ug/kg	48.6	20.6	1	12/15/22 14:57	12/19/22 10:04	12674-11-2	
PCB-1221 (Aroclor 1221)	<33.6	ug/kg	48.6	33.6	1	12/15/22 14:57	12/19/22 10:04	11104-28-2	
PCB-1232 (Aroclor 1232)	<28.7	ug/kg	48.6	28.7	1	12/15/22 14:57	12/19/22 10:04	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.1	ug/kg	48.6	30.1	1	12/15/22 14:57	12/19/22 10:04	53469-21-9	
PCB-1248 (Aroclor 1248)	<24.8	ug/kg	48.6	24.8	1	12/15/22 14:57	12/19/22 10:04	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.2	ug/kg	48.6	24.2	1	12/15/22 14:57	12/19/22 10:04	11097-69-1	
PCB-1260 (Aroclor 1260)	6740	ug/kg	243	86.8	5	12/15/22 14:57	12/19/22 11:55	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.0	ug/kg	48.6	32.0	1	12/15/22 14:57	12/19/22 10:04	37324-23-5	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630039

Sample: SB02D-0.0-0.5-1022 **Lab ID: 10630039017** Collected: 10/17/22 13:50 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB Analytical Method: EPA 8082A Preparation Method: EPA 3546 Pace Analytical Services - Minneapolis									
PCB-1268 (Aroclor 1268)	<23.3	ug/kg	48.6	23.3	1	12/15/22 14:57	12/19/22 10:04	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	97	%.	53-125		1	12/15/22 14:57	12/19/22 10:04	877-09-8	
Decachlorobiphenyl (S)	125	%.	41-125		1	12/15/22 14:57	12/19/22 10:04	2051-24-3	

Sample: SB02-1-1.5-1022 **Lab ID: 10630039018** Collected: 10/17/22 13:55 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB Analytical Method: EPA 8082A Preparation Method: EPA 3546 Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.1	ug/kg	49.8	21.1	1	12/15/22 14:57	12/19/22 10:20	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.4	ug/kg	49.8	34.4	1	12/15/22 14:57	12/19/22 10:20	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.5	ug/kg	49.8	29.5	1	12/15/22 14:57	12/19/22 10:20	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.8	ug/kg	49.8	30.8	1	12/15/22 14:57	12/19/22 10:20	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.4	ug/kg	49.8	25.4	1	12/15/22 14:57	12/19/22 10:20	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.8	ug/kg	49.8	24.8	1	12/15/22 14:57	12/19/22 10:20	11097-69-1	
PCB-1260 (Aroclor 1260)	1120	ug/kg	49.8	17.8	1	12/15/22 14:57	12/19/22 10:20	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.8	ug/kg	49.8	32.8	1	12/15/22 14:57	12/19/22 10:20	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.9	ug/kg	49.8	23.9	1	12/15/22 14:57	12/19/22 10:20	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	91	%.	53-125		1	12/15/22 14:57	12/19/22 10:20	877-09-8	
Decachlorobiphenyl (S)	106	%.	41-125		1	12/15/22 14:57	12/19/22 10:20	2051-24-3	

Sample: SB02-2.5-3.0-1022 **Lab ID: 10630039019** Collected: 10/17/22 14:00 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB Analytical Method: EPA 8082A Preparation Method: EPA 3546 Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.0	ug/kg	49.6	21.0	1	12/15/22 14:57	12/19/22 10:36	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.2	ug/kg	49.6	34.2	1	12/15/22 14:57	12/19/22 10:36	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.3	ug/kg	49.6	29.3	1	12/15/22 14:57	12/19/22 10:36	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.7	ug/kg	49.6	30.7	1	12/15/22 14:57	12/19/22 10:36	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.3	ug/kg	49.6	25.3	1	12/15/22 14:57	12/19/22 10:36	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.7	ug/kg	49.6	24.7	1	12/15/22 14:57	12/19/22 10:36	11097-69-1	
PCB-1260 (Aroclor 1260)	477	ug/kg	49.6	17.7	1	12/15/22 14:57	12/19/22 10:36	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.6	ug/kg	49.6	32.6	1	12/15/22 14:57	12/19/22 10:36	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.8	ug/kg	49.6	23.8	1	12/15/22 14:57	12/19/22 10:36	11100-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630039

Sample: SB02-2.5-3.0-1022 **Lab ID: 10630039019** Collected: 10/17/22 14:00 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
Surrogates									
Tetrachloro-m-xylene (S)	94	%.	53-125		1	12/15/22 14:57	12/19/22 10:36	877-09-8	
Decachlorobiphenyl (S)	102	%.	41-125		1	12/15/22 14:57	12/19/22 10:36	2051-24-3	

Sample: SB03-2.5-3.0-1022 **Lab ID: 10630039020** Collected: 10/17/22 12:15 Received: 10/18/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.8	ug/kg	49.1	20.8	1	12/15/22 14:57	12/19/22 10:52	12674-11-2	
PCB-1221 (Aroclor 1221)	<33.9	ug/kg	49.1	33.9	1	12/15/22 14:57	12/19/22 10:52	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.0	ug/kg	49.1	29.0	1	12/15/22 14:57	12/19/22 10:52	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.4	ug/kg	49.1	30.4	1	12/15/22 14:57	12/19/22 10:52	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.0	ug/kg	49.1	25.0	1	12/15/22 14:57	12/19/22 10:52	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.5	ug/kg	49.1	24.5	1	12/15/22 14:57	12/19/22 10:52	11097-69-1	
PCB-1260 (Aroclor 1260)	<17.5	ug/kg	49.1	17.5	1	12/15/22 14:57	12/19/22 10:52	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.3	ug/kg	49.1	32.3	1	12/15/22 14:57	12/19/22 10:52	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.6	ug/kg	49.1	23.6	1	12/15/22 14:57	12/19/22 10:52	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	77	%.	53-125		1	12/15/22 14:57	12/19/22 10:52	877-09-8	
Decachlorobiphenyl (S)	94	%.	41-125		1	12/15/22 14:57	12/19/22 10:52	2051-24-3	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630039

QC Batch:	858753	Analysis Method:	EPA 8082A
QC Batch Method:	EPA 3546	Analysis Description:	8082A GCS PCB
		Laboratory:	Pace Analytical Services - Minneapolis
Associated Lab Samples:	10630039001, 10630039002, 10630039003, 10630039004, 10630039005, 10630039006, 10630039007, 10630039008, 10630039009, 10630039010, 10630039011, 10630039012, 10630039013, 10630039014, 10630039015, 10630039016, 10630039017, 10630039018, 10630039019, 10630039020		

METHOD BLANK:	4538138	Matrix:	Solid
Associated Lab Samples:	10630039001, 10630039002, 10630039003, 10630039004, 10630039005, 10630039006, 10630039007, 10630039008, 10630039009, 10630039010, 10630039011, 10630039012, 10630039013, 10630039014, 10630039015, 10630039016, 10630039017, 10630039018, 10630039019, 10630039020		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<21.2	50.0	21.2	12/16/22 15:55	
PCB-1221 (Aroclor 1221)	ug/kg	<34.5	50.0	34.5	12/16/22 15:55	
PCB-1232 (Aroclor 1232)	ug/kg	<29.6	50.0	29.6	12/16/22 15:55	
PCB-1242 (Aroclor 1242)	ug/kg	<30.9	50.0	30.9	12/16/22 15:55	
PCB-1248 (Aroclor 1248)	ug/kg	<25.5	50.0	25.5	12/16/22 15:55	
PCB-1254 (Aroclor 1254)	ug/kg	<24.9	50.0	24.9	12/16/22 15:55	
PCB-1260 (Aroclor 1260)	ug/kg	<17.8	50.0	17.8	12/16/22 15:55	
PCB-1262 (Aroclor 1262)	ug/kg	<32.8	50.0	32.8	12/16/22 15:55	
PCB-1268 (Aroclor 1268)	ug/kg	<24.0	50.0	24.0	12/16/22 15:55	
Decachlorobiphenyl (S)	%	116	41-125		12/16/22 15:55	
Tetrachloro-m-xylene (S)	%	95	53-125		12/16/22 15:55	

LABORATORY CONTROL SAMPLE: 4538139

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	1000	1030	103	68-125	
PCB-1260 (Aroclor 1260)	ug/kg	1000	1050	105	70-125	
Decachlorobiphenyl (S)	%			118	41-125	
Tetrachloro-m-xylene (S)	%			108	53-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4538140 4538141

Parameter	Units	10630039001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<21.2	981	996	779	887	79	89	53-125	13	30	
PCB-1260 (Aroclor 1260)	ug/kg	4670	981	996	4680	5200	1	53	30-143	10	30	E,M1
Decachlorobiphenyl (S)	%						88	94	41-125			
Tetrachloro-m-xylene (S)	%						90	96	53-125			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630039

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E Analyte concentration exceeded the calibration range. The reported result is estimated.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

S0 Surrogate recovery outside laboratory control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630039

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10630039001	SB06-0.0-0.5-1022	EPA 3546	858753	EPA 8082A	858854
10630039002	SB06-1.0-1.5-1022	EPA 3546	858753	EPA 8082A	858854
10630039003	SB06-2.5-3.0-1022	EPA 3546	858753	EPA 8082A	858854
10630039004	SB04-0.0-0.5-1022	EPA 3546	858753	EPA 8082A	858854
10630039005	SB04D-0.0-0.5-1022	EPA 3546	858753	EPA 8082A	858854
10630039006	SB04-1.0-1.5-1022	EPA 3546	858753	EPA 8082A	858854
10630039007	SB04-2.5-3.0-1022	EPA 3546	858753	EPA 8082A	858854
10630039008	SB01-0.0-0.5-1022	EPA 3546	858753	EPA 8082A	858854
10630039009	SB01-1.0-1.5-1022	EPA 3546	858753	EPA 8082A	858854
10630039010	SB01-2.5-3.0-1022	EPA 3546	858753	EPA 8082A	858854
10630039011	SB03-0.0-0.5-1022	EPA 3546	858753	EPA 8082A	858854
10630039012	SB03D-0.0-0.5-1022	EPA 3546	858753	EPA 8082A	858854
10630039013	SB03-1.0-1.5-1022	EPA 3546	858753	EPA 8082A	858854
10630039014	ISM01-0.0-0.2-1022	EPA 3546	858753	EPA 8082A	858854
10630039015	ISM03-0.0-0.2-1022	EPA 3546	858753	EPA 8082A	858854
10630039016	SB02-0.0-0.5-1022	EPA 3546	858753	EPA 8082A	858854
10630039017	SB02D-0.0-0.5-1022	EPA 3546	858753	EPA 8082A	858854
10630039018	SB02-1-1.5-1022	EPA 3546	858753	EPA 8082A	858854
10630039019	SB02-2.5-3.0-1022	EPA 3546	858753	EPA 8082A	858854
10630039020	SB03-2.5-3.0-1022	EPA 3546	858753	EPA 8082A	858854

REPORT OF LABORATORY ANALYSIS

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Internal Transfer Chain of Custody



☒ Samples Pre-Logged into eCOC.

State Of Origin: OR

Cert. Needed: ☐ Yes ☐ No

Owner Received Date: 10/18/2022 Results Requested By: 10/27/2022

Workorder: 10630039 Workorder Name: Portland OR-Peninsula Iron Wor

Pace Analytical
www.pacelabs.com

Report To		Subcontract To		Requested Analysis																								
Jennifer Gross Pace Analytical Minnesota 1700 Elm Street Minneapolis, MN 55414 Phone (612)607-1700		Pace Analytical Green Bay 1241 Bellevue Street Suite 9 Green Bay, WI 54302 Phone (920)469-2436																										
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	APPC	Preserved Containers					MISC / ISM (50 Increments) (PACE-ISM)	MISC / Sieving (<2mm) (PACE-GB)											LAB USE ONLY				
1	SB06-0.0-0.5-1022	PS	10/17/2022 15:15	10630039001	Solid	1								X														001
2	SB06-1.0-1.5-1022	PS	10/17/2022 15:20	10630039002	Solid	1								X														002
3	SB06-2.5-3.0-1022	PS	10/17/2022 15:25	10630039003	Solid	1								X														003
4	SB04-0.0-0.5-1022	PS	10/17/2022 14:30	10630039004	Solid	1								X														004
5	SB04D-0.0-0.5-1022	PS	10/17/2022 14:35	10630039005	Solid	1								X														005
6	SB04-1.0-1.5-1022	PS	10/17/2022 14:40	10630039006	Solid	1								X														006
7	SB04-2.5-3.0-1022	PS	10/17/2022 14:45	10630039007	Solid	1								X														007
8	SB01-0.0-0.5-1022	PS	10/17/2022 11:00	10630039008	Solid	1								X														008
9	SB01-1.0-1.5-1022	PS	10/17/2022 11:05	10630039009	Solid	1								X														009
10	SB01-2.5-3.0-1022	PS	10/17/2022 11:10	10630039010	Solid	1								X														010
11	SB03-0.0-0.5-1022	PS	10/17/2022 12:00	10630039011	Solid	1								X														011
12	SB03D-0.0-0.5-1022	PS	10/17/2022 12:05	10630039012	Solid	1								X														012
13	SB03-1.0-1.5-1022	PS	10/17/2022 12:10	10630039013	Solid	1								X														013
14	ISM01-0.0-0.2-1022	PS	10/17/2022 12:15	10630039014	Solid	1							X															014
15	ISM03-0.0-0.2-1022	PS	10/17/2022 12:28	10630039015	Solid	1							X															015
16	SB02-0.0-0.5-1022	PS	10/17/2022 13:45	10630039016	Solid	1								X														016
17	SB02D-0.0-0.5-1022	PS	10/17/2022 13:50	10630039017	Solid	1								X														017
18	SB02-1-1.5-1022	PS	10/17/2022 13:55	10630039018	Solid	1								X														018
19	SB02-2.5-3.0-1022	PS	10/17/2022 14:00	10630039019	Solid	1								X														019

40253331
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www.pacelabs.com



State Of Origin: OR

Cert. Needed: ☐ Yes

☐ No

Workorder Name: Portland OR-Peninsula Iron Wor

Owner Received Date: 10/18/2022 Results Requested By: 10/27/2022

[illegible]

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>.

Section A

Required Client Information:

Company:	Jacobs for UPRR	
Address:	2020 SW 4th Avenue, Suite 300 Portland, OR 97201	
Email:	david.hodson@jacobs.com	
Phone:	(510)316-2323	Fax:
Requested Due Date:		

Section B

Required Project Information:

Report To:	Hodson, David
Copy To:	
Purchase Order #:	2903-01
Project Name:	Portland OR-Peninsula Iron Works
Project #:	

Section C

Invoice Information:

Attention:	John DeJong
Company Name:	UPRR
Address:	4315 E Sprague Ave, Spokane Valley, WA 99212
Pace Quote:	4700001441 (MA-000166-2022)
Pace Project Manager:	jennifer.gross@pacelabs.com,
Pace Profile #:	45173

Regulatory Agency
State / Location
OR / Portland - Multnomah County

[illegible]

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER:

DATE Signed:

TEMP in C

Received on

ce

(N/A)

**Customy
Sealed**

Cooler
N/A

Samples

ntact

Pace

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 2 Of 2

Section C

Required Client Information:

Required Project Information:**Invoice Information:**

Company: Jacobs for UPRR		Report To: Hodson, David	Attention: John DeJong	
Address: 2020 SW 4th Avenue, Suite 300 Portland, OR 97201		Copy To:	Company Name: UPRR	
Email: david.hodson@jacobs.com		Purchase Order #: 2903-01	Address: 4315 E Sprague Ave, Spokane Valley, WA 99212	
Phone: (510)316-2323 Fax:		Project Name: Portland OR-Peninsula Iron Works	Pace Quote: 4700001441 (MA-000166-2022)	
Requested Due Date:		Project #:	Pace Project Manager: jennifer.gross@pacelabs.com, Pace Profile #: 45173	
				OR / Portland - Multnomah County

[illegible]

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Include 1262 & 1268	Jacobs	10/17/22	1100U				
Methods 8082 & 1668 - Require chromatograms	Fedex	10/18/22	945	Morgan	10/18/22	945	
Pack							

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: <u>Adelyn Warren</u> SIGNATURE OF SAMPLER: <u>[Signature]</u>		DATE Signed: <u>10/17/22</u>	TEMP in C Received on Ice (Y/N) Custody Sealed (Y/N) Cooler (Y/N) Samples Intact (Y/N)

Effective Date: 8/16/2022

Client Name:

Jacobs/Pave MN

Sample Preservation Receipt Form

Project #

40253331

All containers needing preservation have been checked and noted below:

☐ Yes☐ No☐ N/A

Lab Lot# of pH paper:

Lab Std #/ID of preservation (if pH adjusted):

Initial when
completed:Date/
Time:

Pace Lab #	Glass						Plastic						Vials					Jars				General				VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC							
001																									-							2.5 / 5
002																									-							2.5 / 5
003																									-							2.5 / 5
004																									-							2.5 / 5
005																									-							2.5 / 5
006																									-							2.5 / 5
007																									-							2.5 / 5
008																									-							2.5 / 5
009																									-							2.5 / 5
010																									-							2.5 / 5
011																									-							2.5 / 5
012																									-							2.5 / 5
013																									-							2.5 / 5
014																									-							2.5 / 5
015																									-							2.5 / 5
016																									-							2.5 / 5
017																									-							2.5 / 5
018																									-							2.5 / 5
019																									-							2.5 / 5
020																									-							2.5 / 5

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____

Headspace in VOA Vials (>6mm): ☐ Yes ☐ No ☒ N/A

*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of 4

10/19/22
Lp

Sample Condition Upon Receipt Form (SCUR)

Client Name: Pace MNProject # 40253331

Additional Comments/Resolution: _____

① ~~5B03-2.5~~10/19/22 up ~~5B03-2.5-3.0-1022~~ 10/17/22 1215① ~~15M02-0.0-0.2-1022~~ 10/17/22 ~~1215~~ 10/19/22 up① Samples not
listed on COC~~did not receive "15M02-0.0-0.2-1022"~~ 10/19/22 up

10/19/22 up

Sample Condition Upon Receipt Form (SCUR)

Client Name: _____

Project # 4025333

Additional Comments/Resolution: _____

Therm 110 No corr.5923 7141 9678 / 2°5923 7141 9645 / 0°5923 7141 9667 / 0°5923 7141 9656 / 0°Sediment in cooler 10/18/22 mp① SB02-0.0-0.5-1022 10/17/22 1345SB02D-0.0-0.5-1022 10/17/22 1350SB02-0-1.5-1022 10/17/22 1355SB02-2.5-3.0-1022 10/17/22 1400① samples not listed on COCSB03D-0.0-0.5-1022 + SB02-0.0-0.5-1022received with holes in bags 10/18/22 mpboth samples have water in bag containing the sample + the outer bag.Both samples in same cooler.~~SB03-2.5-3.0-1022, sample not listed on COC~~~~ISM02-0.0-0.2-1022~~ 10/19/22 mp10/19/22 mpPage 3 of 4
10/19/22 mp

Sample Condition Upon Receipt Form (SCUR)

Project #:

Client Name:

Jacobs / Pace MN

Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco

☐ Client

☐ Pace

Other: _____

WO#: 40253331



40253331

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other _____

Thermometer Used SR - 110 Type of Ice: Wet Blue Dry None ☐ Meltwater Only

Cooler Temperature Uncorr: — / Corr: See additional

Temp Blank Present: ☐ yes ☒ no Comments: Biological Tissue is Frozen ☐ yes ☐ no

Person examining contents:

Date: 10/18/22 / Initials: up

Labeled By Initials: mt

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☐ Yes ☒ No ☐ N/A	2. <u>proj# 10/19/22 mp</u>
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC:	☒ Yes ☐ No ☐ N/A	4.
Samples Arrived within Hold Time:	☒ Yes ☐ No	5.
- DI VOA Samples frozen upon receipt	☐ Yes ☐ No	Date/Time:
Short Hold Time Analysis (<72hr):	☐ Yes ☒ No	6.
Rush Turn Around Time Requested:	☐ Yes ☒ No	7.
Sufficient Volume:		8.
For Analysis: ☒ Yes ☐ No MS/MSD: ☐ Yes ☒ No ☐ N/A		
Correct Containers Used:	☒ Yes ☐ No	9.
Correct Type: Pace Green Bay, Pace IR, <u>Non-Pace</u>		
Containers Intact:	☐ Yes ☒ No	10. <u>See additional comments 10/18/22 mp</u>
Filtered volume received for Dissolved tests	☐ Yes ☐ No ☒ N/A	11.
Sample Labels match COC:	☐ Yes ☒ No ☐ N/A	12. <u>015" 13M02-0.0-0.2-1022</u> <u>10/17/22 14:25" per client 10/19/22 mp</u>
-Includes date/time/ID/Analysis Matrix: <u>5</u>		
Trip Blank Present:	☐ Yes ☐ No ☒ N/A	13.
Trip Blank Custody Seals Present	☐ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

If checked, see attached form for additional comments ☒

Person Contacted: David Hodson Date/Time: 10/19/22

Comments/ Resolution: Client notified of additional samples received but not listed on the coc and samples received with holes in the bags and ice melt in the samples. Lab instructed to proceed with prep and analysis on all samples.

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample log in

Page 2 of 2
4.44 10/19/22
mp

40253331



State Of Origin: OR

Pace Analytical
www.pacelabs.com

Workorder Name: Portland OR-Peninsula Iron Wor

Owner Received Date: 10/18/2022 **Results Requested By:** 10/27/2022

Subcontract To

Requested Analysis

Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

WO# : 10630039



10630039

Preserved Containers

[illegible]

Internal Transfer Chain of Custody



☒ Samples Pre-Logged into eCOC.

State Of Origin: OR

Cert. Needed: ☐ Yes ☐ No

Owner Received Date: 10/18/2022 Results Requested By: 10/27/2022

4053331



Workorder: 10630039

Workorder Name: Portland OR-Peninsula Iron Wor

Report To	Subcontract To	Requested Analysis

Jennifer Gross
Pace Analytical Minnesota
1700 Elm Street
Minneapolis, MN 55414
Phone (612)607-1700

Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

Item	Sample ID		Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers					MISC / ISM (50 Increments)	MISC / Sieving (<2mm)	LAB USE ONLY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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20	SB03-2.5-3.0-1022		PS	10/17/2022 12:15	10630039020	Solid	1						X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

					Comments

Transfers	Released By	Date/Time	Received By	Date/Time	Forward prepped volume to Pace Mnpls, methods 8082 & possibly 1668.
1	Fedex	10/18/22 945	Morgan A. Doope	10/18/22 945	Hold all additional volume for six months. 14:35
2	Matt VanLambeck Pace	12/13/22 10:00	CMC Pace	12/14/22	
3					

Cooler Temperature on Receipt	NA °C	Custody Seal	(Y) or N	Received on Ice	(Y) or N	Samples Intact	(Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

This chain of custody is considered complete as is since this information is available in the owner laboratory.

Effective Date: 11/16/2022

Sample Condition
Upon Receipt

Client Name:

Pace Green Bay

Project #:

WO#: 10630039

PM: JMG

Due Date: 12/16/22

CLIENT: UPRR_Jacobs

Courier: ☐ FedEx ☐ UPS ☐ USPS ☐ Client
☐ Pace ☐ SpeedDee ☒ Commercial☐ See Exceptions

Tracking Number: ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ NoPacking Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ OtherThermometer: ☐ T1 (0461) ☐ T2 (1336) ☐ T3 (0459) ☐ T4 (0254) ☐ T5 (0178)
☐ T6 (0235) ☒ T7 (0042) ☐ T8 (0775) ☐ T9 (0727) ☐ 01339252/1710Biological Tissue Frozen? ☐ Yes ☐ No ☒ N/ATemp Blank? ☐ Yes ☒ NoType of Ice: ☐ Wet ☐ Blue ☐ Dry ☒ None
☐ MeltedDid Samples Originate in West Virginia? ☐ Yes ☒ NoWere All Container Temps Taken? ☐ Yes ☐ No ☒ N/A

Temp should be above freezing to 6 °C

Cooler temp Read w/Temp Blank: Amb °C

Average Corrected Temp

(no temp blank only): °C

Correction Factor: add 0.1

Cooler Temp Corrected w/temp blank: Amb °C

☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 ContainerUSDA Regulated Soil: (☐ N/A, water sample/other:)

Date/Initials of Person Examining Contents: 12/14/22 ADC

Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? ☐ Yes ☒ NoDid samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

Location (Check one): ☐ Duluth ☒ Minneapolis ☐ Virginia	COMMENTS
Chain of Custody Present and Filled Out?	1.
Chain of Custody Relinquished?	2.
Sampler Name and/or Signature on COC?	3.
Samples Arrived within Hold Time?	4. If fecal: ☐ <8 hrs ☐ >8 hr, <24 ☐ No
Short Hold Time Analysis (<72 hr)?	5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E.coli ☐ BOD/cBOD ☐ Hex Chrom ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	6.
Sufficient Sample Volume?	7.
Correct Containers Used?	8.
-Pace Containers Used?	
Containers Intact?	9.
Field Filtered Volume Received for Dissolved Tests?	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	11. If no, write ID/Date/Time of container below: ☐ See Exceptions ENV-FRM-MIN4-0142
Matrix: ☐ Water ☒ Soil ☐ Oil ☐ Other	
All containers needing acid/base preservation have been checked?	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH >10 Cyanide)	☐ NaOH ☐ HNO3 ☐ H2SO4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS (*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)	Positive for Residual Chlorine? ☐ Yes ☐ No ☐ See Exceptions ENV-FRM-MIN4-0142 pH Paper Lot #
	Residual Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Headspace in Methyl Mercury Container?	13.
Extra labels present on soil VOA or WIDRO containers?	14. ☐ See Exceptions ENV-FRM-MIN4-0142
Headspace in VOA Vials (greater than 6mm)?	
3-Trip Blanks-Present?	15.
Trip Blank Custody Seals Present?	Pace Trip Blank Lot # (if purchased):

CLIENT NOTIFICATION/RESOLUTION

Person Contacted:

Comments/Resolution:

Project Manager Review:

Jenni Gross

Field Data Required? ☐ Yes ☐ No

Date/Time:

Date: 12/14/22

Labeled By:

ADC

Line:

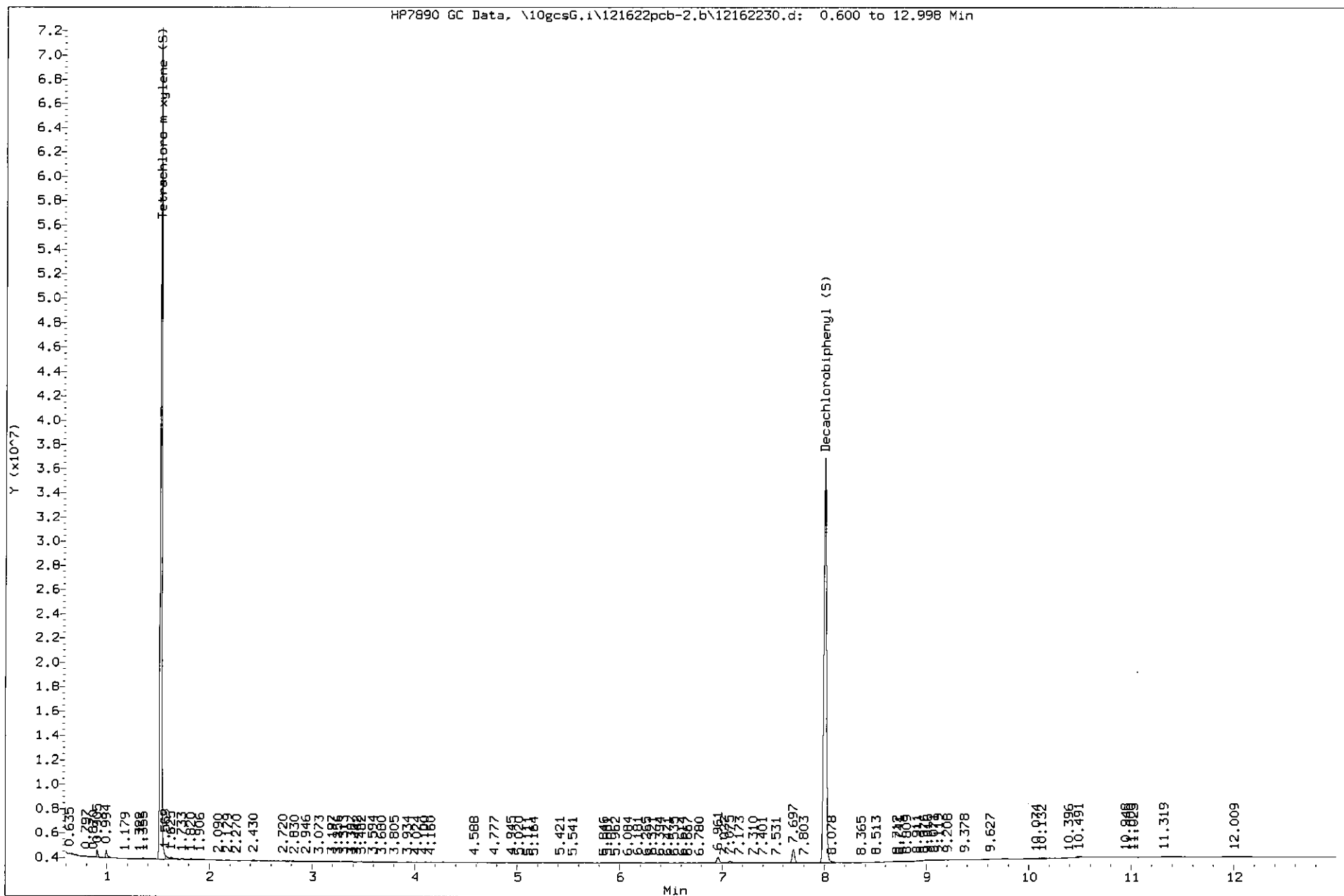
Page 22 of 65
Page 1 of 1

NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (see out of hold, incorrect preservative, out of temp, incorrect containers).

Data File: \\v10wintarget\chem\10gcsG.i\121622pcb-2.b\12162230.d
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Client Sample ID: MB

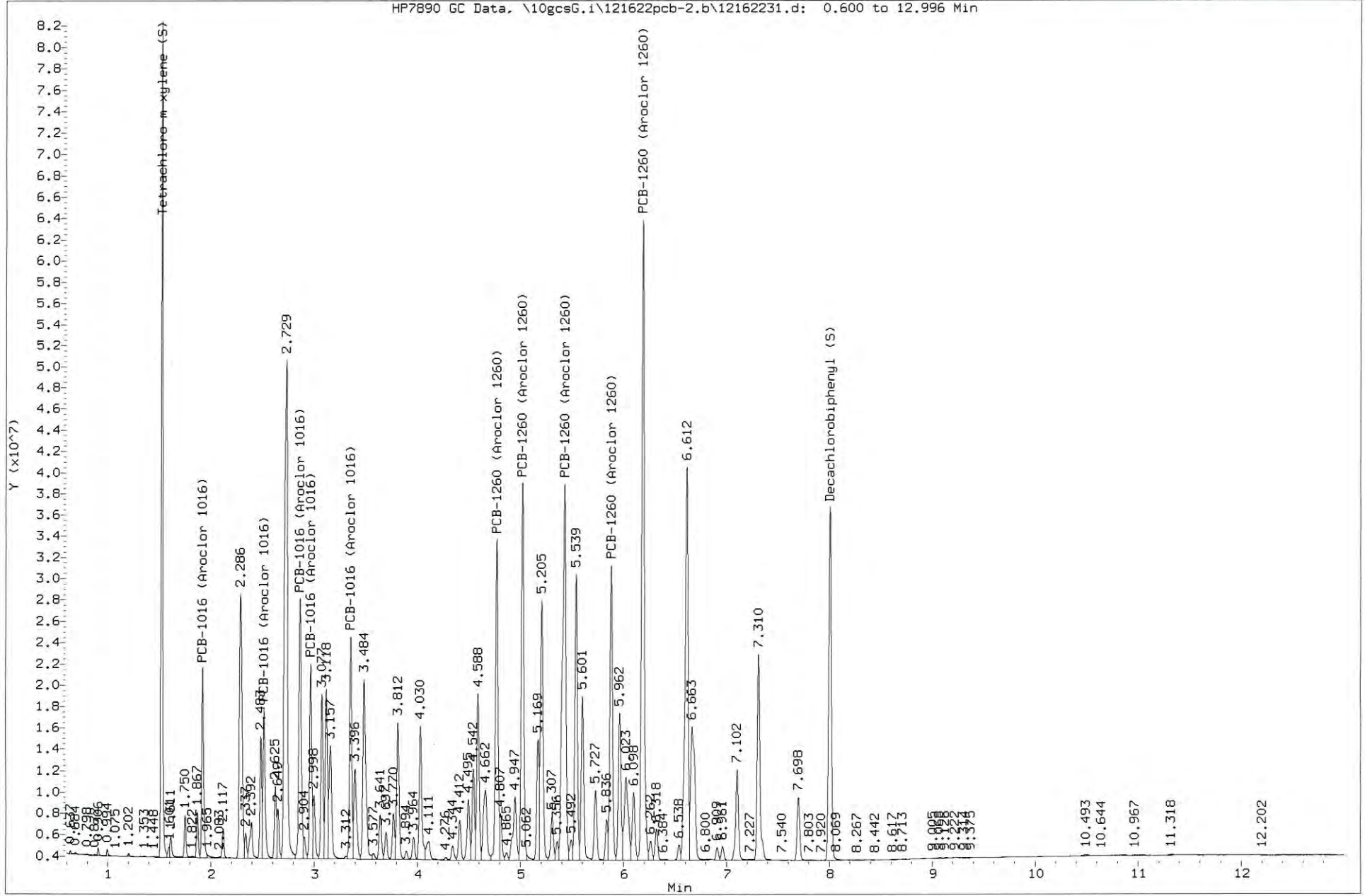
Batch 41272-858854
Blank 4538138

Page 3 of 65



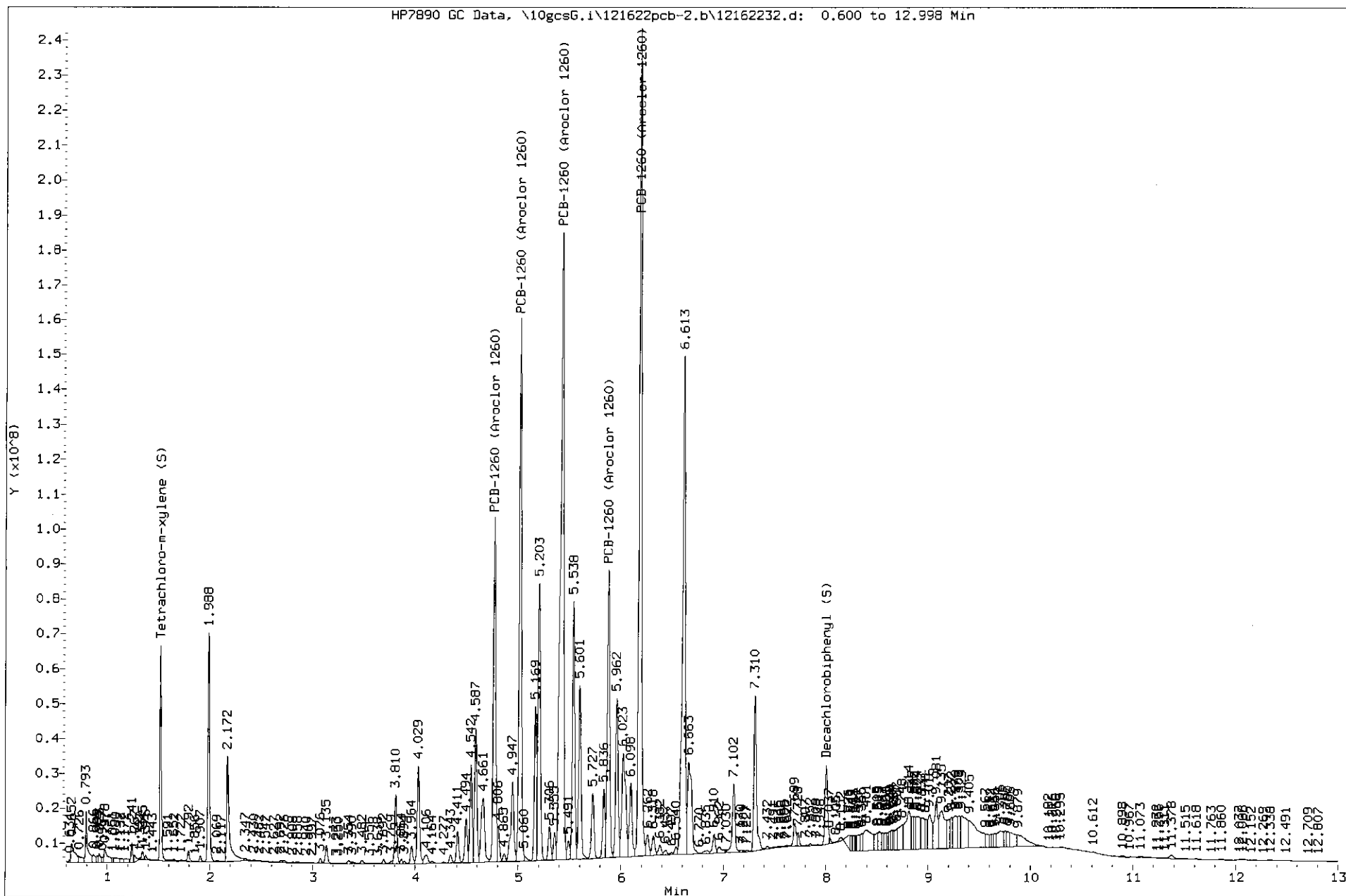
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Instrument: 10gcsG.i
Client Sample ID: MBLCS

Batch 41272-858854
LCS 4538139



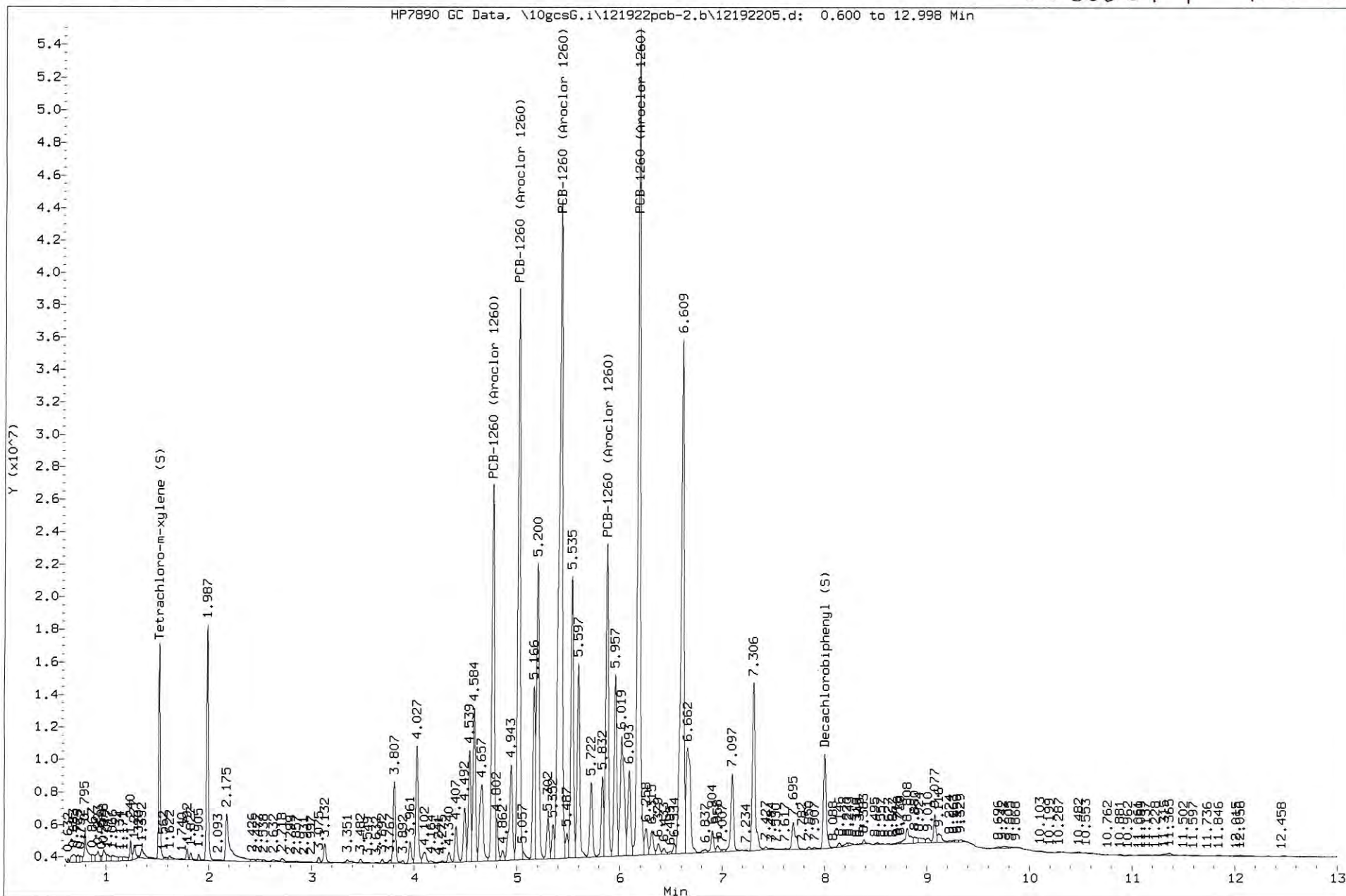
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Injection Date: 16-DEC-2022 16:26
Instrument: 10gcsG.1
Client Sample ID: SB06-0.0-0.5-1022

Batch 41272-858854
10630039-1



Data File: \\vi10wintarget\chem\10gcsG.i\121922pcb-2.b\12192205.d
Injection Date: 19-DEC-2022 07:58
Instrument: 10gcsG.i
Client Sample ID: SB06-0.0-0.5-1022

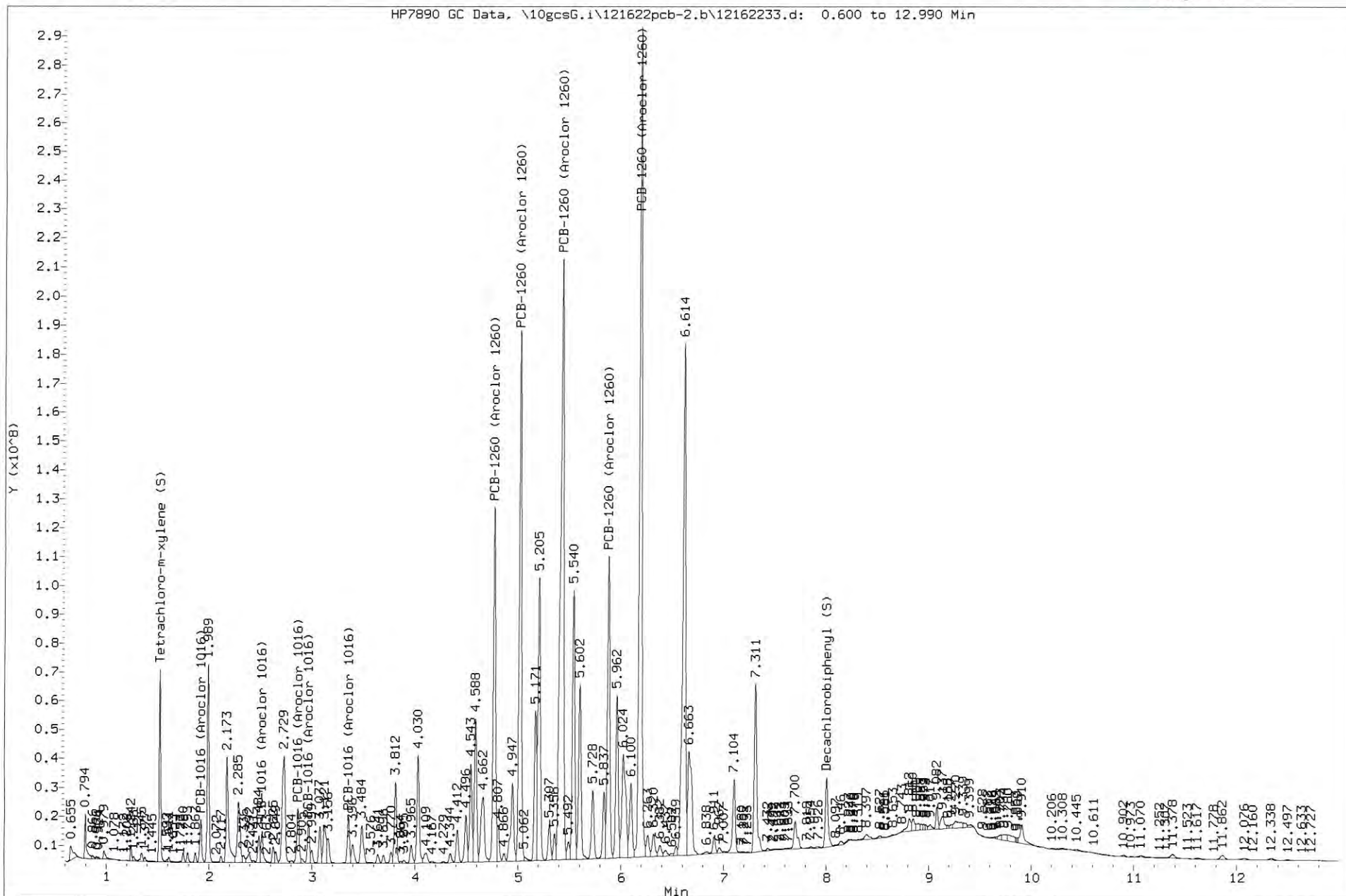
Batch 41272-958854
10630039-1 Dilution 5x



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Instrument: 10gcsG.i
Client Sample ID: SB06-0.0-0.5-1022MS

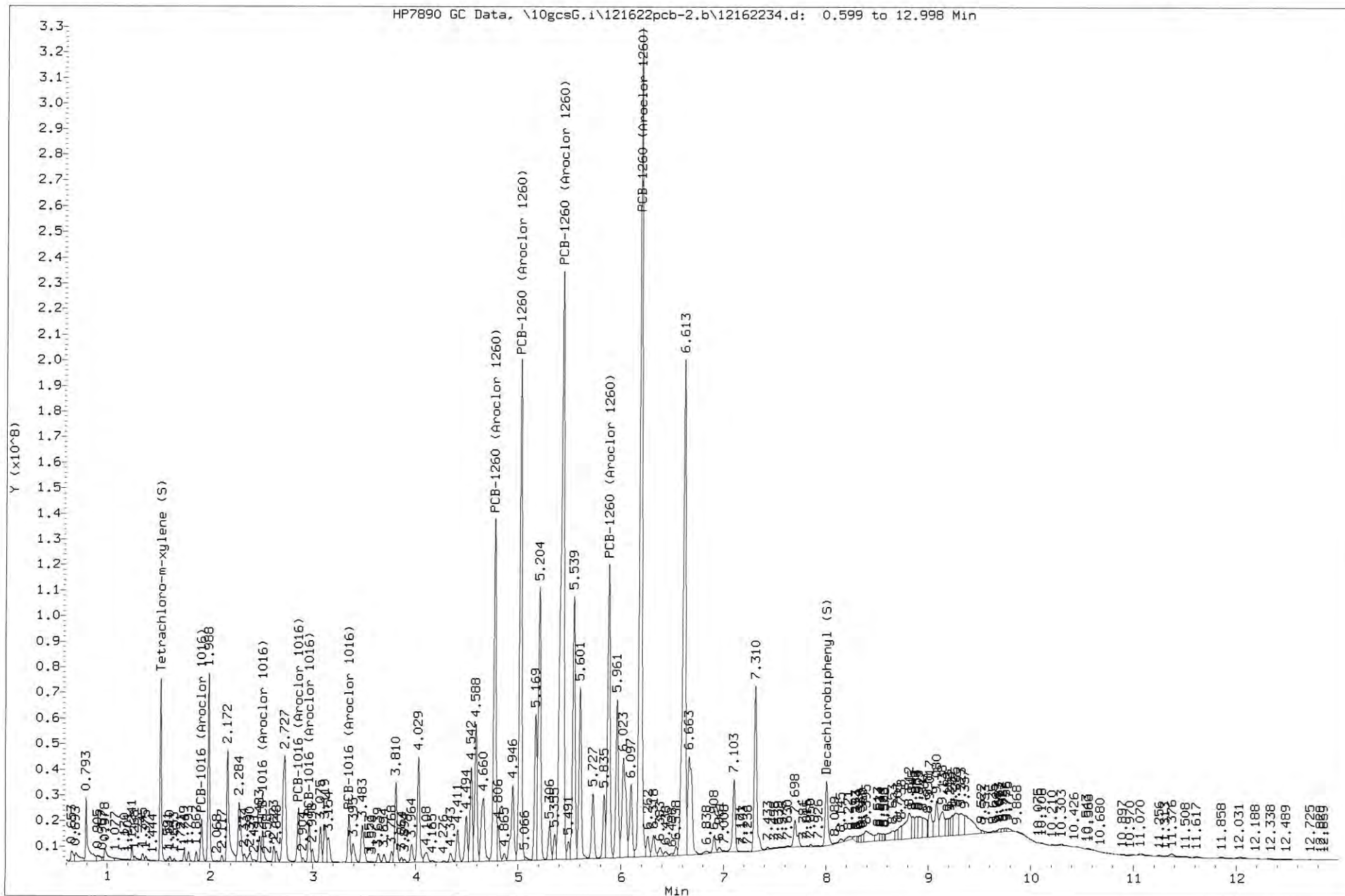
DAG Butch
12/20/22 BLANK
MS

41272-858854
4538140



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Injection Date: 16-DEC-2022 16:58
Instrument: 10gcsG.i
Client Sample ID: SB06-0.0-0.5-1022MS

Batch 41272-858854
MSD 4538141

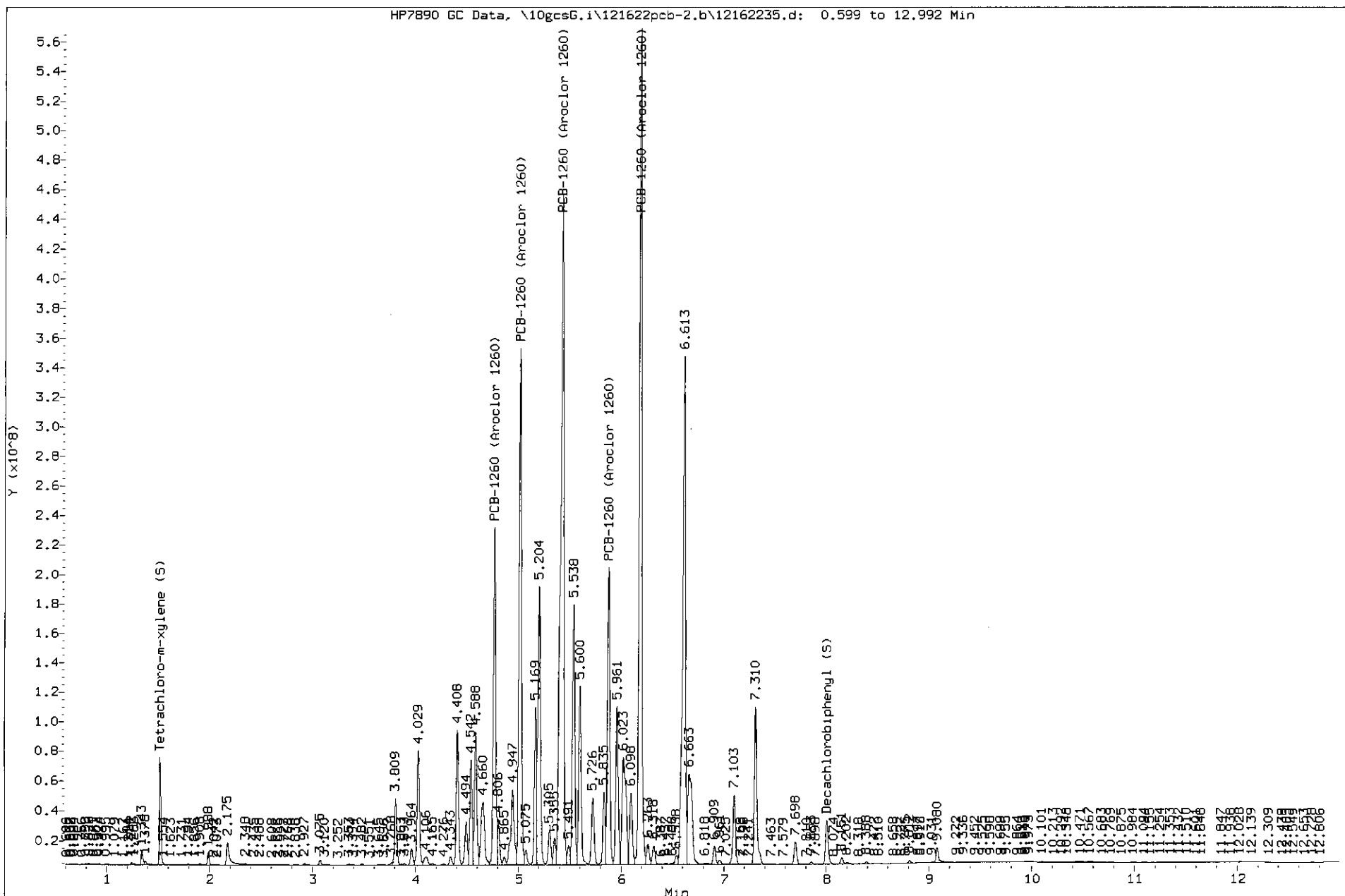


Data File: \\v10wintarget\chem\10gcsG.i\121622pcb-2.b\12162235.d
Injection Date: 16-DEC-2022 17:14
Instrument: 10gcsG.i
Client Sample ID: SB06-1.0-1.5-1022

Batch 41272-858854

10630039-2

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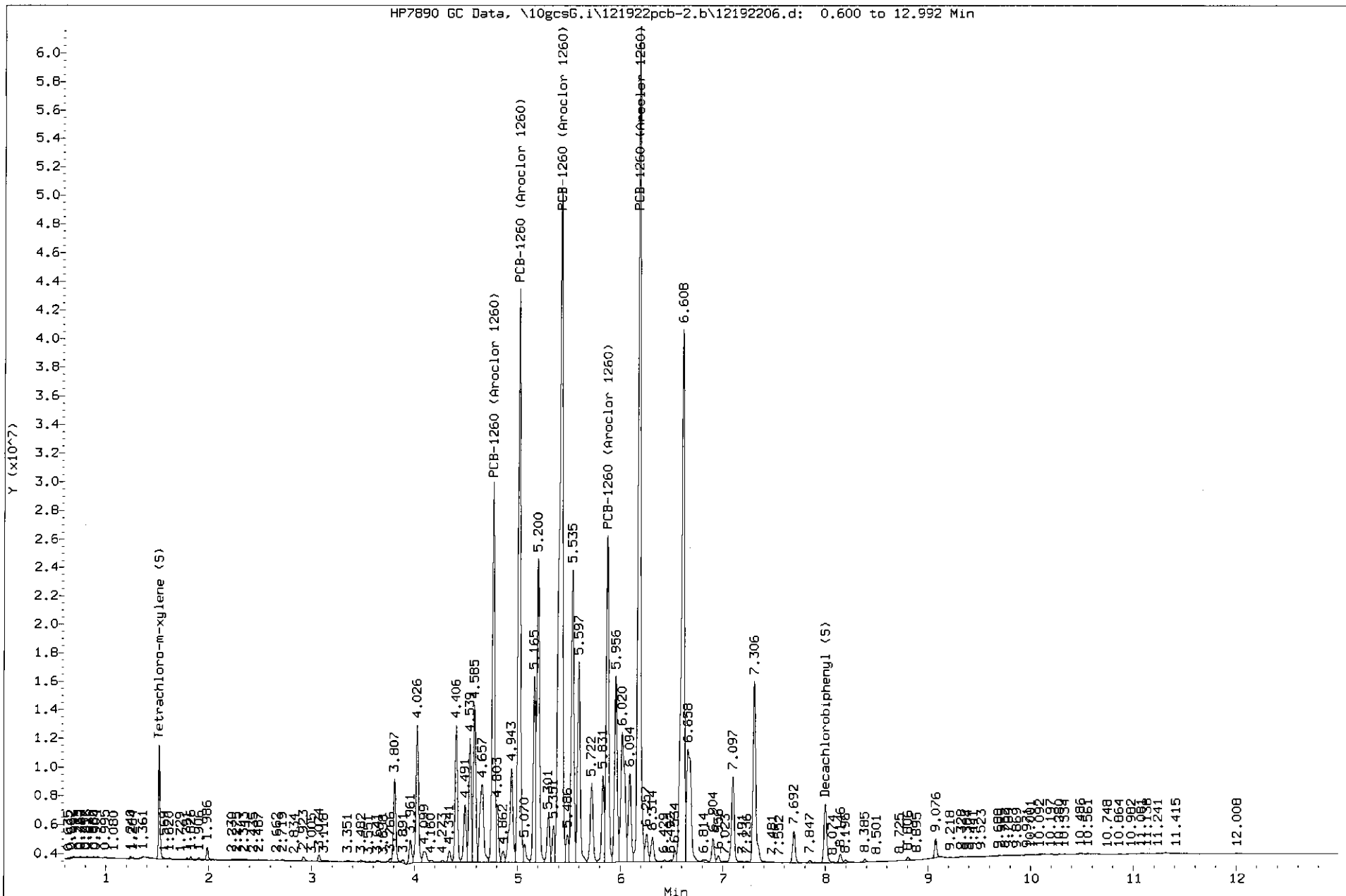
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Instrument: 10gcsG.i
Client Sample ID: SB06-1.0-1.5-1022

Batch-41272-859854

10630039-2

Dilution: 10X

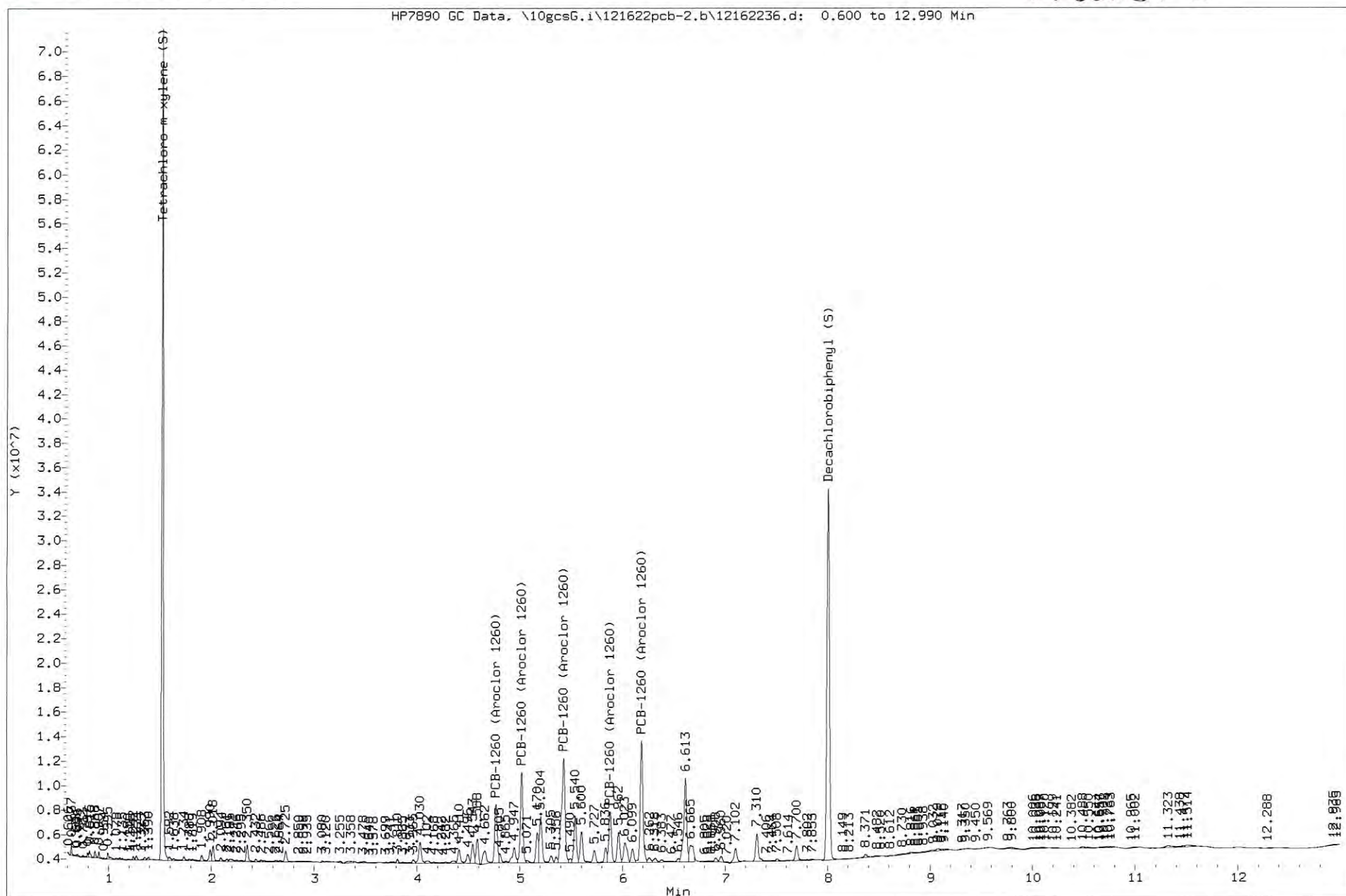
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Data File: \\v10wintarget\chem\10gcsG.i\121622pcb-2.b\12162236.d
Injection Date: 16-DEC-2022 17:30
Instrument: 10gcsG.i
Client Sample ID: 5B06-2.5-3.0-1022

Batch 41272 - ^{BAG}~~8~~ 858854
10630039-3

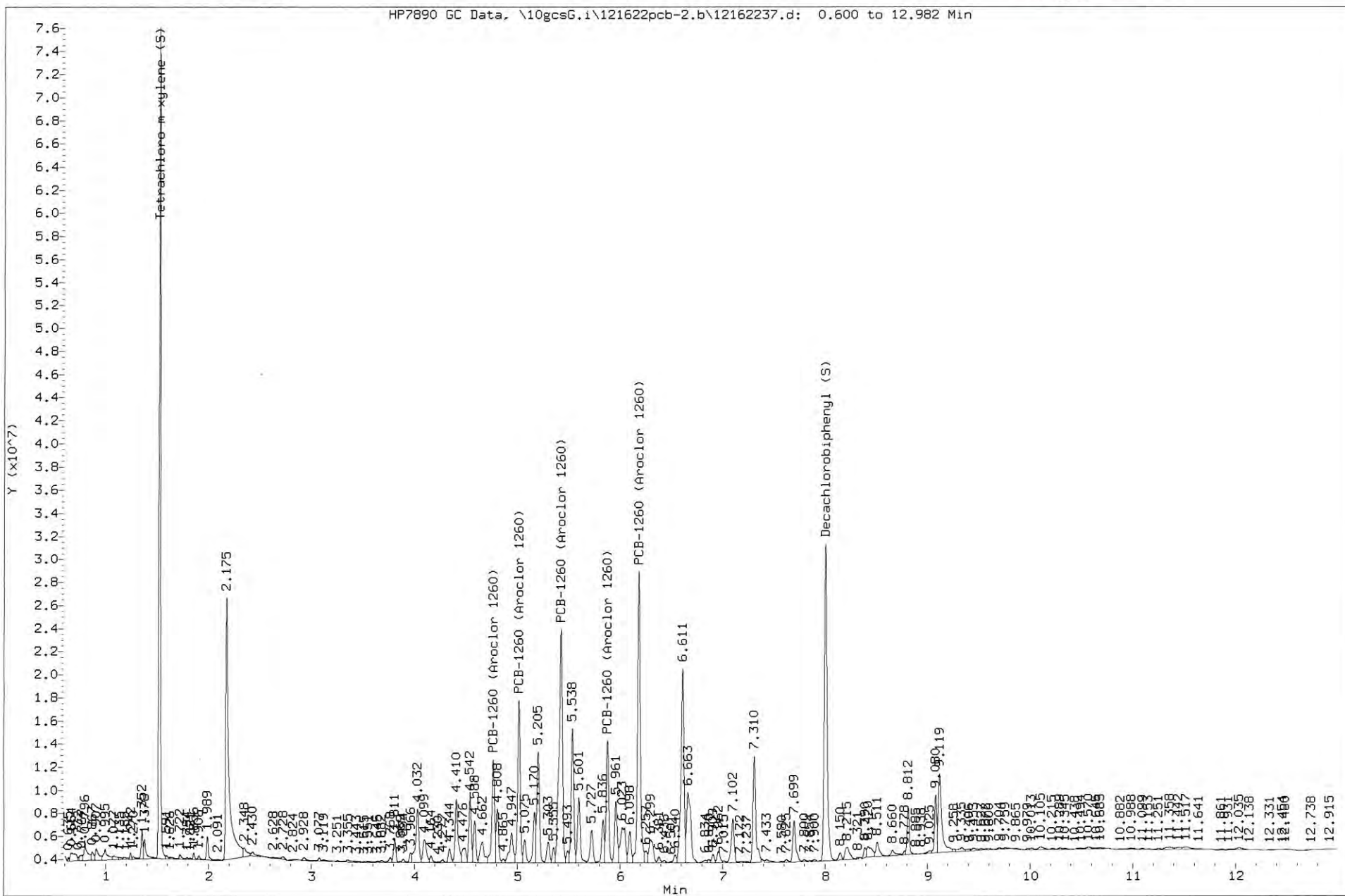
Page 41 of 65

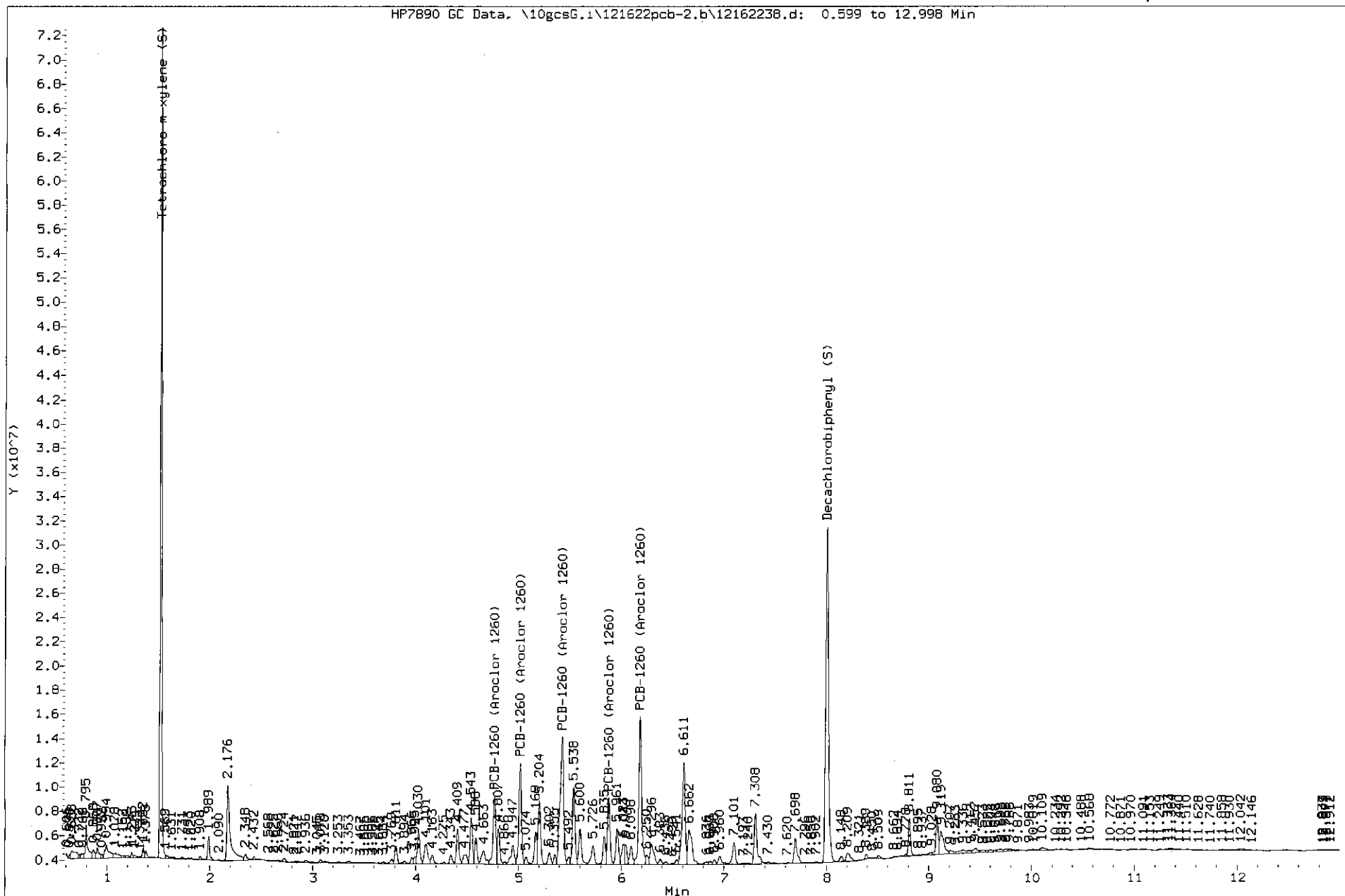


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Instrument: 10gcsG.i
Client Sample ID: SB04-0.0-0.5-1022

Batch 41272-858854
10630039-4

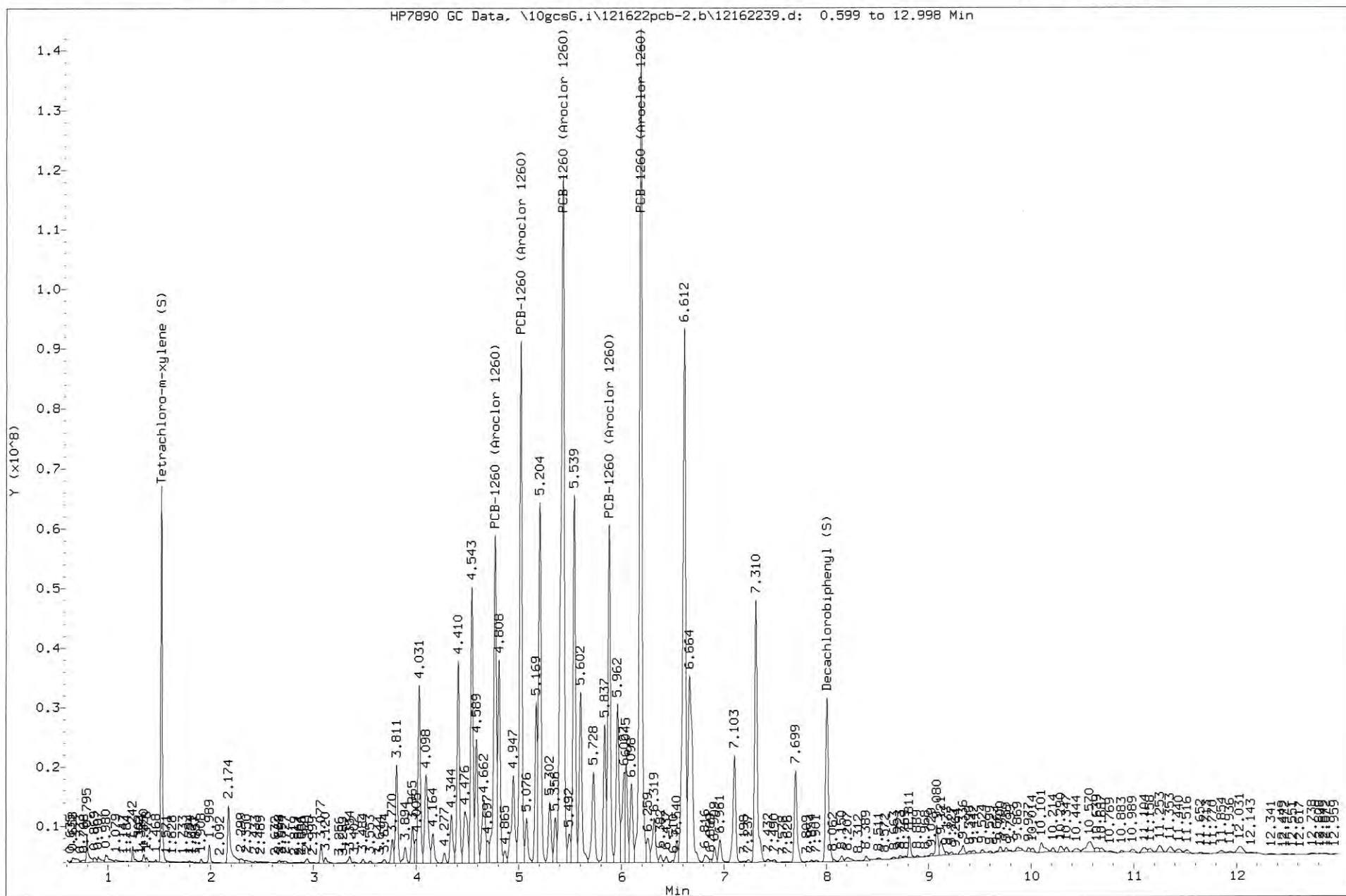
Page 42 of 65





Data File: \\v10wintarget\chem\10gcsG.i\121622pcb-2.b\12162239.d
Injection Date: 16-DEC-2022 18:17
Instrument: 10gcsG.i
Client Sample ID: SB04-1.0-1.5-1022

Batch 41272-858854
106300391-6

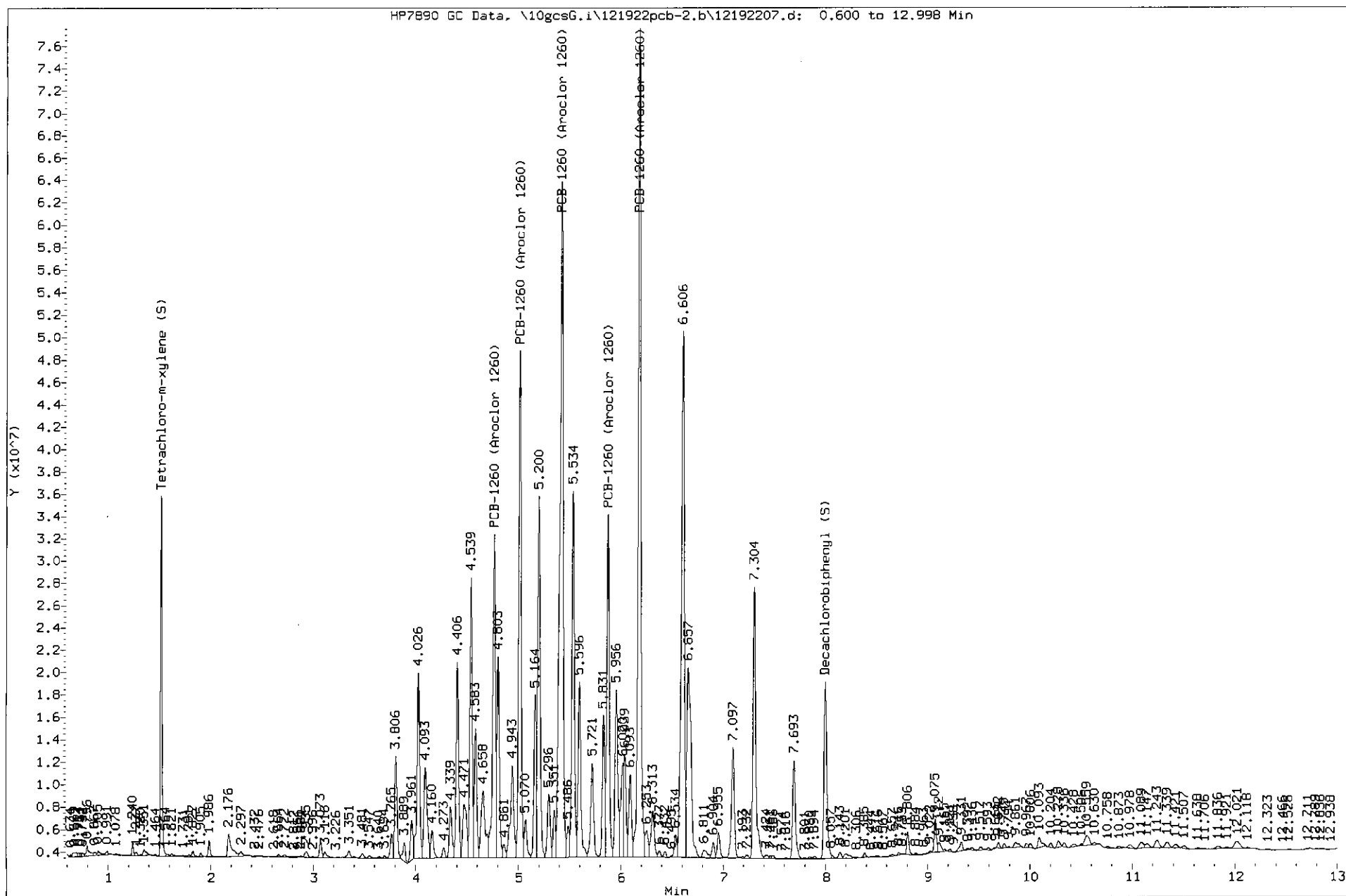


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Instrument: 10gcs6.i
Client Sample ID: SB04-1.0-1.5-1022

Batch 41272-858854

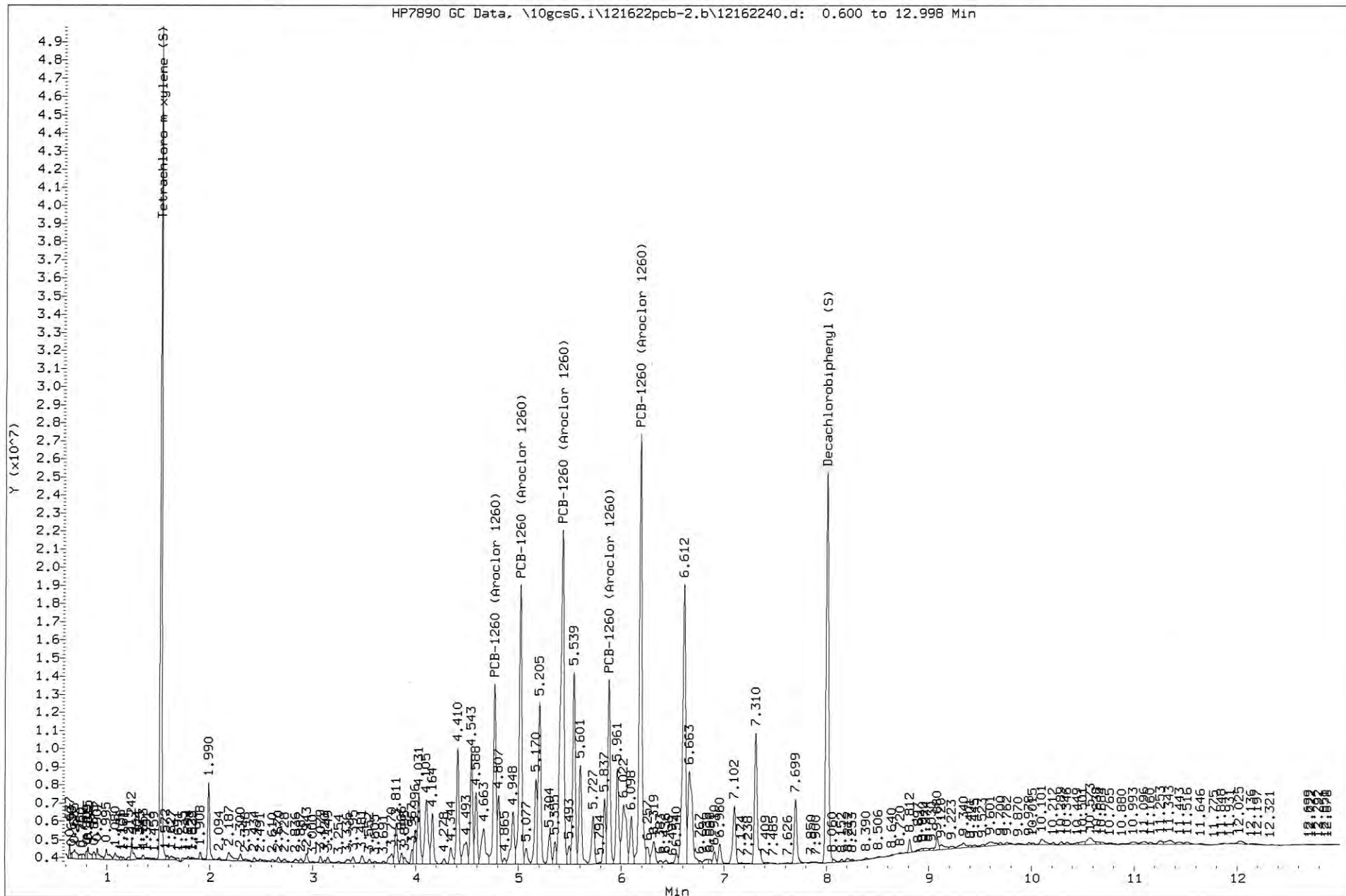
10630039-6 Dilution: 3

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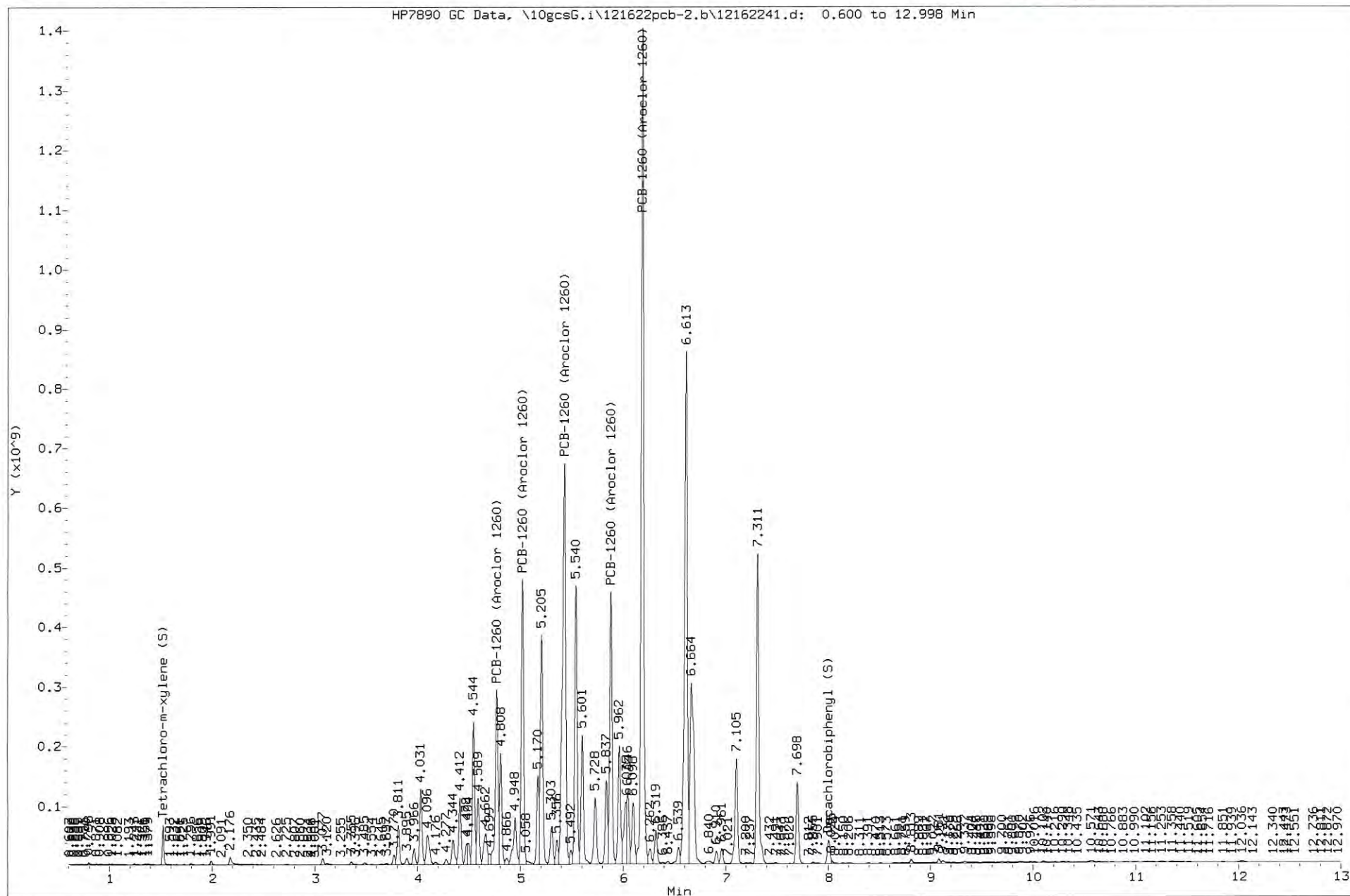


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Batch 41272-858854
10630039-7

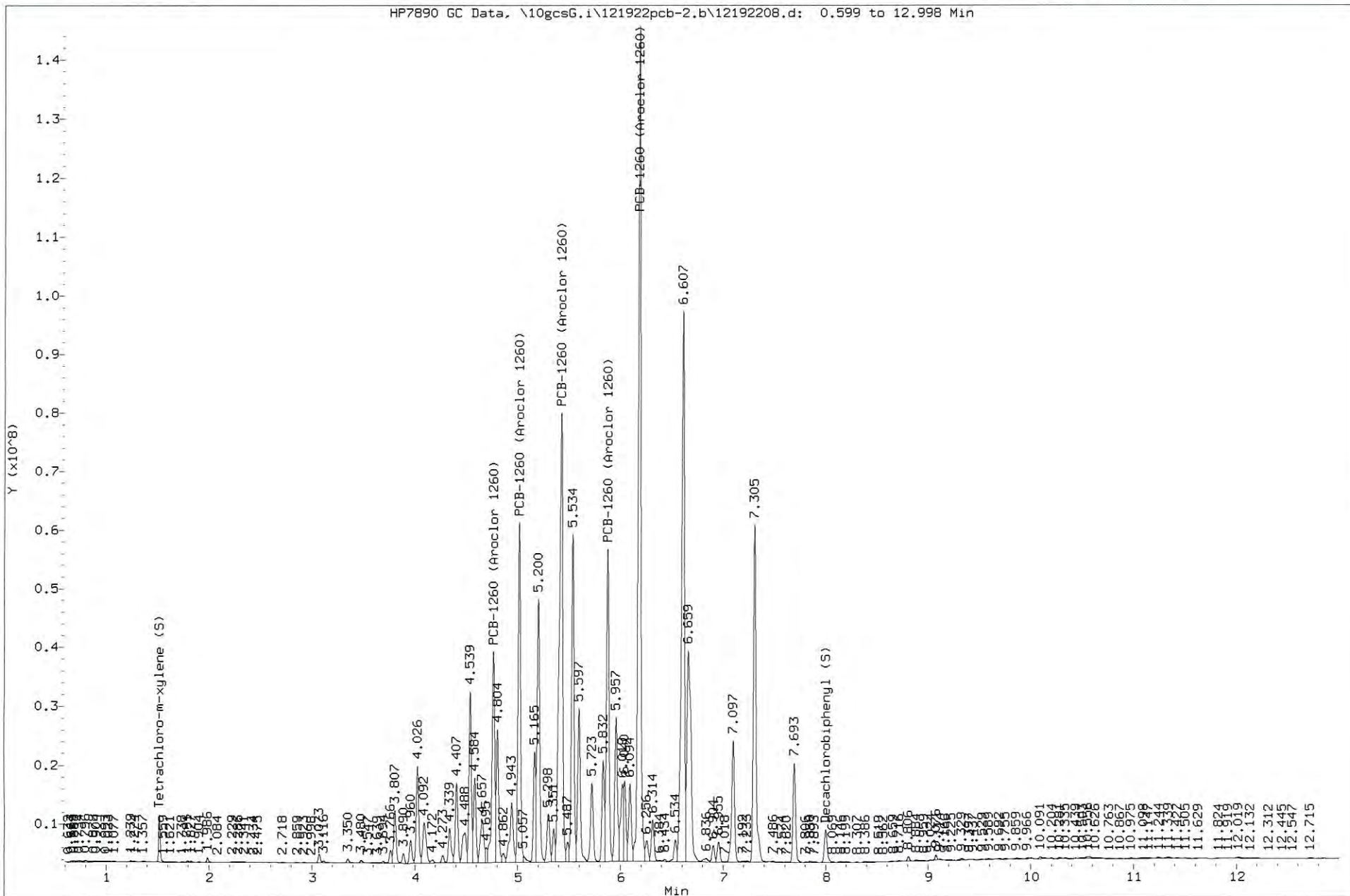


Batch 41272-858854
10630039-8



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Instrument: 10gcsG.i
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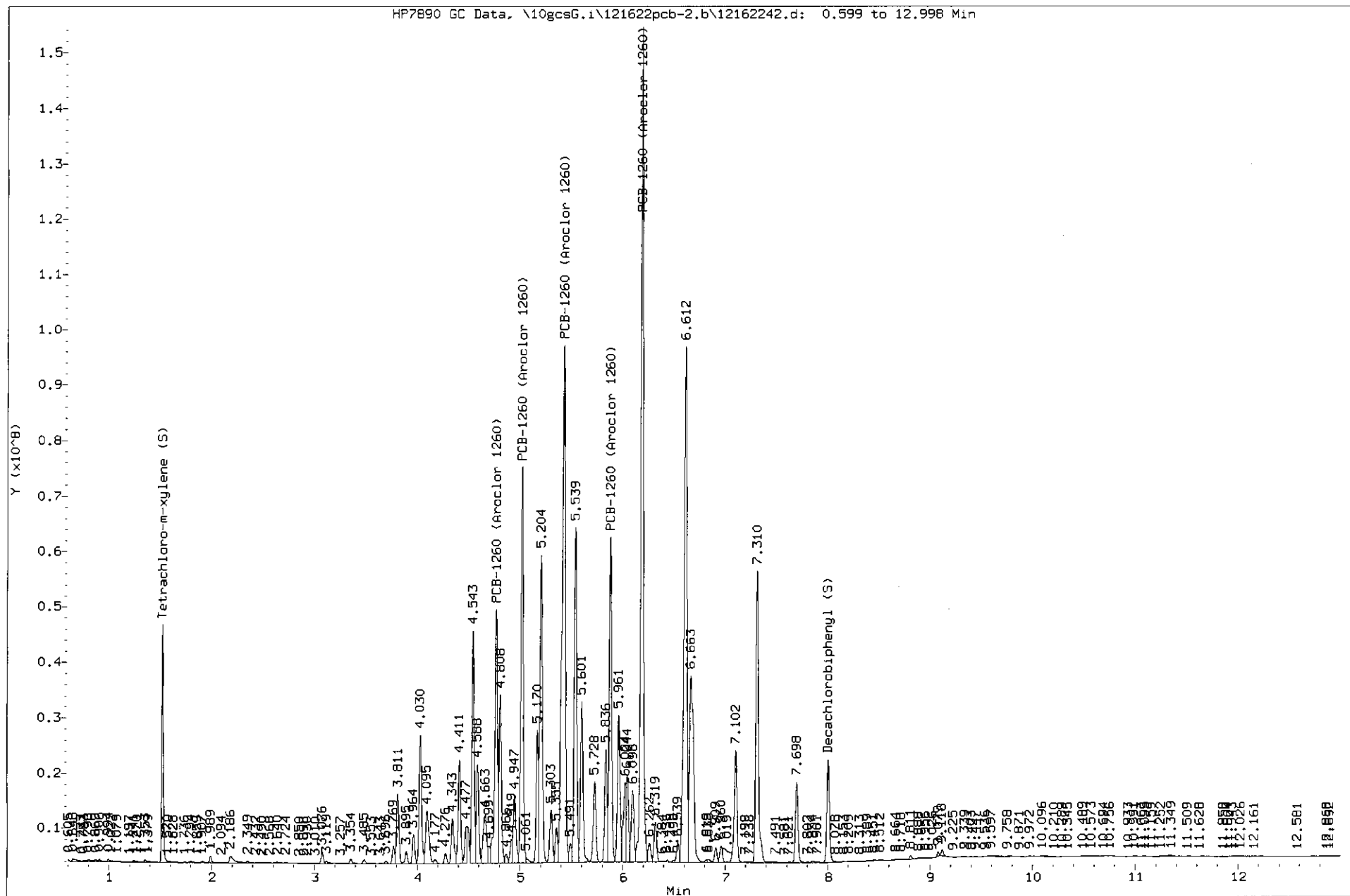
Batch 41272-858854
10630039-8 Dilution: 10x



Batch 41272-858854

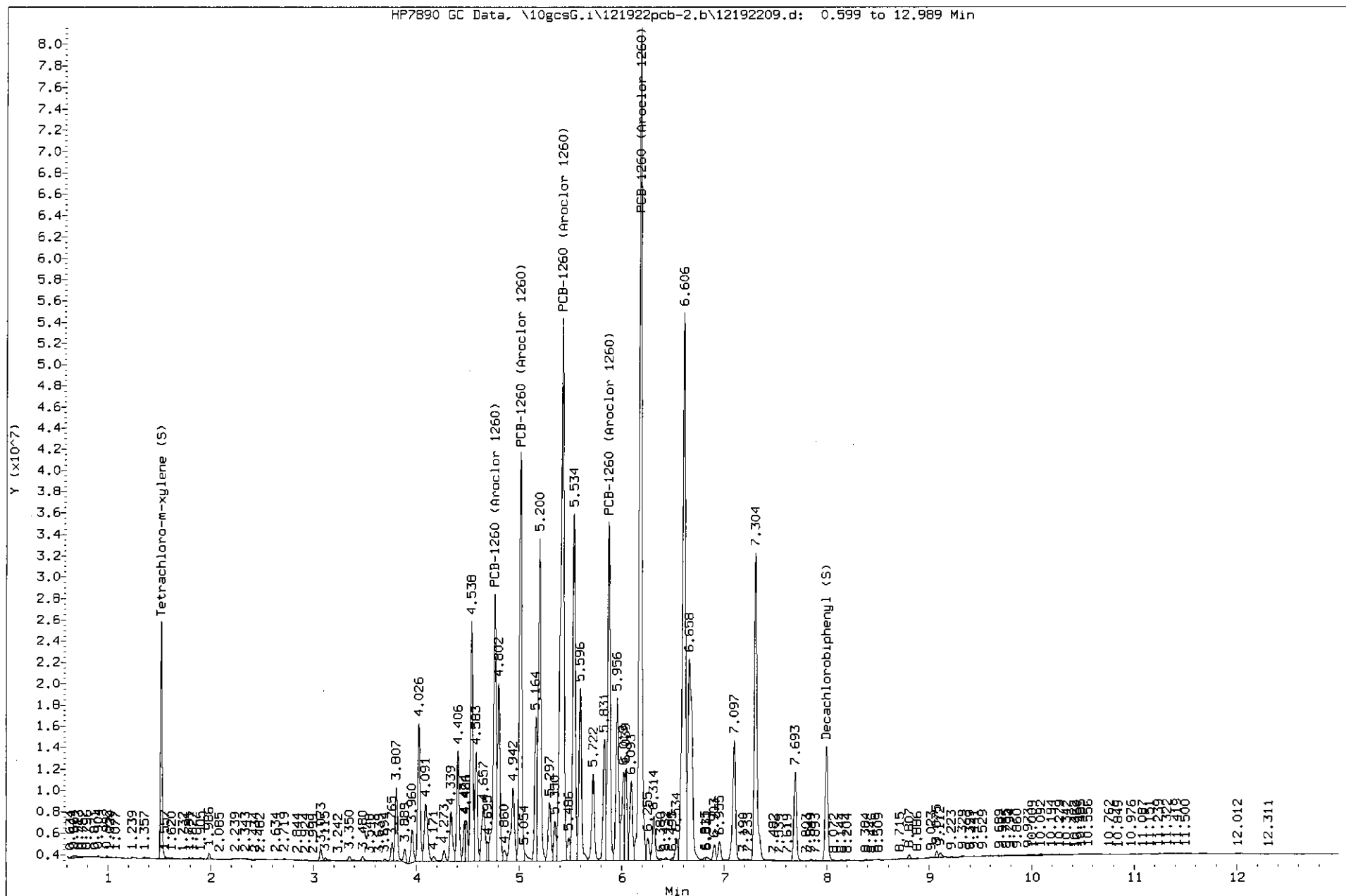
10630039-9

Data File: \\v10wintarget\chem\10gcsG.i\121622pcb-2.b\12162242.d
Injection Date: 16-DEC-2022 19:04
Instrument: 10gcsG.i
Client Sample ID: SB01-1.0-1.5-1022



Data File: \\v10wintarget\chem\10gcsG.i\121922pcb-2.b\12192209.d
Injection Date: 19-DEC-2022 09:01
Instrument: 10gcsG.i
Client Sample ID: SB01-1.0-1.5-1022

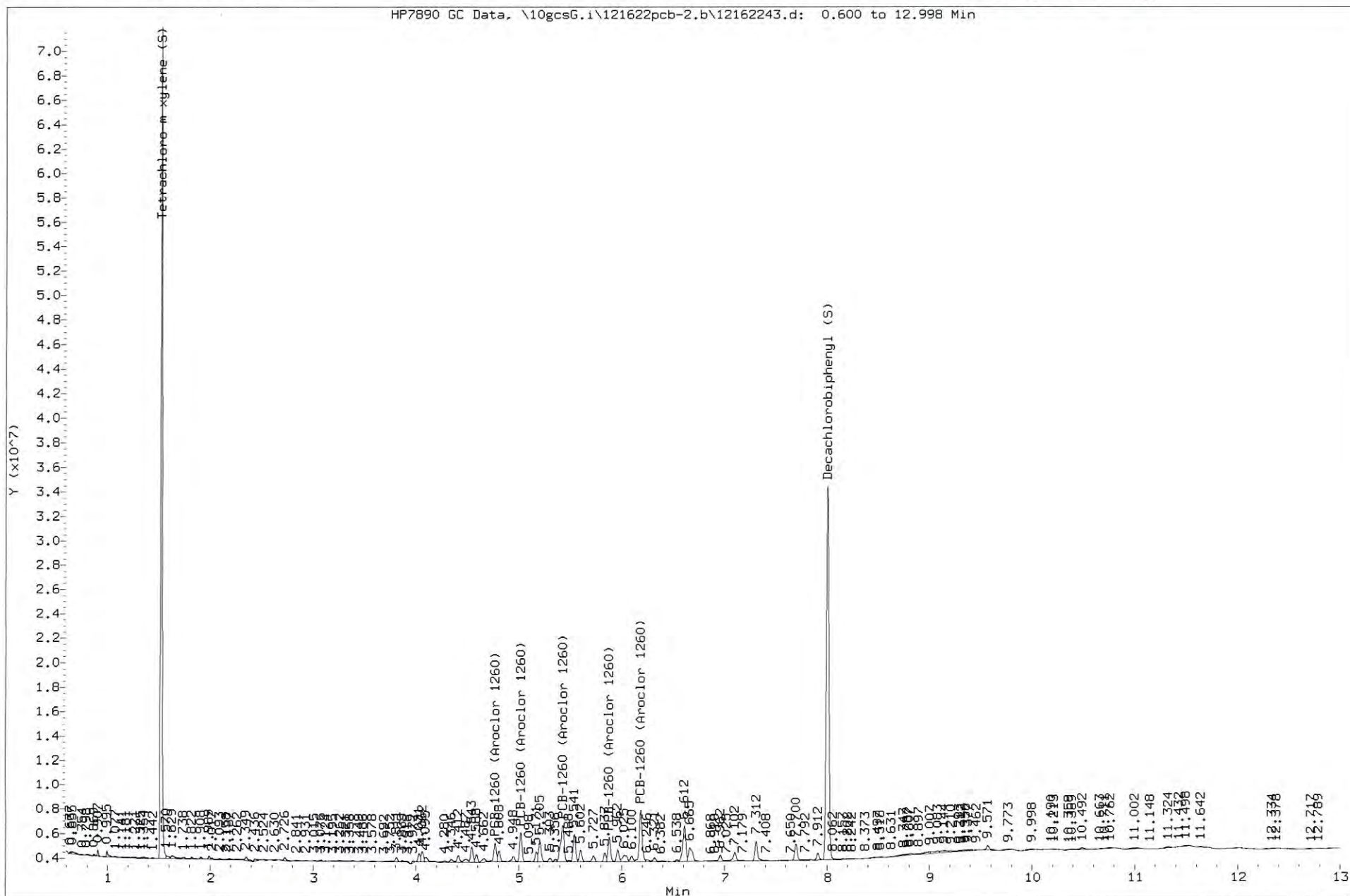
Batch 41272-858854
106300391-9 Dilution: 2X



Data File: \\v10wintarget\chem\10gcsG.i\121622pcb-2.b\12162243.d
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Batch 41272-858854

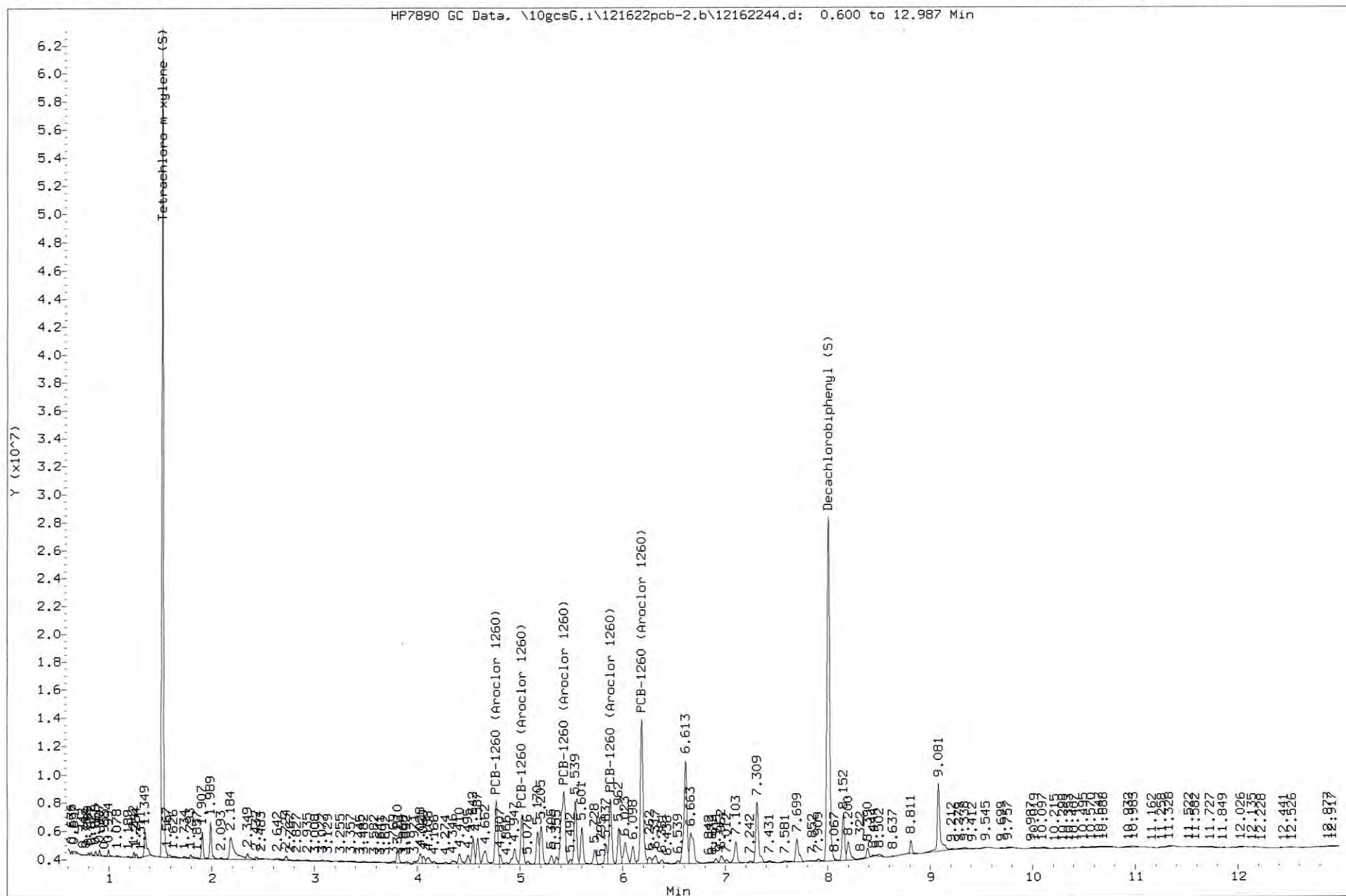
10630039-10



Data File: \\v10wintarget\chem\10gcsG.i\121622pcb-2.b\12162244.d
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Instrument: 10gcsG.i
Client Sample ID: SB03-0.0-0.5-1022

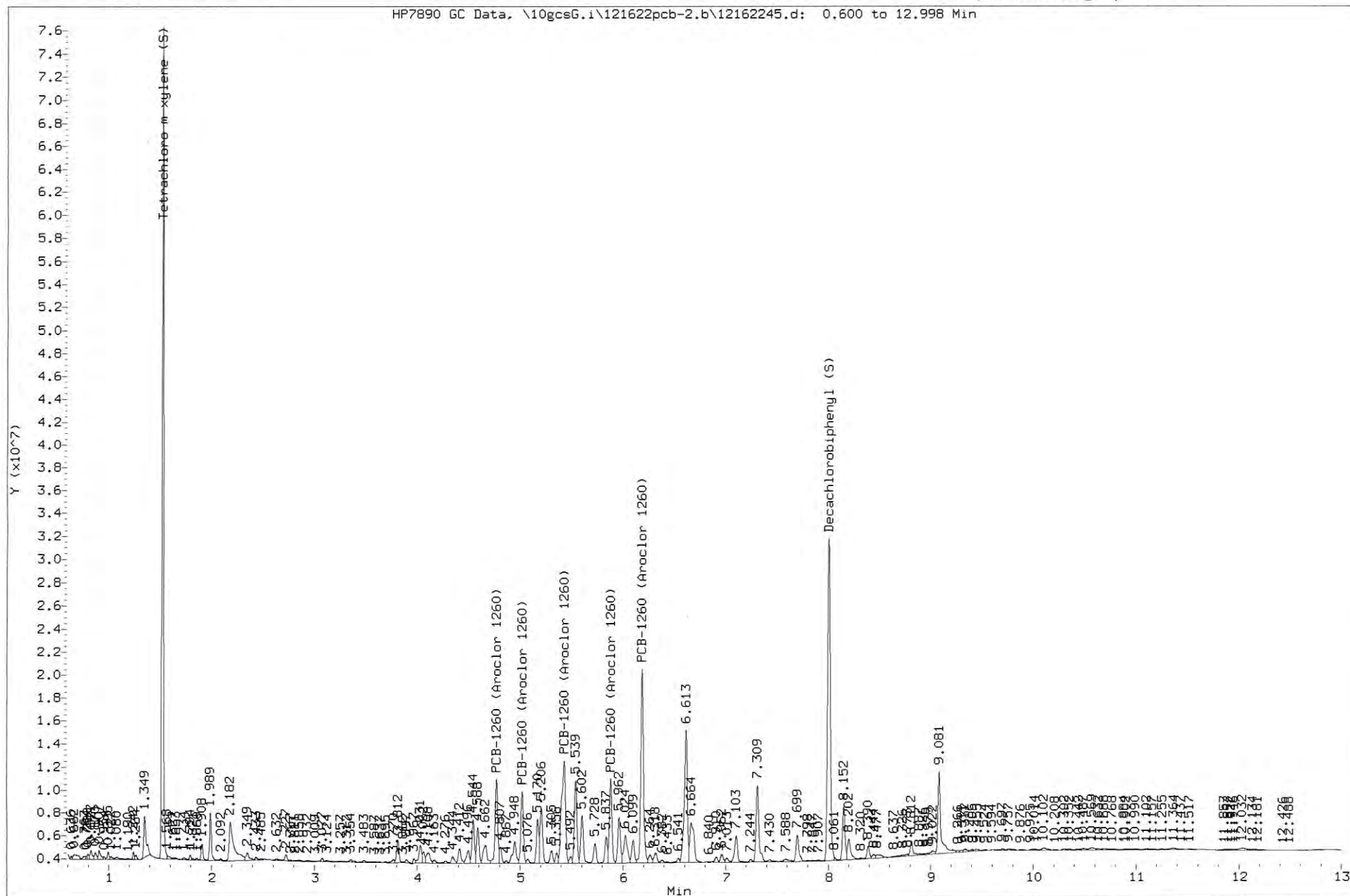
Batch 41272-858854

10636039-11

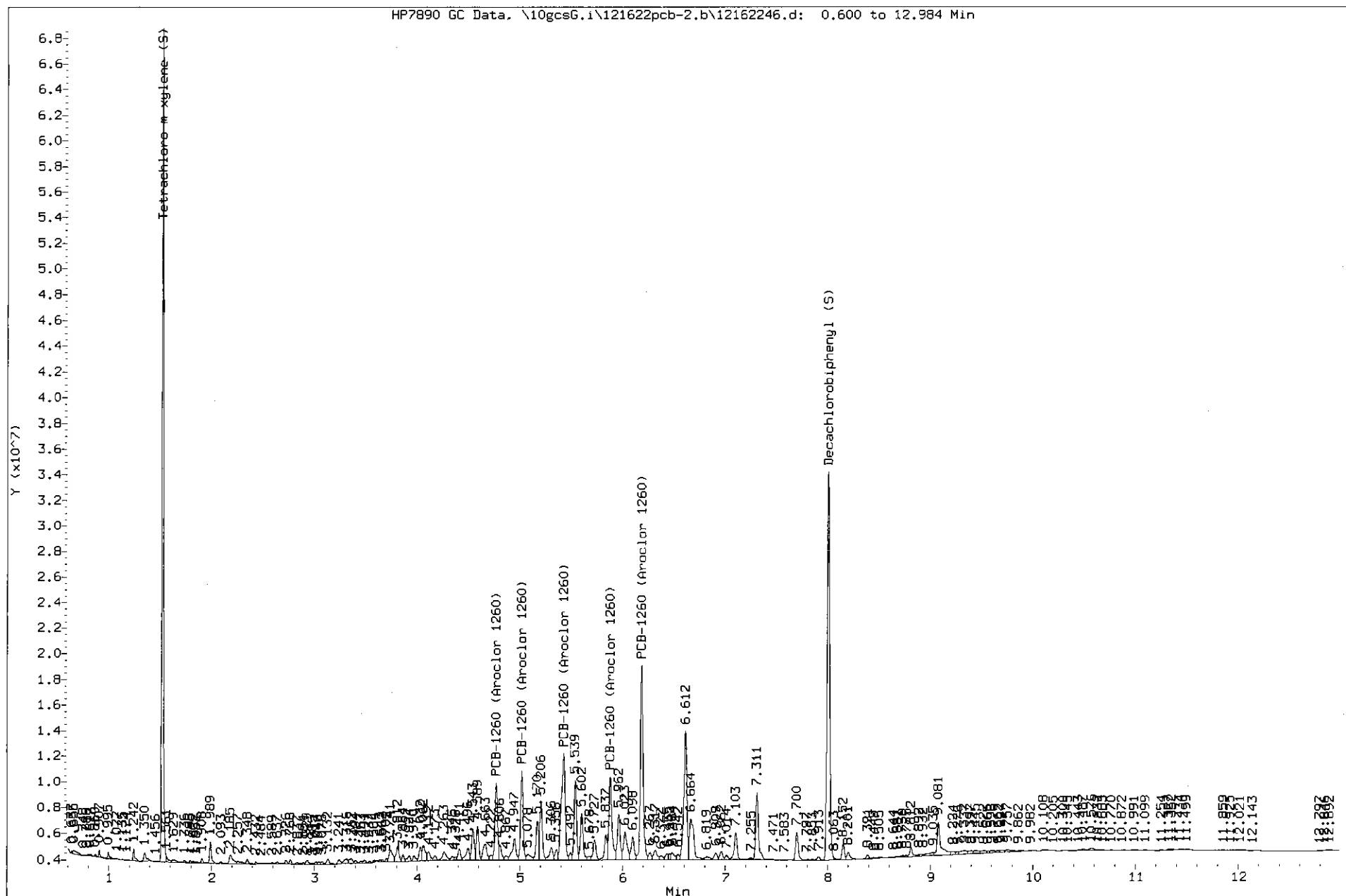


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Client Sample ID: SB03D-0.0-0.5-1022

Batch 41272-858854
10630039-12

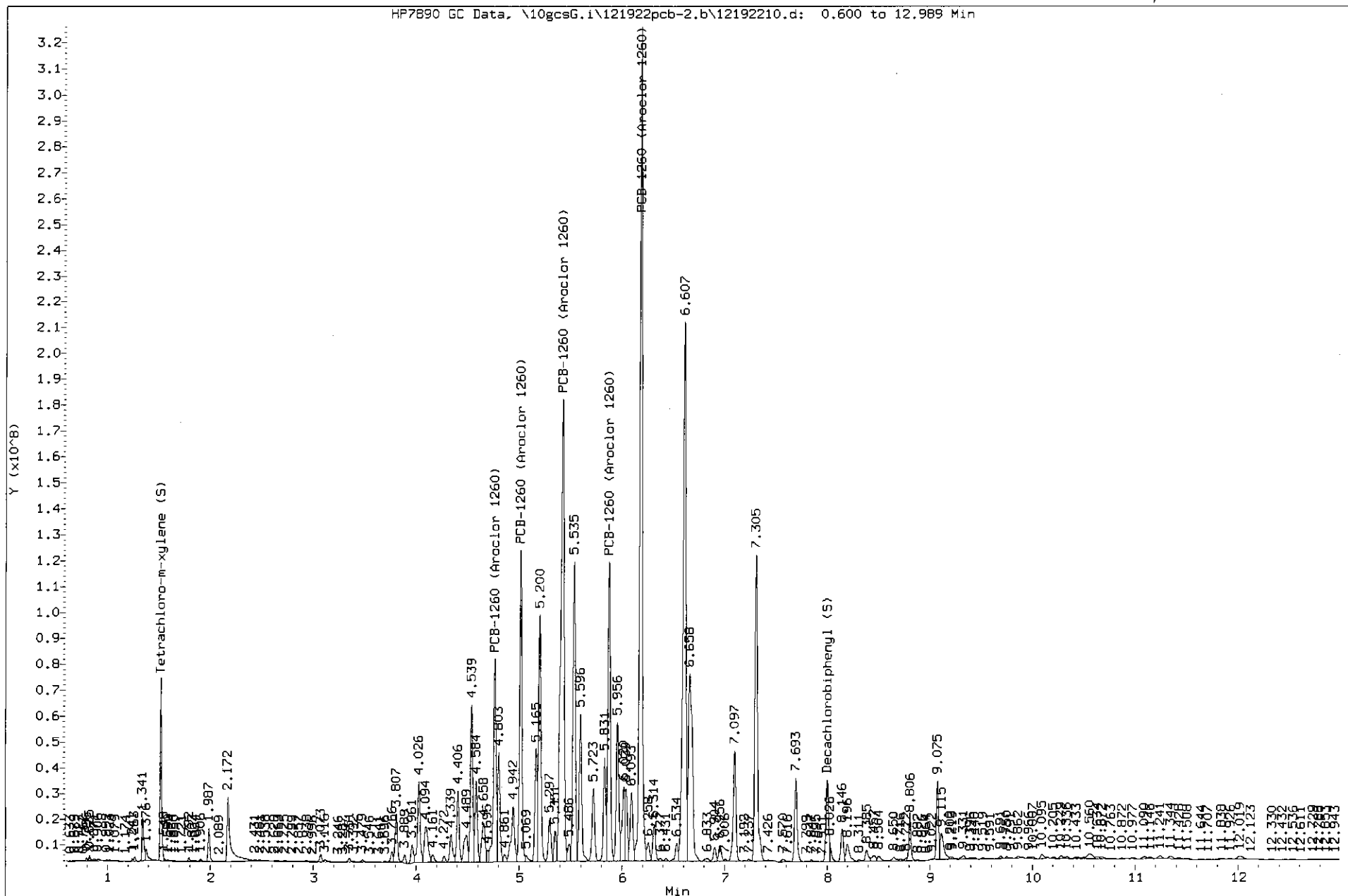


10630039-13



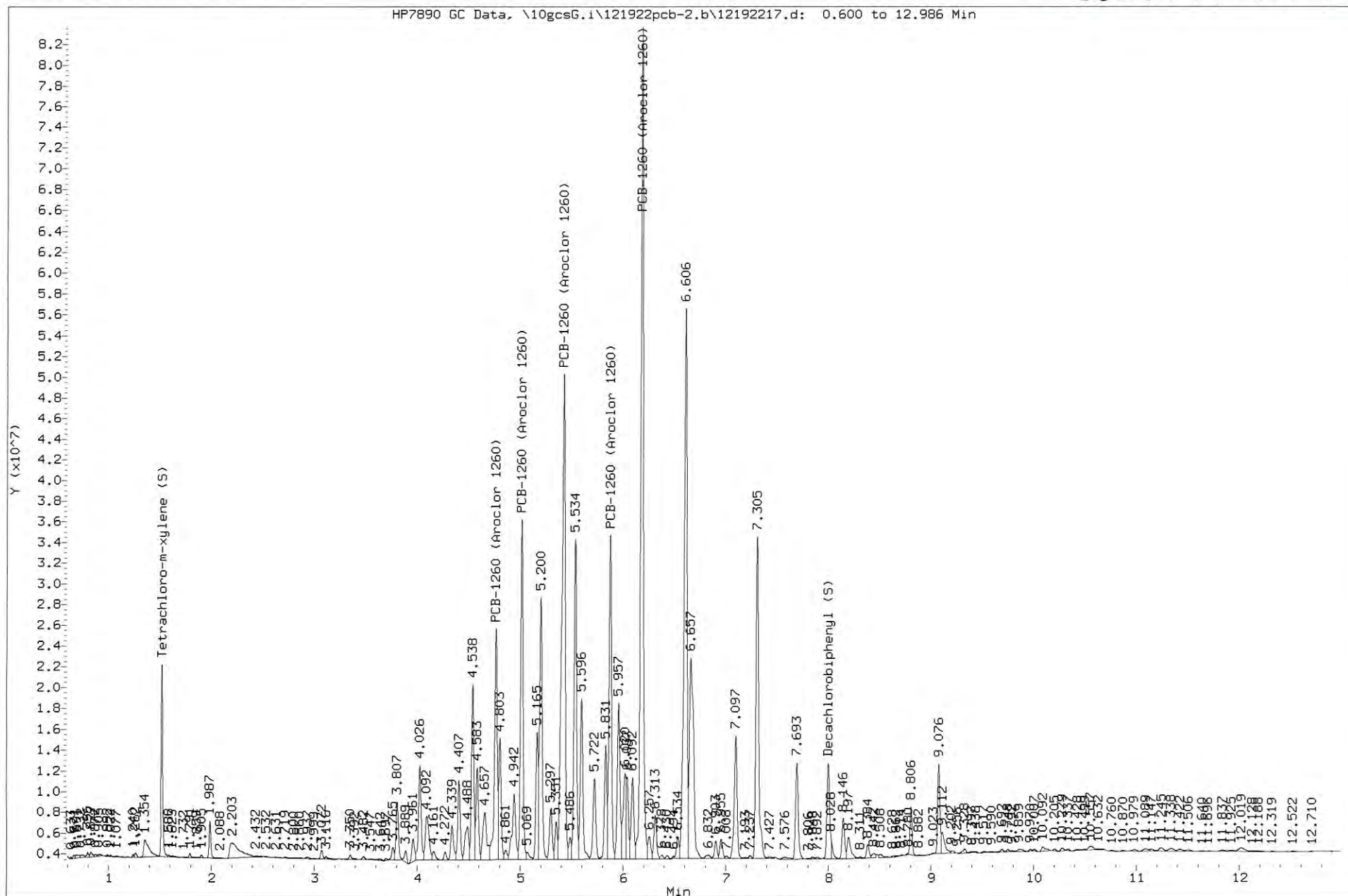
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Instrument: 10gcsG.i
Client Sample ID: ISM01-0.0-0.2-1022

Batch 41272-858854
10630039-14

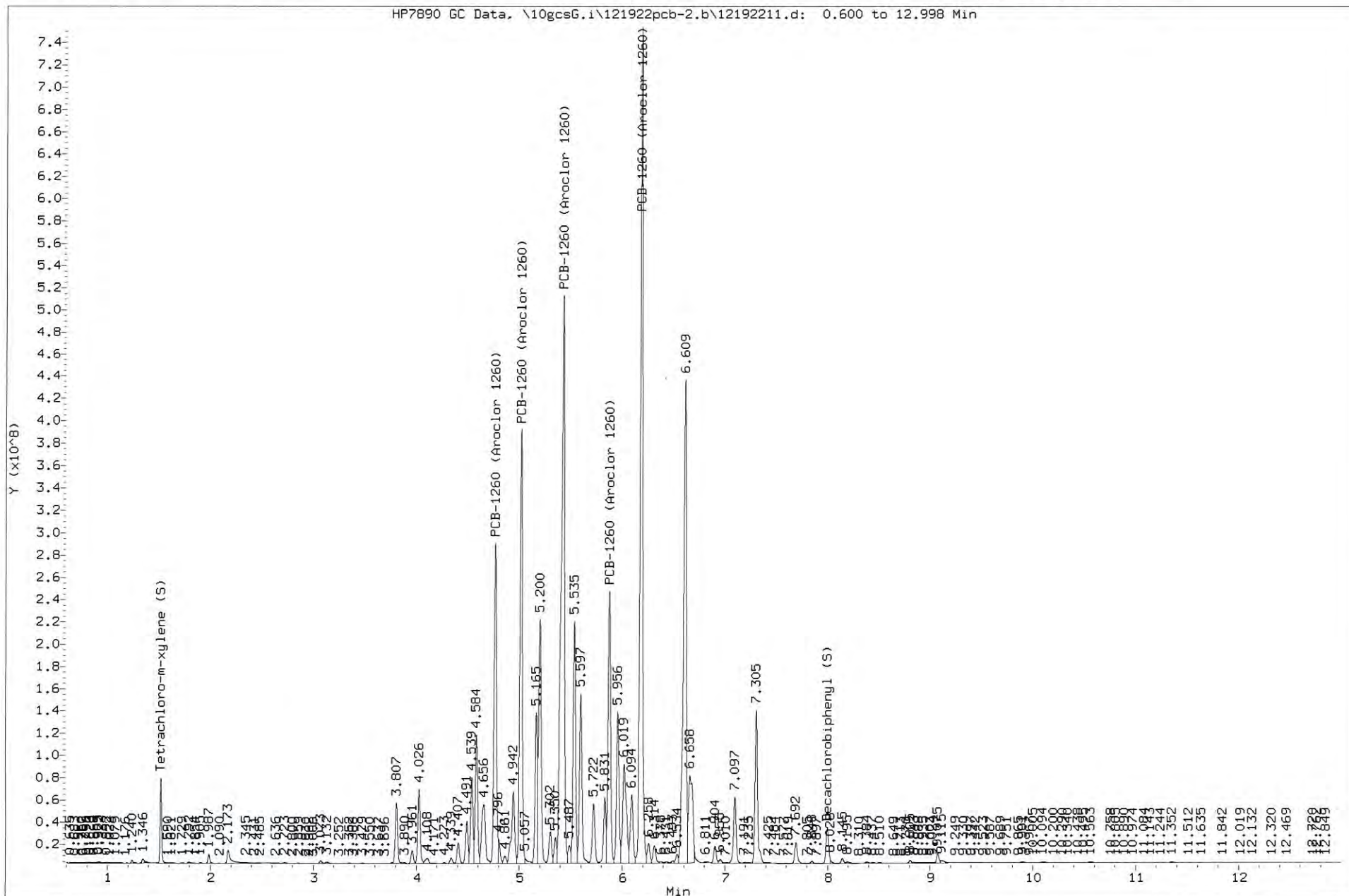


Data File: \\vi0wintarget\chem\10gcsG.i\121922pcb-2.b\12192217.d
Injection Date: 19-DEC-2022 11:07
Instrument: 10gcsG.i
Client Sample ID: ISM01-0.0-0.2-1022

Batch 41272-858854
10630039-14 Dilution: 5x



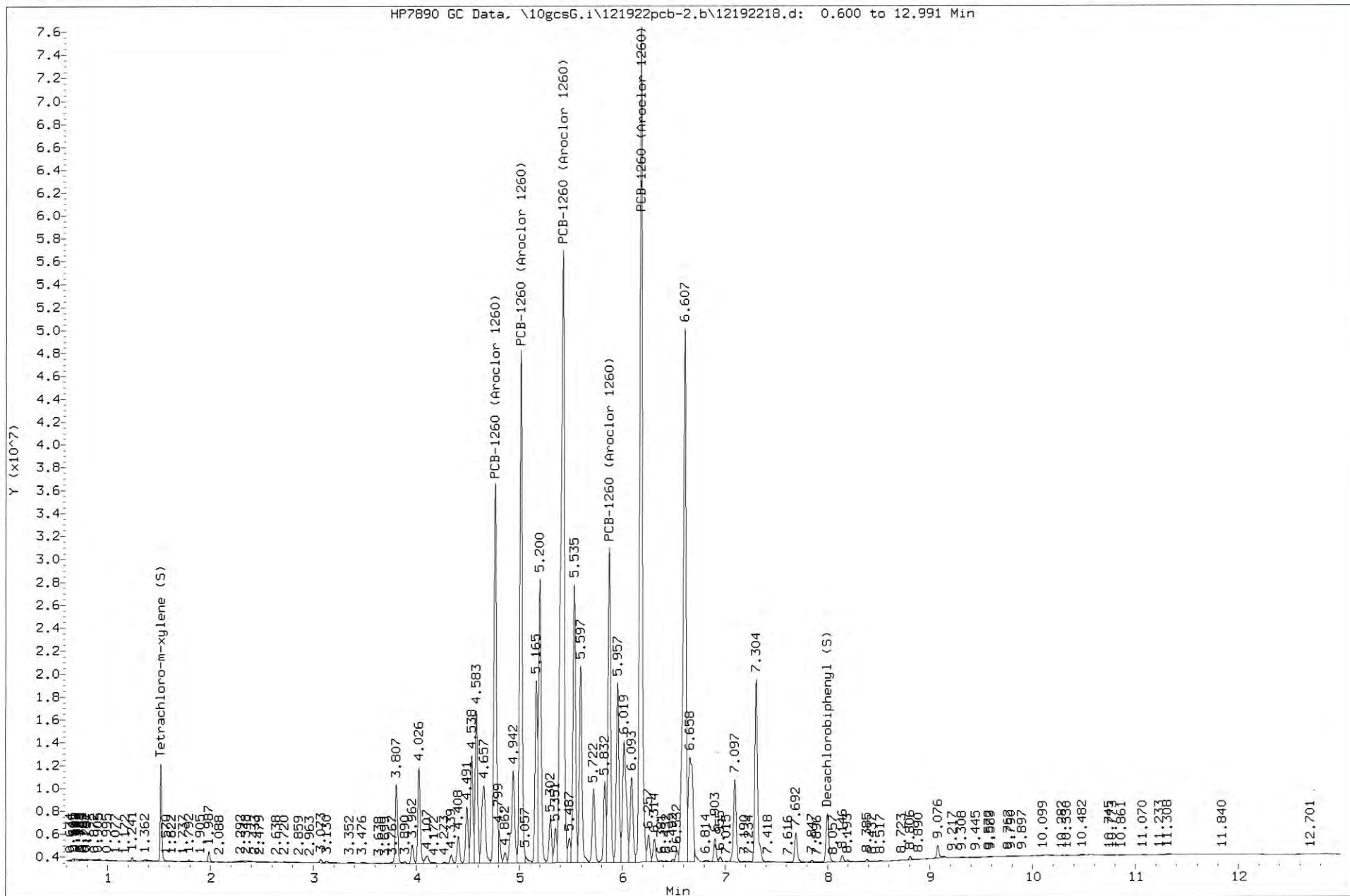
Batch 41272-859854
10630039-15



Client Sample ID: ISM03-0.0-0.2-1022

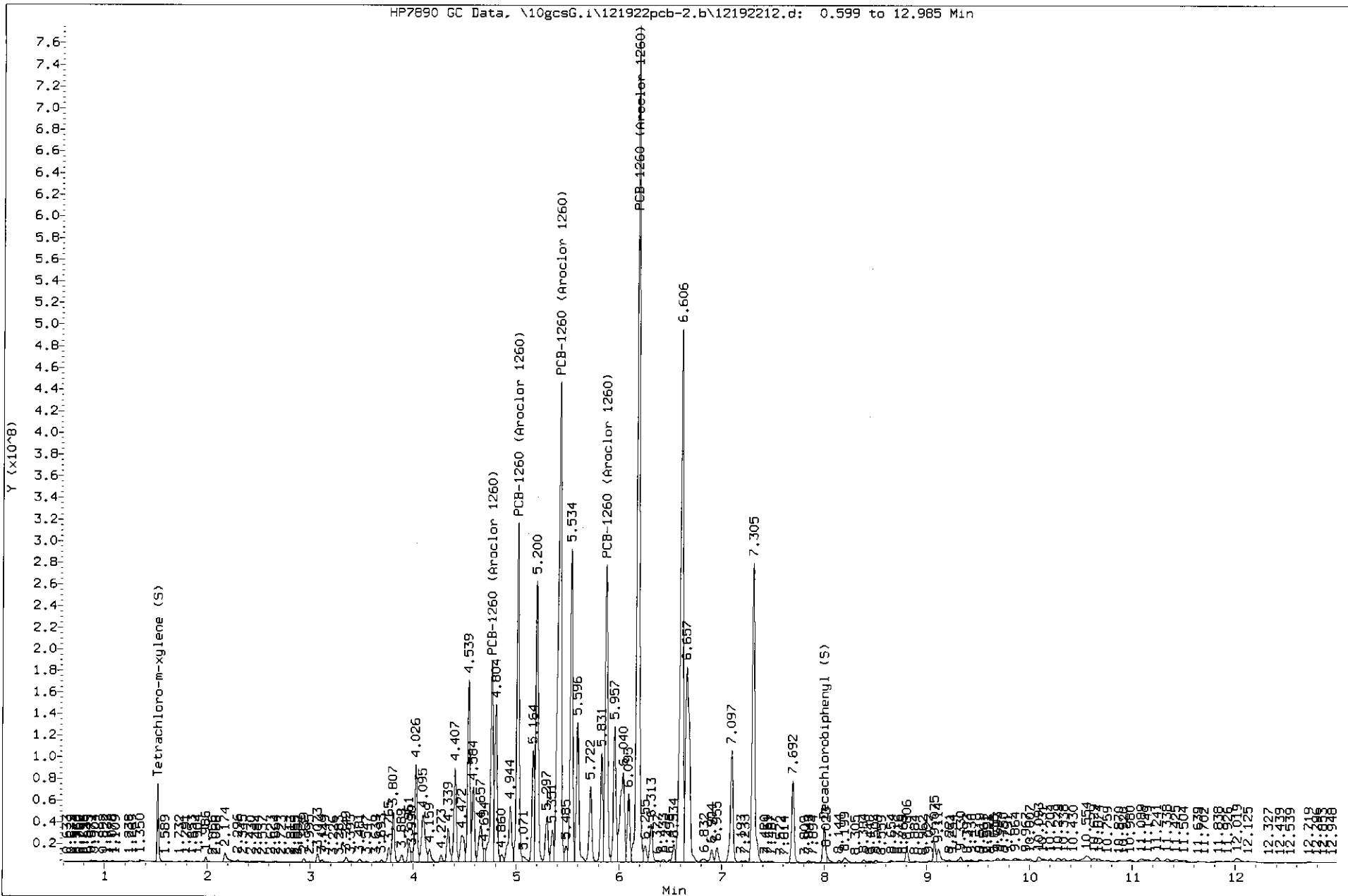
10630039-15 Dilution: 10X

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Data File: \\v10wintarget\chem\10gcsG.i\121922pcb-2.b\12192212.d
Injection Date: 19-DEC-2022 09:48
Instrument: 10gcsG.i
Client Sample ID: SB02-0.0-0.5-1022

Batch 41272-858854
10630039-16



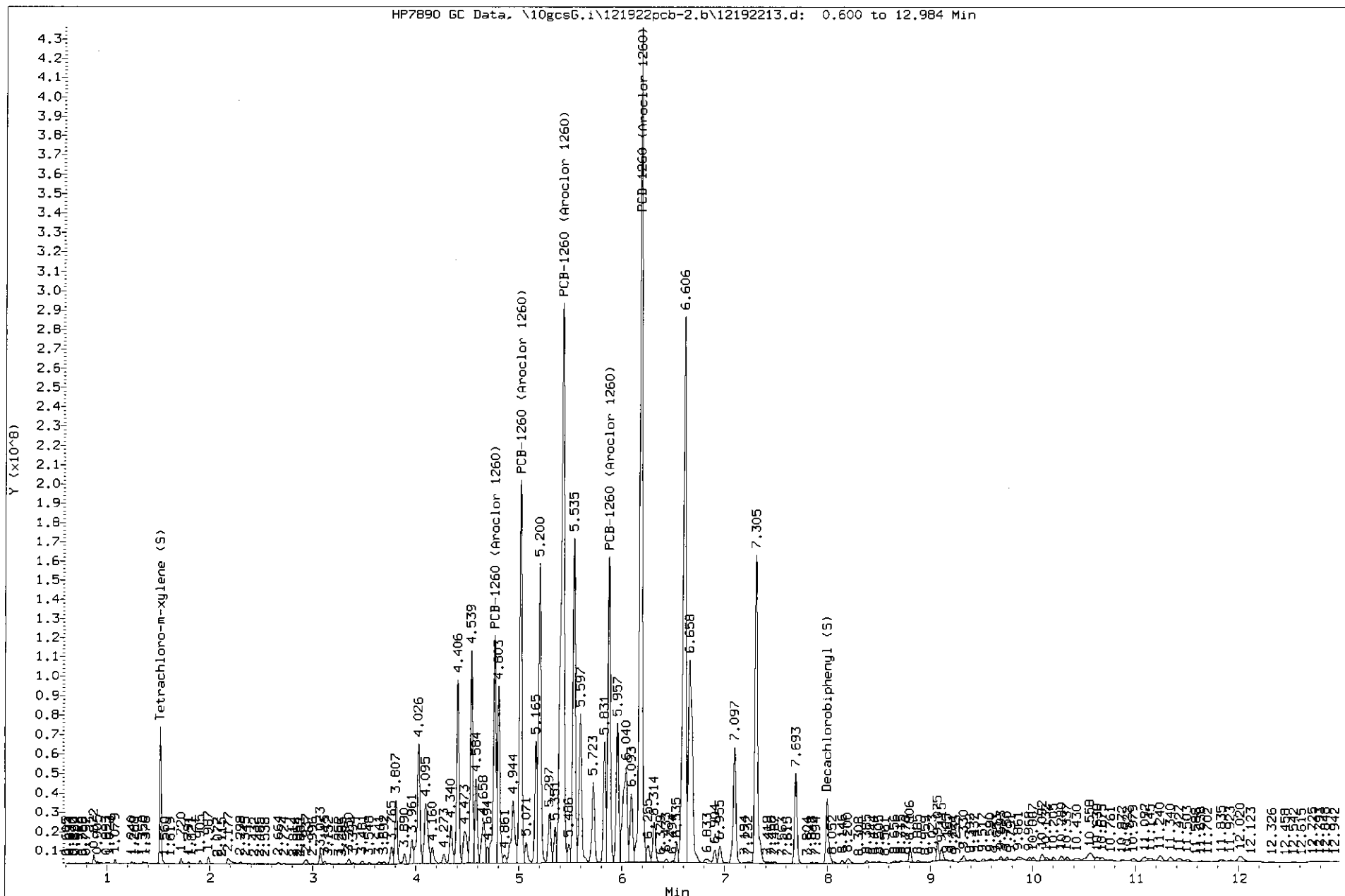
Batch 41272-858854
10630039-16 Dilution: 10x

HP7890 GC Data, \10gcsG.1\1219222pcb-2.b\12192219.d: 0.600 to 12.994 Min

Chromatogram showing detector response (Y-axis, scaled by 10^{-7}) versus time (X-axis, minutes). The plot displays numerous peaks, with several labeled as PCB-1260 (Aroclor 1260) and Tetrachloro-m-xylene (S). Key peaks are labeled with retention times such as 1.352, 4.026, 4.538, 5.534, 6.606, 7.305, and 12.915.

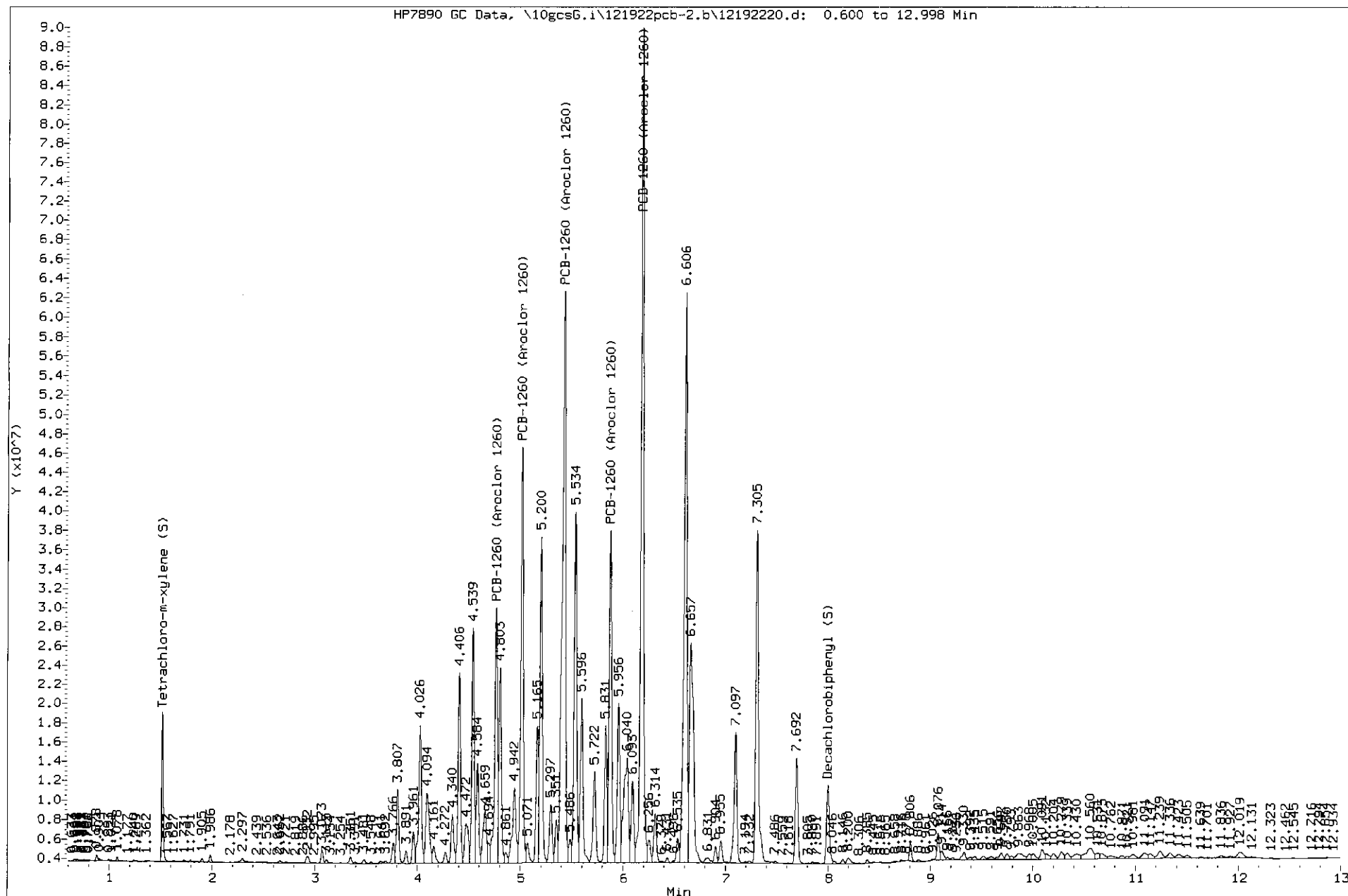
Data File: \\v10wintarget\chem\10gcsG.1\121922pcb-2.b\12192213.d
Injection Date: 19-DEC-2022 10:04
Instrument: 10gcsG.1
Client Sample ID: SB02D-0.0-0.5-1022

Batch 41272-858854
10630039-17



Data File: \\v10wintarget\chem\10gcs6.i\121922pcb-2.b\12192220.d
Injection Date: 19-DEC-2022 11:55
Instrument: 10gcs6.i
Client Sample ID: SB02D-0.0-0.5-1022

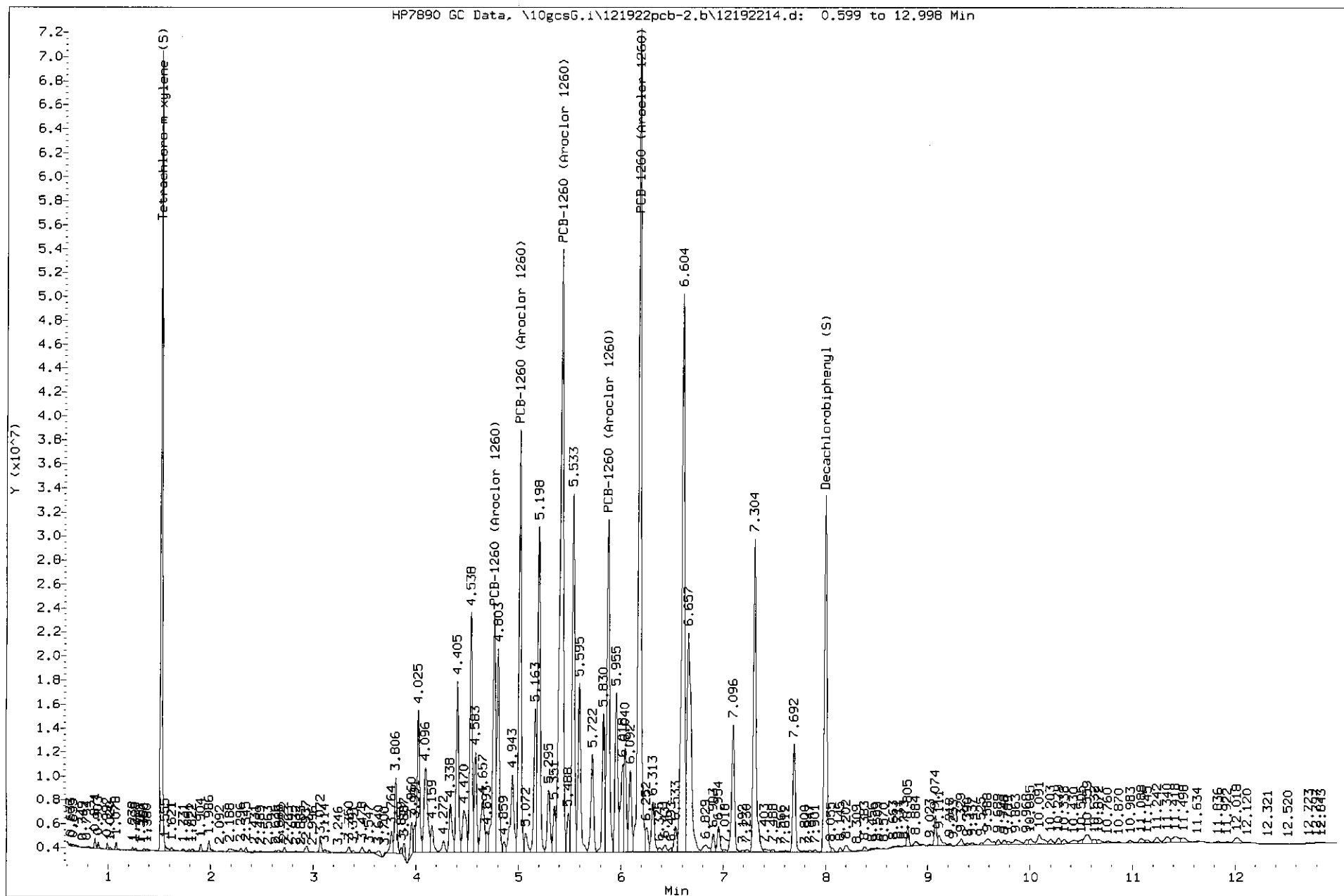
Batch 41272-858854
10630039-17 Dilution: 30x



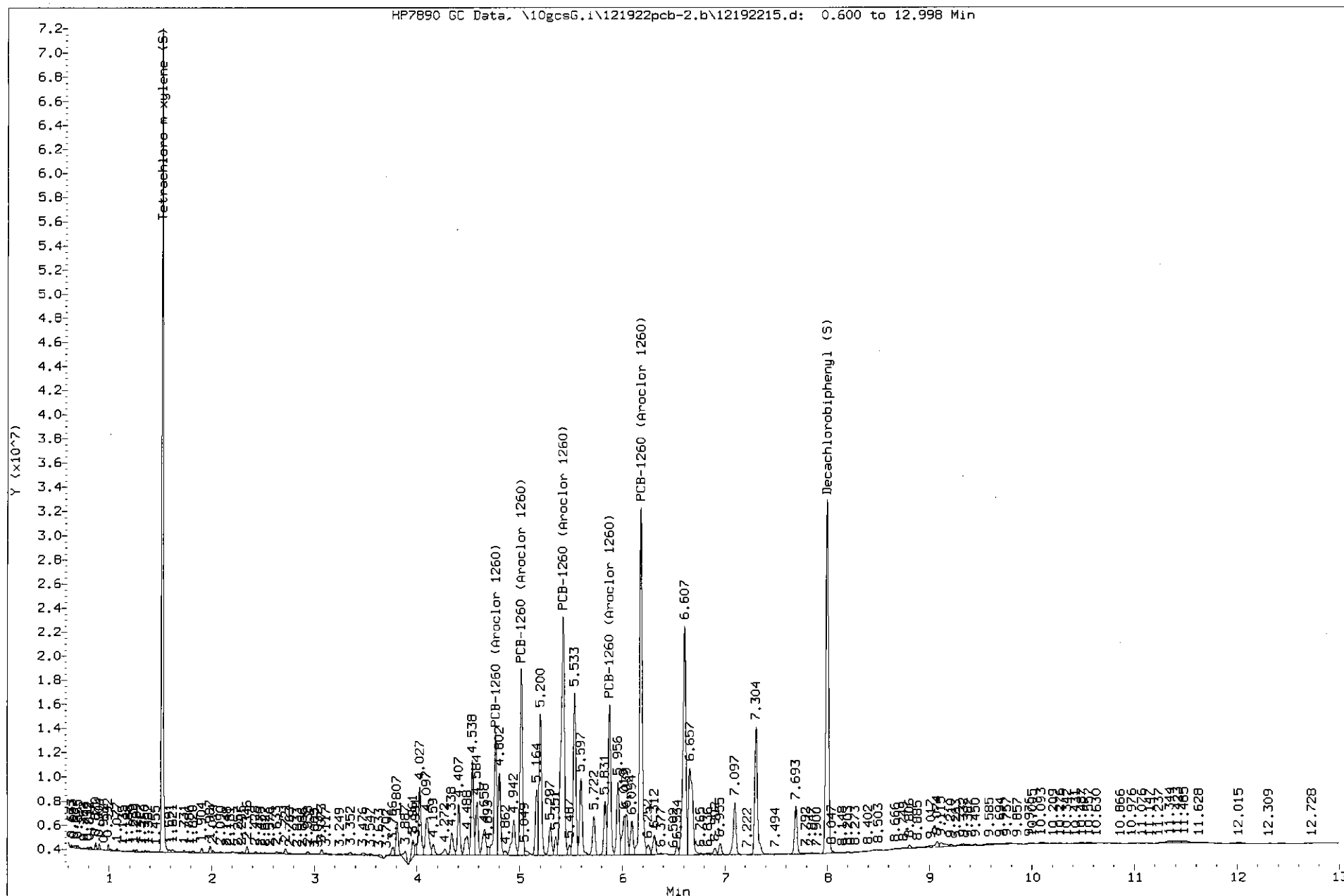
Data File: \\v10wintarget\chem\10gcsG.1\121922pcb-2.b\12192214.d
Injection Date: 19-DEC-2022 10:20
Instrument: 10gcsG.1
Client Sample ID: SB02-1-1.5-1022

Batch 41272-858854

10630039-18

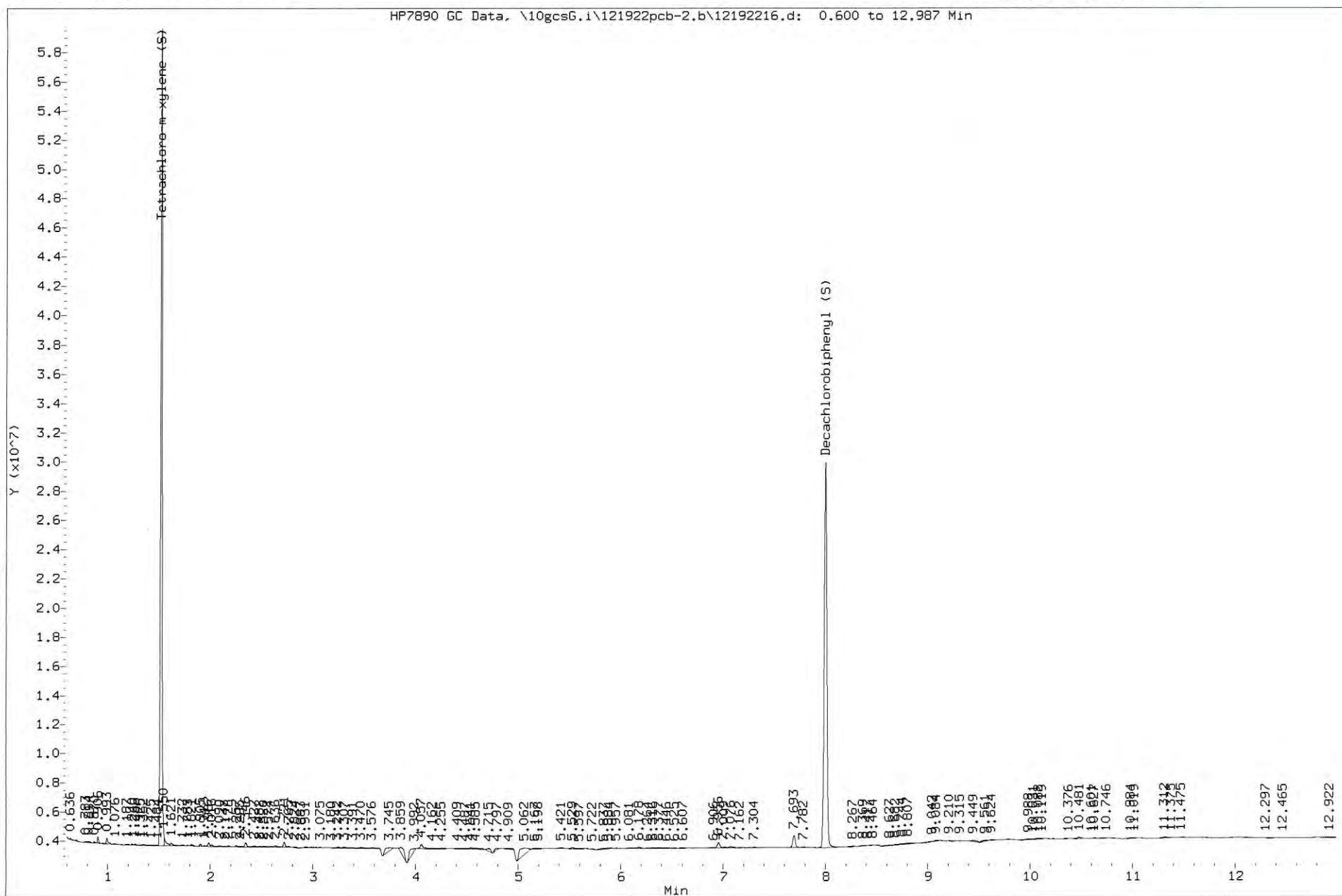


Batch 41272-858854
10630039-19



Data File: \\v10wintarget\chem\10gcsG.i\121922pcb-2.b\12192216.d
Injection Date: 19-DEC-2022 10:52
Instrument: 10gcsG.i
Client Sample ID: SB03-2.5-3.0-1022

Batch 41272-858854
10630039-20



December 21, 2022

David Hodson
Jacobs
2020 SW 4th Avenue
Suite 300
Portland, OR 97201

RE: Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630481

Dear David Hodson:

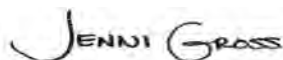
Enclosed are the analytical results for sample(s) received by the laboratory on October 20, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Minneapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jennifer Gross
jennifer.gross@pacelabs.com
(612)607-1700
Project Manager

Enclosures

cc: UPRR-Sysdat@ghd.com, UPRR



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630481

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414

A2LA Certification #: 2926.01*

1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009*

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014*

Arkansas DW Certification #: MN00064

Arkansas WW Certification #: 88-0680

California Certification #: 2929

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137

Florida Certification #: E87605*

Georgia Certification #: 959

GMP+ Certification #: GMP050884

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: AI-03086*

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064*

Maryland Certification #: 322

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137*

Minnesota Dept of Ag Approval: via MN 027-053-137

Minnesota Petrofund Registration #: 1240*

Mississippi Certification #: MN00064

Missouri Certification #: 10100

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081*

New Jersey Certification #: MN002

New York Certification #: 11647*

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification (A2LA) #: R-036

North Dakota Certification (MN) #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification (1700) #: CL101

Ohio VAP Certification (1800) #: CL110*

Oklahoma Certification #: 9507*

Oregon Primary Certification #: MN300001

Oregon Secondary Certification #: MN200001*

Pennsylvania Certification #: 68-00563

Puerto Rico Certification #: MN00064

South Carolina Certification #: 74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192*

Utah Certification #: MN00064*

Vermont Certification #: VT-027053137

Virginia Certification #: 460163*

Washington Certification #: C486*

West Virginia DEP Certification #: 382

West Virginia DW Certification #: 9952 C

Wisconsin Certification #: 999407970

Wyoming UST Certification #: via A2LA 2926.01

USDA Permit #: P330-19-00208

Please Note: Applicable air certifications are denoted with an asterisk ().

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630481

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10630481001	SB14-0.0-0.5-1022	Solid	10/19/22 08:00	10/20/22 10:30
10630481002	SB14-1.0-1.5-1022	Solid	10/19/22 08:05	10/20/22 10:30
10630481003	SB14-2.5-3.0-1022	Solid	10/19/22 09:10	10/20/22 10:30
10630481004	SB13-0.0-0.5-1022	Solid	10/19/22 10:00	10/20/22 10:30
10630481005	SB13-1.0-1.5-1022	Solid	10/19/22 10:05	10/20/22 10:30
10630481006	SB13-2.5-3.0-1022	Solid	10/19/22 10:10	10/20/22 10:30
10630481007	SB11-0.0-0.5-1022	Solid	10/19/22 11:00	10/20/22 10:30
10630481008	SB11D-0.0-0.5-1022	Solid	10/19/22 11:05	10/20/22 10:30
10630481009	SB11-1.0-1.5-1022	Solid	10/19/22 11:10	10/20/22 10:30
10630481010	SB11-2.5-3.0-1022	Solid	10/19/22 11:15	10/20/22 10:30
10630481011	SB15-0.0-0.5-1022	Solid	10/19/22 12:00	10/20/22 10:30
10630481012	SB15-1.0-1.5-1022	Solid	10/19/22 12:05	10/20/22 10:30
10630481013	SB15-2.5-3.0-1022	Solid	10/19/22 12:10	10/20/22 10:30
10630481014	SB16-0.0-0.5-1022	Solid	10/19/22 13:00	10/20/22 10:30
10630481015	SB16-1.0-1.5-1022	Solid	10/19/22 13:05	10/20/22 10:30
10630481016	SB16-2.5-3.0-1022	Solid	10/19/22 13:10	10/20/22 10:30
10630481017	ISM02-0.0-0.2-1022	Solid	10/19/22 14:00	10/20/22 10:30
10630481018	ISM07-0.0-0.2-1022	Solid	10/19/22 11:25	10/20/22 10:30
10630481019	ISM07T-0.0-0.2-1022	Solid	10/19/22 11:30	10/20/22 10:30
10630481020	ISM07TT-0.0-0.2-1022	Solid	10/19/22 11:35	10/20/22 10:30
10630481021	ISM06-0.0-0.2-1022	Solid	10/19/22 09:25	10/20/22 10:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630481

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10630481001	SB14-0.0-0.5-1022	EPA 8082A	RAG	11	PASI-M
10630481002	SB14-1.0-1.5-1022	EPA 8082A	RAG	11	PASI-M
10630481003	SB14-2.5-3.0-1022	EPA 8082A	RAG	11	PASI-M
10630481004	SB13-0.0-0.5-1022	EPA 8082A	RAG	11	PASI-M
10630481005	SB13-1.0-1.5-1022	EPA 8082A	RAG	11	PASI-M
10630481006	SB13-2.5-3.0-1022	EPA 8082A	RAG	11	PASI-M
10630481007	SB11-0.0-0.5-1022	EPA 8082A	RAG	11	PASI-M
10630481008	SB11D-0.0-0.5-1022	EPA 8082A	RAG	11	PASI-M
10630481009	SB11-1.0-1.5-1022	EPA 8082A	RAG	11	PASI-M
10630481010	SB11-2.5-3.0-1022	EPA 8082A	RAG	11	PASI-M
10630481011	SB15-0.0-0.5-1022	EPA 8082A	RAG	11	PASI-M
10630481012	SB15-1.0-1.5-1022	EPA 8082A	RAG	11	PASI-M
10630481013	SB15-2.5-3.0-1022	EPA 8082A	RAG	11	PASI-M
10630481014	SB16-0.0-0.5-1022	EPA 8082A	RAG	11	PASI-M
10630481015	SB16-1.0-1.5-1022	EPA 8082A	RAG	11	PASI-M
10630481016	SB16-2.5-3.0-1022	EPA 8082A	RAG	11	PASI-M
10630481017	ISM02-0.0-0.2-1022	EPA 8082A	RAG	11	PASI-M
10630481018	ISM07-0.0-0.2-1022	EPA 8082A	RAG	11	PASI-M
10630481019	ISM07T-0.0-0.2-1022	EPA 8082A	RAG	11	PASI-M
10630481020	ISM07TT-0.0-0.2-1022	EPA 8082A	RAG	11	PASI-M
10630481021	ISM06-0.0-0.2-1022	EPA 8082A	RAG	11	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630481

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10630481001	SB14-0.0-0.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	296	ug/kg	48.6	12/20/22 15:50	
10630481002	SB14-1.0-1.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	124	ug/kg	49.8	12/20/22 16:06	
10630481003	SB14-2.5-3.0-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	163	ug/kg	49.0	12/20/22 16:22	
10630481004	SB13-0.0-0.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	224	ug/kg	49.9	12/20/22 16:37	
10630481005	SB13-1.0-1.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	52.6	ug/kg	49.2	12/20/22 16:53	
10630481006	SB13-2.5-3.0-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	19.3J	ug/kg	49.7	12/20/22 17:09	
10630481007	SB11-0.0-0.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	4110	ug/kg	246	12/21/22 07:46	M1
10630481008	SB11D-0.0-0.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	3210	ug/kg	98.9	12/21/22 08:02	
10630481009	SB11-1.0-1.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	482	ug/kg	48.4	12/20/22 17:40	
10630481010	SB11-2.5-3.0-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	103	ug/kg	49.0	12/20/22 17:56	
10630481011	SB15-0.0-0.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	339	ug/kg	49.5	12/20/22 18:12	
10630481012	SB15-1.0-1.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	65.2	ug/kg	48.2	12/20/22 18:28	
10630481013	SB15-2.5-3.0-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	175	ug/kg	49.6	12/20/22 18:44	
10630481014	SB16-0.0-0.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	260	ug/kg	47.6	12/20/22 19:00	
10630481015	SB16-1.0-1.5-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	104	ug/kg	49.1	12/20/22 19:48	
10630481016	SB16-2.5-3.0-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	389	ug/kg	49.3	12/20/22 20:04	
10630481017	ISM02-0.0-0.2-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	267	ug/kg	48.4	12/20/22 20:20	
10630481018	ISM07-0.0-0.2-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	189	ug/kg	48.6	12/20/22 20:36	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630481

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10630481019	ISM07T-0.0-0.2-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	179	ug/kg	49.6	12/20/22 20:52	
10630481020	ISM07TT-0.0-0.2-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	185	ug/kg	49.2	12/20/22 21:08	
10630481021	ISM06-0.0-0.2-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	631	ug/kg	49.3	12/20/22 22:59	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630481

Method: EPA 8082A
Description: 8082A GCS PCB
Client: UPRR_Jacobs
Date: December 21, 2022

General Information:

21 samples were analyzed for EPA 8082A by Pace Analytical Services Minneapolis. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 859359

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10630481007

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 4541297)
 - PCB-1260 (Aroclor 1260)
- MSD (Lab ID: 4541298)
 - PCB-1260 (Aroclor 1260)

QC Batch: 859363

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10632522001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 4541336)
 - PCB-1260 (Aroclor 1260)

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630481

Method: EPA 8082A

Description: 8082A GCS PCB

Client: UPRR_Jacobs

Date: December 21, 2022

Analyte Comments:

QC Batch: 859359

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- MS (Lab ID: 4541297)
 - PCB-1260 (Aroclor 1260)
- MSD (Lab ID: 4541298)
 - PCB-1260 (Aroclor 1260)

QC Batch: 859363

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- MS (Lab ID: 4541336)
 - PCB-1260 (Aroclor 1260)
- MSD (Lab ID: 4541337)
 - PCB-1260 (Aroclor 1260)

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630481

Sample: SB14-0.0-0.5-1022 **Lab ID: 10630481001** Collected: 10/19/22 08:00 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.6	ug/kg	48.6	20.6	1	12/20/22 07:44	12/20/22 15:50	12674-11-2	
PCB-1221 (Aroclor 1221)	<33.6	ug/kg	48.6	33.6	1	12/20/22 07:44	12/20/22 15:50	11104-28-2	
PCB-1232 (Aroclor 1232)	<28.8	ug/kg	48.6	28.8	1	12/20/22 07:44	12/20/22 15:50	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.1	ug/kg	48.6	30.1	1	12/20/22 07:44	12/20/22 15:50	53469-21-9	
PCB-1248 (Aroclor 1248)	<24.8	ug/kg	48.6	24.8	1	12/20/22 07:44	12/20/22 15:50	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.2	ug/kg	48.6	24.2	1	12/20/22 07:44	12/20/22 15:50	11097-69-1	
PCB-1260 (Aroclor 1260)	296	ug/kg	48.6	17.4	1	12/20/22 07:44	12/20/22 15:50	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.0	ug/kg	48.6	32.0	1	12/20/22 07:44	12/20/22 15:50	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.4	ug/kg	48.6	23.4	1	12/20/22 07:44	12/20/22 15:50	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	70	%.	53-125		1	12/20/22 07:44	12/20/22 15:50	877-09-8	
Decachlorobiphenyl (S)	92	%.	41-125		1	12/20/22 07:44	12/20/22 15:50	2051-24-3	

Sample: SB14-1.0-1.5-1022 **Lab ID: 10630481002** Collected: 10/19/22 08:05 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.1	ug/kg	49.8	21.1	1	12/20/22 07:44	12/20/22 16:06	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.4	ug/kg	49.8	34.4	1	12/20/22 07:44	12/20/22 16:06	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.4	ug/kg	49.8	29.4	1	12/20/22 07:44	12/20/22 16:06	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.8	ug/kg	49.8	30.8	1	12/20/22 07:44	12/20/22 16:06	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.4	ug/kg	49.8	25.4	1	12/20/22 07:44	12/20/22 16:06	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.8	ug/kg	49.8	24.8	1	12/20/22 07:44	12/20/22 16:06	11097-69-1	
PCB-1260 (Aroclor 1260)	124	ug/kg	49.8	17.8	1	12/20/22 07:44	12/20/22 16:06	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.7	ug/kg	49.8	32.7	1	12/20/22 07:44	12/20/22 16:06	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.9	ug/kg	49.8	23.9	1	12/20/22 07:44	12/20/22 16:06	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	73	%.	53-125		1	12/20/22 07:44	12/20/22 16:06	877-09-8	
Decachlorobiphenyl (S)	100	%.	41-125		1	12/20/22 07:44	12/20/22 16:06	2051-24-3	

Sample: SB14-2.5-3.0-1022 **Lab ID: 10630481003** Collected: 10/19/22 09:10 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.8	ug/kg	49.0	20.8	1	12/20/22 07:44	12/20/22 16:22	12674-11-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630481

Sample: SB14-2.5-3.0-1022 **Lab ID: 10630481003** Collected: 10/19/22 09:10 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1221 (Aroclor 1221)	<33.9	ug/kg	49.0	33.9	1	12/20/22 07:44	12/20/22 16:22	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.0	ug/kg	49.0	29.0	1	12/20/22 07:44	12/20/22 16:22	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.3	ug/kg	49.0	30.3	1	12/20/22 07:44	12/20/22 16:22	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.0	ug/kg	49.0	25.0	1	12/20/22 07:44	12/20/22 16:22	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.4	ug/kg	49.0	24.4	1	12/20/22 07:44	12/20/22 16:22	11097-69-1	
PCB-1260 (Aroclor 1260)	163	ug/kg	49.0	17.5	1	12/20/22 07:44	12/20/22 16:22	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.2	ug/kg	49.0	32.2	1	12/20/22 07:44	12/20/22 16:22	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.6	ug/kg	49.0	23.6	1	12/20/22 07:44	12/20/22 16:22	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	77	%.	53-125		1	12/20/22 07:44	12/20/22 16:22	877-09-8	
Decachlorobiphenyl (S)	104	%.	41-125		1	12/20/22 07:44	12/20/22 16:22	2051-24-3	

Sample: SB13-0.0-0.5-1022 **Lab ID: 10630481004** Collected: 10/19/22 10:00 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.1	ug/kg	49.9	21.1	1	12/20/22 07:44	12/20/22 16:37	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.4	ug/kg	49.9	34.4	1	12/20/22 07:44	12/20/22 16:37	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.5	ug/kg	49.9	29.5	1	12/20/22 07:44	12/20/22 16:37	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.8	ug/kg	49.9	30.8	1	12/20/22 07:44	12/20/22 16:37	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.4	ug/kg	49.9	25.4	1	12/20/22 07:44	12/20/22 16:37	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.9	ug/kg	49.9	24.9	1	12/20/22 07:44	12/20/22 16:37	11097-69-1	
PCB-1260 (Aroclor 1260)	224	ug/kg	49.9	17.8	1	12/20/22 07:44	12/20/22 16:37	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.8	ug/kg	49.9	32.8	1	12/20/22 07:44	12/20/22 16:37	37324-23-5	
PCB-1268 (Aroclor 1268)	<24.0	ug/kg	49.9	24.0	1	12/20/22 07:44	12/20/22 16:37	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	65	%.	53-125		1	12/20/22 07:44	12/20/22 16:37	877-09-8	
Decachlorobiphenyl (S)	95	%.	41-125		1	12/20/22 07:44	12/20/22 16:37	2051-24-3	

Sample: SB13-1.0-1.5-1022 **Lab ID: 10630481005** Collected: 10/19/22 10:05 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.8	ug/kg	49.2	20.8	1	12/20/22 07:44	12/20/22 16:53	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.0	ug/kg	49.2	34.0	1	12/20/22 07:44	12/20/22 16:53	11104-28-2	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630481

Sample: SB13-1.0-1.5-1022 **Lab ID: 10630481005** Collected: 10/19/22 10:05 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1232 (Aroclor 1232)	<29.1	ug/kg	49.2	29.1	1	12/20/22 07:44	12/20/22 16:53	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.4	ug/kg	49.2	30.4	1	12/20/22 07:44	12/20/22 16:53	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.1	ug/kg	49.2	25.1	1	12/20/22 07:44	12/20/22 16:53	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.5	ug/kg	49.2	24.5	1	12/20/22 07:44	12/20/22 16:53	11097-69-1	
PCB-1260 (Aroclor 1260)	52.6	ug/kg	49.2	17.6	1	12/20/22 07:44	12/20/22 16:53	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.3	ug/kg	49.2	32.3	1	12/20/22 07:44	12/20/22 16:53	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.6	ug/kg	49.2	23.6	1	12/20/22 07:44	12/20/22 16:53	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	86	%	53-125		1	12/20/22 07:44	12/20/22 16:53	877-09-8	
Decachlorobiphenyl (S)	103	%	41-125		1	12/20/22 07:44	12/20/22 16:53	2051-24-3	

Sample: SB13-2.5-3.0-1022 **Lab ID: 10630481006** Collected: 10/19/22 10:10 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.0	ug/kg	49.7	21.0	1	12/20/22 07:44	12/20/22 17:09	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.3	ug/kg	49.7	34.3	1	12/20/22 07:44	12/20/22 17:09	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.4	ug/kg	49.7	29.4	1	12/20/22 07:44	12/20/22 17:09	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.7	ug/kg	49.7	30.7	1	12/20/22 07:44	12/20/22 17:09	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.4	ug/kg	49.7	25.4	1	12/20/22 07:44	12/20/22 17:09	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.8	ug/kg	49.7	24.8	1	12/20/22 07:44	12/20/22 17:09	11097-69-1	
PCB-1260 (Aroclor 1260)	19.3J	ug/kg	49.7	17.8	1	12/20/22 07:44	12/20/22 17:09	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.7	ug/kg	49.7	32.7	1	12/20/22 07:44	12/20/22 17:09	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.9	ug/kg	49.7	23.9	1	12/20/22 07:44	12/20/22 17:09	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	80	%	53-125		1	12/20/22 07:44	12/20/22 17:09	877-09-8	
Decachlorobiphenyl (S)	97	%	41-125		1	12/20/22 07:44	12/20/22 17:09	2051-24-3	

Sample: SB11-0.0-0.5-1022 **Lab ID: 10630481007** Collected: 10/19/22 11:00 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.8	ug/kg	49.2	20.8	1	12/20/22 07:44	12/20/22 15:02	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.0	ug/kg	49.2	34.0	1	12/20/22 07:44	12/20/22 15:02	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.1	ug/kg	49.2	29.1	1	12/20/22 07:44	12/20/22 15:02	11141-16-5	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630481

Sample: SB11-0.0-0.5-1022 **Lab ID: 10630481007** Collected: 10/19/22 11:00 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1242 (Aroclor 1242)	<30.4	ug/kg	49.2	30.4	1	12/20/22 07:44	12/20/22 15:02	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.1	ug/kg	49.2	25.1	1	12/20/22 07:44	12/20/22 15:02	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.5	ug/kg	49.2	24.5	1	12/20/22 07:44	12/20/22 15:02	11097-69-1	
PCB-1260 (Aroclor 1260)	4110	ug/kg	246	87.8	5	12/20/22 07:44	12/21/22 07:46	11096-82-5	M1
PCB-1262 (Aroclor 1262)	<32.3	ug/kg	49.2	32.3	1	12/20/22 07:44	12/20/22 15:02	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.6	ug/kg	49.2	23.6	1	12/20/22 07:44	12/20/22 15:02	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	72	%	53-125		1	12/20/22 07:44	12/20/22 15:02	877-09-8	
Decachlorobiphenyl (S)	94	%	41-125		1	12/20/22 07:44	12/20/22 15:02	2051-24-3	

Sample: SB11D-0.0-0.5-1022 **Lab ID: 10630481008** Collected: 10/19/22 11:05 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.9	ug/kg	49.5	20.9	1	12/20/22 07:44	12/20/22 17:25	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.2	ug/kg	49.5	34.2	1	12/20/22 07:44	12/20/22 17:25	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.3	ug/kg	49.5	29.3	1	12/20/22 07:44	12/20/22 17:25	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.6	ug/kg	49.5	30.6	1	12/20/22 07:44	12/20/22 17:25	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.2	ug/kg	49.5	25.2	1	12/20/22 07:44	12/20/22 17:25	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.7	ug/kg	49.5	24.7	1	12/20/22 07:44	12/20/22 17:25	11097-69-1	
PCB-1260 (Aroclor 1260)	3210	ug/kg	98.9	35.3	2	12/20/22 07:44	12/21/22 08:02	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.5	ug/kg	49.5	32.5	1	12/20/22 07:44	12/20/22 17:25	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.8	ug/kg	49.5	23.8	1	12/20/22 07:44	12/20/22 17:25	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	66	%	53-125		1	12/20/22 07:44	12/20/22 17:25	877-09-8	
Decachlorobiphenyl (S)	88	%	41-125		1	12/20/22 07:44	12/20/22 17:25	2051-24-3	

Sample: SB11-1.0-1.5-1022 **Lab ID: 10630481009** Collected: 10/19/22 11:10 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.5	ug/kg	48.4	20.5	1	12/20/22 07:44	12/20/22 17:40	12674-11-2	
PCB-1221 (Aroclor 1221)	<33.5	ug/kg	48.4	33.5	1	12/20/22 07:44	12/20/22 17:40	11104-28-2	
PCB-1232 (Aroclor 1232)	<28.7	ug/kg	48.4	28.7	1	12/20/22 07:44	12/20/22 17:40	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.0	ug/kg	48.4	30.0	1	12/20/22 07:44	12/20/22 17:40	53469-21-9	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630481

Sample: SB11-1.0-1.5-1022 **Lab ID: 10630481009** Collected: 10/19/22 11:10 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB Analytical Method: EPA 8082A Preparation Method: EPA 3546 Pace Analytical Services - Minneapolis									
PCB-1248 (Aroclor 1248)	<24.7	ug/kg	48.4	24.7	1	12/20/22 07:44	12/20/22 17:40	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.2	ug/kg	48.4	24.2	1	12/20/22 07:44	12/20/22 17:40	11097-69-1	
PCB-1260 (Aroclor 1260)	482	ug/kg	48.4	17.3	1	12/20/22 07:44	12/20/22 17:40	11096-82-5	
PCB-1262 (Aroclor 1262)	<31.9	ug/kg	48.4	31.9	1	12/20/22 07:44	12/20/22 17:40	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.3	ug/kg	48.4	23.3	1	12/20/22 07:44	12/20/22 17:40	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	79	%	53-125		1	12/20/22 07:44	12/20/22 17:40	877-09-8	
Decachlorobiphenyl (S)	90	%	41-125		1	12/20/22 07:44	12/20/22 17:40	2051-24-3	

Sample: SB11-2.5-3.0-1022 **Lab ID: 10630481010** Collected: 10/19/22 11:15 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB Analytical Method: EPA 8082A Preparation Method: EPA 3546 Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.7	ug/kg	49.0	20.7	1	12/20/22 07:44	12/20/22 17:56	12674-11-2	
PCB-1221 (Aroclor 1221)	<33.8	ug/kg	49.0	33.8	1	12/20/22 07:44	12/20/22 17:56	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.0	ug/kg	49.0	29.0	1	12/20/22 07:44	12/20/22 17:56	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.3	ug/kg	49.0	30.3	1	12/20/22 07:44	12/20/22 17:56	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.0	ug/kg	49.0	25.0	1	12/20/22 07:44	12/20/22 17:56	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.4	ug/kg	49.0	24.4	1	12/20/22 07:44	12/20/22 17:56	11097-69-1	
PCB-1260 (Aroclor 1260)	103	ug/kg	49.0	17.5	1	12/20/22 07:44	12/20/22 17:56	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.2	ug/kg	49.0	32.2	1	12/20/22 07:44	12/20/22 17:56	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.5	ug/kg	49.0	23.5	1	12/20/22 07:44	12/20/22 17:56	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	64	%	53-125		1	12/20/22 07:44	12/20/22 17:56	877-09-8	
Decachlorobiphenyl (S)	71	%	41-125		1	12/20/22 07:44	12/20/22 17:56	2051-24-3	

Sample: SB15-0.0-0.5-1022 **Lab ID: 10630481011** Collected: 10/19/22 12:00 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB Analytical Method: EPA 8082A Preparation Method: EPA 3546 Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.9	ug/kg	49.5	20.9	1	12/20/22 07:44	12/20/22 18:12	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.2	ug/kg	49.5	34.2	1	12/20/22 07:44	12/20/22 18:12	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.3	ug/kg	49.5	29.3	1	12/20/22 07:44	12/20/22 18:12	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.6	ug/kg	49.5	30.6	1	12/20/22 07:44	12/20/22 18:12	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.2	ug/kg	49.5	25.2	1	12/20/22 07:44	12/20/22 18:12	12672-29-6	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630481

Sample: SB15-0.0-0.5-1022 **Lab ID: 10630481011** Collected: 10/19/22 12:00 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1254 (Aroclor 1254)	<24.7	ug/kg	49.5	24.7	1	12/20/22 07:44	12/20/22 18:12	11097-69-1	
PCB-1260 (Aroclor 1260)	339	ug/kg	49.5	17.7	1	12/20/22 07:44	12/20/22 18:12	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.5	ug/kg	49.5	32.5	1	12/20/22 07:44	12/20/22 18:12	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.8	ug/kg	49.5	23.8	1	12/20/22 07:44	12/20/22 18:12	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	75	%.	53-125		1	12/20/22 07:44	12/20/22 18:12	877-09-8	
Decachlorobiphenyl (S)	94	%.	41-125		1	12/20/22 07:44	12/20/22 18:12	2051-24-3	

Sample: SB15-1.0-1.5-1022 **Lab ID: 10630481012** Collected: 10/19/22 12:05 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.4	ug/kg	48.2	20.4	1	12/20/22 07:44	12/20/22 18:28	12674-11-2	
PCB-1221 (Aroclor 1221)	<33.3	ug/kg	48.2	33.3	1	12/20/22 07:44	12/20/22 18:28	11104-28-2	
PCB-1232 (Aroclor 1232)	<28.5	ug/kg	48.2	28.5	1	12/20/22 07:44	12/20/22 18:28	11141-16-5	
PCB-1242 (Aroclor 1242)	<29.8	ug/kg	48.2	29.8	1	12/20/22 07:44	12/20/22 18:28	53469-21-9	
PCB-1248 (Aroclor 1248)	<24.6	ug/kg	48.2	24.6	1	12/20/22 07:44	12/20/22 18:28	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.0	ug/kg	48.2	24.0	1	12/20/22 07:44	12/20/22 18:28	11097-69-1	
PCB-1260 (Aroclor 1260)	65.2	ug/kg	48.2	17.2	1	12/20/22 07:44	12/20/22 18:28	11096-82-5	
PCB-1262 (Aroclor 1262)	<31.7	ug/kg	48.2	31.7	1	12/20/22 07:44	12/20/22 18:28	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.1	ug/kg	48.2	23.1	1	12/20/22 07:44	12/20/22 18:28	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	85	%.	53-125		1	12/20/22 07:44	12/20/22 18:28	877-09-8	
Decachlorobiphenyl (S)	99	%.	41-125		1	12/20/22 07:44	12/20/22 18:28	2051-24-3	

Sample: SB15-2.5-3.0-1022 **Lab ID: 10630481013** Collected: 10/19/22 12:10 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.0	ug/kg	49.6	21.0	1	12/20/22 07:44	12/20/22 18:44	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.2	ug/kg	49.6	34.2	1	12/20/22 07:44	12/20/22 18:44	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.3	ug/kg	49.6	29.3	1	12/20/22 07:44	12/20/22 18:44	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.7	ug/kg	49.6	30.7	1	12/20/22 07:44	12/20/22 18:44	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.3	ug/kg	49.6	25.3	1	12/20/22 07:44	12/20/22 18:44	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.7	ug/kg	49.6	24.7	1	12/20/22 07:44	12/20/22 18:44	11097-69-1	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630481

Sample: SB15-2.5-3.0-1022 **Lab ID: 10630481013** Collected: 10/19/22 12:10 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1260 (Aroclor 1260)	175	ug/kg	49.6	17.7	1	12/20/22 07:44	12/20/22 18:44	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.6	ug/kg	49.6	32.6	1	12/20/22 07:44	12/20/22 18:44	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.8	ug/kg	49.6	23.8	1	12/20/22 07:44	12/20/22 18:44	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	73	%.	53-125		1	12/20/22 07:44	12/20/22 18:44	877-09-8	
Decachlorobiphenyl (S)	103	%.	41-125		1	12/20/22 07:44	12/20/22 18:44	2051-24-3	

Sample: SB16-0.0-0.5-1022 **Lab ID: 10630481014** Collected: 10/19/22 13:00 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.1	ug/kg	47.6	20.1	1	12/20/22 07:44	12/20/22 19:00	12674-11-2	
PCB-1221 (Aroclor 1221)	<32.9	ug/kg	47.6	32.9	1	12/20/22 07:44	12/20/22 19:00	11104-28-2	
PCB-1232 (Aroclor 1232)	<28.1	ug/kg	47.6	28.1	1	12/20/22 07:44	12/20/22 19:00	11141-16-5	
PCB-1242 (Aroclor 1242)	<29.4	ug/kg	47.6	29.4	1	12/20/22 07:44	12/20/22 19:00	53469-21-9	
PCB-1248 (Aroclor 1248)	<24.3	ug/kg	47.6	24.3	1	12/20/22 07:44	12/20/22 19:00	12672-29-6	
PCB-1254 (Aroclor 1254)	<23.7	ug/kg	47.6	23.7	1	12/20/22 07:44	12/20/22 19:00	11097-69-1	
PCB-1260 (Aroclor 1260)	260	ug/kg	47.6	17.0	1	12/20/22 07:44	12/20/22 19:00	11096-82-5	
PCB-1262 (Aroclor 1262)	<31.3	ug/kg	47.6	31.3	1	12/20/22 07:44	12/20/22 19:00	37324-23-5	
PCB-1268 (Aroclor 1268)	<22.9	ug/kg	47.6	22.9	1	12/20/22 07:44	12/20/22 19:00	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	70	%.	53-125		1	12/20/22 07:44	12/20/22 19:00	877-09-8	
Decachlorobiphenyl (S)	88	%.	41-125		1	12/20/22 07:44	12/20/22 19:00	2051-24-3	

Sample: SB16-1.0-1.5-1022 **Lab ID: 10630481015** Collected: 10/19/22 13:05 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.8	ug/kg	49.1	20.8	1	12/20/22 07:44	12/20/22 19:48	12674-11-2	
PCB-1221 (Aroclor 1221)	<33.9	ug/kg	49.1	33.9	1	12/20/22 07:44	12/20/22 19:48	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.0	ug/kg	49.1	29.0	1	12/20/22 07:44	12/20/22 19:48	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.4	ug/kg	49.1	30.4	1	12/20/22 07:44	12/20/22 19:48	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.0	ug/kg	49.1	25.0	1	12/20/22 07:44	12/20/22 19:48	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.5	ug/kg	49.1	24.5	1	12/20/22 07:44	12/20/22 19:48	11097-69-1	
PCB-1260 (Aroclor 1260)	104	ug/kg	49.1	17.5	1	12/20/22 07:44	12/20/22 19:48	11096-82-5	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630481

Sample: SB16-1.0-1.5-1022 **Lab ID: 10630481015** Collected: 10/19/22 13:05 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1262 (Aroclor 1262)	<32.3	ug/kg	49.1	32.3	1	12/20/22 07:44	12/20/22 19:48	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.6	ug/kg	49.1	23.6	1	12/20/22 07:44	12/20/22 19:48	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	77	%	53-125		1	12/20/22 07:44	12/20/22 19:48	877-09-8	
Decachlorobiphenyl (S)	99	%	41-125		1	12/20/22 07:44	12/20/22 19:48	2051-24-3	

Sample: SB16-2.5-3.0-1022 **Lab ID: 10630481016** Collected: 10/19/22 13:10 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.9	ug/kg	49.3	20.9	1	12/20/22 07:44	12/20/22 20:04	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.1	ug/kg	49.3	34.1	1	12/20/22 07:44	12/20/22 20:04	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.2	ug/kg	49.3	29.2	1	12/20/22 07:44	12/20/22 20:04	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.5	ug/kg	49.3	30.5	1	12/20/22 07:44	12/20/22 20:04	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.2	ug/kg	49.3	25.2	1	12/20/22 07:44	12/20/22 20:04	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.6	ug/kg	49.3	24.6	1	12/20/22 07:44	12/20/22 20:04	11097-69-1	
PCB-1260 (Aroclor 1260)	389	ug/kg	49.3	17.6	1	12/20/22 07:44	12/20/22 20:04	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.4	ug/kg	49.3	32.4	1	12/20/22 07:44	12/20/22 20:04	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.7	ug/kg	49.3	23.7	1	12/20/22 07:44	12/20/22 20:04	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	70	%	53-125		1	12/20/22 07:44	12/20/22 20:04	877-09-8	
Decachlorobiphenyl (S)	98	%	41-125		1	12/20/22 07:44	12/20/22 20:04	2051-24-3	

Sample: ISM02-0.0-0.2-1022 **Lab ID: 10630481017** Collected: 10/19/22 14:00 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.5	ug/kg	48.4	20.5	1	12/20/22 07:44	12/20/22 20:20	12674-11-2	
PCB-1221 (Aroclor 1221)	<33.4	ug/kg	48.4	33.4	1	12/20/22 07:44	12/20/22 20:20	11104-28-2	
PCB-1232 (Aroclor 1232)	<28.6	ug/kg	48.4	28.6	1	12/20/22 07:44	12/20/22 20:20	11141-16-5	
PCB-1242 (Aroclor 1242)	<29.9	ug/kg	48.4	29.9	1	12/20/22 07:44	12/20/22 20:20	53469-21-9	
PCB-1248 (Aroclor 1248)	<24.7	ug/kg	48.4	24.7	1	12/20/22 07:44	12/20/22 20:20	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.1	ug/kg	48.4	24.1	1	12/20/22 07:44	12/20/22 20:20	11097-69-1	
PCB-1260 (Aroclor 1260)	267	ug/kg	48.4	17.3	1	12/20/22 07:44	12/20/22 20:20	11096-82-5	
PCB-1262 (Aroclor 1262)	<31.8	ug/kg	48.4	31.8	1	12/20/22 07:44	12/20/22 20:20	37324-23-5	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630481

Sample: ISM02-0.0-0.2-1022 **Lab ID:** 10630481017 **Collected:** 10/19/22 14:00 **Received:** 10/20/22 10:30 **Matrix:** Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB Analytical Method: EPA 8082A Preparation Method: EPA 3546 Pace Analytical Services - Minneapolis									
PCB-1268 (Aroclor 1268)	<23.3	ug/kg	48.4	23.3	1	12/20/22 07:44	12/20/22 20:20	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	82	%.	53-125		1	12/20/22 07:44	12/20/22 20:20	877-09-8	
Decachlorobiphenyl (S)	89	%.	41-125		1	12/20/22 07:44	12/20/22 20:20	2051-24-3	

Sample: ISM07-0.0-0.2-1022 **Lab ID:** 10630481018 **Collected:** 10/19/22 11:25 **Received:** 10/20/22 10:30 **Matrix:** Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB Analytical Method: EPA 8082A Preparation Method: EPA 3546 Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.6	ug/kg	48.6	20.6	1	12/20/22 07:44	12/20/22 20:36	12674-11-2	
PCB-1221 (Aroclor 1221)	<33.6	ug/kg	48.6	33.6	1	12/20/22 07:44	12/20/22 20:36	11104-28-2	
PCB-1232 (Aroclor 1232)	<28.7	ug/kg	48.6	28.7	1	12/20/22 07:44	12/20/22 20:36	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.1	ug/kg	48.6	30.1	1	12/20/22 07:44	12/20/22 20:36	53469-21-9	
PCB-1248 (Aroclor 1248)	<24.8	ug/kg	48.6	24.8	1	12/20/22 07:44	12/20/22 20:36	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.2	ug/kg	48.6	24.2	1	12/20/22 07:44	12/20/22 20:36	11097-69-1	
PCB-1260 (Aroclor 1260)	189	ug/kg	48.6	17.4	1	12/20/22 07:44	12/20/22 20:36	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.0	ug/kg	48.6	32.0	1	12/20/22 07:44	12/20/22 20:36	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.3	ug/kg	48.6	23.3	1	12/20/22 07:44	12/20/22 20:36	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	83	%.	53-125		1	12/20/22 07:44	12/20/22 20:36	877-09-8	
Decachlorobiphenyl (S)	93	%.	41-125		1	12/20/22 07:44	12/20/22 20:36	2051-24-3	

Sample: ISM07T-0.0-0.2-1022 **Lab ID:** 10630481019 **Collected:** 10/19/22 11:30 **Received:** 10/20/22 10:30 **Matrix:** Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB Analytical Method: EPA 8082A Preparation Method: EPA 3546 Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.0	ug/kg	49.6	21.0	1	12/20/22 07:44	12/20/22 20:52	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.3	ug/kg	49.6	34.3	1	12/20/22 07:44	12/20/22 20:52	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.3	ug/kg	49.6	29.3	1	12/20/22 07:44	12/20/22 20:52	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.7	ug/kg	49.6	30.7	1	12/20/22 07:44	12/20/22 20:52	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.3	ug/kg	49.6	25.3	1	12/20/22 07:44	12/20/22 20:52	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.7	ug/kg	49.6	24.7	1	12/20/22 07:44	12/20/22 20:52	11097-69-1	
PCB-1260 (Aroclor 1260)	179	ug/kg	49.6	17.7	1	12/20/22 07:44	12/20/22 20:52	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.6	ug/kg	49.6	32.6	1	12/20/22 07:44	12/20/22 20:52	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.8	ug/kg	49.6	23.8	1	12/20/22 07:44	12/20/22 20:52	11100-14-4	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630481

Sample: ISM07T-0.0-0.2-1022 **Lab ID:** 10630481019 **Collected:** 10/19/22 11:30 **Received:** 10/20/22 10:30 **Matrix:** Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB Analytical Method: EPA 8082A Preparation Method: EPA 3546 Pace Analytical Services - Minneapolis									
Surrogates									
Tetrachloro-m-xylene (S)	76	%	53-125		1	12/20/22 07:44	12/20/22 20:52	877-09-8	
Decachlorobiphenyl (S)	86	%	41-125		1	12/20/22 07:44	12/20/22 20:52	2051-24-3	

Sample: ISM07TT-0.0-0.2-1022 **Lab ID:** 10630481020 **Collected:** 10/19/22 11:35 **Received:** 10/20/22 10:30 **Matrix:** Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB Analytical Method: EPA 8082A Preparation Method: EPA 3546 Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.8	ug/kg	49.2	20.8	1	12/20/22 07:44	12/20/22 21:08	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.0	ug/kg	49.2	34.0	1	12/20/22 07:44	12/20/22 21:08	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.1	ug/kg	49.2	29.1	1	12/20/22 07:44	12/20/22 21:08	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.4	ug/kg	49.2	30.4	1	12/20/22 07:44	12/20/22 21:08	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.1	ug/kg	49.2	25.1	1	12/20/22 07:44	12/20/22 21:08	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.5	ug/kg	49.2	24.5	1	12/20/22 07:44	12/20/22 21:08	11097-69-1	
PCB-1260 (Aroclor 1260)	185	ug/kg	49.2	17.6	1	12/20/22 07:44	12/20/22 21:08	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.3	ug/kg	49.2	32.3	1	12/20/22 07:44	12/20/22 21:08	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.6	ug/kg	49.2	23.6	1	12/20/22 07:44	12/20/22 21:08	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	79	%	53-125		1	12/20/22 07:44	12/20/22 21:08	877-09-8	
Decachlorobiphenyl (S)	88	%	41-125		1	12/20/22 07:44	12/20/22 21:08	2051-24-3	

Sample: ISM06-0.0-0.2-1022 **Lab ID:** 10630481021 **Collected:** 10/19/22 09:25 **Received:** 10/20/22 10:30 **Matrix:** Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB Analytical Method: EPA 8082A Preparation Method: EPA 3546 Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.9	ug/kg	49.3	20.9	1	12/20/22 08:07	12/20/22 22:59	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.1	ug/kg	49.3	34.1	1	12/20/22 08:07	12/20/22 22:59	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.2	ug/kg	49.3	29.2	1	12/20/22 08:07	12/20/22 22:59	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.5	ug/kg	49.3	30.5	1	12/20/22 08:07	12/20/22 22:59	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.2	ug/kg	49.3	25.2	1	12/20/22 08:07	12/20/22 22:59	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.6	ug/kg	49.3	24.6	1	12/20/22 08:07	12/20/22 22:59	11097-69-1	
PCB-1260 (Aroclor 1260)	631	ug/kg	49.3	17.6	1	12/20/22 08:07	12/20/22 22:59	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.4	ug/kg	49.3	32.4	1	12/20/22 08:07	12/20/22 22:59	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.7	ug/kg	49.3	23.7	1	12/20/22 08:07	12/20/22 22:59	11100-14-4	

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630481

Sample: ISM06-0.0-0.2-1022 **Lab ID:** 10630481021 Collected: 10/19/22 09:25 Received: 10/20/22 10:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
Surrogates									
Tetrachloro-m-xylene (S)	76	%.	53-125		1	12/20/22 08:07	12/20/22 22:59	877-09-8	
Decachlorobiphenyl (S)	79	%.	41-125		1	12/20/22 08:07	12/20/22 22:59	2051-24-3	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630481

QC Batch:	859359	Analysis Method:	EPA 8082A
QC Batch Method:	EPA 3546	Analysis Description:	8082A GCS PCB
		Laboratory:	Pace Analytical Services - Minneapolis
Associated Lab Samples:	10630481001, 10630481002, 10630481003, 10630481004, 10630481005, 10630481006, 10630481007, 10630481008, 10630481009, 10630481010, 10630481011, 10630481012, 10630481013, 10630481014, 10630481015, 10630481016, 10630481017, 10630481018, 10630481019, 10630481020		

METHOD BLANK:	4541295	Matrix:	Solid
Associated Lab Samples:	10630481001, 10630481002, 10630481003, 10630481004, 10630481005, 10630481006, 10630481007, 10630481008, 10630481009, 10630481010, 10630481011, 10630481012, 10630481013, 10630481014, 10630481015, 10630481016, 10630481017, 10630481018, 10630481019, 10630481020		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<21.2	50.0	21.2	12/20/22 14:30	
PCB-1221 (Aroclor 1221)	ug/kg	<34.5	50.0	34.5	12/20/22 14:30	
PCB-1232 (Aroclor 1232)	ug/kg	<29.6	50.0	29.6	12/20/22 14:30	
PCB-1242 (Aroclor 1242)	ug/kg	<30.9	50.0	30.9	12/20/22 14:30	
PCB-1248 (Aroclor 1248)	ug/kg	<25.5	50.0	25.5	12/20/22 14:30	
PCB-1254 (Aroclor 1254)	ug/kg	<24.9	50.0	24.9	12/20/22 14:30	
PCB-1260 (Aroclor 1260)	ug/kg	<17.8	50.0	17.8	12/20/22 14:30	
PCB-1262 (Aroclor 1262)	ug/kg	<32.8	50.0	32.8	12/20/22 14:30	
PCB-1268 (Aroclor 1268)	ug/kg	<24.0	50.0	24.0	12/20/22 14:30	
Decachlorobiphenyl (S)	%.	103	41-125		12/20/22 14:30	
Tetrachloro-m-xylene (S)	%.	87	53-125		12/20/22 14:30	

LABORATORY CONTROL SAMPLE: 4541296

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	1000	822	82	68-125	
PCB-1260 (Aroclor 1260)	ug/kg	1000	871	87	70-125	
Decachlorobiphenyl (S)	%.			101	41-125	
Tetrachloro-m-xylene (S)	%.			86	53-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4541297 4541298

Parameter	Units	10630481007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<20.8	996	986	842	781	85	79	53-125	8	30	
PCB-1260 (Aroclor 1260)	ug/kg	4110	996	986	4310	3940	21	-17	30-143	9	30	E,M1
Decachlorobiphenyl (S)	%.						99	90	41-125			
Tetrachloro-m-xylene (S)	%.						77	70	53-125			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10630481

QC Batch:	859363	Analysis Method:	EPA 8082A
QC Batch Method:	EPA 3546	Analysis Description:	8082A GCS PCB
		Laboratory:	Pace Analytical Services - Minneapolis

Associated Lab Samples: 10630481021

METHOD BLANK: 4541303 Matrix: Solid

Associated Lab Samples: 10630481021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<21.2	50.0	21.2	12/20/22 21:39	
PCB-1221 (Aroclor 1221)	ug/kg	<34.5	50.0	34.5	12/20/22 21:39	
PCB-1232 (Aroclor 1232)	ug/kg	<29.6	50.0	29.6	12/20/22 21:39	
PCB-1242 (Aroclor 1242)	ug/kg	<30.9	50.0	30.9	12/20/22 21:39	
PCB-1248 (Aroclor 1248)	ug/kg	<25.5	50.0	25.5	12/20/22 21:39	
PCB-1254 (Aroclor 1254)	ug/kg	<24.9	50.0	24.9	12/20/22 21:39	
PCB-1260 (Aroclor 1260)	ug/kg	<17.8	50.0	17.8	12/20/22 21:39	
PCB-1262 (Aroclor 1262)	ug/kg	<32.8	50.0	32.8	12/20/22 21:39	
PCB-1268 (Aroclor 1268)	ug/kg	<24.0	50.0	24.0	12/20/22 21:39	
Decachlorobiphenyl (S)	%.	95	41-125		12/20/22 21:39	
Tetrachloro-m-xylene (S)	%.	85	53-125		12/20/22 21:39	

LABORATORY CONTROL SAMPLE: 4541304

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	1000	928	93	68-125	
PCB-1260 (Aroclor 1260)	ug/kg	1000	947	95	70-125	
Decachlorobiphenyl (S)	%.			104	41-125	
Tetrachloro-m-xylene (S)	%.			94	53-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4541336 4541337

Parameter	Units	10632522001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<20.7	995	982	894	892	90	91	53-125	0	30	
PCB-1260 (Aroclor 1260)	ug/kg	15200	995	982	15300	15500	7	30	30-143	1	30	E,M1
Decachlorobiphenyl (S)	%.						97	102	41-125			
Tetrachloro-m-xylene (S)	%.						88	91	53-125			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630481

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E Analyte concentration exceeded the calibration range. The reported result is estimated.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10630481

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10630481001	SB14-0.0-0.5-1022	EPA 3546	859359	EPA 8082A	859556
10630481002	SB14-1.0-1.5-1022	EPA 3546	859359	EPA 8082A	859556
10630481003	SB14-2.5-3.0-1022	EPA 3546	859359	EPA 8082A	859556
10630481004	SB13-0.0-0.5-1022	EPA 3546	859359	EPA 8082A	859556
10630481005	SB13-1.0-1.5-1022	EPA 3546	859359	EPA 8082A	859556
10630481006	SB13-2.5-3.0-1022	EPA 3546	859359	EPA 8082A	859556
10630481007	SB11-0.0-0.5-1022	EPA 3546	859359	EPA 8082A	859556
10630481008	SB11D-0.0-0.5-1022	EPA 3546	859359	EPA 8082A	859556
10630481009	SB11-1.0-1.5-1022	EPA 3546	859359	EPA 8082A	859556
10630481010	SB11-2.5-3.0-1022	EPA 3546	859359	EPA 8082A	859556
10630481011	SB15-0.0-0.5-1022	EPA 3546	859359	EPA 8082A	859556
10630481012	SB15-1.0-1.5-1022	EPA 3546	859359	EPA 8082A	859556
10630481013	SB15-2.5-3.0-1022	EPA 3546	859359	EPA 8082A	859556
10630481014	SB16-0.0-0.5-1022	EPA 3546	859359	EPA 8082A	859556
10630481015	SB16-1.0-1.5-1022	EPA 3546	859359	EPA 8082A	859556
10630481016	SB16-2.5-3.0-1022	EPA 3546	859359	EPA 8082A	859556
10630481017	ISM02-0.0-0.2-1022	EPA 3546	859359	EPA 8082A	859556
10630481018	ISM07-0.0-0.2-1022	EPA 3546	859359	EPA 8082A	859556
10630481019	ISM07T-0.0-0.2-1022	EPA 3546	859359	EPA 8082A	859556
10630481020	ISM07TT-0.0-0.2-1022	EPA 3546	859359	EPA 8082A	859556
10630481021	ISM06-0.0-0.2-1022	EPA 3546	859363	EPA 8082A	859557

REPORT OF LABORATORY ANALYSIS

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40253455

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www.pacelabs.com



State Of Origin: OR
 Cert. Needed: ☐ Yes ☐ No

Owner Received Date: 10/20/2022 Results Requested By: 10/31/2022

[illegible]

Internal Transfer Chain of Custody



☒ Samples Pre-Logged into eCOC.

State Of Origin: OR

Cert. Needed: ☐ Yes

☐ No

Owner Received Date:

10/20/2022 Results Requested By: 10/31/2022

Pace Analytical[®]
www.pacelabs.com

Workorder: 10630481

Workorder Name: Portland OR-Peninsula Iron Wor

[illegible]

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

This chain of custody is considered complete as is since this information is available in the owner laboratory.

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>.

40253458

Section A

Required Client Information:

Company: Jacobs for UPRR
Address: 2020 SW 4th Avenue, Suite 300
Portland, OR 97201
Email: david.hodson@jacobs.com
Phone: (510)316-2323 Fax:
Requested Due Date:

Section B

Required Project Information:

Report To: Hodson, David
Copy To:
Purchase Order #: 2903-01
Project Name: Portland OR-Peninsula Iron Works
Project #:

Section C

Invoice Information:

Attention: John DeJong
Company Name: UPRR
Address: 4315 E Sprague Ave, Spokane Valley, WA 99212
Pace Quote: 4700001441 (MA-000166-2022)
Pace Project Manager: jennifer.gross@pacelabs.com
Pace Profile #: 45173

Page : 1 Of 2

Regulatory Agency: OR / Portland - Multnomah County

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 /, -) Sample IDs must be unique	MATRIX Drinking Water Water Waste Water Product Soil/Solid Oil Wipe Air Other Tissue	CODE DW WT WW P SL OL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Analyses Test ISM Prep (Pace Green Bay) Sieve only (Pace Green Bay) 8082A PCBs* 8015D GRO & DRO/RO 6010D/7400 Total T22 Metals 8260D VOCs 8270E SVOCs Moisture/Dry Weight TCLP 6010D/7471B (HOLD) TCLP 8260D VOCs (HOLD) TCLP 8270E SVOCs (HOLD) HOLD ONLY MS/MSD Requested	Requested Analysis Filtered (Y/N)	MS/MSD Requested										
						START		END				Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other															
						DATE	TIME	DATE	TIME																									
1	SB14-0.0-0.5-1022					10/14	1000				1	X									X	X												001
2	SB14-1.0-1.5-1022					10/14	1005				1	X									X	X												002
3	SB14-2.5-3.0-1022					10/14	1005				1	X									X	X												003
4	SB13-0.0-0.5-1022					10/14	1000				1	X									X	X												004
5	SB13-1.0-1.5-1022					10/14	1005				1	X									X	X												005
6	SB13-2.5-3.0-1022					10/14	1010				1	X									X	X												006
7	SB11-0.0-0.5-1022					10/14	1100				1	X									X	X												007
8	SB110-0.0-0.5-1022					10/14	1105				1	X									X	X												008
9	SB11-1.0-1.5-1022					10/14	1110				1	X									X	X												009
10	SB11-2.5-3.0-1022					10/14	1115				1	X									X	X												010
11	SB15-0.0-0.5-1022					10/14	1205				1	X									X	X												011
12	SB15-1.0-1.5-1022					10/14	1205				1	X									X	X												012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Include 1262 & 1268	Barclay Warren	10/19/22	1500	1 X			
Methods 8082 & 1668 - Require chromatograms							

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on Ice (Y/N)	Custody Sealed (Y/N)	Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER: <i>Barclay Warren</i>						
SIGNATURE of SAMPLER: <i>[Signature]</i>						
DATE Signed: <i>10/19/22</i>						

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>.

410253455

Section A

Required Client Information:

Company: Jacobs for UPRR
Address: 2020 SW 4th Avenue, Suite 300
Portland, OR 97201
Email: david.hodson@jacobs.com
Phone: (510)316-2323 Fax:
Requested Due Date:

Section B

Required Project Information:

Report To: Hodson, David
Copy To:
Purchase Order #: 2903-01
Project Name: Portland OR-Peninsula Iron Works
Project #:

Section C

Invoice Information:

Attention: John DeJong
Company Name: UPRR
Address: 4315 E Sprague Ave, Spokane Valley, WA 99212
Pace Quote: 4700001441 (MA-000166-2022)
Pace Project Manager: jennifer.gross@pacelabs.com
Pace Profile #: 45173

Page: 2 Of 2

Regulatory Agency:

State / Location:

OR / Portland - Multnomah County

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 /, -) Sample Ids must be unique	MATRIX Drinking Water Water Waste Water Product Soil/Solid Oil Wipe Air Other Tissue	CODE DW WT WW P SL OL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										ANALYSES TEST	Requested Analysis Filtered (Y/N)																MS/MSD Requested	
						START		END				Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	ISM Prep (Pace Green Bay)	Sieve only (Pace Green Bay)		8082A PCBs*	8015D GRO & DRO/RO	6010D/7400 Total T22 Metals	8260D VOCs	8270E SVOCs	Moisture/Dry Weight	TCLP 6010D/7471B (HOLD)	TCLP 8260D VOCs (HOLD)	TCLP 8270E SVOCs (HOLD)	HOLD ONLY								
						DATE	TIME	DATE	TIME																															
1	SB15-2.5-3.0-1022					11/19/22	12:10				1	X											X	X														013		
2	SB16-0.0-0.5-1022					"	13:00				1	X											X	X														014		
3	SB16-10-1.5-1022					"	13:05				1	X											X	X														015		
4	SB16-2.5-30-1022					"	13:10				1	X											X	X														016		
5	SM02-0.0-0.2-1022					"	14:00				1	X											X	X														017		
6	SM07-0.0-0.2-1022					"	14:25				1	X											X	X														018		
7	SM07-0.0-0.2-1022					"	14:30				1	X											X	X														019		
8	SM07-10-0.2-1022					"	14:35				1	X											X	X														020		
9	SM06-0.0-0.2-1022					"	14:40				1	X											X	X														Hand Aligned		
10	EB01-101922-HADS					"	14:40				2	X											X	X														Hand Aligned		
11	EB01-101922-HTISM					"	14:30				2	X											X	X														Hand Aligned		
12	EB01-101922-HTDS					"	14:40				2	X											X	X														Hand Aligned		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Include 1262 & 1268	Barlyn Warren / Jacobs	10/19/22	500				
Methods 8082 & 1668 - Require chromatograms							

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact
PRINT Name of SAMPLER: <u>Barlyn Warren</u>					
SIGNATURE of SAMPLER: <u>[Signature]</u>	DATE Signed: <u>10/19/23</u>				

Effective Date: 8/16/2022

Client Name: Pace MN

Sample Preservation Receipt Form

Project # 41053455

All containers needing preservation have been checked and noted below:

☐ Yes☐ No☒ N/A

Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Initial when
completed:Date/
Time:

Pace Lab #	Glass						Plastic						Vials					Jars				General				VOA Vials (≥6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC							
001																																2.5 / 5
002																																2.5 / 5
003																																2.5 / 5
004																																2.5 / 5
005																																2.5 / 5
006																																2.5 / 5
007																																2.5 / 5
008																																2.5 / 5
009																																2.5 / 5
010																																2.5 / 5
011																																2.5 / 5
012																																2.5 / 5
013																																2.5 / 5
014																																2.5 / 5
015																																2.5 / 5
016																																2.5 / 5
017																																2.5 / 5
018																																2.5 / 5
019																																2.5 / 5
020																																2.5 / 5

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____

Headspace in VOA Vials (>6mm) : ☐ Yes ☐ No ☒ N/A

*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H ₂ SO ₄	BP3N	250 mL plastic HNO ₃	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H ₂ SO ₄	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H ₂ SO ₄	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of ____

Client Name:

Page MN

Project #:

Receipt Form 4053455

[illegible]

Page 2 of 2

Sample Condition Upon Receipt Form (SCUR)

Client Name: Pace MN Project # 40253455

Additional Comments/Resolution: ① 5923 7141 9760, 5923 7141 9770

② ^{SR-9} 3 → 3.5, ^{SR-9} 3.5 → 4, ^{SR-9} 3 → 3.5 5923 7141 9792

Sample Condition Upon Receipt Form (SCUR)

Project #:

Client Name: Pace MN

Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Walto
☐ Client ☐ Pace Other: _____

Tracking #: 5923 7141 9781 ①

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other _____

Thermometer Used SR - 9 Type of Ice: Wet Blue Dry None ☐ Meltwater Only

Cooler Temperature Uncorr: 5 /Corr: 5.5 ②

Temp Blank Present: ☒ yes ☐ no

Biological Tissue is Frozen: ☐ yes ☐ no

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:

Date: 10/20/22 Initials: SG

Labeled By Initials: UP

Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☒ Yes ☐ No ☐ N/A	2.
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC:	☐ Yes ☐ No ☒ N/A	4. <u>IAWO</u> <u>10/20/22 SG</u>
Samples Arrived within Hold Time:	☒ Yes ☐ No	5.
- DI VOA Samples frozen upon receipt	☐ Yes ☐ No	Date/Time:
Short Hold Time Analysis (<72hr):	☐ Yes ☒ No	6.
Rush Turn Around Time Requested:	☐ Yes ☒ No	7.
Sufficient Volume:		8.
For Analysis: ☒ Yes ☐ No MS/MSD: ☒ Yes ☐ No ☐ N/A		
Correct Containers Used:	☒ Yes ☐ No	9.
Correct Type: Pace Green Bay, Pace IR, <u>(Non-Pace)</u>		
Containers Intact:	☒ Yes ☐ No	10.
Filtered volume received for Dissolved tests	☐ Yes ☐ No ☒ N/A	11.
Sample Labels match COC:	☐ Yes ☒ No ☐ N/A	12. <u>IAWO COC 001 Time "0800", client COC matches sample time "0900"</u> <u>IAWO COC 002 Time "0805", client COC matches sample time "0905"</u> <u>10/20/22 SG</u>
-Includes date/time/ID/Analysis Matrix: <u>S</u>		
Trip Blank Present:	☐ Yes ☐ No ☒ N/A	13.
Trip Blank Custody Seals Present	☐ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logi

Page 2 of 3 10/20/22 SG
304

Internal Transfer Chain of Custody



☒ Samples Pre-Logged into eCOC.

State Of Origin: OR

Cert. Needed: ☐ Yes ☐ No

Owner Received Date: 10/20/2022 Results Requested By: 10/31/2022

L0253455
Pace Analytical®
www.pacelabs.com

Workorder: 10630481

Workorder Name: Portland OR-Peninsula Iron Wor

Report To:

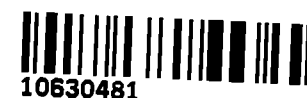
Subcontract To:

Requ

Jennifer Gross
Pace Analytical Minnesota
1700 Elm Street
Minneapolis, MN 55414
Phone (612)607-1700

Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

WO#: 10630481



Preserved Containers

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Pre-Logged	MISC / ISM (50 Increments) (PACE-GB)	MISC / Sieving (<2mm) (PACE-GB)	LAB USE ONLY
1	SB14-0.0-0.5-1022	PS	10/19/2022 08:00	10630481001	Solid	1	X		001
2	SB14-1.0-1.5-1022	PS	10/19/2022 08:05	10630481002	Solid	1	X		002
3	SB14-2.5-3.0-1022	PS	10/19/2022 09:10	10630481003	Solid	1	X		003
4	SB13-0.0-0.5-1022	PS	10/19/2022 10:00	10630481004	Solid	1	X		004
5	SB13-1.0-1.5-1022	PS	10/19/2022 10:05	10630481005	Solid	1	X		005
6	SB13-2.5-3.0-1022	PS	10/19/2022 10:10	10630481006	Solid	1	X		006
7	SB11-0.0-0.5-1022	RQS	10/19/2022 11:00	10630481007	Solid	1	X		007
8	SB11D-0.0-0.5-1022	PS	10/19/2022 11:05	10630481008	Solid	1	X		008
9	SB11-1.0-1.5-1022	PS	10/19/2022 11:10	10630481009	Solid	1	X		009
10	SB11-2.5-3.0-1022	PS	10/19/2022 11:15	10630481010	Solid	1	X		010
11	SB15-0.0-0.5-1022	PS	10/19/2022 12:00	10630481011	Solid	1	X		011
12	SB15-1.0-1.5-1022	PS	10/19/2022 12:05	10630481012	Solid	1	X		012
13	SB15-2.5-3.0-1022	PS	10/19/2022 12:10	10630481013	Solid	1	X		013
14	SB16-0.0-0.5-1022	PS	10/19/2022 13:00	10630481014	Solid	1	X		014
15	SB16-1.0-1.5-1022	PS	10/19/2022 13:05	10630481015	Solid	1	X		015
16	SB16-2.5-3.0-1022	PS	10/19/2022 13:10	10630481016	Solid	1	X		016
17	ISM02-0.0-0.2-1022	PS	10/19/2022 14:00	10630481017	Solid	1	X		017
18	ISM07-0.0-0.2-1022	PS	10/19/2022 11:25	10630481018	Solid	1	X		018
19	ISM07T-0.0-0.2-1022	PS	10/19/2022 11:30	10630481019	Solid	1	X		019

Internal Transfer Chain of Custody



☒ Samples Pre-Logged into eCOC.

State Of Origin: OR

Cert. Needed: ☐ Yes ☐ No

Owner Received Date: 10/20/2022 **Results Requested By:** 10/31/2022

Face Analytical
www.faceahs.com

Workorder: 10630481

Workorder Name: Portland OR-Peninsula Iron Wor

Owner Received Date: 10/20/2022 **Results Requested By:** 10/31/2022

Report To	Subcontract To	Requested Analysis

Jennifer Gross
Pace Analytical Minnesota
1700 Elm Street
Minneapolis, MN 55414
Phone (612)607-1700

Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

Preserved Containers

[illegible]

Comments

Transfers	Released By	Date/Time	Received By	Date/Time	
1	Fedex	10/20/10 10:30	Sam Paine	10/20/10 10:30	Forward prepped volume to Pace Mnlpl, methods 8082 & possibly 1668
2	Morgan	12/10/22 1700			Hold all additional volume for six months.
3					

Cooler Temperature on Receipt	55.35°C	Custody Seal	Y or N	Received on Ice	Y or N	Samples Intact	Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

This chain of custody is considered complete as is since this information is available in the owner laboratory.

Effective Date: 11/16/2022

Sample Condition Upon Receipt	Client Name: <u>Pan Ocean Bay</u>	Project # WO#: 10630481	PM: JMG Due Date: 02/17/23 CLIENT: UPRR_Jacobs
Courier: ☐ FedEx ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ Speedee ☒ Commercial <u>WALCO</u>		☐ See Exception:	

Tracking Number: _____ ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ No	Biological Tissue Frozen? ☐ Yes ☐ No ☒ N/A
Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other	Temp Blank? ☒ Yes ☐ No
Thermometer: ☐ T1 (0461) ☐ T2 (1336) ☐ T3 (0459) ☐ T4 (0254) ☐ T5 (0178) ☐ T6 (0235) ☒ T7 (0042) ☐ T8 (0775) ☐ T9(0727) ☐ 01339252/1710	Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☒ None ☐ Melted

Did Samples Originate in West Virginia? ☐ Yes ☒ No JMG 12/19/22	Were All Container Temps Taken? ☐ Yes ☐ No ☒ N/A JMG 12/19/22
Temp should be above freezing to 6 °C Cooler temp Read w/Temp Blank: <u>2.5242°C 13.6</u>	
Correction Factor: <u>+1</u> Cooler Temp Corrected w/temp blank: <u>1.5242°C 3.1</u>	
☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 Container	

USDA Regulated Soil: (☐ N/A, water sample/other: _____) **Date/Initials of Person Examining Contents:** 12/19/22 JMG

Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? ☐ Yes ☒ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

Location (Check one): ☐ Duluth ☒ Minneapolis ☐ Virginia	COMMENTS
Chain of Custody Present and Filled Out?	☒ Yes ☐ No 1.
Chain of Custody Relinquished?	☒ Yes ☐ No 2.
Sampler Name and/or Signature on COC?	☐ Yes ☒ No ☐ N/A 3.
Samples Arrived within Hold Time?	☒ Yes ☐ No 4. If fecal: ☐ <8 hrs ☐ >8 hr, <24 ☐ No
Short Hold Time Analysis (<72 hr)?	☐ Yes ☒ No 5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E.coli ☐ BOD/cBOD ☐ Hex Chrom ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	☒ Yes ☐ No 6. <u>late</u>
Sufficient Sample Volume?	☒ Yes ☐ No 7.
Correct Containers Used?	☒ Yes ☐ No ☐ N/A 8.
-Pace Containers Used?	☐ Yes ☒ No
Containers Intact?	☒ Yes ☐ No 9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes ☒ No ☐ N/A 10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	☒ Yes ☐ No 11. If no, write ID/Date/Time of container below: <u>6N containers added to COC/WO</u> ☐ See Exceptions ENV-FRM-MIN4-0142
Matrix: ☐ Water ☒ Soil ☐ Oil ☐ Other	
All containers needing acid/base preservation have been checked?	☐ Yes ☐ No ☒ N/A 12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	☐ Yes ☐ No ☒ N/A ☐ NaOH ☐ HNO3 ☐ H2SO4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS (*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)	☐ Yes ☐ No ☒ N/A Positive for Residual Chlorine? ☐ Yes ☐ No ☐ See Exceptions ENV-FRM-MIN4-0142
	pH Paper Lot # Residual Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Headspace in Methyl Mercury Container?	☐ Yes ☐ No ☒ N/A 13.
Extra labels present on soil VOA or WIDRO containers?	☐ Yes ☐ No ☒ N/A 14. ☐ See Exceptions ENV-FRM-MIN4-0142
Headspace in VOA Vials (greater than 6mm)?	☐ Yes ☐ No ☒ N/A
3 Trip Blanks Present?	☐ Yes ☐ No ☒ N/A 15.
Trip Blank Custody Seals Present?	☐ Yes ☐ No ☒ N/A Pace Trip Blank Lot # (if purchased): _____

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Jenni Gross Date: 12/19/22

NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled By: NK Line: 7



DC#_Title: ENV-FRM-MIN4-0142 v02_Sample Condition Upon Receipt
(SCUR) Exception Form

Effective Date: 09/22/2022

Workorder #: _____

No Temp Blank		
Read Temp	Corrected Temp	Average temp

PM Notified of Out of Temp Cooler? ☐ Yes ☐ No

If yes, indicate who was contacted, date and time.

If no, indicate reason why.

Multiple Cooler Project? ☐ Yes ☐ No

If anything is OVER 6.0° C, you **MUST** document containers in this section HERE



Tracking Number	Temperature
3424796-4	8.9
3424796-5	11.3
3424796-2	8.7
3424796-1	11.2

Out of Temp Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples

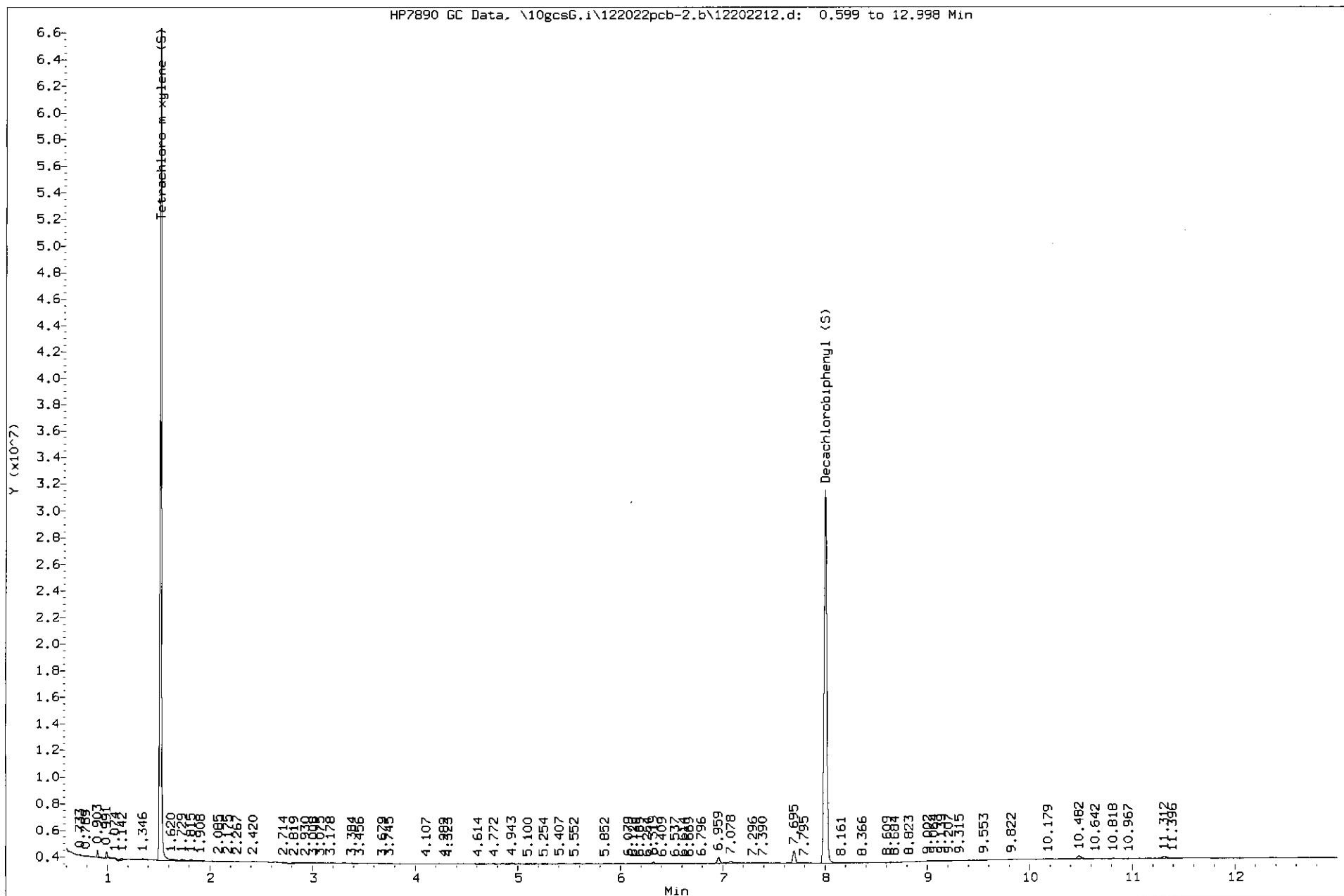
Sample ID	Type Of Preserve	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance After Addition?		Initials
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	

Comments:

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Instrument: 10gcsG.i
Client Sample ID: MB

Batch 41306-85955
Blank 4541295

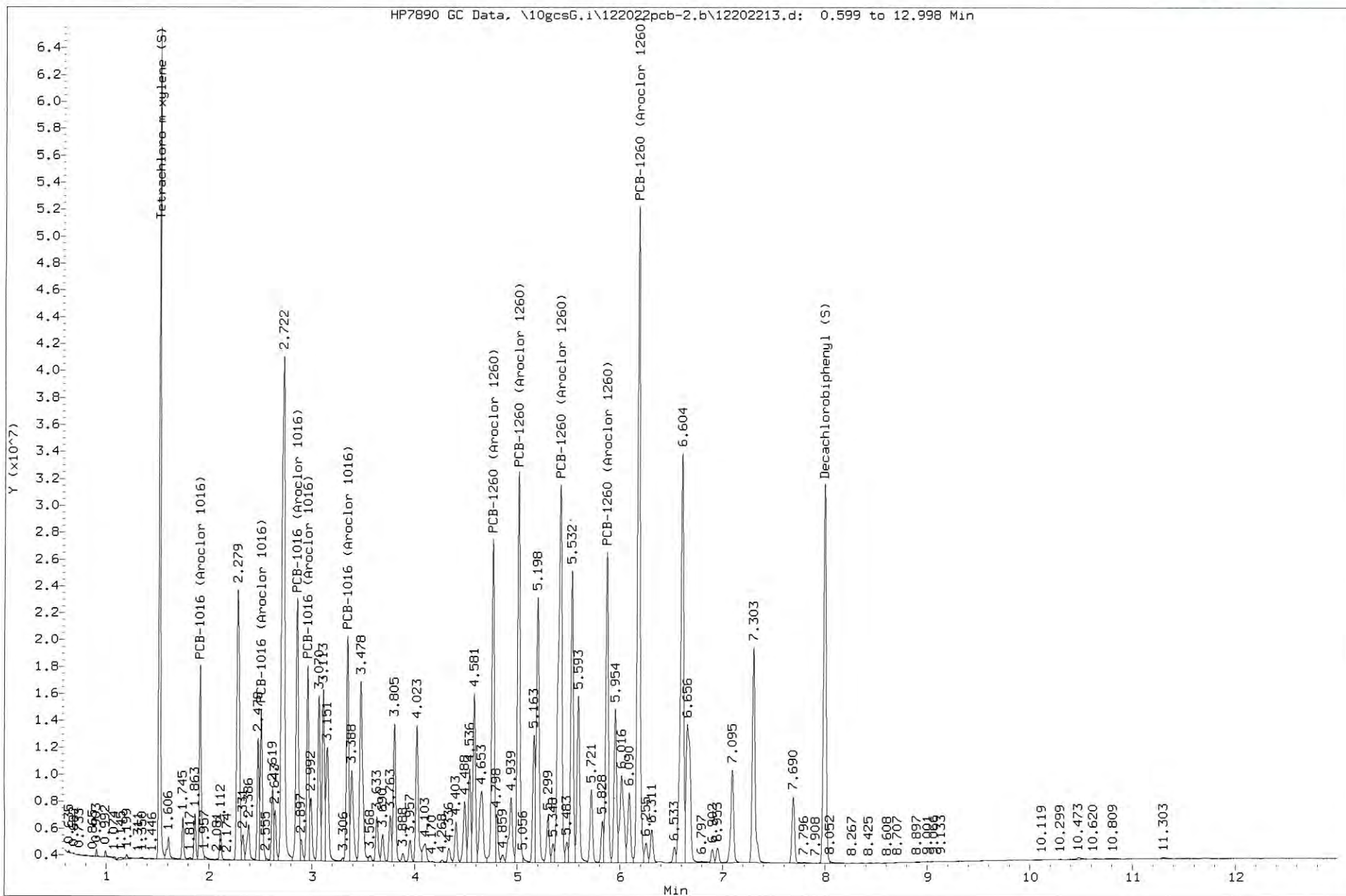
Page 36 of 66



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Instrument: 10gcsG.i
Client Sample ID: MBLCS

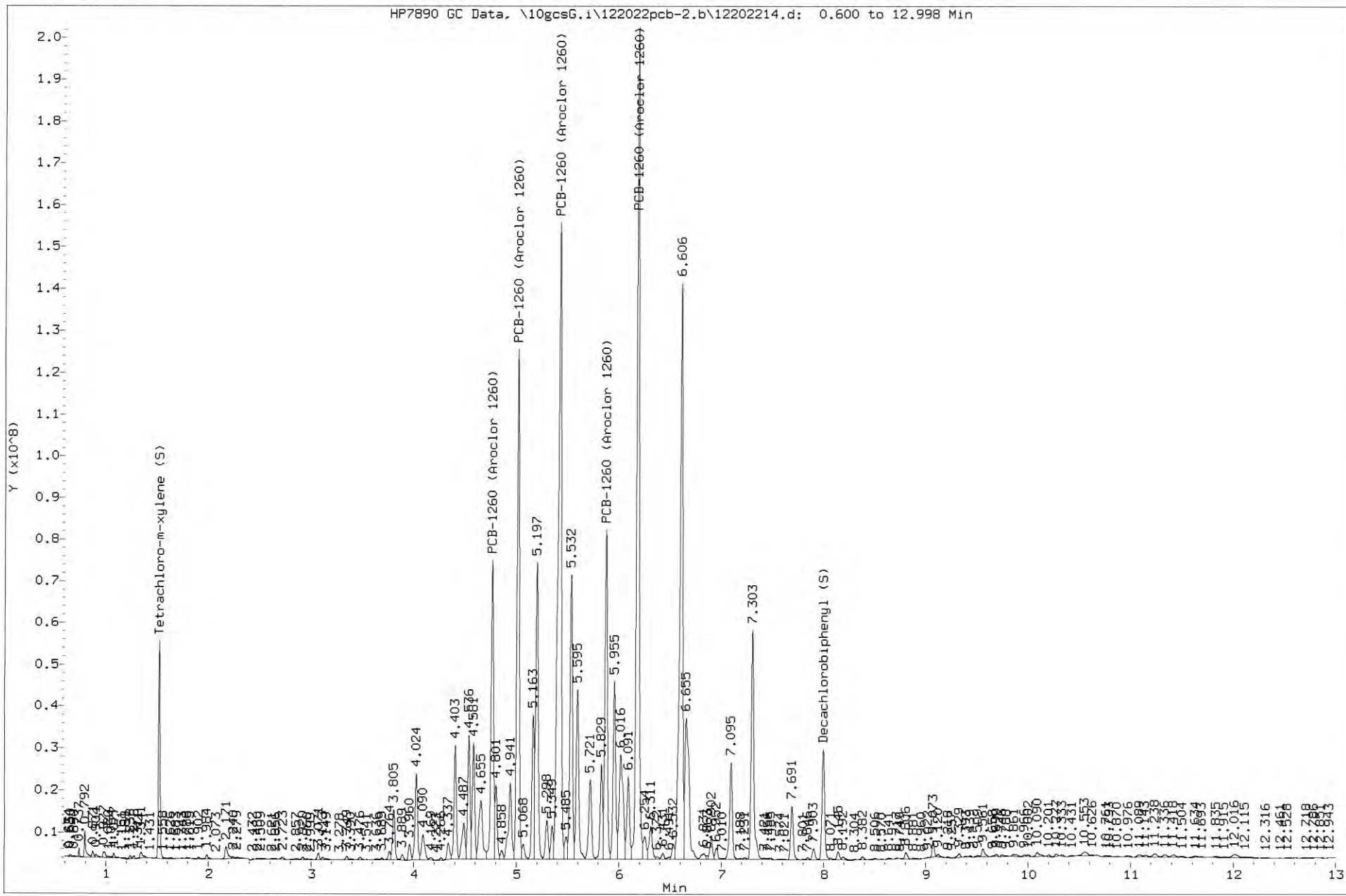
Batch 41306-859556
LCS 4541296

Page 37 of 66



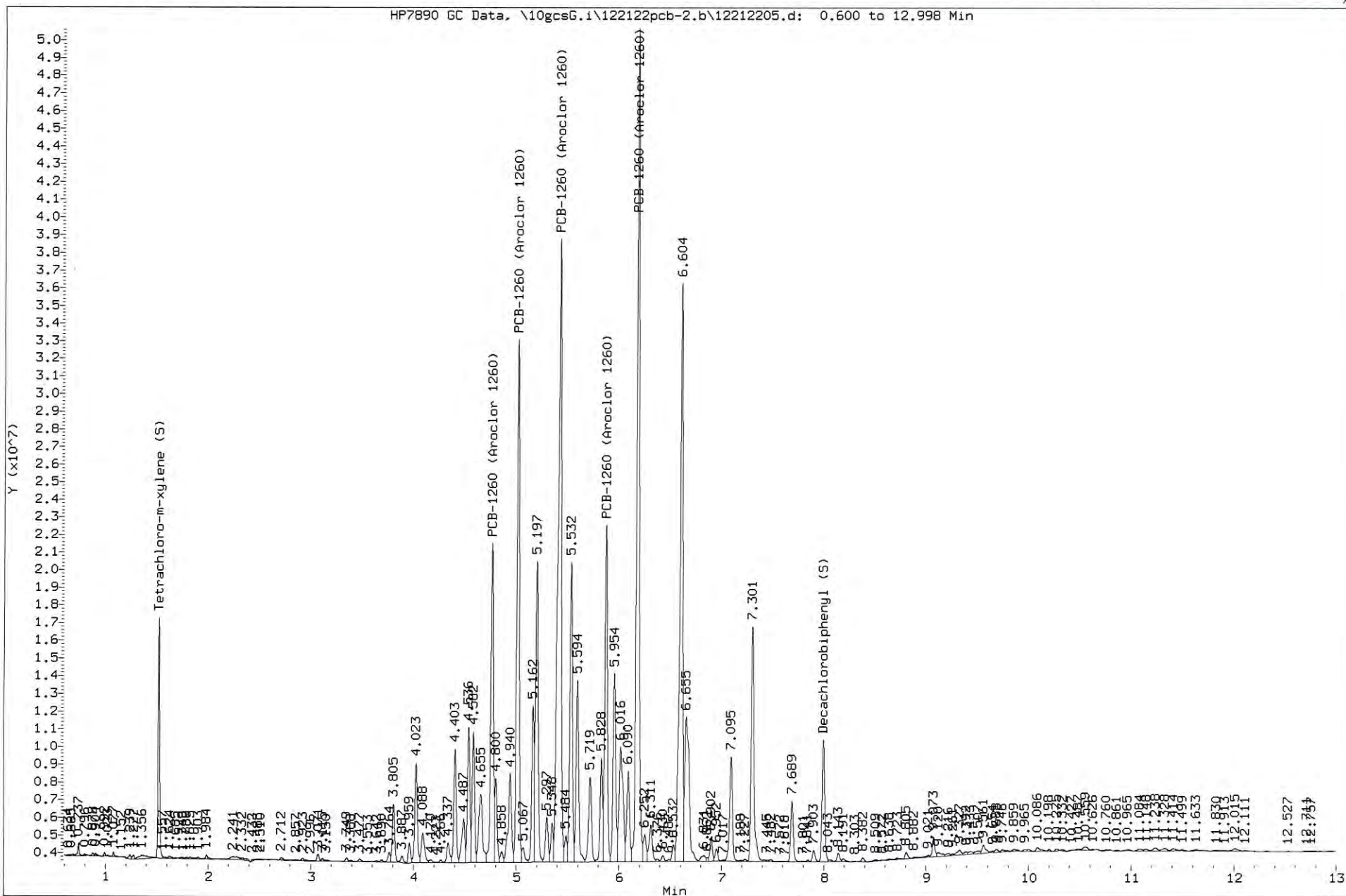
Batch 41306-859556
10630481-7

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Instrument: 10gcsG.i
Client Sample ID: SB11-0.0-0.5-1022



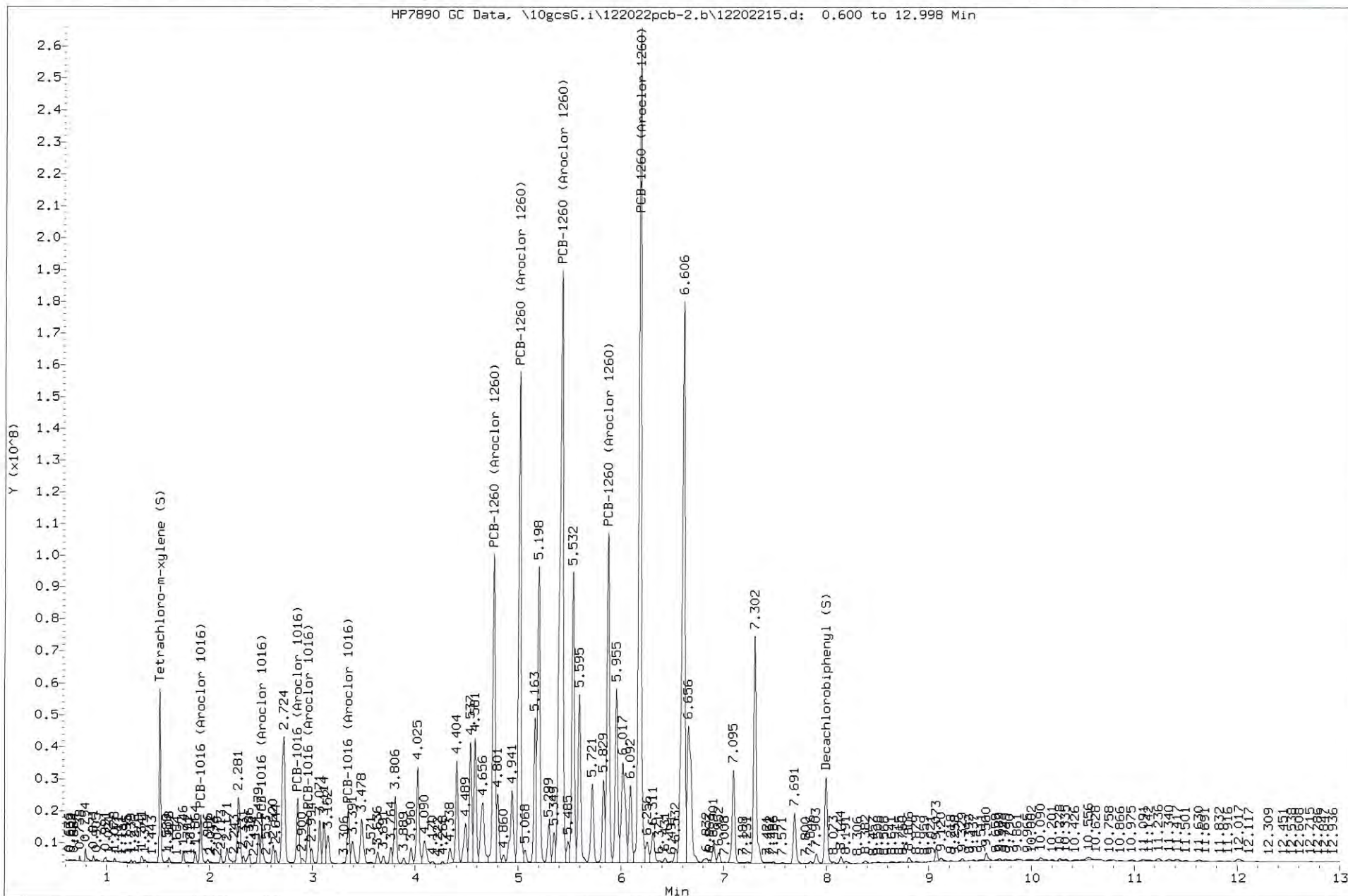
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Client Sample ID: SB11-0.0-0.5-1022

Batch 41306-859556
10630481-7 Dilution: 5x



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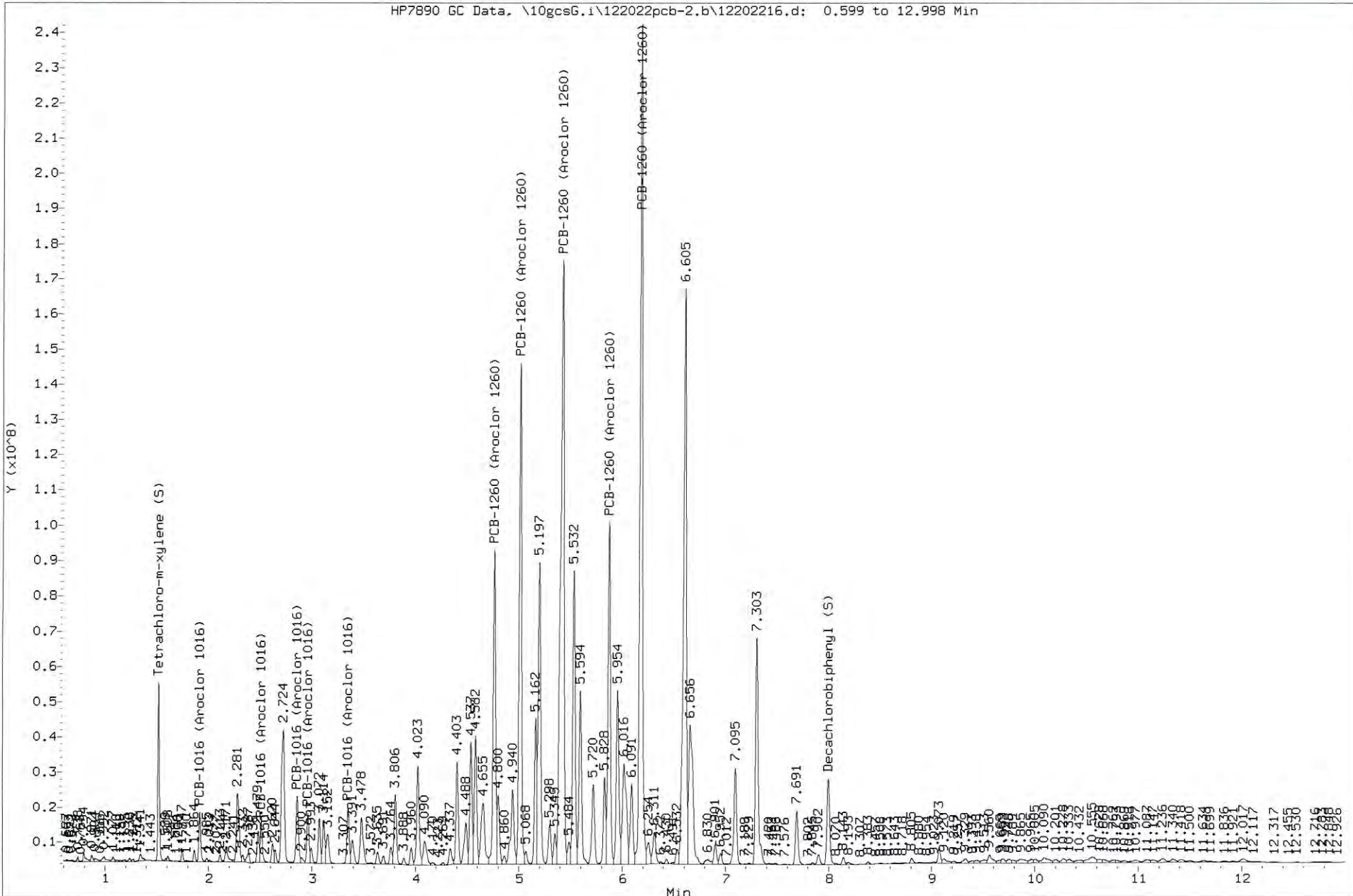
Batch 41306-859556
MS 4541297



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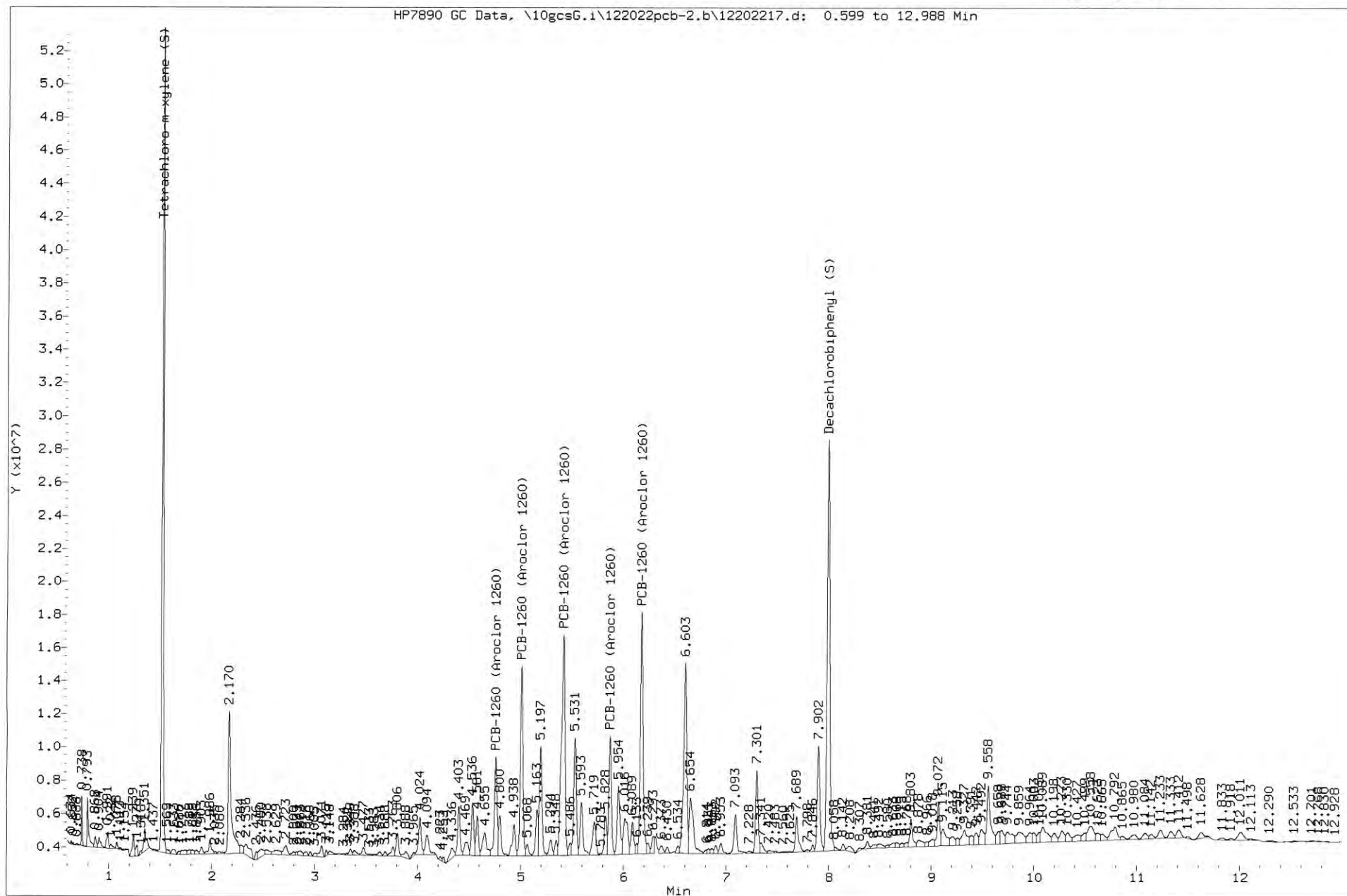
Batch 41306-859556
MSD 4541298

Page 41 of 66



Data File: \\v10wintarget\chem\10gcsG.i\122022pcb-2.b\12202217.d
Injection Date: 20-DEC-2022 15:50
Instrument: 10gcsG.i
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Batch 41306-859556
10630481-1



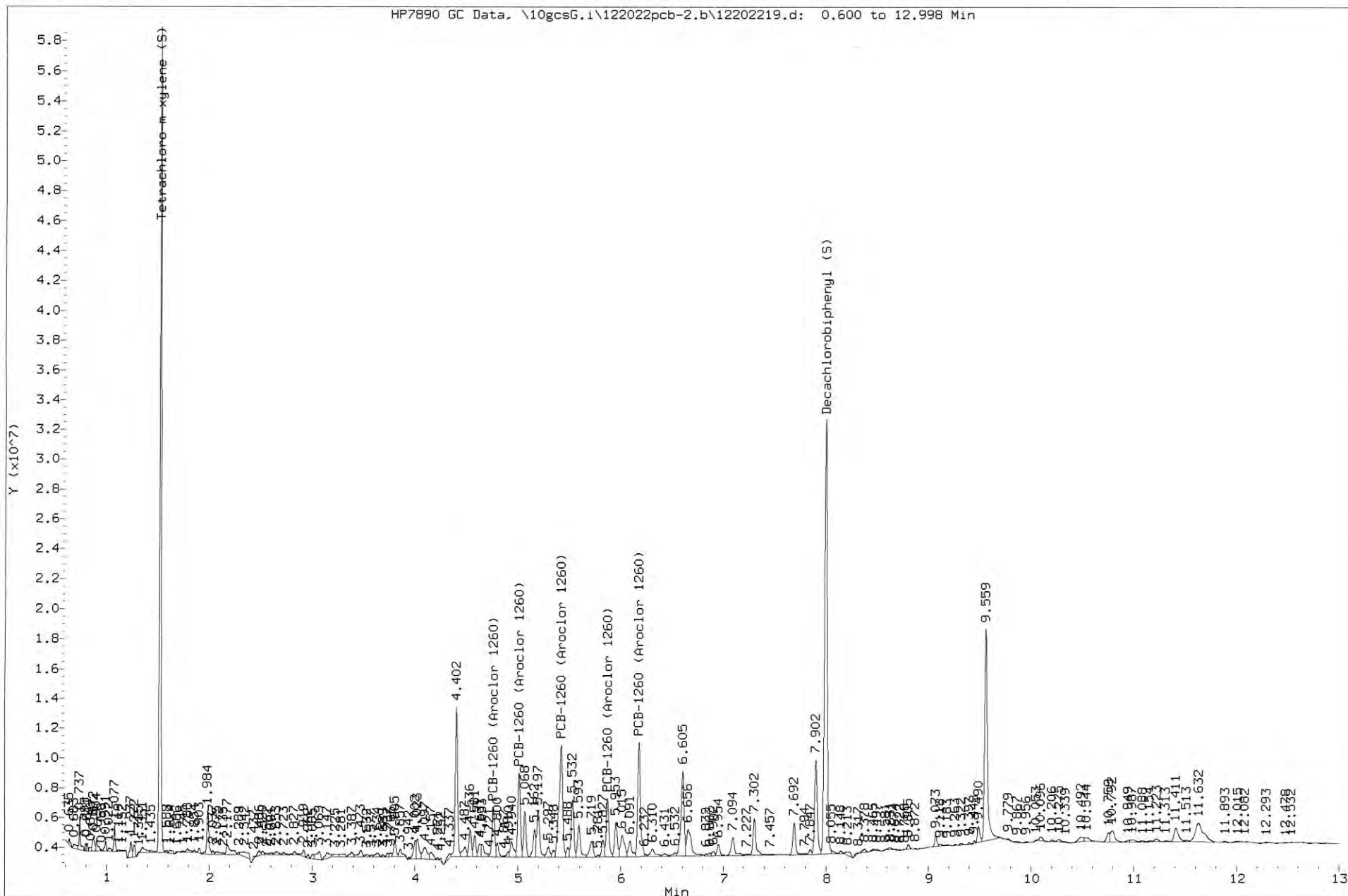
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10630481-2

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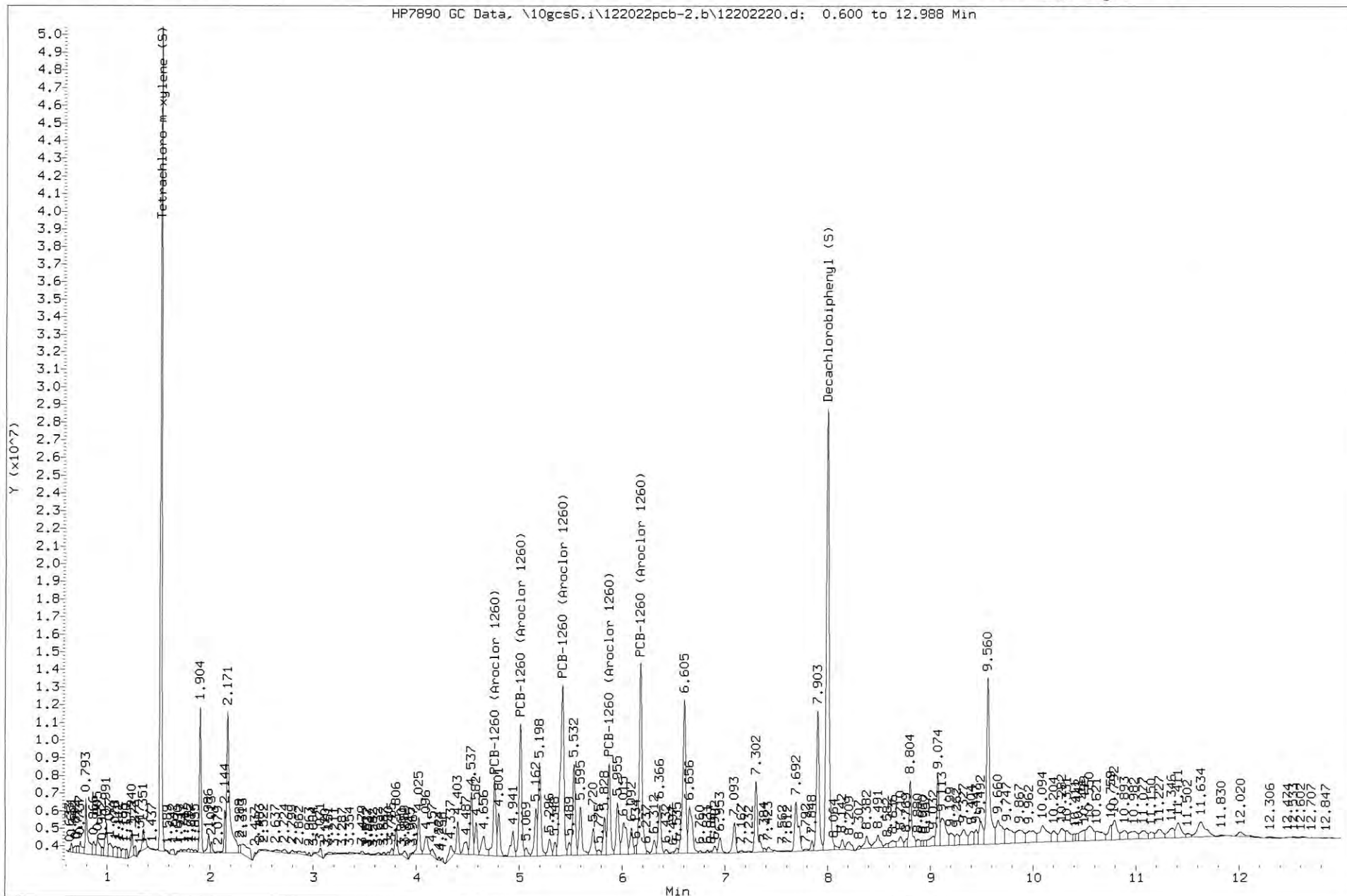
Batch 41306-859556
10630481-3



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Batch 41306-859556

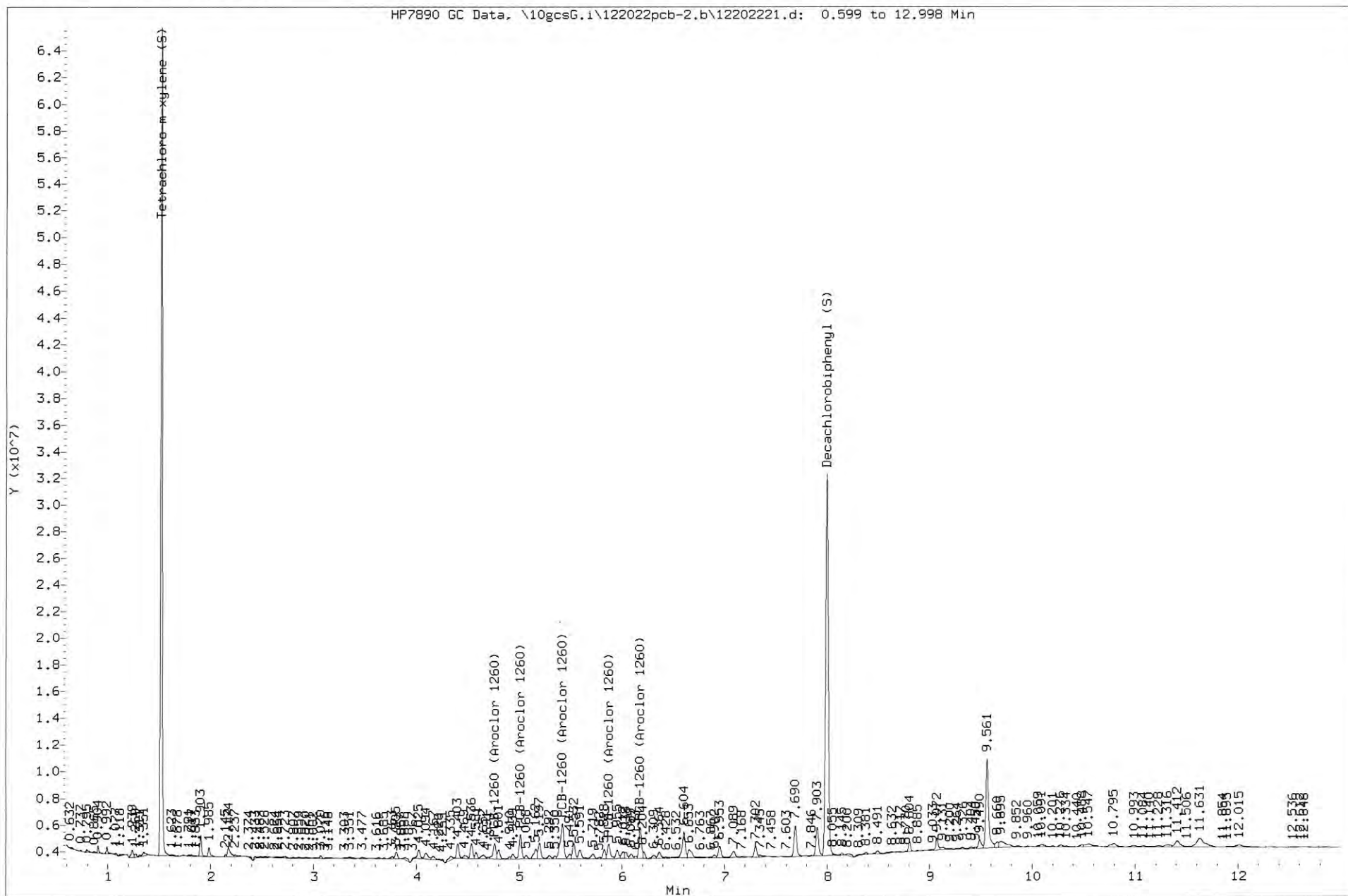
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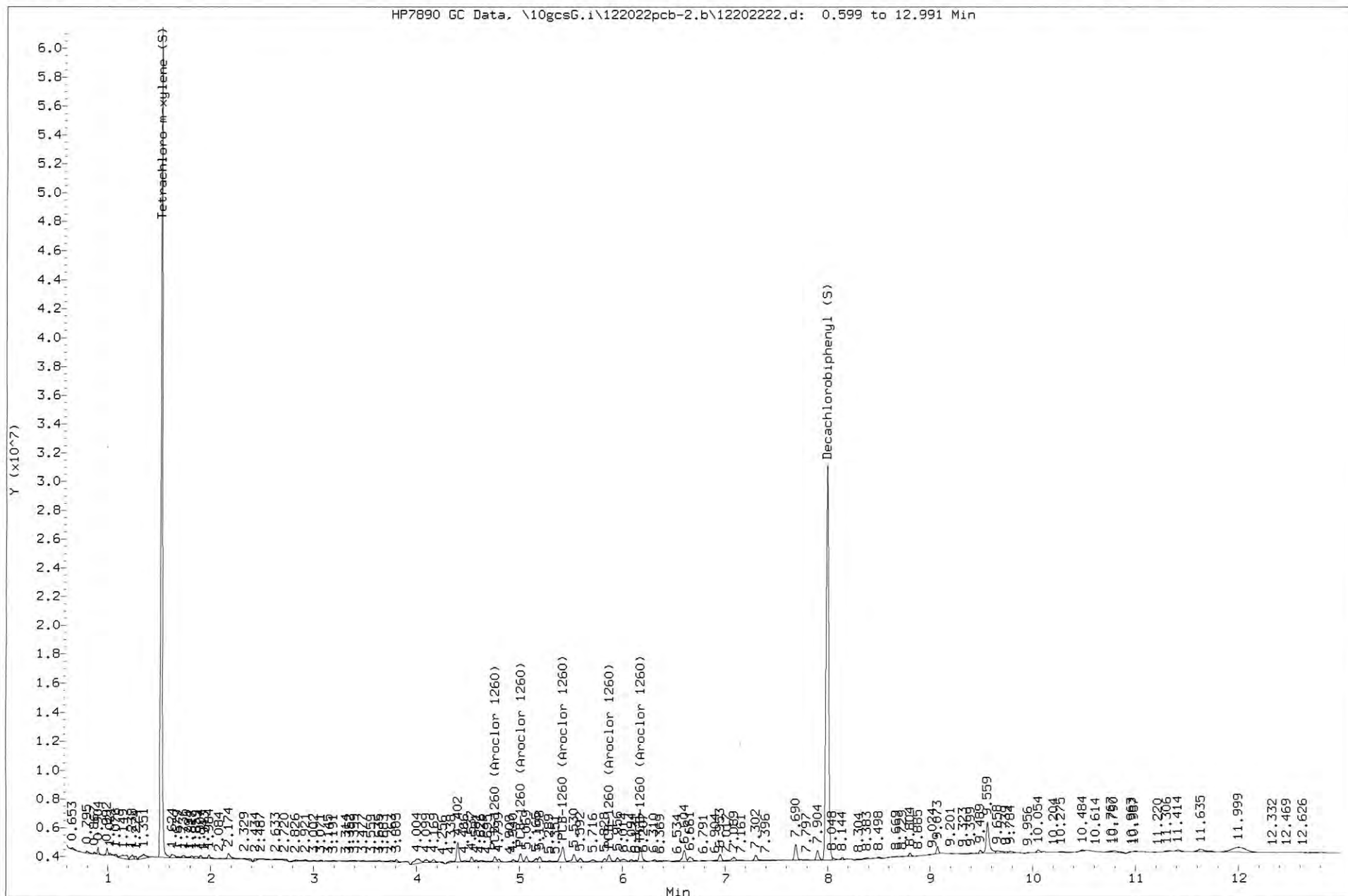
Batch 41306-86955
10630481-5

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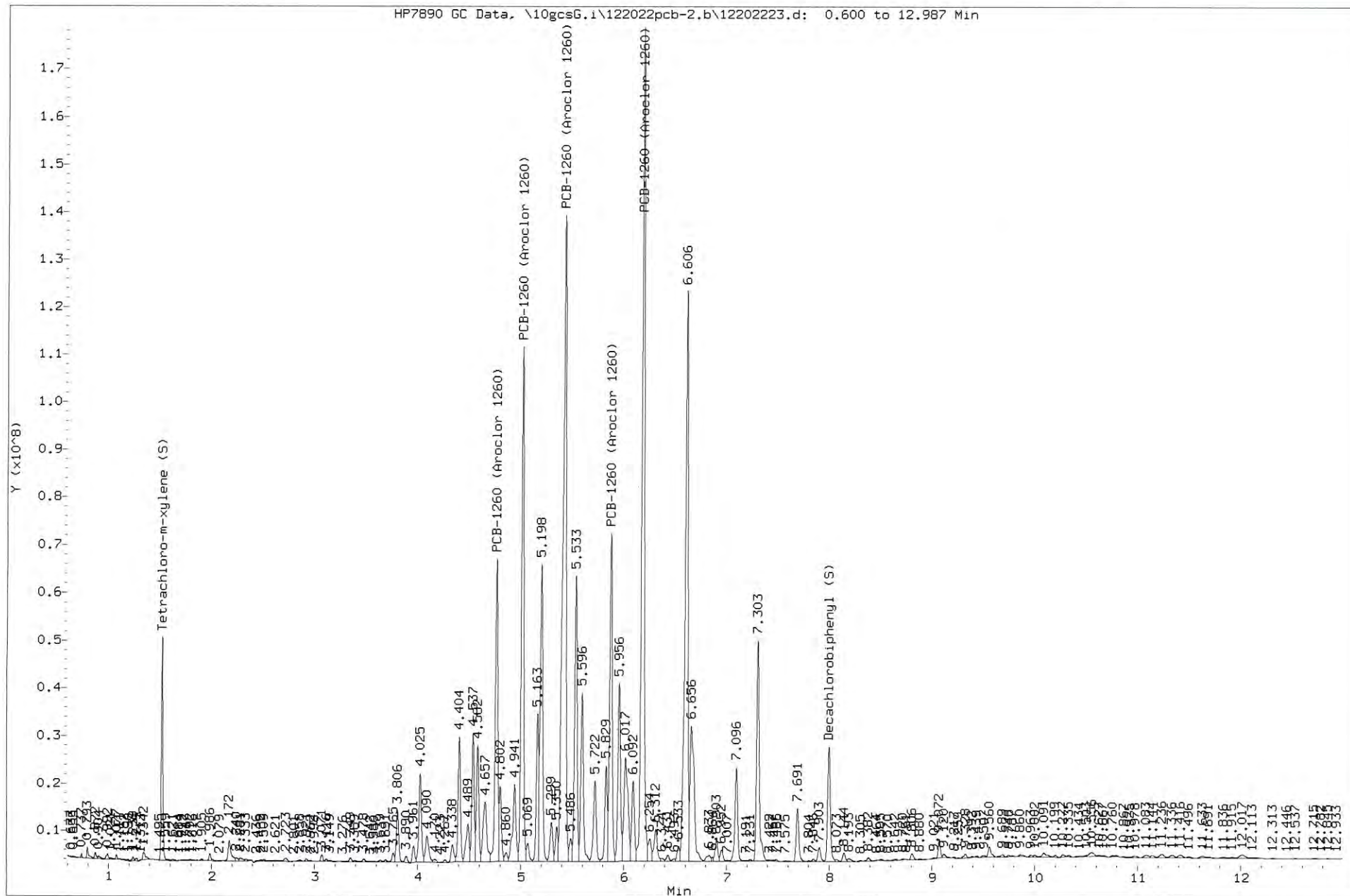
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Instrument: 10gcsG.i
Client Sample ID: SB13-2.5-3.0-1022

Batch 41306-859556
10630481-6



Data File: \\v10wintarget\chem\10gcs6.i\122022pcb-2.b\12202223.d
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Instrument: 10gcs6.i
Client Sample ID: SB11D-0.0-0.5-1022

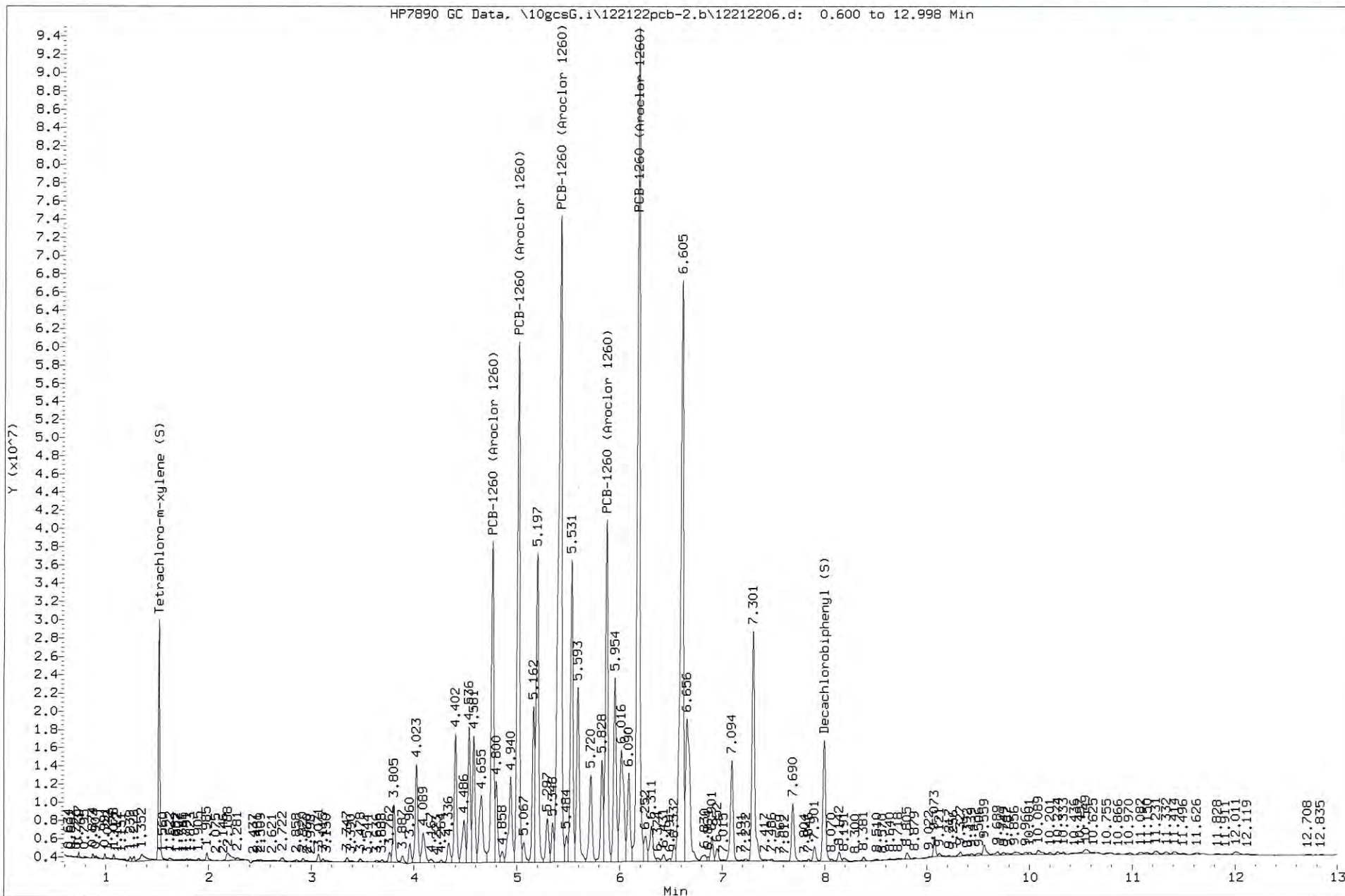
Batch 41306-859556
10630481-8



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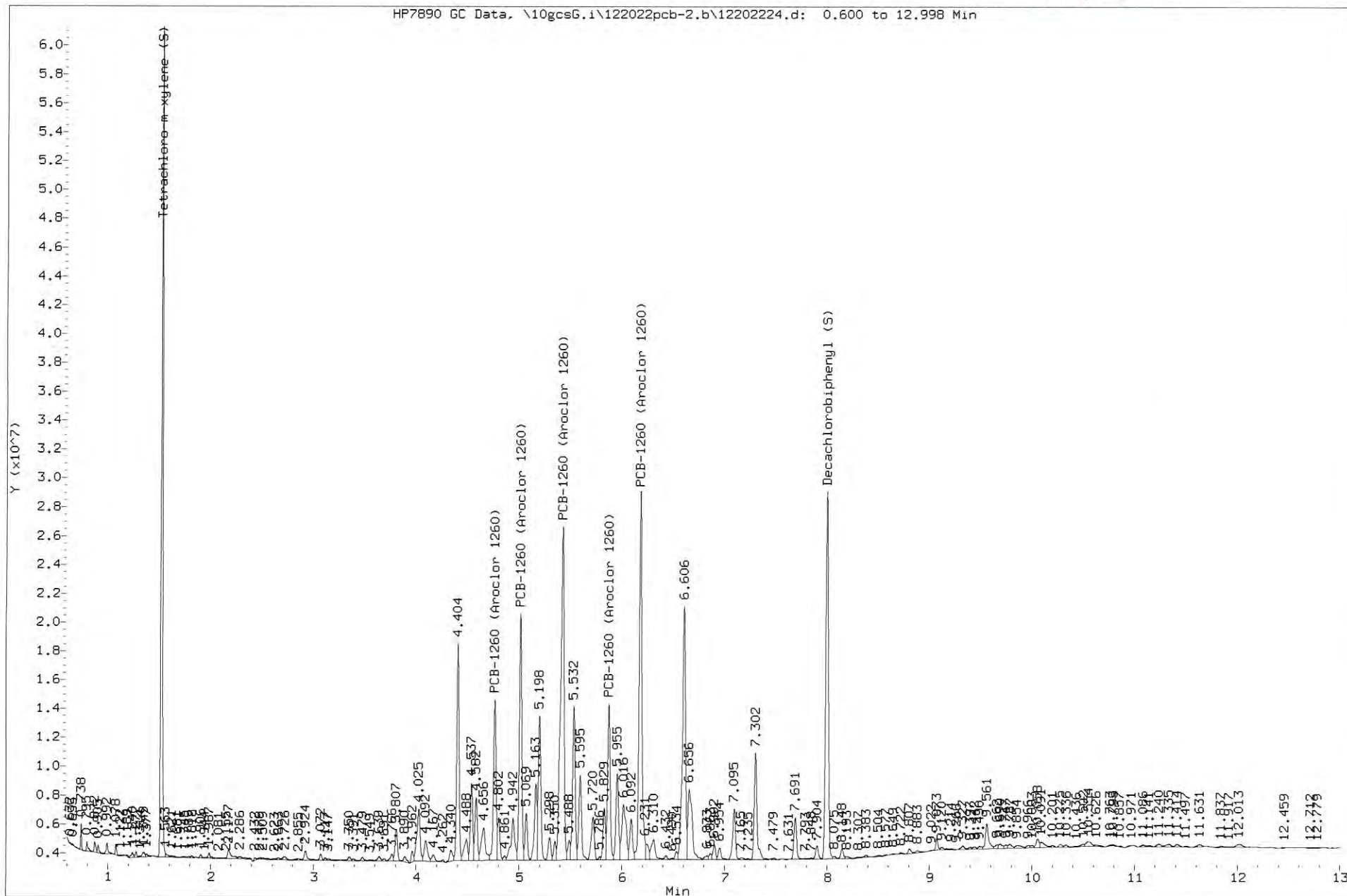
Batch 41306-859556

10630481-8 Dilution: 2x



Data File: \\v10wintarget\chem\10gcsG.i\122022pcb-2.b\12202224.d
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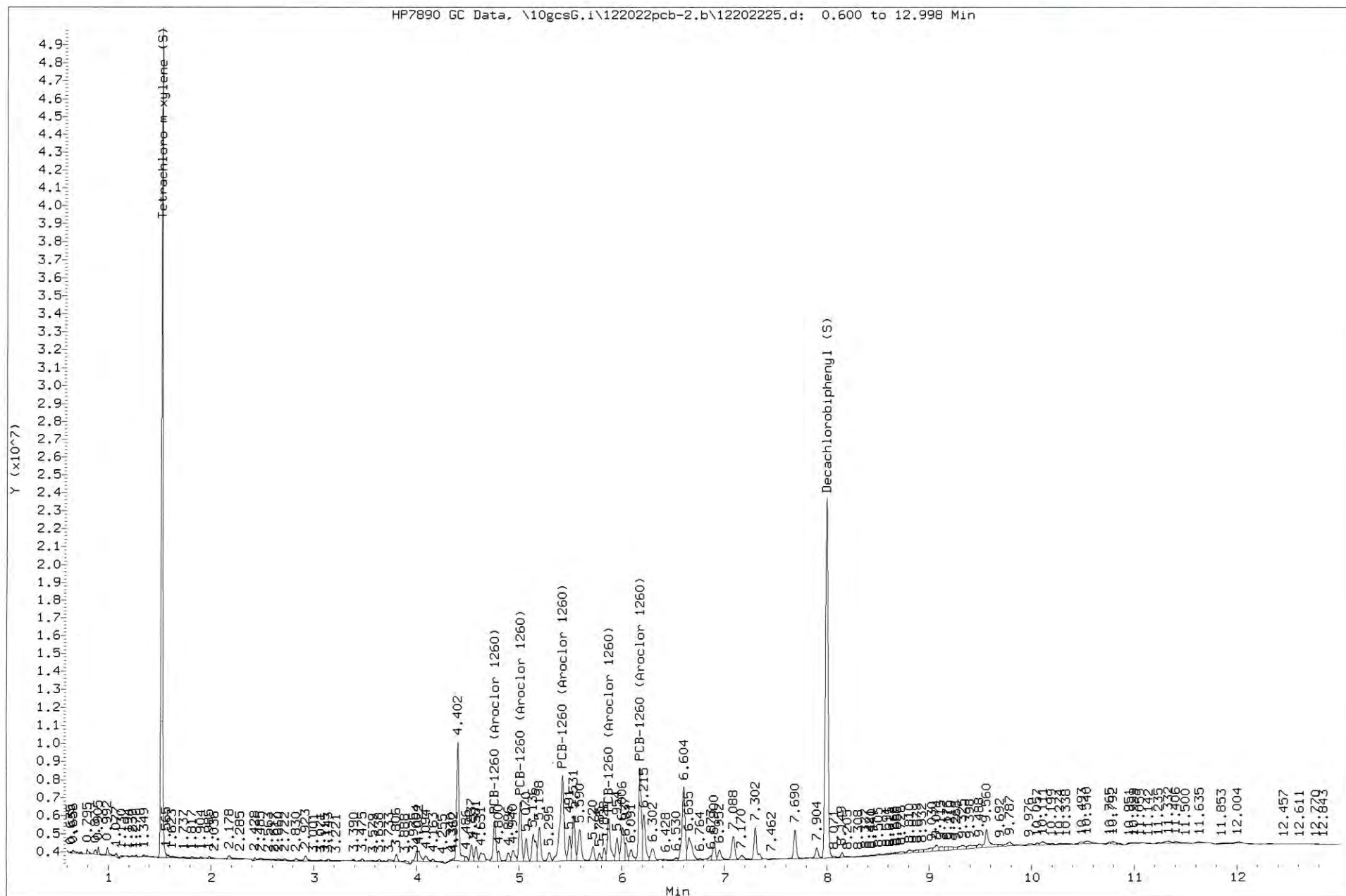
Batch 41306-859556
10630481-9



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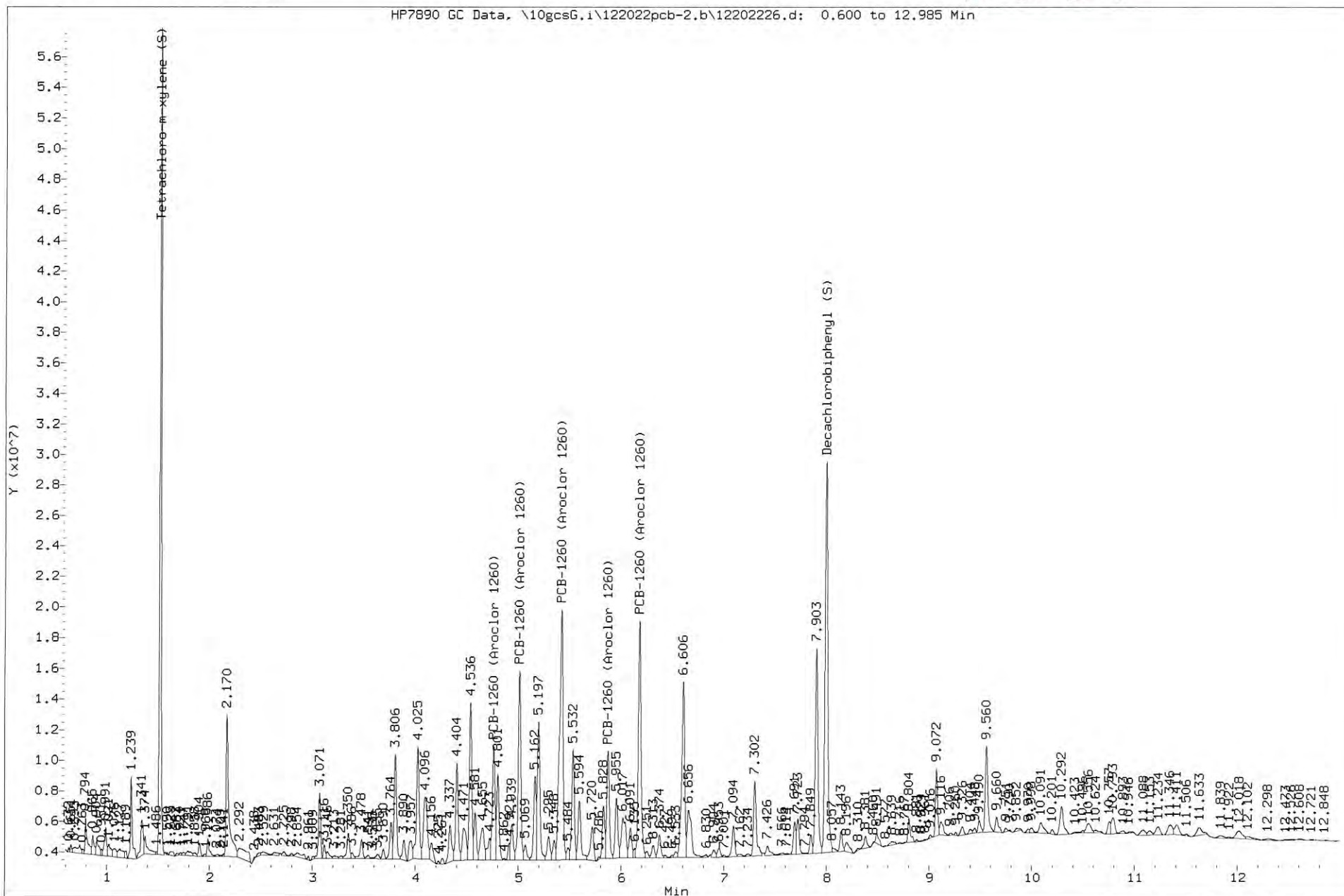
Batch 41306-859556
10630481-10

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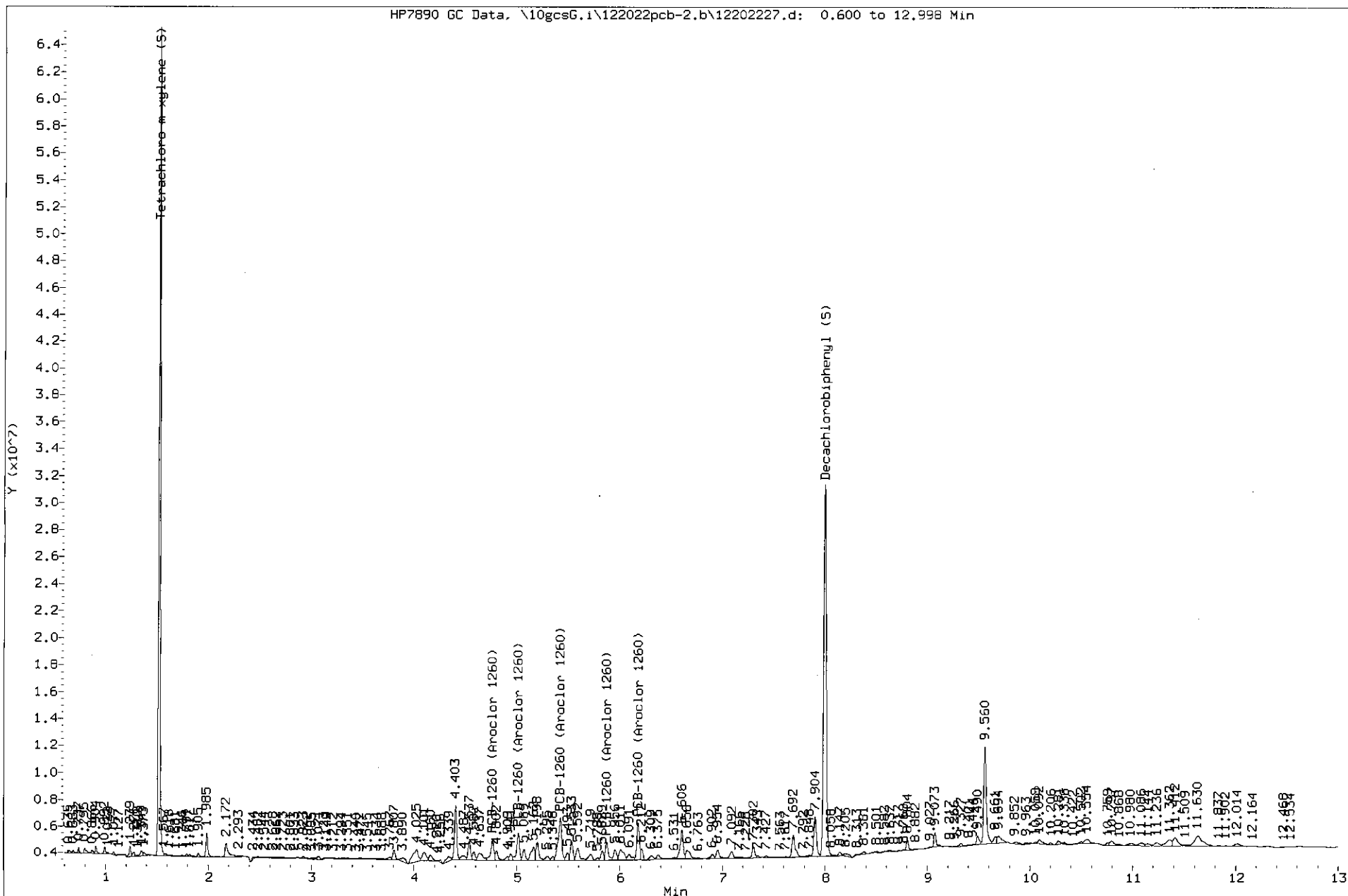
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Batch 41306-859556
10630481-11



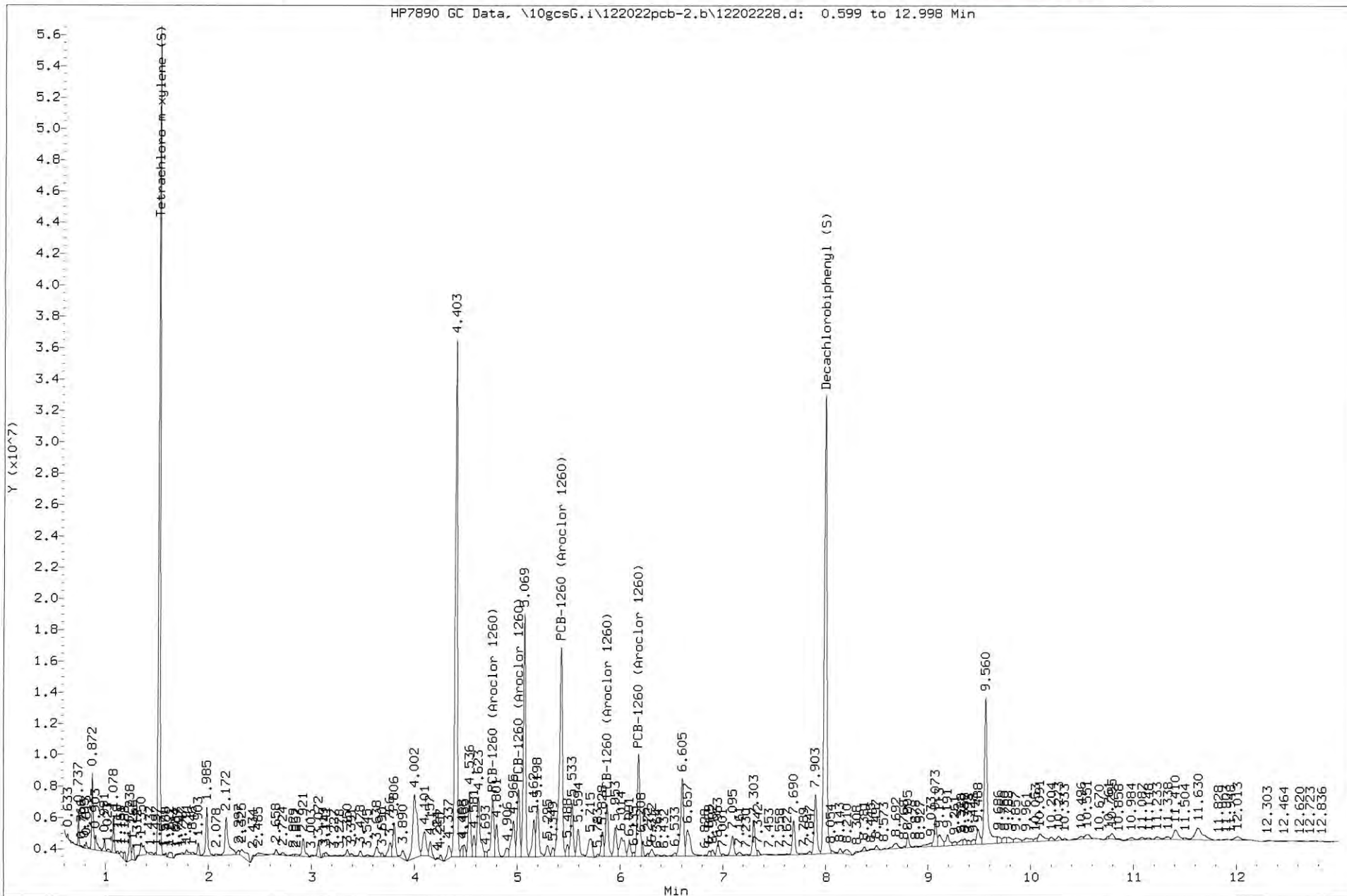
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Client Sample ID: SB15-1.0-1.5-1022

Batch 41306-859556
10630481-12



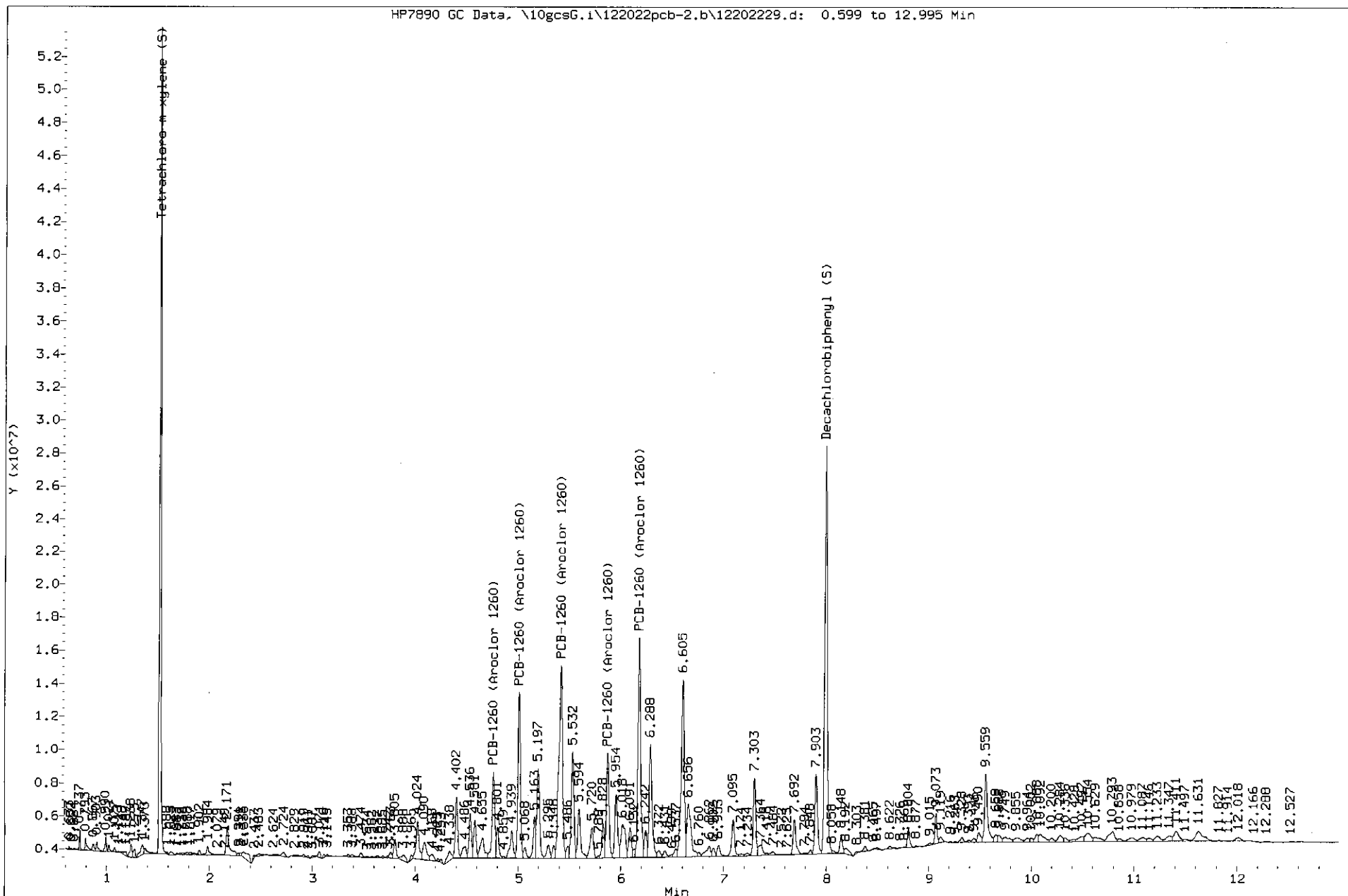
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Client Sample ID: SB15-2.5-3.0-1022

Batch 41306-859556
10630481-13



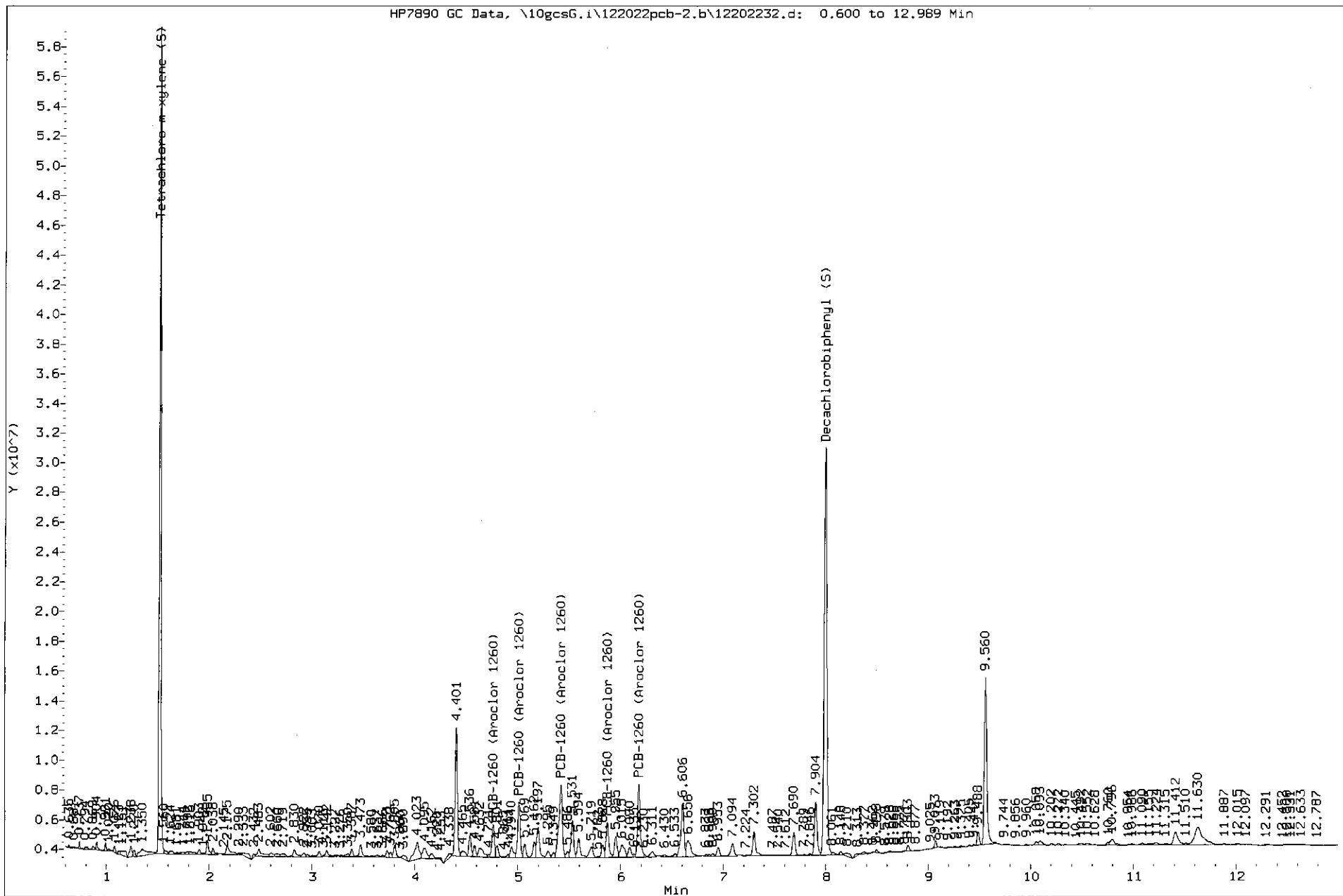
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Instrument: 10gcsG.i
Client Sample ID: SB16-0.0-0.5-1022

Batch 41306-859556
10630481-14



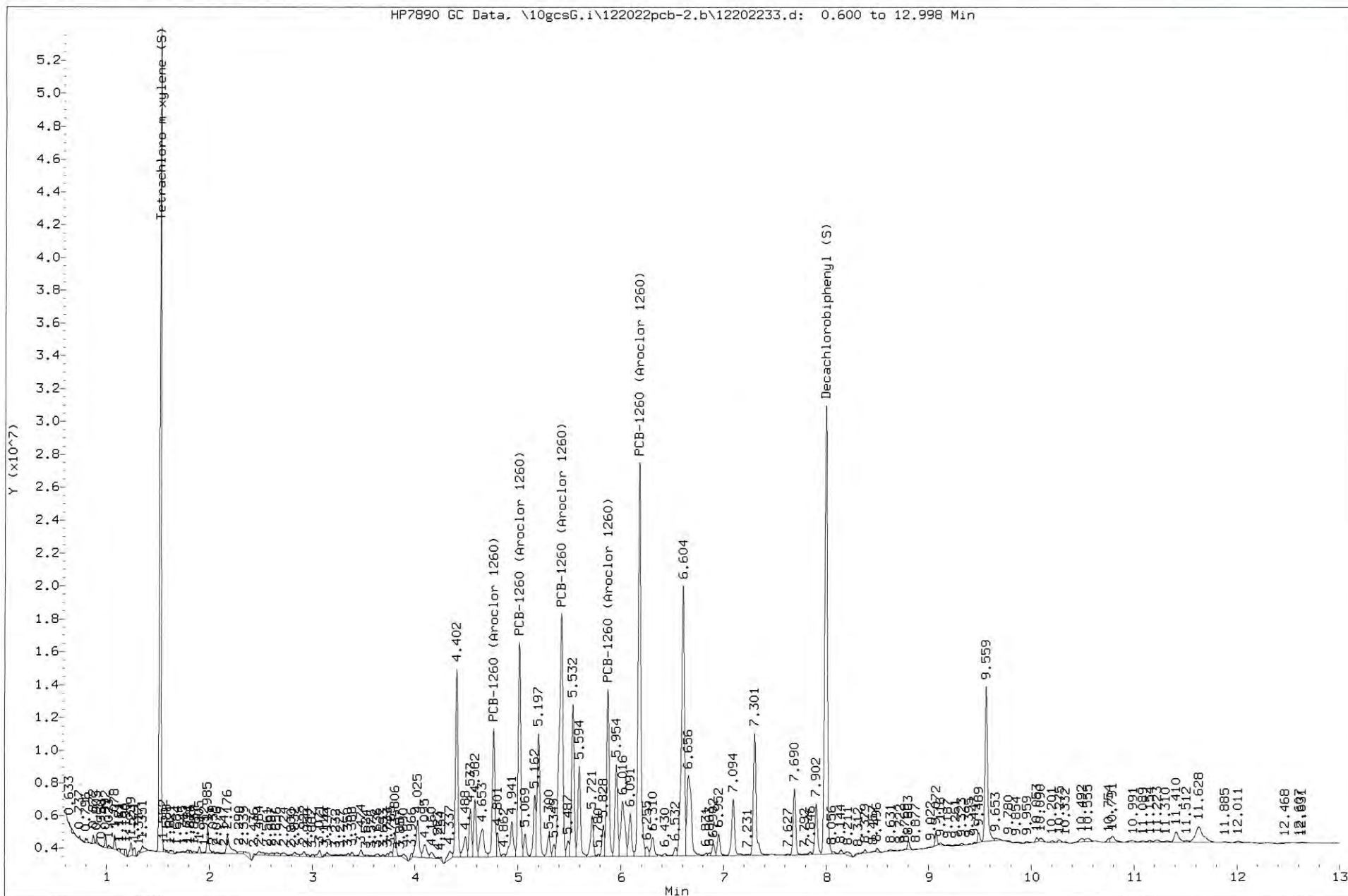
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Instrument: 10gcsG.i
Client Sample ID: SB16-1.0-1.5-1022

Batch 41306-859556
10630481-15



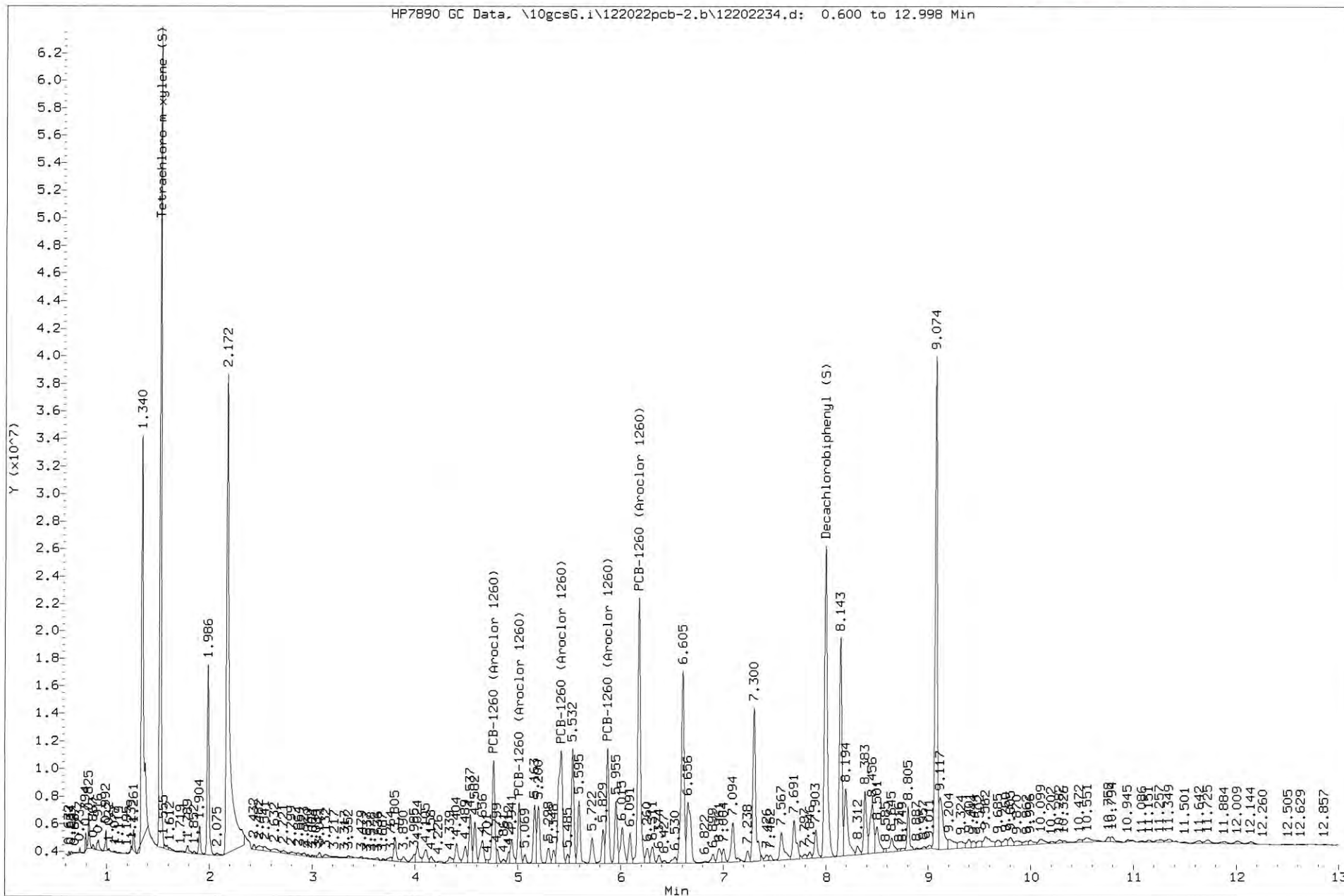
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Injection Date: 20-DEC-2022 20:04
Instrument: 10gcsG.i
Client Sample ID: SB16-2.5-3.0-1022

Batch 41306-859556
10630481-16



Data File: \\v10wintarget\chem\10gcsG.i\122022pcb-2.b\12202234.d
Injection Date: 20-DEC-2022 20:20
Instrument: 10gcsG.i
Client Sample ID: ISM02-0.0-0.2-1022

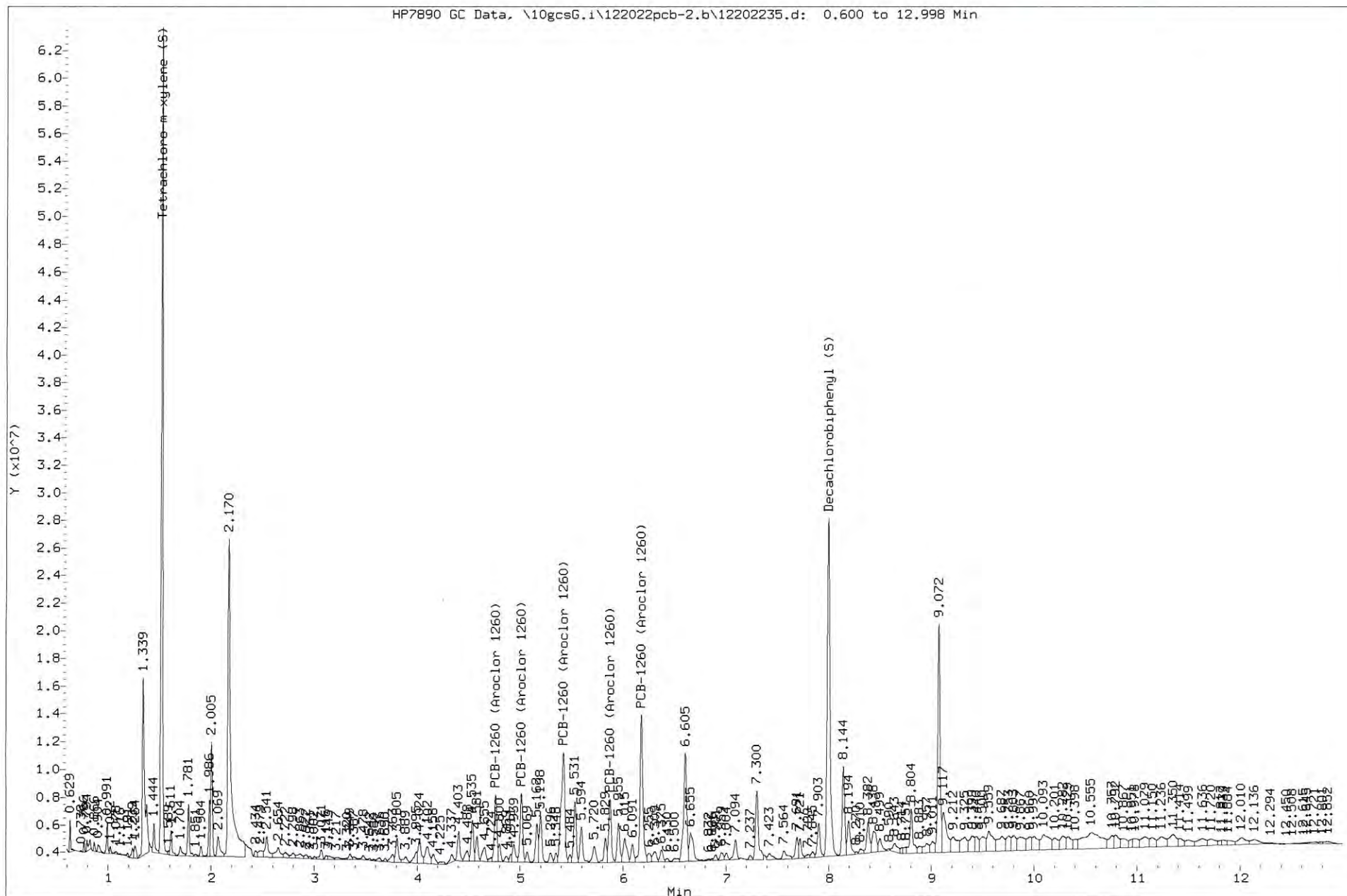
Batch 41306-859556
10630481-17



Data File: \\v10wintarget\chem\10gcsG.i\120222pcb-2.b\12022235.d
Injection Date: 20-DEC-2022 20:36
Instrument: 10gcsG.i
Client Sample ID: ISM07-0.0-0.2-1022

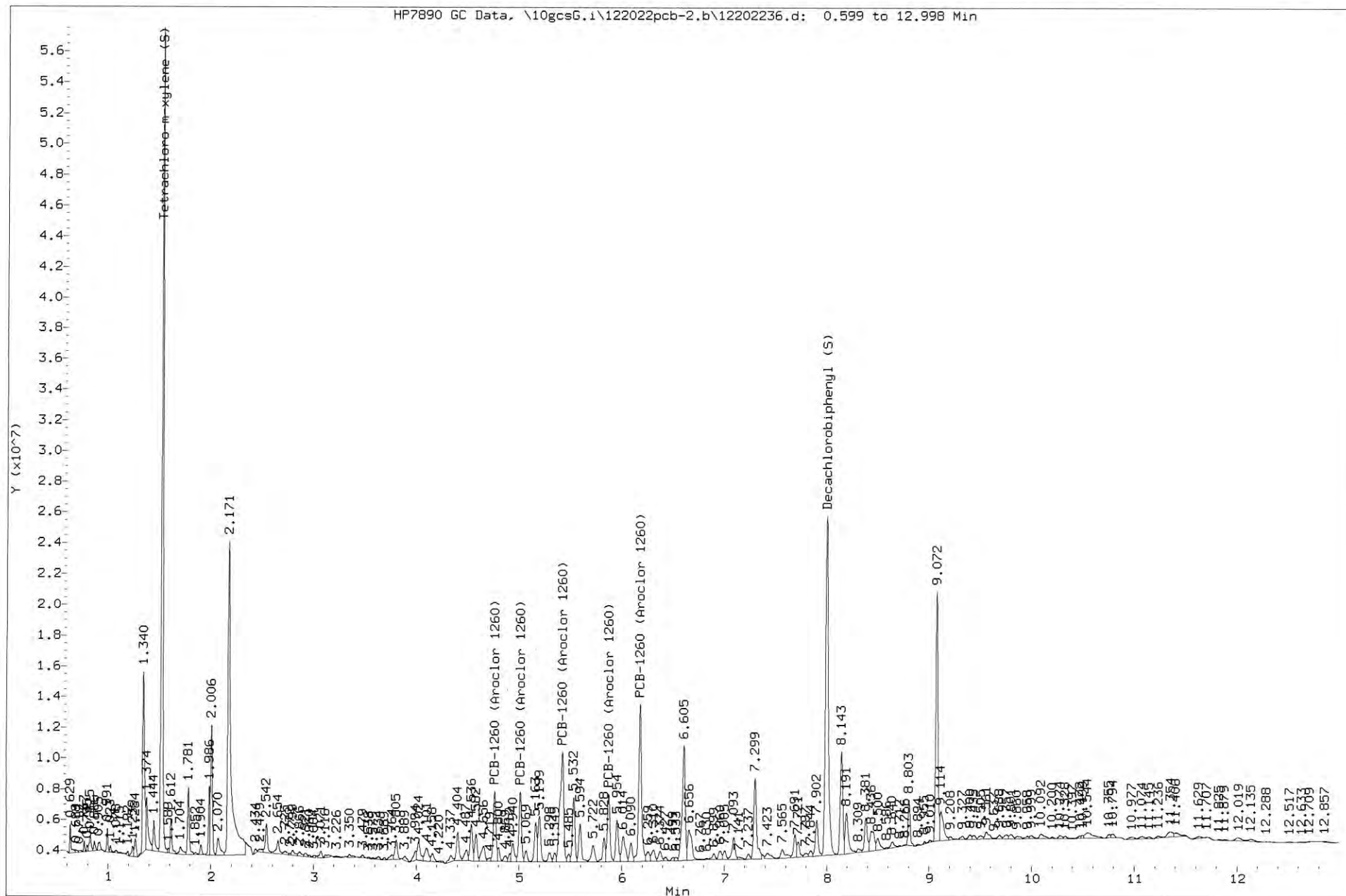
Batch 41306-859556
10630481-18

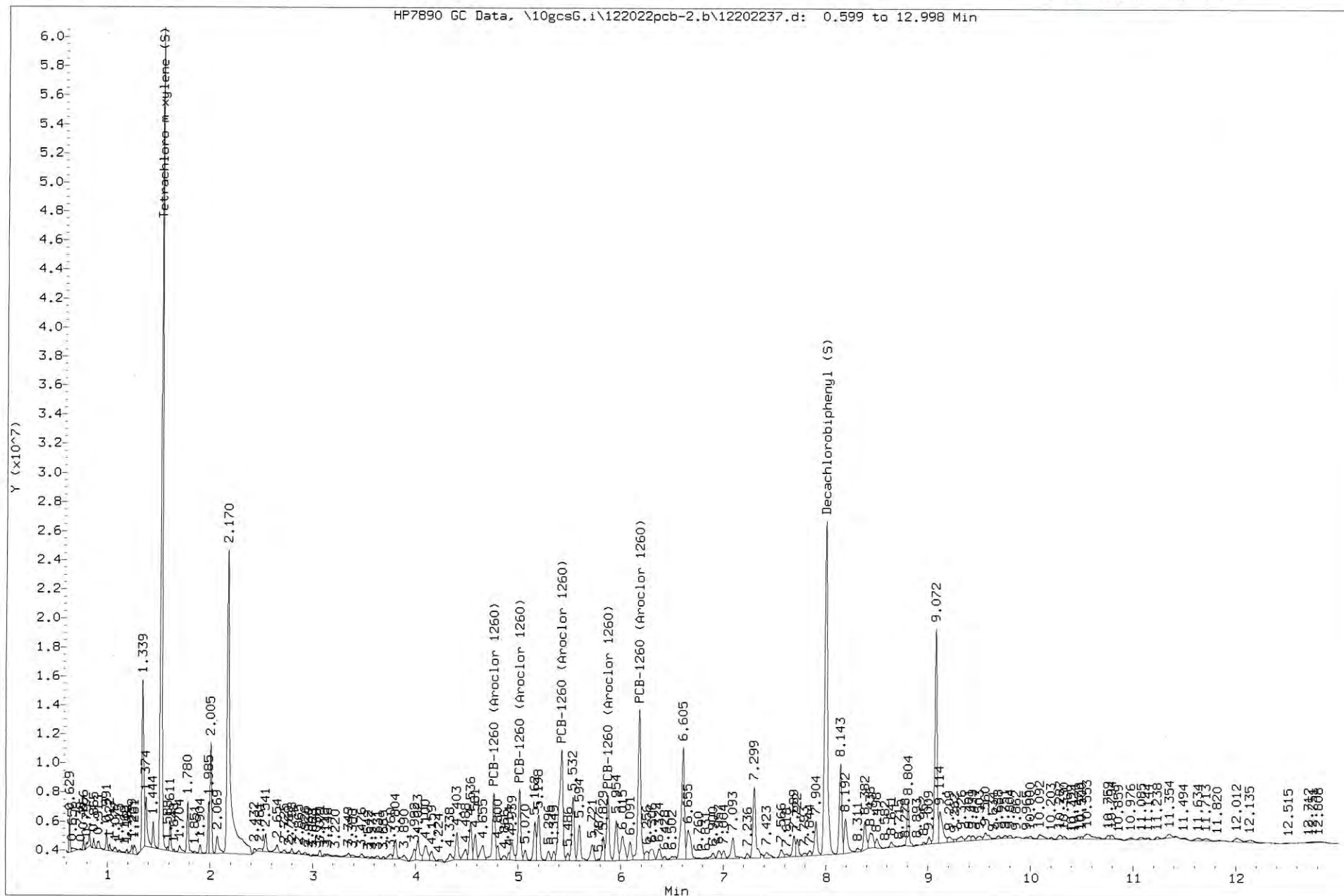
Page 59 of 66



Data File: \\v10wintarget\chem\10gcsG.1\122022pcb-2.b\12202236.d
Injection Date: 20-DEC-2022 20:52
Instrument: 10gcsG.1
Client Sample ID: ISM07T-0.0-0.2-1022

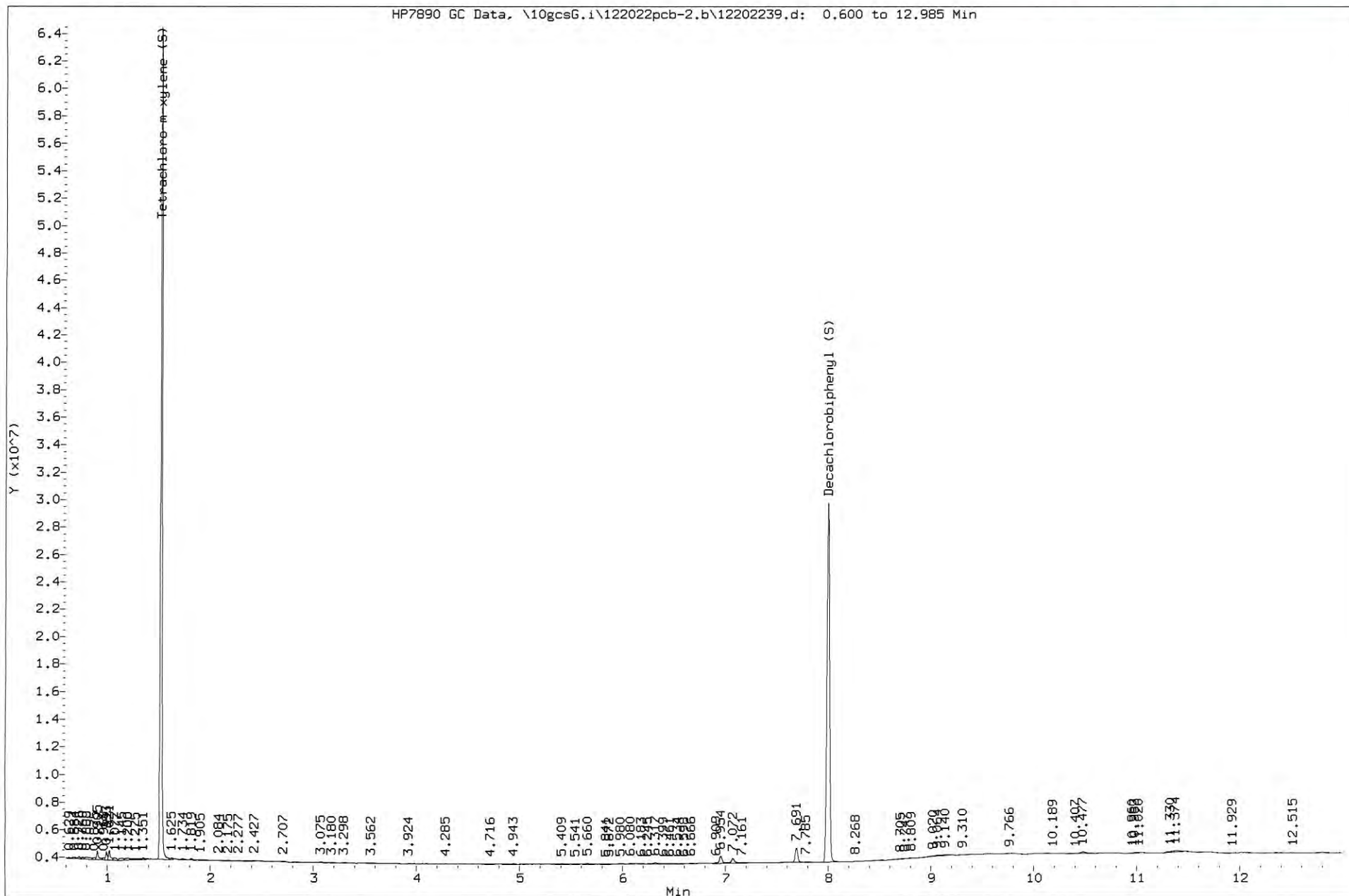
Batch 41306-859556
10630481-19





Data File: \\v10wintarget\chem\10gcsG.i\122022pcb-2.b\12202239.d
Injection Date: 20-DEC-2022 21:39
Instrument: 10gcsG.i
Client Sample ID: MB

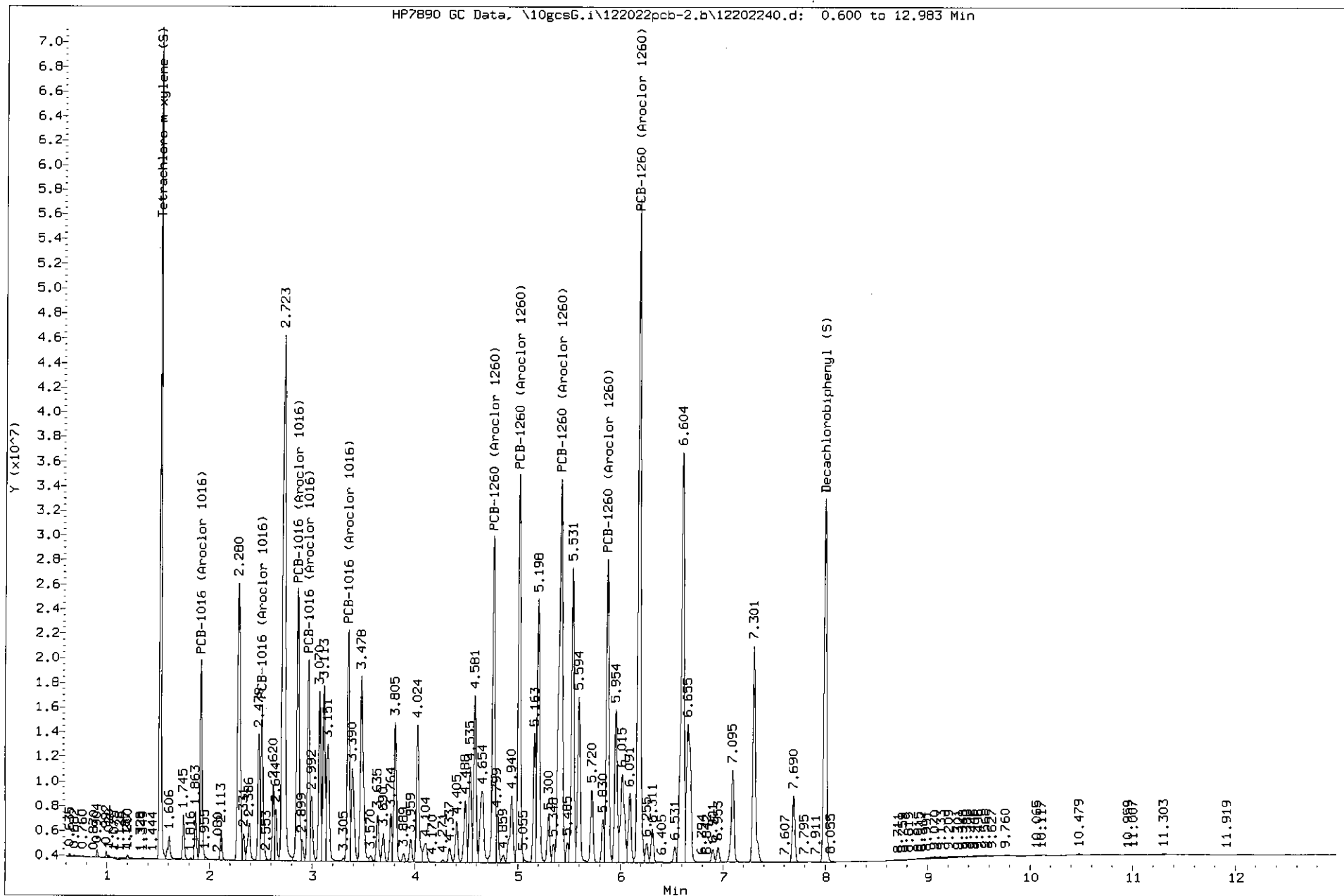
Batch 41307-859557
Blank 4541303



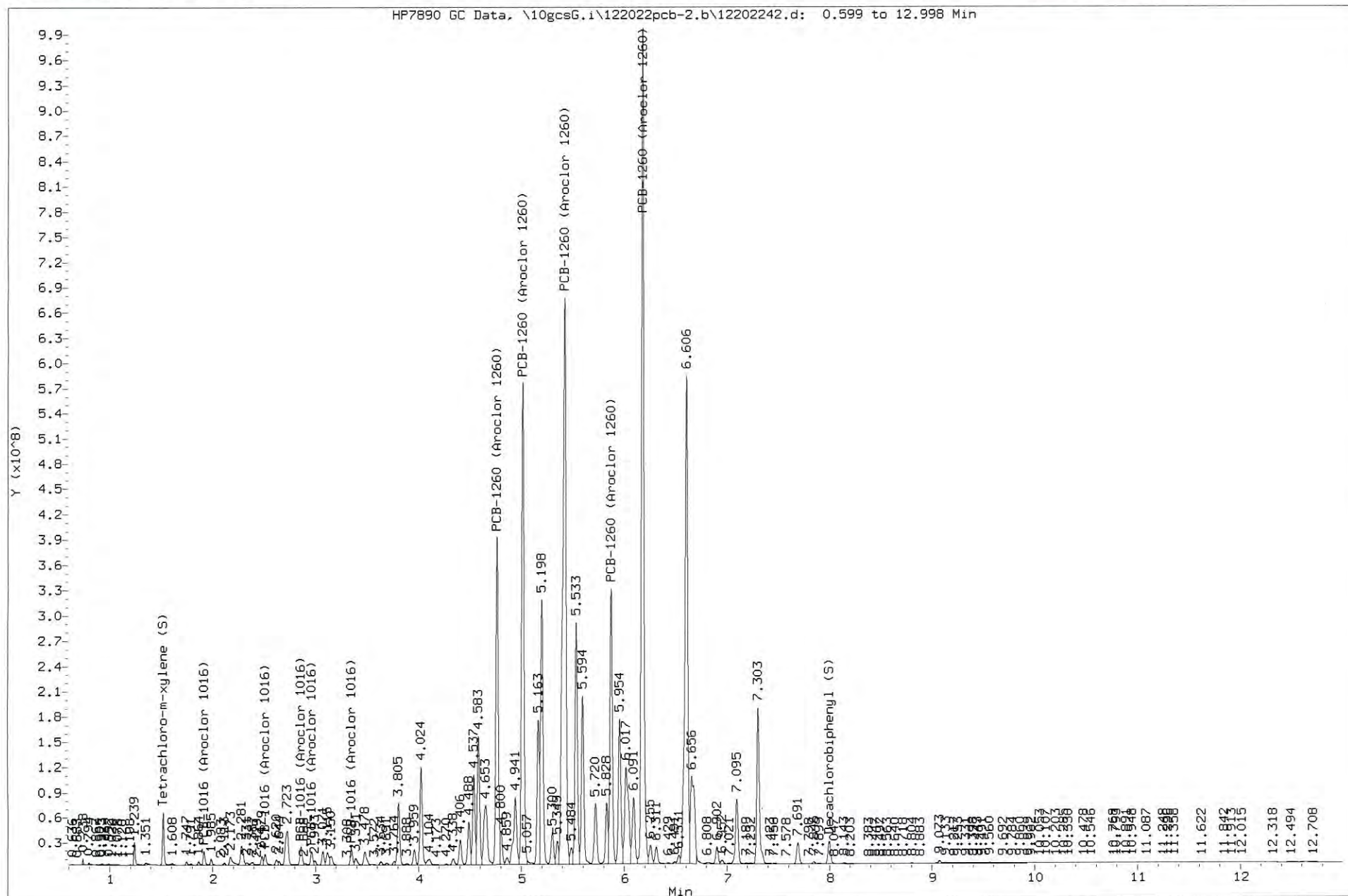
Data File: \\vi0wintarget\chem\10gcsG.i\122022pcb-2.b\12202240.d
Injection Date: 20-DEC-2022 21:55
Instrument: 10gcsG.i
Client Sample ID: MBLCS

Batch 41307-859557
LCS 4541304

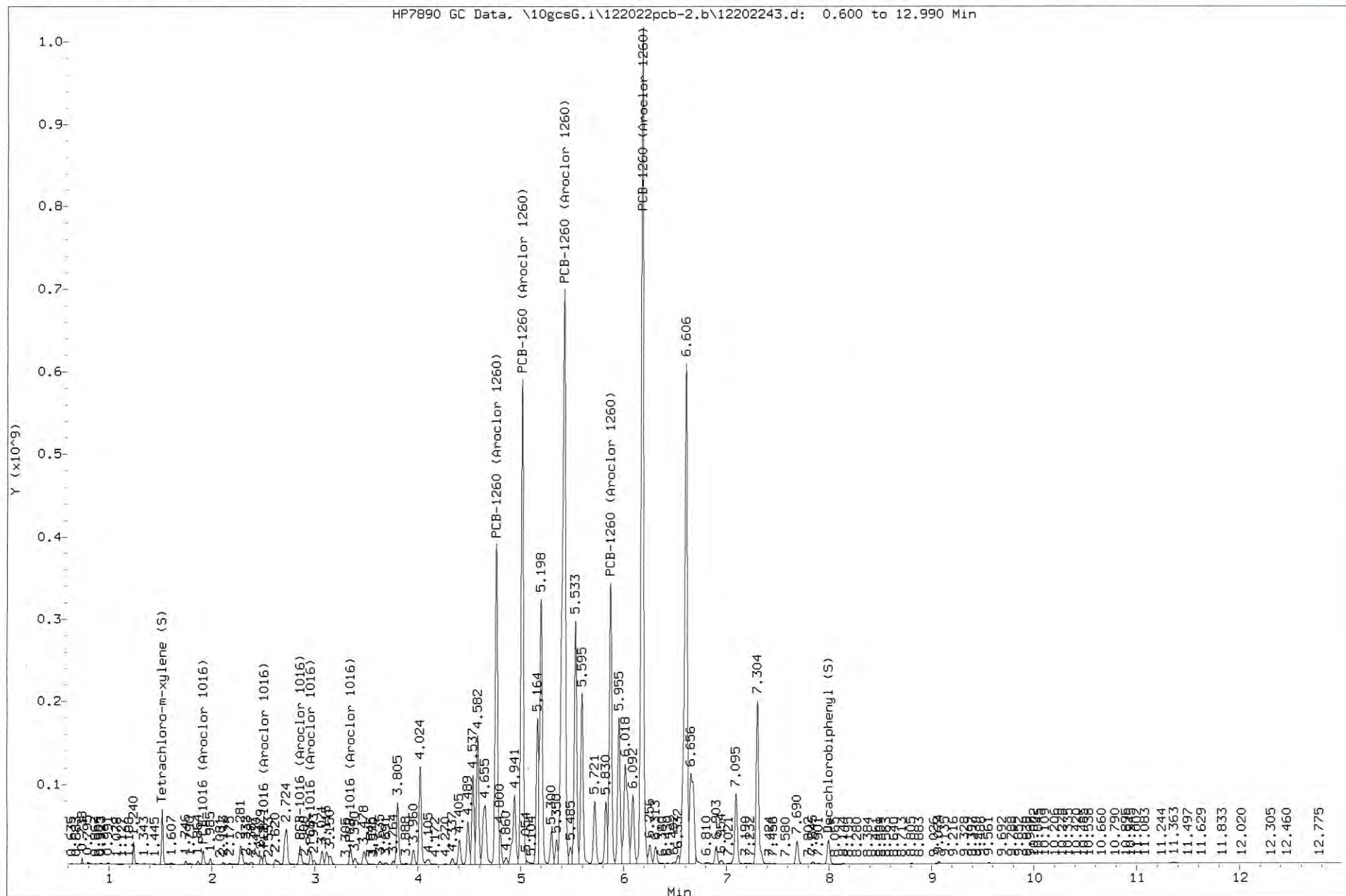
Page 63 of 66



Batch 41307-859557
MS 4541336

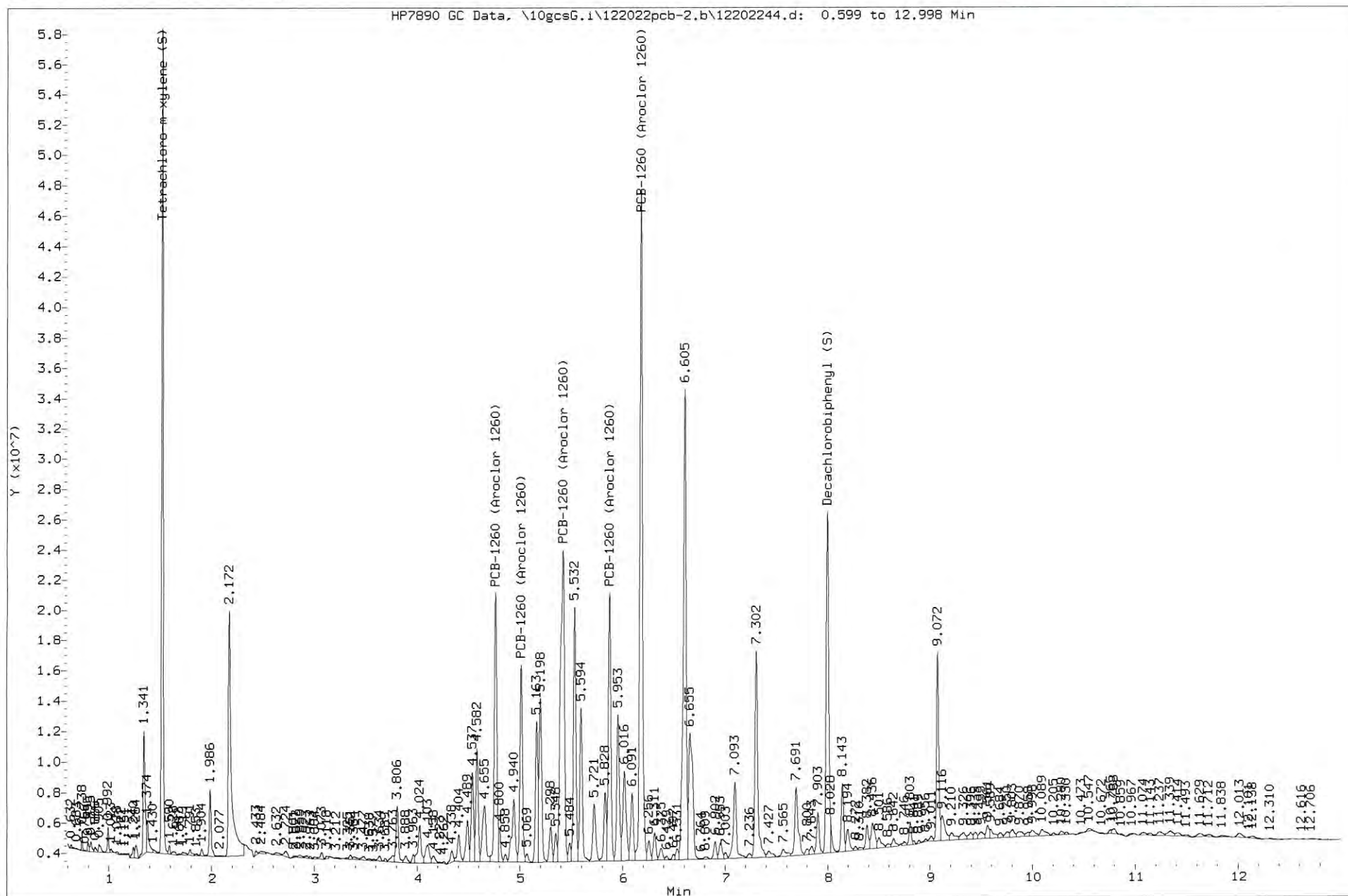


Batch 41307-859557
MSD 4541337



Data File: \\v10wintarget\chem\10gcsG.i\122022pcb-2.b\12202244.d
Injection Date: 20-DEC-2022 22:59
Instrument: 10gcsG.i
Client Sample ID: ISM06-0.0-0.2-1022

Batch 41307-859557
10630481-21



December 21, 2022

David Hodson
Jacobs
2020 SW 4th Avenue
Suite 300
Portland, OR 97201

RE: Project: Portland OR-Peninsula Iron Wor-Revised Report
Pace Project No.: 10630729

Dear David Hodson:

Enclosed are the analytical results for sample(s) received by the laboratory on October 21, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

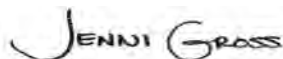
The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Minneapolis

This report was revised on December 21, 2022, to update the client sample ID for Pace sample 10630729001.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jennifer Gross
jennifer.gross@pacelabs.com
(612)607-1700
Project Manager

Enclosures

cc: UPRR-Sysdat@ghd.com, UPRR



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Portland OR-Peninsula Iron Wor-Revised Report

Pace Project No.: 10630729

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414

A2LA Certification #: 2926.01*

1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009*

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014*

Arkansas DW Certification #: MN00064

Arkansas WW Certification #: 88-0680

California Certification #: 2929

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137

Florida Certification #: E87605*

Georgia Certification #: 959

GMP+ Certification #: GMP050884

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: AI-03086*

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064*

Maryland Certification #: 322

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137*

Minnesota Dept of Ag Approval: via MN 027-053-137

Minnesota Petrofund Registration #: 1240*

Mississippi Certification #: MN00064

Missouri Certification #: 10100

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081*

New Jersey Certification #: MN002

New York Certification #: 11647*

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification (A2LA) #: R-036

North Dakota Certification (MN) #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification (1700) #: CL101

Ohio VAP Certification (1800) #: CL110*

Oklahoma Certification #: 9507*

Oregon Primary Certification #: MN300001

Oregon Secondary Certification #: MN200001*

Pennsylvania Certification #: 68-00563

Puerto Rico Certification #: MN00064

South Carolina Certification #: 74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192*

Utah Certification #: MN00064*

Vermont Certification #: VT-027053137

Virginia Certification #: 460163*

Washington Certification #: C486*

West Virginia DEP Certification #: 382

West Virginia DW Certification #: 9952 C

Wisconsin Certification #: 999407970

Wyoming UST Certification #: via A2LA 2926.01

USDA Permit #: P330-19-00208

Please Note: Applicable air certifications are denoted with an asterisk ().

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Portland OR-Peninsula Iron Wor-Revised Report

Pace Project No.: 10630729

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10630729001	ISM08-0.0-0.2-1022	Solid	10/20/22 10:00	10/21/22 10:10

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Portland OR-Peninsula Iron Wor-Revised Report

Pace Project No.: 10630729

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10630729001	ISM08-0.0-0.2-1022	EPA 8082A	RAG	11	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Portland OR-Peninsula Iron Wor-Revised Report

Pace Project No.: 10630729

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10630729001	ISM08-0.0-0.2-1022					
EPA 8082A	PCB-1260 (Aroclor 1260)	122	ug/kg	49.9	11/04/22 22:23	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Portland OR-Peninsula Iron Wor-Revised Report

Pace Project No.: 10630729

Method: EPA 8082A

Description: 8082A GCS PCB

Client: UPRR_Jacobs

Date: December 21, 2022

General Information:

1 sample was analyzed for EPA 8082A by Pace Analytical Services Minneapolis. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor-Revised Report

Pace Project No.: 10630729

Sample: ISM08-0.0-0.2-1022 **Lab ID:** 10630729001 Collected: 10/20/22 10:00 Received: 10/21/22 10:10 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.1	ug/kg	49.9	21.1	1	11/03/22 13:46	11/04/22 22:23	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.4	ug/kg	49.9	34.4	1	11/03/22 13:46	11/04/22 22:23	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.5	ug/kg	49.9	29.5	1	11/03/22 13:46	11/04/22 22:23	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.8	ug/kg	49.9	30.8	1	11/03/22 13:46	11/04/22 22:23	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.4	ug/kg	49.9	25.4	1	11/03/22 13:46	11/04/22 22:23	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.9	ug/kg	49.9	24.9	1	11/03/22 13:46	11/04/22 22:23	11097-69-1	
PCB-1260 (Aroclor 1260)	122	ug/kg	49.9	17.8	1	11/03/22 13:46	11/04/22 22:23	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.8	ug/kg	49.9	32.8	1	11/03/22 13:46	11/04/22 22:23	37324-23-5	
PCB-1268 (Aroclor 1268)	<24.0	ug/kg	49.9	24.0	1	11/03/22 13:46	11/04/22 22:23	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	108	%.	53-125		1	11/03/22 13:46	11/04/22 22:23	877-09-8	
Decachlorobiphenyl (S)	90	%.	41-125		1	11/03/22 13:46	11/04/22 22:23	2051-24-3	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Portland OR-Peninsula Iron Wor-Revised Report

Pace Project No.: 10630729

QC Batch: 851304

Analysis Method: EPA 8082A

QC Batch Method: EPA 3546

Analysis Description: 8082A GCS PCB

Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10630729001

METHOD BLANK: 4501653

Matrix: Solid

Associated Lab Samples: 10630729001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<21.2	50.0	21.2	11/04/22 21:20	
PCB-1221 (Aroclor 1221)	ug/kg	<34.5	50.0	34.5	11/04/22 21:20	
PCB-1232 (Aroclor 1232)	ug/kg	<29.6	50.0	29.6	11/04/22 21:20	
PCB-1242 (Aroclor 1242)	ug/kg	<30.9	50.0	30.9	11/04/22 21:20	
PCB-1248 (Aroclor 1248)	ug/kg	<25.5	50.0	25.5	11/04/22 21:20	
PCB-1254 (Aroclor 1254)	ug/kg	<24.9	50.0	24.9	11/04/22 21:20	
PCB-1260 (Aroclor 1260)	ug/kg	<17.8	50.0	17.8	11/04/22 21:20	
PCB-1262 (Aroclor 1262)	ug/kg	<32.8	50.0	32.8	11/04/22 21:20	
PCB-1268 (Aroclor 1268)	ug/kg	<24.0	50.0	24.0	11/04/22 21:20	
Decachlorobiphenyl (S)	%.	118	41-125		11/04/22 21:20	
Tetrachloro-m-xylene (S)	%.	86	53-125		11/04/22 21:20	

LABORATORY CONTROL SAMPLE: 4501654

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	1000	982	98	68-125	
PCB-1260 (Aroclor 1260)	ug/kg	1000	1140	114	70-125	
Decachlorobiphenyl (S)	%.			120	41-125	
Tetrachloro-m-xylene (S)	%.			86	53-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4501655 4501656

Parameter	Units	10630729001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<21.1	982	998	1110	1140	113	114	53-125	2	30	
PCB-1260 (Aroclor 1260)	ug/kg	122	982	998	1000	1020	90	90	30-143	1	30	
Decachlorobiphenyl (S)	%.						91	95	41-125			
Tetrachloro-m-xylene (S)	%.						114	116	53-125			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Portland OR-Peninsula Iron Wor-Revised Report

Pace Project No.: 10630729

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Portland OR-Peninsula Iron Wor-Revised Report

Pace Project No.: 10630729

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10630729001	ISM08-0.0-0.2-1022	EPA 3546	851304	EPA 8082A	851451

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>.

4025360

Section A

Required Client Information:

Company: Jacobs for UPRR
Address: 2020 SW 4th Avenue, Suite 300
Portland, OR 97201
Email: david.hodson@jacobs.com
Phone: (510)316-2323 Fax:
Requested Due Date:

Section B

Required Project Information:

Report To: Hodson, David
Copy To:
Purchase Order #: 2903-01
Project Name: Portland OR-Peninsula Iron Works
Project #:

Section C

Invoice Information:

Attention: John DeJong
Company Name: UPRR
Address: 4315 E Sprague Ave, Spokane Valley, WA 99212
Pace Quote: 4700001441 (MA-000166-2022)
Pace Project Manager: jennifer.gross@pacelabs.com,
Pace Profile #: 45173

Page : 1 Of 1

Regulatory Agency

State / Location

OR / Portland - Multnomah County

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX Drinking Water Water Waste Water Product Soil/Solid Oil Wipe Air Other Tissue	CODE DW WT WW P SL OL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Requested Analysis Filtered (Y/N)														MS/MSD Requested																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
						START		END				Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	ISM Prep (Pace Green Bay)	Sieve only (Pace Green Bay)	8082A PCBs*	8015D GRO & DRO/ORO	6010D/7400 Total T22 Metals	8260D VOCs	8270E SVOCs	Moisture/Dry Weight	TCLP 6010D/7471B (HOLD)	TCLP 8260D VOCs (HOLD)	TCLP 8270E SVOCs (HOLD)	HOLD ONLY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS		
*Include 1262 & 1268	Jaclyn Warren / Jacobs	10/20/22	1400				49	Y	Y
Methods 8082 & 1668 - Require chromatograms	Fedex	10/21/22	1010	R. Inos-Bell Pace	10/21/22	1010			

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER:

DATE Signed:

TEMP in C

Received on

Ice

(Y/N)

Custody

Sealed

Cooler

(Y/N)

Samples

Intact

(Y/N)

Effective Date: 8/16/2022

Client Name:

Jacobs for UPRR

Sample Preservation Receipt Form

Project #

40253560

All containers needing preservation have been checked and noted below:

☐ Yes☐ No☒ N/A

Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Initial when
completed:Date/
Time:

Pace Lab #	Glass						Plastic						Vials					Jars				General				VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)	
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN 1	GN 2						
001																																	2.5 / 5
002																																	2.5 / 5
003																																	2.5 / 5
004																																	2.5 / 5
005																																	2.5 / 5
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020																																	2.5 / 5

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other:

Headspace in VOA Vials (>6mm): ☐ Yes ☐ No ☒ N/A

*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of 2

Sample Condition Upon Receipt Form (SCUR)

Project #:

Client Name: Jacobs for UPRR

Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Walto
☐ Client ☐ Pace Other: _____

Tracking #: 5923 7141 9759

WO#: 40253560



Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☒ Other Ziploc

Thermometer Used SR - 125 Type of Ice: Wet ☐ Blue ☐ Dry ☐ None ☐ Meltwater Only

Cooler Temperature Uncorr: 5 / Corr: 4.9

Temp Blank Present: ☒ yes ☐ no

Biological Tissue is Frozen: ☐ yes ☐ no

Person examining contents:

Date: 10/21/22 Initials: FB

Labeled By Initials: MP

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☒ Yes ☐ No ☐ N/A	2.
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC:	☒ Yes ☐ No ☐ N/A	4.
Samples Arrived within Hold Time:	☒ Yes ☐ No	5.
- DI VOA Samples frozen upon receipt	☐ Yes ☐ No	Date/Time:
Short Hold Time Analysis (<72hr):	☐ Yes ☒ No	6.
Rush Turn Around Time Requested:	☐ Yes ☒ No	7.
Sufficient Volume:		8.
For Analysis: ☒ Yes ☐ No MS/MSD: ☐ Yes ☒ No ☐ N/A		
Correct Containers Used:	☒ Yes ☐ No	9.
Correct Type: <u>Pace Green Bay, Pace IR, Non-Pace</u>		
Containers Intact:	☒ Yes ☐ No	10.
Filtered volume received for Dissolved tests	☐ Yes ☐ No ☒ N/A	11.
Sample Labels match COC:	☒ Yes ☐ No ☐ N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>S</u>		
Trip Blank Present:	☐ Yes ☒ No ☐ N/A	13.
Trip Blank Custody Seals Present	☐ Yes ☒ No ☐ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logir

Page 2 of 2

Internal Transfer Chain of Custody



☒ Samples Pre-Logged into eCOC.

State Of Origin: OR
Cert. Needed: ☐ Yes ☐ No

Workorder: 10630729 Workorder Name: Portland OR-Peninsula Iron Wor

Results Requested By: 11/1/2022

Report To: Jennifer Gross
Pace Analytical Minnesota
1700 Elm Street
Minneapolis, MN 55414
Phone (612)607-1700

Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

WO#: 10630729



Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers					MISC / ISM (50 Increments) (PACF)	LAB USE ONLY									
						1	2	3	4	5		1	2	3	4	5	6	7	8	9	10
1	ISM03-0.0-0.2-1022	PS	10/20/2022 10:00	10630729001	Solid	1					X										
2																					
3																					
4																					
5																					

Transfers	Released By	Date/Time	Received By	Date/Time	Received on Ice	Y or N	Samples Intact	Y or N
1	Fed Ex	10/21/22	Liquidville	10/21/22				
2	Impulse	10/20/22						
3								
Cooler Temperature on Receipt 4.9 °C					Custody Seal		Y	N
Forward prepped volume to Pace Mnpls, methods 8082 & possibly 1668.					Hold all additional volume for six months.			

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

This chain of custody is considered complete as is since this information is available in the owner laboratory.

22 at the 15:30 with forward to PACE MN
43 - ISM sample 4/1/22
CAR

Effective Date:

Sample Condition Upon Receipt	Client Name: <u>Pace Greenberg</u>	Project #: WO#: 10630729
Courier: ☐ FedEx ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ Speedee ☒ Commercial <u>WALKE</u>		PM: JMG Due Date: 11/16/22 CLIENT: UPRR_Jacobs
Tracking Number: _____ ENV-FRM-MIN4-0142		

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ No		Biological Tissue Frozen? ☐ Yes ☐ No ☒ N/A
Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other		Temp Blank? ☒ Yes ☐ No
Thermometer: ☐ T1 (0461) ☐ T2 (1336) ☒ T3 (0459) ☐ T4 (0254) ☐ T5 (0178) ☐ T6 (0235) ☐ T7 (0042) ☐ T8 (0775) ☐ 01339252/1710		Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☐ None ☐ Melted

Did Samples Originate in West Virginia? ☐ Yes ☒ No		Were All Container Temps Taken? ☐ Yes ☐ No ☒ N/A
Temp should be above freezing to 6 °C Cooler temp Read w/Temp Blank: <u>22</u> °C		Average Corrected Temp (no temp blank only): _____ °C
Correction Factor: <u>True</u> Cooler Temp Corrected w/temp blank: <u>22</u> °C		☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 Container

USDA Regulated Soil: (☐ N/A, water sample/other: _____)

Date/Initials of Person Examining Contents: WJW

Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? ☐ Yes ☒ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

Location (Check one): ☐ Duluth ☒ Minneapolis ☐ Virginia	COMMENTS
Chain of Custody Present and Filled Out?	1.
Chain of Custody Relinquished?	2.
Sampler Name and/or Signature on COC?	3.
Samples Arrived within Hold Time?	4. If fecal: ☐ <8 hrs ☐ >8 hr, <24 ☐ No
Short Hold Time Analysis (<72 hr)?	5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E.coli ☐ BOD/cBOD ☐ Hex Chrom ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other _____
Rush Turn Around Time Requested?	6. <u>late</u>
Sufficient Sample Volume?	7.
Correct Containers Used?	8.
-Pace Containers Used?	
Containers Intact?	9.
Field Filtered Volume Received for Dissolved Tests?	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	11. If no, write ID/Date/Time of container below: ☐ See Exceptions ENV-FRM-MIN4-0142
Matrix: ☐ Water ☒ Soil ☐ Oil ☐ Other	
All containers needing acid/base preservation have been checked?	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , <2pH, NaOH >9 Sulfide, NaOH >10 Cyanide)	☐ NaOH ☐ HNO ₃ ☐ H ₂ SO ₄ ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS (*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)	Positive for Residual Chlorine? ☐ Yes ☐ No ☐ See Exceptions ENV-FRM-MIN4-0142 pH Paper Lot # Residual Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Headspace in Methyl Mercury Container?	13.
Extra labels present on soil VOA or WIDRO containers?	14. ☐ See Exceptions ENV-FRM-MIN4-0142
Headspace in VOA Vials (greater than 6mm)?	
3 Trip Blanks Present?	15.
Trip Blank Custody Seals Present?	Pace Trip Blank Lot # (if purchased): _____

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: _____

Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____

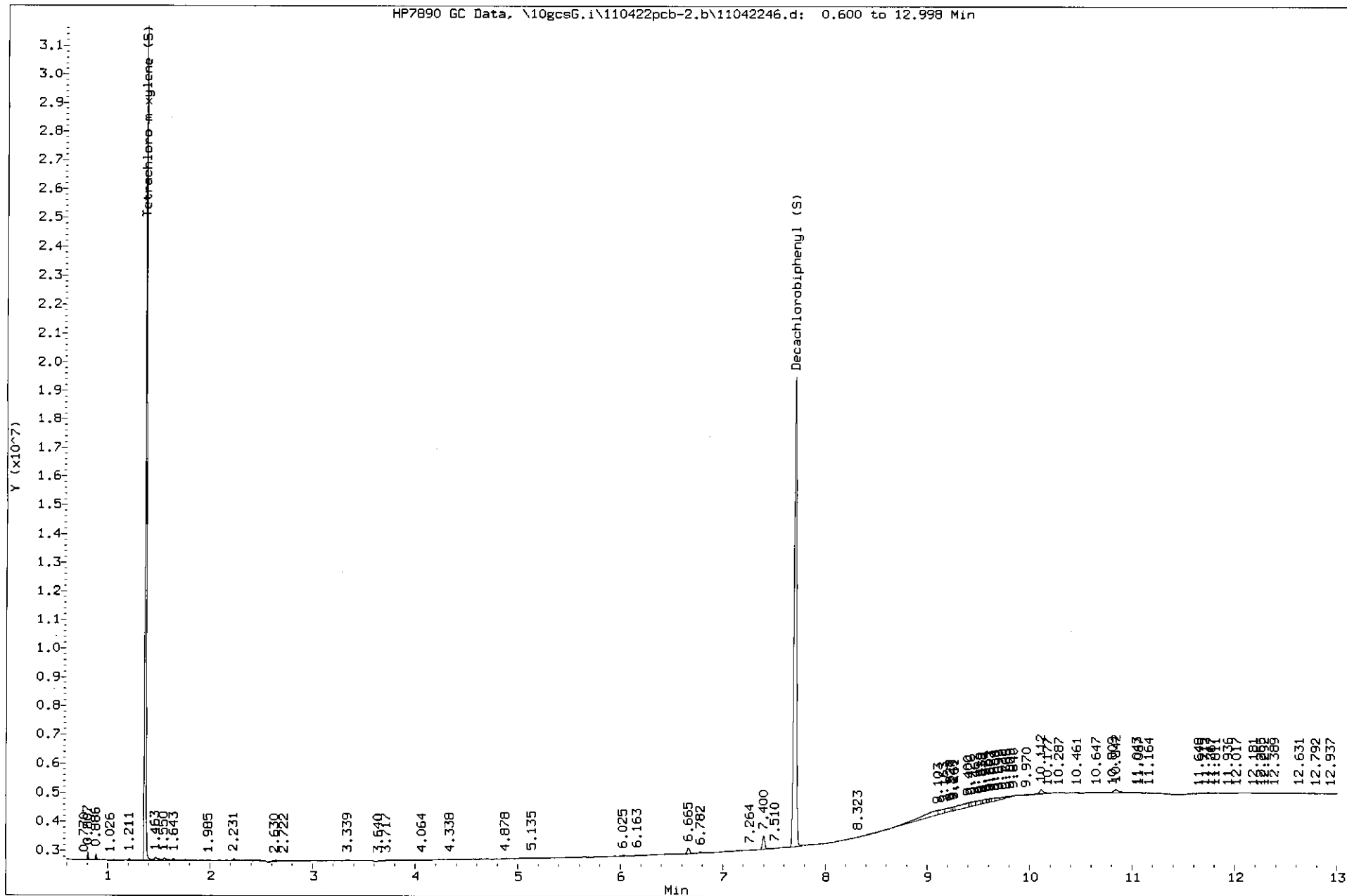
Date: 11/2/22

NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled By: DFLine: 1

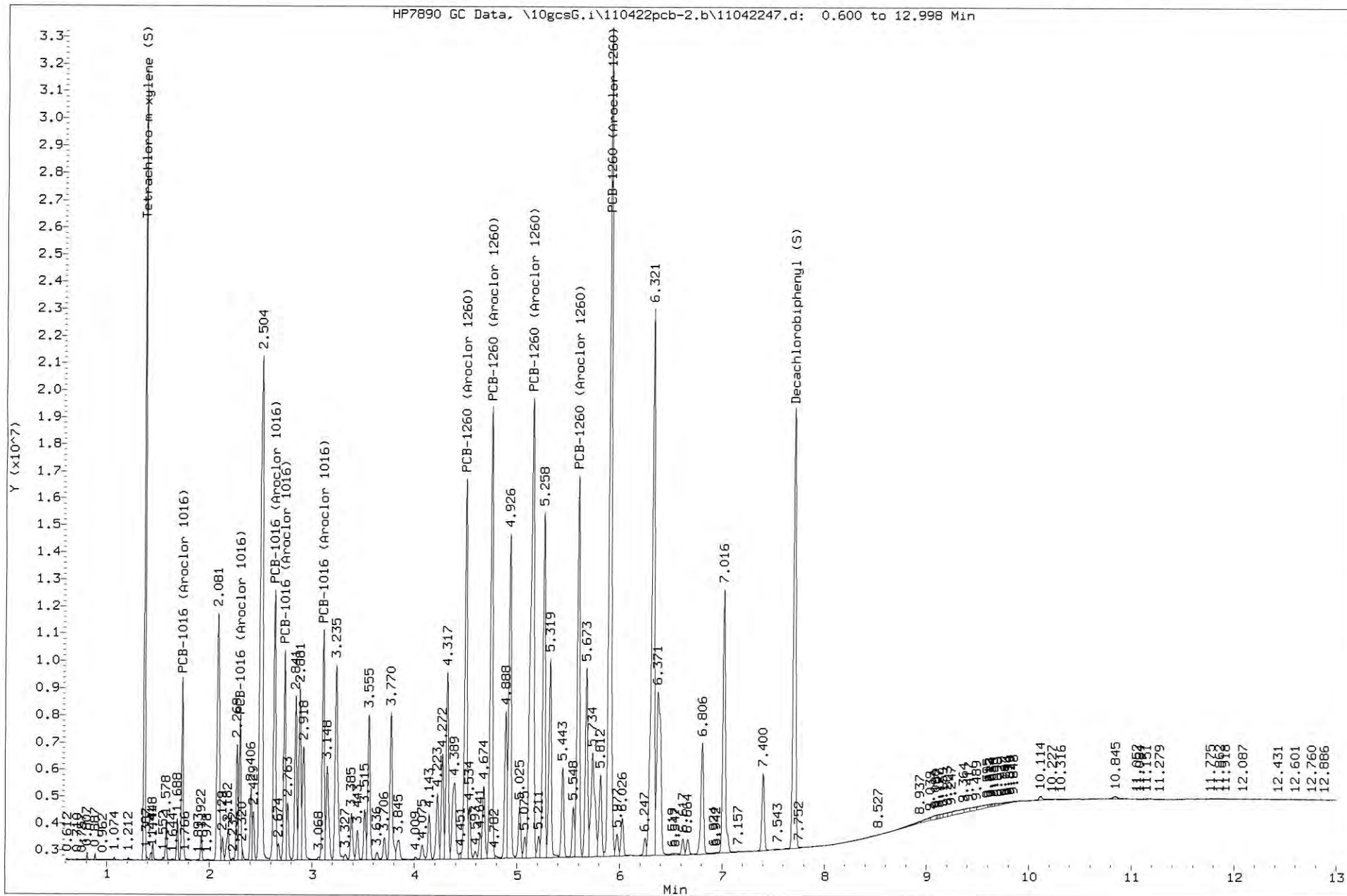
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Injection Date: 04-NOV-2022 21:20
Instrument: 10gcsG.i
Client Sample ID: MB

Batch 40936-851451
Blank 4501653



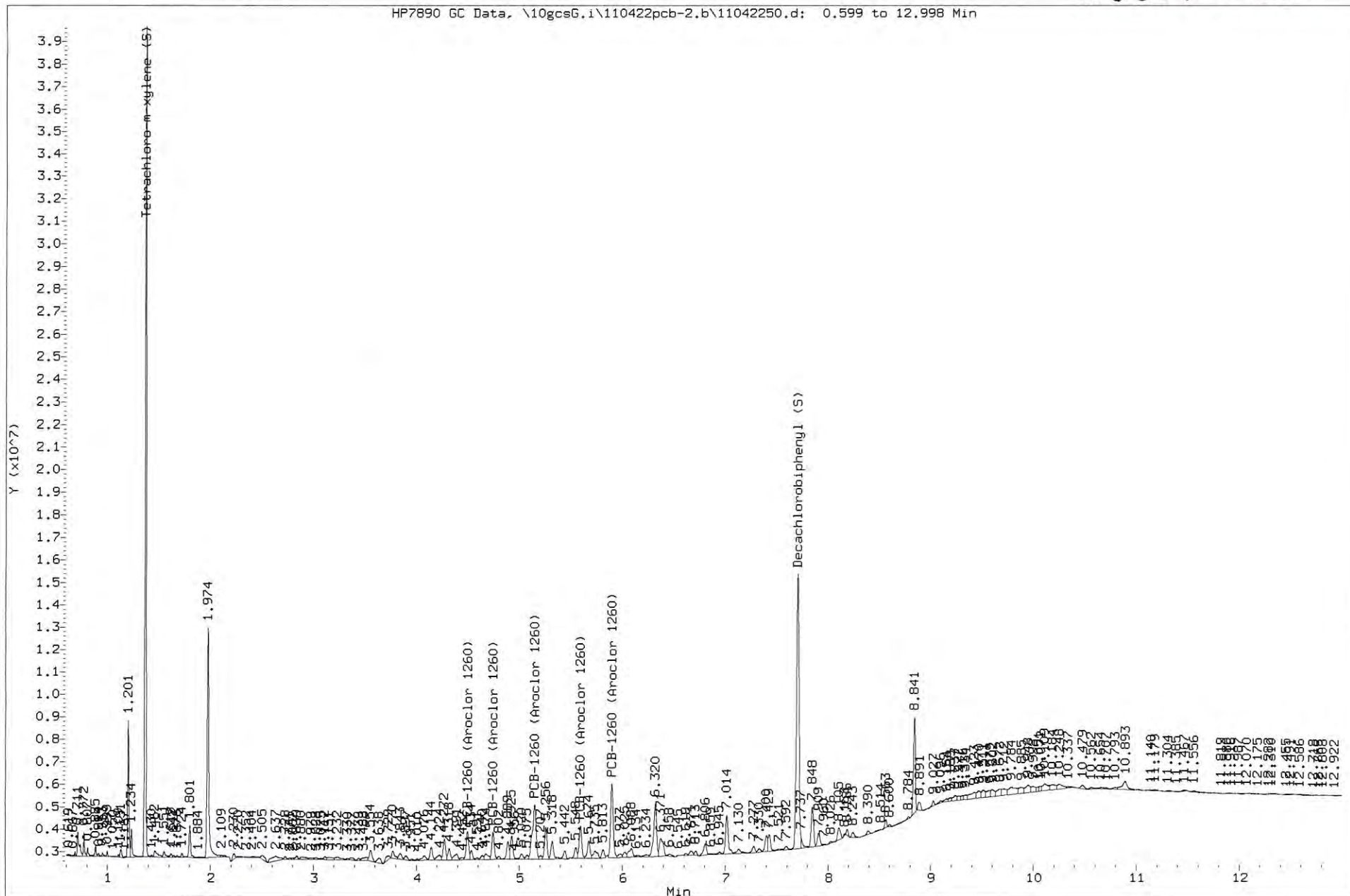
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Instrument: 10gcs6.i
Client Sample ID: MBLCS

Batch 40936-851451
LCS 4501654



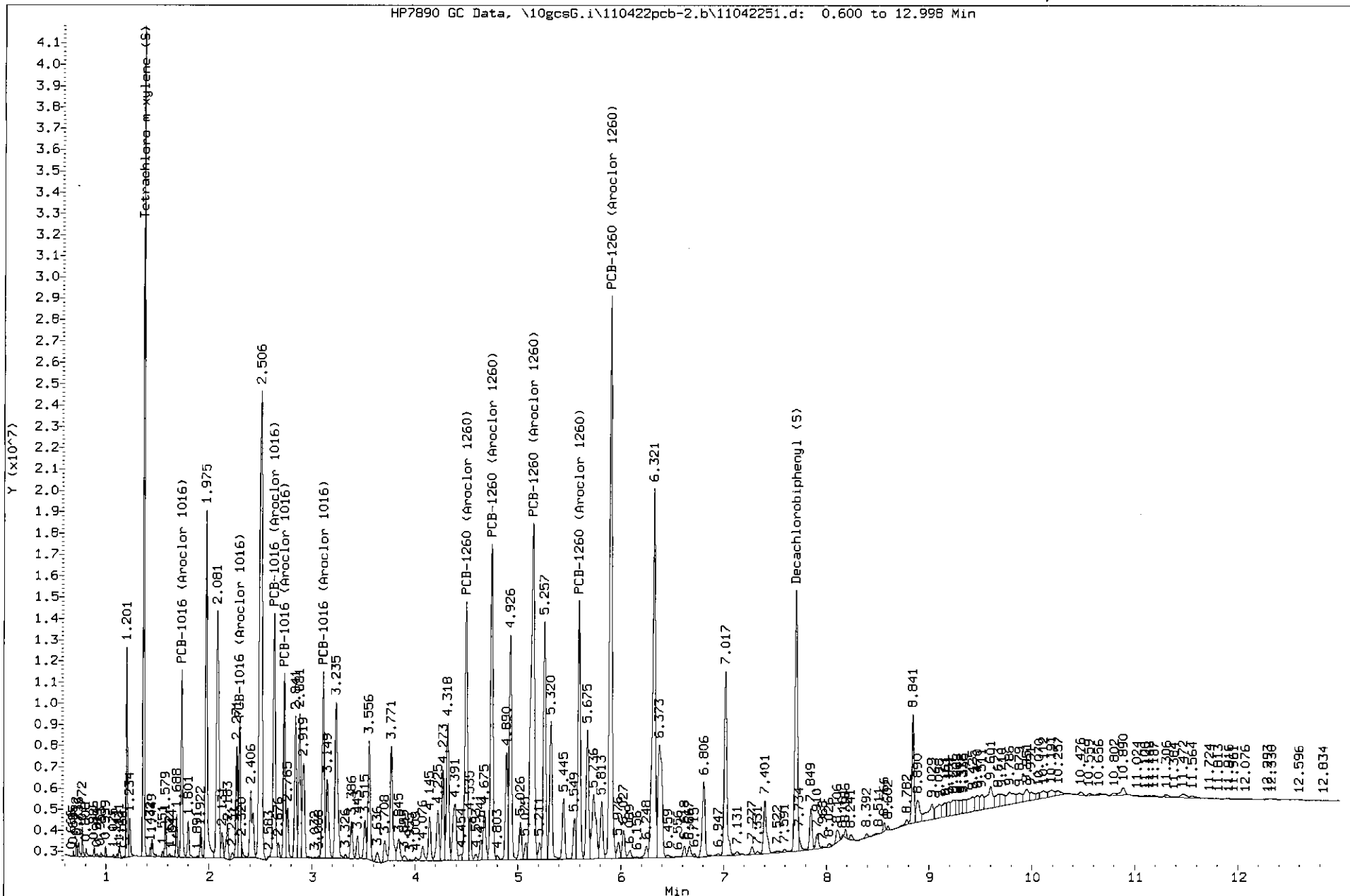
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Injection Date: 04-NOV-2022 22:23
Instrument: 10gcs6.i
Client Sample ID: ISM03-0.0-0.2-1022

Batch 40936-85145
10630729-001



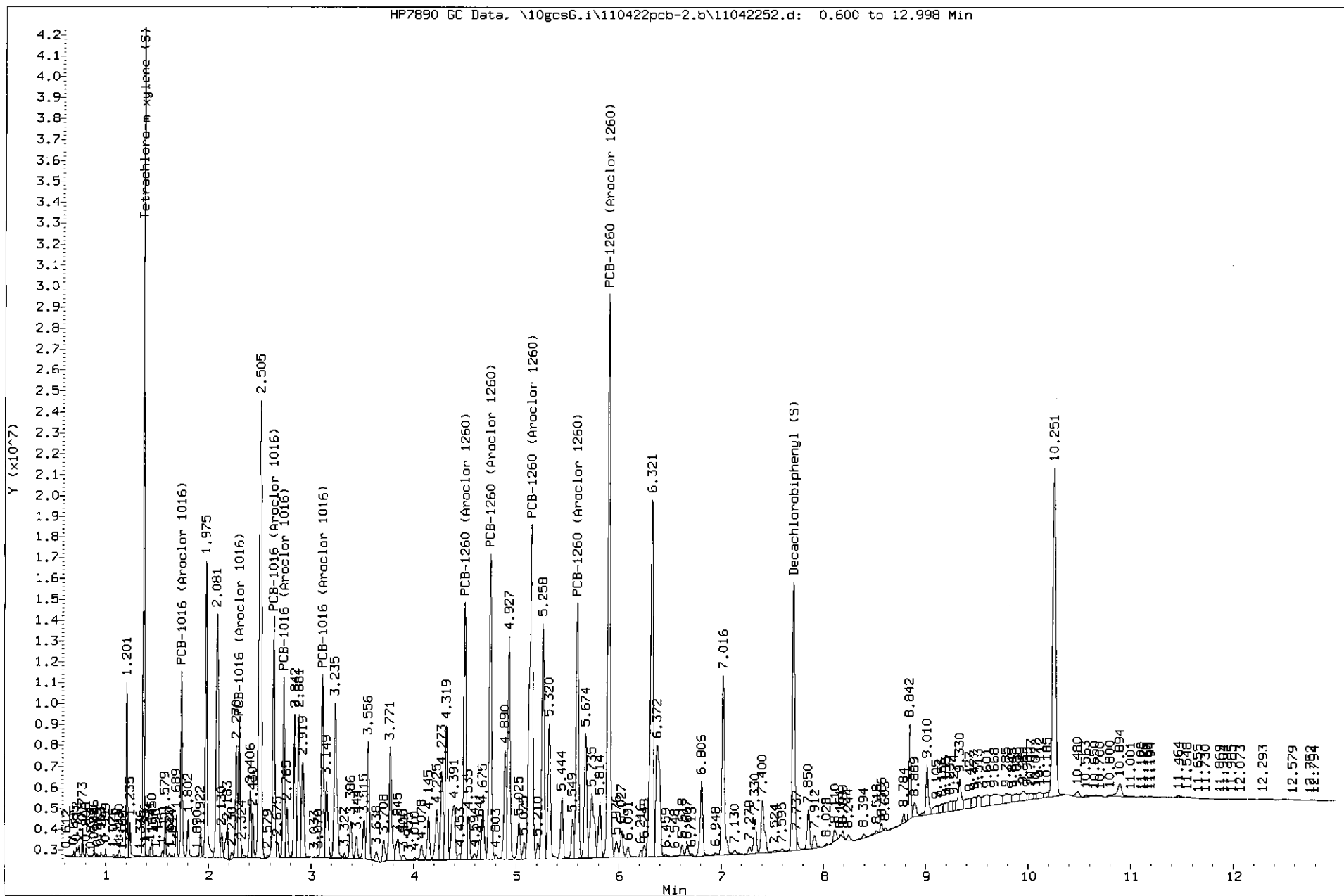
Data File: \\vi0wintarget\chem\10gcs6.i\110422pcb-2.b\11042251.d
Injection Date: 04-NOV-2022 22:39
Instrument: 10gcs6.i
Client Sample ID: ISM03-0.0-0.2-1022M

Batch 40936-851451
MS 4501655



Data File: \\v10wintarget\chem\10gcs6.i\110422pcb-2.b\11042252.d
Injection Date: 04-NOV-2022 22:55
Instrument: 10gcs6.i
Client Sample ID: ISM03-0.0-0.2-1022M

Batch 40936-851451
MSD 4501656



December 21, 2022

David Hodson
Jacobs
2020 SW 4th Avenue
Suite 300
Portland, OR 97201

RE: Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10632522

Dear David Hodson:

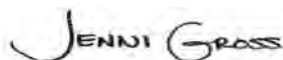
Enclosed are the analytical results for sample(s) received by the laboratory on November 04, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Minneapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jennifer Gross
jennifer.gross@pacelabs.com
(612)607-1700
Project Manager

Enclosures

cc: UPRR-Sysdat@ghd.com, UPRR



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10632522

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414

A2LA Certification #: 2926.01*

1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009*

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014*

Arkansas DW Certification #: MN00064

Arkansas WW Certification #: 88-0680

California Certification #: 2929

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137

Florida Certification #: E87605*

Georgia Certification #: 959

GMP+ Certification #: GMP050884

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: AI-03086*

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064*

Maryland Certification #: 322

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137*

Minnesota Dept of Ag Approval: via MN 027-053-137

Minnesota Petrofund Registration #: 1240*

Mississippi Certification #: MN00064

Missouri Certification #: 10100

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081*

New Jersey Certification #: MN002

New York Certification #: 11647*

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification (A2LA) #: R-036

North Dakota Certification (MN) #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification (1700) #: CL101

Ohio VAP Certification (1800) #: CL110*

Oklahoma Certification #: 9507*

Oregon Primary Certification #: MN300001

Oregon Secondary Certification #: MN200001*

Pennsylvania Certification #: 68-00563

Puerto Rico Certification #: MN00064

South Carolina Certification #: 74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192*

Utah Certification #: MN00064*

Vermont Certification #: VT-027053137

Virginia Certification #: 460163*

Washington Certification #: C486*

West Virginia DEP Certification #: 382

West Virginia DW Certification #: 9952 C

Wisconsin Certification #: 999407970

Wyoming UST Certification #: via A2LA 2926.01

USDA Permit #: P330-19-00208

Please Note: Applicable air certifications are denoted with an asterisk ().

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10632522

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10632522001	SB08-0.5-110322	Solid	11/03/22 08:45	11/04/22 09:45
10632522002	SB08-1-110322	Solid	11/03/22 09:10	11/04/22 09:45
10632522003	SB08-2.5-110322	Solid	11/03/22 09:20	11/04/22 09:45

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SAMPLE ANALYTE COUNT

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10632522

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10632522001	SB08-0.5-110322	EPA 8082A	RAG	11	PASI-M
10632522002	SB08-1-110322	EPA 8082A	RAG	11	PASI-M
10632522003	SB08-2.5-110322	EPA 8082A	RAG	11	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10632522

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
10632522001	SB08-0.5-110322					
EPA 8082A	PCB-1260 (Aroclor 1260)	15200	ug/kg	489	12/21/22 08:18	M1
10632522002	SB08-1-110322					
EPA 8082A	PCB-1260 (Aroclor 1260)	4550	ug/kg	250	12/21/22 08:33	
10632522003	SB08-2.5-110322					
EPA 8082A	PCB-1260 (Aroclor 1260)	290	ug/kg	49.7	12/20/22 23:31	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10632522

Method: EPA 8082A
Description: 8082A GCS PCB
Client: UPRR_Jacobs
Date: December 21, 2022

General Information:

3 samples were analyzed for EPA 8082A by Pace Analytical Services Minneapolis. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 859363

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10632522001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 4541336)
- PCB-1260 (Aroclor 1260)

Additional Comments:

Analyte Comments:

QC Batch: 859363

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- MS (Lab ID: 4541336)
 - PCB-1260 (Aroclor 1260)
- MSD (Lab ID: 4541337)
 - PCB-1260 (Aroclor 1260)

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10632522

Method: EPA 8082A

Description: 8082A GCS PCB

Client: UPRR_Jacobs

Date: December 21, 2022

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10632522

Sample: SB08-0.5-110322 **Lab ID: 10632522001** Collected: 11/03/22 08:45 Received: 11/04/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<20.7	ug/kg	48.9	20.7	1	12/20/22 08:07	12/20/22 22:12	12674-11-2	
PCB-1221 (Aroclor 1221)	<33.8	ug/kg	48.9	33.8	1	12/20/22 08:07	12/20/22 22:12	11104-28-2	
PCB-1232 (Aroclor 1232)	<28.9	ug/kg	48.9	28.9	1	12/20/22 08:07	12/20/22 22:12	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.2	ug/kg	48.9	30.2	1	12/20/22 08:07	12/20/22 22:12	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.0	ug/kg	48.9	25.0	1	12/20/22 08:07	12/20/22 22:12	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.4	ug/kg	48.9	24.4	1	12/20/22 08:07	12/20/22 22:12	11097-69-1	
PCB-1260 (Aroclor 1260)	15200	ug/kg	489	175	10	12/20/22 08:07	12/21/22 08:18	11096-82-5	M1
PCB-1262 (Aroclor 1262)	<32.1	ug/kg	48.9	32.1	1	12/20/22 08:07	12/20/22 22:12	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.5	ug/kg	48.9	23.5	1	12/20/22 08:07	12/20/22 22:12	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	92	%.	53-125		1	12/20/22 08:07	12/20/22 22:12	877-09-8	
Decachlorobiphenyl (S)	102	%.	41-125		1	12/20/22 08:07	12/20/22 22:12	2051-24-3	

Sample: SB08-1-110322 **Lab ID: 10632522002** Collected: 11/03/22 09:10 Received: 11/04/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.2	ug/kg	50.0	21.2	1	12/20/22 08:07	12/20/22 23:15	12674-11-2	
PCB-1221 (Aroclor 1221)	<34.5	ug/kg	50.0	34.5	1	12/20/22 08:07	12/20/22 23:15	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.6	ug/kg	50.0	29.6	1	12/20/22 08:07	12/20/22 23:15	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.9	ug/kg	50.0	30.9	1	12/20/22 08:07	12/20/22 23:15	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.5	ug/kg	50.0	25.5	1	12/20/22 08:07	12/20/22 23:15	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.9	ug/kg	50.0	24.9	1	12/20/22 08:07	12/20/22 23:15	11097-69-1	
PCB-1260 (Aroclor 1260)	4550	ug/kg	250	89.2	5	12/20/22 08:07	12/21/22 08:33	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.8	ug/kg	50.0	32.8	1	12/20/22 08:07	12/20/22 23:15	37324-23-5	
PCB-1268 (Aroclor 1268)	<24.0	ug/kg	50.0	24.0	1	12/20/22 08:07	12/20/22 23:15	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	87	%.	53-125		1	12/20/22 08:07	12/20/22 23:15	877-09-8	
Decachlorobiphenyl (S)	98	%.	41-125		1	12/20/22 08:07	12/20/22 23:15	2051-24-3	

Sample: SB08-2.5-110322 **Lab ID: 10632522003** Collected: 11/03/22 09:20 Received: 11/04/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1016 (Aroclor 1016)	<21.0	ug/kg	49.7	21.0	1	12/20/22 08:07	12/20/22 23:31	12674-11-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10632522

Sample: SB08-2.5-110322 **Lab ID: 10632522003** Collected: 11/03/22 09:20 Received: 11/04/22 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB									
Analytical Method: EPA 8082A Preparation Method: EPA 3546									
Pace Analytical Services - Minneapolis									
PCB-1221 (Aroclor 1221)	<34.3	ug/kg	49.7	34.3	1	12/20/22 08:07	12/20/22 23:31	11104-28-2	
PCB-1232 (Aroclor 1232)	<29.4	ug/kg	49.7	29.4	1	12/20/22 08:07	12/20/22 23:31	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.7	ug/kg	49.7	30.7	1	12/20/22 08:07	12/20/22 23:31	53469-21-9	
PCB-1248 (Aroclor 1248)	<25.3	ug/kg	49.7	25.3	1	12/20/22 08:07	12/20/22 23:31	12672-29-6	
PCB-1254 (Aroclor 1254)	<24.8	ug/kg	49.7	24.8	1	12/20/22 08:07	12/20/22 23:31	11097-69-1	
PCB-1260 (Aroclor 1260)	290	ug/kg	49.7	17.7	1	12/20/22 08:07	12/20/22 23:31	11096-82-5	
PCB-1262 (Aroclor 1262)	<32.7	ug/kg	49.7	32.7	1	12/20/22 08:07	12/20/22 23:31	37324-23-5	
PCB-1268 (Aroclor 1268)	<23.9	ug/kg	49.7	23.9	1	12/20/22 08:07	12/20/22 23:31	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	78	%.	53-125		1	12/20/22 08:07	12/20/22 23:31	877-09-8	
Decachlorobiphenyl (S)	92	%.	41-125		1	12/20/22 08:07	12/20/22 23:31	2051-24-3	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10632522

QC Batch: 859363 Analysis Method: EPA 8082A
QC Batch Method: EPA 3546 Analysis Description: 8082A GCS PCB
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10632522001, 10632522002, 10632522003

METHOD BLANK: 4541303 Matrix: Solid
Associated Lab Samples: 10632522001, 10632522002, 10632522003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<21.2	50.0	21.2	12/20/22 21:39	
PCB-1221 (Aroclor 1221)	ug/kg	<34.5	50.0	34.5	12/20/22 21:39	
PCB-1232 (Aroclor 1232)	ug/kg	<29.6	50.0	29.6	12/20/22 21:39	
PCB-1242 (Aroclor 1242)	ug/kg	<30.9	50.0	30.9	12/20/22 21:39	
PCB-1248 (Aroclor 1248)	ug/kg	<25.5	50.0	25.5	12/20/22 21:39	
PCB-1254 (Aroclor 1254)	ug/kg	<24.9	50.0	24.9	12/20/22 21:39	
PCB-1260 (Aroclor 1260)	ug/kg	<17.8	50.0	17.8	12/20/22 21:39	
PCB-1262 (Aroclor 1262)	ug/kg	<32.8	50.0	32.8	12/20/22 21:39	
PCB-1268 (Aroclor 1268)	ug/kg	<24.0	50.0	24.0	12/20/22 21:39	
Decachlorobiphenyl (S)	%.	95	41-125		12/20/22 21:39	
Tetrachloro-m-xylene (S)	%.	85	53-125		12/20/22 21:39	

LABORATORY CONTROL SAMPLE: 4541304

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	1000	928	93	68-125	
PCB-1260 (Aroclor 1260)	ug/kg	1000	947	95	70-125	
Decachlorobiphenyl (S)	%.			104	41-125	
Tetrachloro-m-xylene (S)	%.			94	53-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4541336 4541337

Parameter	Units	10632522001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<20.7	995	982	894	892	90	91	53-125	0	30	
PCB-1260 (Aroclor 1260)	ug/kg	15200	995	982	15300	15500	7	30	30-143	1	30	E,M1
Decachlorobiphenyl (S)	%.						97	102	41-125			
Tetrachloro-m-xylene (S)	%.						88	91	53-125			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10632522

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

E Analyte concentration exceeded the calibration range. The reported result is estimated.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10632522

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10632522001	SB08-0.5-110322	EPA 3546	859363	EPA 8082A	859557
10632522002	SB08-1-110322	EPA 3546	859363	EPA 8082A	859557
10632522003	SB08-2.5-110322	EPA 3546	859363	EPA 8082A	859557

REPORT OF LABORATORY ANALYSIS

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40254208

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>.

Page : 1 Of

Section A

Section B

Section C

Required Client Information:

Required Project Information:

Invoice Information:

Company	Jacobs for UPRR	Report To.	Hodson, David	Attention	John DeJong
Address:	2020 SW 4th Avenue, Suite 300	Copy To		Company Name.	UPRR
	Portland, OR 97201			Address	4315 E Sprague Ave, Spokane Valley, WA 99212
Email	david.hodson@jacobs.com	Purchase Order #	2903-01	Pace Quote	4700001441 (MA-000166-2022)
Phone	(510)316-2323	Project Name.	Portland OR-Peninsula Iron Works	Pace Project Manager	jennifer.gross@pacelabs.com,
Requested Due Date		Project #.		Pace Profile #:	45173

OR / Portland - Multnomah County

[illegible][illegible]

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	DAVID HODSON				
SIGNATURE of SAMPLER:	11/3/22				

Effective Date: 8/16/2022

Client Name: Jacobs

Sample Preservation Receipt Form

Project # 40254308All containers needing preservation have been checked and noted below
Lab Lot# of pH paper☐ Yes☐ No☒ N/A

Lab Std #/ID of preservation (if pH adjusted).

Initial when
completed:Date/
Time:

Pace Lab #	Glass						Plastic						Vials					Jars				General				VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN 1	GN 2					
001																																2.5 / 5
002																																2.5 / 5
003																																2.5 / 5
004																																2.5 / 5
005																																2.5 / 5
006																																2.5 / 5
007																																2.5 / 5
008																																2.5 / 5
009																																2.5 / 5
010																																2.5 / 5
011																																2.5 / 5
012																																2.5 / 5
013																																2.5 / 5
014																																2.5 / 5
015																																2.5 / 5
016																																2.5 / 5
017																																2.5 / 5
018																																2.5 / 5
019																																2.5 / 5
020																																2.5 / 5

Exceptions to preservation check VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other.

Headspace in VOA Vials (>6mm) ☐ Yes ☒ No ☒ N/A

*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of 2

Sample Condition Upon Receipt Form (SCUR)

Client Name: Jacobs

Project #:

WO#: 40254308

Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco
☐ Client ☐ Pace Other: _____



Tracking #: 5923 7141 9689

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other _____

Thermometer Used SR - 110 Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☐ None ☐ Meltwater Only

Cooler Temperature Uncorr: _____ /Corr: 0°

Temp Blank Present: ☐ yes ☒ no

Biological Tissue is Frozen: ☐ yes ☐ no

Person examining contents:

Date: 11/4/22 Initials: mp

Labeled By Initials: mh

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice

Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☐ Yes ☒ No ☐ N/A	2. <u>proj#, 11/4/22 mp</u>
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC:	☒ Yes ☐ No ☐ N/A	4.
Samples Arrived within Hold Time	☒ Yes ☐ No	5.
- DI VOA Samples frozen upon receipt	☐ Yes ☐ No	Date/Time
Short Hold Time Analysis (<72hr):	☐ Yes ☒ No	6.
Rush Turn Around Time Requested:	☐ Yes ☒ No	7.
Sufficient Volume:		8.
For Analysis: ☒ Yes ☐ No MS/MSD ☐ Yes ☒ No ☐ N/A		
Correct Containers Used:	☒ Yes ☐ No	9.
Correct Type: <u>Pace Green Bay</u> Pace IR, Non-Pace		
Containers Intact:	☒ Yes ☐ No	10.
Filtered volume received for Dissolved tests	☐ Yes ☐ No ☒ N/A	11.
Sample Labels match COC:	☐ Yes ☒ No ☐ N/A	12. <u>No collect date or time 11/4/22 mp</u>
-Includes date/time/ID/Analysis Matrix: <u>5</u>		
Trip Blank Present:	☐ Yes ☐ No ☒ N/A	13.
Trip Blank Custody Seals Present	☐ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time _____

Comments/ Resolution: _____

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample log

Page 2 of 2

Internal Transfer Chain of Custody

40254308



☒ Samples Pre-Logged into eCOC.

State Of Origin: OR

Cert. Needed: ☐ Yes ☐ No

Owner Received Date: 11/4/2022 Results Requested By: 11/15/2022



Workorder: 10632522 Workorder Name: Portland OR-Peninsula Iron Wor

Report To Subcontract To Requested Analysis

Jennifer Gross
Pace Analytical Minnesota
1700 Elm Street
Minneapolis, MN 55414
Phone (612)607-1700

Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

WO#: 10632522



10632522

MISC / Sieving (<2mm) (PACE-GB)

Preserved Containers

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Containers	MISC / Sieving (<2mm) (PACE-GB)	LAB USE ONLY
1	SB08-0.5-110322	PS	11/3/2022 08:45	10632522001	Solid	1	X	001
2	SB08-1-110322	PS	11/3/2022 09:10	10632522002	Solid	1	X	002
3	SB08-2 5-110322	PS	11/3/2022 09:20	10632522003	Solid	1	X	003
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	Fedex	11/4/22 09:45	mail	11/4/22 09:45	Forward prepped volume to Pace Mnpls, methods 8082 & possibly 1668.
2	Morgan	12/16/22 17:00	mail	12/17/22 10:46	Hold all additional volume for six months.
3					

Cooler Temperature on Receipt ☐ °C Custody Seal ☒ or N Received on Ice ☒ or N Samples Intact ☒ or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

0.9, 11.3, 0.7

2.6, 2.5, 2.8, 3.7

Effective Date: 11/16/2022

Sample Condition
Upon Receipt

Client Name:

Project #:

WO#: 10632522

PM: JMG

Due Date: 02/12/23

CLIENT: UPRR_Jacobs

Courier: ☐ FedEx ☐ UPS ☐ USPS ☐ Client
☐ Pace ☐ Speedee ☒ Commercial☐ See Exceptions

Tracking Number: ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ NoBiological Tissue Frozen? ☐ Yes ☐ No ☒ N/APacking Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ OtherTemp Blank? ☒ Yes ☐ NoThermometer: ☐ T1 (0461) ☐ T2 (1336) ☐ T3 (0459) ☐ T4 (0254) ☐ T5 (0178)
☐ T6 (0235) ☒ T7 (0042) ☐ T8 (0775) ☐ T9 (0727) ☐ 01339252/1710Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☒ None
☐ MeltedDid Samples Originate in West Virginia? ☐ Yes ☒ No JMG 12/19/22 Were All Container Temps Taken? ☐ Yes ☐ No ☒ N/A JMG 12/19/22

Temp should be above freezing to 6 °C

Cooler temp Read w/Temp Blank: 3.24, 3.07, 3.6

Average Corrected Temp
(no temp blank only): °C

Correction Factor: +.1

Cooler Temp Corrected w/temp blank: 3.25, 3.17, 3.7

☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 ContainerUSDA Regulated Soil: ☐ N/A, water sample/other: _____

Date/Initials of Person Examining Contents: 12/19/22 JMG

Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? ☐ Yes ☒ NoDid samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

Location (Check one): ☐ Duluth ☒ Minneapolis ☐ Virginia	COMMENTS
Chain of Custody Present and Filled Out?	1.
Chain of Custody Relinquished?	2.
Sampler Name and/or Signature on COC?	3.
Samples Arrived within Hold Time?	4. If fecal: ☐ <8 hrs ☐ >8 hr, <24 ☐ No
Short Hold Time Analysis (<72 hr)?	5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E.coli ☐ BOD/cBOD ☐ Hex Chrom ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	6. late
Sufficient Sample Volume?	7.
Correct Containers Used?	8.
-Pace Containers Used?	
Containers Intact?	9.
Field Filtered Volume Received for Dissolved Tests?	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	11. If no, write ID/Date/Time of container below: CN Containers added to WAs ☐ See Exceptions ENV-FRM-MIN4-0142
Matrix: ☐ Water ☒ Soil ☐ Oil ☐ Other	
All containers needing acid/base preservation have been checked?	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , <2pH, NaOH >9 Sulfide, NaOH >10 Cyanide)	☐ NaOH ☐ HNO ₃ ☐ H ₂ SO ₄ ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS	Positive for Residual Chlorine? ☐ Yes ☐ No ☐ See Exceptions ENV-FRM-MIN4-0142
(*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)	pH Paper Lot #
Headspace in Methyl Mercury Container?	Residual Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Extra labels present on soil VOA or WIDRO containers?	13.
Headspace in VOA Vials (greater than 6mm)?	14. ☐ See Exceptions ENV-FRM-MIN4-0142
3 Trip Blanks Present?	15.
Trip Blank Custody Seals Present?	Pace Trip Blank Lot # (if purchased):

CLIENT NOTIFICATION/RESOLUTION

Person Contacted:

Field Data Required? ☐ Yes ☐ No

Comments/Resolution:

Date/Time:

Project Manager Review:

Date: 12/19/22

NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled By: NE

Line: 1



DC#_Title: ENV-FRM-MIN4-0142 v02_Sample Condition Upon Receipt
(SCUR) Exception Form

Effective Date: 09/22/2022

Workorder #: _____

No Temp Blank		
Read Temp	Corrected Temp	Average temp

PM Notified of Out of Temp Cooler? ☐ Yes ☐ No
If yes, indicate who was contacted, date and time. If no, indicate reason why.

Multiple Cooler Project? ☐ Yes ☐ No

If anything is OVER 6.0° C, you **MUST** document containers in this section **HERE**



Tracking Number	Temperature
3429796-4	8.9
3429796-5	11.3
3429796-2	8.7
3429796-1	11.2

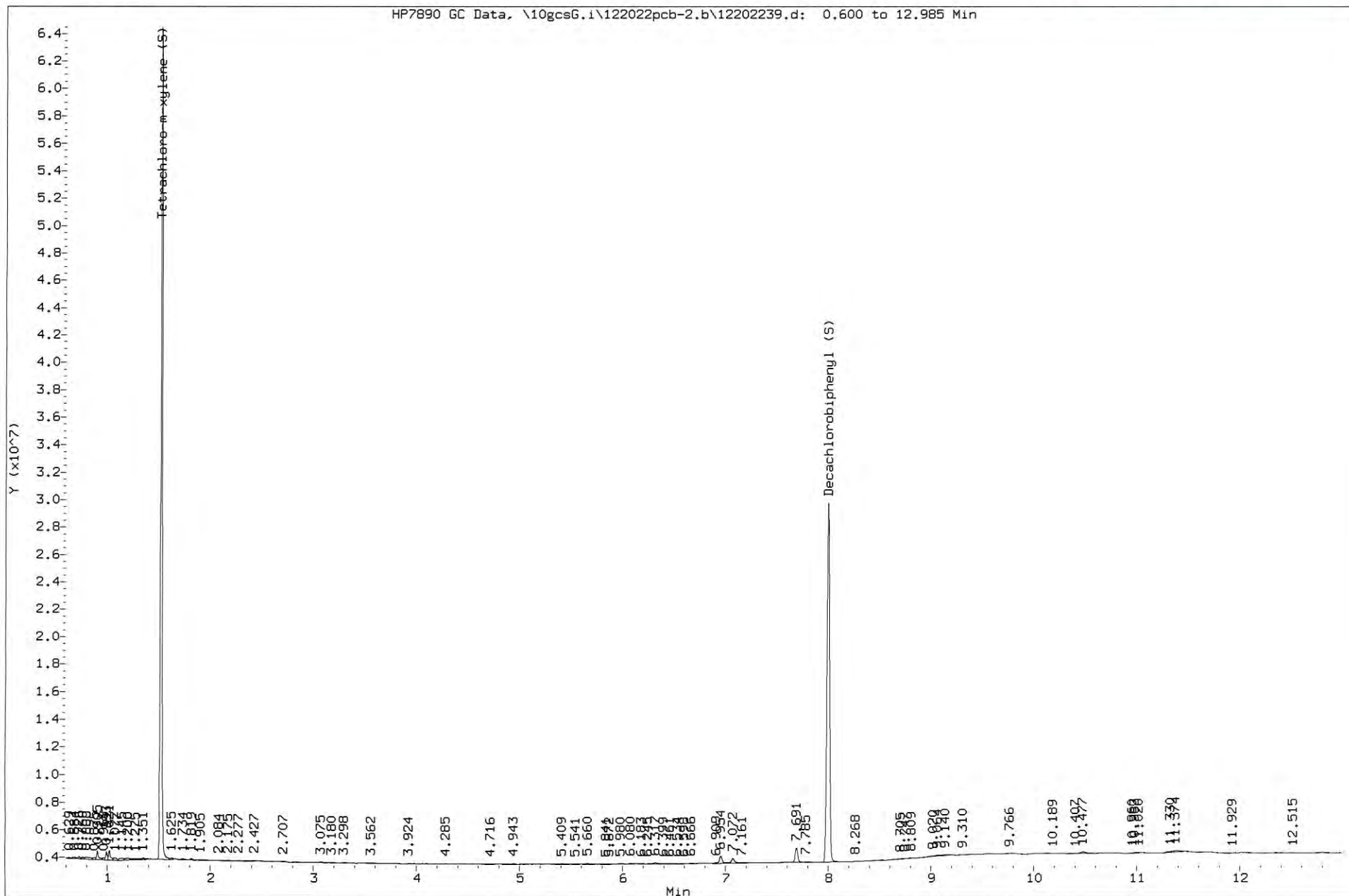
Out of Temp Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples										
Sample ID	Type Of Preserve	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance After Addition?		Initials
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	

Comments:

Data File: \\v10wintarget\chem\10gcsG.i\122022pcb-2.b\12202239.d
Injection Date: 20-DEC-2022 21:39
Instrument: 10gcsG.i
Client Sample ID: MB

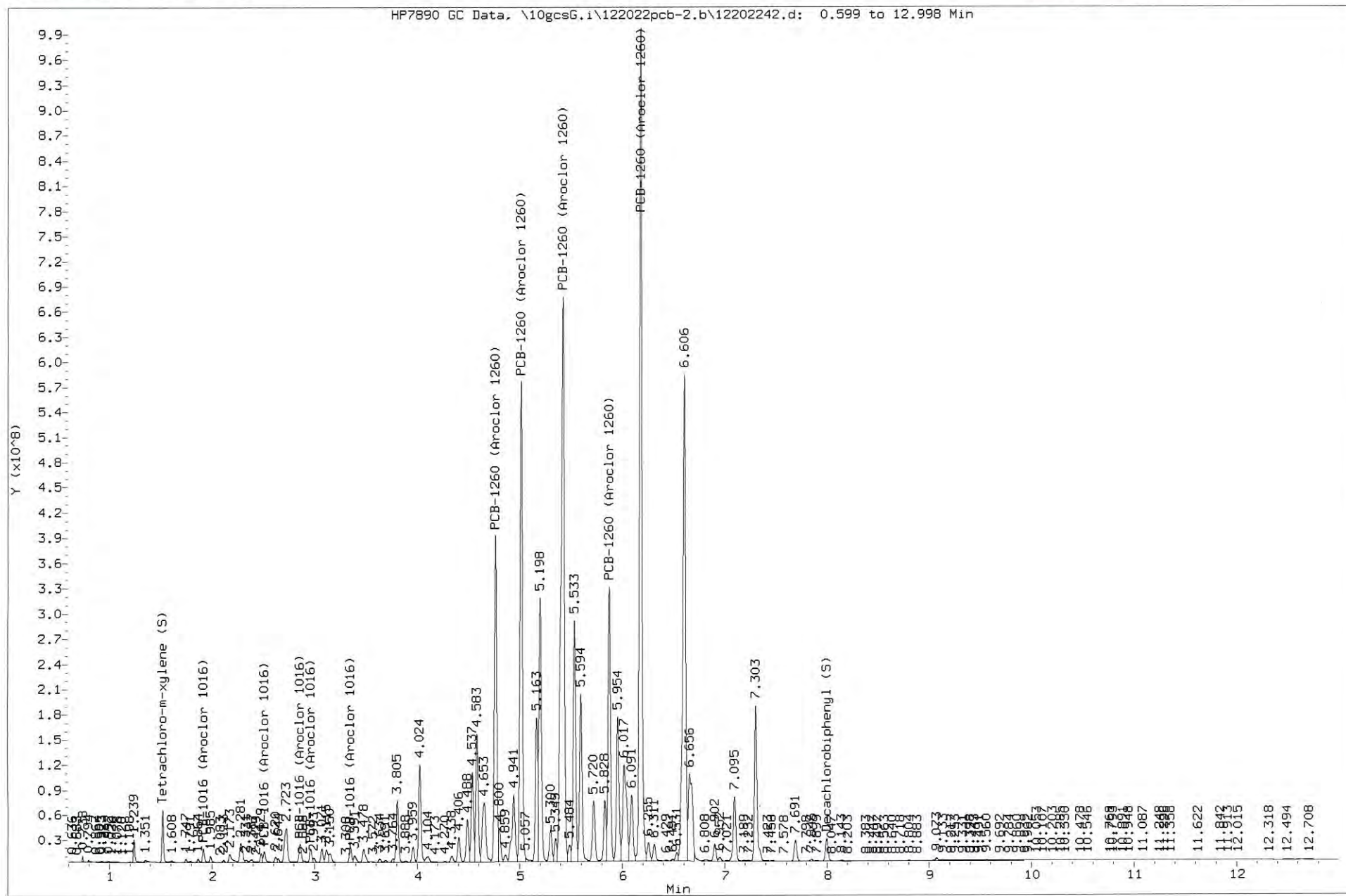
Batch 41307-859557
Blank 4541303



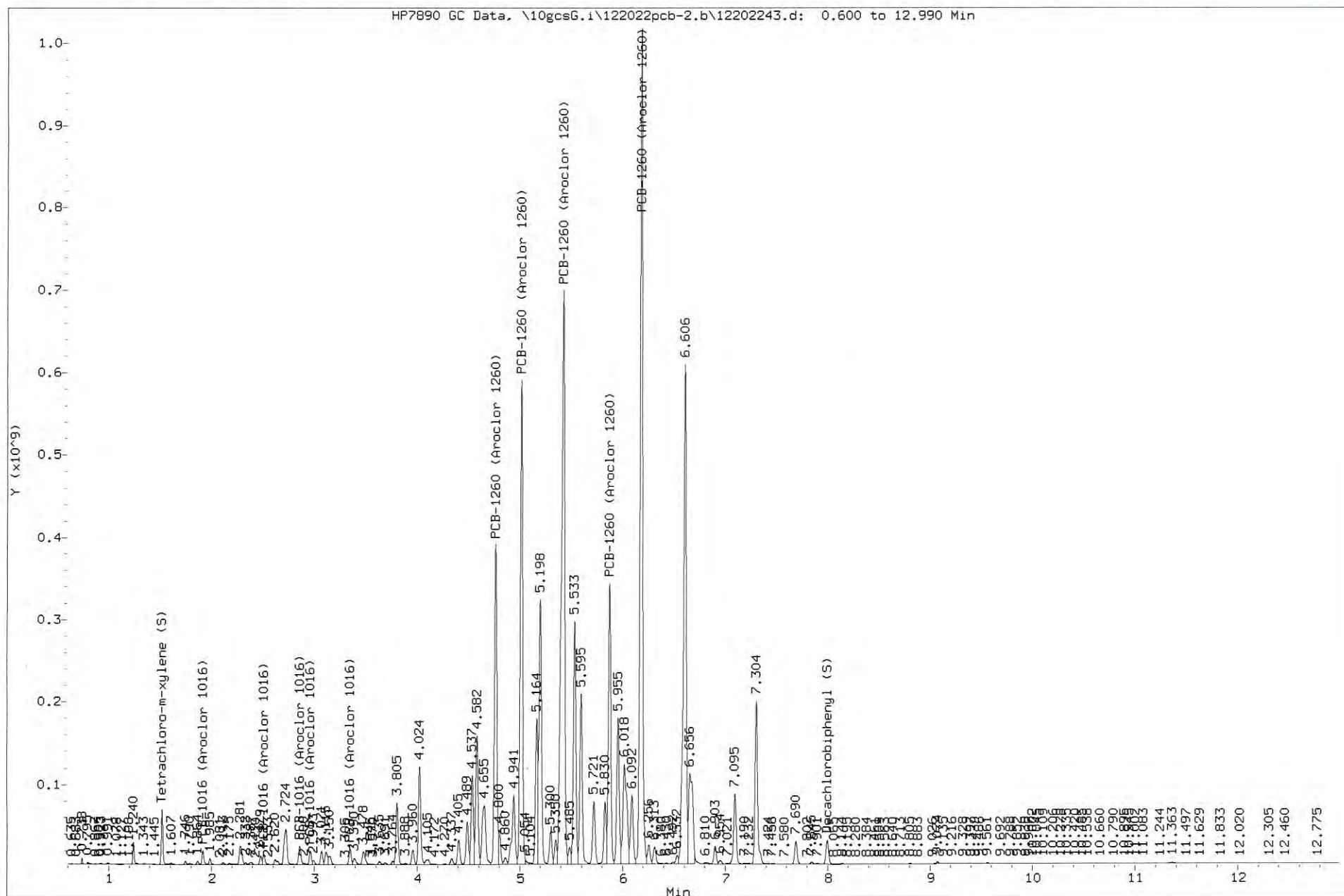
Batch 41307-859557
LCS 4541304

Batch 41307-859557
10632522-1

Batch 41307-859557
MS 4541336

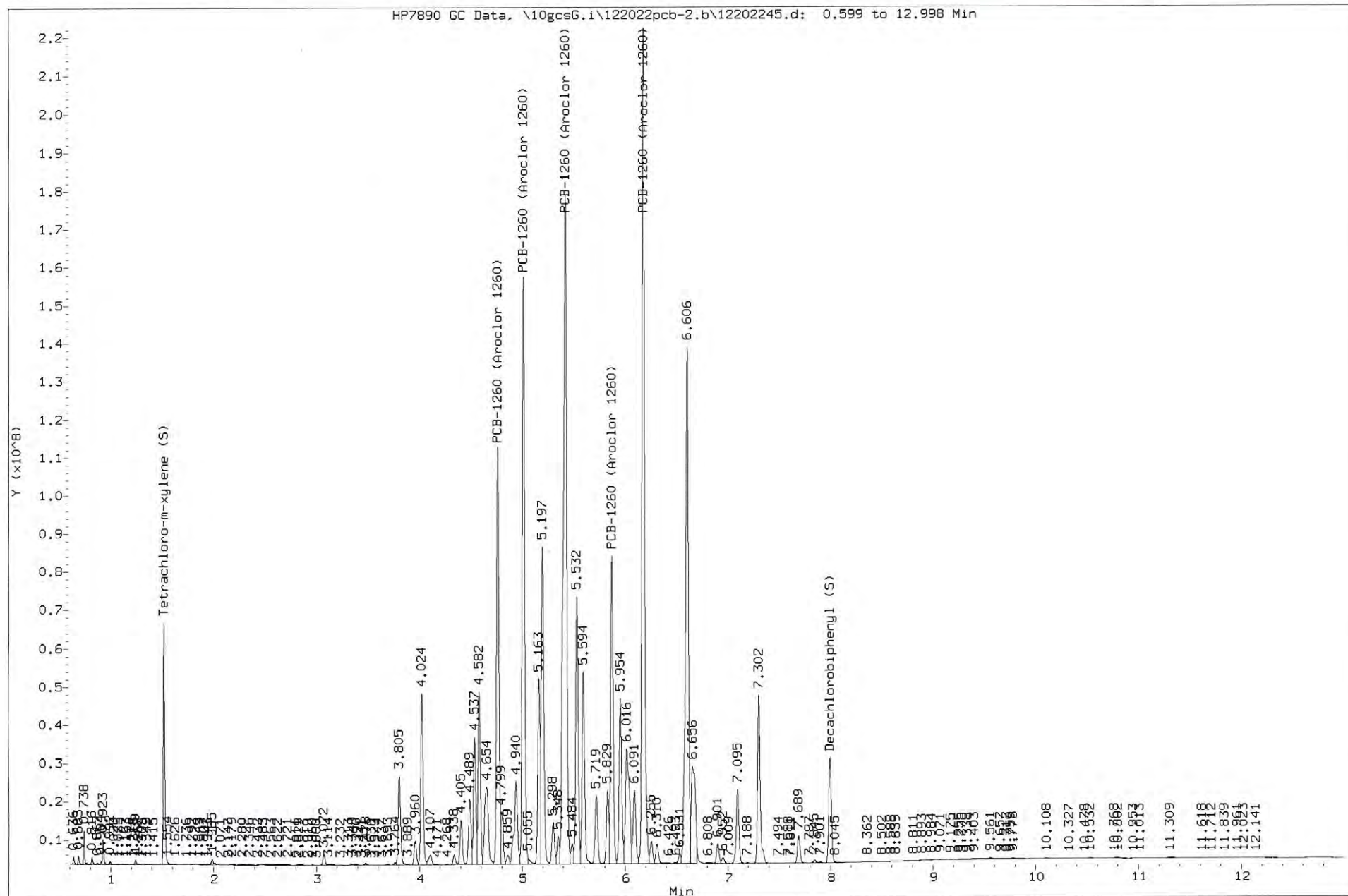


Batch 41307-859557
MSD 4541337



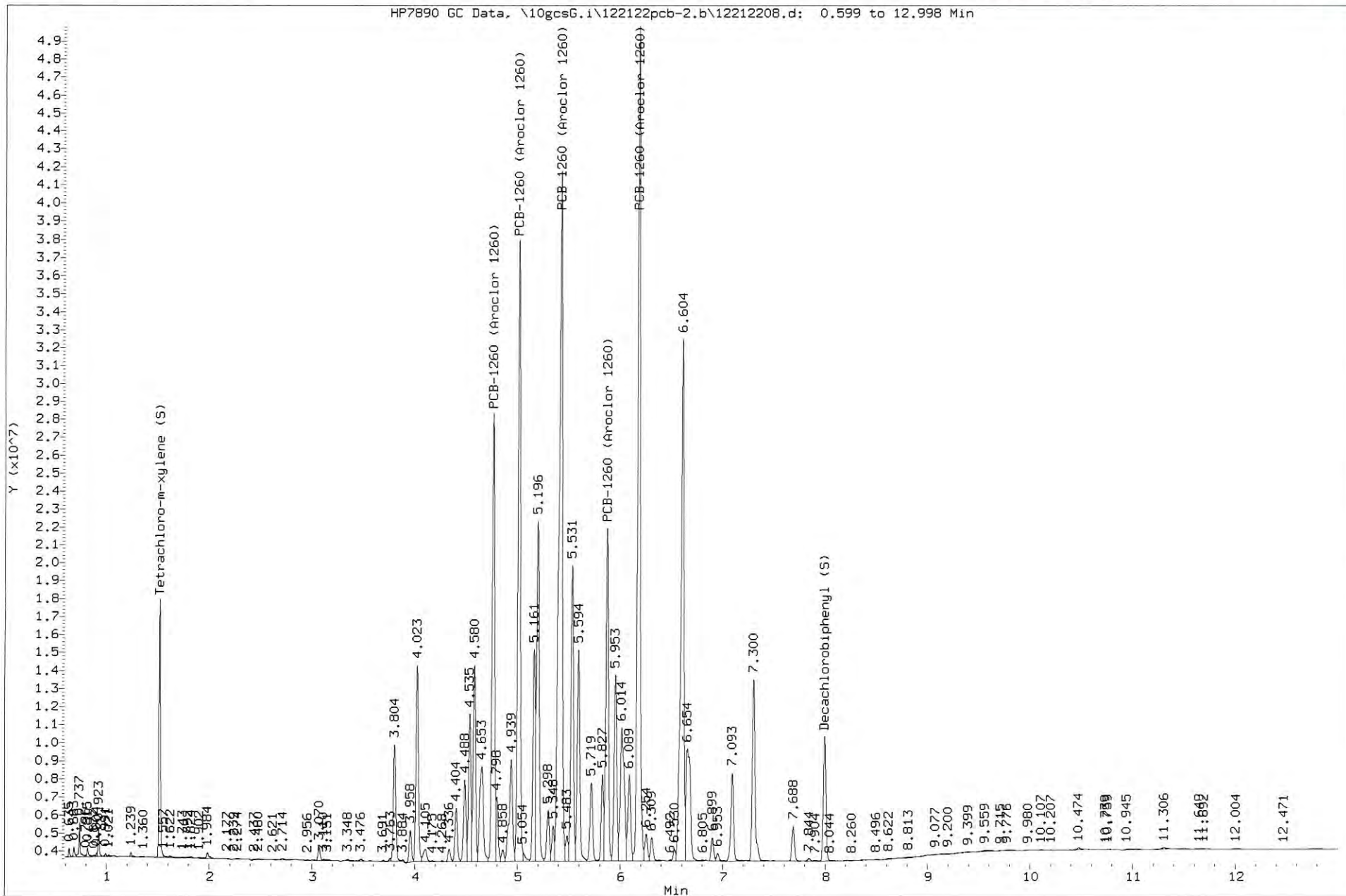
Data File: \\v10wintarget\chem\10gcsG.1\122022pcb-2.b\12202245.d
Injection Date: 20-DEC-2022 23:15
Instrument: 10gcsG.i
Client Sample ID: SB08-1-110322

Batch 41307-859557
10632522-2



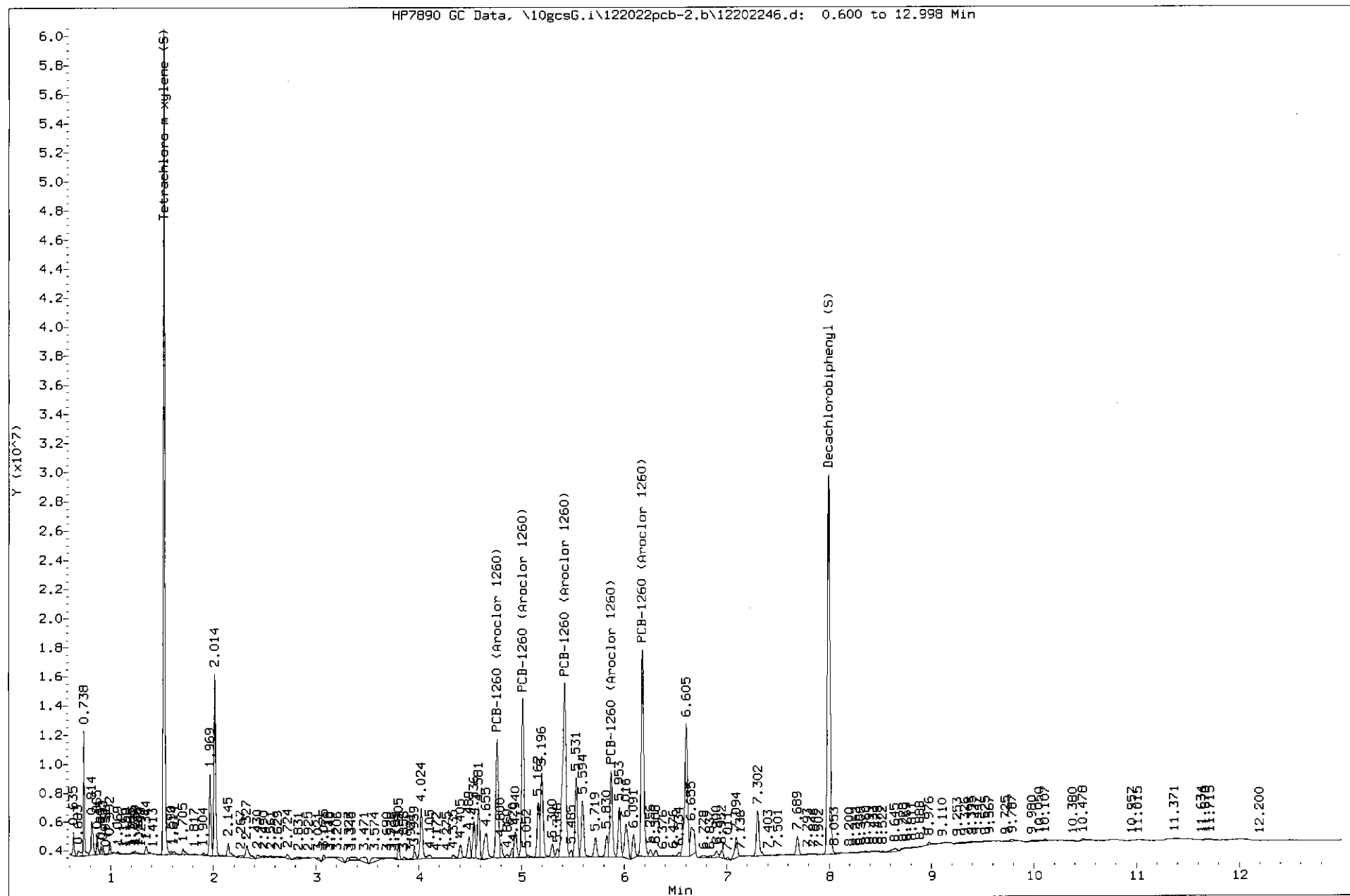
Data File: \\v10wintarget\chem\10gcsG.i\122122pcb-2.b\12212208.d
Injection Date: 21-DEC-2022 08:33
Instrument: 10gcsG.1
Client Sample ID: SB08-1-110322

Batch 41307-859557
10632522-2 Dilution: 5x



Data File: \\v10wintarget\chem\10gcsG.i\122022pcb-2.b\12202246.d
Injection Date: 20-DEC-2022 23:31
Instrument: 10gcsG.i
Client Sample ID: SB08-2.5-110322

Batch 41307-859557
10632522-3



January 26, 2023

David Hodson
Jacobs
2020 SW 4th Avenue
Suite 300
Portland, OR 97201

RE: Project: Portland OR-Peninsula Iron Wor
Pace Project No.: 10638496

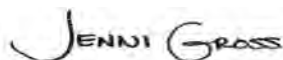
Dear David Hodson:

Enclosed are the analytical results for sample(s) received by the laboratory between October 18, 2022 and November 04, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jennifer Gross
jennifer.gross@pacelabs.com
(612)607-1700
Project Manager

Enclosures

cc: UPRR-Sysdat@ghd.com, UPRR



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: Portland OR-Peninsula Iron Wor

Pace Project No.: 10638496

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10638496001	SB06-1.0-1.5-1022	Solid	10/17/22 15:20	10/18/22 09:45
10638496002	SB08-0.5-110322	Solid	11/03/22 08:45	11/04/22 09:45
10638496003	SB10-0.0-0.5-1022	Solid	10/18/22 11:15	10/19/22 10:00
10638496004	SB12-0.0-0.5-1022	Solid	10/18/22 12:30	10/19/22 10:00
10638496005	SB13-0.0-0.5-1022	Solid	10/19/22 10:00	10/20/22 10:30
10638496006	SB14-1.0-1.5-1022	Solid	10/19/22 08:05	10/20/22 10:30

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project:

Pace Project No.:

Method:

Description:

Client:

Date:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

From: [Hodson, David](#)
To: [Jennifer Gross](#)
Subject: RE: [EXTERNAL] Portland OR-Peninsula Iron Wor (Pace Project # 10632522)
Date: Friday, December 23, 2022 9:44:07 AM
Attachments: [image001.png](#)

CAUTION: This email originated from outside Pace Analytical. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Jenni,

Can you have the following samples analyzed by EPA Method 1668 (PCB congeners)?

- SB06-1.0-1.5-1022
- SB08-0.5-110322
- SB10-0.0-0.5-1022
- SB12-0.0-0.5-1022
- SB13-0.0-0.5-1022
- SB14-1.0-1.5-1022

David J Hodson, P.E. * | [Jacobs](#) | Senior Project Manager
M: 1 510 316 2323 | david.hodson@jacobs.com
2020 SW 4th Avenue, Suite 300 | Portland, OR 97201

** Registered in CA, OR, and WA*

From: Paceport Email Notification <jennifer.gross@pacelabs.com>
Sent: Wednesday, December 21, 2022 3:06 PM
To: Jennifer Gross <jennifer.gross@pacelabs.com>; uprr-sysdat@ghd.com; Hodson, David <David.Hodson@jacobs.com>
Subject: [EXTERNAL] Portland OR-Peninsula Iron Wor (Pace Project # 10632522)



[Paceport Login](#)

Pace Automated Email Notification

This email contains EDDs and Reports generated by Paceport's automated deliverable service. The attached files have been authorized to be sent to you due to the completion of project 10632522. Your Pace project manager has been CC'ed on this email so that you may request any further assistance.

To access this project's page in paceport click on the following link.

<http://paceport.pacelabs.com/ClientPortal/mvc/projectDetails/modelAndView?projectId=10632522&systemID=lims10>

Pace Analytical is pleased to announce that we are now accepting samples for analysis of waste

Pace

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>.

Section C

Invoice Information:

Regulatory Agency
State / Local
OR / Portland - Multnomah County

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Include 1262 & 1268	JACOBS	10/17/22	1600				
Methods 8082 & 1668 - Require chromatograms	FEECH	11/18/22	945	MONTGOMERY	10/18/22	945	
PAT							

Page 5 of 680

40253331

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>.

Section A

Required Client Information:

Company: Jacobs for UPRR
Address: 2020 SW 4th Avenue, Suite 300
Portland, OR 97201
Email: david.hodson@jacobs.com
Phone: (510)316-2323 Fax:
Requested Due Date:

Section B

Required Project Information:

Report To: Hodson, David
Copy To:
Purchase Order #: 2903-01
Project Name: Portland OR-Peninsula Iron Works
Project #:

Section C

Invoice Information:

Attention: John DeJong
Company Name: UPRR
Address: 4315 E Sprague Ave, Spokane Valley, WA 99212
Pace Quote: 4700001441 (MA-000166-2022)
Pace Project Manager: jennifer.gross@pacelabs.com
Pace Profile #: 45173

Page : 2 of 2

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX Drinking Water Water Waste Water Product Soil/Solid Oil Wipe Air Other Tissue	CODE DW WT WW P SL OL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Y/N	Requested Analysis Filtered (Y/N)																MS/MSD Requested																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
						START		END				Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	ISM Prep (Pace Green Bay)	Sieve only (Pace Green Bay)		8082A PCBs*	8015D GRO & DRO/ORO	6010D/7400 Total T22 Metals	8260D VOCs	8270E SVOCs	Moisture/Dry Weight	TCLP 6010D/7471B (HOLD)	TCLP 8260D VOCs (HOLD)	TCLP 8270E SVOCs (HOLD)	HOLD ONLY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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1	5B03-1.0-1.5-1022	SLC		10/7	1210	-	-	-	-	1	X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		</

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Include 1262 & 1268	Jacobs	10/17/22	1100				
Methods 8082 & 1668 - Require chromatograms	Fedex	10/18/22	945	Montrell	10/18/22	945	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Jacklyn Warren

SIGNATURE of SAMPLER: *[Signature]* DATE Signed: 10/17/22

TEMP in C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

Effective Date: 8/16/2022

Client Name:

Jacobs/Pave MN

Sample Preservation Receipt Form

Project #

40253331

All containers needing preservation have been checked and noted below:

☐ Yes☐ No☐ N/A

Lab Lot# of pH paper:

Lab Std #/ID of preservation (if pH adjusted):

Initial when
completed:Date/
Time:

Pace Lab #	Glass						Plastic						Vials					Jars				General				VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)	
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JG9U	JG9U	WGFU	WPFU	SP5T	ZPLC								GN 1
001																									-								2.5 / 5
002																									-								2.5 / 5
003																									-								2.5 / 5
004																									-								2.5 / 5
005																									-								2.5 / 5
006																									-								2.5 / 5
007																									-								2.5 / 5
008																									-								2.5 / 5
009																									-								2.5 / 5
010																									-								2.5 / 5
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016																									-								2.5 / 5
017																									-								2.5 / 5
018																									-								2.5 / 5
019																									-								2.5 / 5
020																									-								2.5 / 5

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other:

Headspace in VOA Vials (>6mm): ☐ Yes ☐ No ☒ N/A

*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of

24
10/19/22
LP

Sample Condition Upon Receipt Form (SCUR)

Client Name: Pace MNProject # 40253331

Additional Comments/Resolution: _____

① ~~5B03-2.5~~
10/19/22 up ~~5B03-2.5-3.0-1022~~ 10/17/22 1215

① ~~15M02-0.0-0.2-1022~~ 10/17/22 ~~1215~~ 10/19/22 up

① Samples not
listed on COL

~~did not receive "15M02-0.0-0.2-1022"~~ 10/19/22 up

10/19/22 up

Page 2 of 3

Sample Condition Upon Receipt Form (SCUR)

Client Name: _____

Project # 4025333

Additional Comments/Resolution: _____

Therm 110 No corr.

5923 7141 9678 / 2°

5923 7141 9645 / 0°

5923 7141 9667 / 0°

5923 7141 9656 / 0°

Sediment in cooler 10/18/22 mp

① SB02-0.0-0.5-1022 10/17/22 1345

SB02D-0.0-0.5-1022 10/17/22 1350

SB02-0-1.5-1022 10/17/22 1355

SB02-2.5-3.0-1022 10/17/22 1400

① samples not listed on COC

SB03D-0.0-0.5-1022 + SB02-0.0-0.5-1022

received with holes in bags 10/18/22 mp

both samples have water in bag containing the sample + the outer bag.

Both samples in same cooler.

~~SB03-2.5-3.0-1022, sample not listed on COC~~

~~ISM02-0.0-0.2-1022~~ 10/19/22 mp

10/19/22 mp

Page 3 of 4
10/19/22 mp

Sample Condition Upon Receipt Form (SCUR)

Project #:

Client Name:

Jacobs/Pace MN

Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco

☐ Client

☐ Pace

Other:

Tracking #:

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other

Thermometer Used SR - 110 Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☐ None ☐ Meltwater Only

Cooler Temperature Uncorr: - /Corr: 5 additional

Temp Blank Present: ☐ yes ☒ no Comments: Biological Tissue is Frozen: ☐ yes ☐ no

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:

Date: 10/18/22 Initials: up

Labeled By Initials: mt

Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☐ Yes ☒ No ☐ N/A	2. project 10/19/22 mp
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC:	☒ Yes ☐ No ☐ N/A	4.
Samples Arrived within Hold Time:	☒ Yes ☐ No	5.
- DI VOA Samples frozen upon receipt	☐ Yes ☐ No	Date/Time:
Short Hold Time Analysis (<72hr):	☐ Yes ☒ No	6.
Rush Turn Around Time Requested:	☐ Yes ☒ No	7.
Sufficient Volume:		8.
For Analysis: ☒ Yes ☐ No MS/MSD: ☐ Yes ☒ No ☐ N/A		
Correct Containers Used:	☒ Yes ☐ No	9.
Correct Type: Pace Green Bay, Pace IR, Non-Pace		
Containers Intact:	☐ Yes ☒ No	10. See additional comments 10/18/22 mp
Filtered volume received for Dissolved tests	☐ Yes ☐ No ☒ N/A	11.
Sample Labels match COC:	☐ Yes ☒ No ☐ N/A	12. 015" ISM02-0.0-0.2-1022 10/17/22 14:25" per client 10/19/22 mp
-Includes date/time/ID/Analysis Matrix: 5		
Trip Blank Present:	☐ Yes ☐ No ☒ N/A	13.
Trip Blank Custody Seals Present	☐ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

If checked, see attached form for additional comments ☒

Person Contacted: David Hodson Date/Time: 10/19/22

Comments/ Resolution: Client notified of additional samples received but not listed on the coc and samples received with holes in the bags and ice melt in the samples. Lab instructed to proceed with prep and analysis on all samples.

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample log in

Page 2 of 2
4.44 10/19/22 mp

Internal Transfer Chain of Custody



☒ Samples Pre-Logged into eCOC.

State Of Origin: OR

Cert. Needed: ☐ Yes ☐ No

Owner Received Date: 10/18/2022 Results Requested By: 10/27/2022

Pace Analytical
www.pacelabs.com

Workorder: 10630039

Workorder Name: Portland OR-Peninsula Iron Wor

Report To: Subcontract To: Requested Analysis:

Jennifer Gross
Pace Analytical Minnesota
1700 Elm Street
Minneapolis, MN 55414
Phone (612)607-1700

Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

WO#: 10630039



							Preserved Containers					MISC / ISM (50 Increments) (PACE-)	MISC / Sieving (<2mm) (PACE-GB)											LAB USE ONLY
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Qty																		
1	SB06-0.0-0.5-1022	PS	10/17/2022 15:15	10630039001	Solid	1							X											001
2	SB06-1.0-1.5-1022	PS	10/17/2022 15:20	10630039002	Solid	1							X											002
3	SB06-2.5-3.0-1022	PS	10/17/2022 15:25	10630039003	Solid	1							X											003
4	SB04-0.0-0.5-1022	PS	10/17/2022 14:30	10630039004	Solid	1							X											004
5	SB04D-0.0-0.5-1022	PS	10/17/2022 14:35	10630039005	Solid	1							X											005
6	SB04-1.0-1.5-1022	PS	10/17/2022 14:40	10630039006	Solid	1							X											006
7	SB04-2.5-3.0-1022	PS	10/17/2022 14:45	10630039007	Solid	1							X											007
8	SB01-0.0-0.5-1022	PS	10/17/2022 11:00	10630039008	Solid	1							X											008
9	SB01-1.0-1.5-1022	PS	10/17/2022 11:05	10630039009	Solid	1							X											009
10	SB01-2.5-3.0-1022	PS	10/17/2022 11:10	10630039010	Solid	1							X											010
11	SB03-0.0-0.5-1022	PS	10/17/2022 12:00	10630039011	Solid	1							X											011
12	SB03D-0.0-0.5-1022	PS	10/17/2022 12:05	10630039012	Solid	1							X											012
13	SB03-1.0-1.5-1022	PS	10/17/2022 12:10	10630039013	Solid	1							X											013
14	ISM01-0.0-0.2-1022	PS	10/17/2022 12:15	10630039014	Solid	1						X												014
15	ISM03-0.0-0.2-1022	PS	10/17/2022 12:28	10630039015	Solid	1						X												015
16	SB02-0.0-0.5-1022	PS	10/17/2022 13:45	10630039016	Solid	1							X											016
17	SB02D-0.0-0.5-1022	PS	10/17/2022 13:50	10630039017	Solid	1							X											017
18	SB02-1-1.5-1022	PS	10/17/2022 13:55	10630039018	Solid	1							X											018
19	SB02-2.5-3.0-1022	PS	10/17/2022 14:00	10630039019	Solid	1							X											019

4053331
Pace Analytical®
www.pacelabs.com



State Of Origin: OR

Cert. Needed: ☐ Yes ☐ No

Owner Received Date: 10/18/2022 Results Requested By: 10/27/2022

Workorder: 10630039

Workorder Name: Portland OR-Peninsula Iron Wor

Report To

Subcontract To

Requested Analysis

Jennifer Gross
Pace Analytical Minnesota
1700 Elm Street
Minneapolis, MN 55414
Phone (612)607-1700

Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

MISC / ISM (50 Increments) (PAGE-

MISC / Sleving (<2mm) (PACE-GB)

LAB USE ONLY

020

Preserved Containers

[illegible]

Comments

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	Fedex	10/18/22 945	Mon. A. Doope	10/18/22 945	Forward prepped volume to Pace Mnpls, methods 8082 & possibly 1668.
2	Matt Vandenberg Pace	12/13/22 1601	Chit Pace	12/14/22	Hold all additional volume for six months. 14:35
3					

Cooler Temperature on Receipt <u>NA</u> °C	Custody Seal <u>(Y)</u> or N	Received on Ice <u>(Y)</u> or N	Samples Intact <u>(Y)</u> or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

This chain of custody is considered complete as is since this information is available in the owner laboratory.

Effective Date: 11/16/2022

Sample Condition
Upon Receipt

Client Name:

Pace Green Bay

Project #:

WO#: 10630039

PM: JMG

Due Date: 12/16/22

CLIENT: UPRR_Jacobs

Courier: ☐ FedEx ☐ UPS ☐ USPS ☐ Client
☐ Pace ☐ SpeedDee ☒ Commercial☐ See Exceptions

Tracking Number: ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ NoPacking Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ OtherThermometer: ☐ T1 (0461) ☐ T2 (1336) ☐ T3 (0459) ☐ T4 (0254) ☐ T5 (0178)
☐ T6 (0235) ☒ T7 (0042) ☐ T8 (0775) ☐ T9 (0727) ☐ 01339252/1710Biological Tissue Frozen? ☐ Yes ☐ No ☒ N/ATemp Blank? ☐ Yes ☒ NoType of Ice: ☐ Wet ☐ Blue ☐ Dry ☒ None
☐ MeltedDid Samples Originate in West Virginia? ☐ Yes ☒ NoWere All Container Temps Taken? ☐ Yes ☐ No ☒ N/A

Temp should be above freezing to 6 °C

Cooler temp Read w/Temp Blank: Amb °C

Average Corrected Temp

(no temp blank only): °C

Correction Factor: add 0.1

Cooler Temp Corrected w/temp blank: Amb °C

☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 ContainerUSDA Regulated Soil: (☐ N/A, water sample/other:)

Date/Initials of Person Examining Contents: 12/14/22 ADC

Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? ☐ Yes ☒ NoDid samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

Location (Check one): ☐ Duluth ☒ Minneapolis ☐ Virginia	COMMENTS
Chain of Custody Present and Filled Out?	1.
Chain of Custody Relinquished?	2.
Sampler Name and/or Signature on COC?	3.
Samples Arrived within Hold Time?	4. If fecal: ☐ <8 hrs ☐ >8 hr, <24 ☐ No
Short Hold Time Analysis (<72 hr)?	5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E.coli ☐ BOD/cBOD ☐ Hex Chrom ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	6.
Sufficient Sample Volume?	7.
Correct Containers Used?	8.
-Pace Containers Used?	
Containers Intact?	9.
Field Filtered Volume Received for Dissolved Tests?	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	11. If no, write ID/Date/Time of container below: ☐ See Exceptions ENV-FRM-MIN4-0142
Matrix: ☐ Water ☒ Soil ☐ Oil ☐ Other	
All containers needing acid/base preservation have been checked?	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH >10 Cyanide)	☐ NaOH ☐ HNO3 ☐ H2SO4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS (*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)	Positive for Residual Chlorine? ☐ Yes ☐ No ☐ See Exceptions ENV-FRM-MIN4-0142
	pH Paper Lot #
	Residual Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Headspace in Methyl Mercury Container?	13.
Extra labels present on soil VOA or WIDRO containers?	14. ☐ See Exceptions ENV-FRM-MIN4-0142
Headspace in VOA Vials (greater than 6mm)?	
3-Trip Blanks-Present?	15.
Trip Blank Custody Seals Present?	Pace Trip Blank Lot # (if purchased):

CLIENT NOTIFICATION/RESOLUTION

Person Contacted:

Comments/Resolution:

Project Manager Review:

Jenni Gross

Field Data Required? ☐ Yes ☐ No

Date/Time:

Date: 12/14/22

Labeled By:

ADC

Line: 2
Page 1 of 1

NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (see out of hold, incorrect preservative, out of temp, incorrect containers).

40254208

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>.

Page : 1 Of

Section A

Section B

Section C

Required Client Information:

Required Project Information:**Invoice Information:**

Company	Jacobs for UPRR	Report To.	Hodson, David	Attention	John DeJong
Address:	2020 SW 4th Avenue, Suite 300	Copy To		Company Name.	UPRR
	Portland, OR 97201			Address	4315 E Sprague Ave, Spokane Valley, WA 99212
Email	david.hodson@jacobs.com	Purchase Order #	2903-01	Pace Quote	4700001441 (MA-000166-2022)
Phone	(510)316-2323	Fax.		Pace Project Manager	jennifer.gross@pacelabs.com,
Requested Due Date		Project #.	Portland OR-Peninsula Iron Works	Pace Profile #:	45173

Regulatory/Agency
State / Location
OR / Portland - Multnomah County

[illegible]

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Include 1262 & 1268	Dad [Signature] Fedex	11/3/22	1100	[Signature]	11/4/22	0945	0° Y Y Y
Methods 8082 & 1668 - Require chromatograms							
Page							

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: DAVID HODSON SIGNATURE of SAMPLER: <i>[Signature]</i>		TEMP in C Received on ice (Y/N) Custody Sealed Cooler (Y/N) Samples Intact (Y/N)

Effective Date: 8/16/2022

Client Name: Jacobs

Sample Preservation Receipt Form

Project # 40254308All containers needing preservation have been checked and noted below
Lab Lot# of pH paper☐ Yes☐ No☒ N/A

Lab Std #/ID of preservation (if pH adjusted).

Initial when
completed:Date/
Time:

Pace Lab #	Glass						Plastic						Vials					Jars				General				VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)	
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN 1	GN 2						
001																									-								2.5 / 5
002																									-								2.5 / 5
003																									-								2.5 / 5
004																																	2.5 / 5
005																																	2.5 / 5
006																																	2.5 / 5
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019																																	2.5 / 5
020																																	2.5 / 5

Exceptions to preservation check VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other.

Headspace in VOA Vials (>6mm) ☐ Yes ☒ No ☒ N/A

*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of 2

Sample Condition Upon Receipt Form (SCUR)

Client Name:

Jacobs

Project #:

WO#: 40254308

Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco
☐ Client ☐ Pace Other: _____



Tracking #: 5923 7141 9689

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other _____

Thermometer Used SR - 110 Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☐ None ☐ Meltwater Only

Cooler Temperature Uncorr: _____ /Corr: 0°

Temp Blank Present: ☐ yes ☒ no

Biological Tissue is Frozen: ☐ yes ☐ no

Person examining contents:

Date: 11/4/22 Initials: mp

Labeled By Initials: mh

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice

Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☐ Yes ☒ No ☐ N/A	2. <u>proj#, 11/4/22 mp</u>
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC:	☒ Yes ☐ No ☐ N/A	4.
Samples Arrived within Hold Time	☒ Yes ☐ No	5.
- DI VOA Samples frozen upon receipt	☐ Yes ☐ No	Date/Time
Short Hold Time Analysis (<72hr):	☐ Yes ☒ No	6.
Rush Turn Around Time Requested:	☐ Yes ☒ No	7.
Sufficient Volume:		8.
For Analysis: ☒ Yes ☐ No MS/MSD ☐ Yes ☒ No ☐ N/A		
Correct Containers Used:	☒ Yes ☐ No	9.
Correct Type: <u>Pace Green Bay</u> Pace IR, Non-Pace		
Containers Intact:	☒ Yes ☐ No	10.
Filtered volume received for Dissolved tests	☐ Yes ☐ No ☒ N/A	11.
Sample Labels match COC:	☐ Yes ☒ No ☐ N/A	12. <u>No collect date or time 11/4/22 mp</u>
-Includes date/time/ID/Analysis Matrix: <u>5</u>		
Trip Blank Present:	☐ Yes ☐ No ☒ N/A	13.
Trip Blank Custody Seals Present	☐ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time _____

Comments/ Resolution: _____

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample log

Page 2 of 2

Internal Transfer Chain of Custody

40254308



☒ Samples Pre-Logged into eCOC.

State Of Origin: OR

Cert. Needed: ☐ Yes ☐ No

Owner Received Date: 11/4/2022 Results Requested By: 11/15/2022



Workorder: 10632522 Workorder Name: Portland OR-Peninsula Iron Wor

Report To Subcontract To Requested Analysis

Jennifer Gross
Pace Analytical Minnesota
1700 Elm Street
Minneapolis, MN 55414
Phone (612)607-1700

Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

WO#: 10632522



Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	PAT #	Preserved Containers					MISC / Sieving																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

Transfers					Comments
Released By	Date/Time	Received By	Date/Time		
1	Fedex	11/4/22 09:45	mail	11/4/22 09:45	
2	Morgan	12/16/22 17:00	mail	12/17/22 10:46	
3					
Cooler Temperature on Receipt 0 °C					
Custody Seal (Y) or N		Received on Ice (Y) or (N)		Samples Intact (Y) or N	

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

0.9, 11.3, 8.7

2.6, 2.5, 2.8, 3.7

Effective Date: 11/16/2022

Sample Condition
Upon Receipt

Client Name:

Project #:

WO#: 10632522

PM: JMG

Due Date: 02/12/23

CLIENT: UPRR_Jacobs

Courier: ☐ FedEx ☐ UPS ☐ USPS ☐ Client
☐ Pace ☐ Speedee ☒ Commercial☐ See Exceptions

Tracking Number: ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ NoBiological Tissue Frozen? ☐ Yes ☐ No ☒ N/APacking Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ OtherTemp Blank? ☒ Yes ☐ NoThermometer: ☐ T1 (0461) ☐ T2 (1336) ☐ T3 (0459) ☐ T4 (0254) ☐ T5 (0178)
☐ T6 (0235) ☒ T7 (0042) ☐ T8 (0775) ☐ T9 (0727) ☐ 01339252/1710Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☒ None
☐ MeltedDid Samples Originate in West Virginia? ☐ Yes ☒ No JMG 12/19/22 Were All Container Temps Taken? ☐ Yes ☐ No ☒ N/A JMG 12/19/22

Temp should be above freezing to 6 °C

Cooler temp Read w/Temp Blank: 3.24, 3.07, 3.6

Average Corrected Temp

(no temp blank only): °C

Correction Factor: +.1

Cooler Temp Corrected w/temp blank: 3.24, 3.17, 3.7

☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 ContainerUSDA Regulated Soil: ☐ N/A, water sample/other: _____

Date/Initials of Person Examining Contents: 12/19/22 JMG

Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? ☐ Yes ☒ NoDid samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

Location (Check one): ☐ Duluth ☒ Minneapolis ☐ Virginia	COMMENTS
Chain of Custody Present and Filled Out?	1.
Chain of Custody Relinquished?	2.
Sampler Name and/or Signature on COC?	3.
Samples Arrived within Hold Time?	4. If fecal: ☐ <8 hrs ☐ >8 hr, <24 ☐ No
Short Hold Time Analysis (<72 hr)?	5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E.coli ☐ BOD/cBOD ☐ Hex Chrom ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	6. Late
Sufficient Sample Volume?	7.
Correct Containers Used?	8.
-Pace Containers Used?	
Containers Intact?	9.
Field Filtered Volume Received for Dissolved Tests?	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	11. If no, write ID/Date/Time of container below: CN Containers added to WAs ☐ See Exceptions ENV-FRM-MIN4-0142
Matrix: ☐ Water ☒ Soil ☐ Oil ☐ Other	
All containers needing acid/base preservation have been checked?	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , <2pH, NaOH >9 Sulfide, NaOH >10 Cyanide)	☐ NaOH ☐ HNO ₃ ☐ H ₂ SO ₄ ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS	Positive for Residual Chlorine? ☐ Yes ☐ No ☐ See Exceptions ENV-FRM-MIN4-0142
(*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)	pH Paper Lot #
Headspace in Methyl Mercury Container?	Residual Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Extra labels present on soil VOA or WIDRO containers?	13.
Headspace in VOA Vials (greater than 6mm)?	14. ☐ See Exceptions ENV-FRM-MIN4-0142
3 Trip Blanks Present?	15.
Trip Blank Custody Seals Present?	Pace Trip Blank Lot # (if purchased):

CLIENT NOTIFICATION/RESOLUTION

Person Contacted:

Date/Time:

Comments/Resolution:

Field Data Required? ☐ Yes ☐ No

Project Manager Review:

Date: 12/19/22

NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled By: NE

Line: 1



DC#_Title: ENV-FRM-MIN4-0142 v02_Sample Condition Upon Receipt
(SCUR) Exception Form

Effective Date: 09/22/2022

Workorder #: _____

No Temp Blank		
Read Temp	Corrected Temp	Average temp

PM Notified of Out of Temp Cooler? ☐ Yes ☐ No

If yes, indicate who was contacted, date and time.

If no, indicate reason why.

Multiple Cooler Project? ☐ Yes ☐ No

If anything is OVER 6.0° C, you **MUST** document containers in this section **HERE**



Tracking Number	Temperature
3429796-4	8.9
3429796-5	11.3
3429796-2	8.7
3429796-1	11.2

Out of Temp Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples

Sample ID	Type Of Preserve	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance After Addition?		Initials
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	

Comments:

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>.

40253359

Section A

Required Client Information:

Company: Jacobs for UPRR
Address: 2020 SW 4th Avenue, Suite 300
Portland, OR 97201
Email: david.hodson@jacobs.com
Phone: (510)316-2323 Fax:
Requested Due Date:

Section B

Required Project Information:

Report To: Hodson, David
Copy To:
Purchase Order #: 2903-01
Project Name: Portland OR-Peninsula Iron Works
Project #:

Section C

Invoice Information:

Attention: John DeJong
Company Name: UPRR
Address: 4315 E Sprague Ave, Spokane Valley, WA 99212
Pace Quote: 4700001441 (MA-000166-2022)
Pace Project Manager: jennifer.gross@pacelabs.com
Pace Profile #: 45173

Page: 1 of 2

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample IDs must be unique	MATRIX Drinking Water Water Waste Water Product Soil/Solid Oil Wipe Air Other Tissue	CODE DW WT WW P SL OL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										ANALYSIS TEST Y/N	Requested Analysis Filtered (Y/N)														MS/MSD Requested																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
						START		END				Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	ISM Prep (Pace Green Bay)	Sieve only (Pace Green Bay)		8082A PCBs*	8015D GRO & DRO/ORO	6010D/7400 Total T22 Metals	8260D VOCs	8270E SVOCs	Moisture/Dry Weight	TCLP 6010D/7471B (HOLD)	TCLP 8260D VOCs (HOLD)	TCLP 8270E SVOCs (HOLD)	HOLD ONLY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Include 1262 & 1268	Jaclyn Warren / Jacobs	10/18/22	1400				
Methods 8082 & 1668 - Require chromatograms	Fedex	10/19/22	1000	Sam Spence	10/19/22	1000	

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on Ice (Y/N)	Custody Sealed (Y/N)	Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:						
SIGNATURE of SAMPLER:						
Jaclyn Warren						
DATE Signed: 10/18/22						

40253359

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>.

Page : 2 of 2

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	Page: 2 Of 2
Company: Jacobs for UPRR	Report To: Hodson, David	Attention: John DeJong	
Address: 2020 SW 4th Avenue, Suite 300 Portland, OR 97201	Copy To:	Company Name: UPRR	
Email: david.hodson@jacobs.com	Purchase Order #: 2903-01	Address: 4315 E Sprague Ave, Spokane Valley, WA 99212	
Phone: (510)316-2323 Fax:	Project Name: Portland OR-Peninsula Iron Works	Pace Quote: 4700001441 (MA-000166-2022)	
Requested Due Date:	Project #:	Pace Project Manager: jennifer.gross@pacelabs.com	
		Pace Profile #: 45173	

[illegible]

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Include 1262 & 1268 Methods 8082 & 1668 - Require chromatograms	Bodlyn Warren / Jacobs <i>Fedex</i>	11/11/22	1400	<i>[Signature]</i>	12/19/22	1000	
Page _____							

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER: <i>Jacklyn Warren</i>						
SIGNATURE of SAMPLER: <i>[Signature]</i>		DATE Signed: <i>10/18/22</i>				

Effective Date: 8/16/2022

Client Name: Pace MW

Sample Preservation Receipt Form

Project # 10253359

All containers needing preservation have been checked and noted below:

☐ Yes☐ No☒ N/A

Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Initial when
completed:Date/
Time:

Pace Lab #	Glass						Plastic						Vials					Jars				General				VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)	
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC								GN 1
001																									-							2.5 / 5	
002																									-							2.5 / 5	
003																									-							2.5 / 5	
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014																									-							2.5 / 5	
015																									2							2.5 / 5	
016																									-							2.5 / 5	
017																									-							2.5 / 5	
018																									-							2.5 / 5	
019																																	2.5 / 5
020																																	2.5 / 5

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other:

Headspace in VOA Vials (>6mm): ☐ Yes ☐ No ☒ N/A

*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of 3

Sample Condition Upon Receipt Form (SCUR)

Client Name: PALE mn

Project # LH253359

Additional Comments/Resolution: _____

① SB-10-1.0-1.5-1022

SB-10-2.5-3.0-1022

SB12-0.0-0.5-1022

SB12-1.0-1.5-1022

SB12D-0.0-0.5-1022

SB10-0.0-0.5-1022

① Samples have melt water in them

Sample Condition Upon Receipt Form (SCUR)

Project #:

Client Name: Pace MN

Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco
☐ Client ☐ Pace Other: _____

Tracking #: 5923 7141 9830 ①

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other _____

Thermometer Used SR - 9 Type of Ice: Wet Blue Dry None ☐ Meltwater Only

Cooler Temperature Uncorr: 3 / Corr: 3.5 ②

Temp Blank Present: ☒ yes ☐ no

Biological Tissue is Frozen: ☐ yes ☐ no

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:

Date: 10/19/22 Initials: SB

Labeled By Initials: NK

Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☒ Yes ☐ No ☐ N/A	2.
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC:	☐ Yes ☐ No ☒ N/A	4. <u>IRWD</u> <u>10/19/22 SB</u>
Samples Arrived within Hold Time:	☒ Yes ☐ No	5.
- DI VOA Samples frozen upon receipt	☐ Yes ☐ No	Date/Time:
Short Hold Time Analysis (<72hr):	☐ Yes ☒ No	6.
Rush Turn Around Time Requested:	☐ Yes ☒ No	7.
Sufficient Volume:		8.
For Analysis: ☒ Yes ☐ No MS/MSD: ☒ Yes ☐ No ☐ N/A		
Correct Containers Used:	☒ Yes ☐ No	9.
Correct Type: Pace Green Bay, Pace IR, <u>Non-Pace</u>		
Containers Intact:	☐ Yes ☒ No	10. <u>See other SCUR page</u> <u>10/19/22 SB</u>
Filtered volume received for Dissolved tests	☐ Yes ☐ No ☒ N/A	11.
Sample Labels match COC:	☒ Yes ☐ No ☐ N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>S</u>		
Trip Blank Present:	☐ Yes ☐ No ☒ N/A	13.
Trip Blank Custody Seals Present	☐ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted: David Hodson

Date/Time: 10/19/22

Comments/ Resolution: ① other tracking #s 5923 7141 9829, 5923 7141 9807, 5923 7141 9818

② other temps in order according to ①: 2.5 → 3, 0.5 → 2, 1 → 1.5
Client notified of samples received with holes in the bags and ice melt in the samples. Lab instructed to proceed with prep and analysis on all samples. JMG

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logir

Page 2 of 3

Internal Transfer Chain of Custody

40253359



☒ Samples Pre-Logged into eCOC.

State Of Origin: OR

Cert. Needed: ☐ Yes ☐ No

Owner Received Date: 10/19/2022 Results Requested By: 10/28/2022

Workorder: 10630317

Workorder Name: Portland OR-Peninsula Iron Wor

Report To: Subcontract To: Requested Analysis:

Jennifer Gross
Pace Analytical Minnesota
1700 Elm Street
Minneapolis, MN 55414
Phone (612)607-1700

Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

WO#: 10630317



Preserved Containers

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Unpreserved	MTSC / ISM (50 Increments) (PACE-)	MTSC / Sieving (<2mm) (PACE-GB)	LAB USE ONLY
1	ISM04-0.0-0.2-1022	RQS	10/18/2022 09:45	10630317001	Solid	1	X		001
2	ISM05-0.0-0.2-1022	PS	10/18/2022 12:05	10630317002	Solid	1	X		002
3	SB10-0.0-0.5-1022	PS	10/18/2022 11:15	10630317003	Solid	1		X	003
4	SB10-1.0-1.5-1022	PS	10/18/2022 11:20	10630317004	Solid	1		X	004
5	SB10-2.5-3.0-1022	PS	10/18/2022 11:25	10630317005	Solid	1		X	005
6	SB09-0.0-0.5-1022	PS	10/18/2022 10:30	10630317006	Solid	1		X	006
7	SB09-1.0-1.5-1022	PS	10/18/2022 10:35	10630317007	Solid	1		X	007
8	SB09-2.5-3.0-1022	PS	10/18/2022 10:40	10630317008	Solid	1		X	008
9	SB07-0.0-0.5-1022	RQS	10/18/2022 09:00	10630317009	Solid	1		X	009
10	SB07-1.0-1.5-1022	PS	10/18/2022 09:05	10630317010	Solid	1		X	010
11	SB07-2.5-3.0-1022	PS	10/18/2022 09:10	10630317011	Solid	1		X	011
12	SB05-0.0-0.5-1022	PS	10/18/2022 08:30	10630317012	Solid	1		X	012
13	SB05-1.0-1.5-1022	PS	10/18/2022 08:35	10630317013	Solid	1		X	013
14	SB05-2.5-3.0-1022	PS	10/18/2022 08:40	10630317014	Solid	1		X	014
15	SB12-0.0-0.5-1022	RQS	10/18/2022 12:30	10630317015	Solid	1		X	015
16	SB12D-0.0-0.5-1022	PS	10/18/2022 12:35	10630317016	Solid	1		X	016
17	SB12-1.0-1.5-1022	PS	10/18/2022 12:40	10630317017	Solid	1		X	017
18	SB12-2.5-3.0-1022	PS	10/18/2022 12:45	10630317018	Solid	1		X	018

41253359

					Comments
Transfers	Released By	Date/Time	Received By	Date/Time	
1	Feder	10/19/22 1800	Sym	10/19/22 1800	Forward prepped volume to Pace Mnpls, methods 8082 & possibly 1668.
2	Tamm	11/1/22 1700			Hold all additional volume for six months.
3					
Cooler Temperature on Receipt 3.5, 25°C		Custody Seal Y or N		Received on Ice Y or N	Samples Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

0.4, 1.4, 7.2, 10.9

M Pau

15:30

WMM

Forwarding all Volume that was
Sieved.

ISM sample is 403 jms.

Car 11/1/22

DC#_Title: ENV-FRM-MIN4-0150 v10_Sample Condition Upon Receipt (SCUR)

Effective Date:

Sample Condition
Upon Receipt

Client Name:

Project #:

WO#: 10630317

PM: JMG

Due Date: 11/16/22

CLIENT: UPRR_Jacobs

Courier: ☐ FedEx ☐ UPS ☐ USPS ☐ Client☐ Pace ☐ Speedee ☒ Commercial *Walter*☐ See Exceptions

Tracking Number: _____ ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ NoBiological Tissue Frozen? ☐ Yes ☐ No ☒ N/APacking Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ OtherTemp Blank? ☒ Yes ☐ NoThermometer: ☐ T1 (0461) ☐ T2 (1336) ☒ T3 (0459) ☐ T4 (0254) ☐ T5 (0178)Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☐ None☐ T6 (0235) ☐ T7 (0042) ☐ T8 (0775) ☐ 01339252/1710☐ MeltedDid Samples Originate in West Virginia? ☐ Yes ☐ NoWere All Container Temps Taken? ☐ Yes ☐ No ☐ N/A

Temp should be above freezing to 6 °C

Cooler temp Read w/Temp Blank: *04.14.22°C*

Average Corrected Temp

(no temp blank only): _____ °C

Correction Factor: *1.00*Cooler Temp Corrected w/temp blank: *04.14.22°C*☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 ContainerUSDA Regulated Soil: ☐ N/A, water sample/other: _____Date/Initials of Person Examining Contents: *01/12/22*Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? ☐ Yes ☒ NoDid samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

Location (Check one): ☐ Duluth ☒ Minneapolis ☐ Virginia	COMMENTS
Chain of Custody Present and Filled Out?	1. ☒ Yes ☐ No
Chain of Custody Relinquished?	2. ☒ Yes ☐ No
Sampler Name and/or Signature on COC?	3. ☒ Yes ☐ No ☒ N/A
Samples Arrived within Hold Time?	4. If fecal: ☐ <8 hrs ☐ >8 hr, <24 ☐ No
Short Hold Time Analysis (<72 hr)?	5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E.coli
	☐ BOD/cBOD ☐ Hex Chrom ☐ Turbidity ☐ Nitrate
	☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	6. <i>late</i>
Sufficient Sample Volume?	7. ☒ Yes ☐ No
Correct Containers Used?	8. ☒ Yes ☐ No ☐ N/A
-Pace Containers Used?	9. ☐ Yes ☒ No
Containers Intact?	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Field Filtered Volume Received for Dissolved Tests?	11. If no, write ID/Date/Time of container below:
Is sufficient information available to reconcile the samples to the COC?	☐ See Exceptions ENV-FRM-MIN4-0142
Matrix: ☐ Water ☒ Soil ☐ Oil ☐ Other	12. Sample #
All containers needing acid/base preservation have been checked?	☐ NaOH ☐ HNO3
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH >10 Cyanide)	☐ H2SO4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS	Positive for Residual Chlorine? ☐ Yes ☐ No
(*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)	☐ See Exceptions ENV-FRM-MIN4-0142
	pH Paper Lot #
	Residual Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Headspace in Methyl Mercury Container?	13. ☐ Yes ☐ No ☒ N/A
Extra labels present on soil VOA or WIDRO containers?	14. ☐ Yes ☐ No ☒ N/A
Headspace in VOA Vials (greater than 6mm)?	15. ☐ Yes ☐ No ☒ N/A
3 Trip Blanks Present?	
Trip Blank Custody Seals Present?	Pace Trip Blank Lot # (if purchased):

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: _____

Date/Time: _____

Comments/Resolution: _____

Field Data Required? ☐ Yes ☐ NoProject Manager Review: *Jenni Gross*

Date: 11/2/22

NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled By: *NF*Line *27* of 680

Qualtrax ID: 52742

Pace® Analytical Services, LLC

Page 1 of 1

41253455

Pace

Section A

Section B

Required Project Information:

Section C

Invoice Information:

Page : Of

Company:	Jacobs for UPRR		
Address:	2020 SW 4th Avenue, Suite 300		
	Portland, OR 97201		
Email:	david.hodson@jacobs.com		
Phone:	(510)316-2323	Fax:	
Requested Due Date:			

Report To:	Hodson, David
Copy To:	
Purchase Order #:	2903-01
Project Name:	Portland OR-Peninsula Iron Works
Project #:	

Attention: John DeJong
Company Name: UPRR
Address: 4315 E Sprague Ave, Spokane Valley, WA 99212
Fax Quote: 4700001441 (MA-000166-2022)
Paper Project Manager: jennifer.gross@pacelabs.com,
Paper Profile #: 45173

Regulatory Agency: WA
State / Location: OR
OR / Portland - Multnomah County

[illegible]

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Include 1262 & 1268	Karlyn Warren/junior	11/9/27	1500	1 X			
Methods 8082 & 1668 - Require chromatograms							
Page							

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: <u>Jason Warren</u> SIGNATURE of SAMPLER: <u>[Signature]</u>		TEMP in C Received on Date (N/N) Custody Sealed Cooler (N/N) Samples intact
DATE Signed: <u>10/19/22</u>		

4053455

Pace

Page: 2 Of 2

Section A	Section B	Section C	Page: 1 Of 2
Required Client Information:	Required Project Information:	Invoice Information:	
Company: Jacobs for UPRR	Report To: Hodson, David	Attention: John DeJong	
Address: 2020 SW 4th Avenue, Suite 300	Copy To:	Company Name: UPRR	
Portland, OR 97201		Address: 4315 E Sprague Ave, Spokane Valley, WA 99212	Regulatory Agency: UPRR
Email: david.hodson@jacobs.com	Purchase Order #: 2903-01	Pace Quote: 4700001441 (MA-000166-2022)	
Phone: (510)316-2323 Fax:	Project Name: Portland OR-Peninsula Iron Works	Pace Project Manager: jennifer.gross@pacelabs.com,	State / Location: OR / Portland - Multnomah County
Requested Due Date:	Project #:	Pace Profile #: 45173	

[illegible]

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Include 1262 & 1268	Karlyn Warren / Jacobs	10/9/22	500				
Methods 8082 & 1668 - Require chromatograms							
Pag							

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: <i>Jacklyn Whiten</i> SIGNATURE of SAMPLER: <i>[Signature]</i>		TEMP in C Received on Ice (Y/N) Custody Sealed Cooler (Y/N) Samples Intact
DATE Signed: <i>10/19/22</i>		

Effective Date: 8/16/2022

Client Name: Pace MN

Sample Preservation Receipt Form

Project # 41053455

All containers needing preservation have been checked and noted below:

☐ Yes☐ No☒ N/A

Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Initial when
completed:Date/
Time:

Pace Lab #	Glass						Plastic						Vials					Jars				General				VOA Vials (>6mm) *	H ₂ SO ₄ pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO ₃ pH ≤2	pH after adjusted	Volume (mL)
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN 1	GN 2					
001																																2.5 / 5
002																																2.5 / 5
003																																2.5 / 5
004																																2.5 / 5
005																																2.5 / 5
006																																2.5 / 5
007																																2.5 / 5
008																																2.5 / 5
009																																2.5 / 5
010																																2.5 / 5
011																																2.5 / 5
012																																2.5 / 5
013																																2.5 / 5
014																																2.5 / 5
015																																2.5 / 5
016																																2.5 / 5
017																																2.5 / 5
018																																2.5 / 5
019																																2.5 / 5
020																																2.5 / 5

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____

Headspace in VOA Vials (>6mm) : ☐ Yes ☐ No ☒ N/A

*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H ₂ SO ₄	BP3N	250 mL plastic HNO ₃	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H ₂ SO ₄	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H ₂ SO ₄	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of ____

Client Name:

Page MN

Sample Preservation Receipt Form

Project #:

Receipt Form 4053455

[illegible]

Page 2 of 2

Sample Condition Upon Receipt Form (SCUR)

Client Name: Pace MN Project # 40253455

Additional Comments/Resolution: ① 5923 7141 9760, 5923 7141 9770

② ^{SR-9} 3 → 3.5, ^{SR-9} 3.5 → 4, ^{SR-9} 3 → 3.5 5923 7141 9792

Internal Transfer Chain of Custody



☒ Samples Pre-Logged into eCOC.

State Of Origin: OR

Cert. Needed: ☐ Yes ☐ No

Owner Received Date: 10/20/2022 Results Requested By: 10/31/2022

L0253455
Pace Analytical®
www.pacelabs.com

Workorder: 10630481

Workorder Name: Portland OR-Peninsula Iron Wor

Report To:

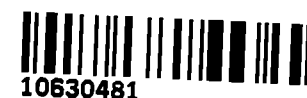
Subcontract To:

Requ

Jennifer Gross
Pace Analytical Minnesota
1700 Elm Street
Minneapolis, MN 55414
Phone (612)607-1700

Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

WO#: 10630481



Preserved Containers

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	PLU	MISC / ISM (50 Increments) (PACE-GB)	MISC / Sieving (<2mm) (PACE-GB)	LAB USE ONLY
1	SB14-0.0-0.5-1022	PS	10/19/2022 08:00	10630481001	Solid	1	X		001
2	SB14-1.0-1.5-1022	PS	10/19/2022 08:05	10630481002	Solid	1	X		002
3	SB14-2.5-3.0-1022	PS	10/19/2022 09:10	10630481003	Solid	1	X		003
4	SB13-0.0-0.5-1022	PS	10/19/2022 10:00	10630481004	Solid	1	X		004
5	SB13-1.0-1.5-1022	PS	10/19/2022 10:05	10630481005	Solid	1	X		005
6	SB13-2.5-3.0-1022	PS	10/19/2022 10:10	10630481006	Solid	1	X		006
7	SB11-0.0-0.5-1022	RQS	10/19/2022 11:00	10630481007	Solid	1	X		007
8	SB11D-0.0-0.5-1022	PS	10/19/2022 11:05	10630481008	Solid	1	X		008
9	SB11-1.0-1.5-1022	PS	10/19/2022 11:10	10630481009	Solid	1	X		009
10	SB11-2.5-3.0-1022	PS	10/19/2022 11:15	10630481010	Solid	1	X		010
11	SB15-0.0-0.5-1022	PS	10/19/2022 12:00	10630481011	Solid	1	X		011
12	SB15-1.0-1.5-1022	PS	10/19/2022 12:05	10630481012	Solid	1	X		012
13	SB15-2.5-3.0-1022	PS	10/19/2022 12:10	10630481013	Solid	1	X		013
14	SB16-0.0-0.5-1022	PS	10/19/2022 13:00	10630481014	Solid	1	X		014
15	SB16-1.0-1.5-1022	PS	10/19/2022 13:05	10630481015	Solid	1	X		015
16	SB16-2.5-3.0-1022	PS	10/19/2022 13:10	10630481016	Solid	1	X		016
17	ISM02-0.0-0.2-1022	PS	10/19/2022 14:00	10630481017	Solid	1	X		017
18	ISM07-0.0-0.2-1022	PS	10/19/2022 11:25	10630481018	Solid	1	X		018
19	ISM07T-0.0-0.2-1022	PS	10/19/2022 11:30	10630481019	Solid	1	X		019

Internal Transfer Chain of Custody



☒ Samples Pre-Logged into eCOC.

State Of Origin: OR

Cert. Needed:	☐	Yes	☐	No

Owner Received Date: 10/20/2022 Results Requested By: 10/31/2022



Workorder: 10630481

Workorder Name: Portland OR-Peninsula Iron Wor

Owner Received Date: 10/20/2022 Results Requested By: 10/31/2022

Report To	Subcontract To	Requested Analysis

Jennifer Gross
Pace Analytical Minnesota
1700 Elm Street
Minneapolis, MN 55414
Phone (612)607-1700

Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

MISC / ISM (50 Increments) (PAGE-

MISC / Sieving (<2mm) (PACE-GB)

Preserved Containers

[illegible]

Comments

Transfers	Released By	Date/Time	Received By	Date/Time	
1	Fisher	10/20/10 1030	Sampane	10/20/10 1030	Forward prepped volume to Pace Mnpls, methods 8082 & possibly 1668.
2	Mezger	12/16/22 1700			Hold all additional volume for six months.
3					
Cooler Temperature on Receipt 55.35 LC		Custody Seal (Y) or N		Received on Ice (Y) or N	
				Samples Intact (Y) or N	

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

This chain of custody is considered complete as is since this information is available in the owner laboratory.

Effective Date: 11/16/2022

Sample Condition Upon Receipt	Client Name: <u>Pan Ocean Bay</u>	Project # WO#: 10630481	PM: JMG Due Date: 02/17/23 CLIENT: UPRR_Jacobs
Courier: ☐ FedEx ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ Speedee ☒ Commercial <u>WALCO</u>		☐ See Exception:	

Tracking Number: _____ ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No
 Seals Intact? ☒ Yes ☐ No
 Biological Tissue Frozen? ☐ Yes ☐ No ☒ N/A

Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other
 Temp Blank? ☒ Yes ☐ No

Thermometer: ☐ T1 (0461) ☐ T2 (1336) ☐ T3 (0459) ☐ T4 (0254) ☐ T5 (0178)
 ☐ T6 (0235) ☒ T7 (0042) ☐ T8 (0775) ☐ T9(0727) ☐ 01339252/1710

Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☒ None ☐ Melted

Did Samples Originate in West Virginia? ☐ Yes ☒ No JMG 12/19/22	Were All Container Temps Taken? ☐ Yes ☐ No ☒ N/A JMG 12/19/22
Temp should be above freezing to 6 °C Cooler temp Read w/Temp Blank: <u>2.5242°C 13.6</u>	
Correction Factor: <u>+ .1</u> Cooler Temp Corrected w/temp blank: <u>2.62528°C 3.1</u>	
Average Corrected Temp (no temp blank only): _____ °C	
☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 Container	

USDA Regulated Soil: (☐ N/A, water sample/other: _____)
 Date/Initials of Person Examining Contents: 12/19/22 JMG

Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? ☐ Yes ☒ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

Location (Check one):	COMMENTS
☐ Duluth ☒ Minneapolis ☐ Virginia	
Chain of Custody Present and Filled Out?	☒ Yes ☐ No 1.
Chain of Custody Relinquished?	☒ Yes ☐ No 2.
Sampler Name and/or Signature on COC?	☐ Yes ☒ No ☐ N/A 3.
Samples Arrived within Hold Time?	☒ Yes ☐ No 4. If fecal: ☐ <8 hrs ☐ >8 hr, <24 ☐ No
Short Hold Time Analysis (<72 hr)?	☐ Yes ☒ No 5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E.coli ☐ BOD/cBOD ☐ Hex Chrom ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	☒ Yes ☐ No 6. <u>late</u>
Sufficient Sample Volume?	☒ Yes ☐ No 7.
Correct Containers Used?	☒ Yes ☐ No ☐ N/A 8.
-Pace Containers Used?	☐ Yes ☒ No
Containers Intact?	☒ Yes ☐ No 9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes ☐ No ☒ N/A 10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	11. If no, write ID/Date/Time of container below: <u>6N containers added to COC/WO</u> ☐ See Exceptions ENV-FRM-MIN4-0142
Matrix: ☐ Water ☒ Soil ☐ Oil ☐ Other	
All containers needing acid/base preservation have been checked?	☐ Yes ☐ No ☒ N/A 12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	☐ Yes ☐ No ☒ N/A ☐ NaOH ☐ HNO3 ☐ H2SO4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS (*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)	Positive for Residual Chlorine? ☐ Yes ☐ No ☐ See Exceptions ENV-FRM-MIN4-0142 pH Paper Lot # Residual Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Headspace in Methyl Mercury Container?	☐ Yes ☐ No ☒ N/A 13.
Extra labels present on soil VOA or WIDRO containers?	☐ Yes ☐ No ☒ N/A 14. ☐ See Exceptions ENV-FRM-MIN4-0142
Headspace in VOA Vials (greater than 6mm)?	☐ Yes ☐ No ☒ N/A
3 Trip Blanks Present?	☐ Yes ☐ No ☒ N/A 15.
Trip Blank Custody Seals Present?	☐ Yes ☐ No ☒ N/A Pace Trip Blank Lot # (if purchased): _____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ **Date/Time:** _____

Comments/Resolution: _____

Project Manager Review: Jenni Gross **Date:** 12/19/22

NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled By: NK **Line:** 7



DC#_Title: ENV-FRM-MIN4-0142 v02_Sample Condition Upon Receipt
(SCUR) Exception Form

Effective Date: 09/22/2022

Workorder #: _____

No Temp Blank		
Read Temp	Corrected Temp	Average temp

PM Notified of Out of Temp Cooler? ☐ Yes ☐ No

If yes, indicate who was contacted, date and time.

If no, indicate reason why.

Multiple Cooler Project? ☐ Yes ☐ No

If anything is OVER 6.0° C, you **MUST** document containers in this section HERE



Tracking Number	Temperature
3424796-4	8.9
3424796-5	11.3
3424796-2	8.7
3424796-1	11.2

Out of Temp Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples

Sample ID	Type Of Preserve	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance After Addition?		Initials
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	

Comments:

Sample Condition Upon Receipt Form (SCUR)

Project #:

Client Name: Pace MN

Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Walto
☐ Client ☐ Pace Other: _____

Tracking #: 5923 7141 9781 ①

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other _____

Thermometer Used SR - 9 Type of Ice: Wet Blue Dry None ☐ Meltwater Only

Cooler Temperature Uncorr: 5 /Corr: 5.5 ②

Temp Blank Present: ☒ yes ☐ no

Biological Tissue is Frozen: ☐ yes ☐ no

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:

Date: 10/20/22 Initials: SG

Labeled By Initials: UP

Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☒ Yes ☐ No ☐ N/A	2.
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC:	☐ Yes ☐ No ☒ N/A	4. <u>IAWO</u> <u>10/20/22 SG</u>
Samples Arrived within Hold Time:	☒ Yes ☐ No	5.
- DI VOA Samples frozen upon receipt	☐ Yes ☐ No	Date/Time:
Short Hold Time Analysis (<72hr):	☐ Yes ☒ No	6.
Rush Turn Around Time Requested:	☐ Yes ☒ No	7.
Sufficient Volume:		8.
For Analysis: ☒ Yes ☐ No MS/MSD: ☒ Yes ☐ No ☐ N/A		
Correct Containers Used:	☒ Yes ☐ No	9.
Correct Type: Pace Green Bay, Pace IR, <u>(Non-Pace)</u>		
Containers Intact:	☒ Yes ☐ No	10.
Filtered volume received for Dissolved tests	☐ Yes ☐ No ☒ N/A	11.
Sample Labels match COC:	☐ Yes ☒ No ☐ N/A	12. <u>IAWO COC 001 Time "0800", client COC matches sample time "0900"</u> <u>IAWO COC 002 Time "0805", client COC matches sample time "0905"</u> <u>10/20/22 SG</u>
-Includes date/time/ID/Analysis Matrix: <u>S</u>		
Trip Blank Present:	☐ Yes ☐ No ☒ N/A	13.
Trip Blank Custody Seals Present	☐ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logi

Page 2 of 3 10/20/22 SG
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Labeled Mono Chlorinated Biphenyls

Data File Name: P230112A_10

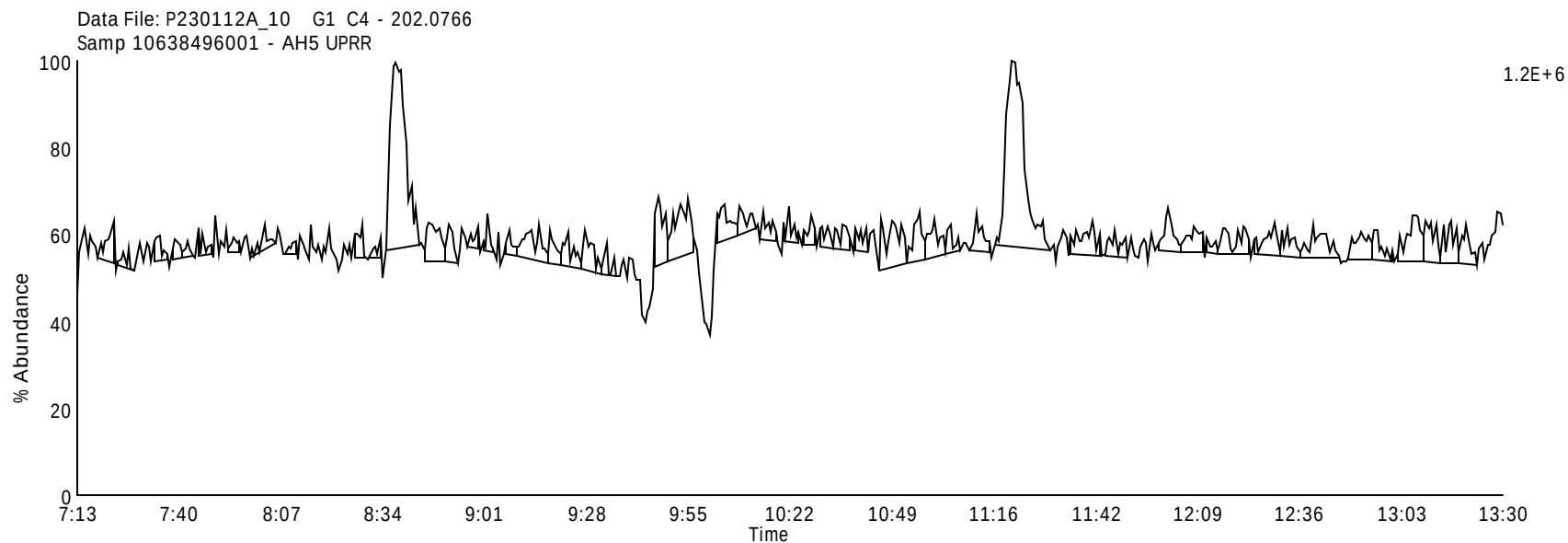
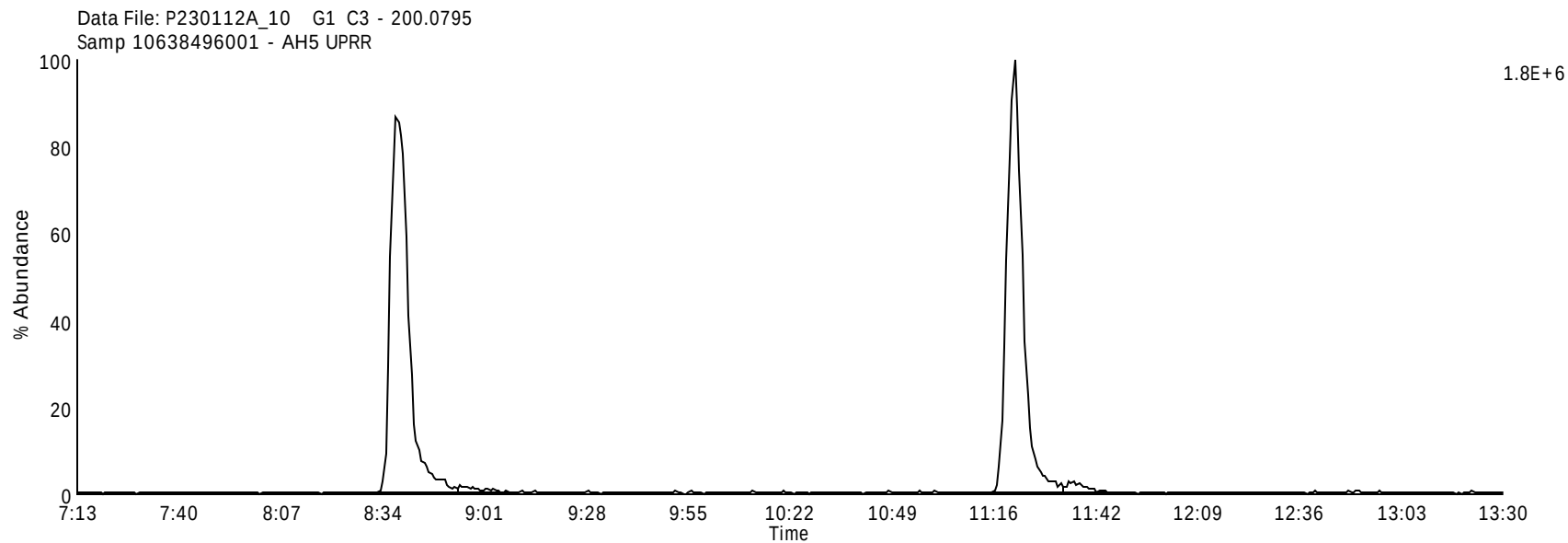
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Labeled Di Chlorinated Biphenyls

Data File Name: P230112A_10

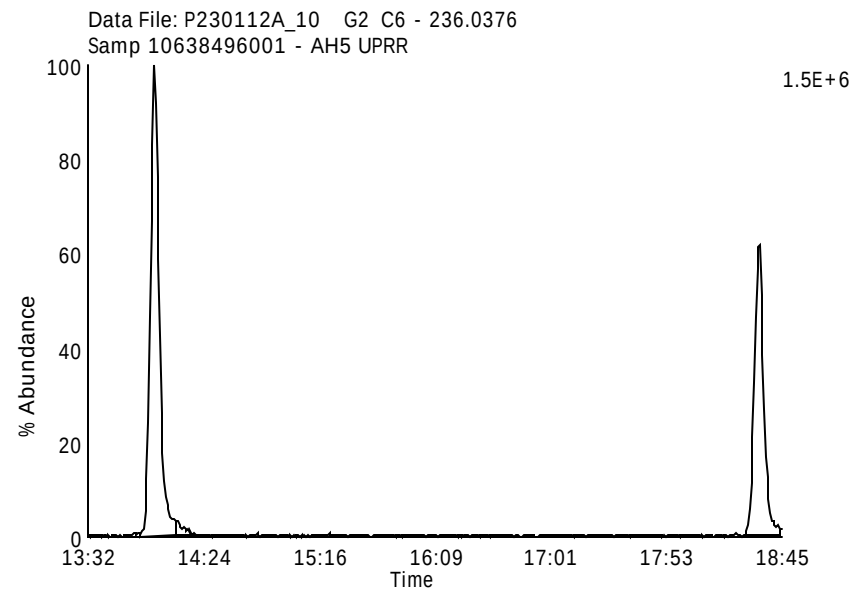
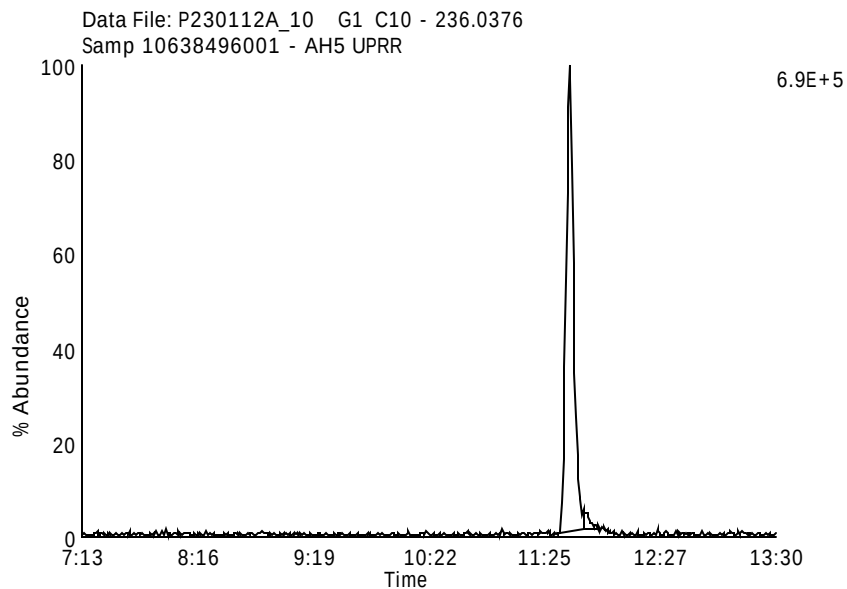
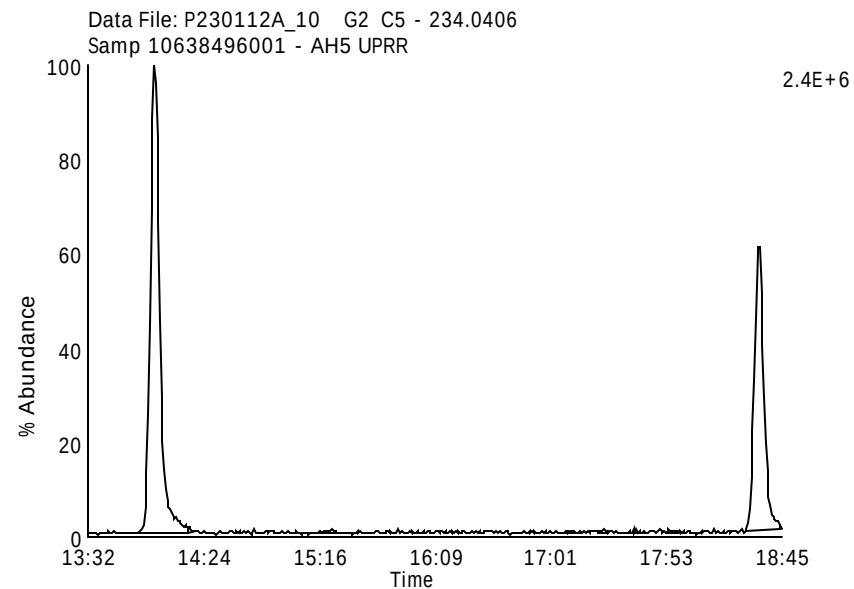
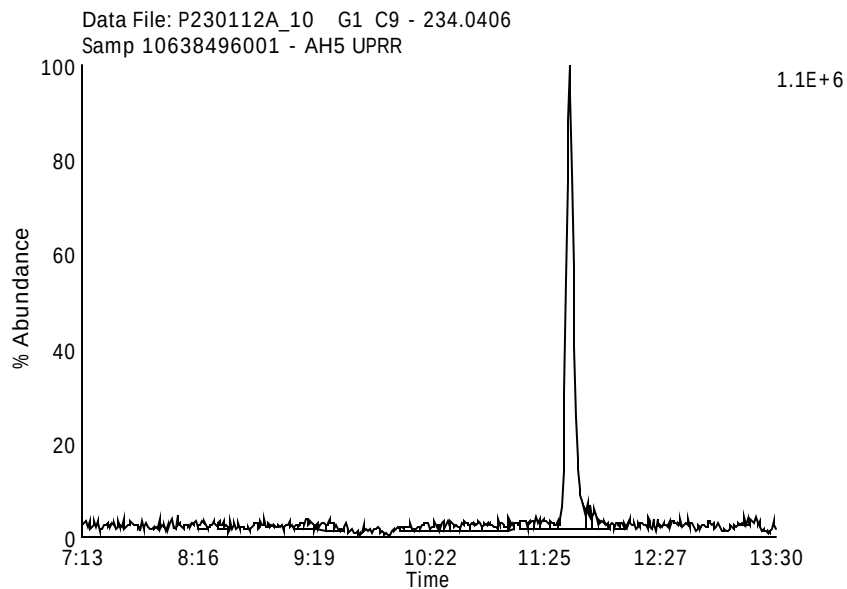
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Labeled Tri Chlorinated Biphenyls

Data File Name: P230112A_10

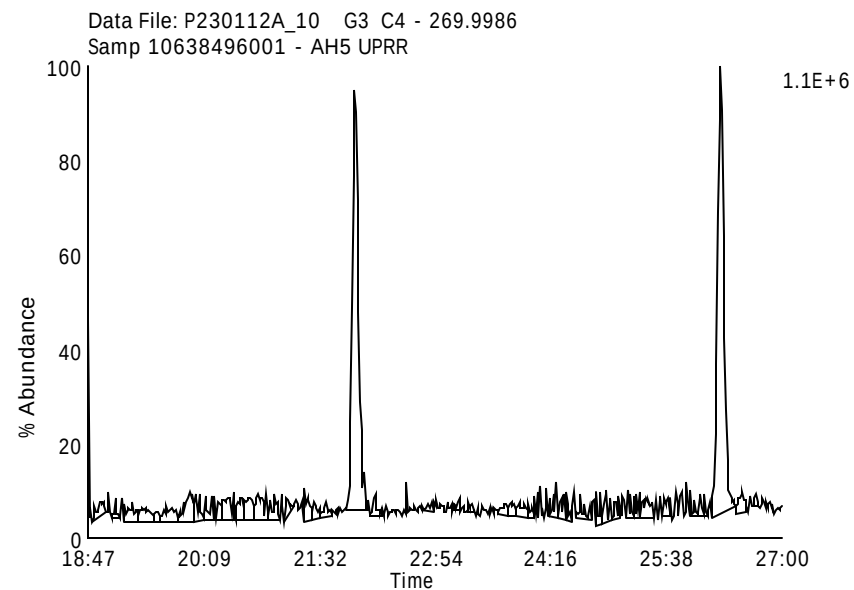
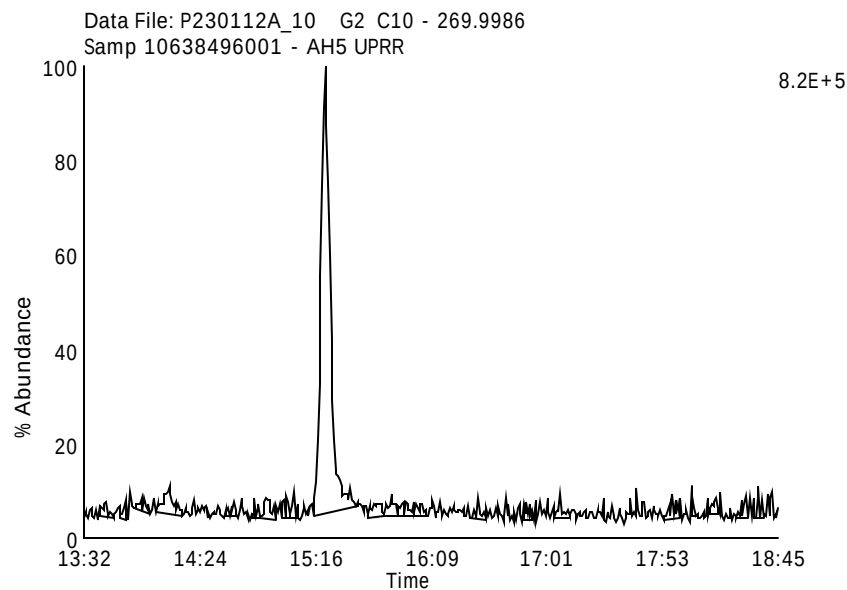
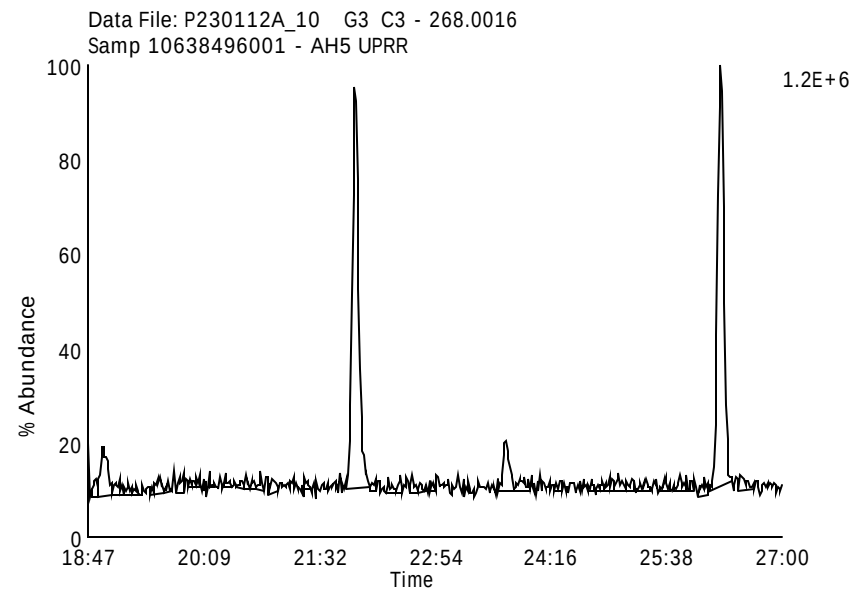
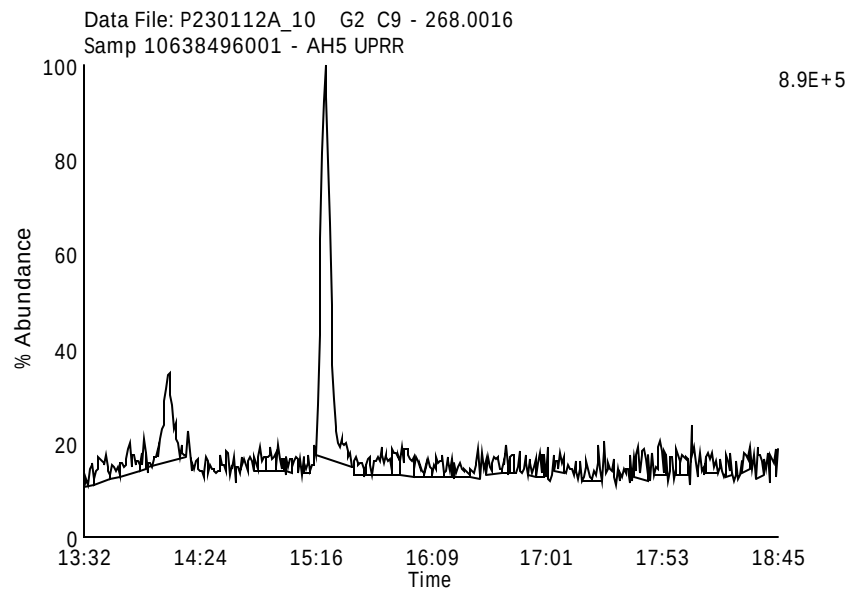
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Labeled Tetra Chlorinated Biphenyls

Data File Name: P230112A_10

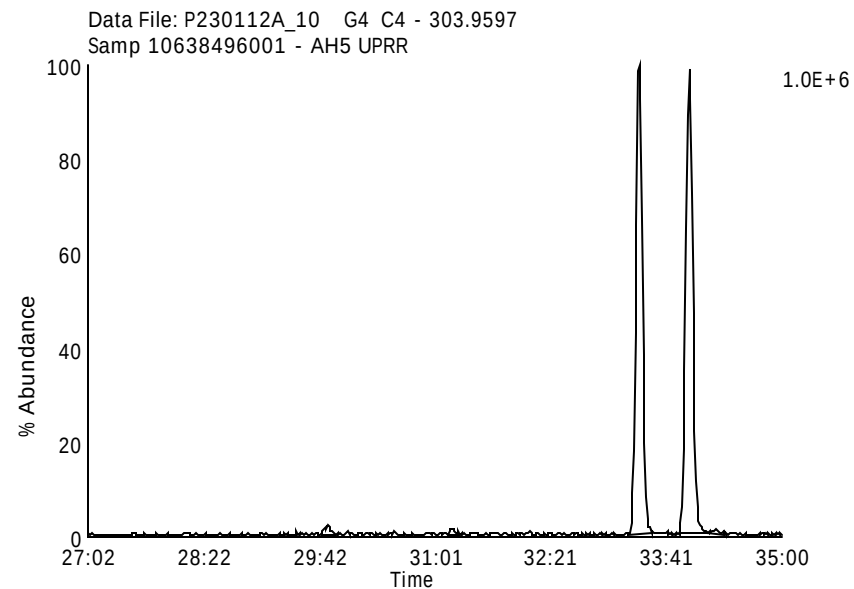
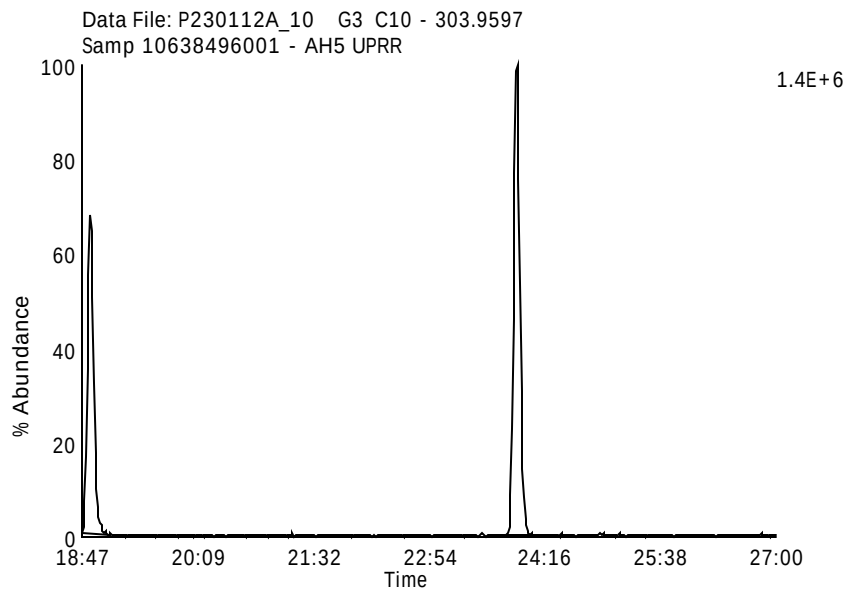
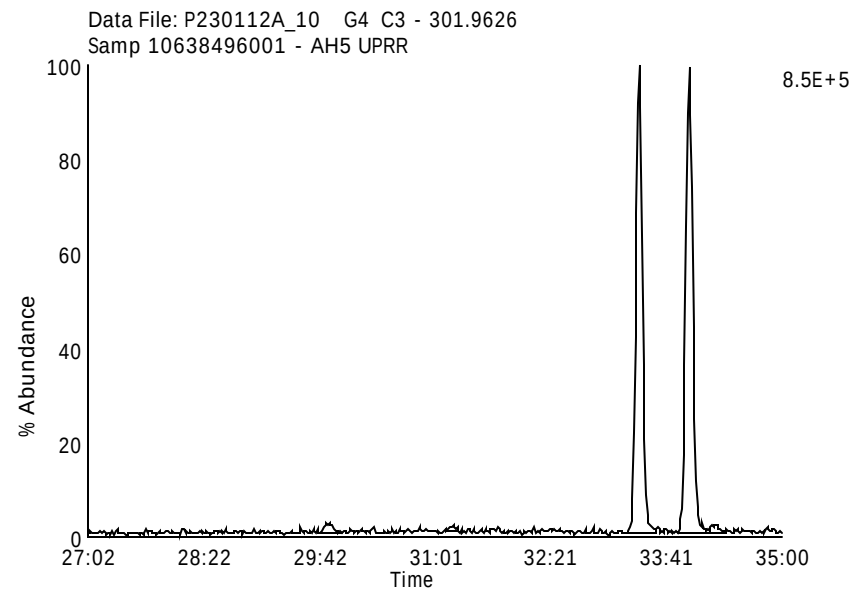
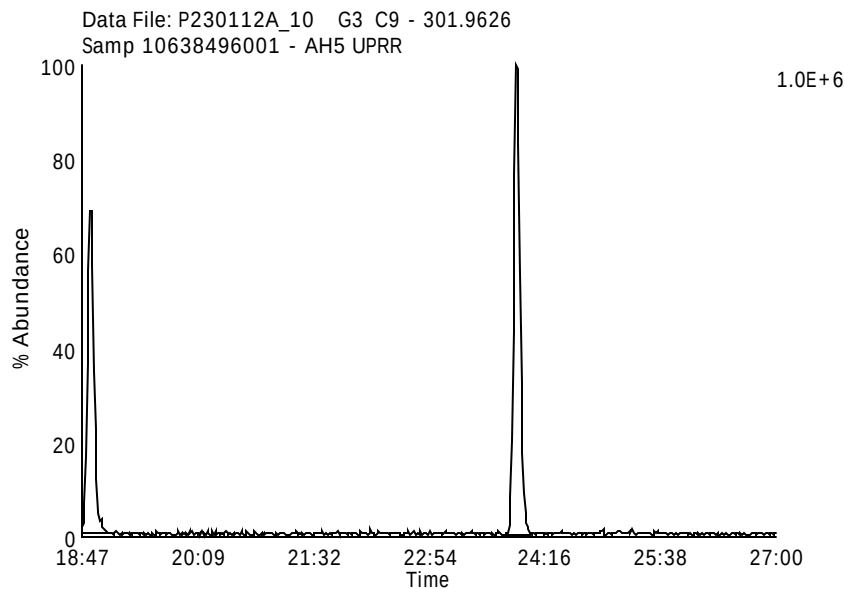
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Labeled Penta Chlorinated Biphenyls

Data File Name: P230112A_10

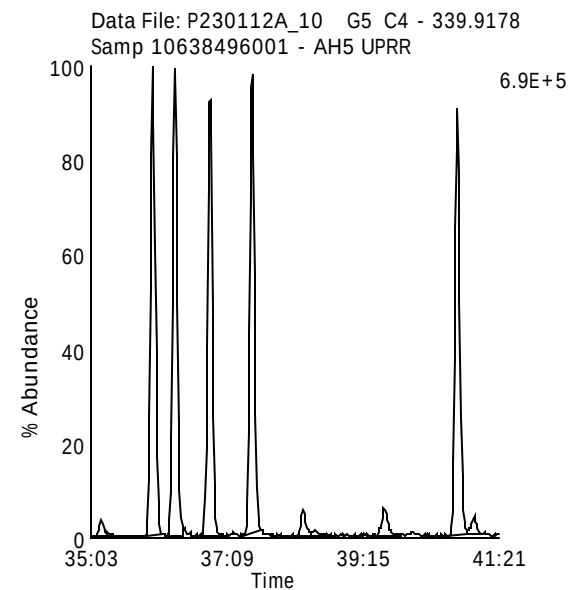
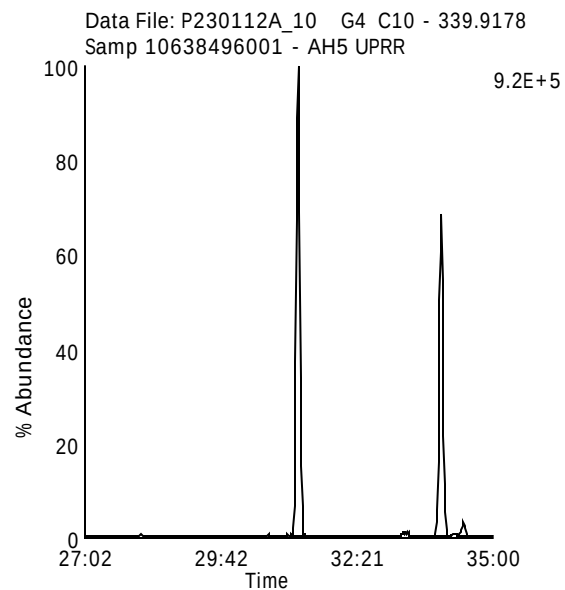
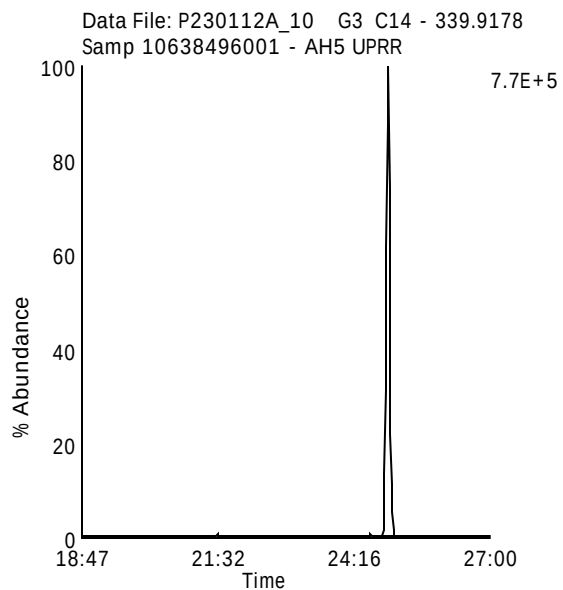
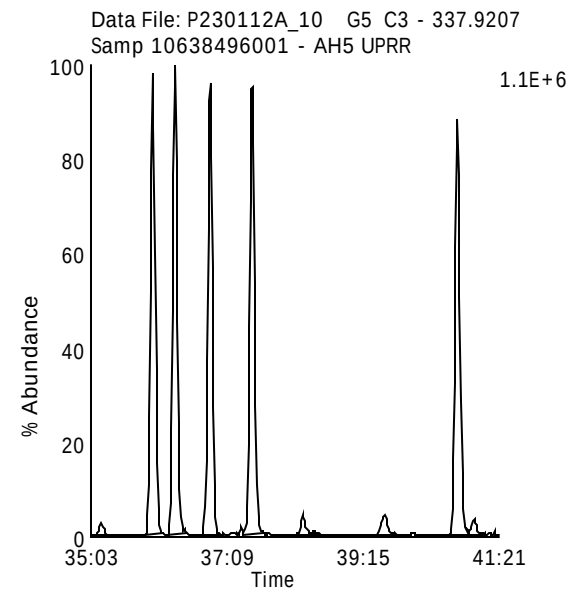
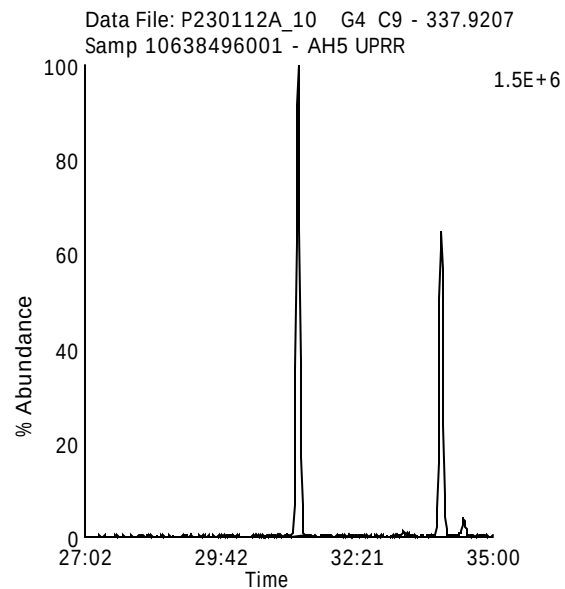
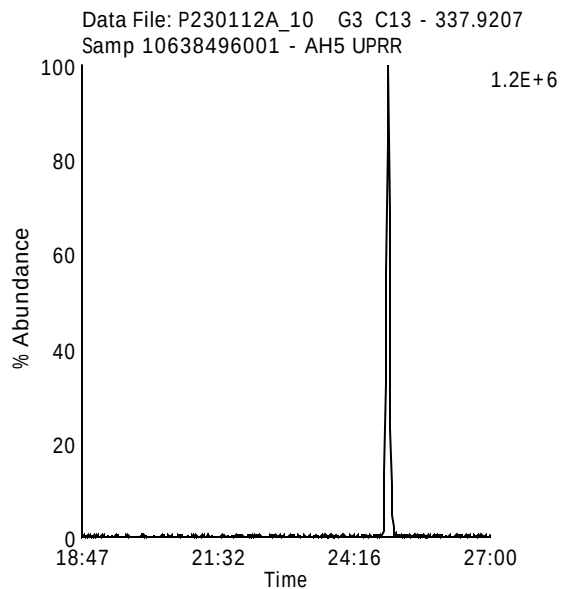
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Labeled Hexa Chlorinated Biphenyls

Data File Name: P230112A_10

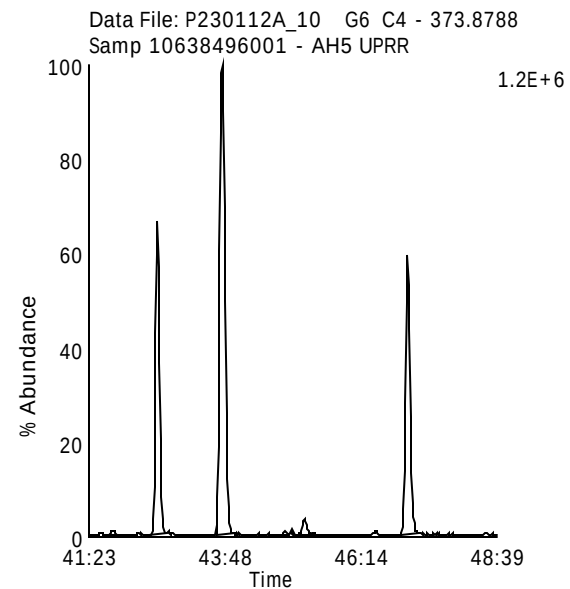
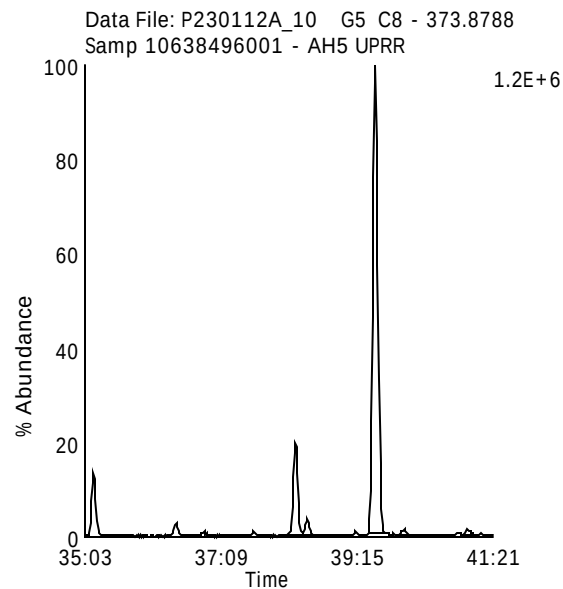
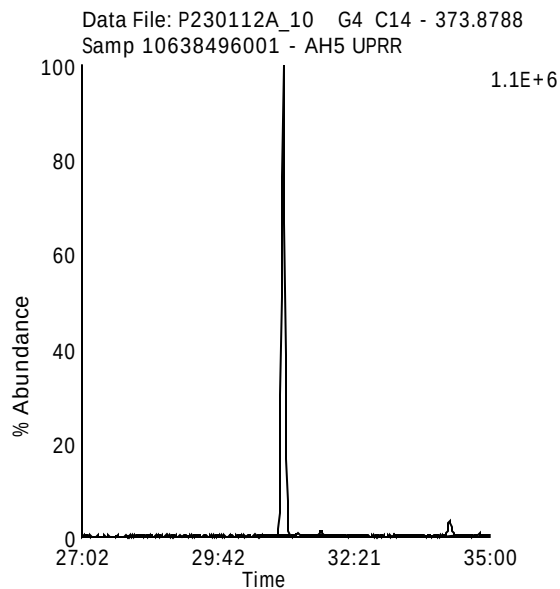
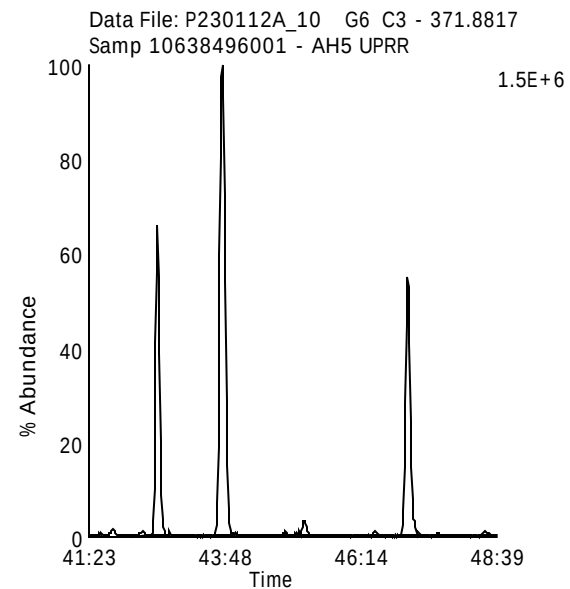
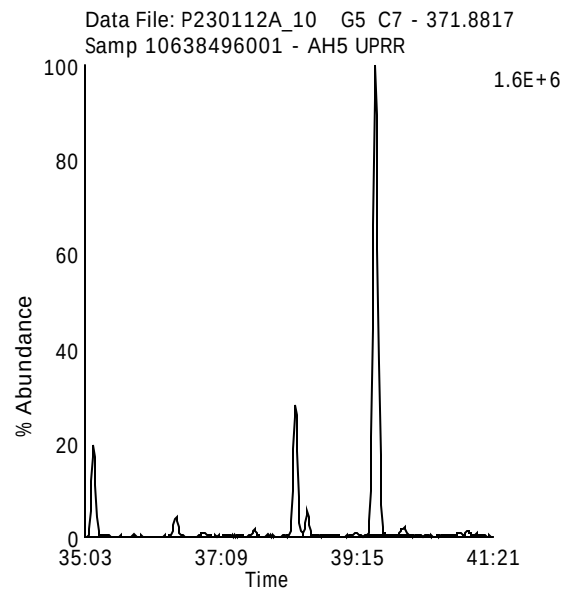
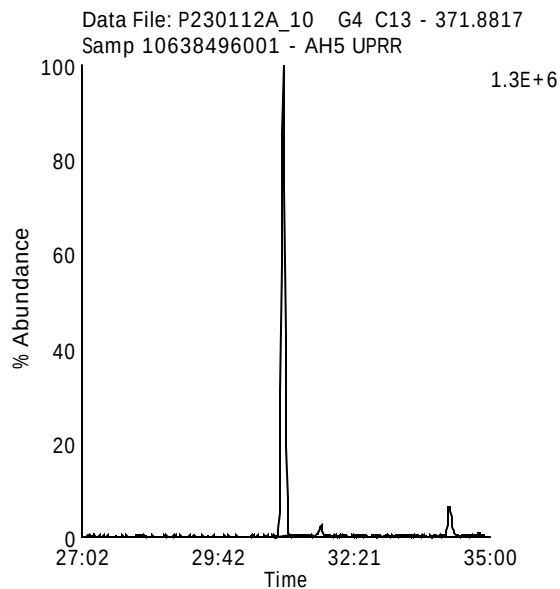
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Labeled Hepta Chlorinated Biphenyls

Data File Name: P230112A_10

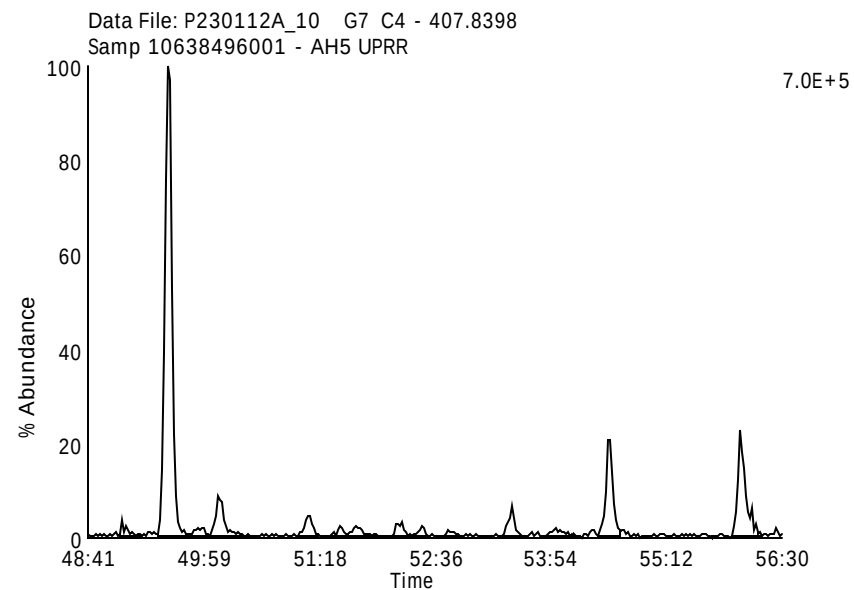
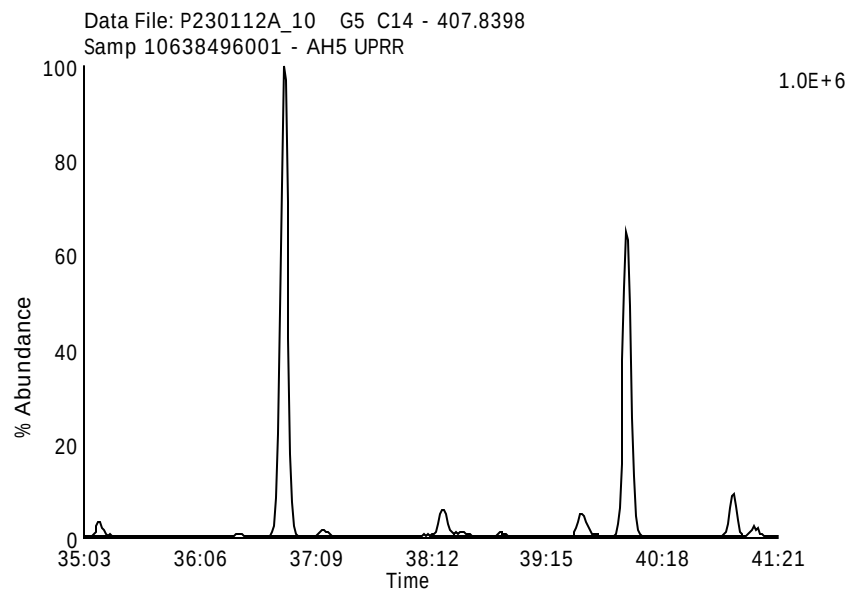
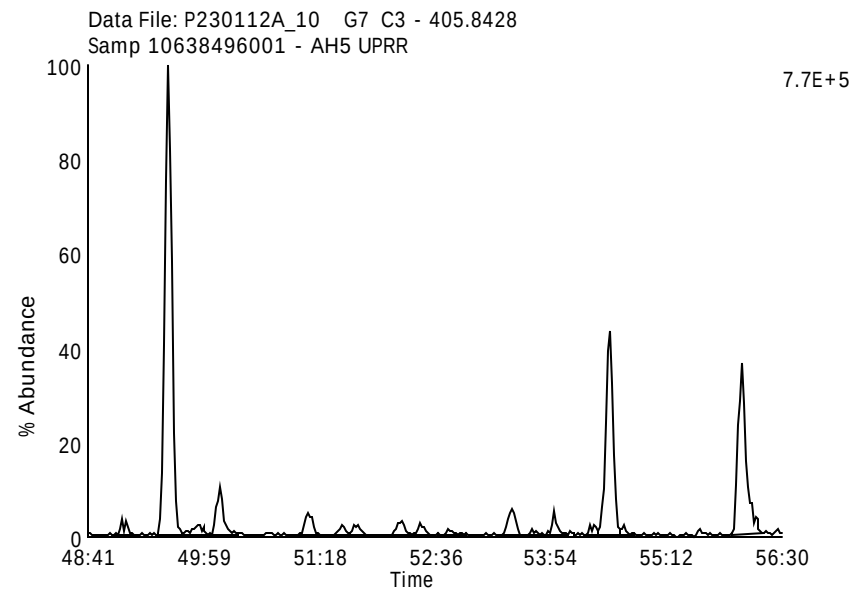
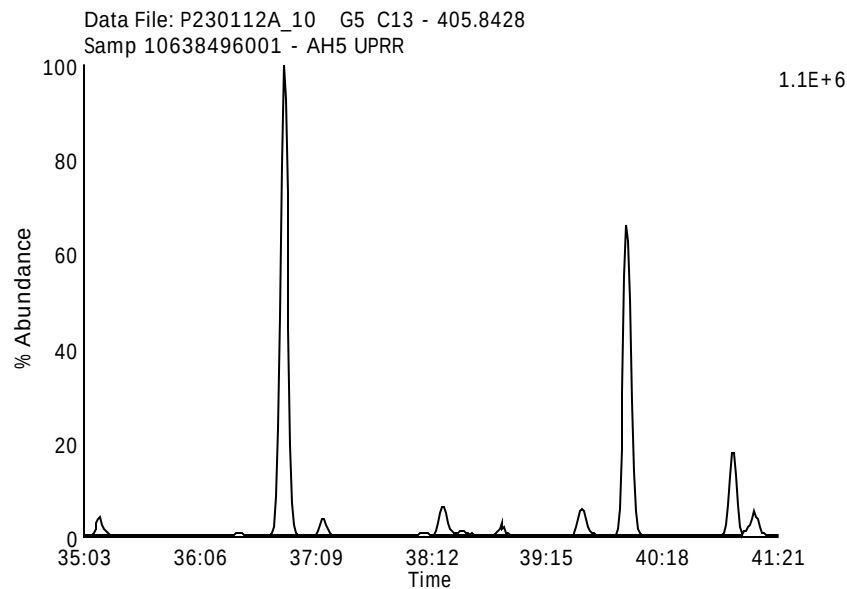
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Labeled Octa Chlorinated Biphenyls

Data File Name: P230112A_10

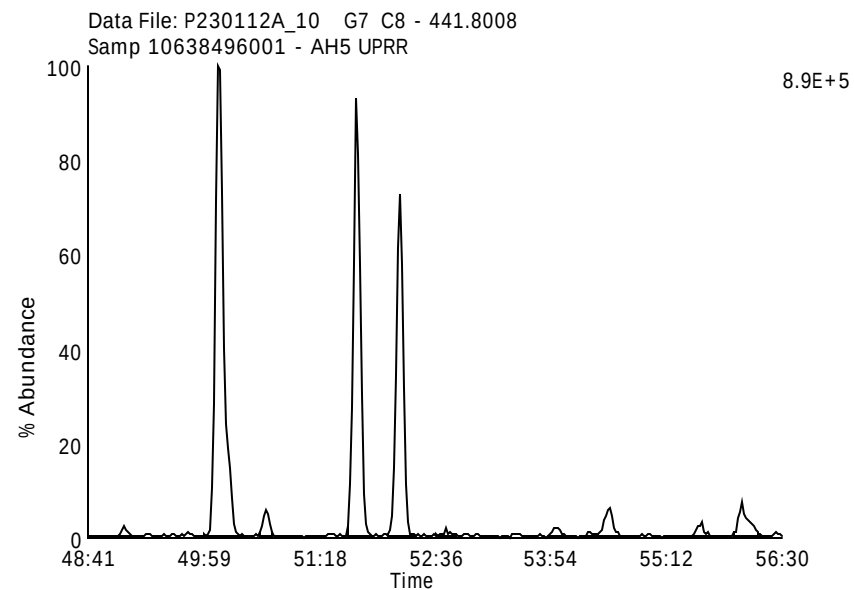
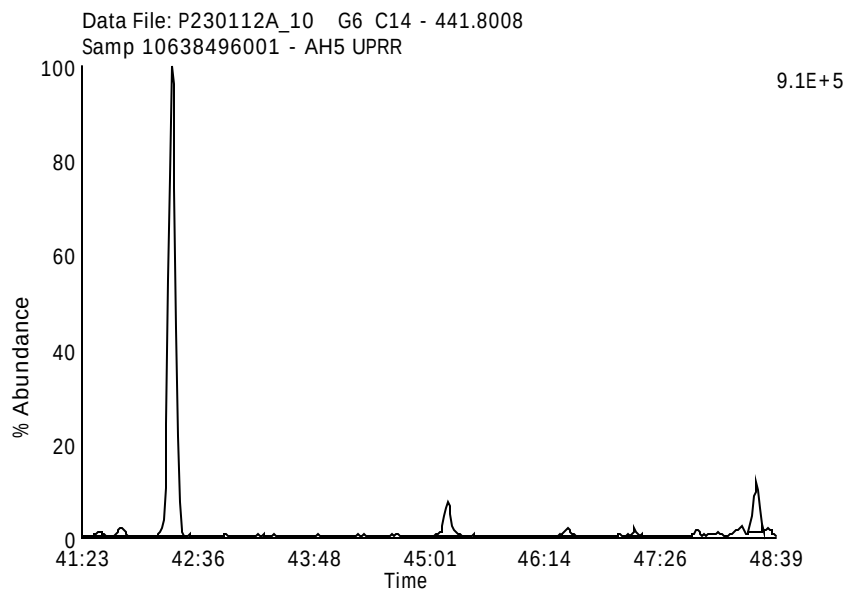
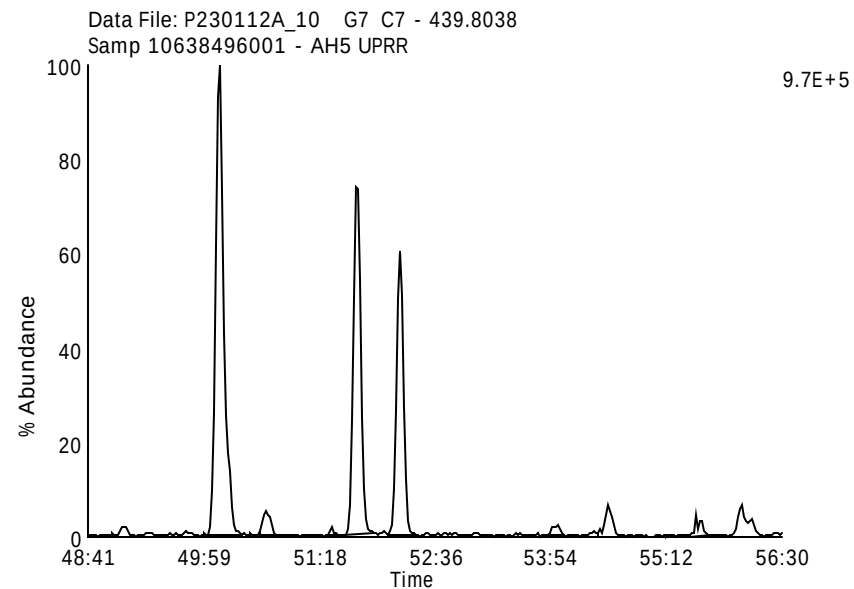
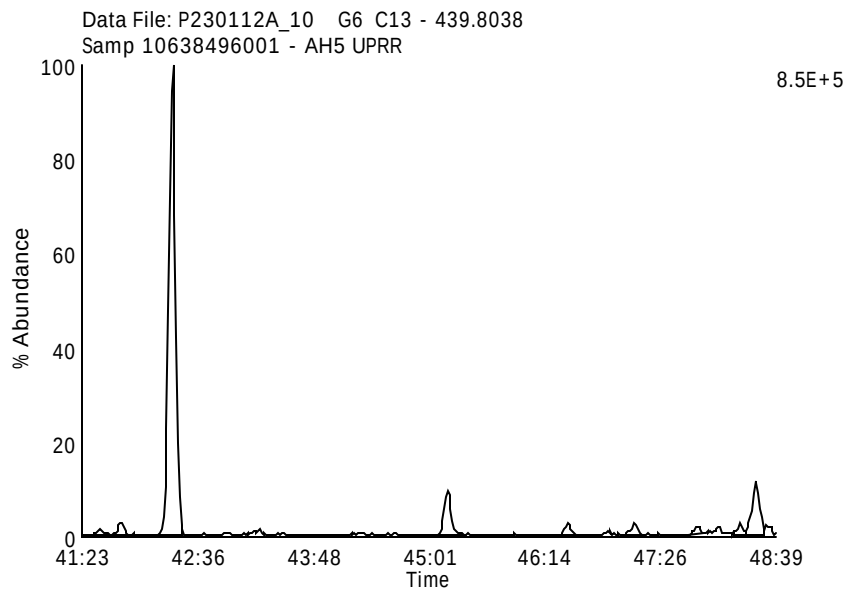
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Labeled Nona Chlorinated Biphenyls

Data File Name: P230112A_10

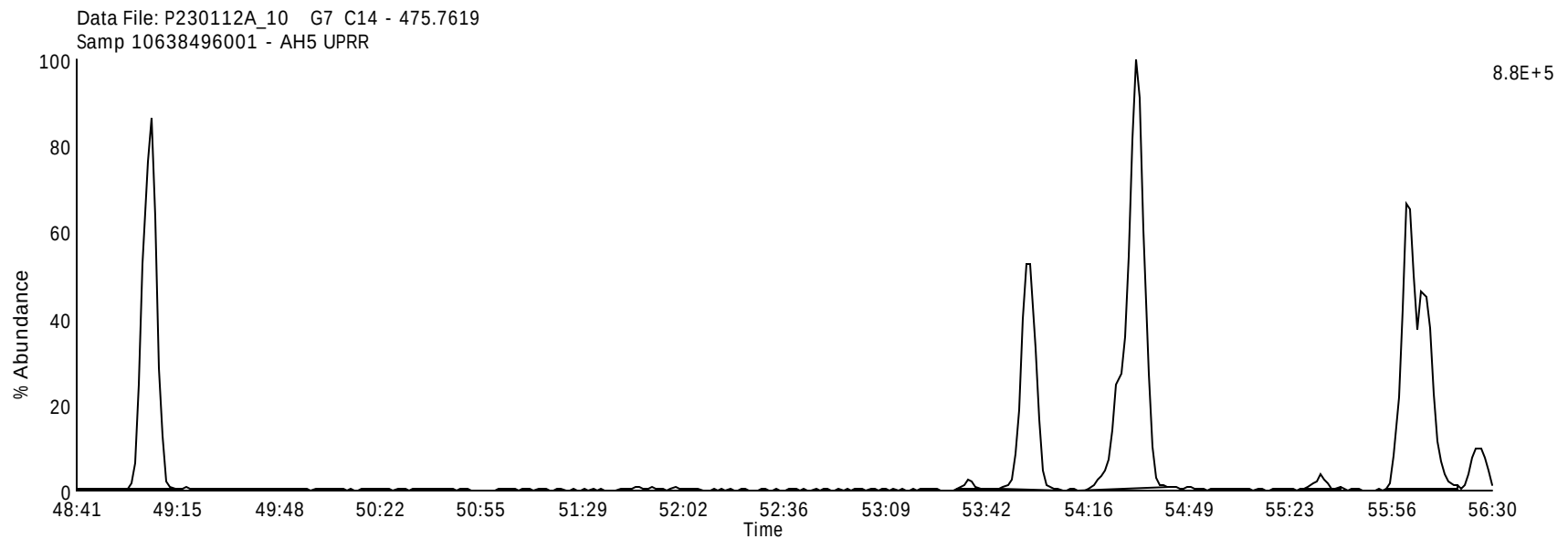
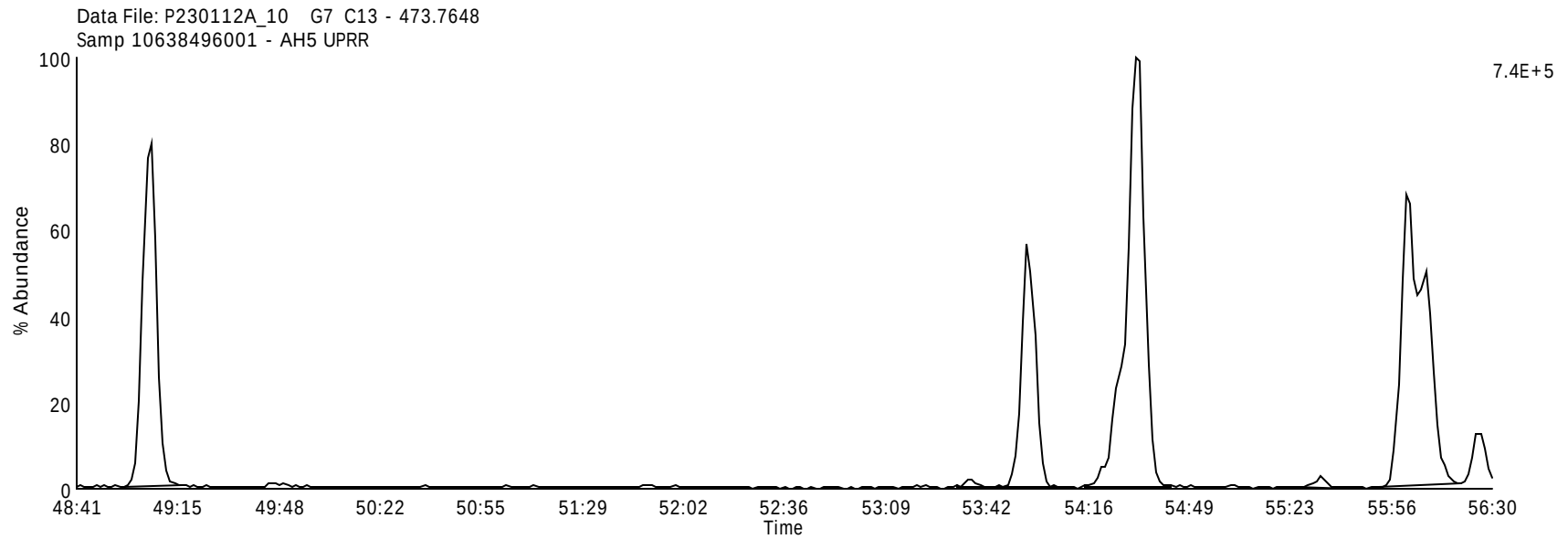
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Labeled Deca Chlorinated Biphenyl

Data File Name: P230112A_10

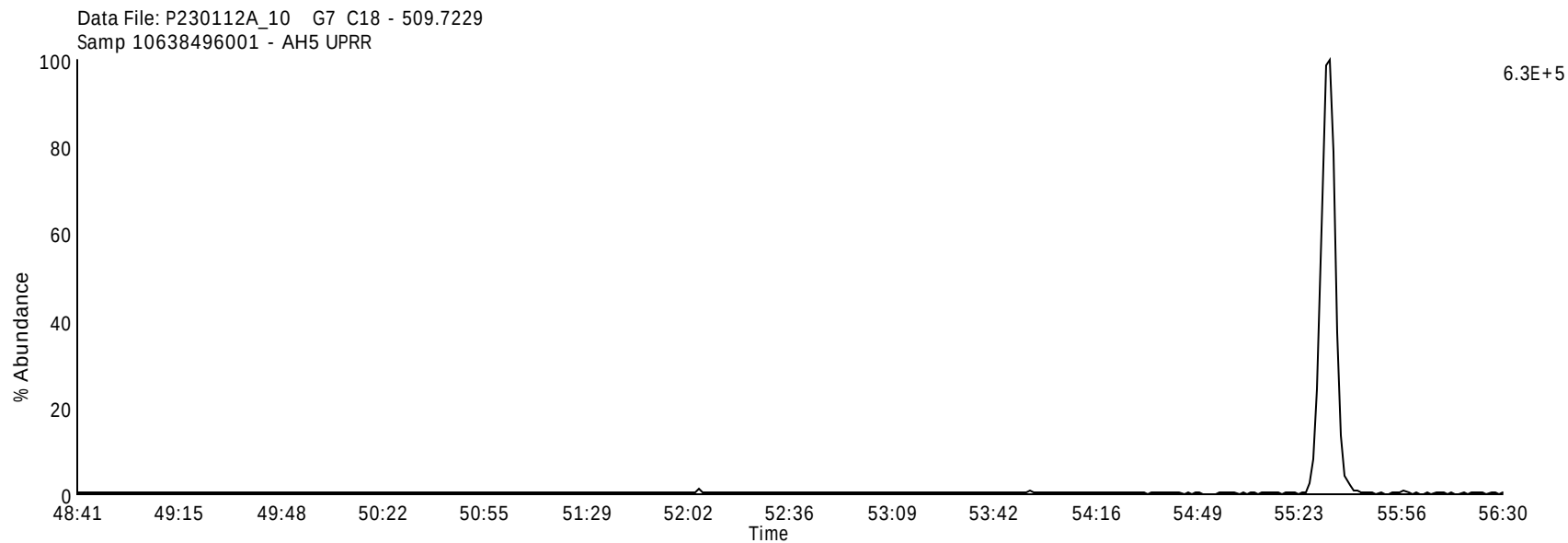
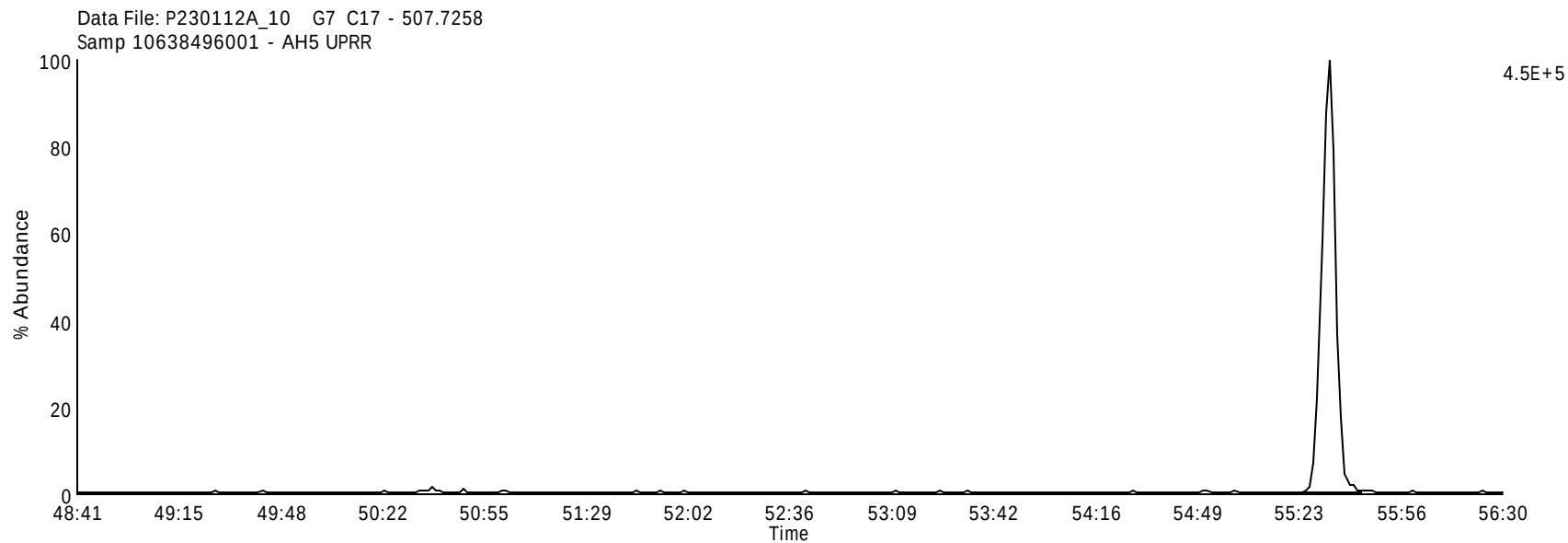
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Mono Chlorinated Biphenyls

Data File Name: P230112A_10

Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

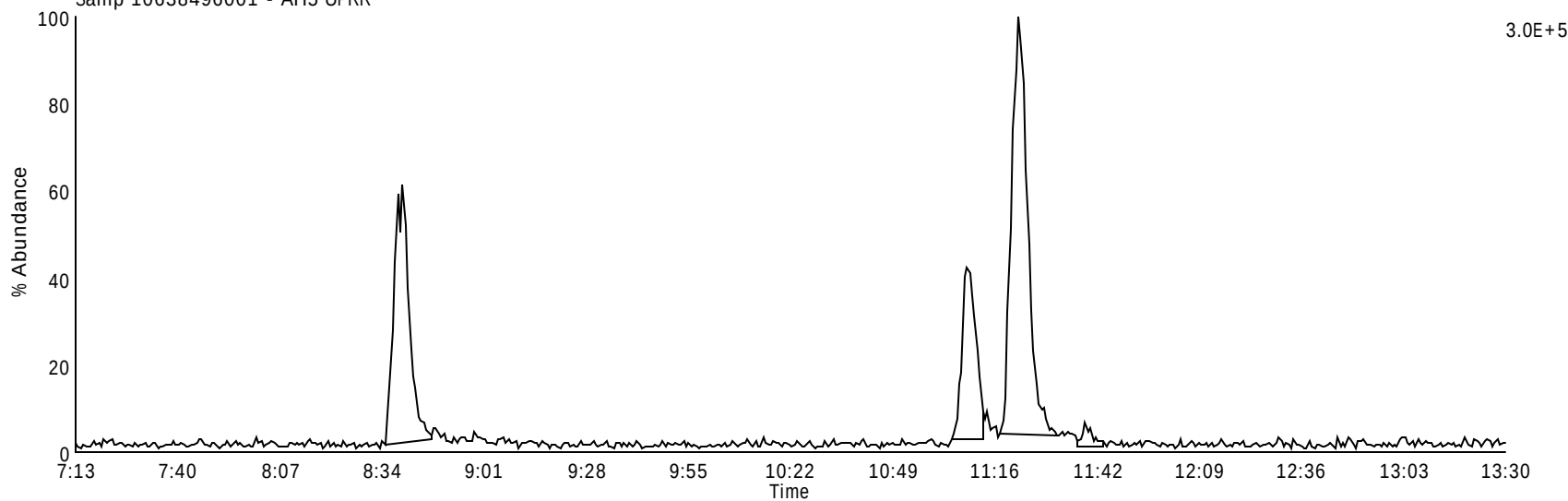
Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022

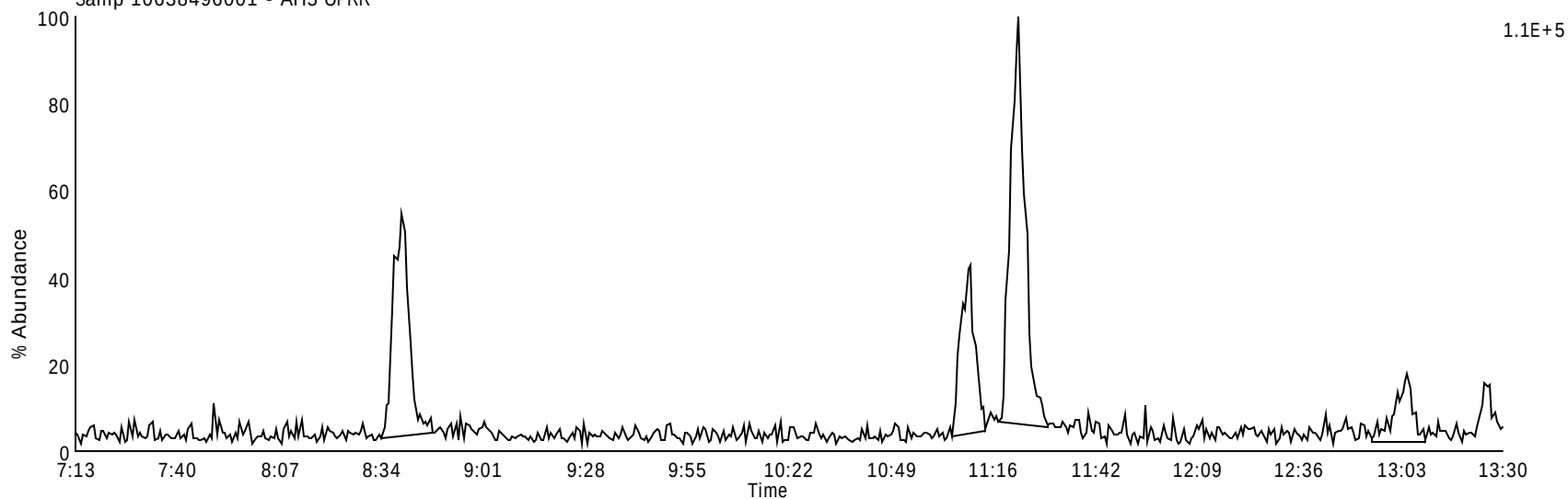
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Samp 10638496001 - AH5 UPRR



Data File: P230112A_10 G1 C2 - 190.0363

Samp 10638496001 - AH5 UPRR



Di Chlorinated Biphenyls

Data File Name: P230112A_10

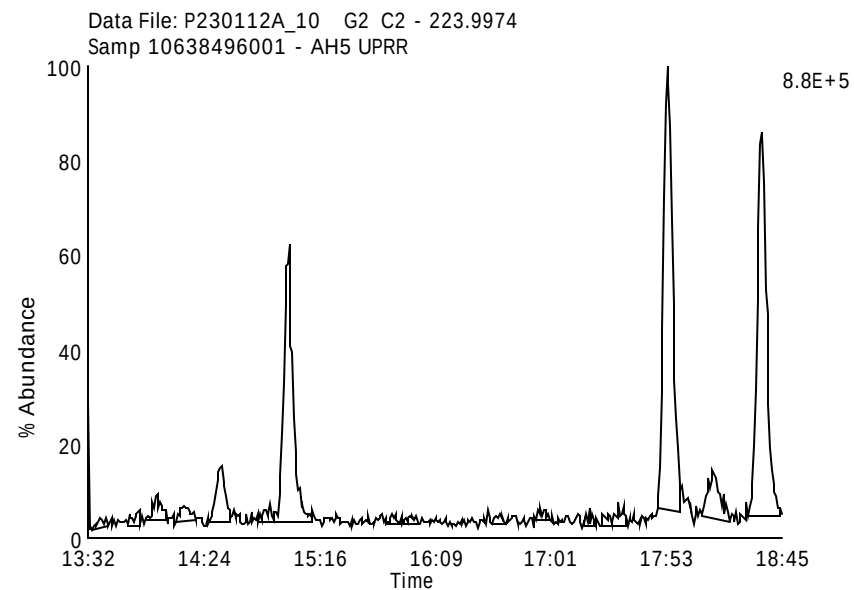
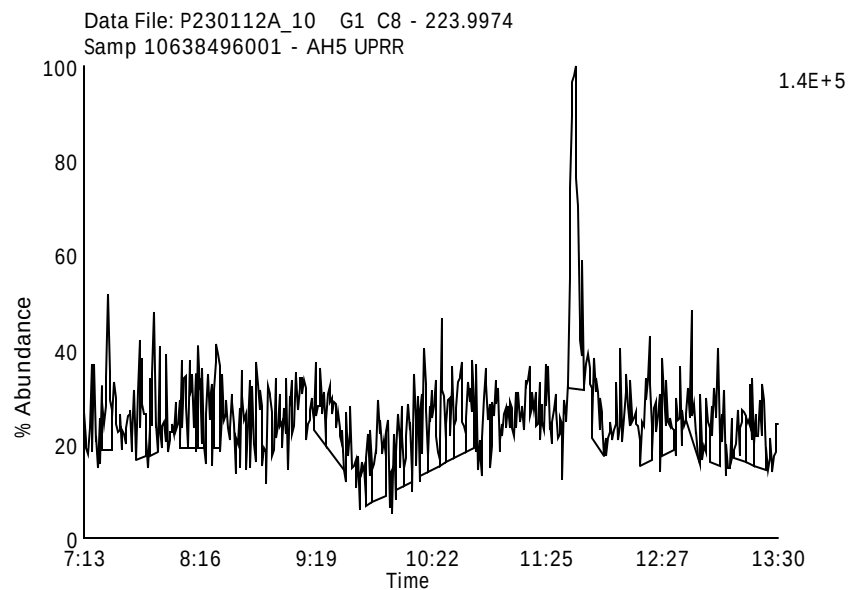
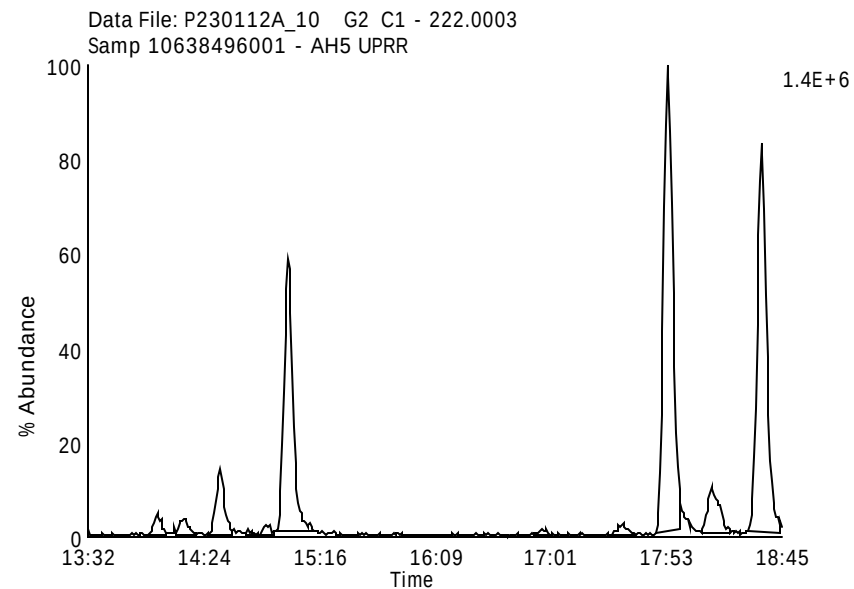
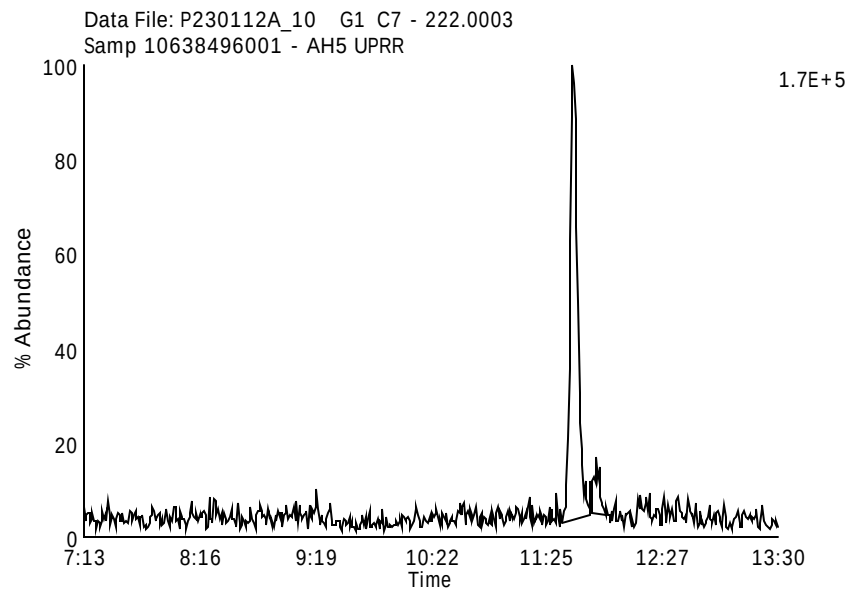
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Tri Chlorinated Biphenyls

Data File Name: P230112A_10

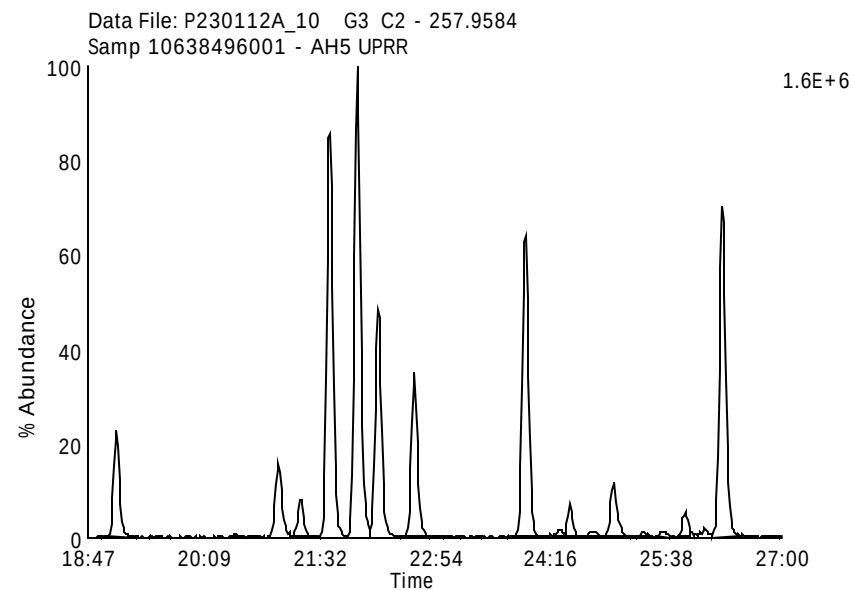
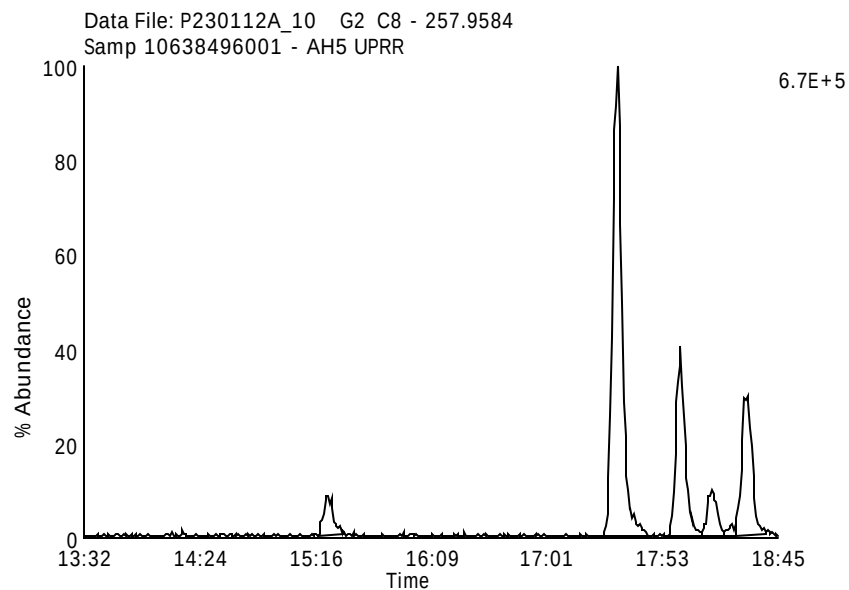
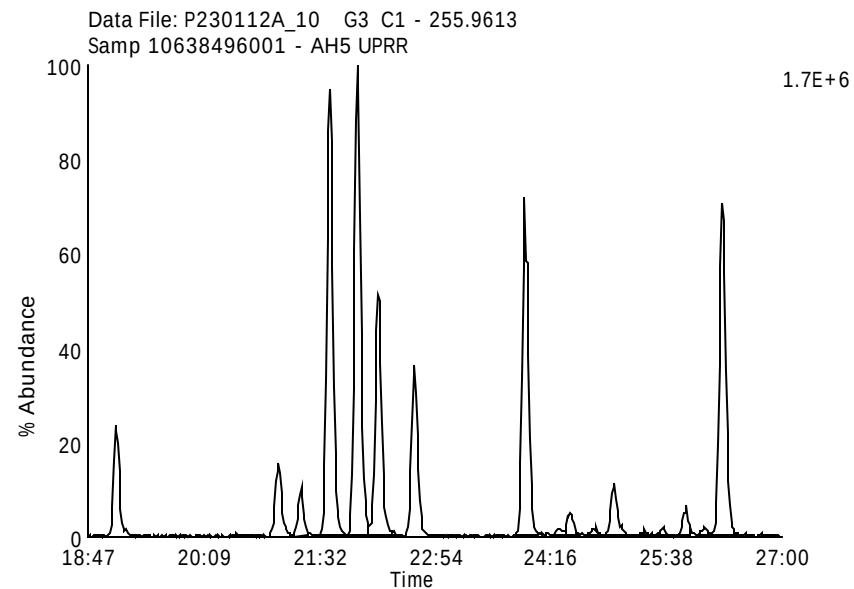
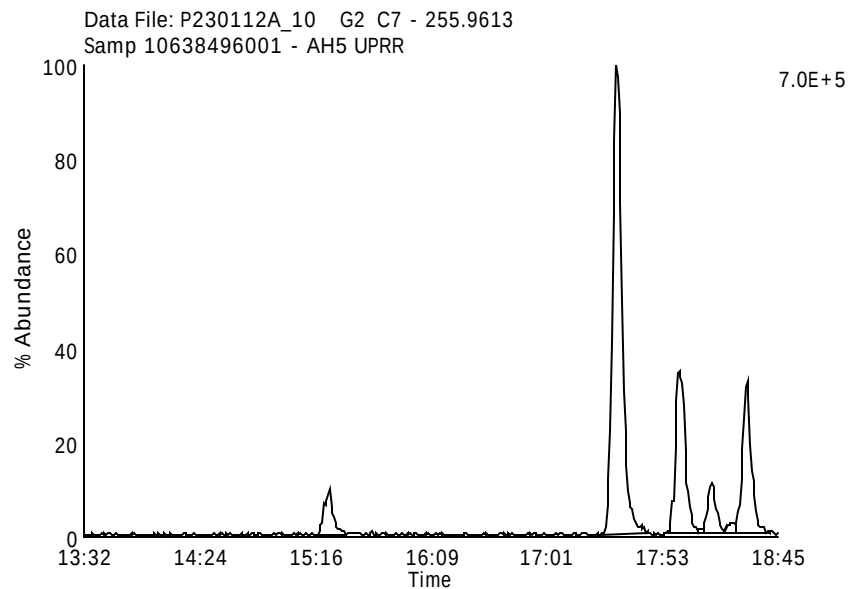
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Tetra Chlorinated Biphenyls

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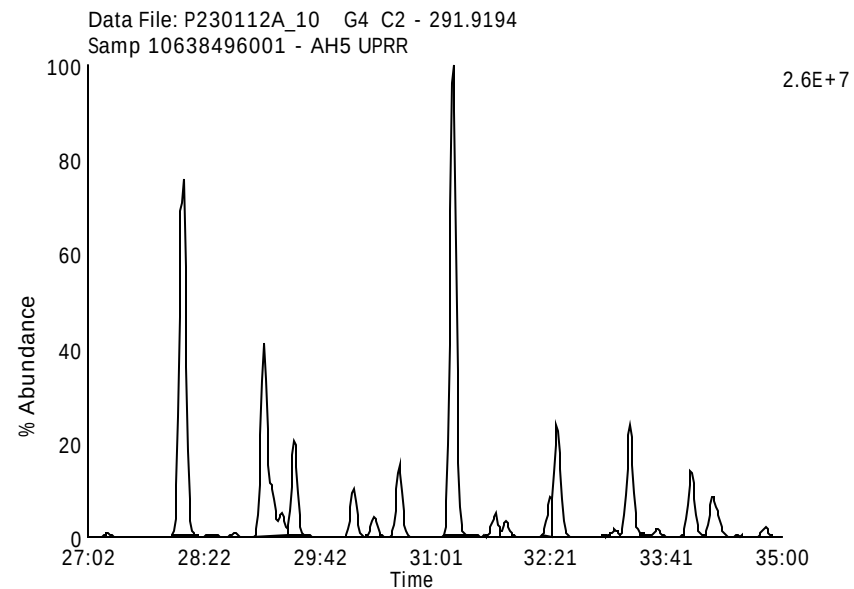
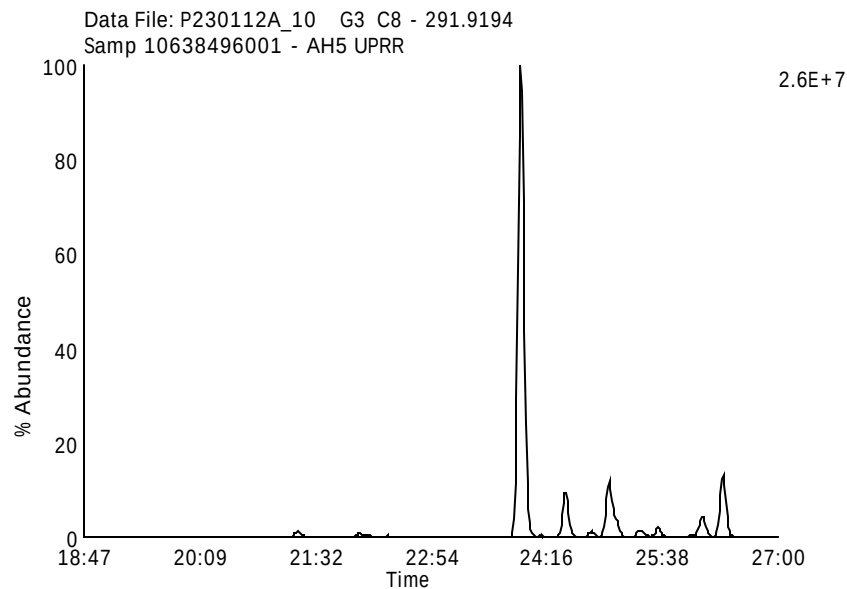
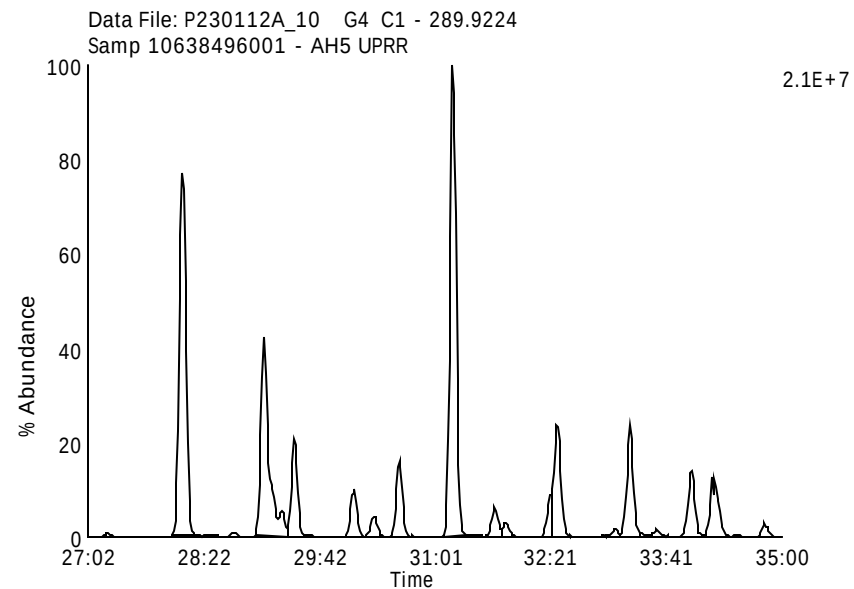
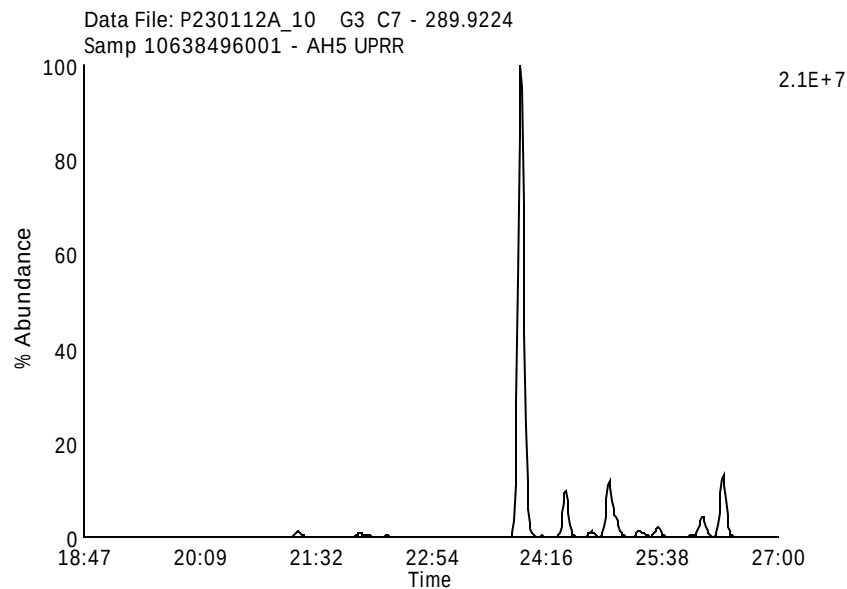
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Penta Chlorinated Biphenyls

Data File Name: P230112A_10

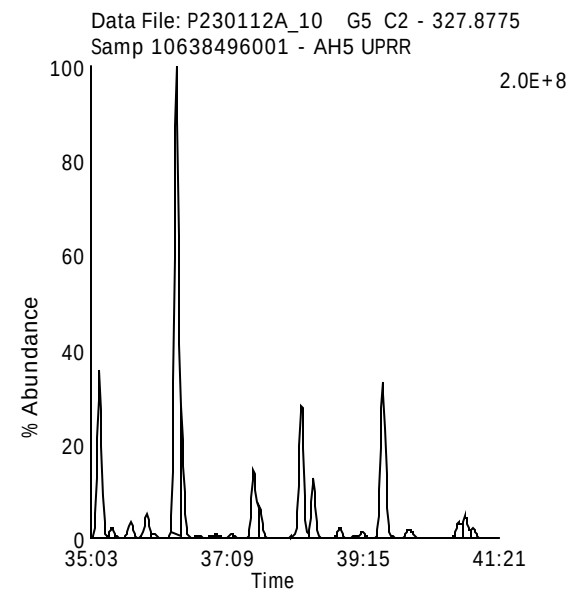
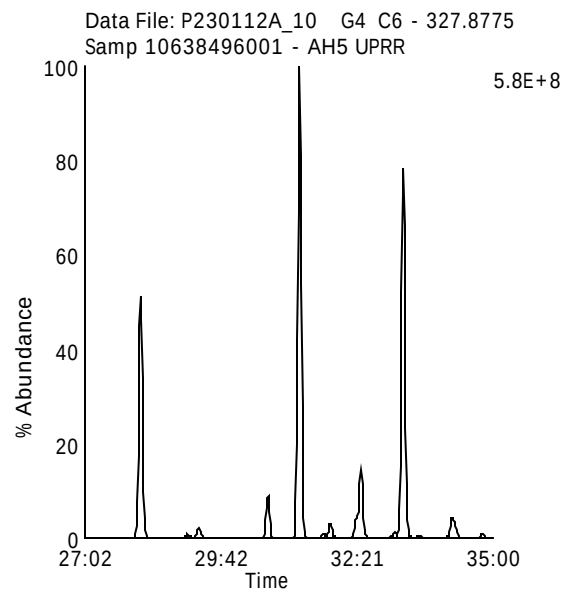
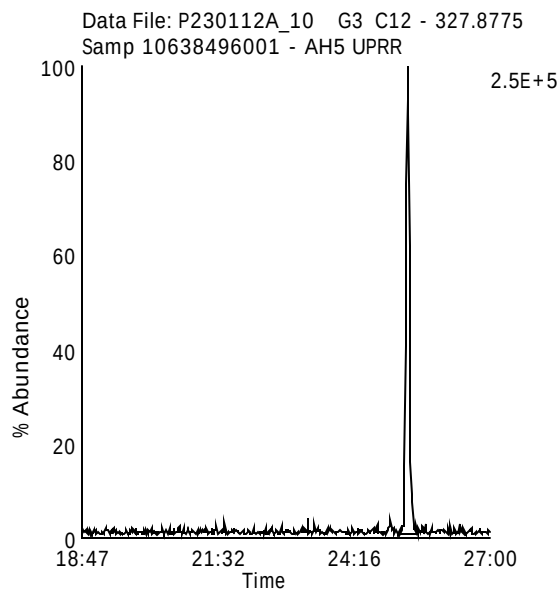
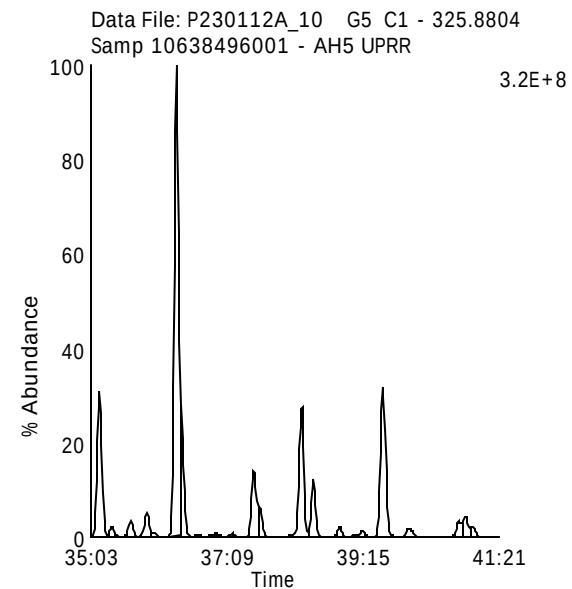
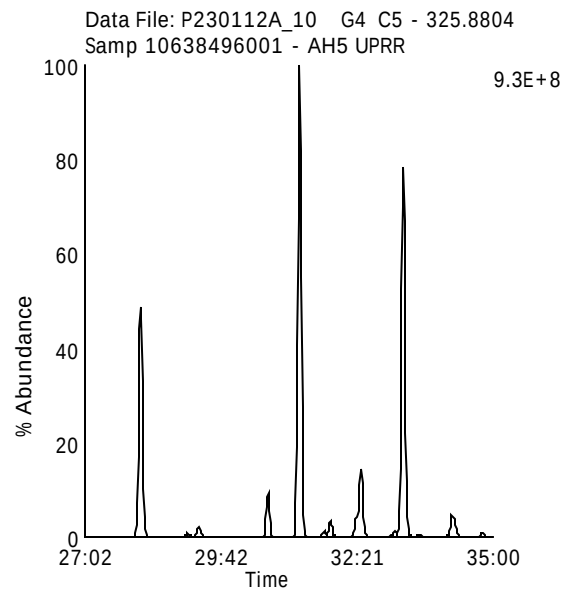
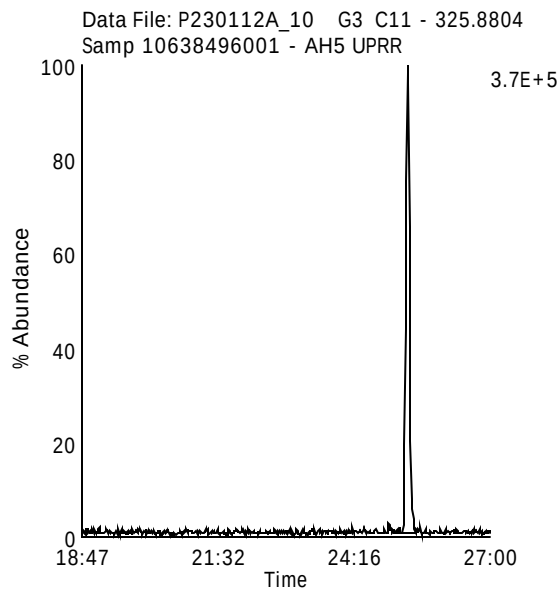
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Hexa Chlorinated Biphenyls

Data File Name: P230112A_10

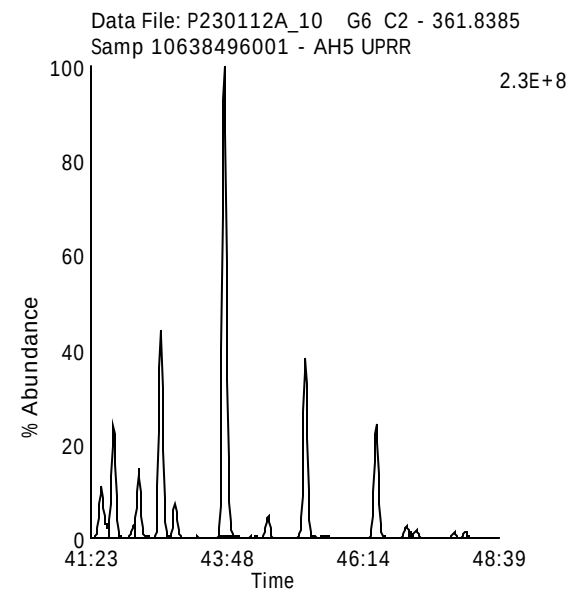
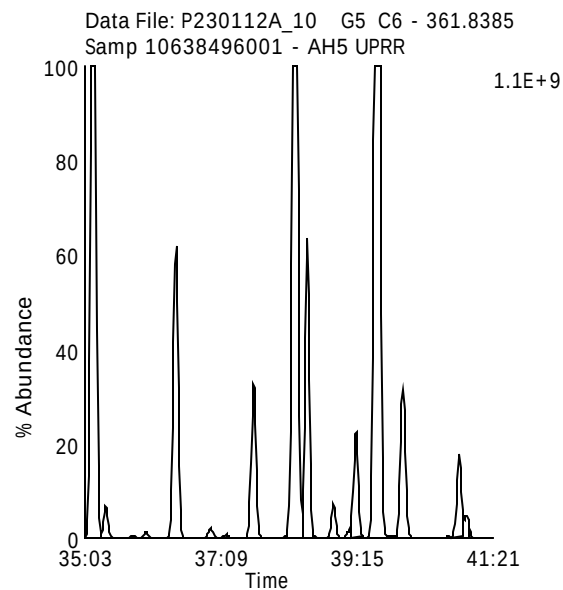
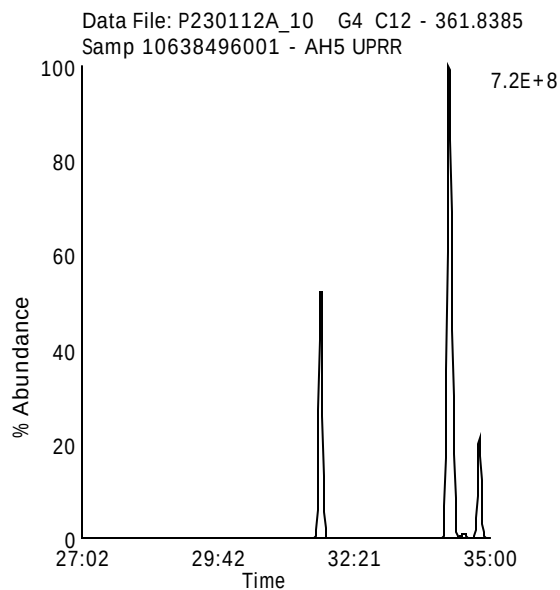
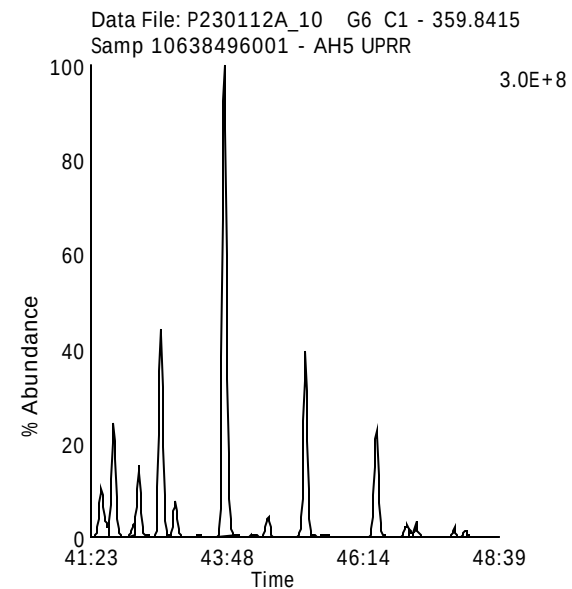
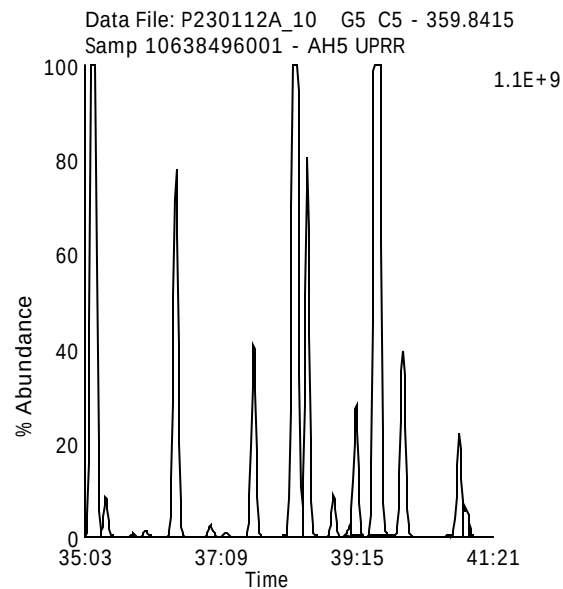
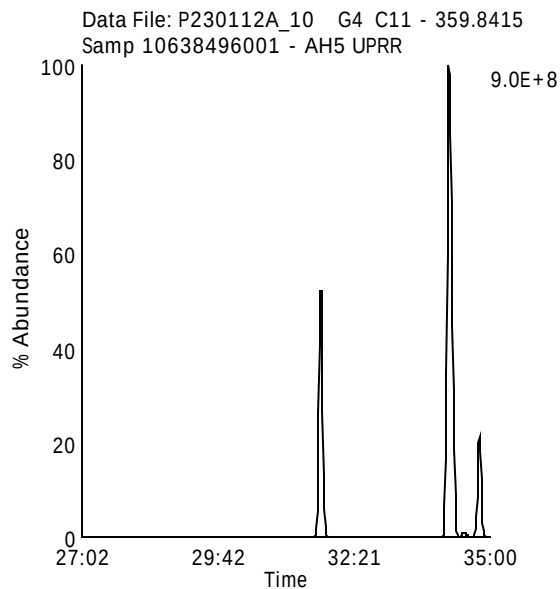
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Hepta Chlorinated Biphenyls

Data File Name: P230112A_10

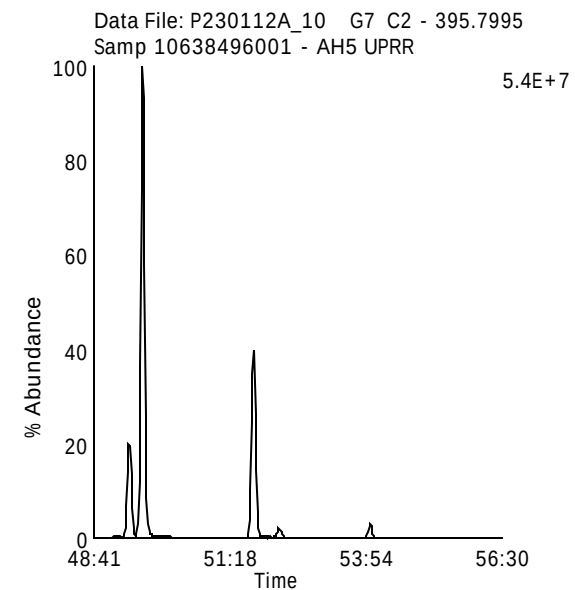
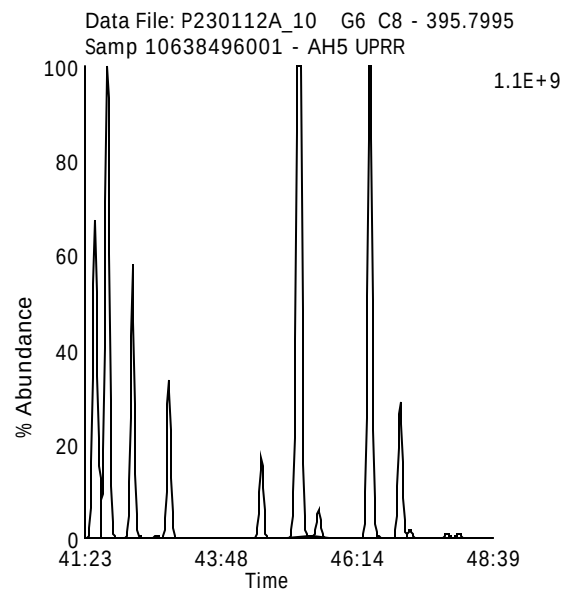
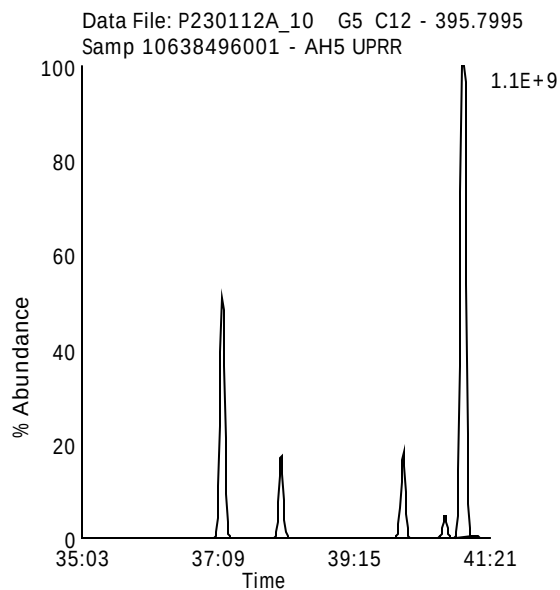
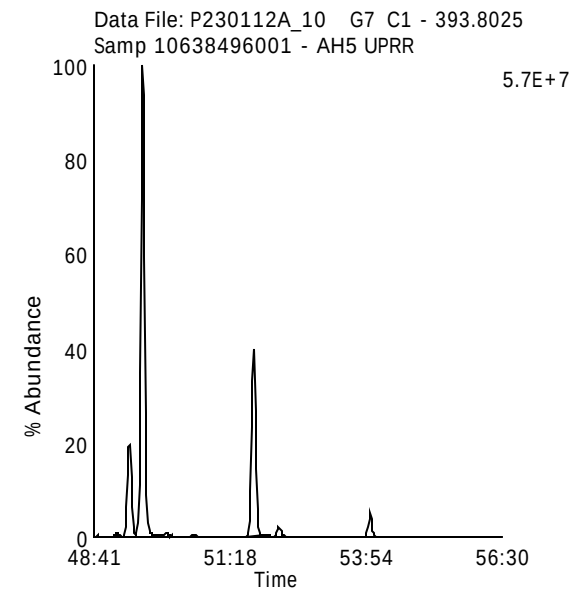
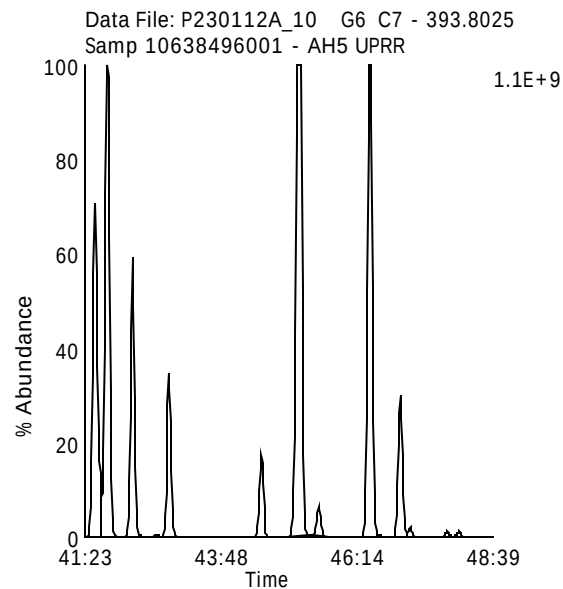
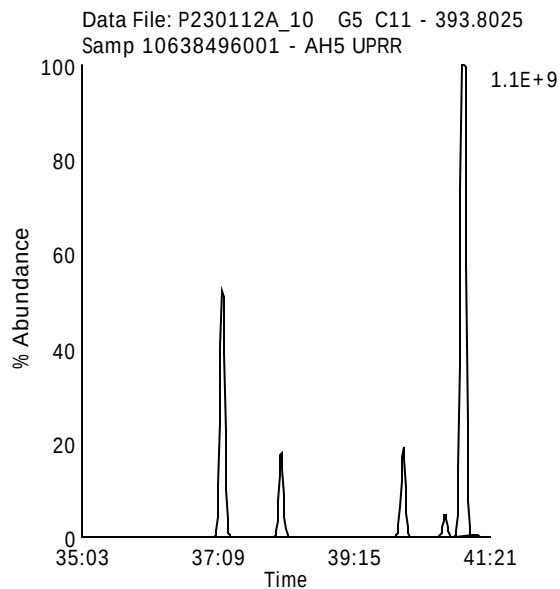
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Octa Chlorinated Biphenyls

Data File Name: P230112A_10

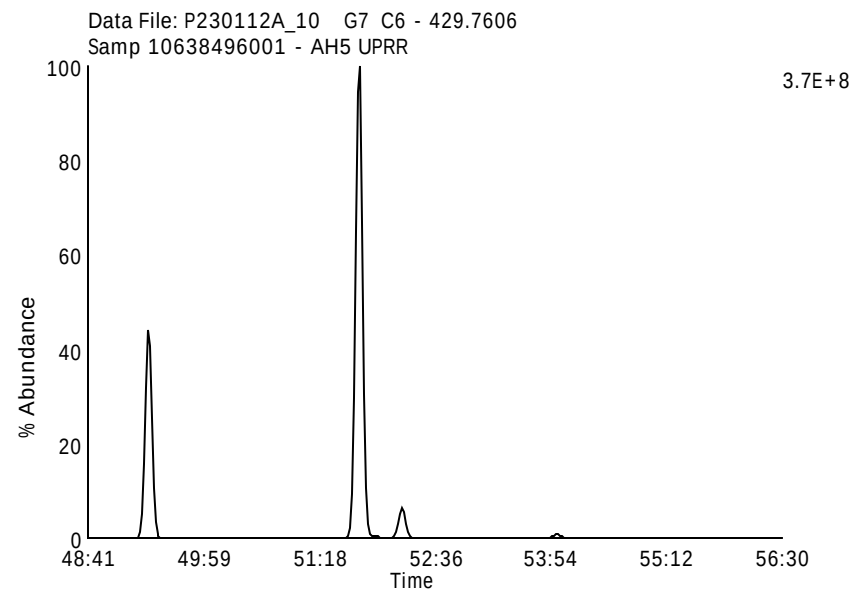
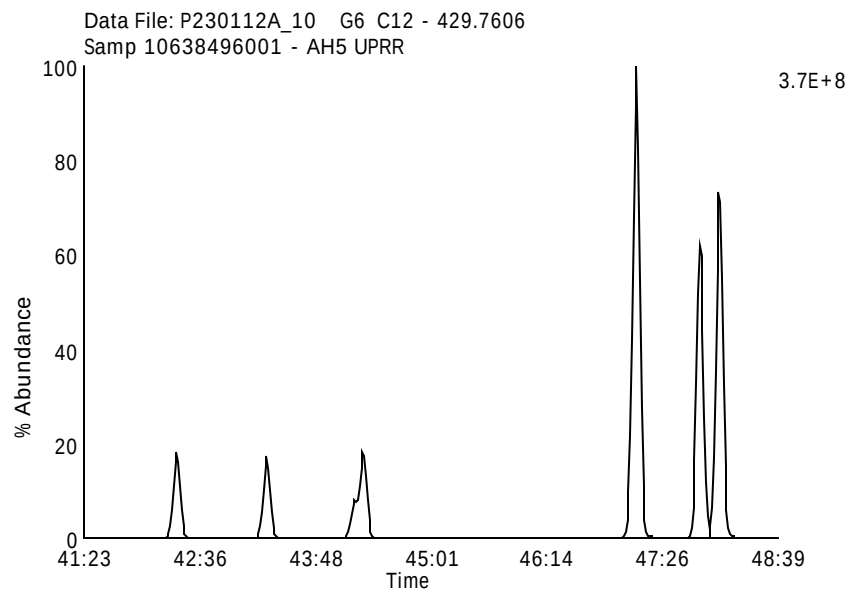
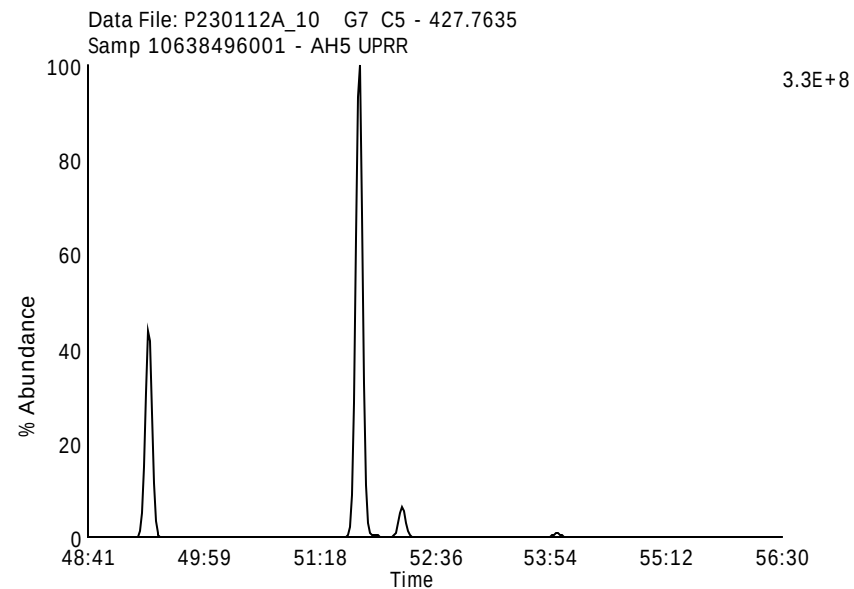
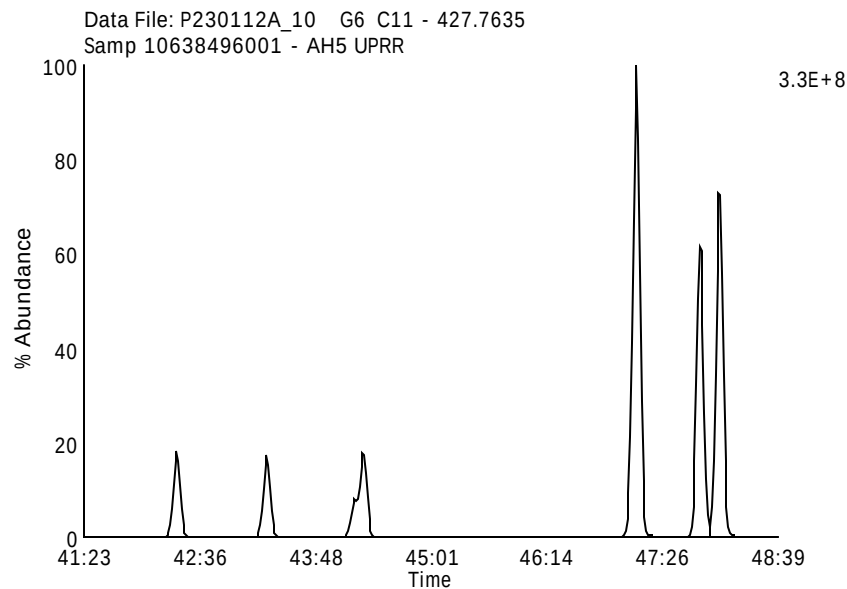
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Nona Chlorinated Biphenyls

Data File Name: P230112A_10

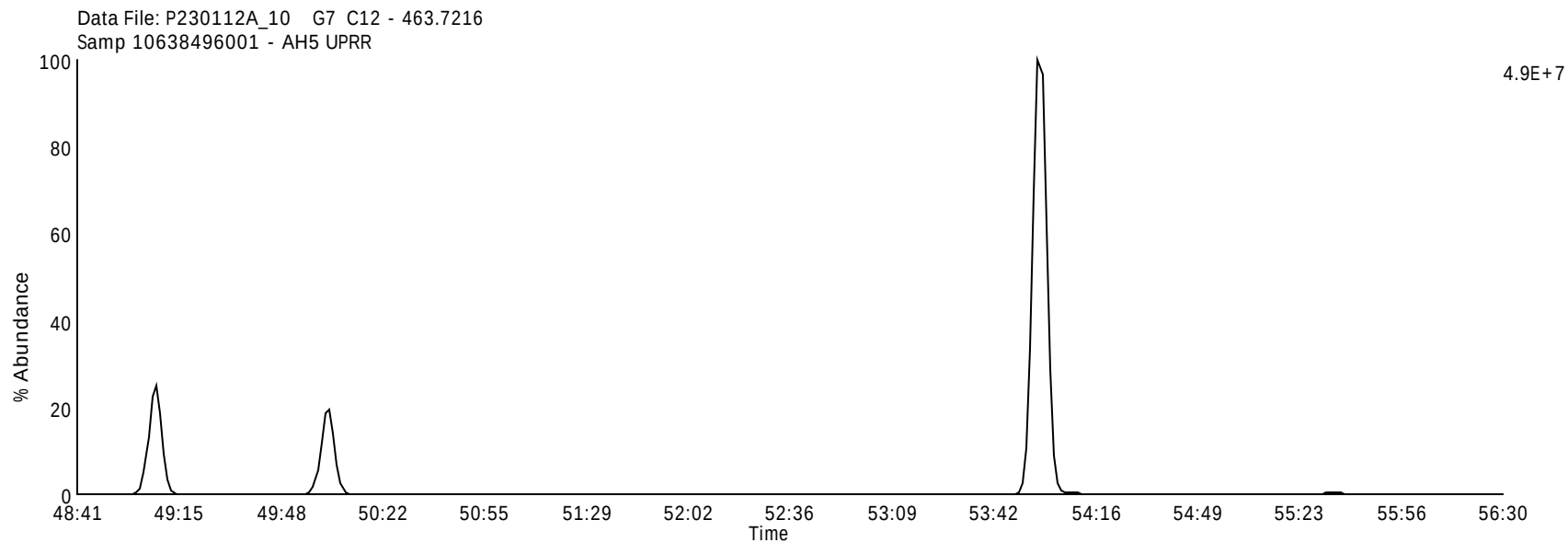
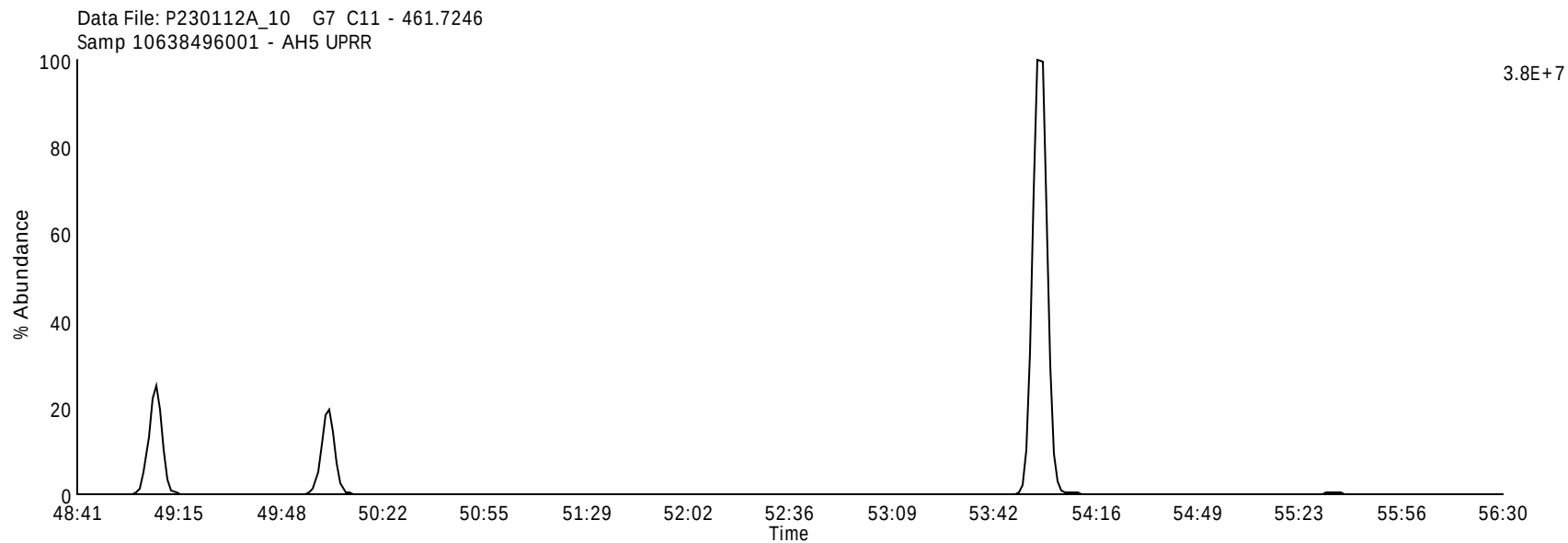
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Deca Chlorinated Biphenyl

Data File Name: P230112A_10

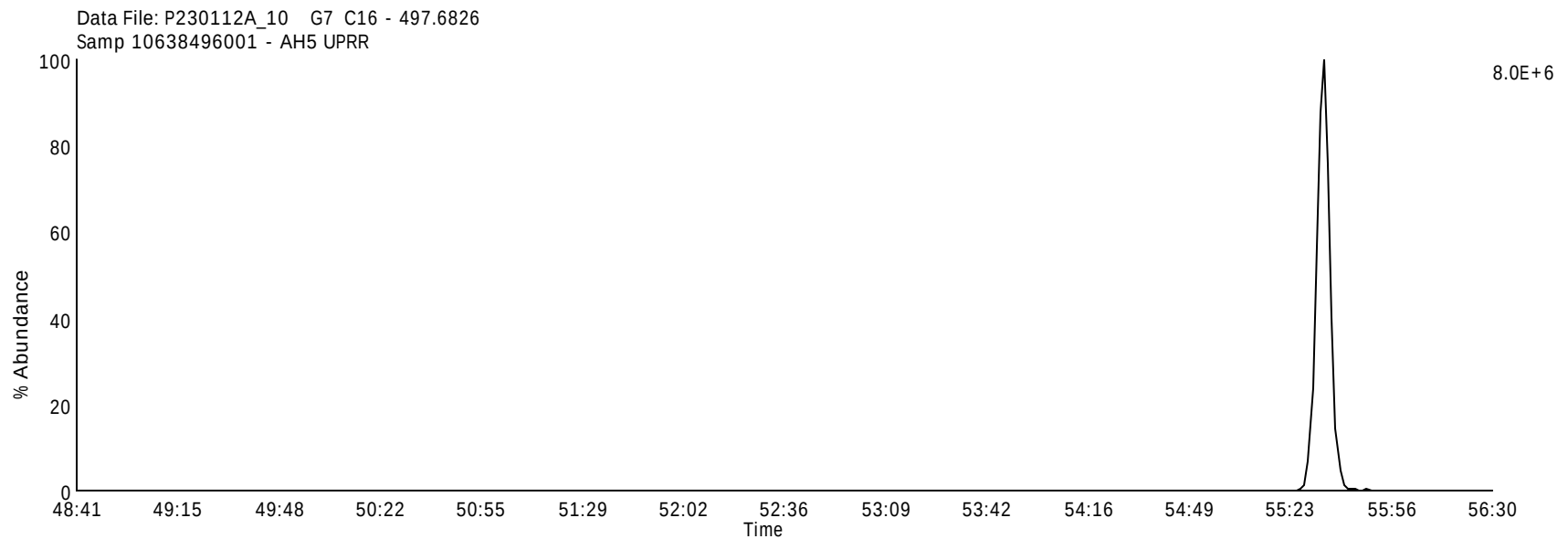
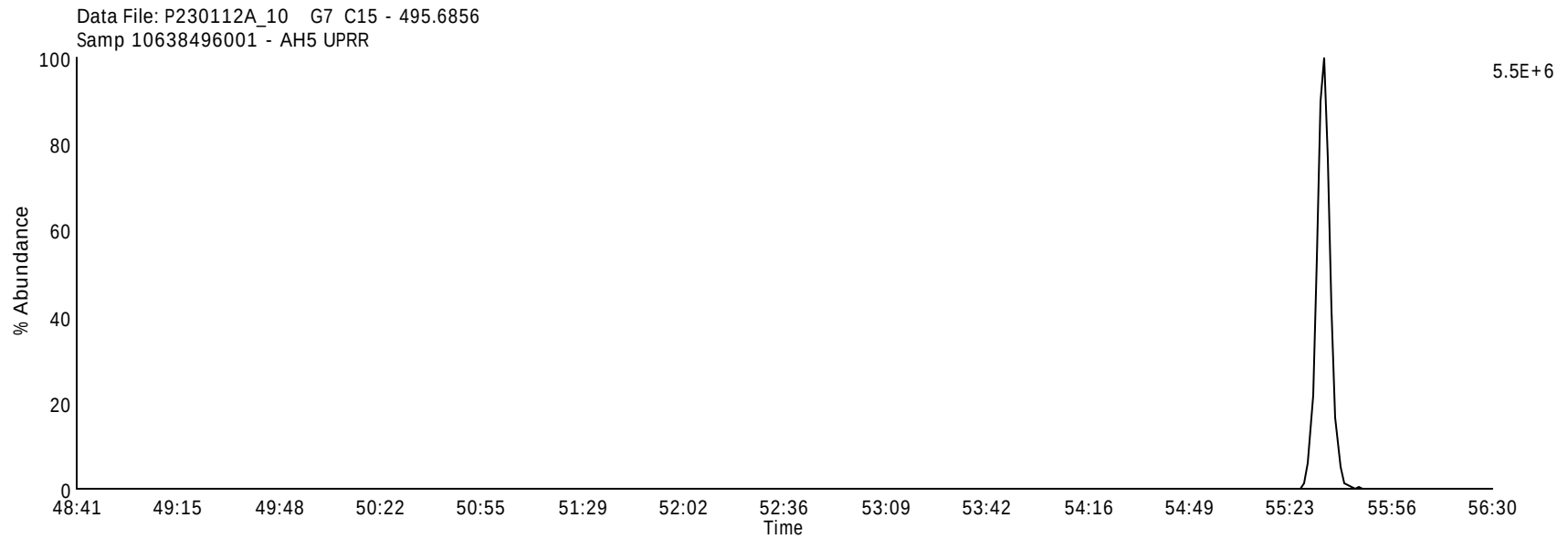
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Group 1 - 4 Lock mass

Data File Name: P230112A_10

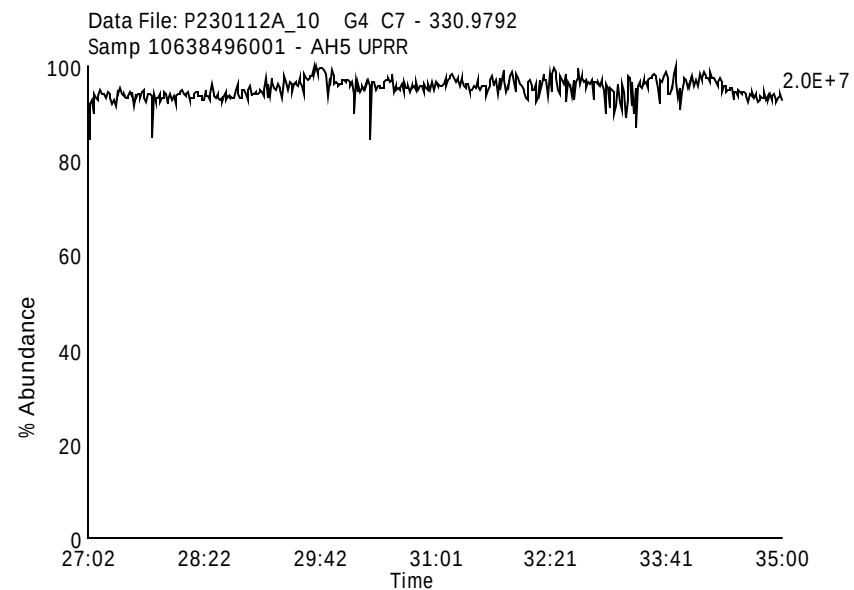
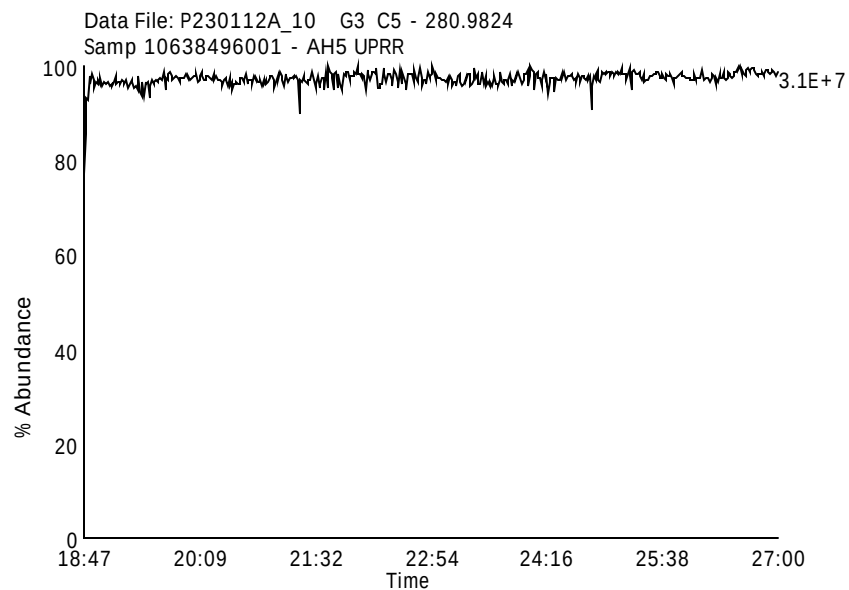
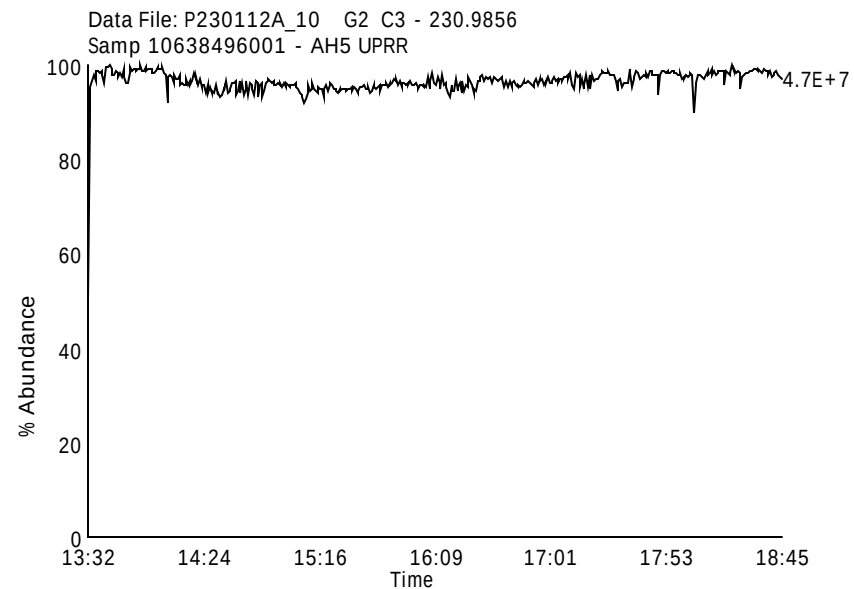
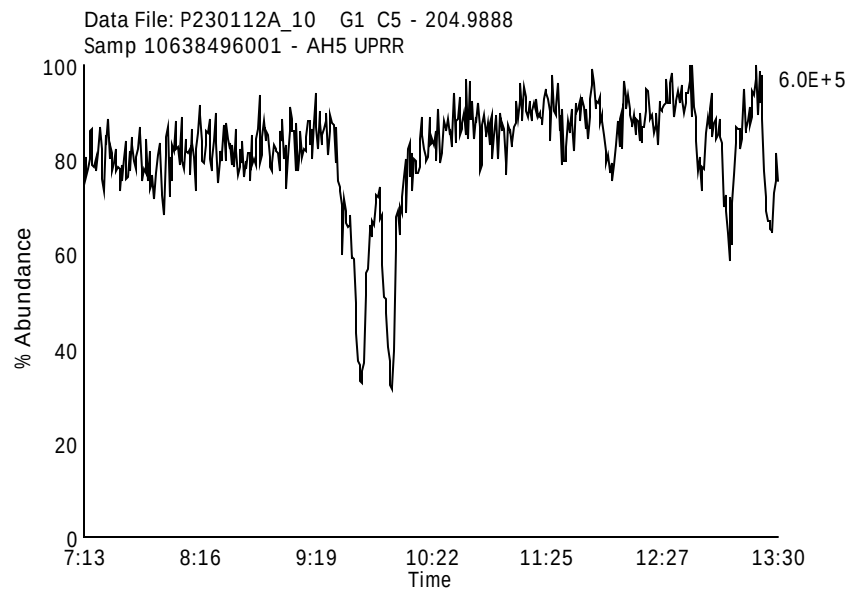
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Group 5 - 7 Lock mass

Data File Name: P230112A_10

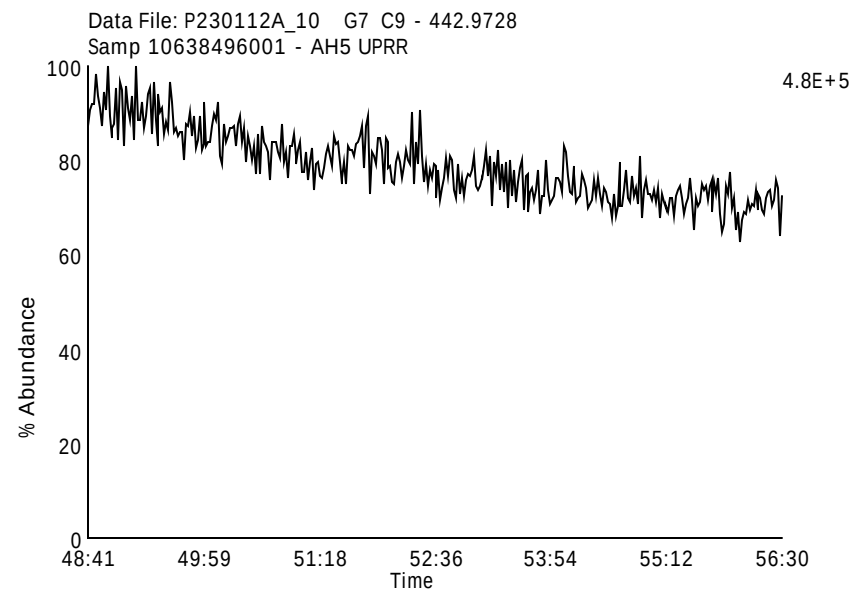
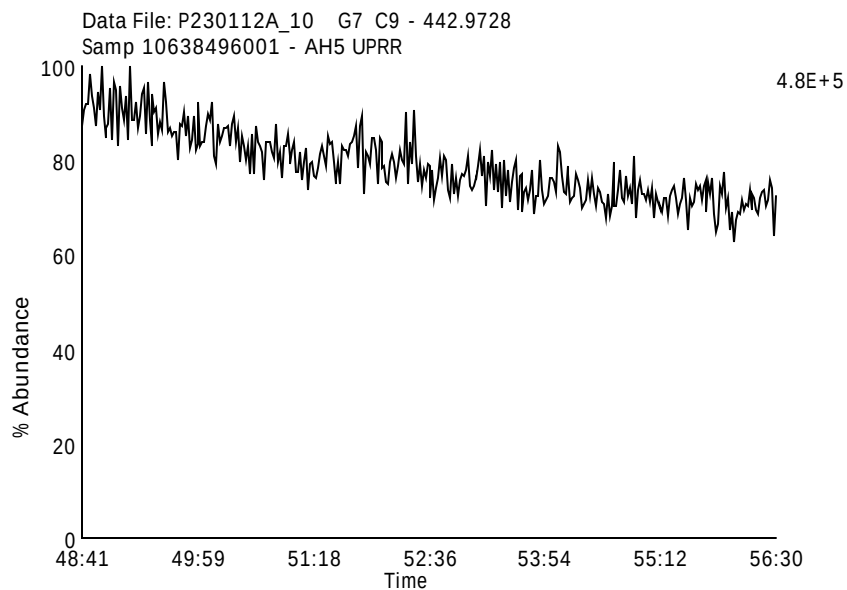
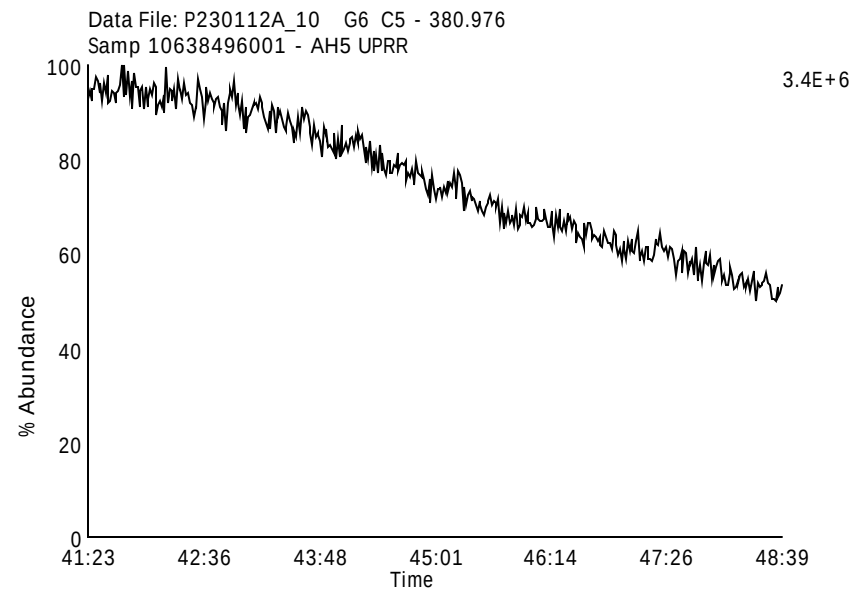
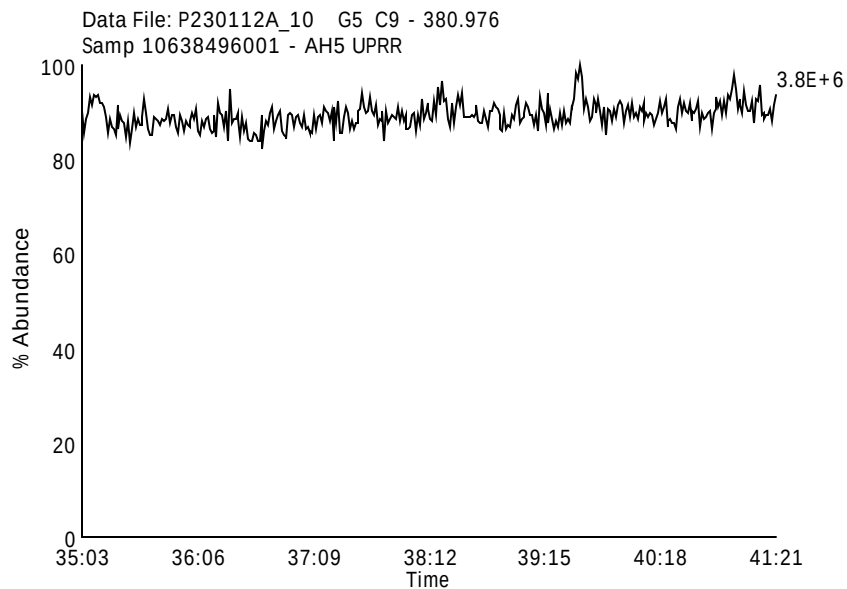
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001 - AH5 UPRR

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Labeled Mono Chlorinated Biphenyls

Data File Name: P230113A_07

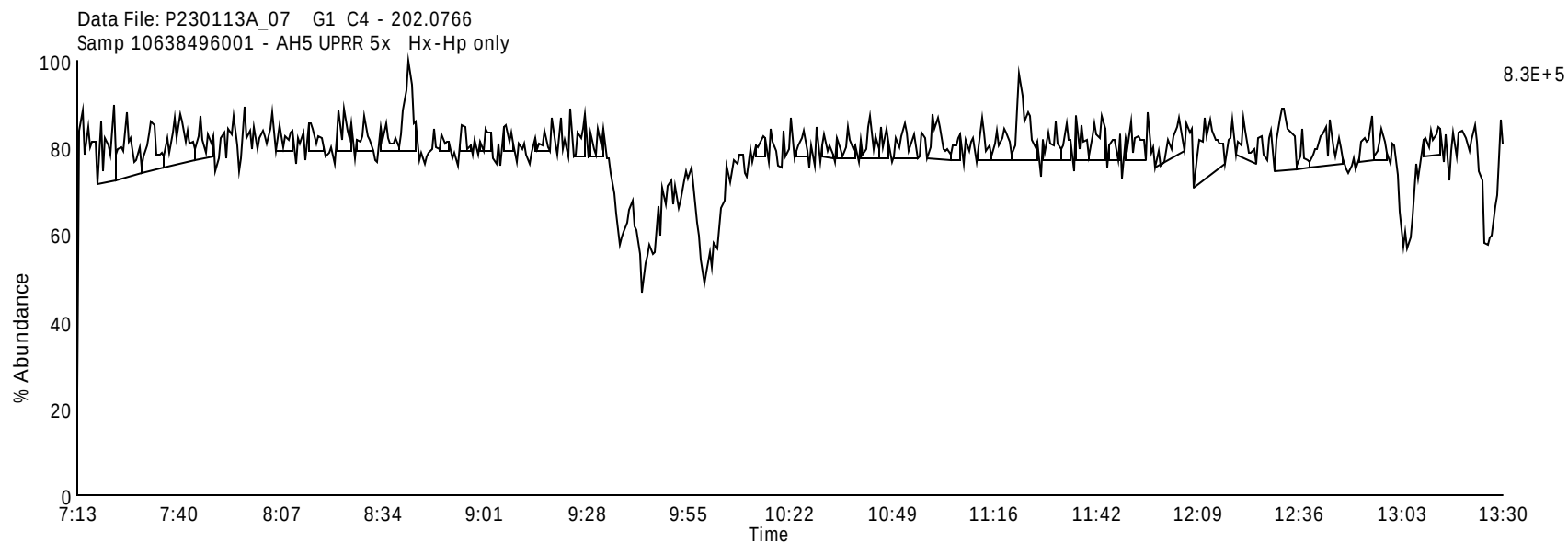
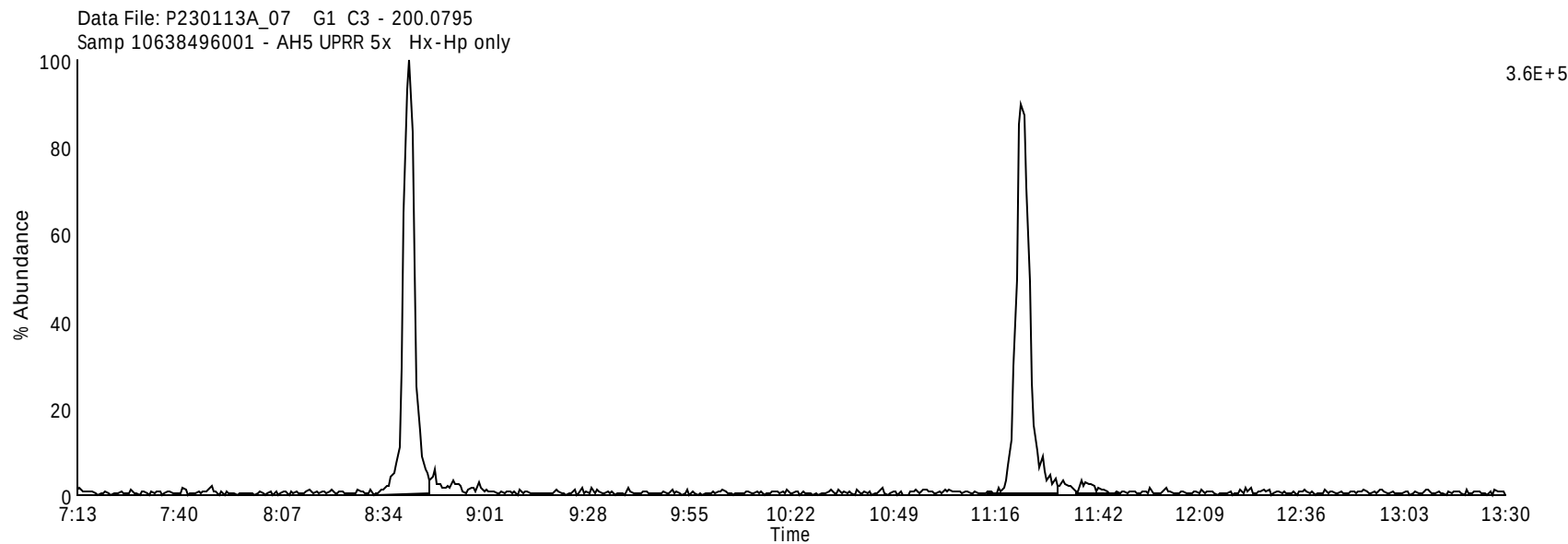
Date Acquired: 1/13/2023

Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Labeled Di Chlorinated Biphenyls

Data File Name: P230113A_07

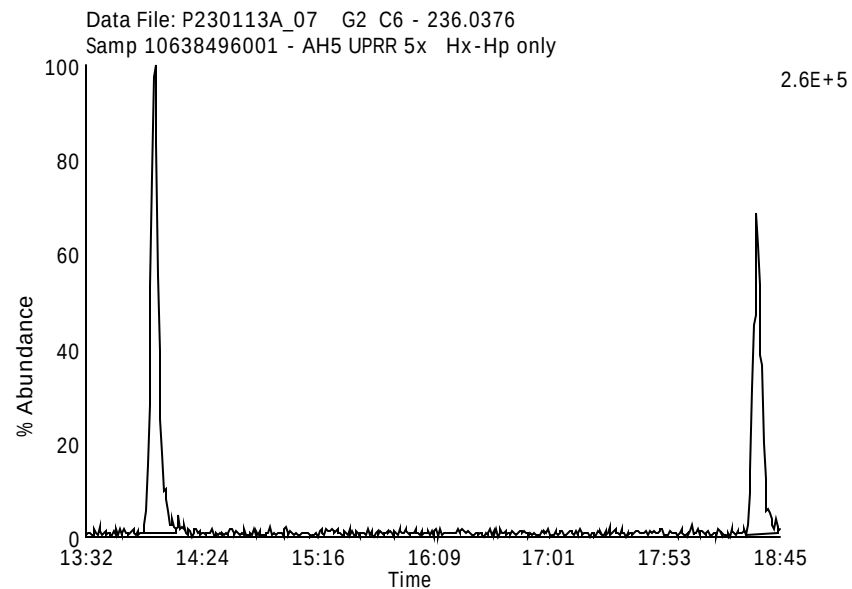
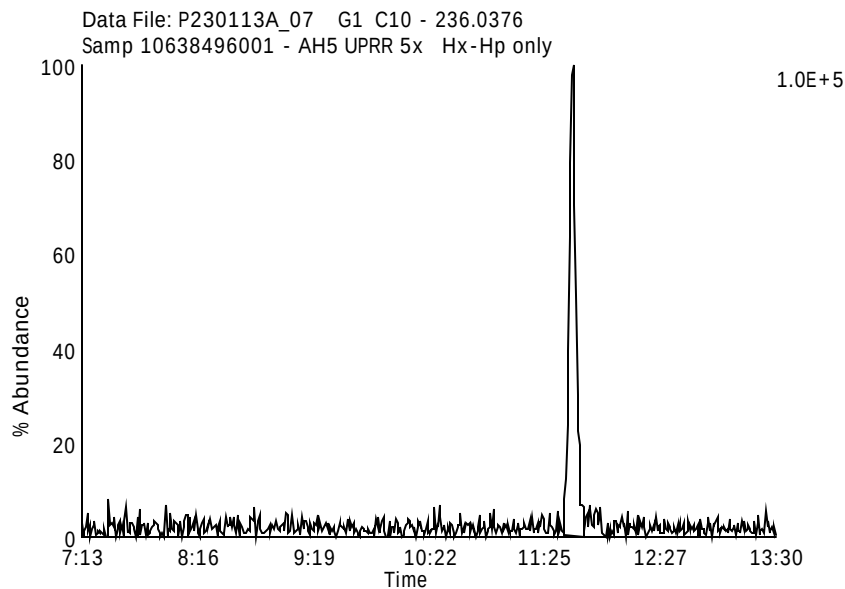
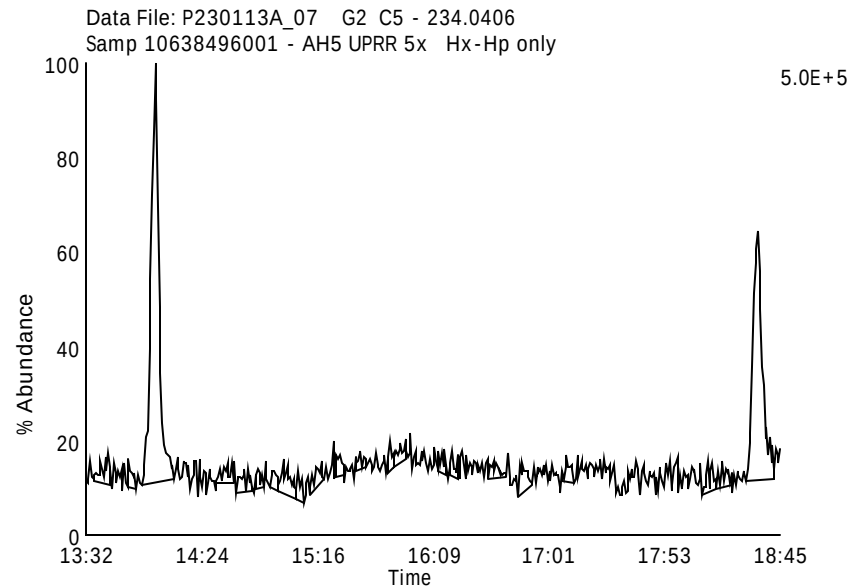
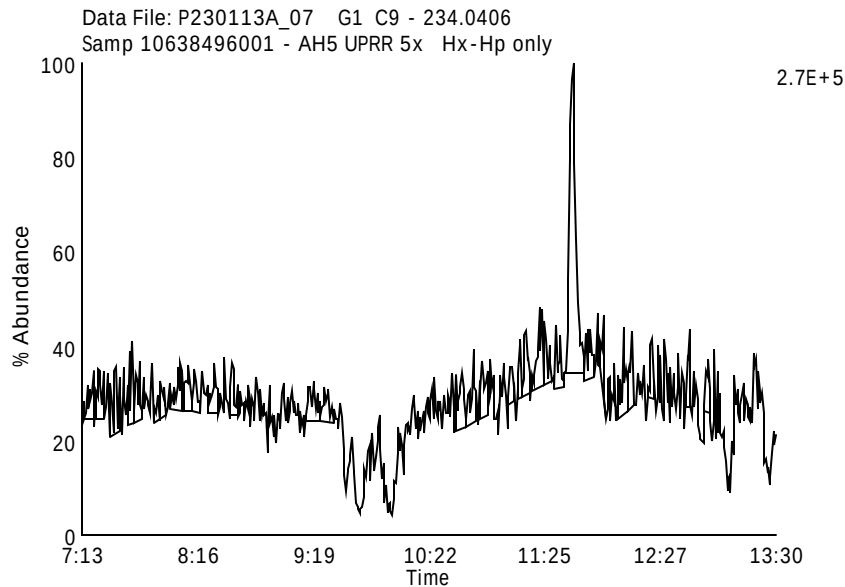
Date Acquired: 1/13/2023

Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Labeled Tri Chlorinated Biphenyls

Data File Name: P230113A_07

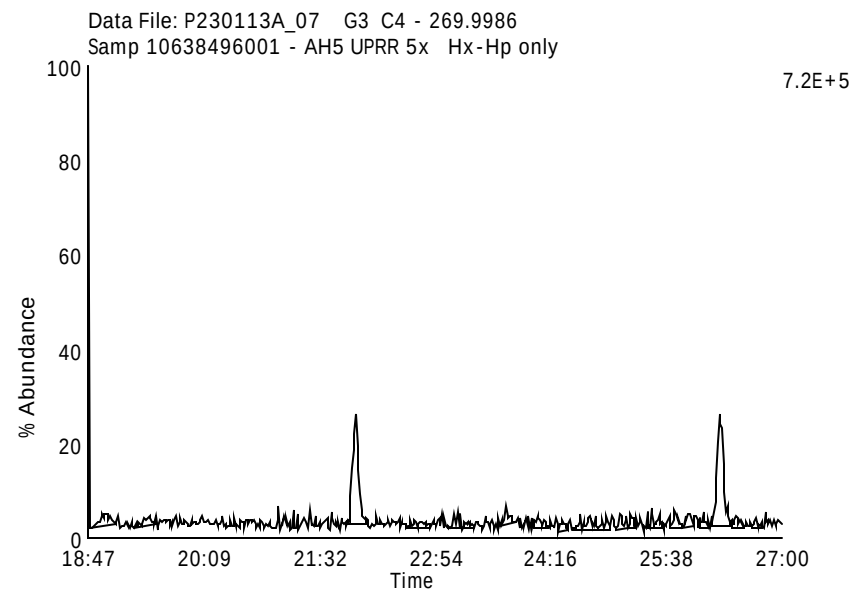
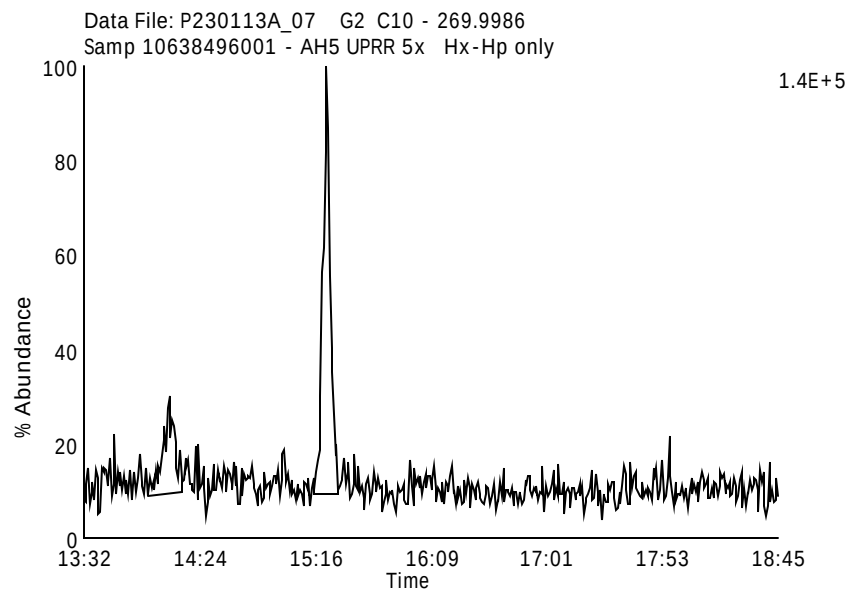
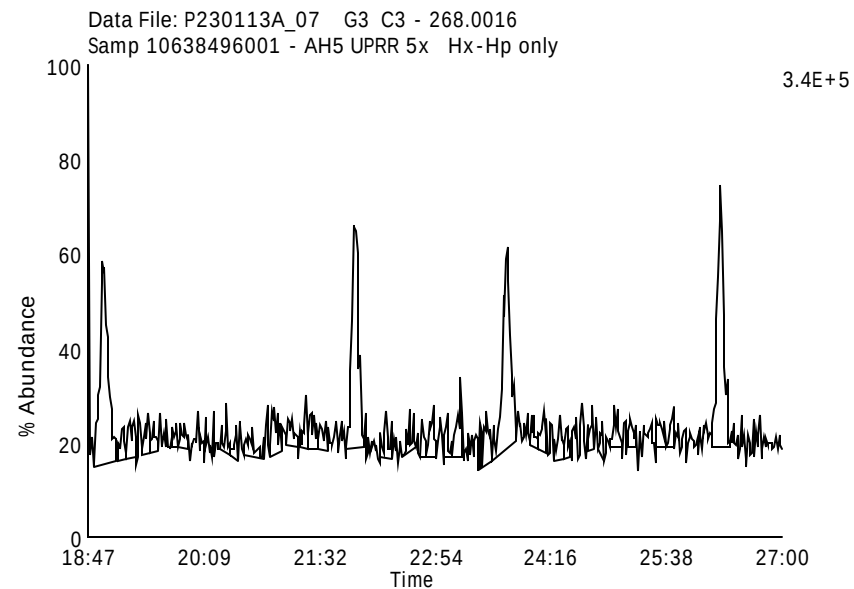
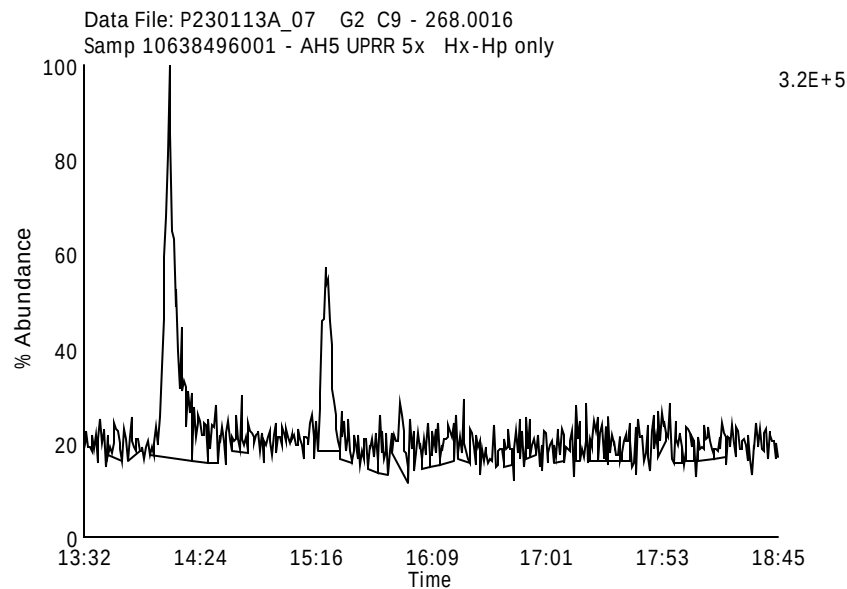
Date Acquired: 1/13/2023

Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Labeled Tetra Chlorinated Biphenyls

Data File Name: P230113A_07

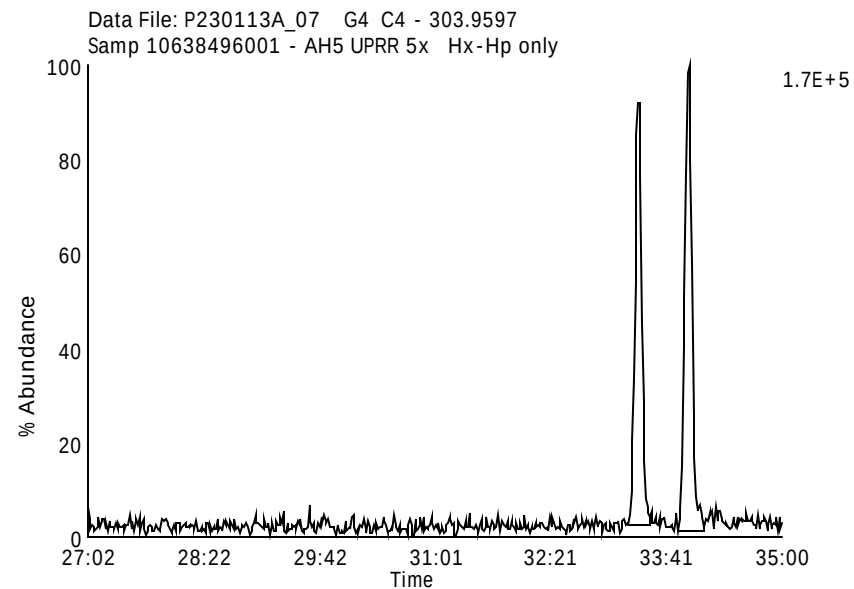
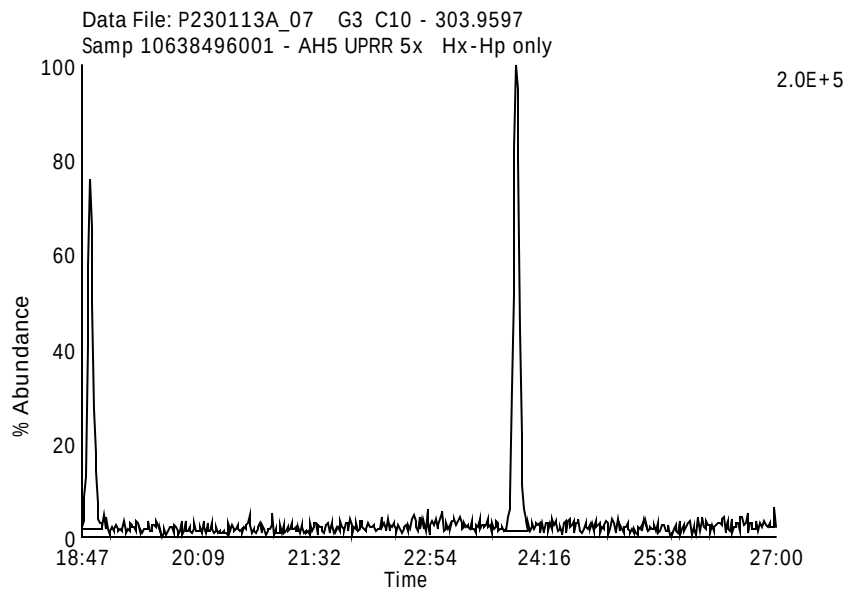
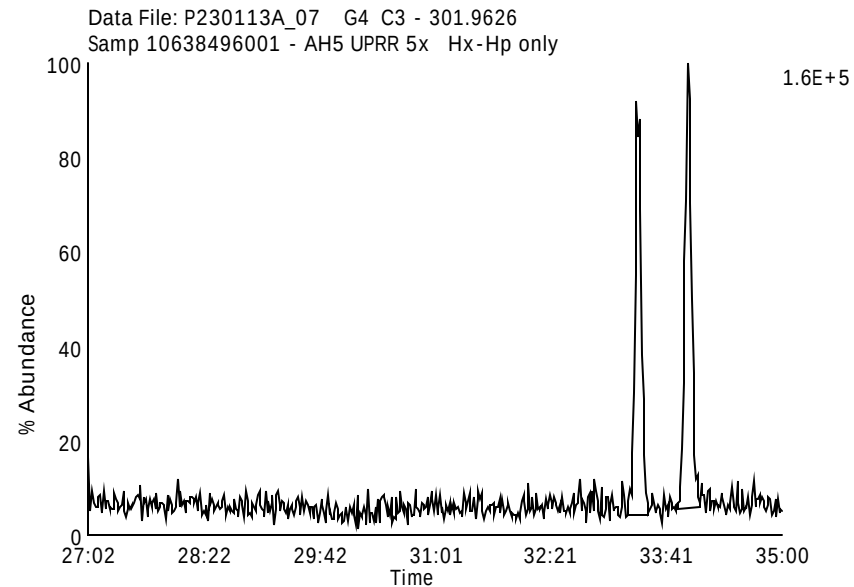
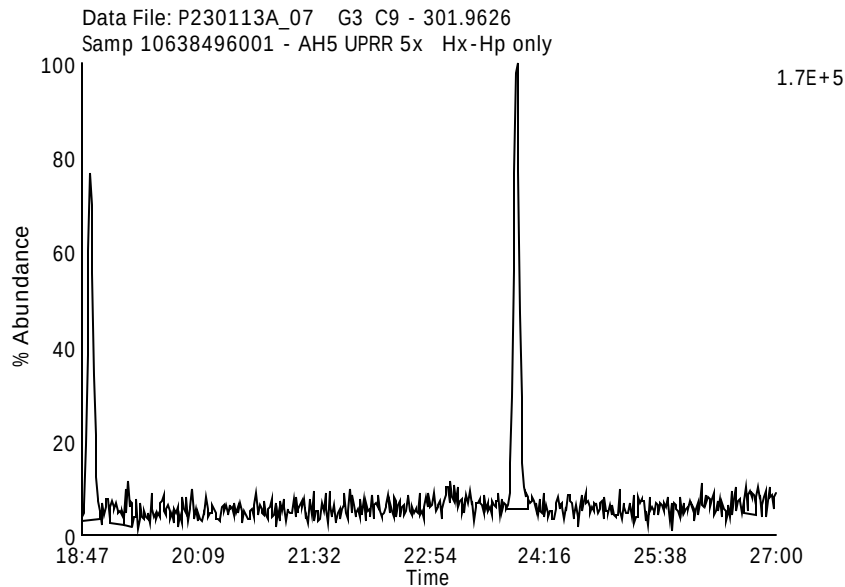
Date Acquired: 1/13/2023

Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Labeled Penta Chlorinated Biphenyls

Data File Name: P230113A_07

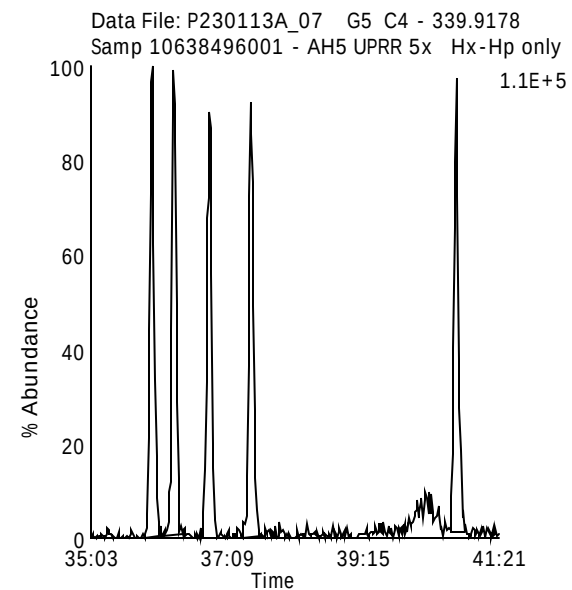
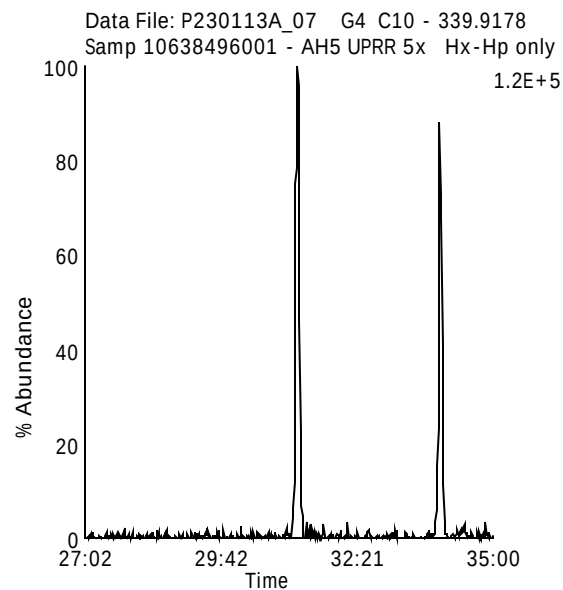
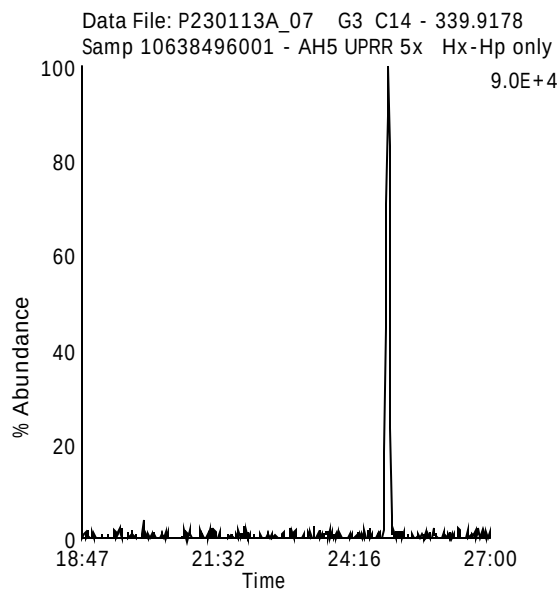
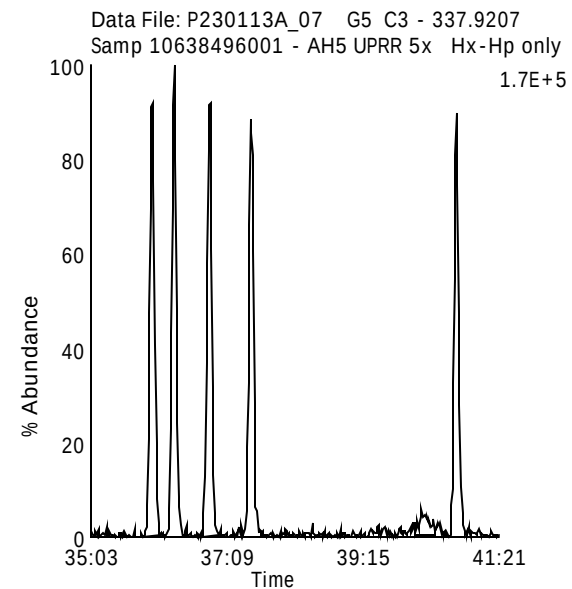
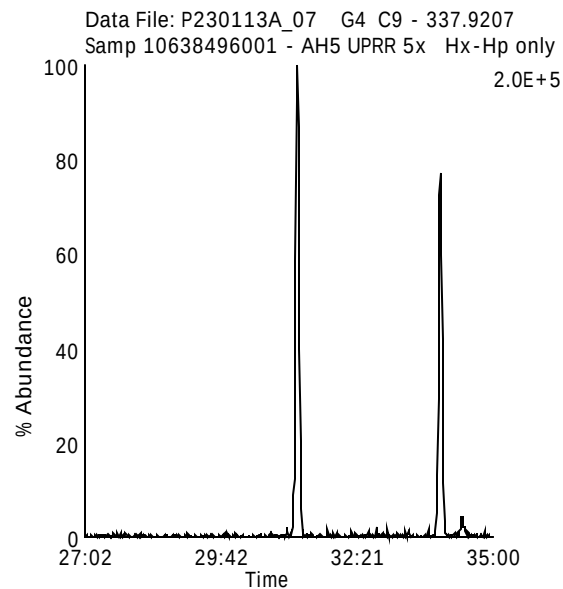
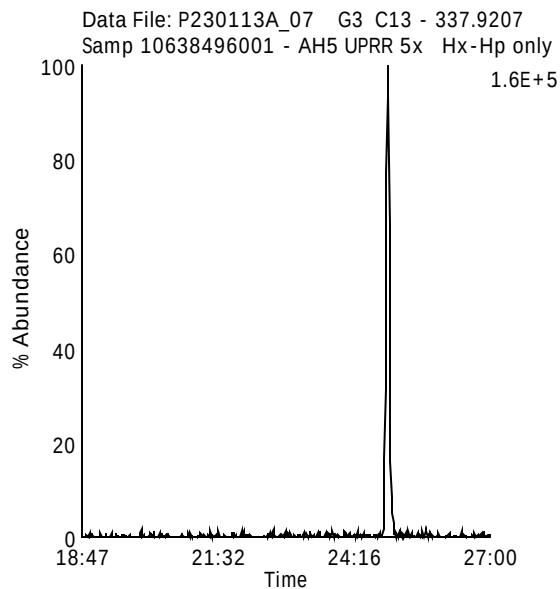
Date Acquired: 1/13/2023

Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Labeled Hexa Chlorinated Biphenyls

Data File Name: P230113A_07

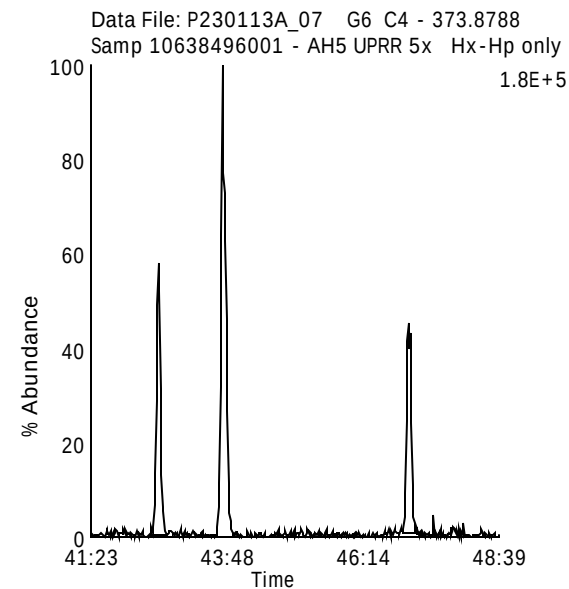
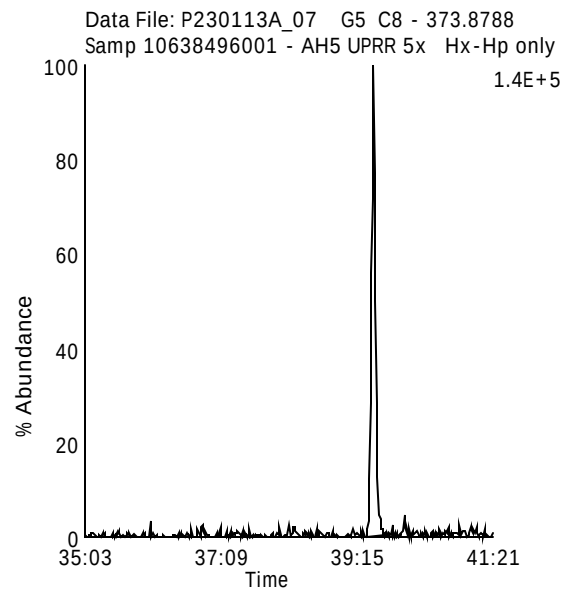
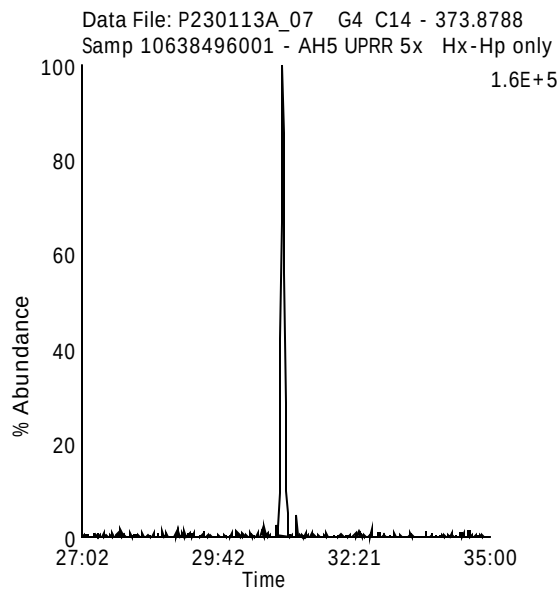
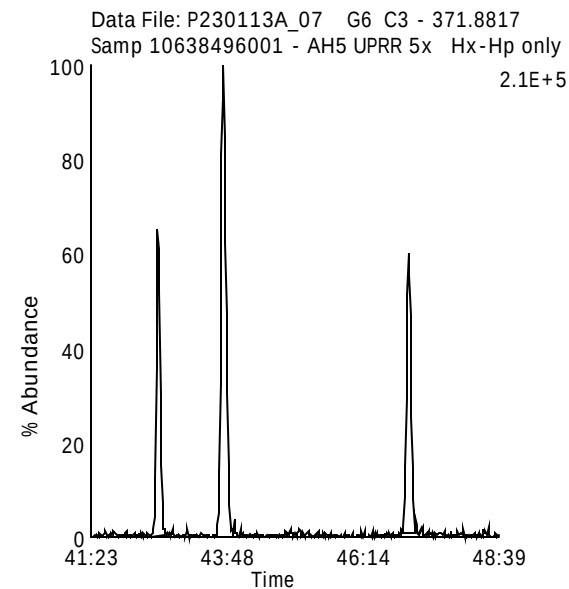
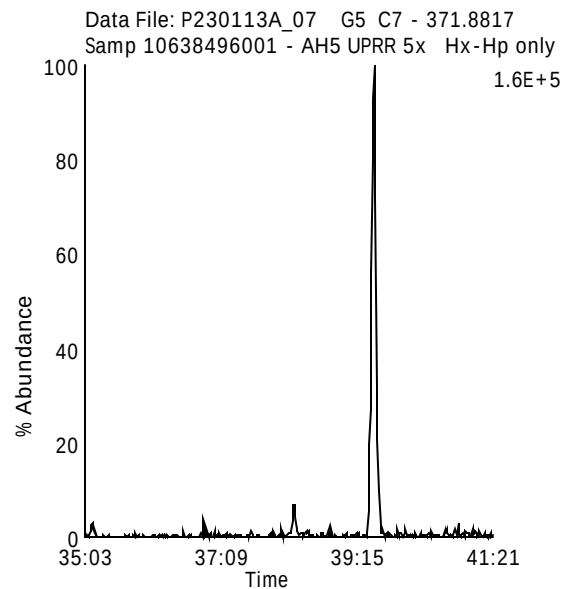
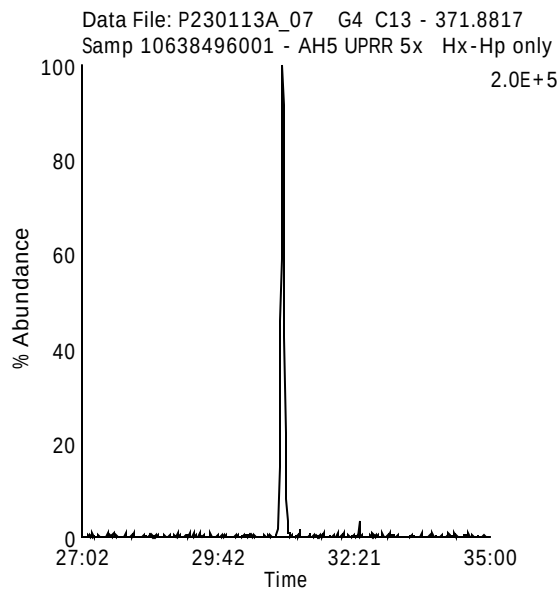
Date Acquired: 1/13/2023

Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Labeled Hepta Chlorinated Biphenyls

Data File Name: P230113A_07

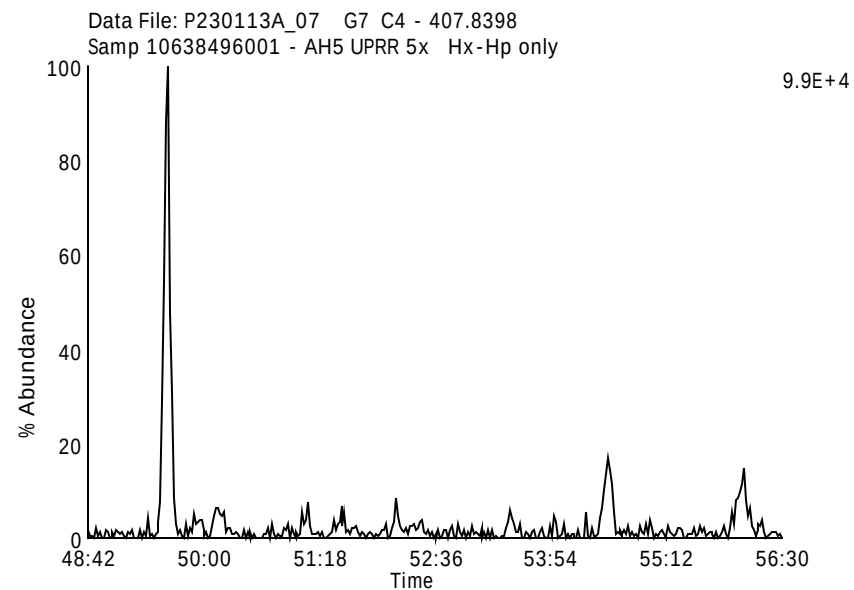
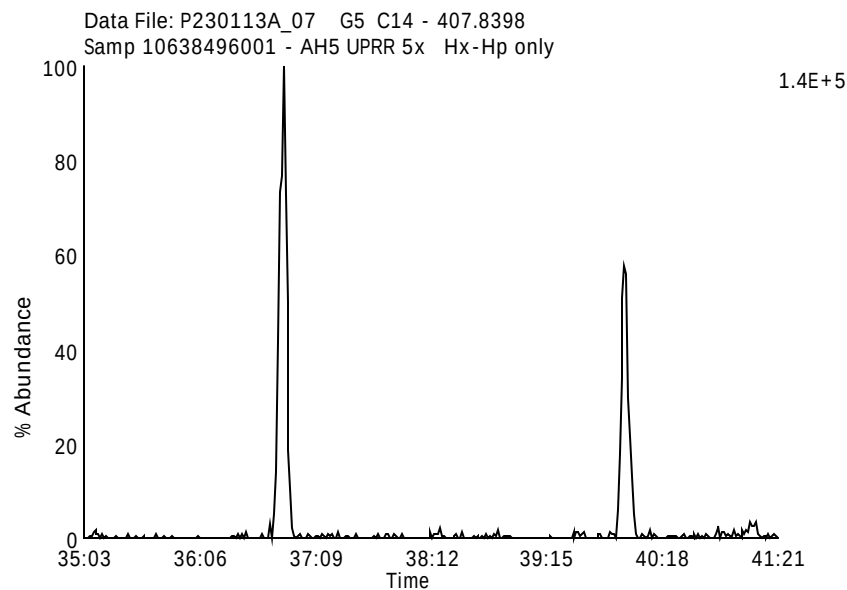
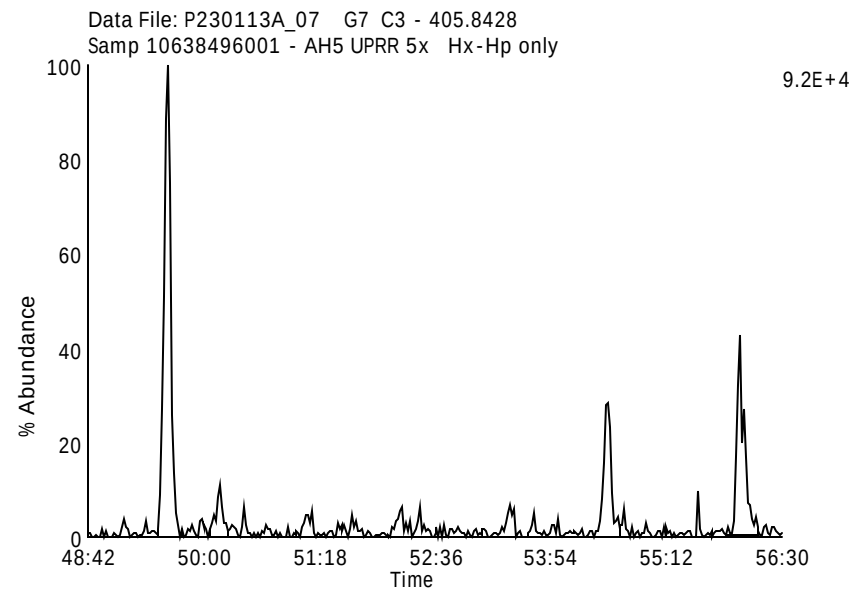
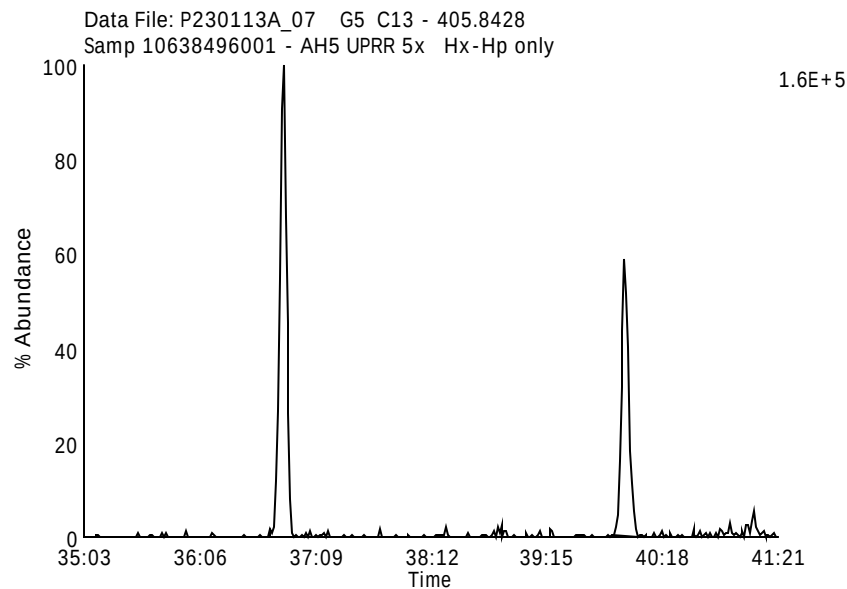
Date Acquired: 1/13/2023

Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Labeled Octa Chlorinated Biphenyls

Data File Name: P230113A_07

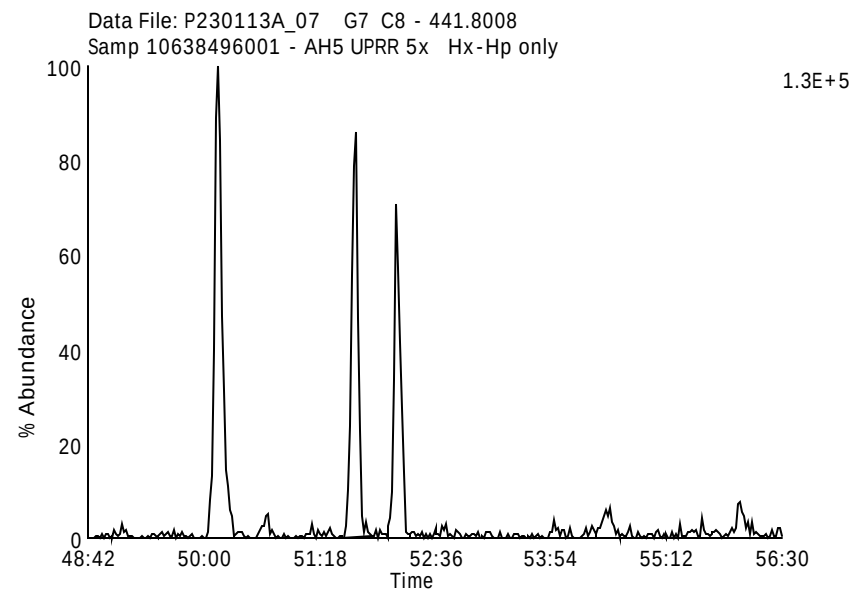
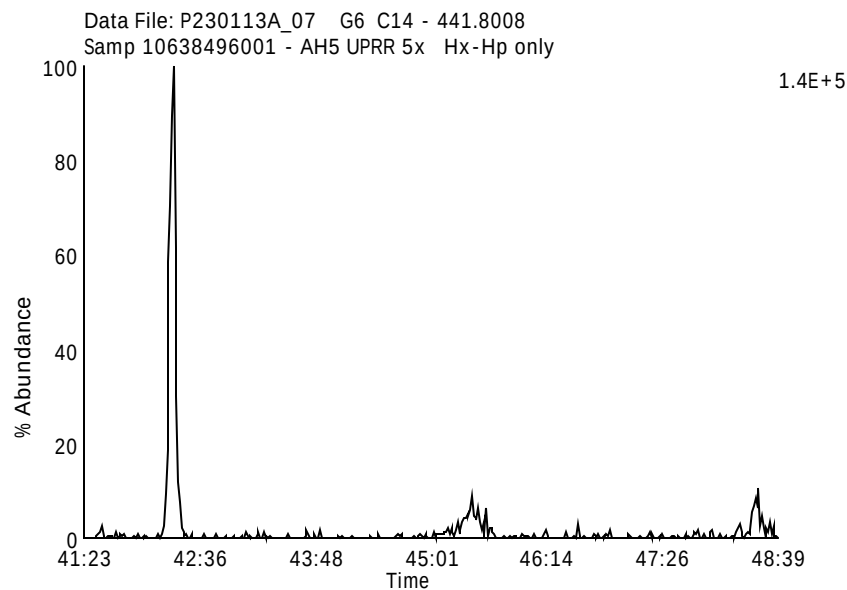
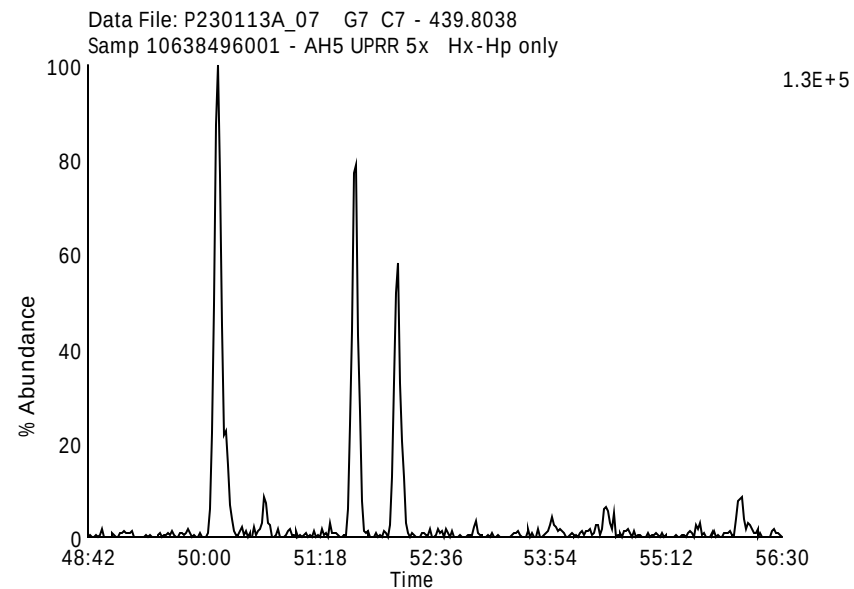
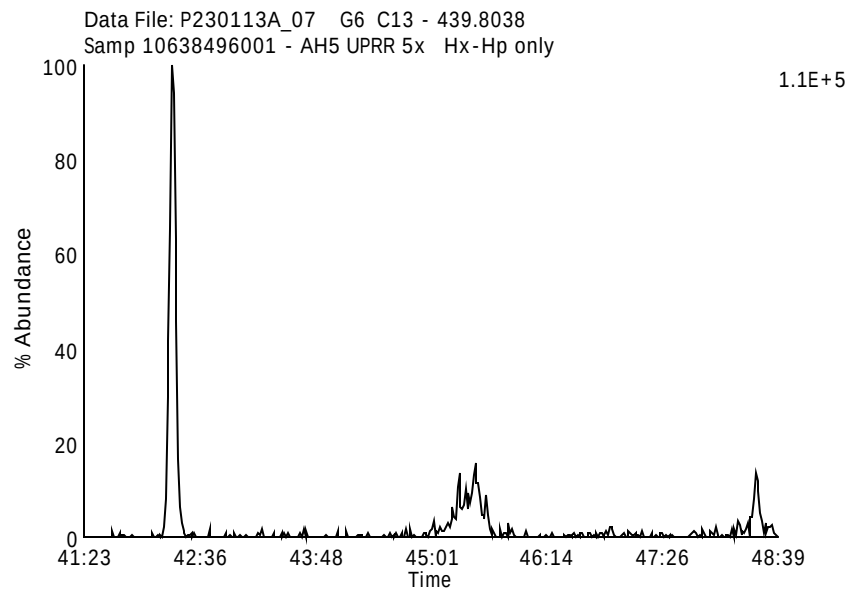
Date Acquired: 1/13/2023

Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Labeled Nona Chlorinated Biphenyls

Data File Name: P230113A_07

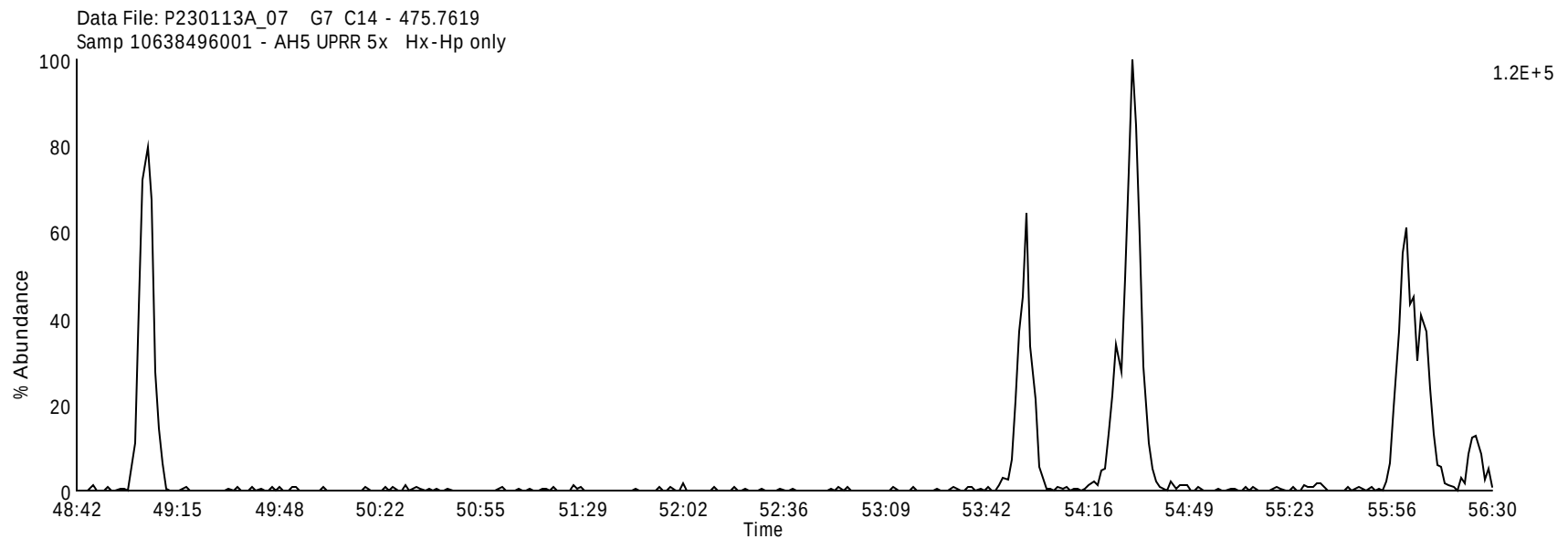
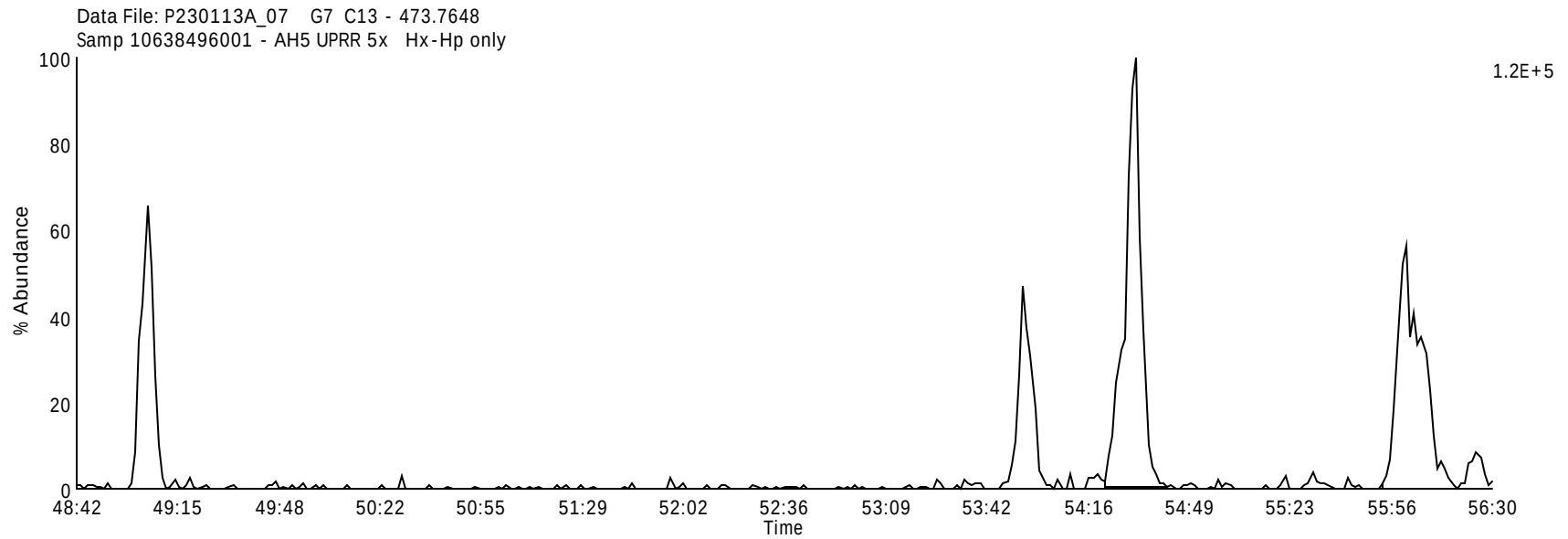
Date Acquired: 1/13/2023

Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Labeled Deca Chlorinated Biphenyl

Data File Name: P230113A_07

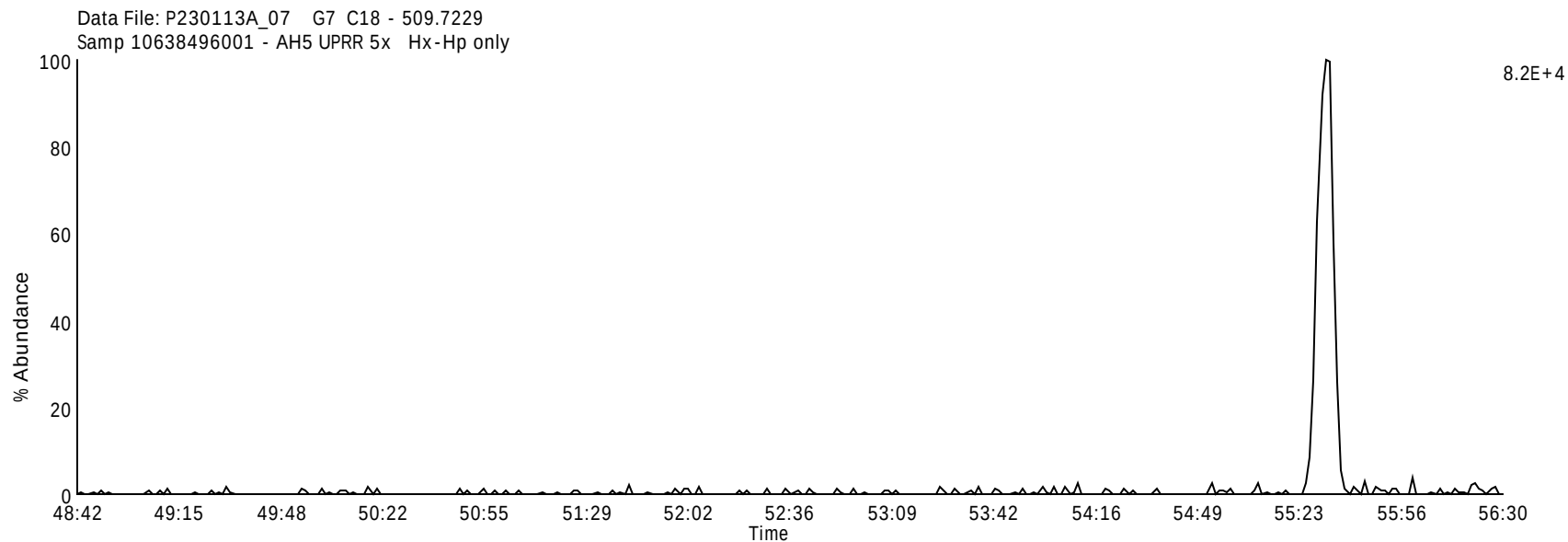
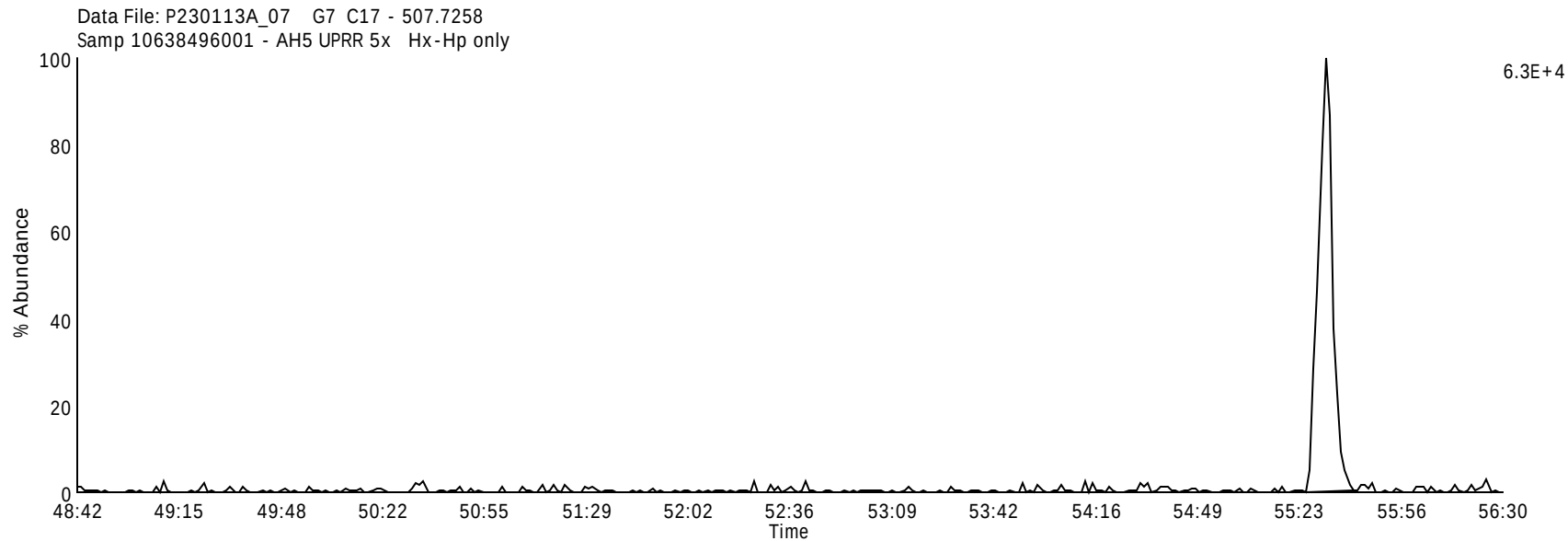
Date Acquired: 1/13/2023

Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Mono Chlorinated Biphenyls

Data File Name: P230113A_07

Date Acquired: 1/13/2023

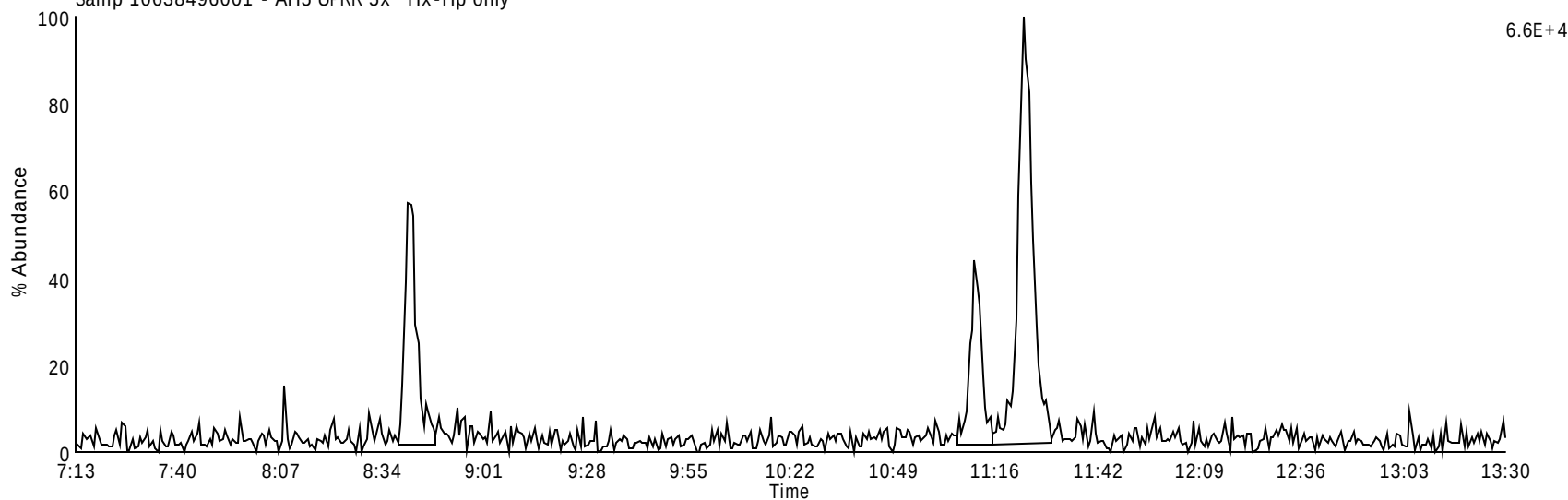
Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

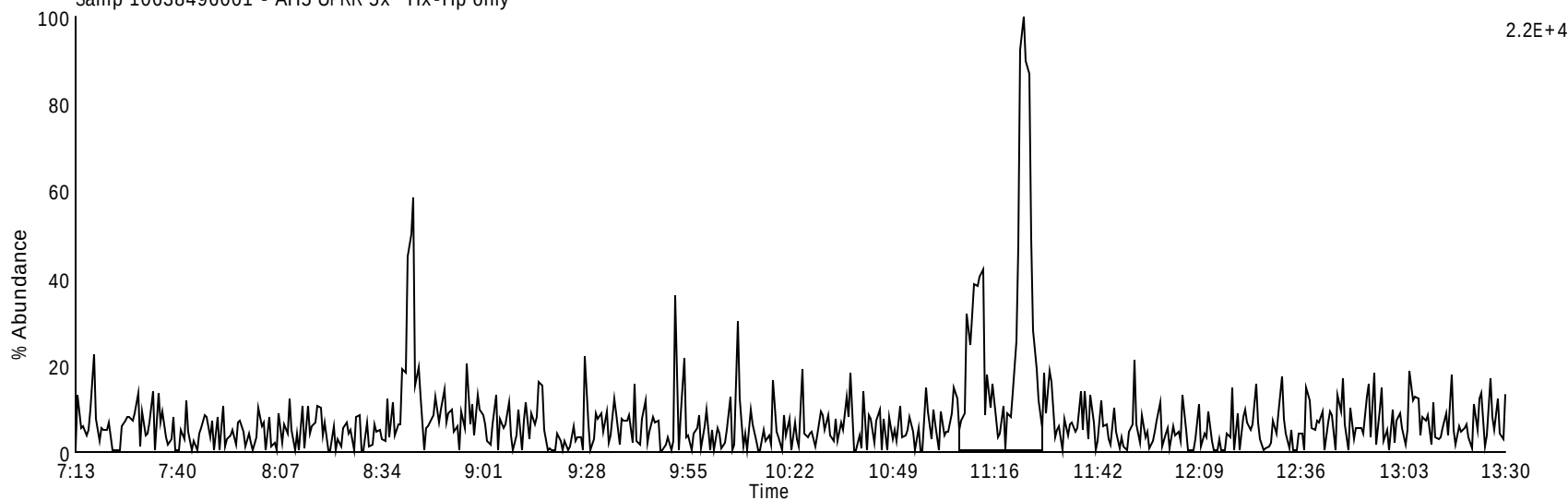
Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022

Data File: P230113A_07 G1 C1 - 188.0393
Samp 10638496001 - AH5 UPRR 5x Hx-Hp only



Data File: P230113A_07 G1 C2 - 190.0363
Samp 10638496001 - AH5 UPRR 5x Hx-Hp only



Di Chlorinated Biphenyls

Data File Name: P230113A_07

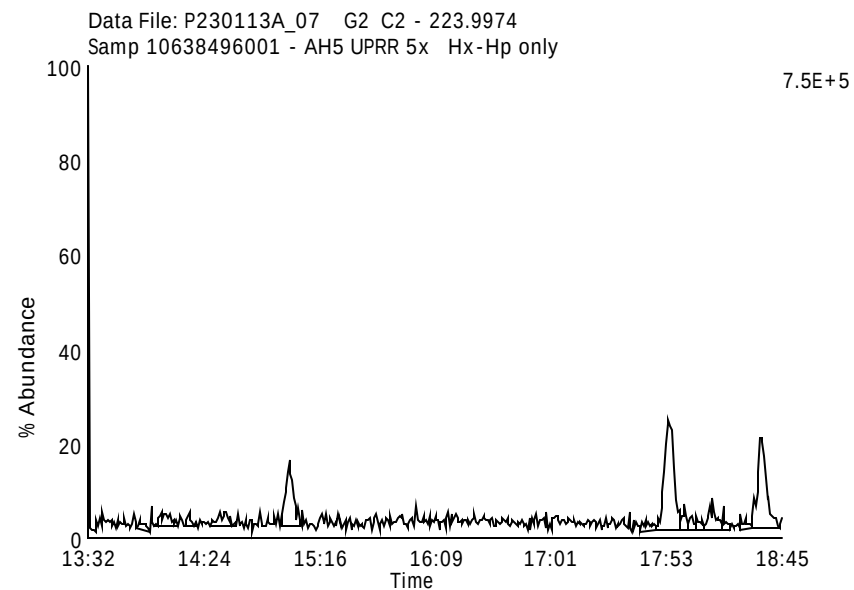
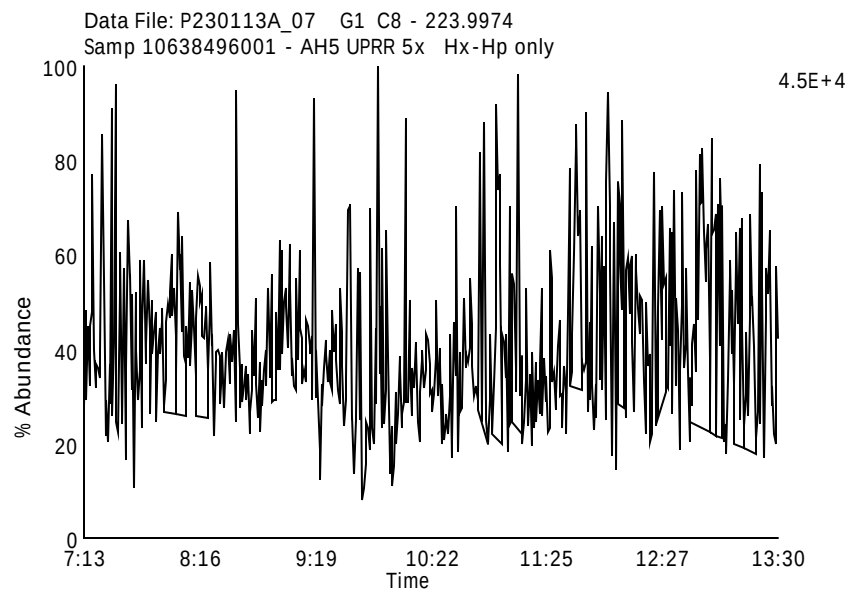
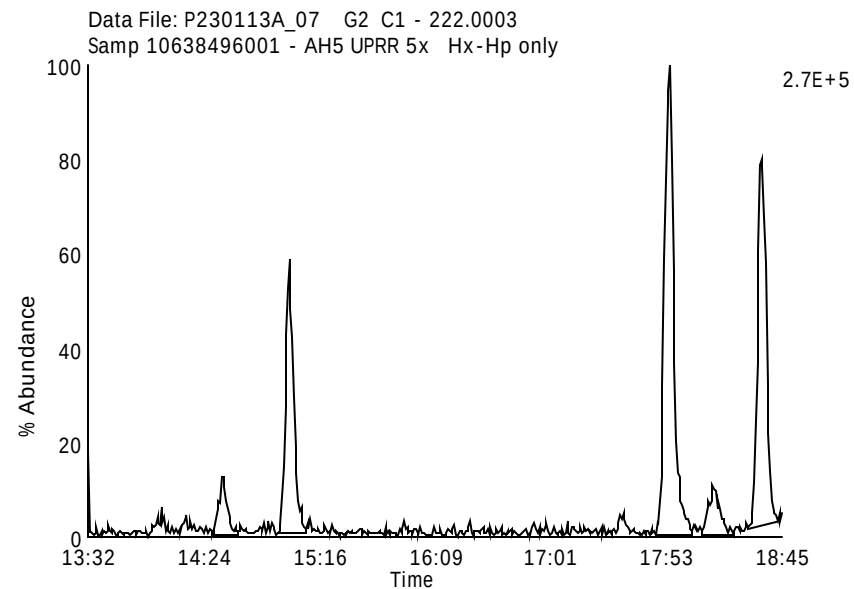
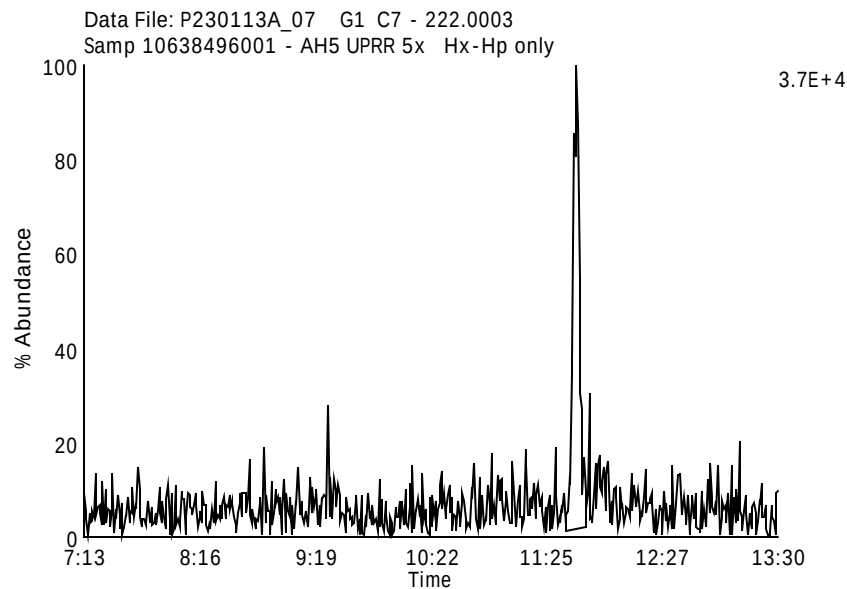
Date Acquired: 1/13/2023

Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Tri Chlorinated Biphenyls

Data File Name: P230113A_07

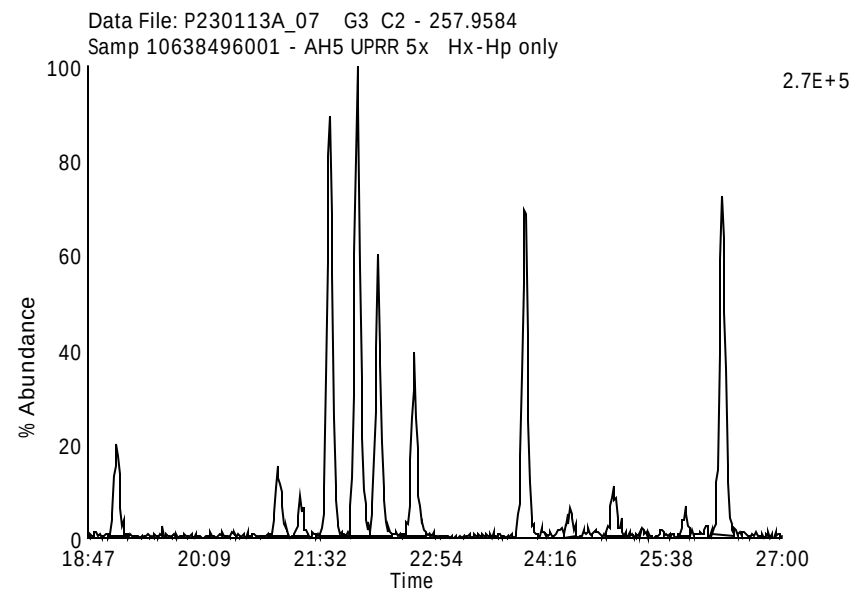
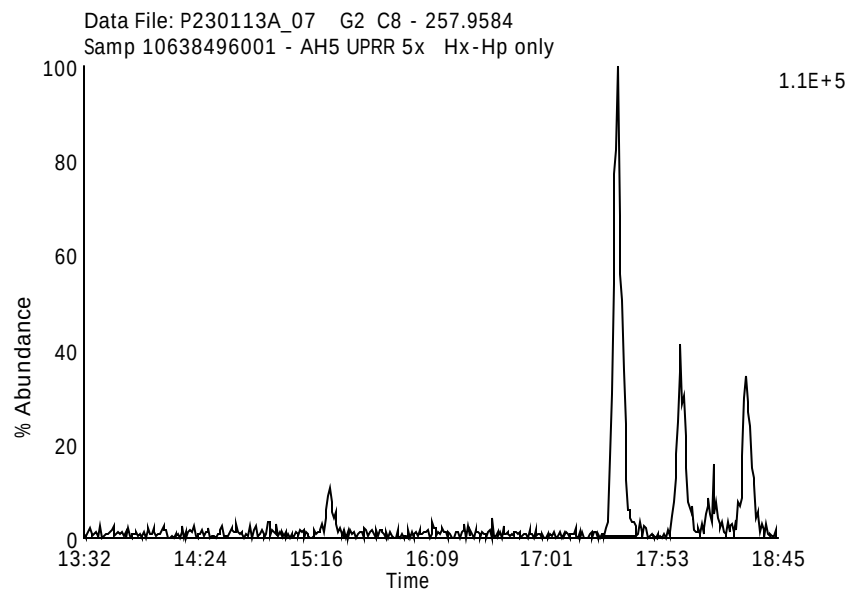
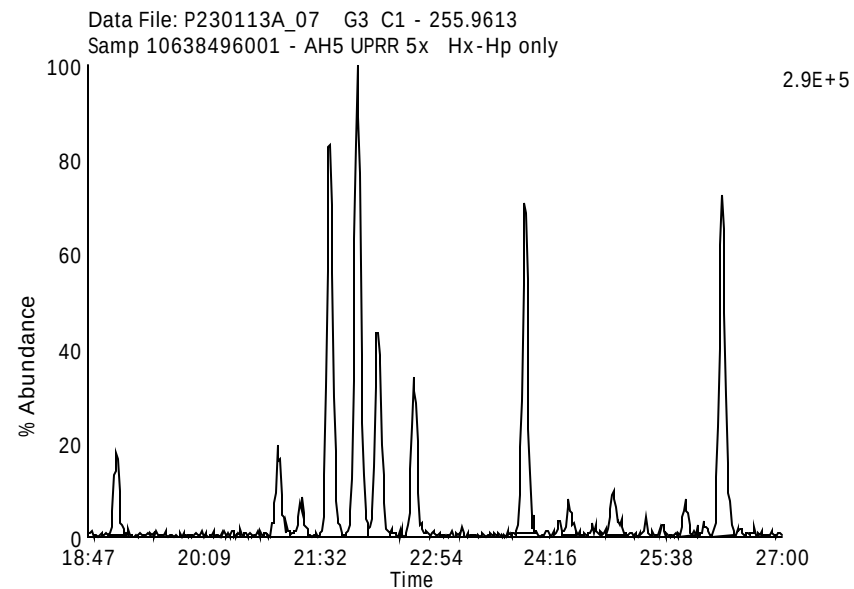
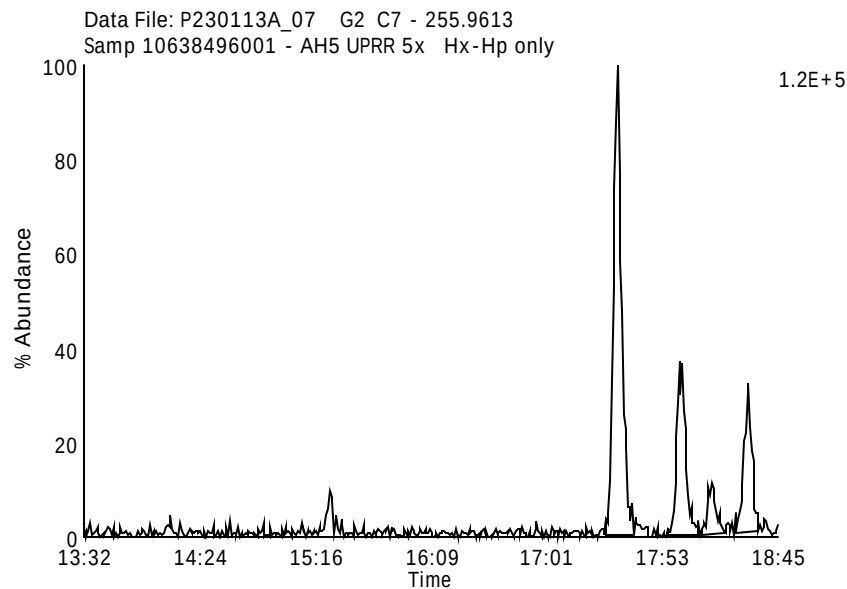
Date Acquired: 1/13/2023

Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Tetra Chlorinated Biphenyls

Data File Name: P230113A_07

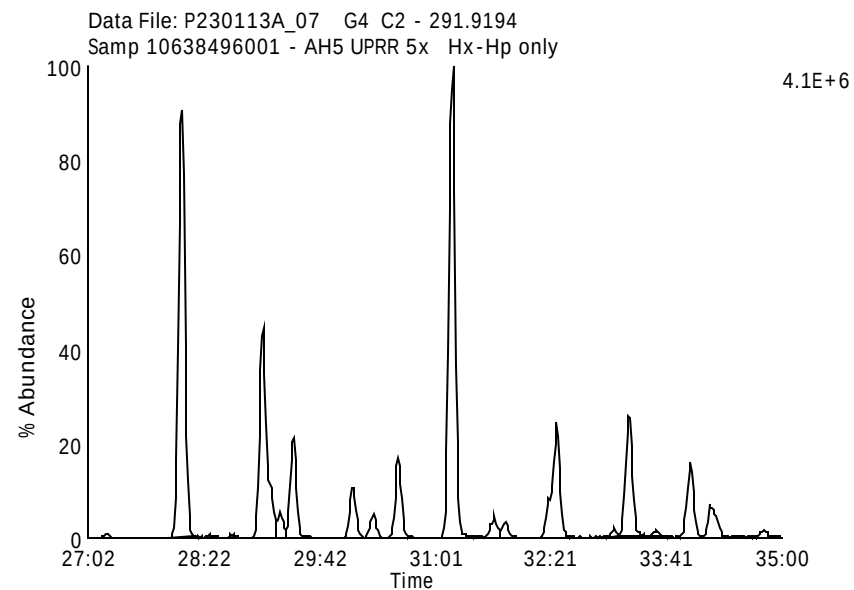
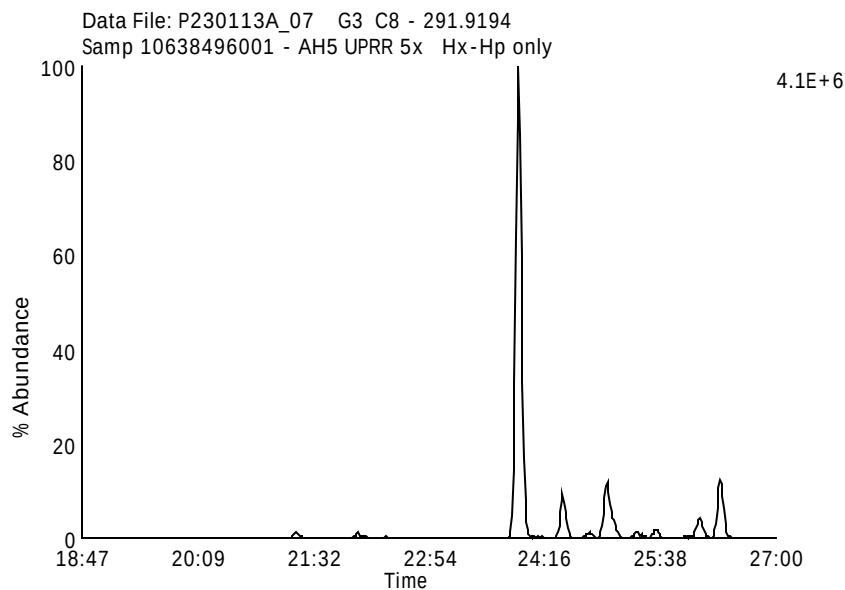
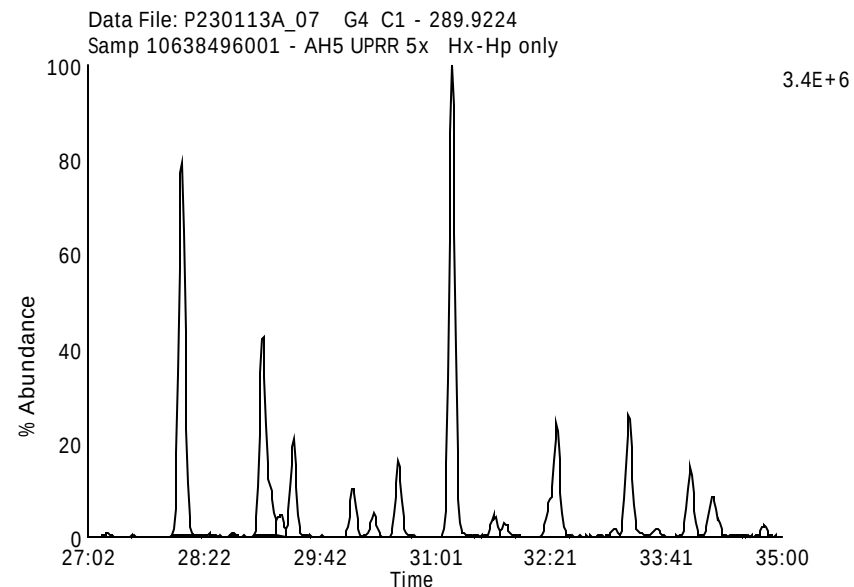
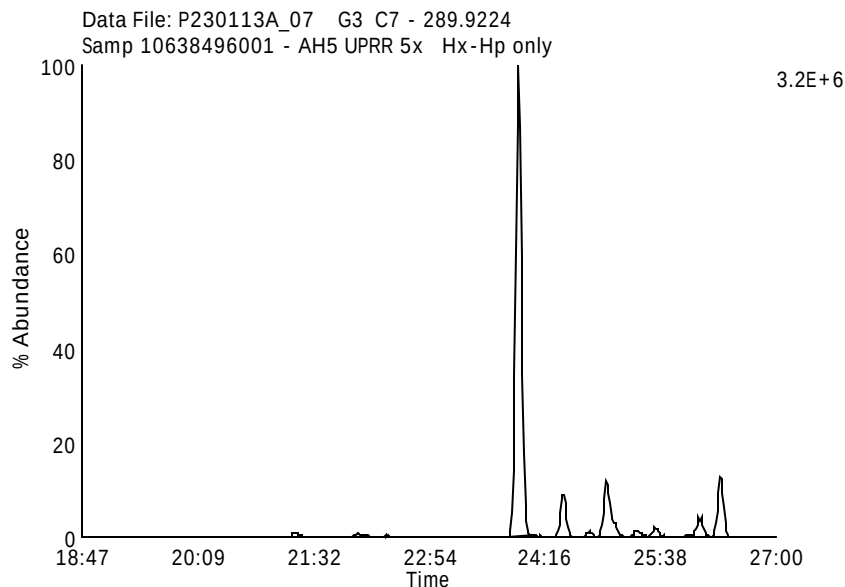
Date Acquired: 1/13/2023

Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Penta Chlorinated Biphenyls

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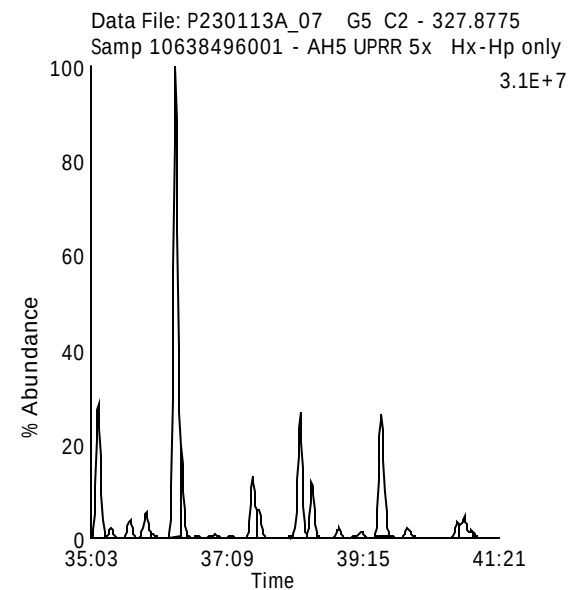
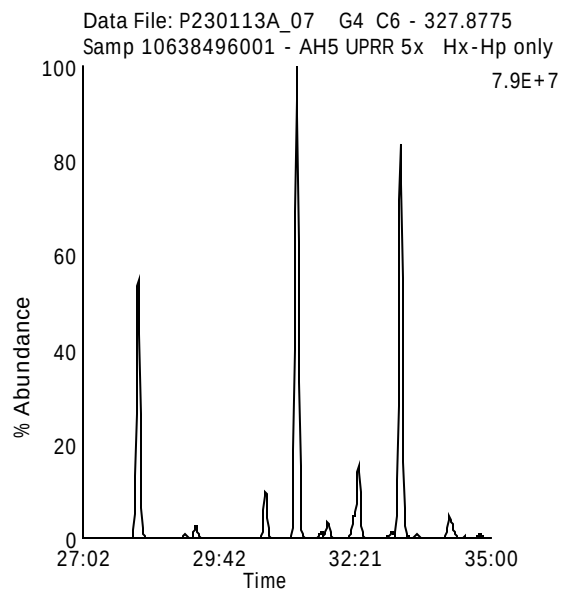
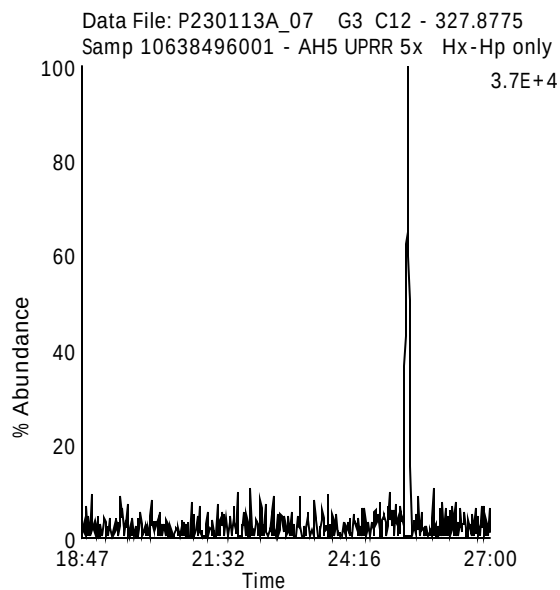
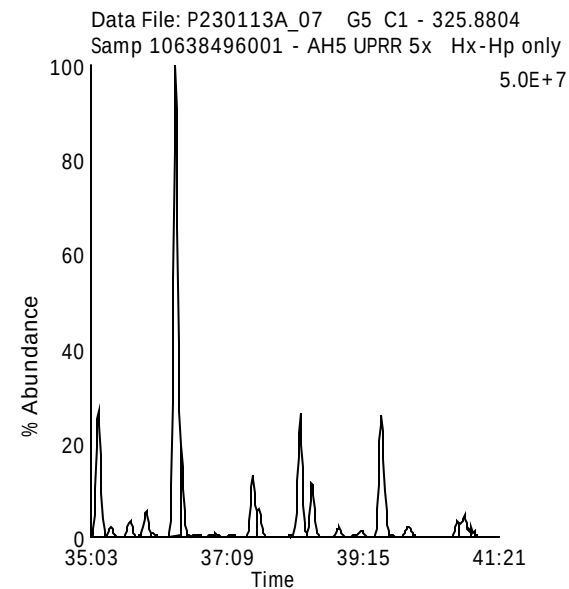
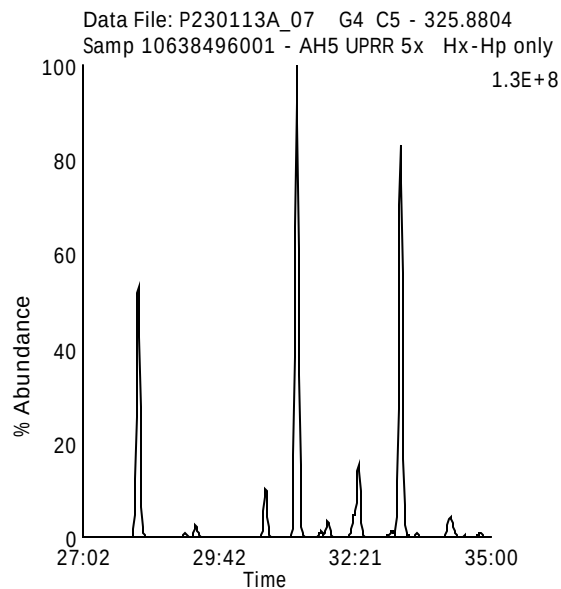
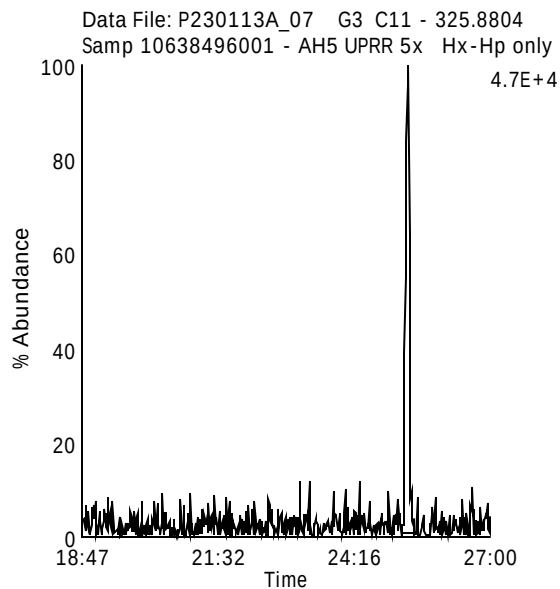
Date Acquired: 1/13/2023

Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Hexa Chlorinated Biphenyls

Data File Name: P230113A_07

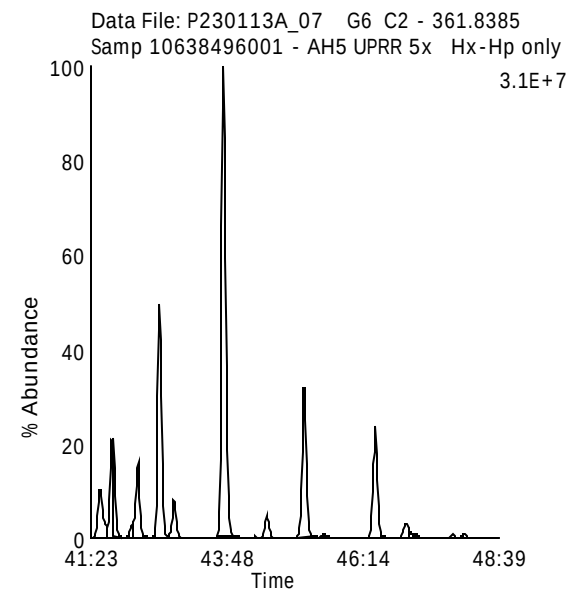
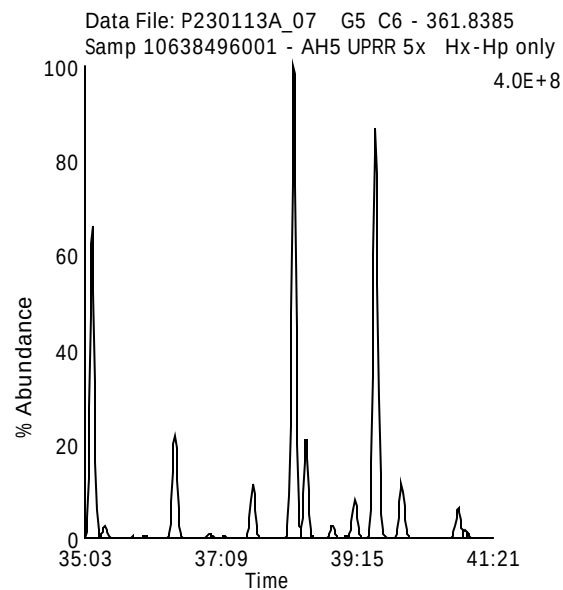
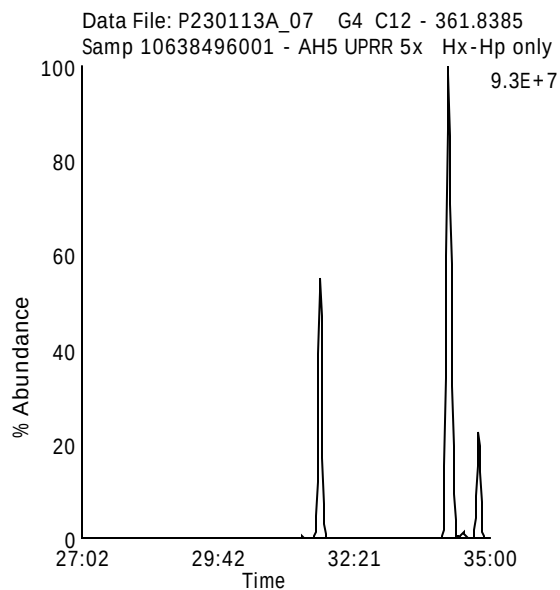
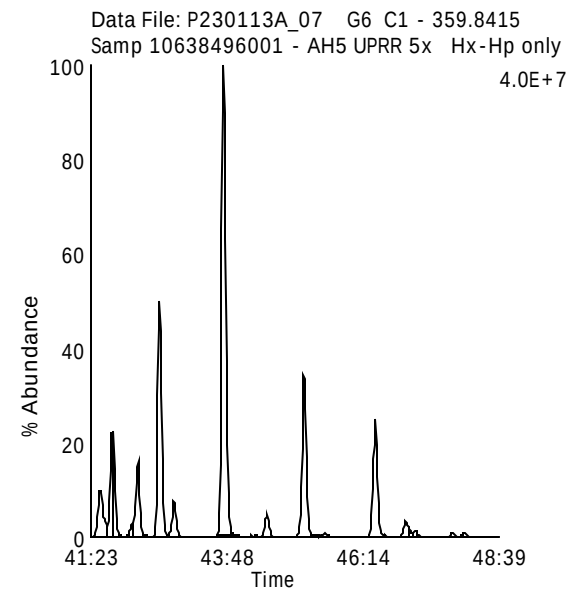
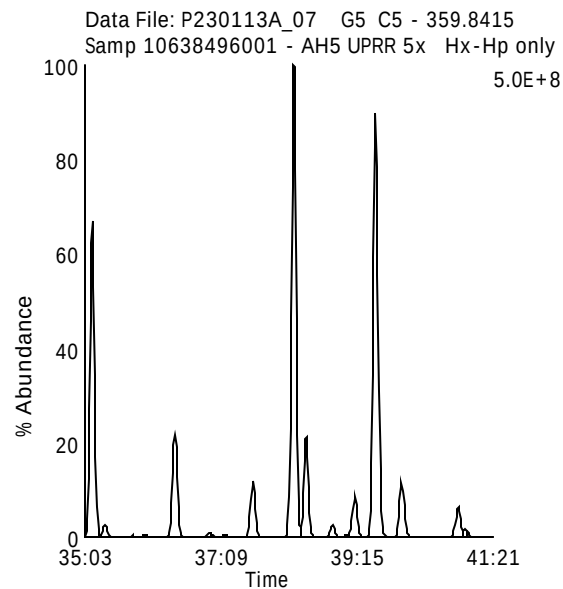
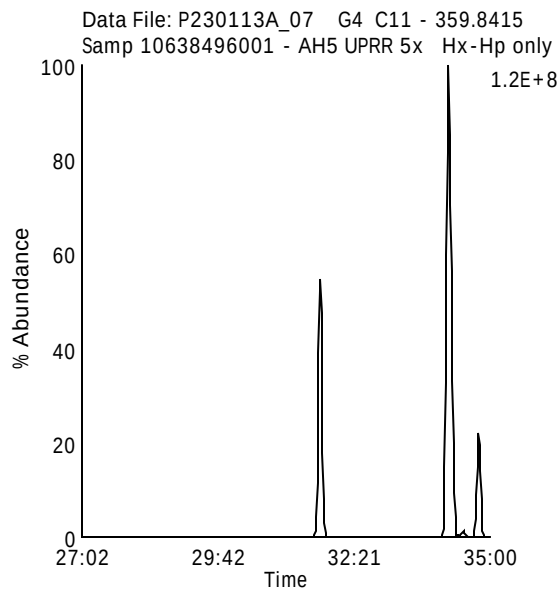
Date Acquired: 1/13/2023

Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Hepta Chlorinated Biphenyls

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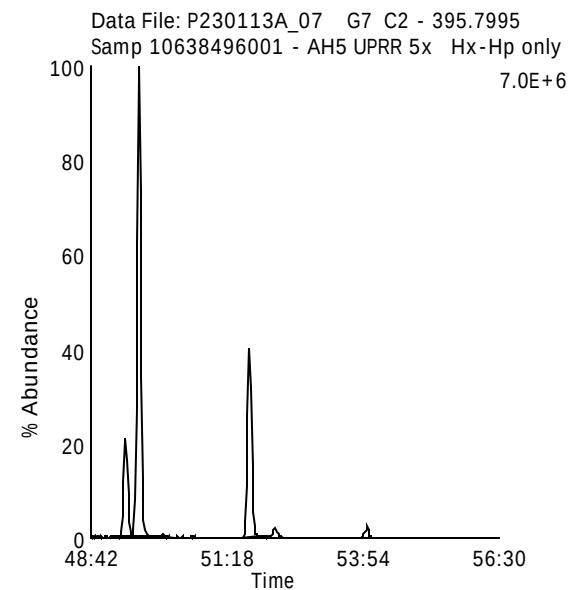
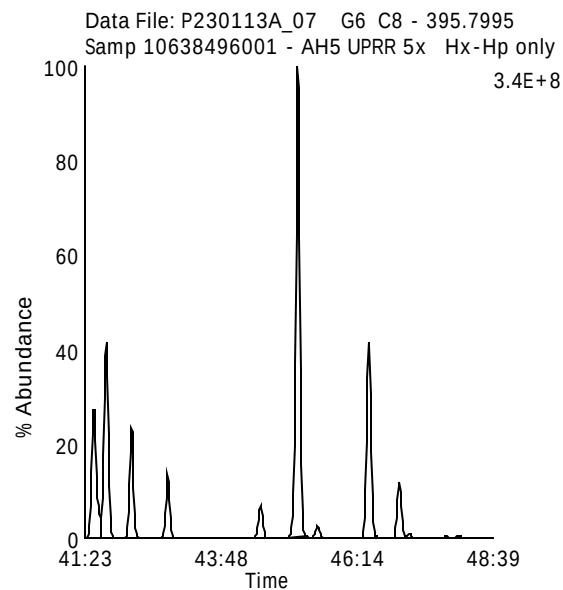
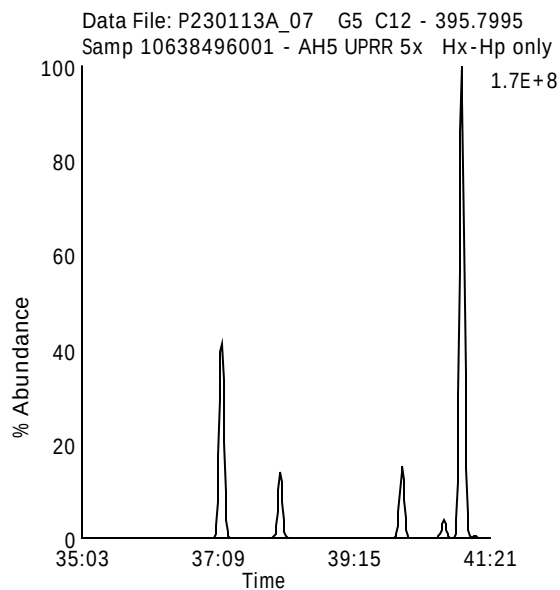
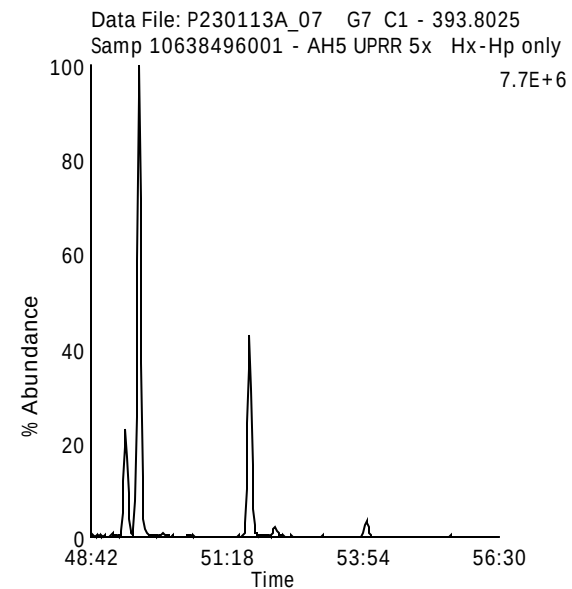
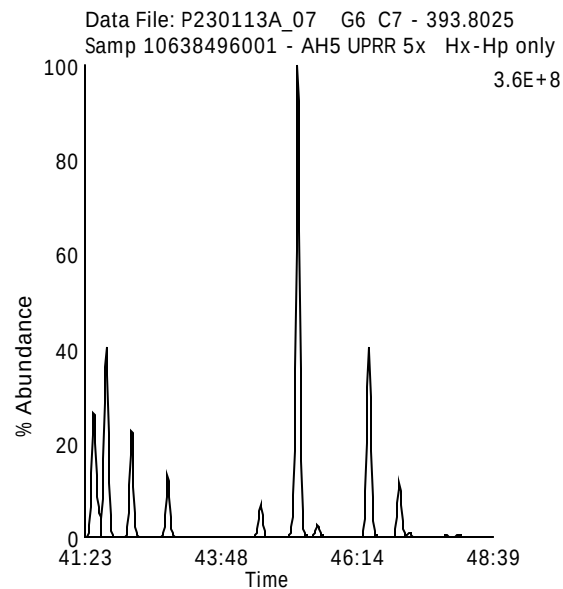
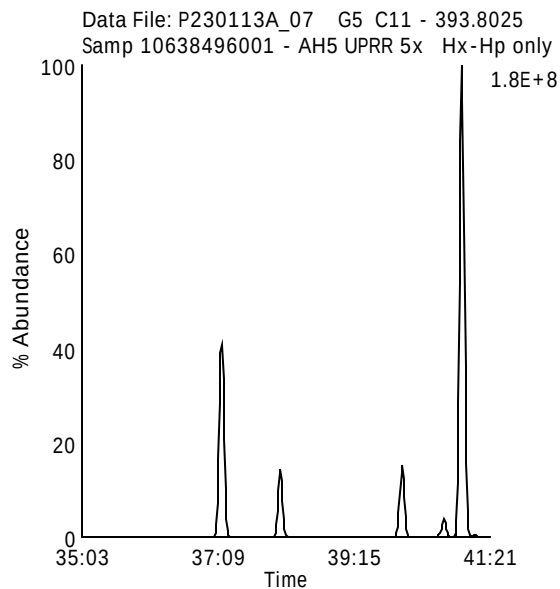
Date Acquired: 1/13/2023

Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Octa Chlorinated Biphenyls

Data File Name: P230113A_07

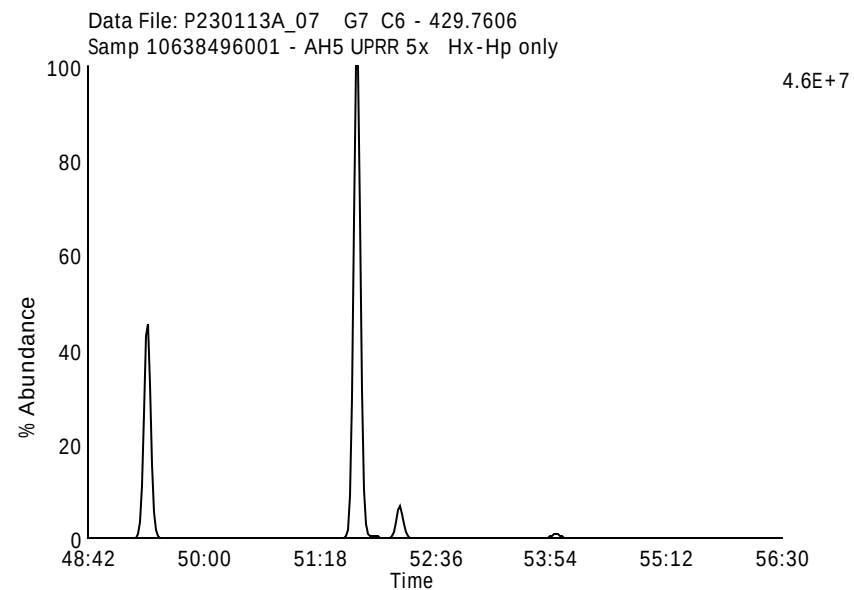
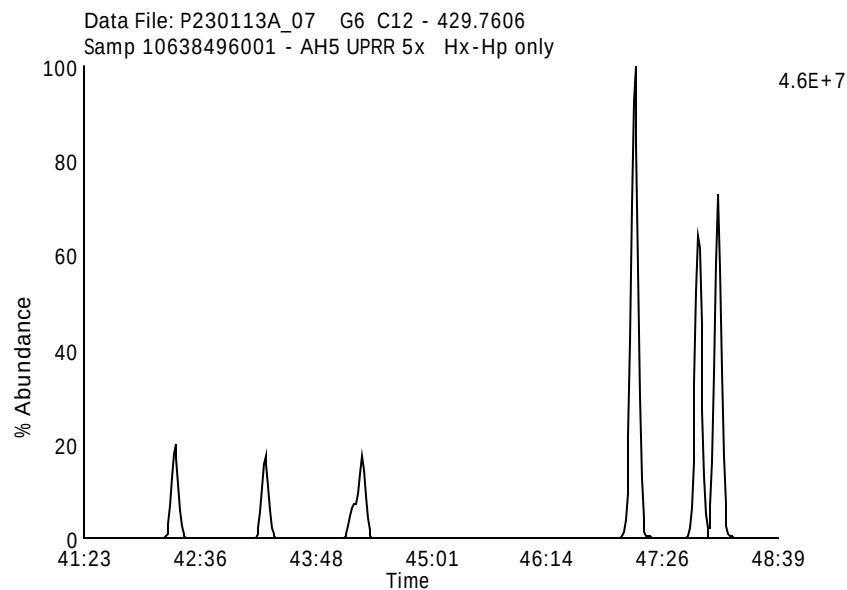
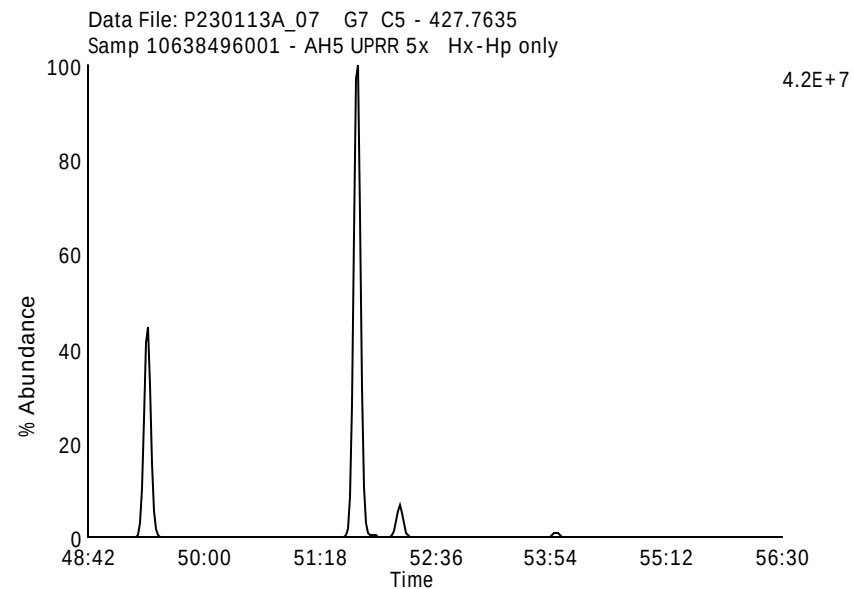
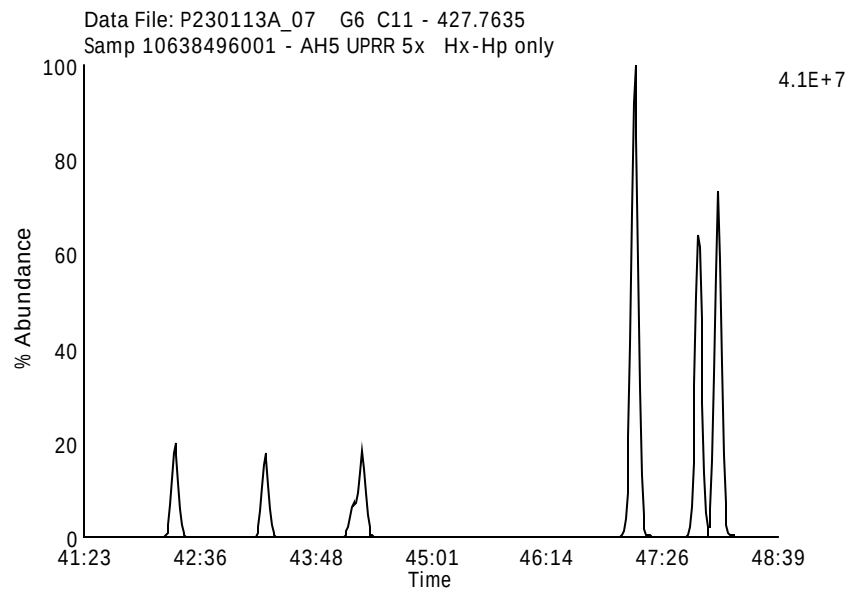
Date Acquired: 1/13/2023

Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Nona Chlorinated Biphenyls

Data File Name: P230113A_07

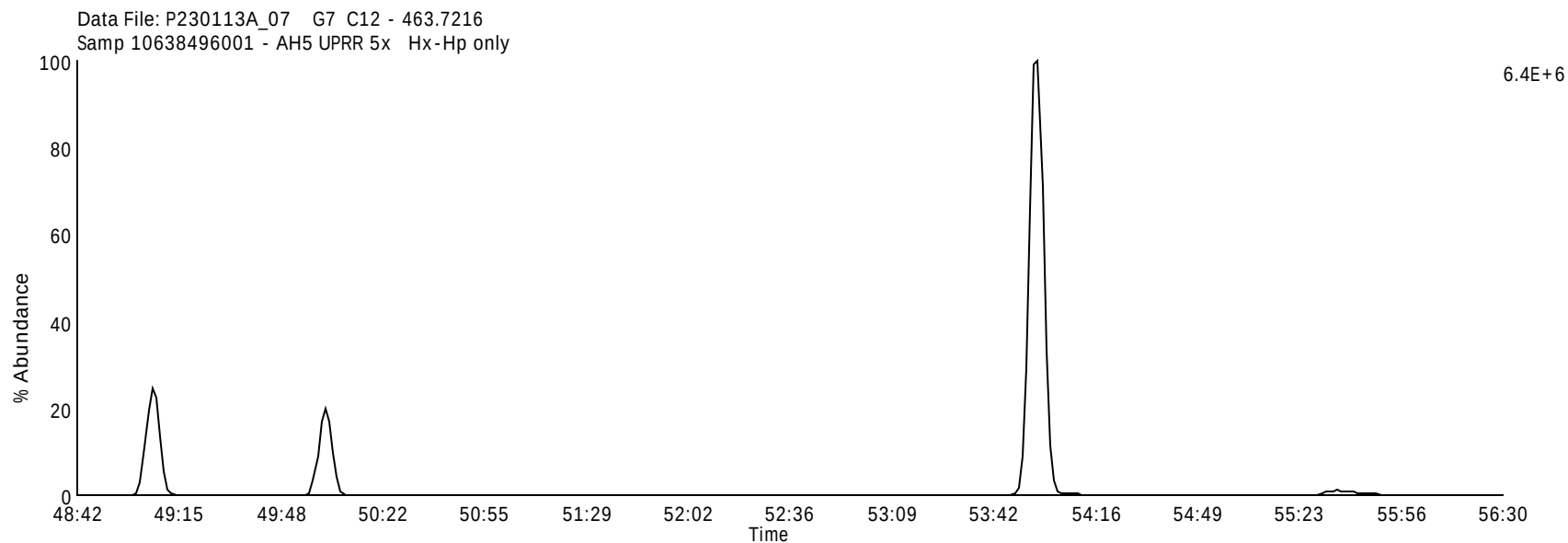
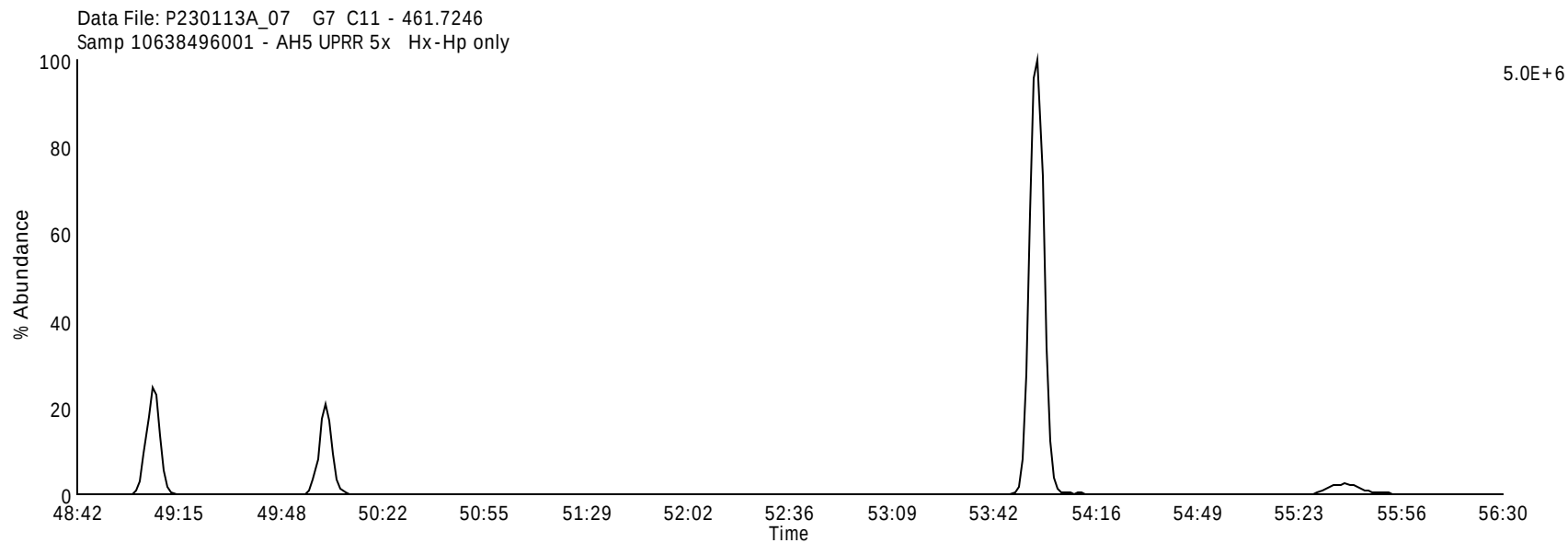
Date Acquired: 1/13/2023

Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Deca Chlorinated Biphenyl

Data File Name: P230113A_07

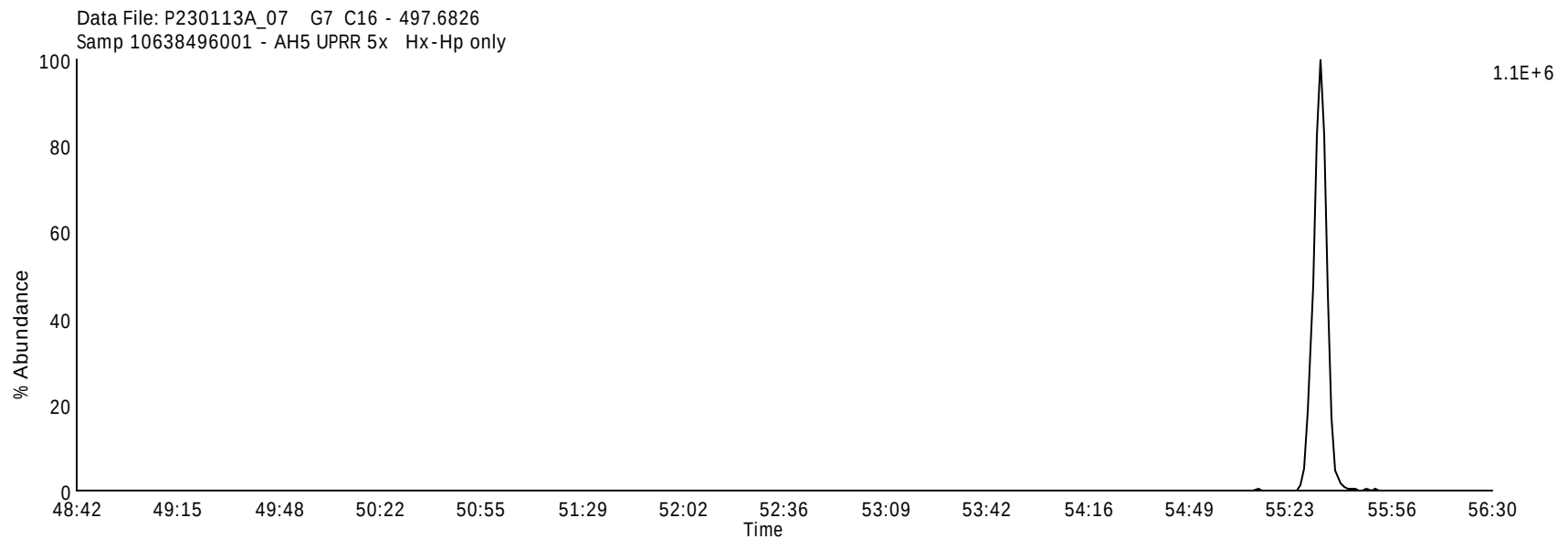
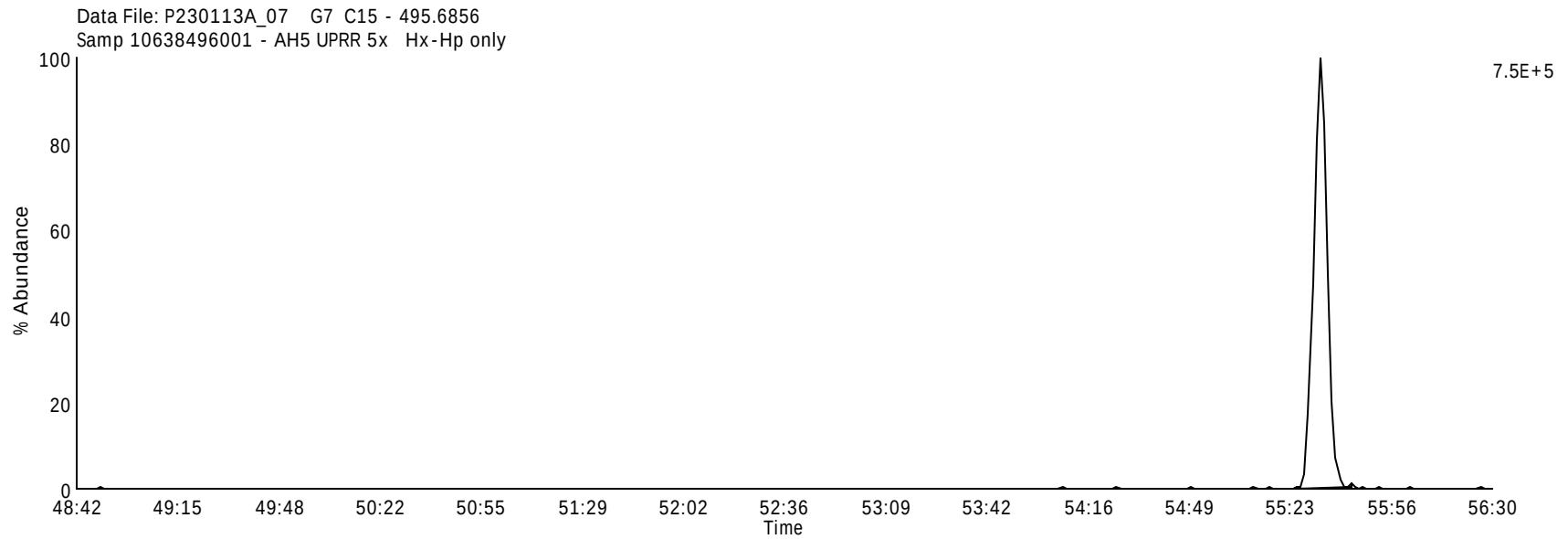
Date Acquired: 1/13/2023

Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Group 1 - 4 Lock mass

Data File Name: P230113A_07

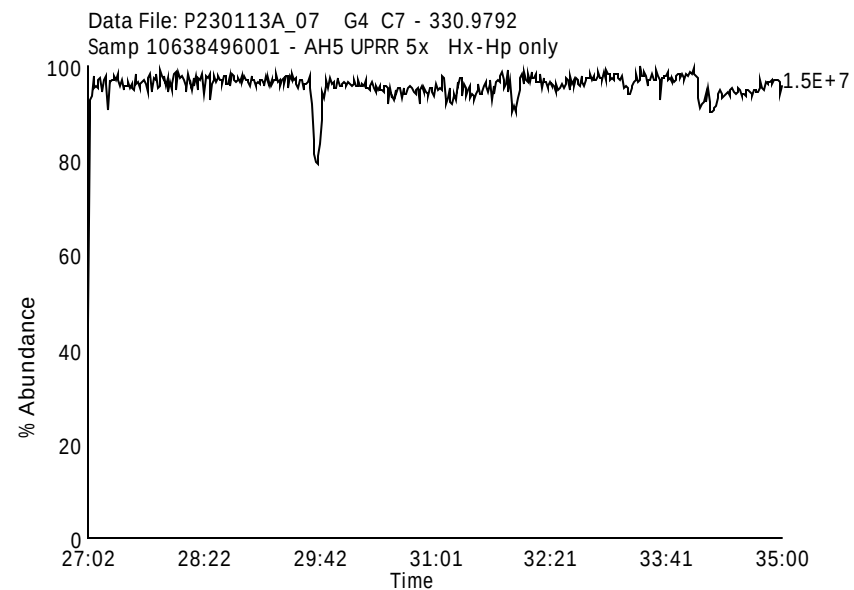
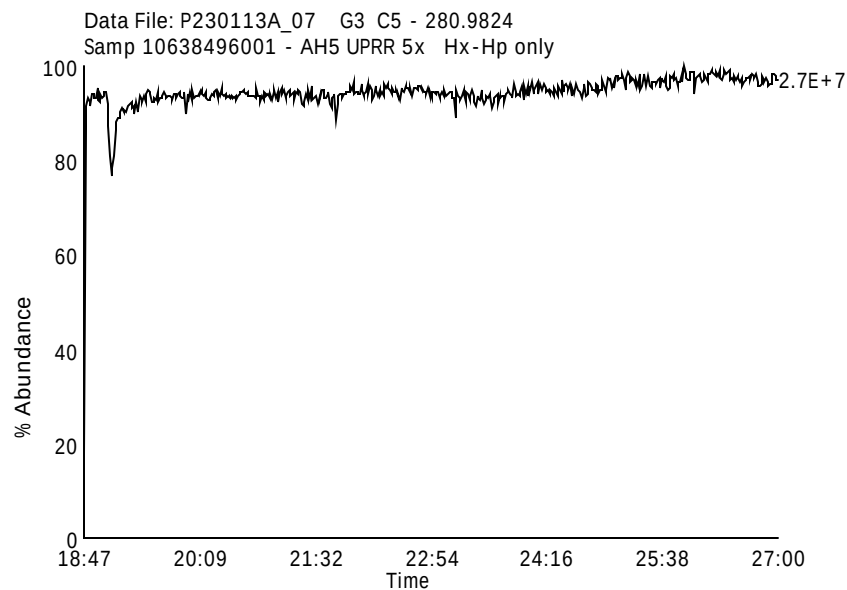
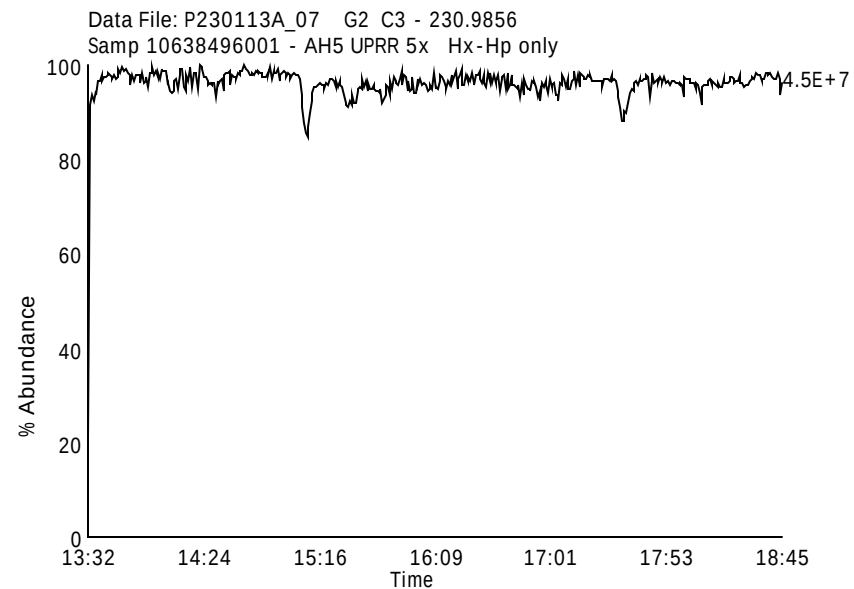
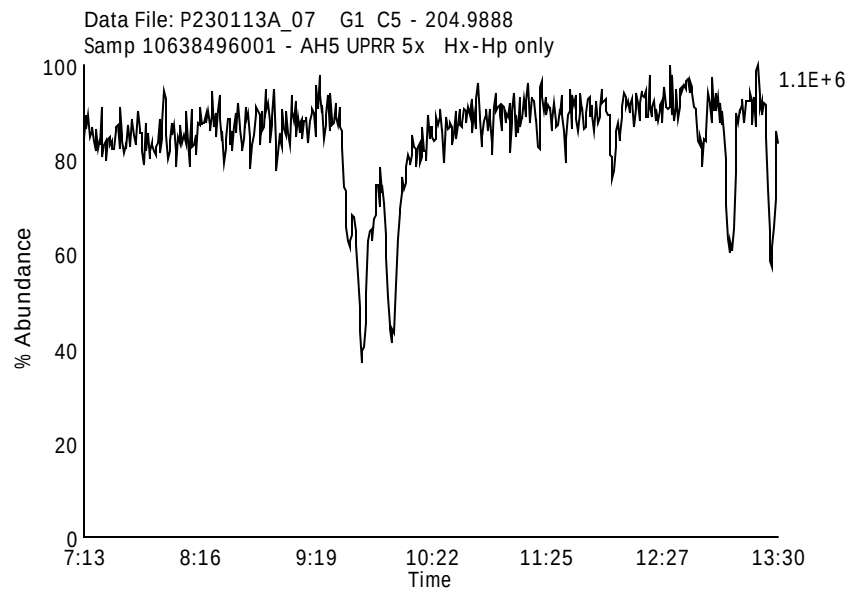
Date Acquired: 1/13/2023

Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Group 5 - 7 Lock mass

Data File Name: P230113A_07

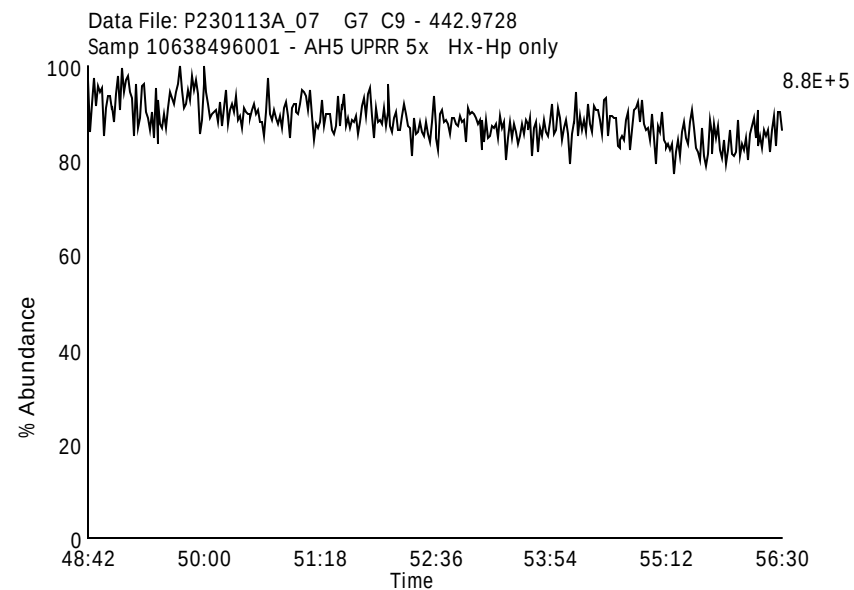
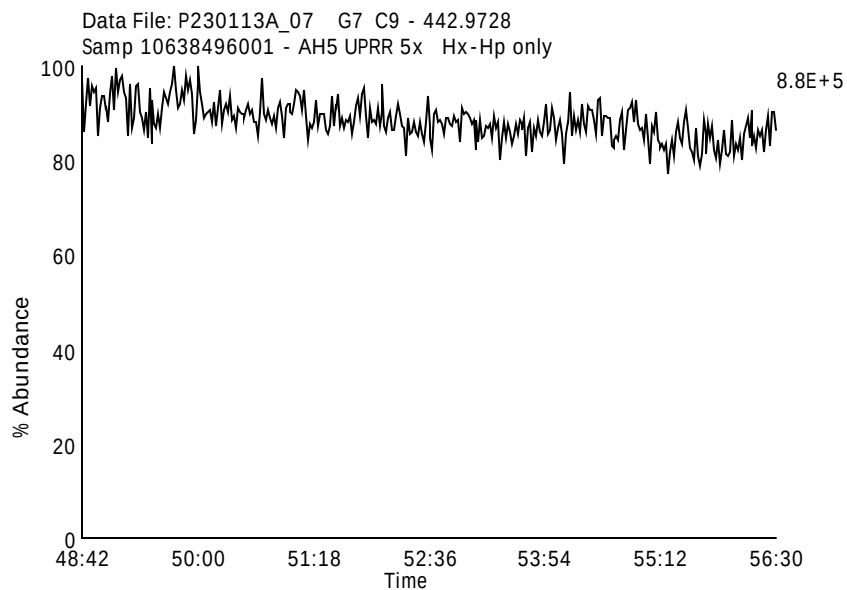
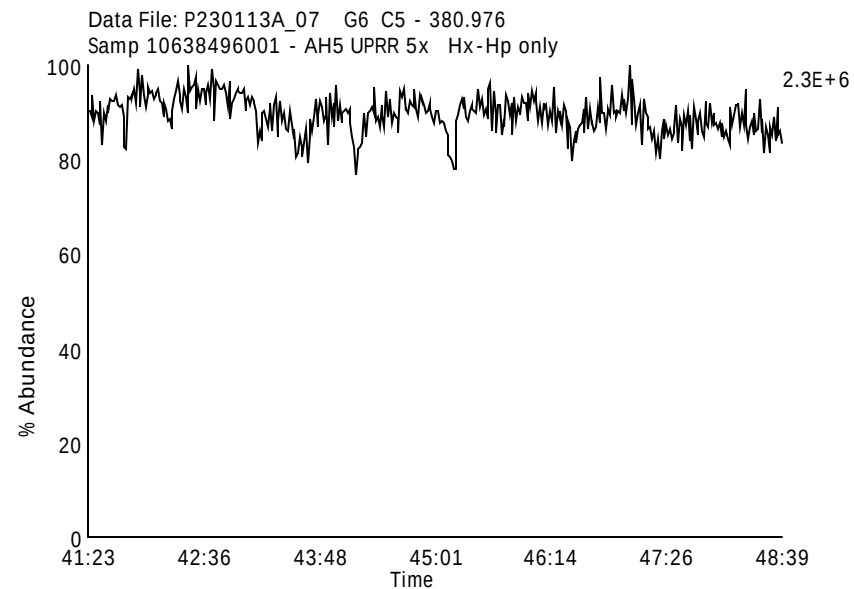
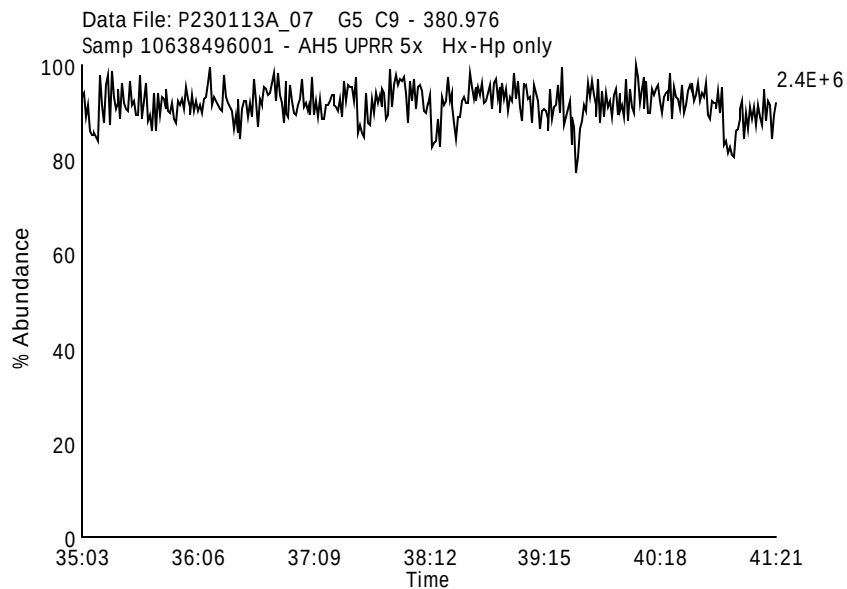
Date Acquired: 1/13/2023

Sample Description: Samp 10638496001 - AH5 UPRR 5x Hx-Hp only

Lab Sample ID: 10638496001

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022



Labeled Mono Chlorinated Biphenyls

Data File Name: P230112A_11

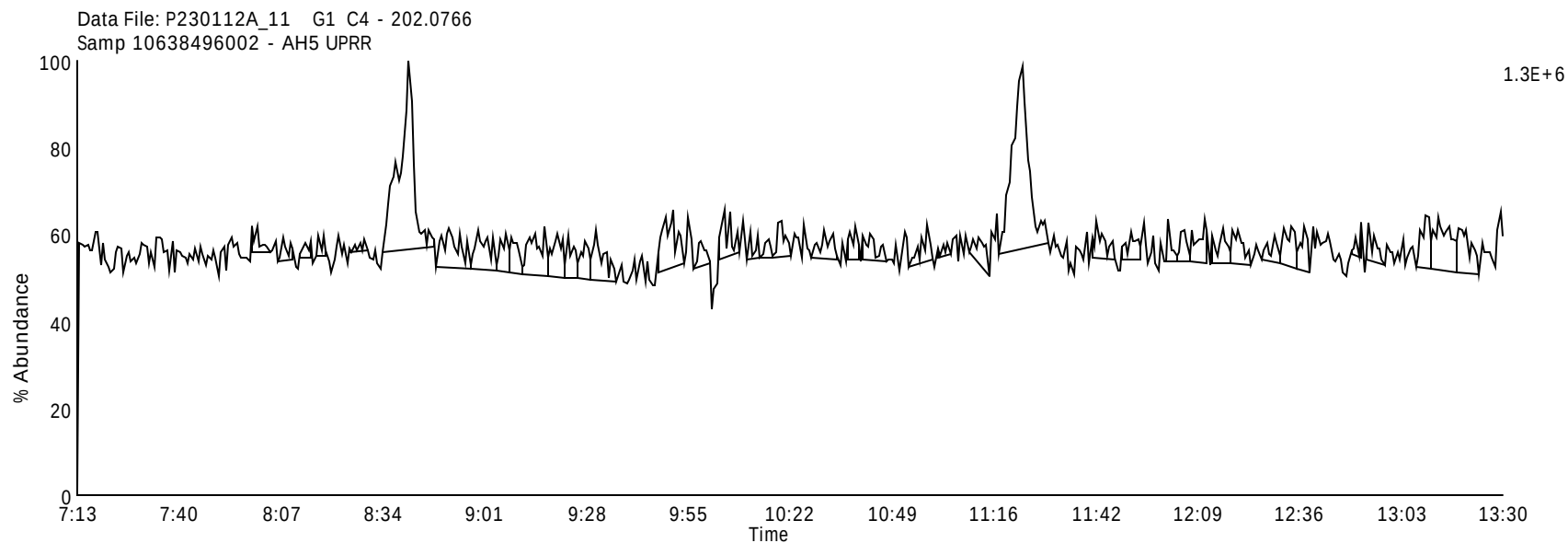
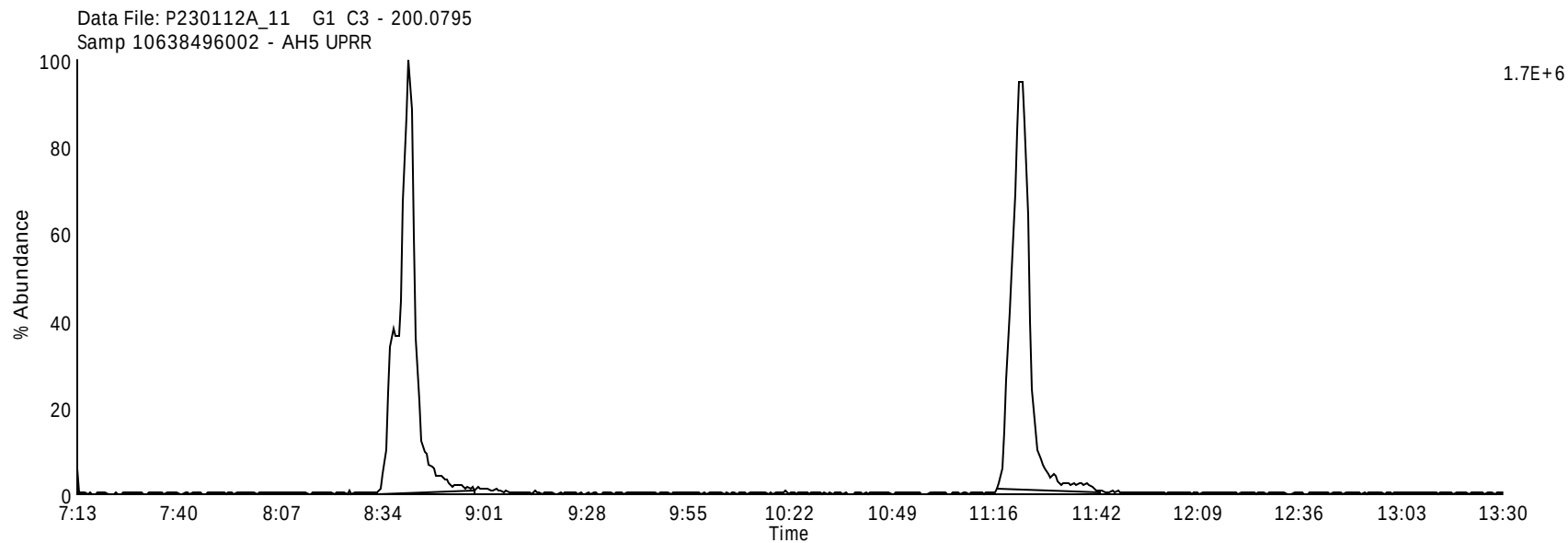
Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Labeled Di Chlorinated Biphenyls

Data File Name: P230112A_11

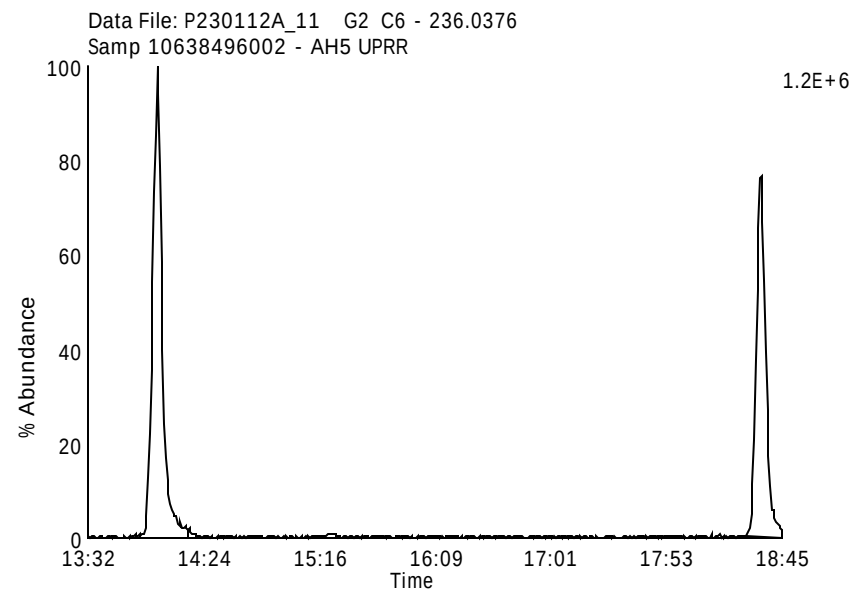
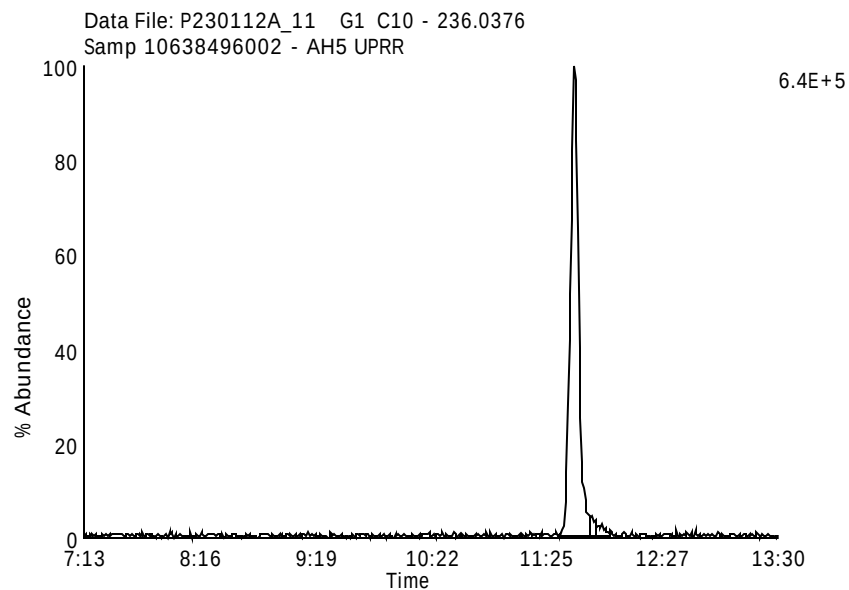
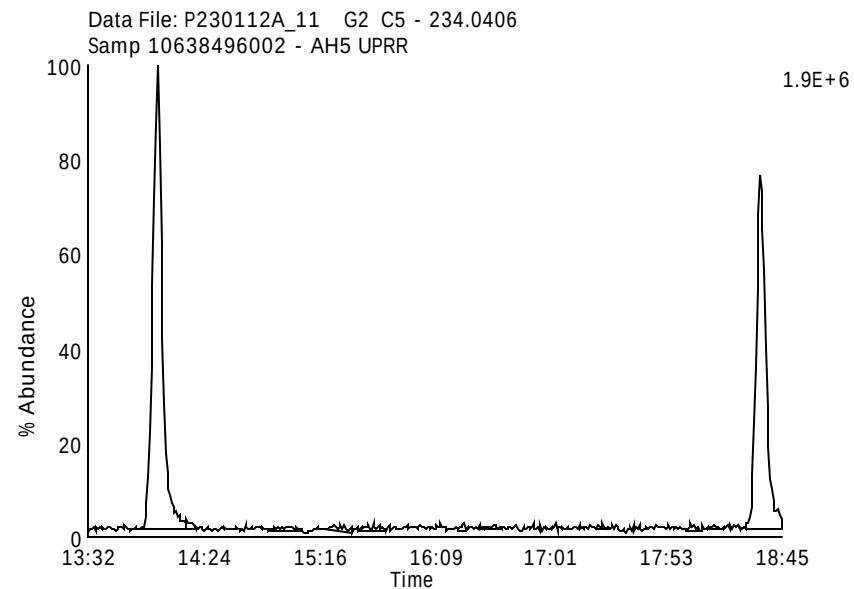
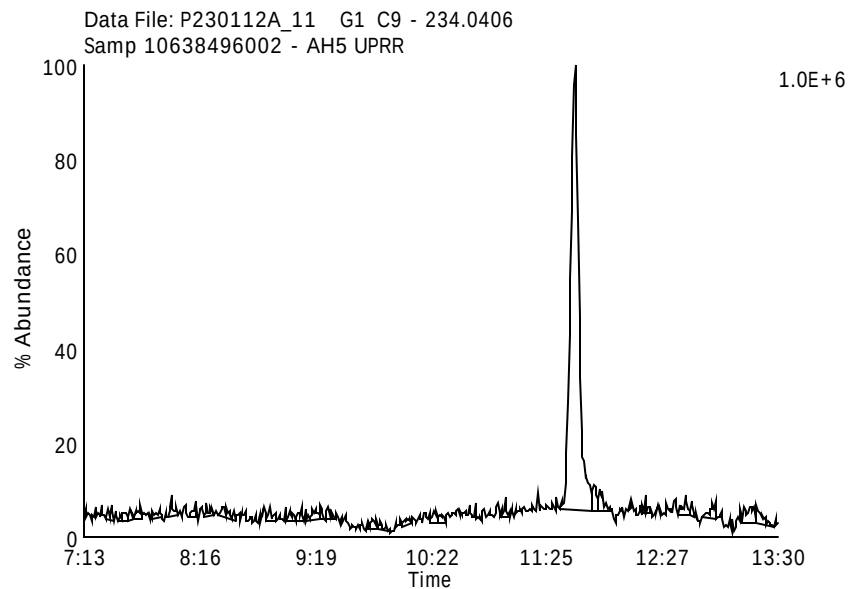
Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Labeled Tri Chlorinated Biphenyls

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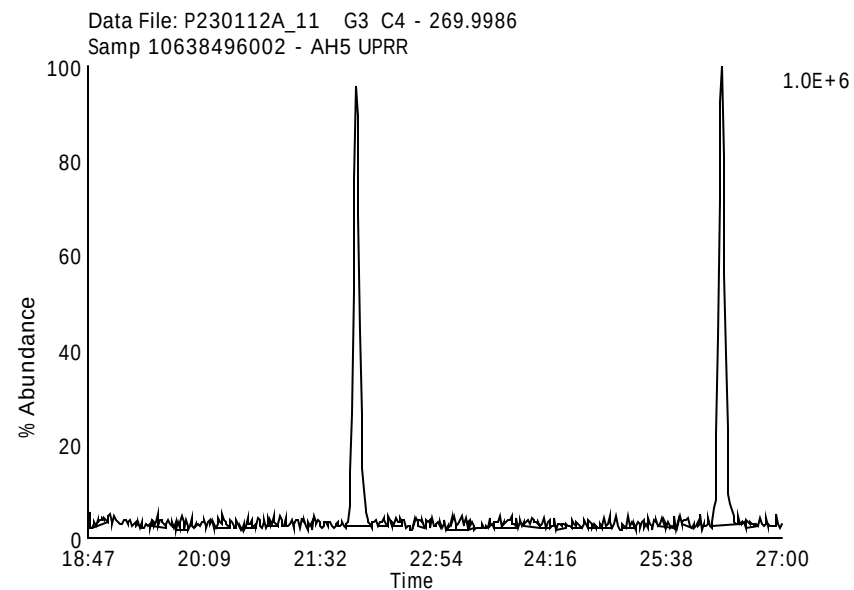
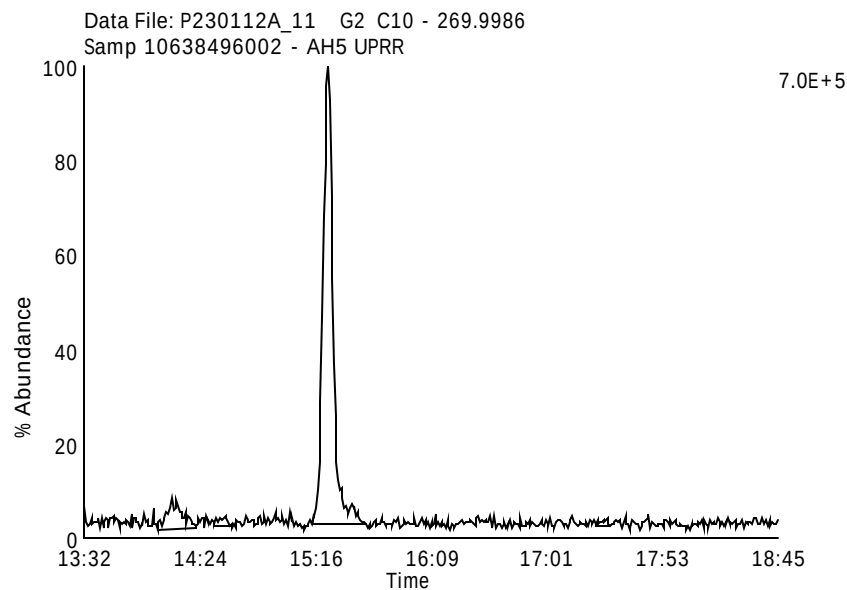
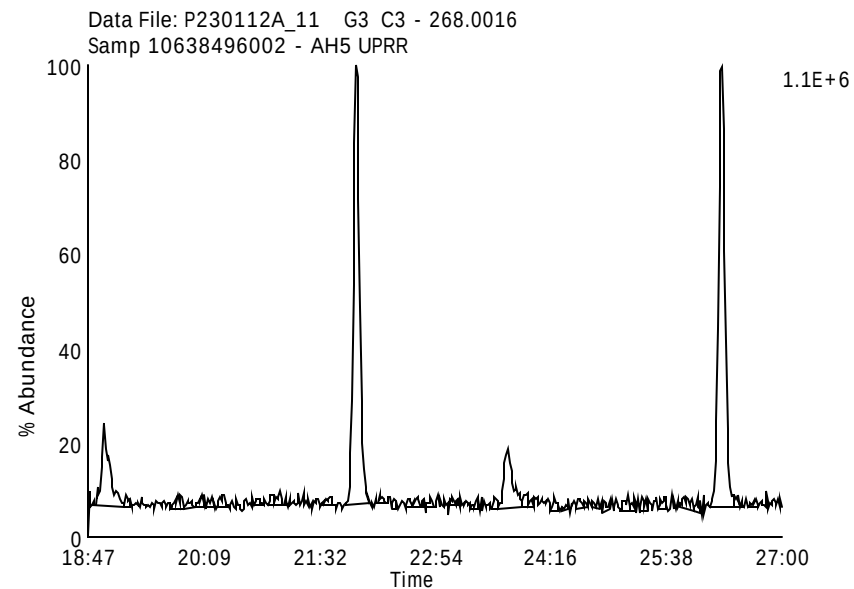
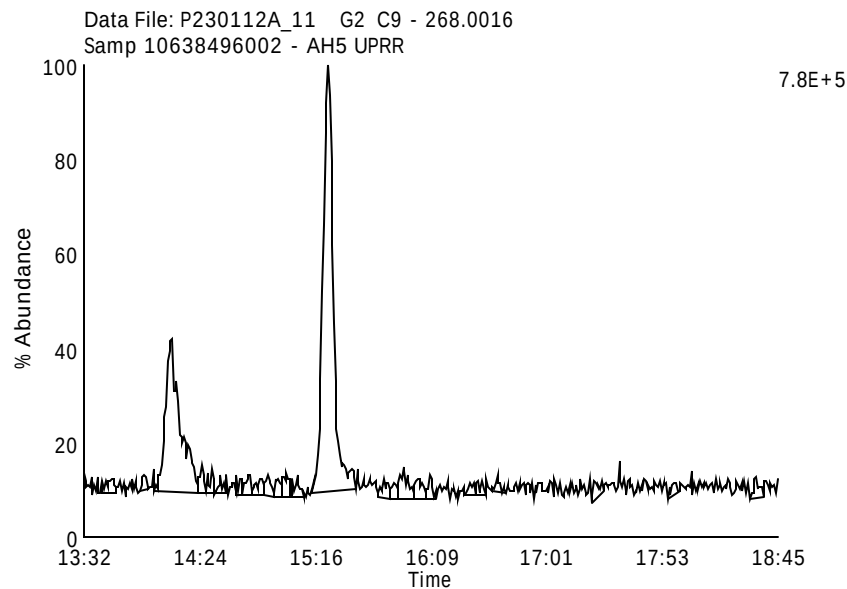
Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Labeled Tetra Chlorinated Biphenyls

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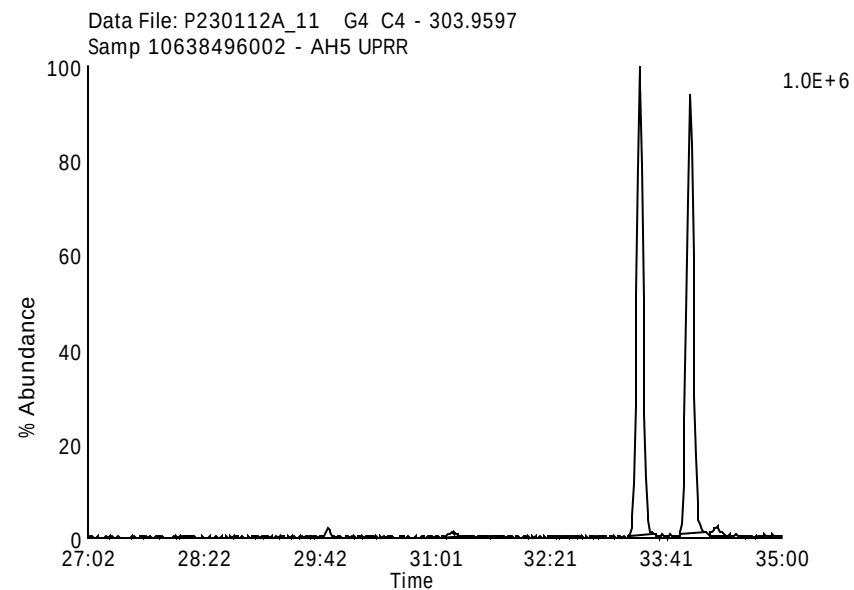
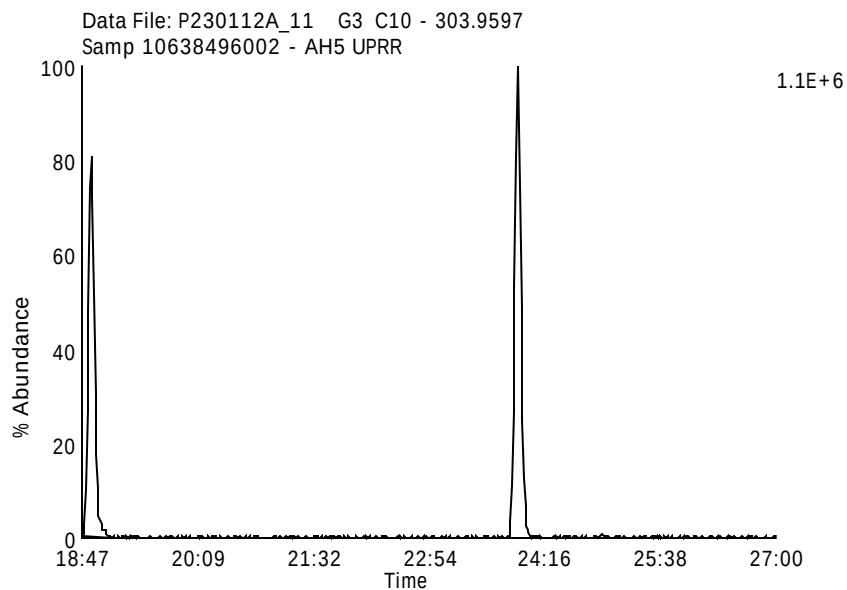
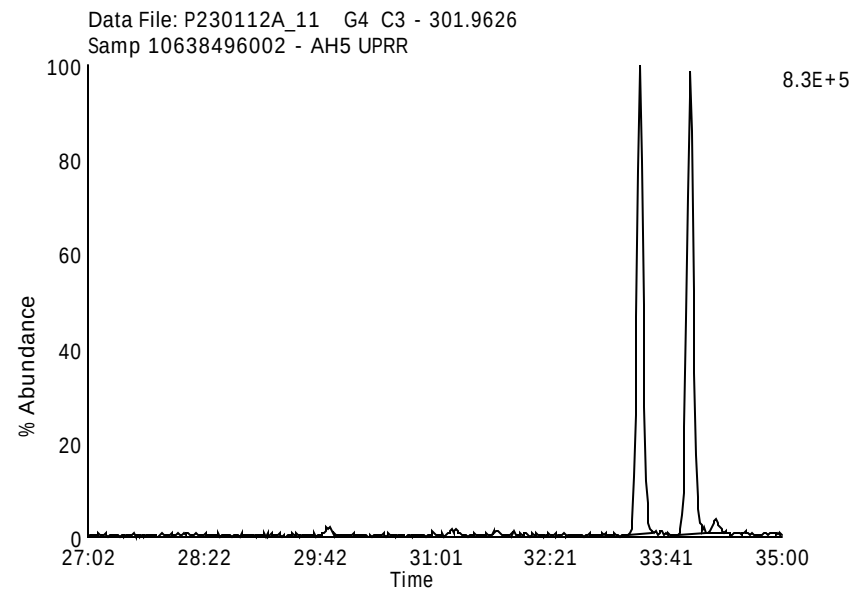
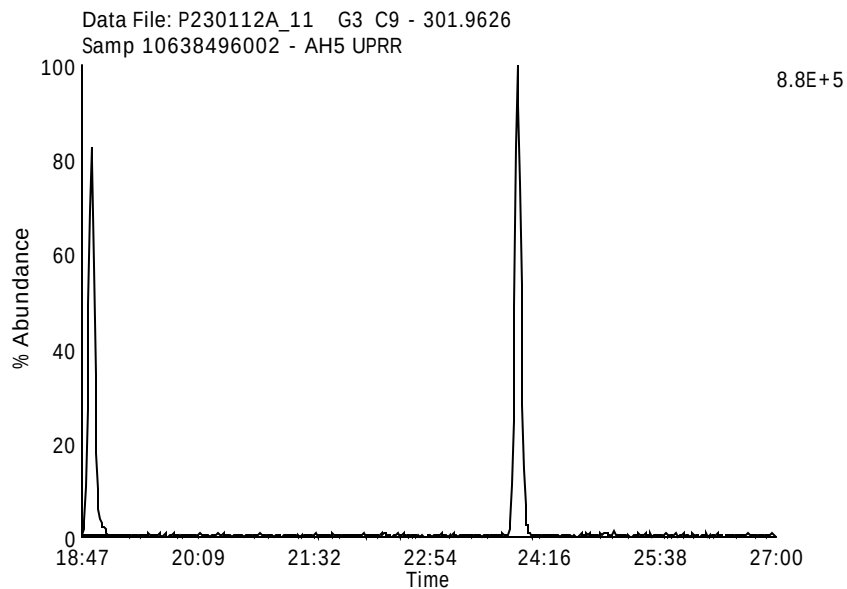
Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Labeled Penta Chlorinated Biphenyls

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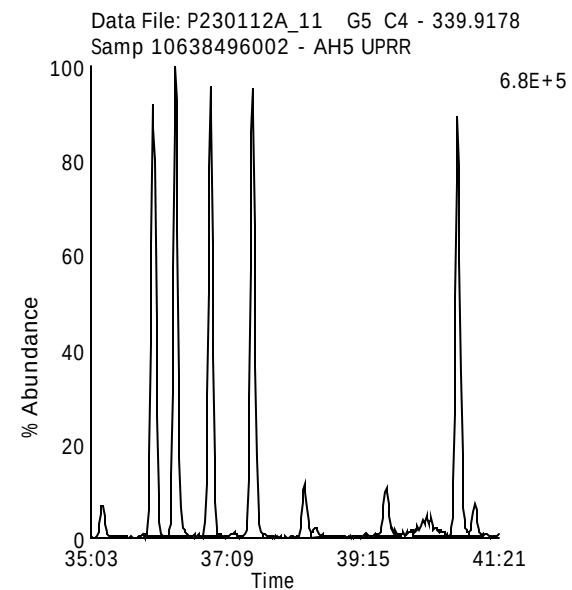
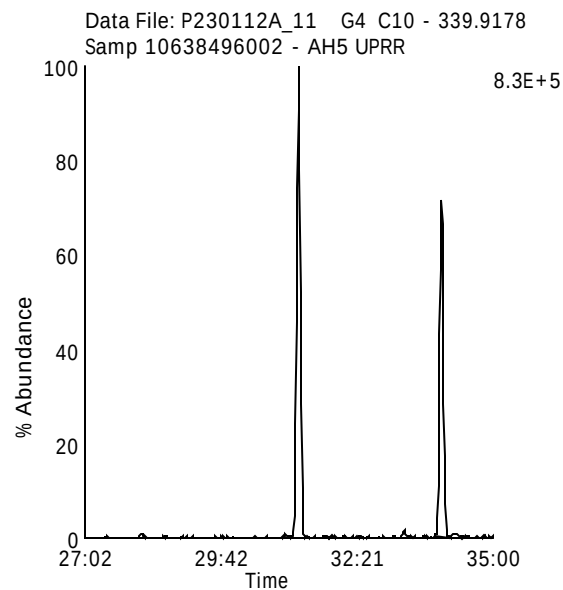
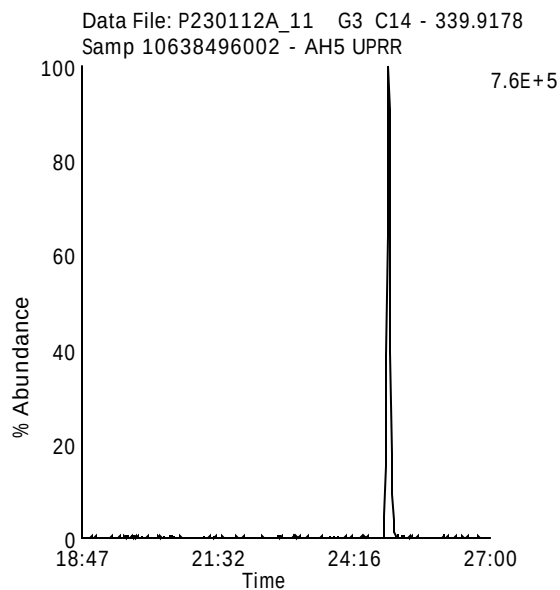
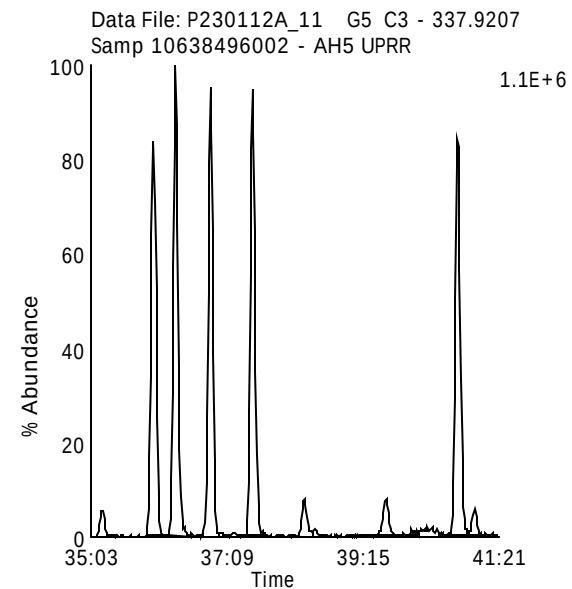
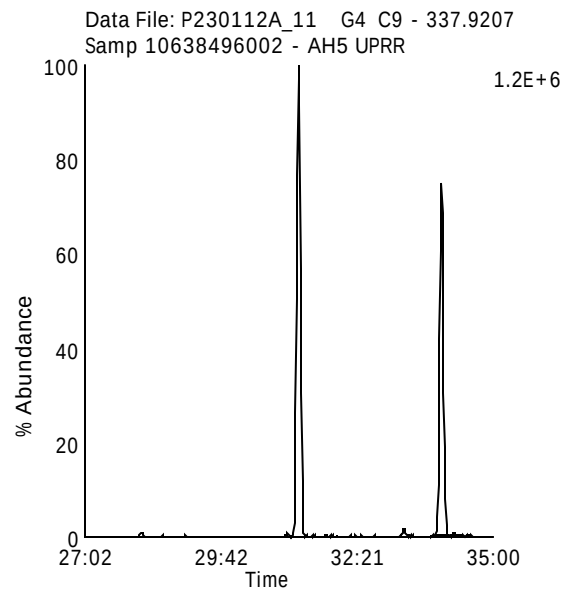
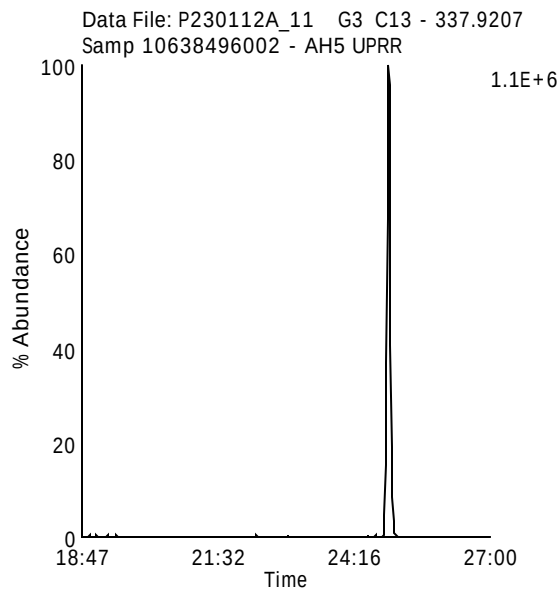
Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Labeled Hexa Chlorinated Biphenyls

Data File Name: P230112A_11

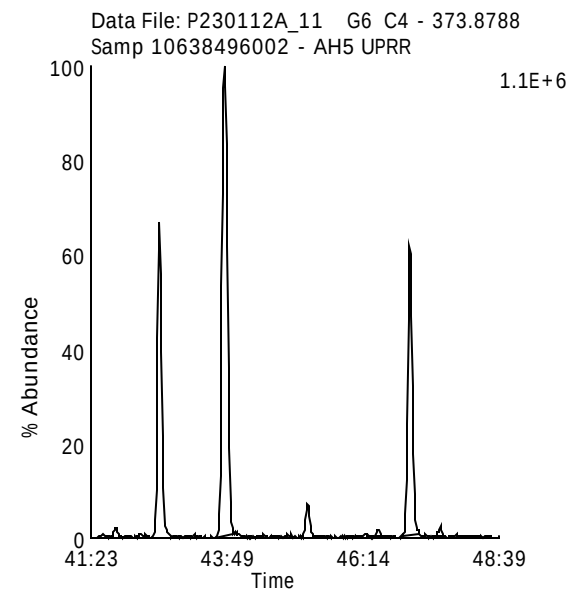
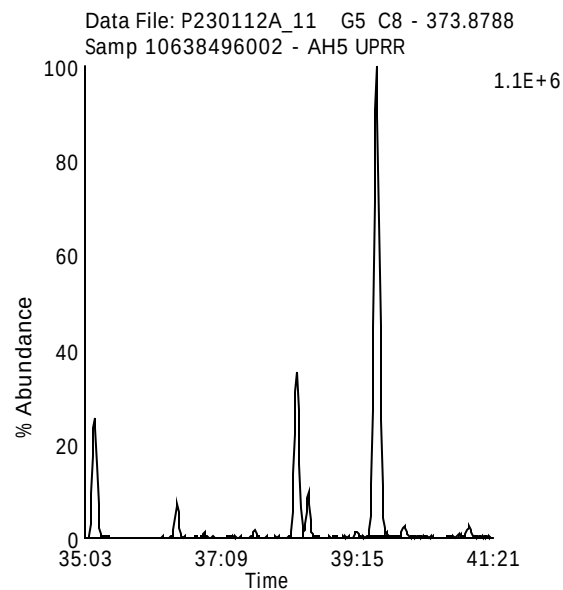
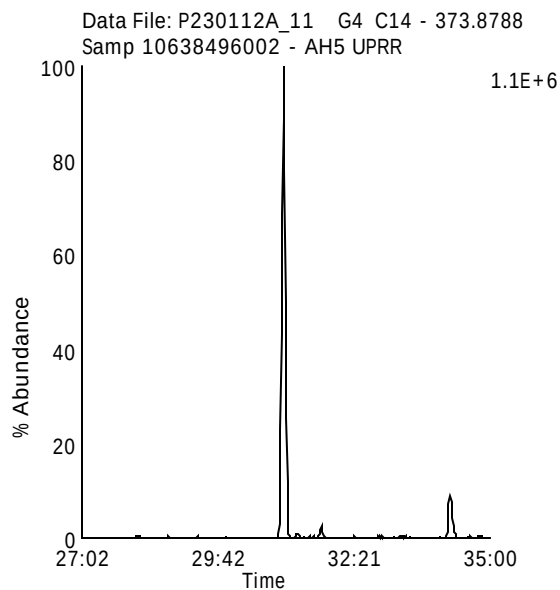
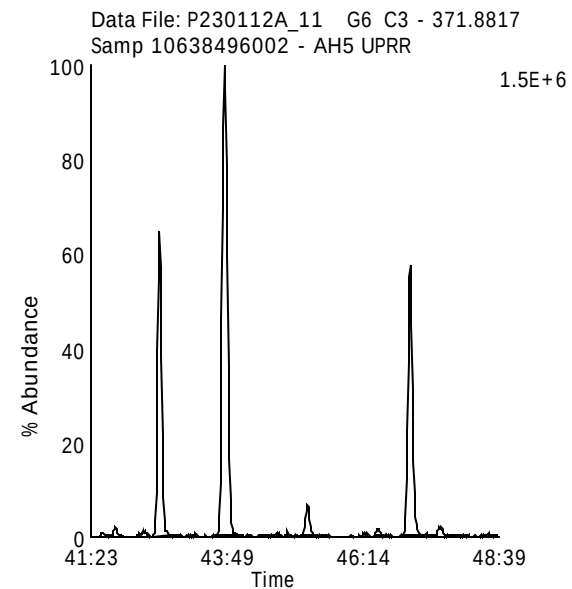
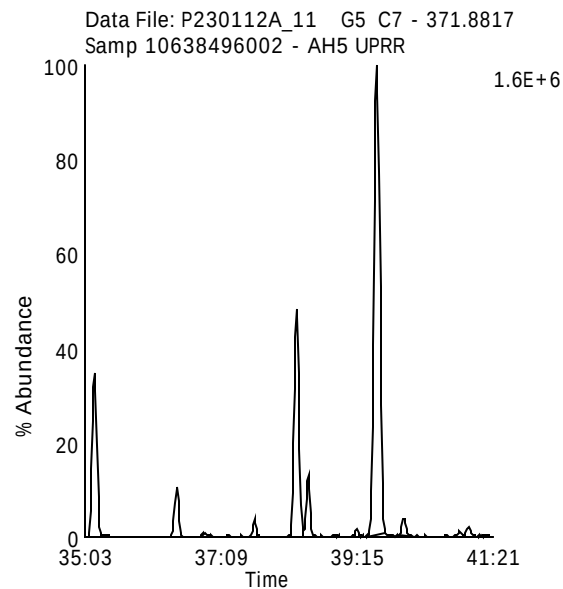
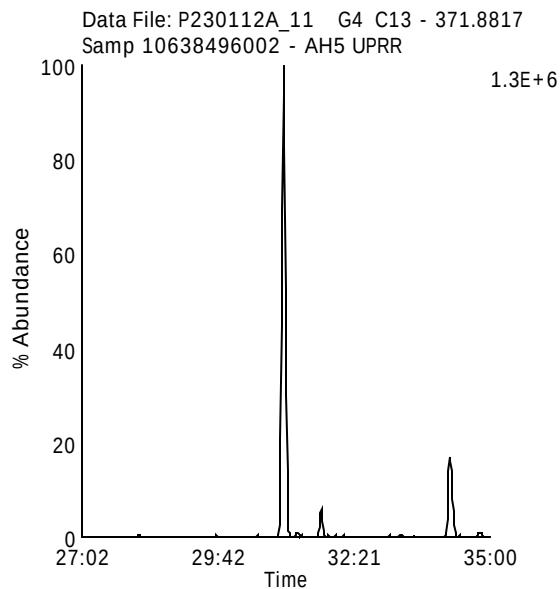
Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Labeled Hepta Chlorinated Biphenyls

Data File Name: P230112A_11

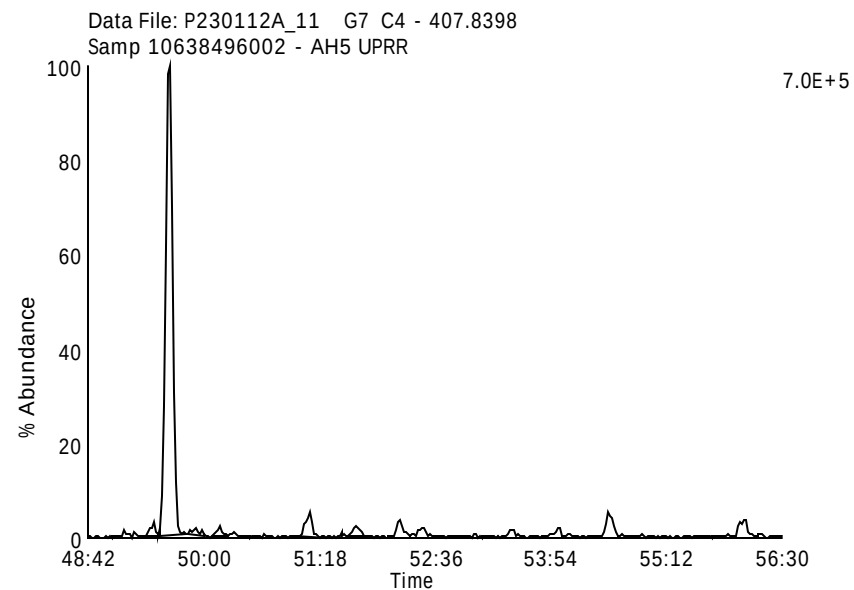
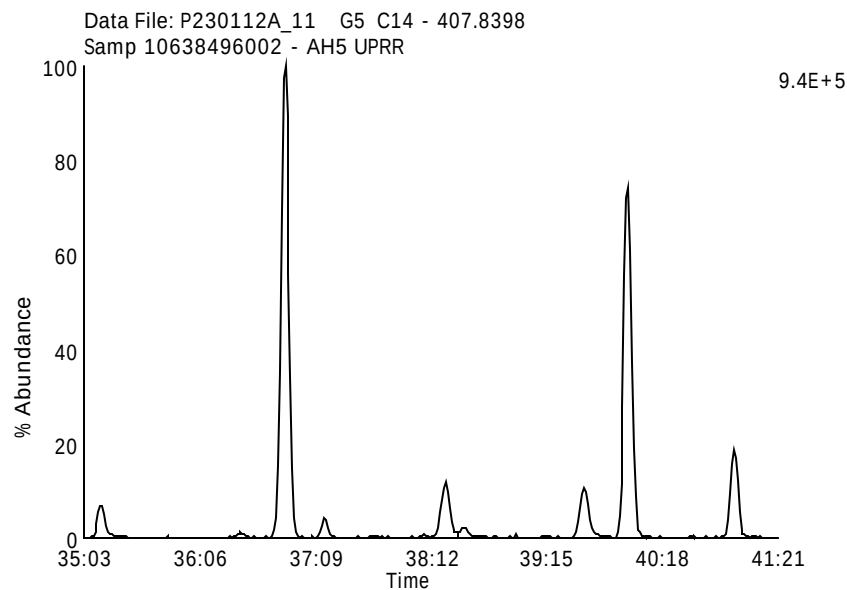
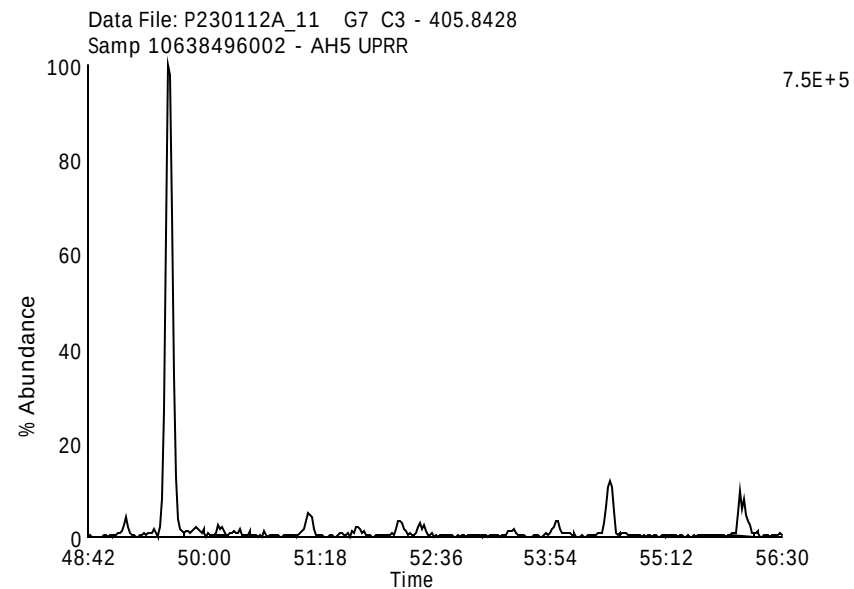
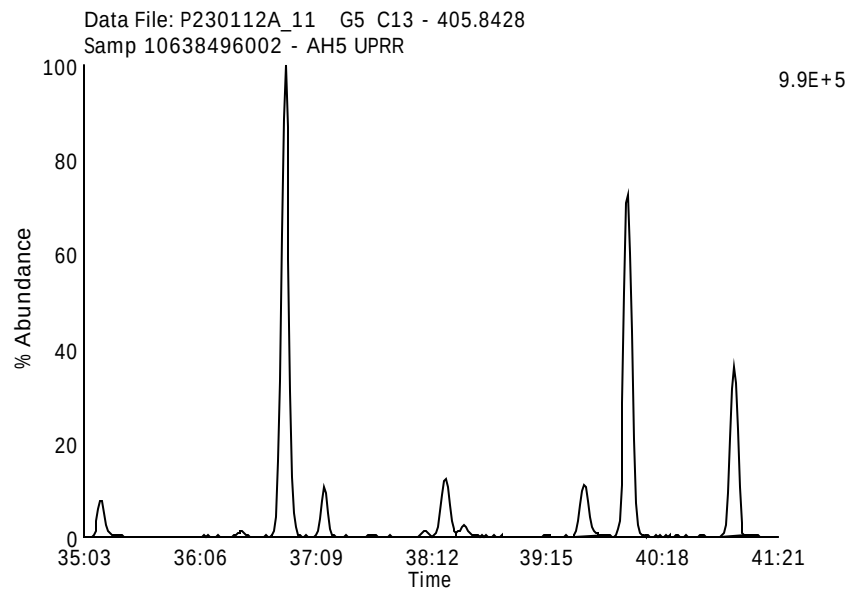
Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Labeled Octa Chlorinated Biphenyls

Data File Name: P230112A_11

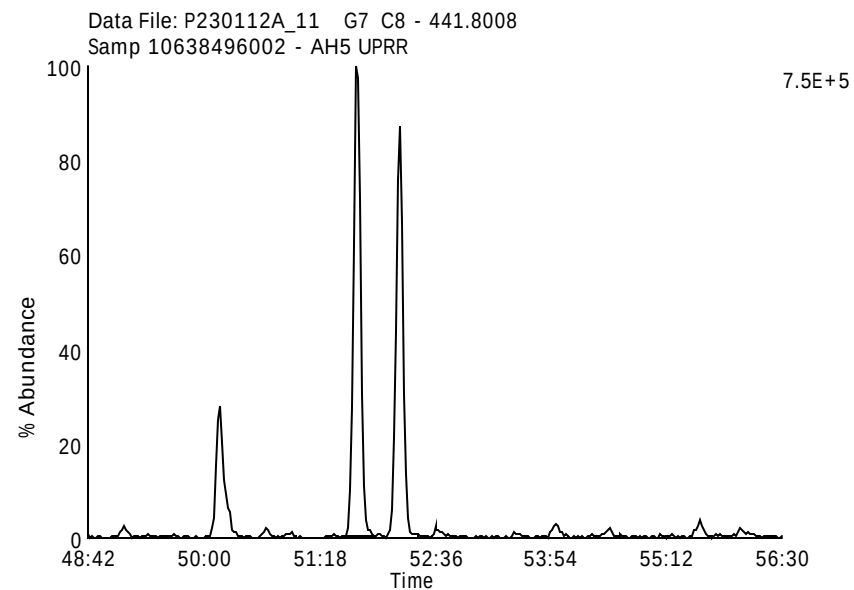
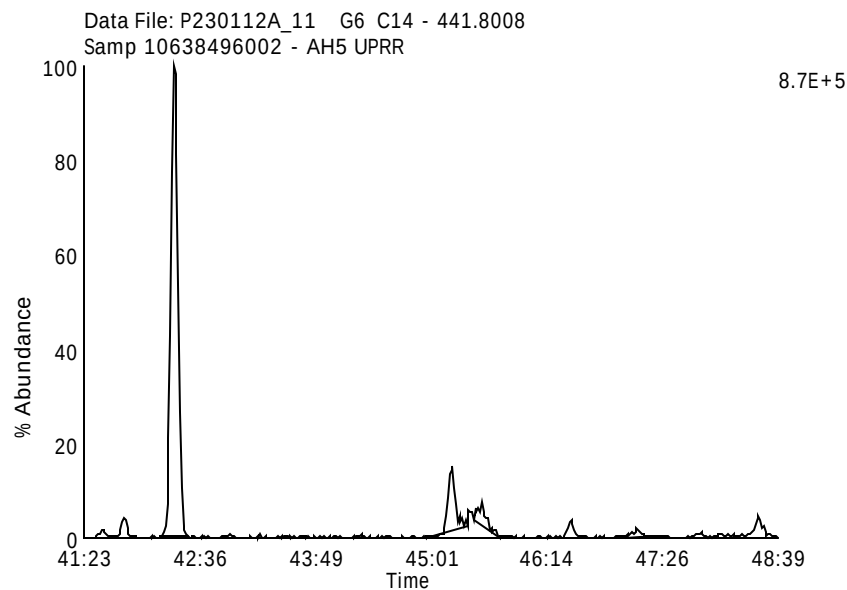
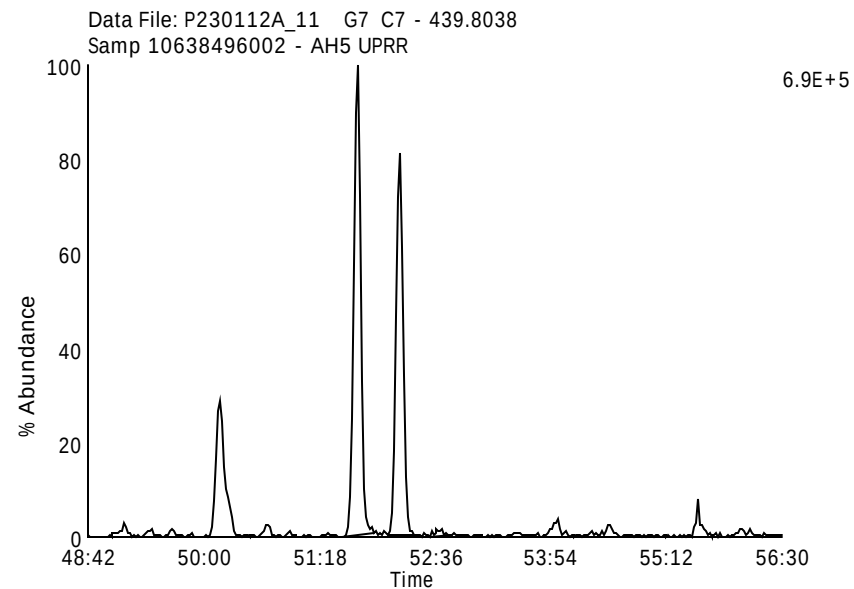
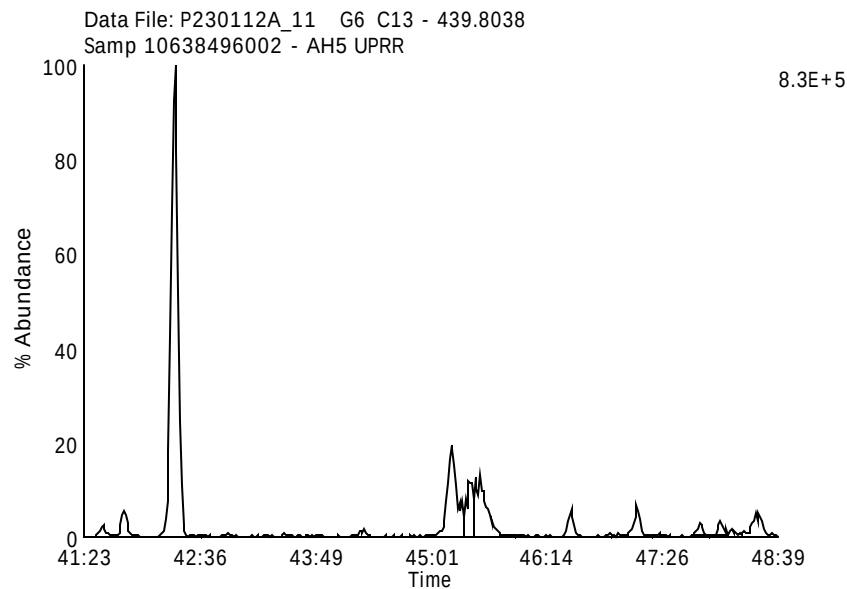
Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Labeled Nona Chlorinated Biphenyls

Data File Name: P230112A_11

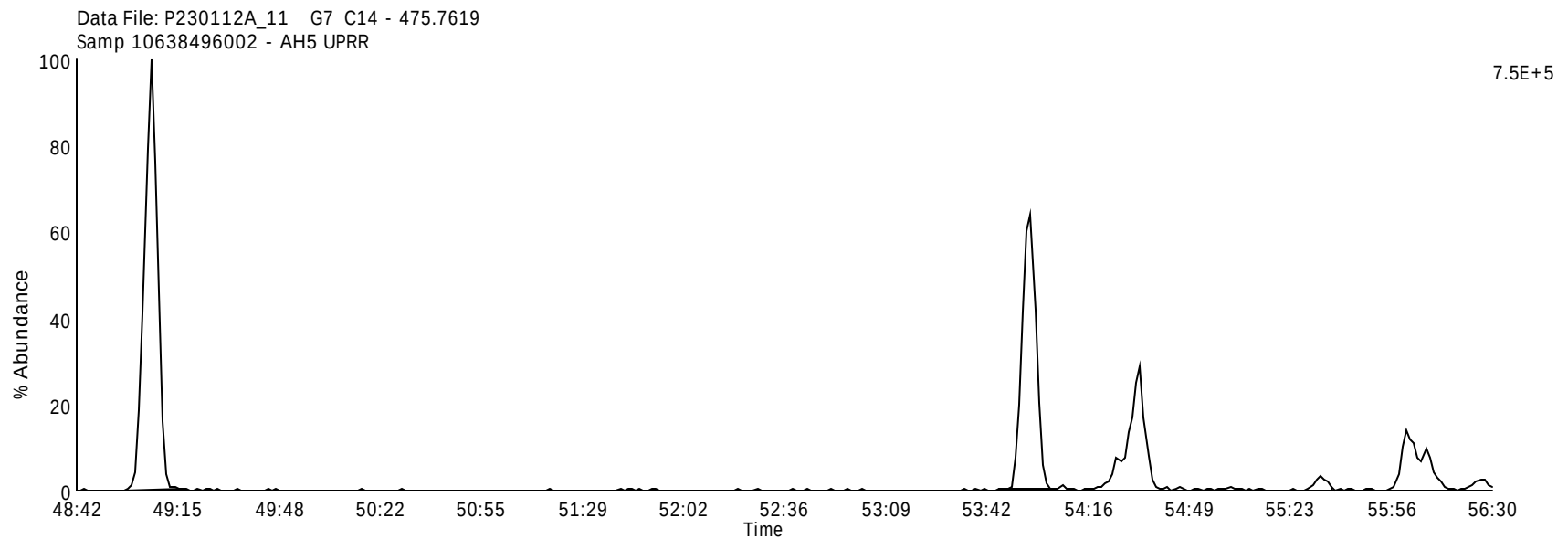
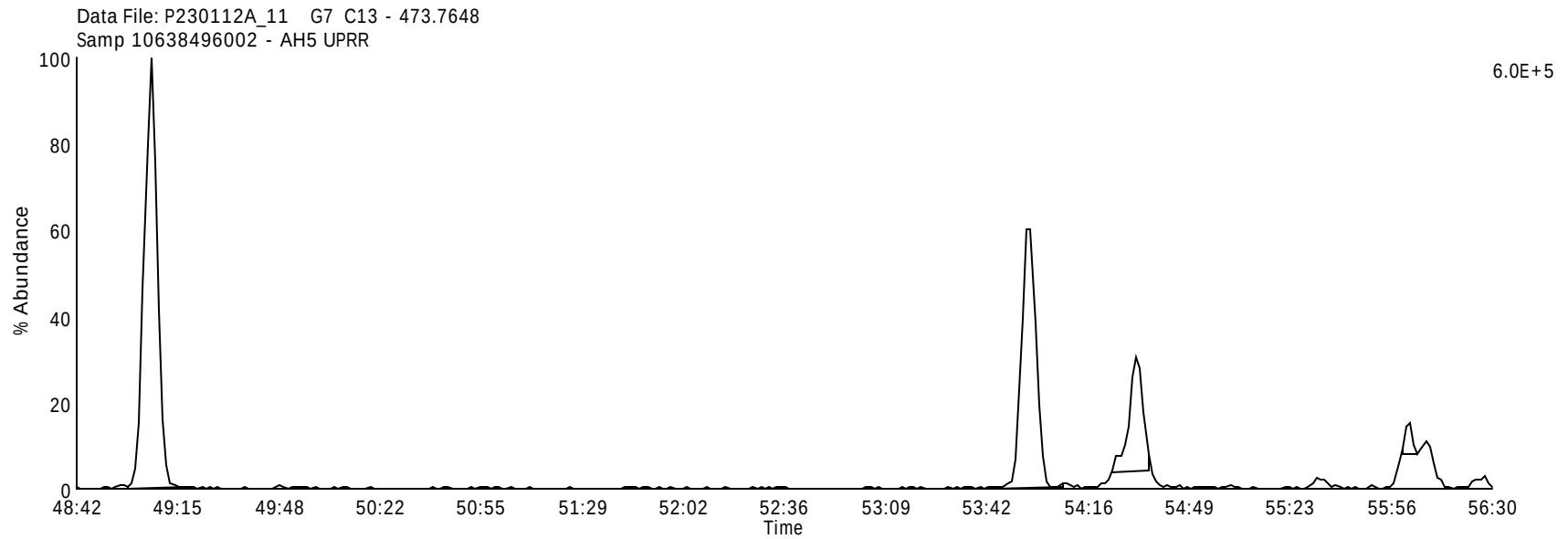
Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Labeled Deca Chlorinated Biphenyl

Data File Name: P230112A_11

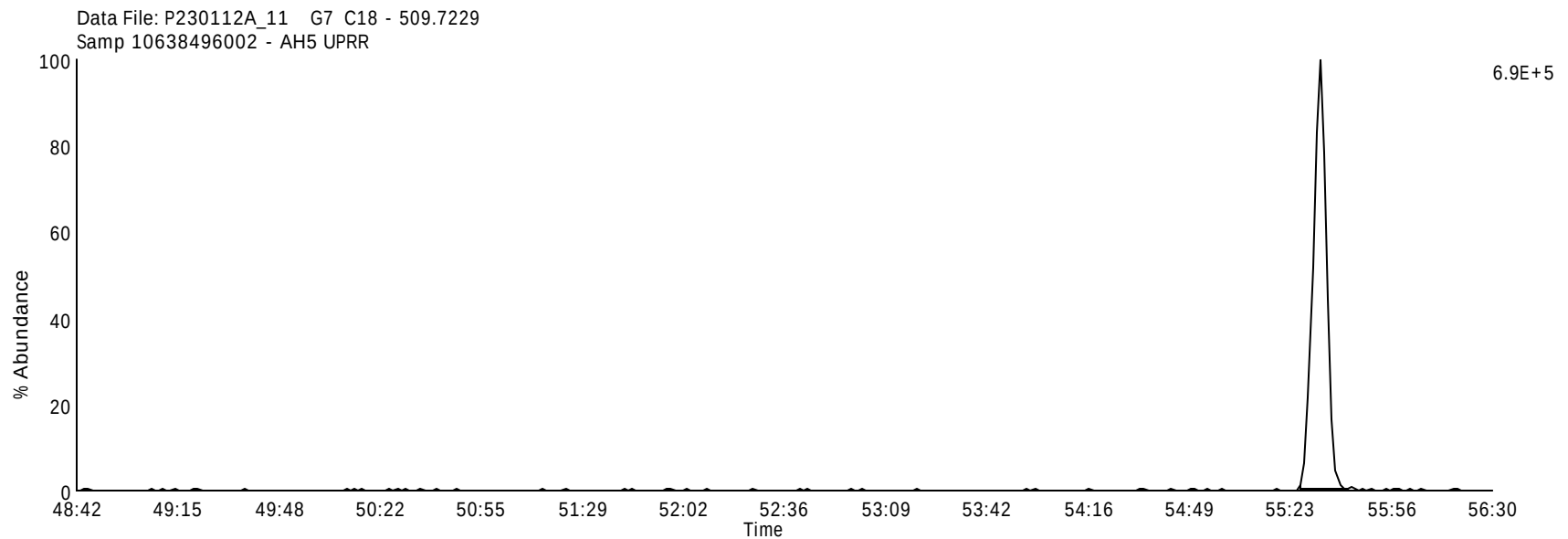
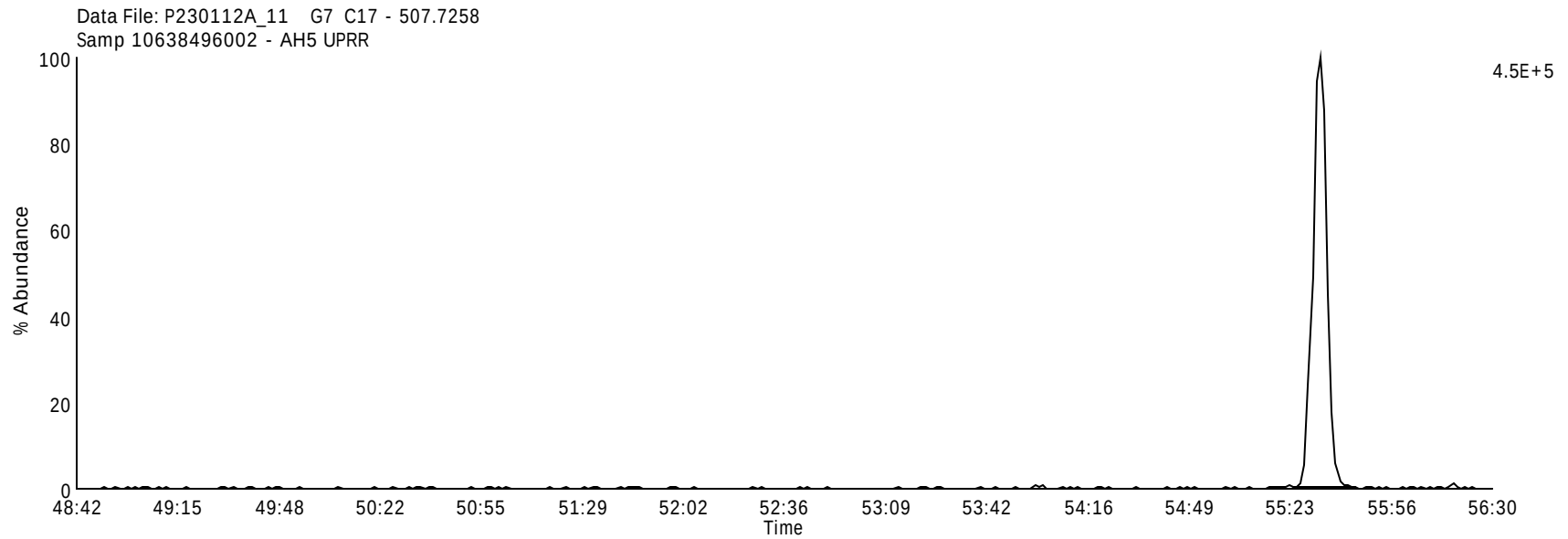
Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Mono Chlorinated Biphenyls

Data File Name: P230112A_11

Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

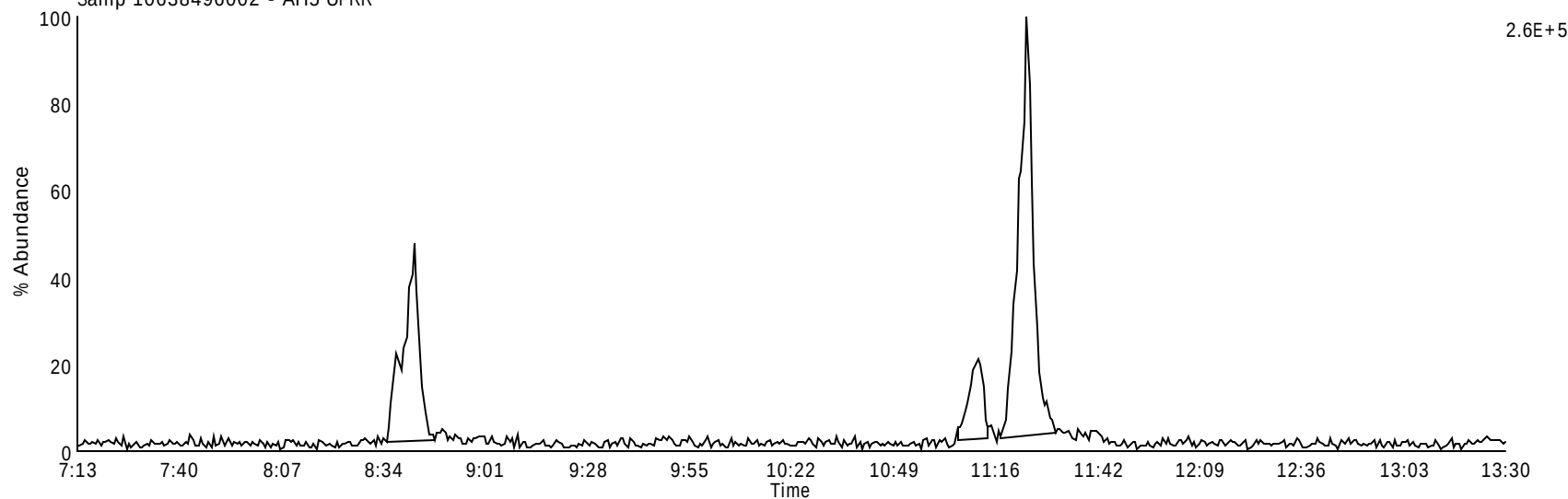
Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322

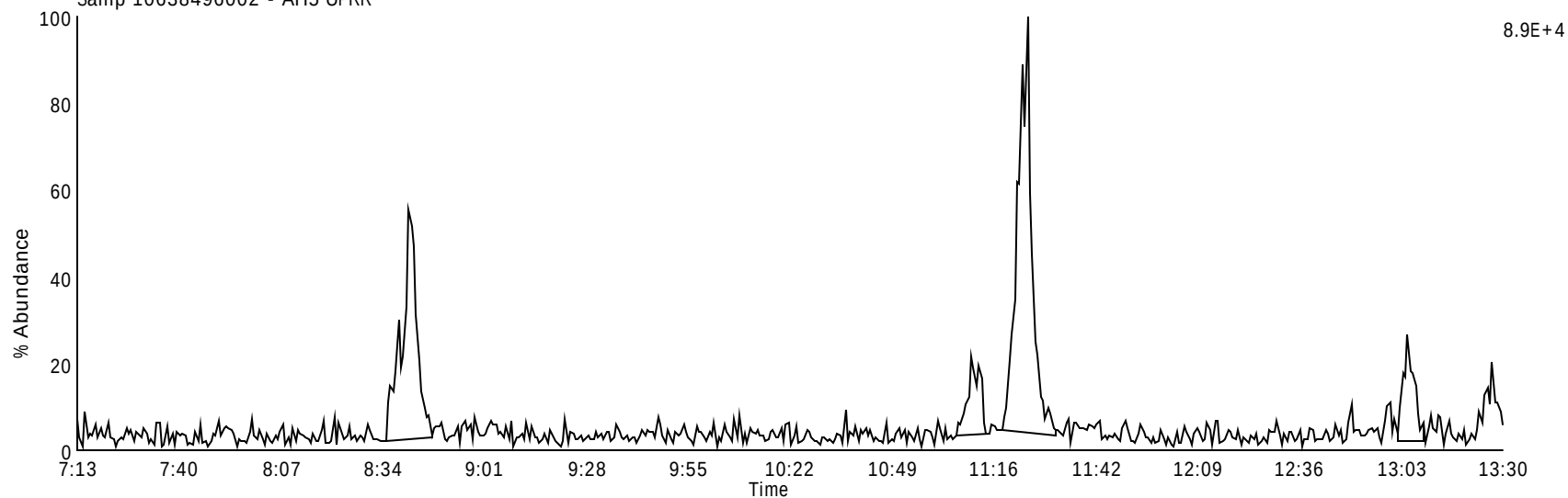
Data File: P230112A_11 G1 C1 - 188.0393

Samp 10638496002 - AH5 UPRR



Data File: P230112A_11 G1 C2 - 190.0363

Samp 10638496002 - AH5 UPRR



Di Chlorinated Biphenyls

Data File Name: P230112A_11

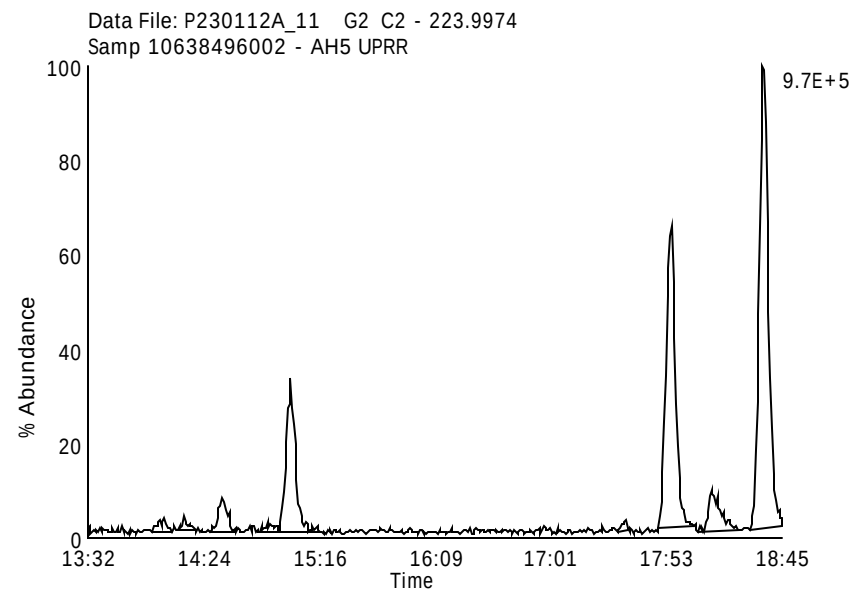
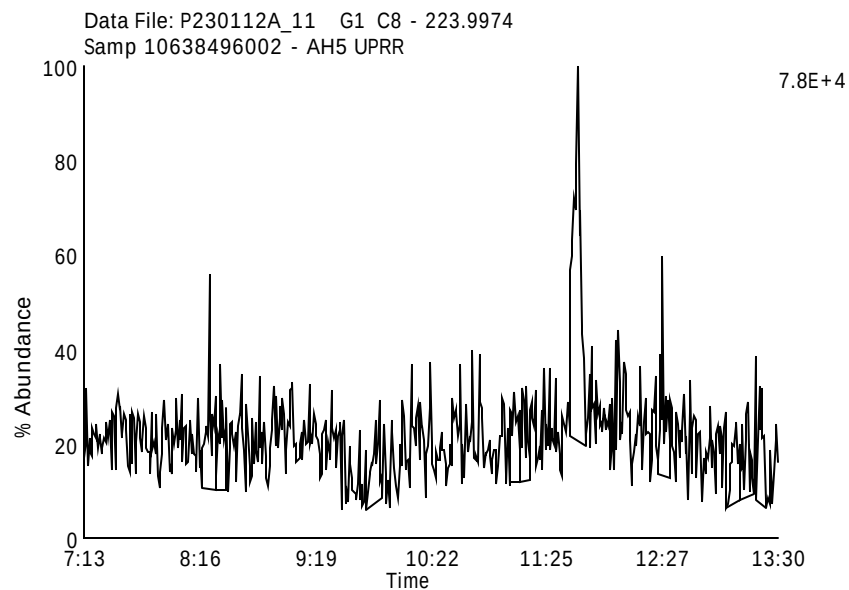
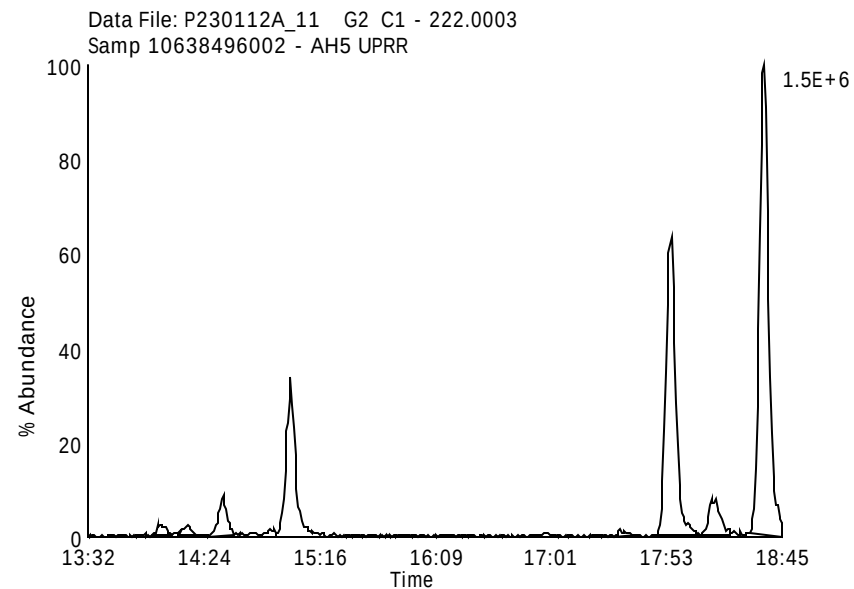
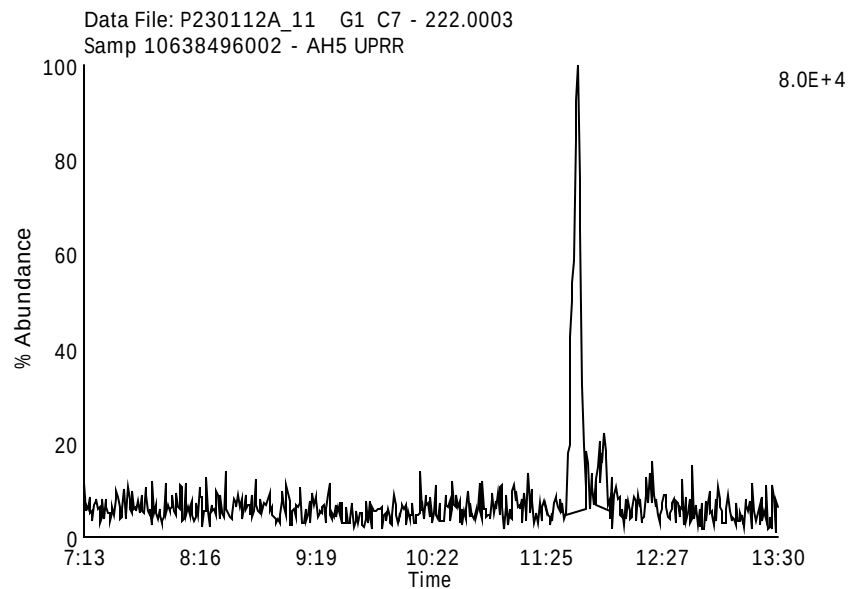
Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Tri Chlorinated Biphenyls

Data File Name: P230112A_11

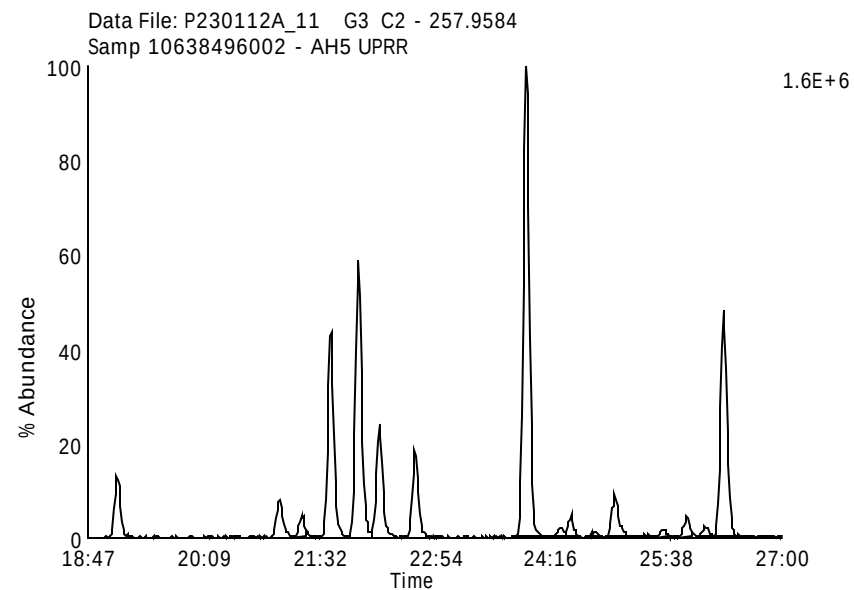
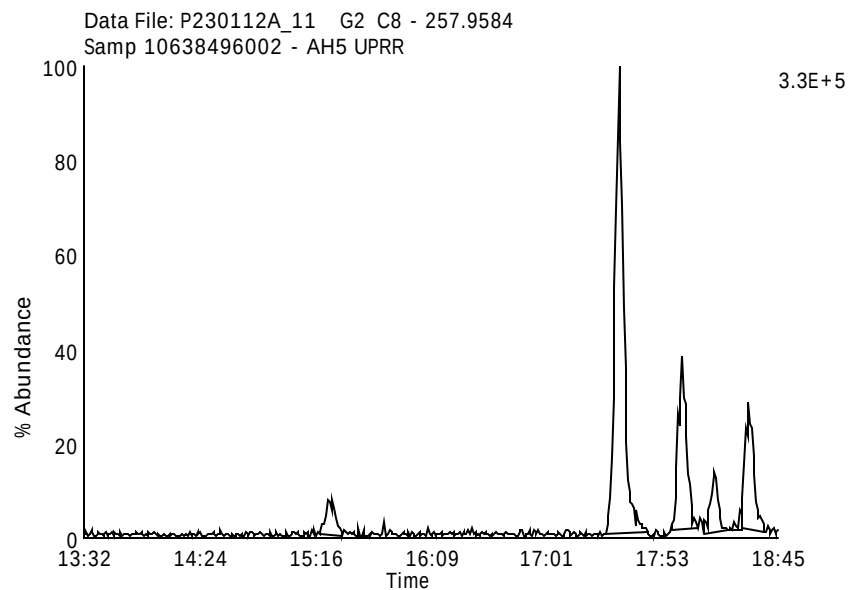
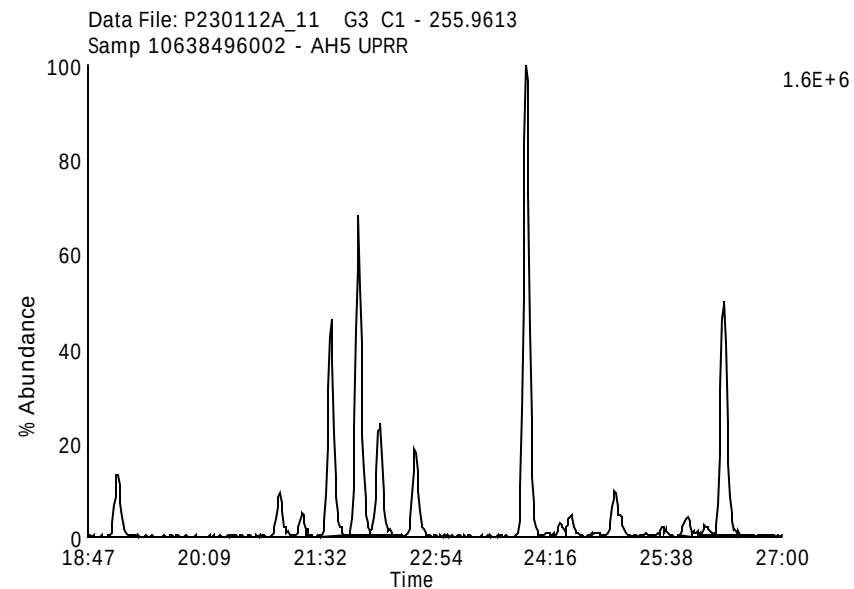
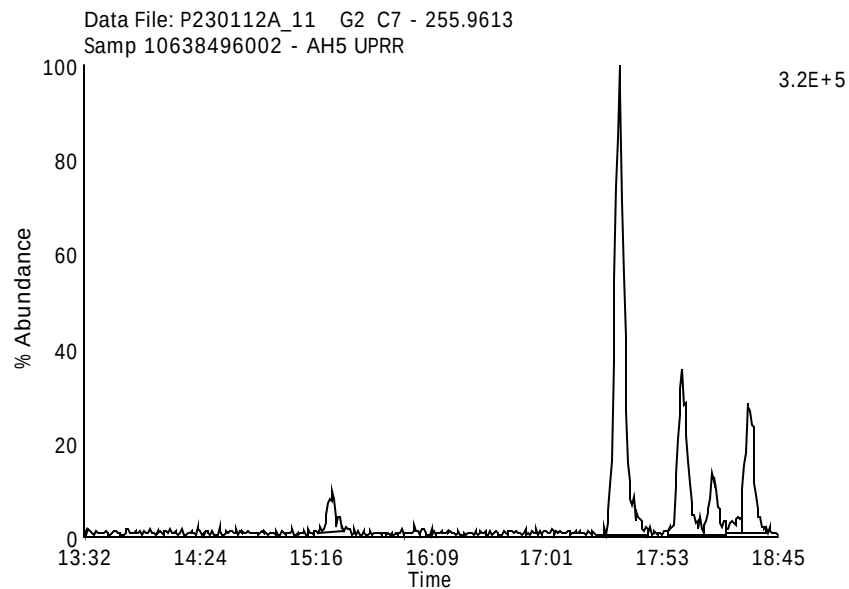
Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Tetra Chlorinated Biphenyls

Data File Name: P230112A_11

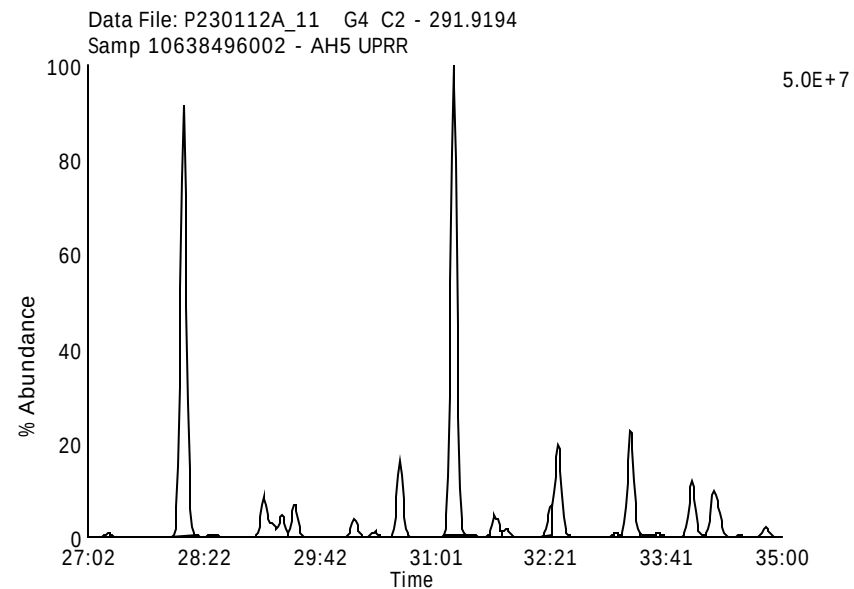
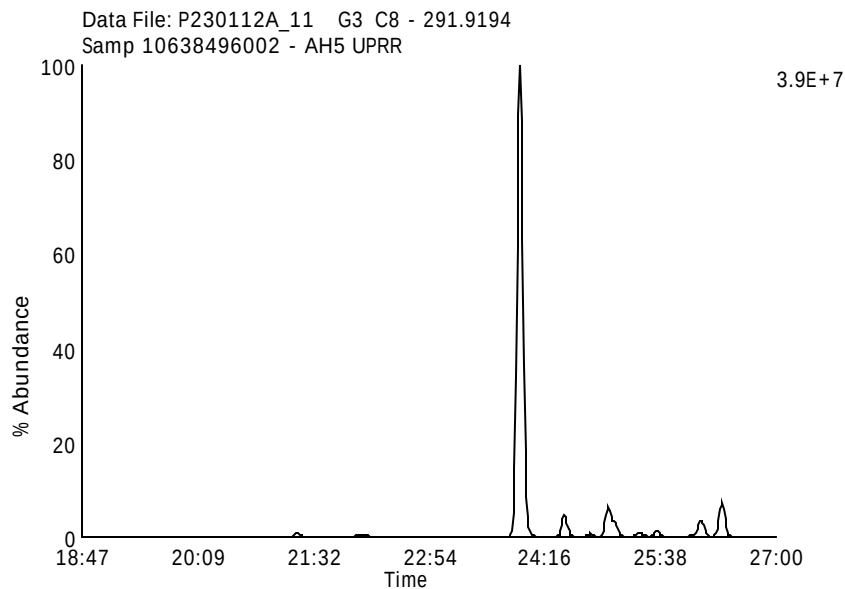
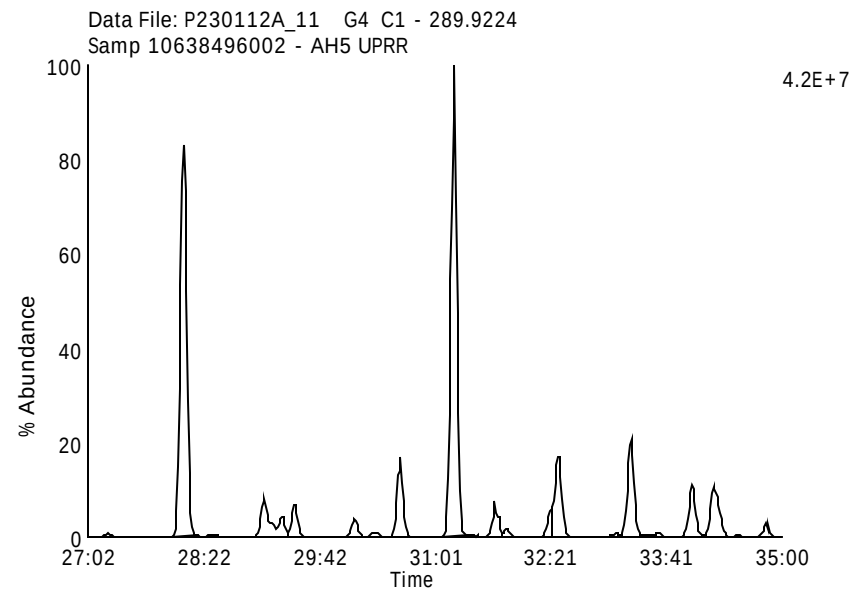
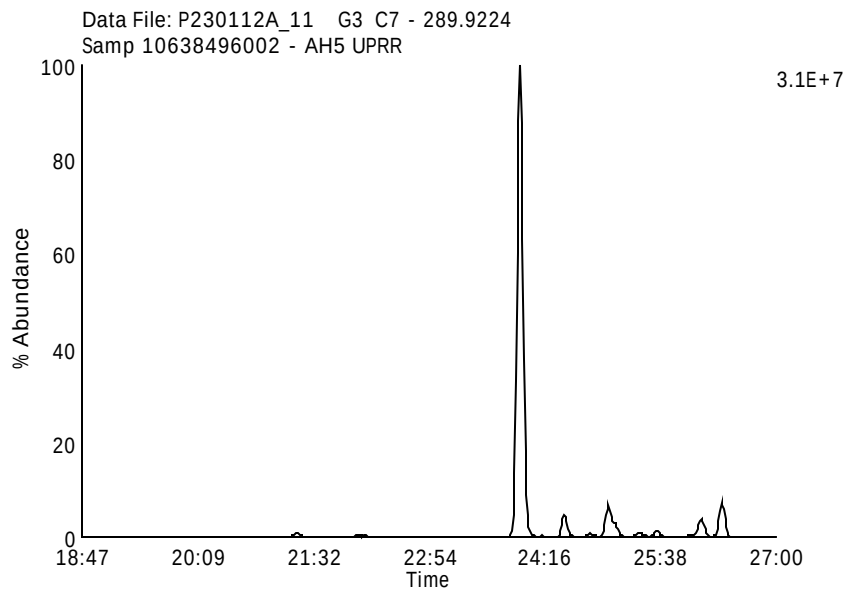
Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Penta Chlorinated Biphenyls

Data File Name: P230112A_11

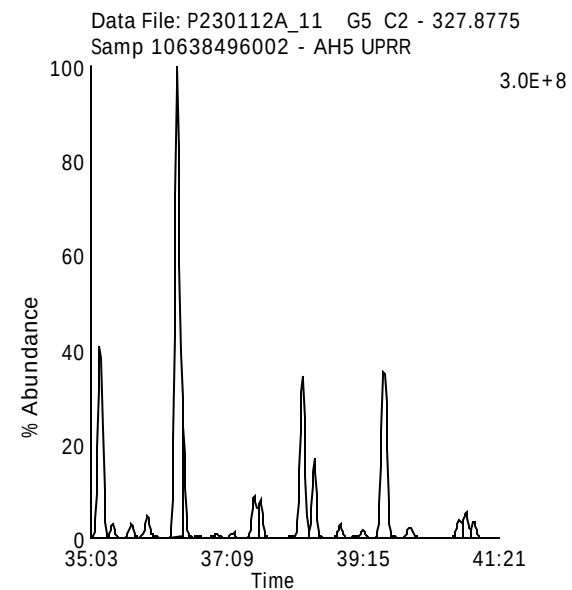
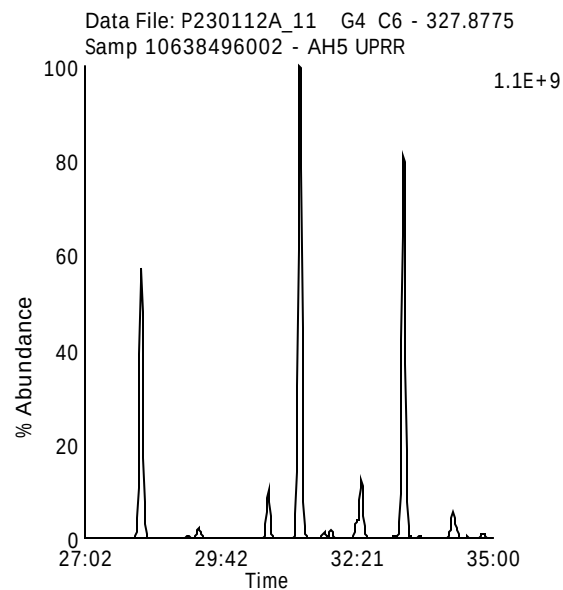
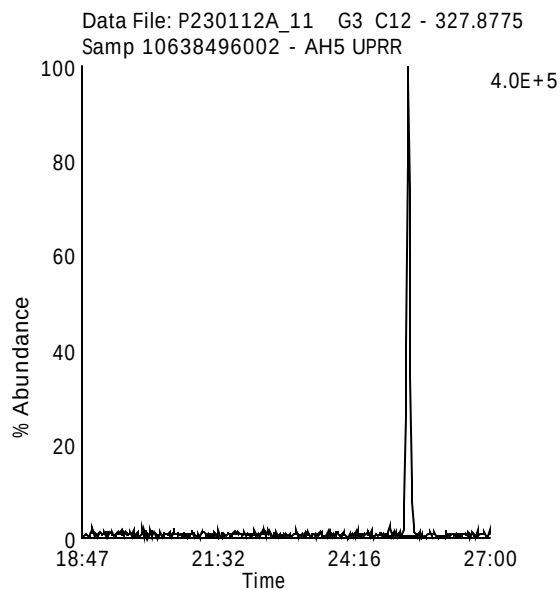
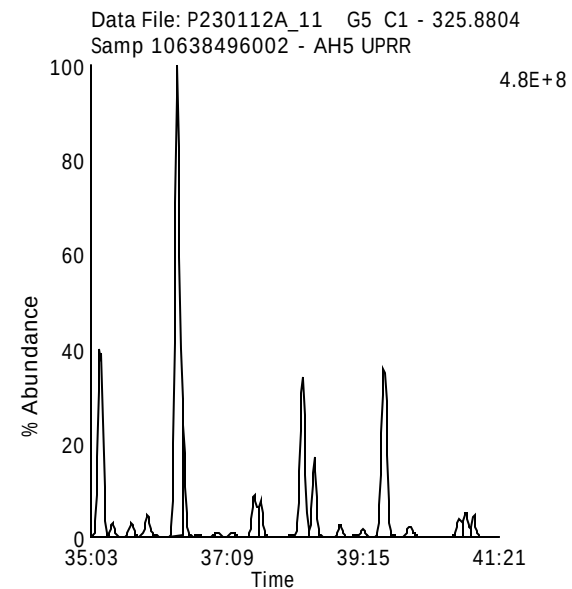
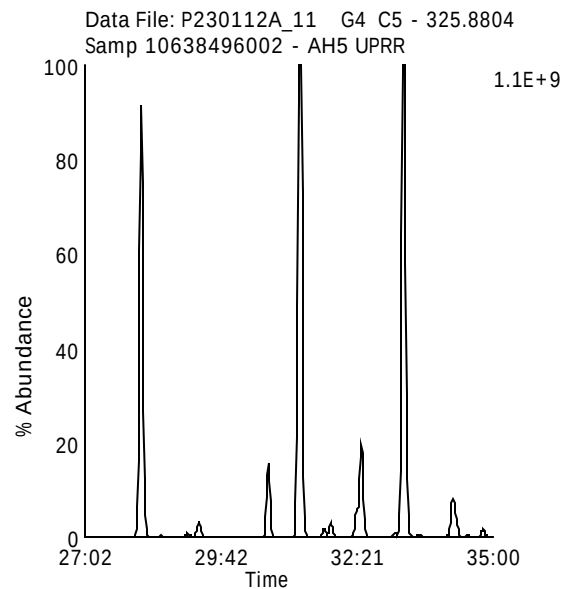
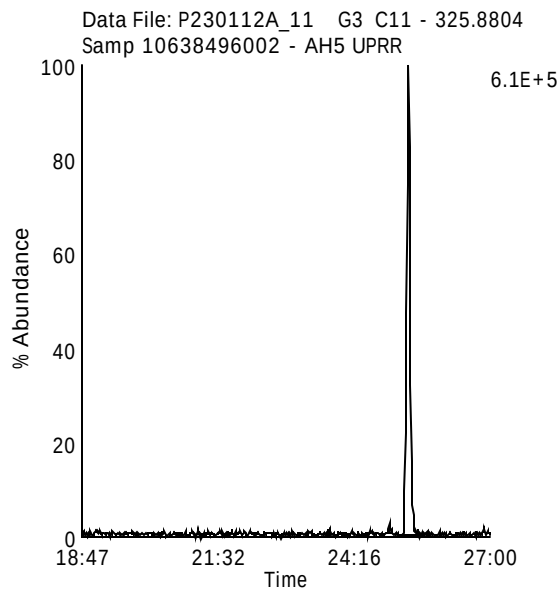
Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Hexa Chlorinated Biphenyls

Data File Name: P230112A_11

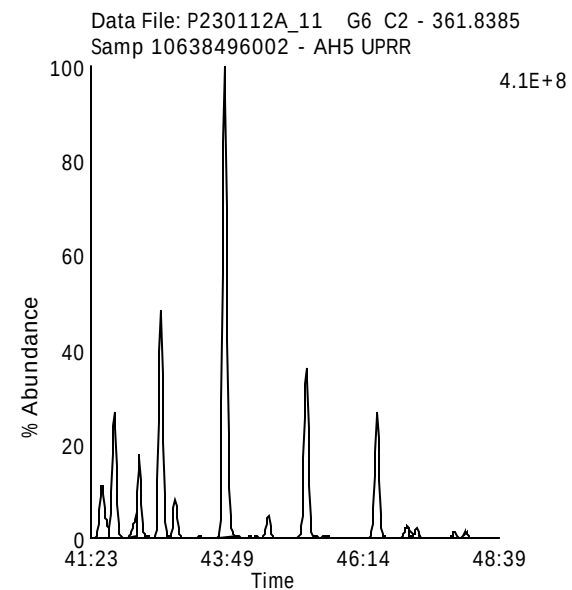
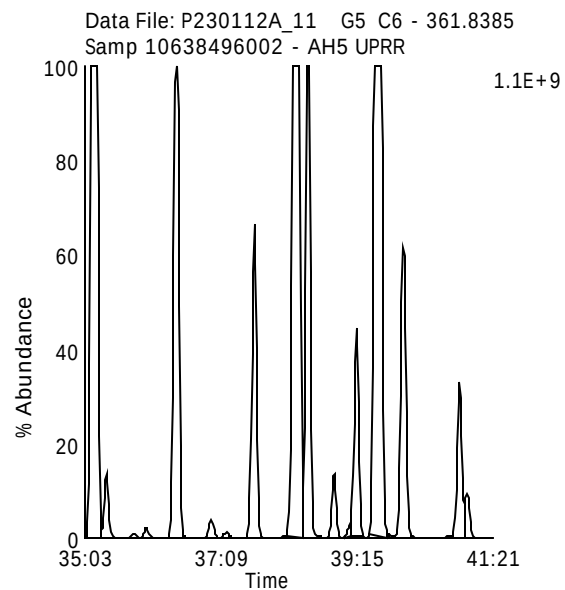
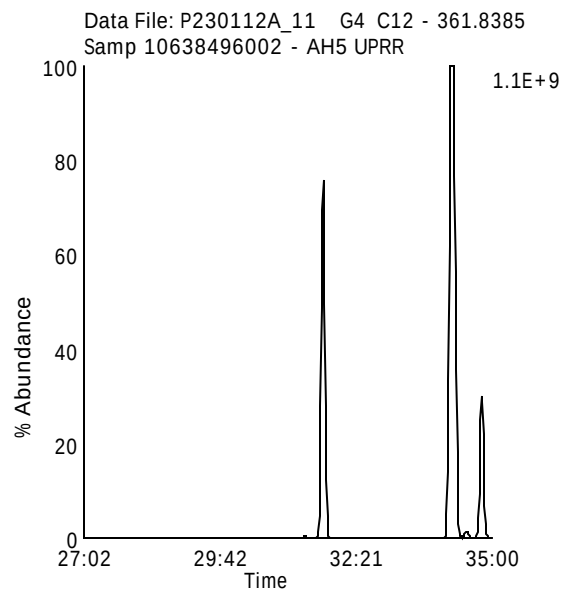
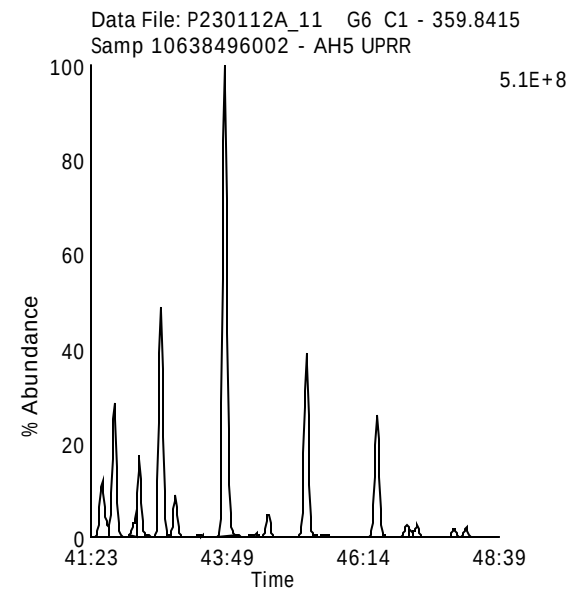
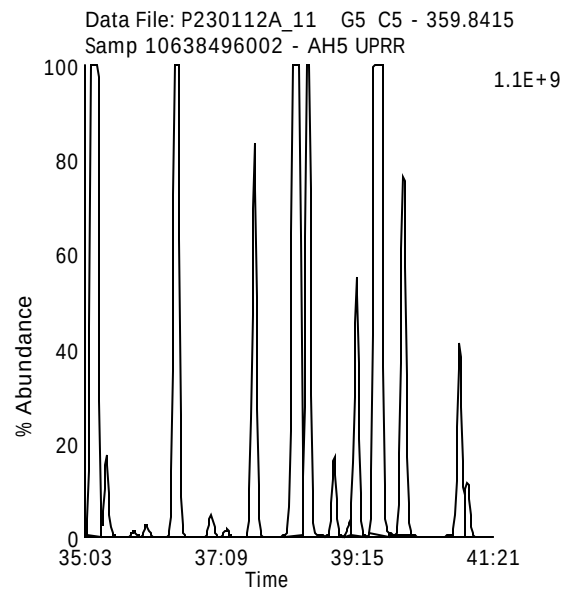
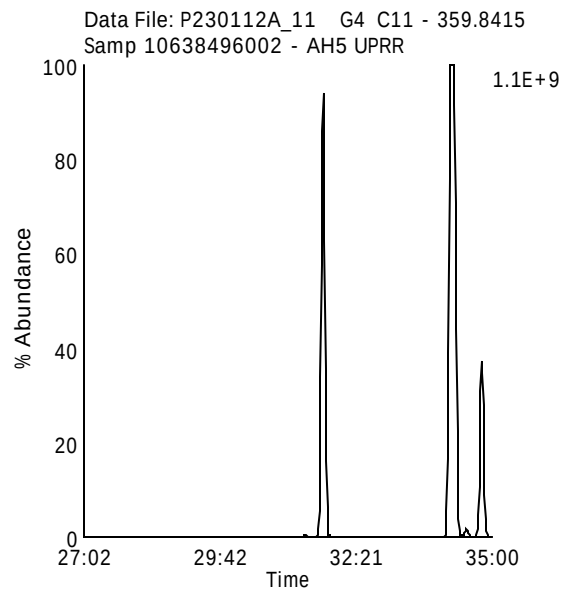
Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Hepta Chlorinated Biphenyls

Data File Name: P230112A_11

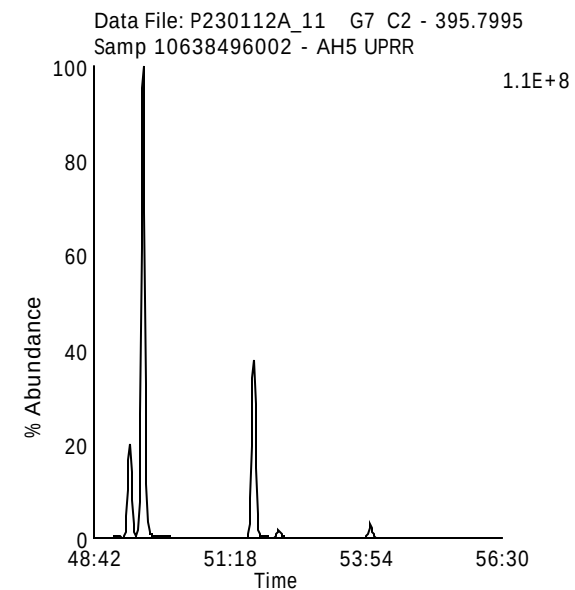
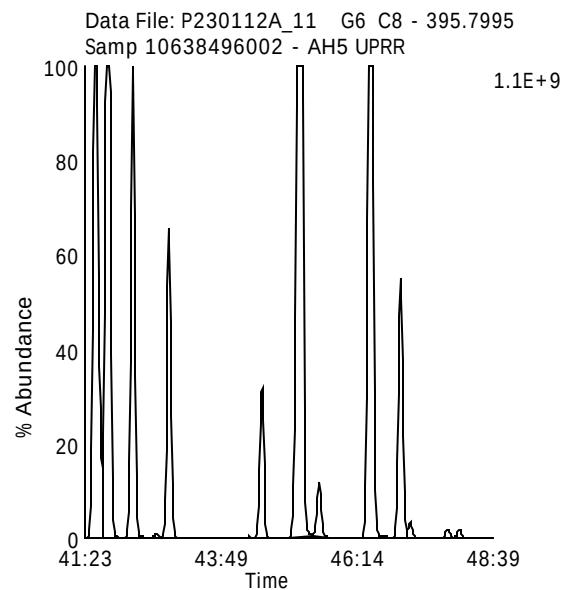
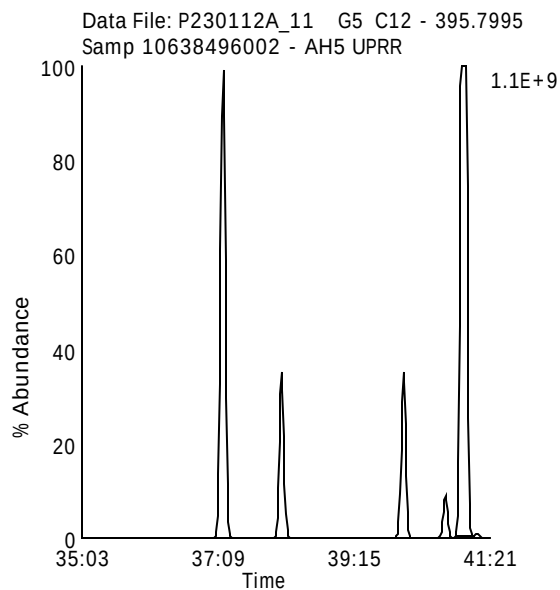
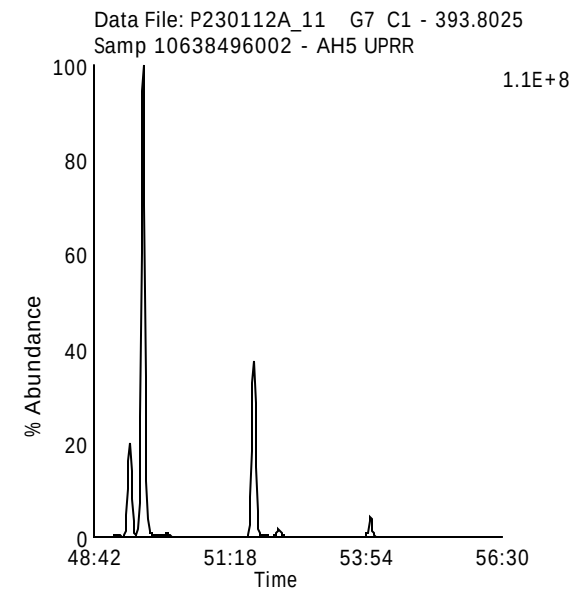
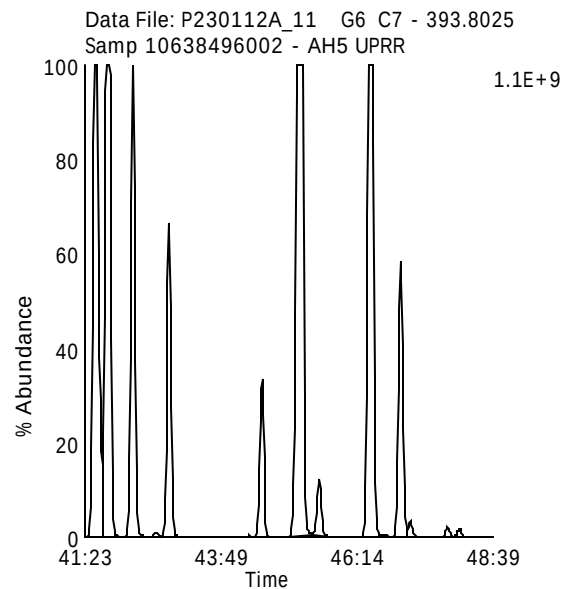
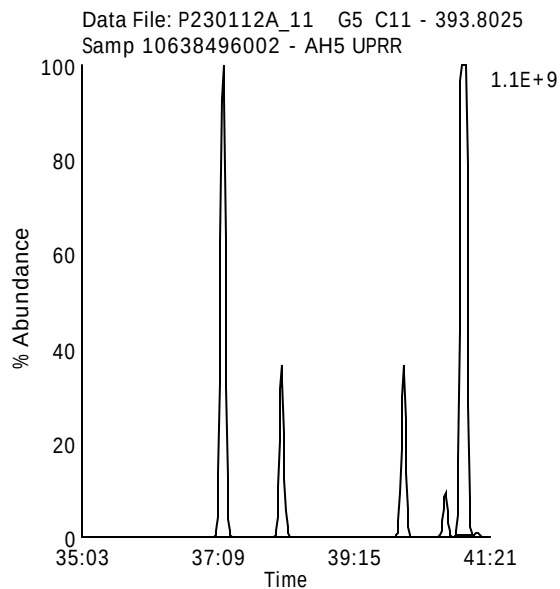
Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Octa Chlorinated Biphenyls

Data File Name: P230112A_11

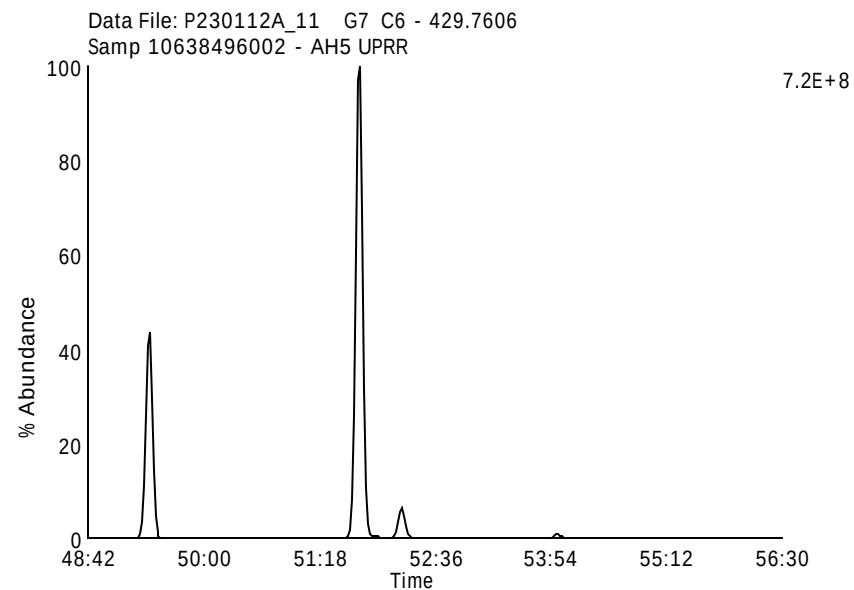
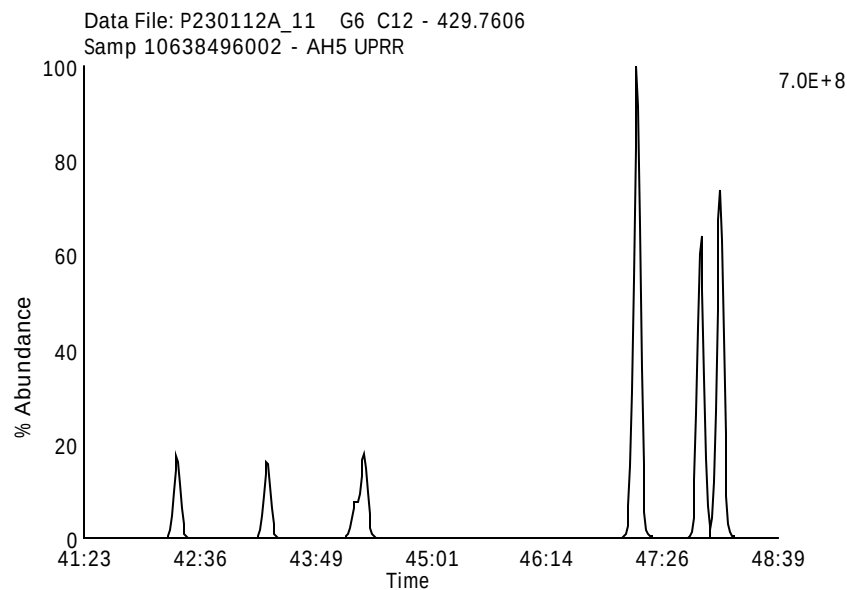
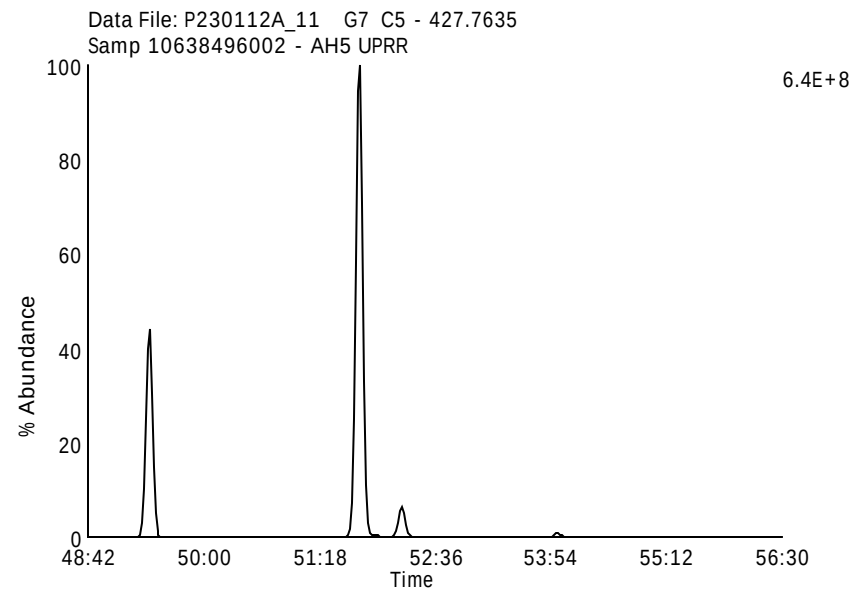
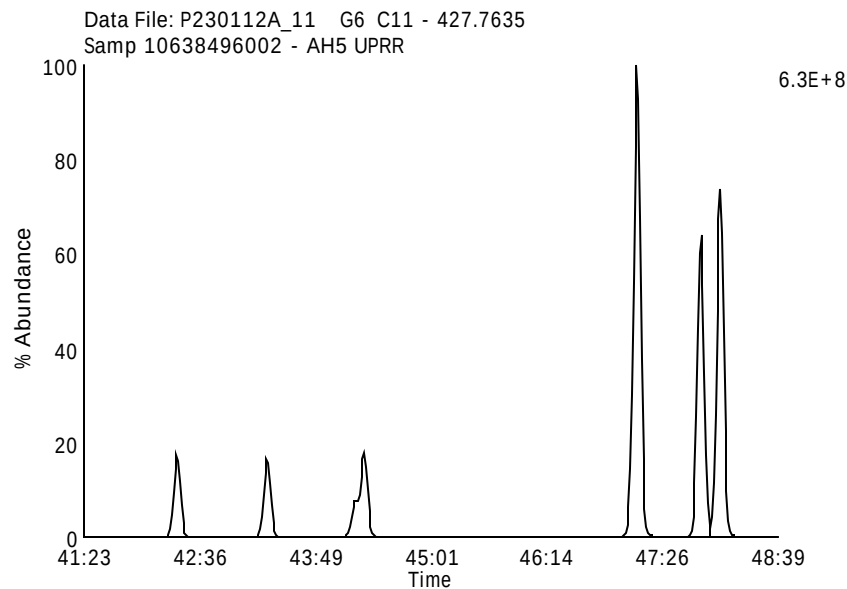
Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Nona Chlorinated Biphenyls

Data File Name: P230112A_11

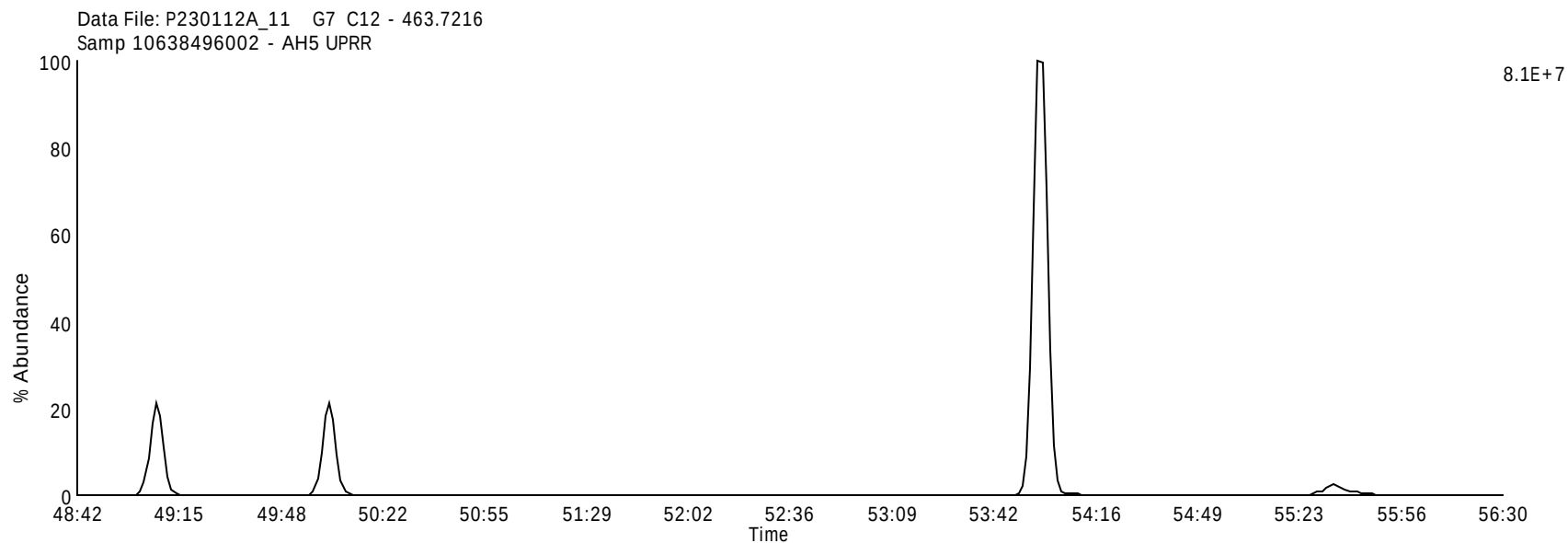
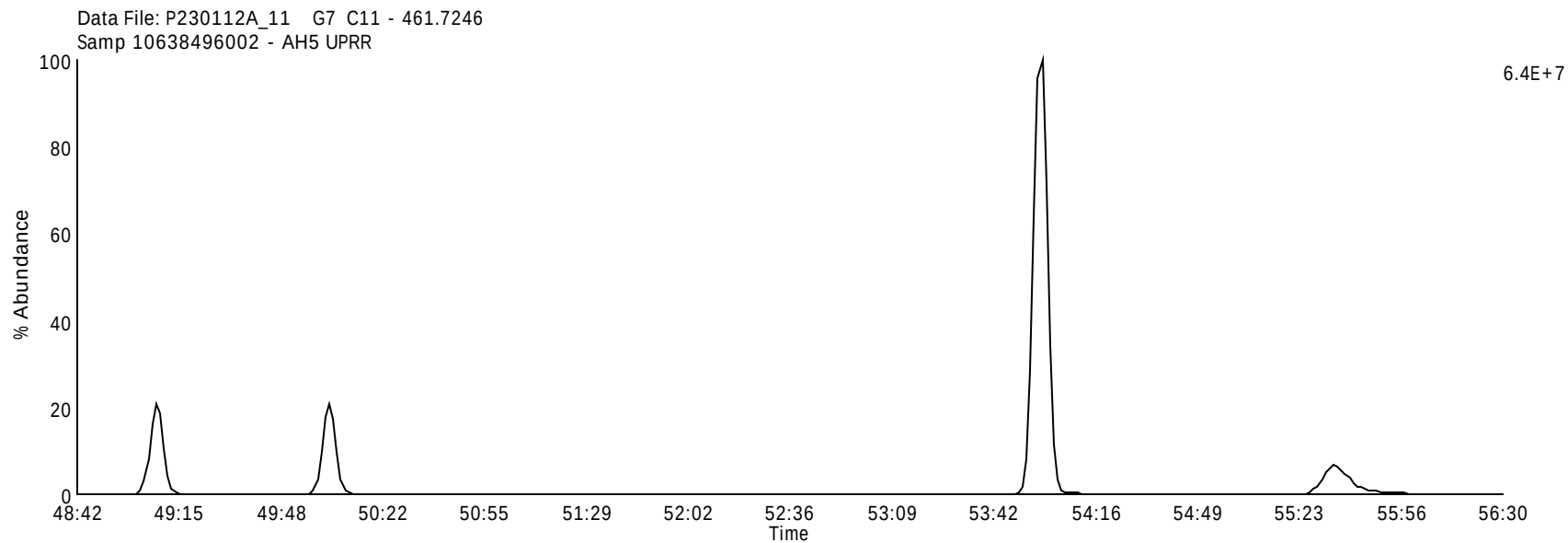
Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Deca Chlorinated Biphenyl

Data File Name: P230112A_11

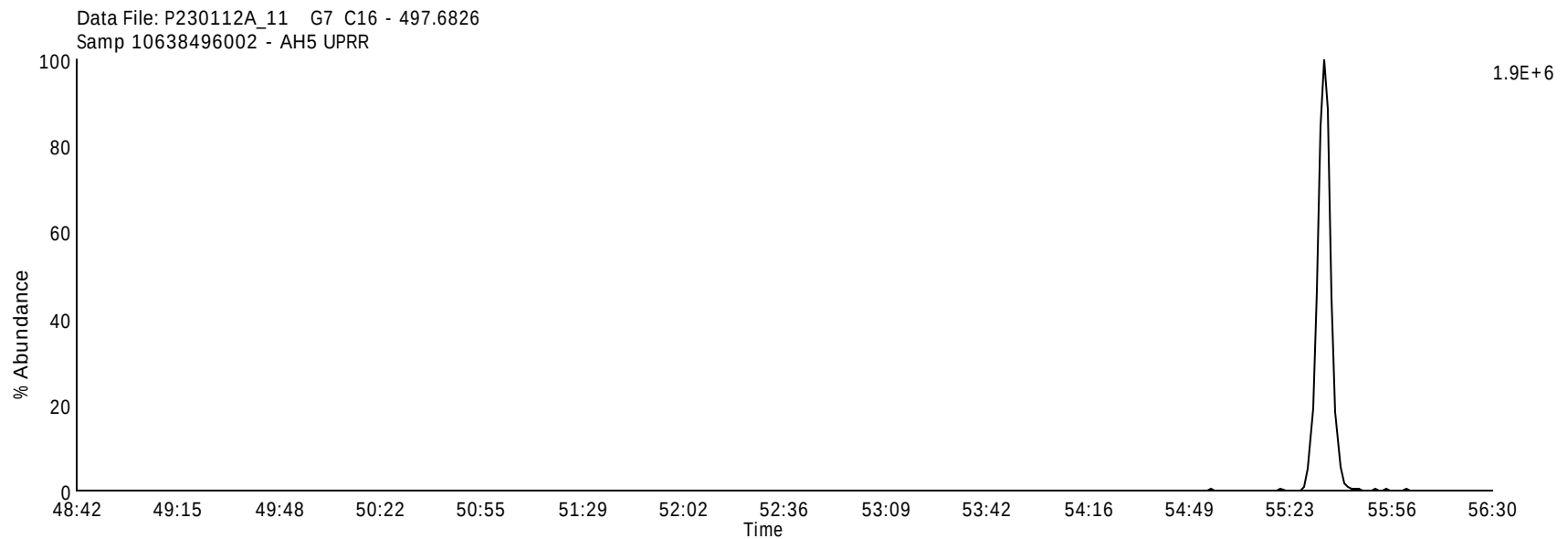
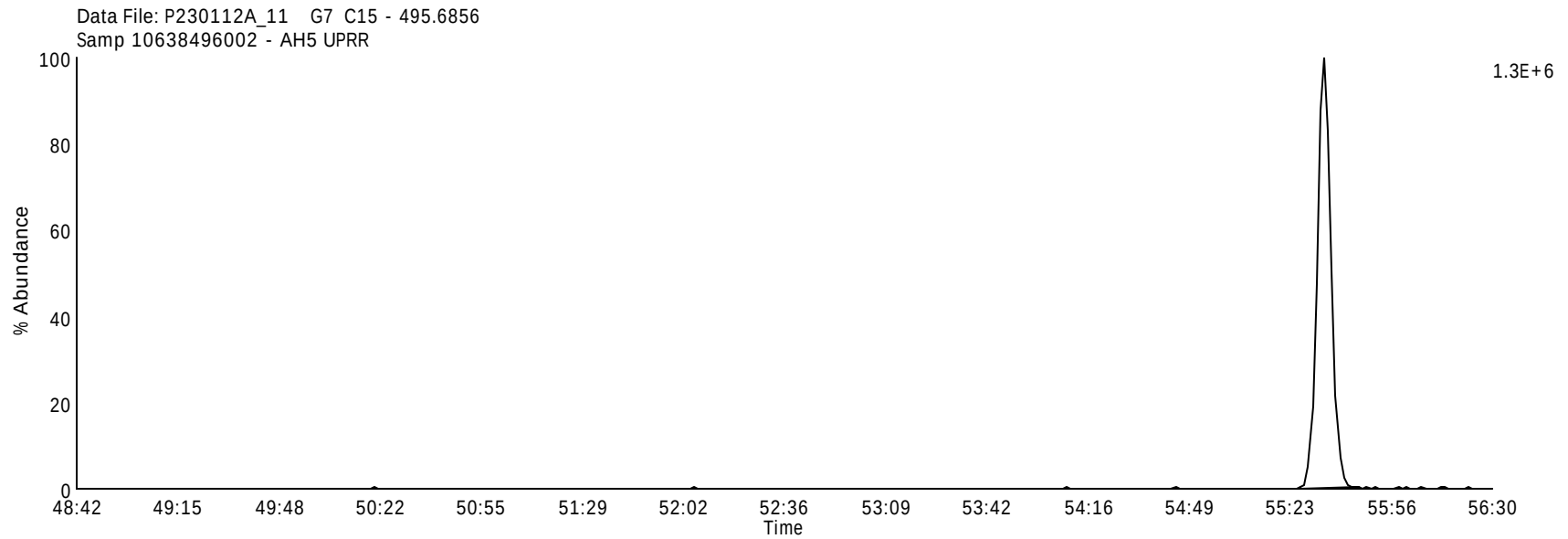
Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Group 1 - 4 Lock mass

Data File Name: P230112A_11

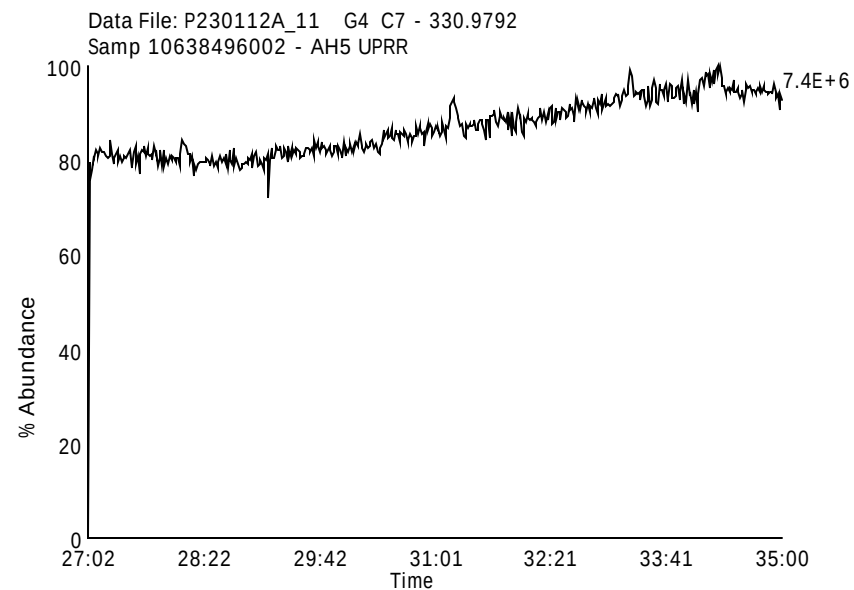
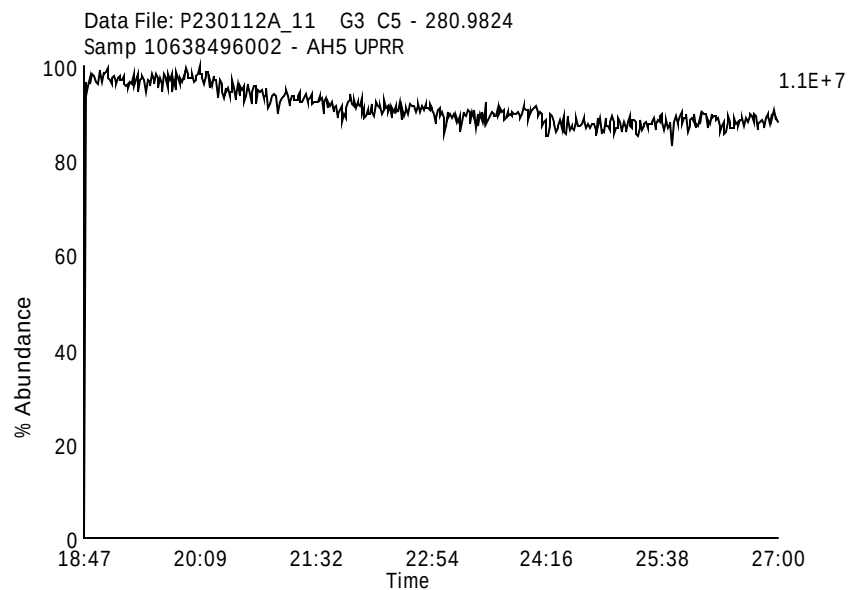
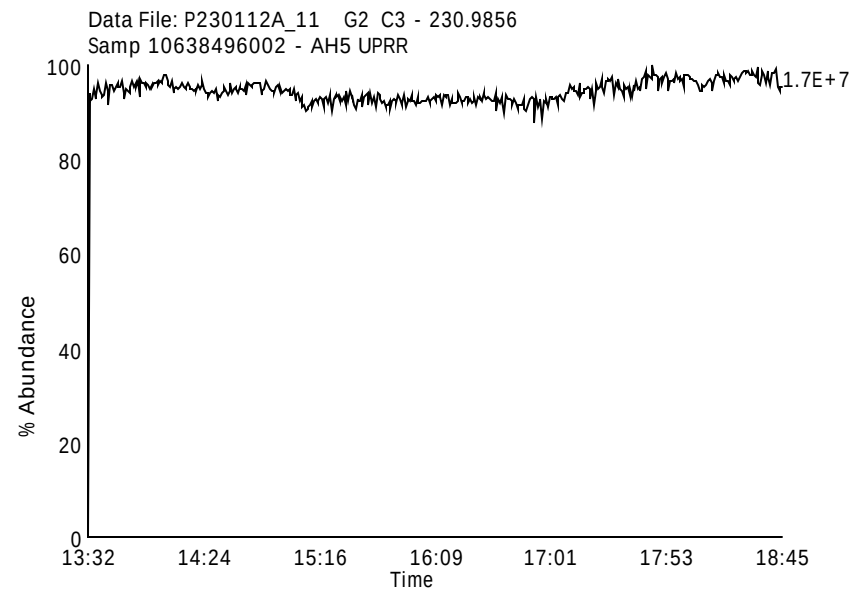
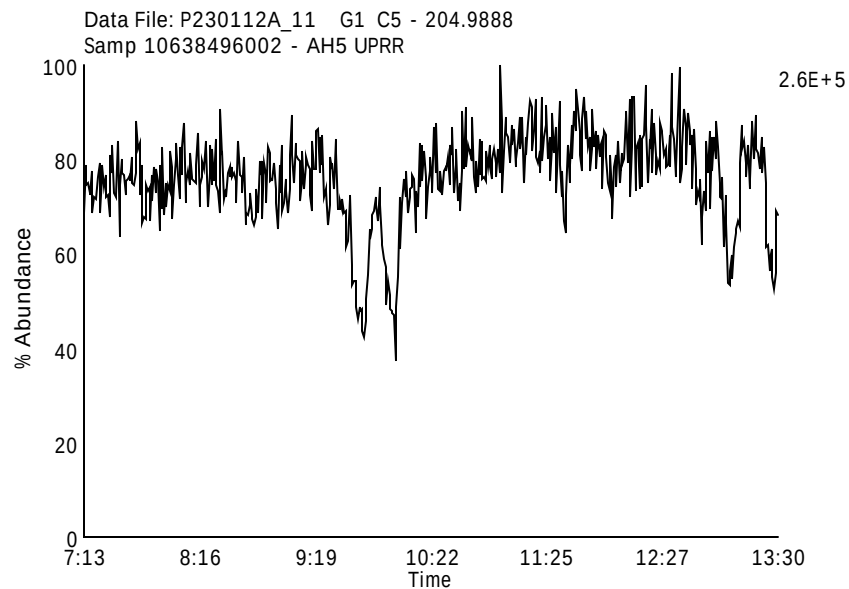
Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Group 5 - 7 Lock mass

Data File Name: P230112A_11

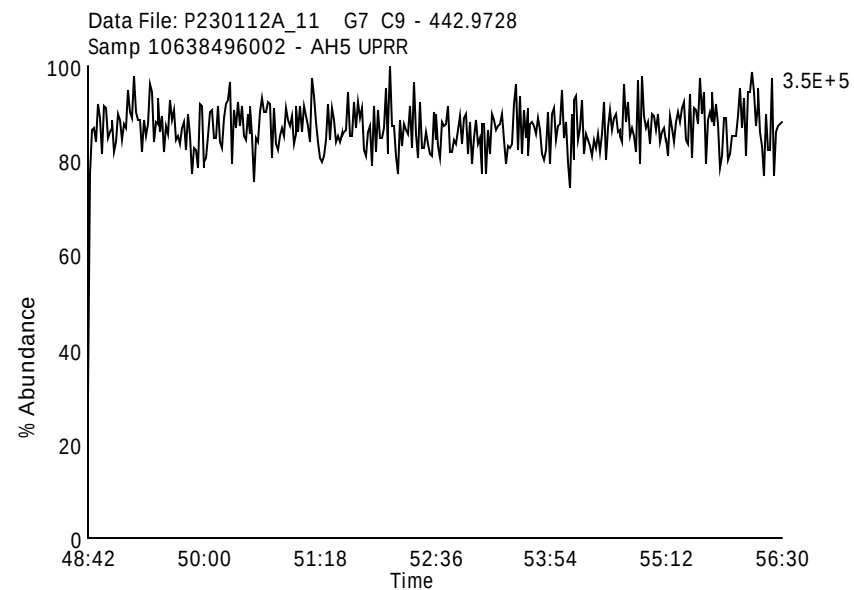
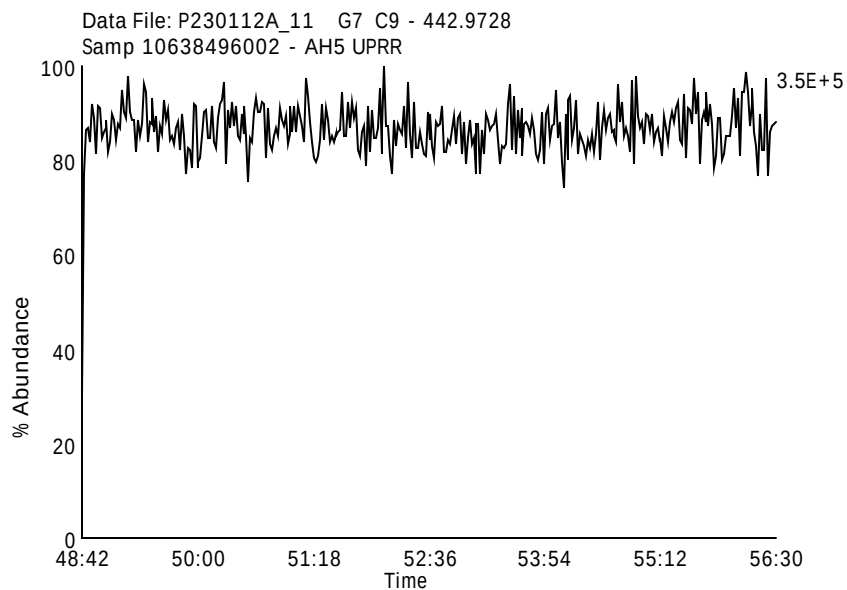
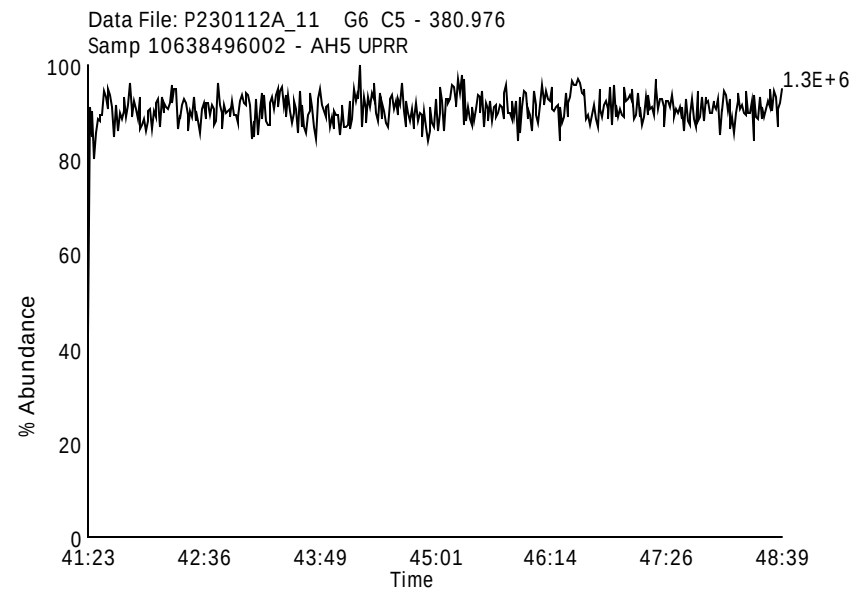
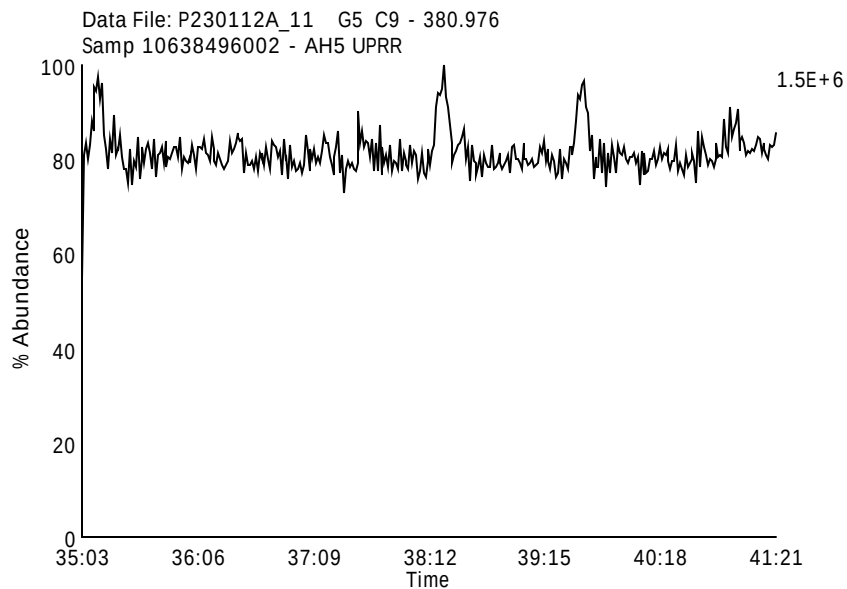
Date Acquired: 1/12/2023

Sample Description: Samp 10638496002 - AH5 UPRR

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Labeled Mono Chlorinated Biphenyls

Data File Name: P230113A_09

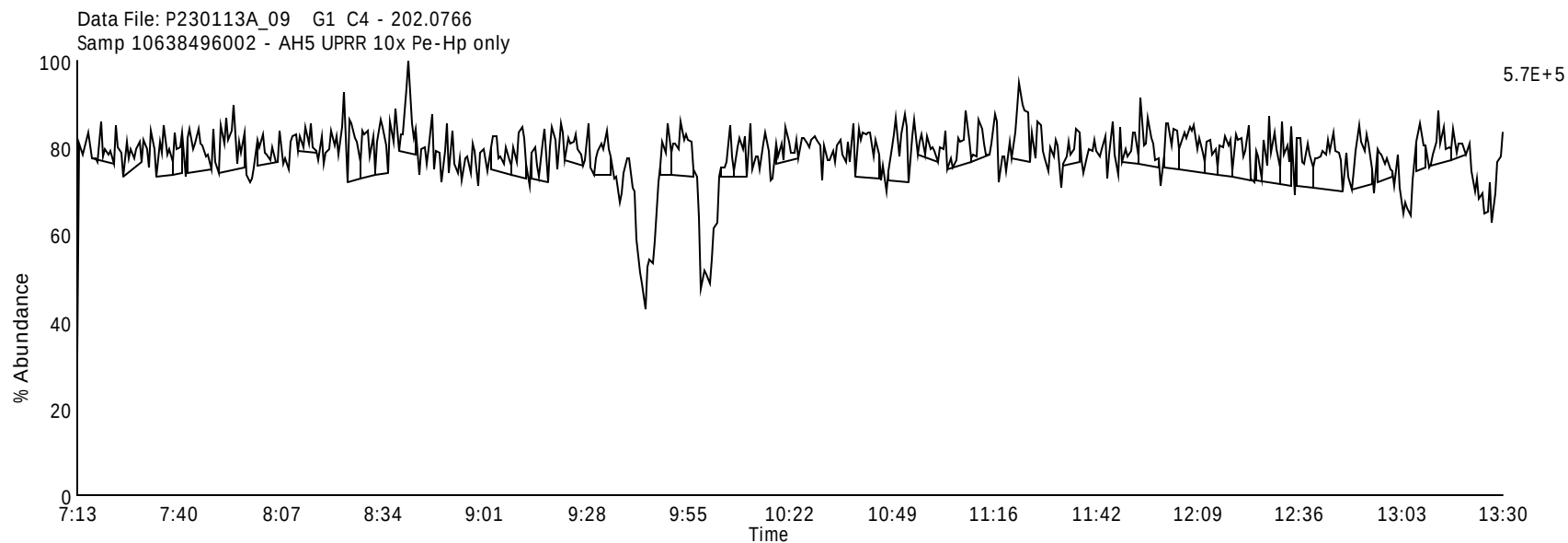
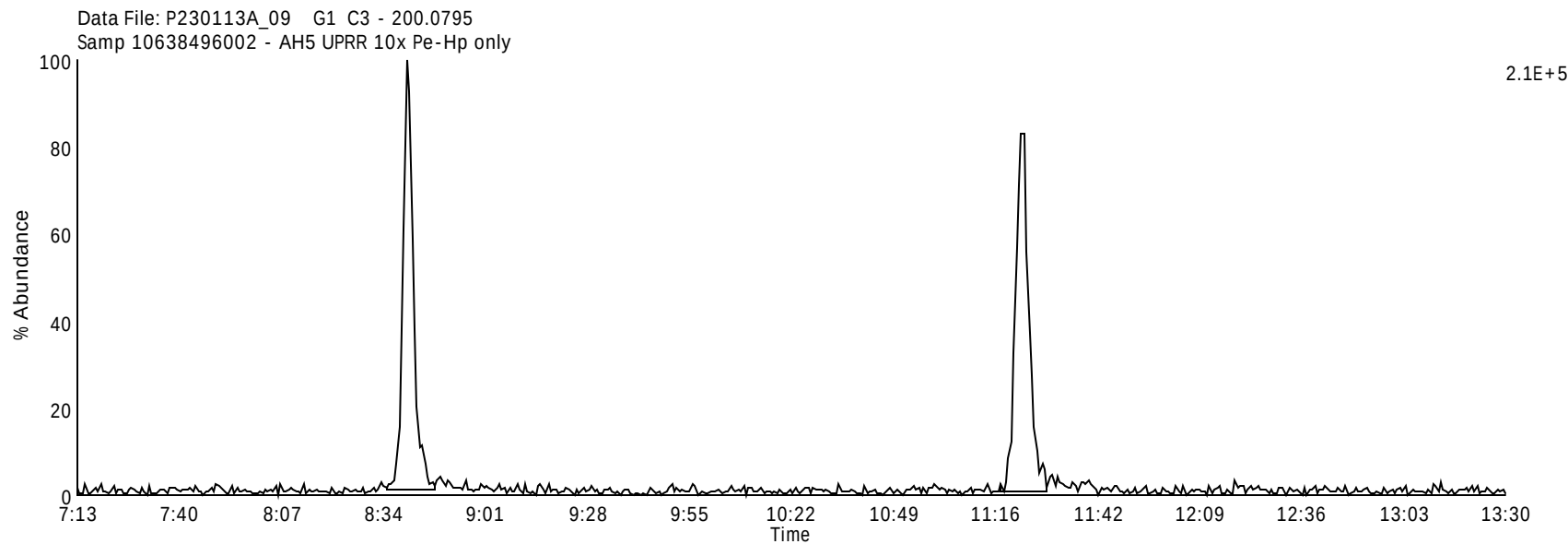
Date Acquired: 1/13/2023

Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Labeled Di Chlorinated Biphenyls

Data File Name: P230113A_09

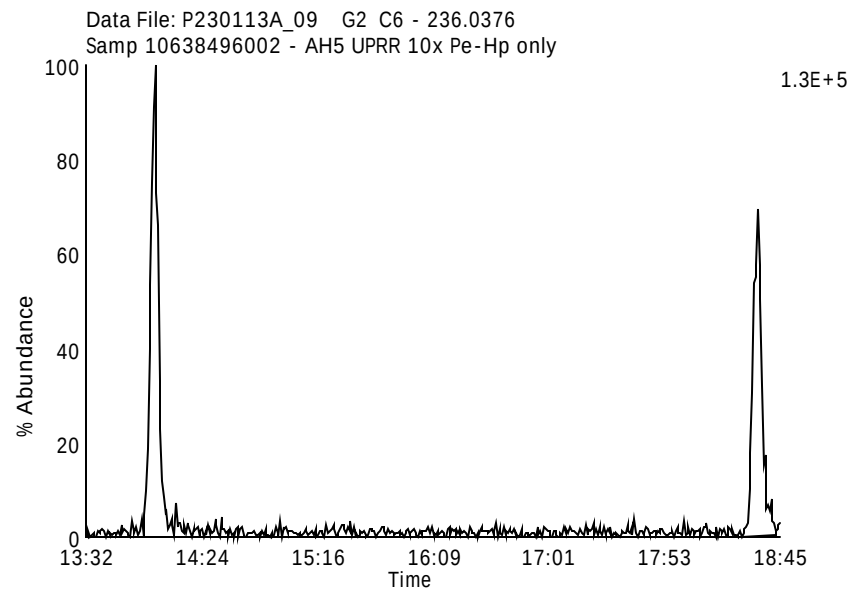
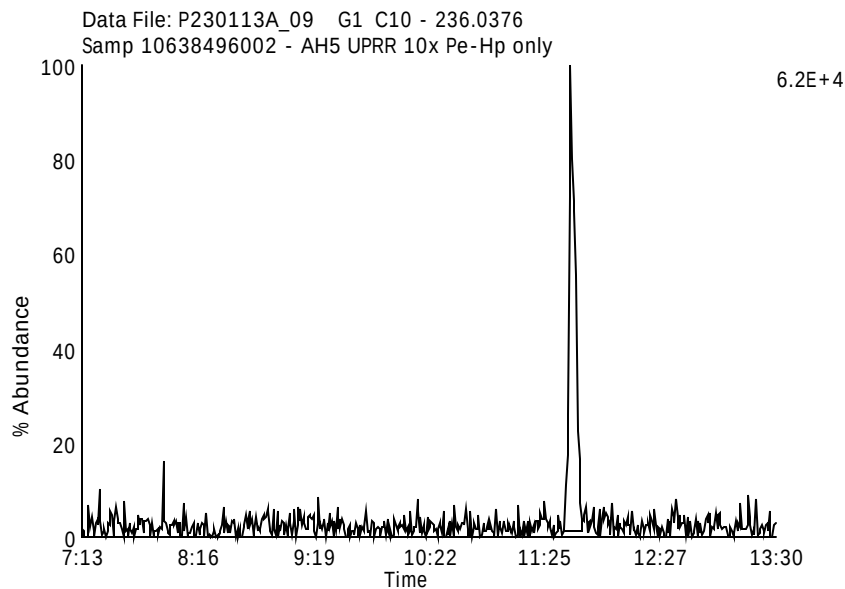
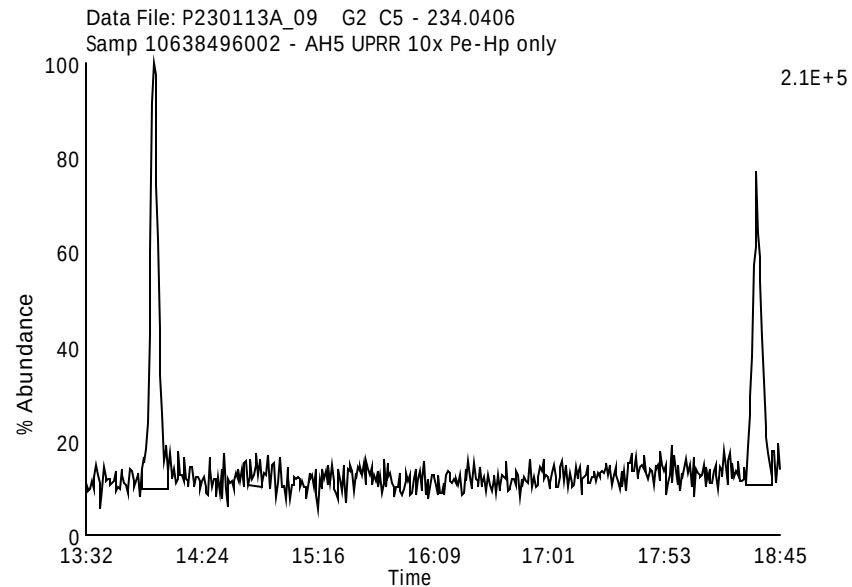
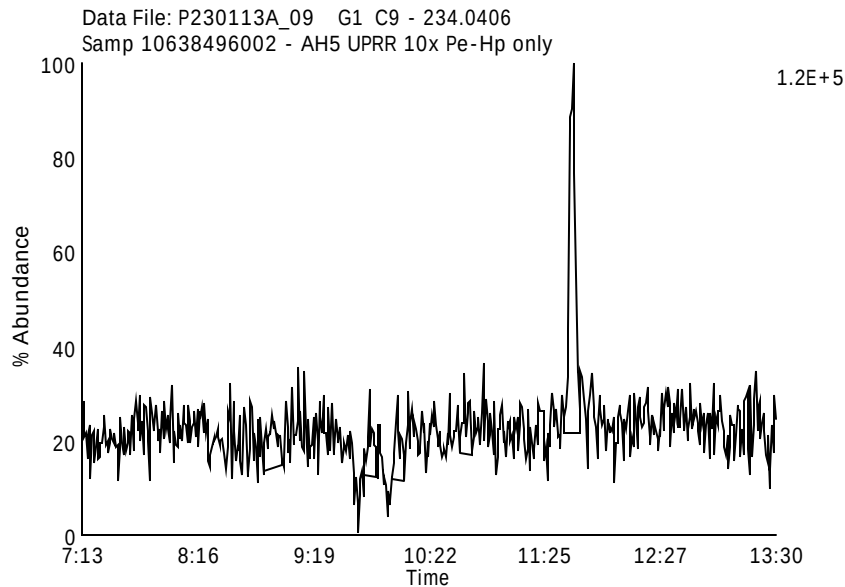
Date Acquired: 1/13/2023

Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Labeled Tri Chlorinated Biphenyls

Data File Name: P230113A_09

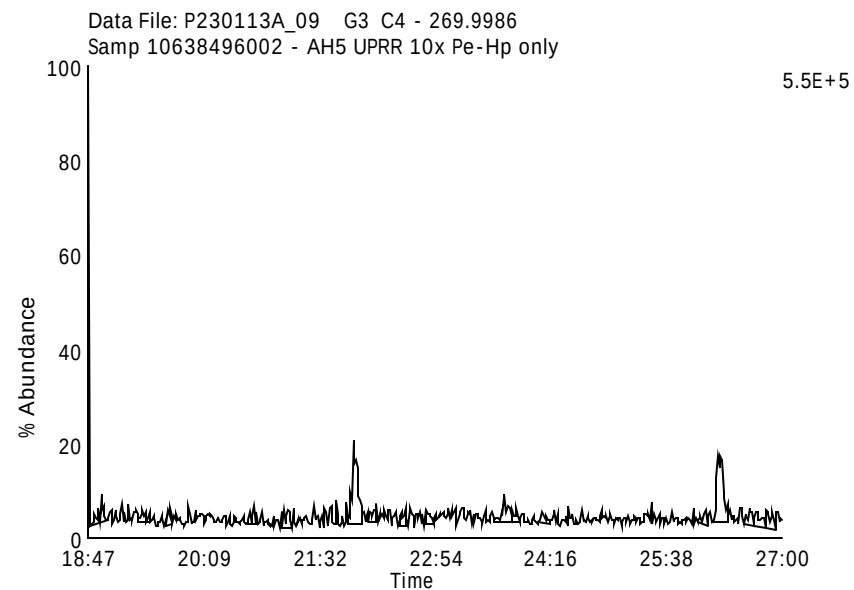
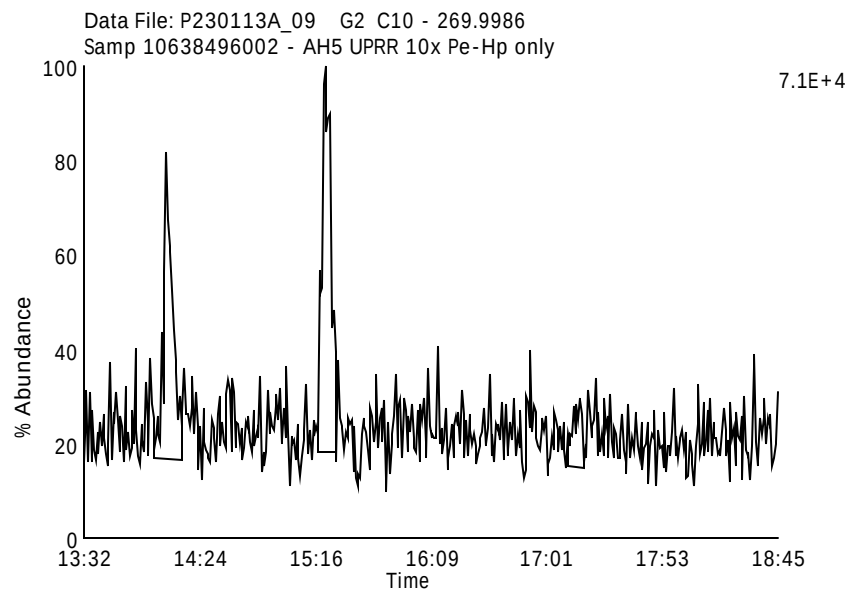
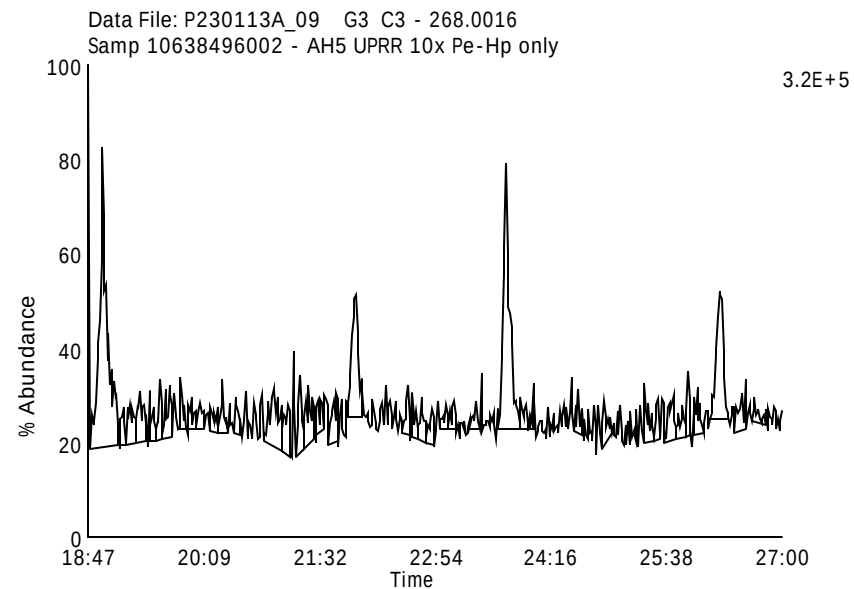
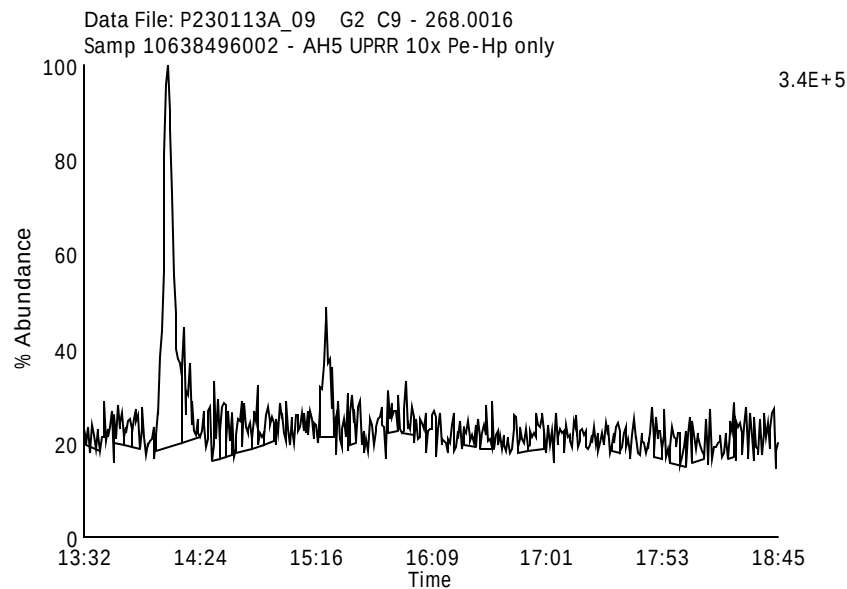
Date Acquired: 1/13/2023

Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Labeled Tetra Chlorinated Biphenyls

Data File Name: P230113A_09

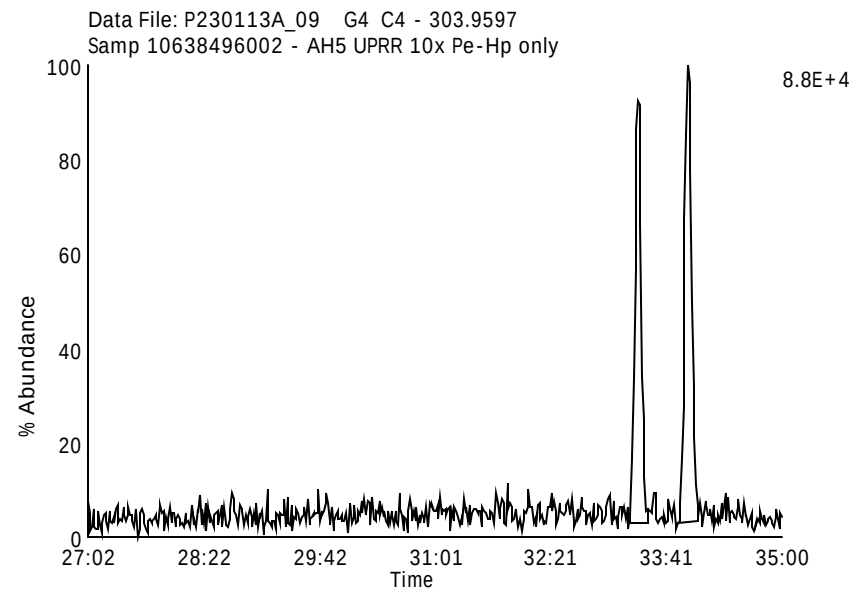
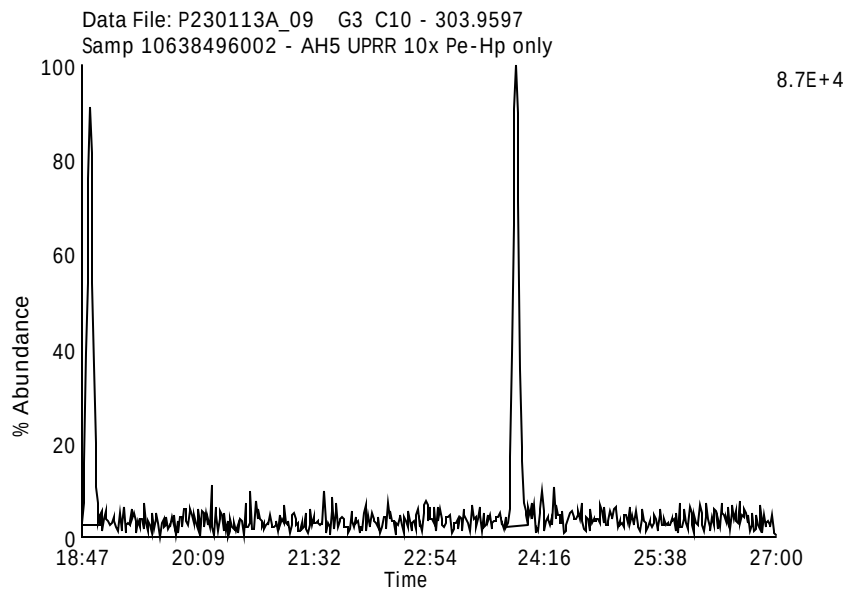
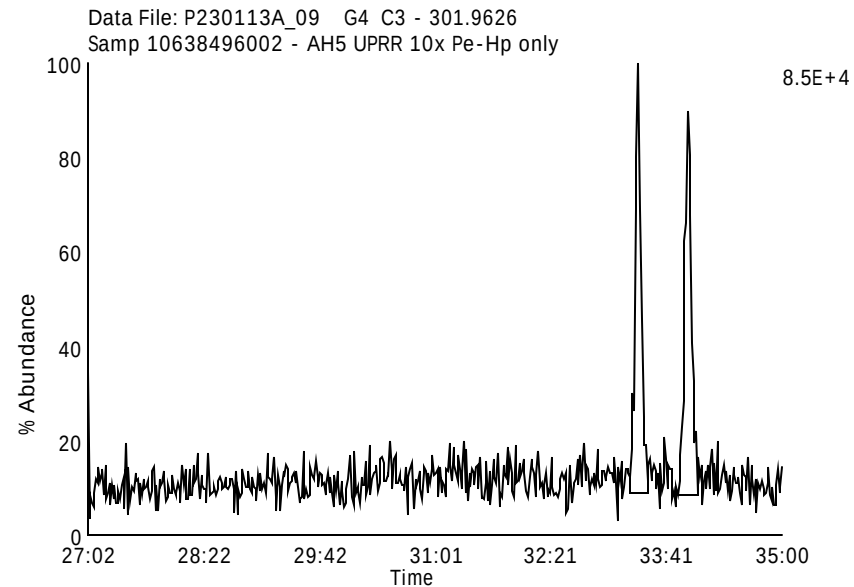
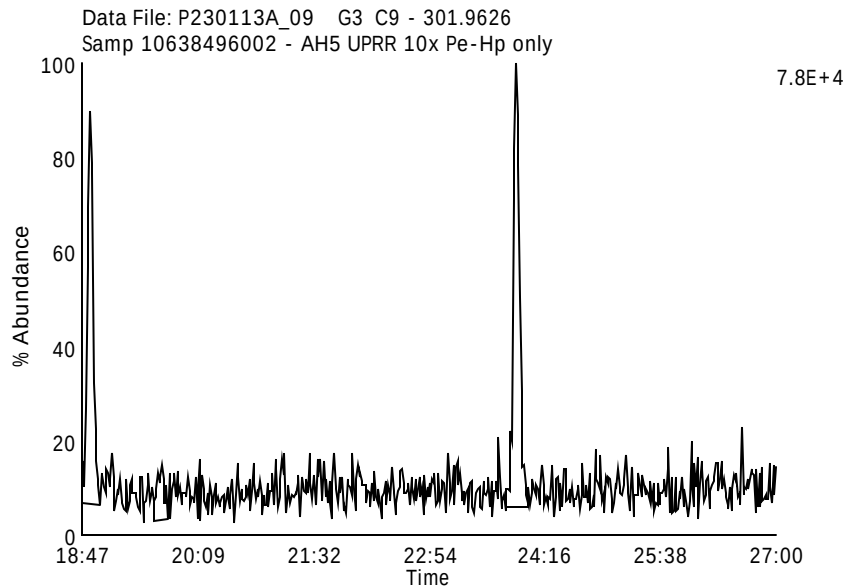
Date Acquired: 1/13/2023

Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Labeled Penta Chlorinated Biphenyls

Data File Name: P230113A_09

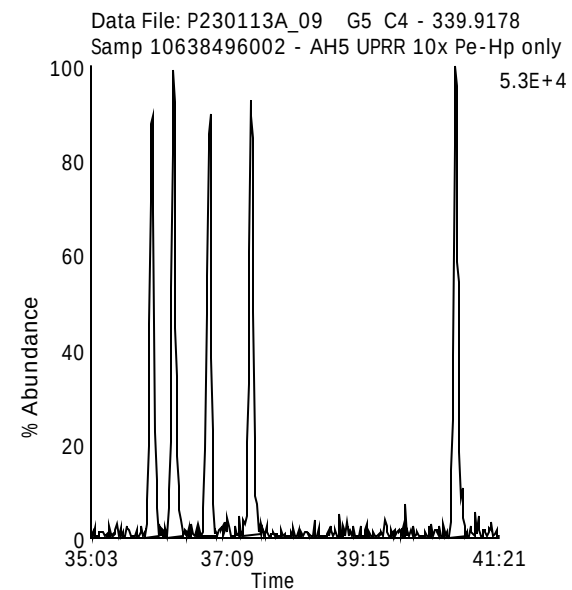
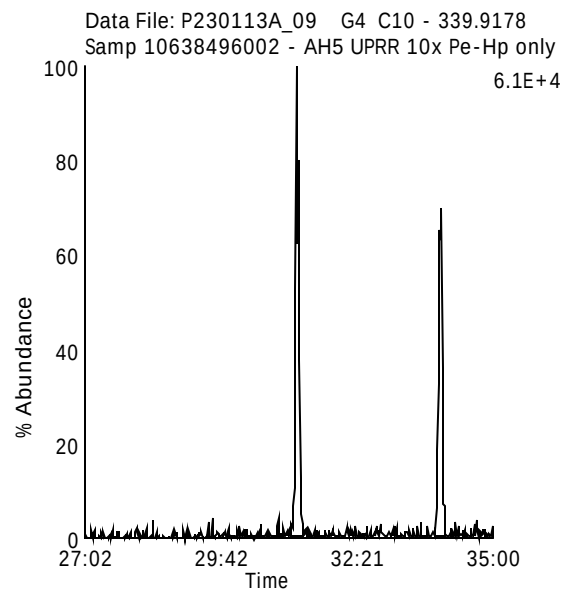
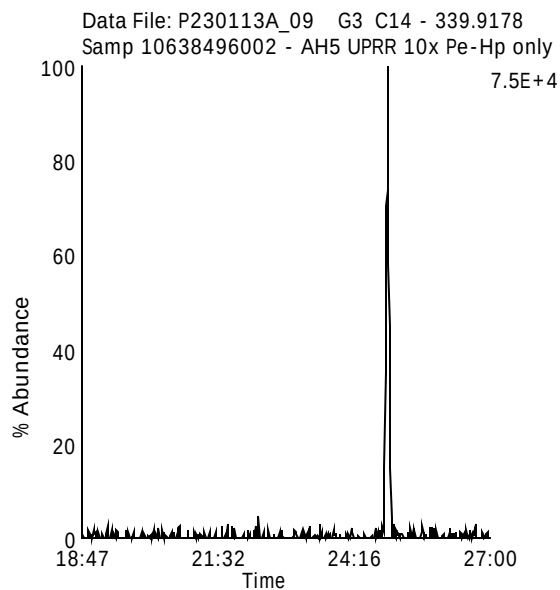
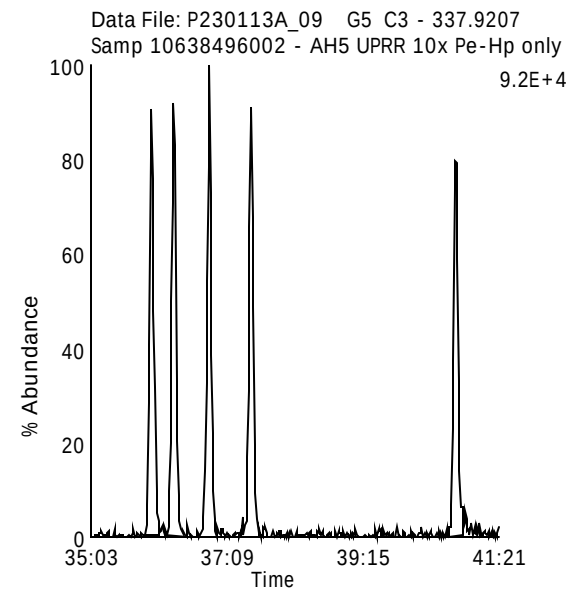
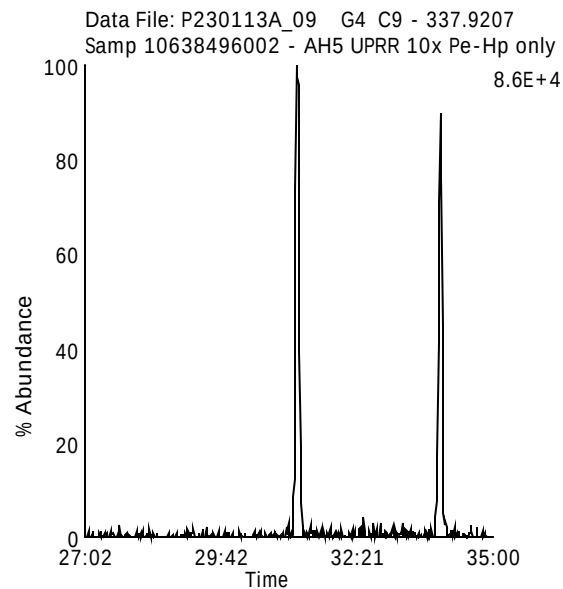
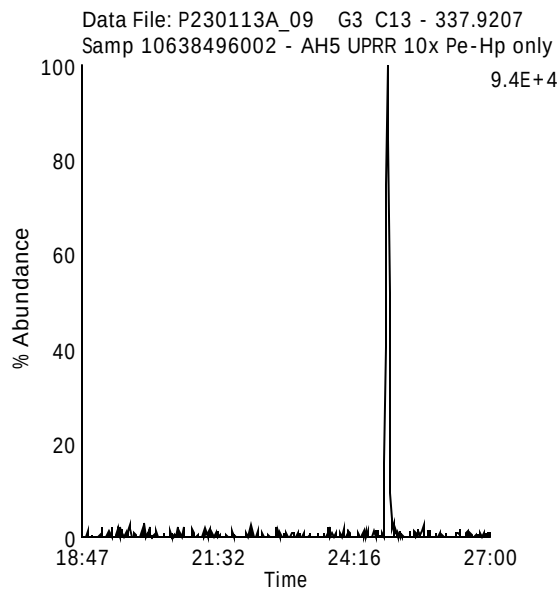
Date Acquired: 1/13/2023

Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Labeled Hexa Chlorinated Biphenyls

Data File Name: P230113A_09

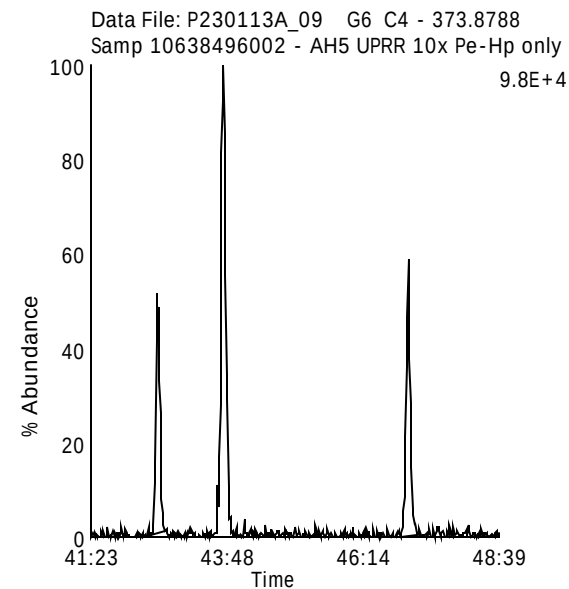
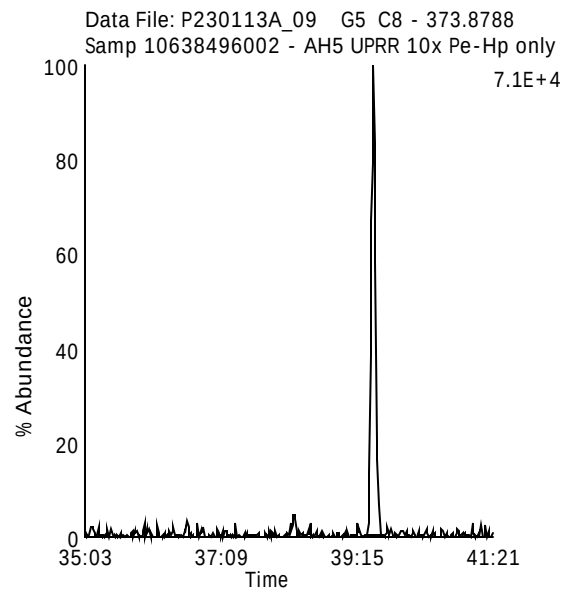
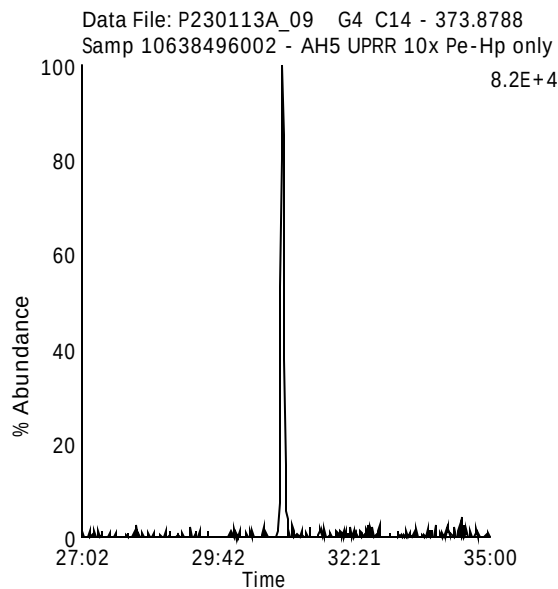
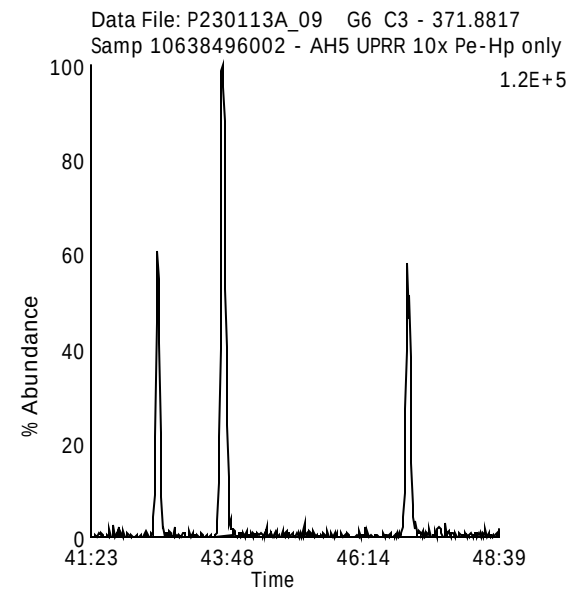
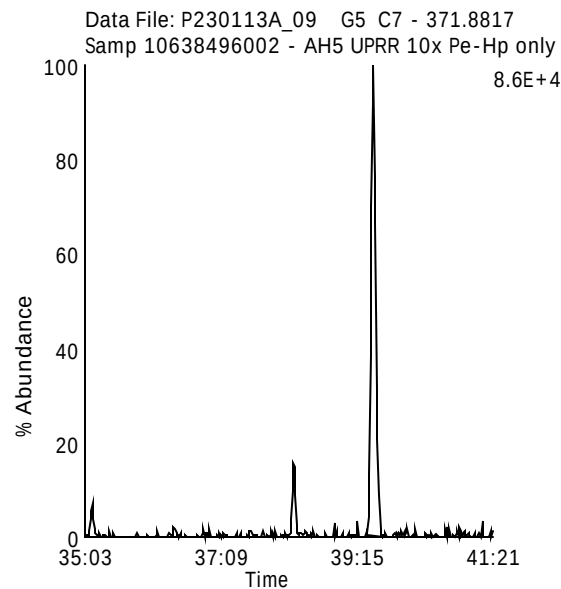
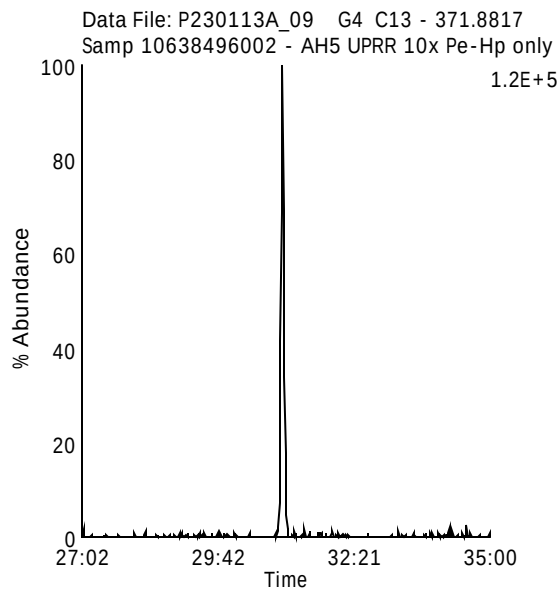
Date Acquired: 1/13/2023

Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Labeled Hepta Chlorinated Biphenyls

Data File Name: P230113A_09

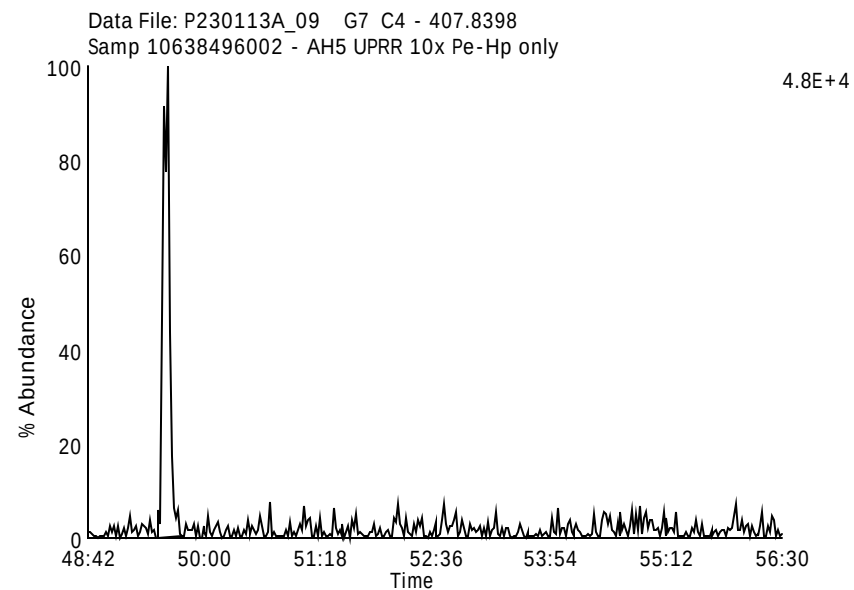
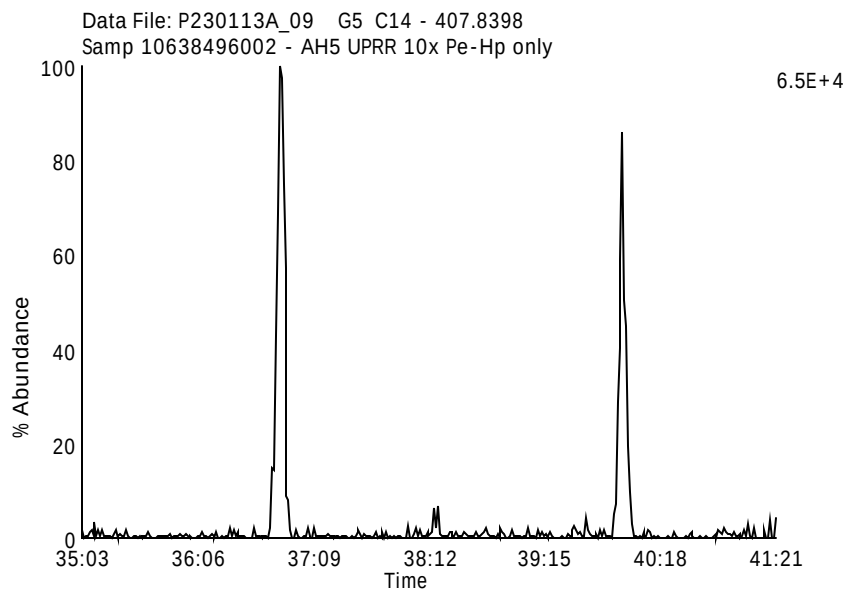
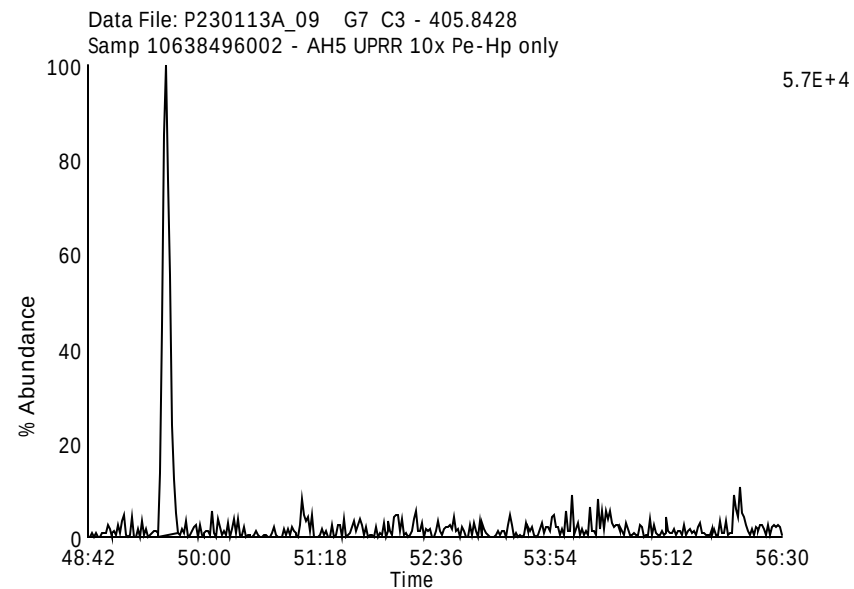
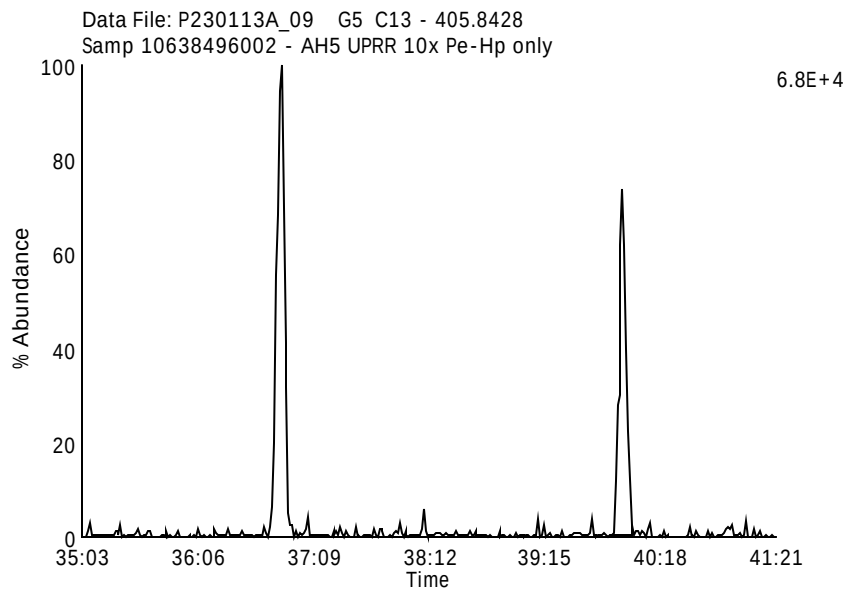
Date Acquired: 1/13/2023

Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Labeled Octa Chlorinated Biphenyls

Data File Name: P230113A_09

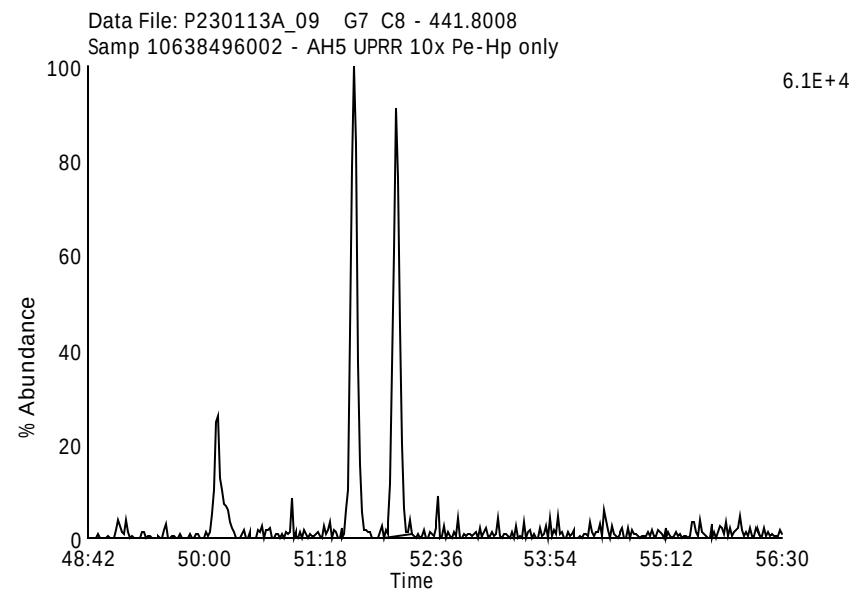
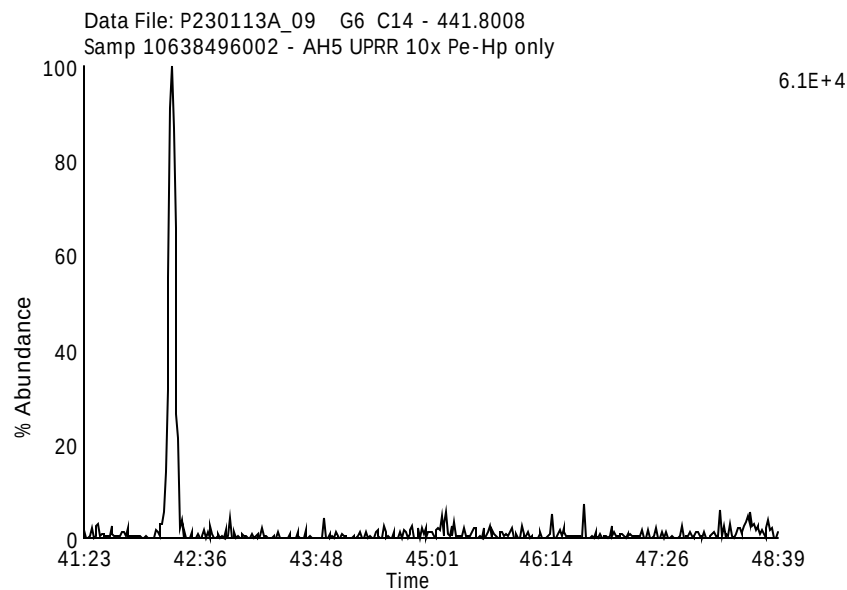
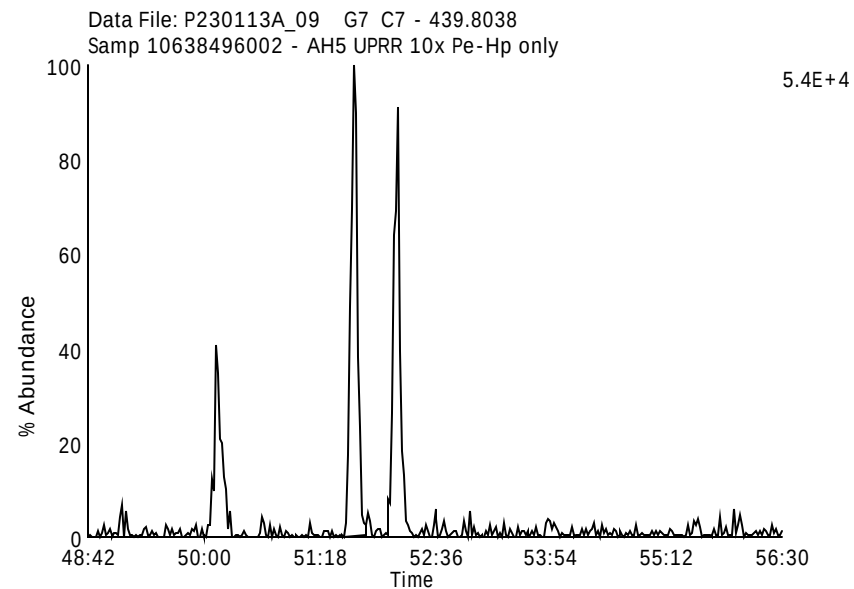
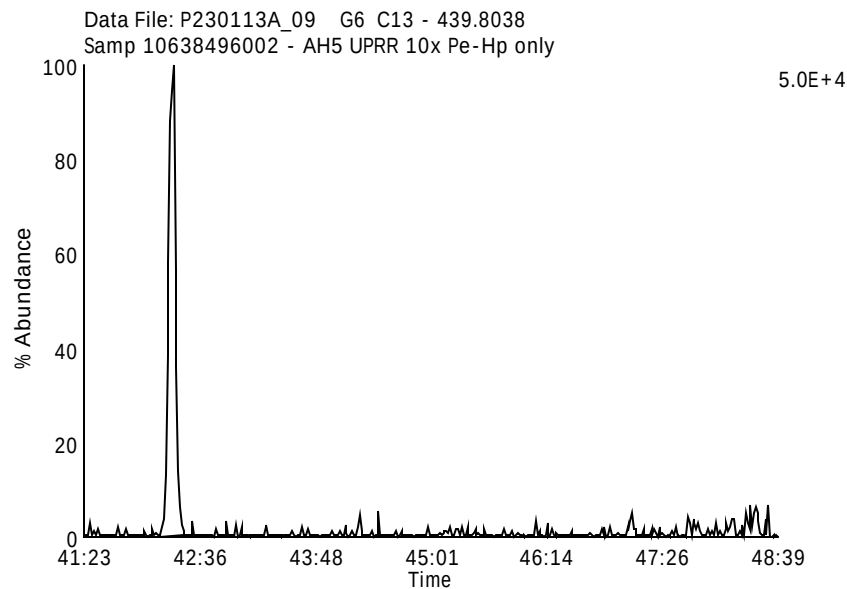
Date Acquired: 1/13/2023

Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Labeled Nona Chlorinated Biphenyls

Data File Name: P230113A_09

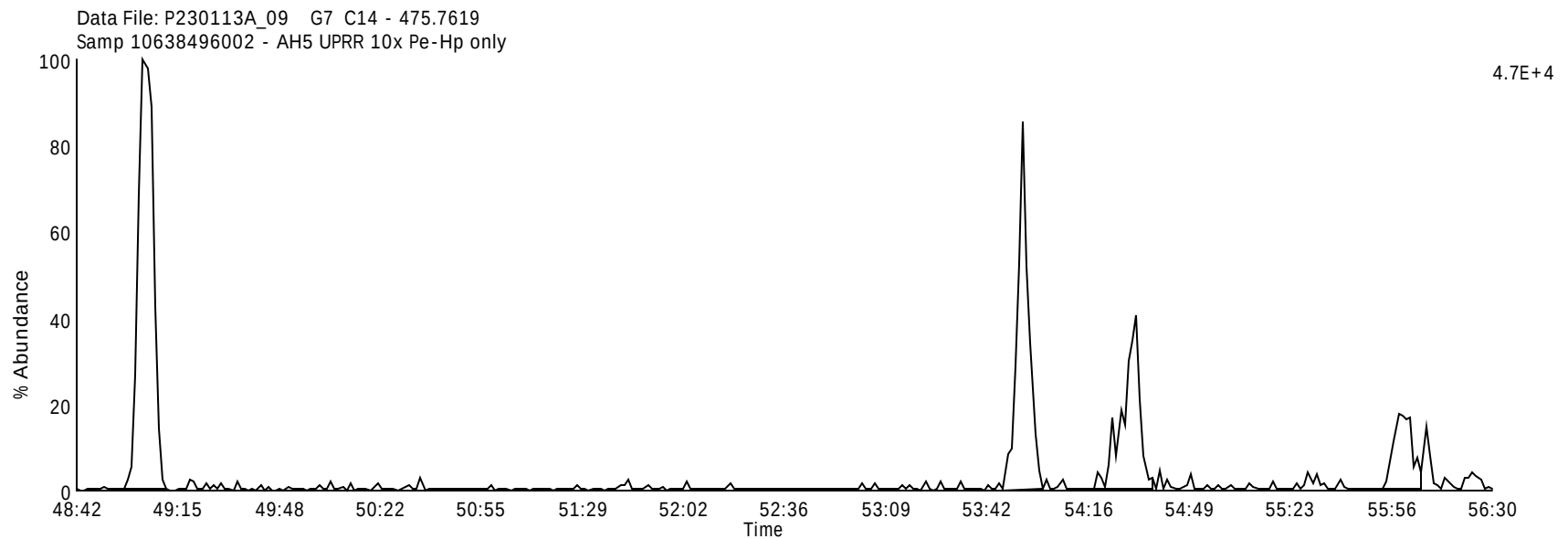
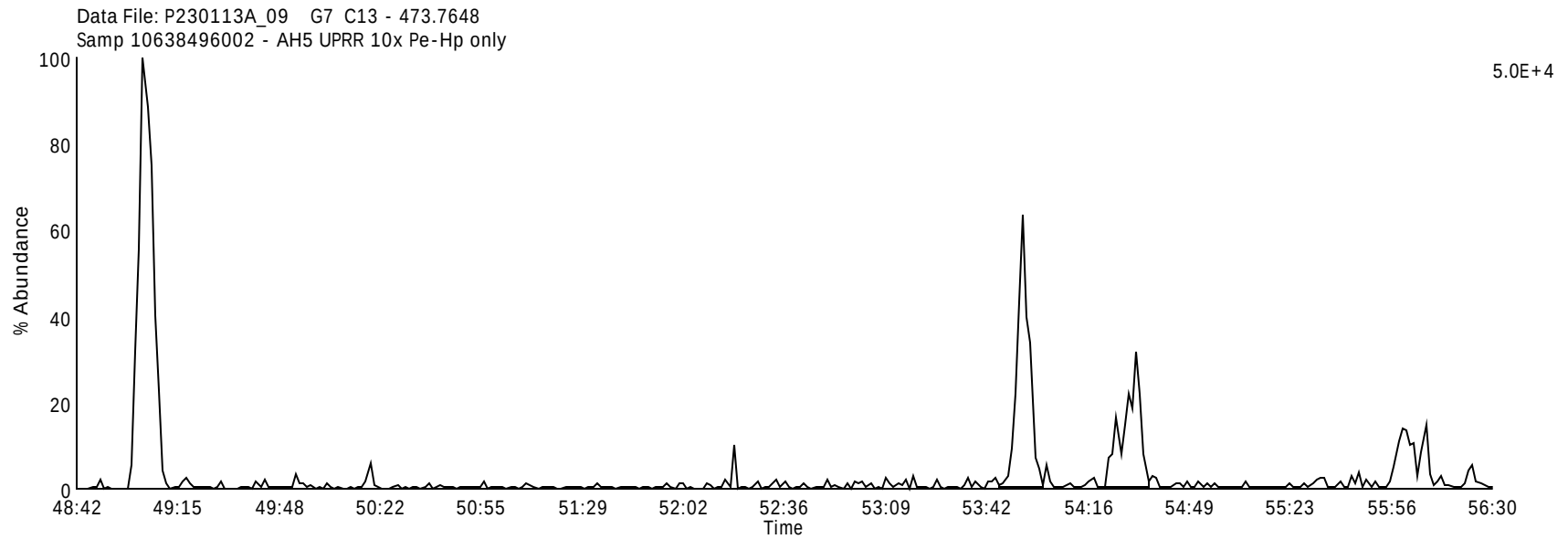
Date Acquired: 1/13/2023

Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Labeled Deca Chlorinated Biphenyl

Data File Name: P230113A_09

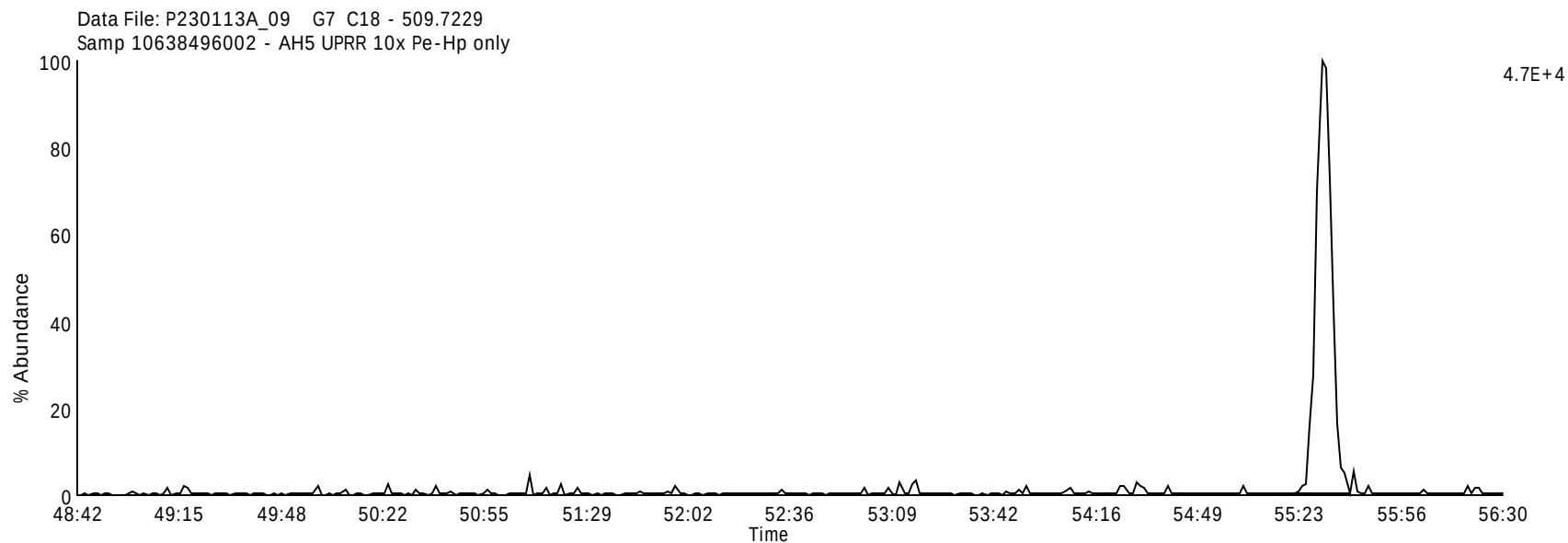
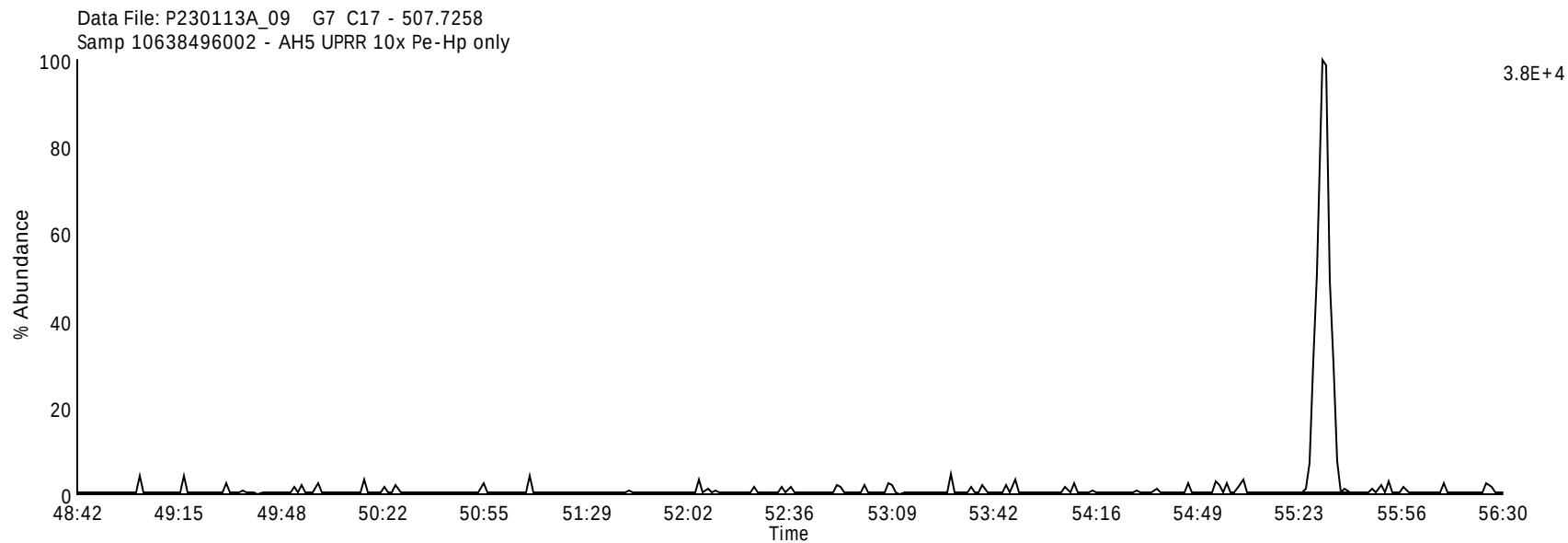
Date Acquired: 1/13/2023

Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Mono Chlorinated Biphenyls

Data File Name: P230113A_09

Date Acquired: 1/13/2023

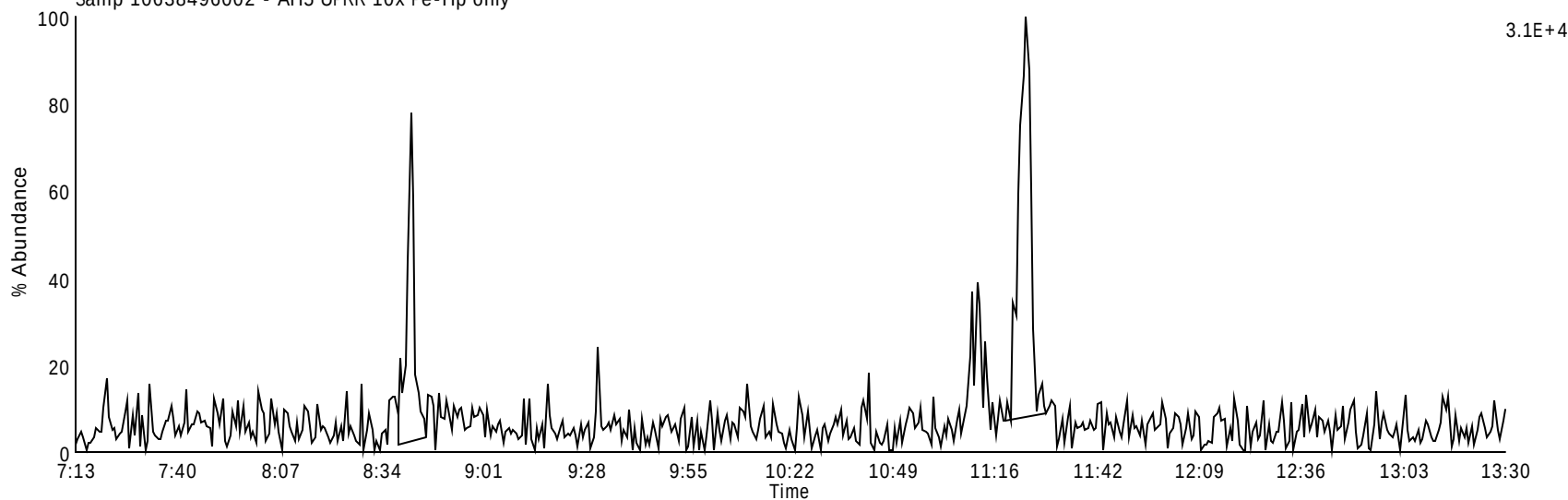
Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

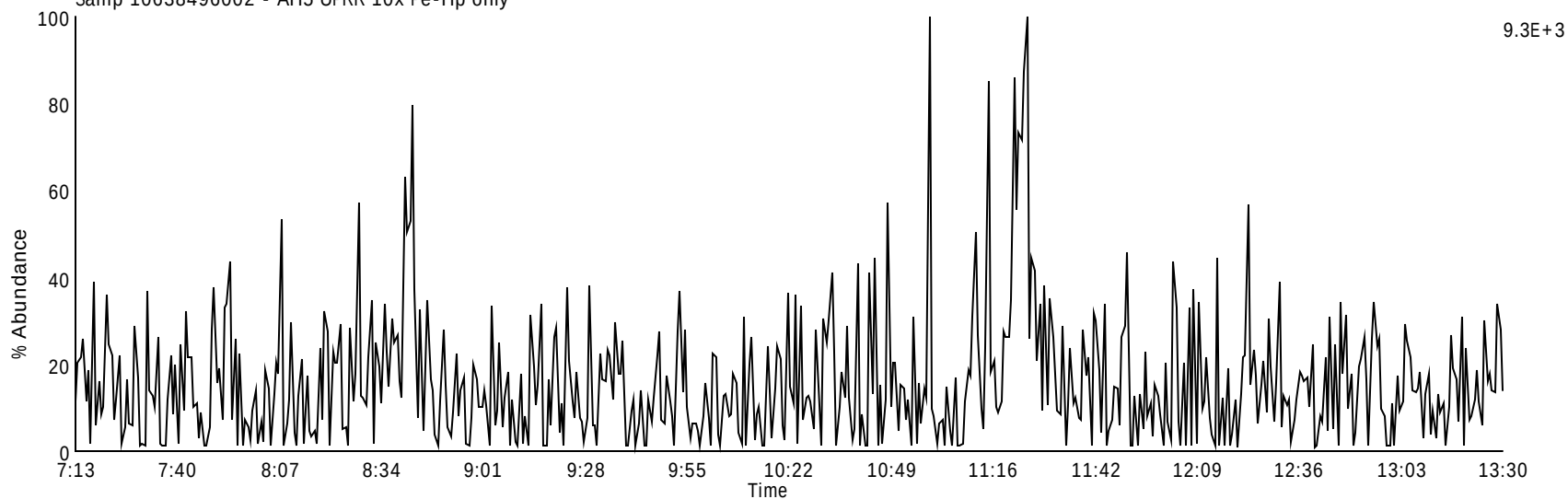
Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322

Data File: P230113A_09 G1 C1 - 188.0393
Samp 10638496002 - AH5 UPRR 10x Pe-Hp only



Data File: P230113A_09 G1 C2 - 190.0363
Samp 10638496002 - AH5 UPRR 10x Pe-Hp only



Di Chlorinated Biphenyls

Data File Name: P230113A_09

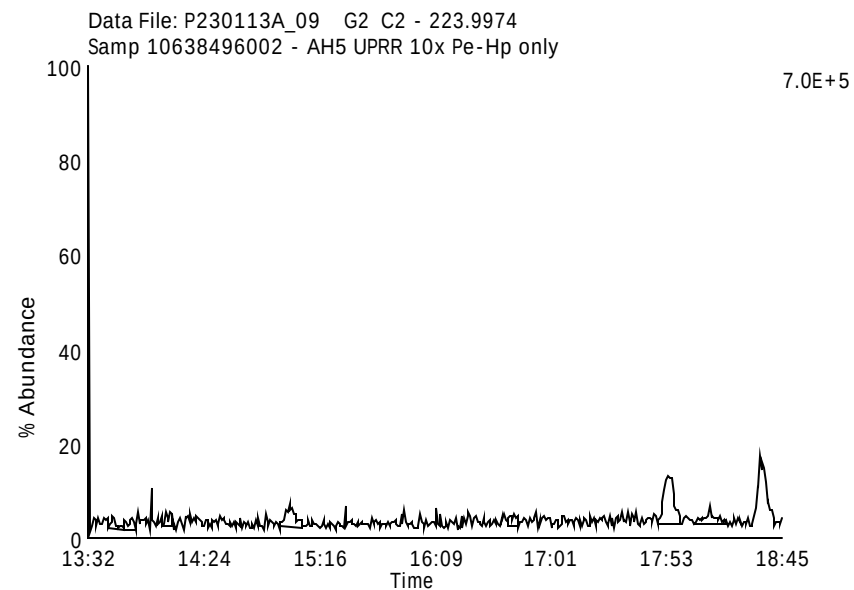
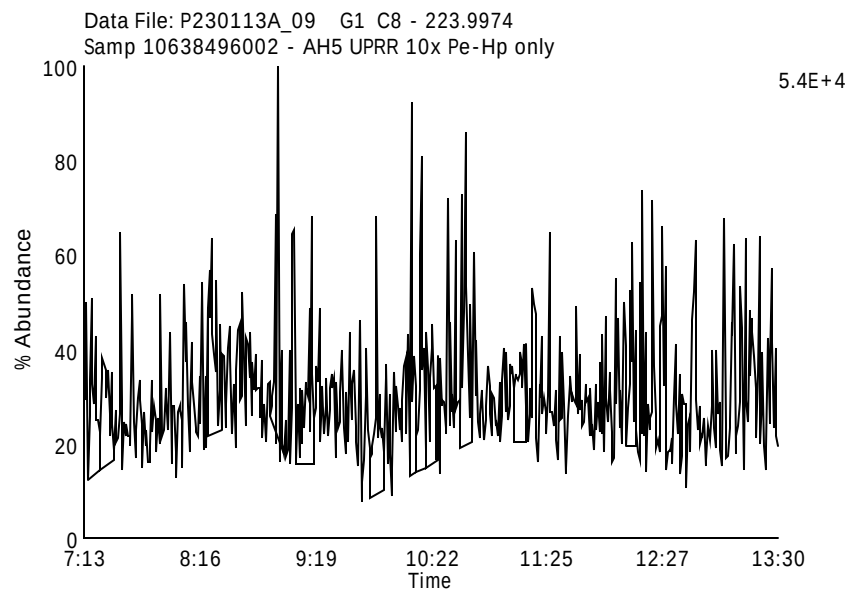
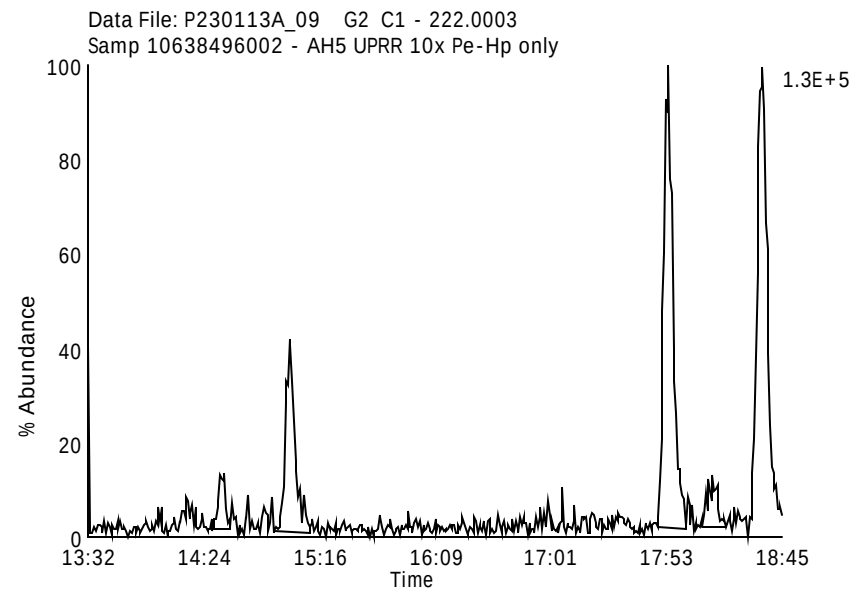
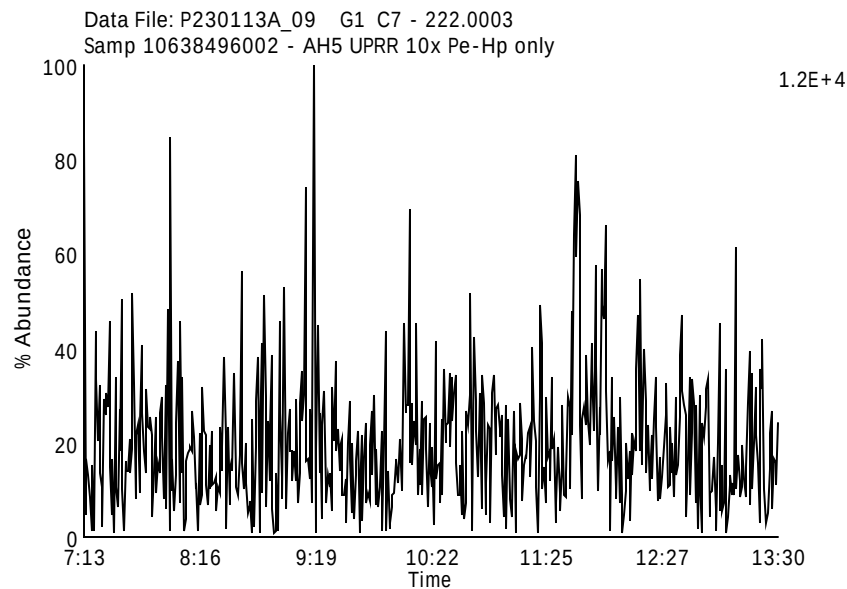
Date Acquired: 1/13/2023

Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Tri Chlorinated Biphenyls

Data File Name: P230113A_09

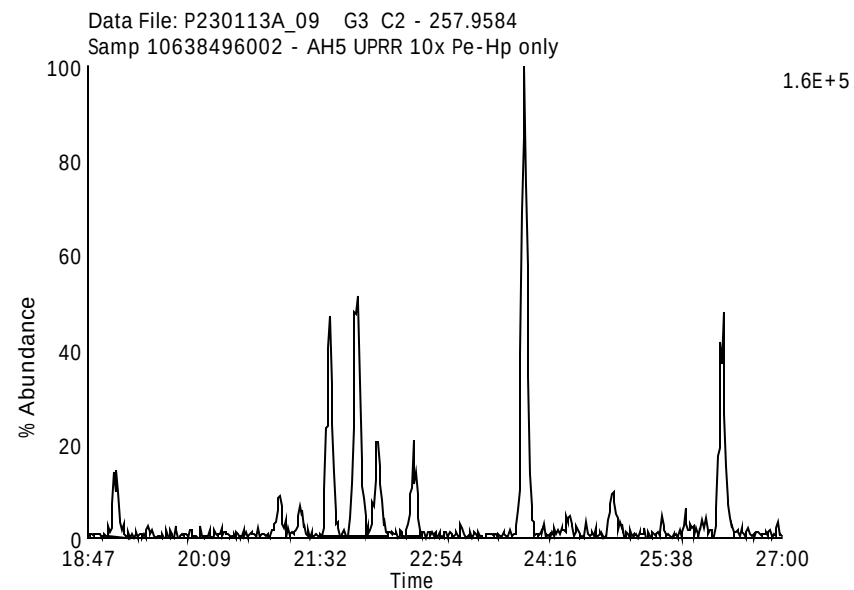
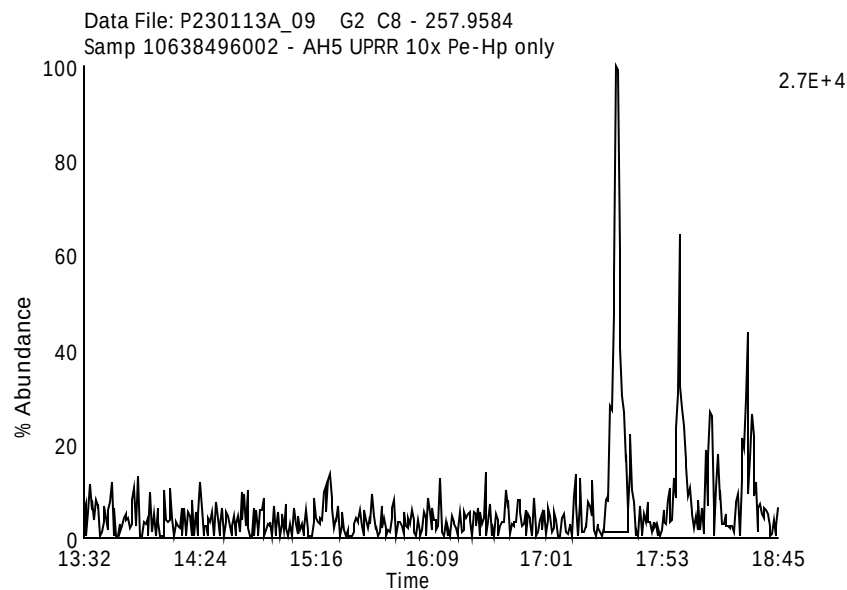
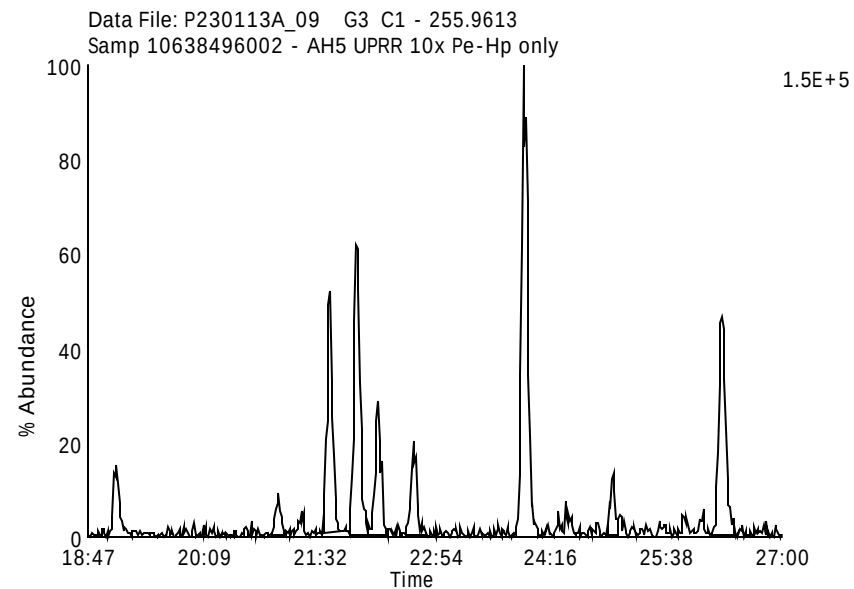
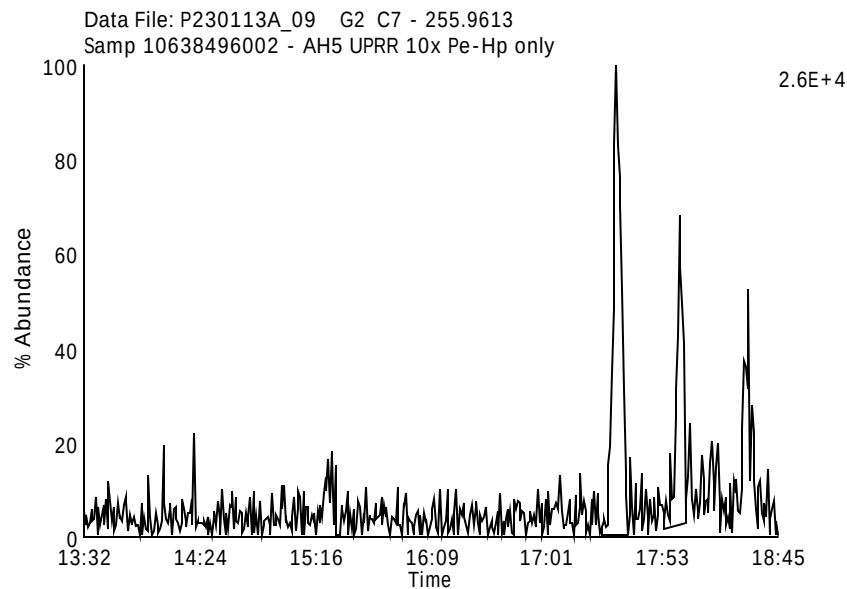
Date Acquired: 1/13/2023

Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Tetra Chlorinated Biphenyls

Data File Name: P230113A_09

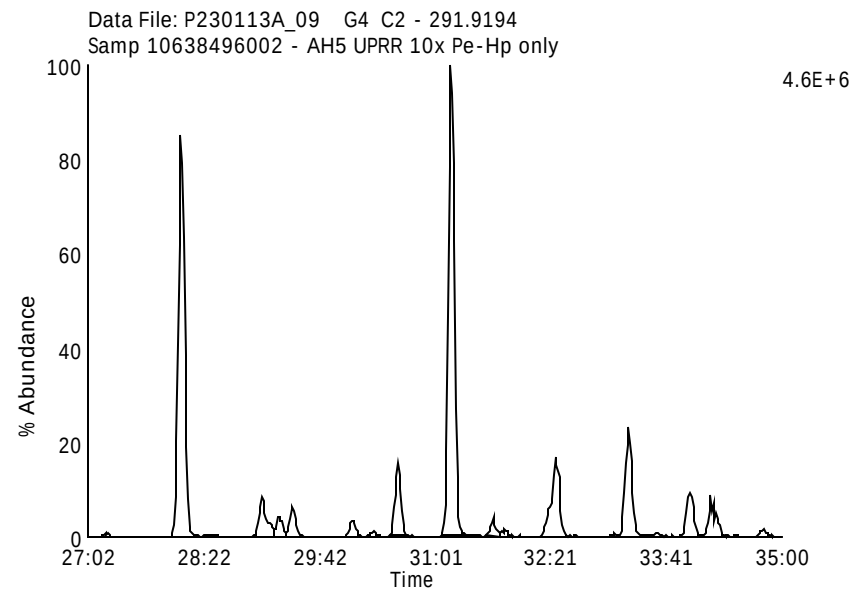
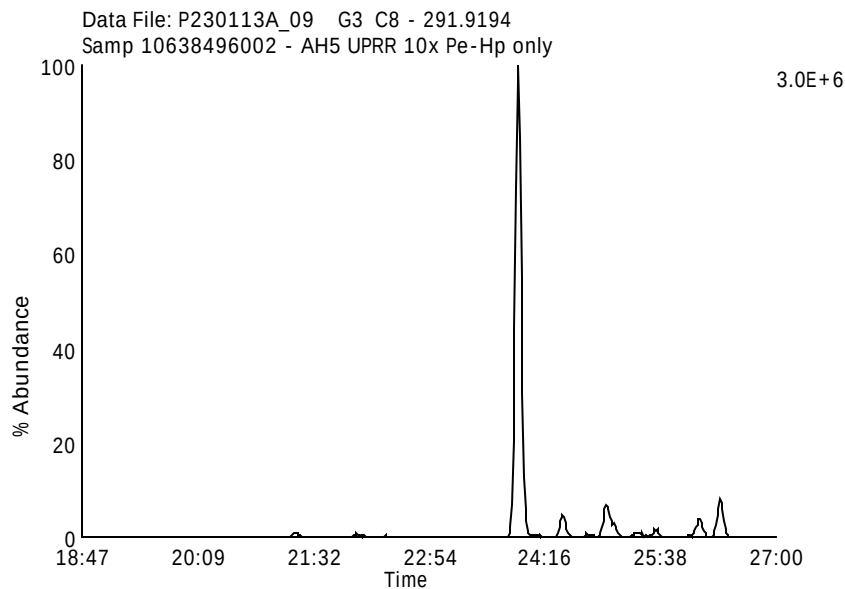
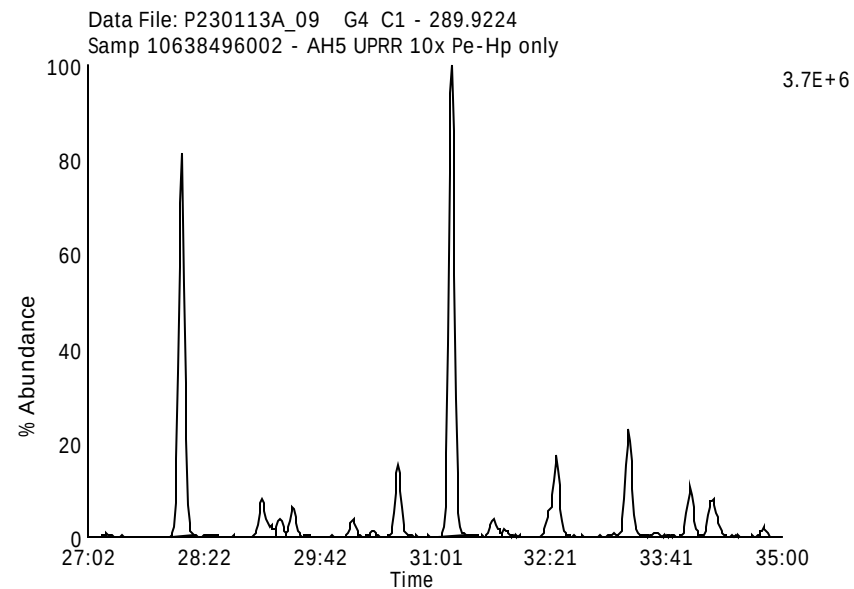
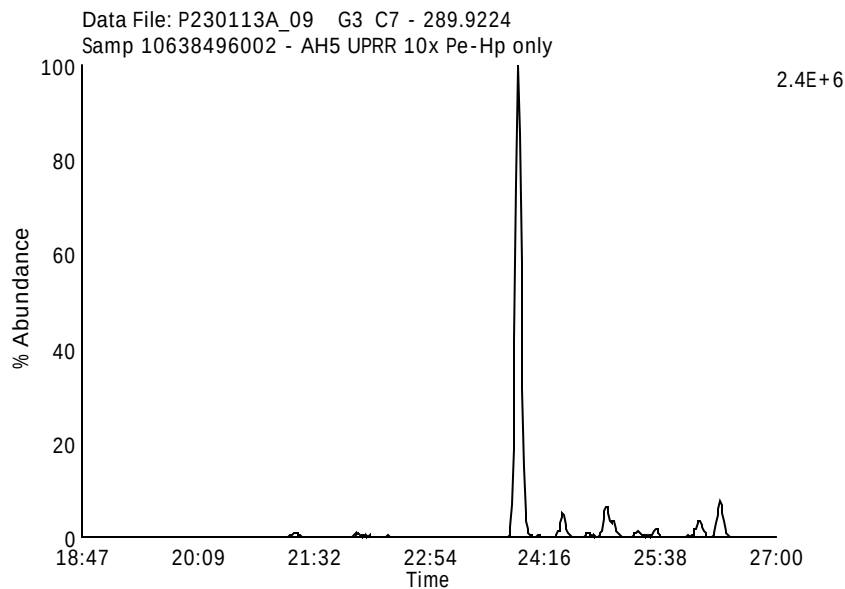
Date Acquired: 1/13/2023

Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Penta Chlorinated Biphenyls

Data File Name: P230113A_09

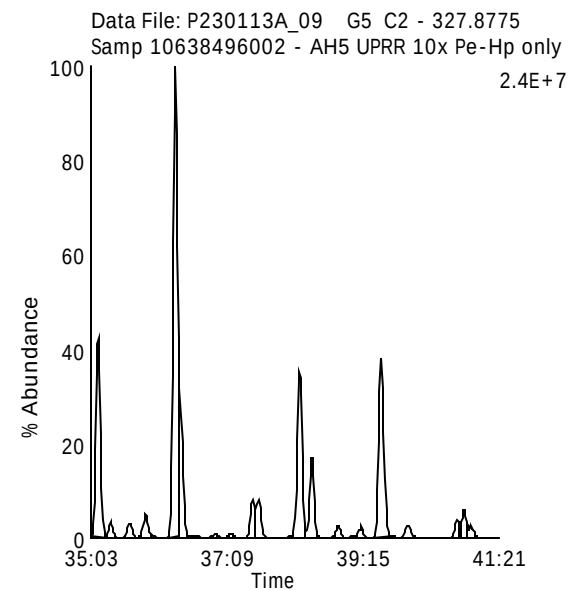
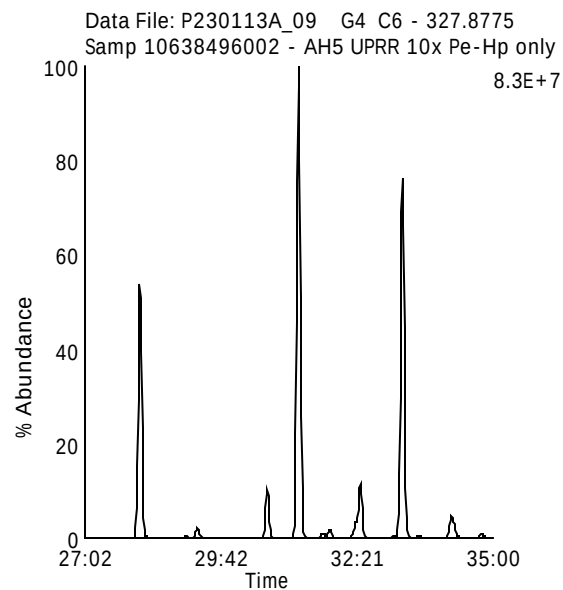
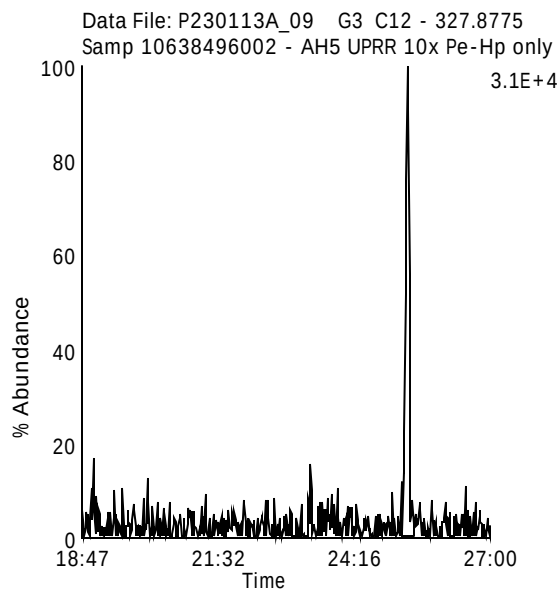
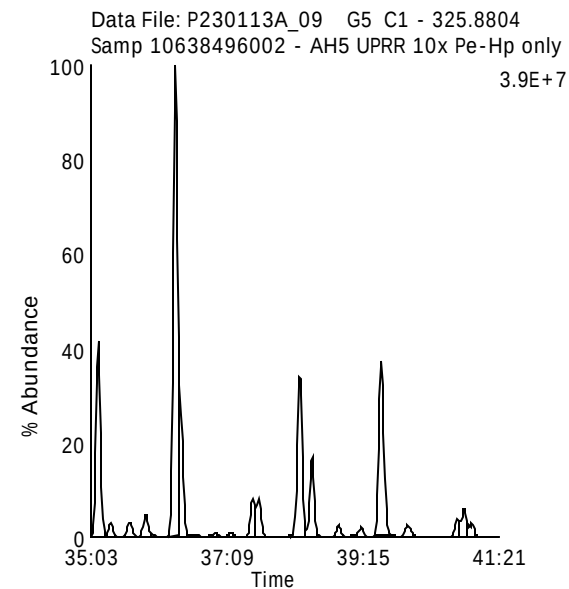
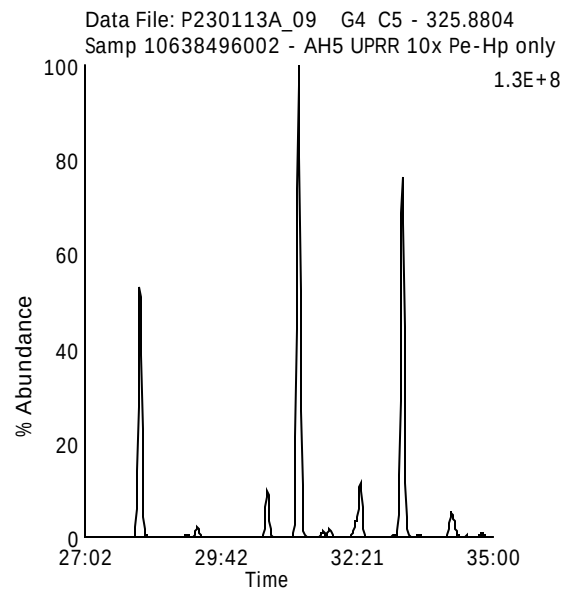
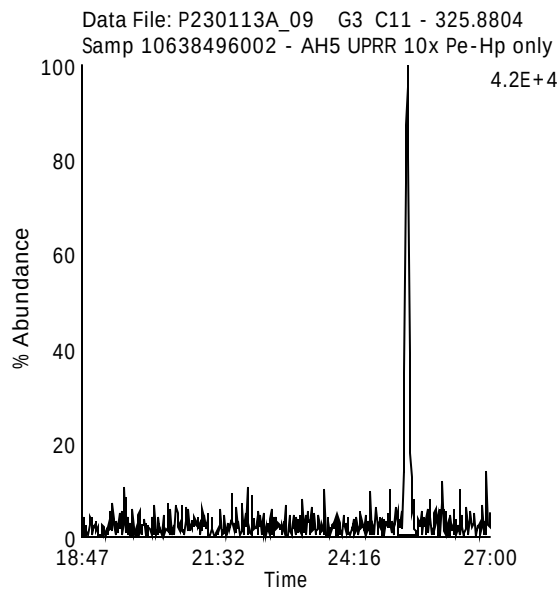
Date Acquired: 1/13/2023

Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Hexa Chlorinated Biphenyls

Data File Name: P230113A_09

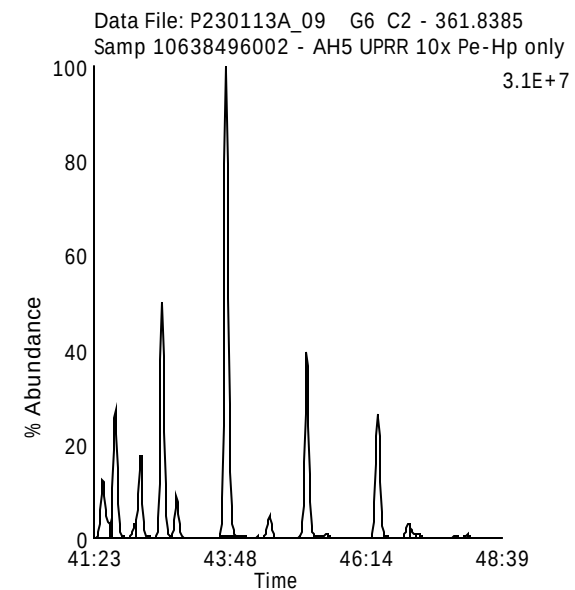
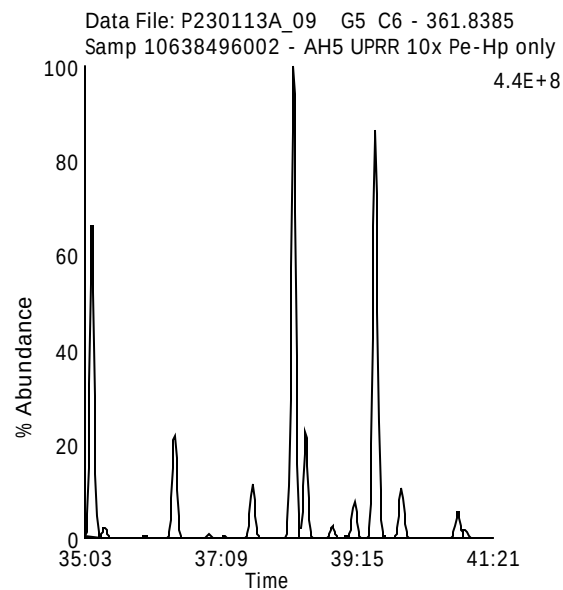
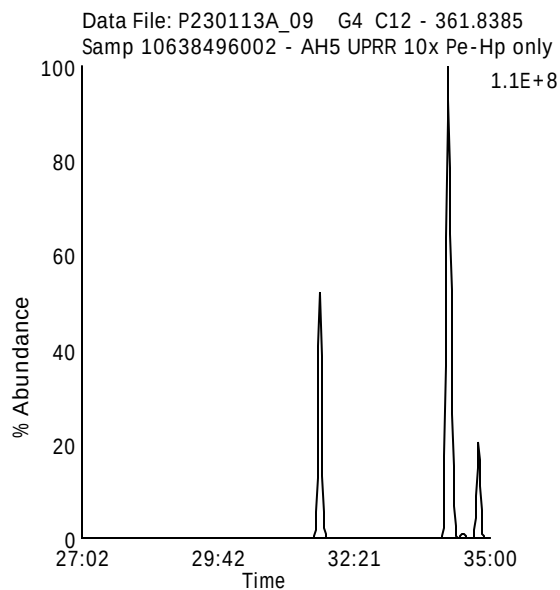
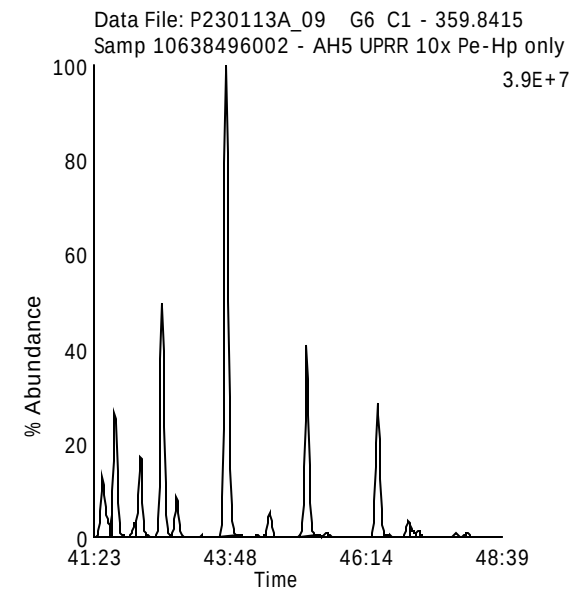
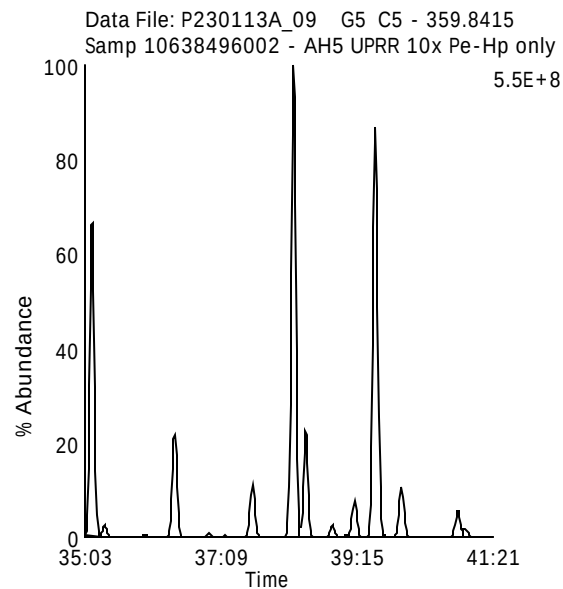
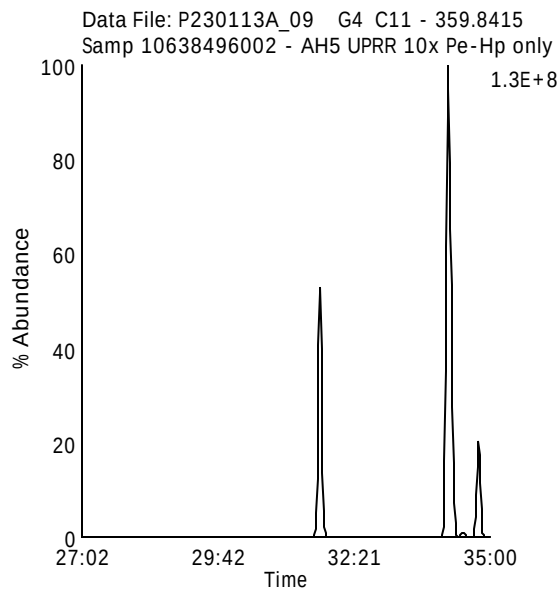
Date Acquired: 1/13/2023

Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Hepta Chlorinated Biphenyls

Data File Name: P230113A_09

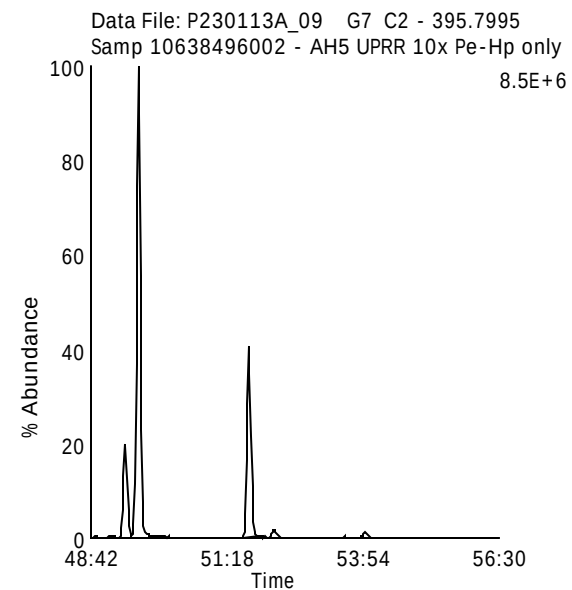
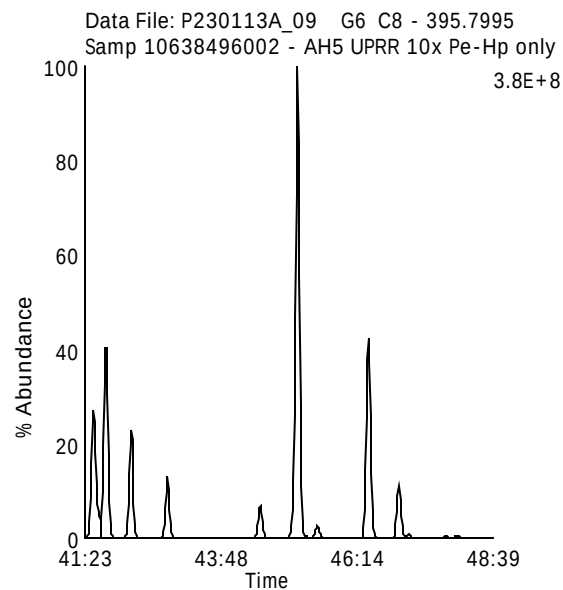
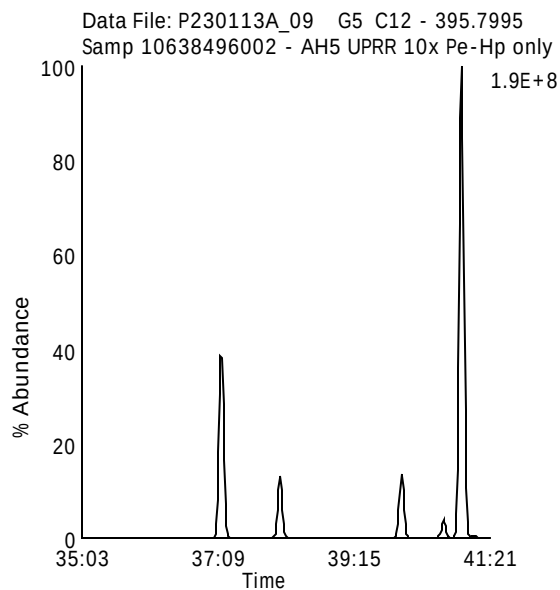
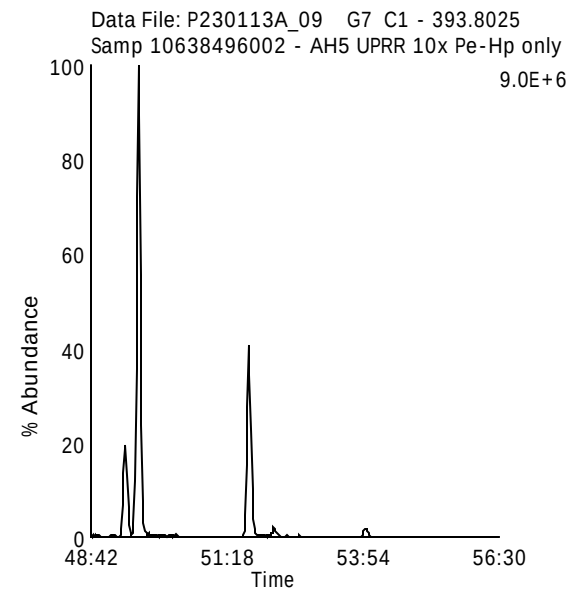
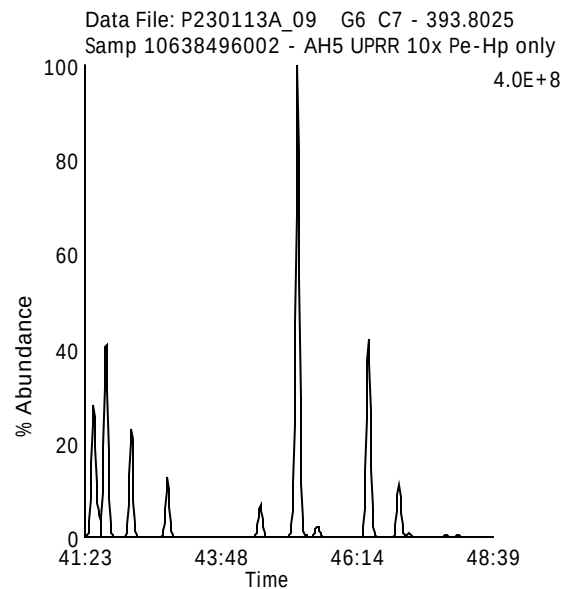
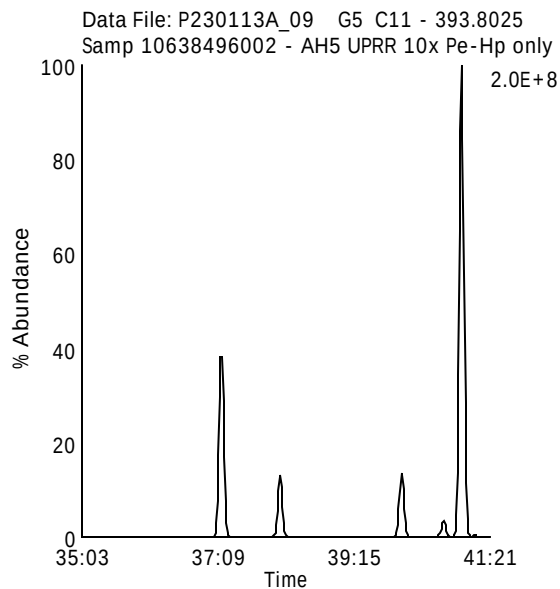
Date Acquired: 1/13/2023

Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Octa Chlorinated Biphenyls

Data File Name: P230113A_09

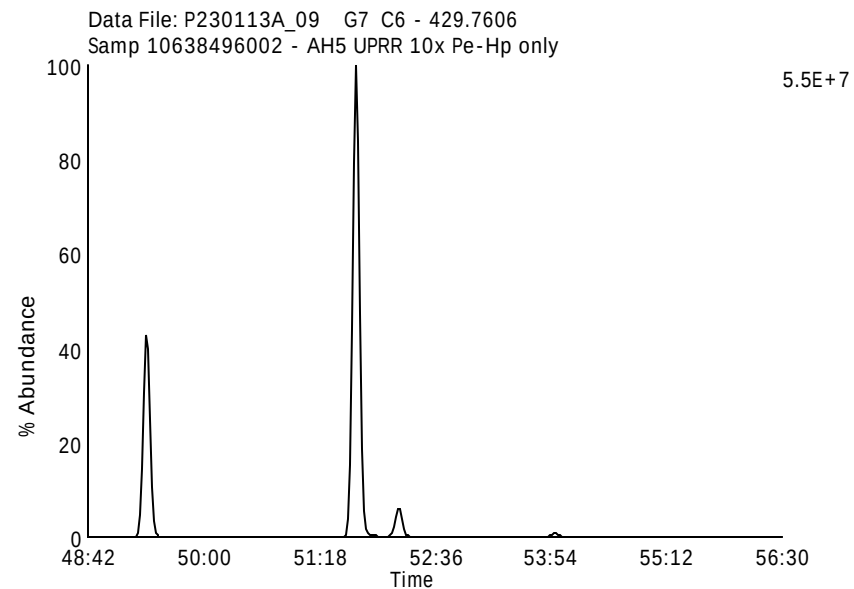
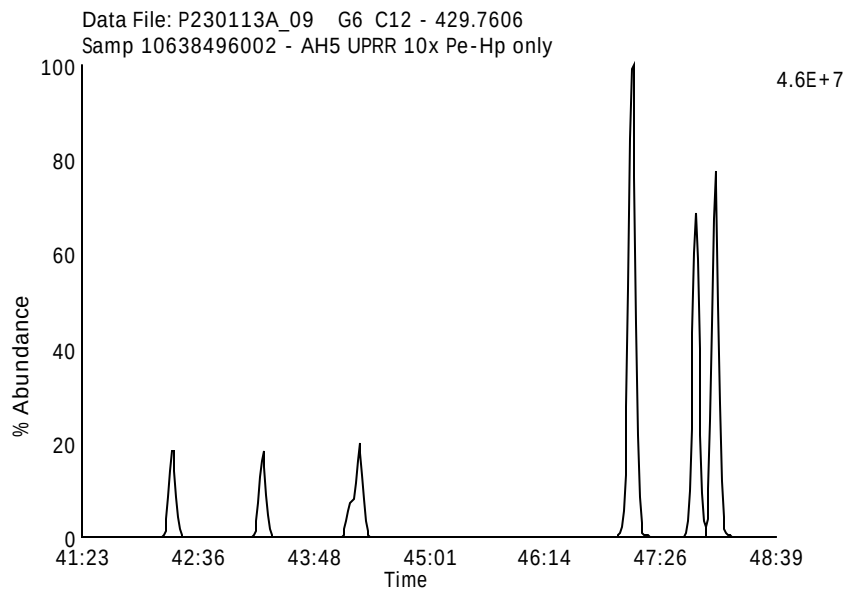
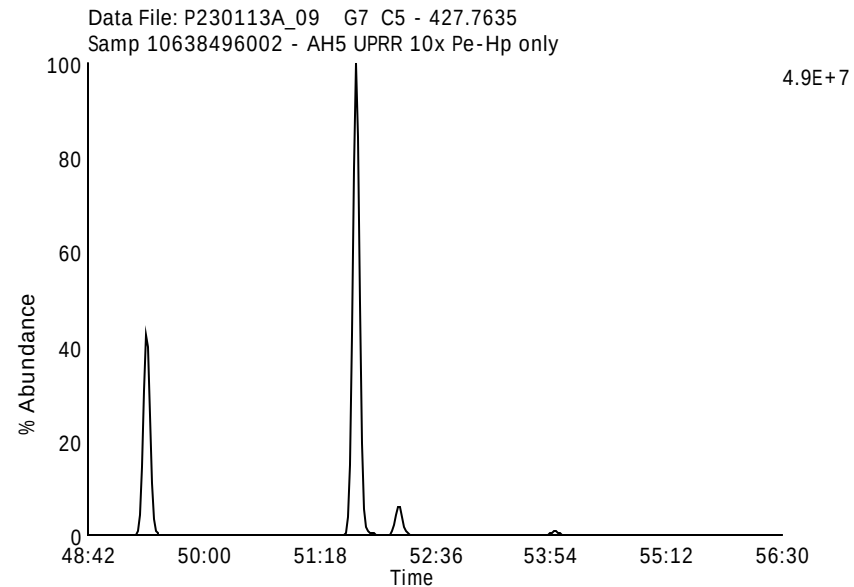
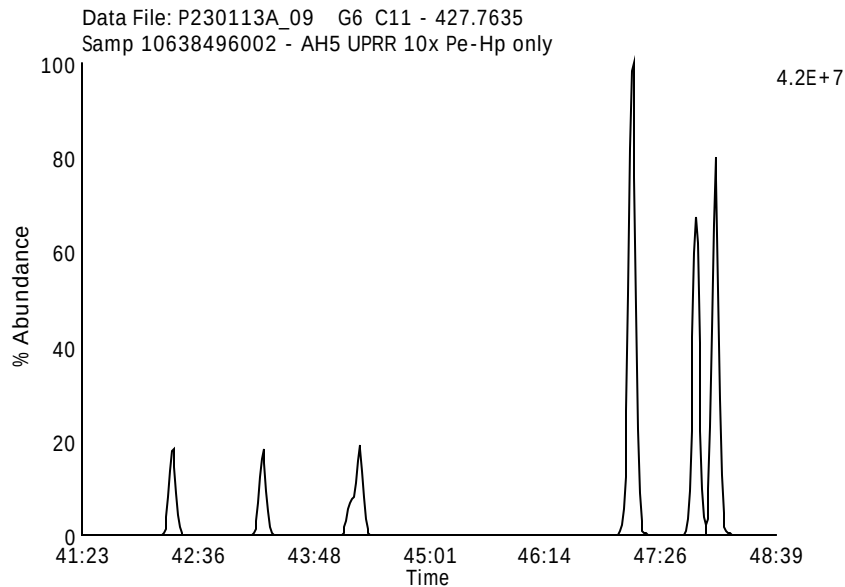
Date Acquired: 1/13/2023

Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Nona Chlorinated Biphenyls

Data File Name: P230113A_09

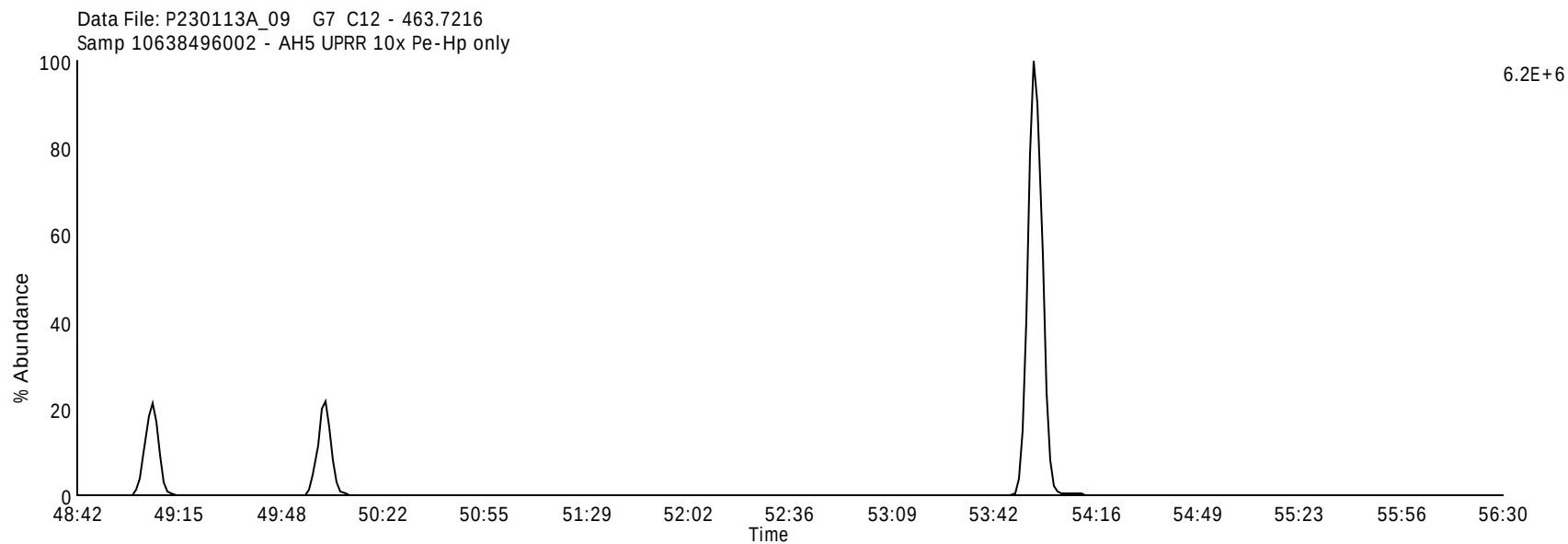
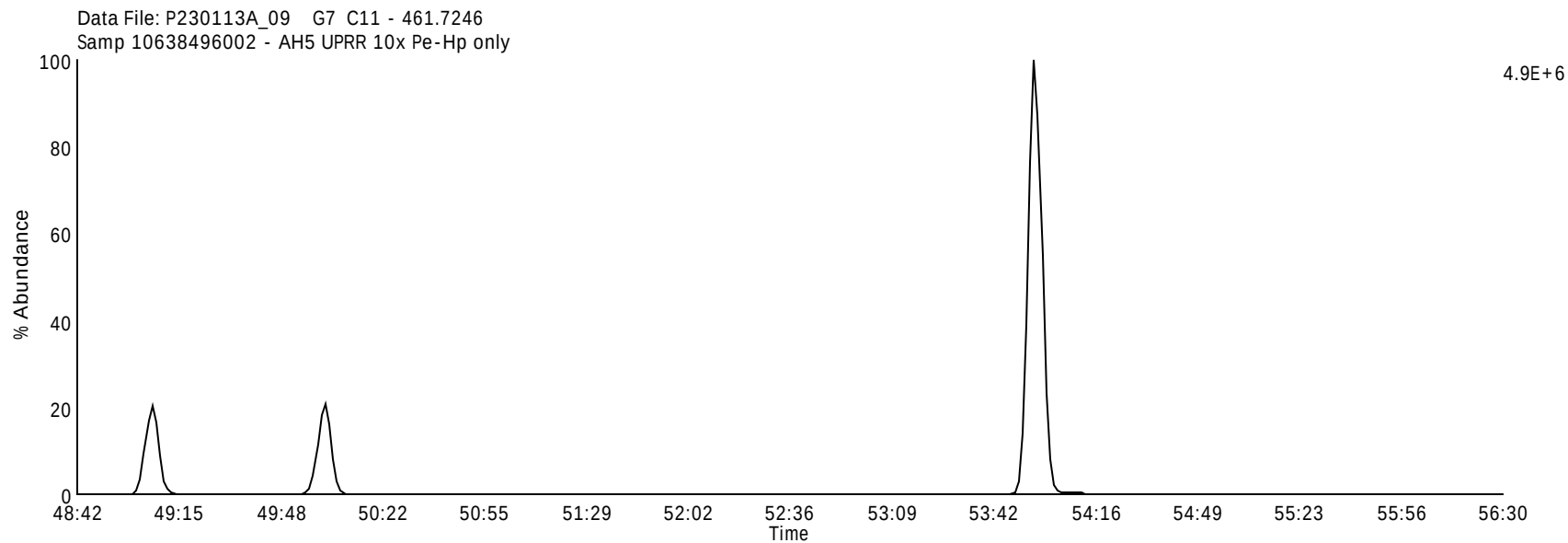
Date Acquired: 1/13/2023

Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Deca Chlorinated Biphenyl

Data File Name: P230113A_09

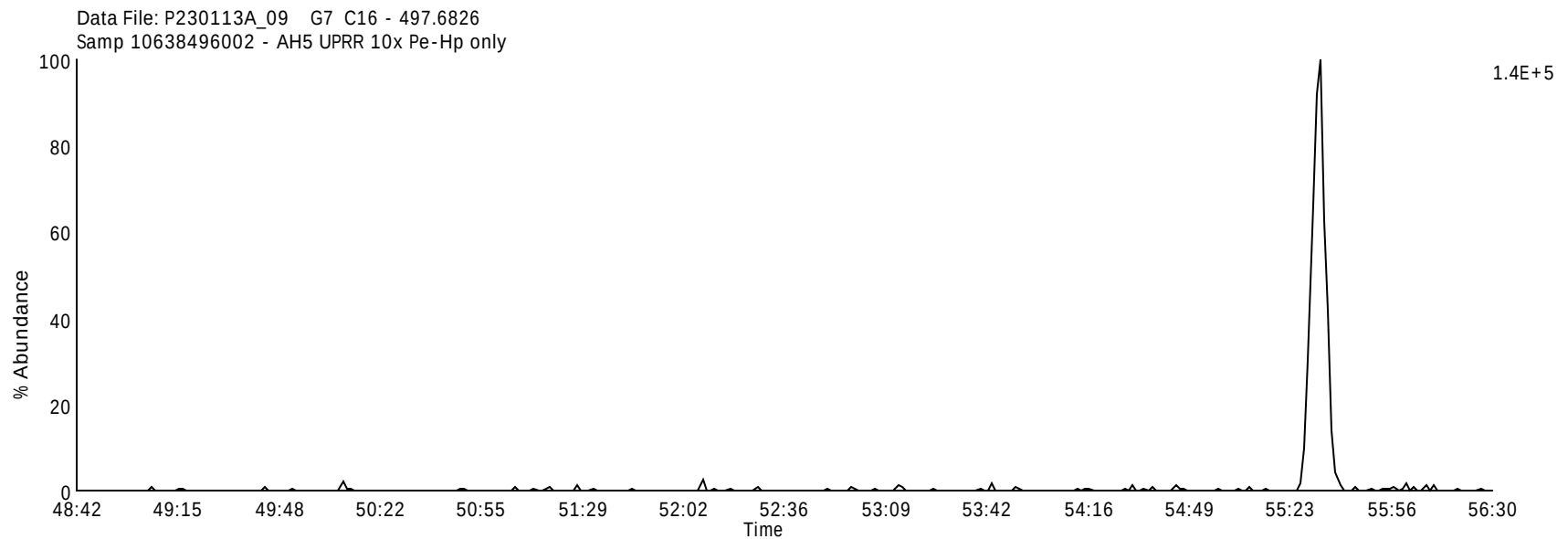
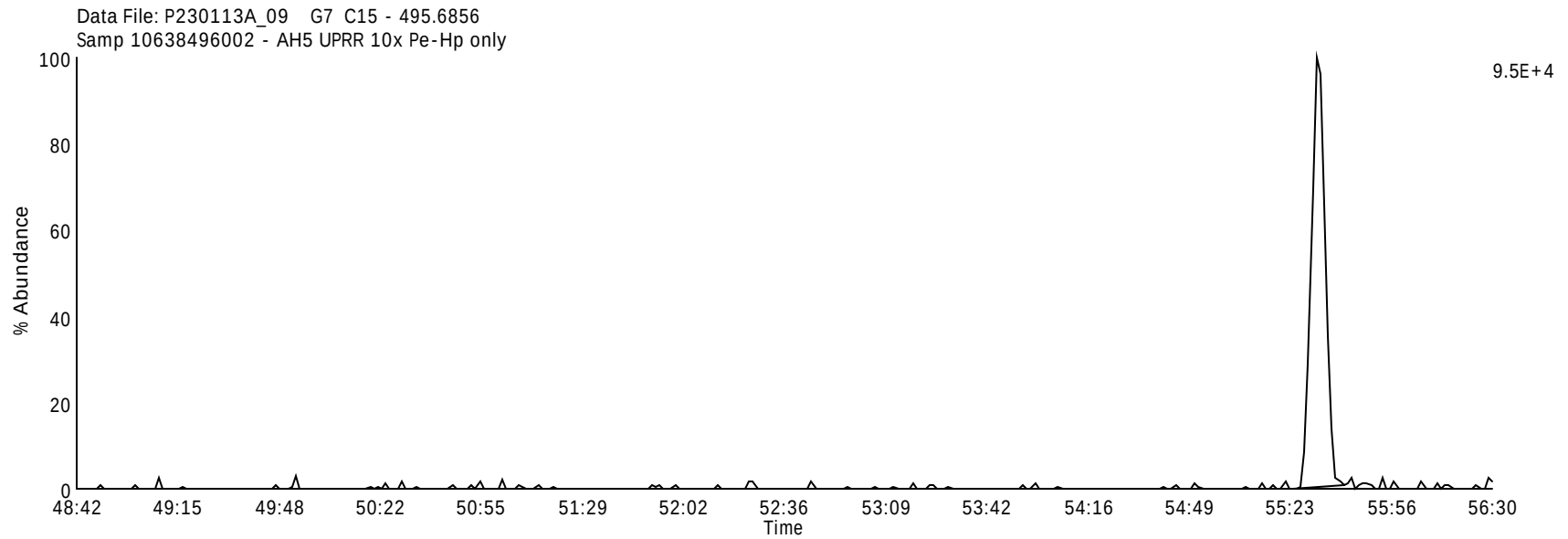
Date Acquired: 1/13/2023

Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Group 1 - 4 Lock mass

Data File Name: P230113A_09

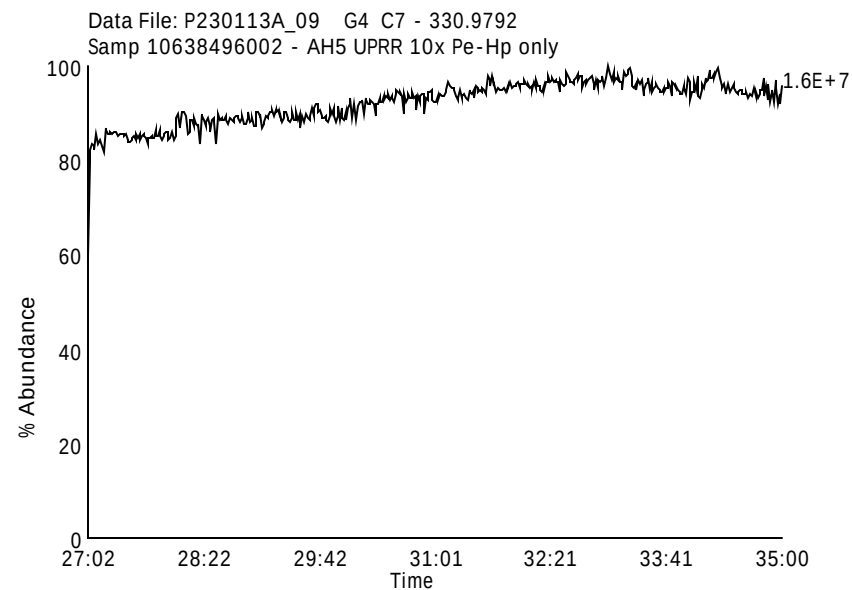
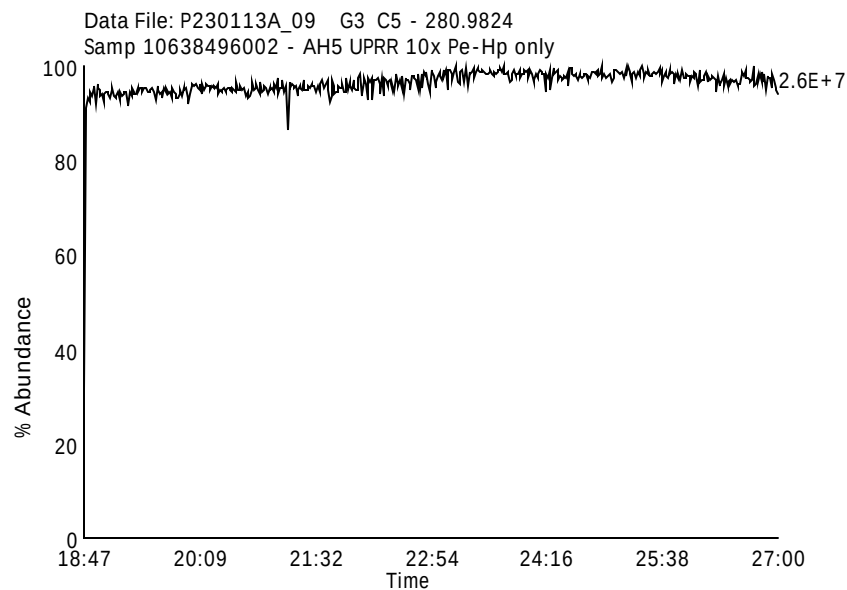
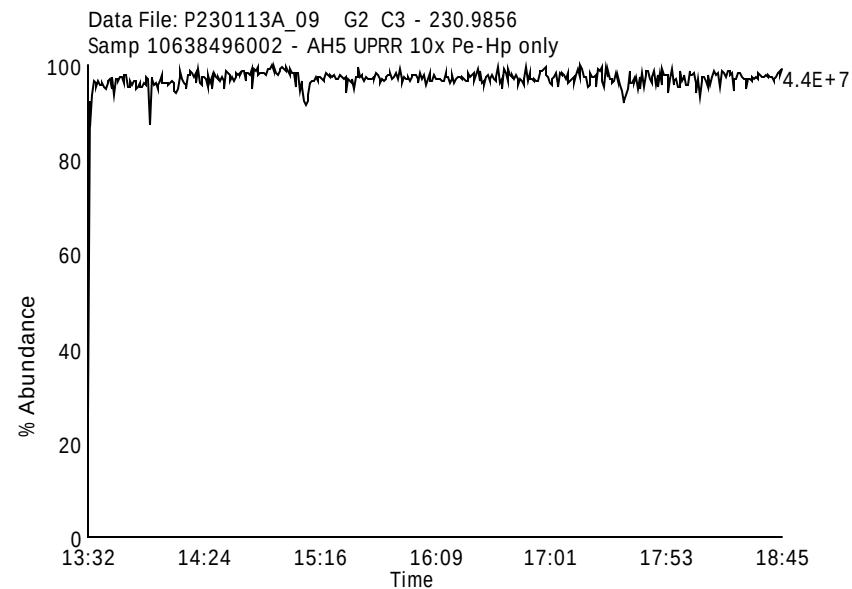
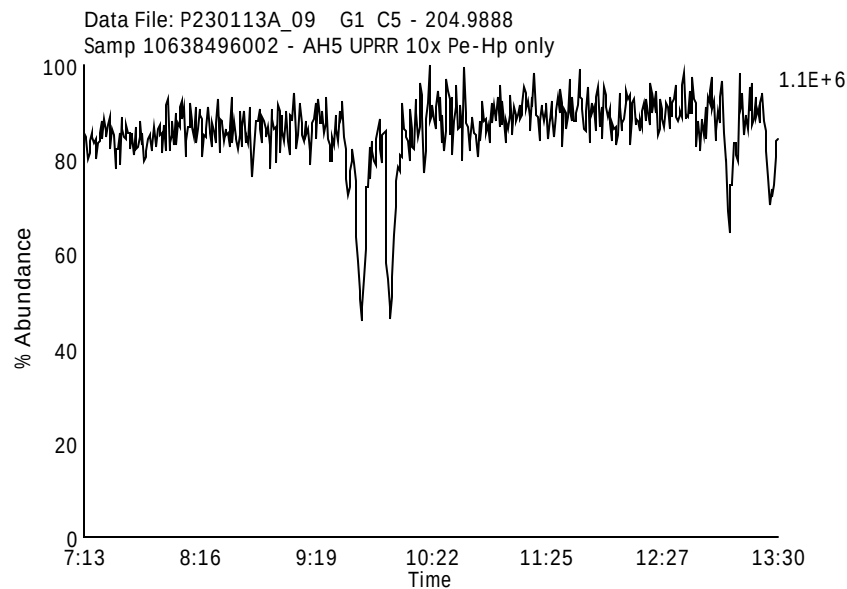
Date Acquired: 1/13/2023

Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Group 5 - 7 Lock mass

Data File Name: P230113A_09

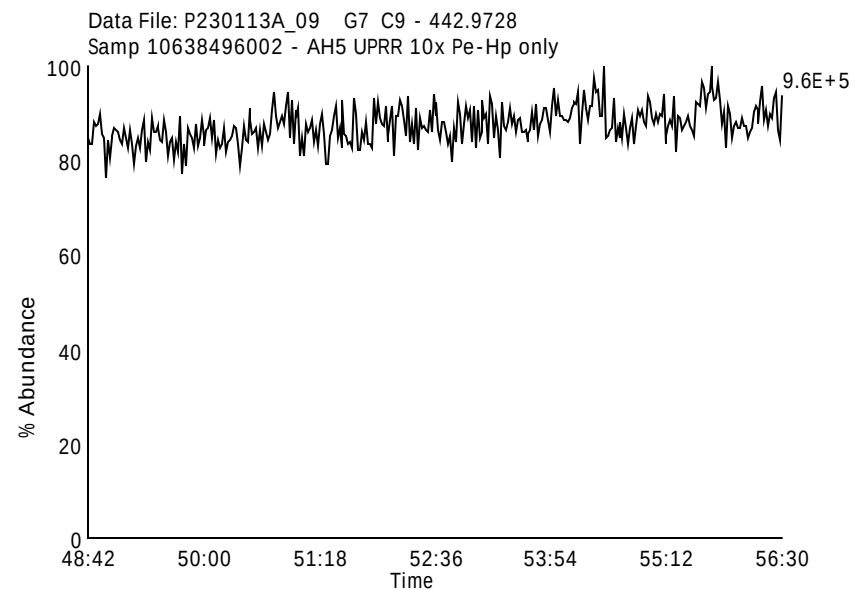
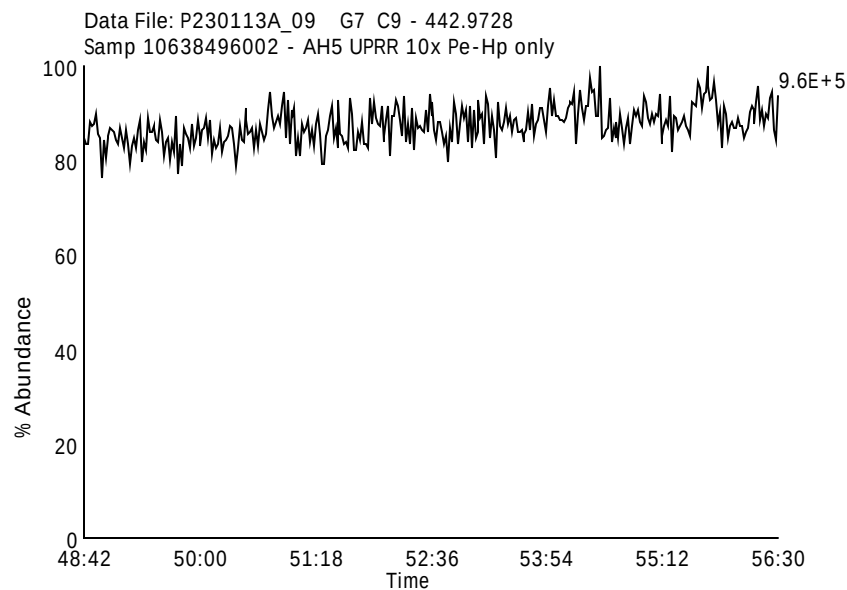
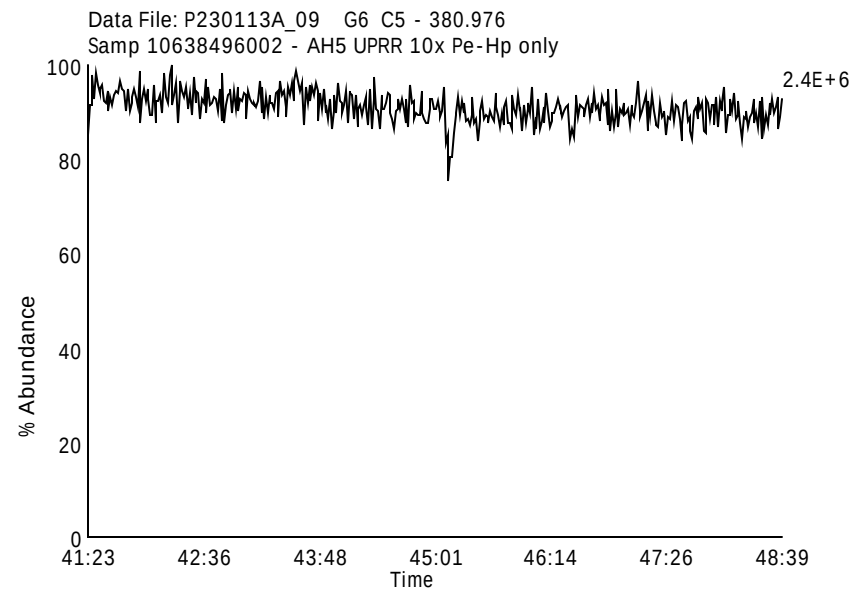
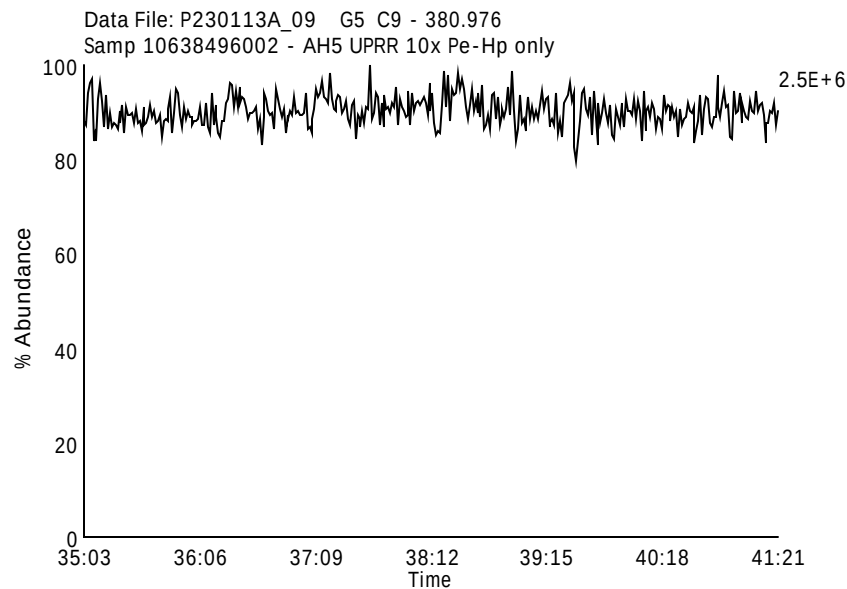
Date Acquired: 1/13/2023

Sample Description: Samp 10638496002 - AH5 UPRR 10x Pe-Hp only

Lab Sample ID: 10638496002

Instrument: 10MSHR09 (P)

Client Sample ID: SB08-0.5-110322



Labeled Mono Chlorinated Biphenyls

Data File Name: P230113A_13

Lab Sample ID: 10638496003

Date Acquired: 1/13/2023

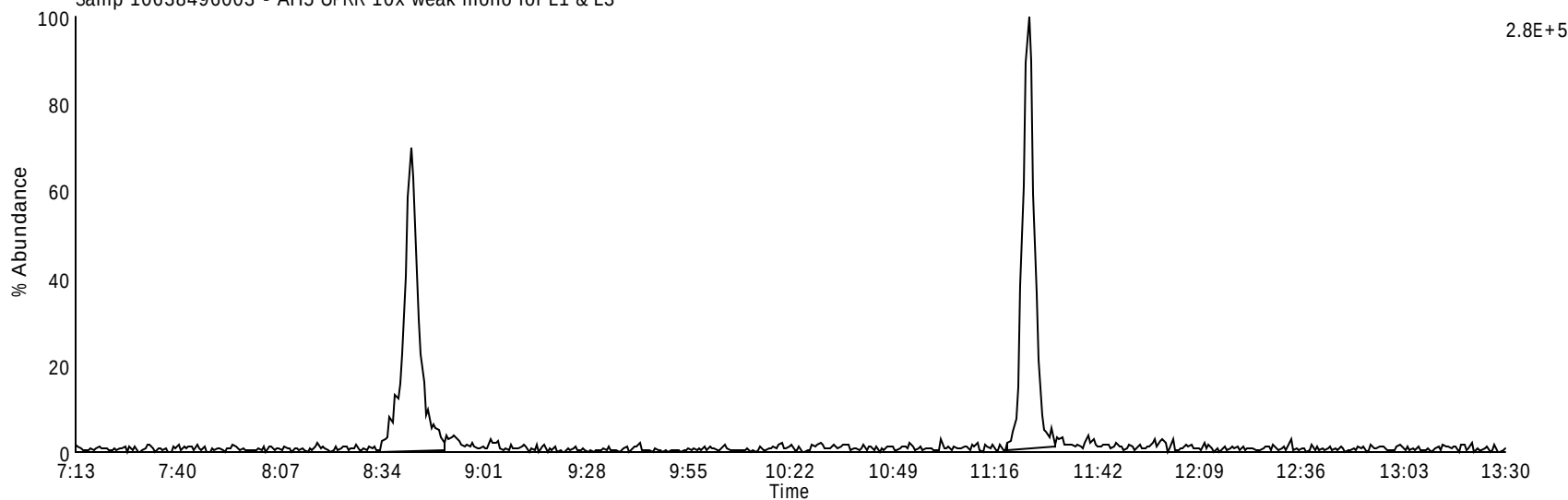
Instrument: 10MSHR09 (P)

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

Client Sample ID: SB10-0.0-0.5-1022

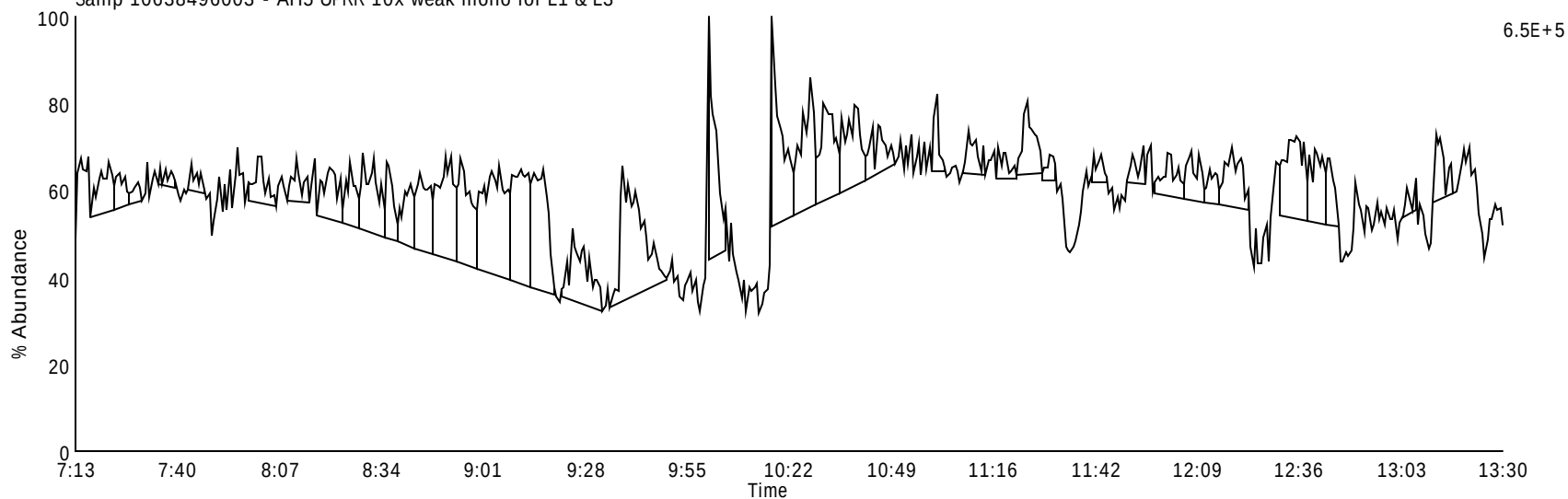
Data File: P230113A_13 G1 C3 - 200.0795

Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3



Data File: P230113A_13 G1 C4 - 202.0766

Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3



Labeled Di Chlorinated Biphenyls

Data File Name: P230113A_13

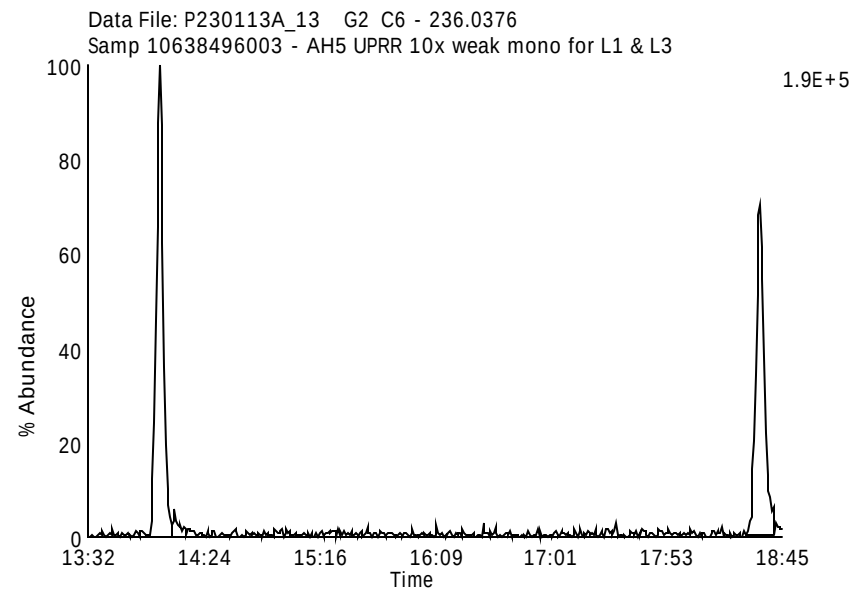
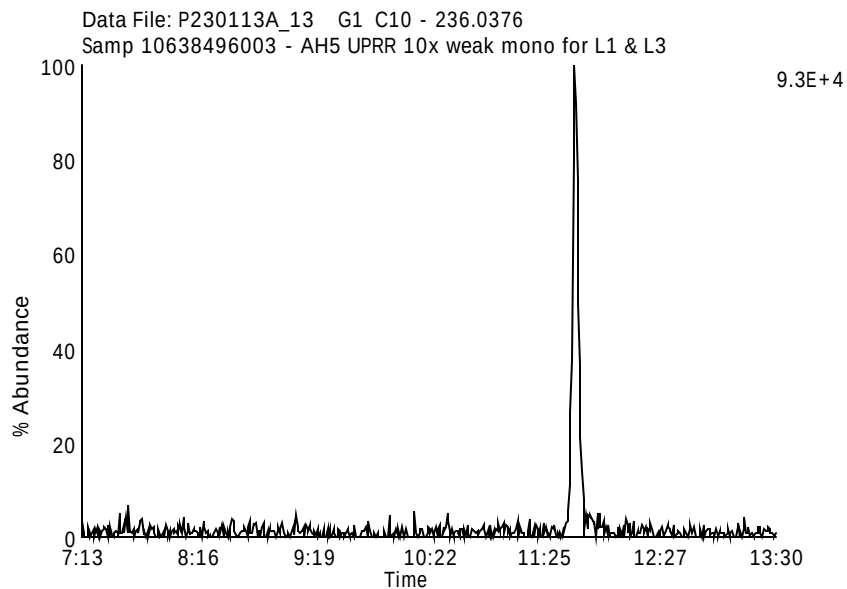
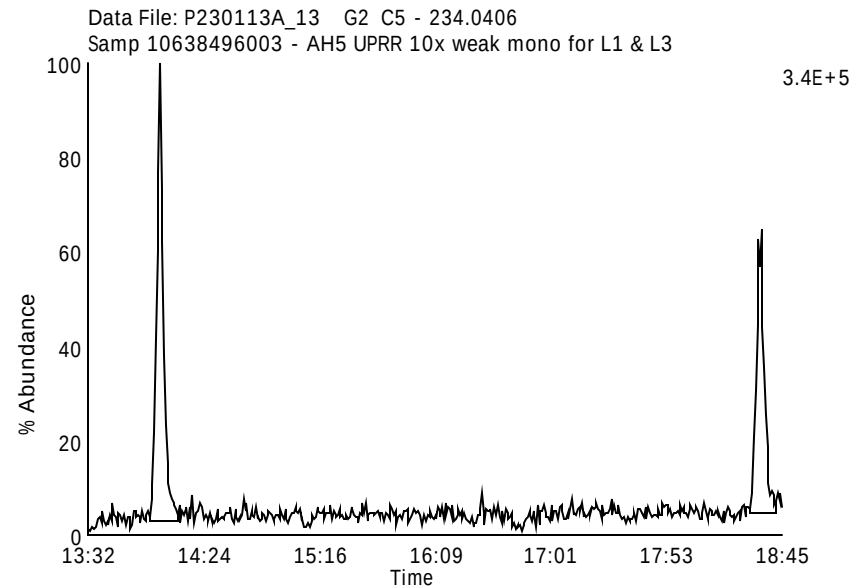
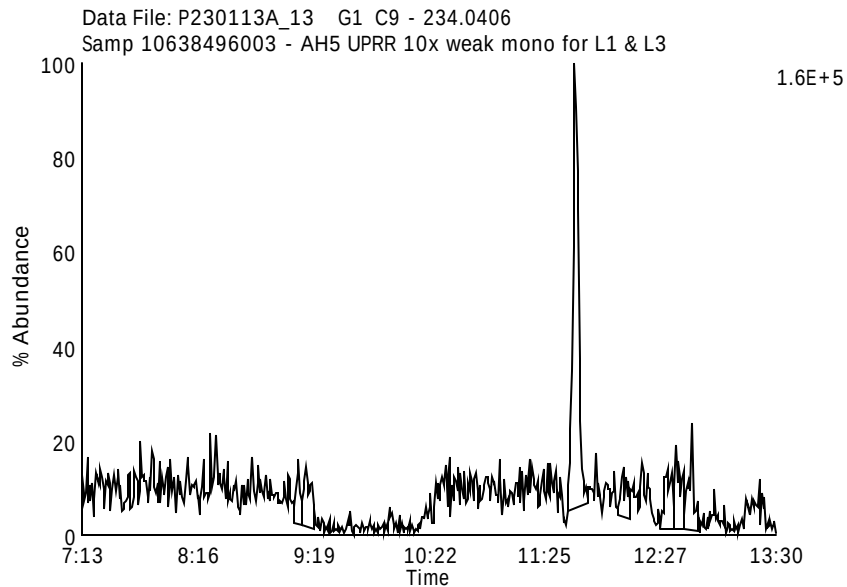
Date Acquired: 1/13/2023

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Labeled Tri Chlorinated Biphenyls

Data File Name: P230113A_13

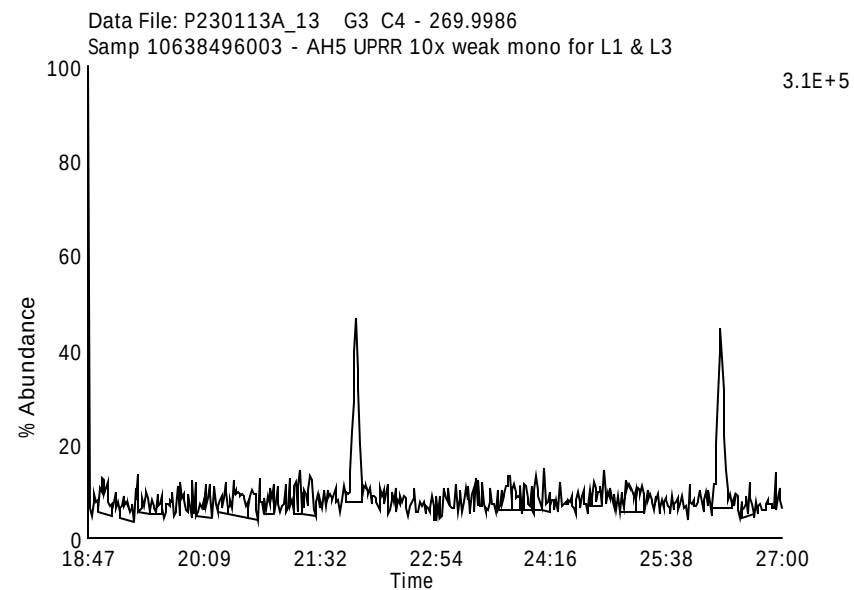
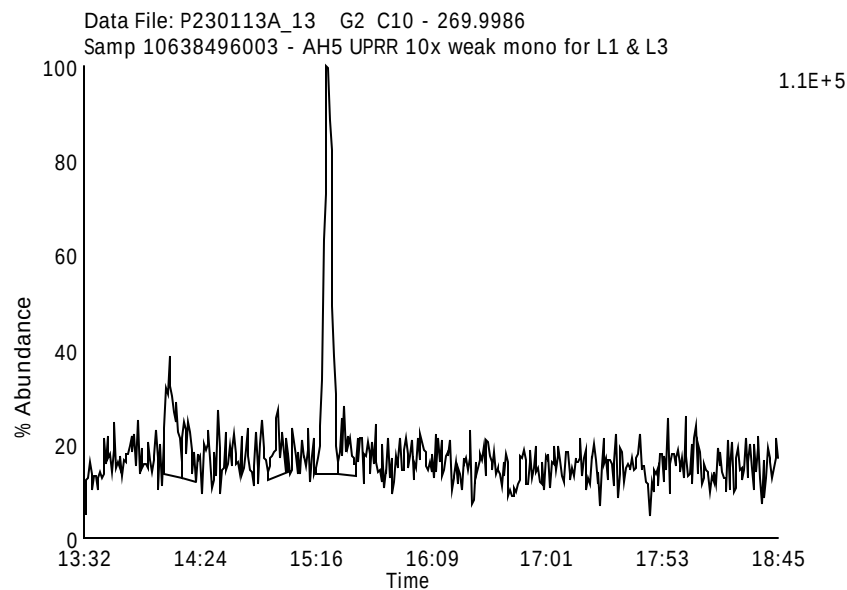
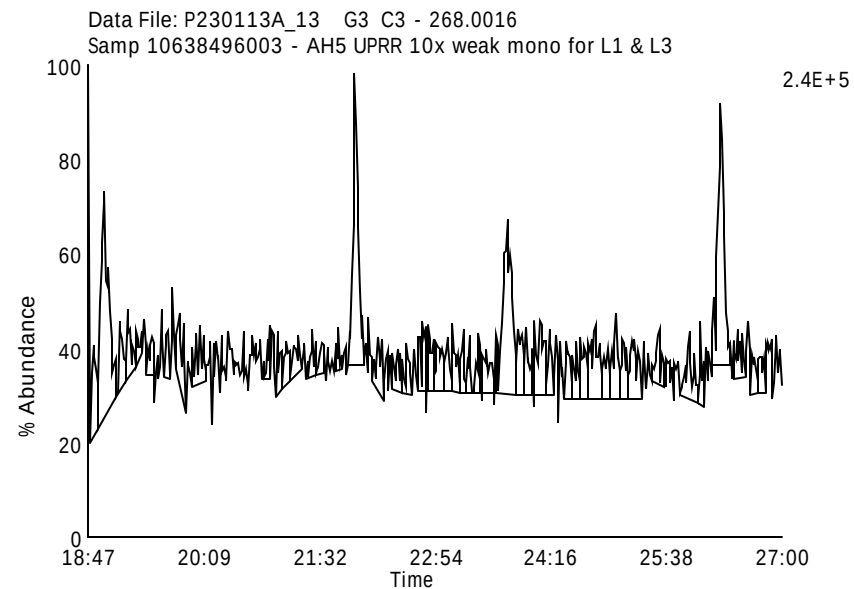
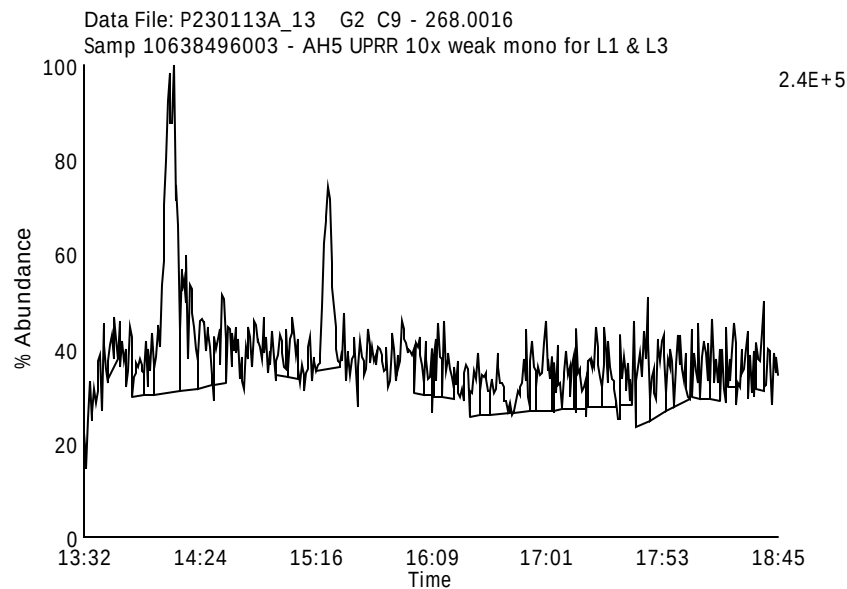
Date Acquired: 1/13/2023

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Labeled Tetra Chlorinated Biphenyls

Data File Name: P230113A_13

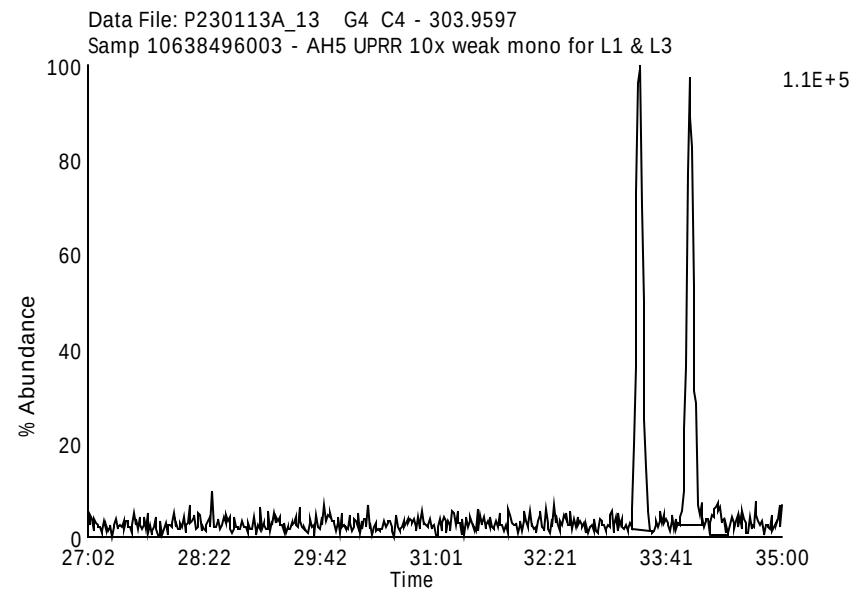
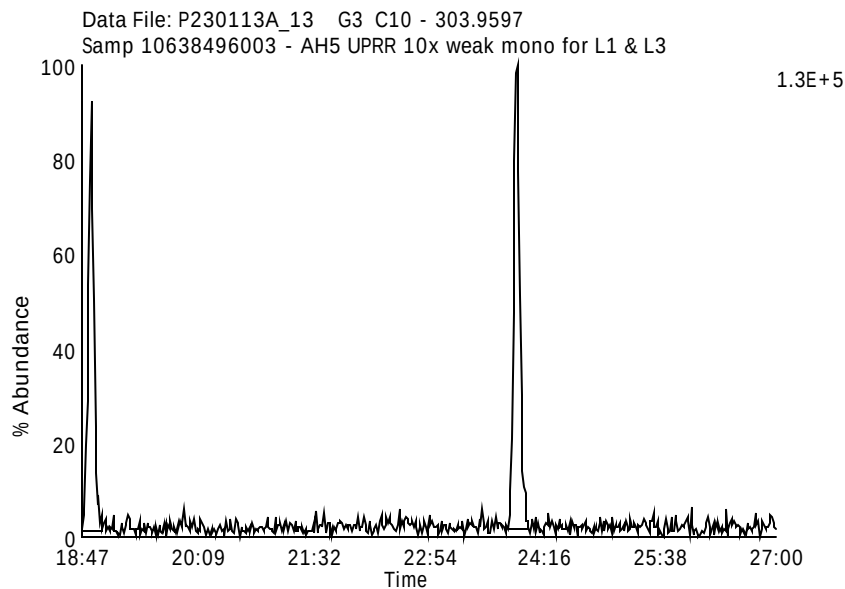
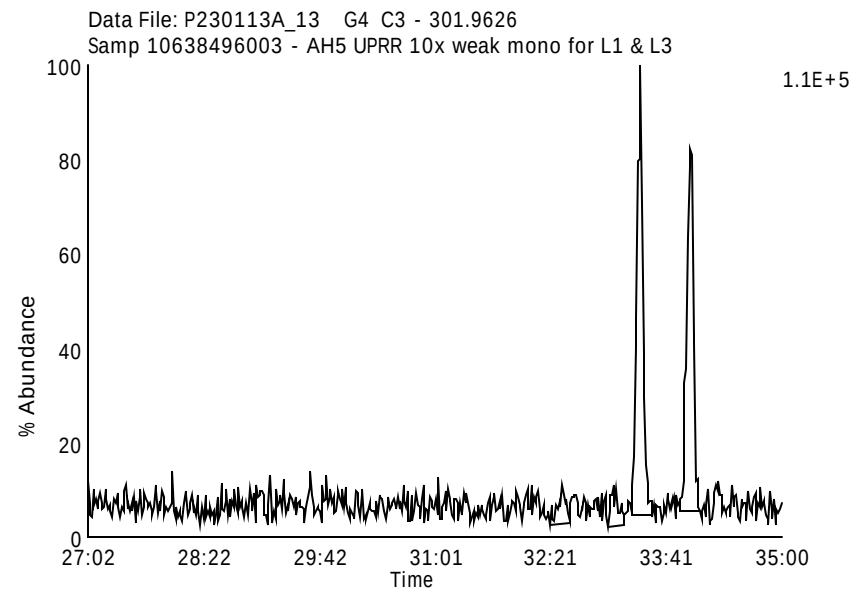
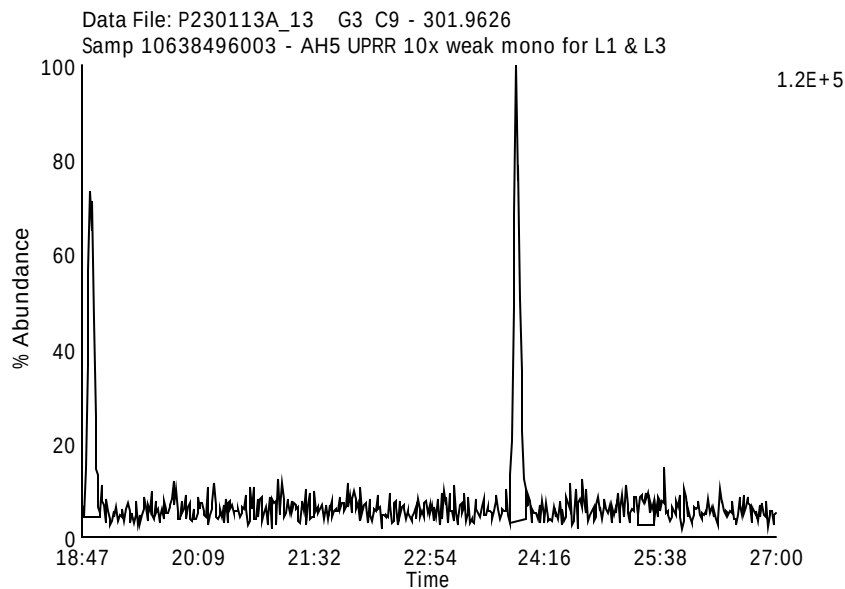
Date Acquired: 1/13/2023

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Labeled Penta Chlorinated Biphenyls

Data File Name: P230113A_13

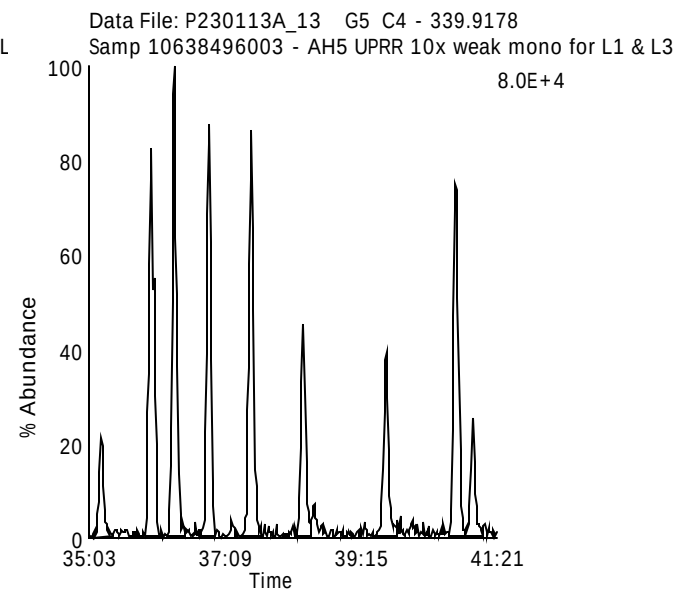
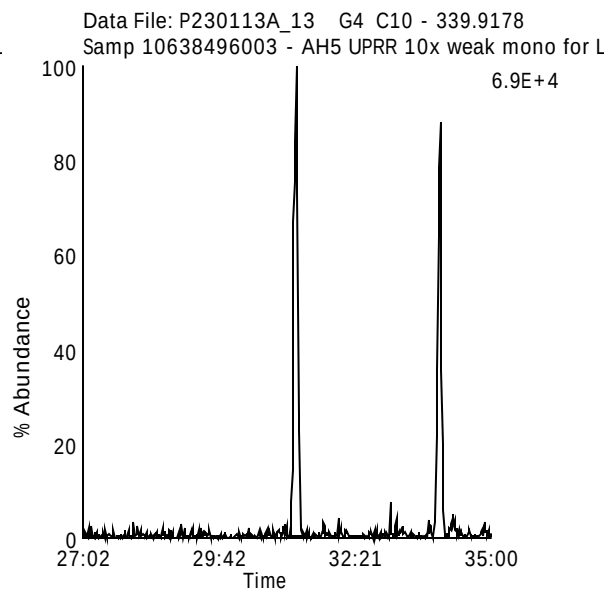
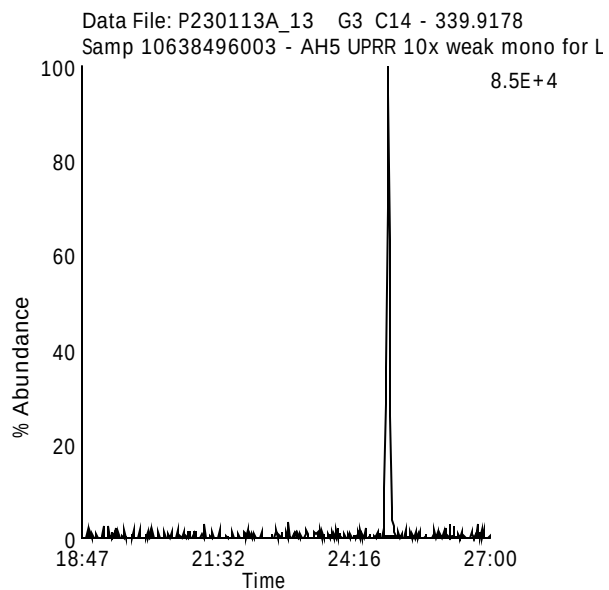
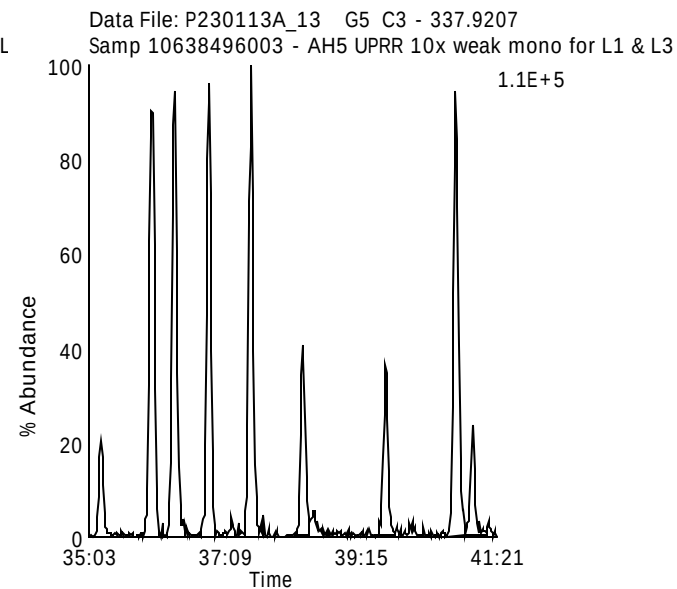
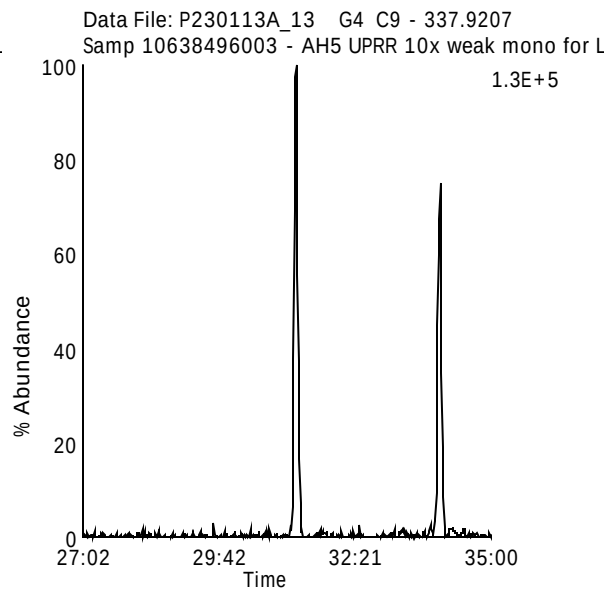
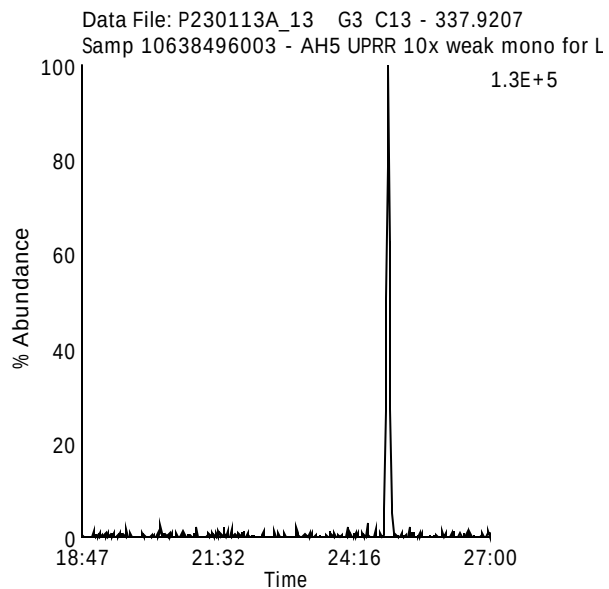
Lab Sample ID: 10638496003

Date Acquired: 1/13/2023

Instrument: 10MSHR09 (P)

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

Client Sample ID: SB10-0.0-0.5-1022



Labeled Hexa Chlorinated Biphenyls

Data File Name: P230113A_13

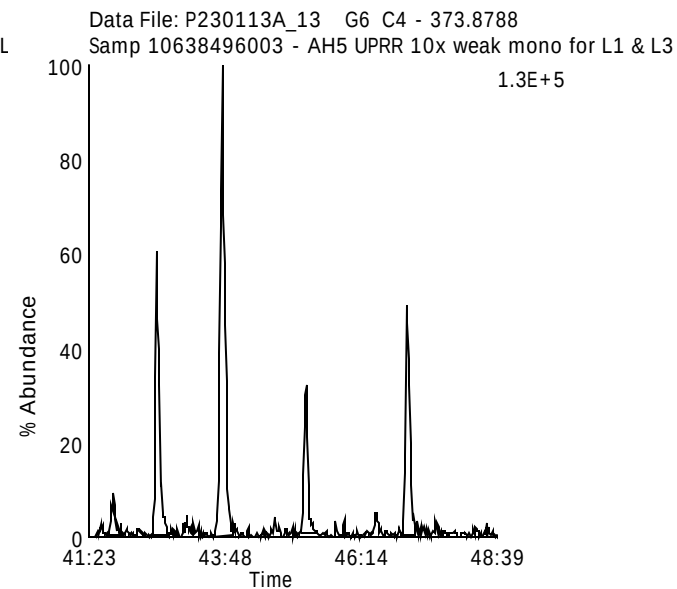
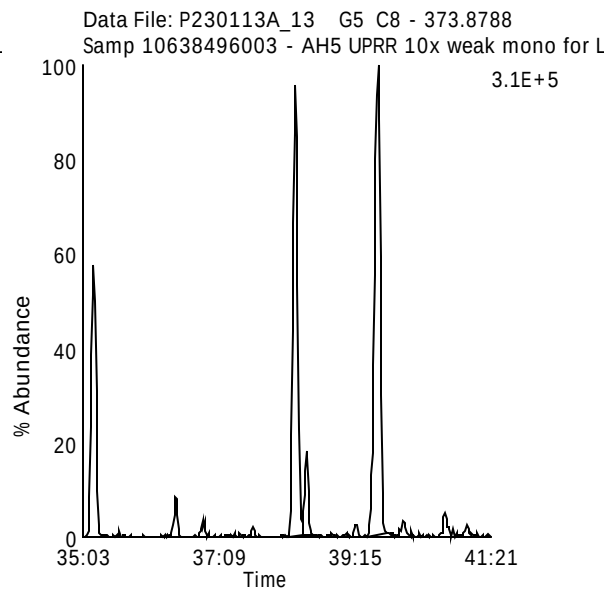
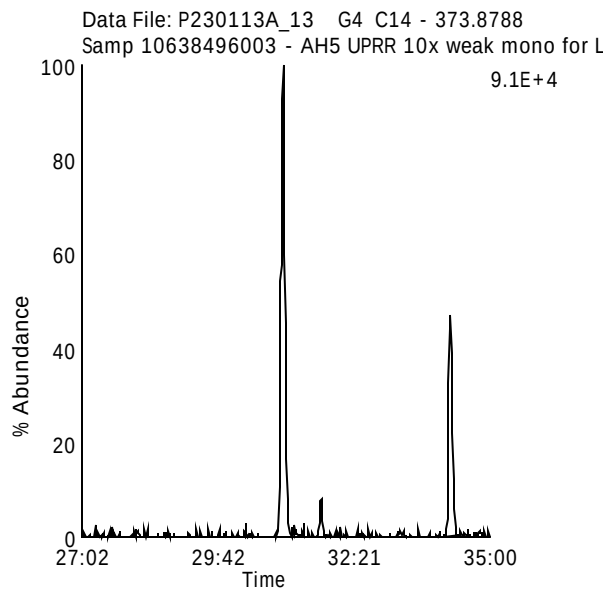
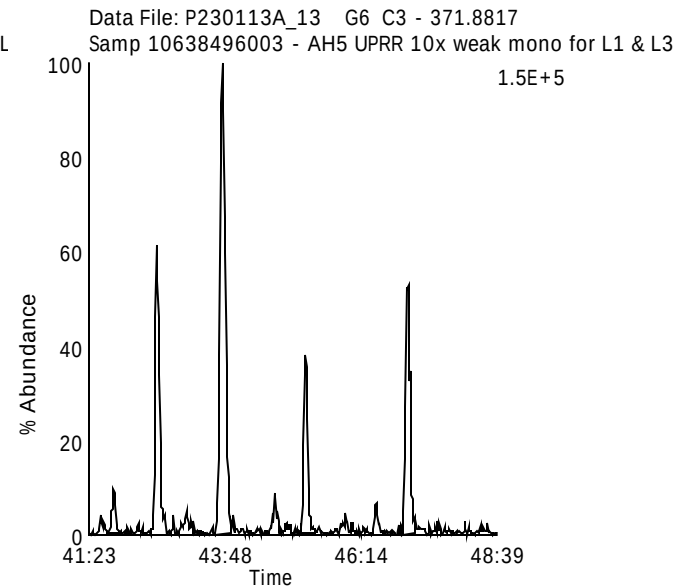
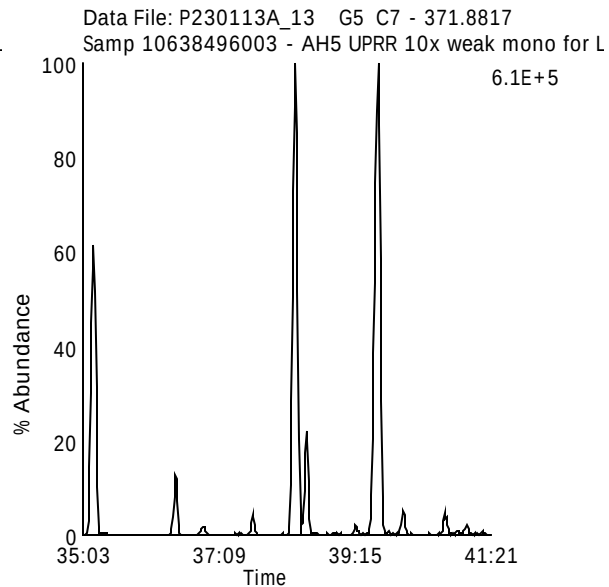
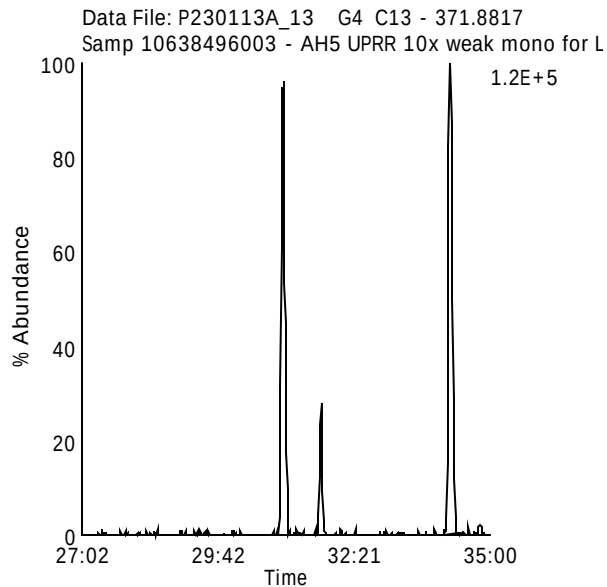
Date Acquired: 1/13/2023

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Labeled Hepta Chlorinated Biphenyls

Data File Name: P230113A_13

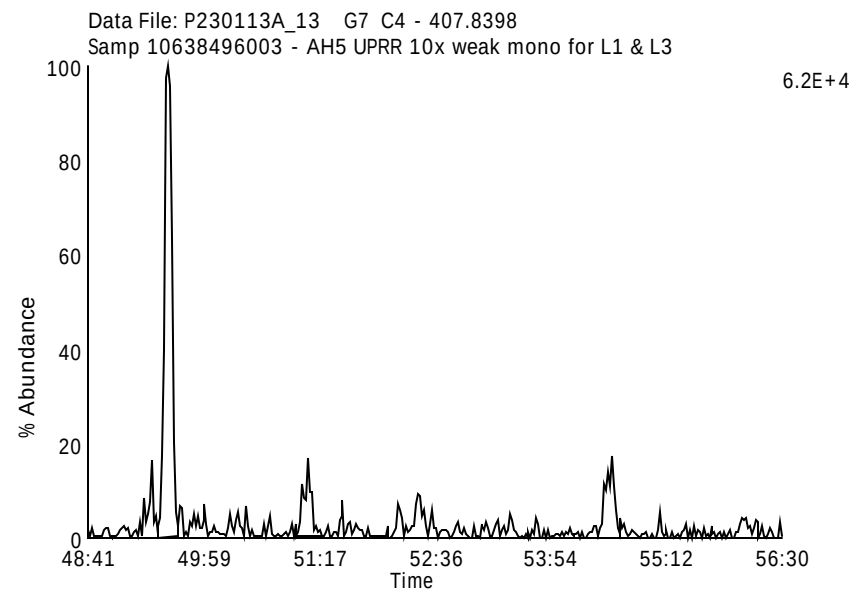
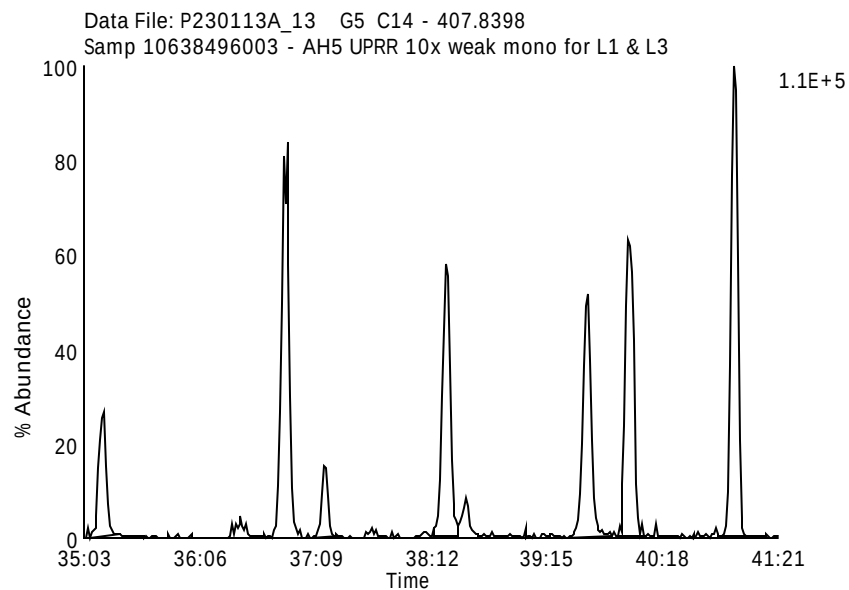
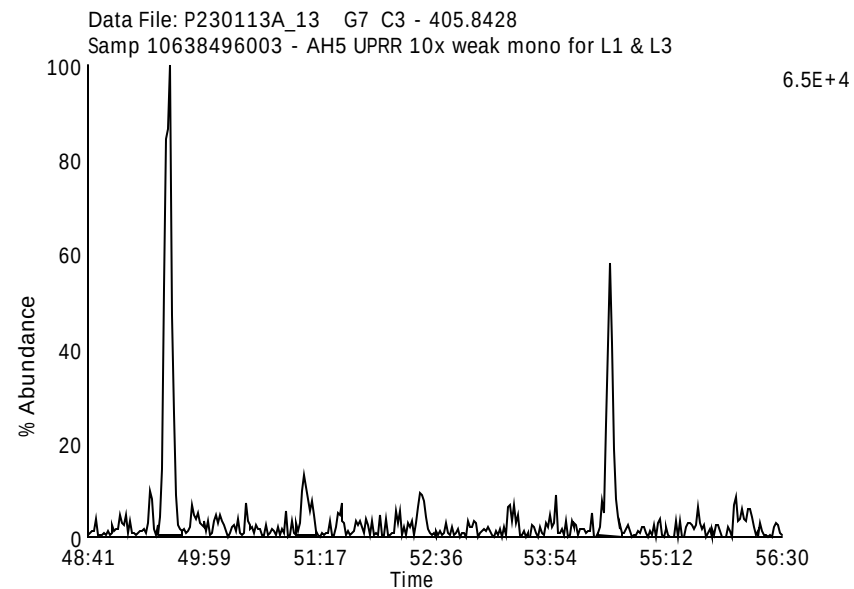
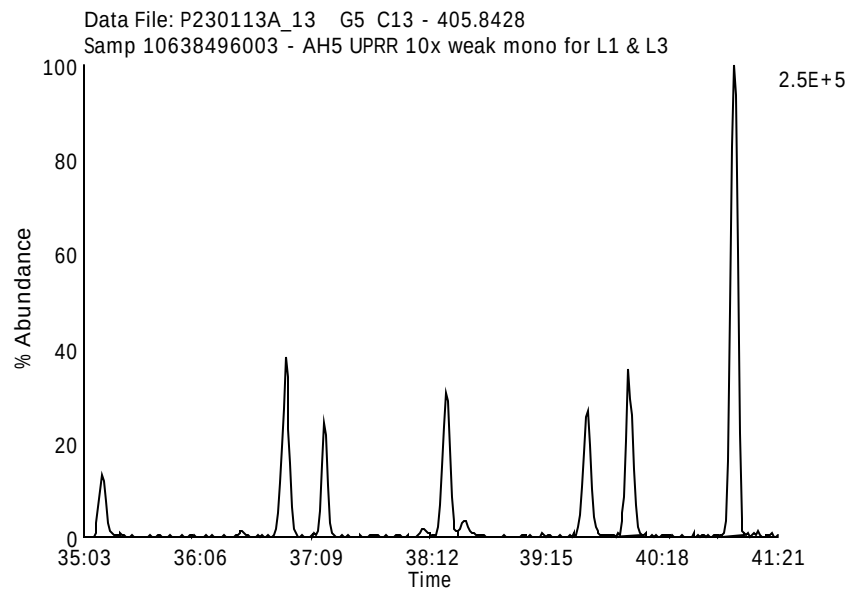
Date Acquired: 1/13/2023

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Labeled Octa Chlorinated Biphenyls

Data File Name: P230113A_13

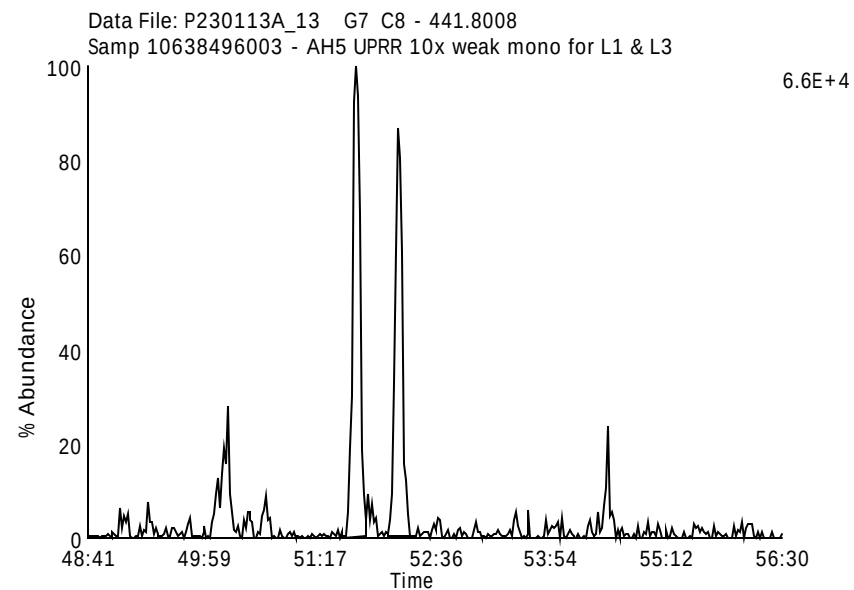
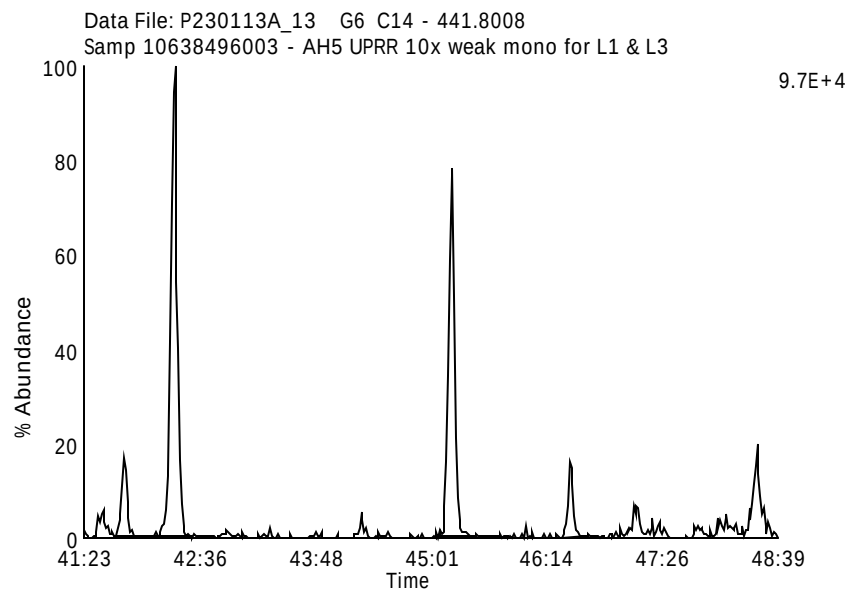
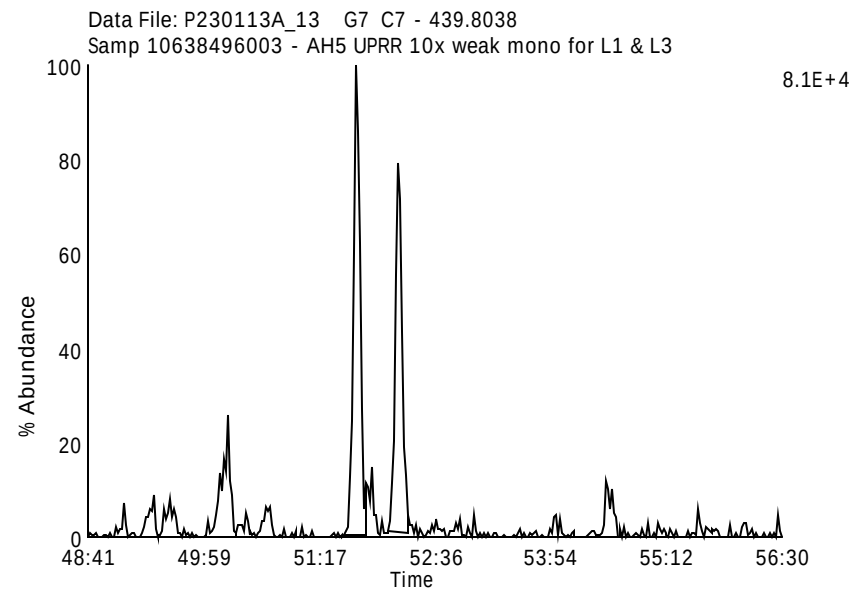
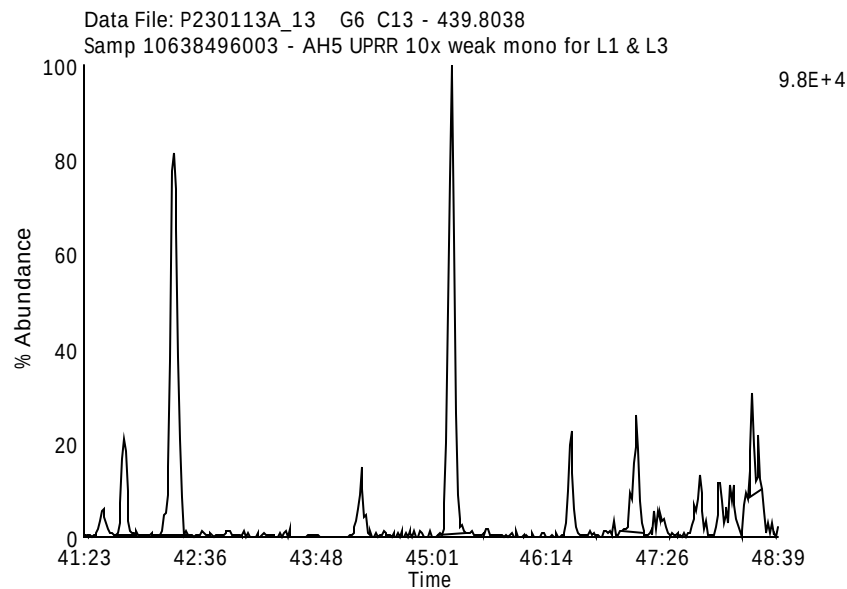
Date Acquired: 1/13/2023

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Labeled Nona Chlorinated Biphenyls

Data File Name: P230113A_13

Lab Sample ID: 10638496003

Date Acquired: 1/13/2023

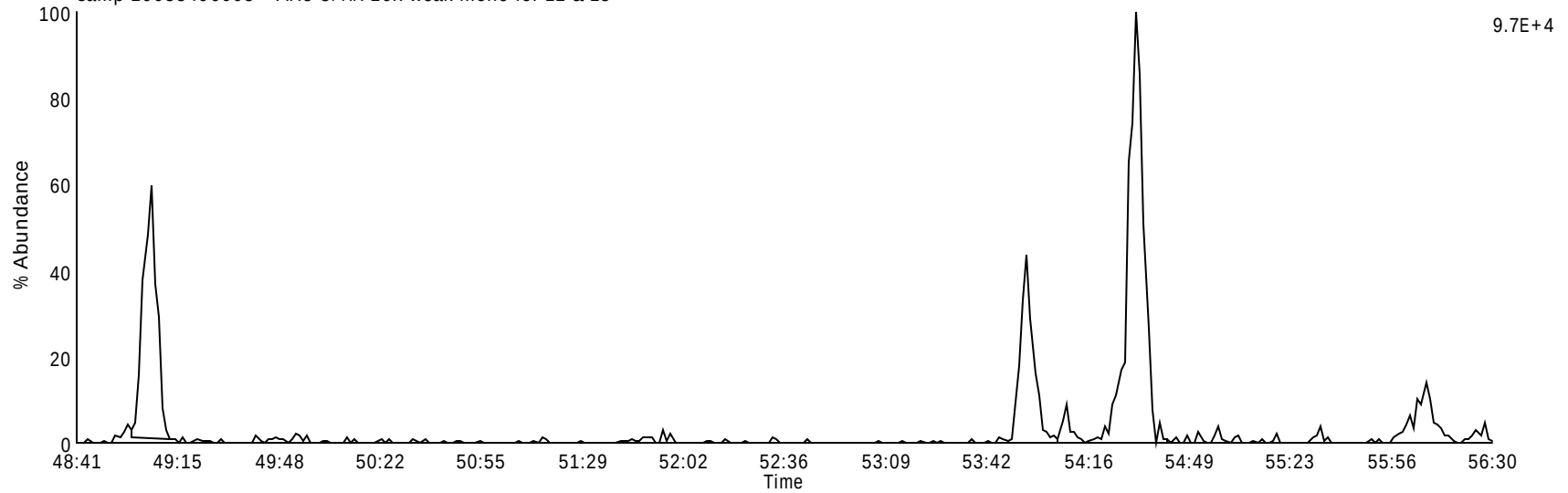
Instrument: 10MSHR09 (P)

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

Client Sample ID: SB10-0.0-0.5-1022

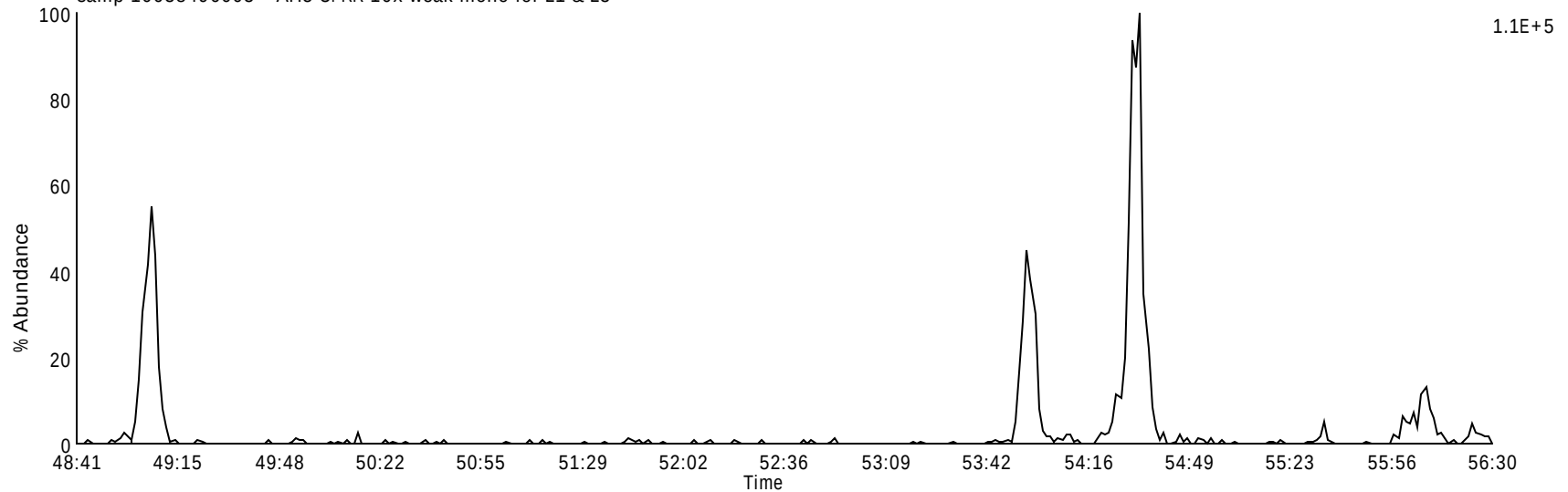
Data File: P230113A_13 G7 C13 - 473.7648

Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3



Data File: P230113A_13 G7 C14 - 475.7619

Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3



Labeled Deca Chlorinated Biphenyl

Data File Name: P230113A_13

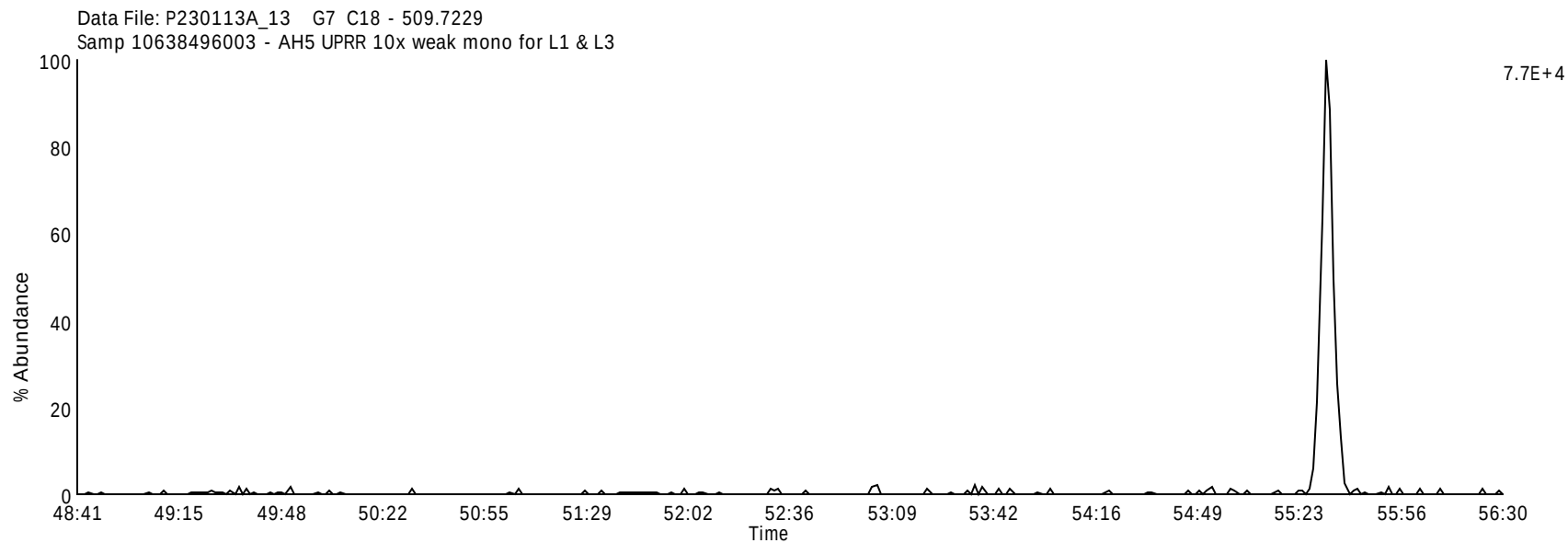
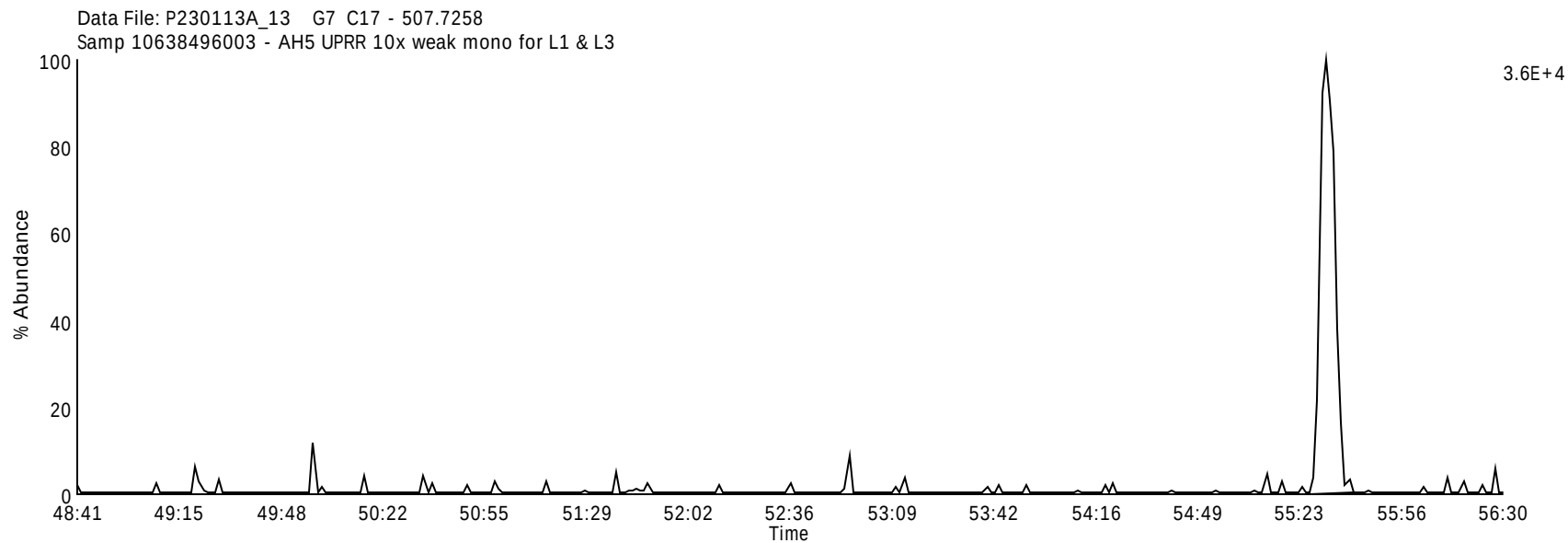
Date Acquired: 1/13/2023

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Mono Chlorinated Biphenyls

Data File Name: P230113A_13

Date Acquired: 1/13/2023

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

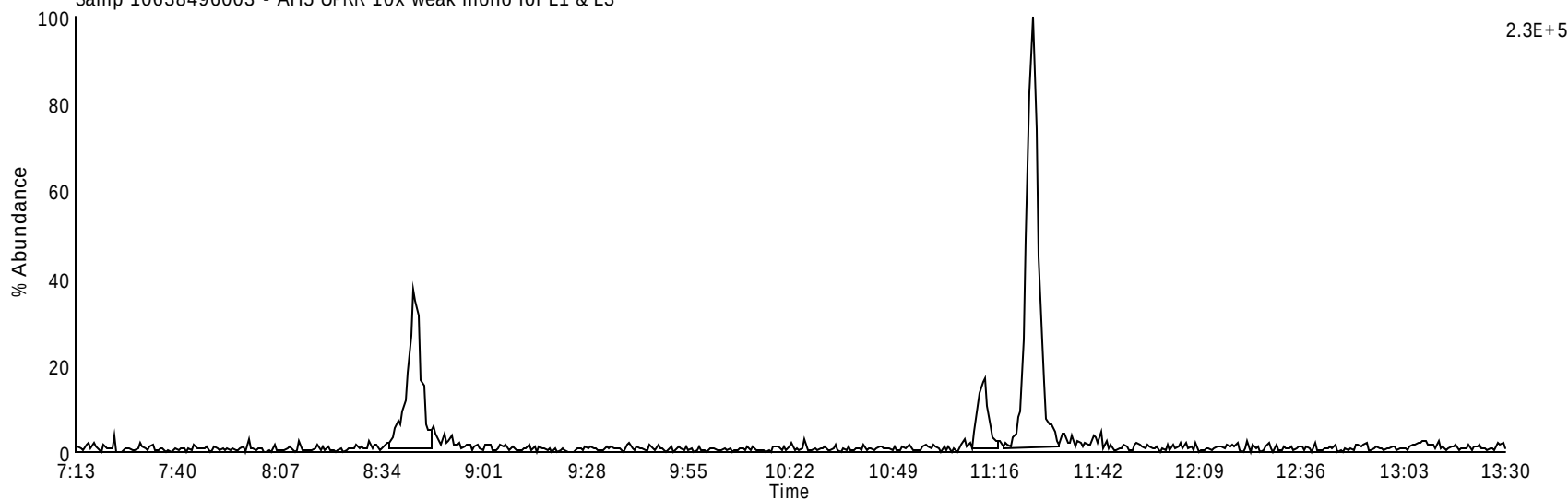
Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022

Data File: P230113A_13 G1 C1 - 188.0393

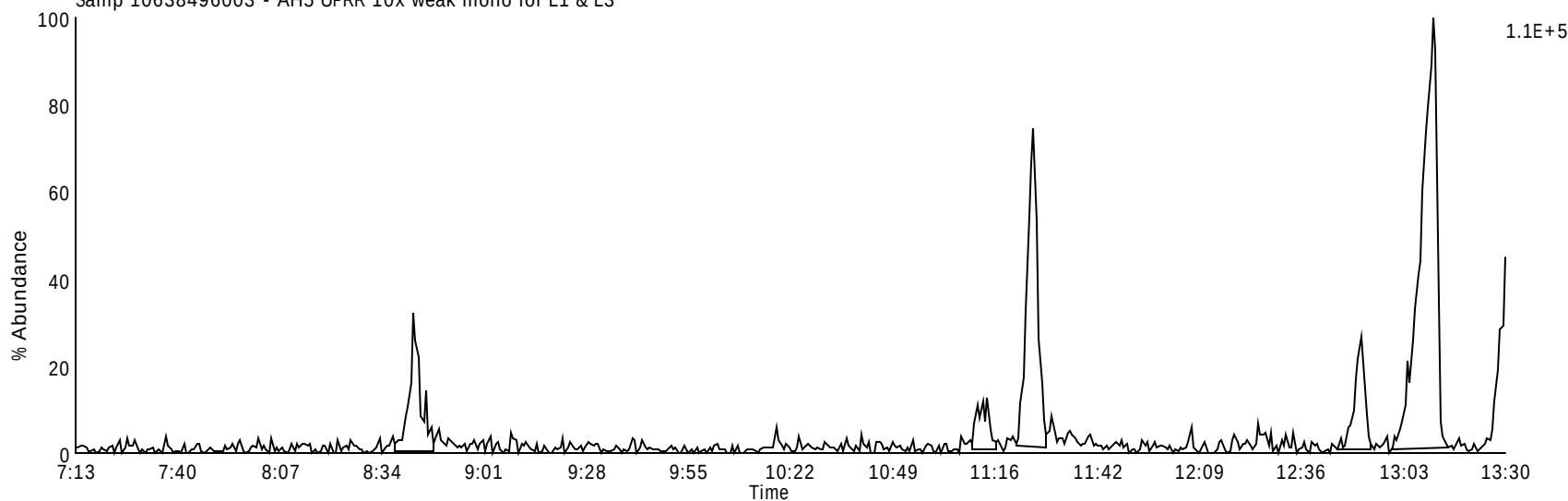
Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3



2.3E+5

Data File: P230113A_13 G1 C2 - 190.0363

Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3



1.1E+5

Di Chlorinated Biphenyls

Data File Name: P230113A_13

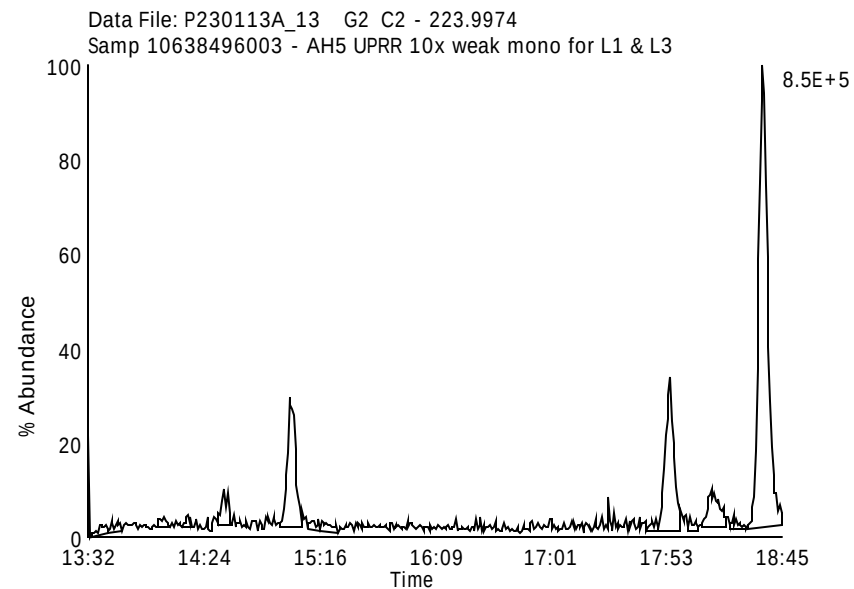
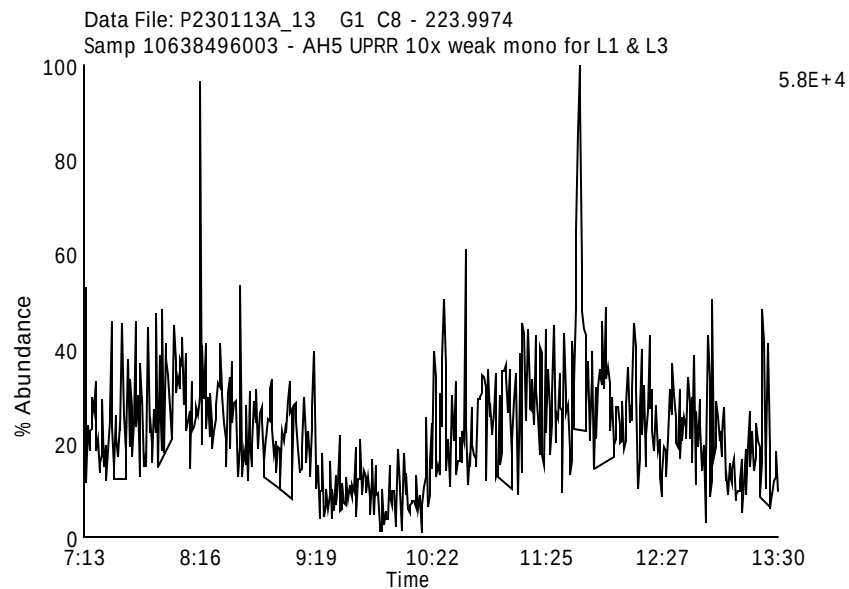
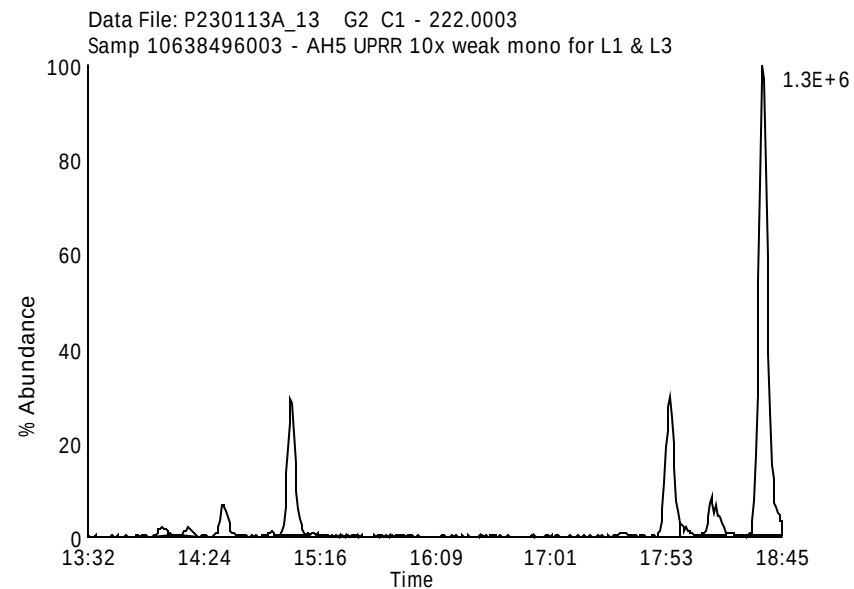
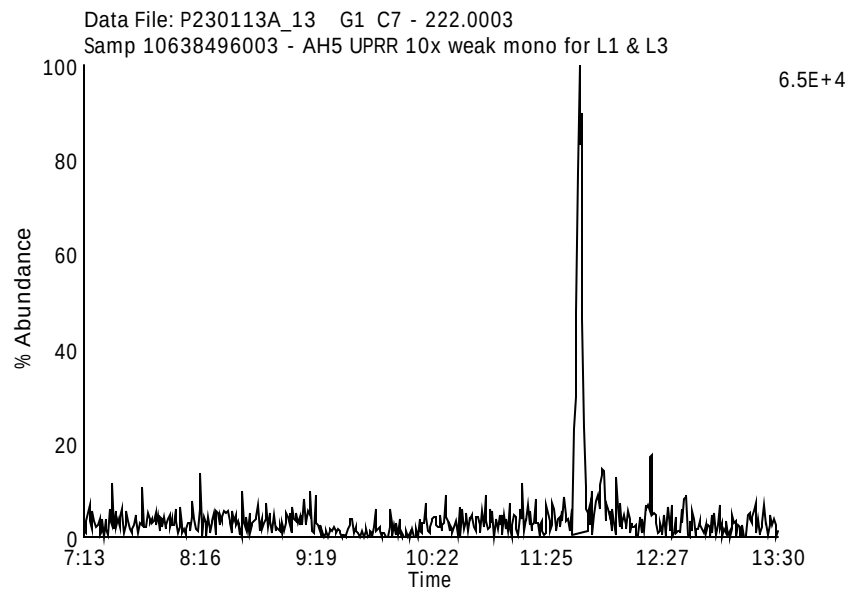
Date Acquired: 1/13/2023

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Tri Chlorinated Biphenyls

Data File Name: P230113A_13

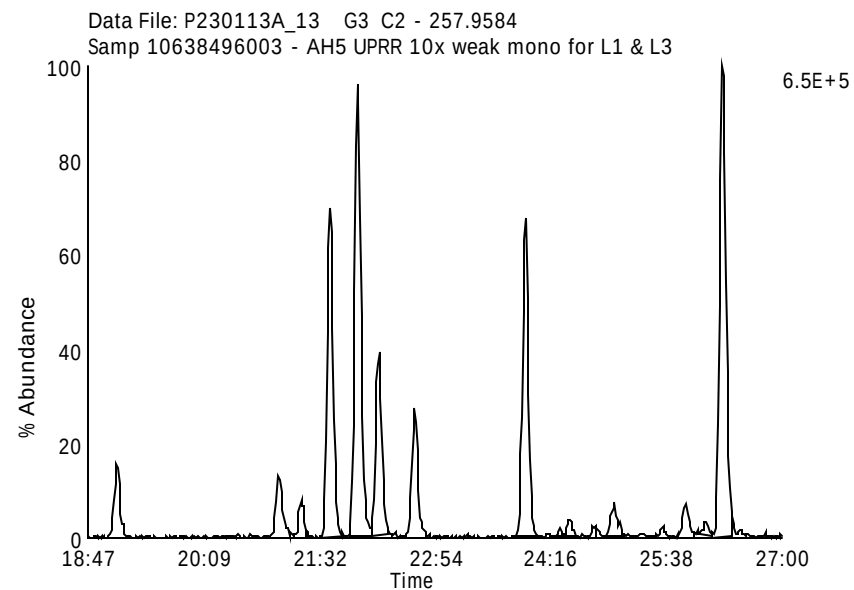
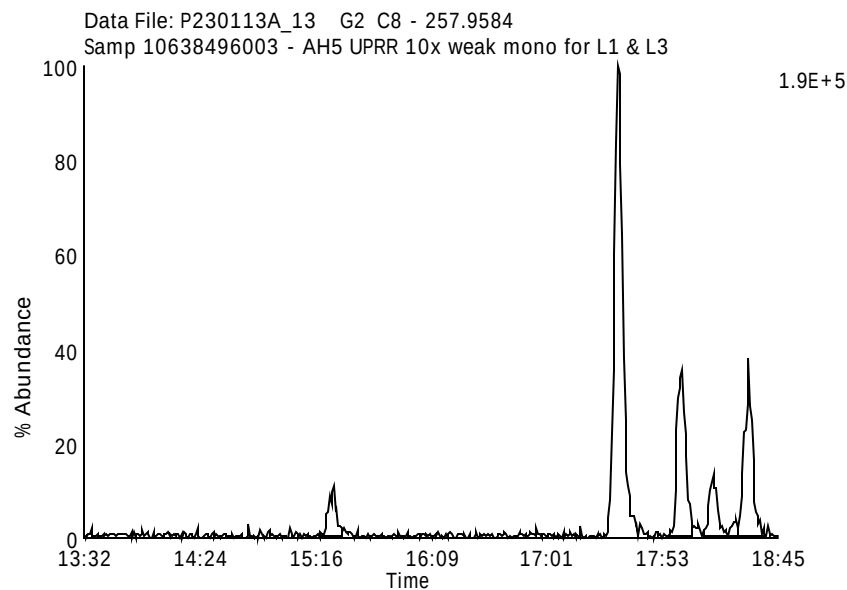
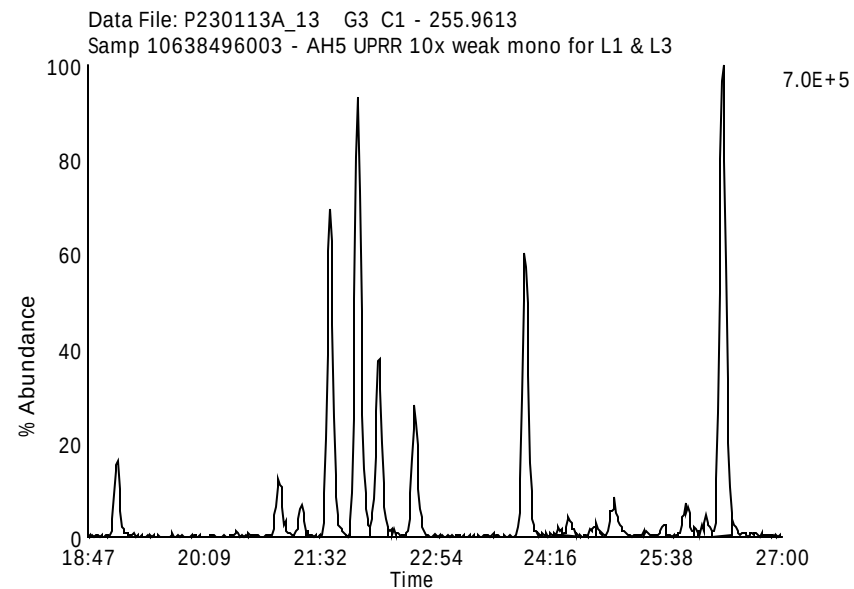
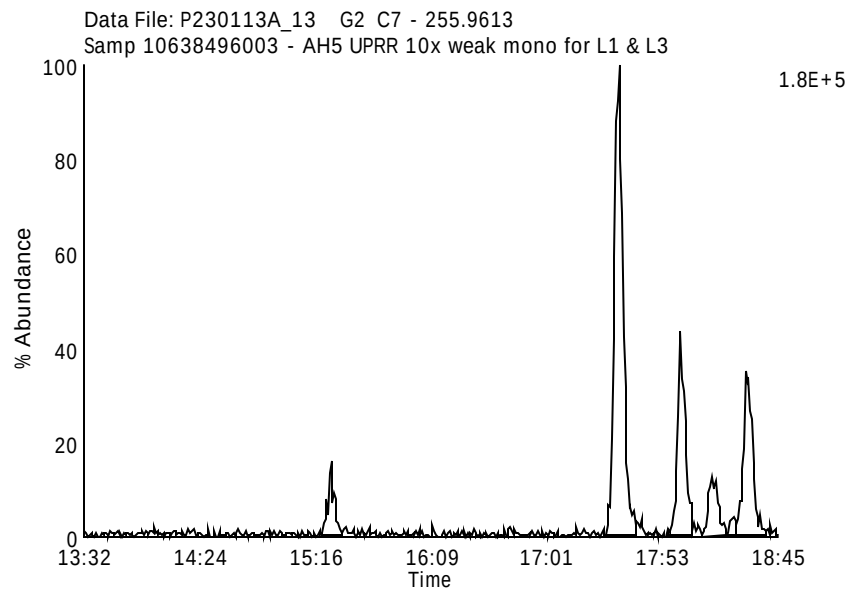
Date Acquired: 1/13/2023

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Tetra Chlorinated Biphenyls

Data File Name: P230113A_13

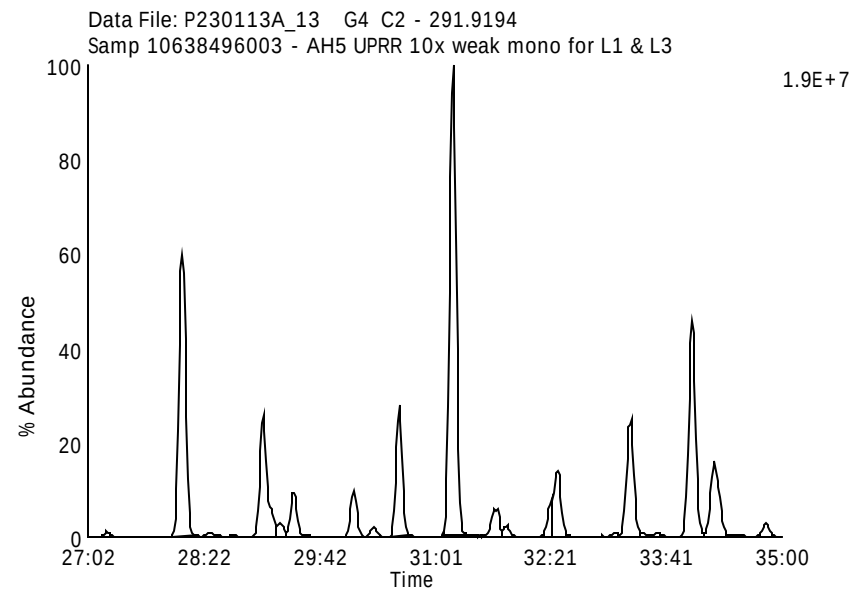
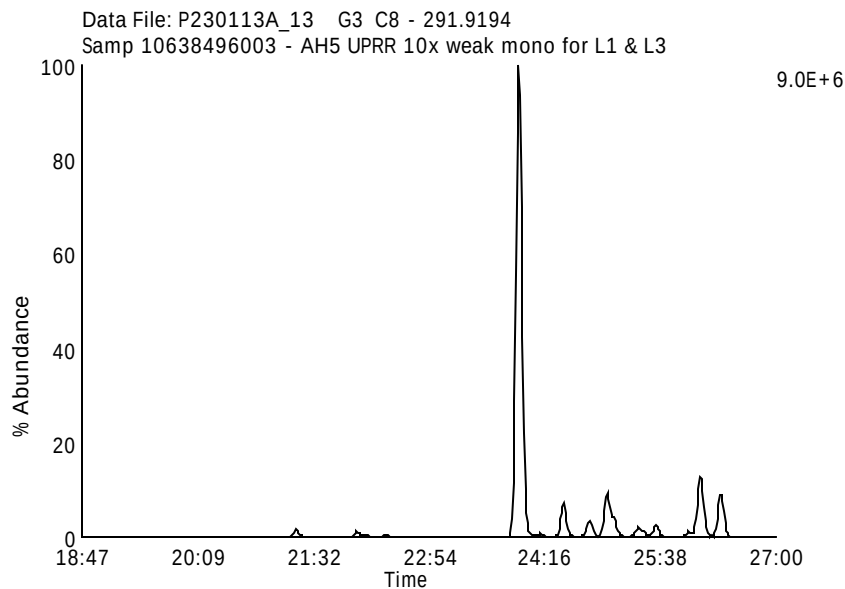
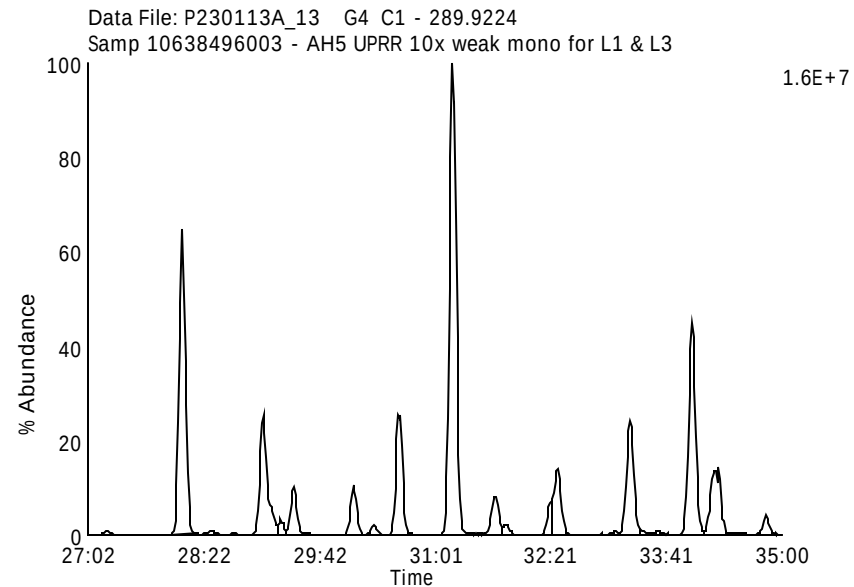
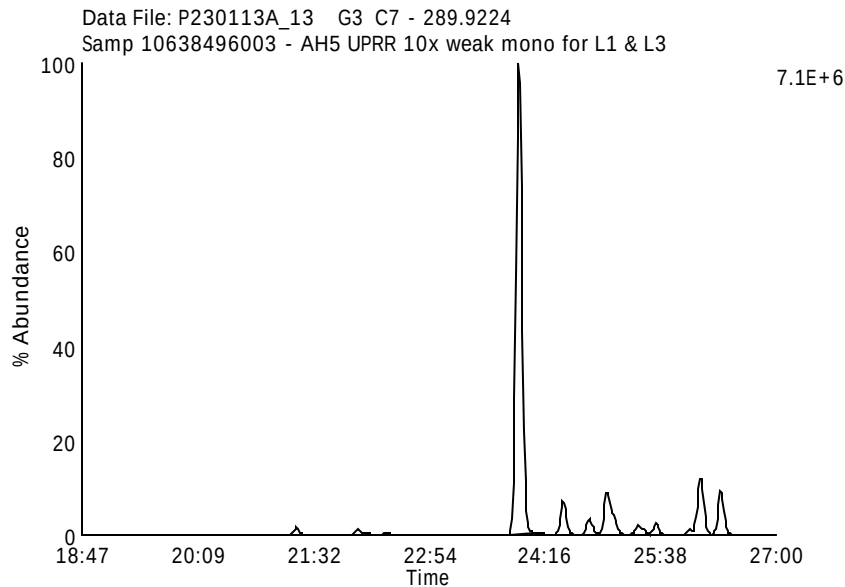
Date Acquired: 1/13/2023

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Penta Chlorinated Biphenyls

Data File Name: P230113A_13

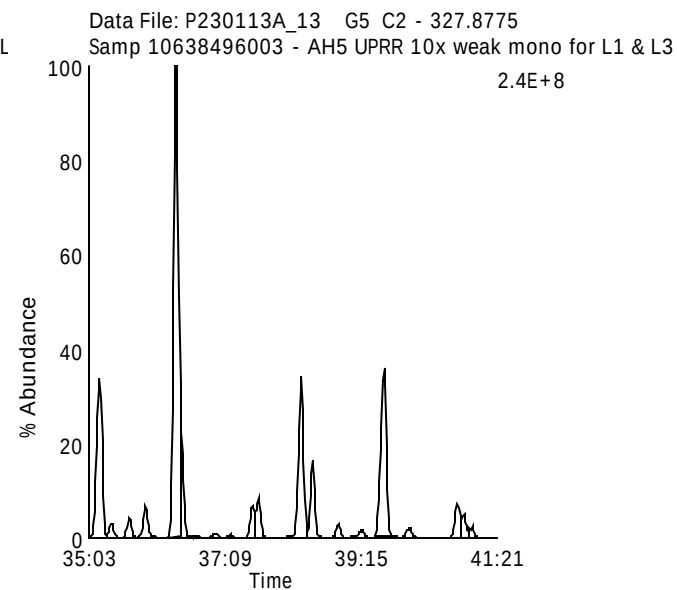
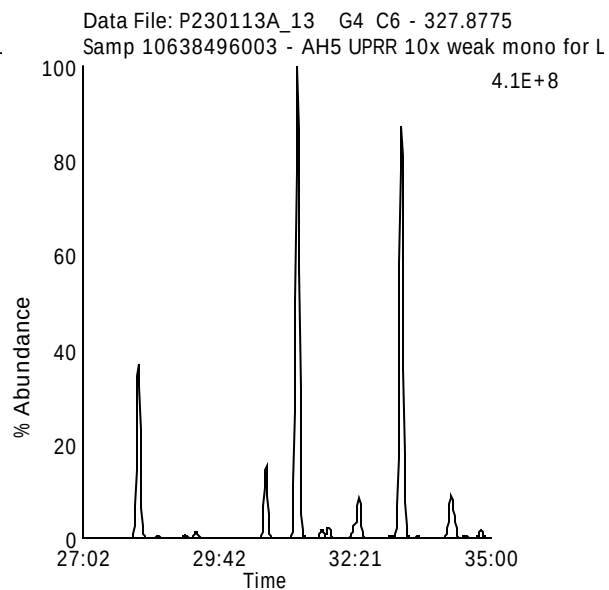
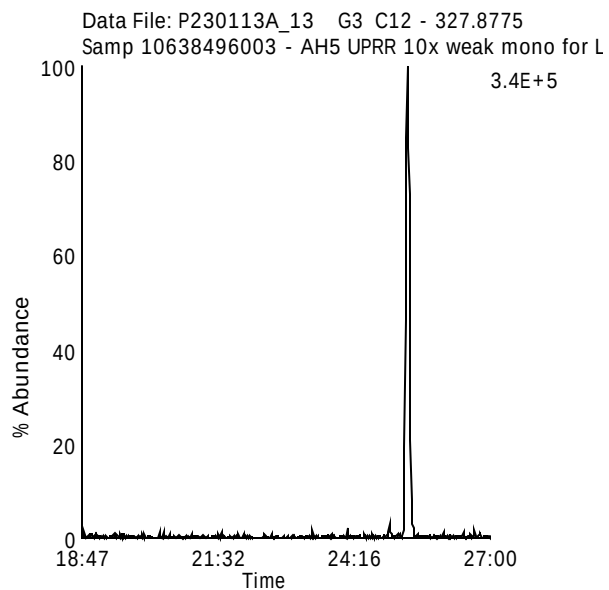
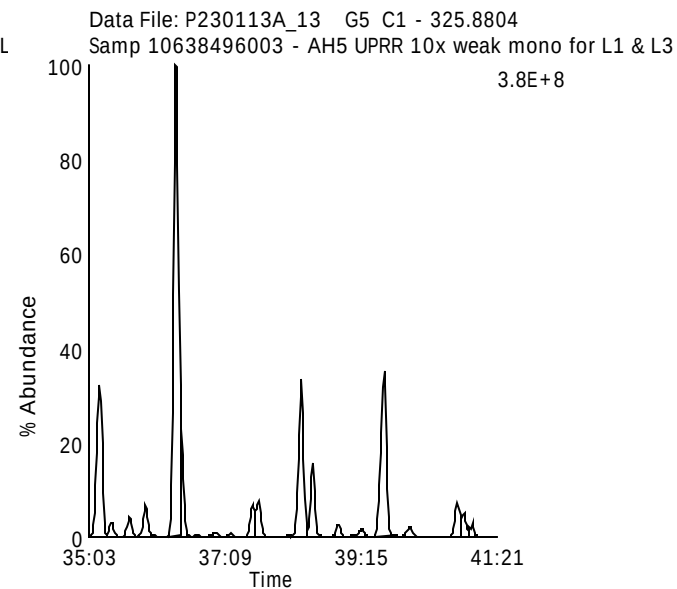
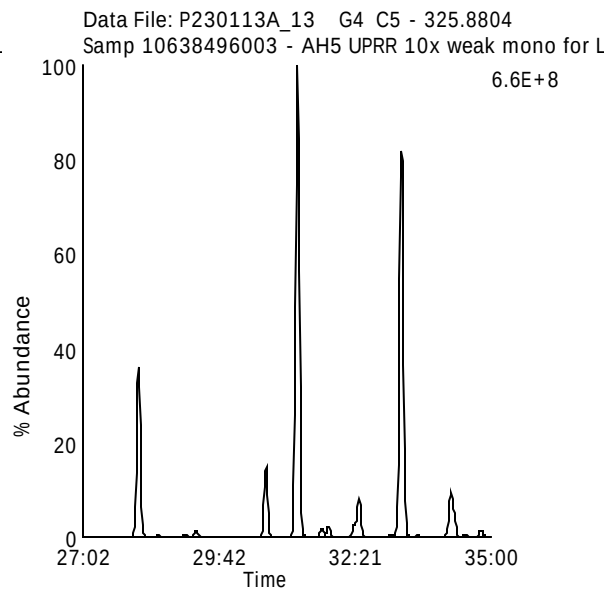
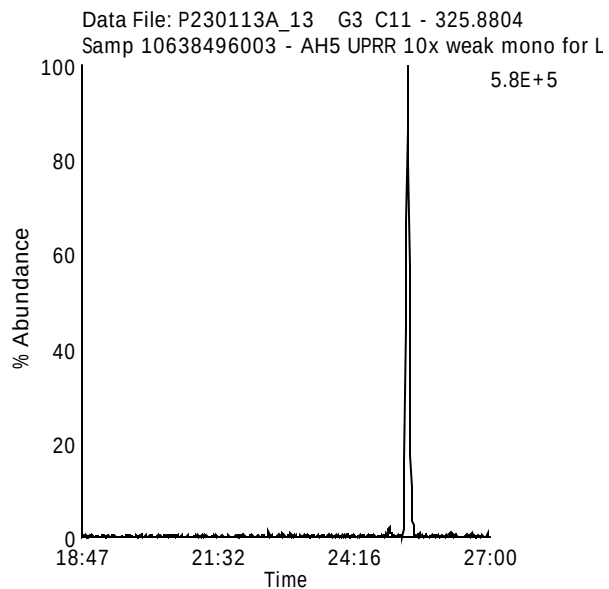
Date Acquired: 1/13/2023

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Hexa Chlorinated Biphenyls

Data File Name: P230113A_13

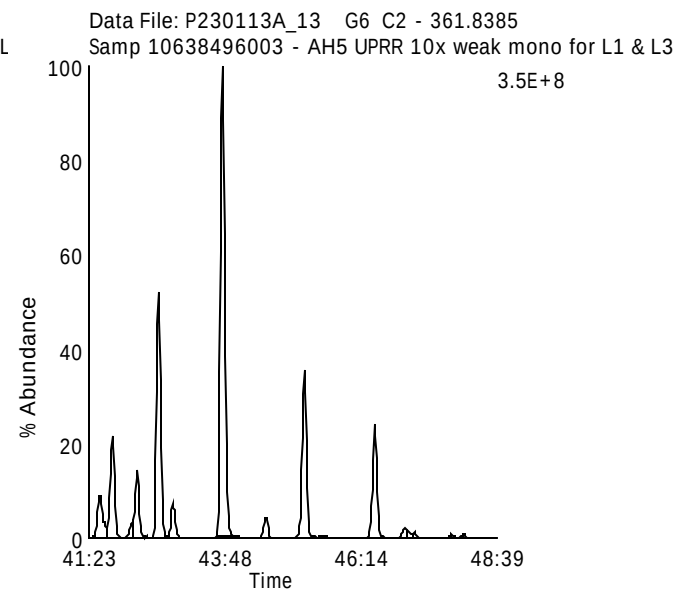
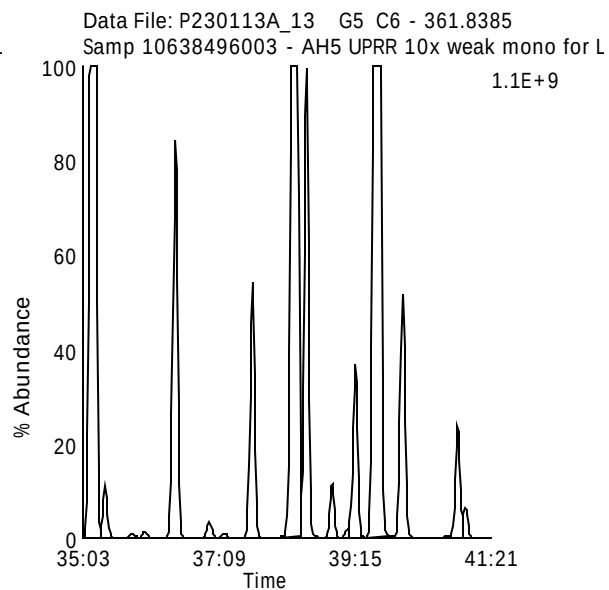
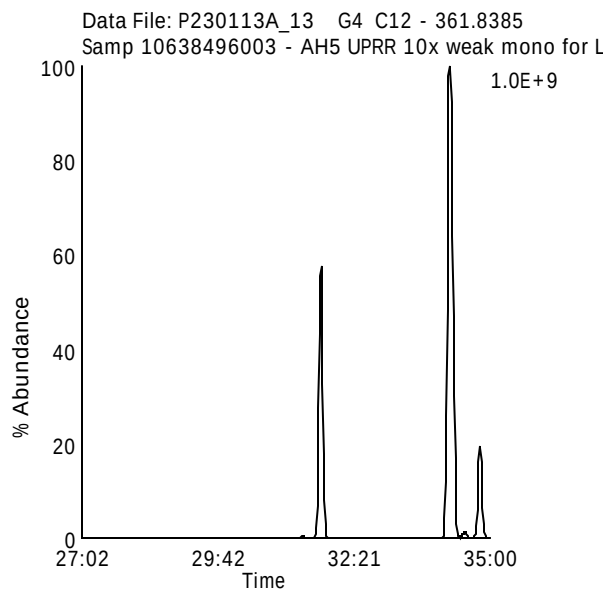
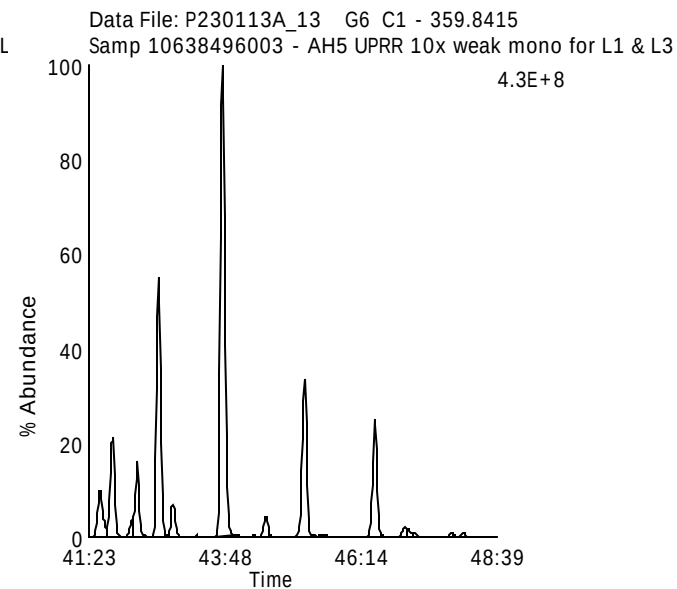
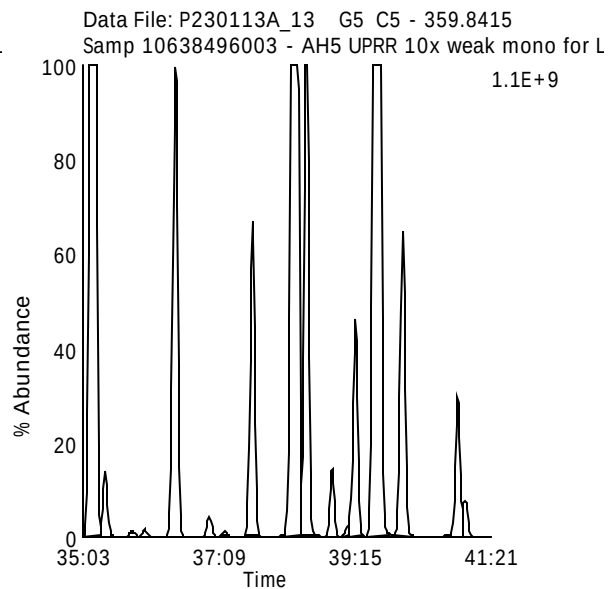
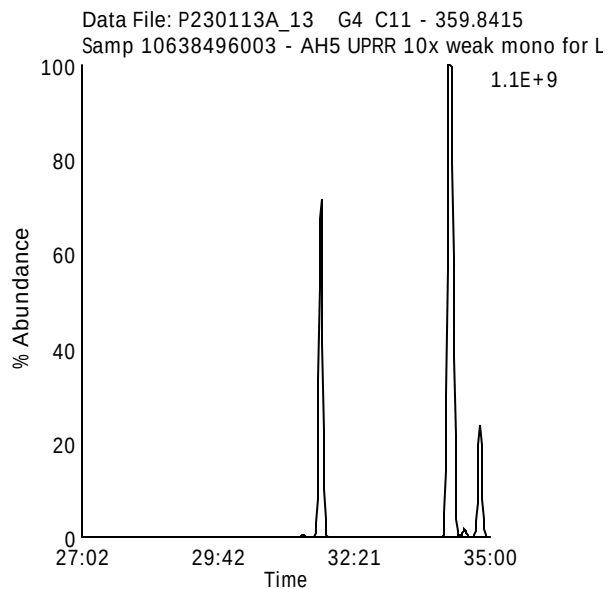
Date Acquired: 1/13/2023

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Hepta Chlorinated Biphenyls

Data File Name: P230113A_13

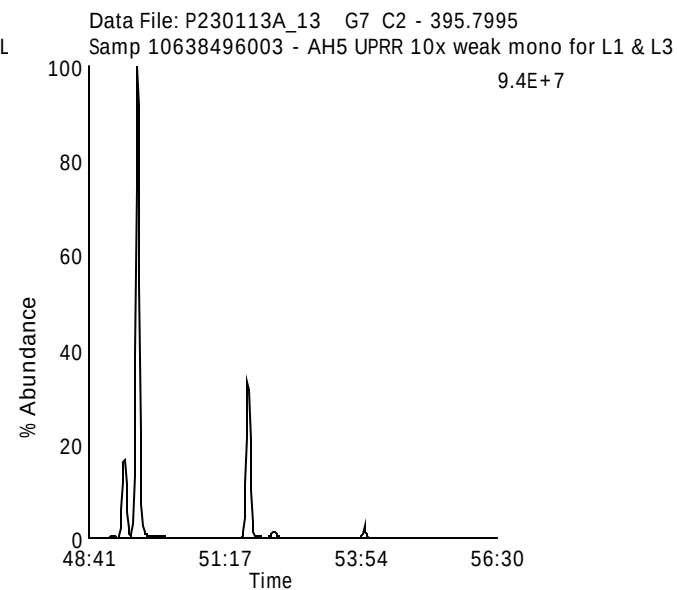
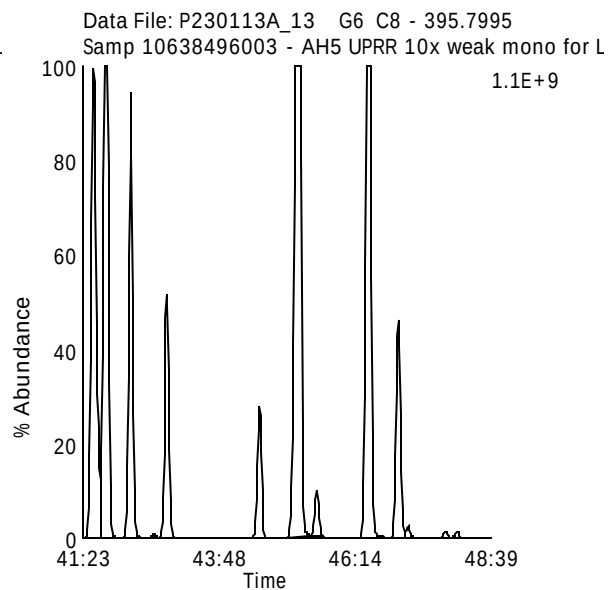
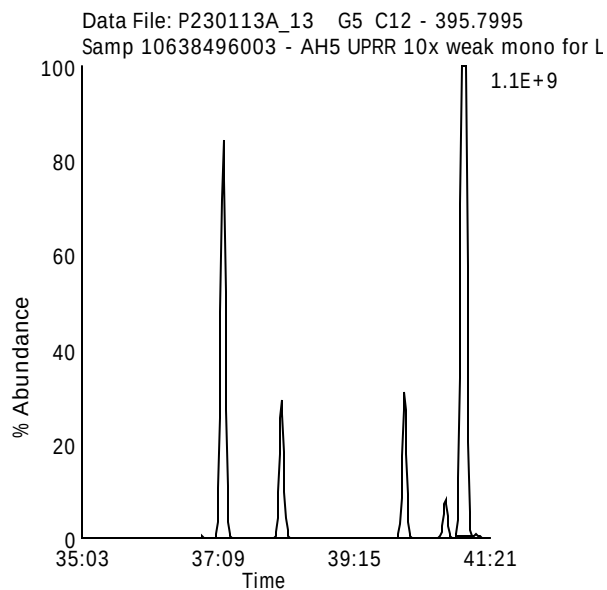
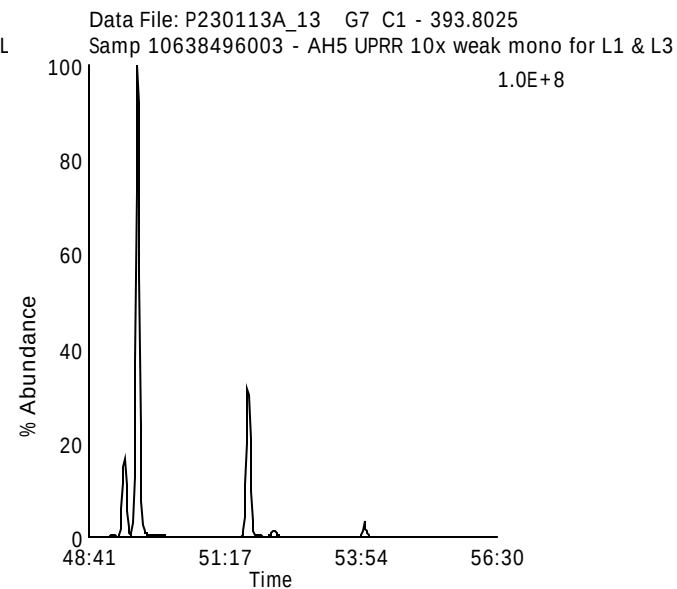
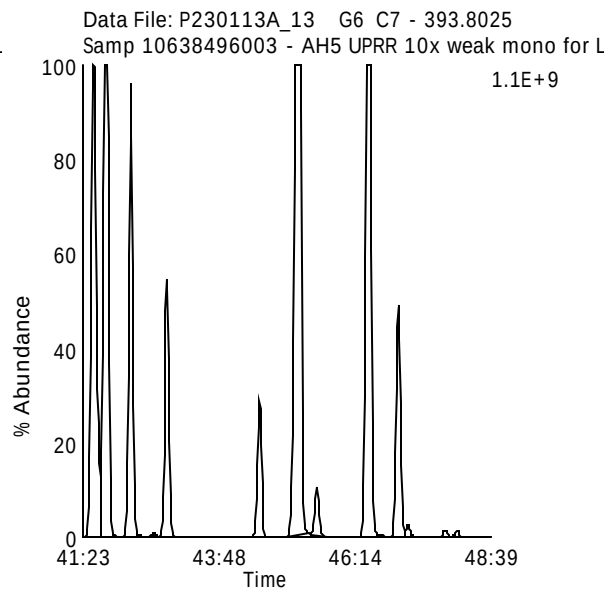
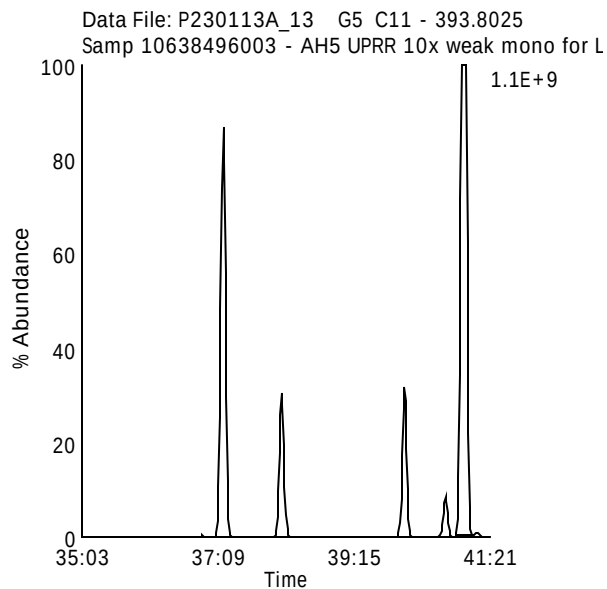
Date Acquired: 1/13/2023

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Octa Chlorinated Biphenyls

Data File Name: P230113A_13

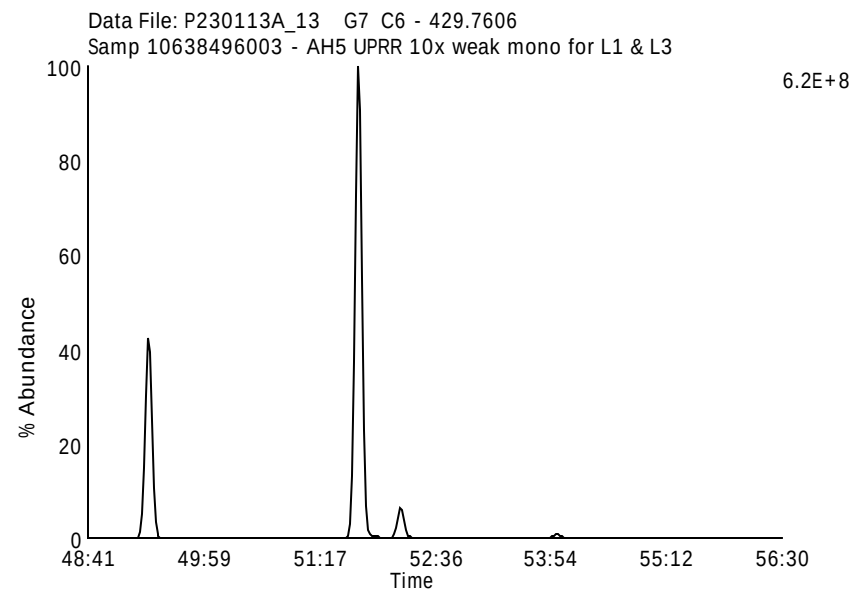
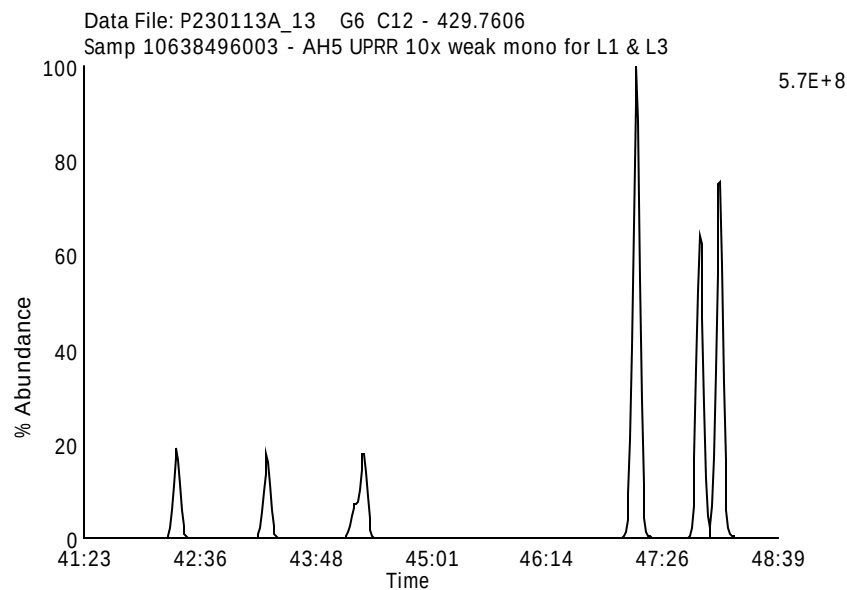
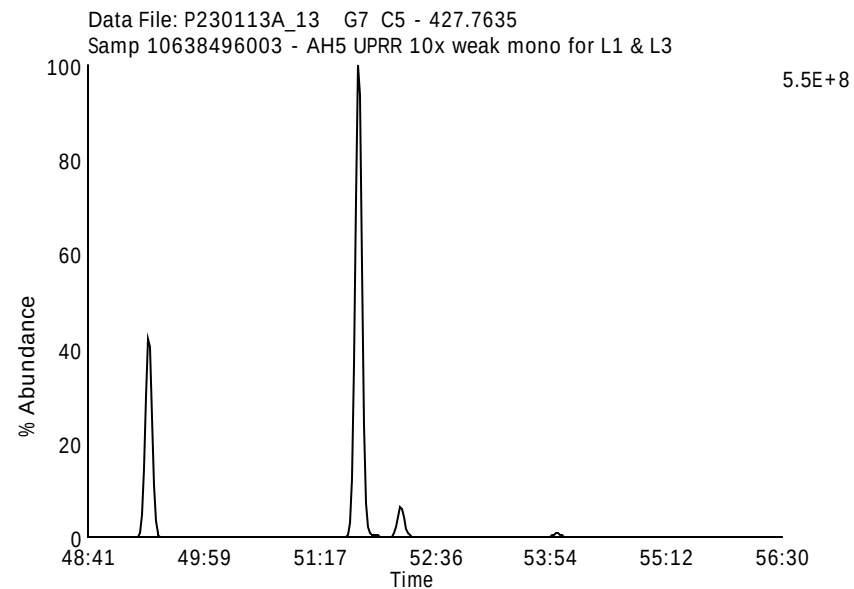
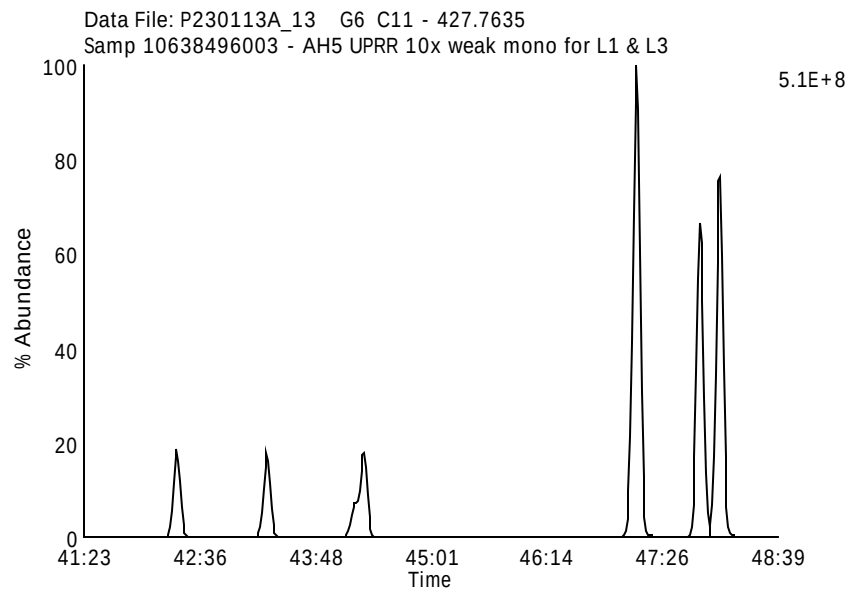
Date Acquired: 1/13/2023

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Nona Chlorinated Biphenyls

Data File Name: P230113A_13

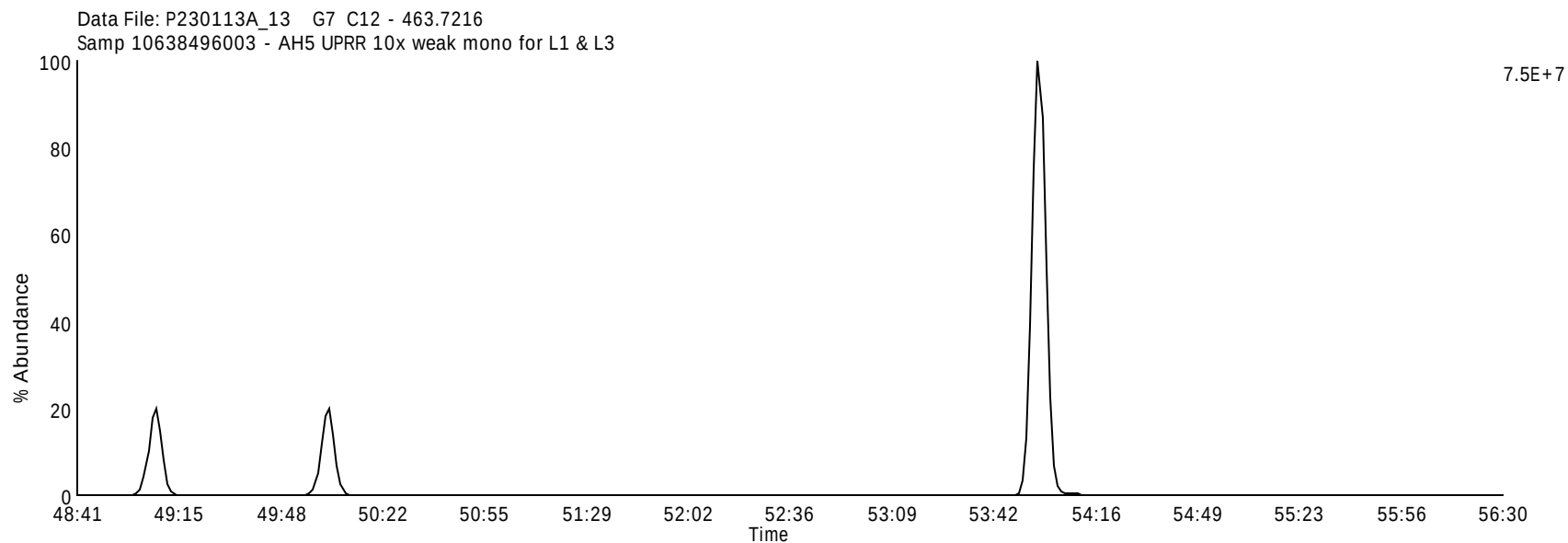
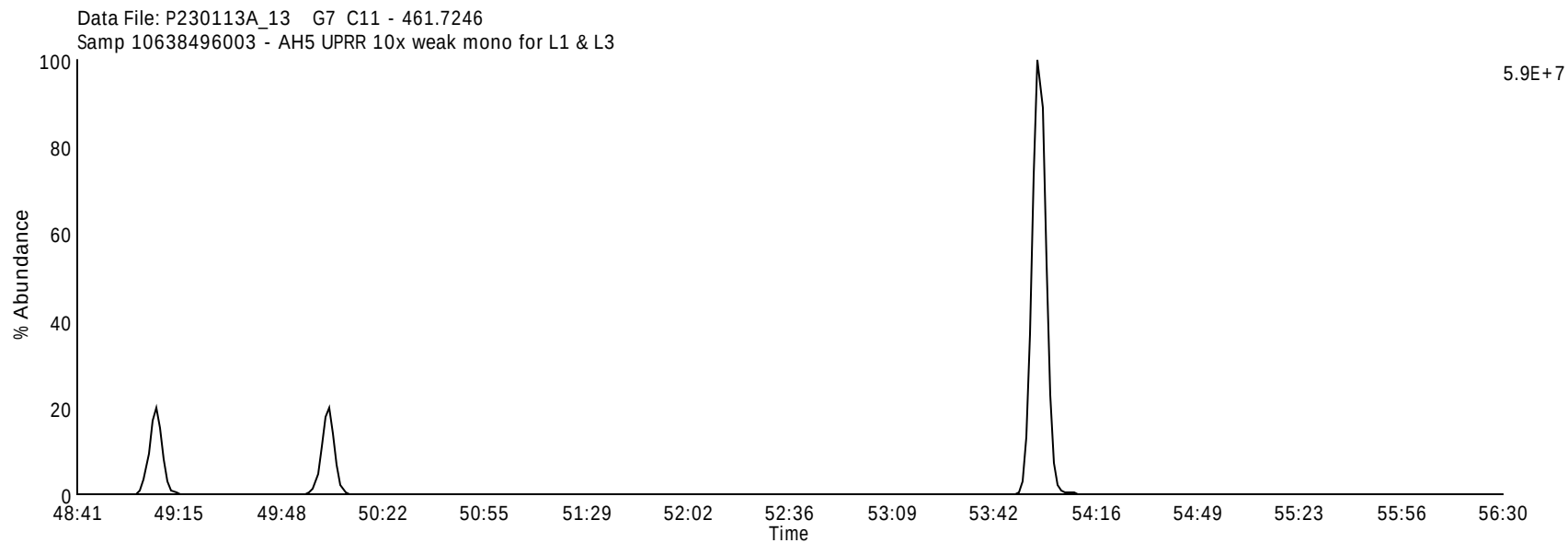
Date Acquired: 1/13/2023

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Deca Chlorinated Biphenyl

Data File Name: P230113A_13

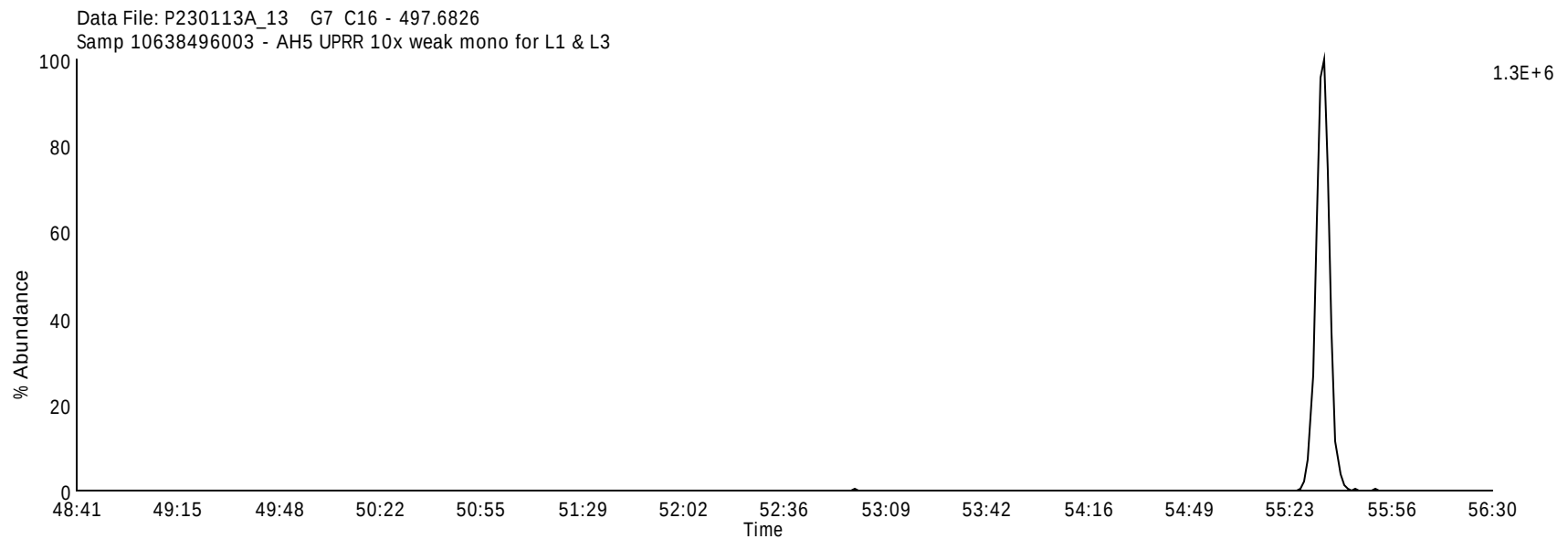
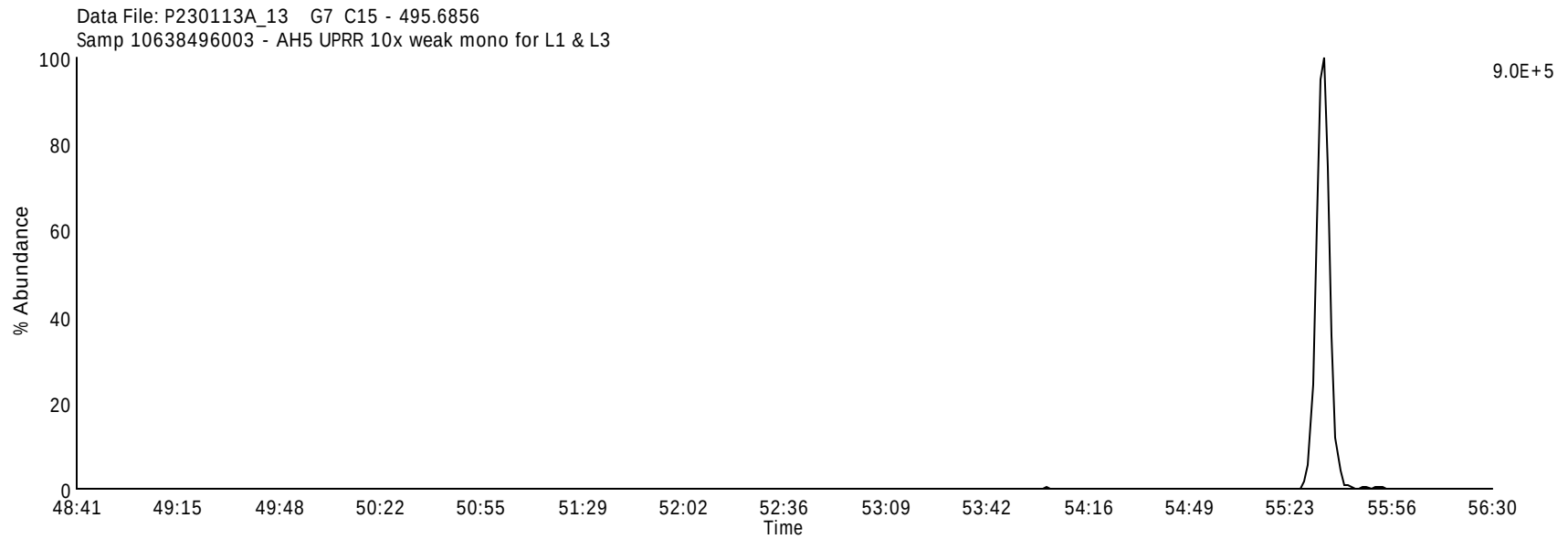
Lab Sample ID: 10638496003

Date Acquired: 1/13/2023

Instrument: 10MSHR09 (P)

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

Client Sample ID: SB10-0.0-0.5-1022



Group 1 - 4 Lock mass

Data File Name: P230113A_13

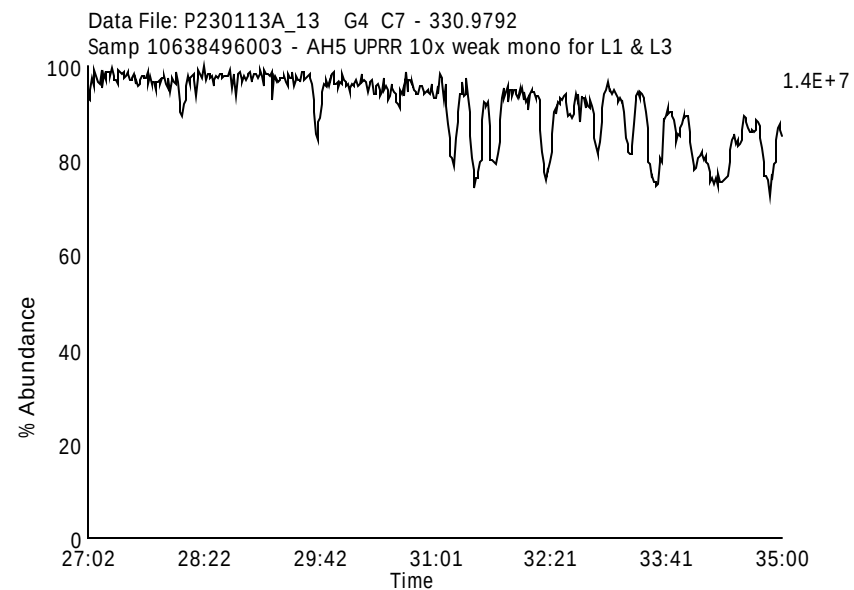
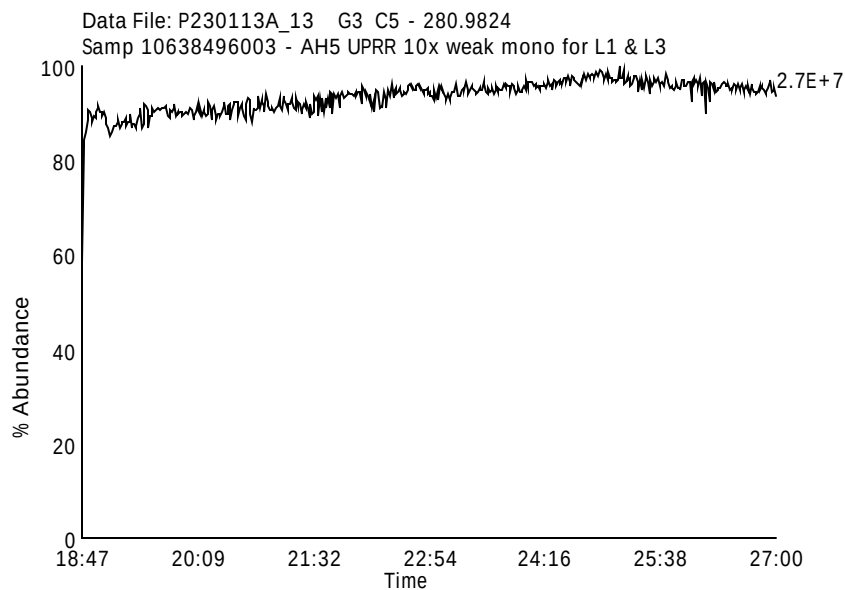
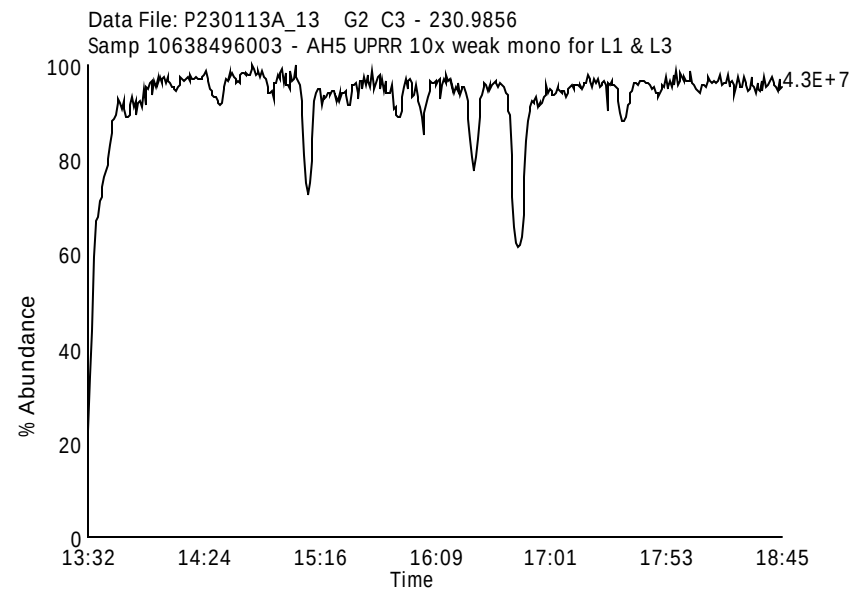
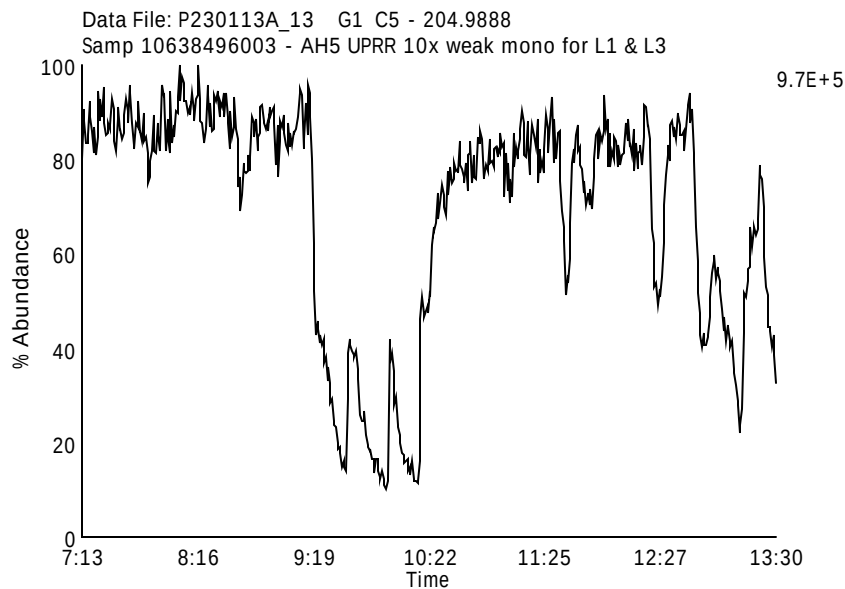
Date Acquired: 1/13/2023

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Group 5 - 7 Lock mass

Data File Name: P230113A_13

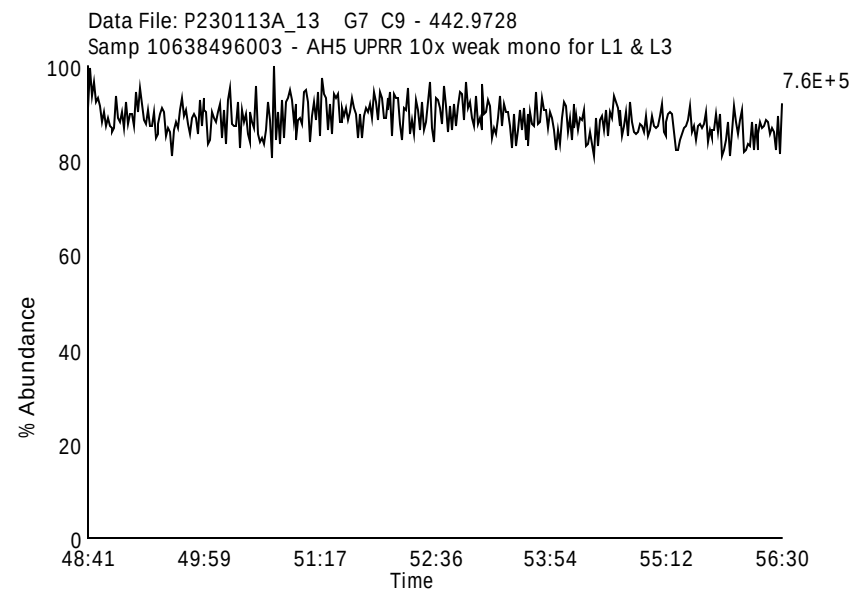
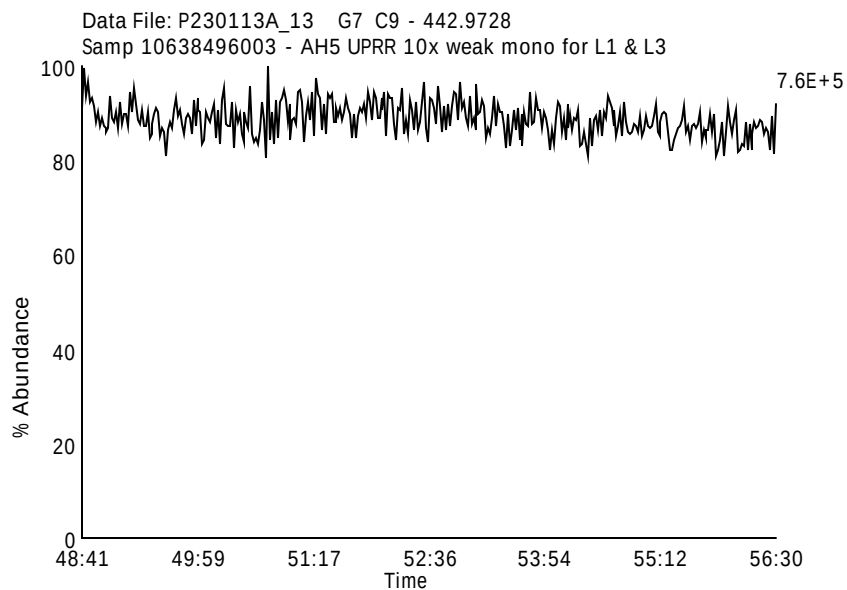
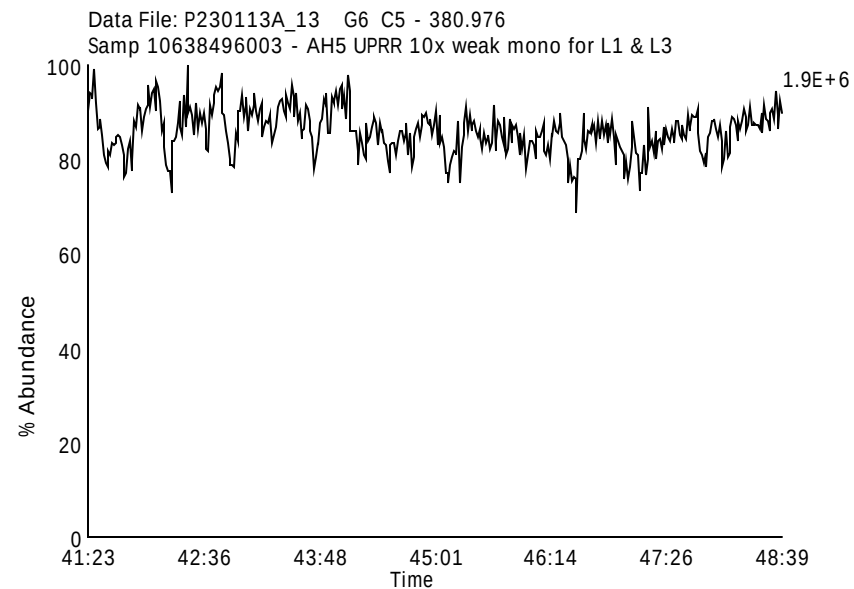
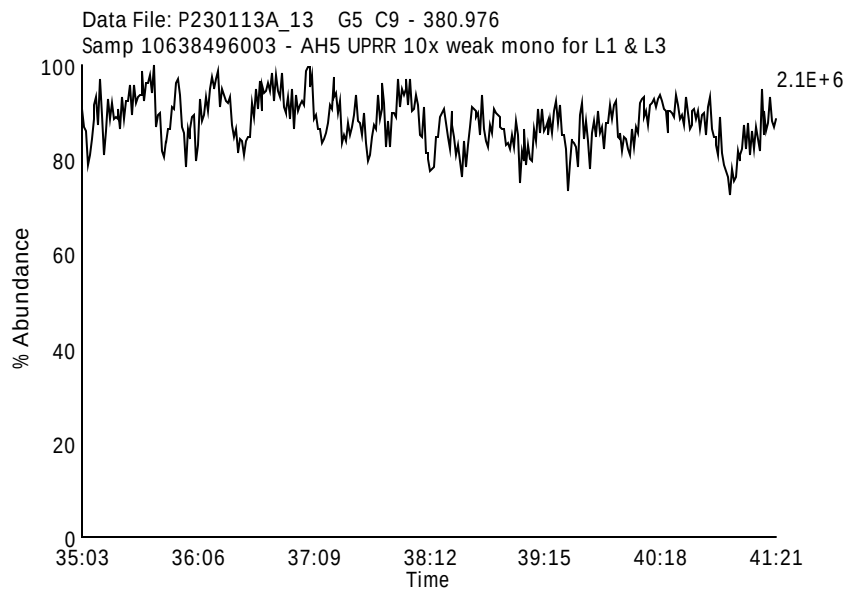
Date Acquired: 1/13/2023

Sample Description: Samp 10638496003 - AH5 UPRR 10x weak mono for L1 & L3

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Labeled Mono Chlorinated Biphenyls

Data File Name: P230115A_06

Date Acquired: 1/15/2023

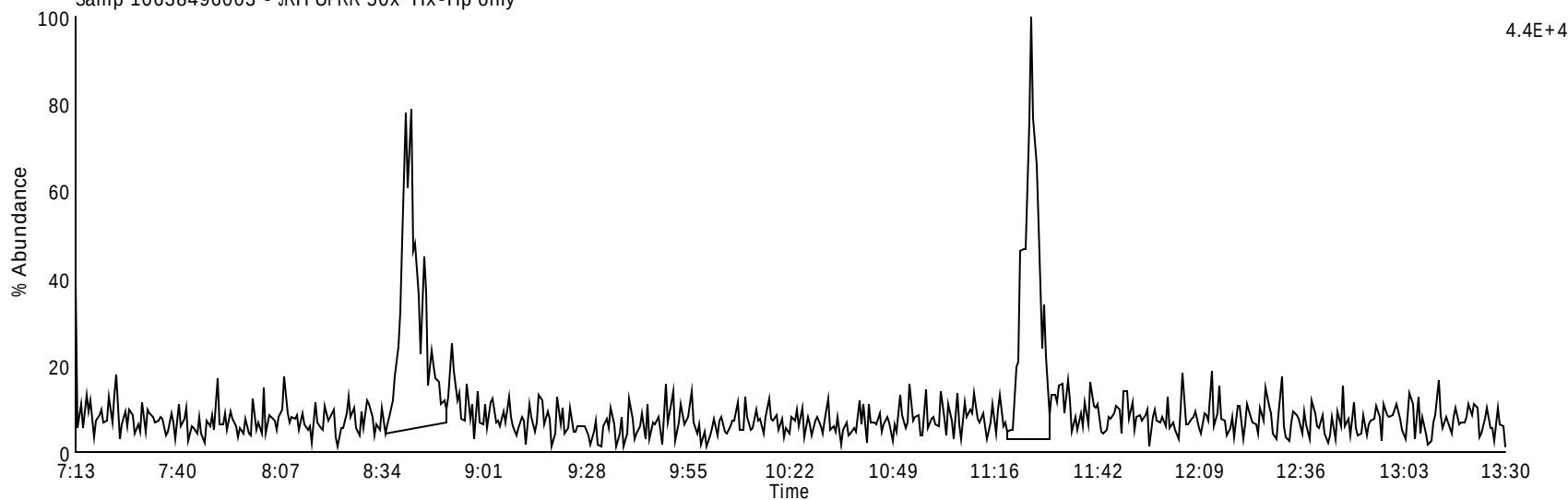
Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

Lab Sample ID: 10638496003

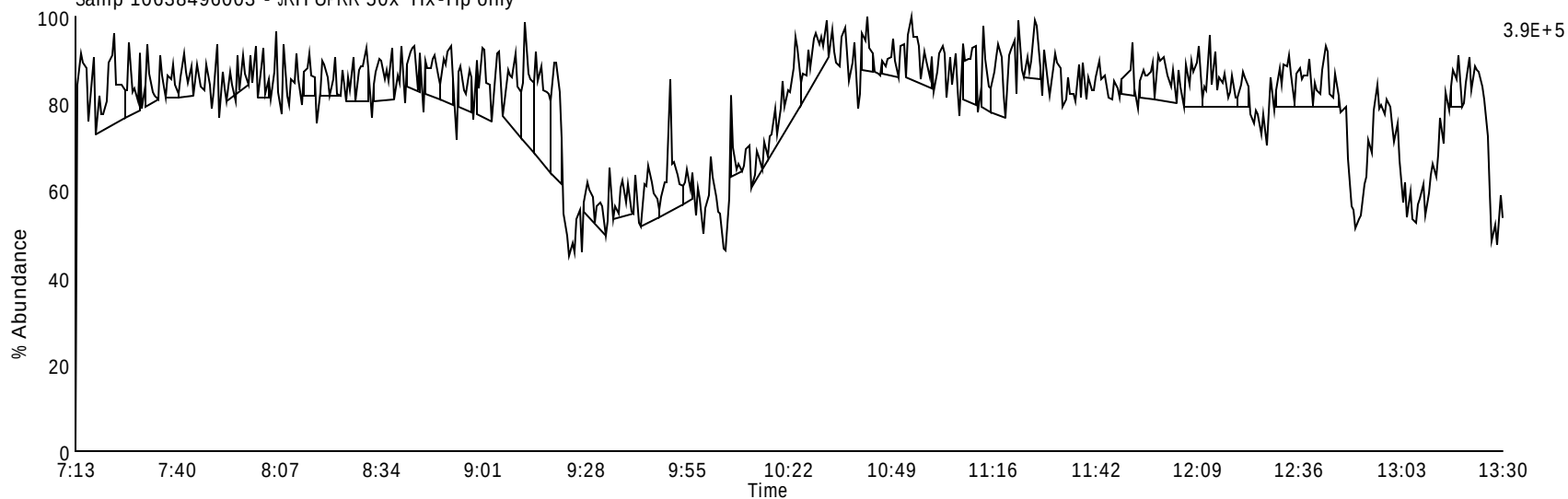
Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022

Data File: P230115A_06 G1 C3 - 200.0795
Samp 10638496003 - JRH UPRR 50x Hx-Hp only



Data File: P230115A_06 G1 C4 - 202.0766
Samp 10638496003 - JRH UPRR 50x Hx-Hp only



Labeled Di Chlorinated Biphenyls

Data File Name: P230115A_06

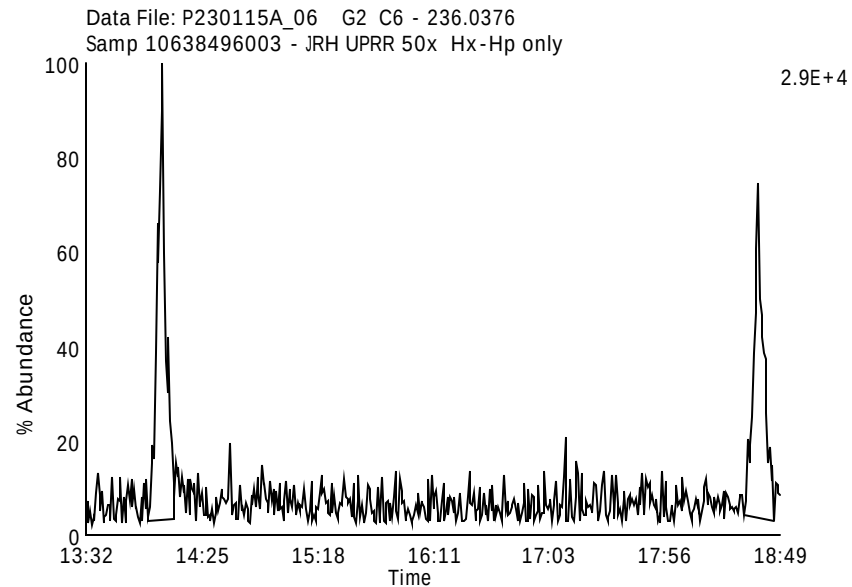
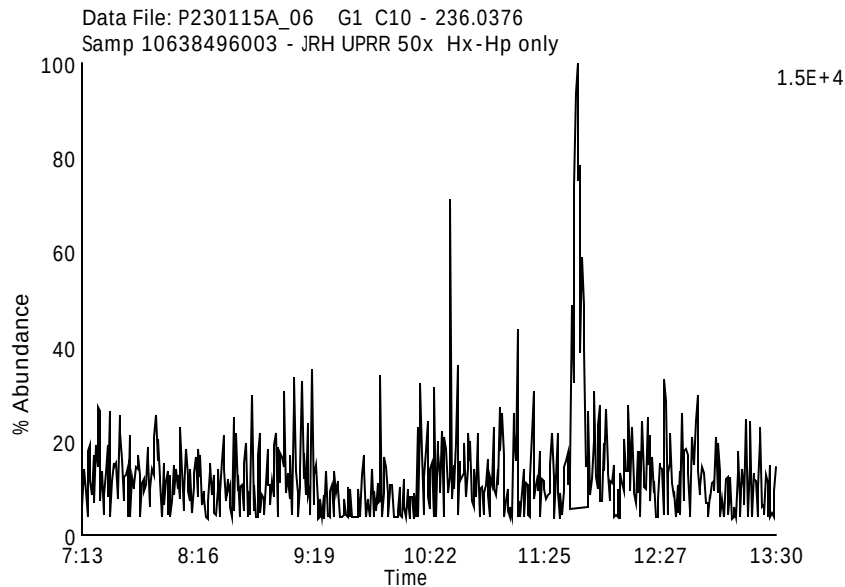
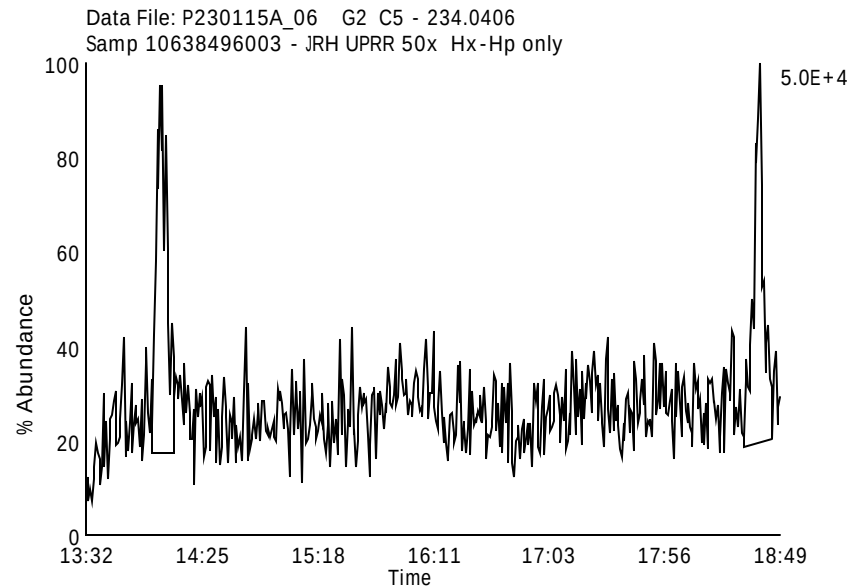
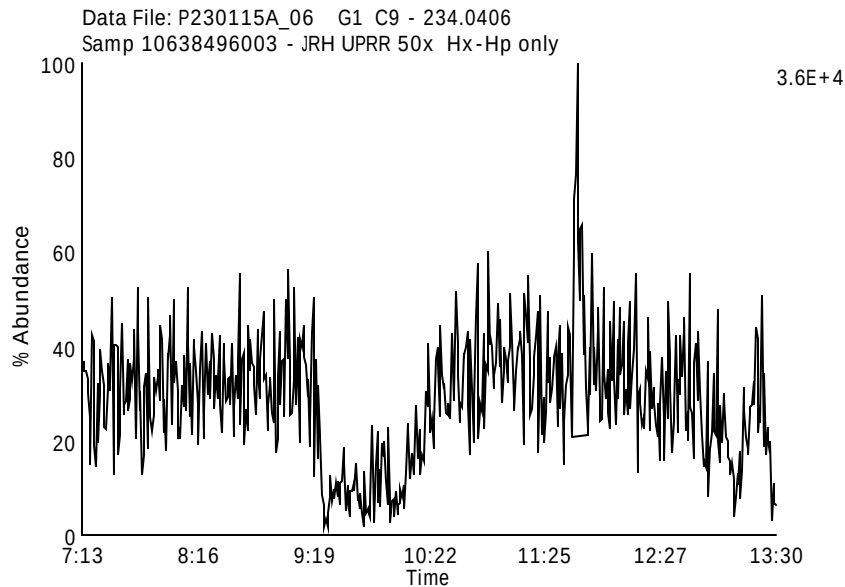
Date Acquired: 1/15/2023

Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Labeled Tri Chlorinated Biphenyls

Data File Name: P230115A_06

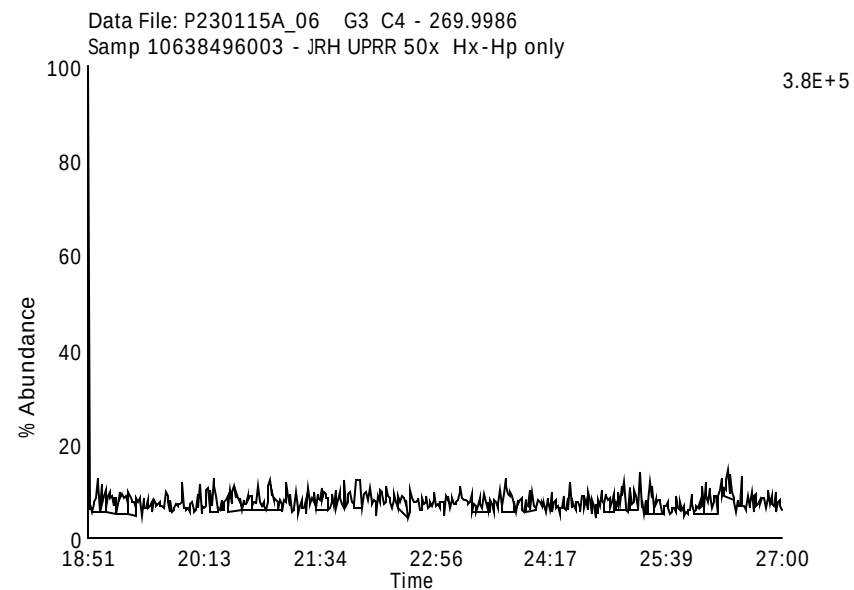
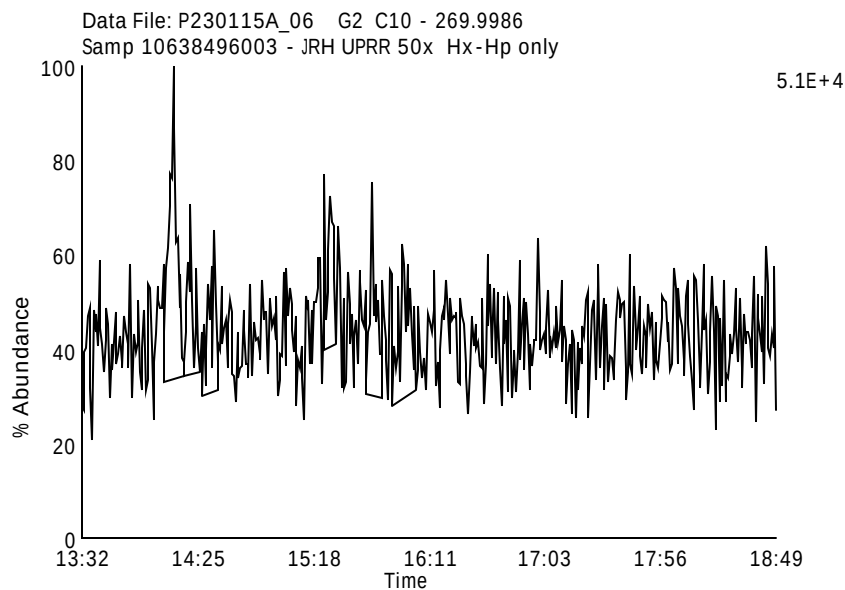
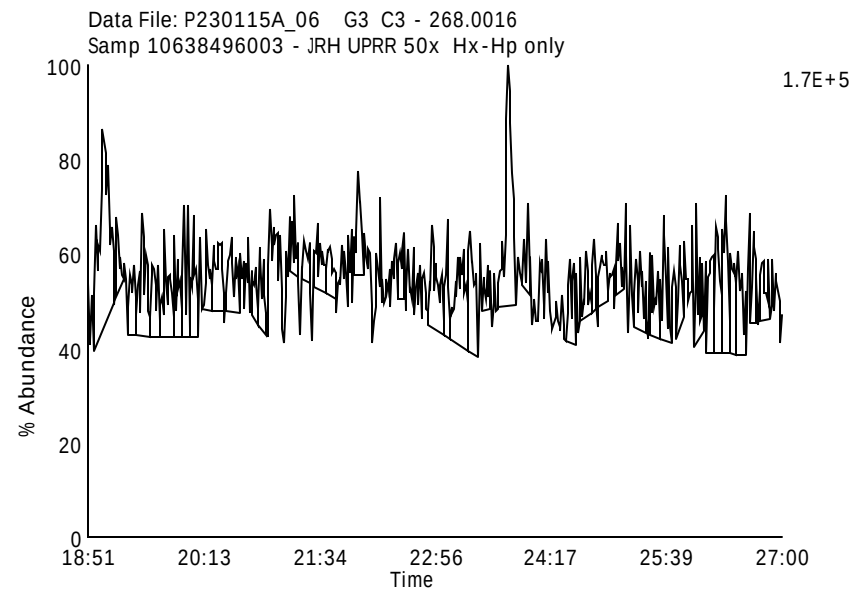
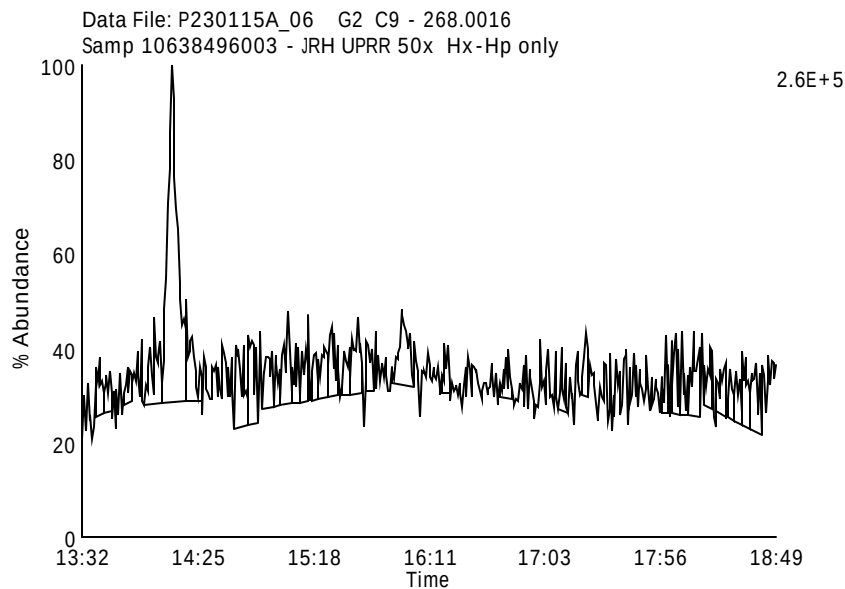
Date Acquired: 1/15/2023

Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Labeled Tetra Chlorinated Biphenyls

Data File Name: P230115A_06

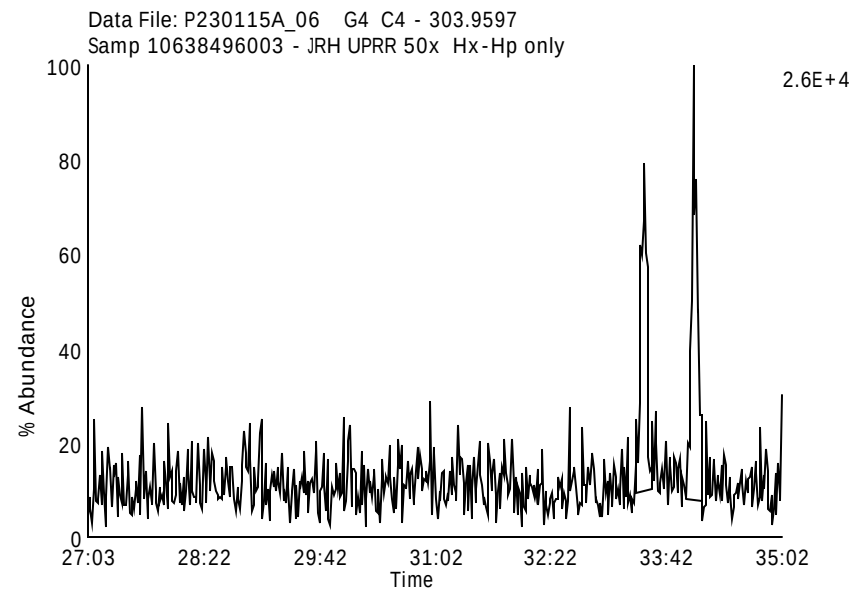
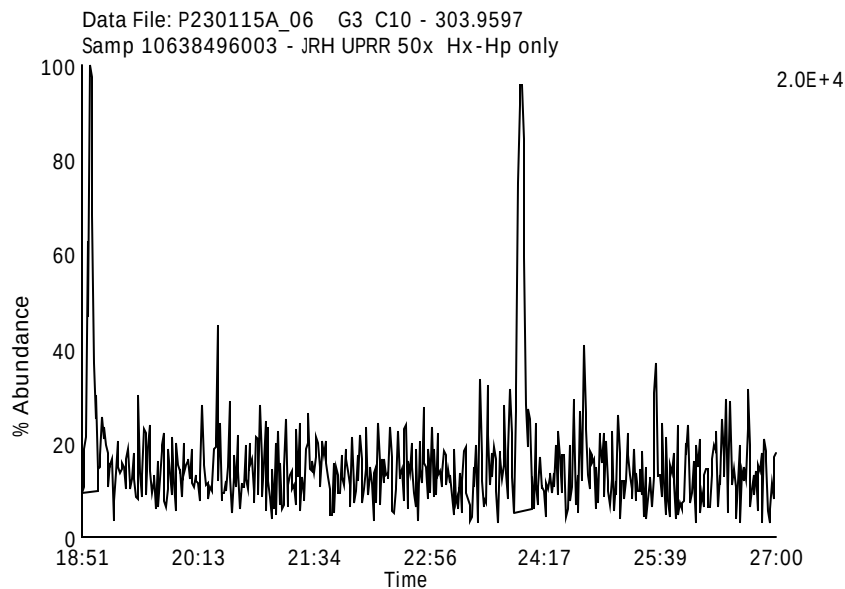
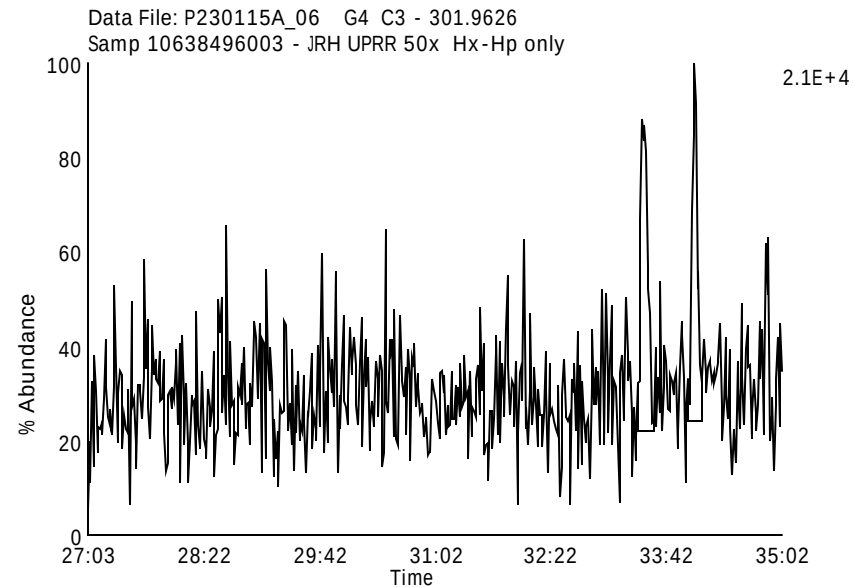
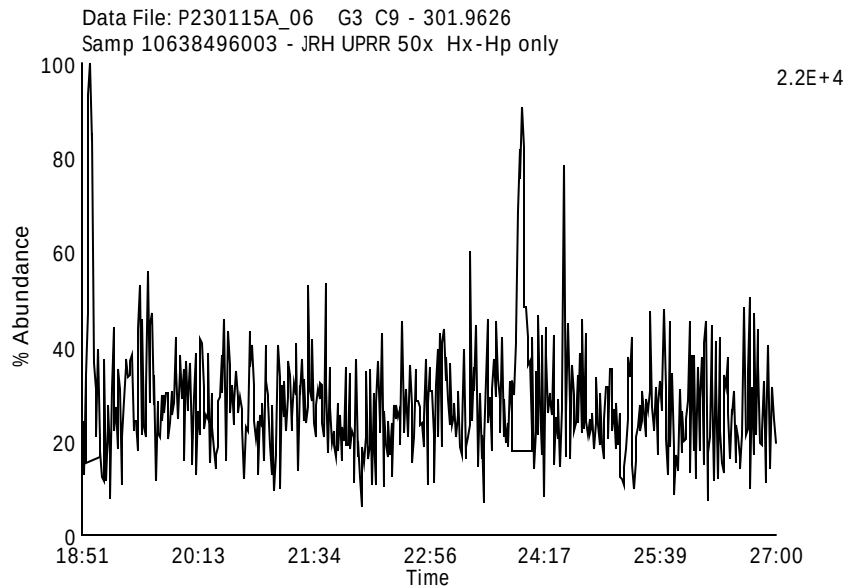
Date Acquired: 1/15/2023

Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Labeled Penta Chlorinated Biphenyls

Data File Name: P230115A_06

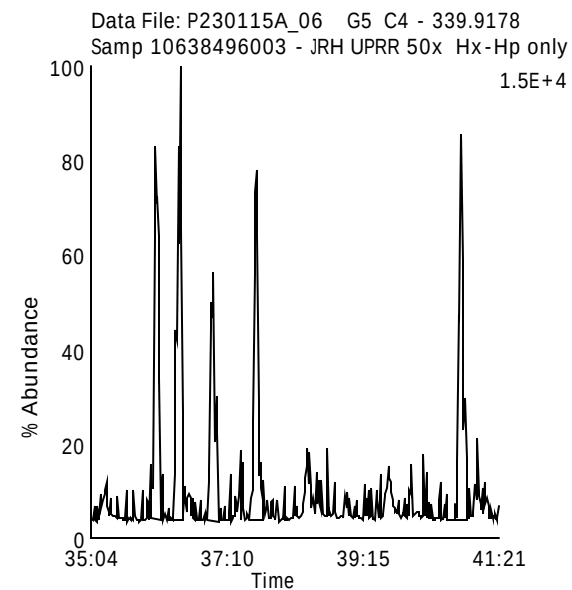
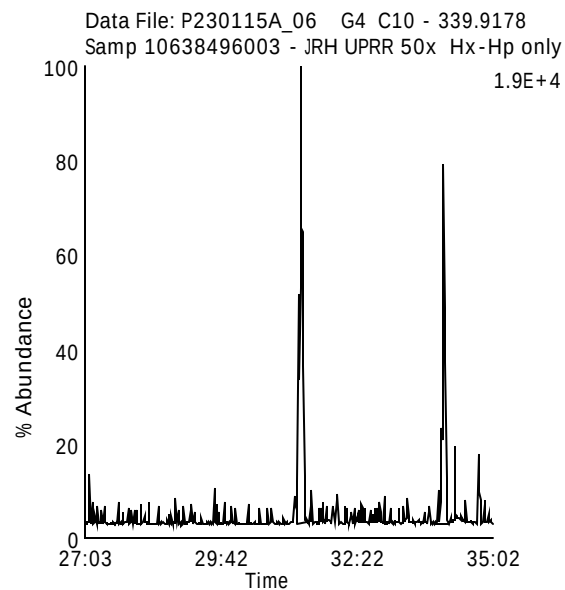
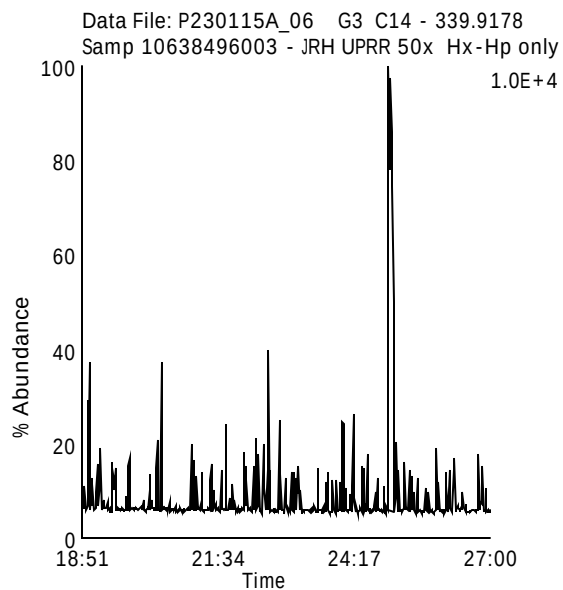
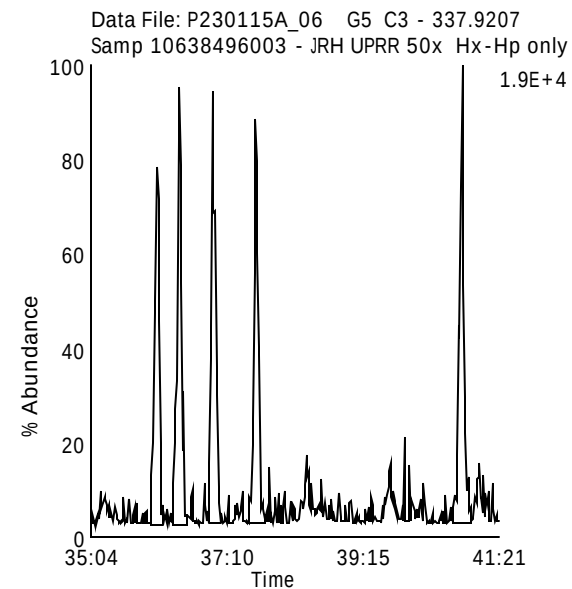
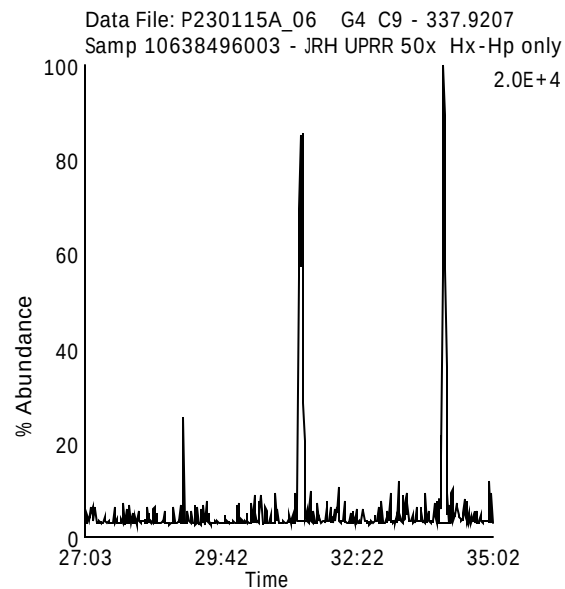
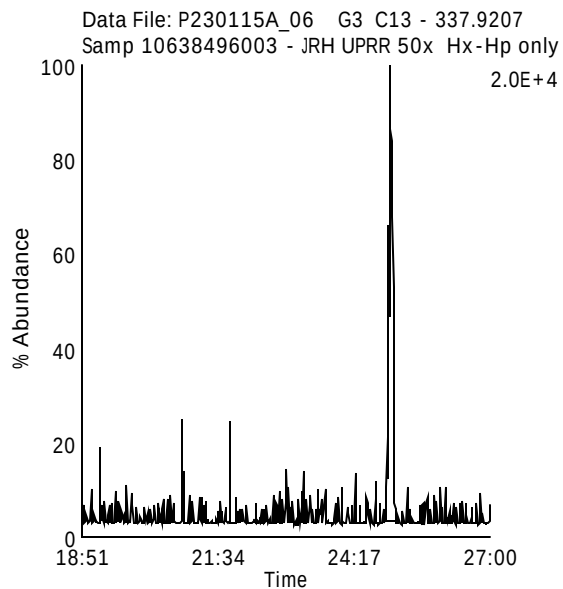
Date Acquired: 1/15/2023

Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Labeled Hexa Chlorinated Biphenyls

Data File Name: P230115A_06

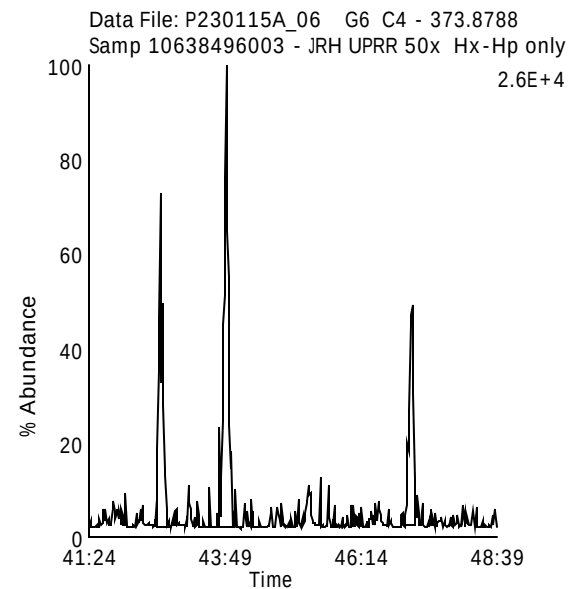
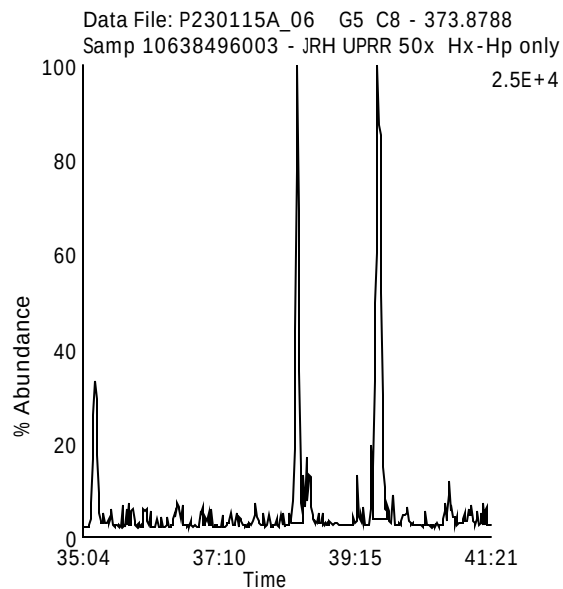
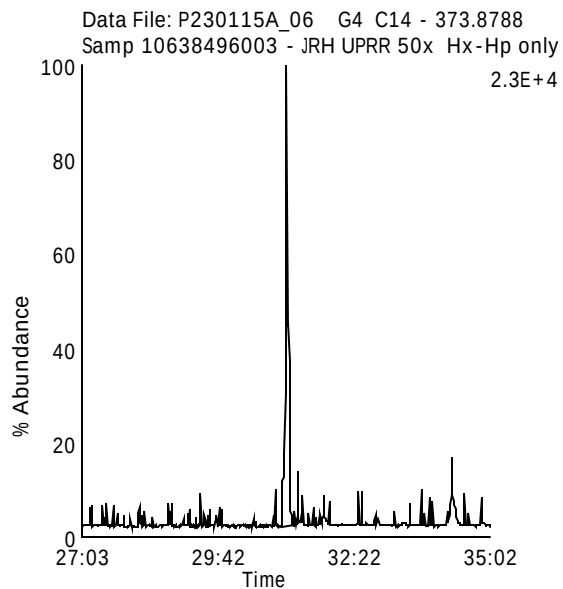
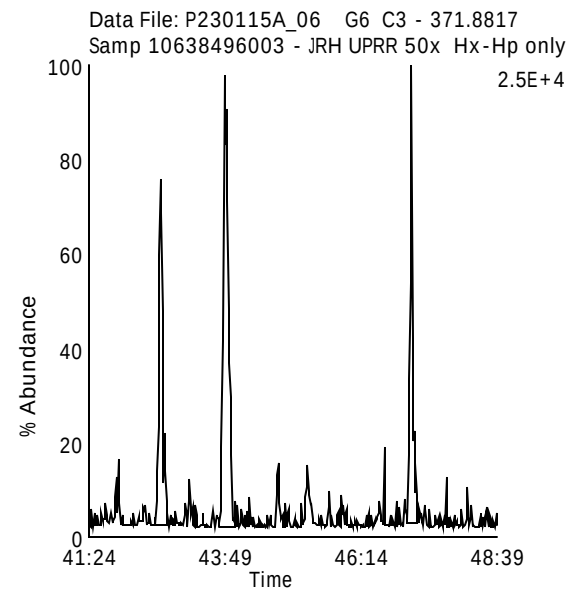
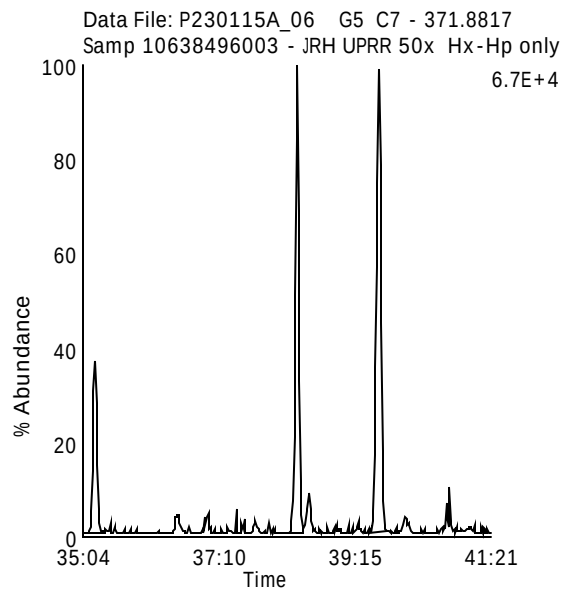
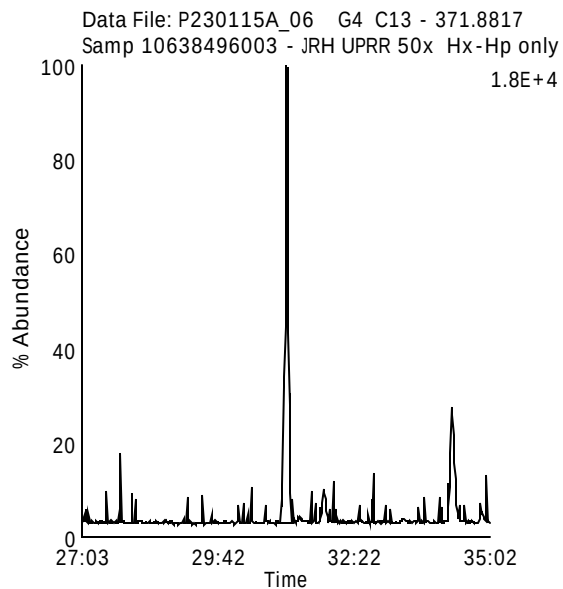
Date Acquired: 1/15/2023

Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Labeled Hepta Chlorinated Biphenyls

Data File Name: P230115A_06

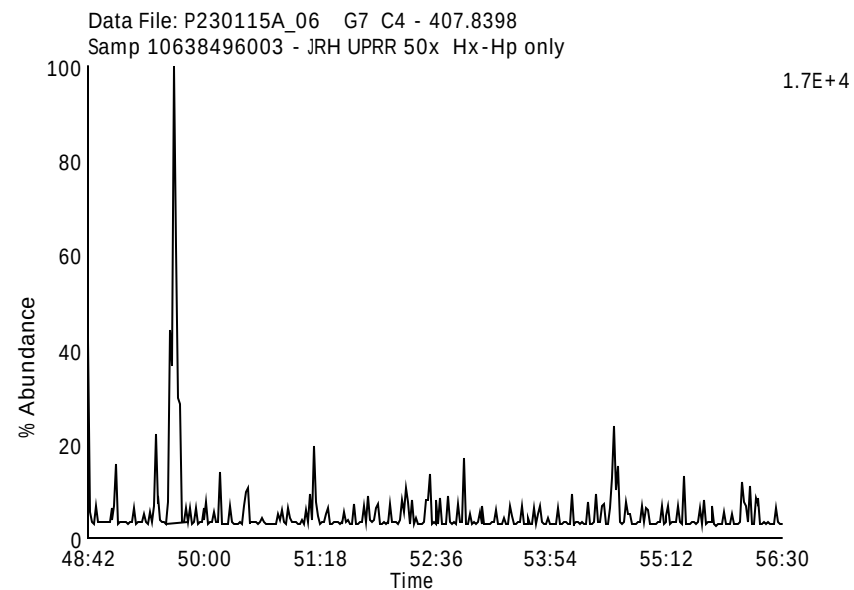
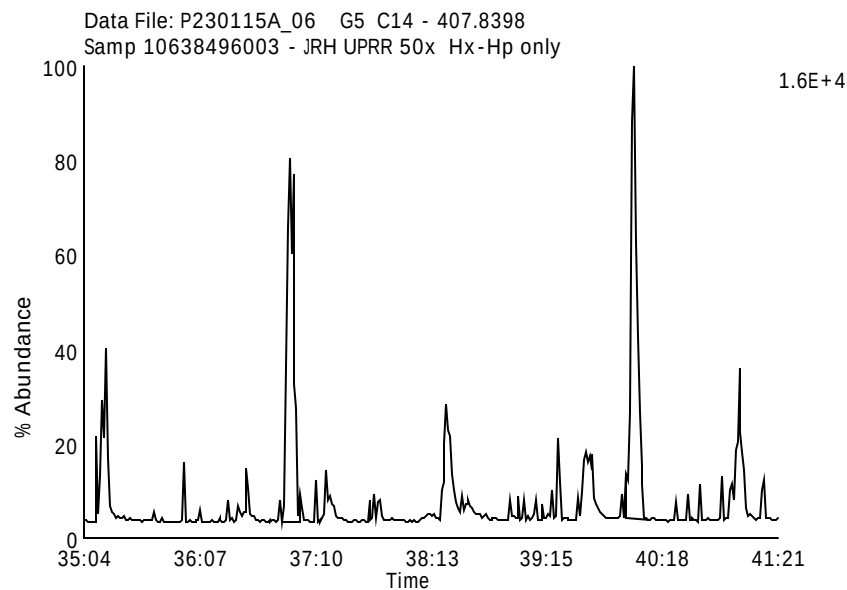
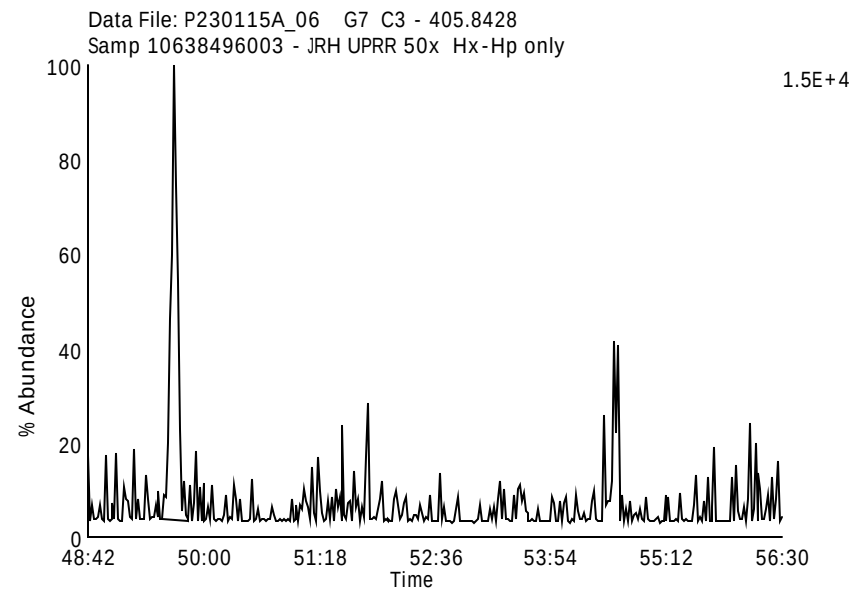
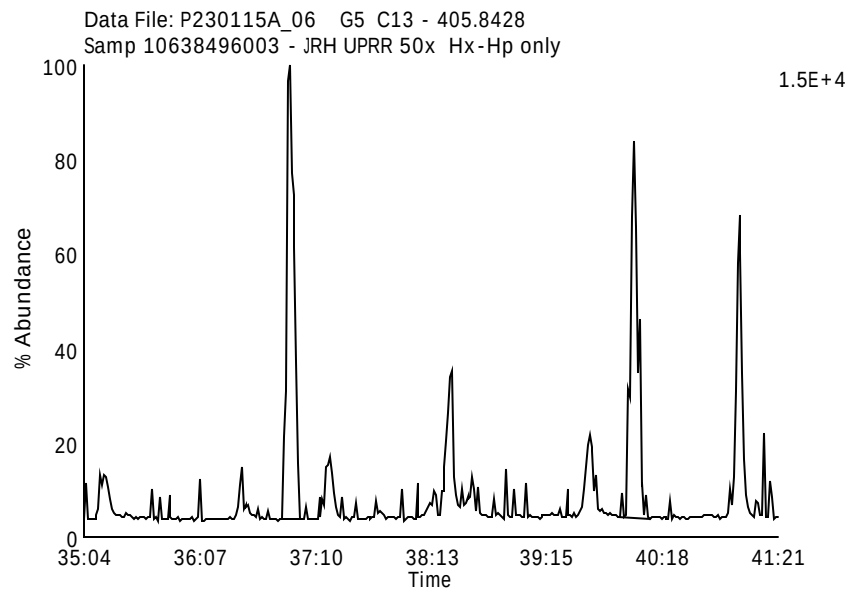
Date Acquired: 1/15/2023

Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Labeled Octa Chlorinated Biphenyls

Data File Name: P230115A_06

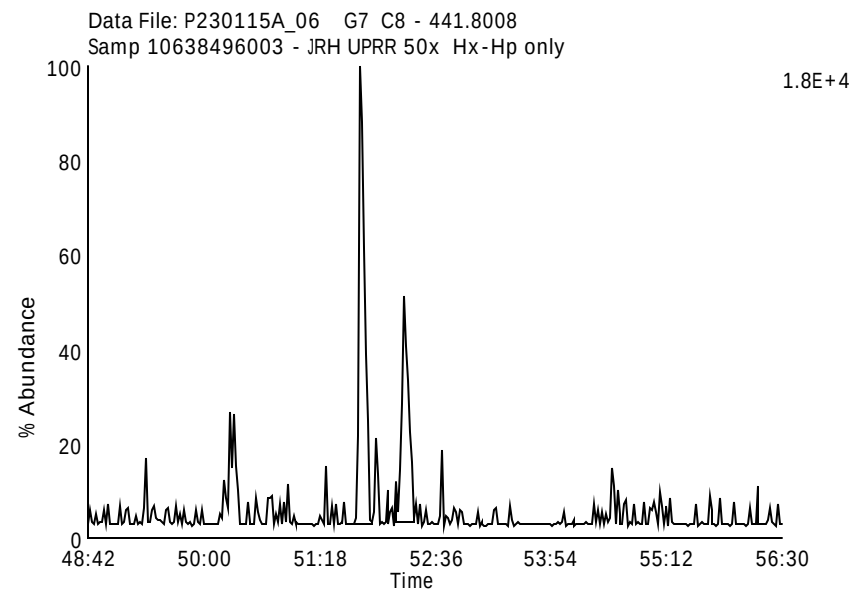
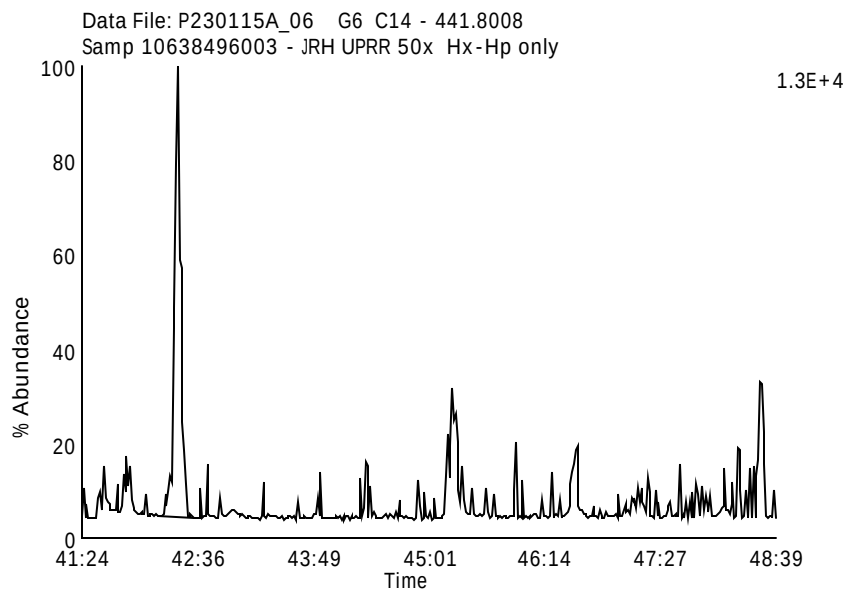
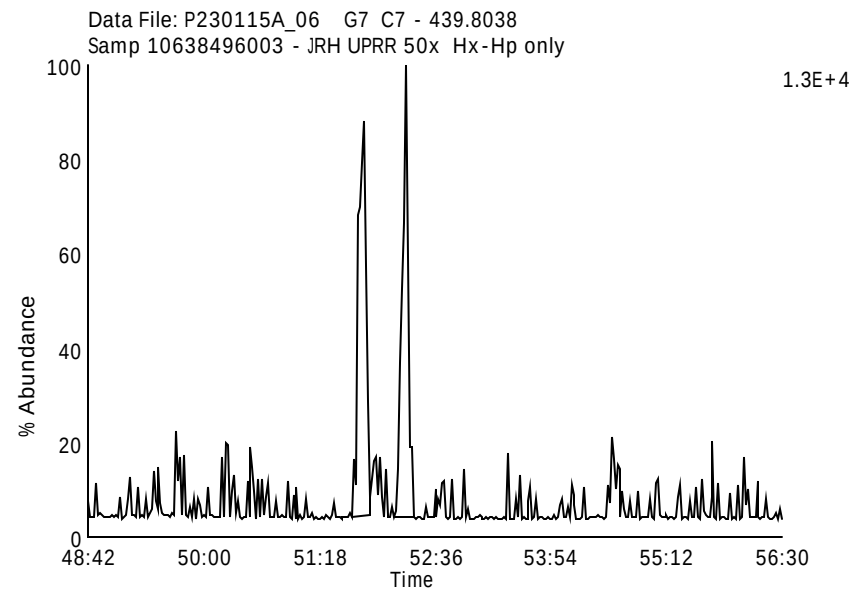
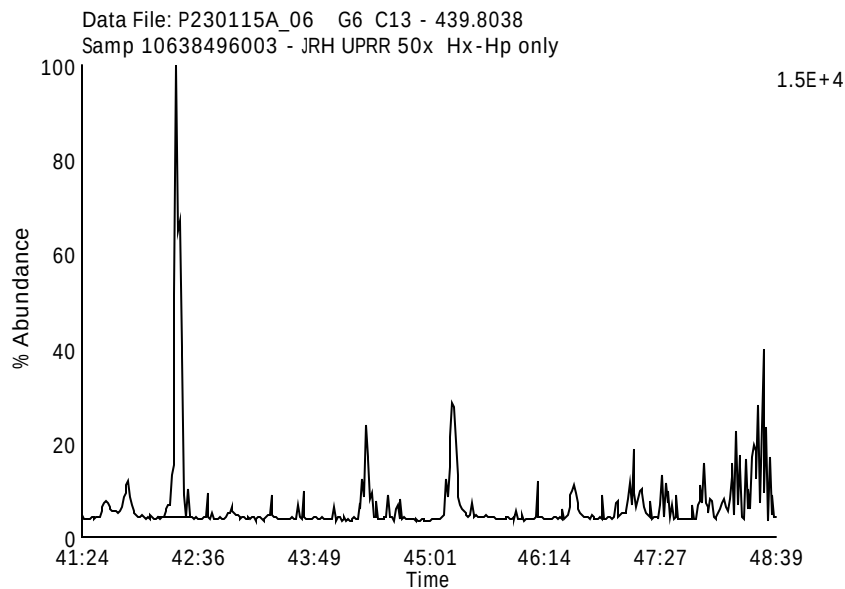
Date Acquired: 1/15/2023

Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Labeled Nona Chlorinated Biphenyls

Data File Name: P230115A_06

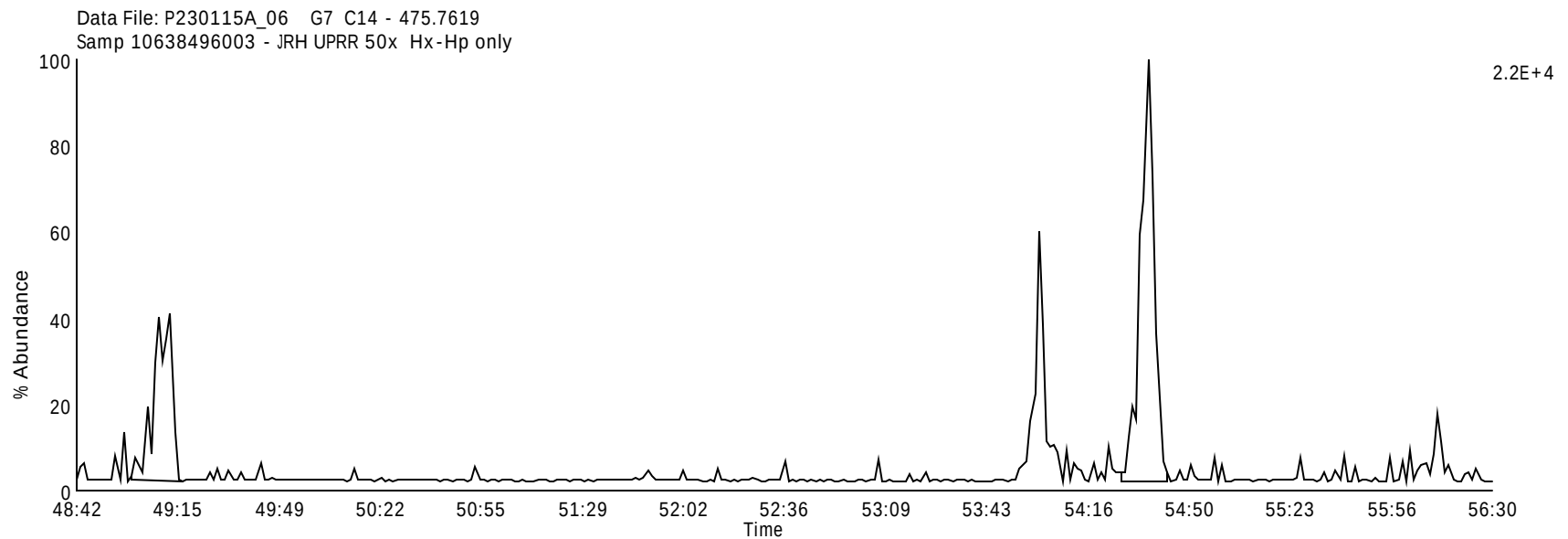
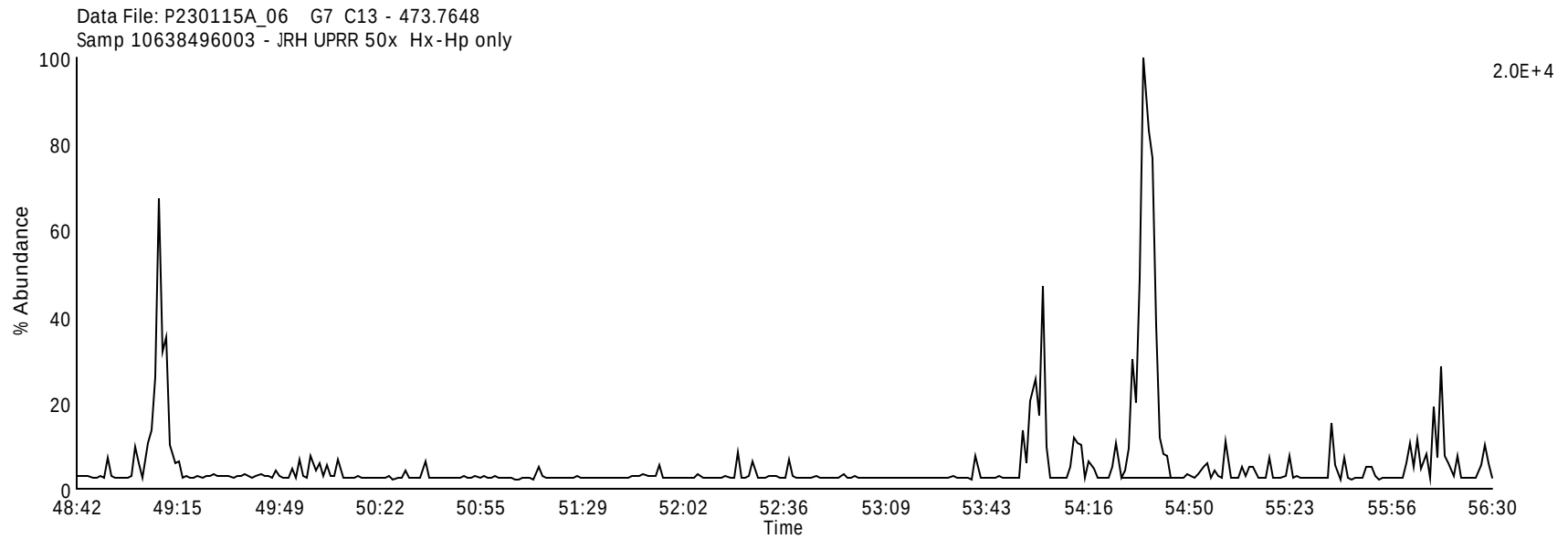
Date Acquired: 1/15/2023

Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Labeled Deca Chlorinated Biphenyl

Data File Name: P230115A_06

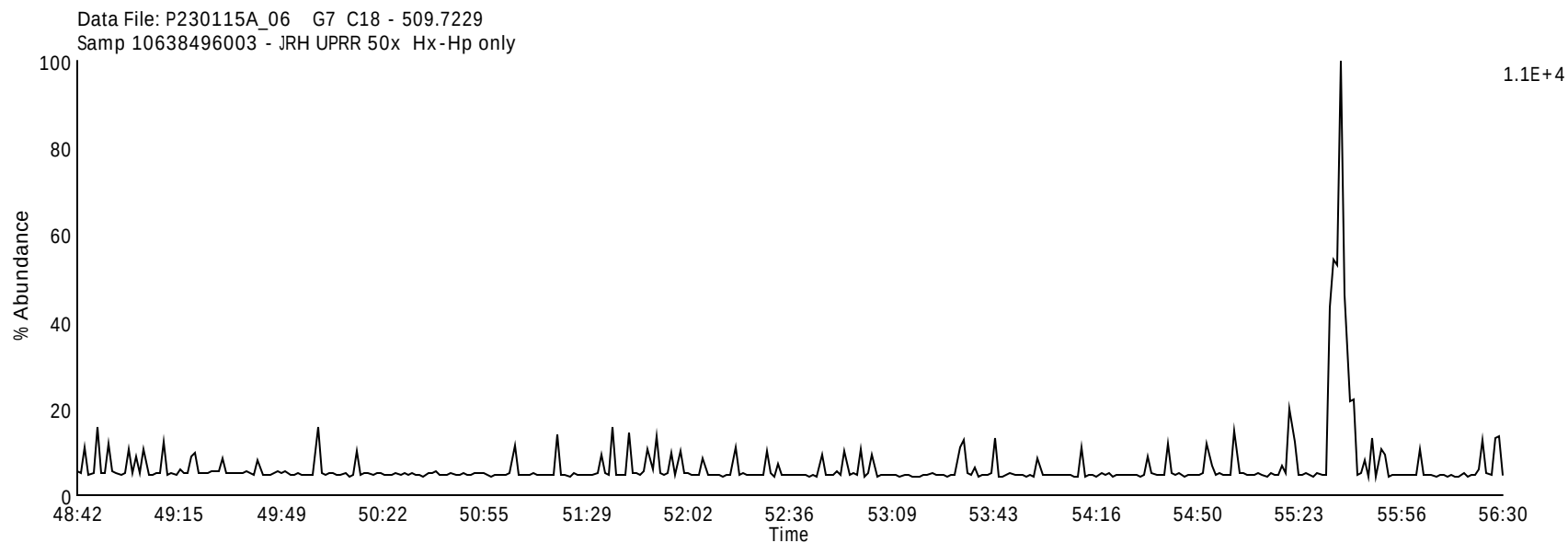
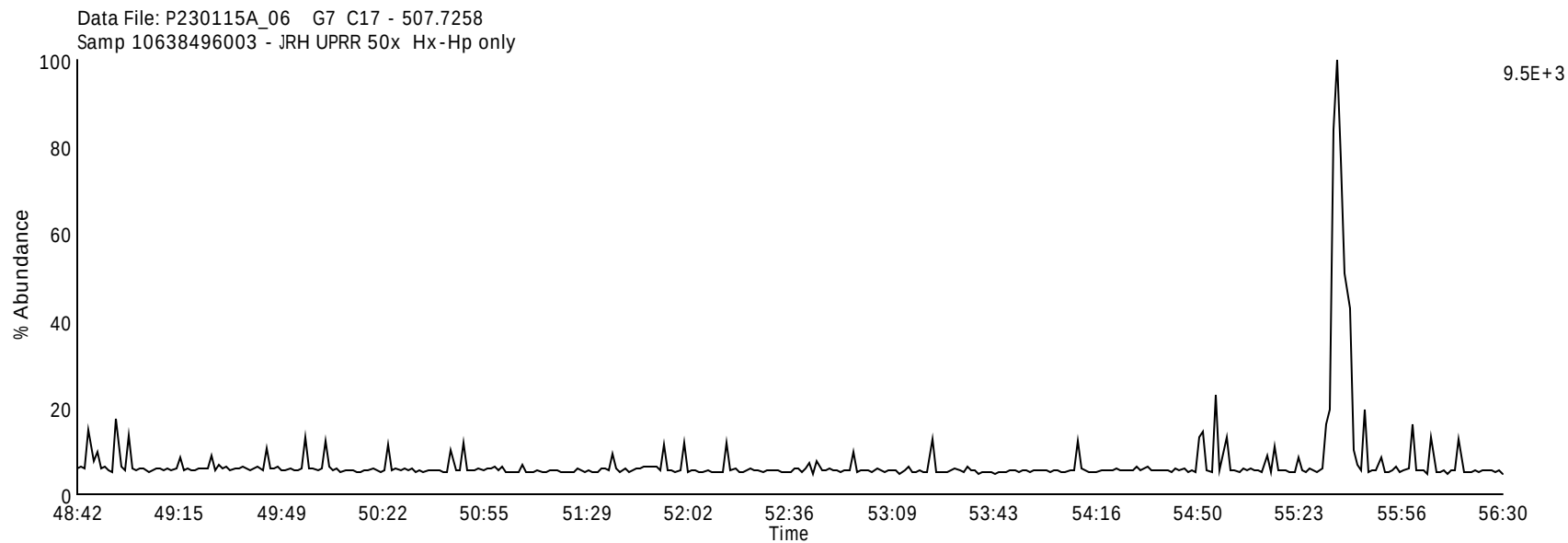
Date Acquired: 1/15/2023

Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Mono Chlorinated Biphenyls

Data File Name: P230115A_06

Date Acquired: 1/15/2023

Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

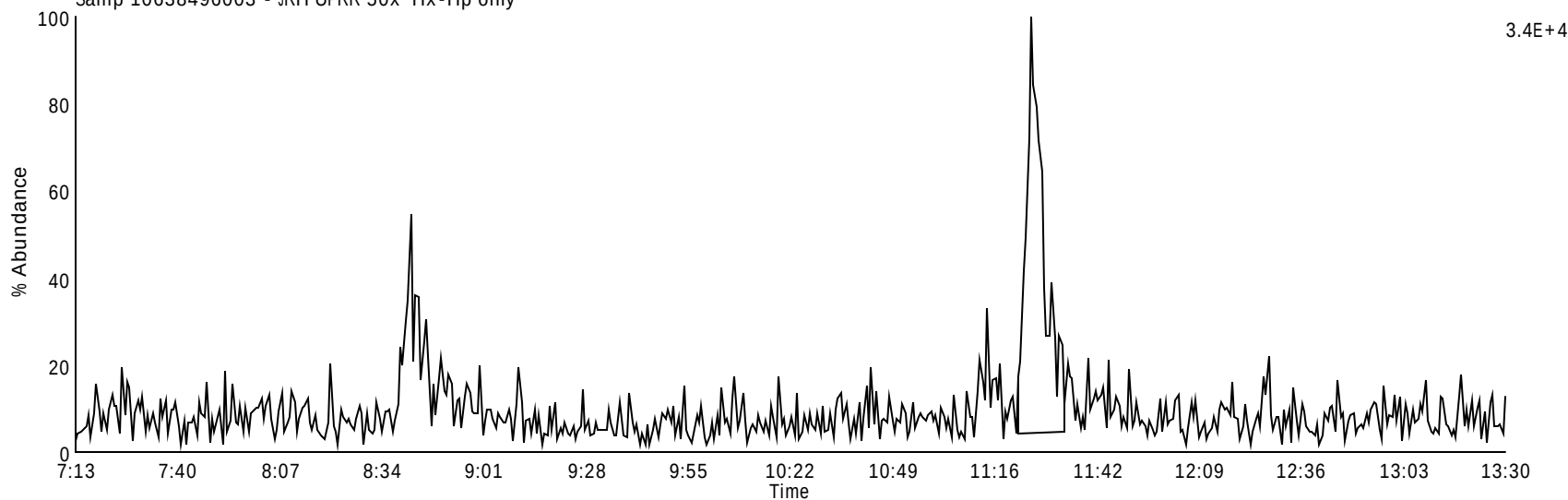
Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022

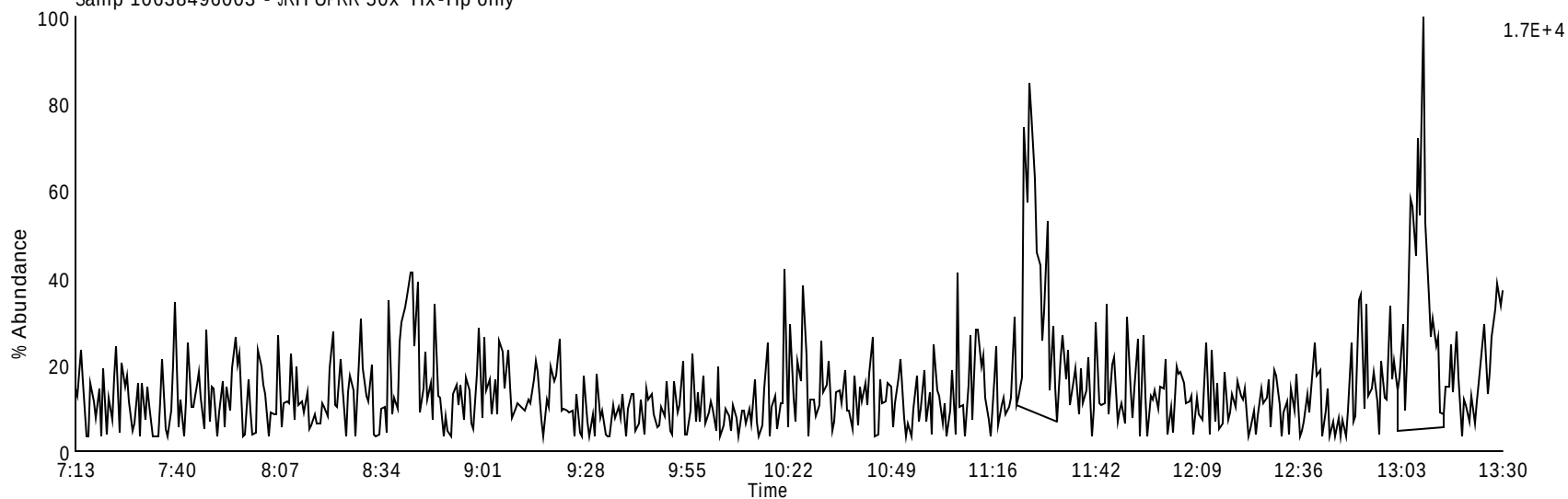
Data File: P230115A_06 G1 C1 - 188.0393

Samp 10638496003 - JRH UPRR 50x Hx-Hp only



Data File: P230115A_06 G1 C2 - 190.0363

Samp 10638496003 - JRH UPRR 50x Hx-Hp only



Di Chlorinated Biphenyls

Data File Name: P230115A_06

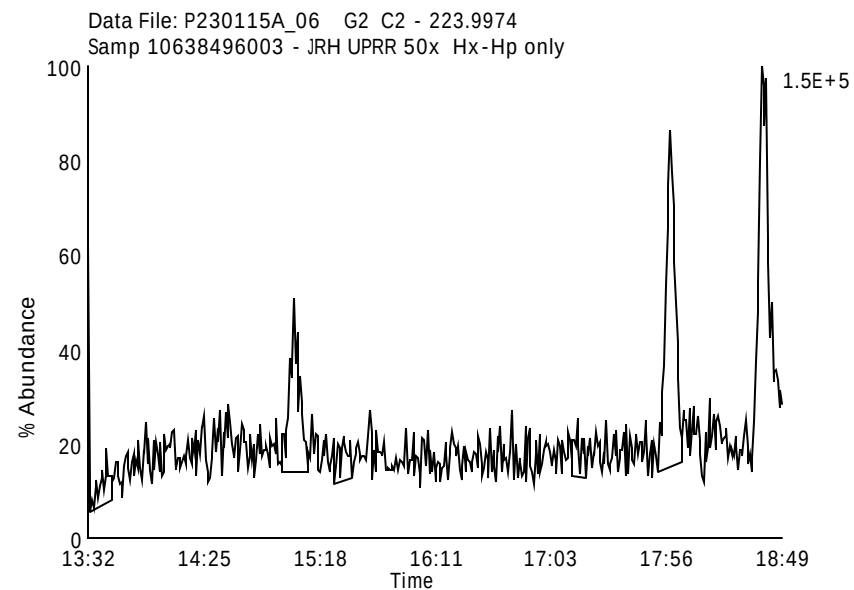
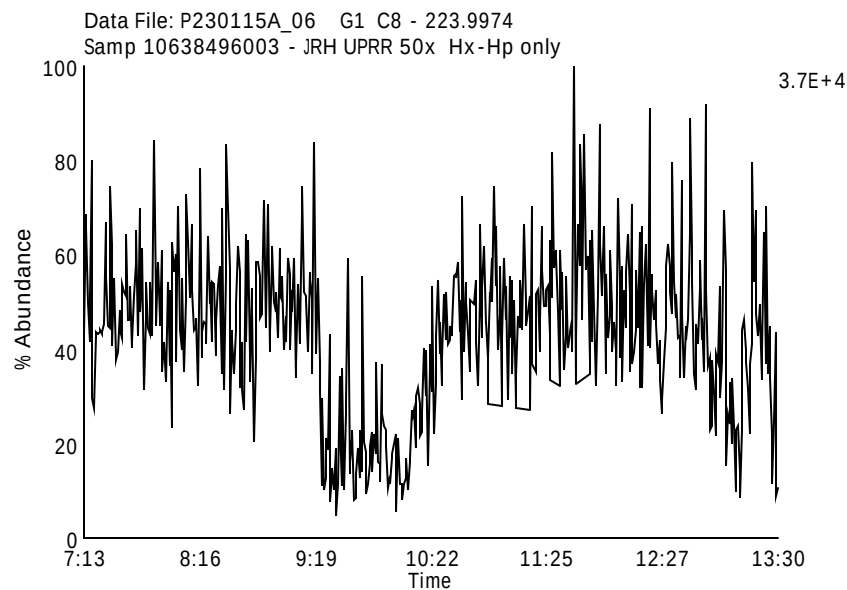
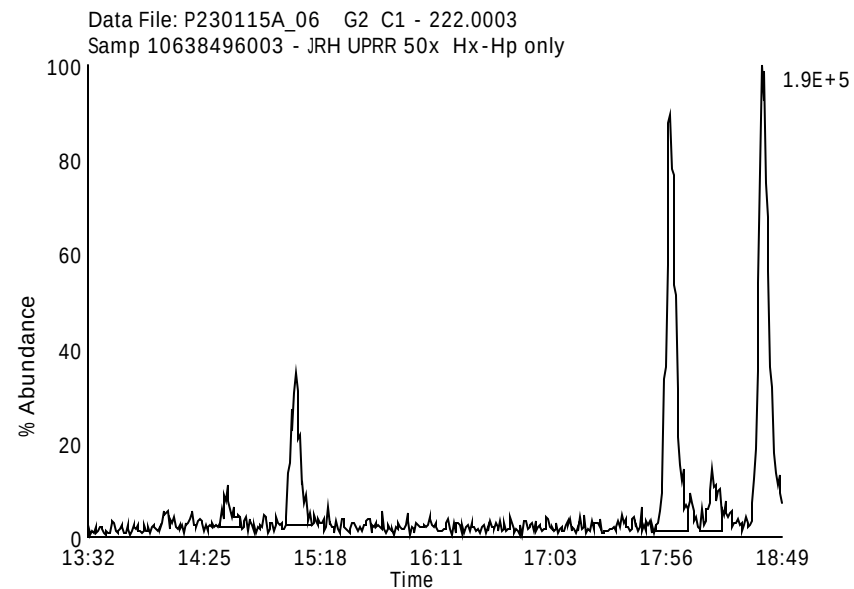
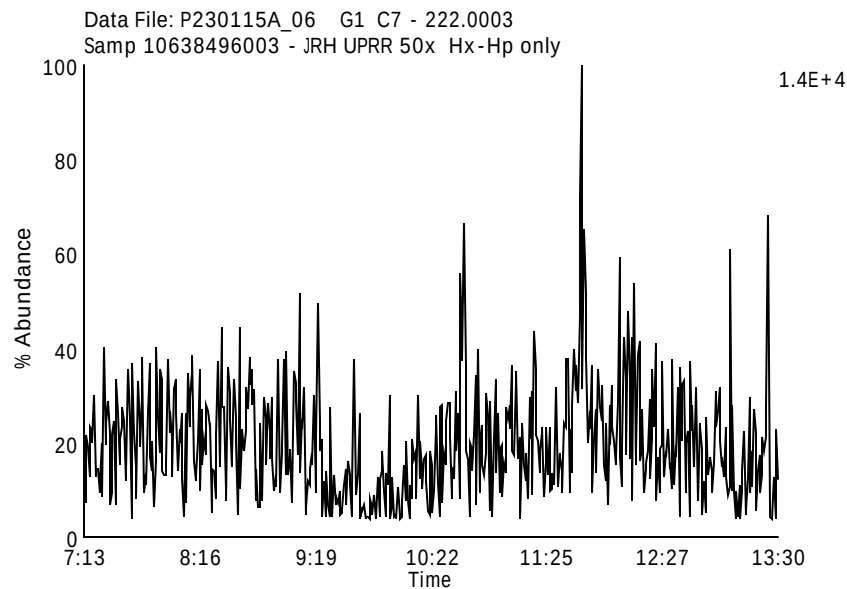
Date Acquired: 1/15/2023

Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Tri Chlorinated Biphenyls

Data File Name: P230115A_06

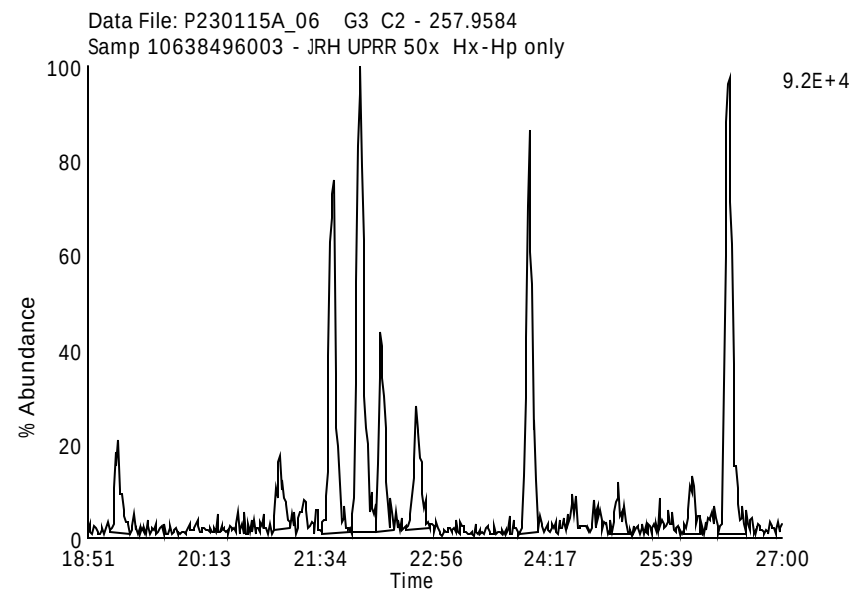
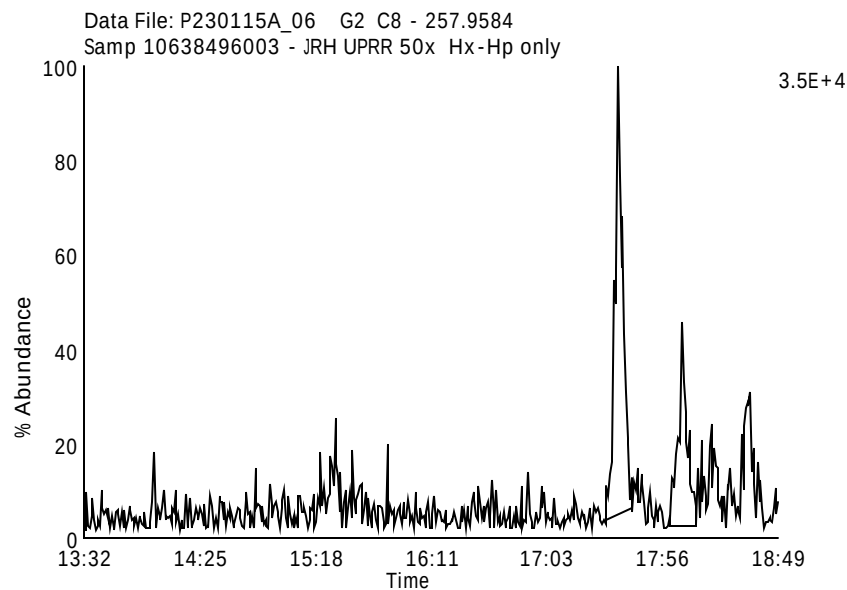
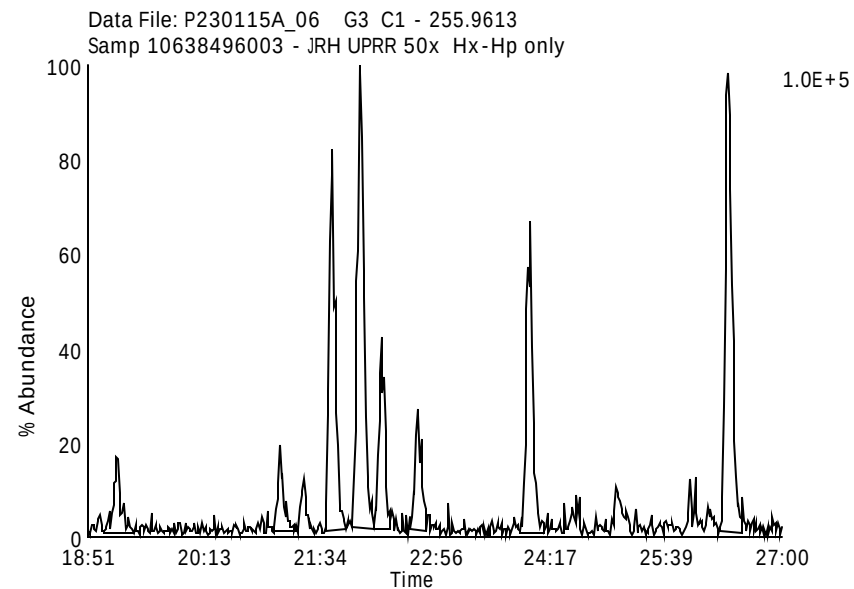
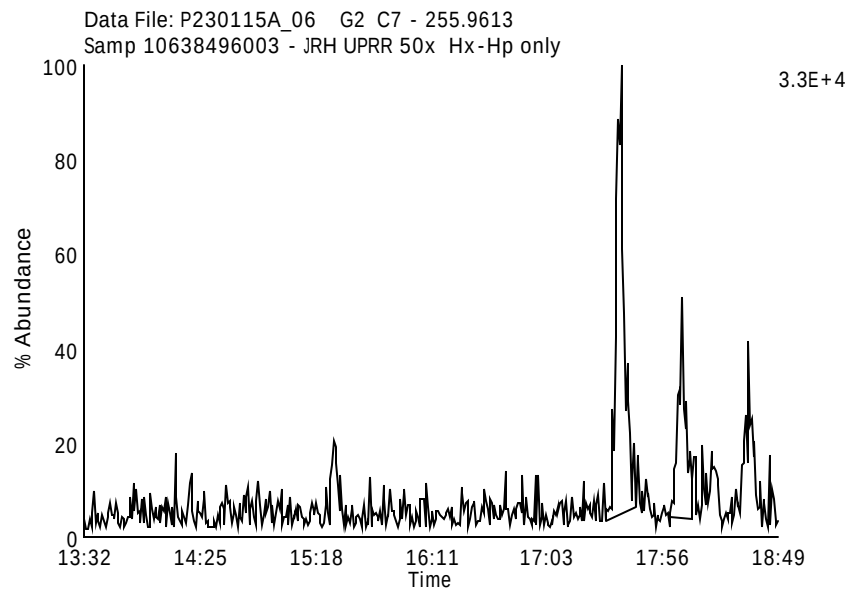
Date Acquired: 1/15/2023

Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Tetra Chlorinated Biphenyls

Data File Name: P230115A_06

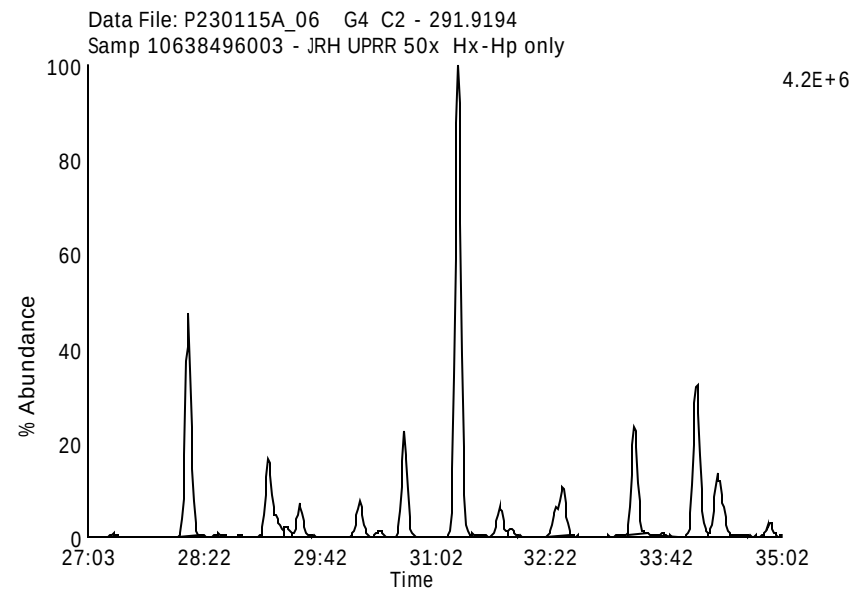
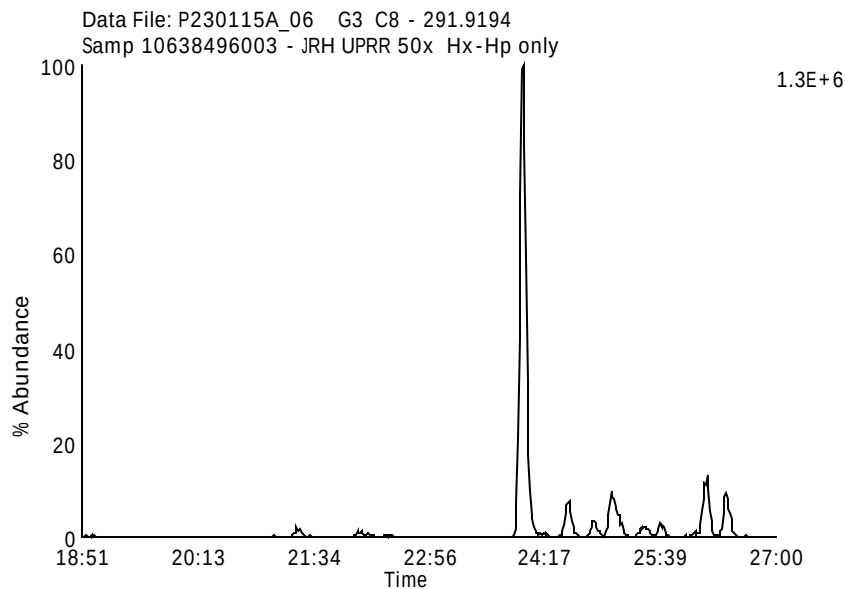
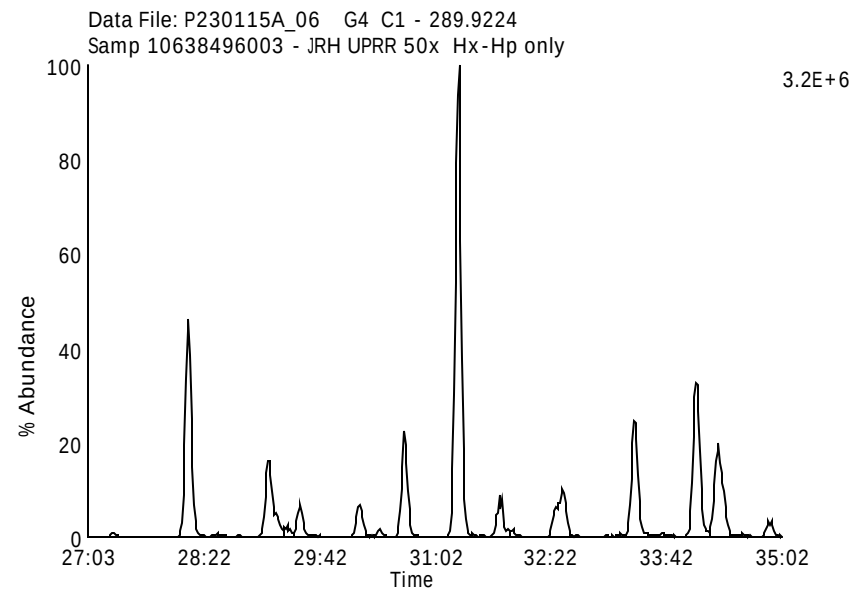
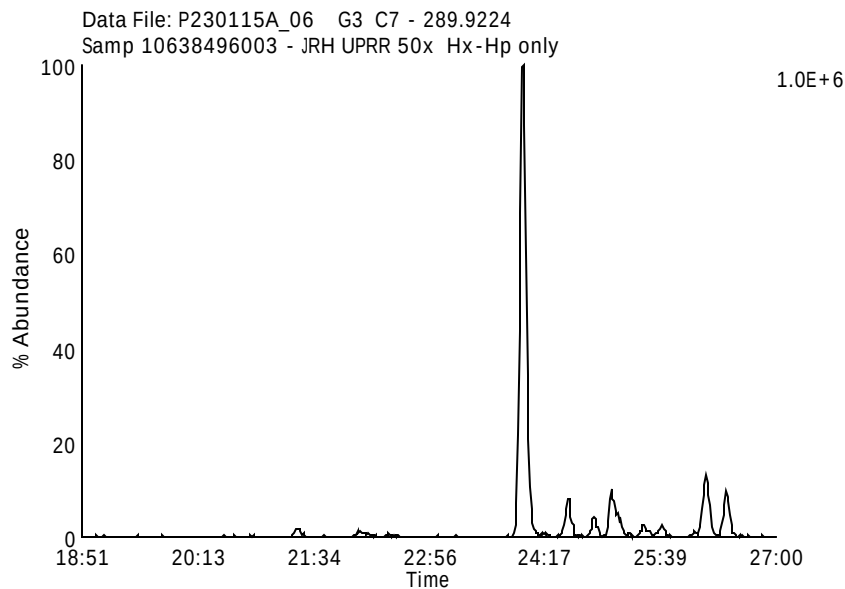
Date Acquired: 1/15/2023

Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Penta Chlorinated Biphenyls

Data File Name: P230115A_06

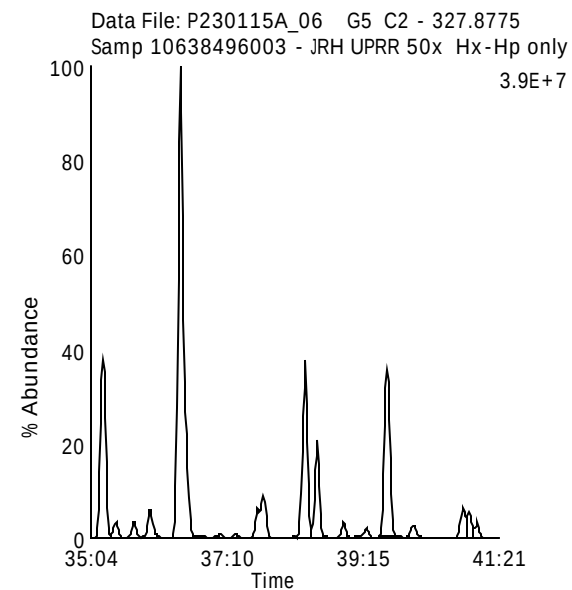
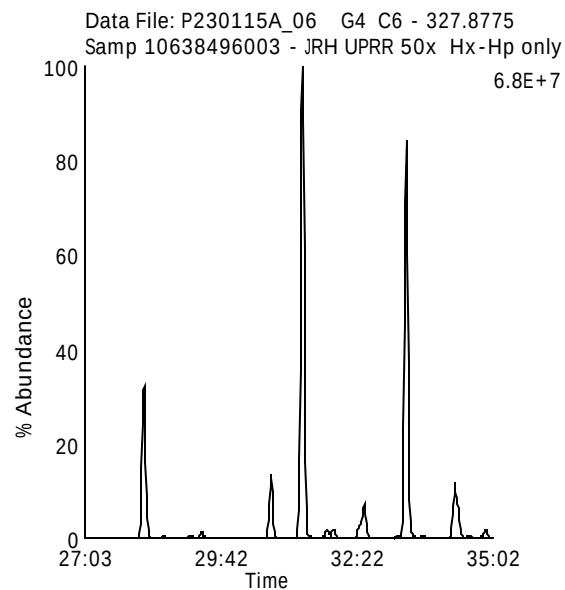
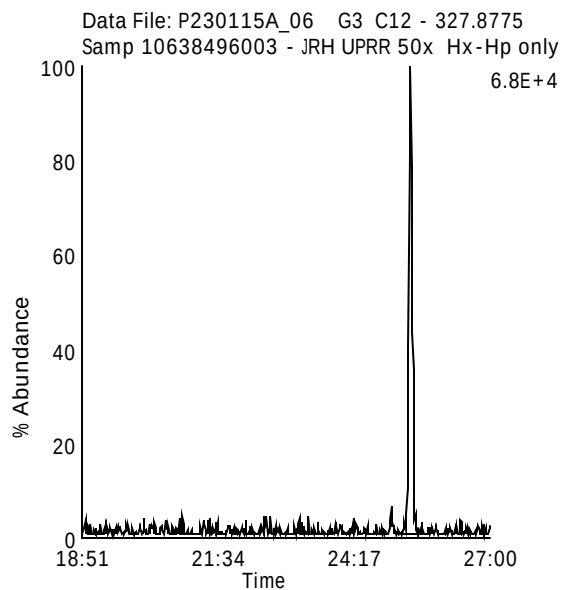
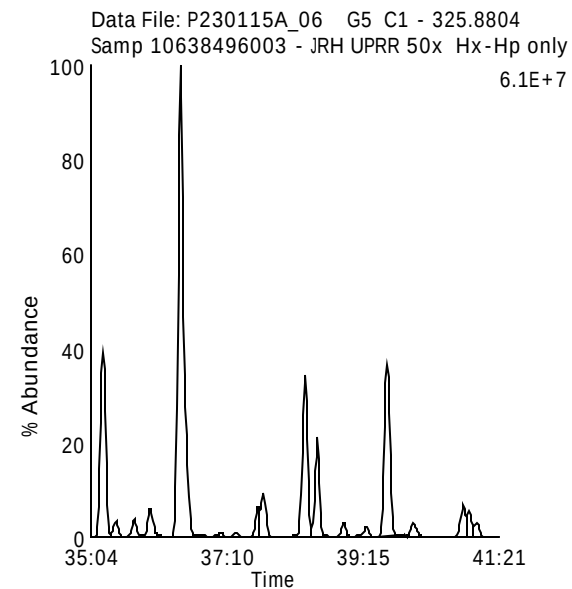
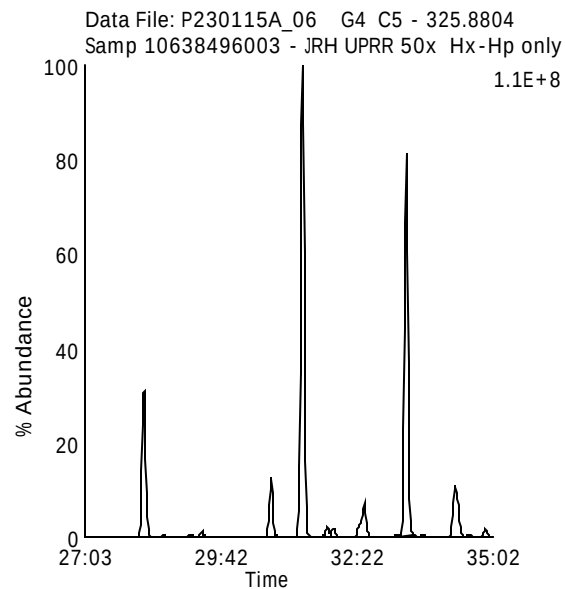
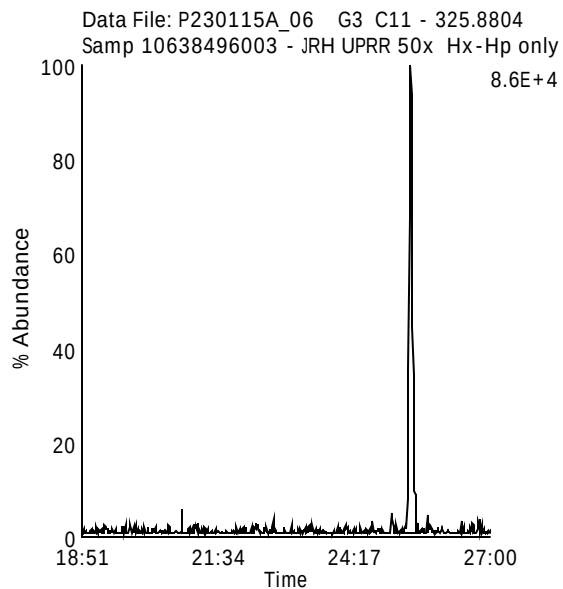
Date Acquired: 1/15/2023

Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Hexa Chlorinated Biphenyls

Data File Name: P230115A_06

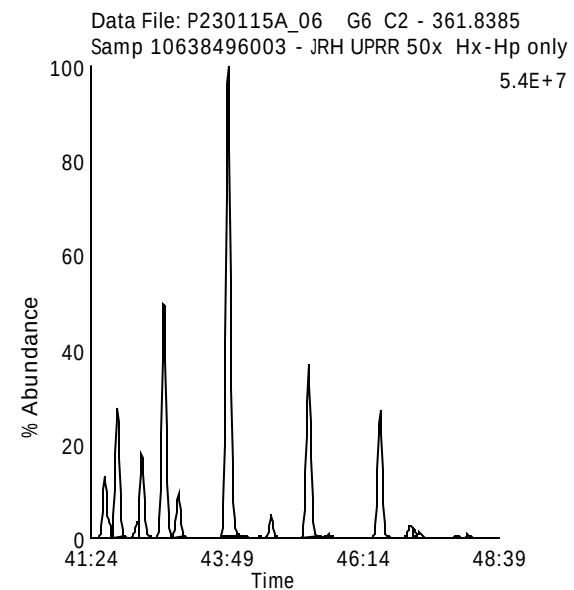
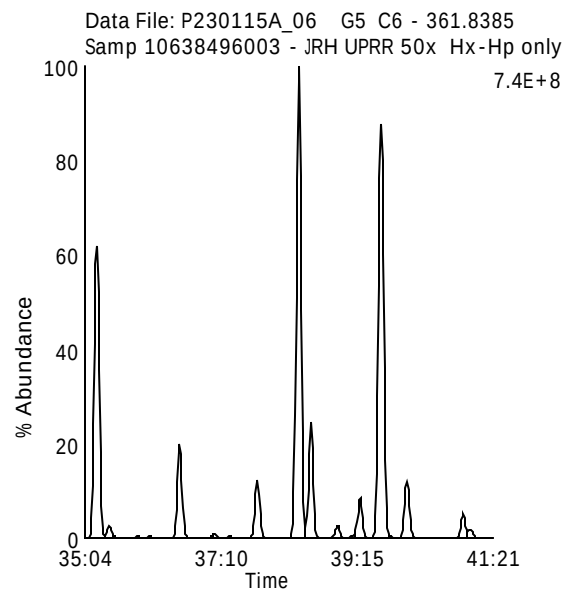
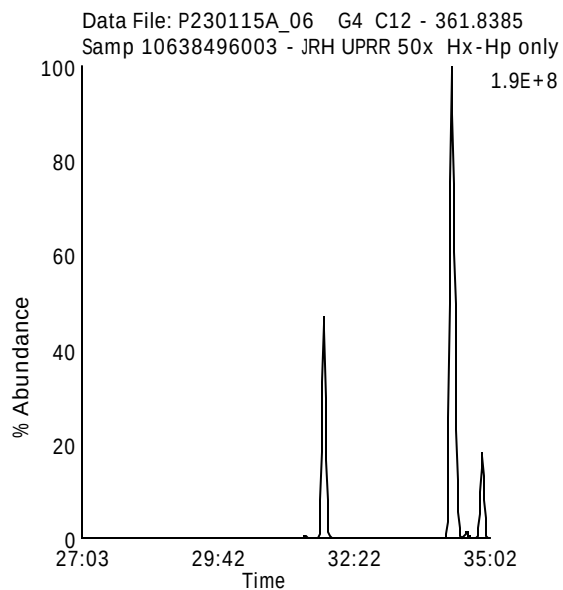
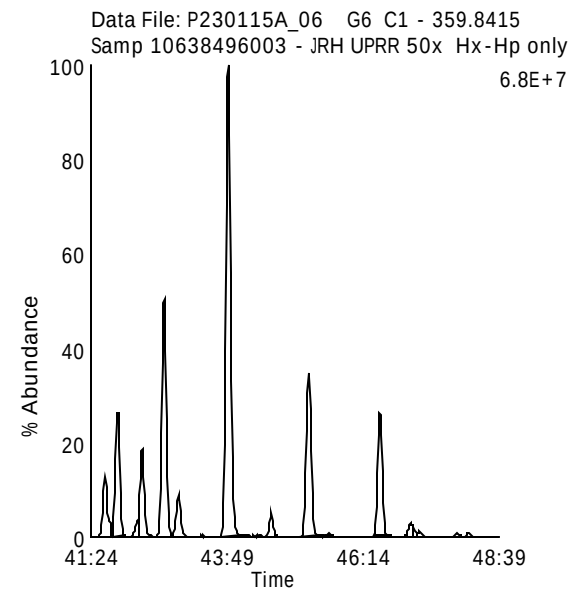
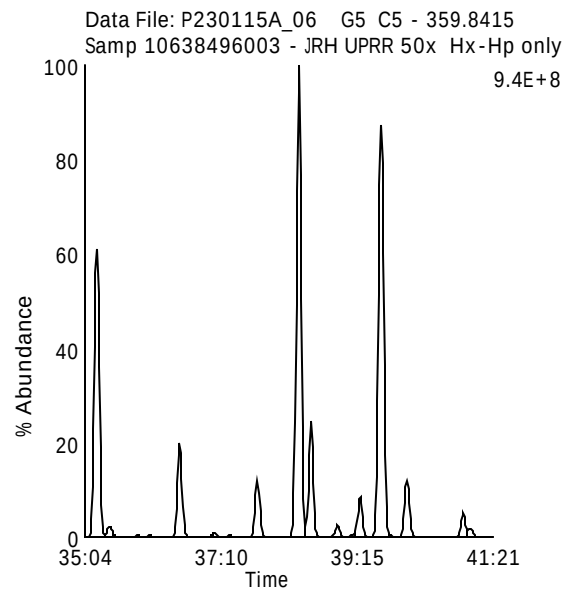
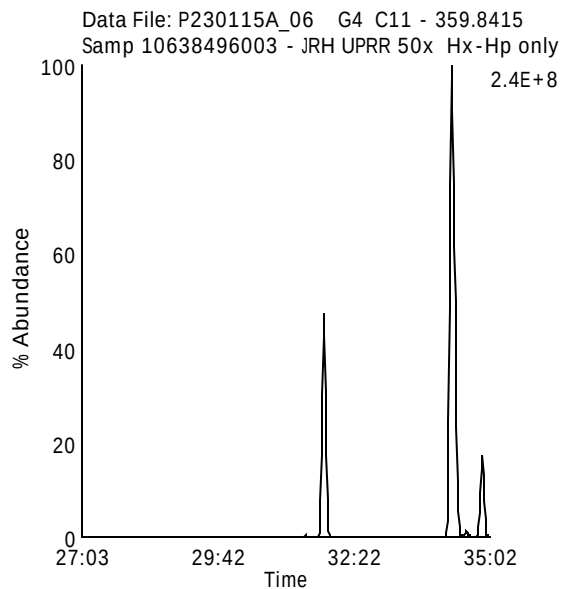
Date Acquired: 1/15/2023

Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Hepta Chlorinated Biphenyls

Data File Name: P230115A_06

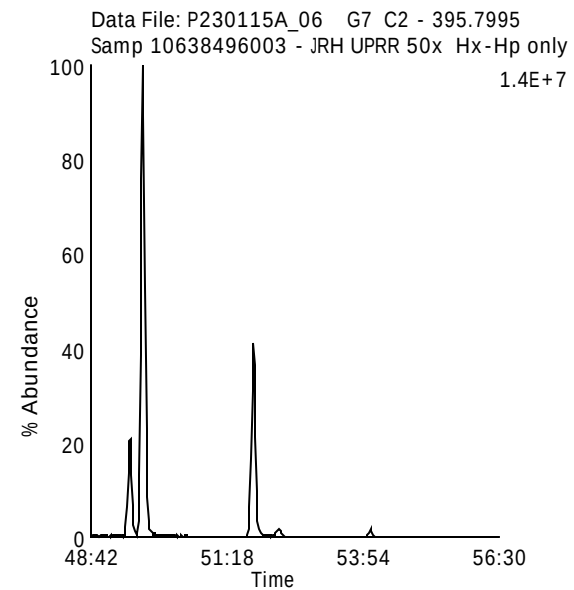
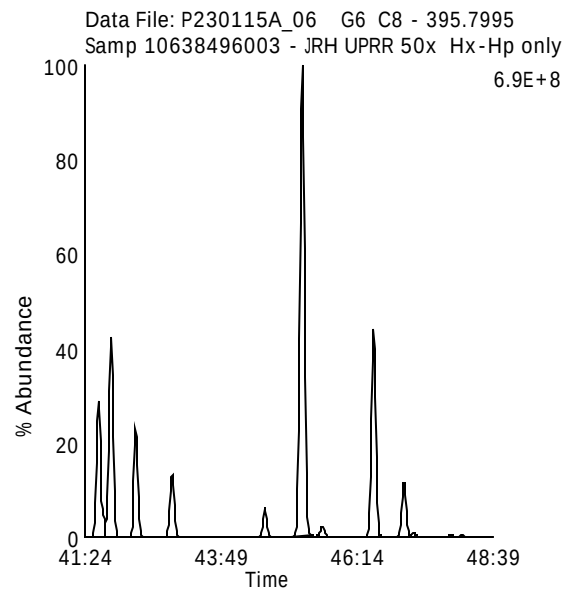
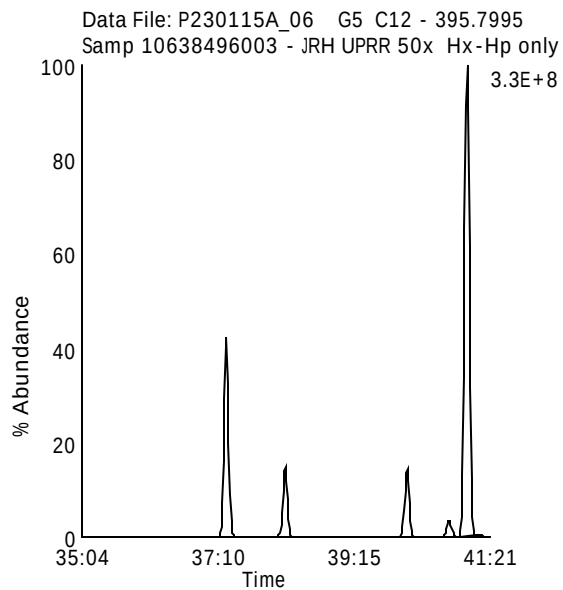
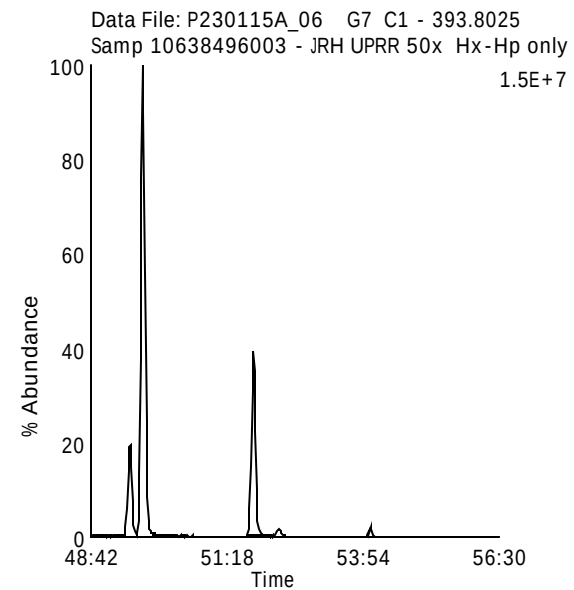
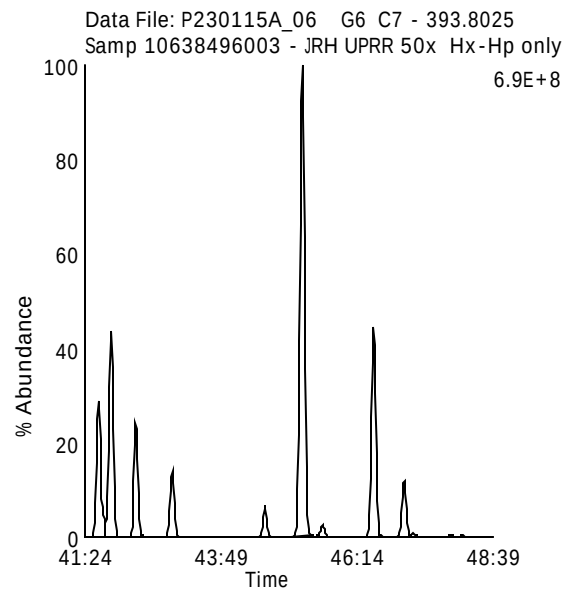
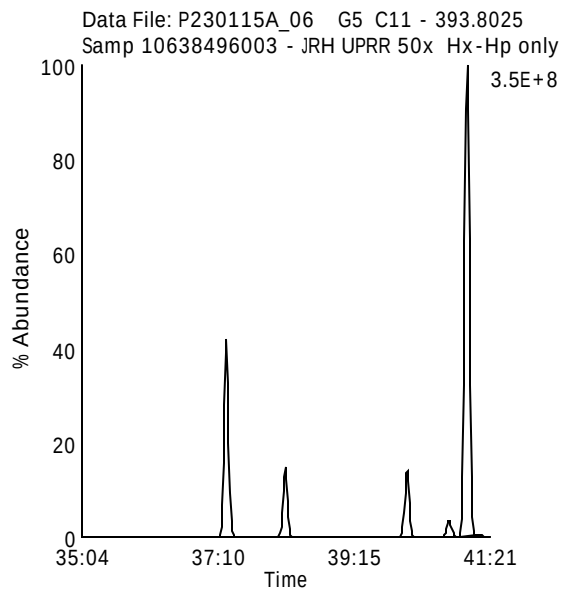
Date Acquired: 1/15/2023

Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Octa Chlorinated Biphenyls

Data File Name: P230115A_06

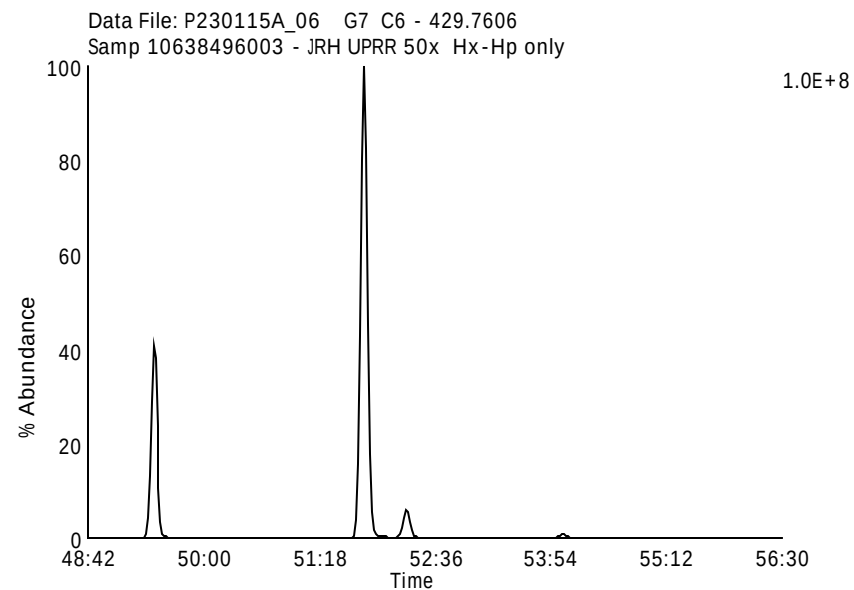
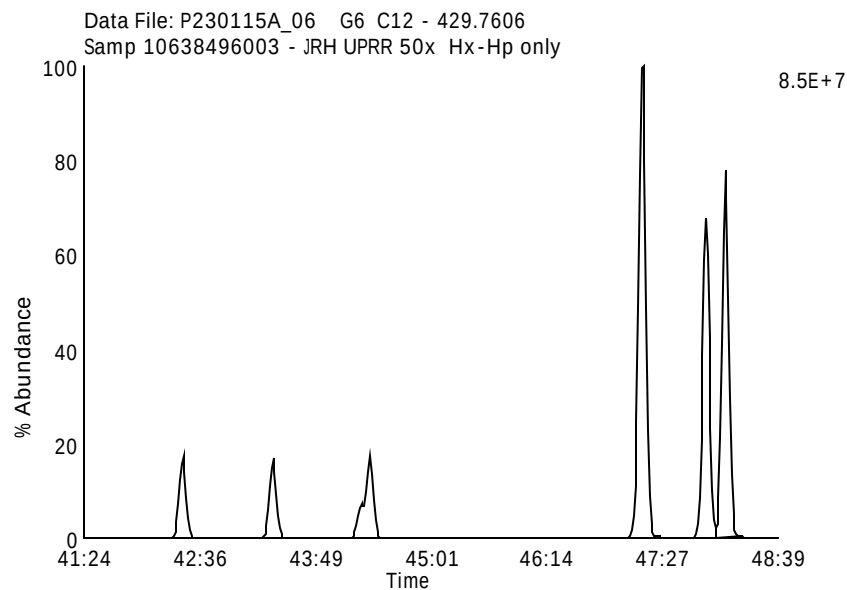
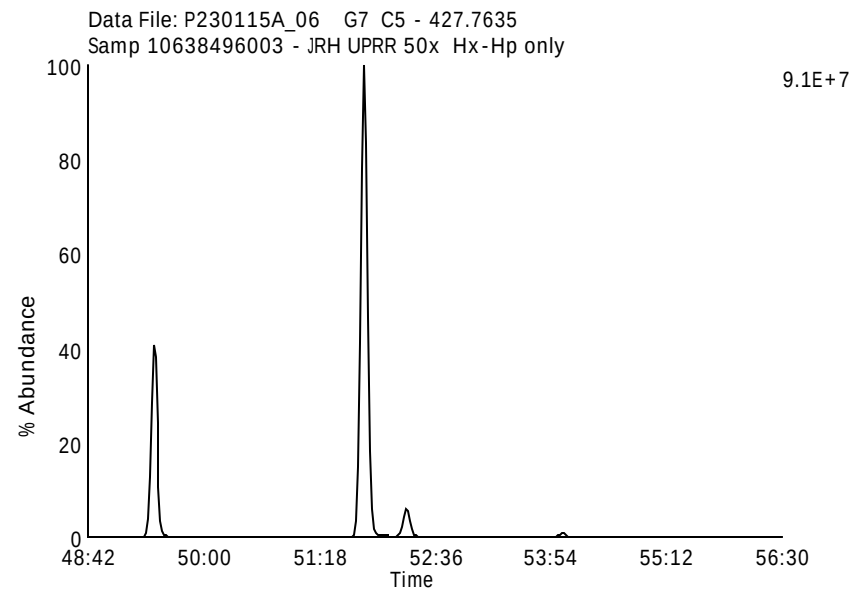
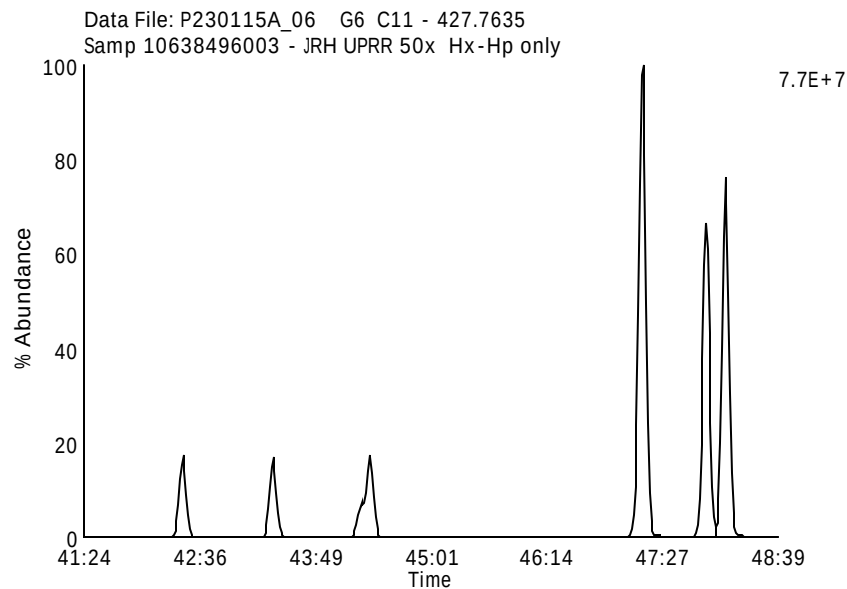
Date Acquired: 1/15/2023

Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Nona Chlorinated Biphenyls

Data File Name: P230115A_06

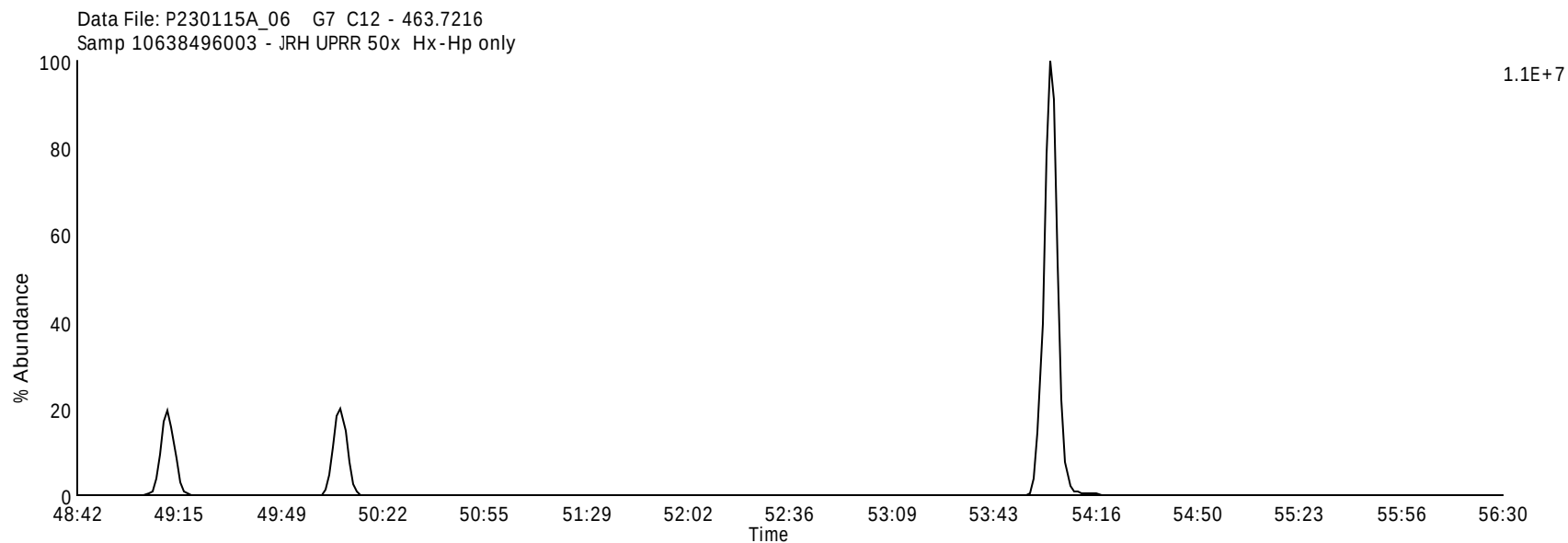
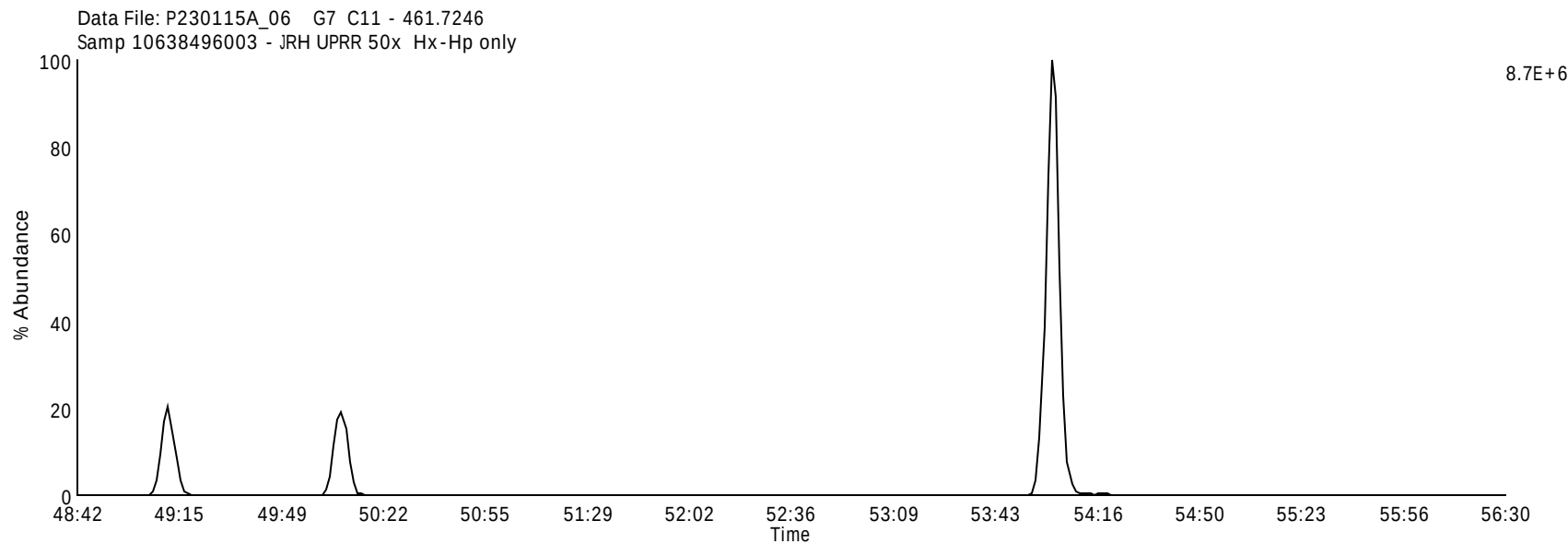
Date Acquired: 1/15/2023

Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Deca Chlorinated Biphenyl

Data File Name: P230115A_06

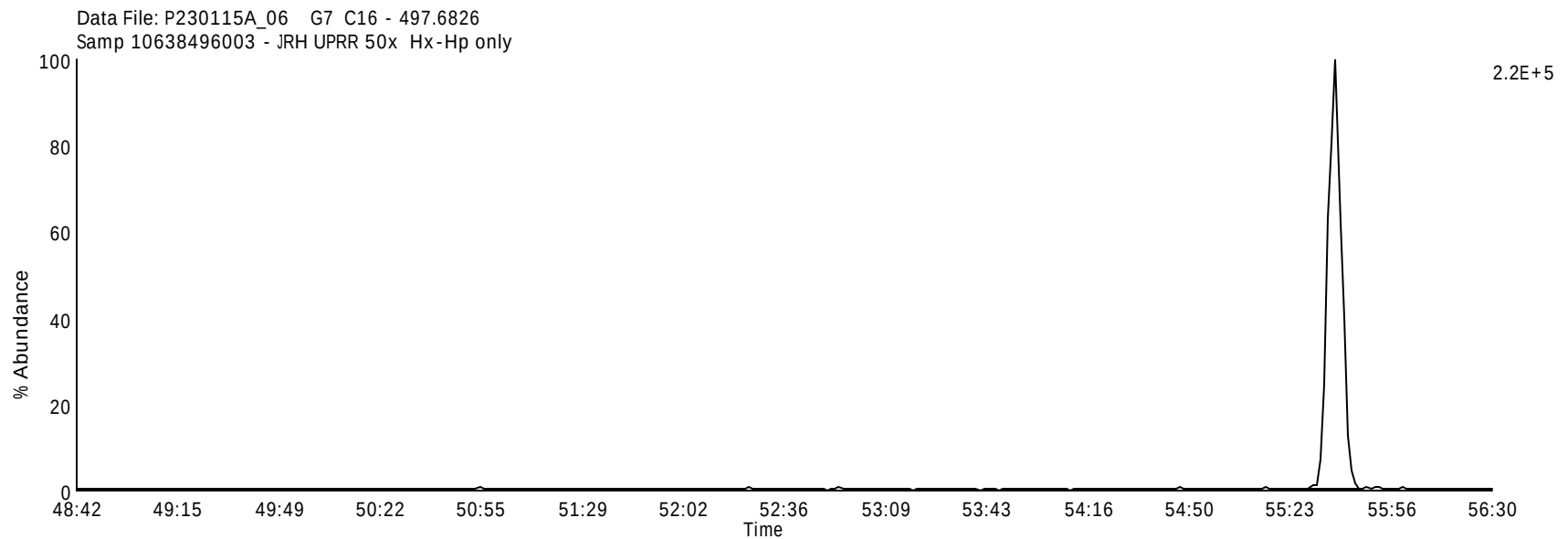
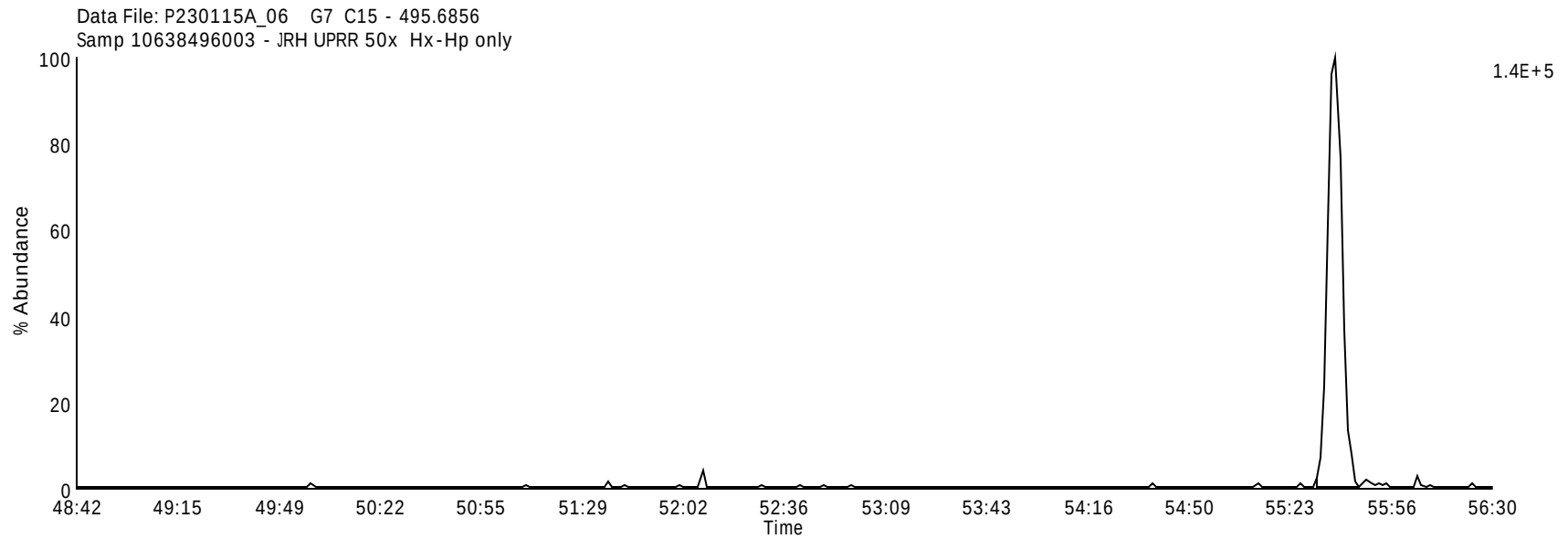
Date Acquired: 1/15/2023

Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Group 1 - 4 Lock mass

Data File Name: P230115A_06

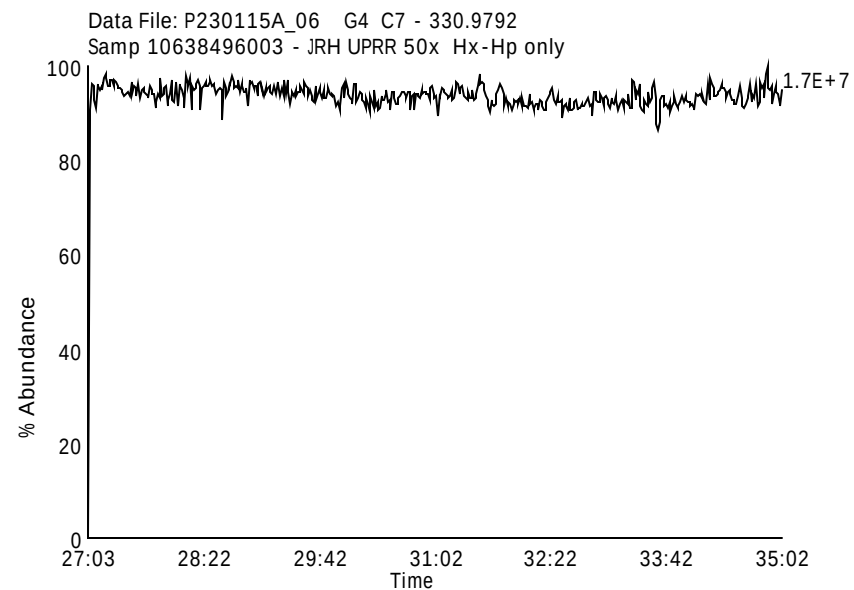
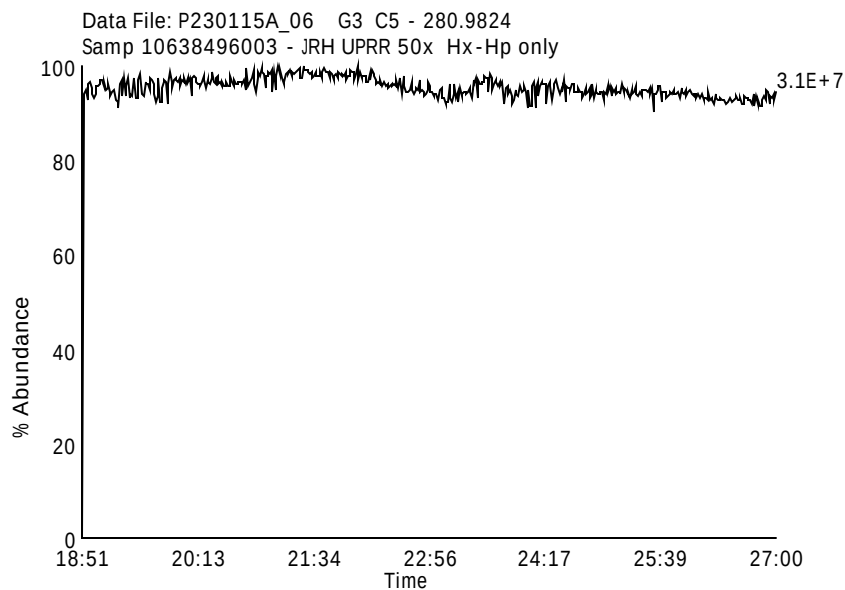
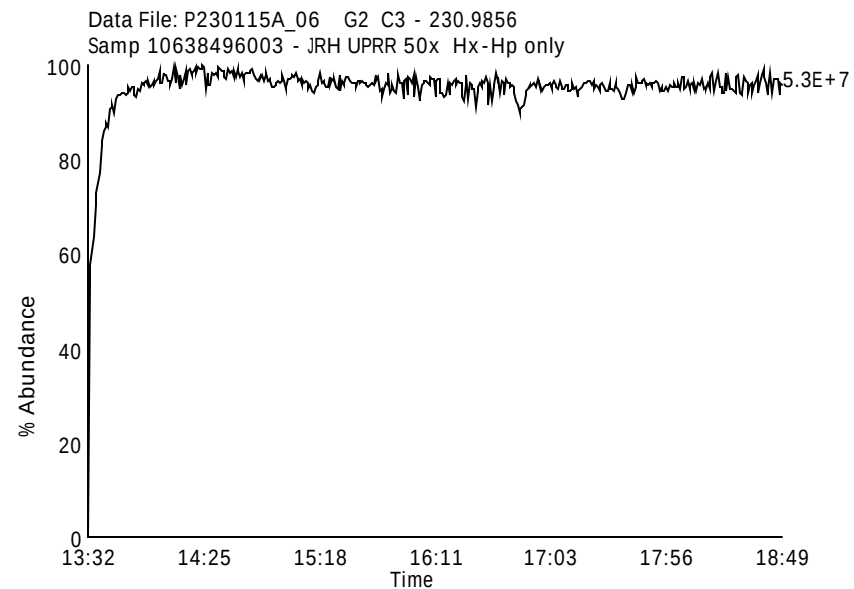
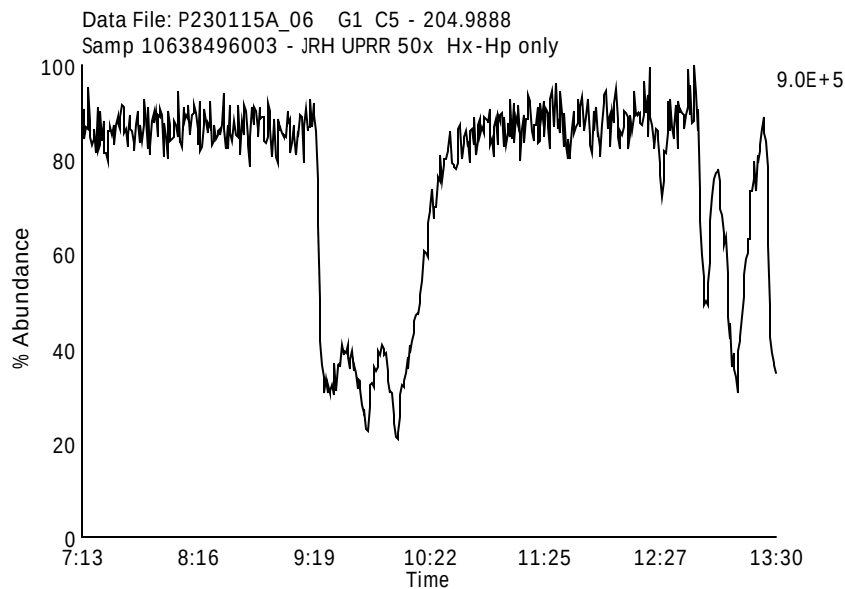
Date Acquired: 1/15/2023

Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Group 5 - 7 Lock mass

Data File Name: P230115A_06

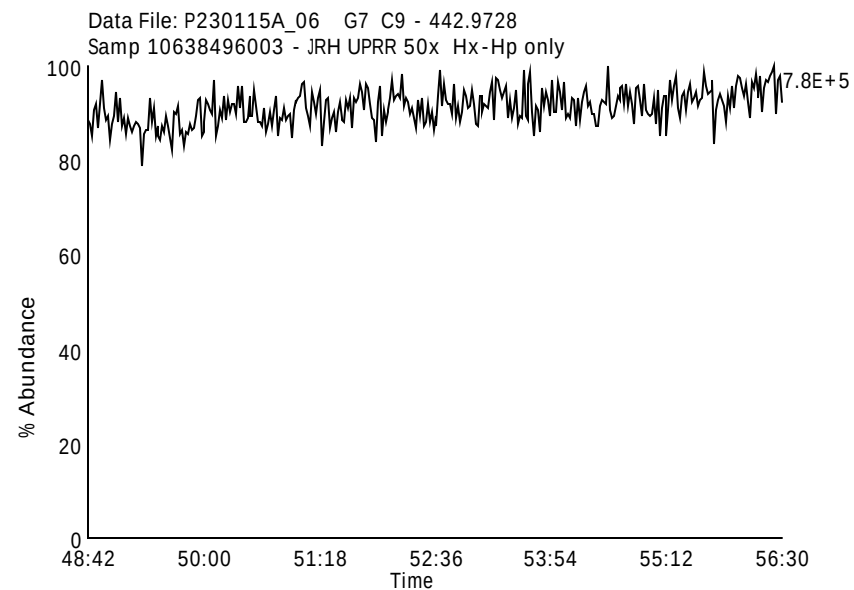
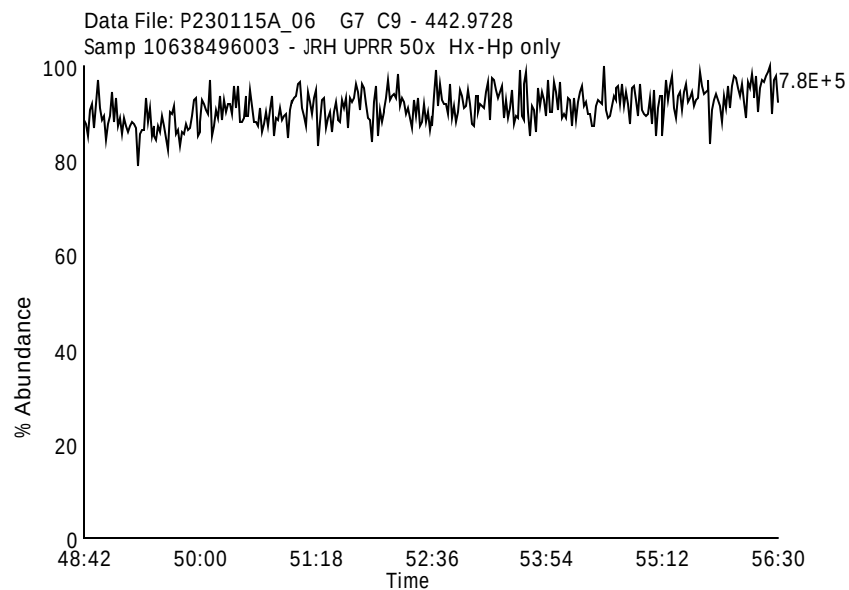
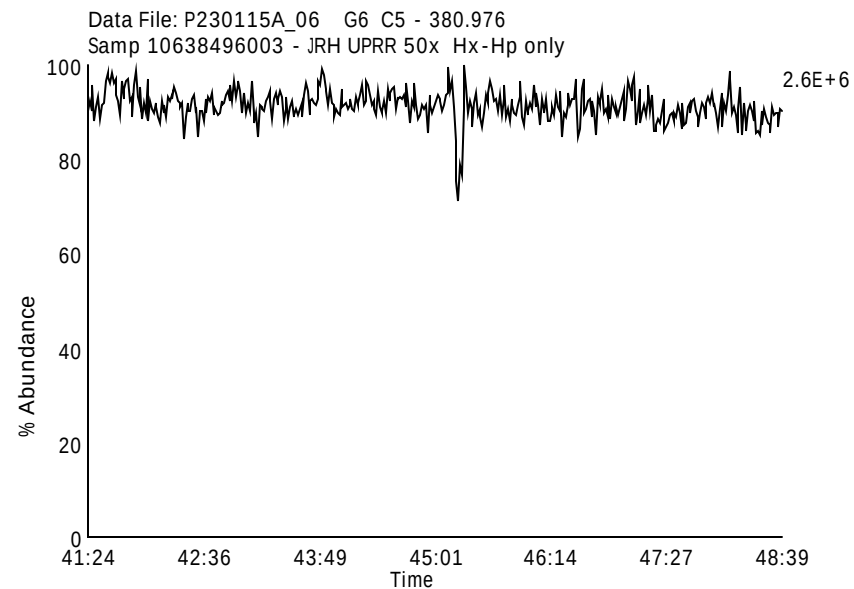
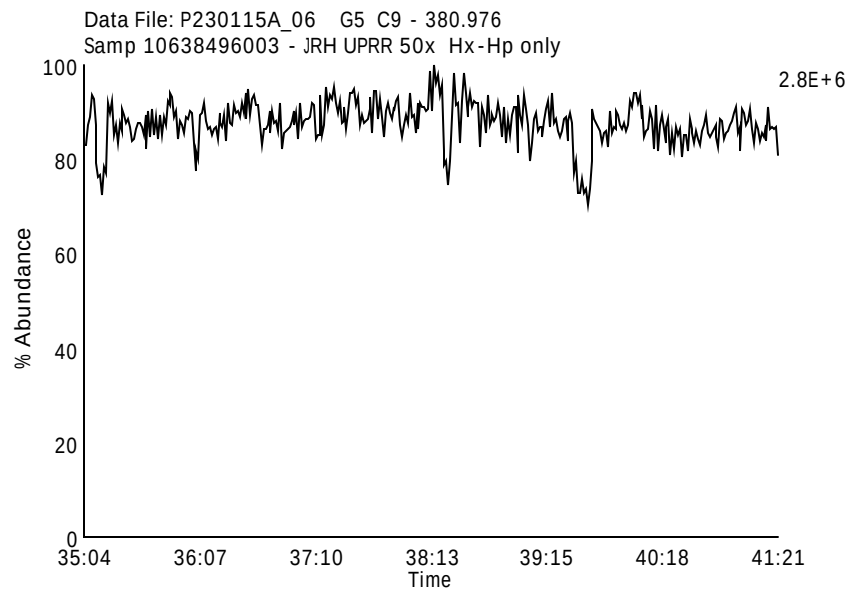
Date Acquired: 1/15/2023

Sample Description: Samp 10638496003 - JRH UPRR 50x Hx-Hp only

Lab Sample ID: 10638496003

Instrument: 10MSHR09 (P)

Client Sample ID: SB10-0.0-0.5-1022



Labeled Mono Chlorinated Biphenyls

Data File Name: P230113A_11

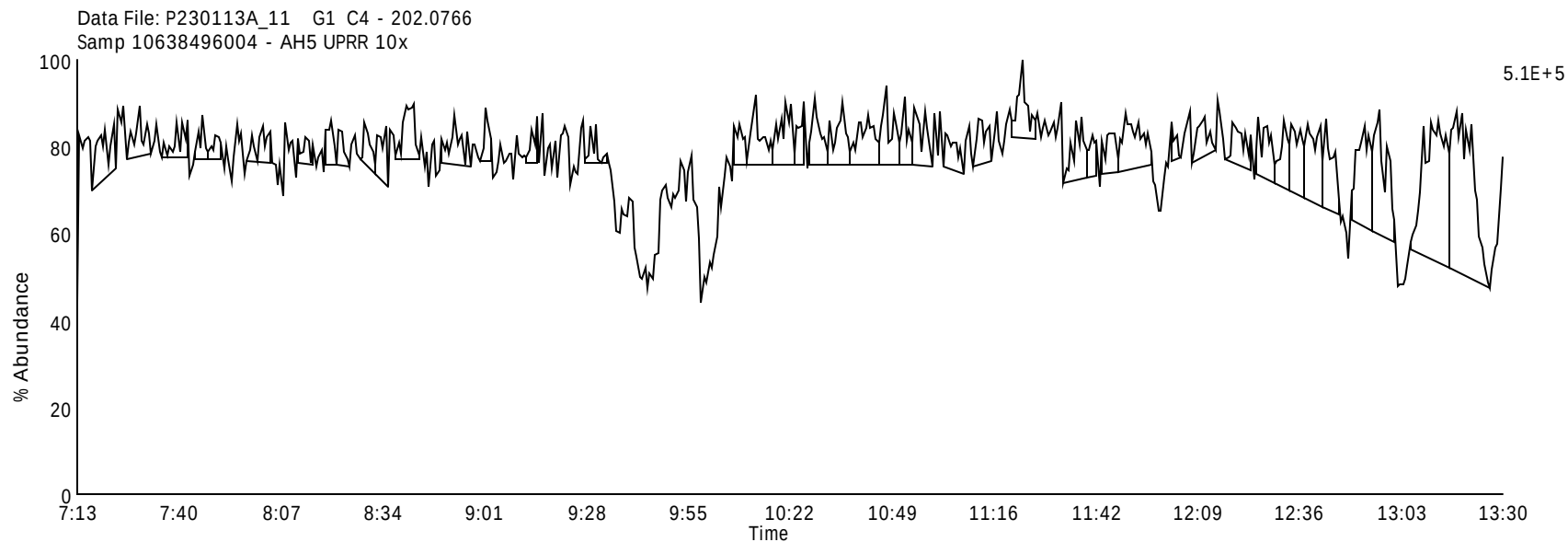
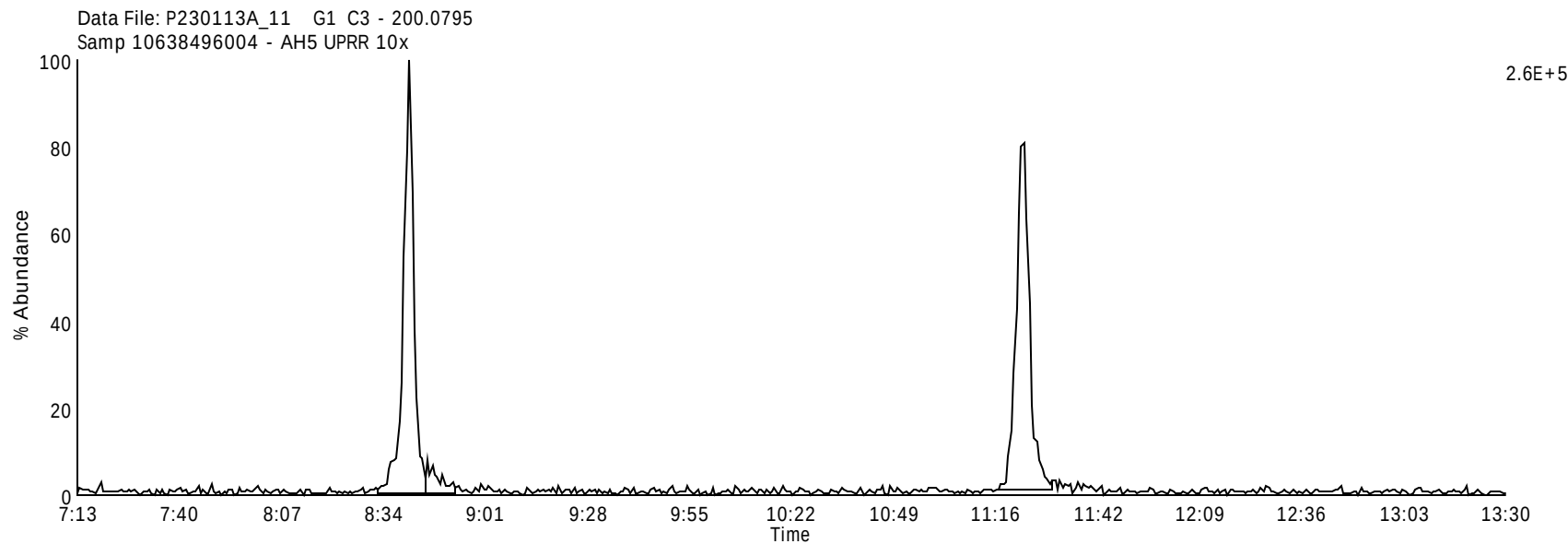
Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022



Labeled Di Chlorinated Biphenyls

Data File Name: P230113A_11

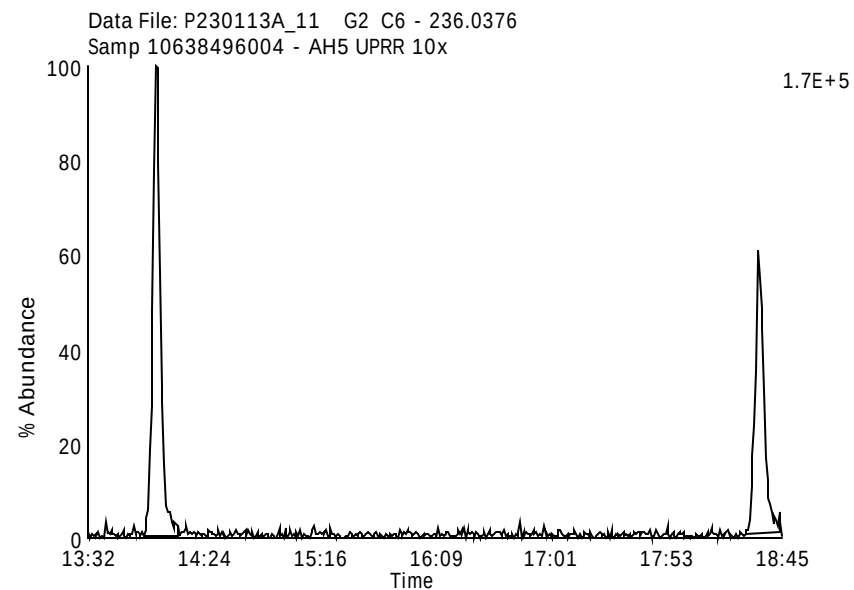
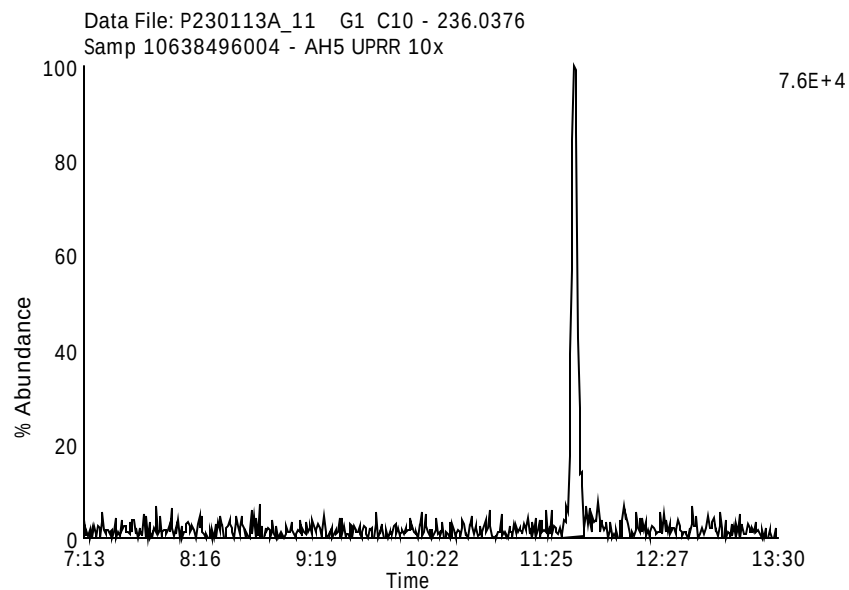
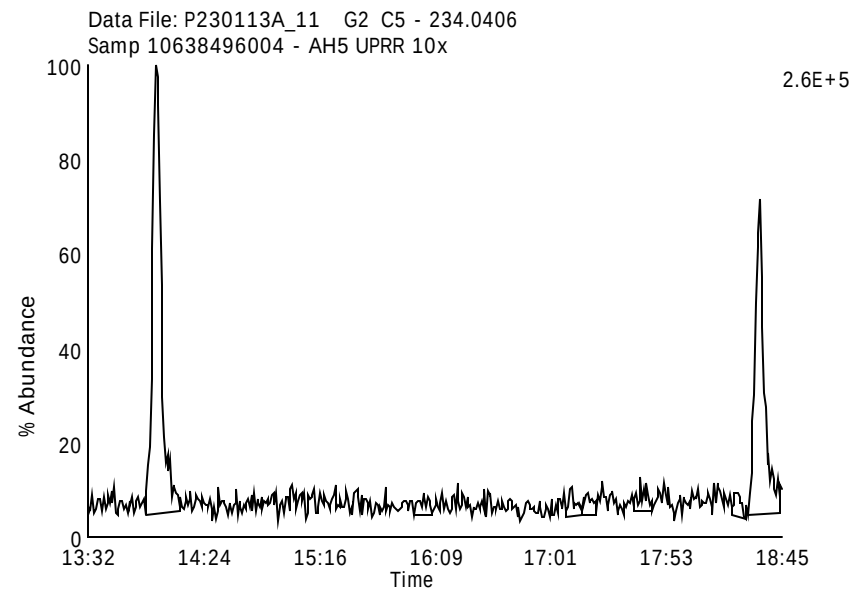
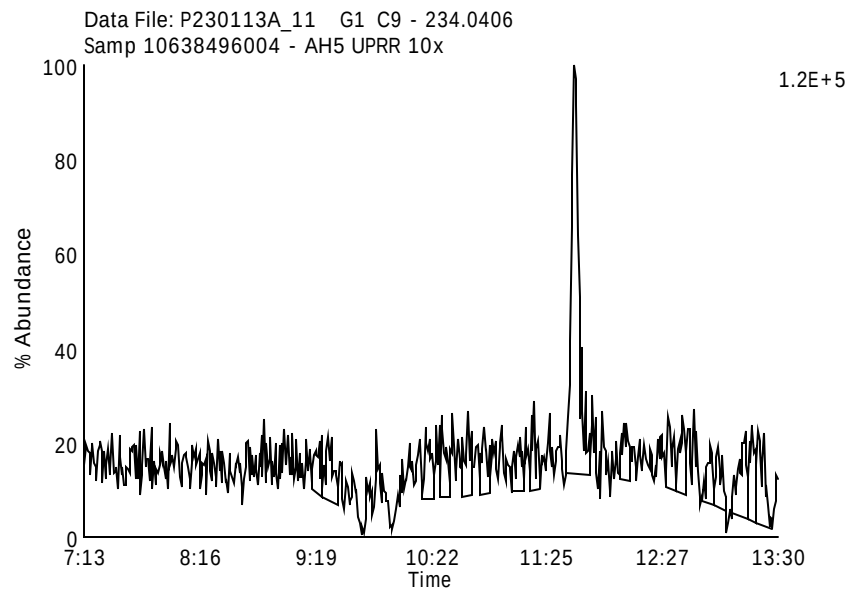
Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022



Labeled Tri Chlorinated Biphenyls

Data File Name: P230113A_11

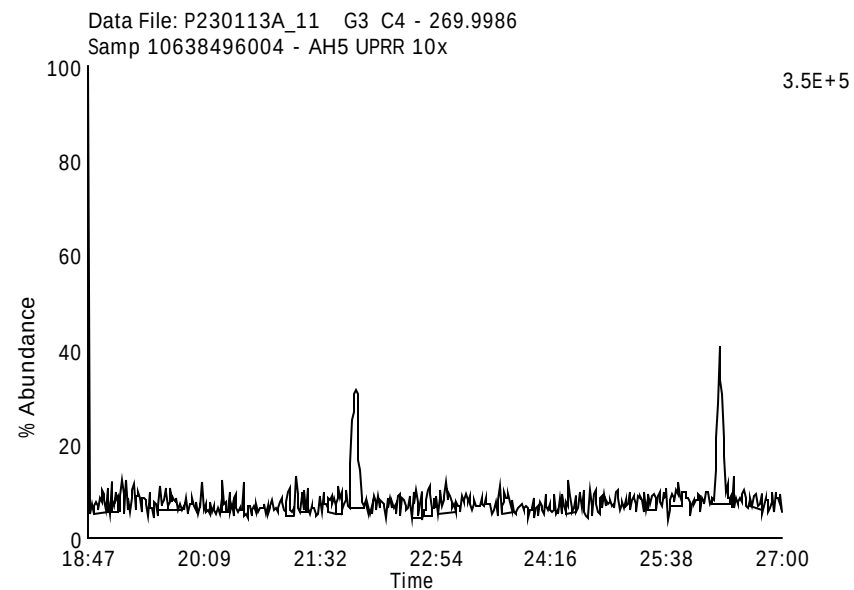
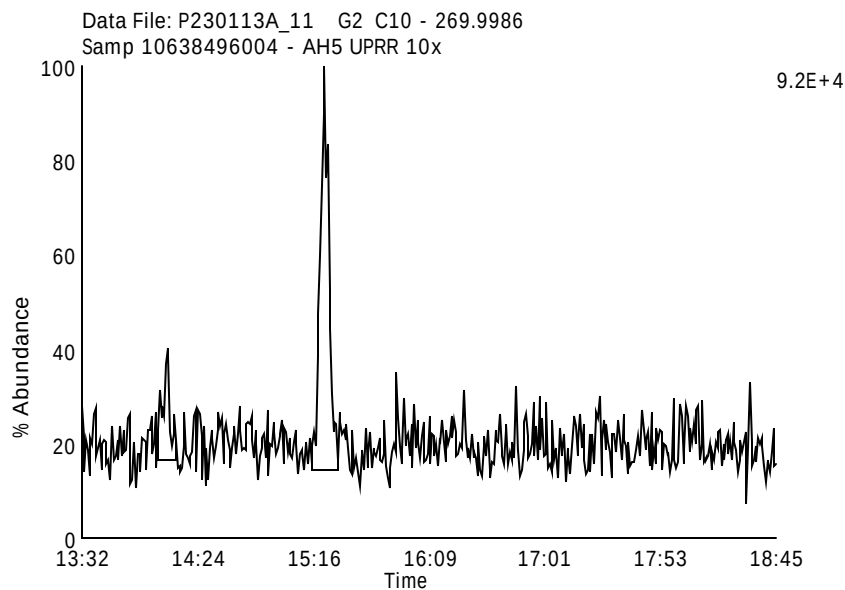
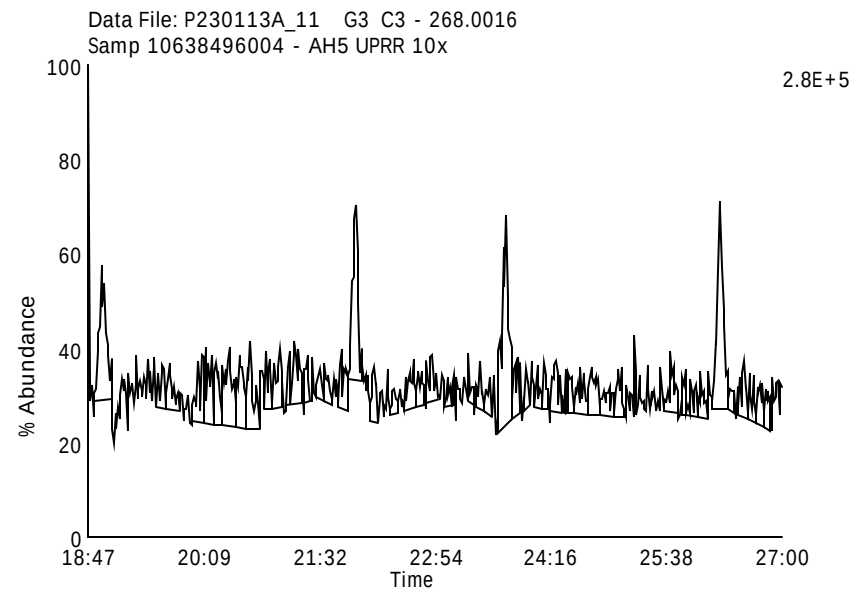
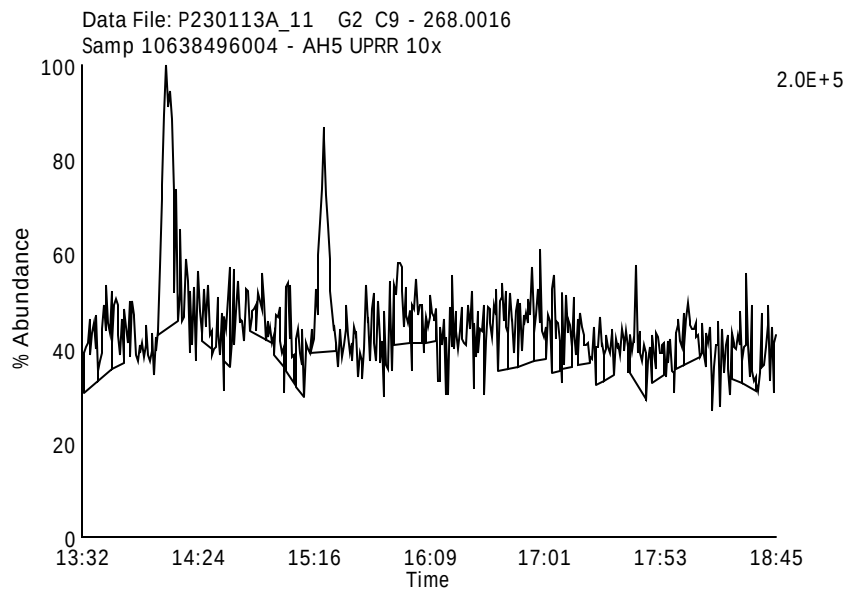
Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022



Labeled Tetra Chlorinated Biphenyls

Data File Name: P230113A_11

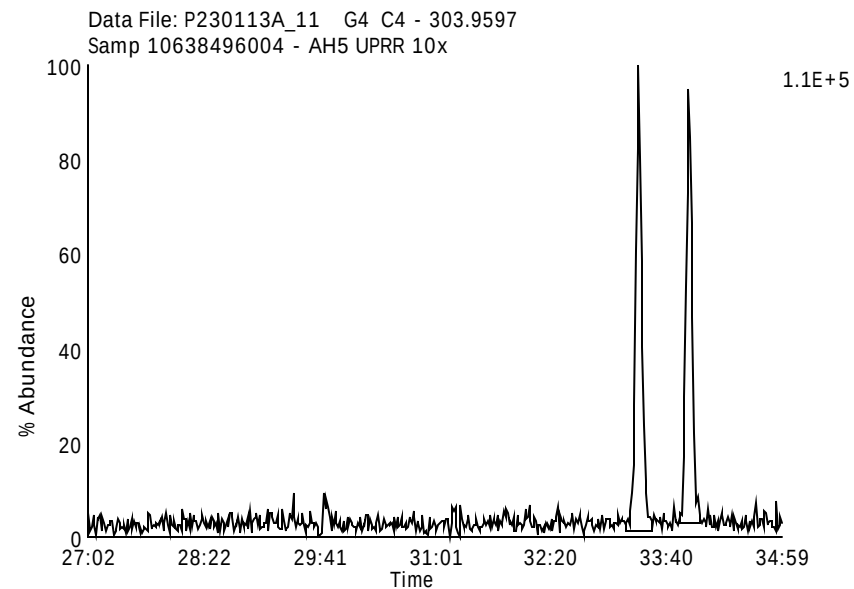
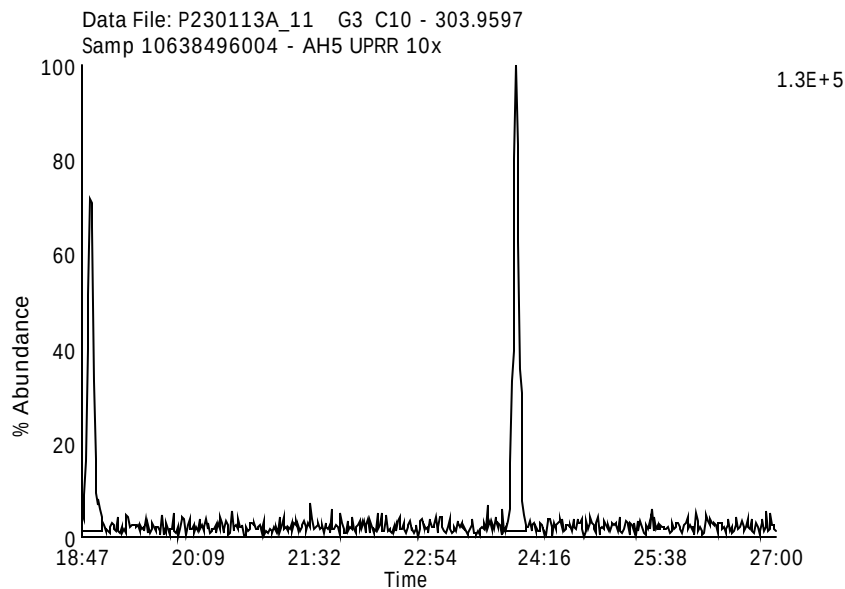
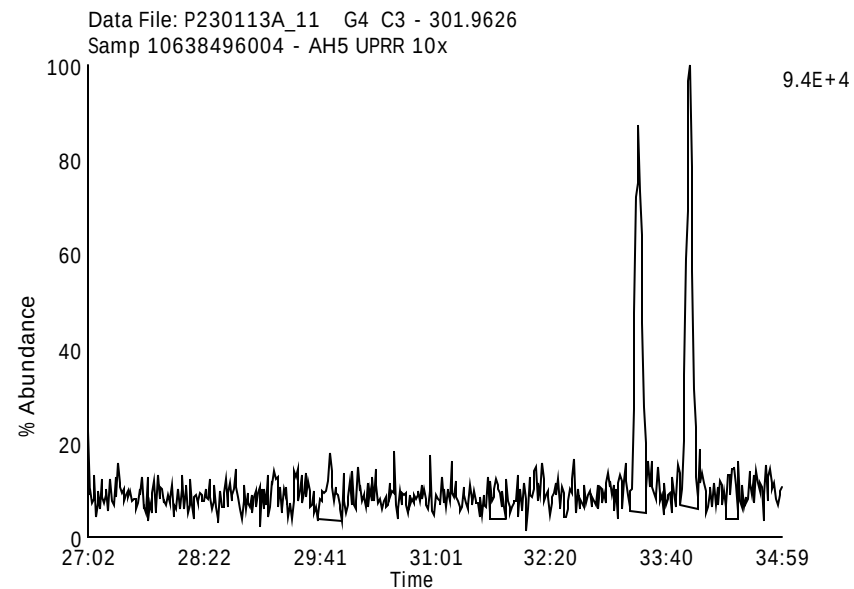
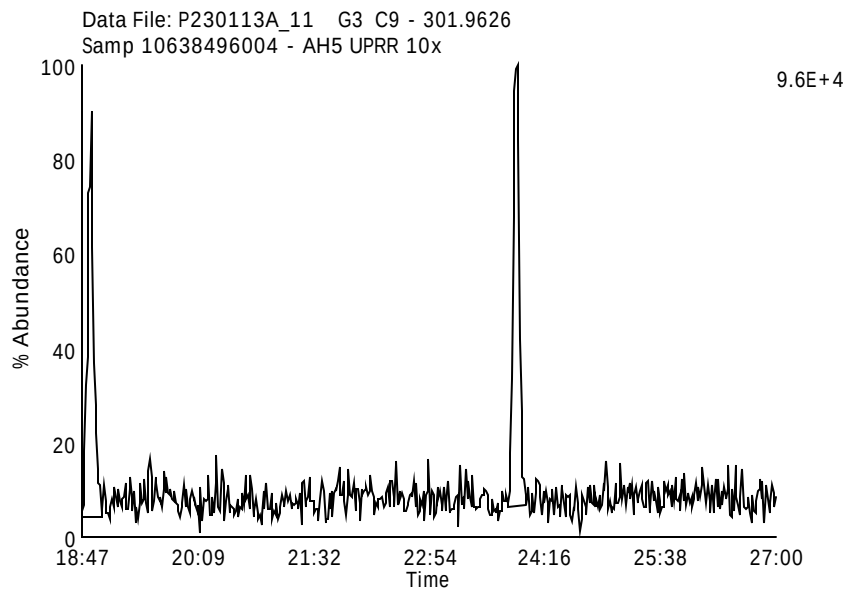
Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022



Labeled Penta Chlorinated Biphenyls

Data File Name: P230113A_11

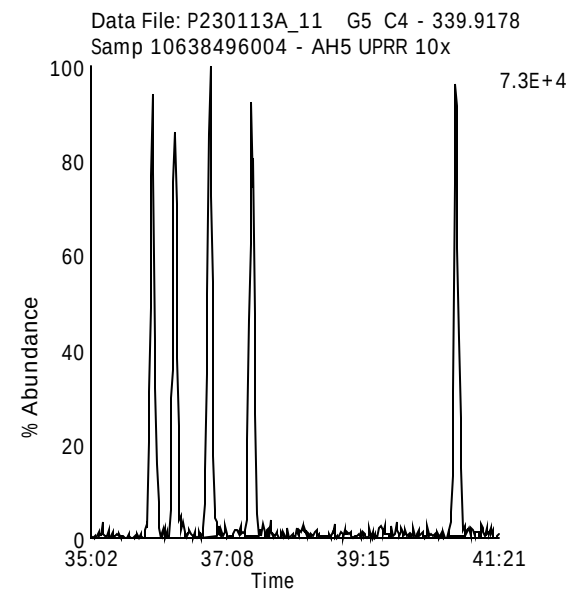
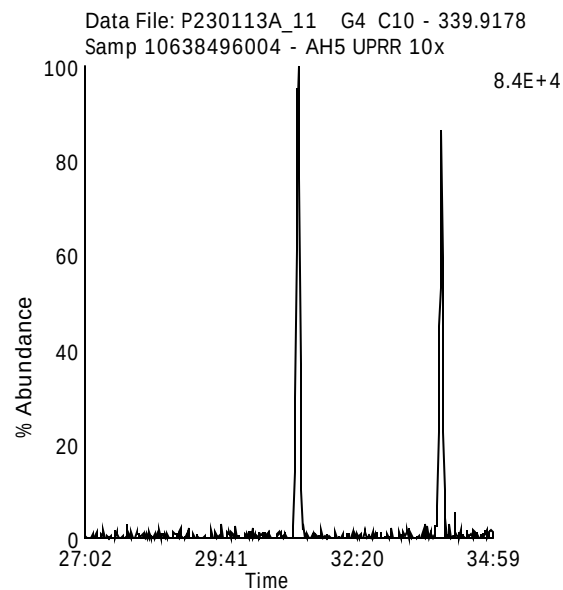
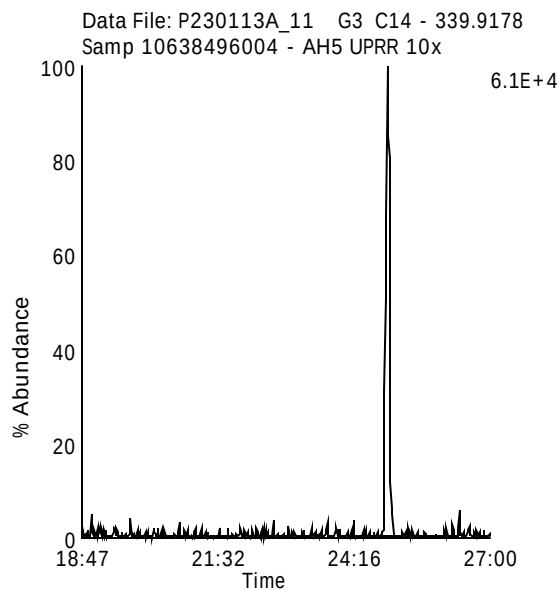
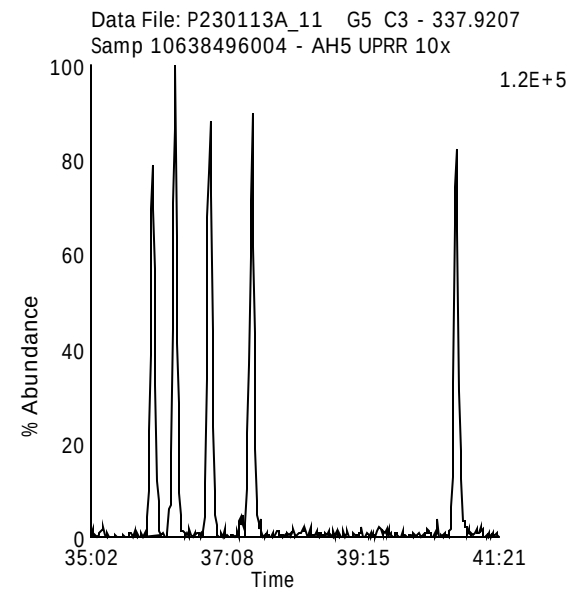
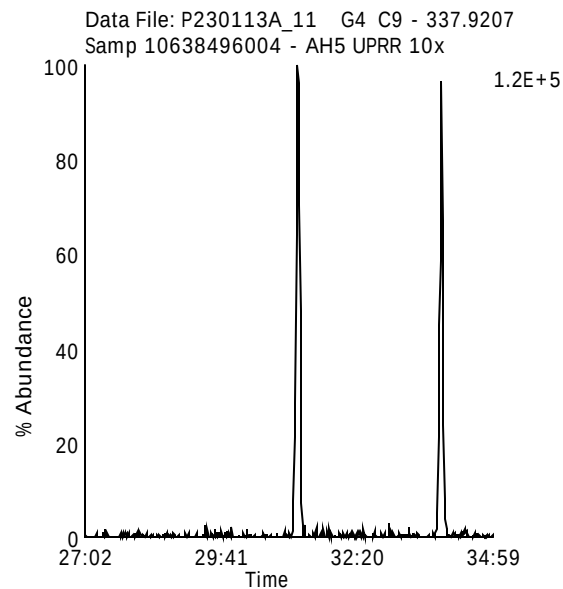
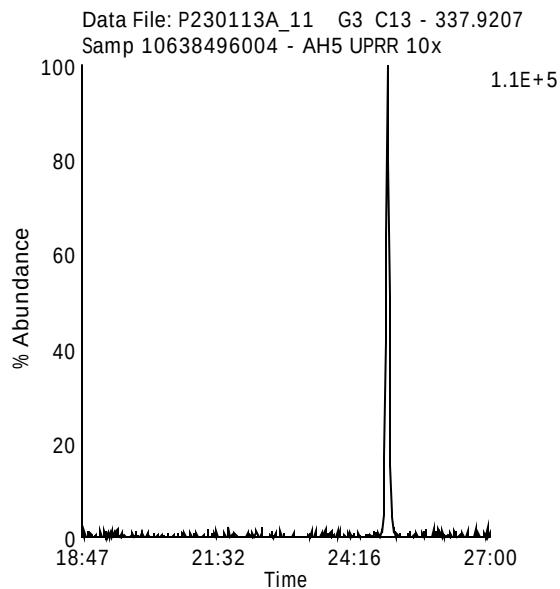
Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022



Labeled Hexa Chlorinated Biphenyls

Data File Name: P230113A_11

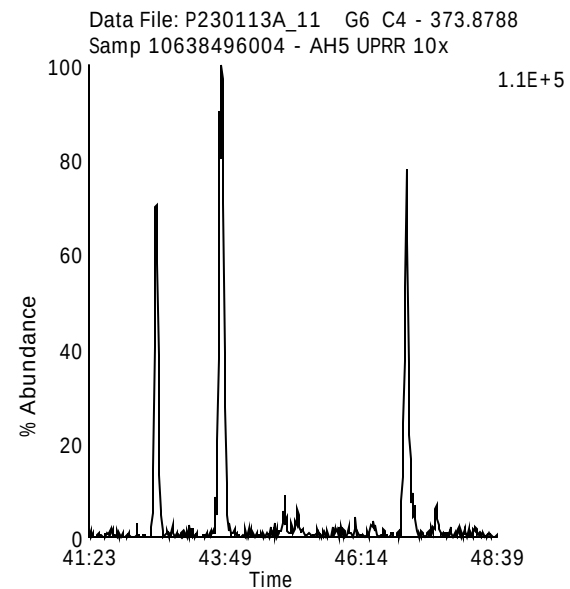
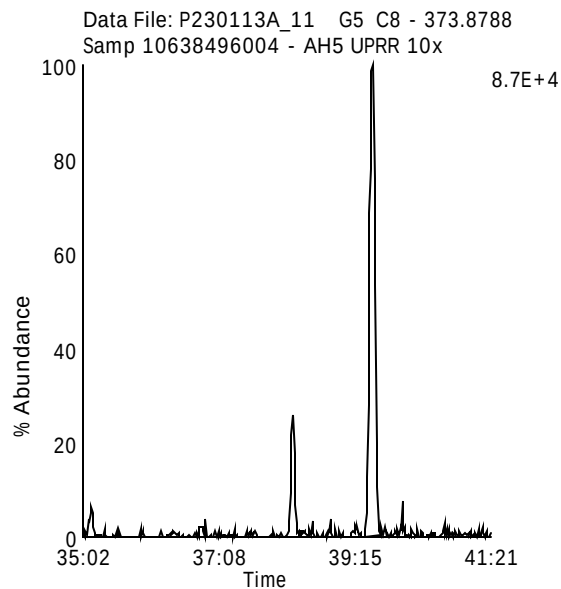
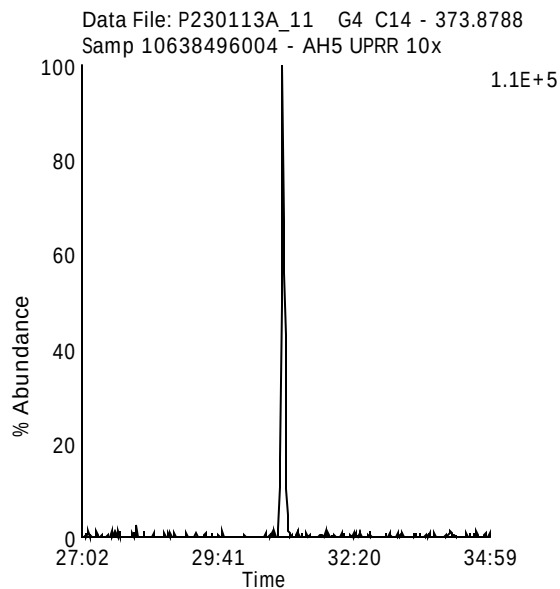
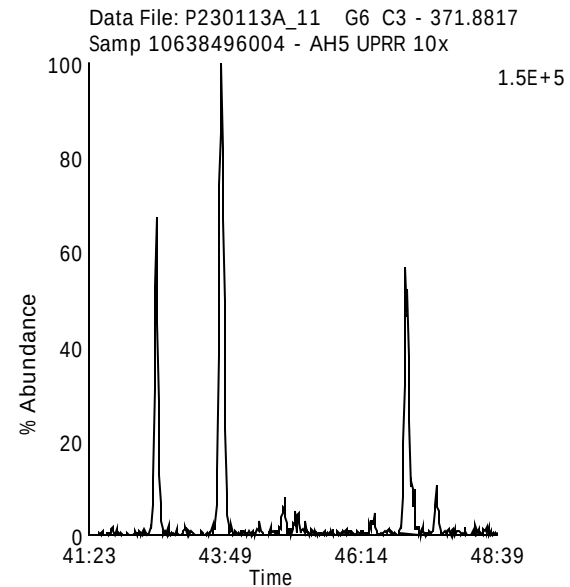
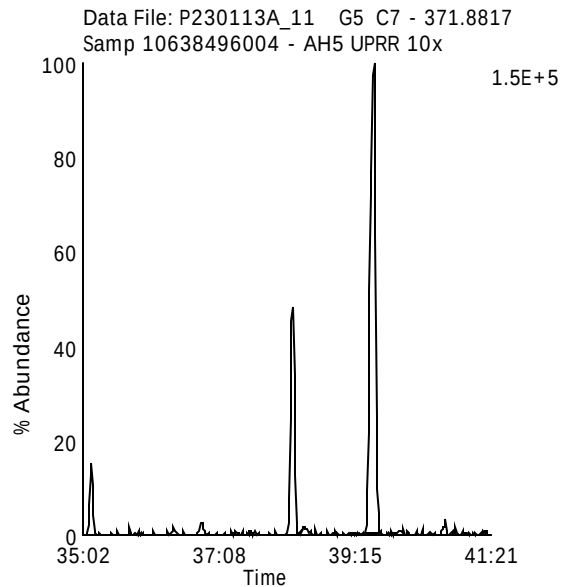
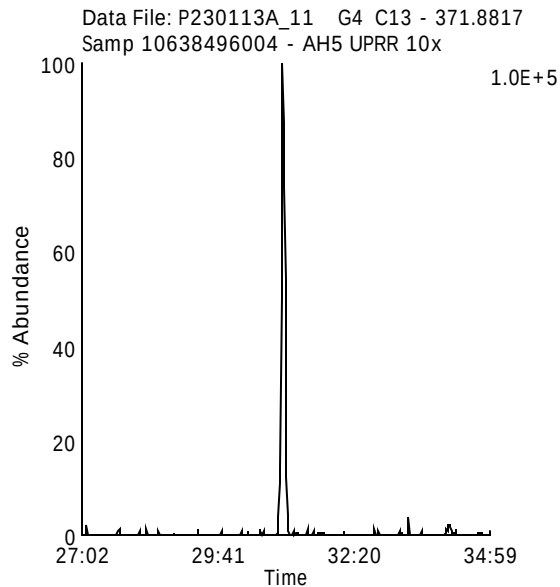
Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022



Labeled Hepta Chlorinated Biphenyls

Data File Name: P230113A_11

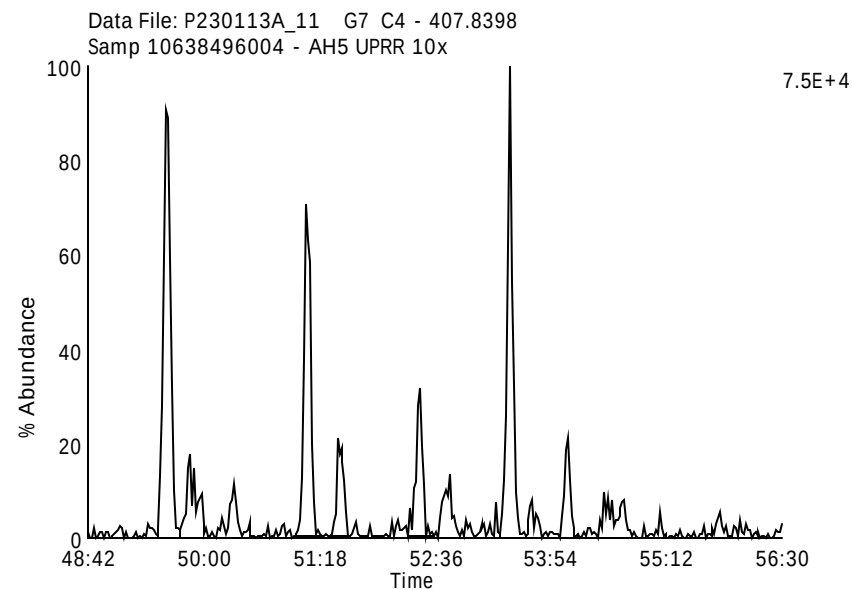
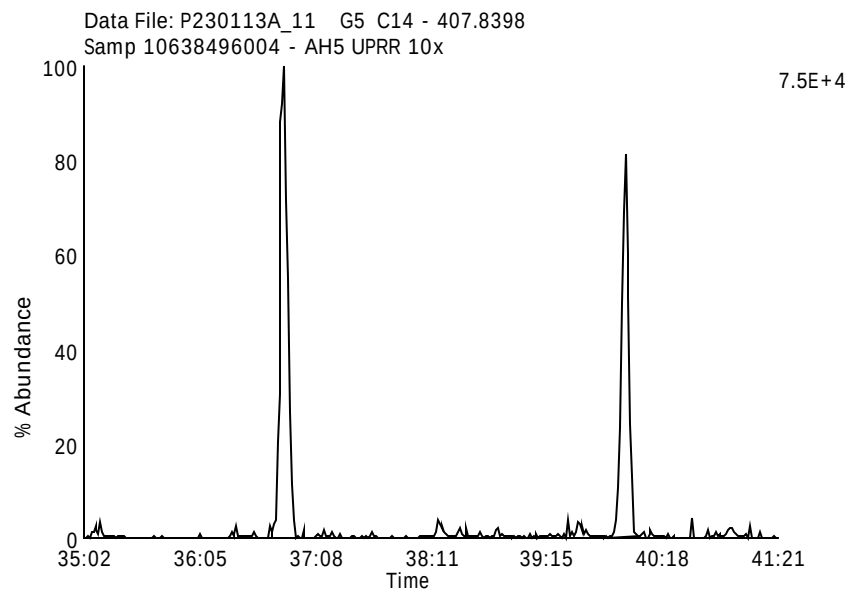
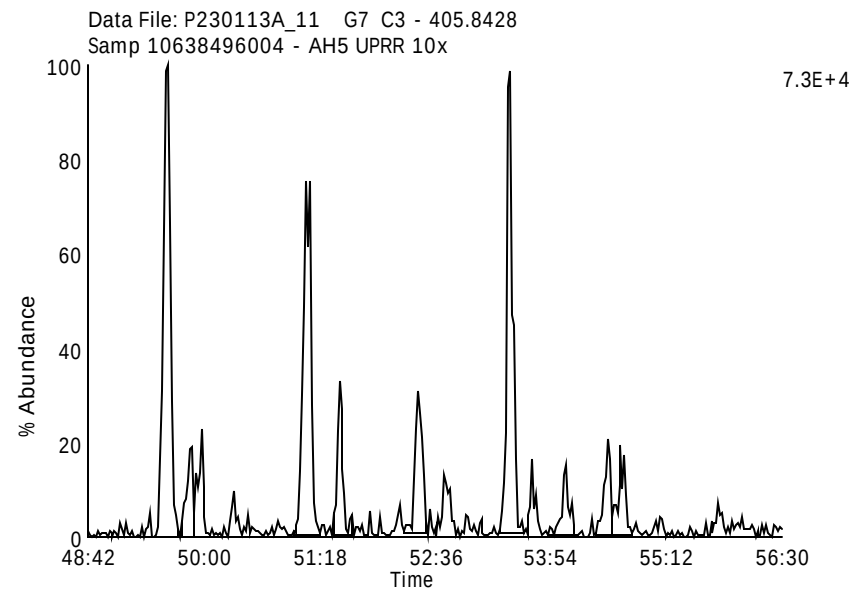
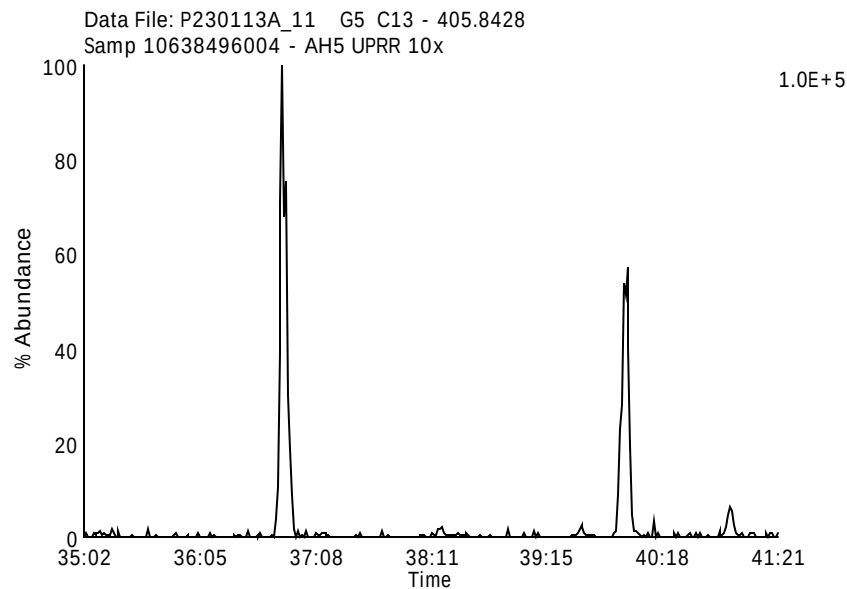
Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022



Labeled Octa Chlorinated Biphenyls

Data File Name: P230113A_11

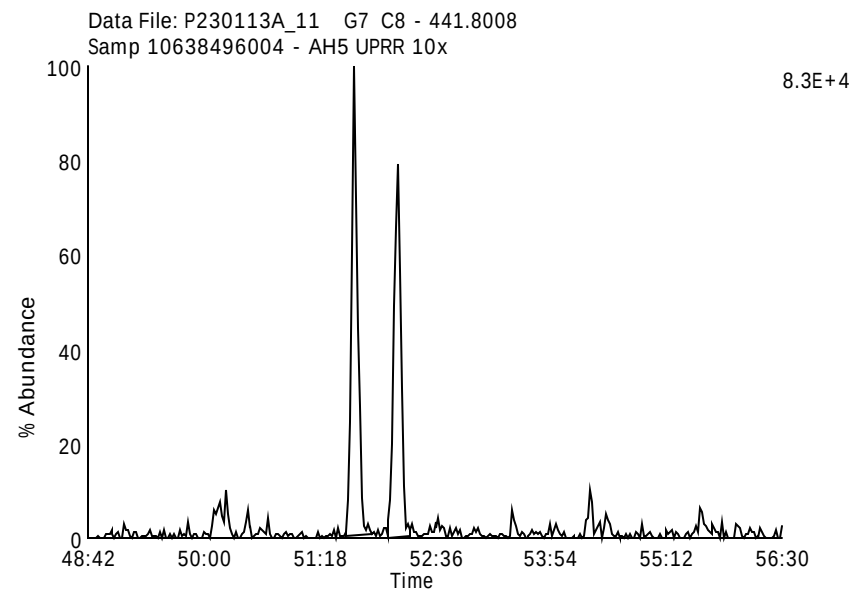
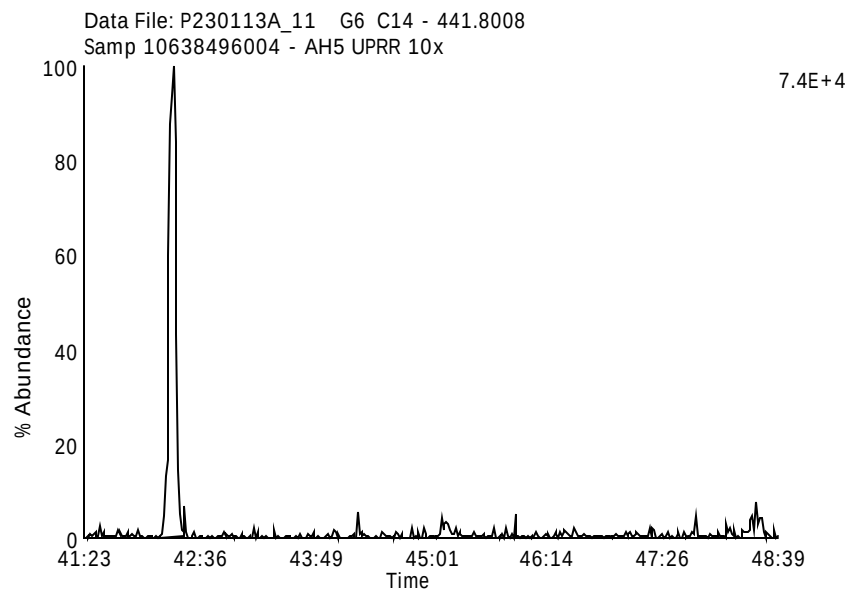
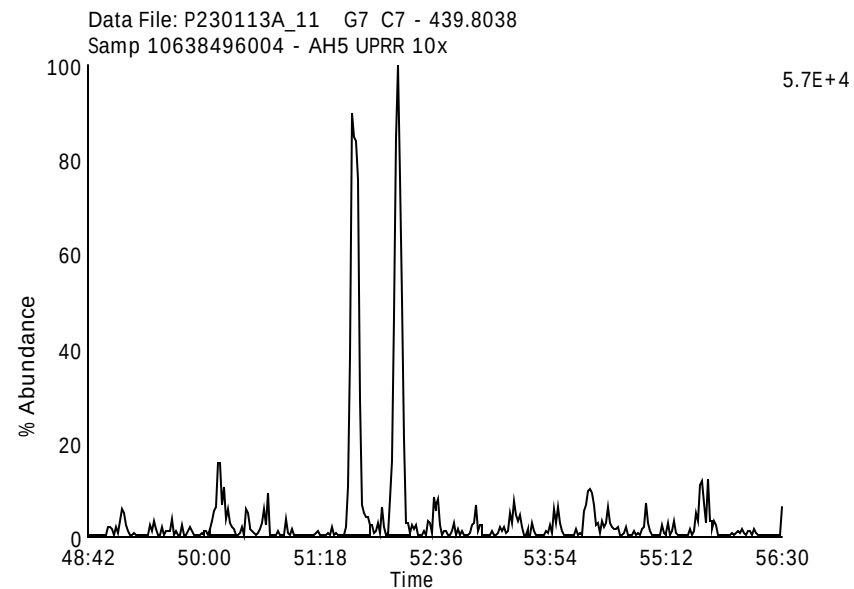
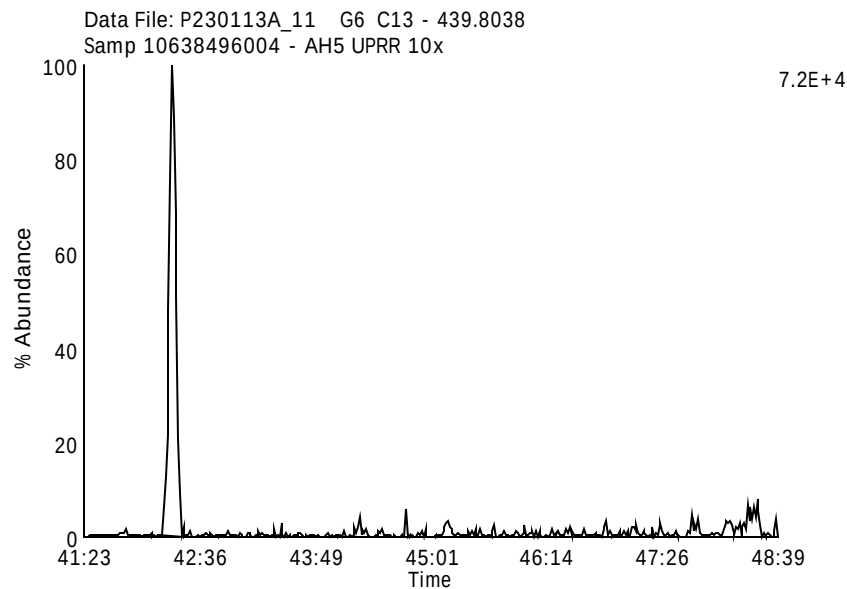
Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022



Labeled Nona Chlorinated Biphenyls

Data File Name: P230113A_11

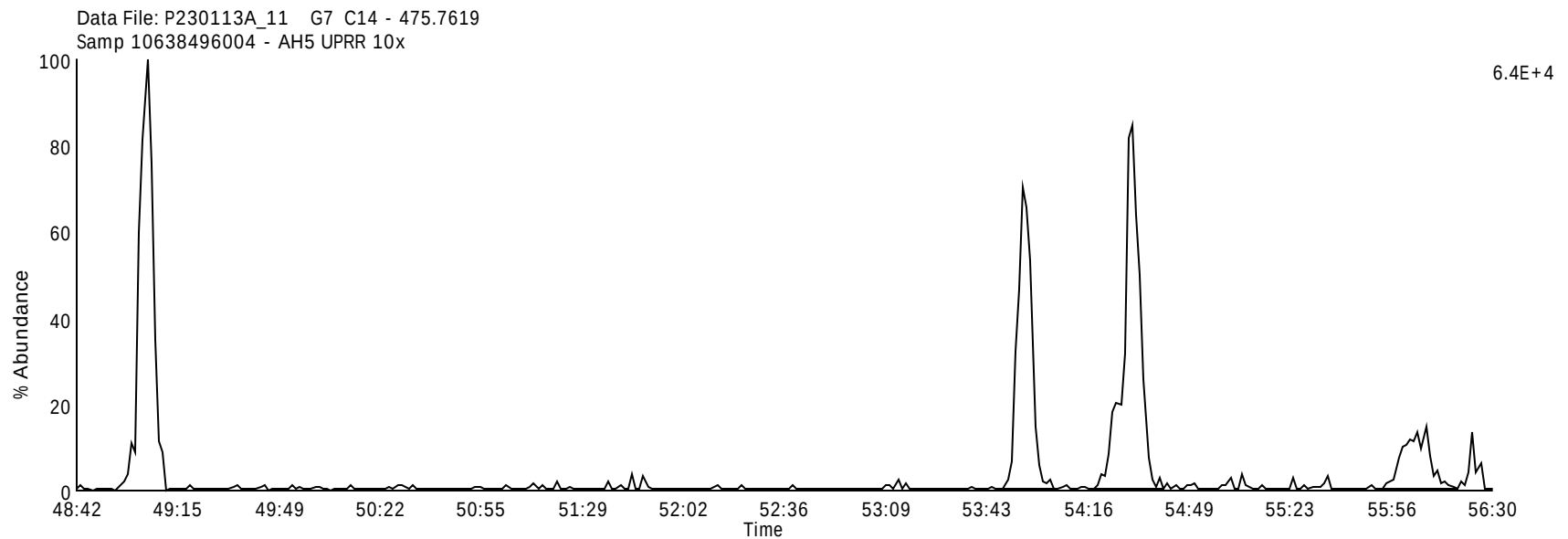
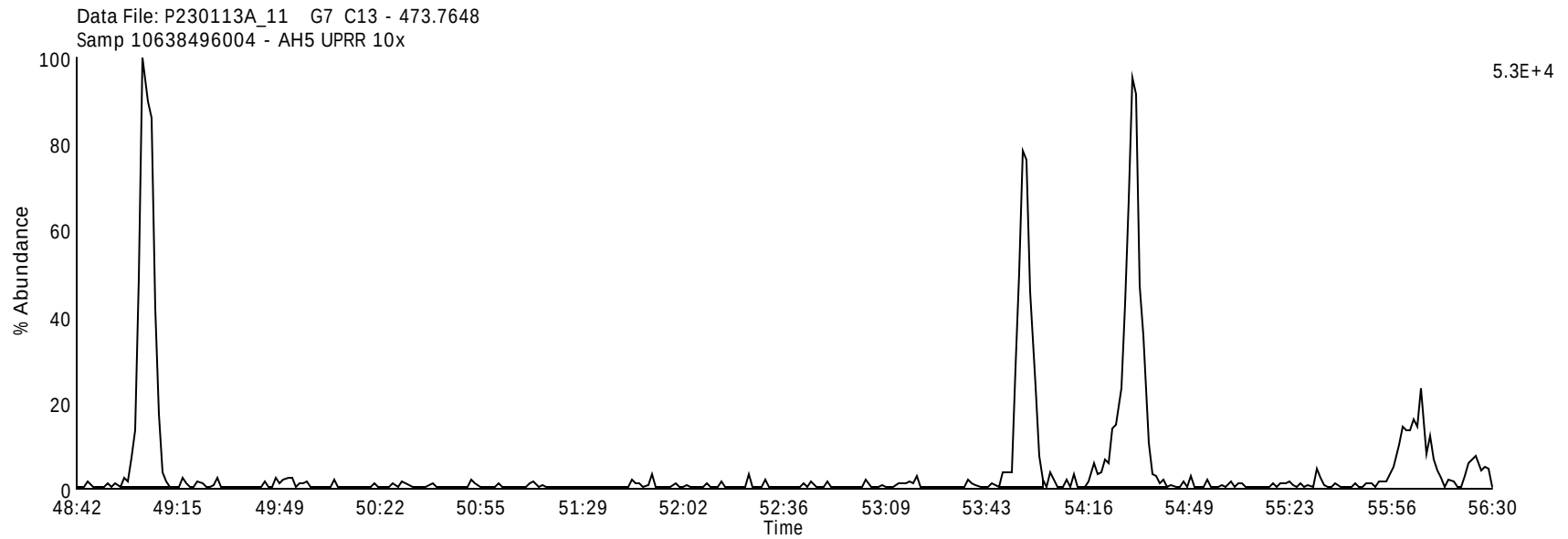
Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022



Labeled Deca Chlorinated Biphenyl

Data File Name: P230113A_11

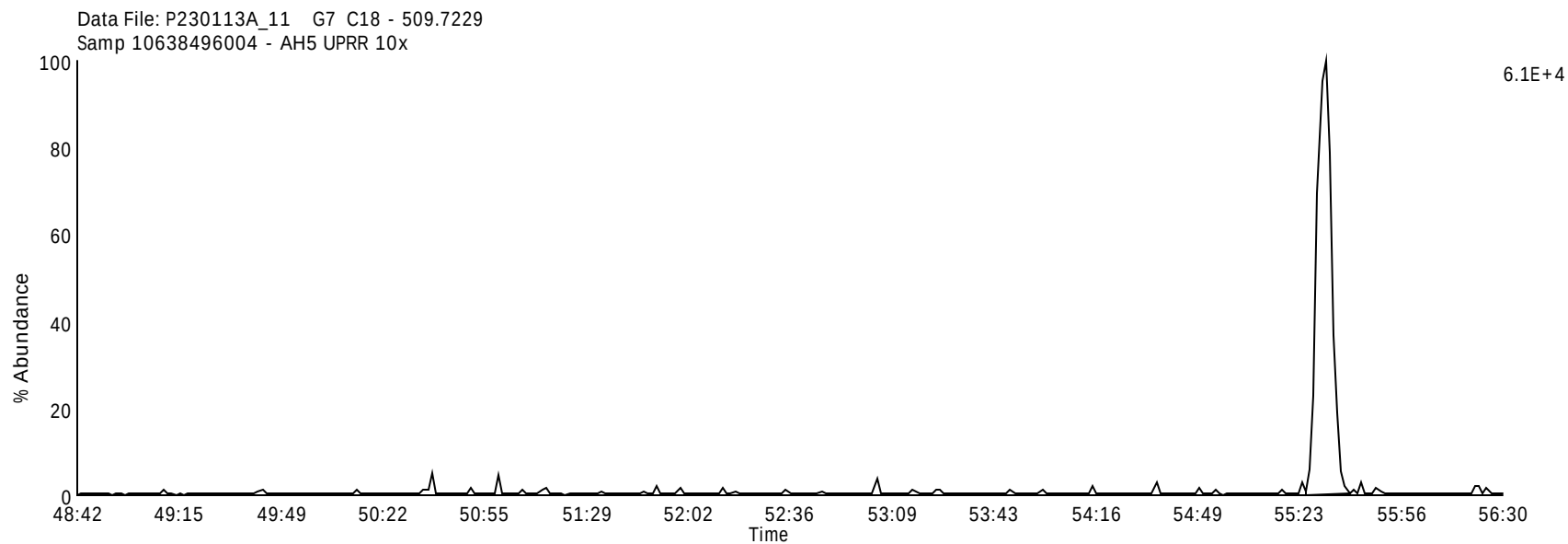
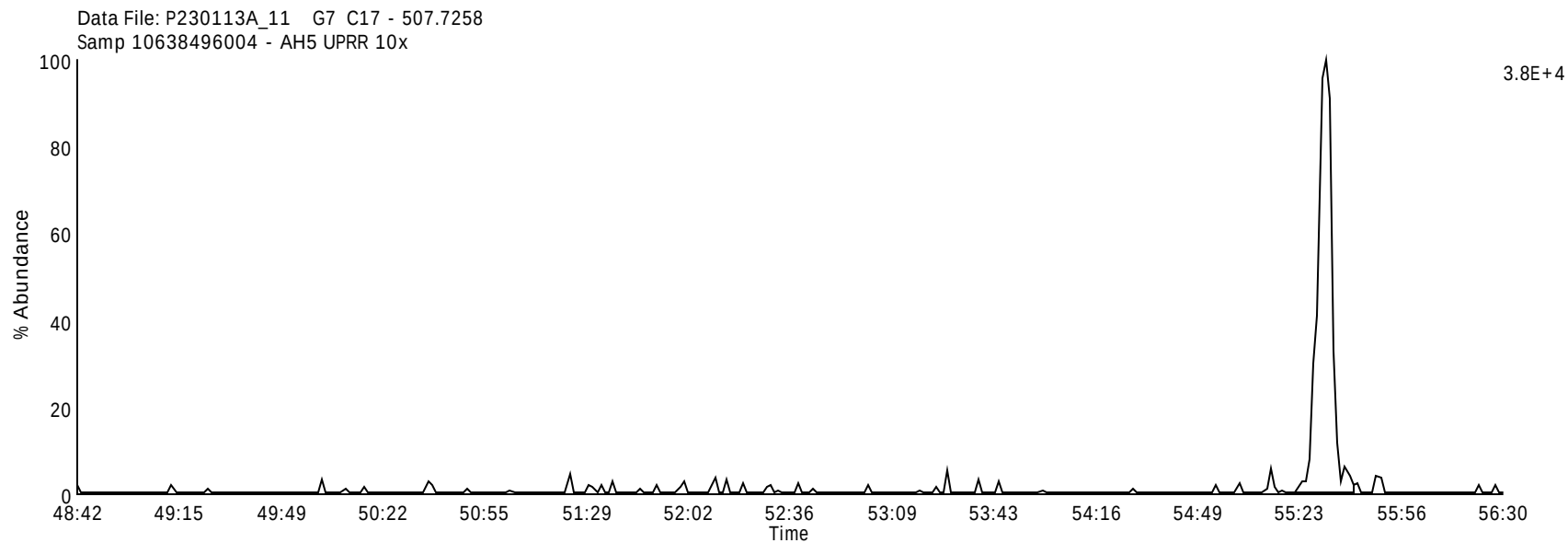
Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022



Mono Chlorinated Biphenyls

Data File Name: P230113A_11

Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

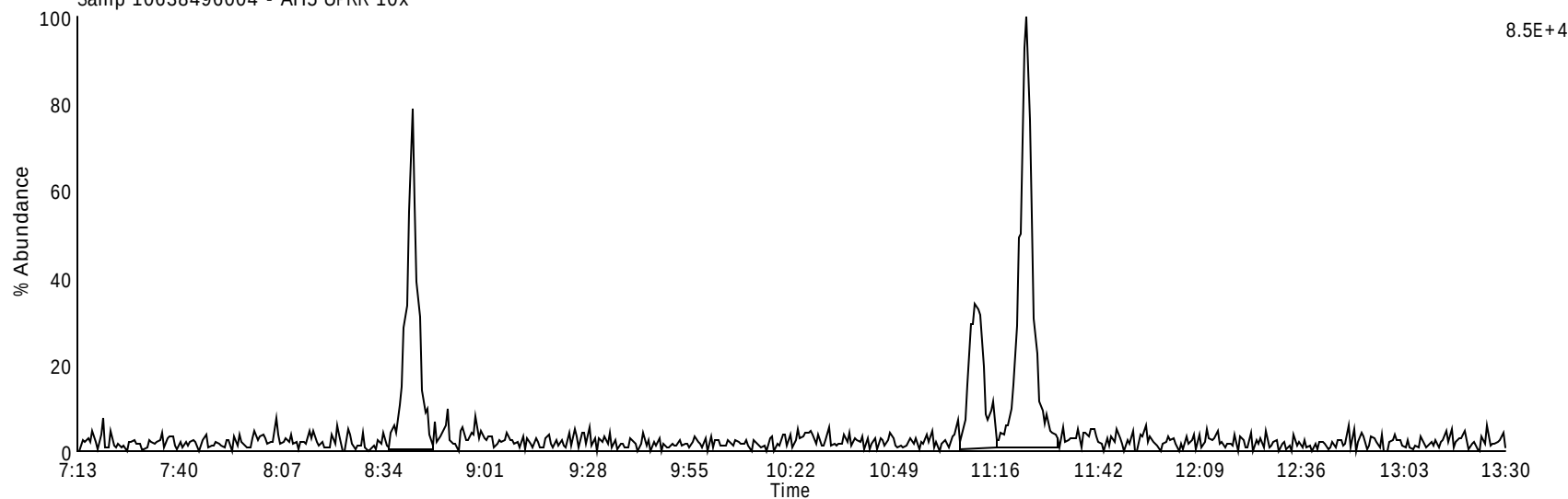
Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022

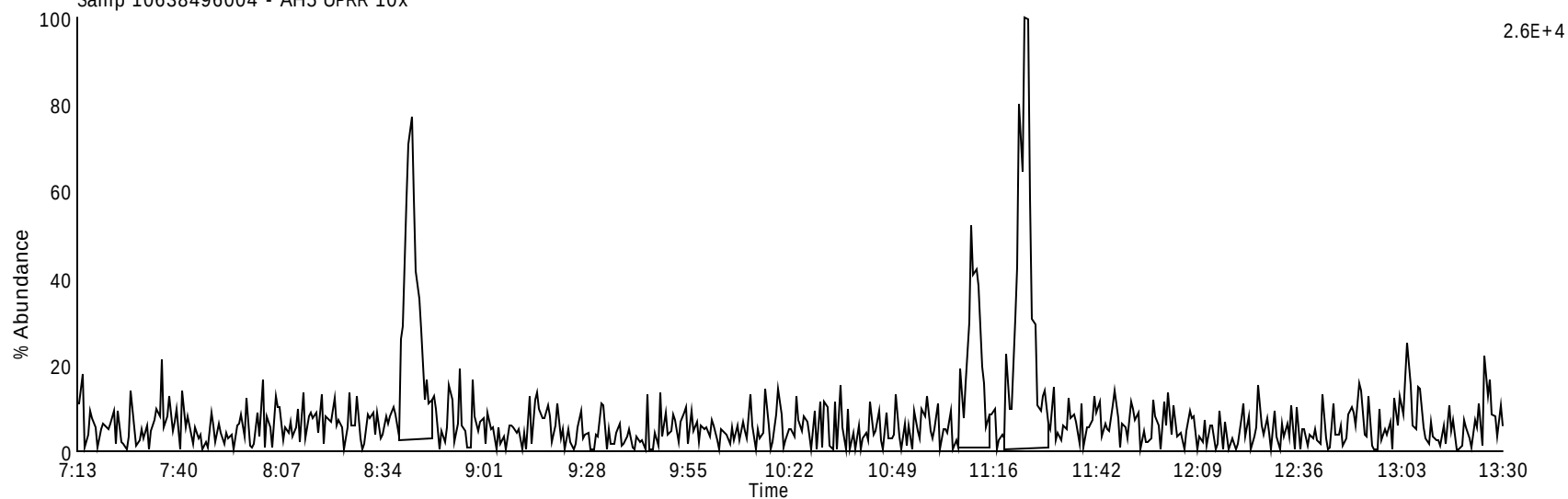
Data File: P230113A_11 G1 C1 - 188.0393

Samp 10638496004 - AH5 UPRR 10x



Data File: P230113A_11 G1 C2 - 190.0363

Samp 10638496004 - AH5 UPRR 10x



Di Chlorinated Biphenyls

Data File Name: P230113A_11

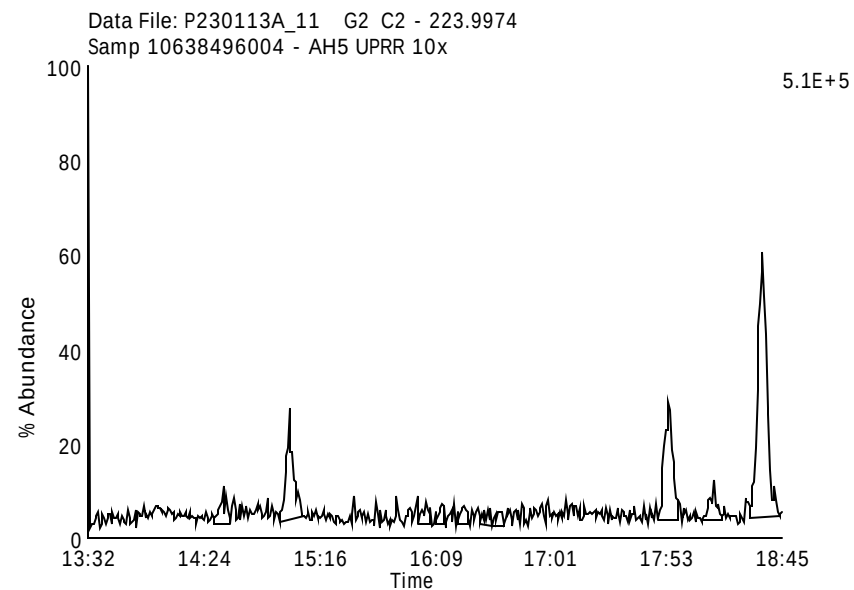
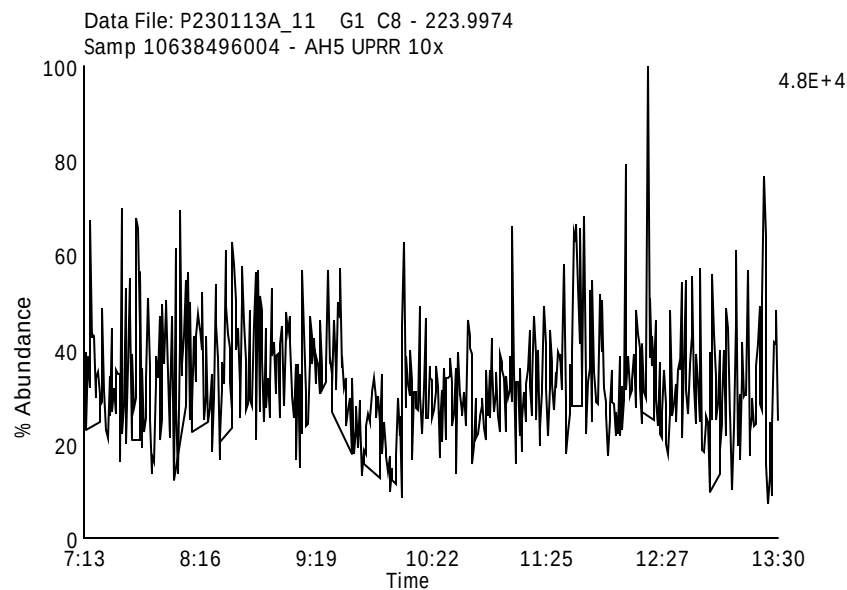
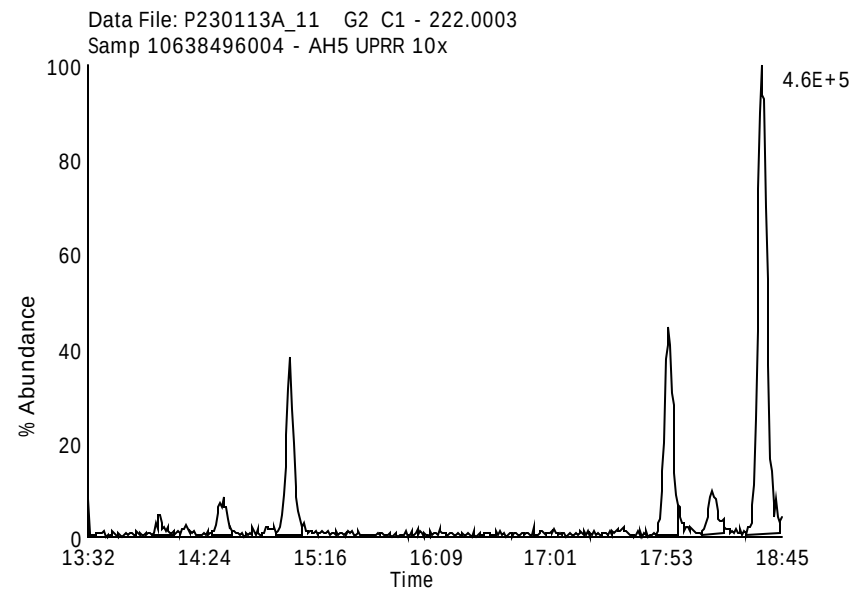
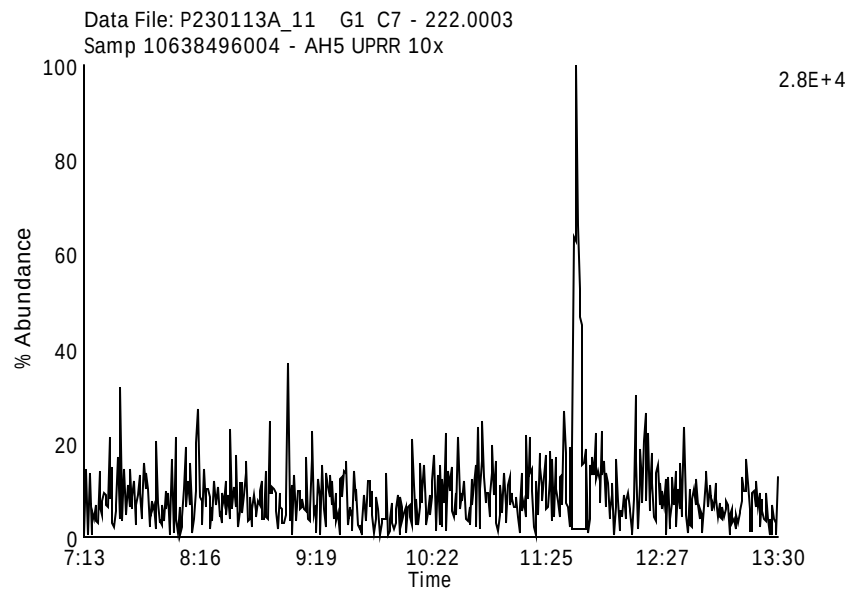
Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022



Tri Chlorinated Biphenyls

Data File Name: P230113A_11

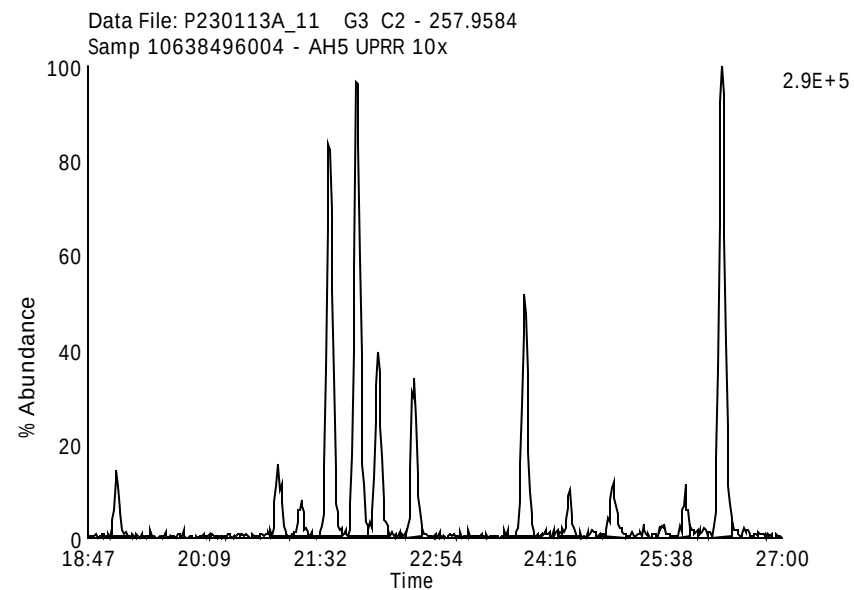
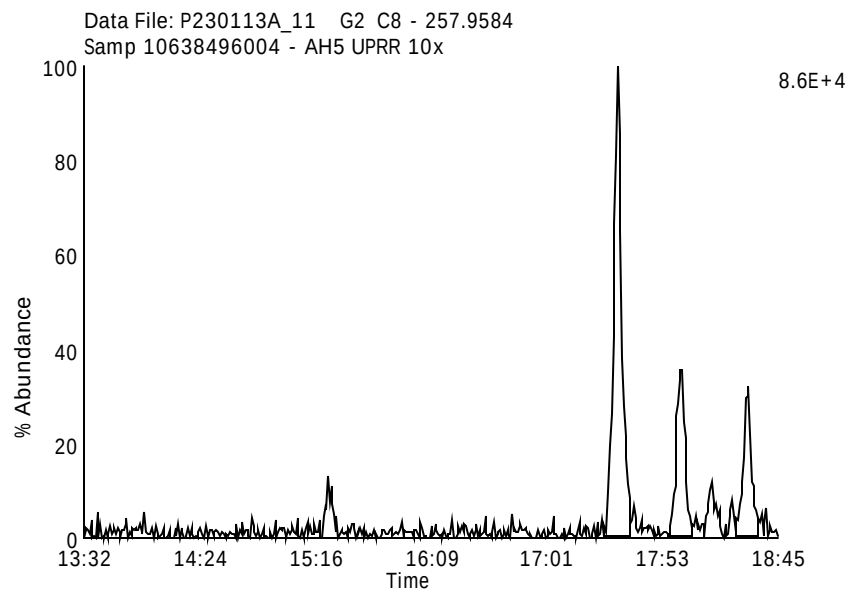
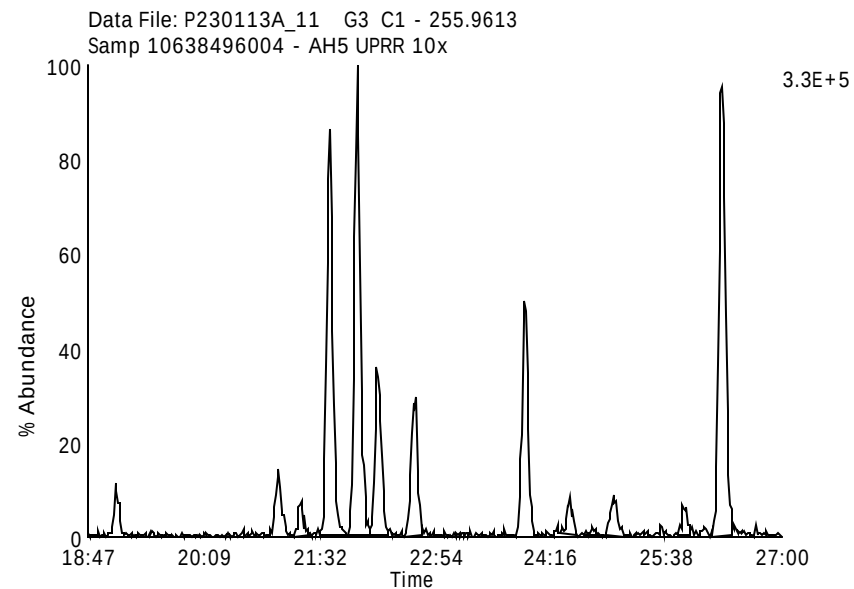
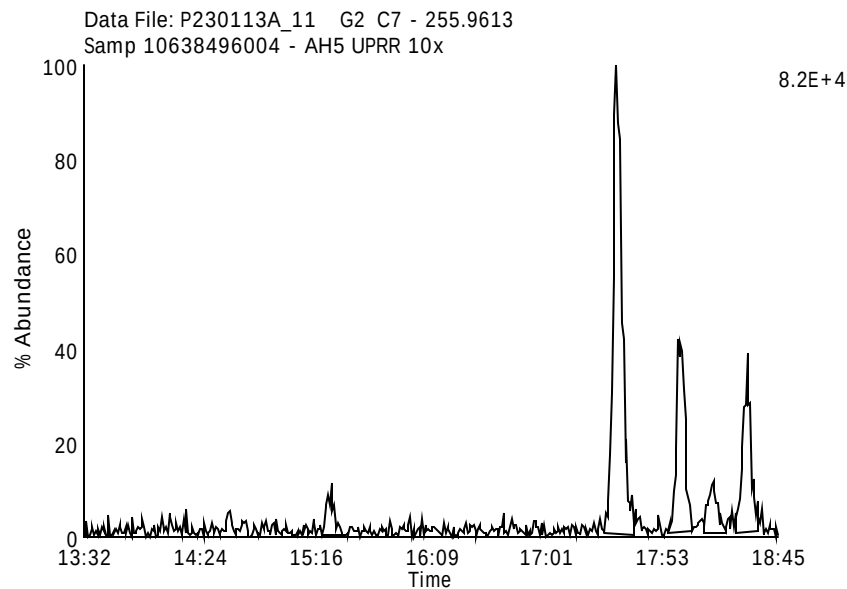
Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022



Tetra Chlorinated Biphenyls

Data File Name: P230113A_11

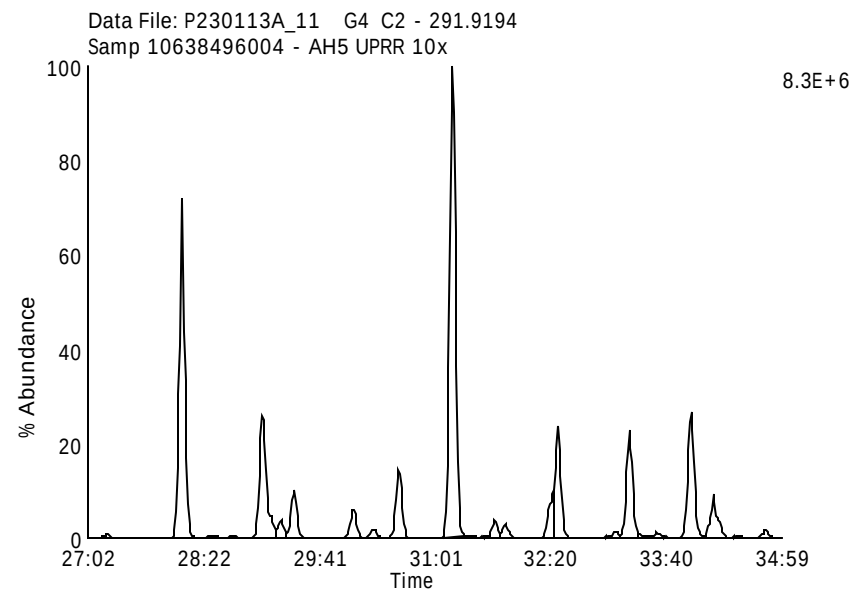
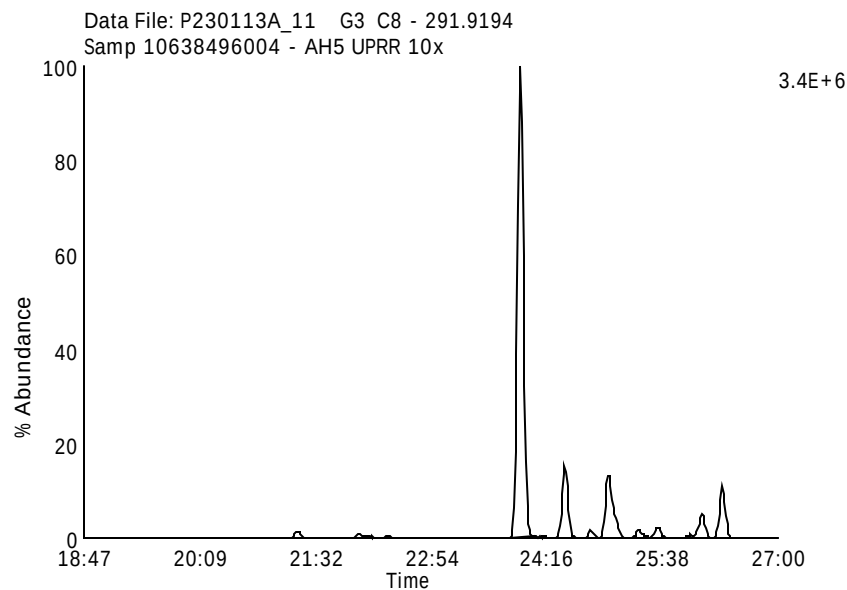
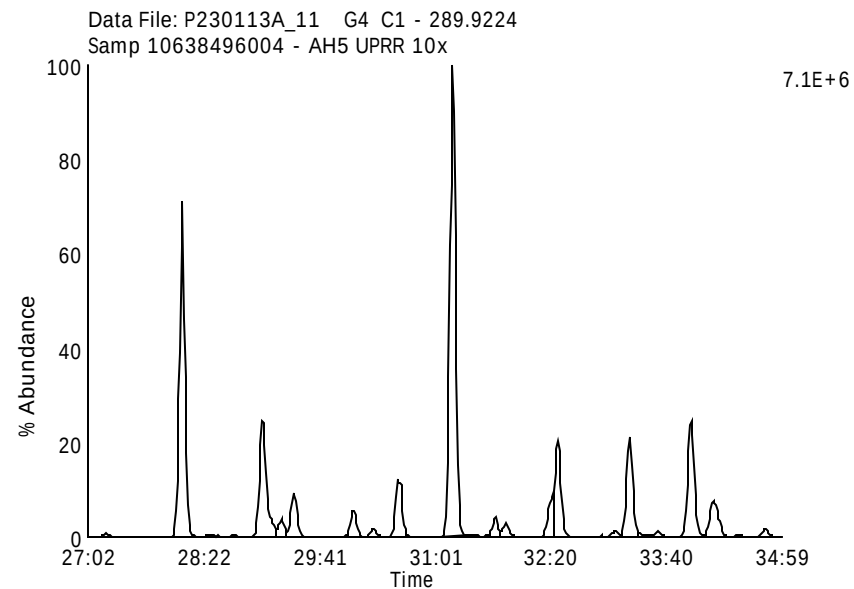
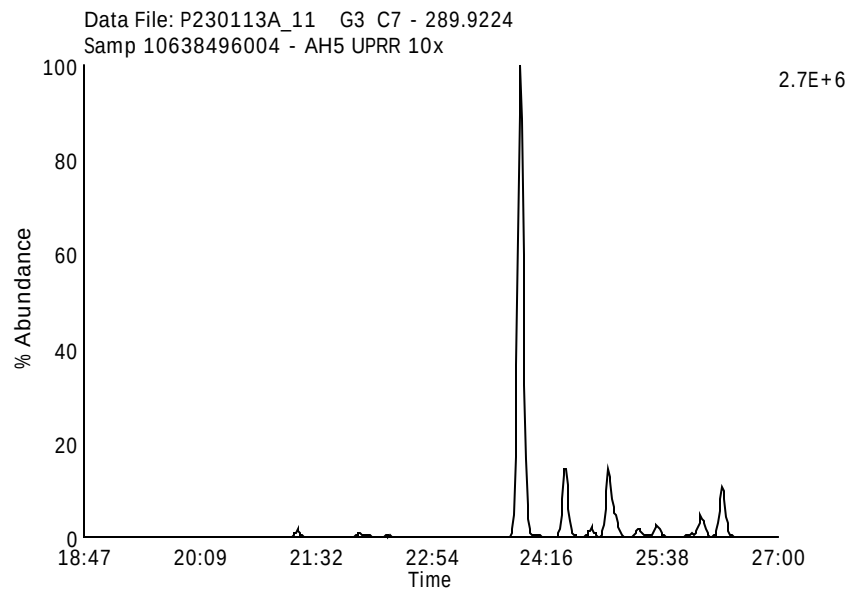
Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022



Penta Chlorinated Biphenyls

Data File Name: P230113A_11

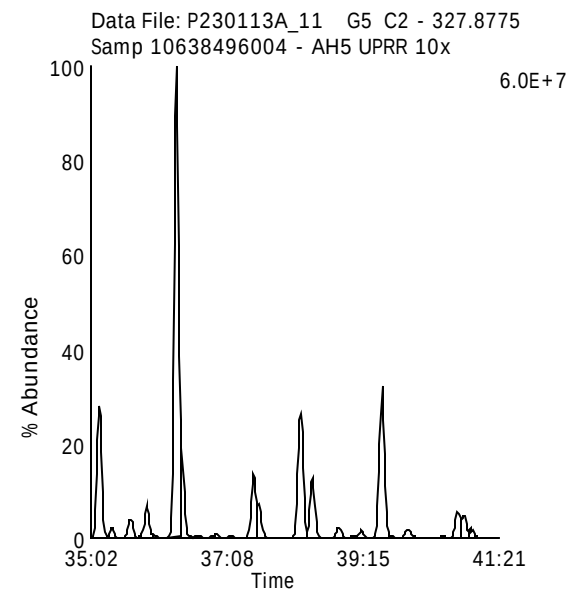
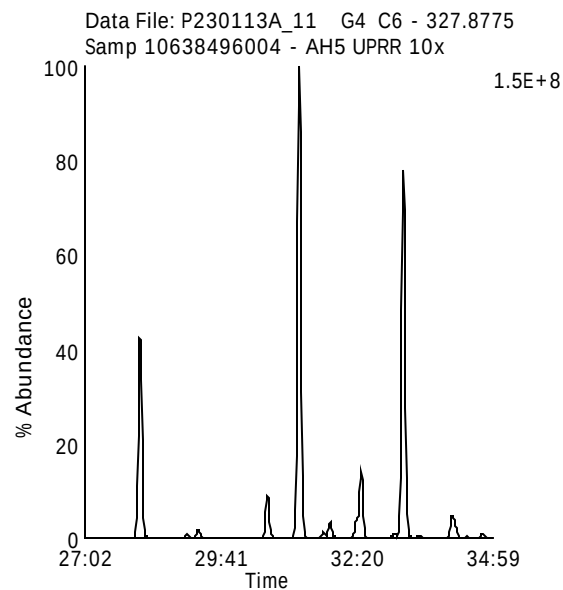
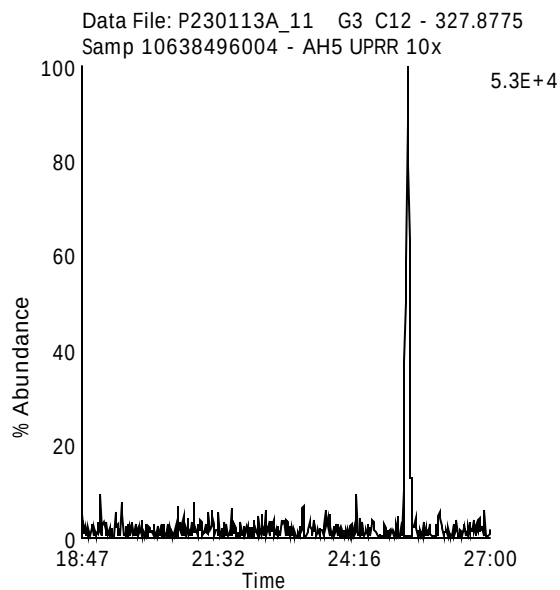
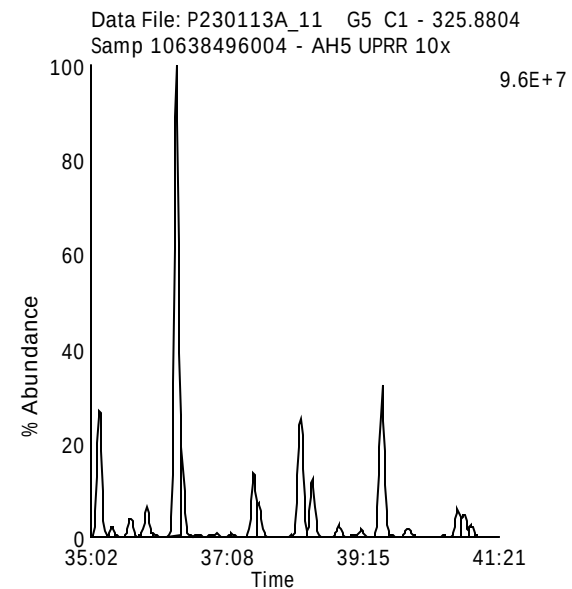
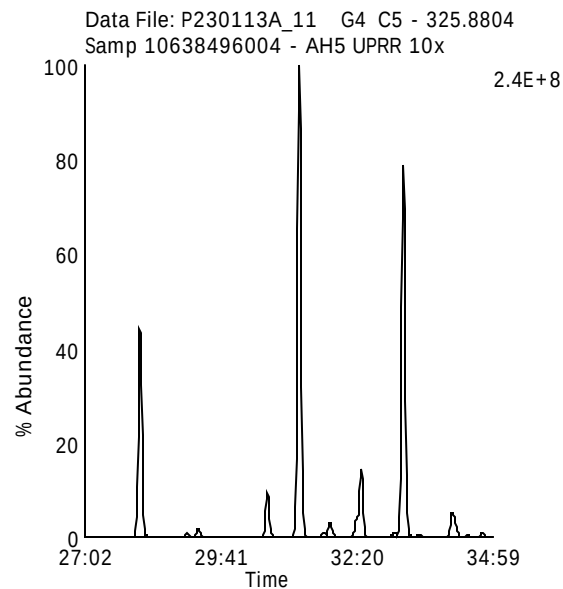
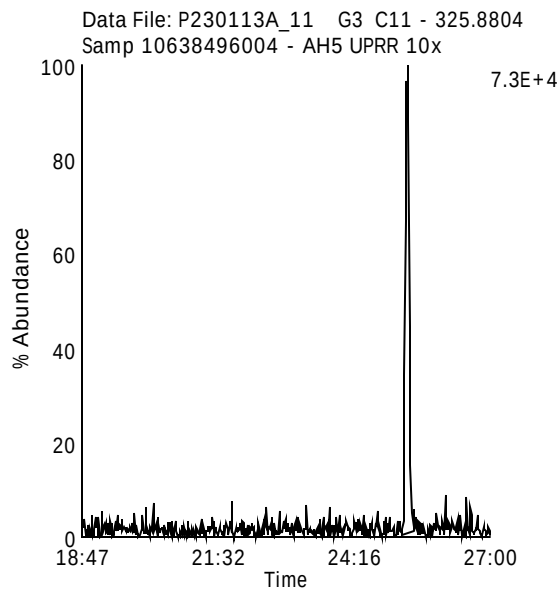
Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022



Hexa Chlorinated Biphenyls

Data File Name: P230113A_11

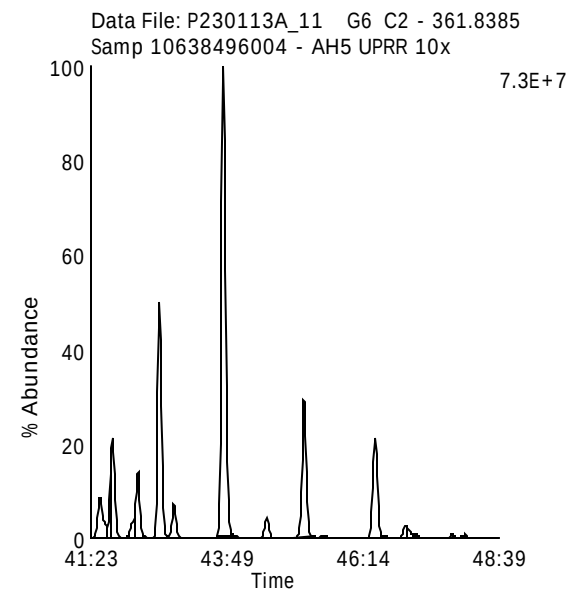
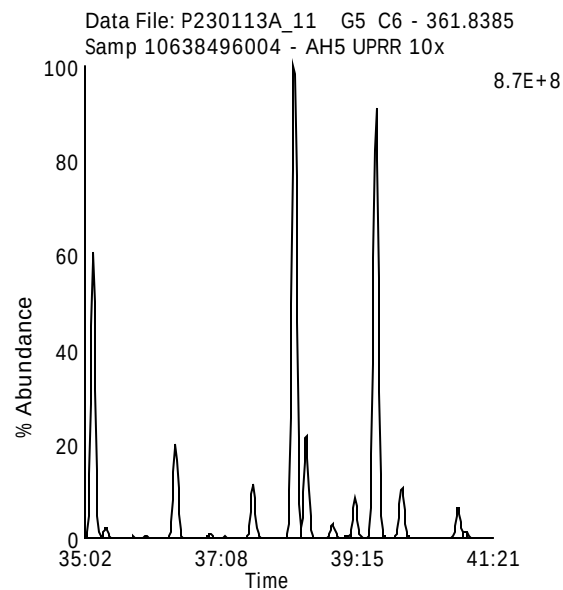
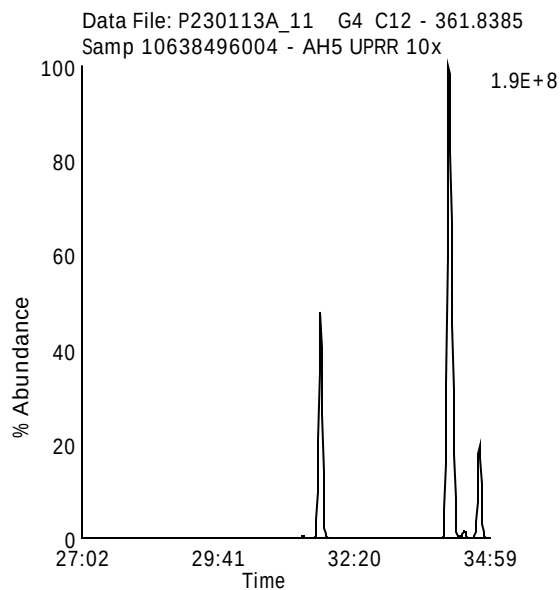
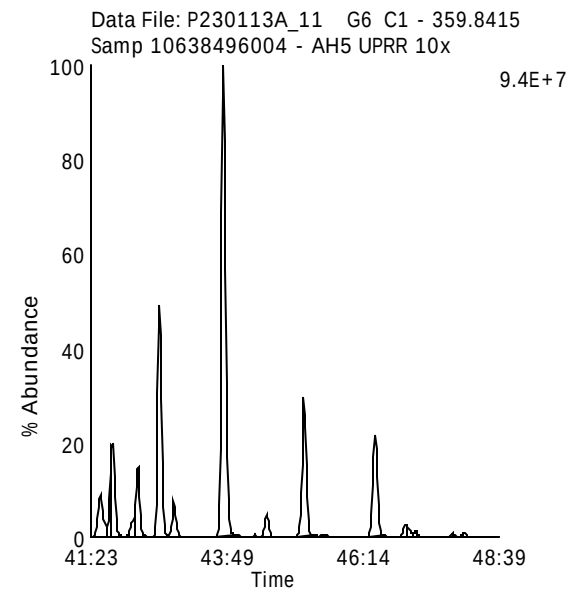
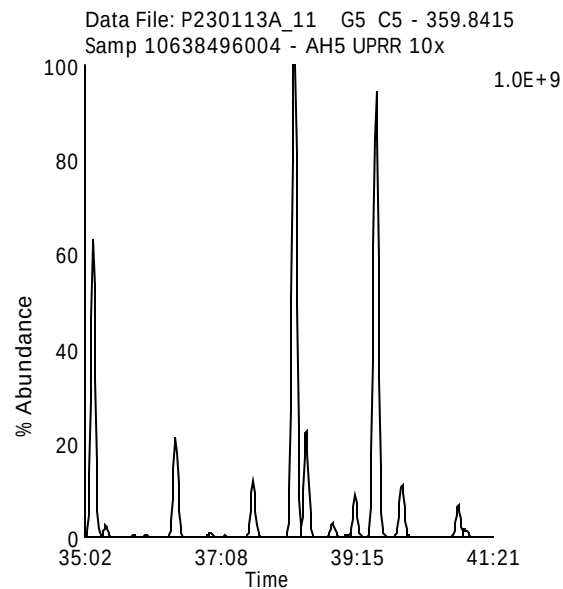
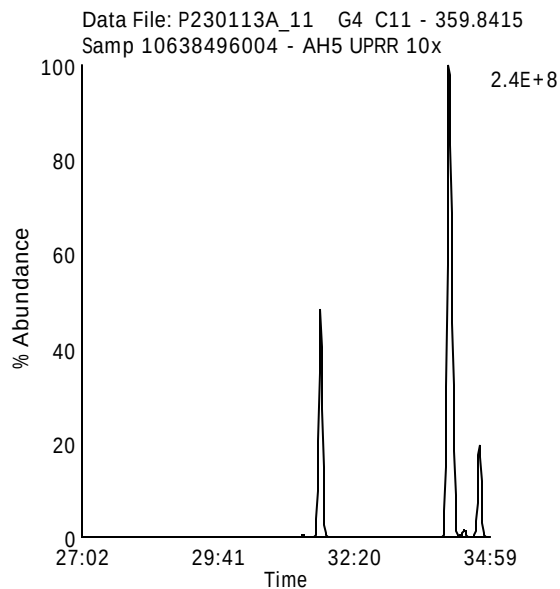
Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022



Hepta Chlorinated Biphenyls

Data File Name: P230113A_11

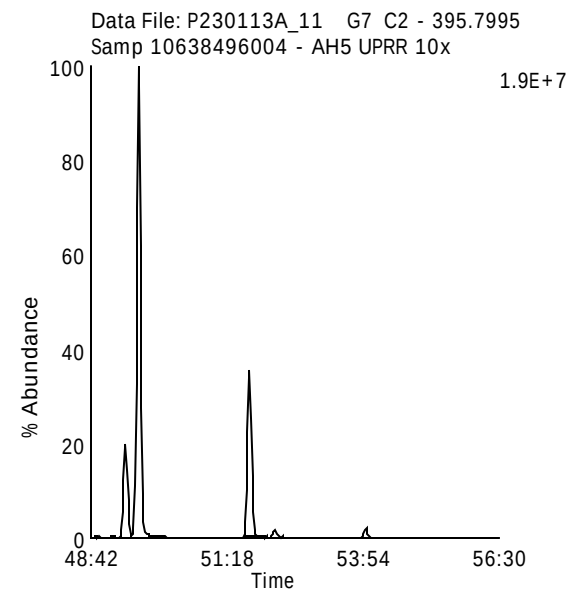
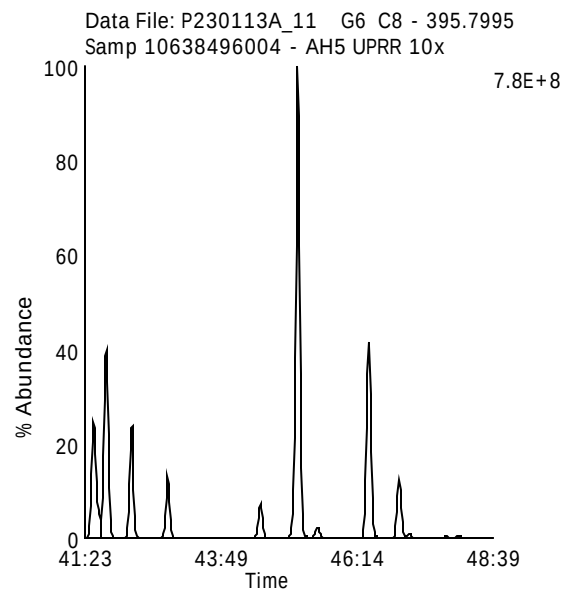
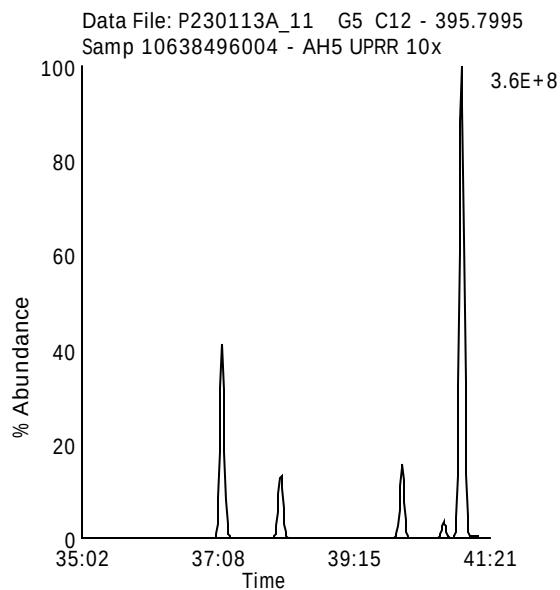
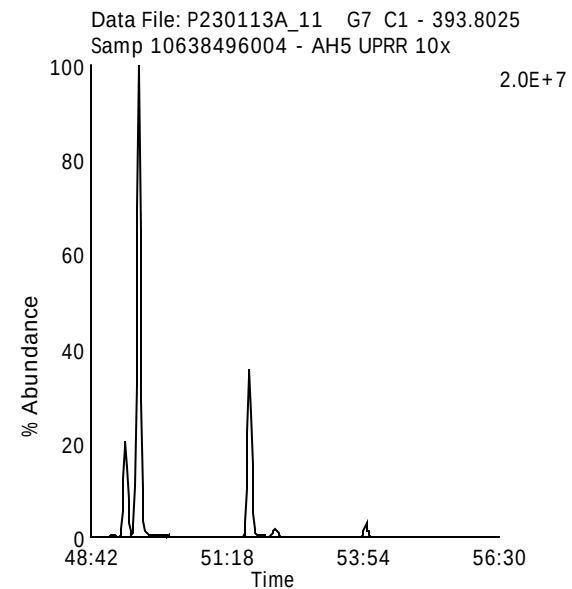
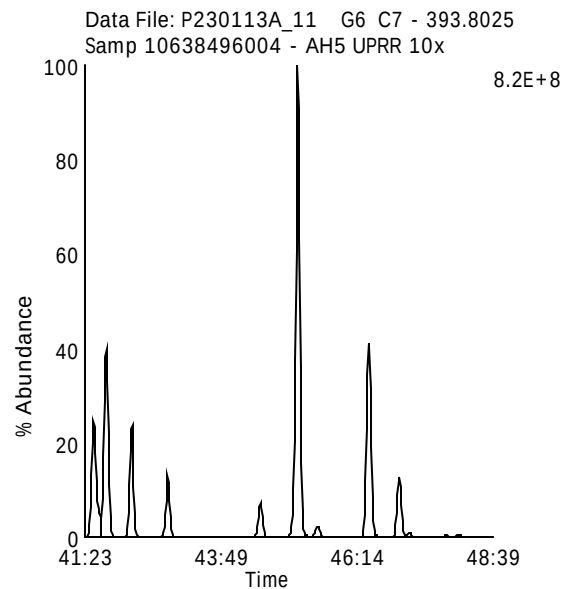
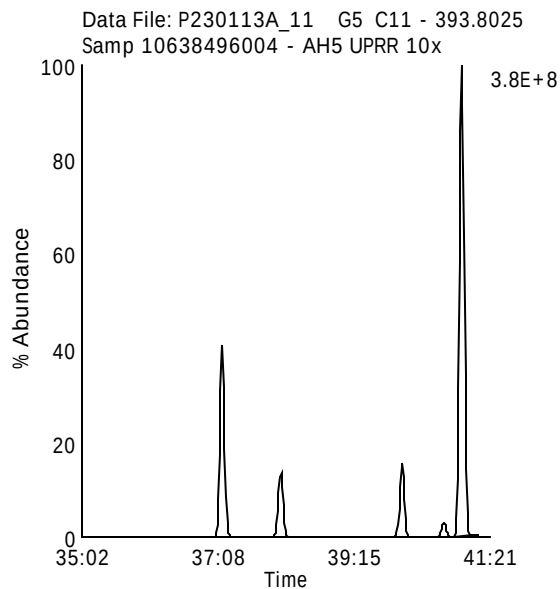
Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022



Octa Chlorinated Biphenyls

Data File Name: P230113A_11

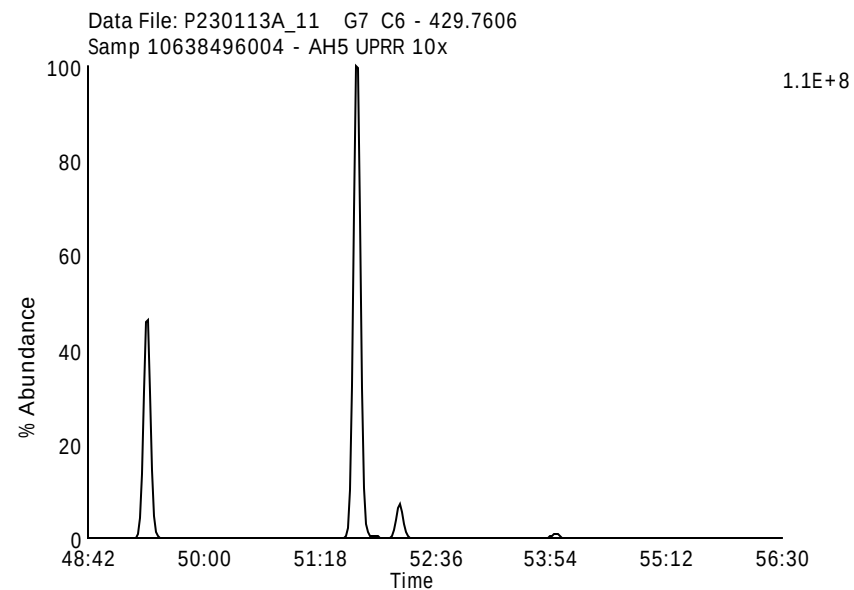
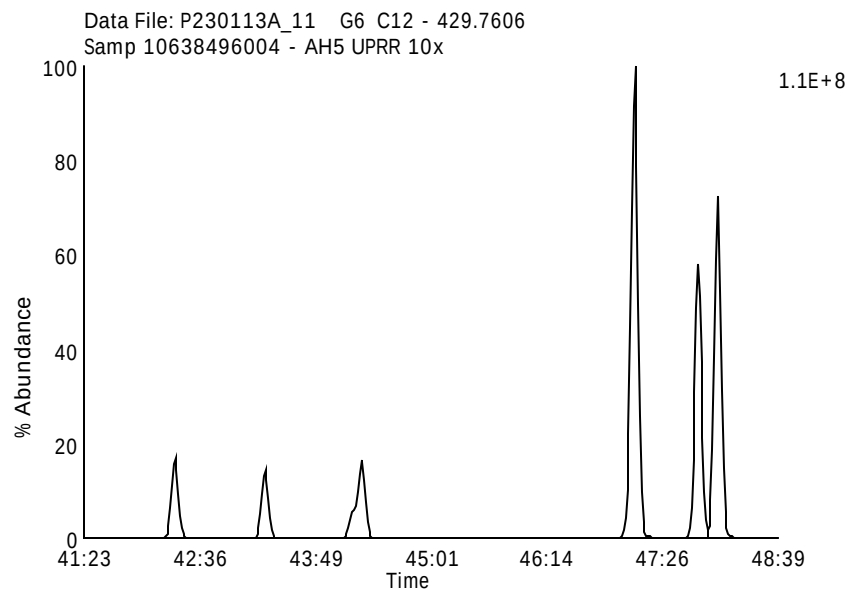
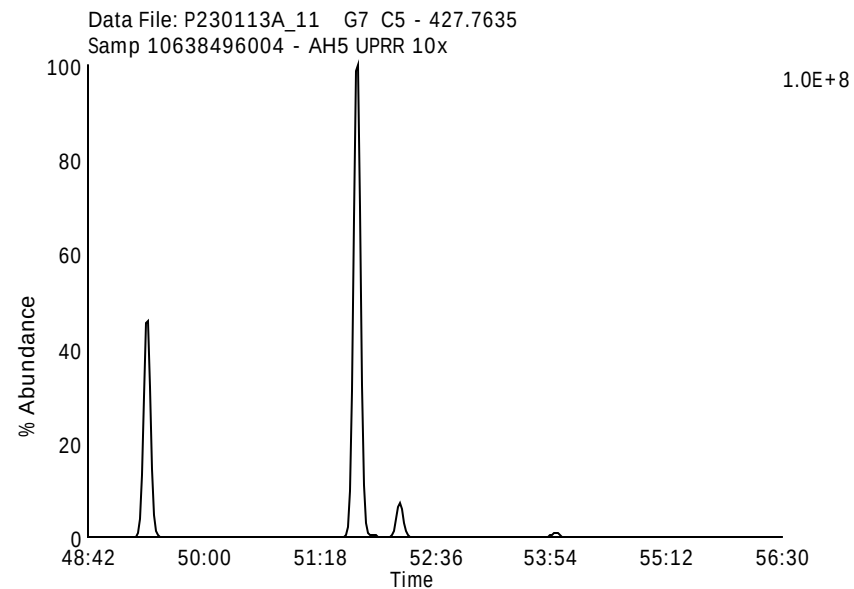
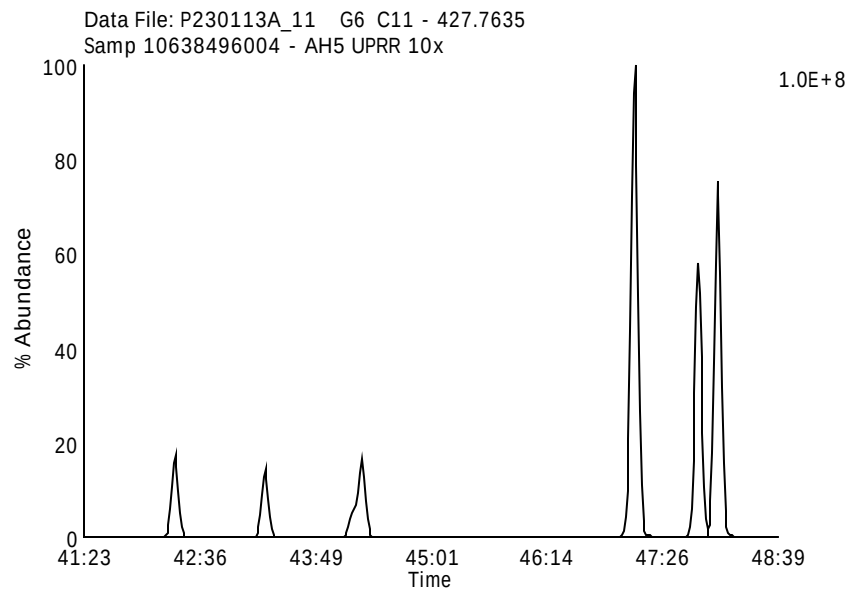
Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022



Nona Chlorinated Biphenyls

Data File Name: P230113A_11

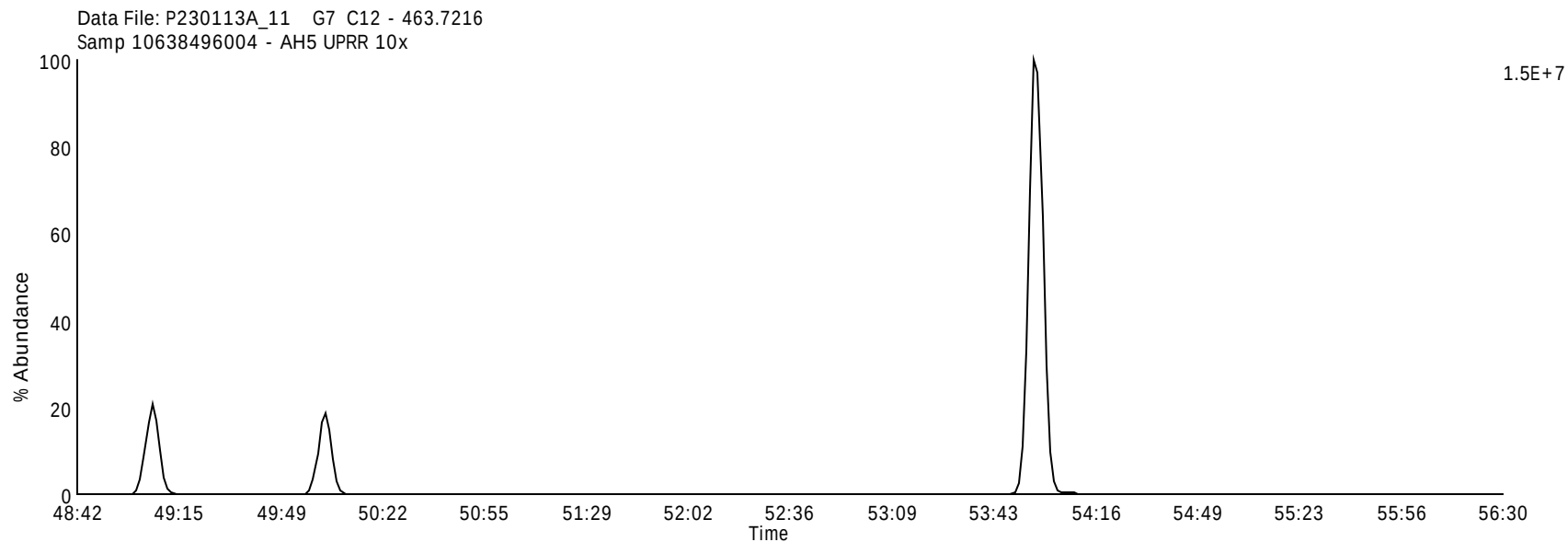
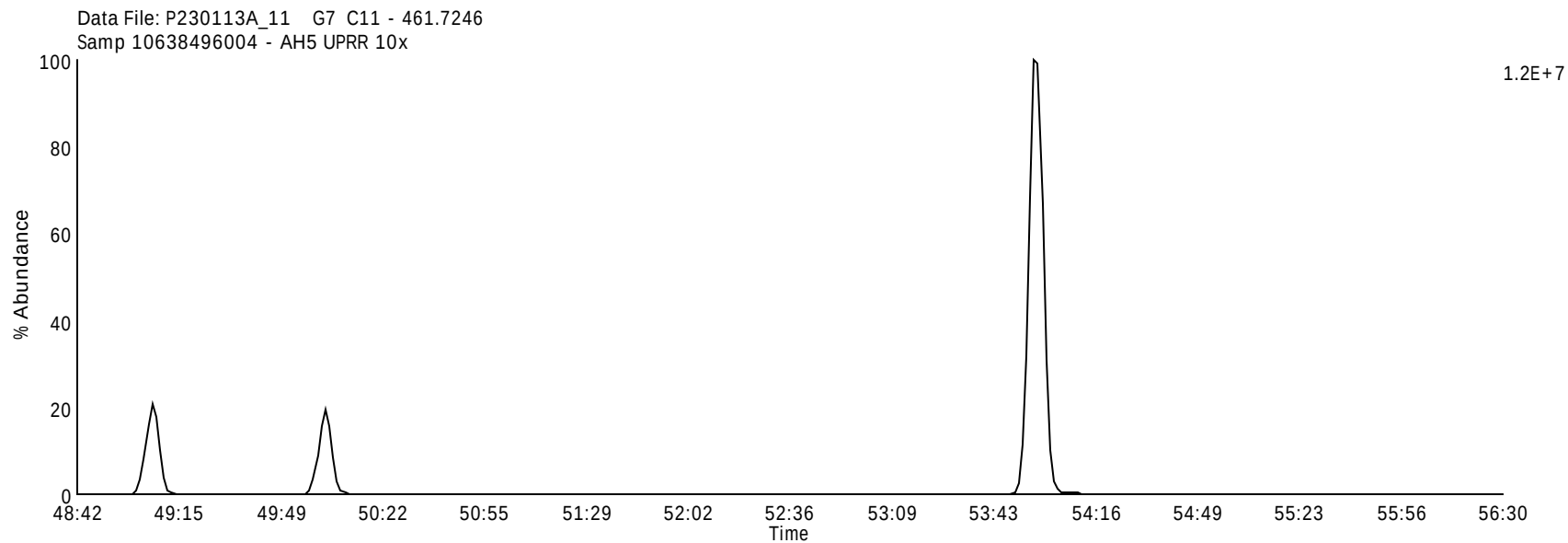
Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022



Deca Chlorinated Biphenyl

Data File Name: P230113A_11

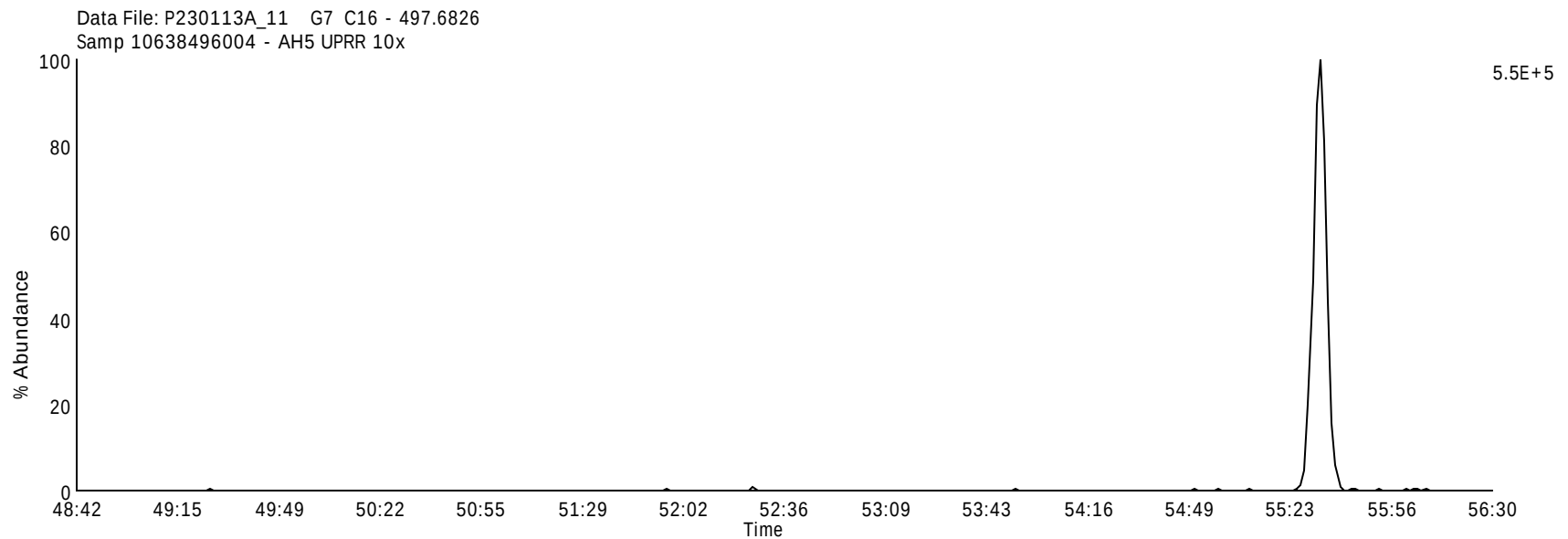
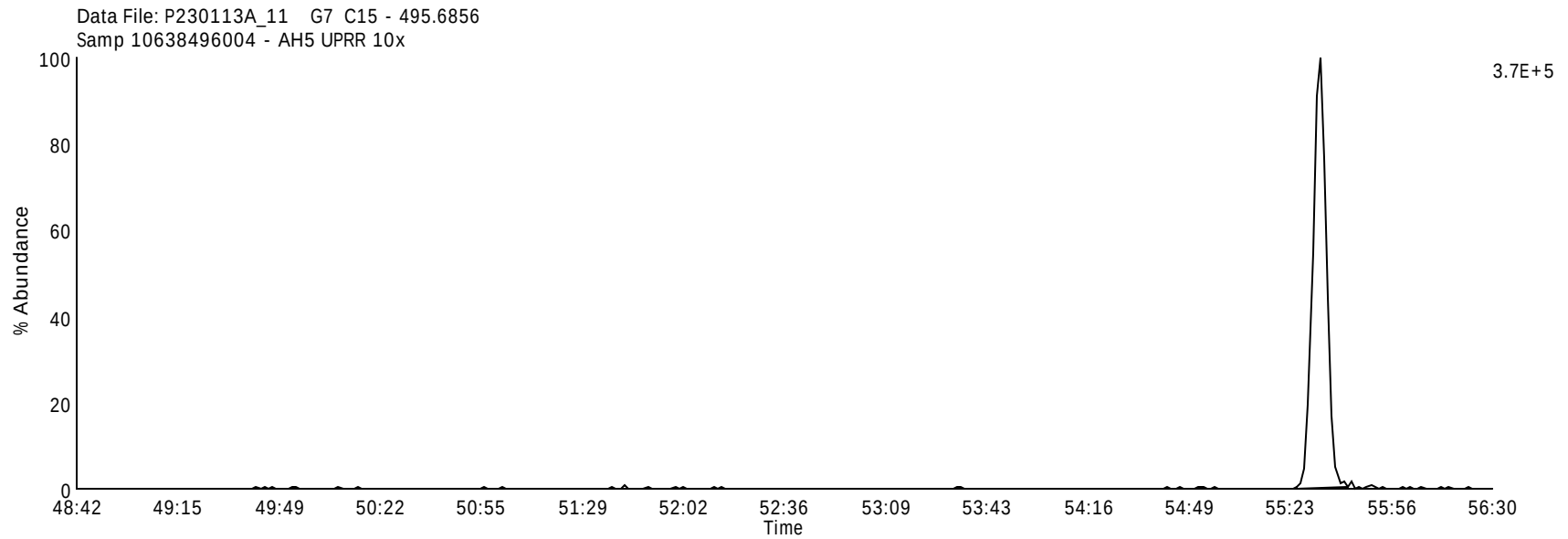
Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022



Group 1 - 4 Lock mass

Data File Name: P230113A_11

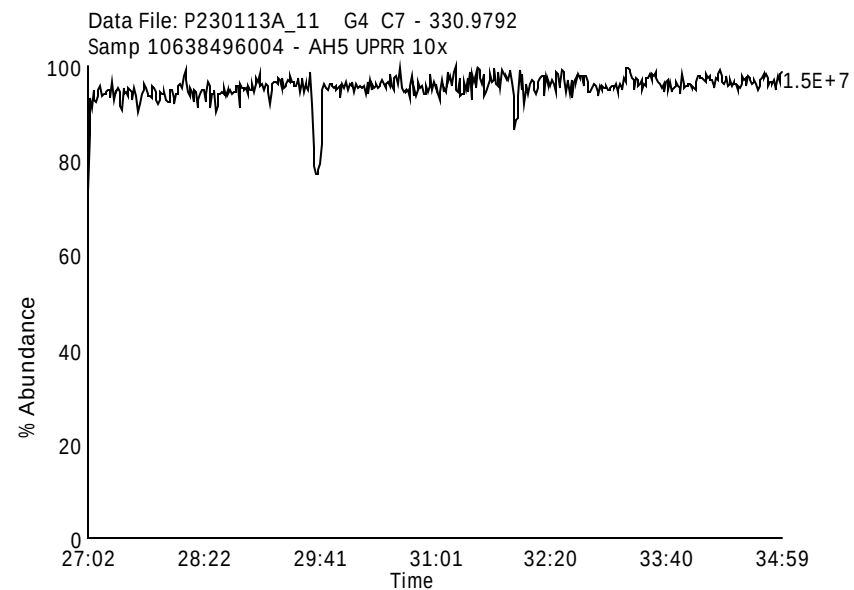
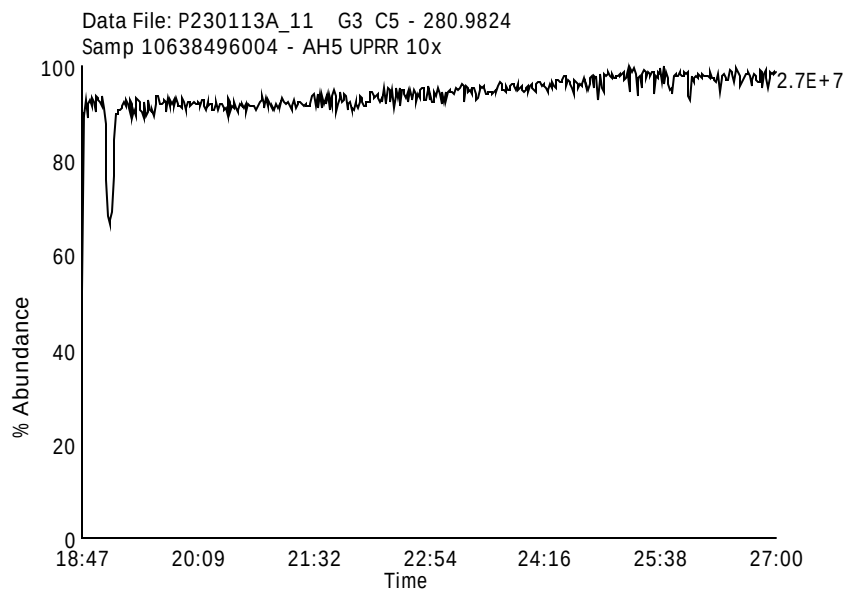
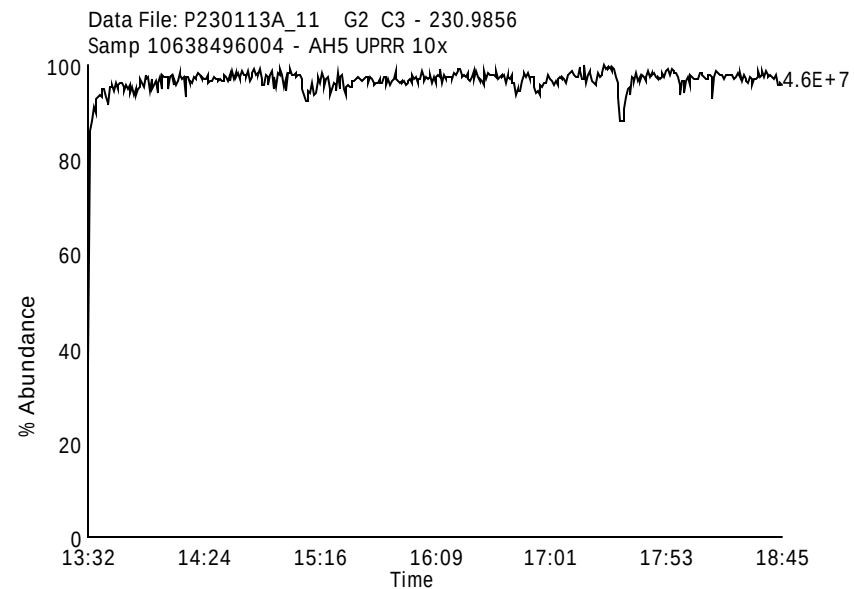
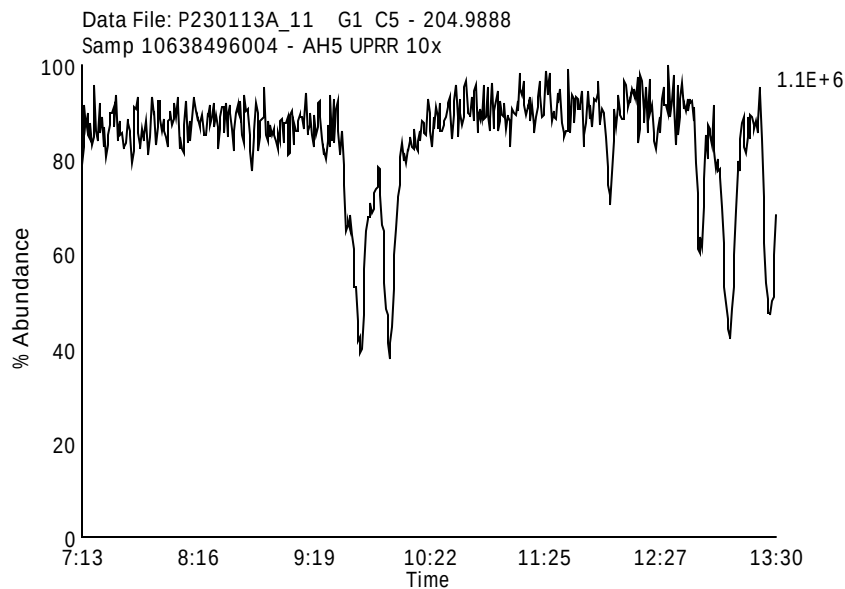
Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022



Group 5 - 7 Lock mass

Data File Name: P230113A_11

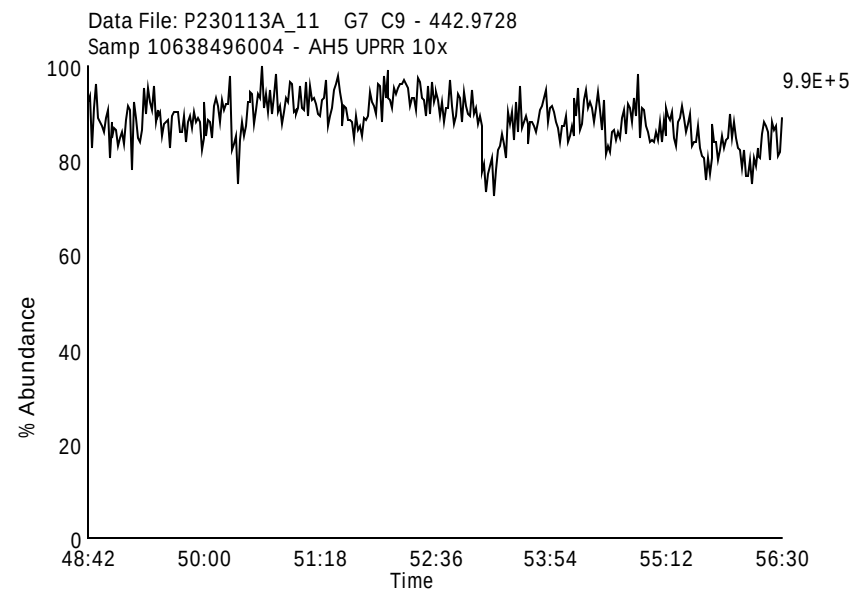
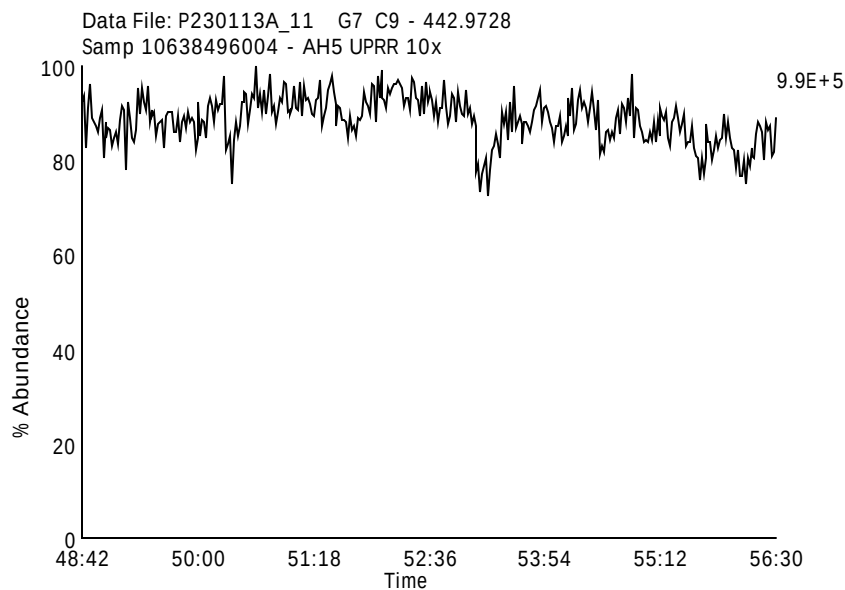
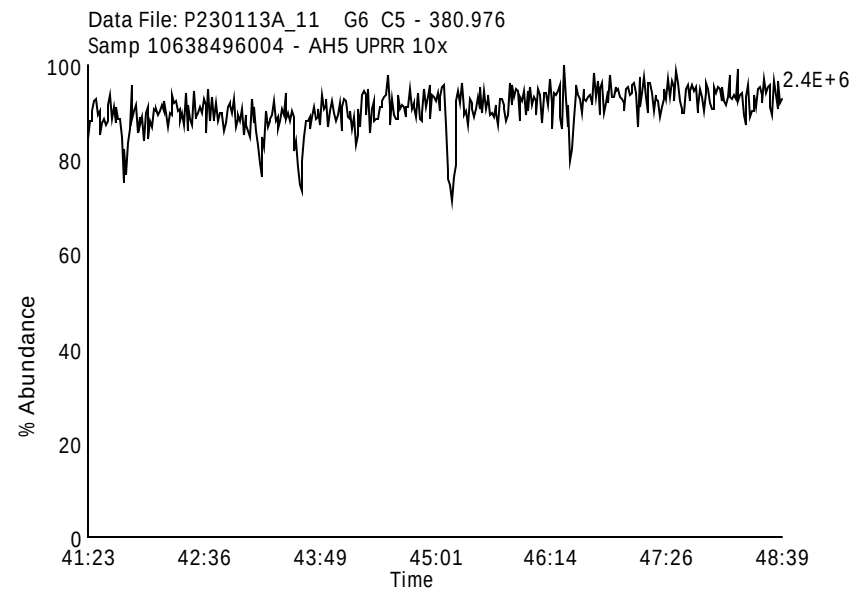
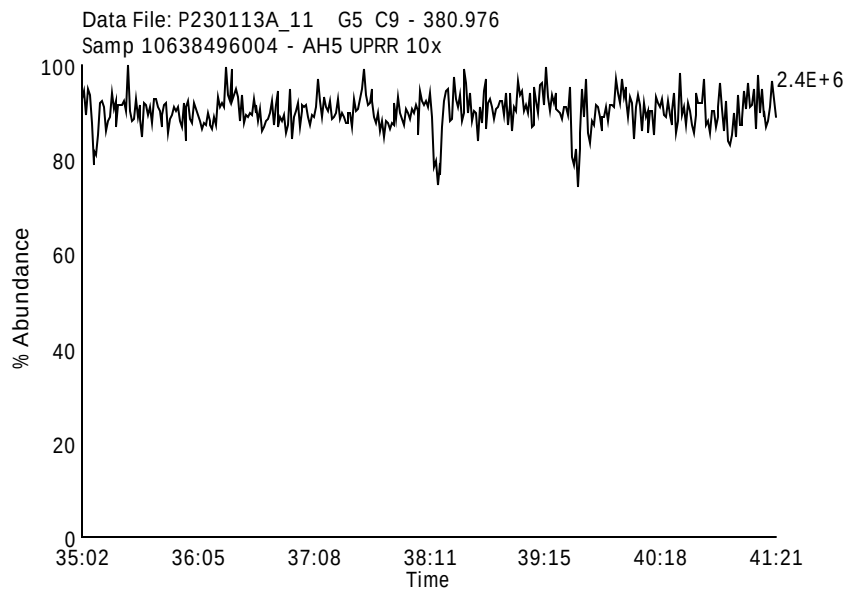
Date Acquired: 1/13/2023

Sample Description: Samp 10638496004 - AH5 UPRR 10x

Lab Sample ID: 10638496004

Instrument: 10MSHR09 (P)

Client Sample ID: SB12-0.0-0.5-1022



Labeled Mono Chlorinated Biphenyls

Data File Name: P230113A_05

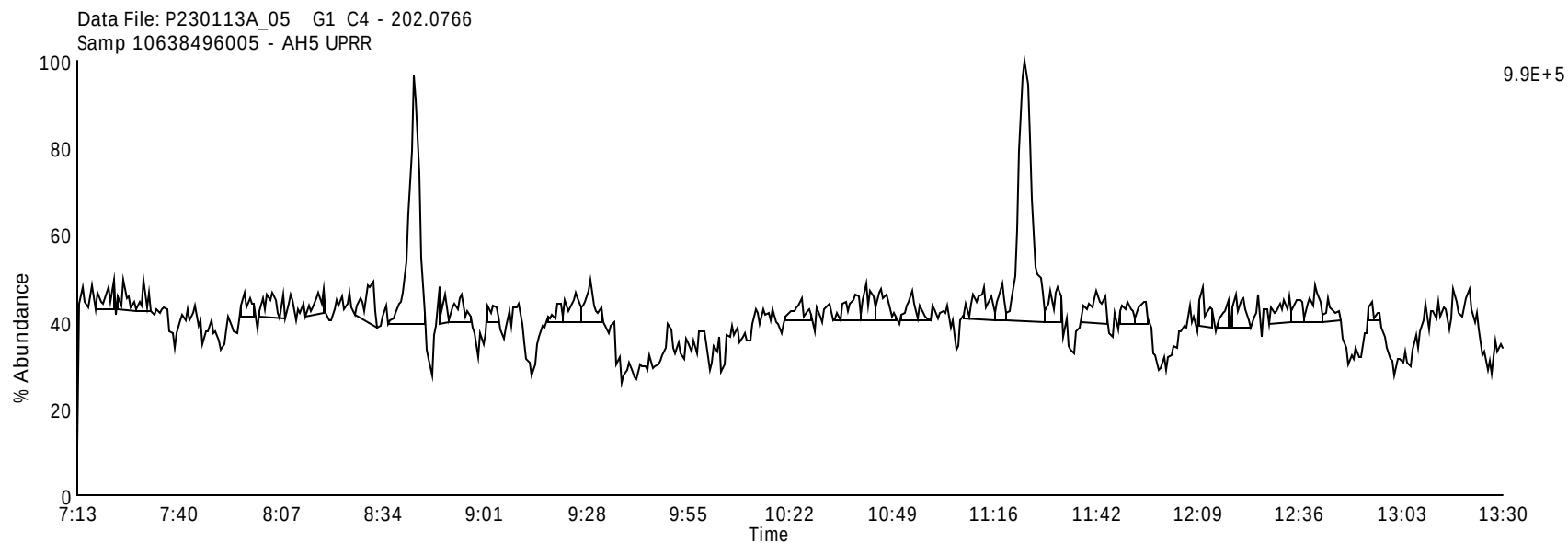
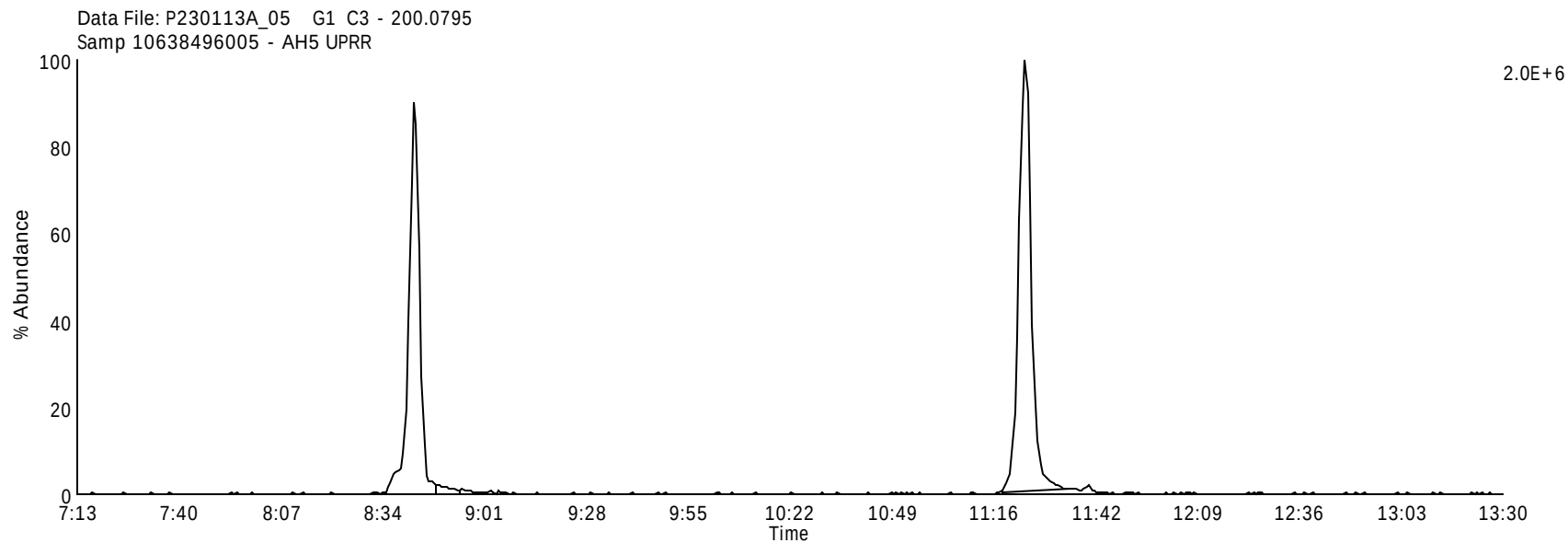
Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022



Labeled Di Chlorinated Biphenyls

Data File Name: P230113A_05

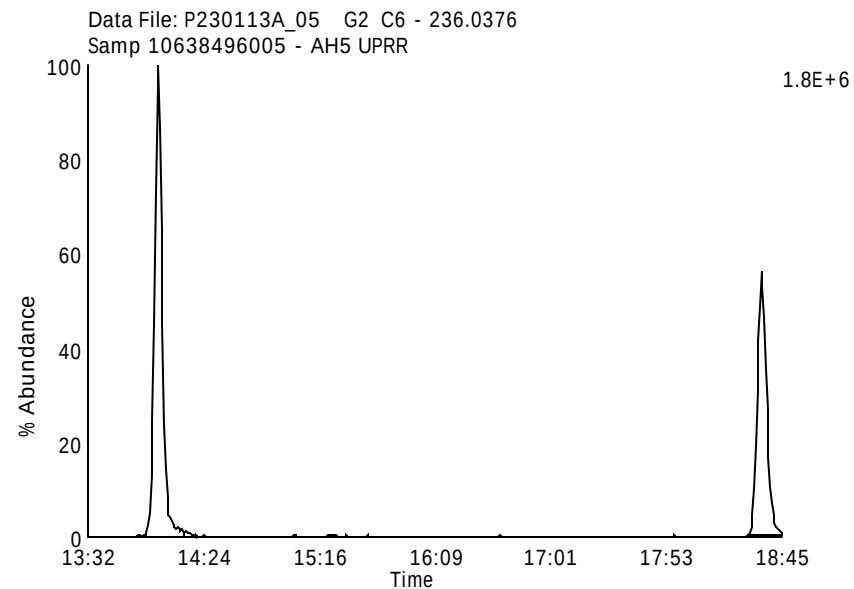
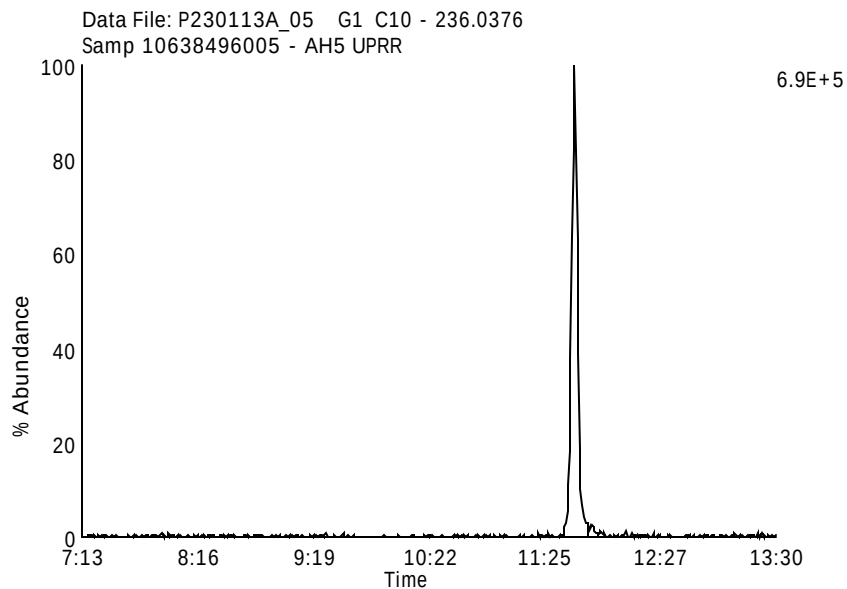
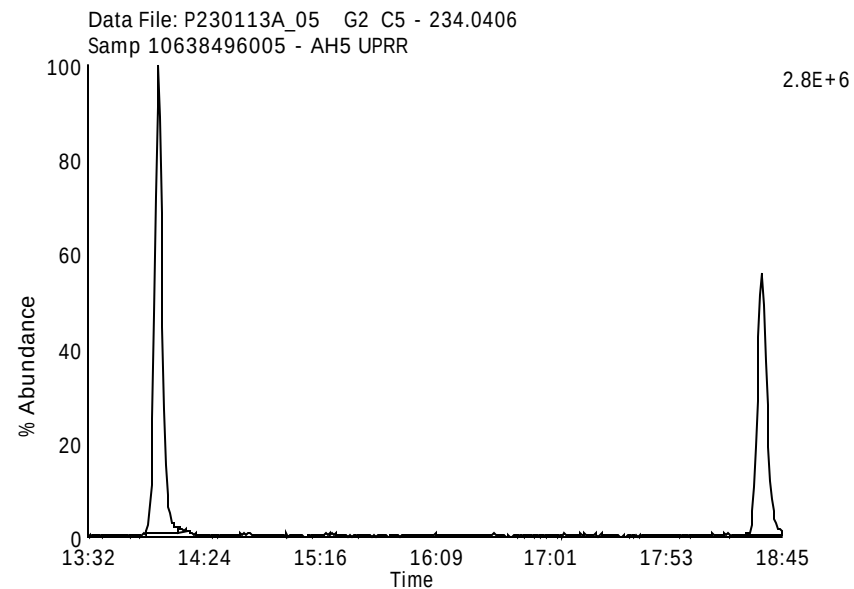
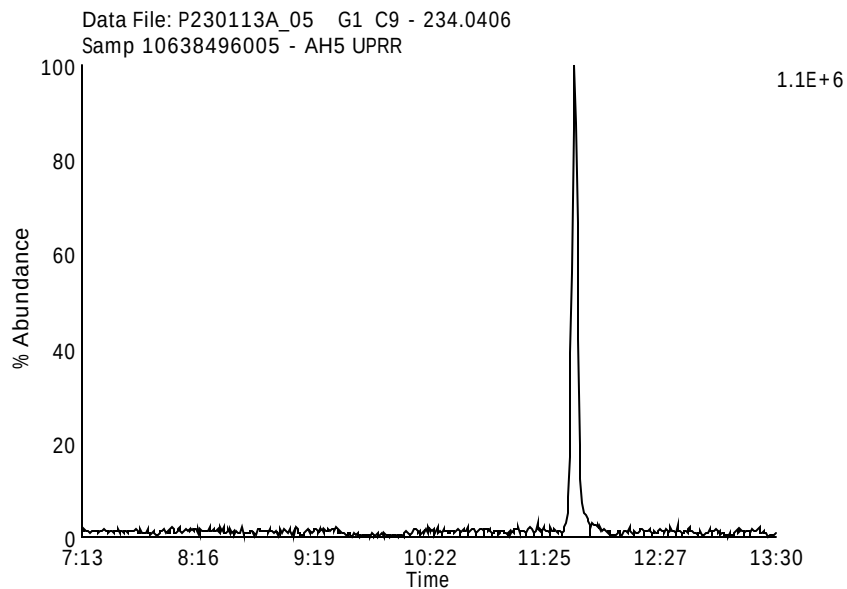
Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022



Labeled Tri Chlorinated Biphenyls

Data File Name: P230113A_05

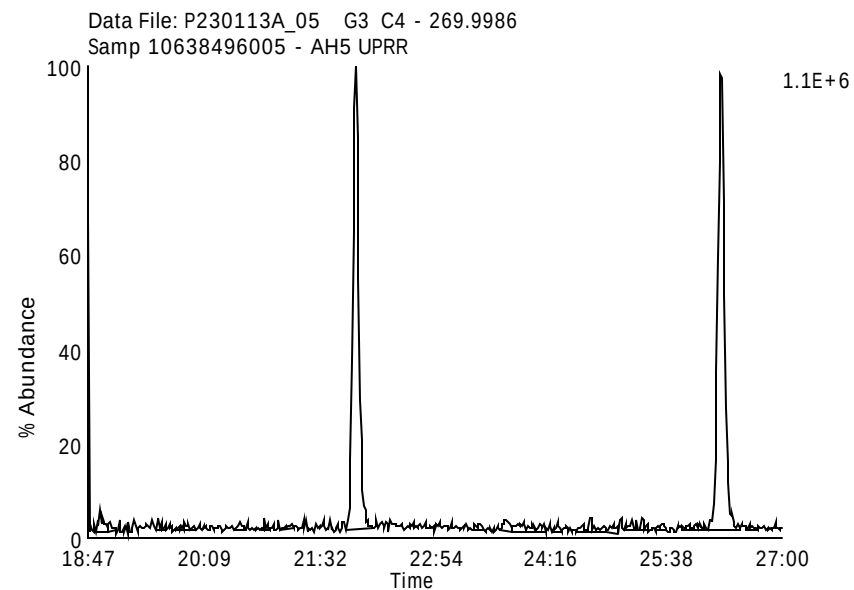
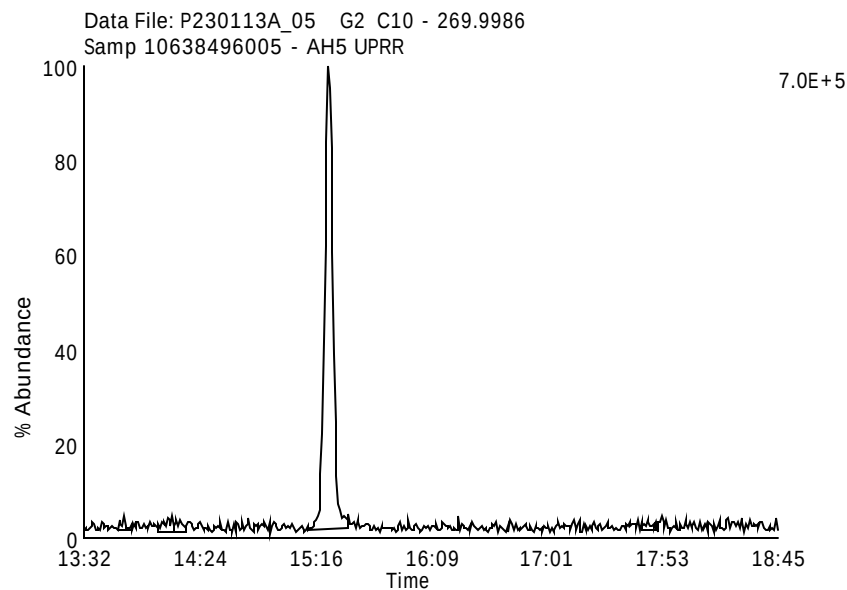
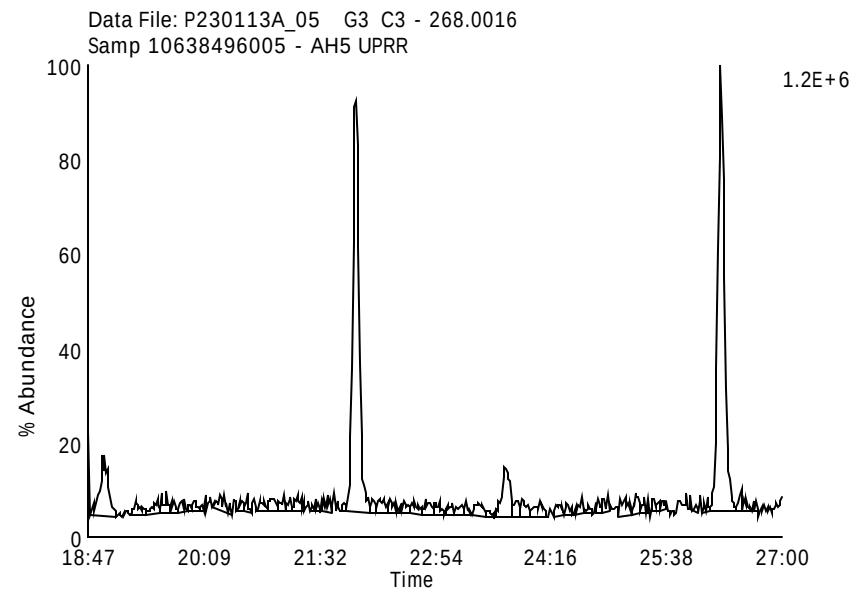
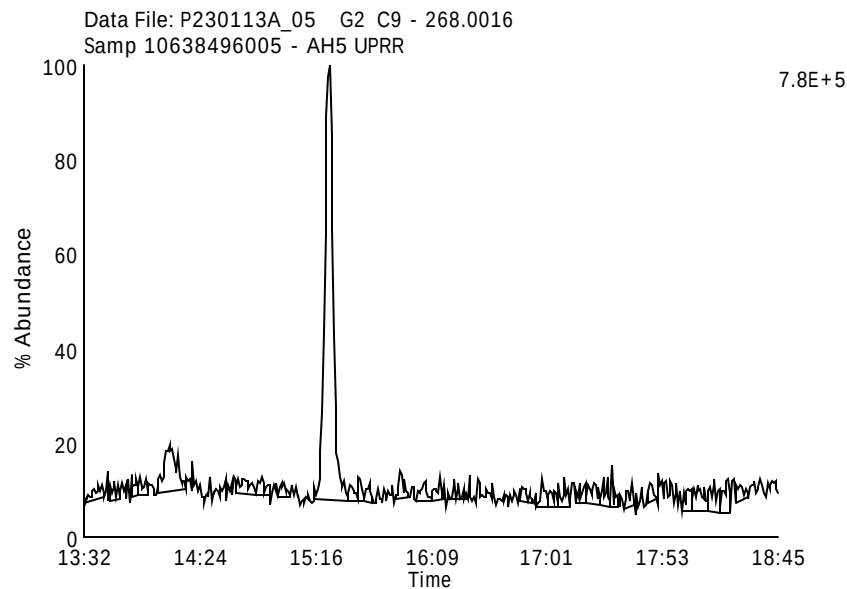
Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022



Labeled Tetra Chlorinated Biphenyls

Data File Name: P230113A_05

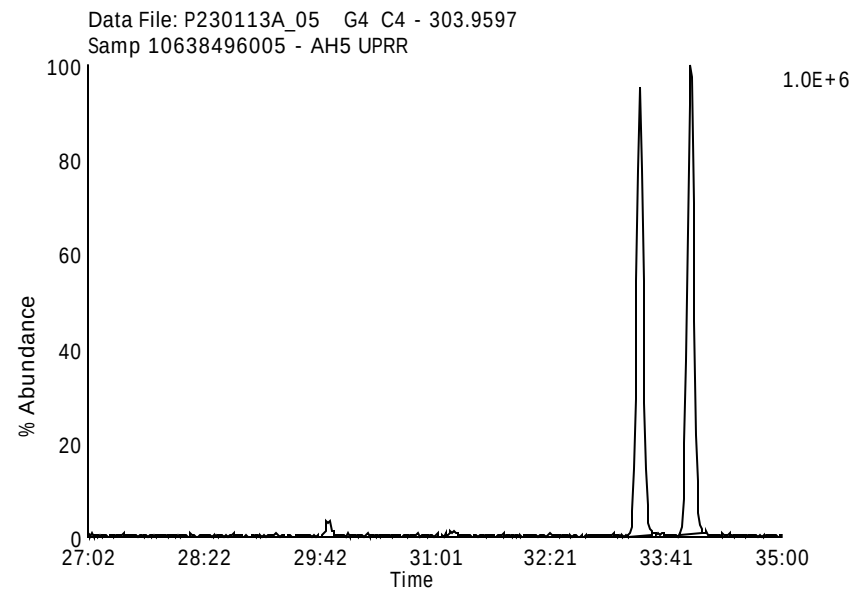
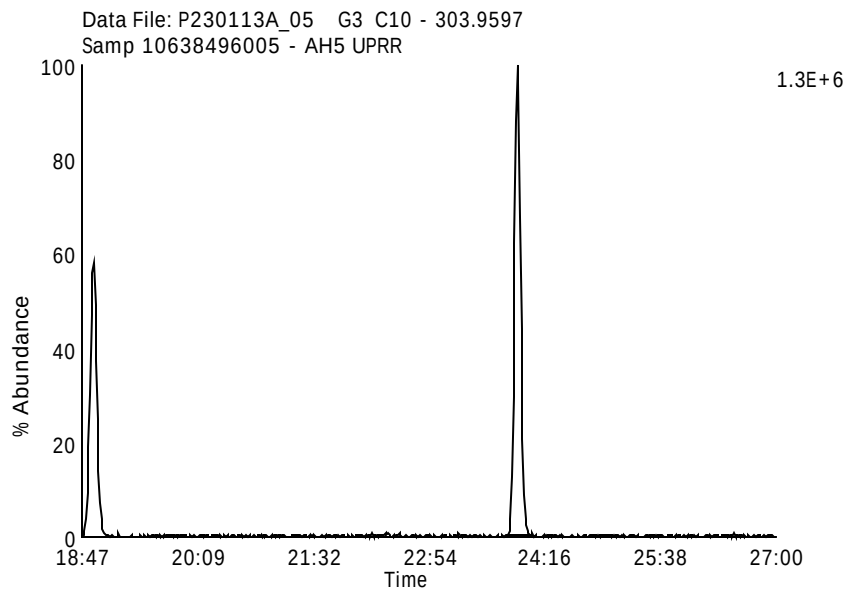
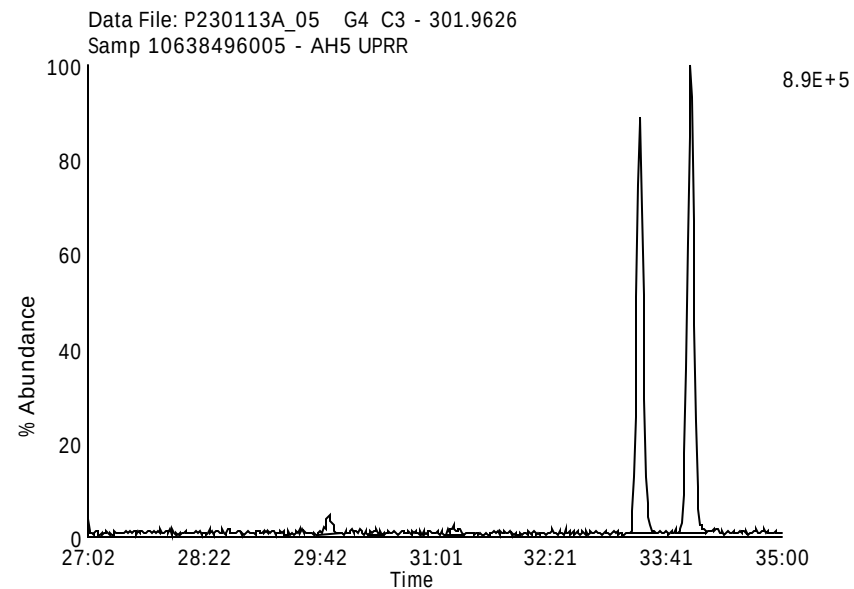
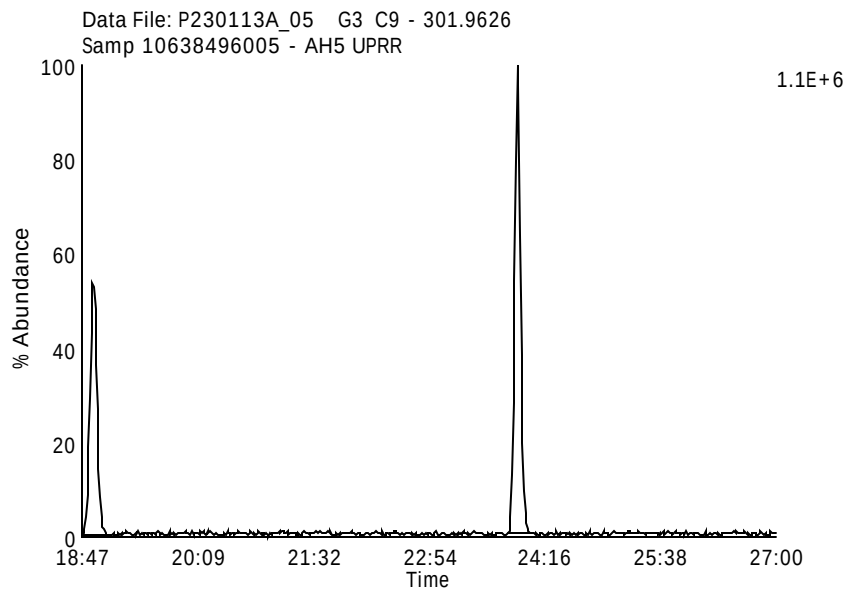
Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022



Labeled Penta Chlorinated Biphenyls

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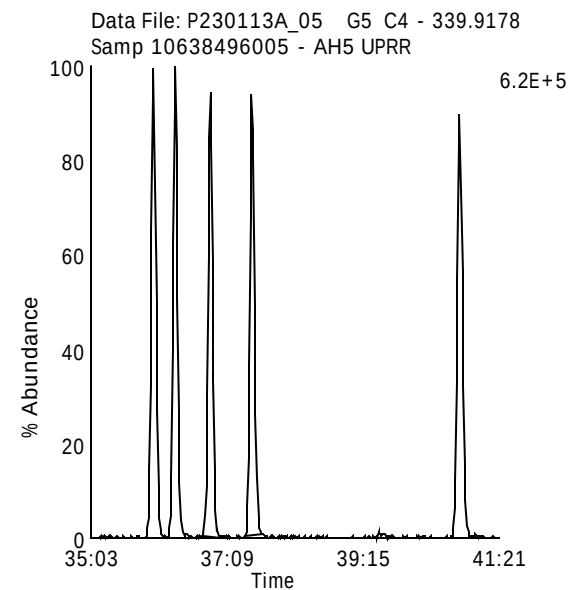
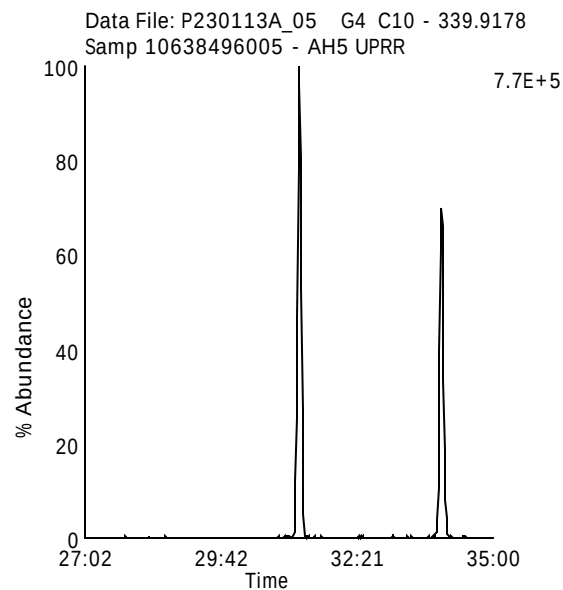
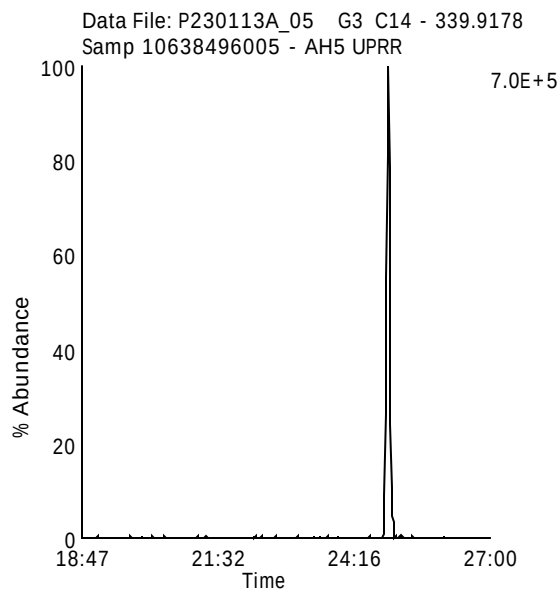
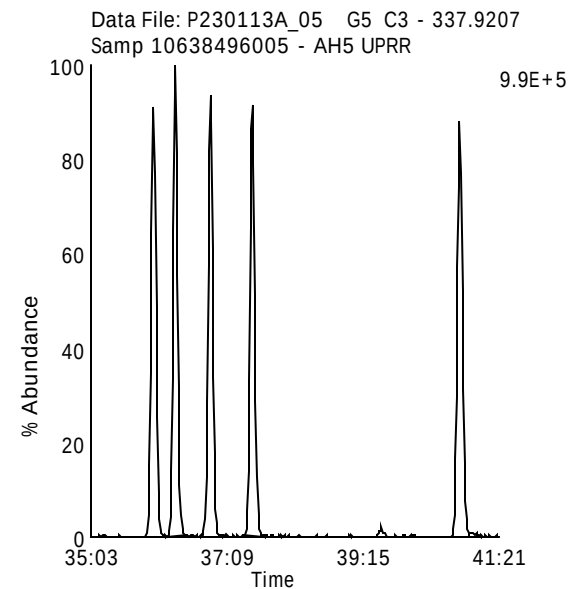
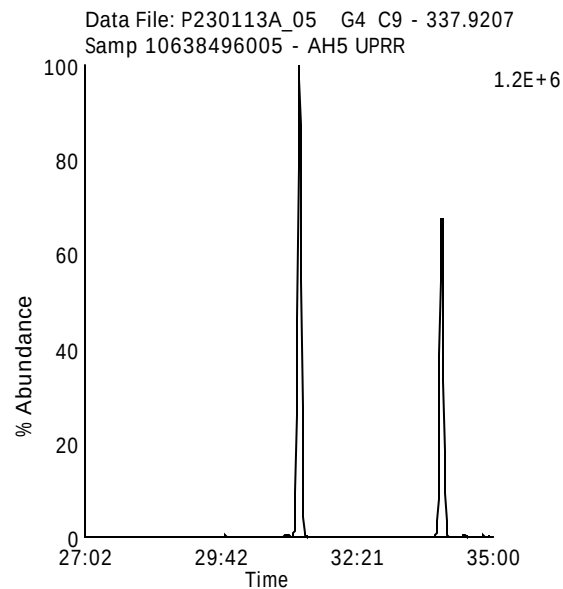
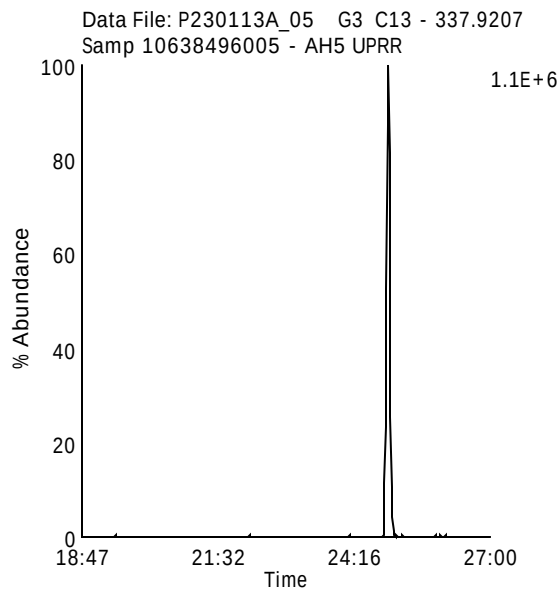
Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022



Labeled Hexa Chlorinated Biphenyls

Data File Name: P230113A_05

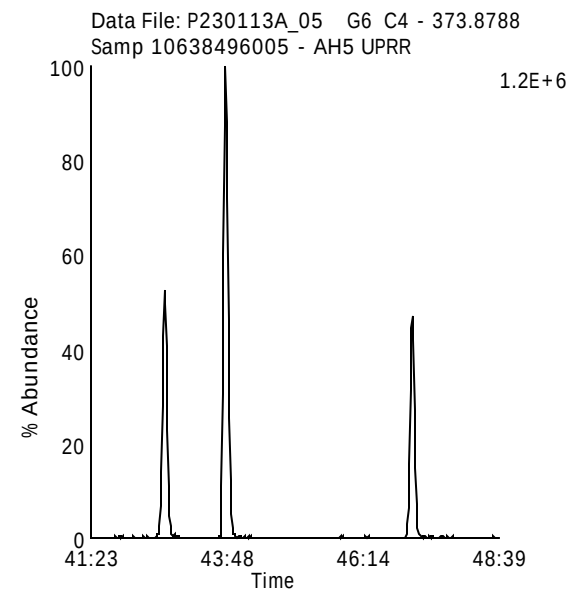
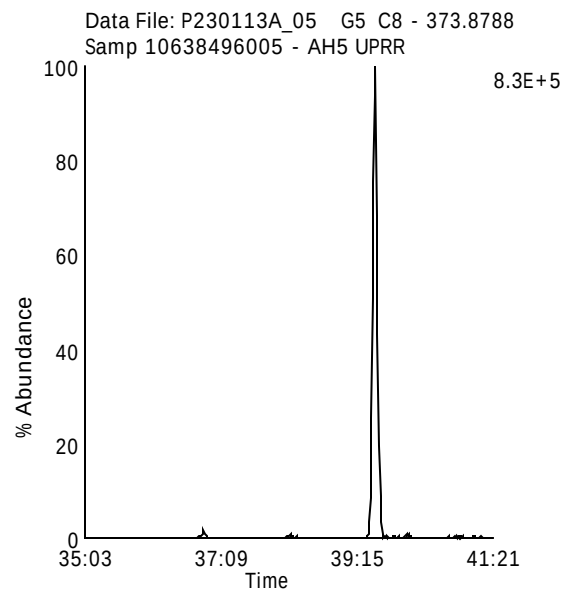
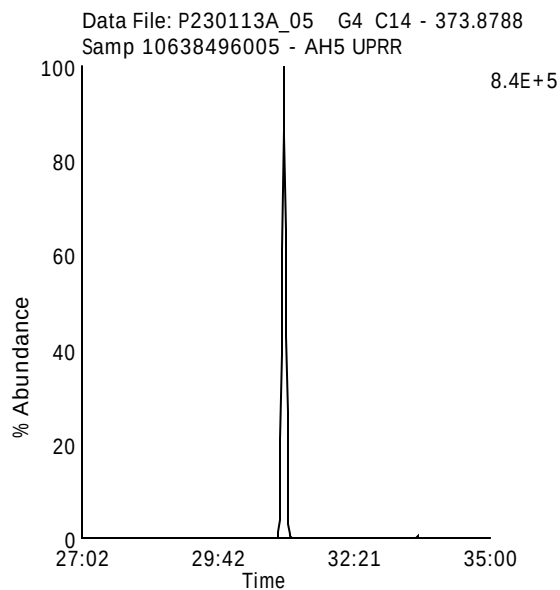
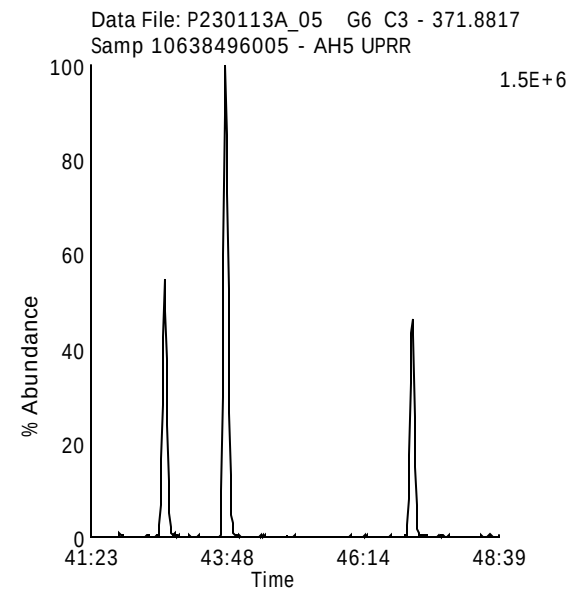
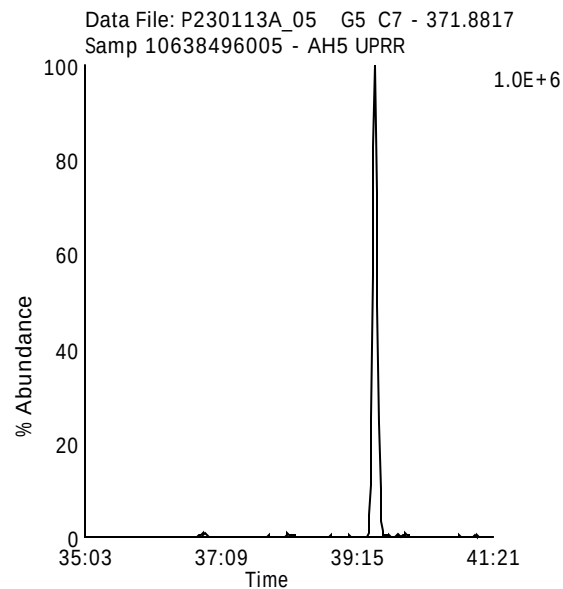
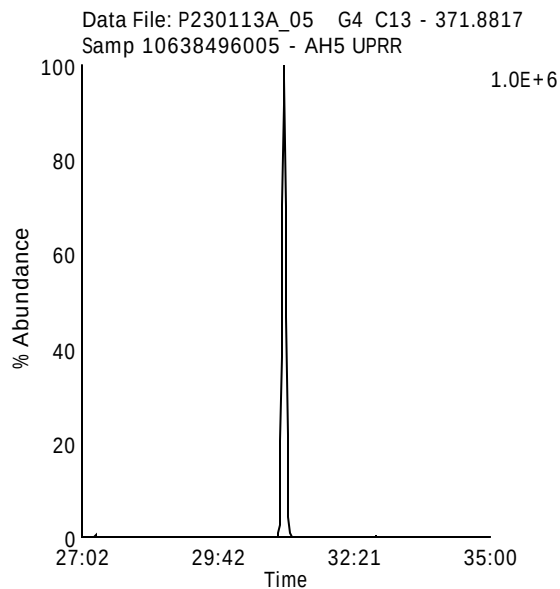
Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022



Labeled Hepta Chlorinated Biphenyls

Data File Name: P230113A_05

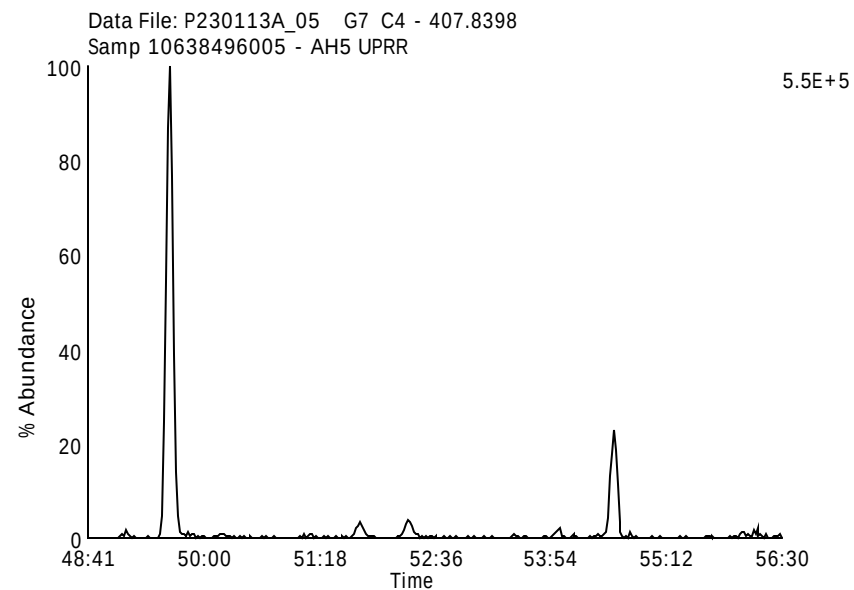
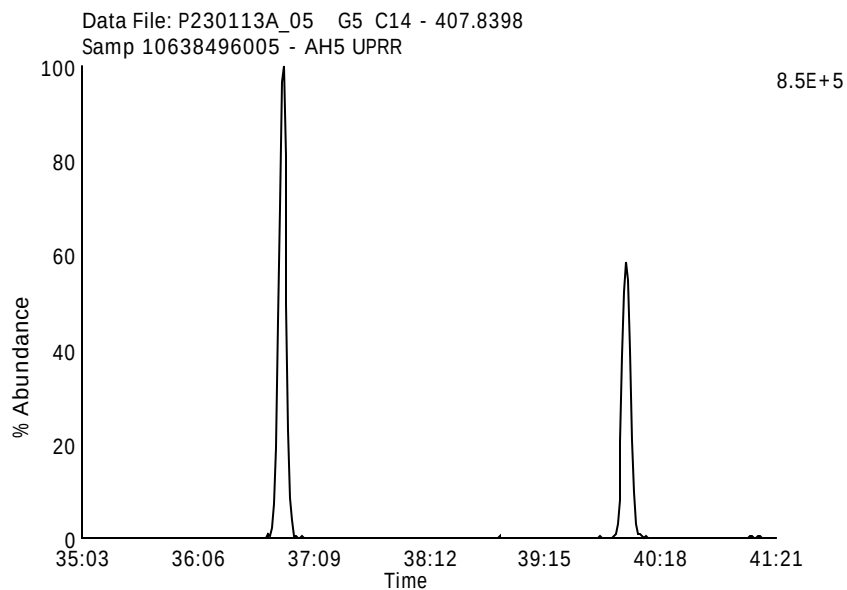
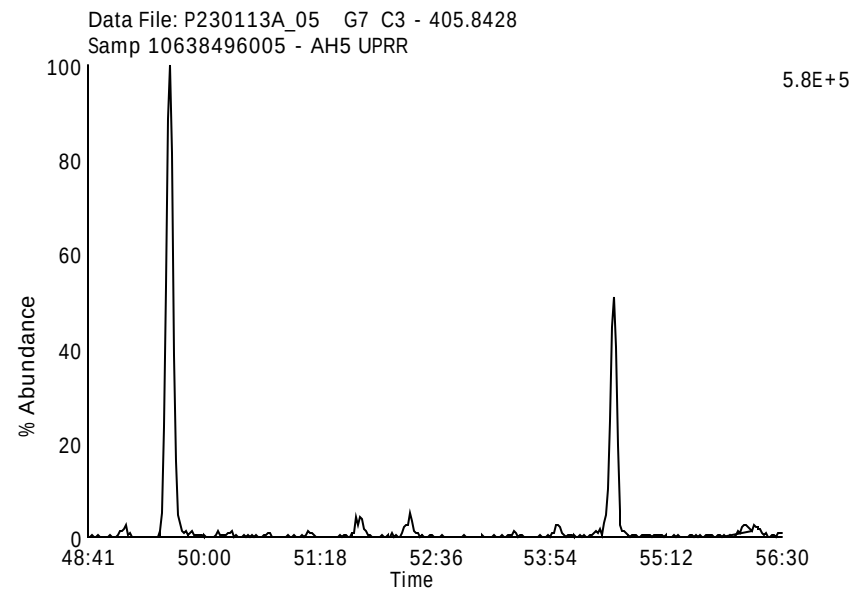
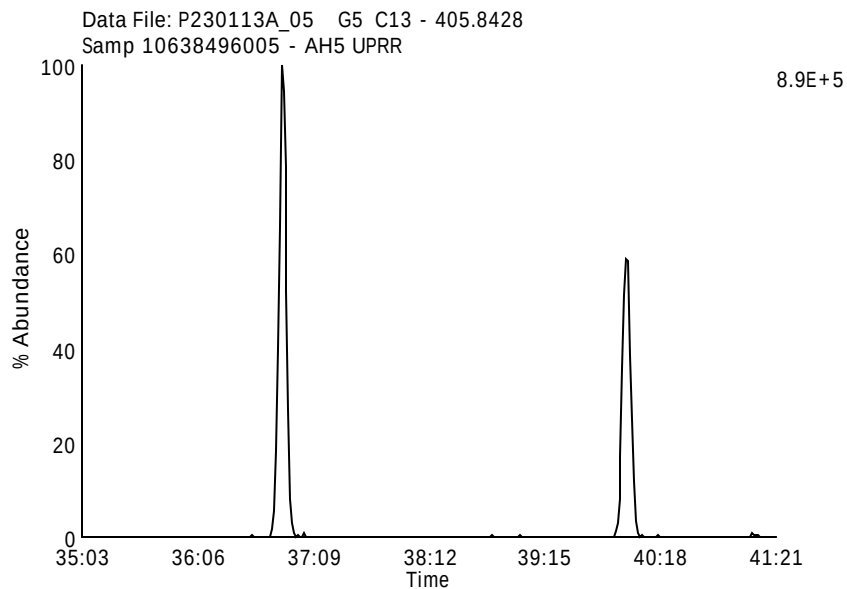
Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022



Labeled Octa Chlorinated Biphenyls

Data File Name: P230113A_05

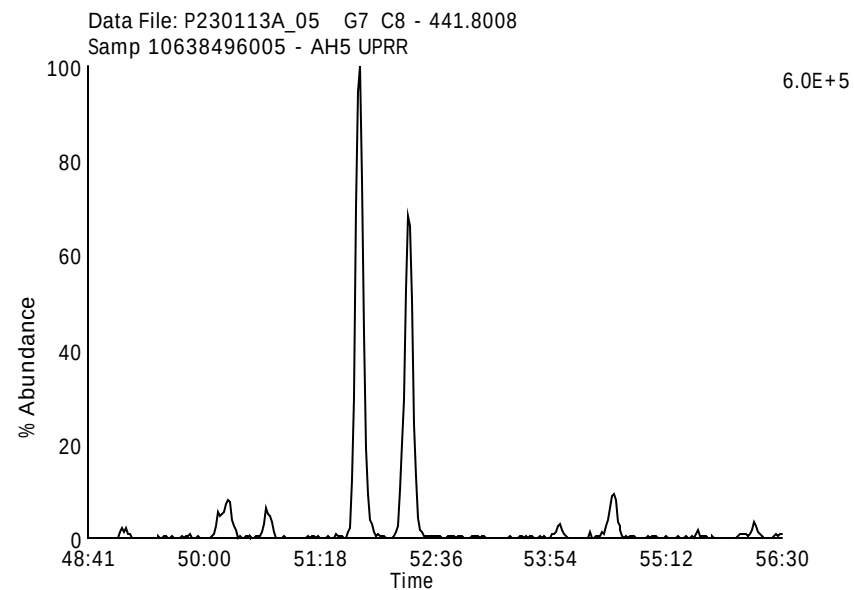
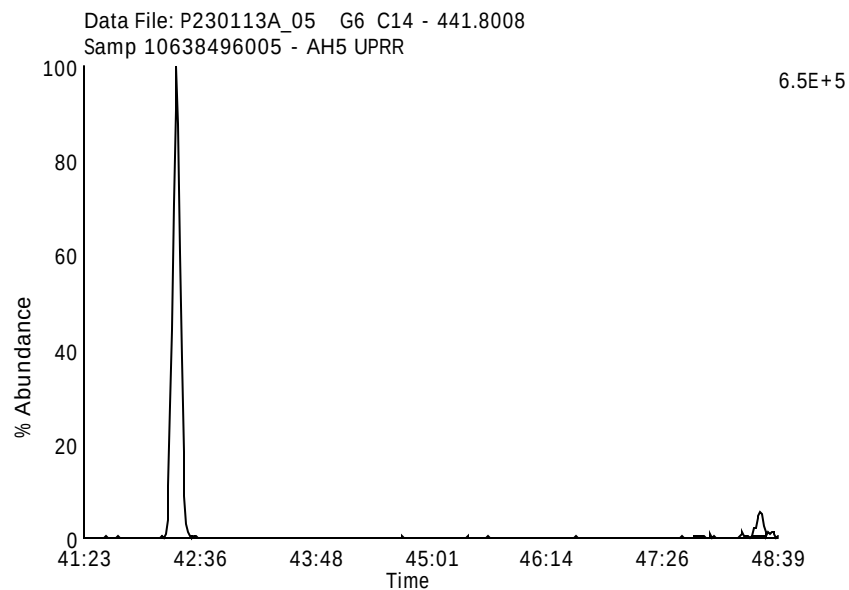
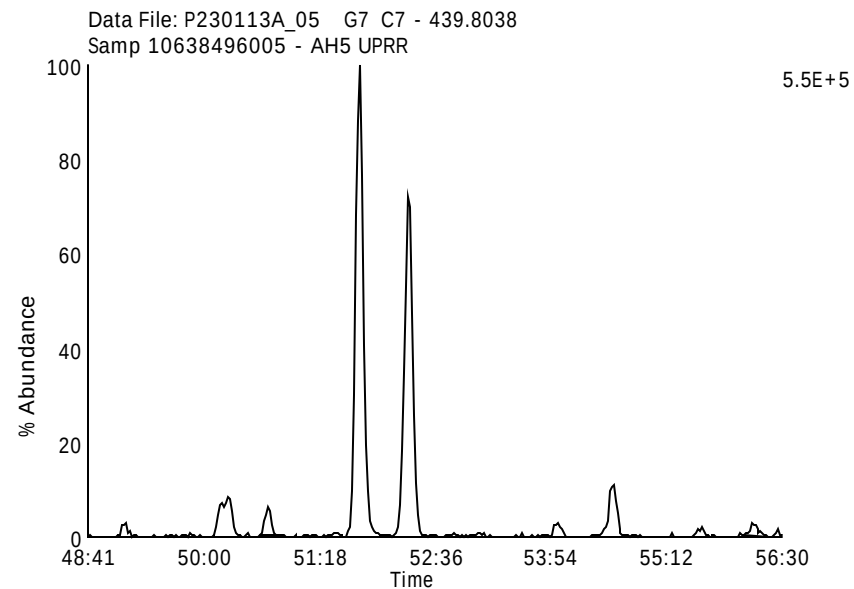
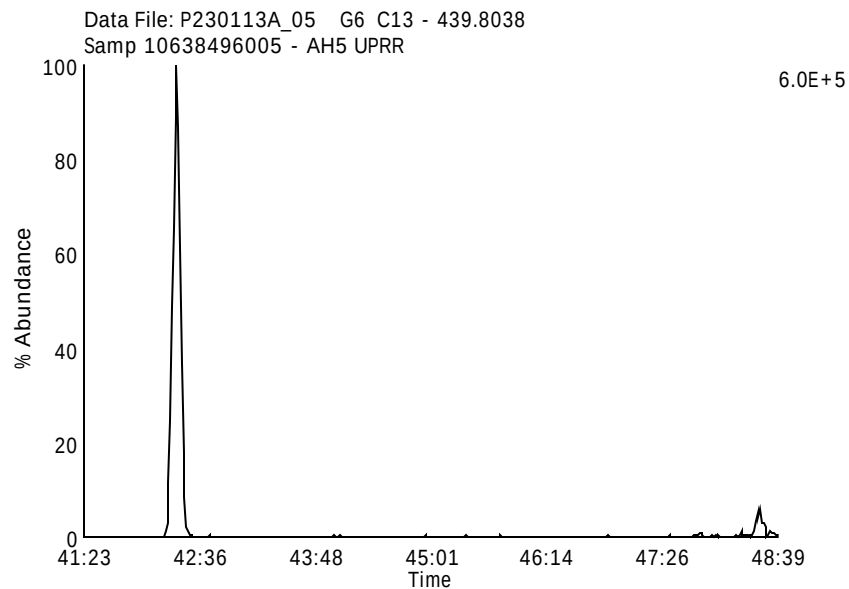
Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022



Labeled Nona Chlorinated Biphenyls

Data File Name: P230113A_05

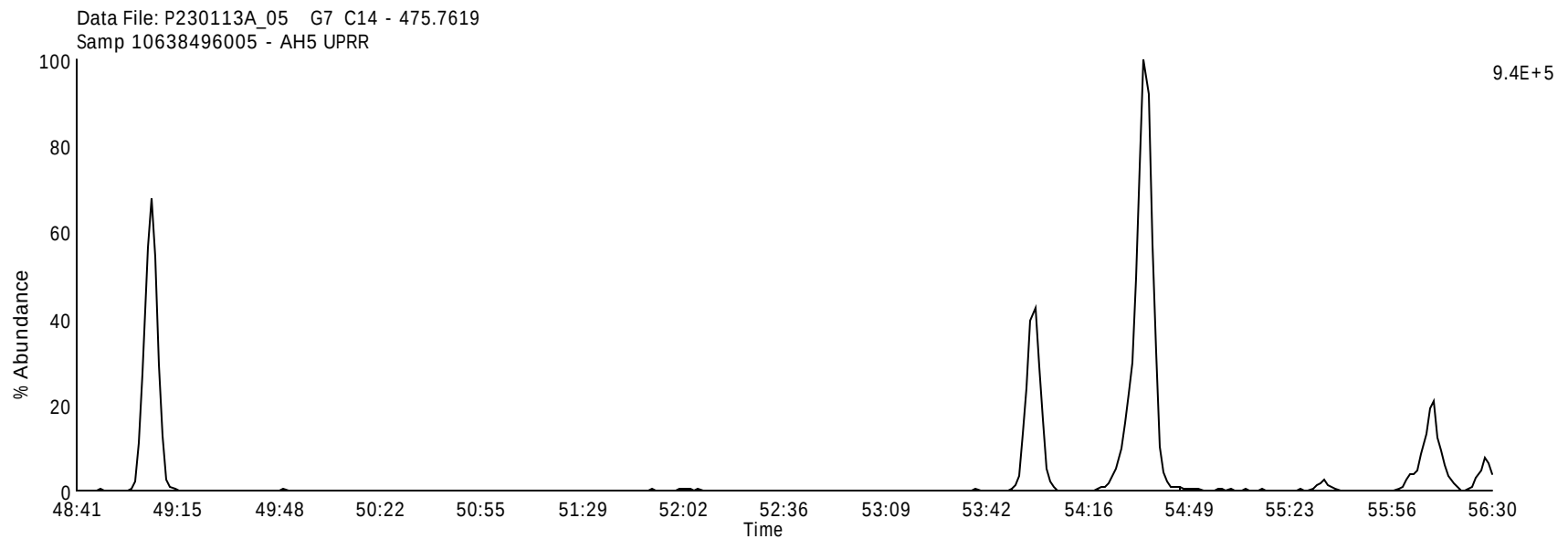
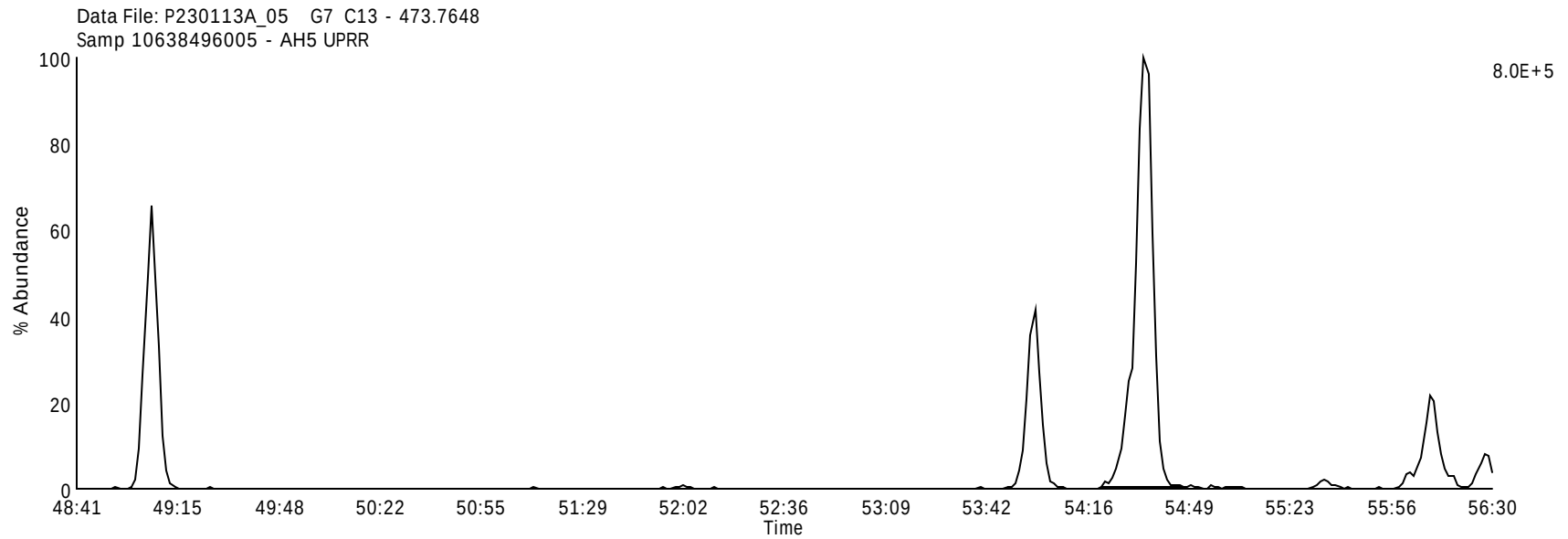
Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022



Labeled Deca Chlorinated Biphenyl

Data File Name: P230113A_05

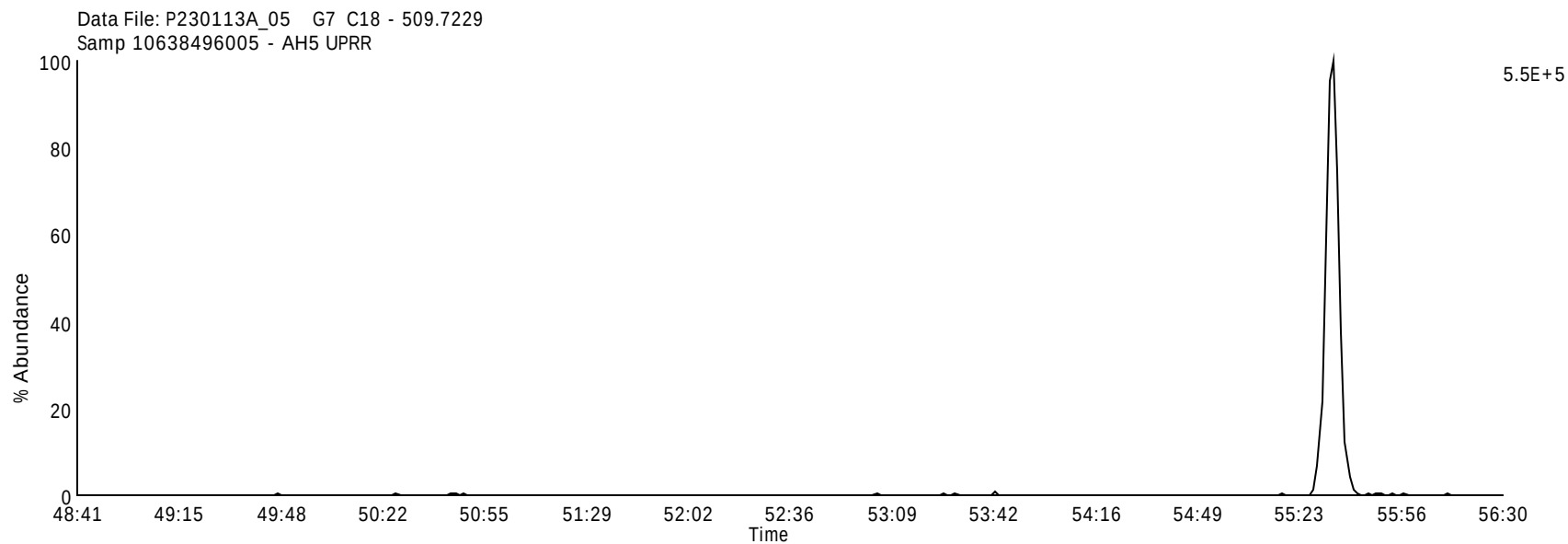
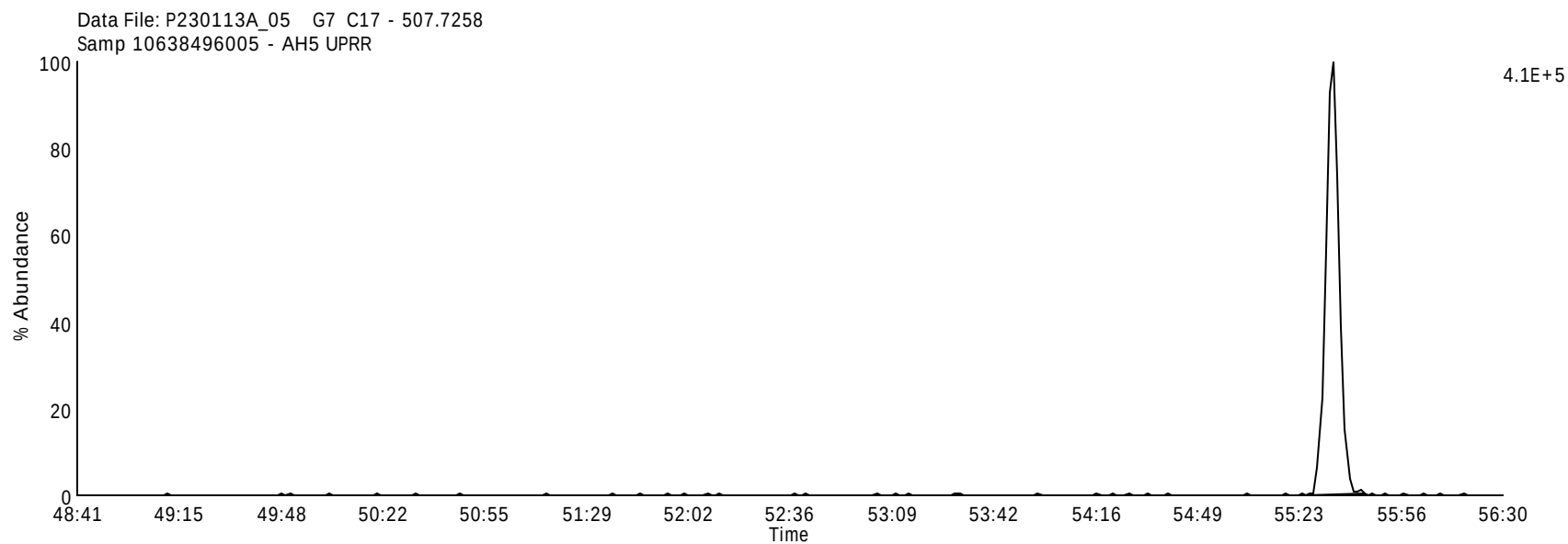
Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022



Mono Chlorinated Biphenyls

Data File Name: P230113A_05

Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

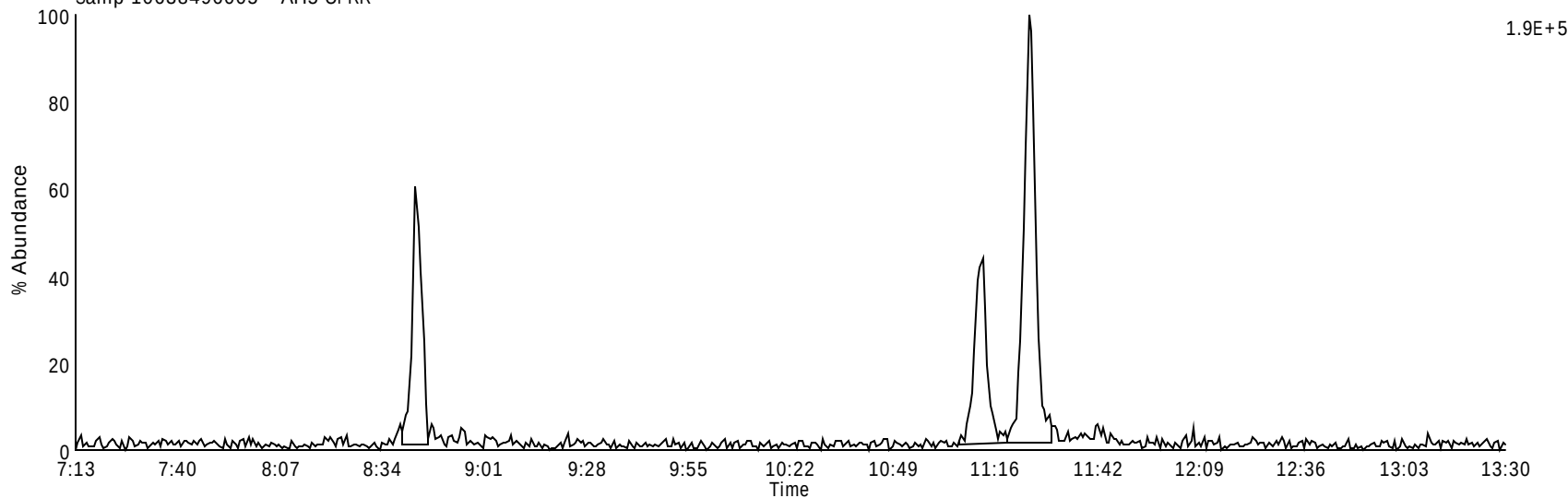
Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022

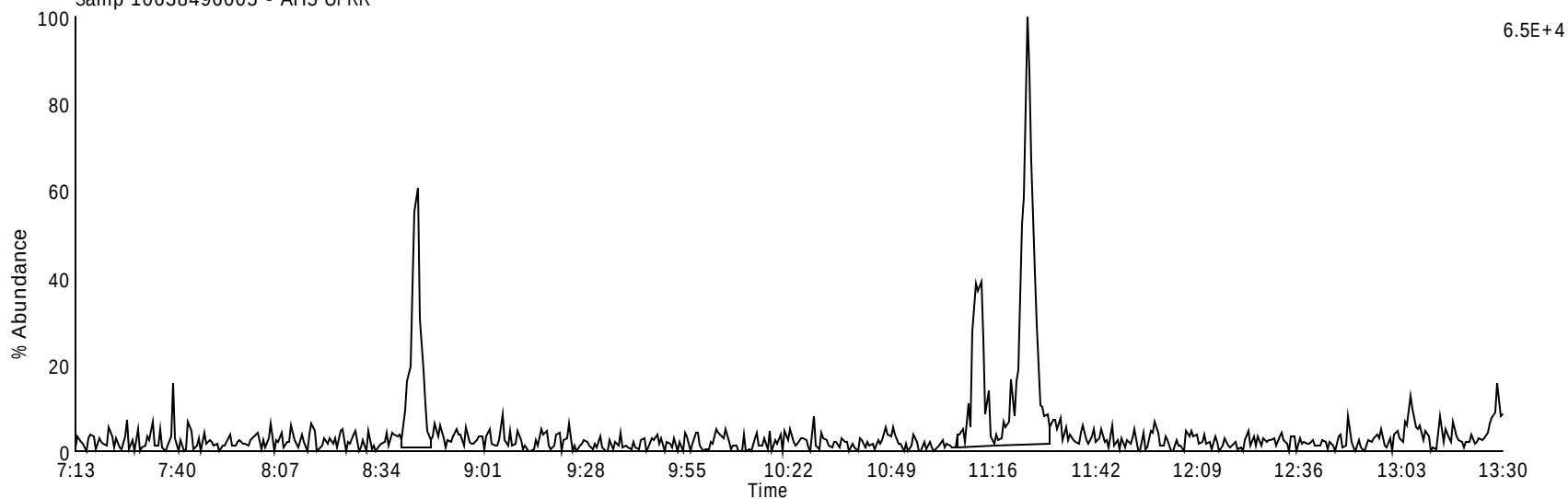
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Samp 10638496005 - AH5 UPRR



Data File: P230113A_05 G1 C2 - 190.0363

Samp 10638496005 - AH5 UPRR



Di Chlorinated Biphenyls

Data File Name: P230113A_05

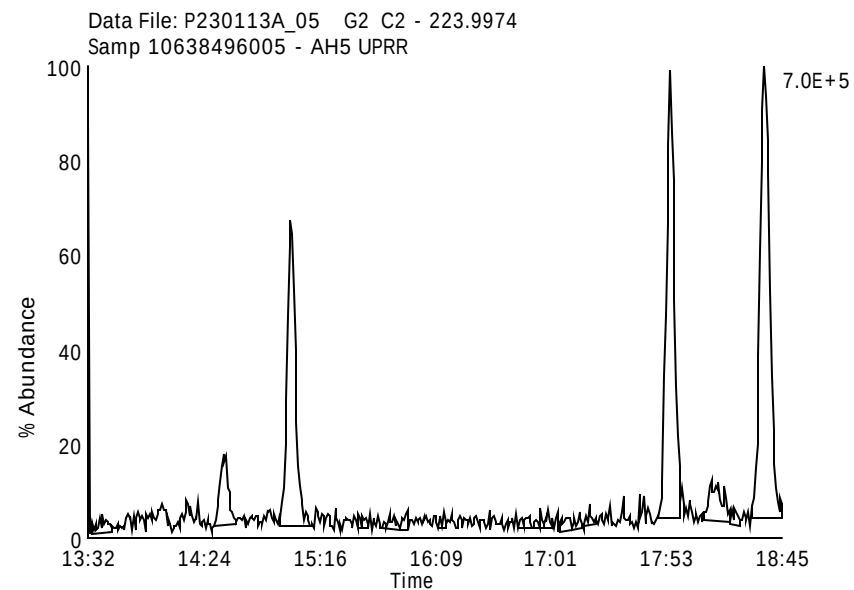
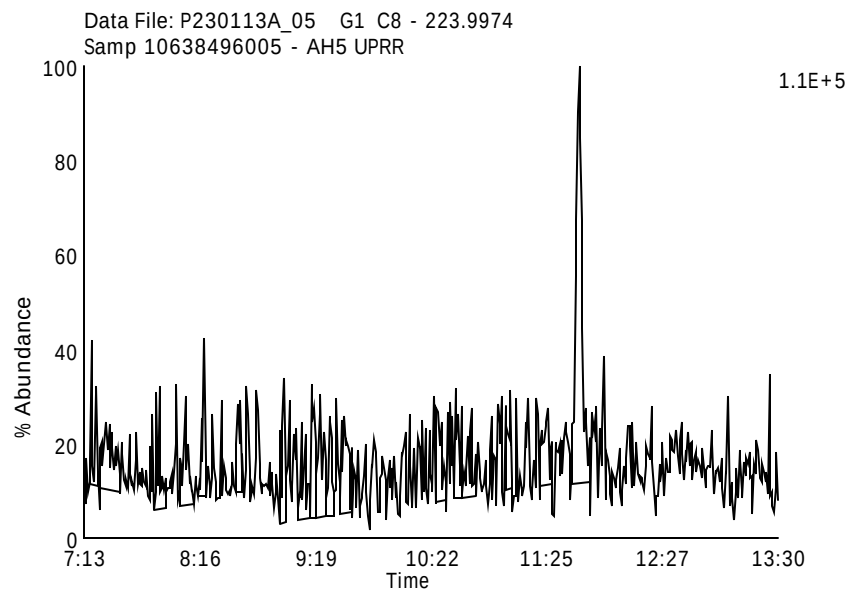
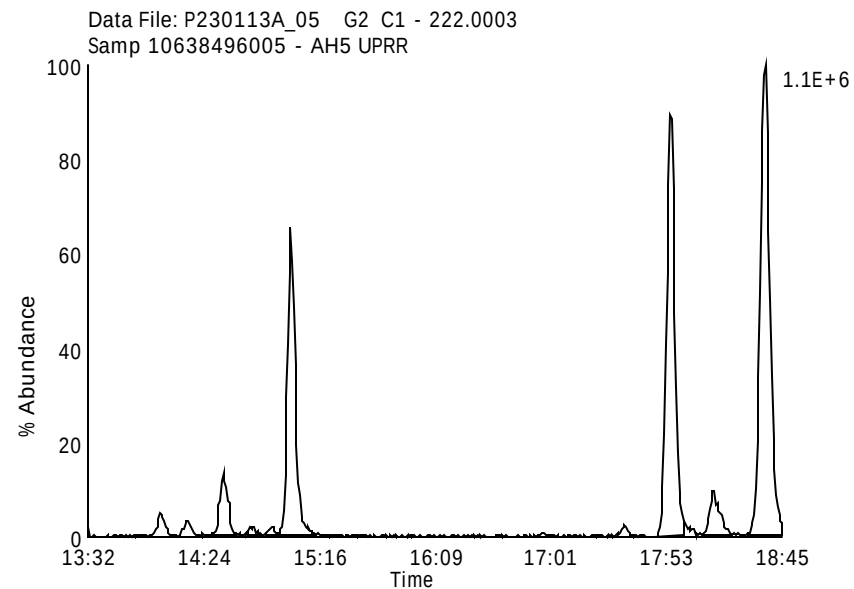
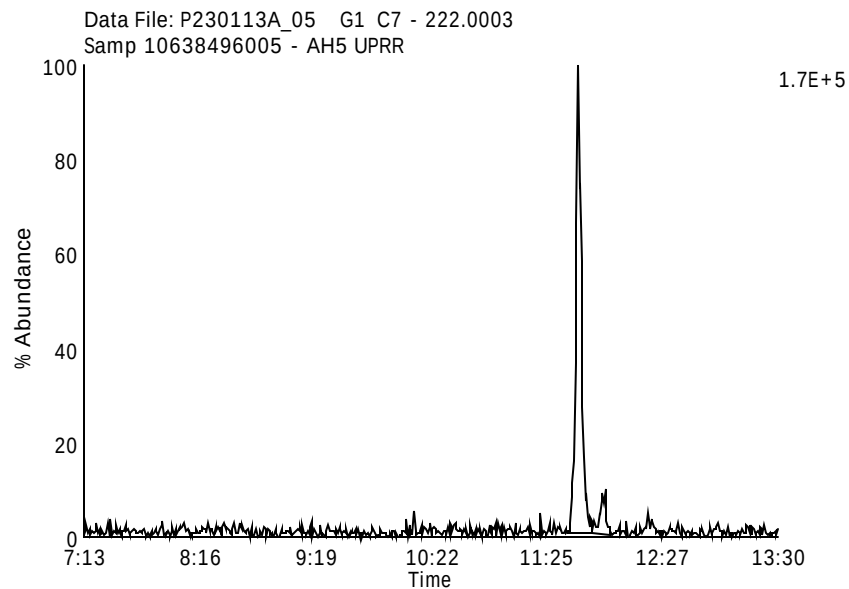
Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022



Tri Chlorinated Biphenyls

Data File Name: P230113A_05

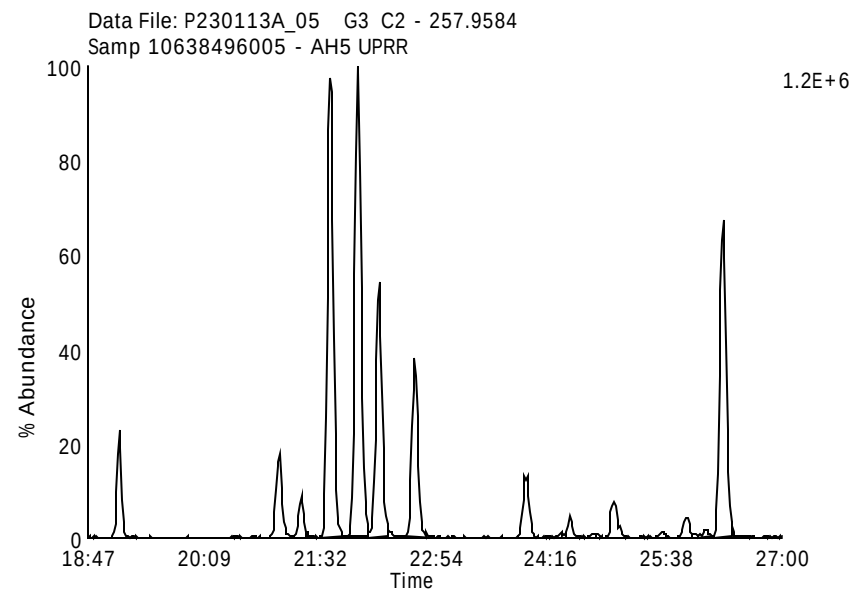
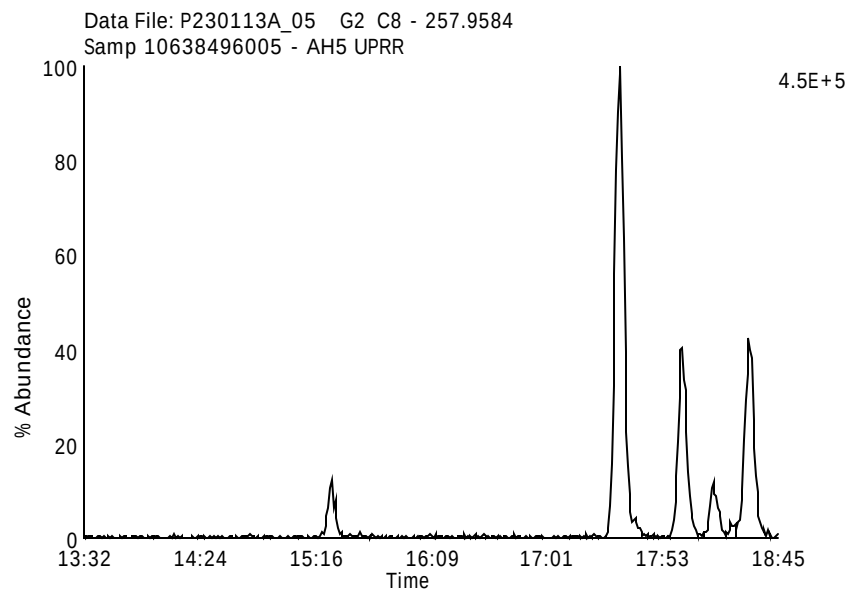
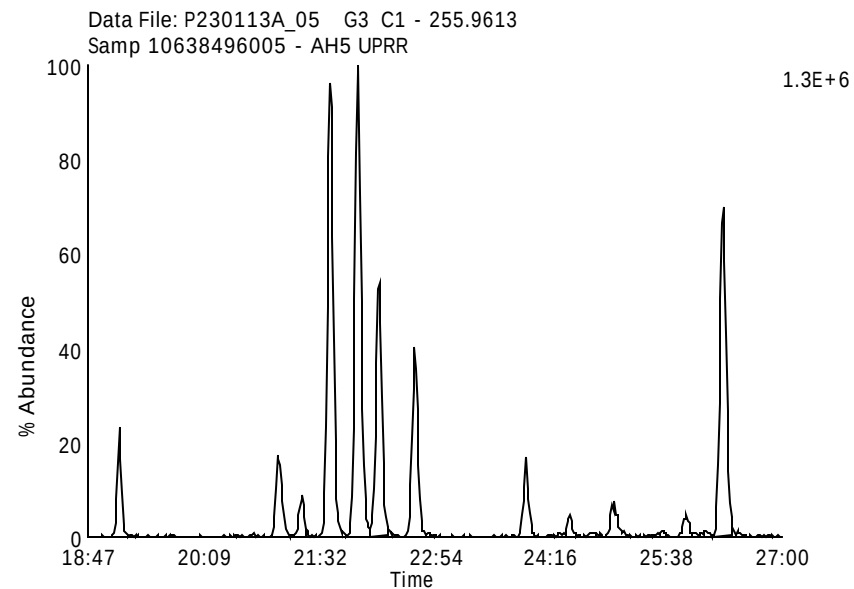
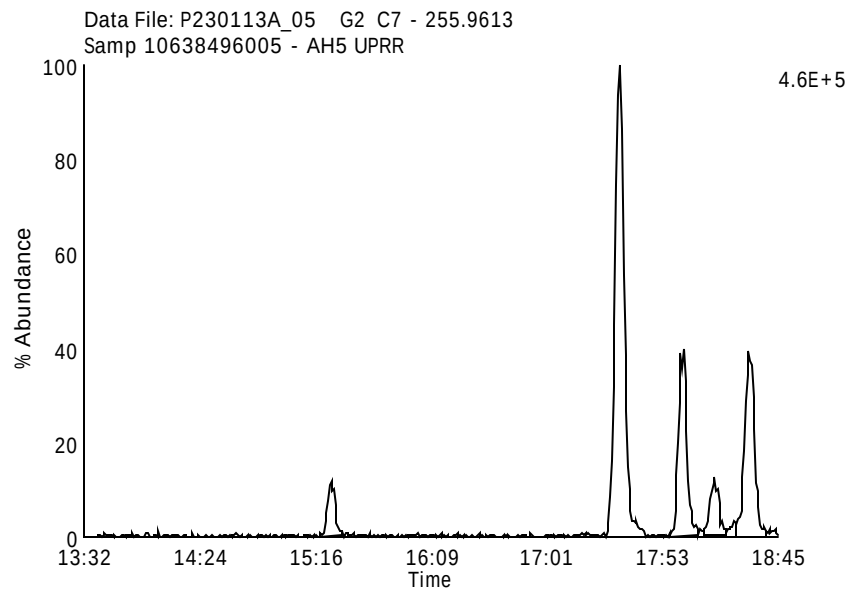
Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022



Tetra Chlorinated Biphenyls

Data File Name: P230113A_05

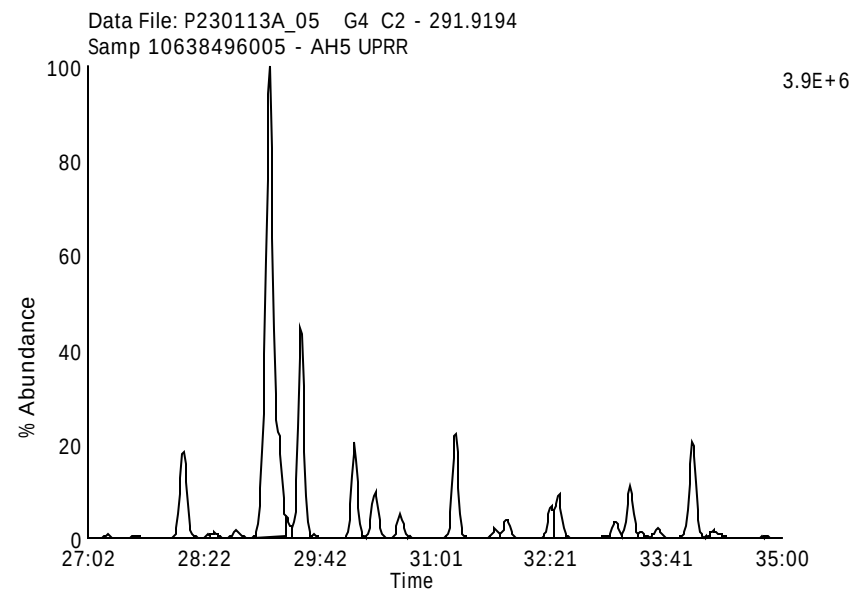
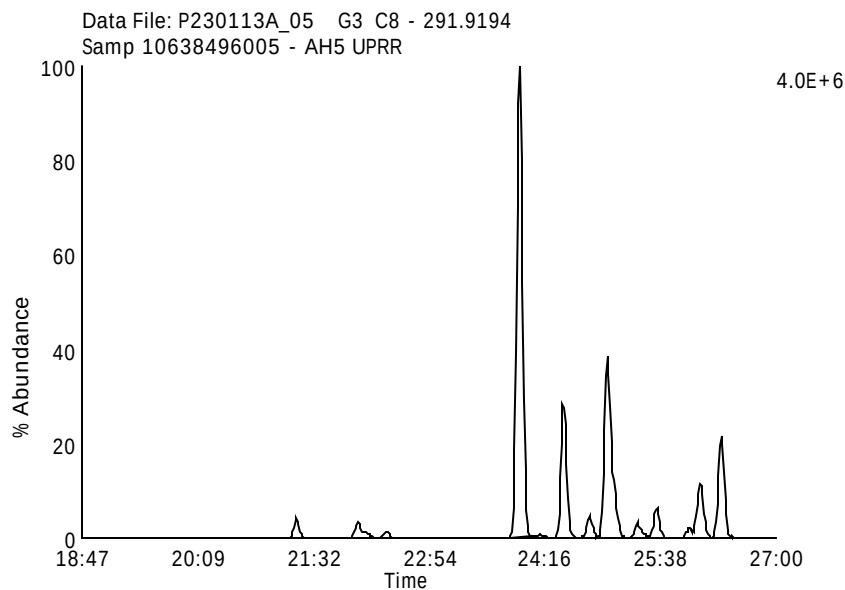
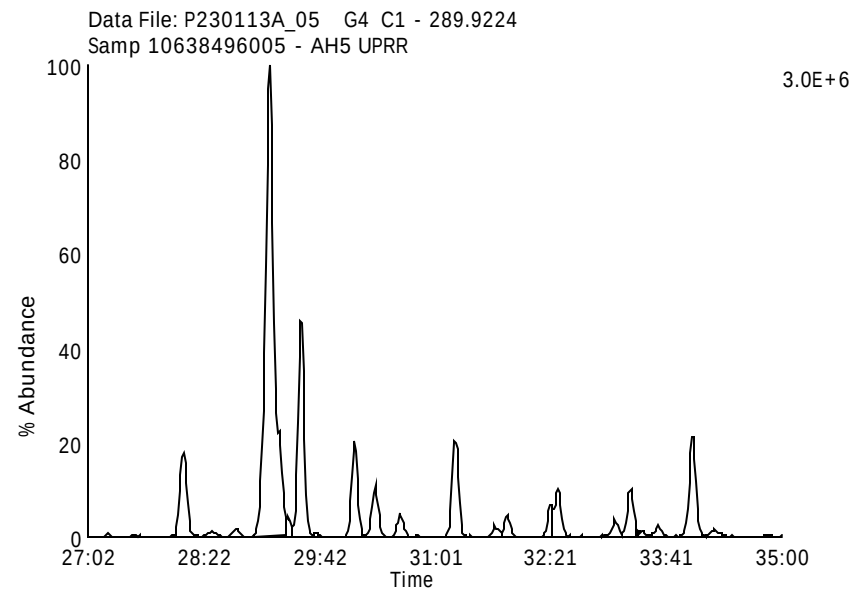
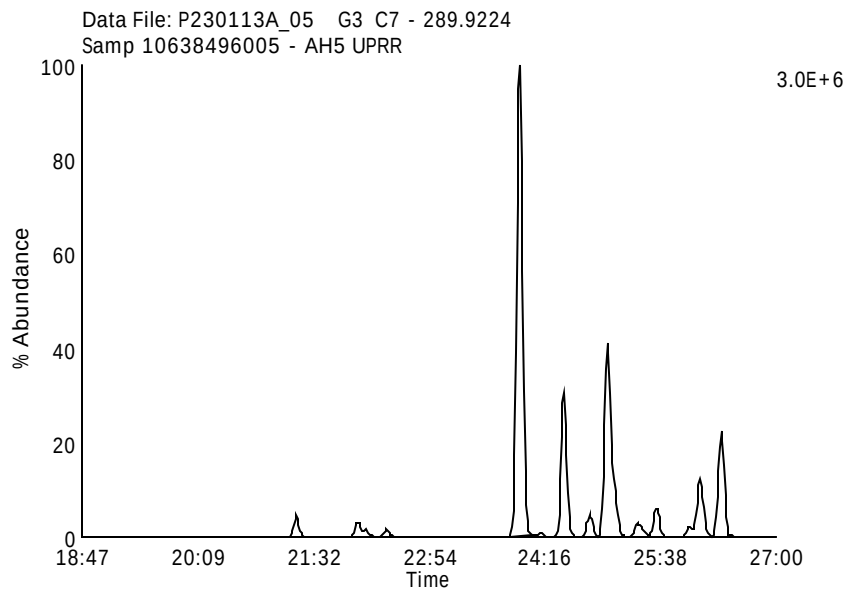
Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022



Penta Chlorinated Biphenyls

Data File Name: P230113A_05

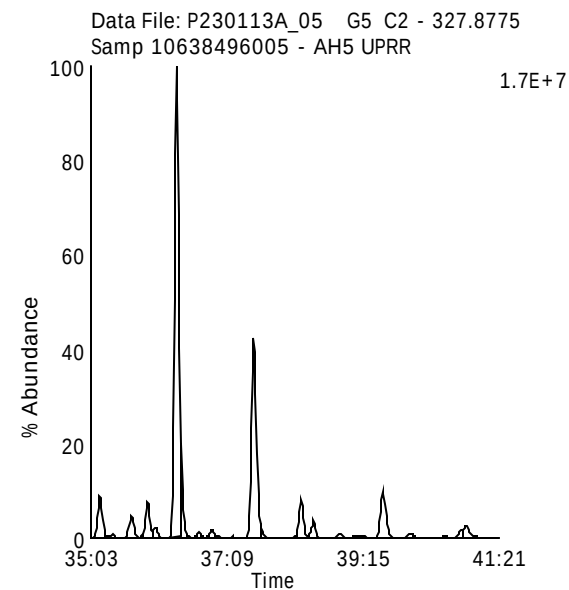
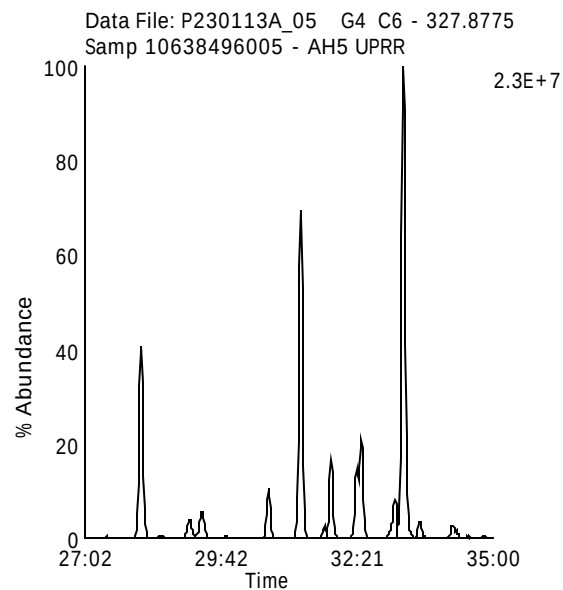
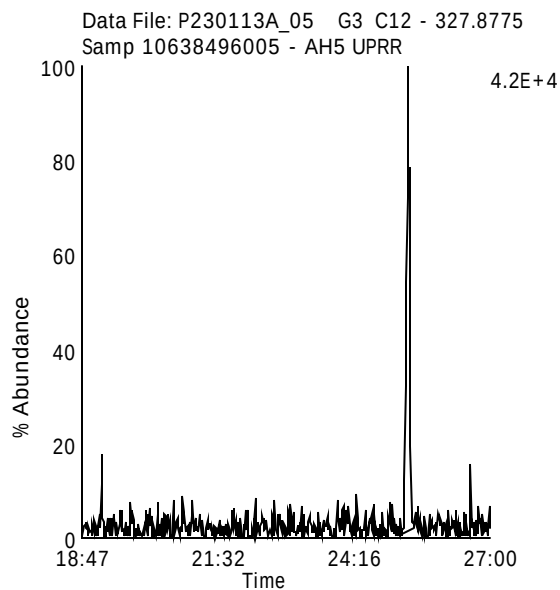
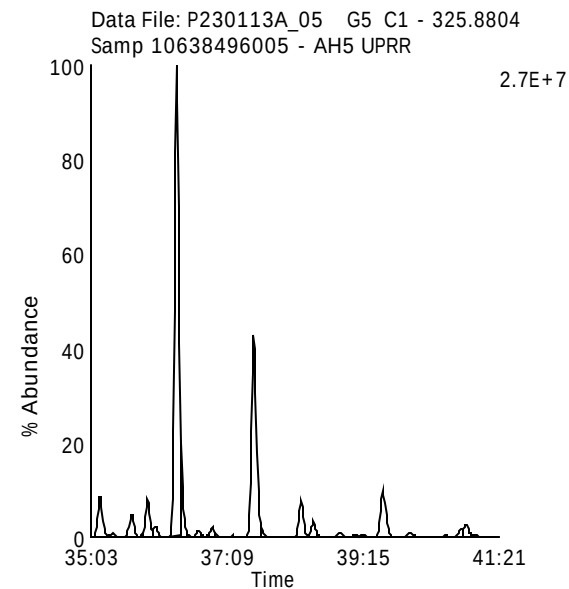
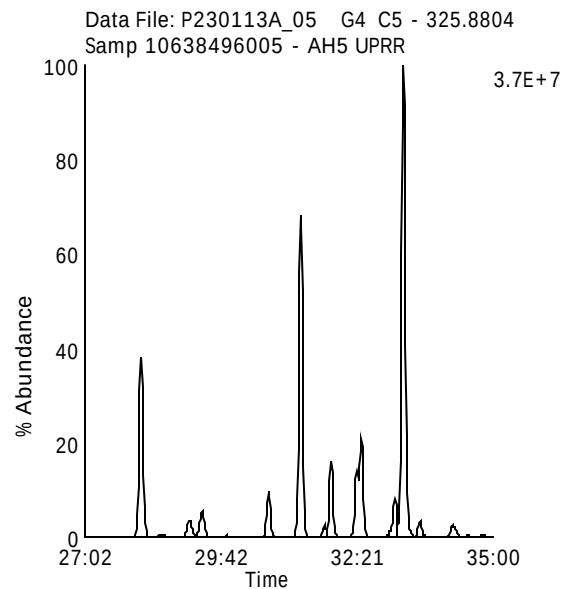
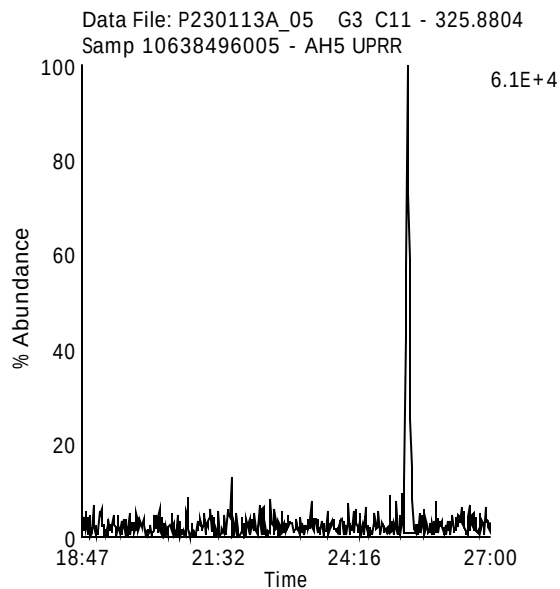
Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022



Hexa Chlorinated Biphenyls

Data File Name: P230113A_05

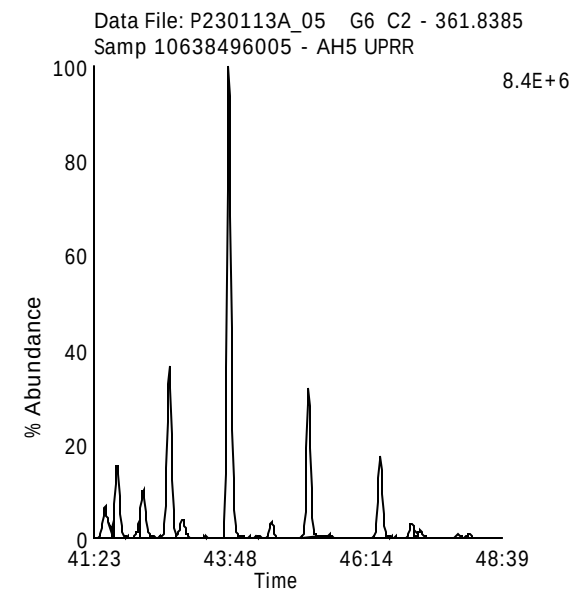
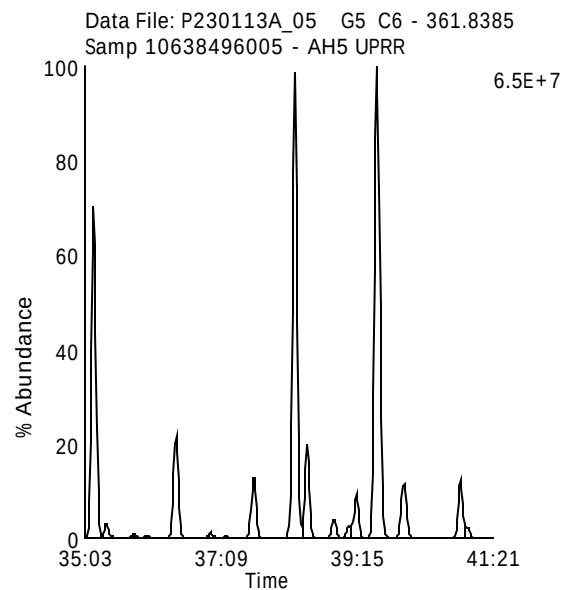
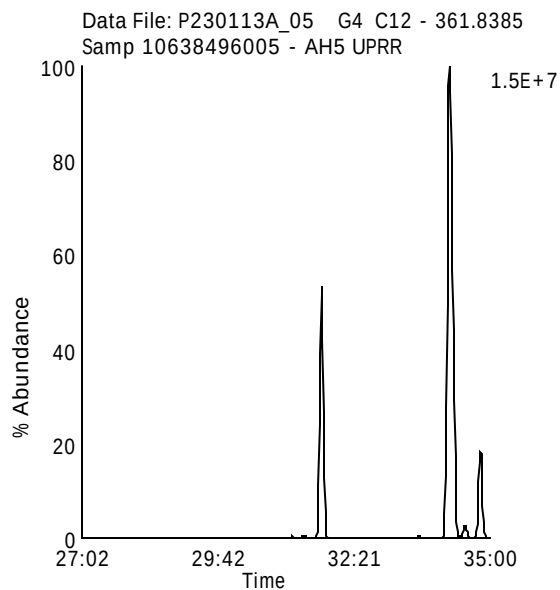
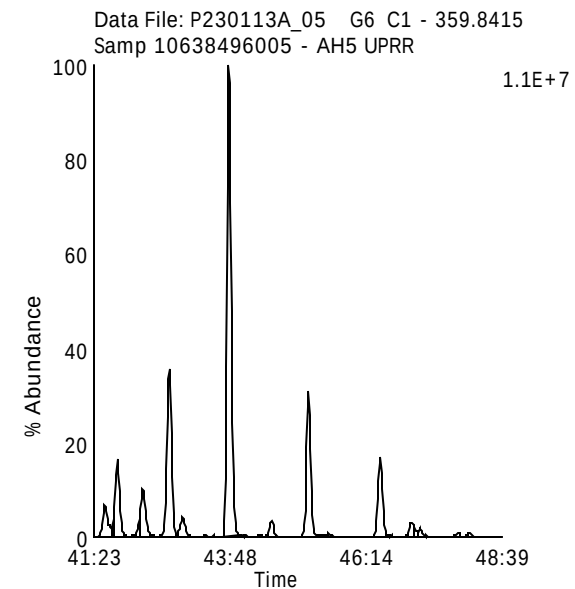
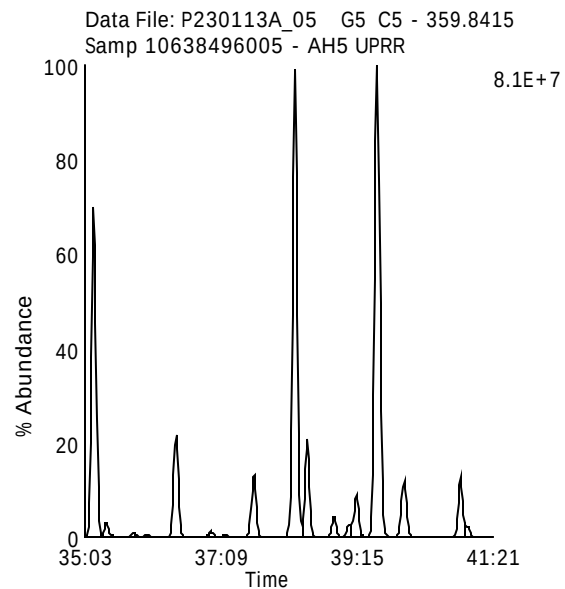
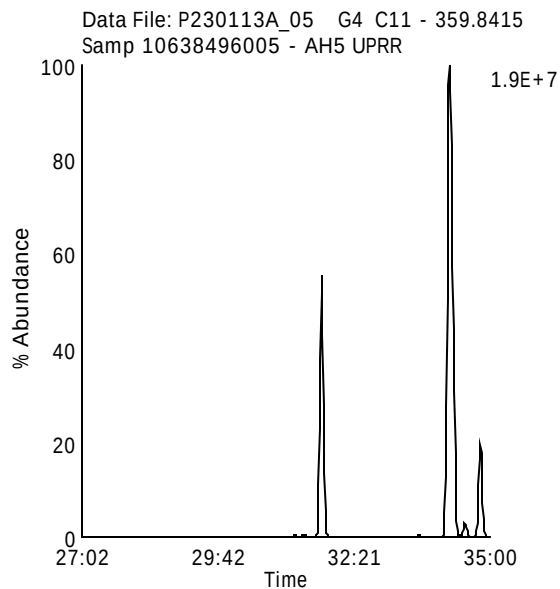
Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022



Hepta Chlorinated Biphenyls

Data File Name: P230113A_05

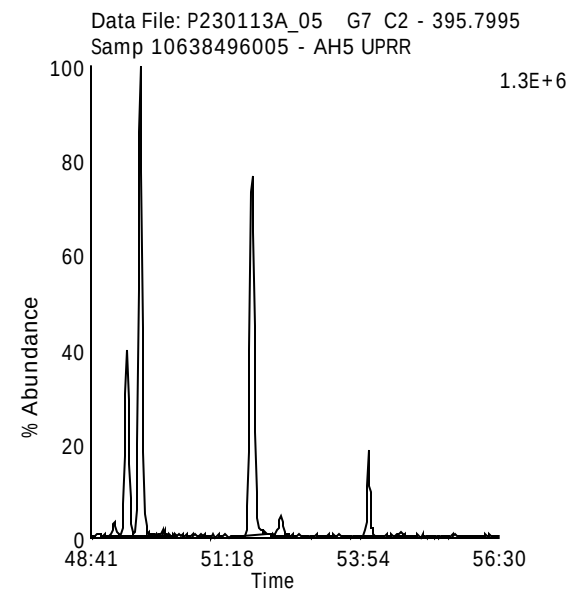
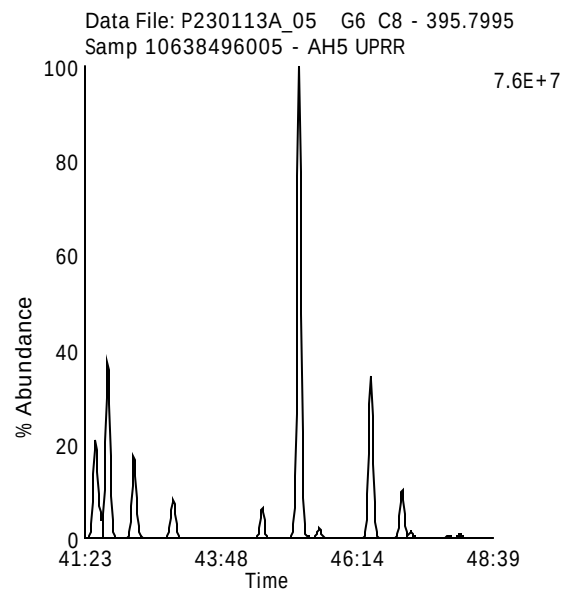
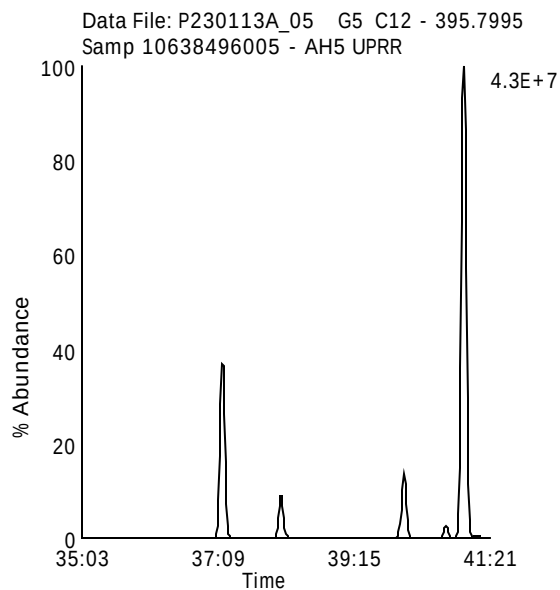
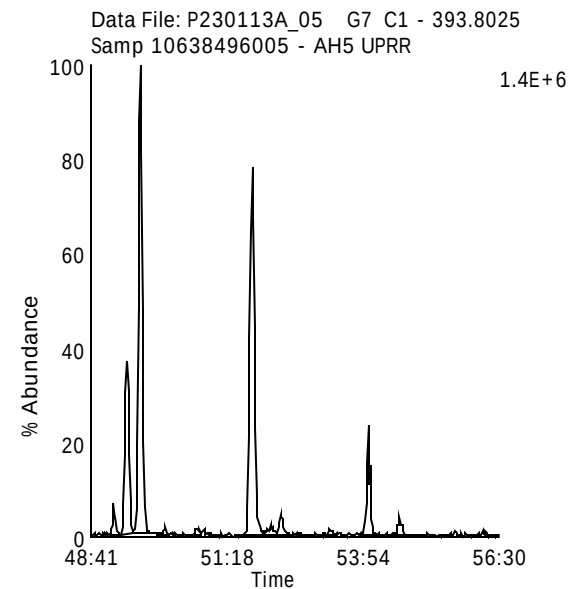
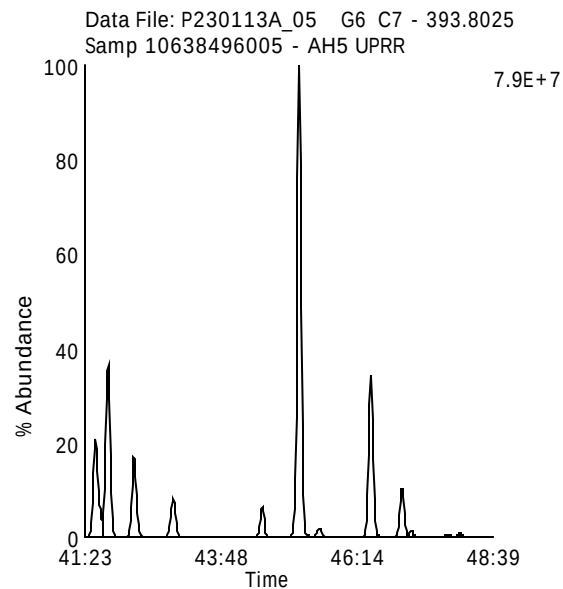
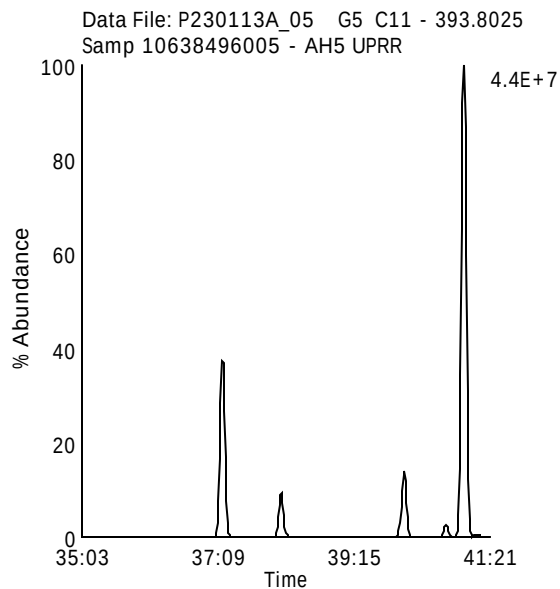
Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022



Octa Chlorinated Biphenyls

Data File Name: P230113A_05

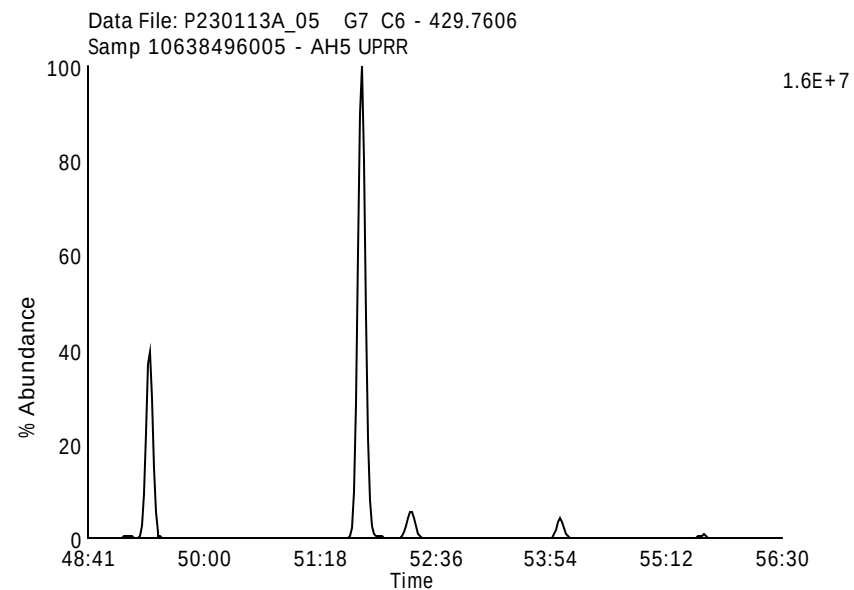
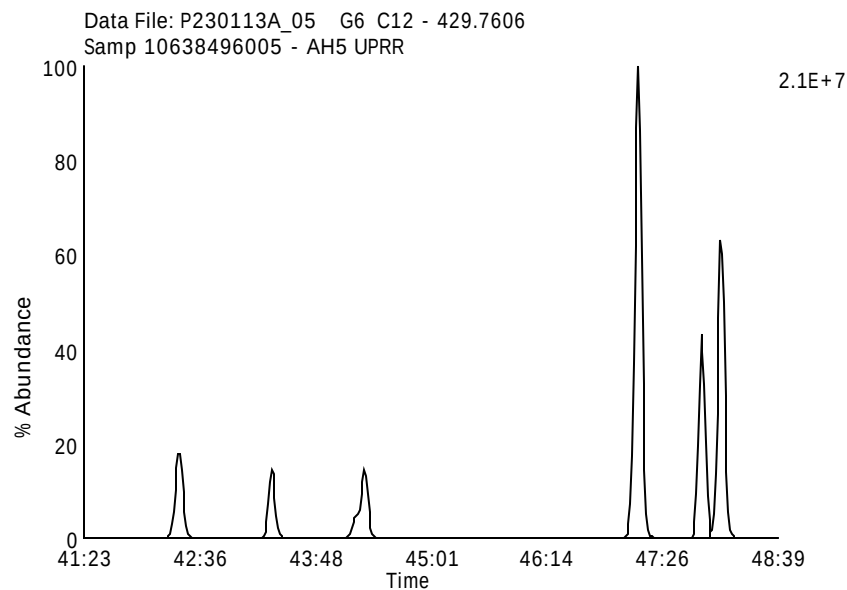
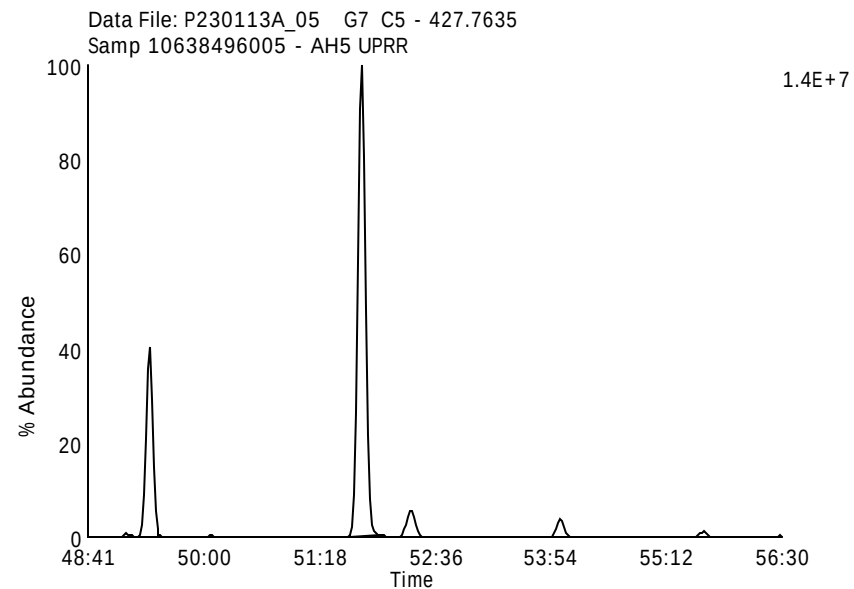
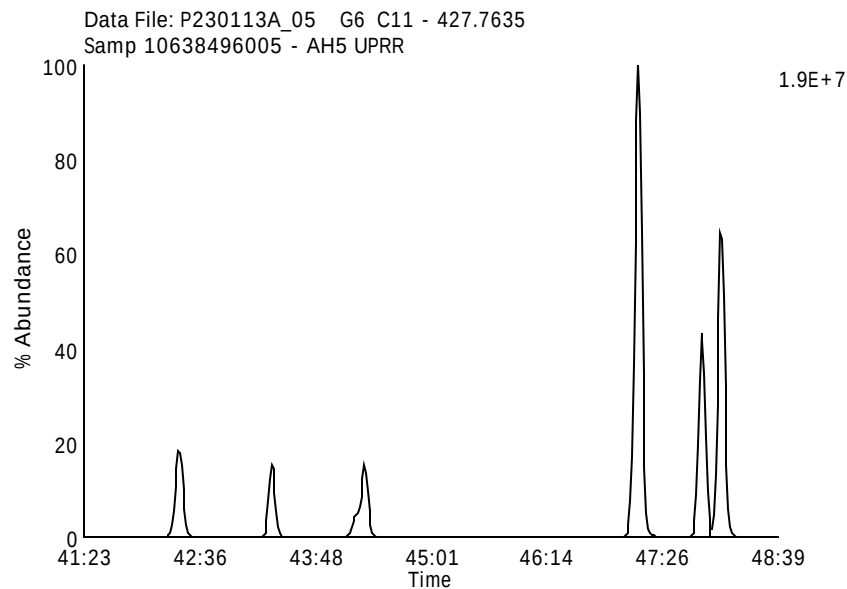
Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022



Nona Chlorinated Biphenyls

Data File Name: P230113A_05

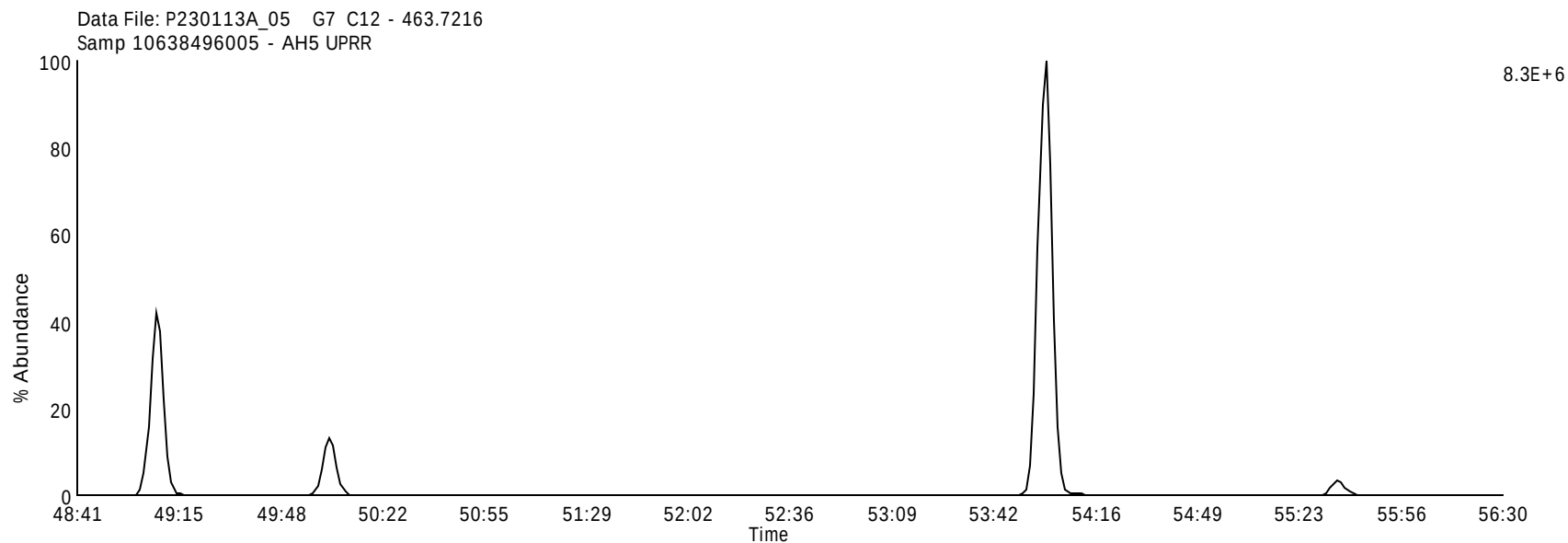
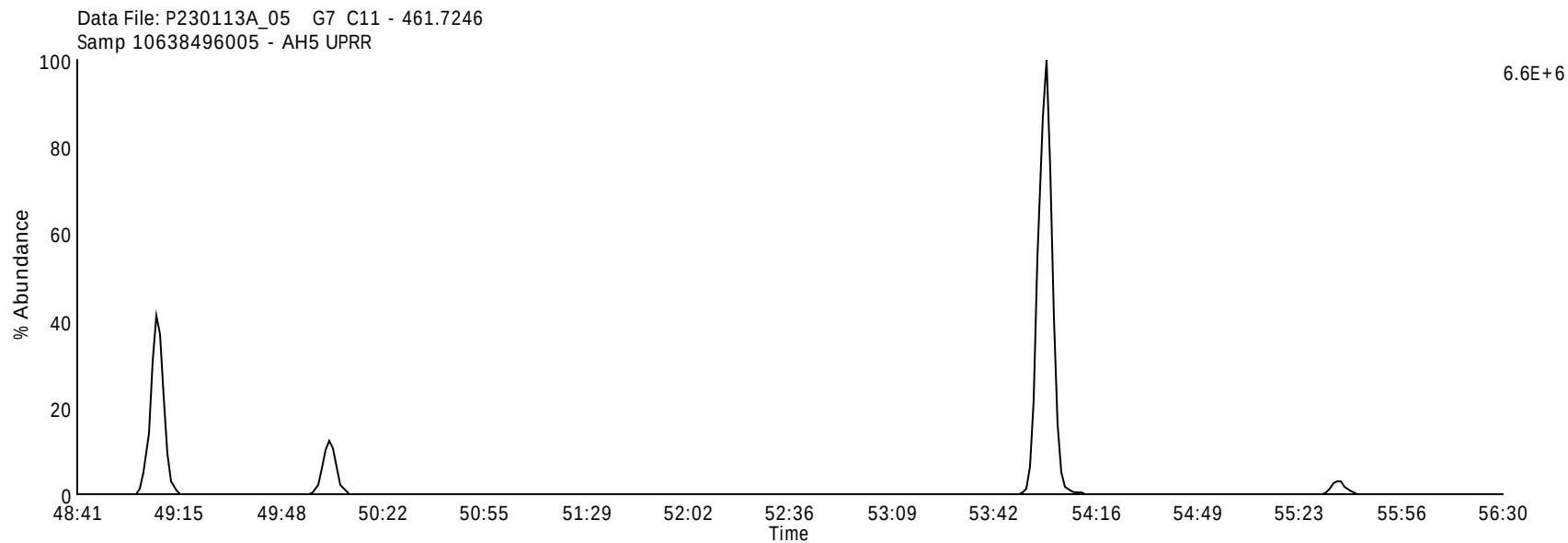
Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022



Deca Chlorinated Biphenyl

Data File Name: P230113A_05

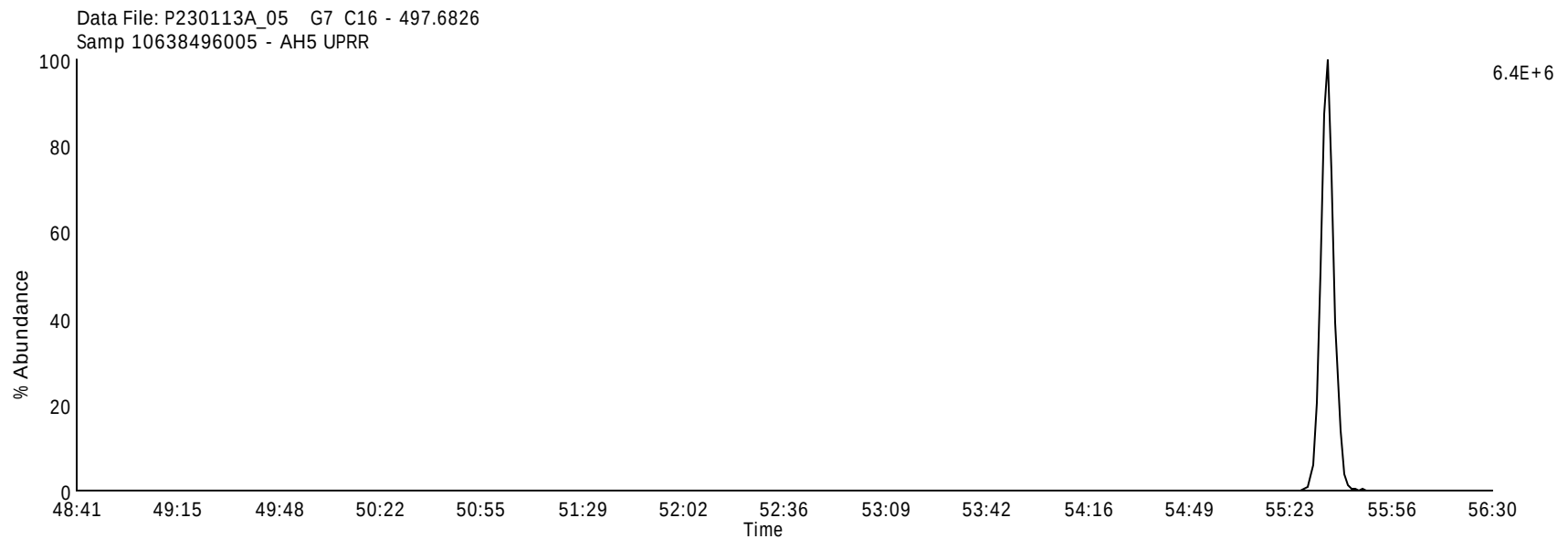
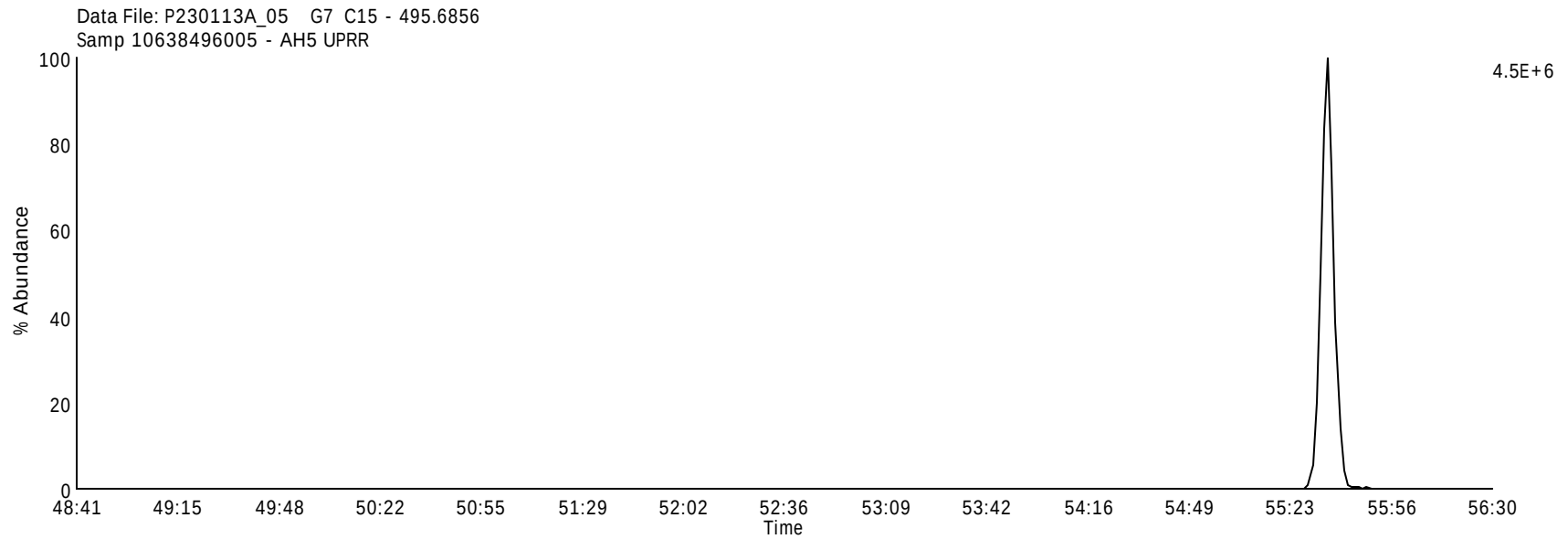
Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022



Group 1 - 4 Lock mass

Data File Name: P230113A_05

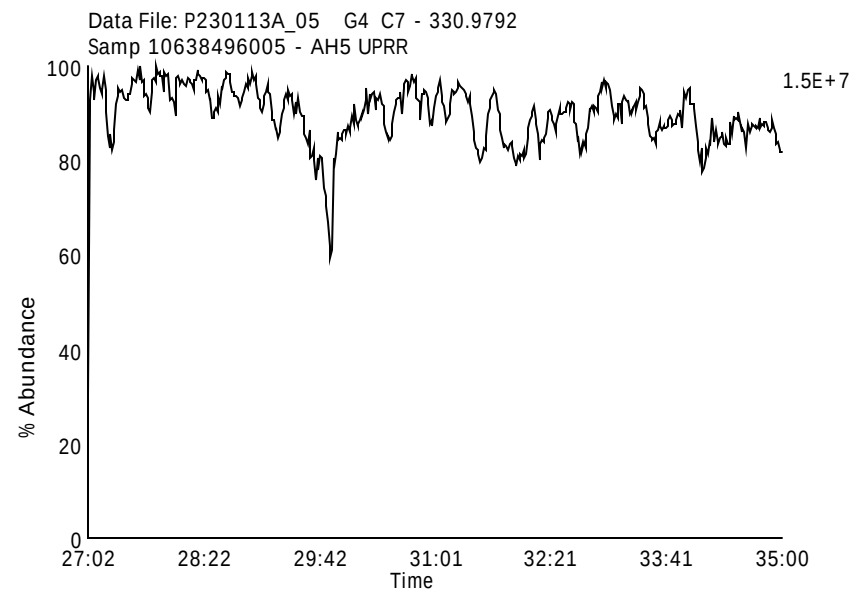
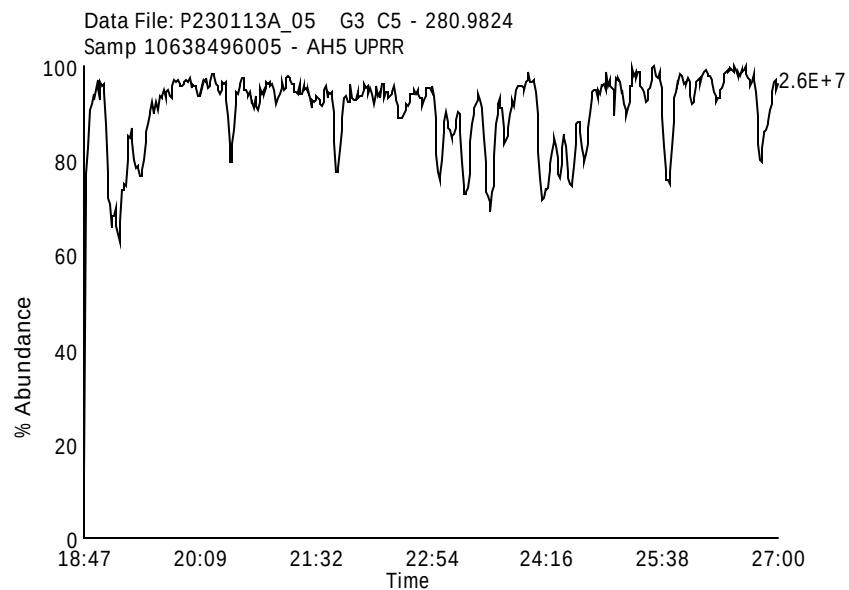
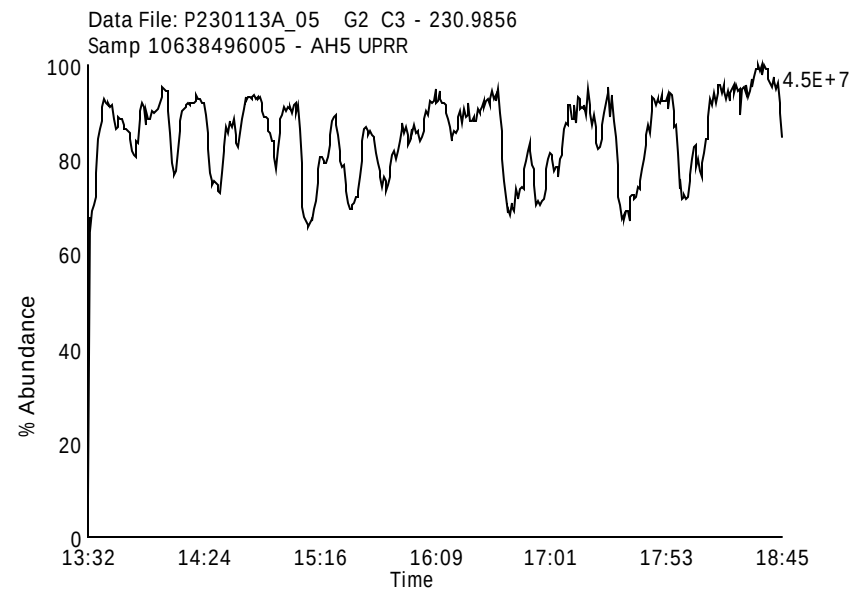
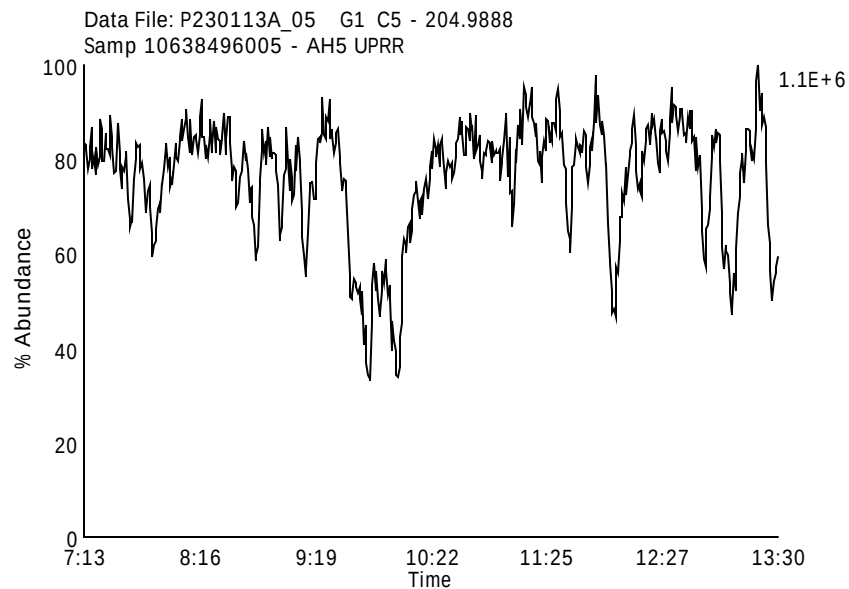
Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022



Group 5 - 7 Lock mass

Data File Name: P230113A_05

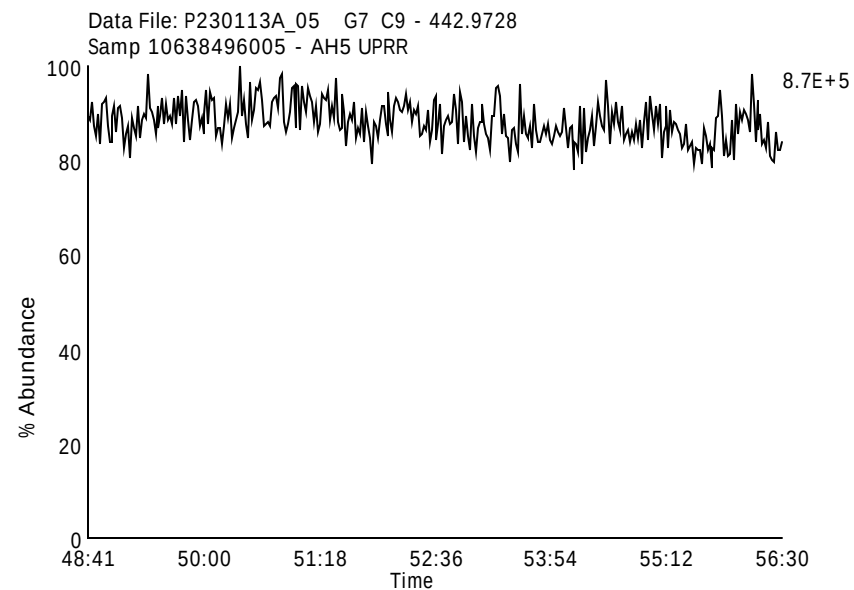
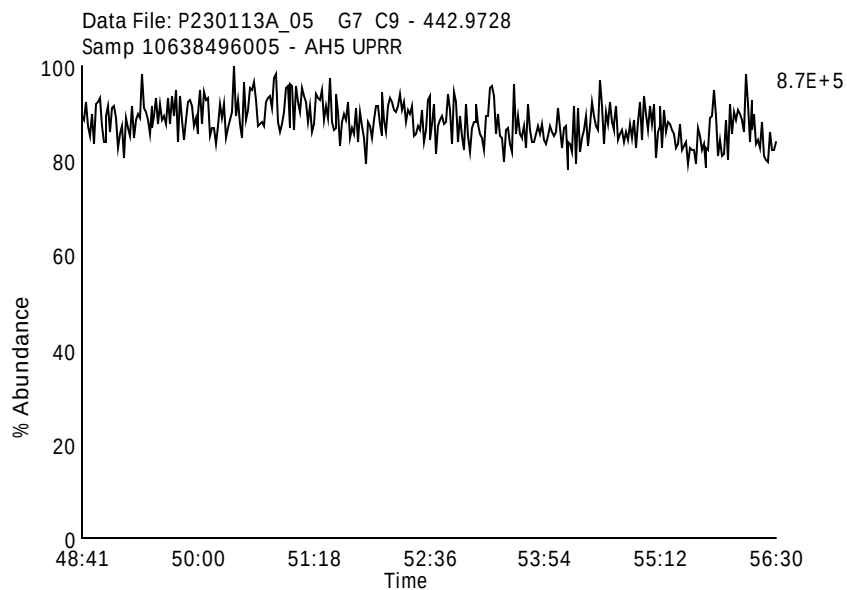
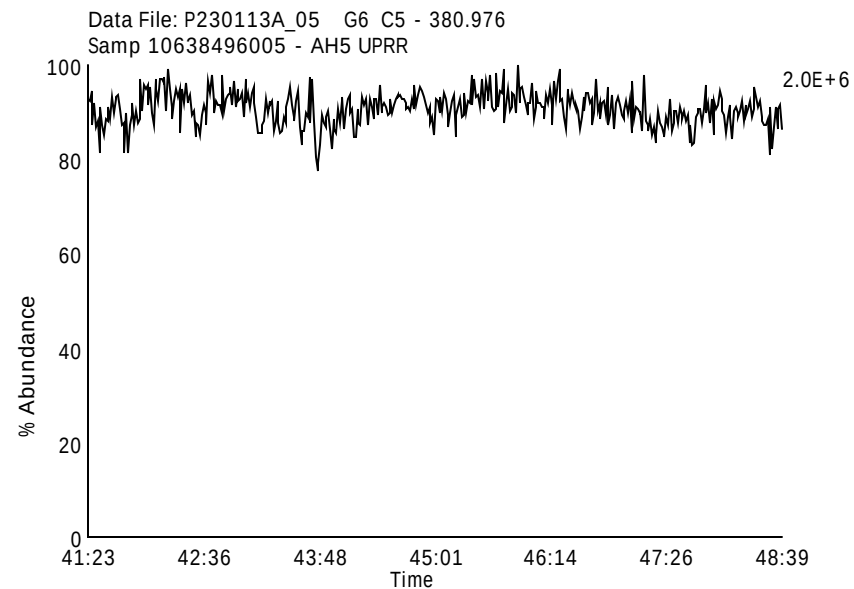
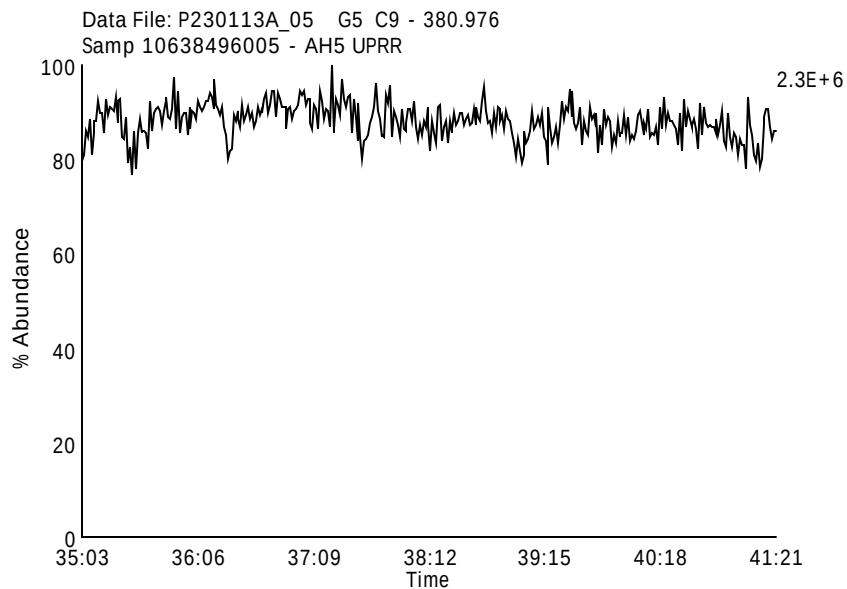
Date Acquired: 1/13/2023

Sample Description: Samp 10638496005 - AH5 UPRR

Lab Sample ID: 10638496005

Instrument: 10MSHR09 (P)

Client Sample ID: SB13-0.0-0.5-1022



Labeled Mono Chlorinated Biphenyls

Data File Name: P230113A_06

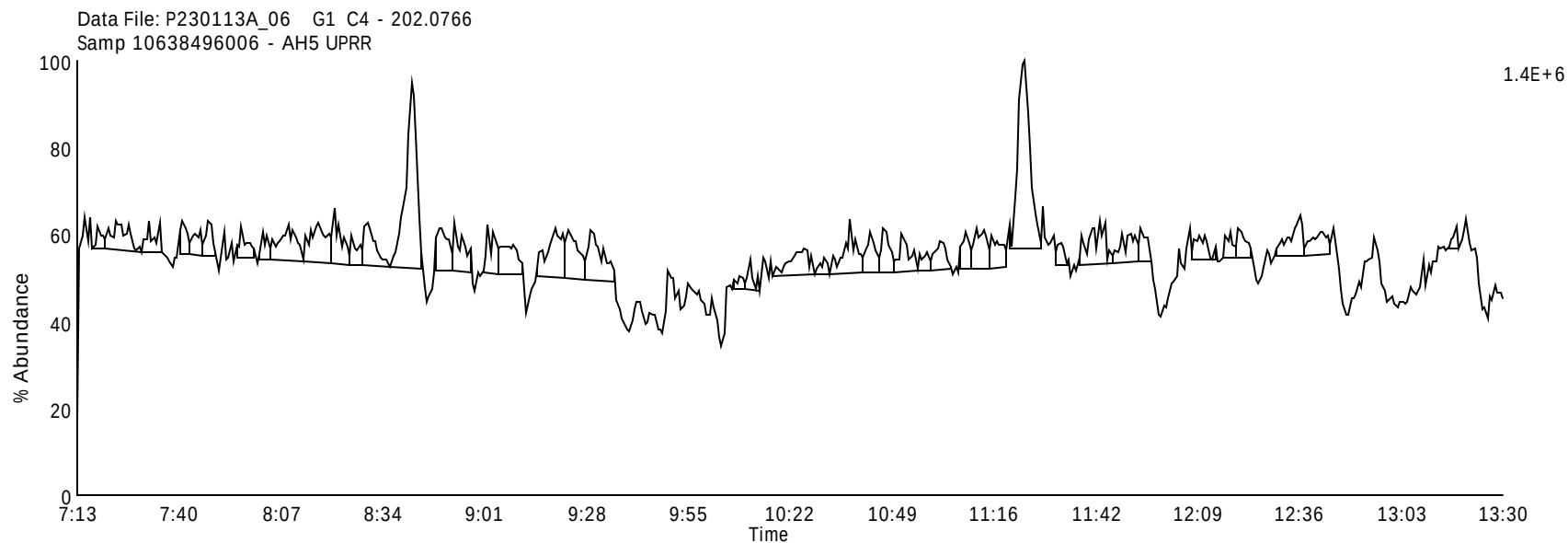
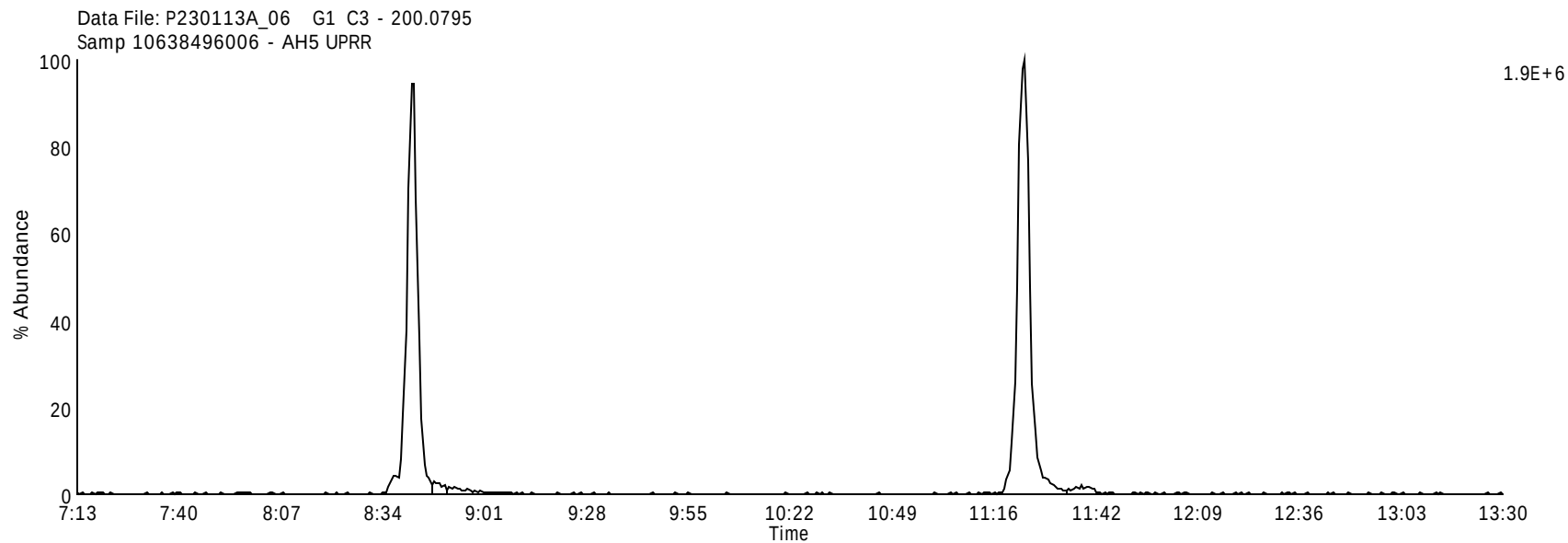
Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022



Labeled Di Chlorinated Biphenyls

Data File Name: P230113A_06

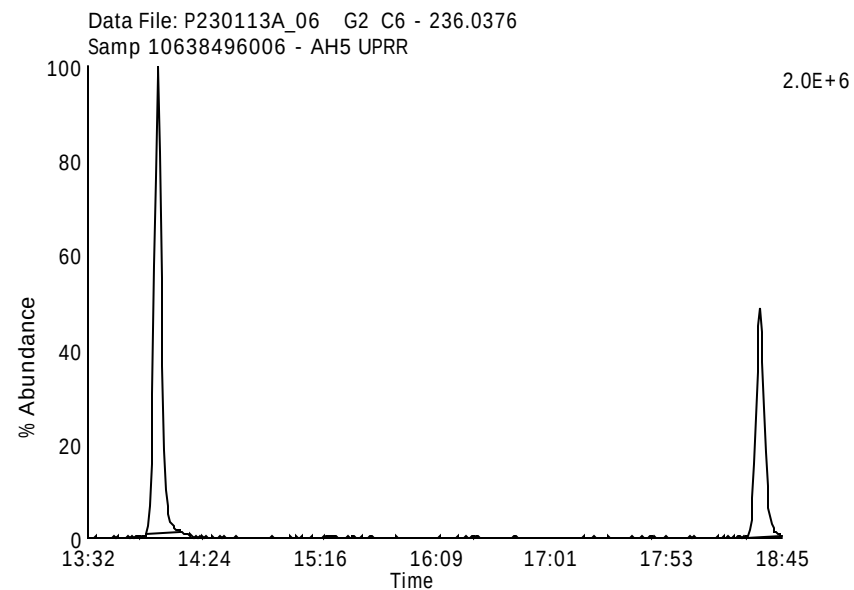
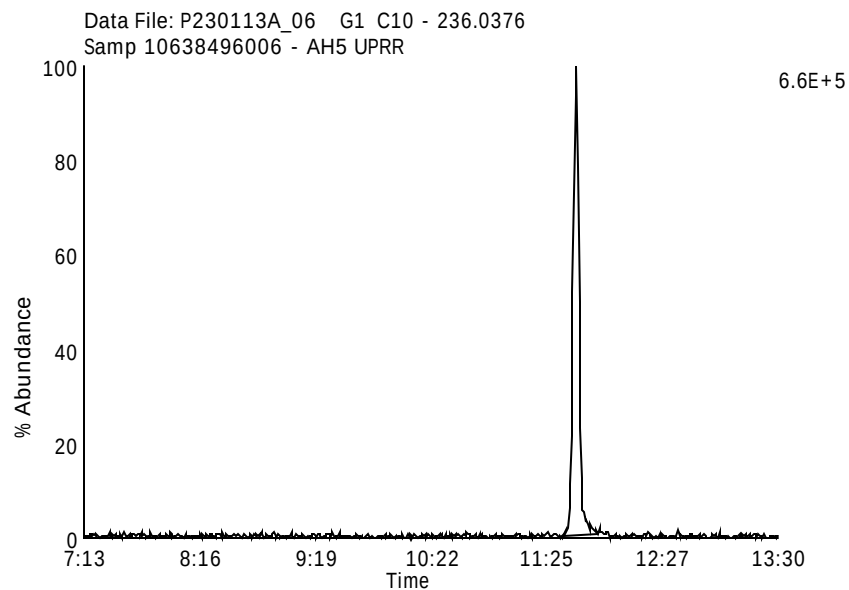
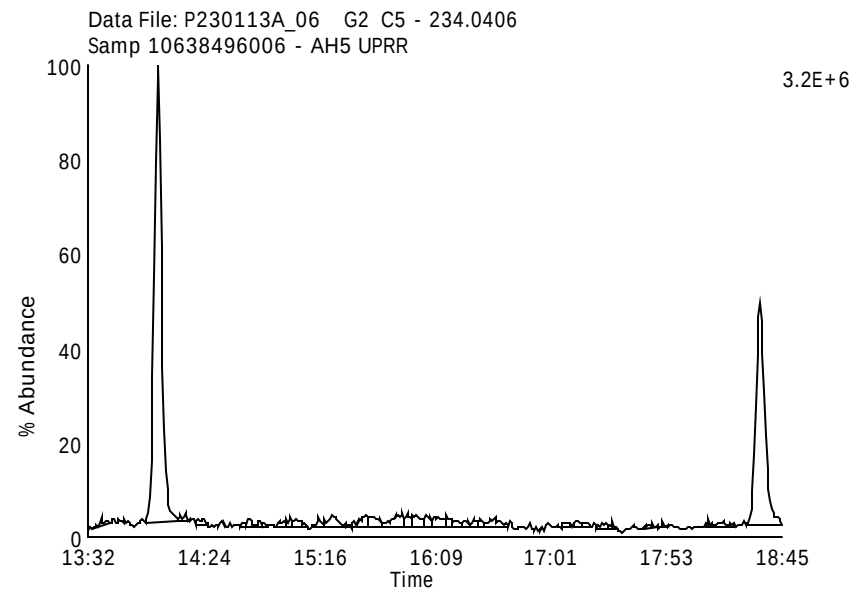
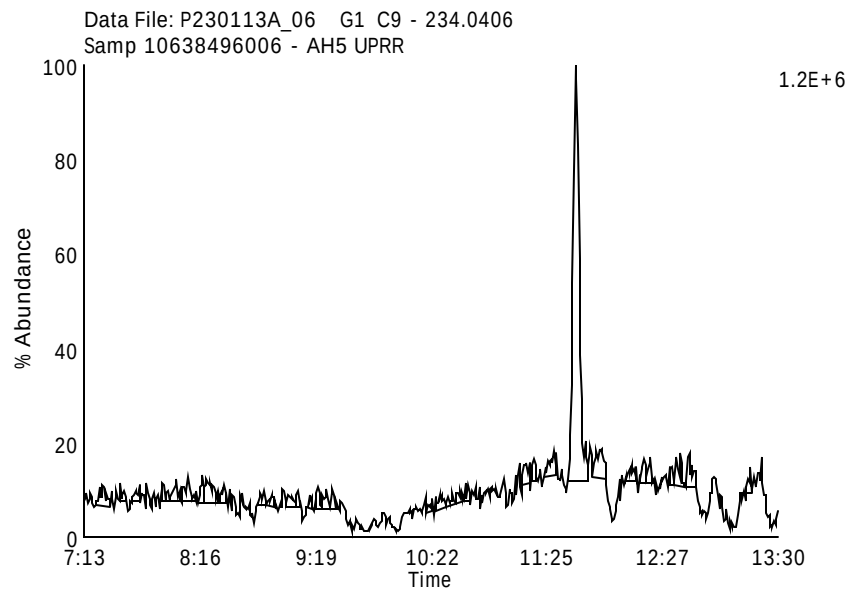
Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022



Labeled Tri Chlorinated Biphenyls

Data File Name: P230113A_06

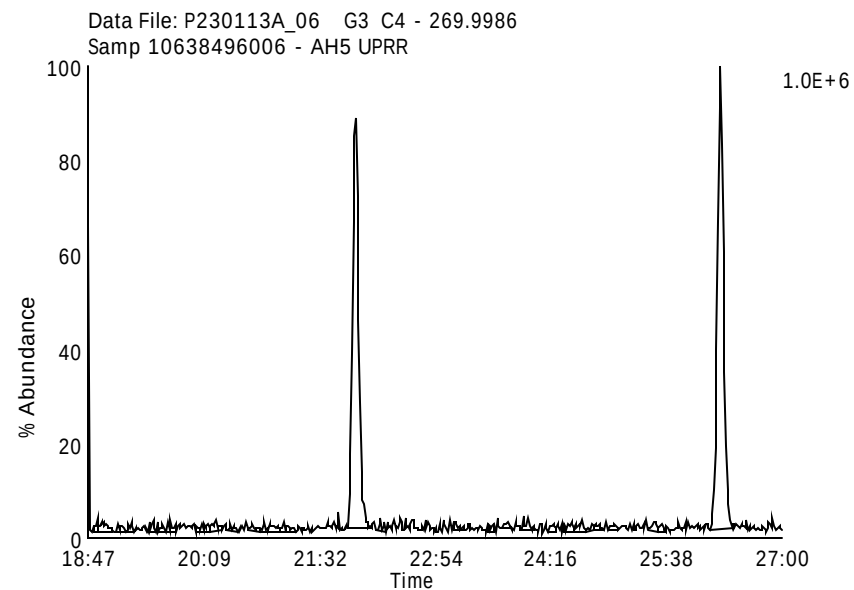
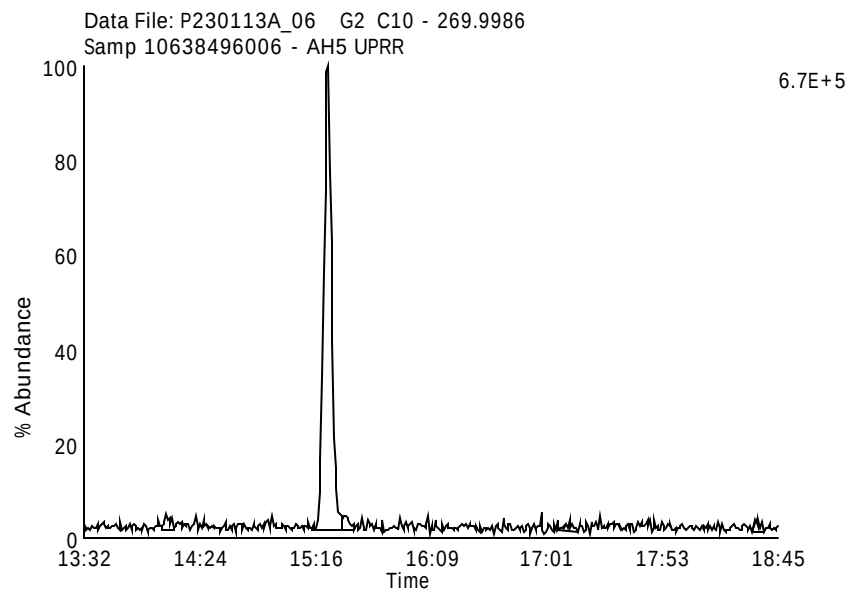
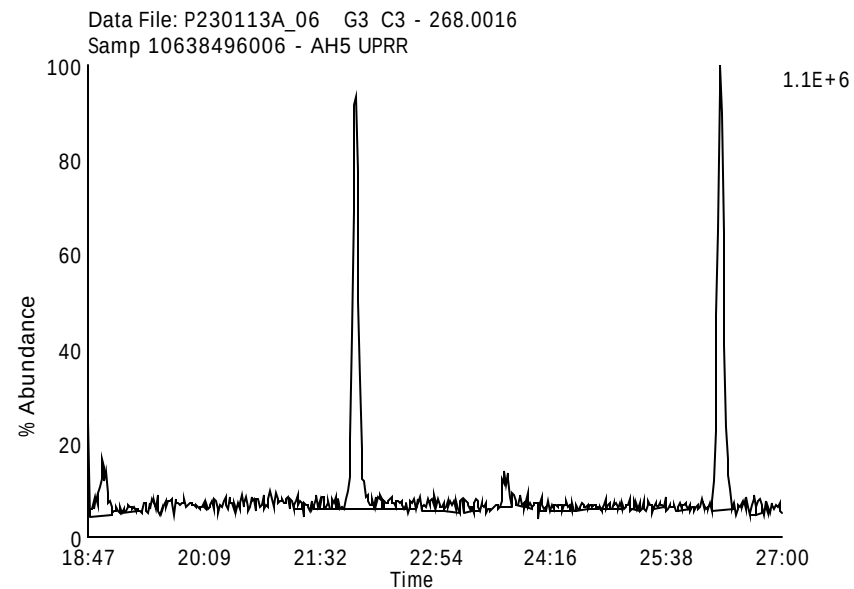
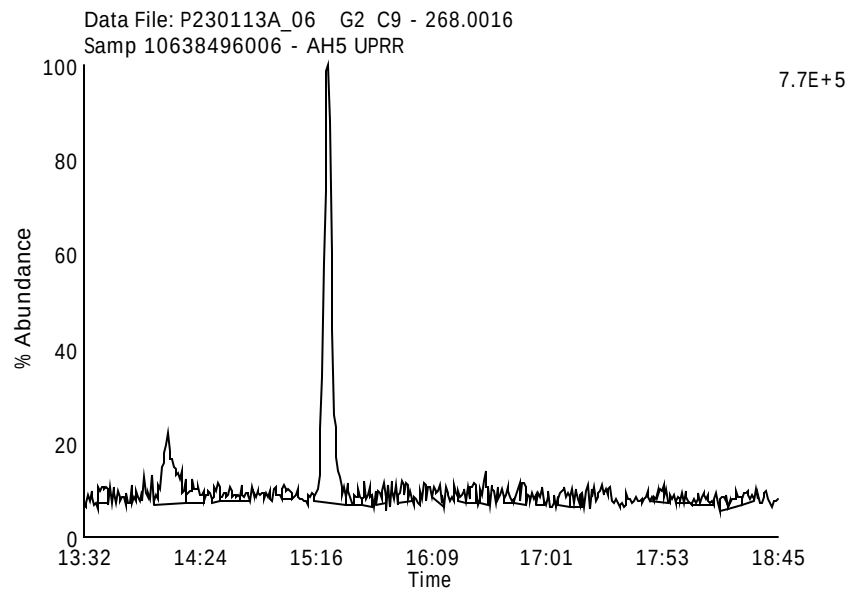
Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022



Labeled Tetra Chlorinated Biphenyls

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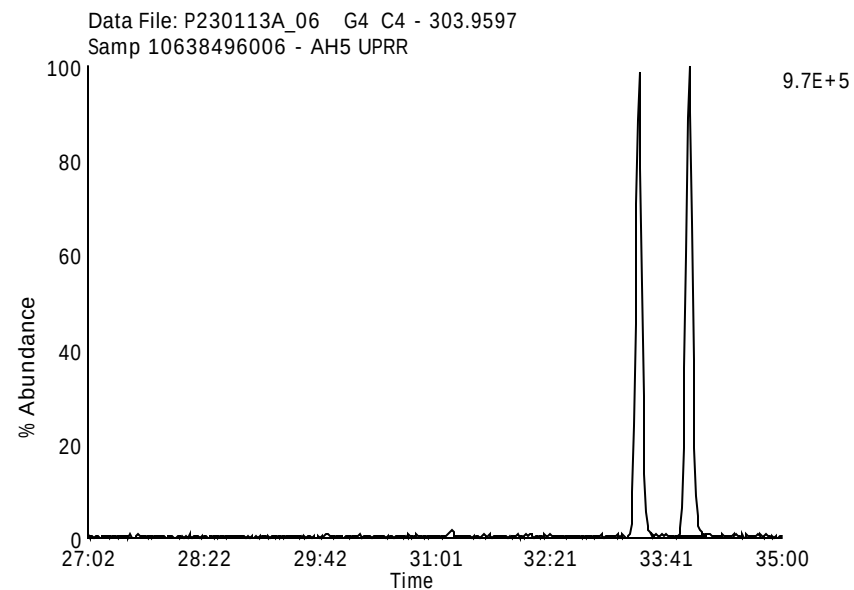
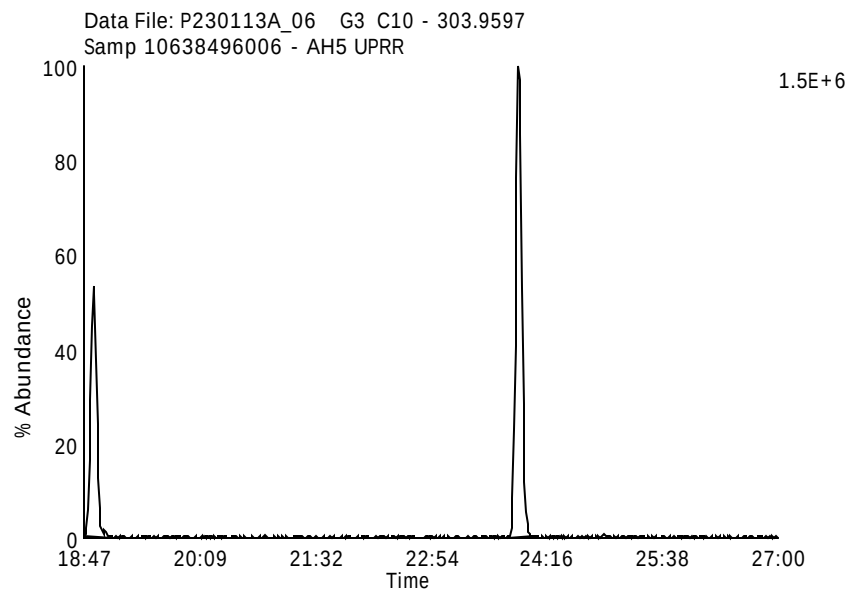
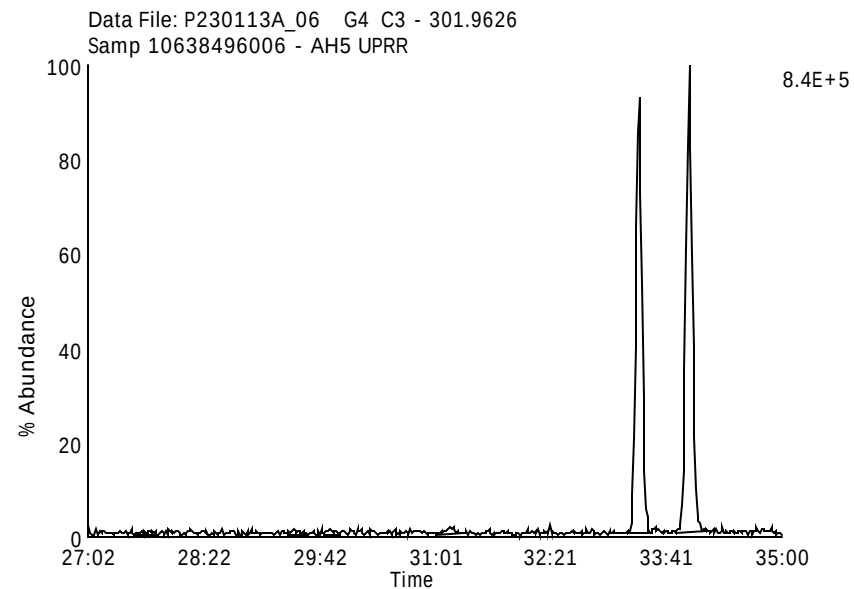
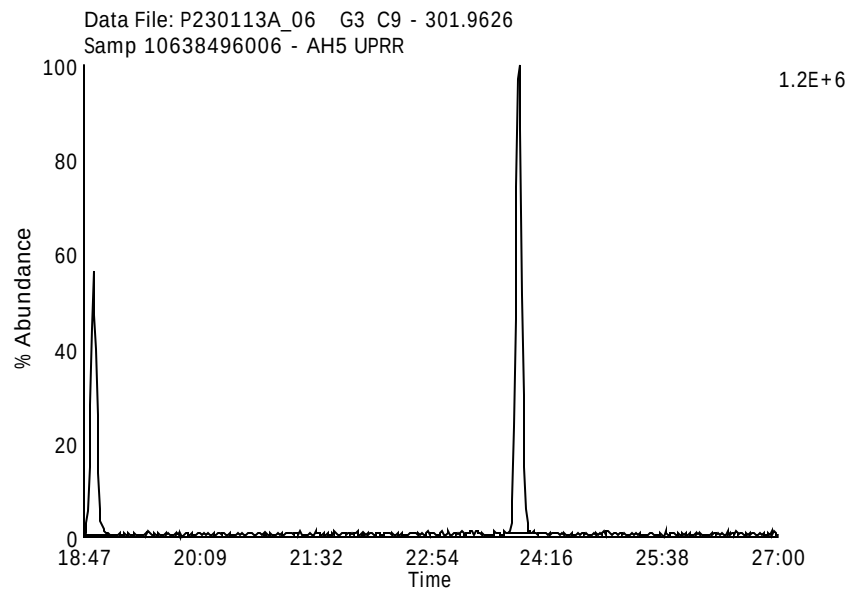
Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022



Labeled Penta Chlorinated Biphenyls

Data File Name: P230113A_06

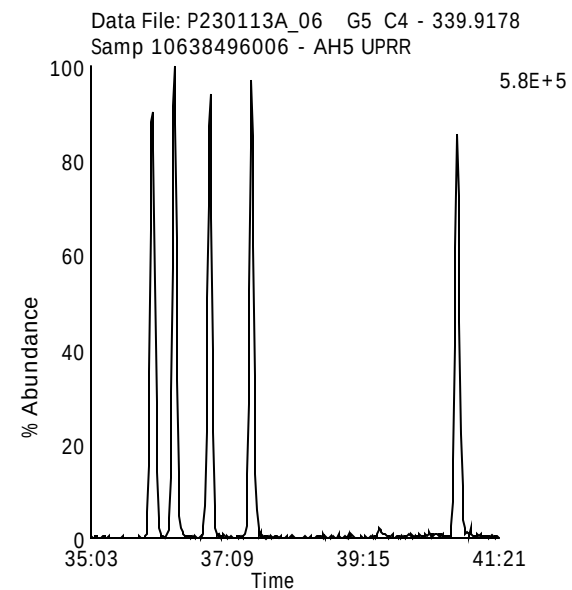
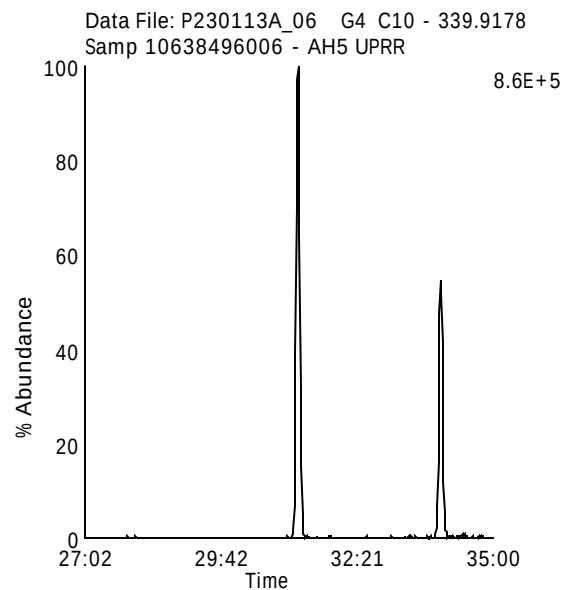
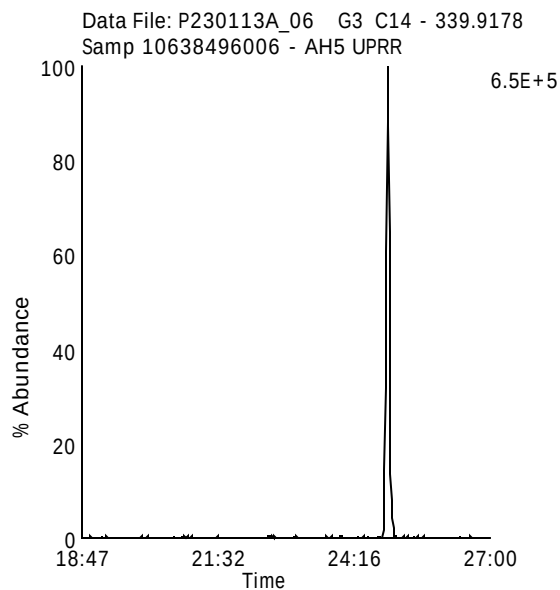
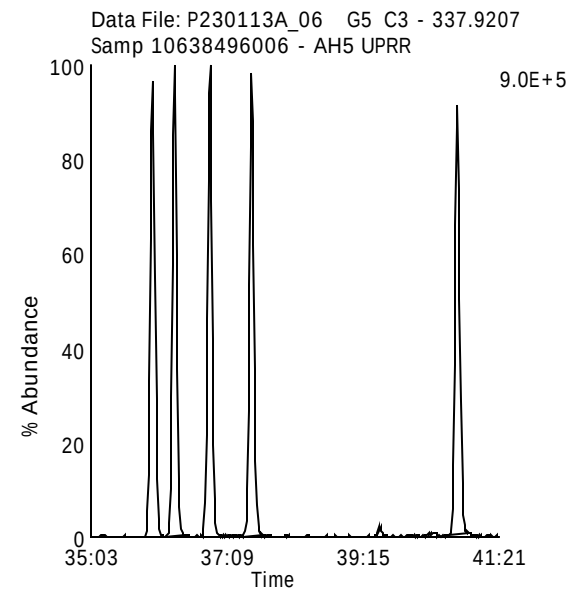
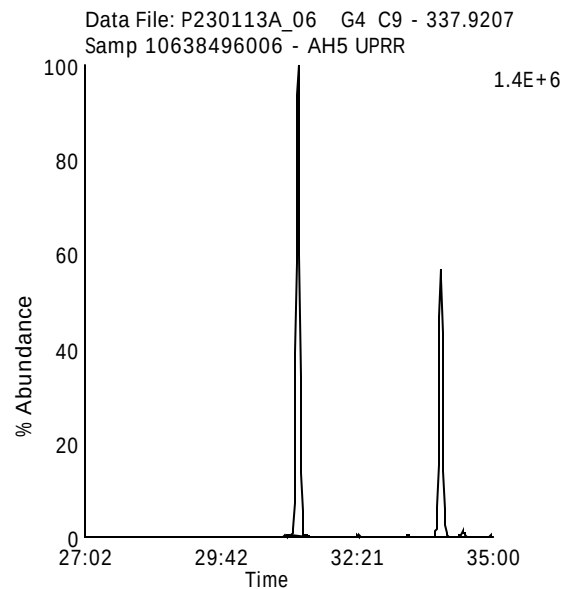
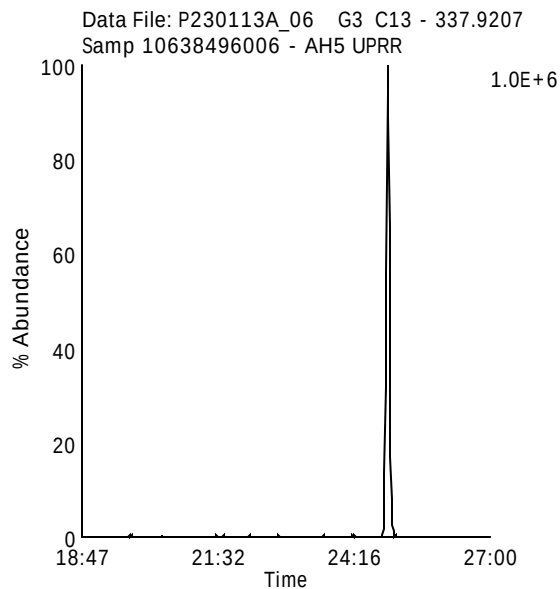
Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022



Labeled Hexa Chlorinated Biphenyls

Data File Name: P230113A_06

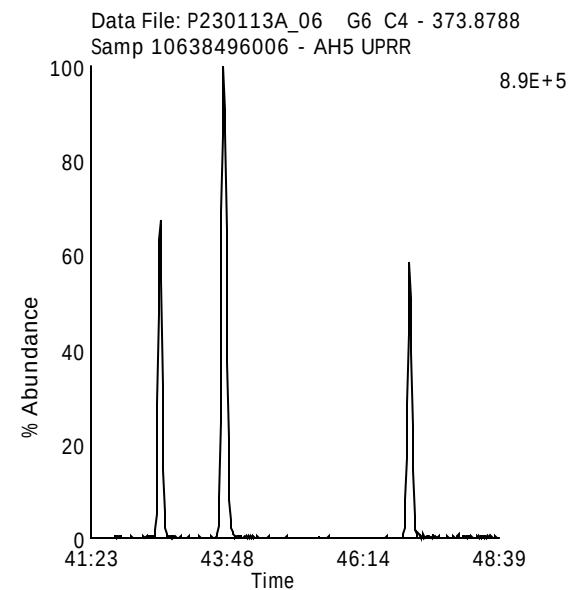
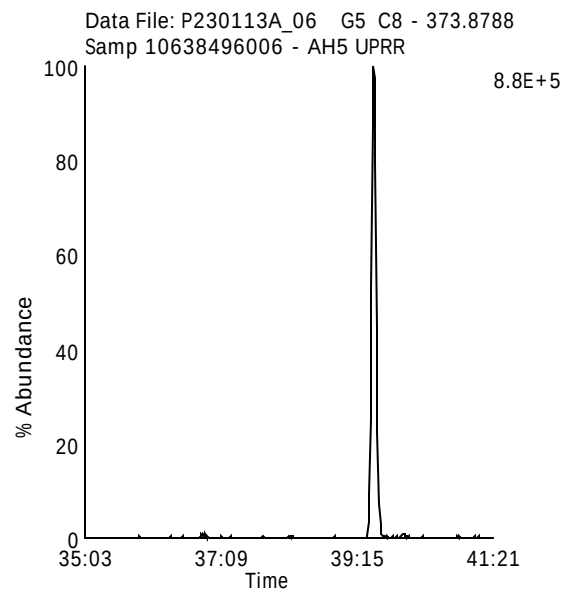
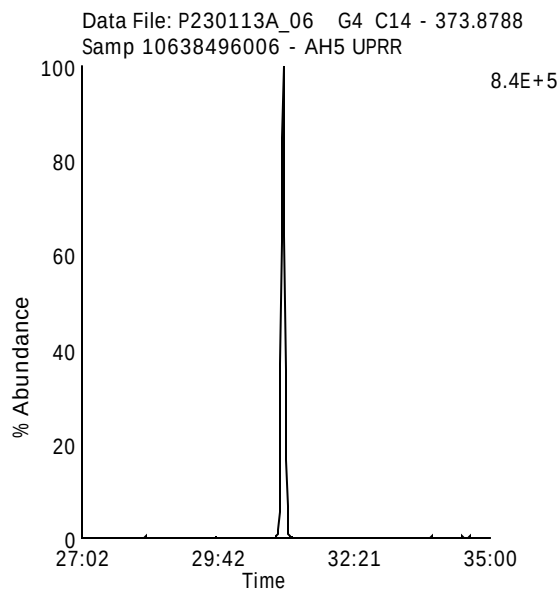
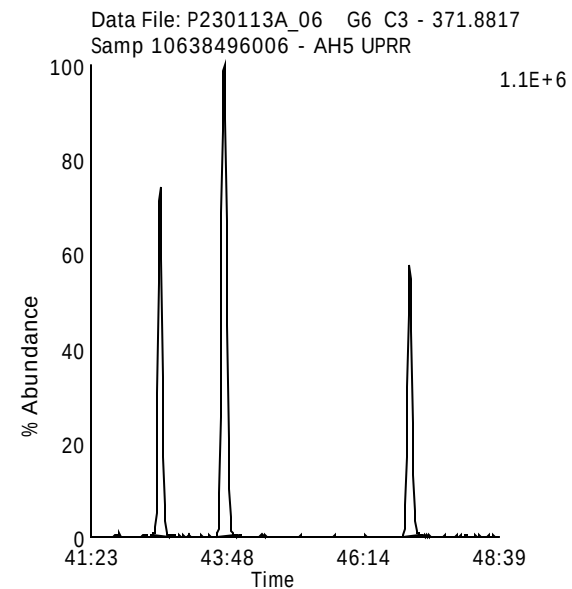
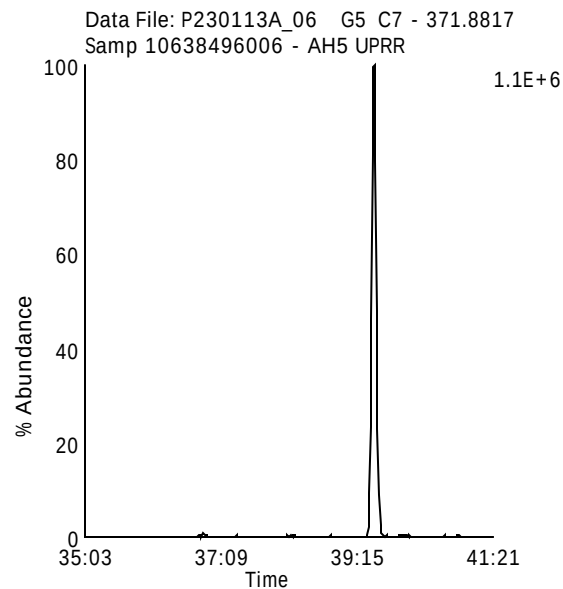
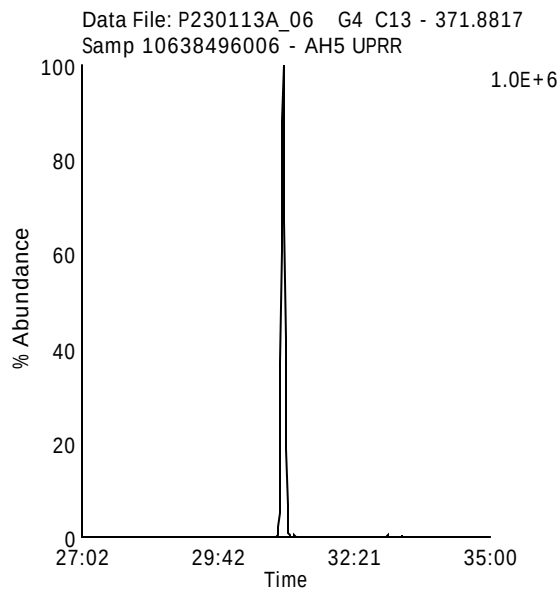
Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022



Labeled Hepta Chlorinated Biphenyls

Data File Name: P230113A_06

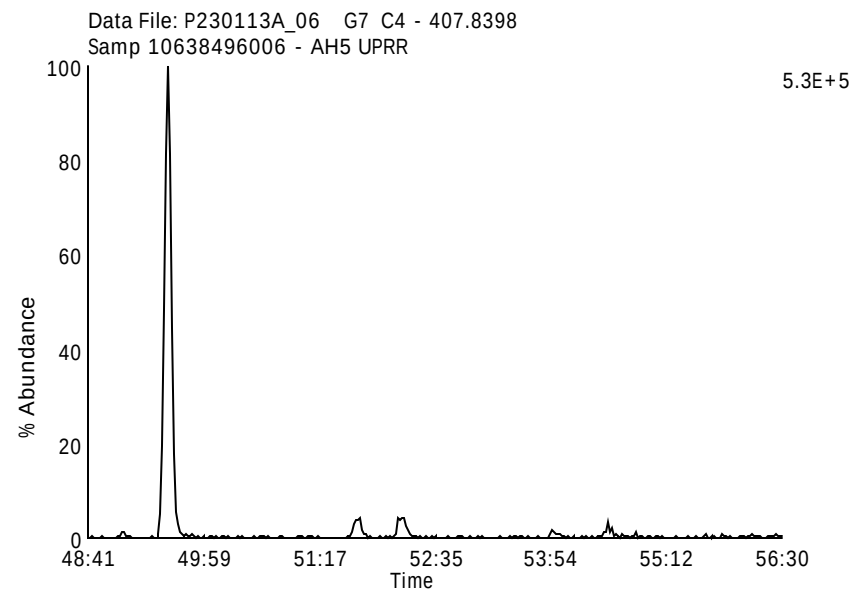
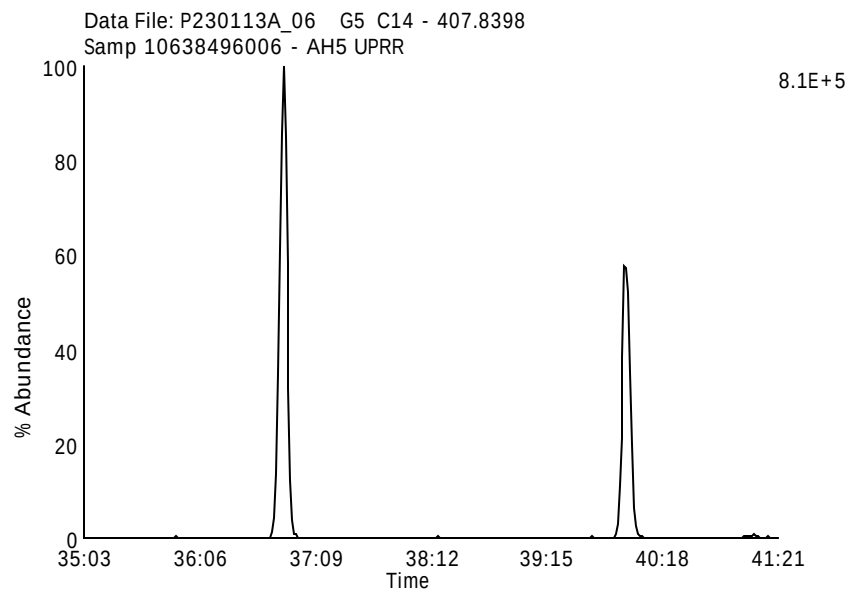
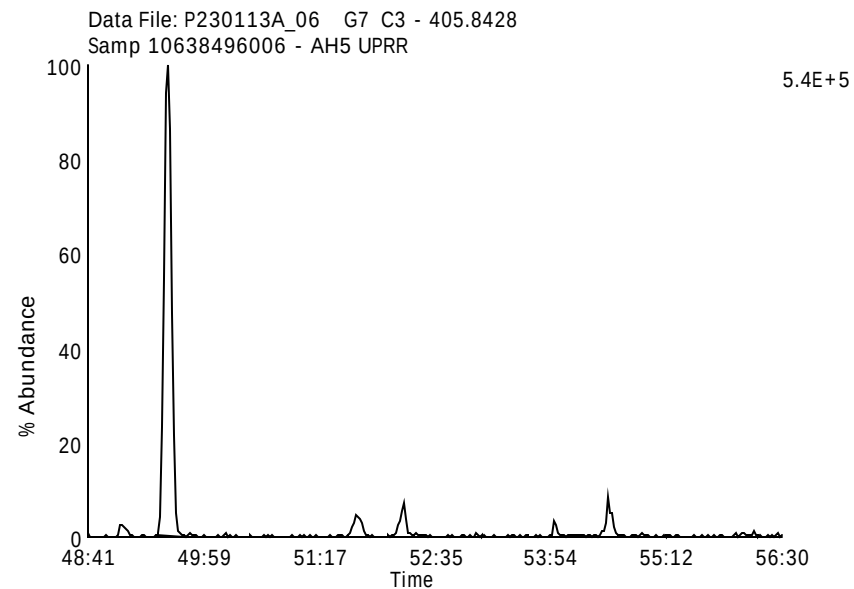
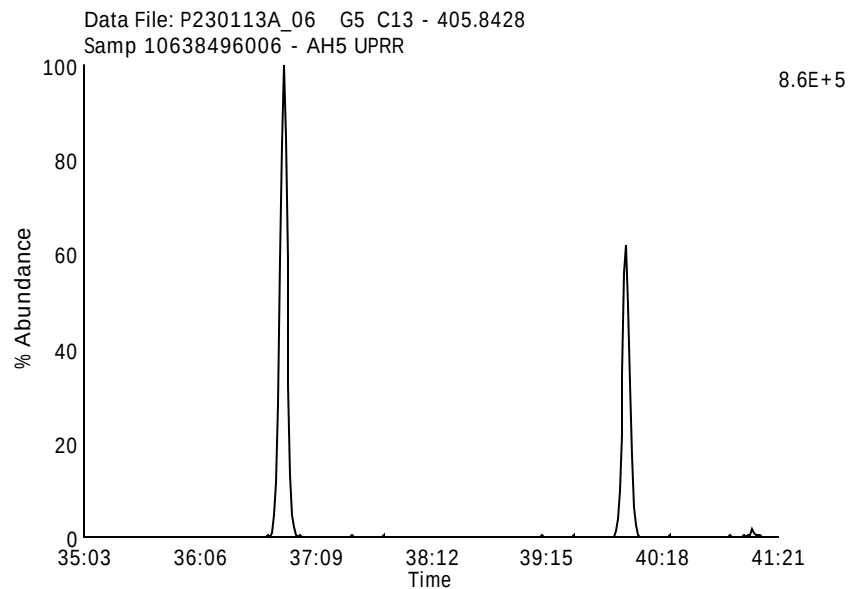
Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022



Labeled Octa Chlorinated Biphenyls

Data File Name: P230113A_06

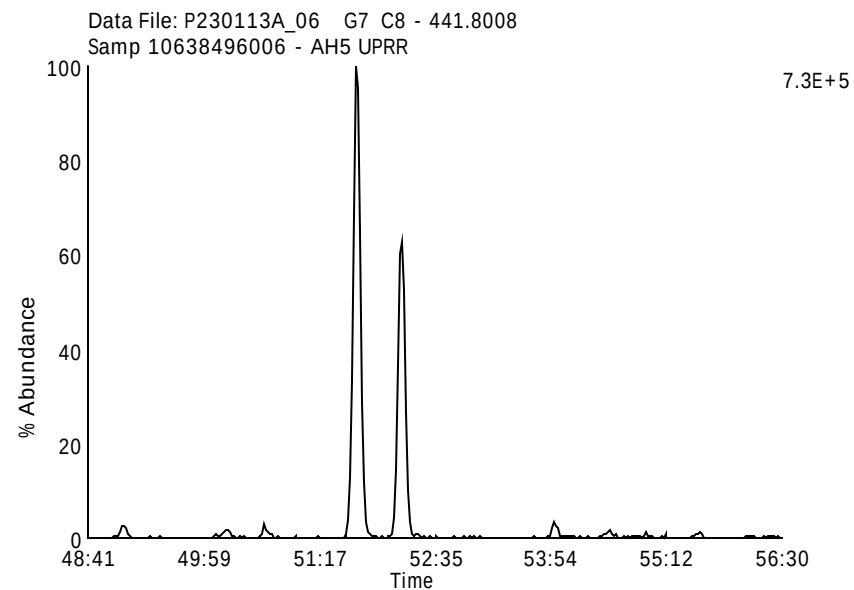
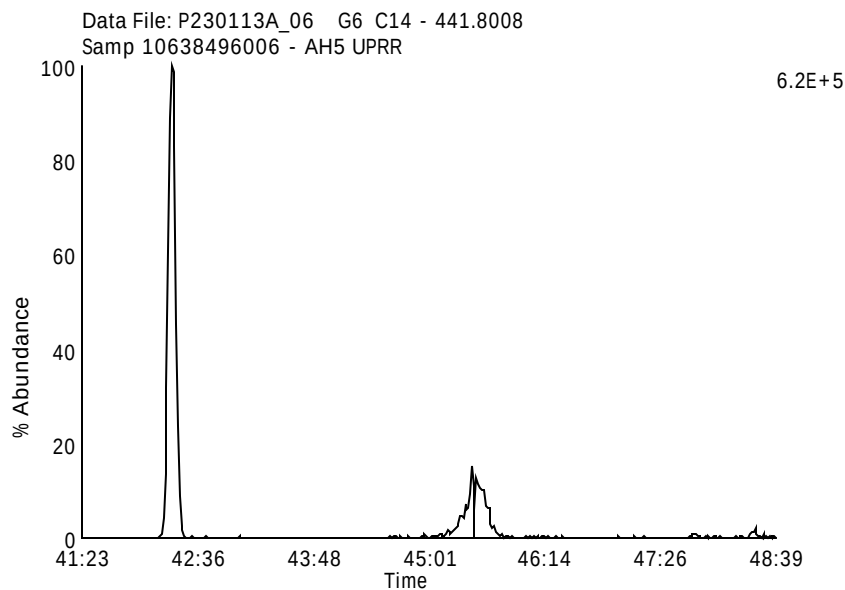
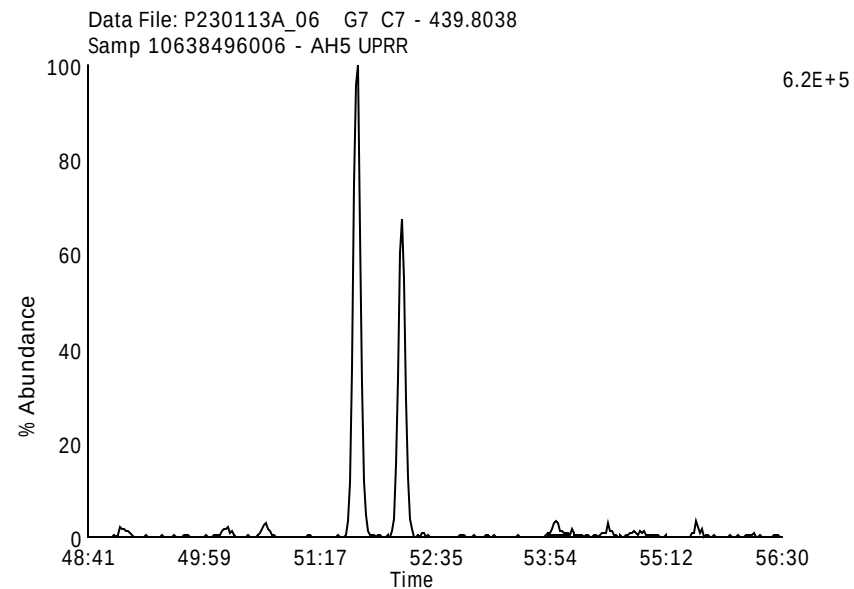
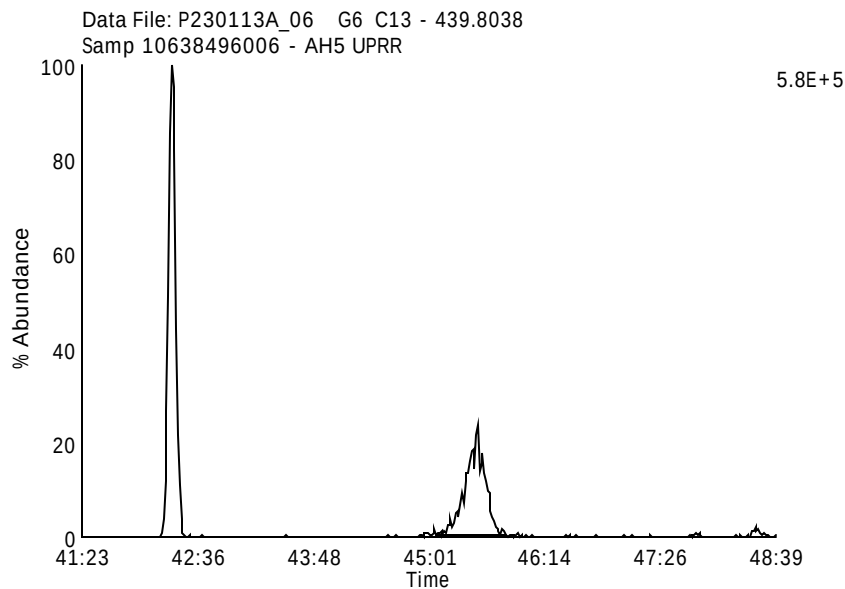
Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022



Labeled Nona Chlorinated Biphenyls

Data File Name: P230113A_06

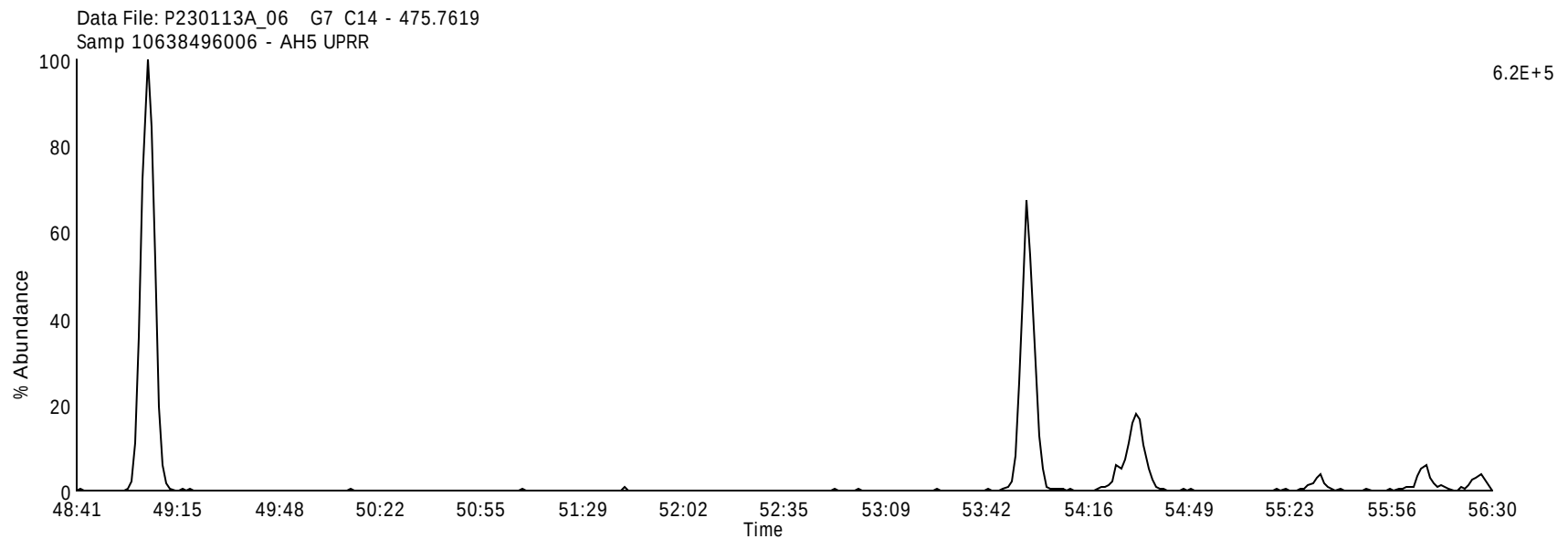
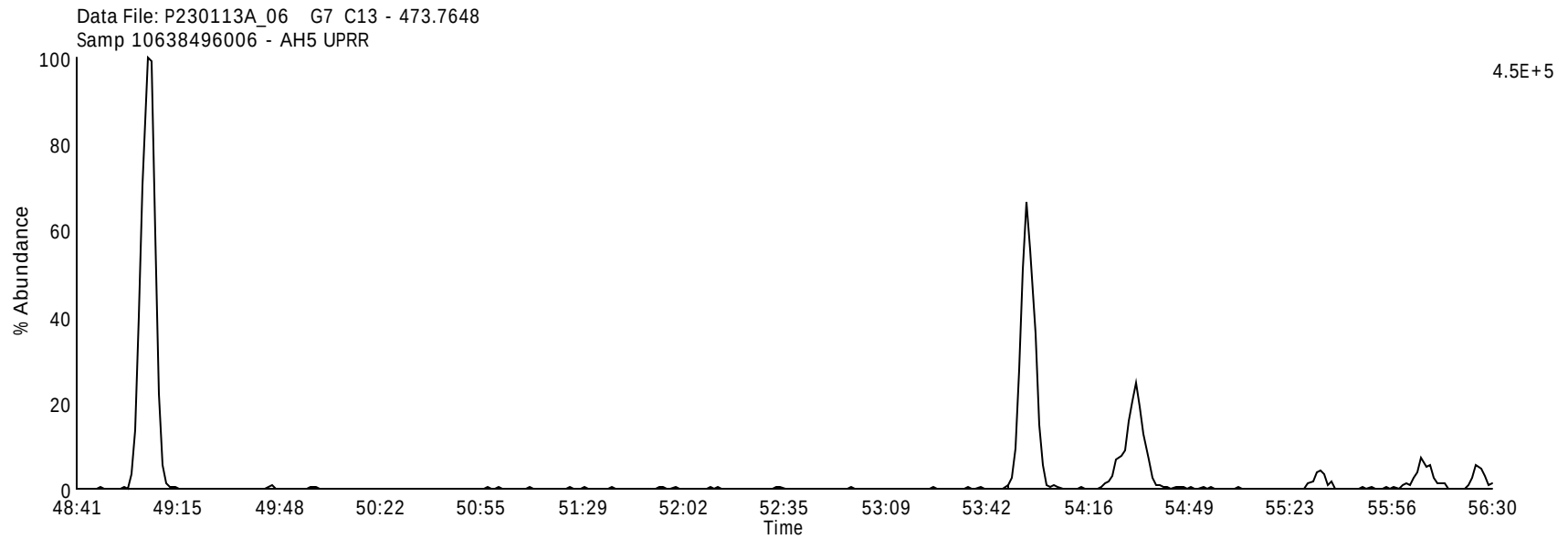
Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022



Labeled Deca Chlorinated Biphenyl

Data File Name: P230113A_06

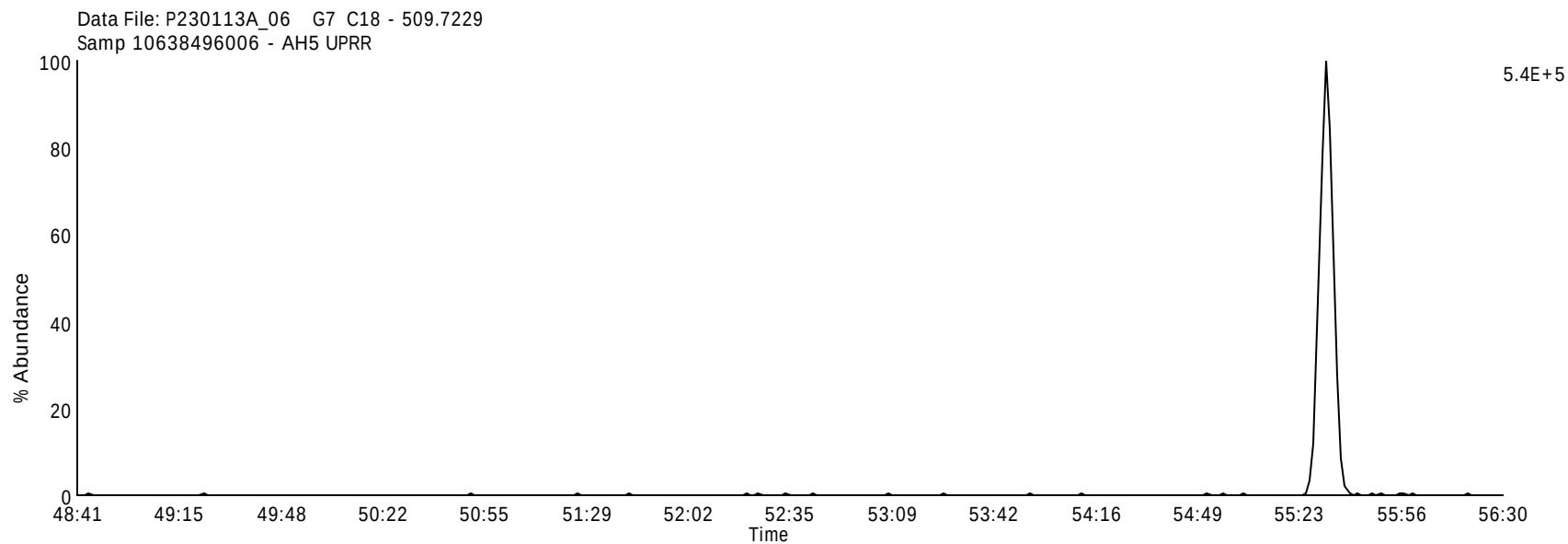
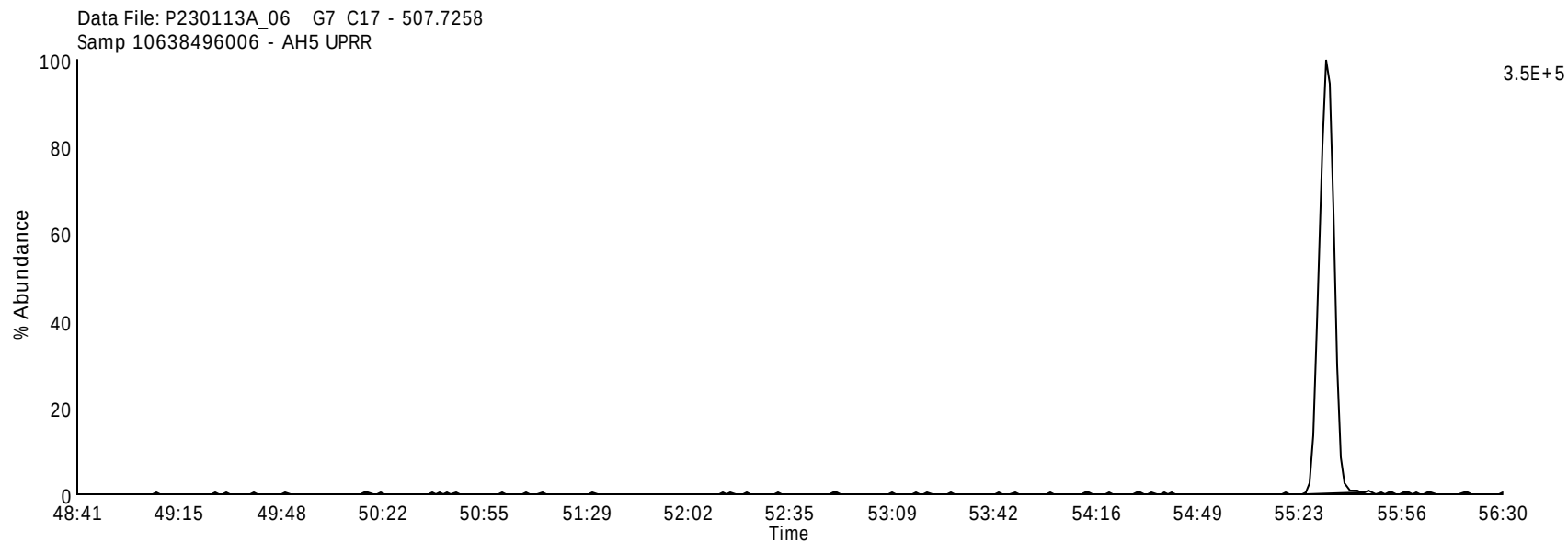
Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022



Mono Chlorinated Biphenyls

Data File Name: P230113A_06

Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

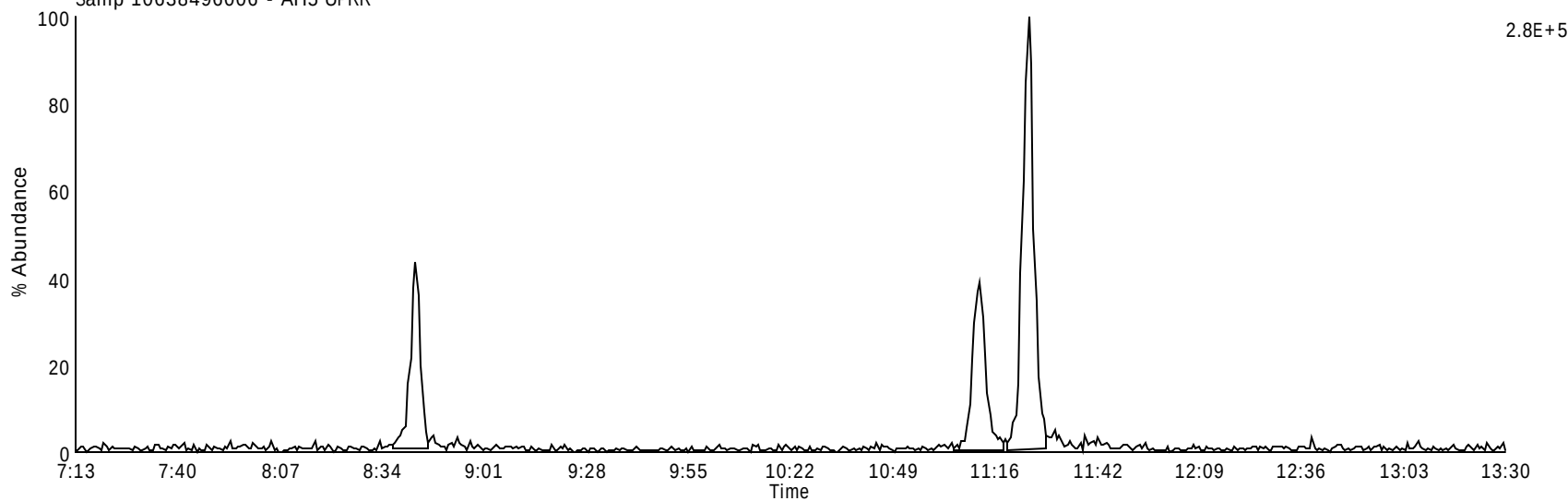
Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022

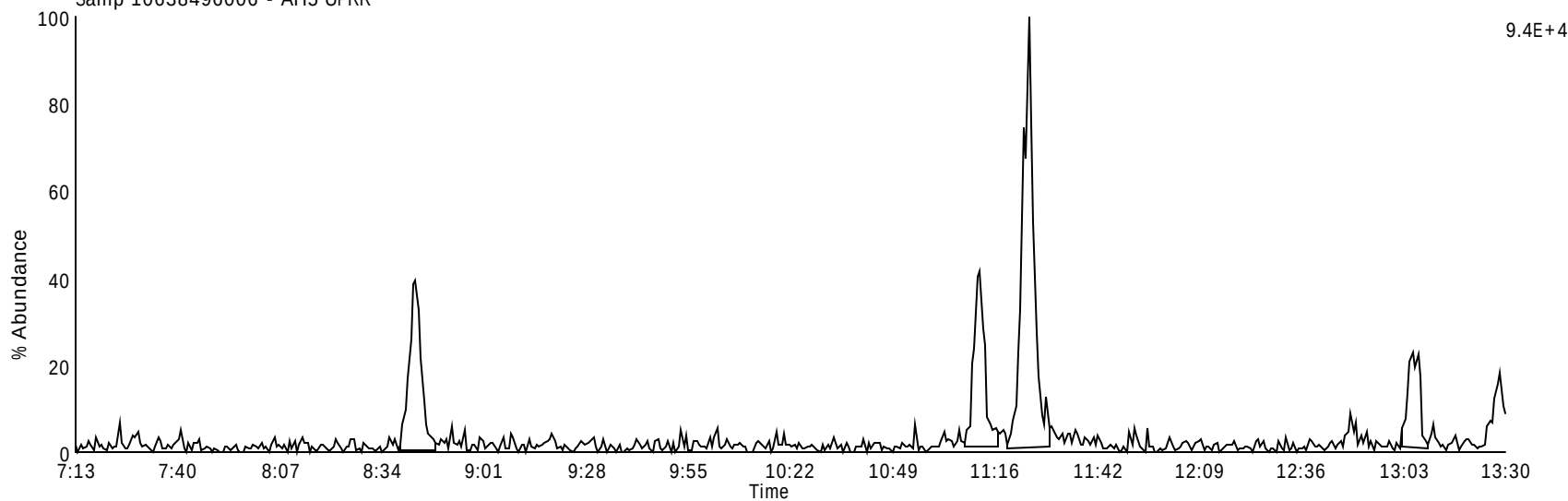
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Samp 10638496006 - AH5 UPRR



Data File: P230113A_06 G1 C2 - 190.0363

Samp 10638496006 - AH5 UPRR



Di Chlorinated Biphenyls

Data File Name: P230113A_06

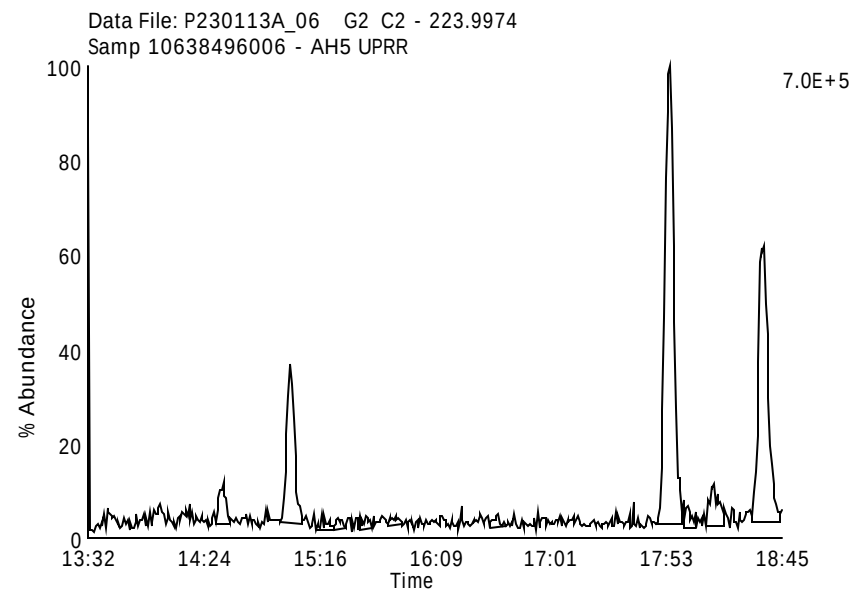
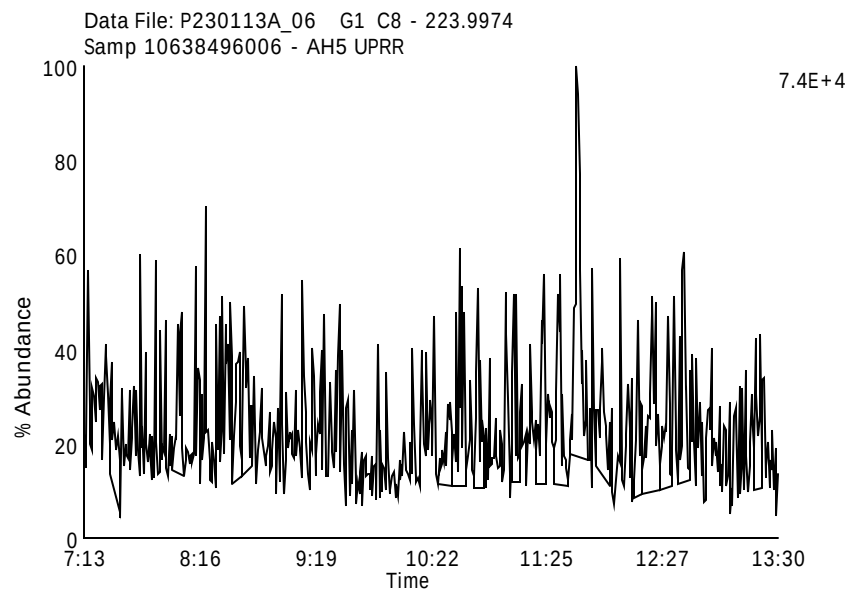
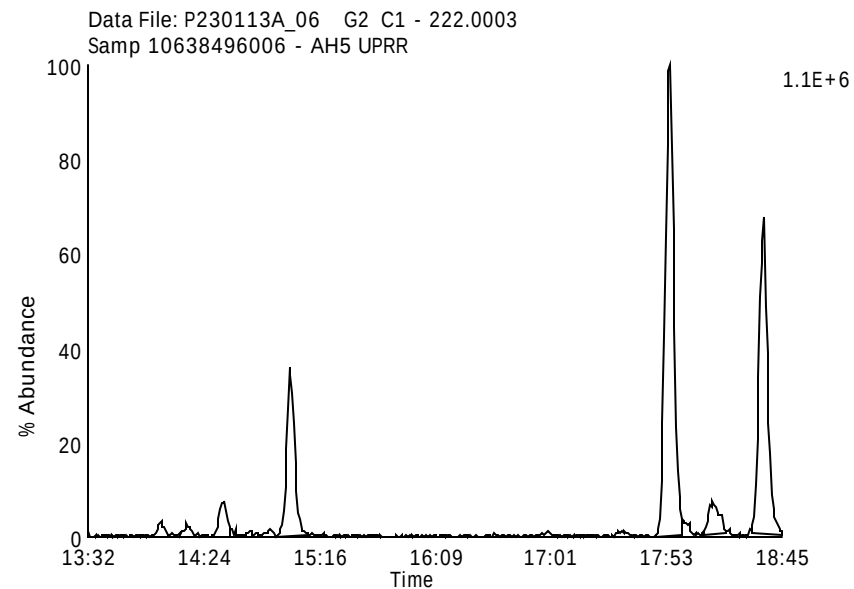
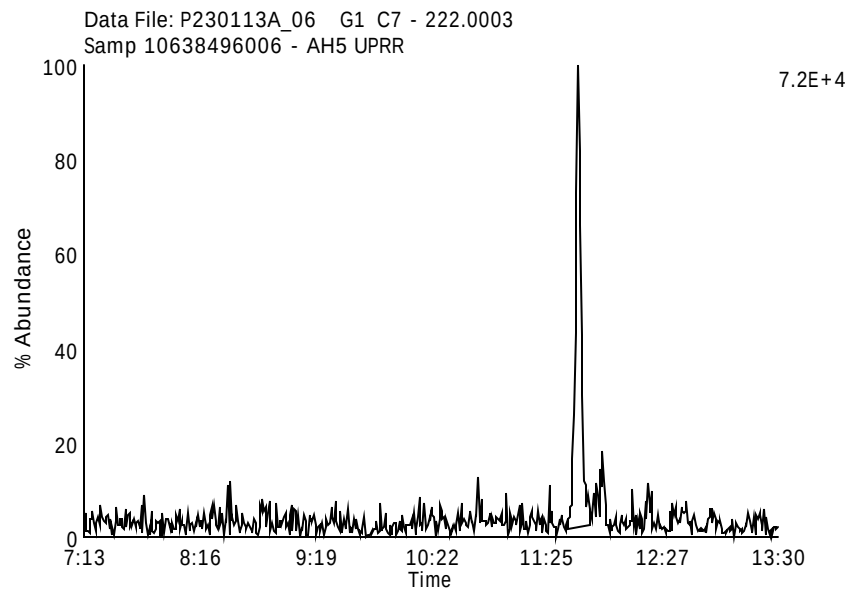
Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022



Tri Chlorinated Biphenyls

Data File Name: P230113A_06

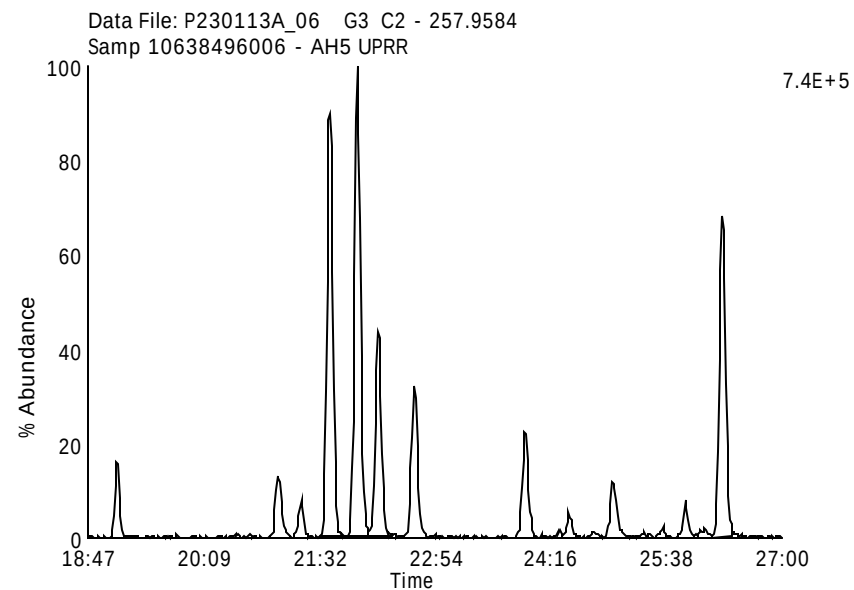
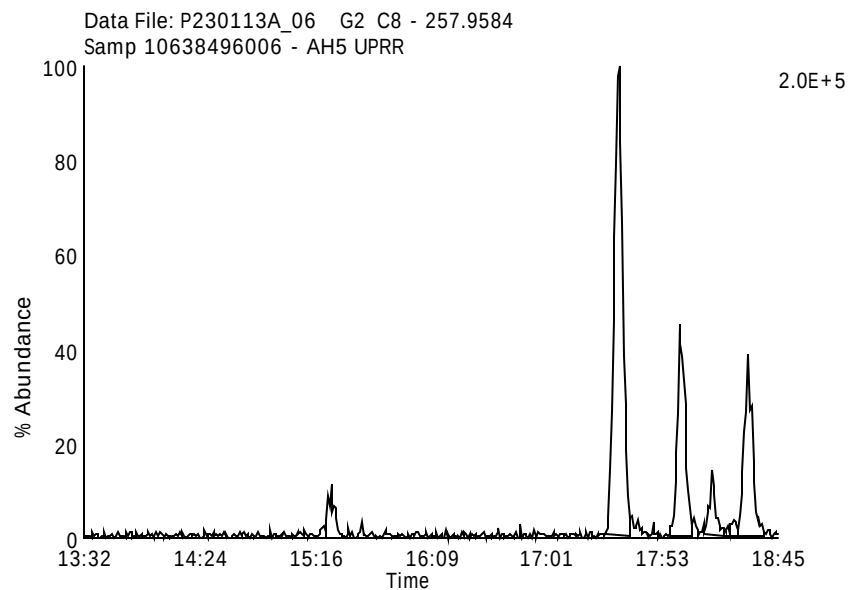
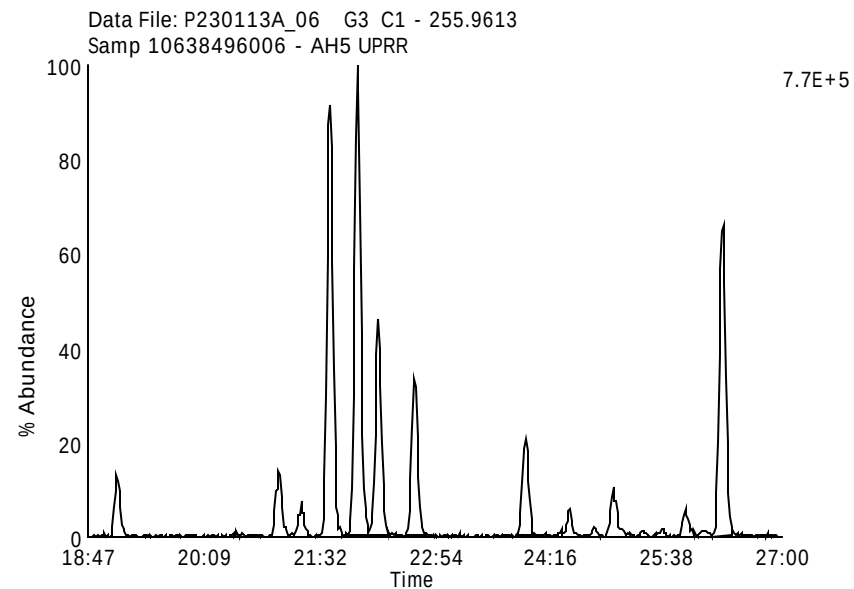
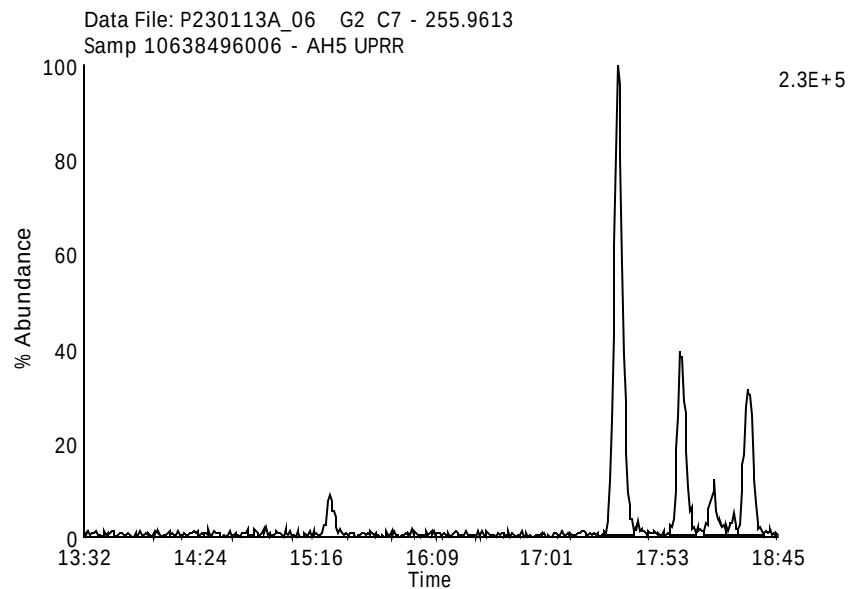
Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022



Tetra Chlorinated Biphenyls

Data File Name: P230113A_06

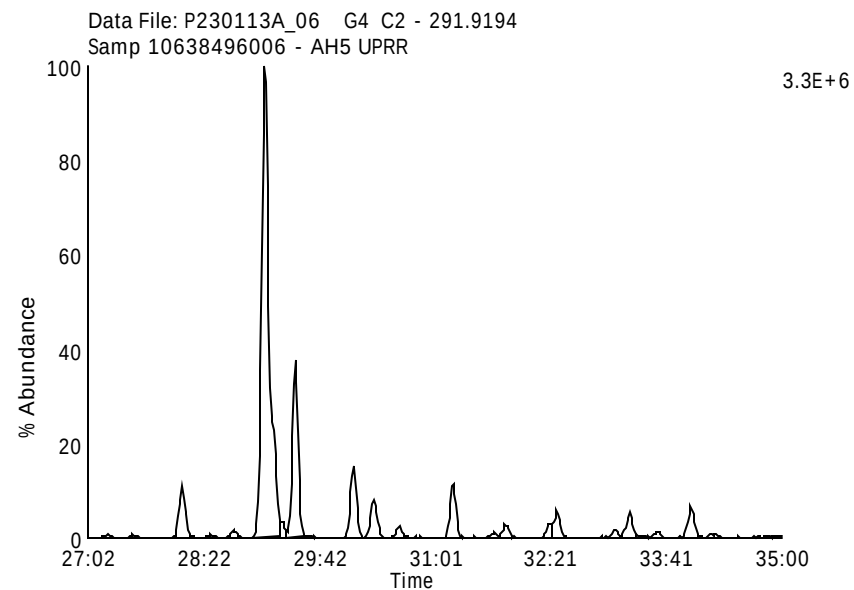
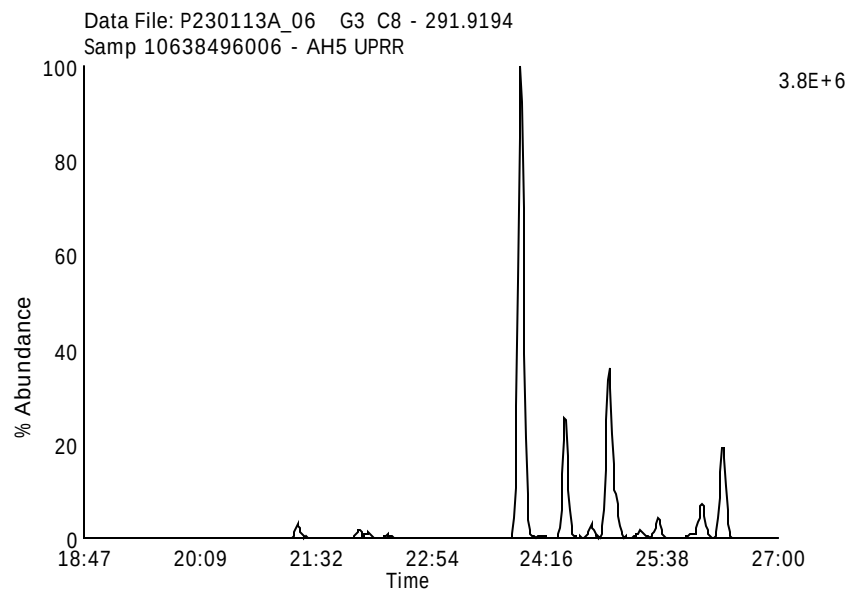
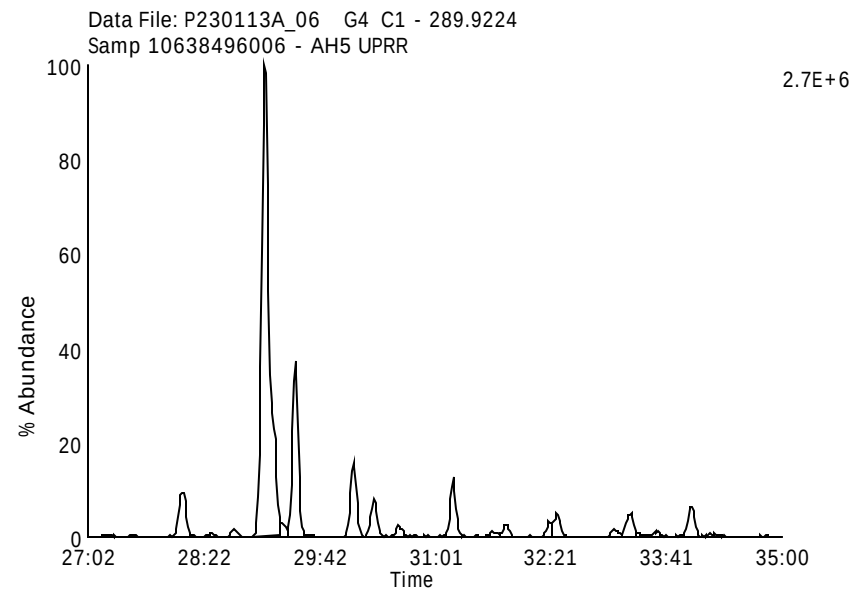
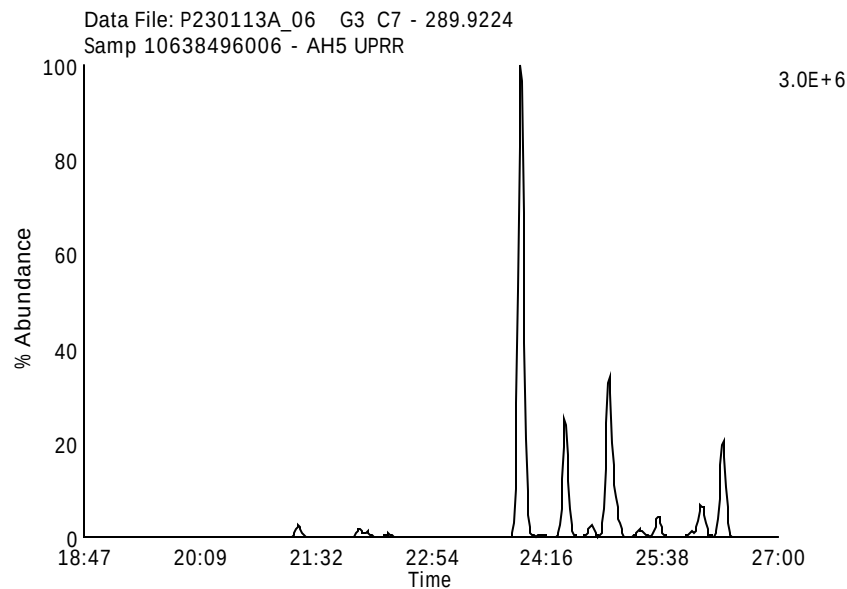
Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022



Penta Chlorinated Biphenyls

Data File Name: P230113A_06

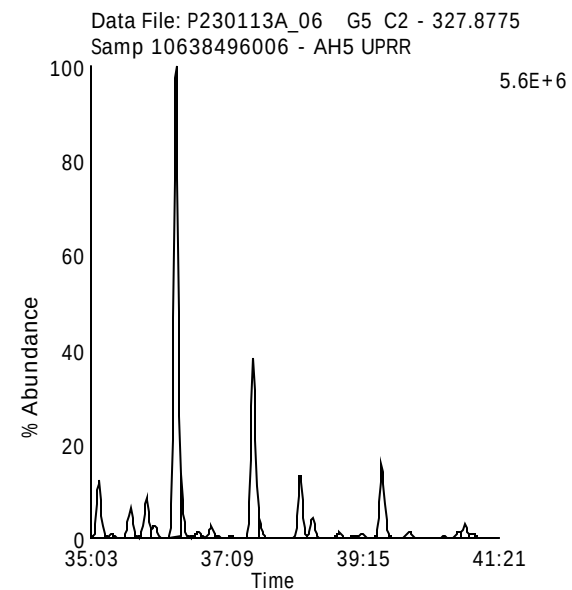
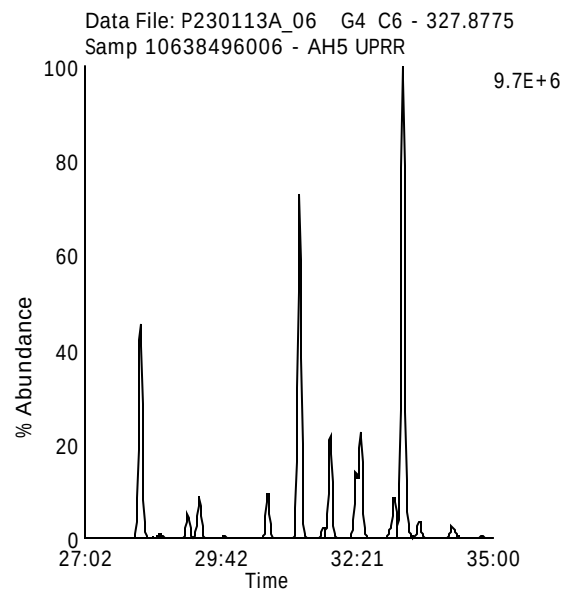
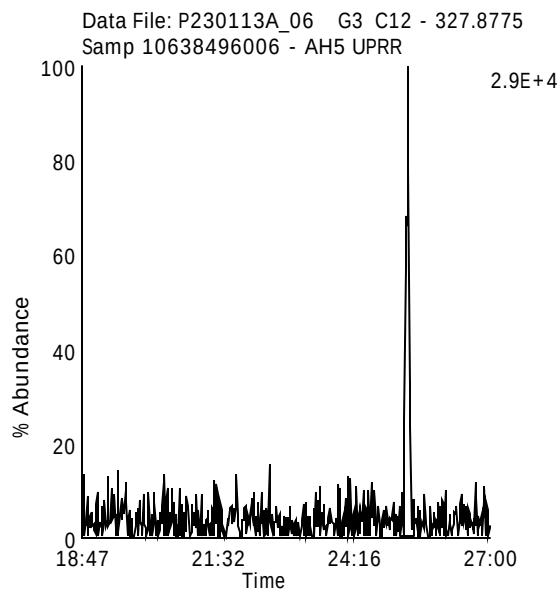
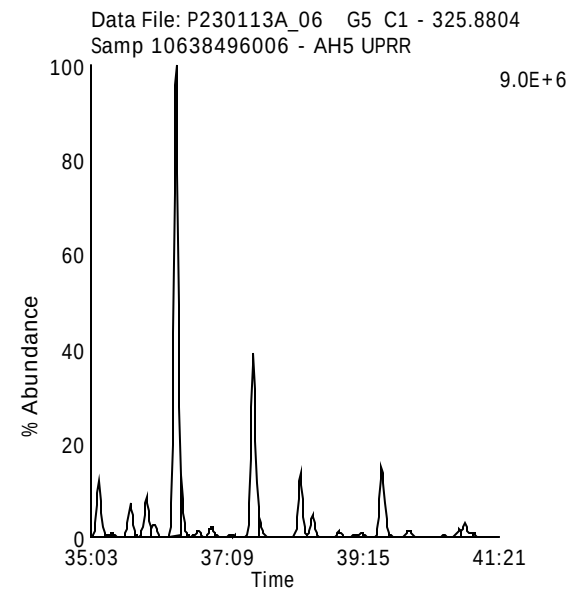
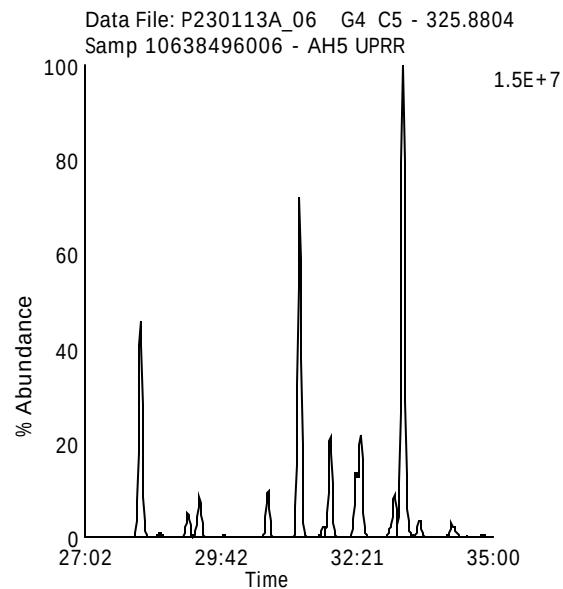
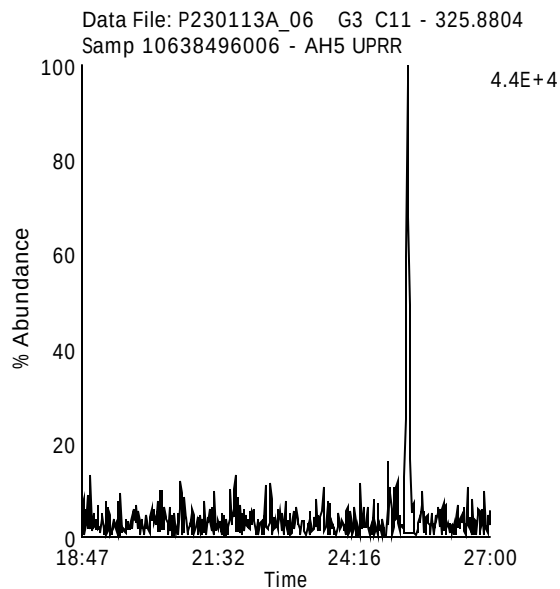
Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022



Hexa Chlorinated Biphenyls

Data File Name: P230113A_06

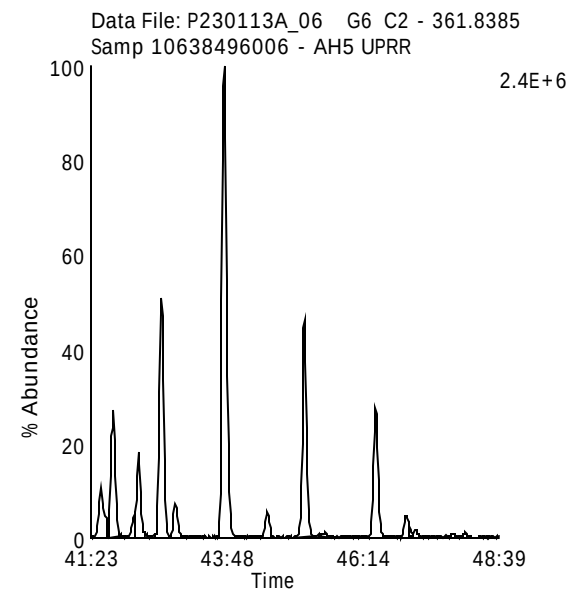
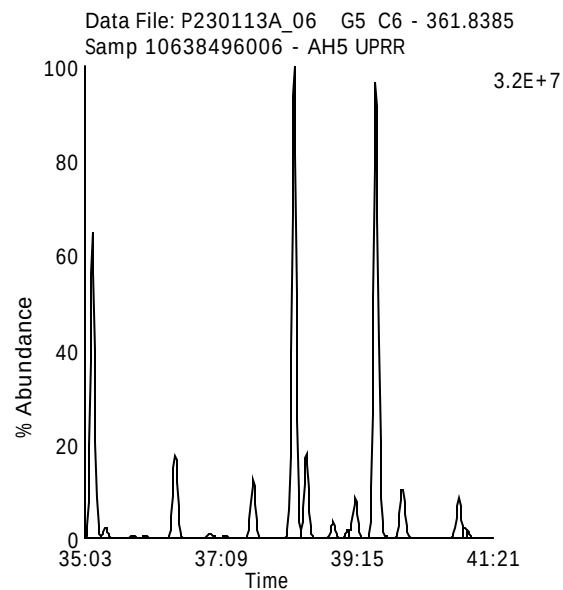
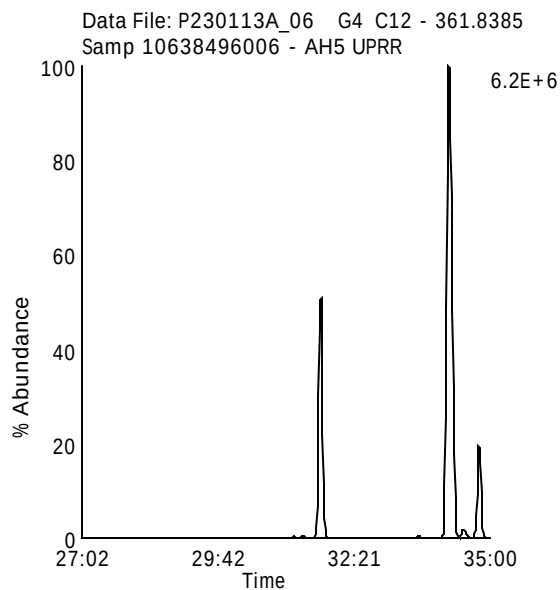
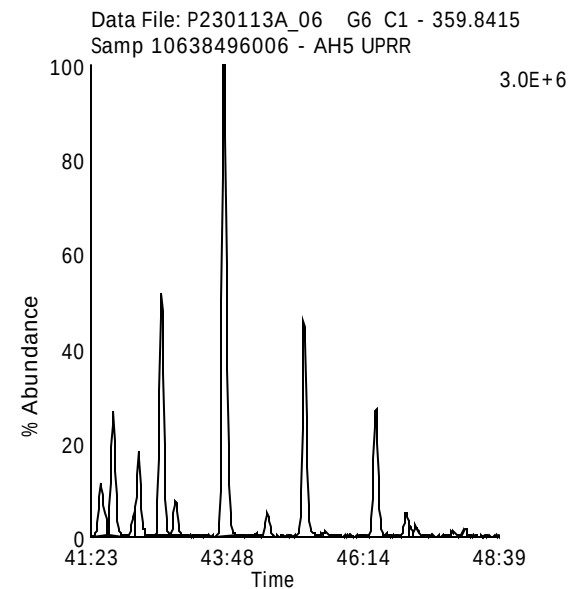
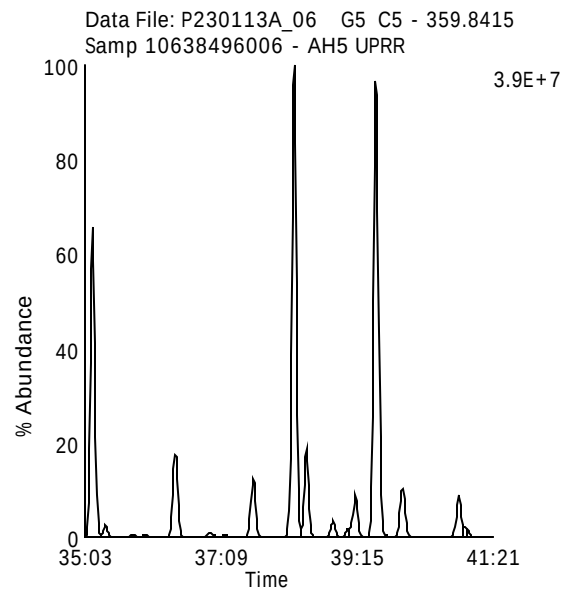
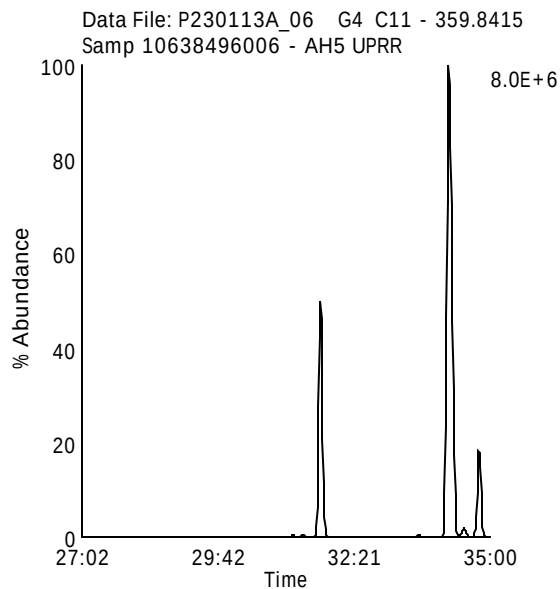
Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022



Hepta Chlorinated Biphenyls

Data File Name: P230113A_06

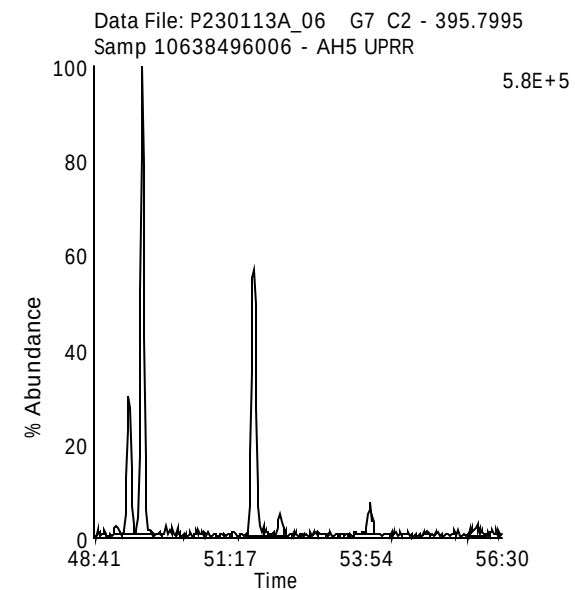
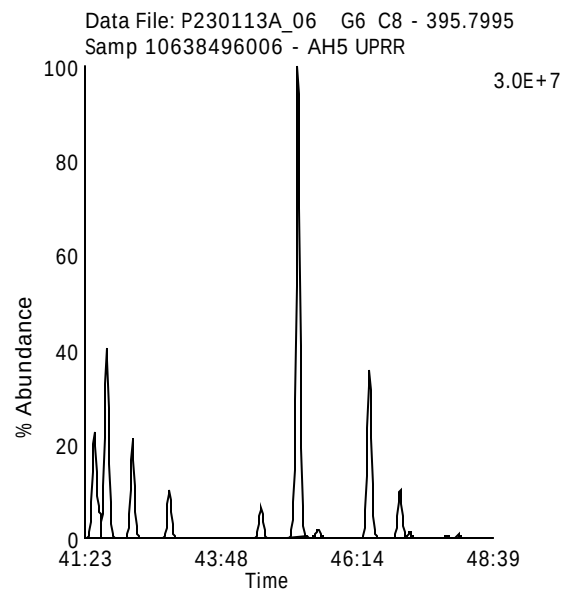
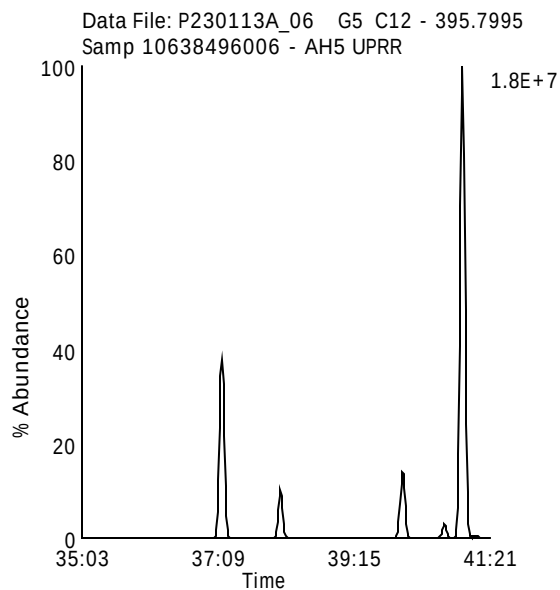
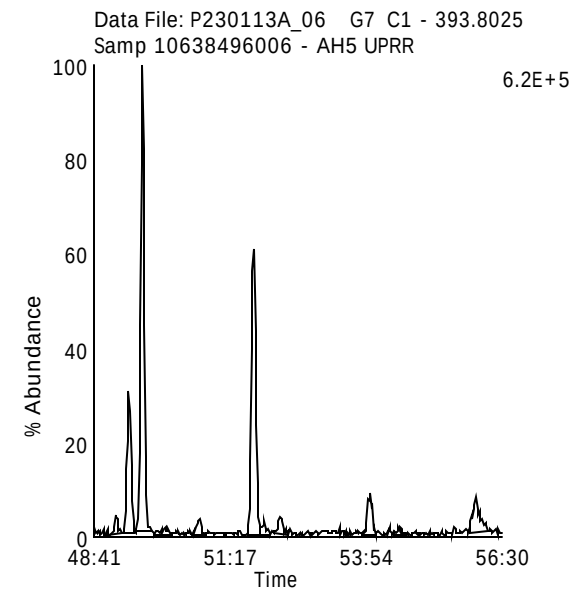
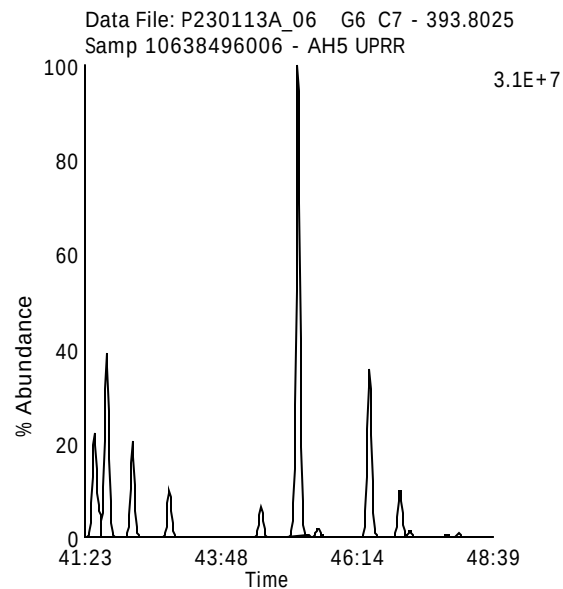
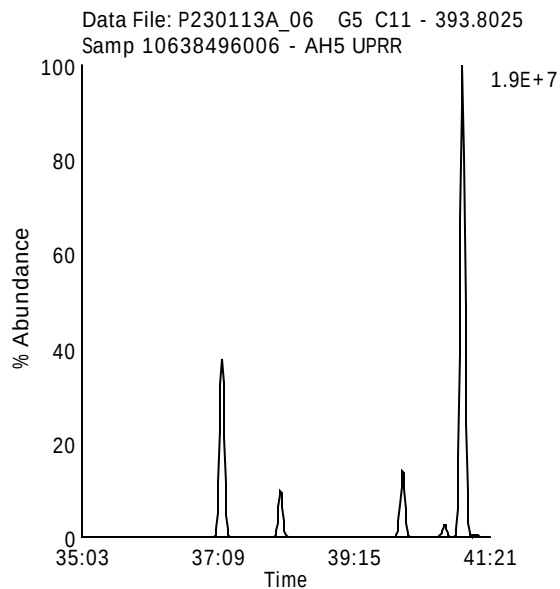
Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022



Octa Chlorinated Biphenyls

Data File Name: P230113A_06

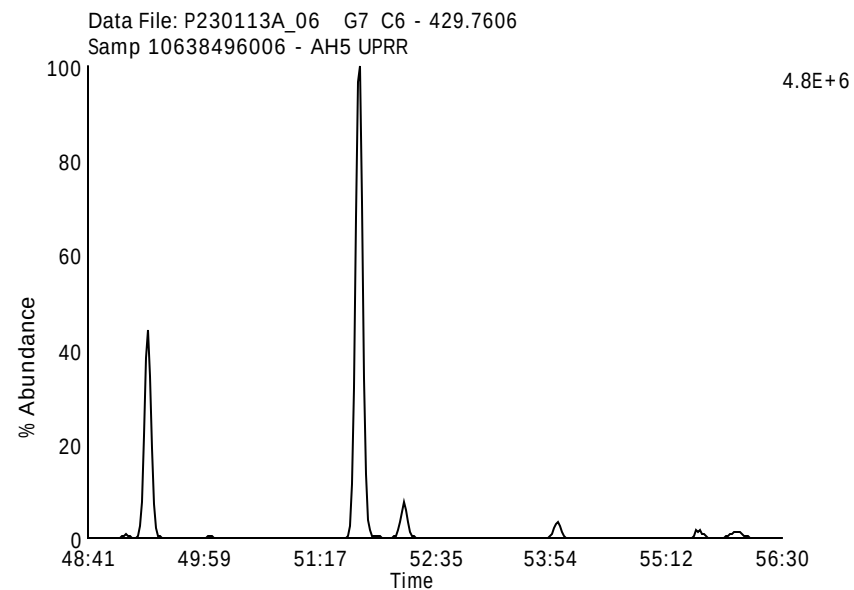
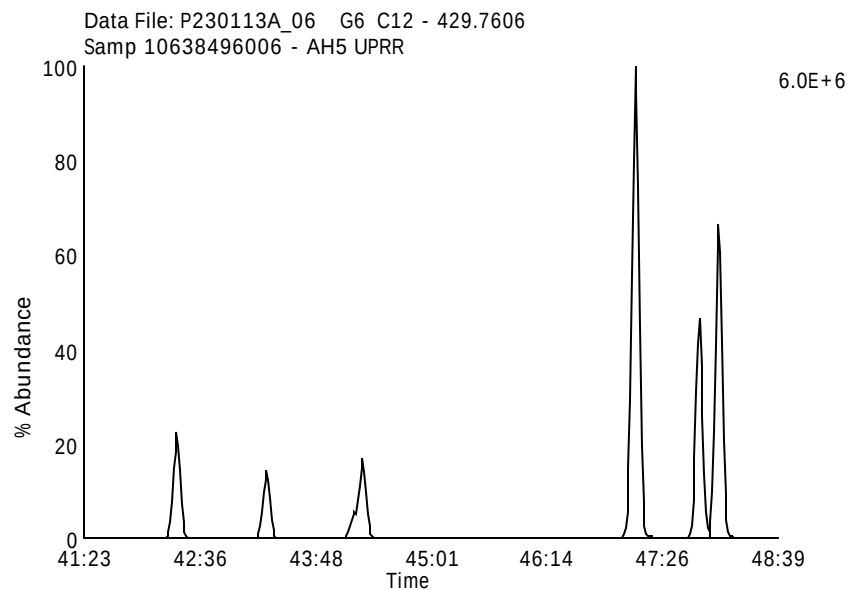
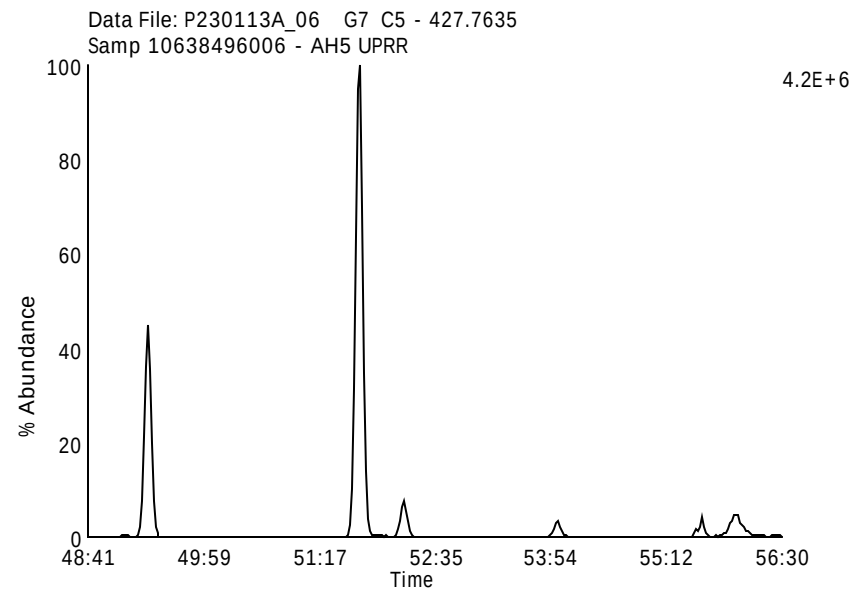
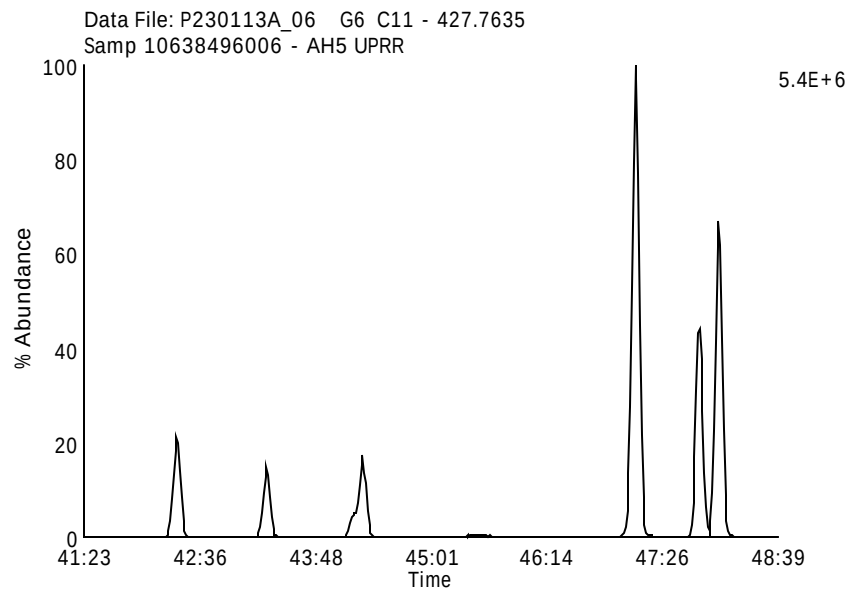
Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022



Nona Chlorinated Biphenyls

Data File Name: P230113A_06

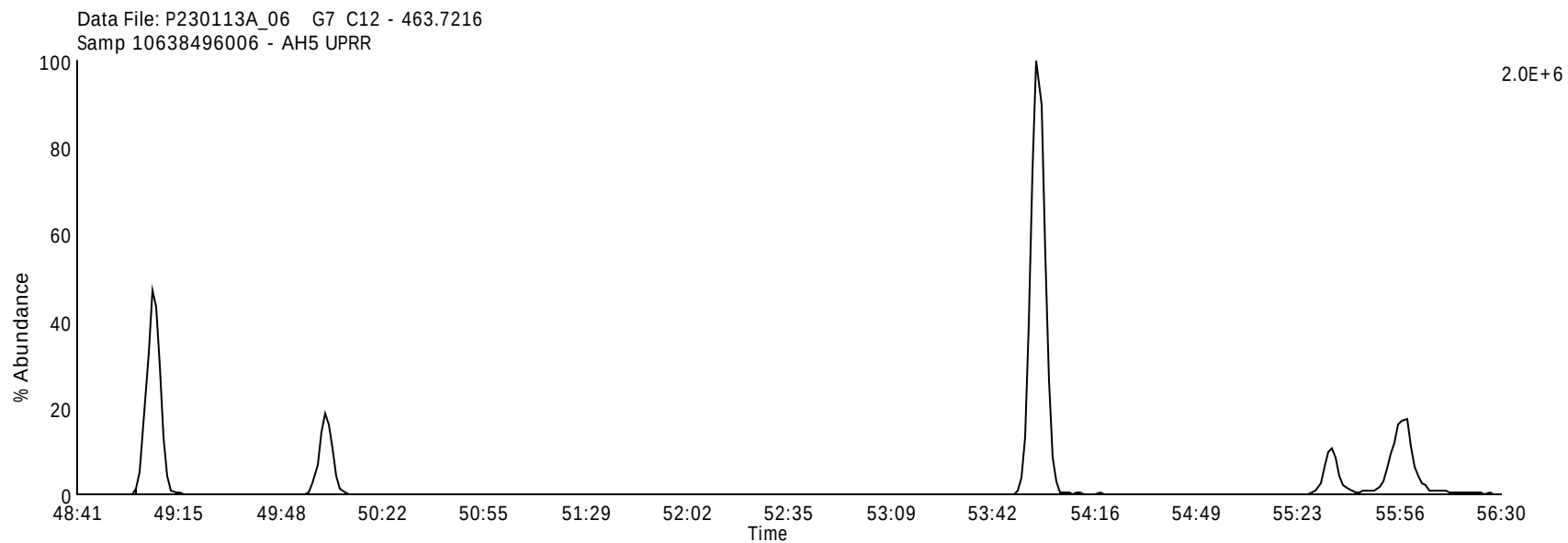
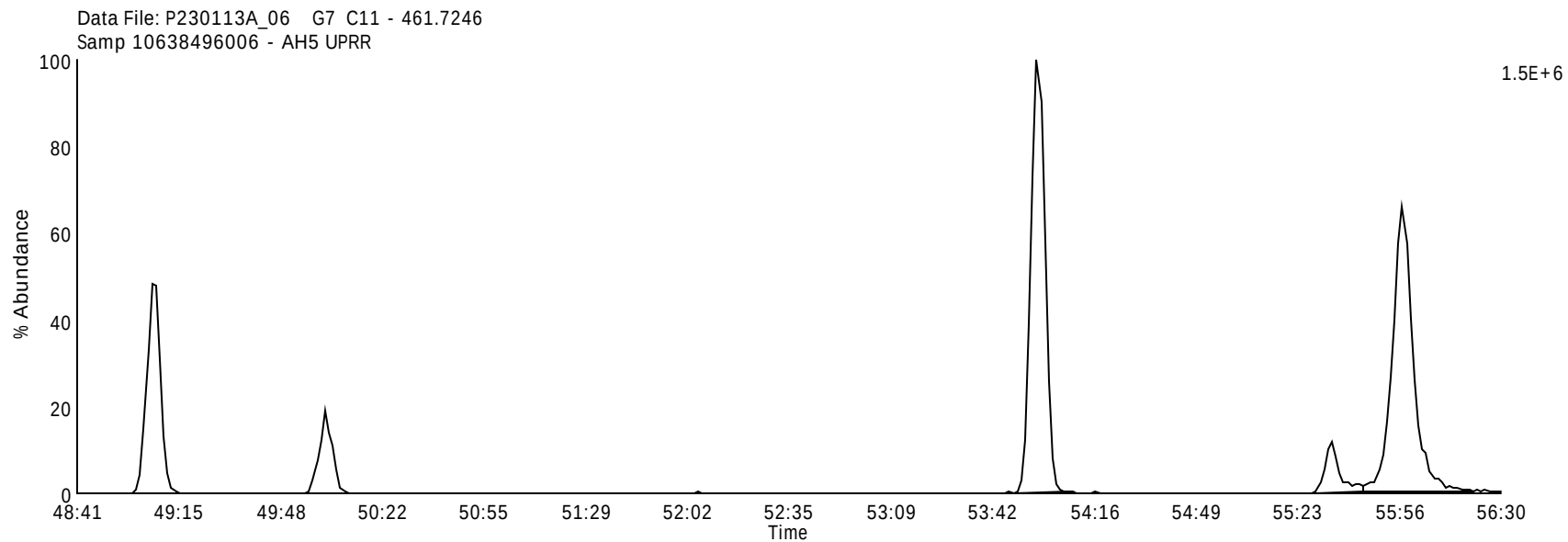
Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022



Deca Chlorinated Biphenyl

Data File Name: P230113A_06

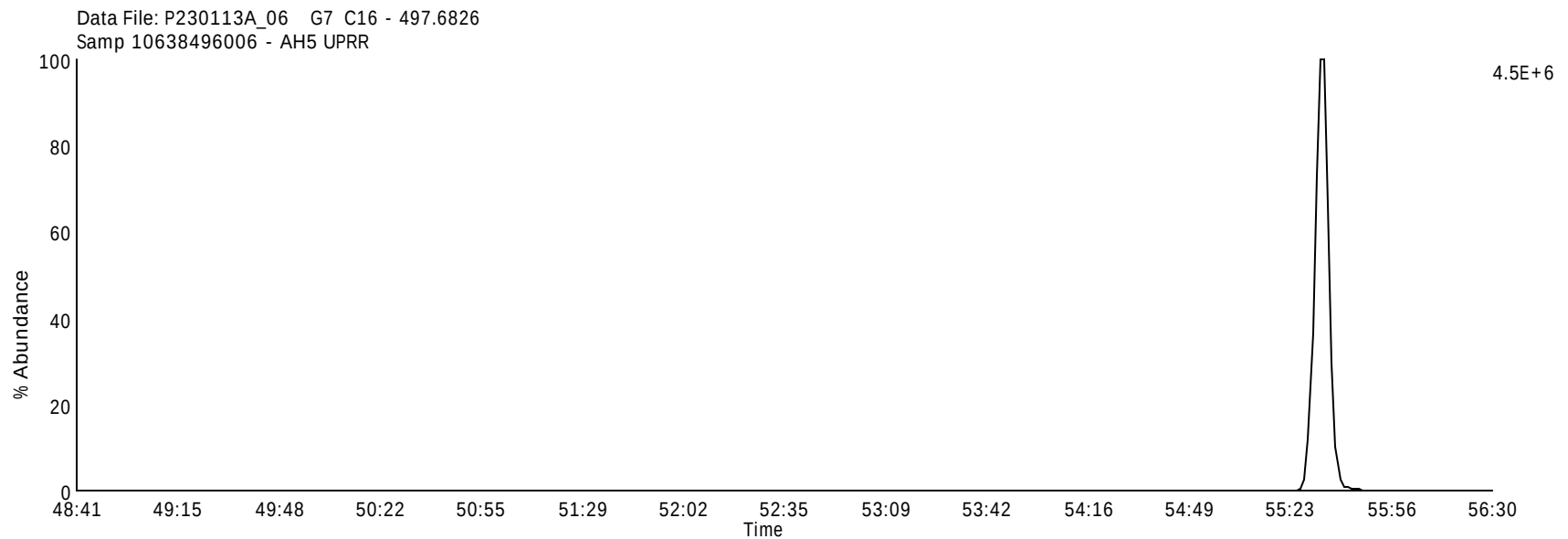
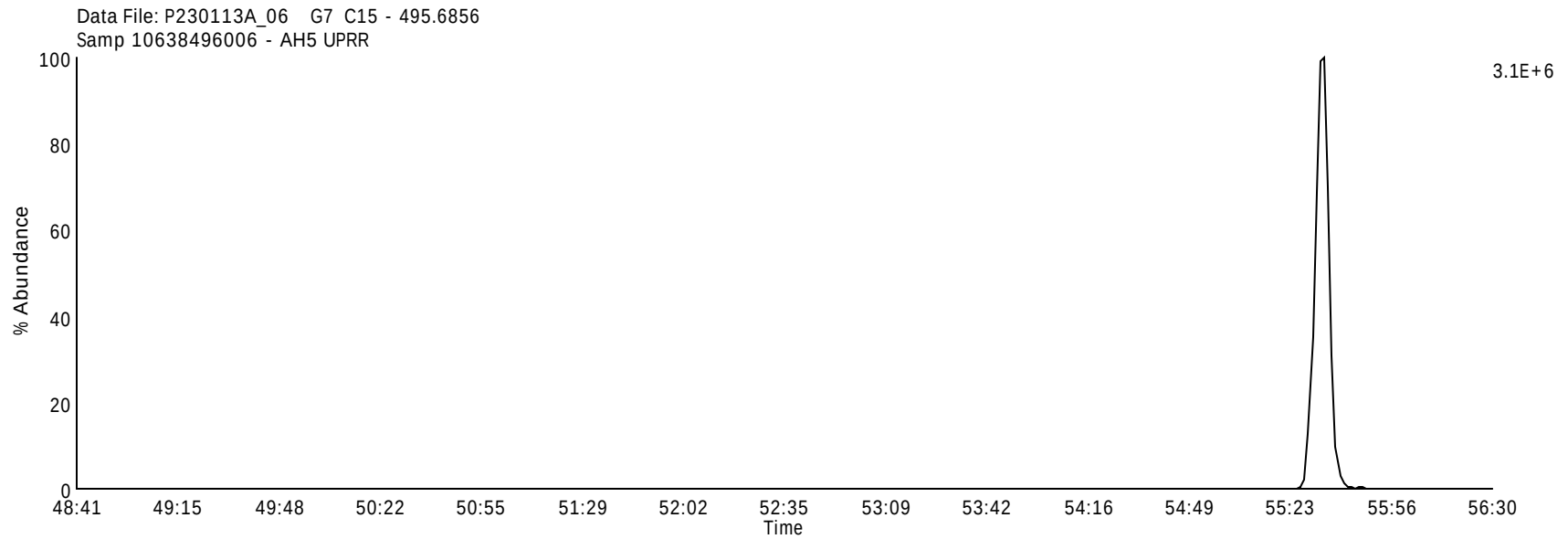
Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022



Group 1 - 4 Lock mass

Data File Name: P230113A_06

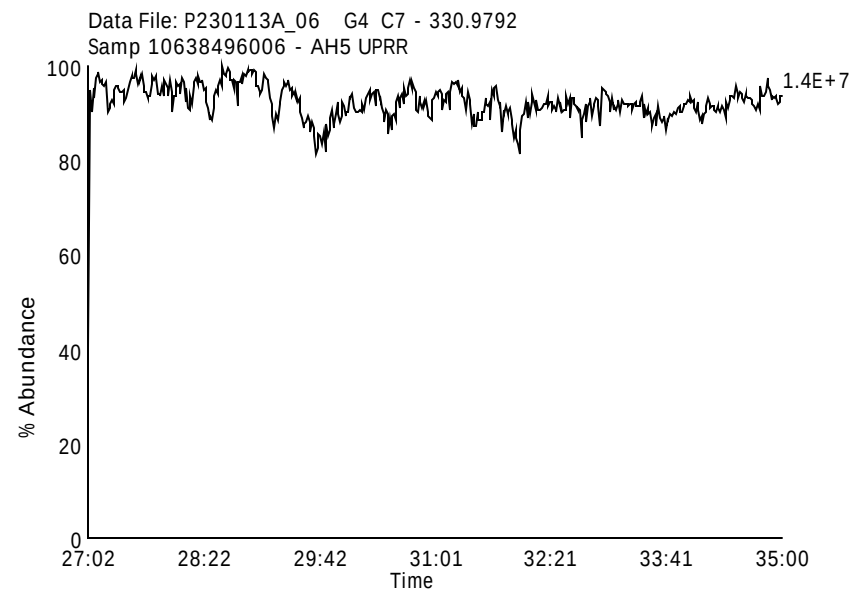
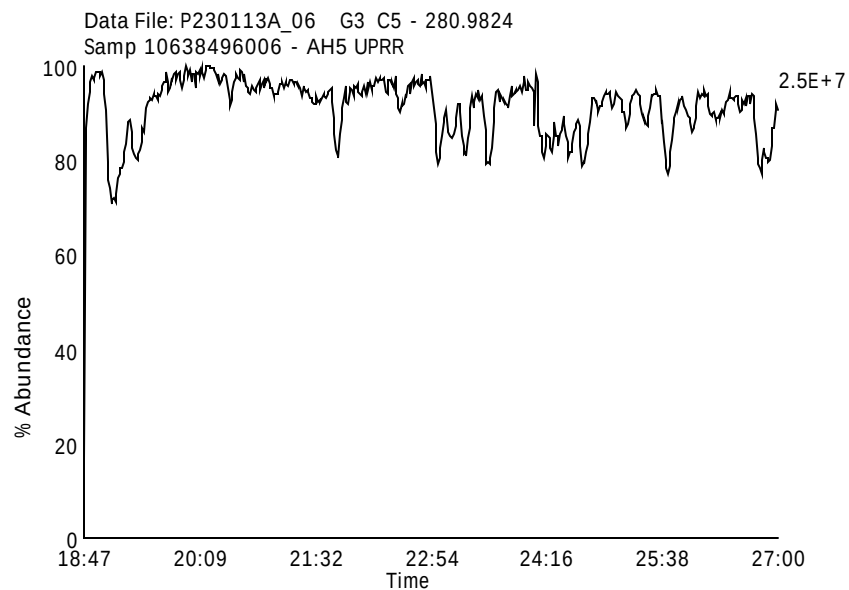
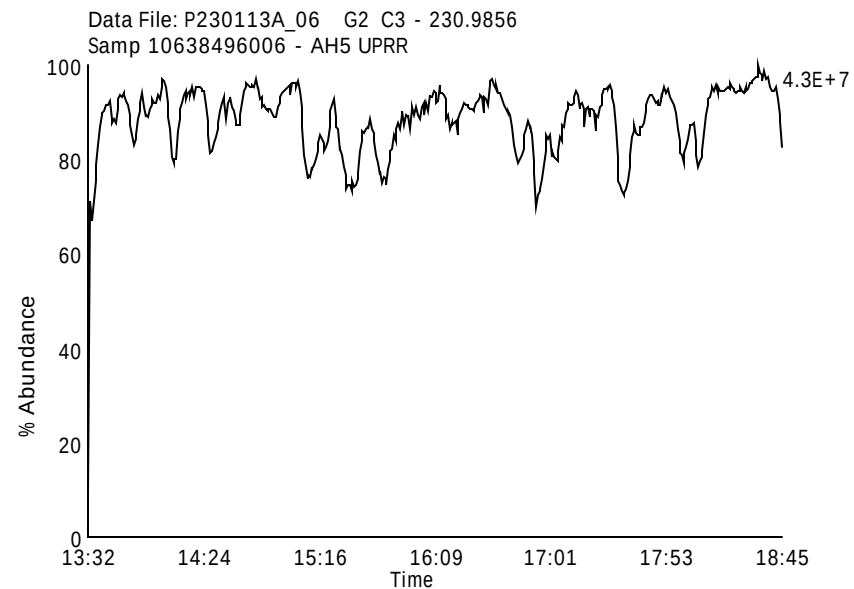
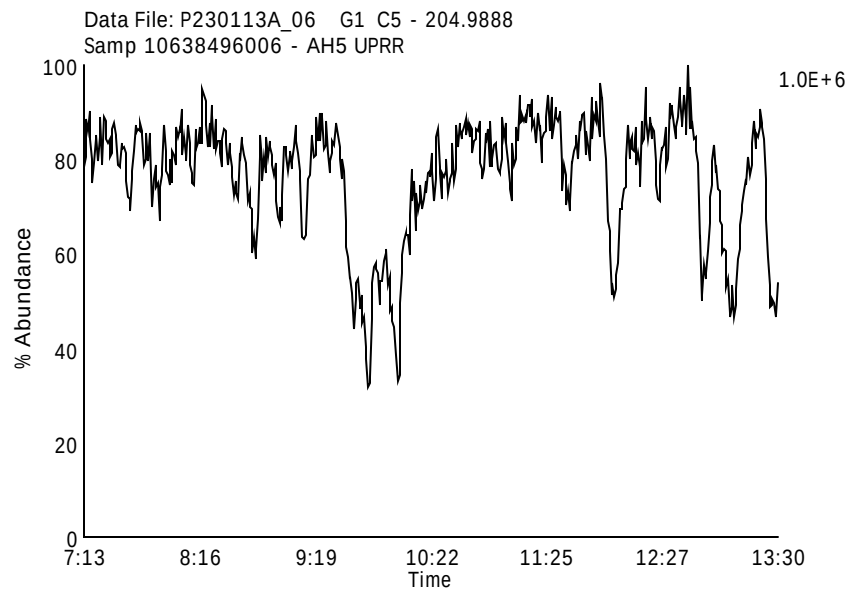
Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022



Group 5 - 7 Lock mass

Data File Name: P230113A_06

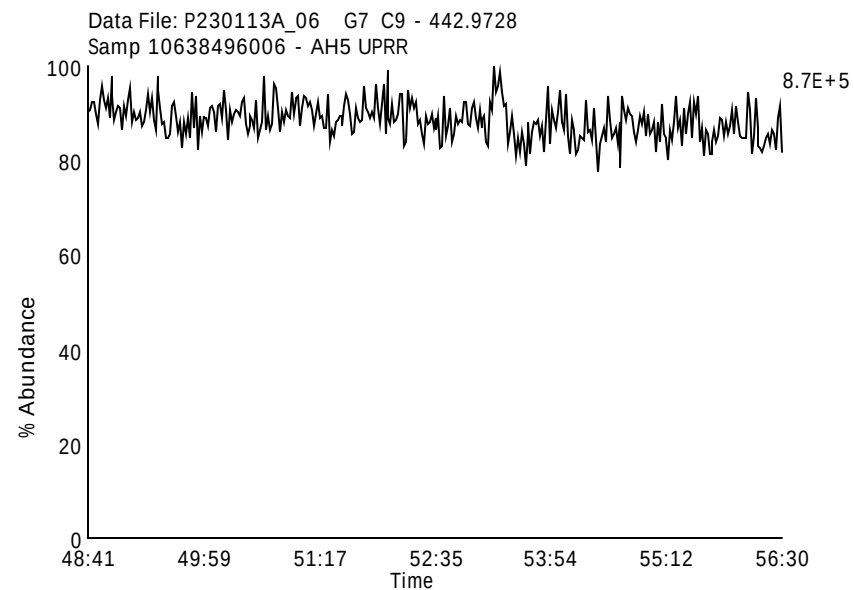
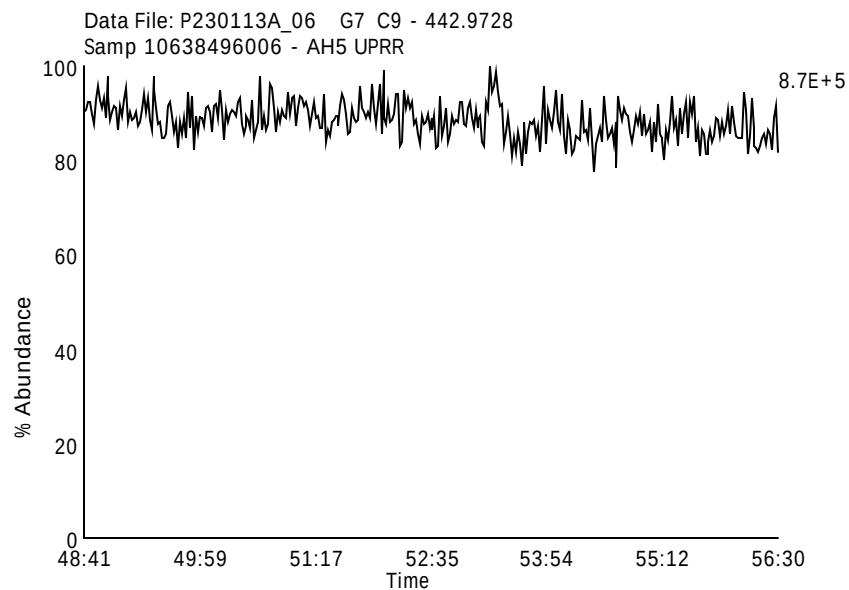
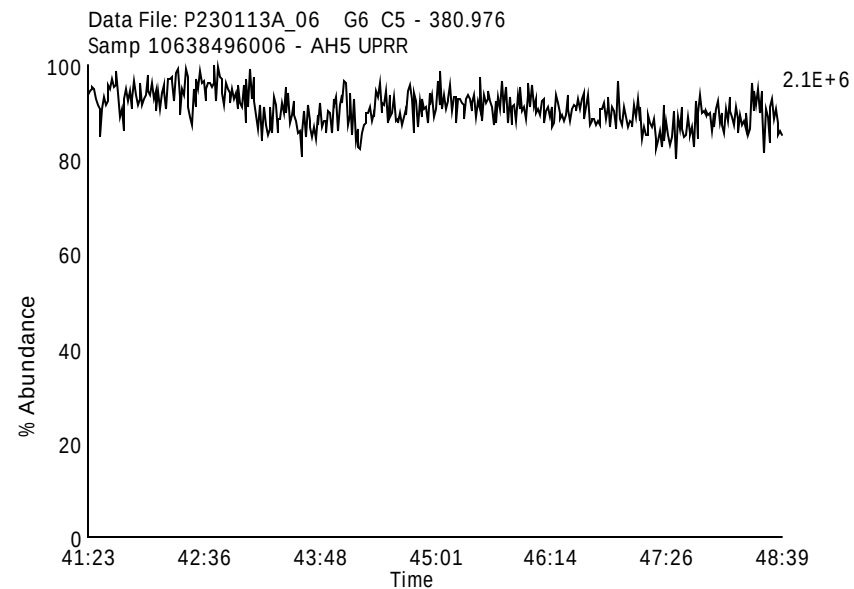
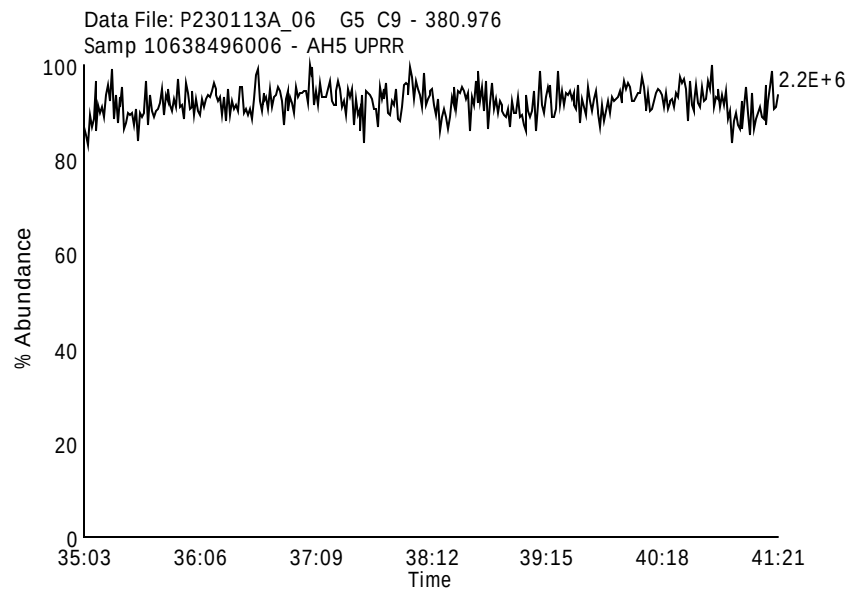
Date Acquired: 1/13/2023

Sample Description: Samp 10638496006 - AH5 UPRR

Lab Sample ID: 10638496006

Instrument: 10MSHR09 (P)

Client Sample ID: SB14-1.0-1.5-1022



Labeled Mono Chlorinated Biphenyls

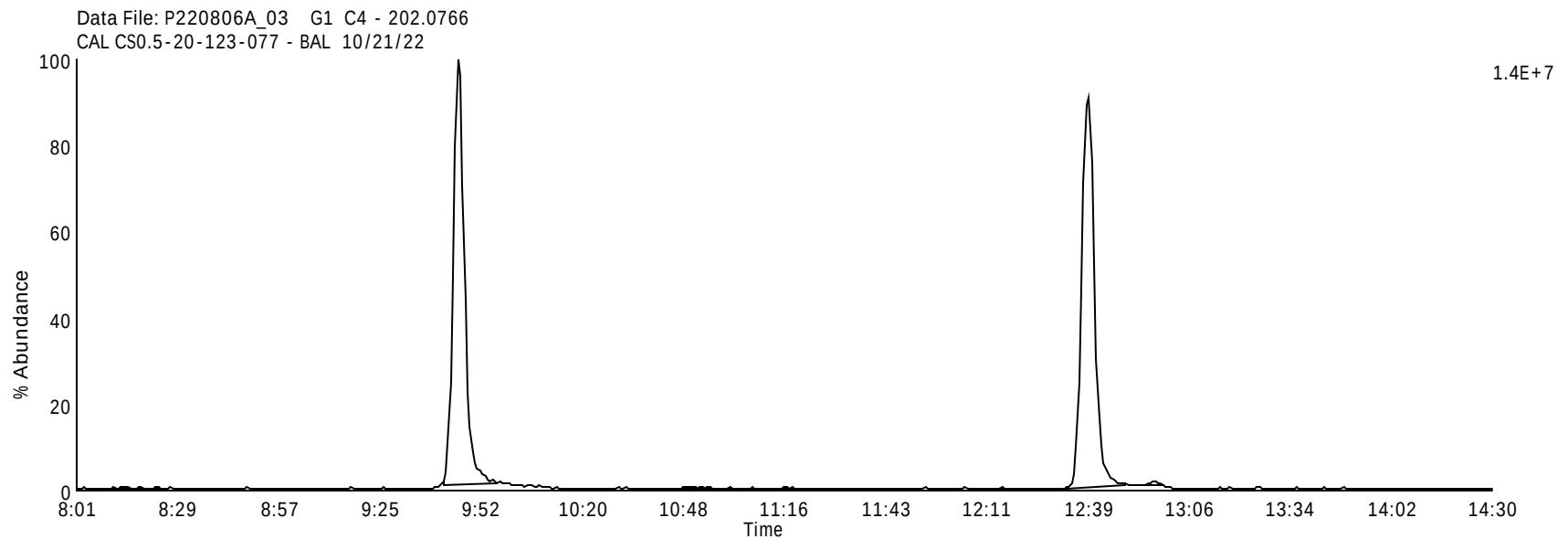
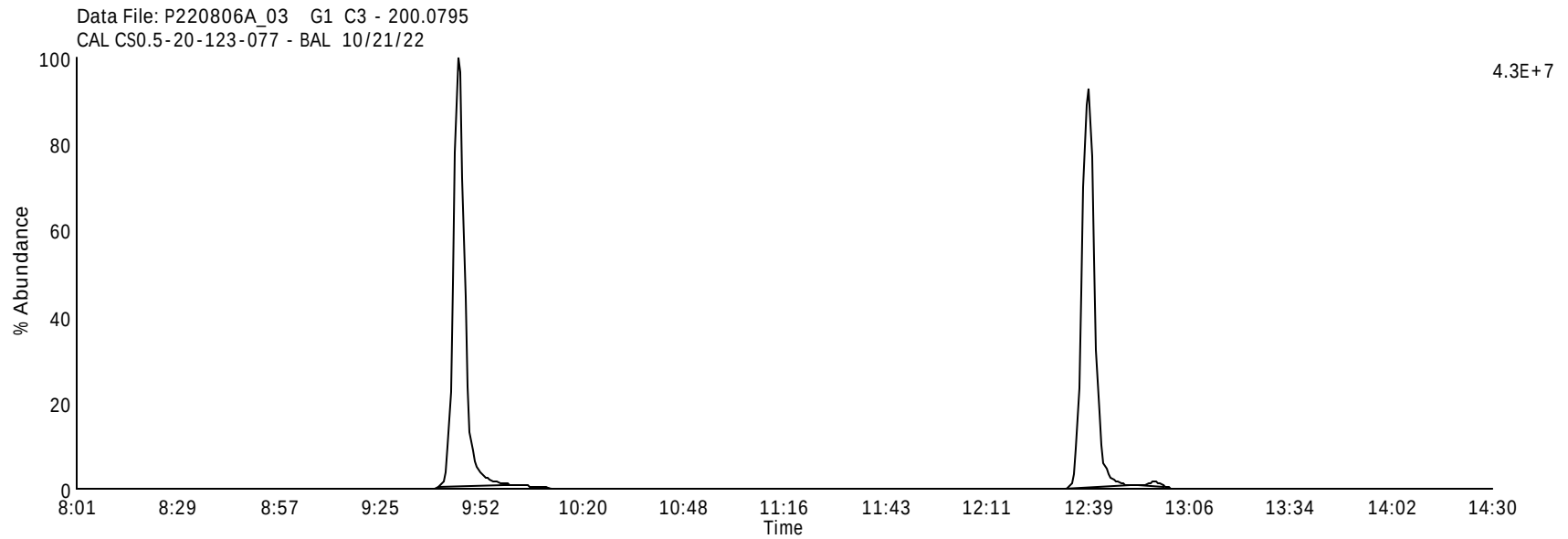
Data File Name: P220806A_03

Lab Sample ID: CS0.5-20-123-077

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22



Labeled Di Chlorinated Biphenyls

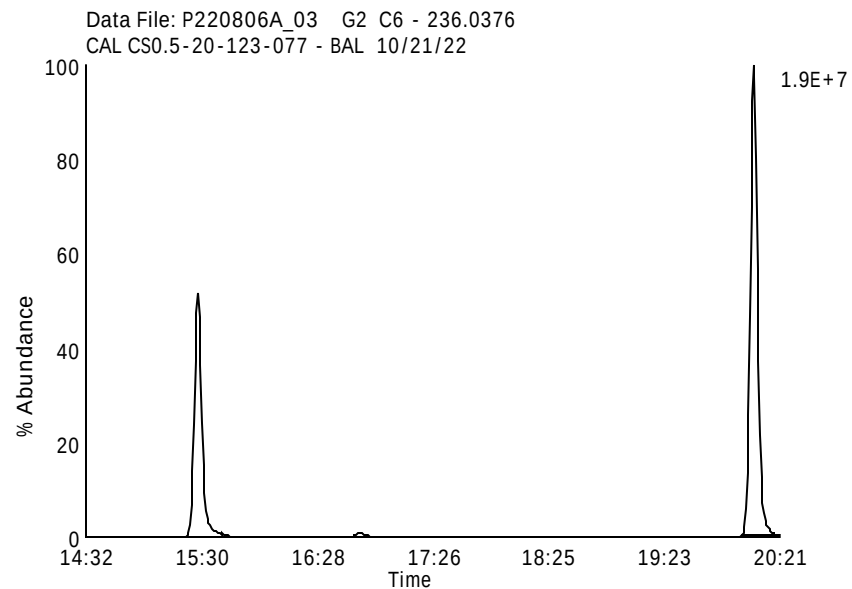
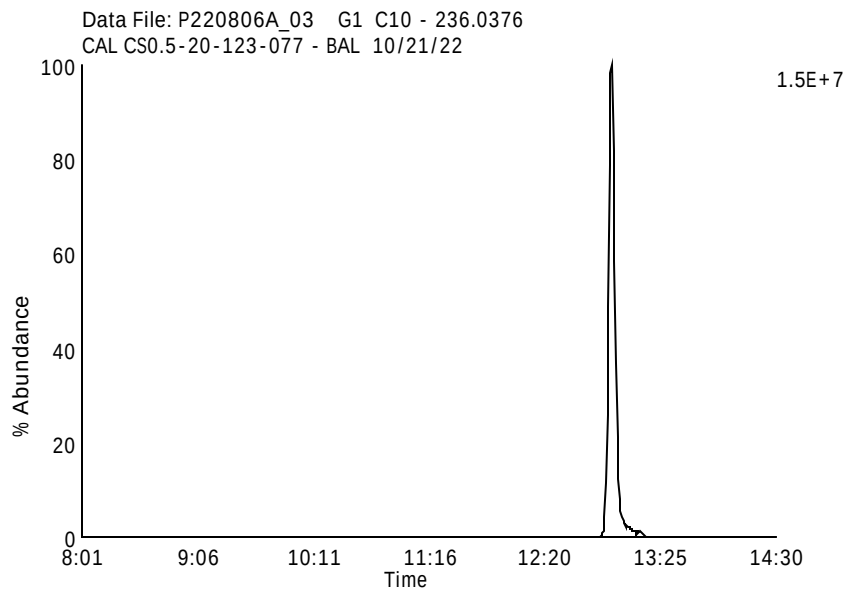
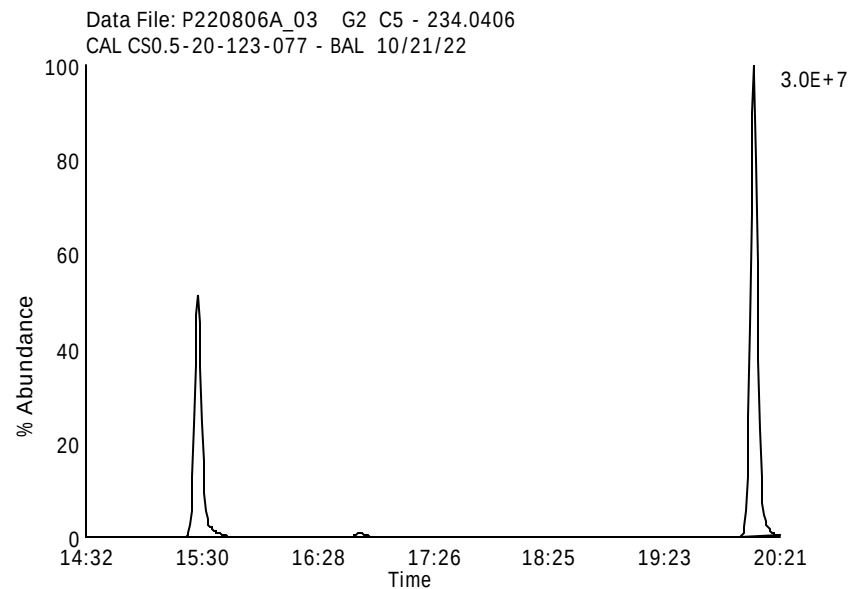
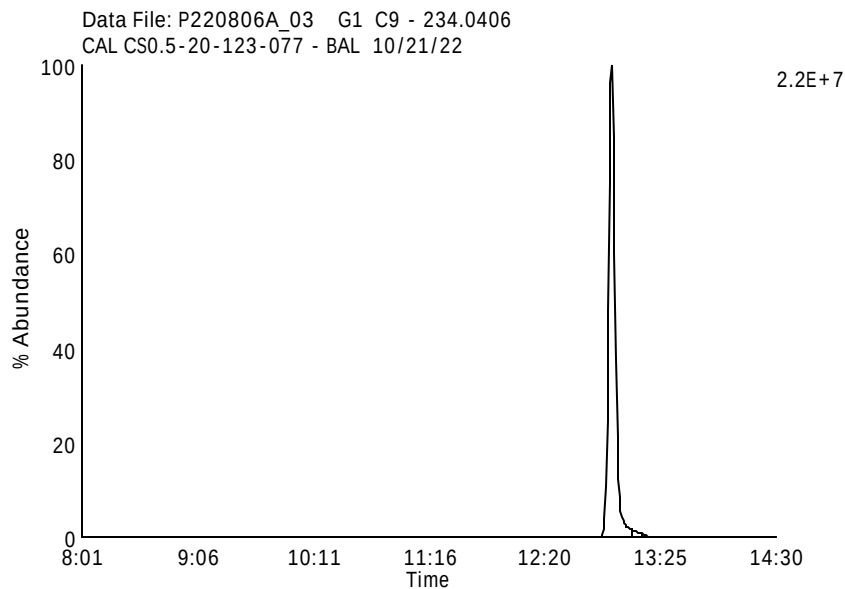
Data File Name: P220806A_03

Date Acquired: 8/6/2022

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22

Lab Sample ID: CS0.5-20-123-077

Instrument: 10MSHR09 (P)



Labeled Tri Chlorinated Biphenyls

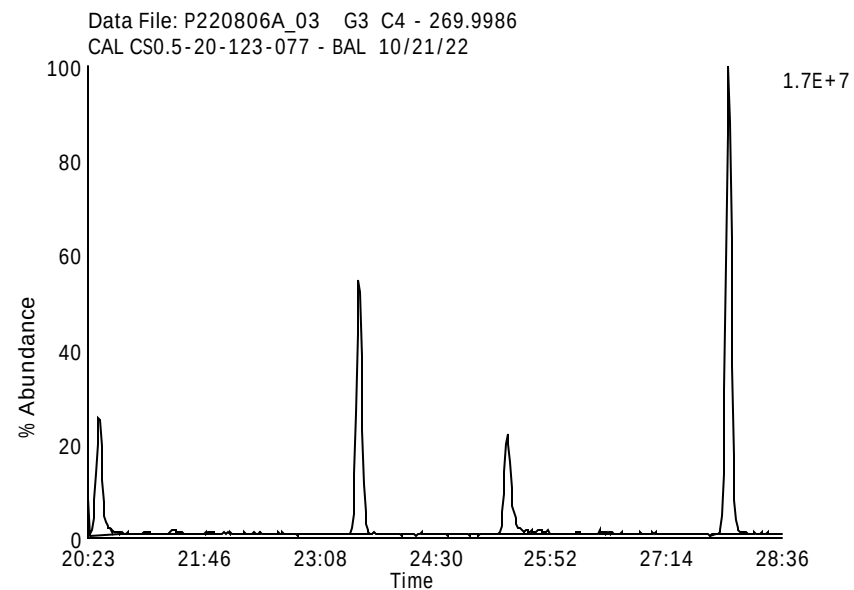
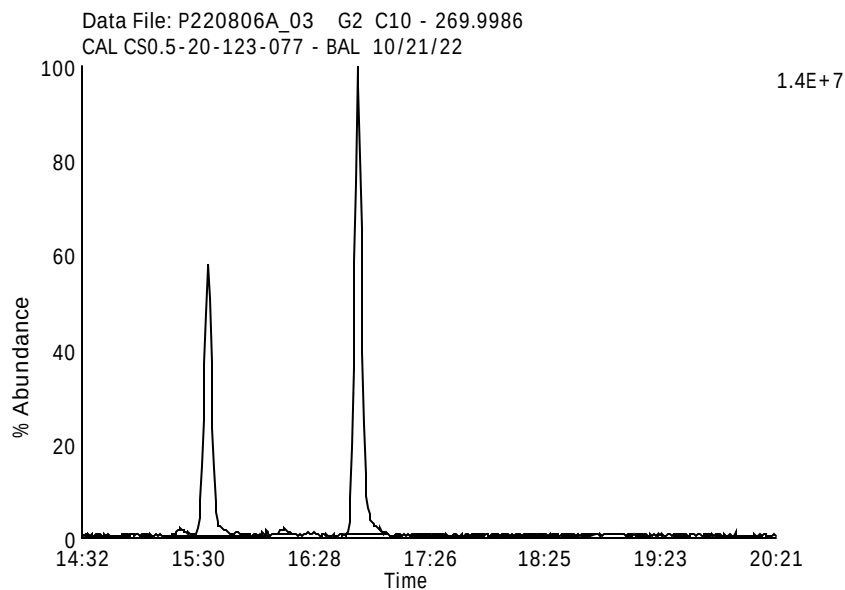
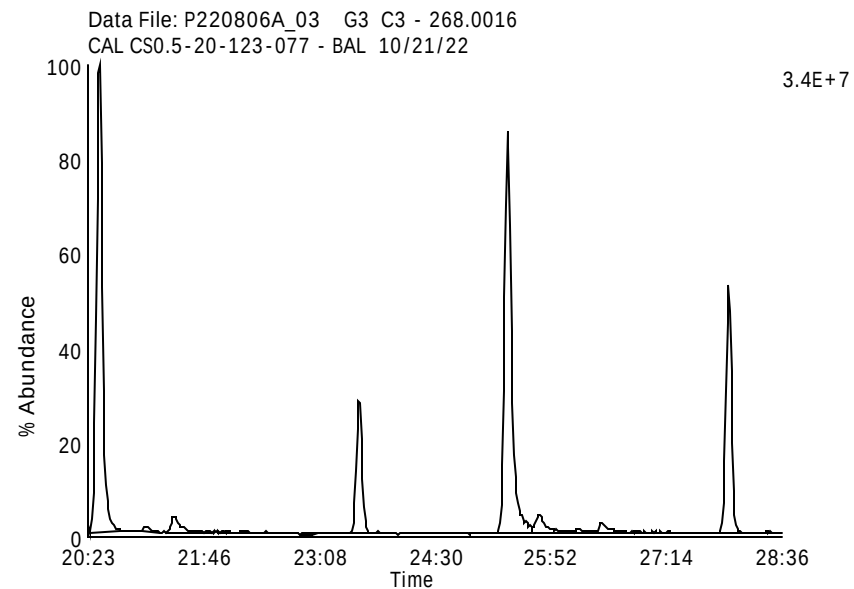
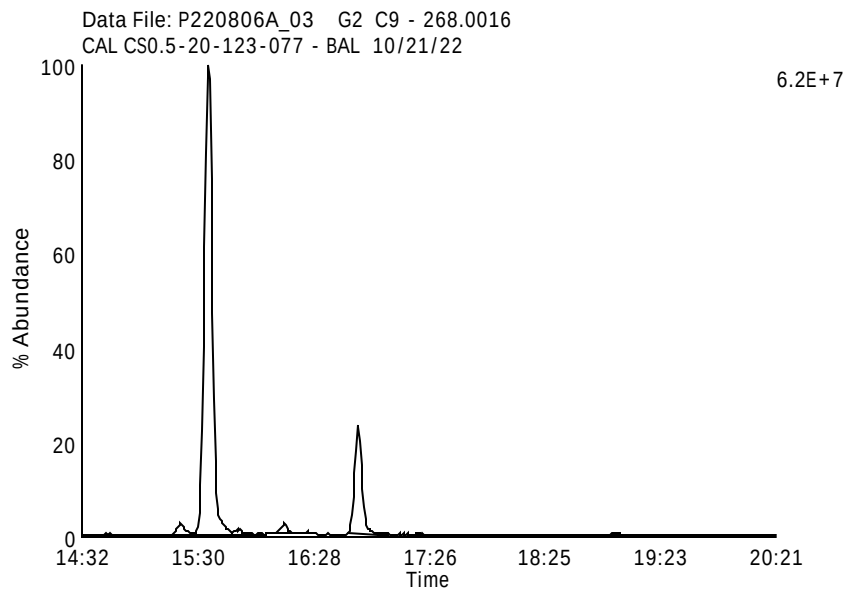
Data File Name: P220806A_03

Date Acquired: 8/6/2022

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22

Lab Sample ID: CS0.5-20-123-077

Instrument: 10MSHR09 (P)



Labeled Tetra Chlorinated Biphenyls

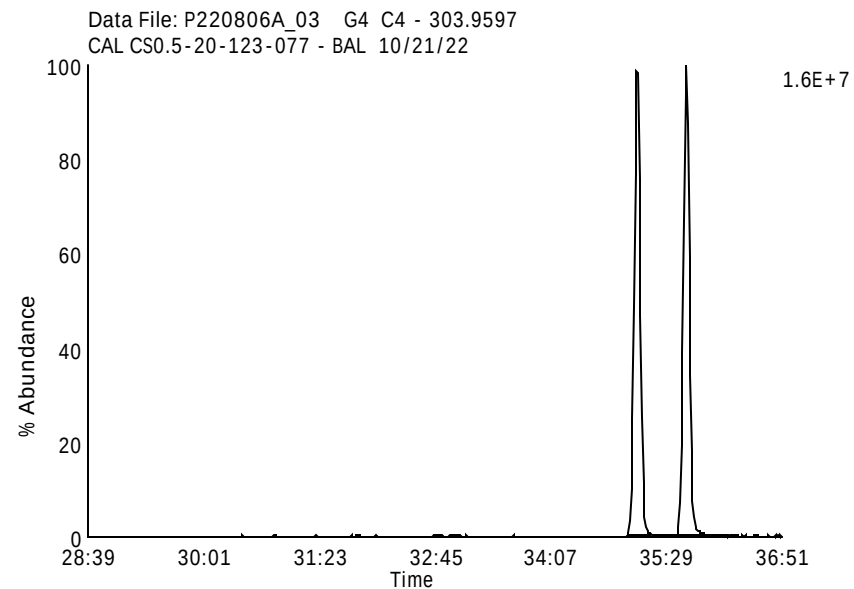
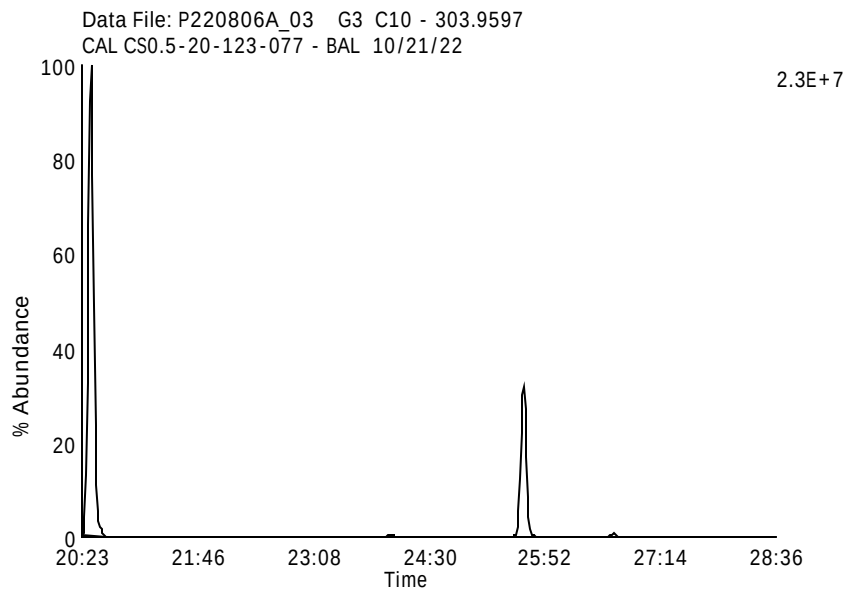
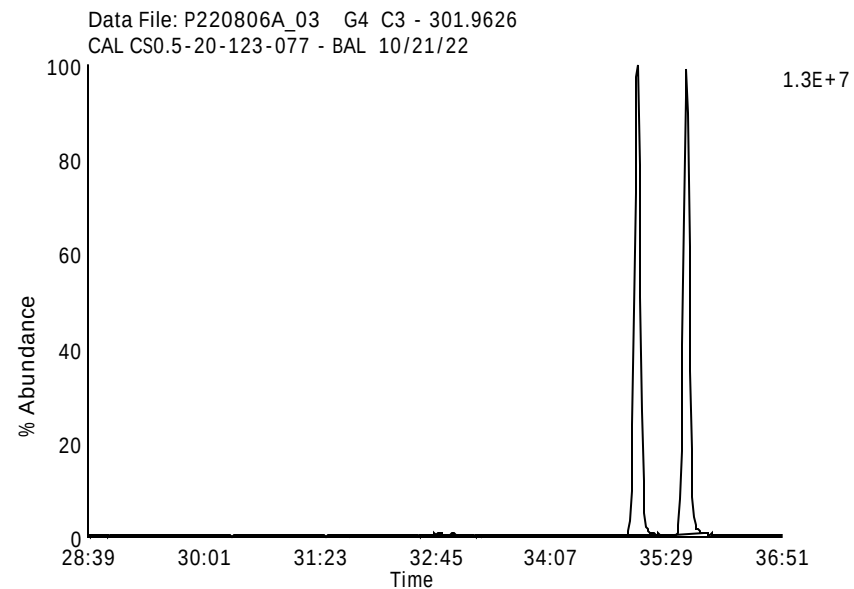
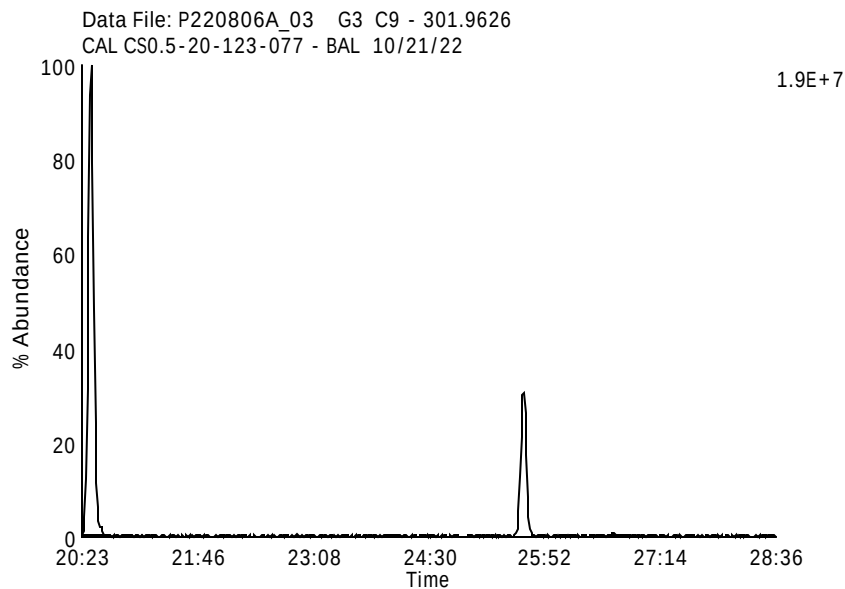
Data File Name: P220806A_03

Date Acquired: 8/6/2022

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22

Lab Sample ID: CS0.5-20-123-077

Instrument: 10MSHR09 (P)



Labeled Penta Chlorinated Biphenyls

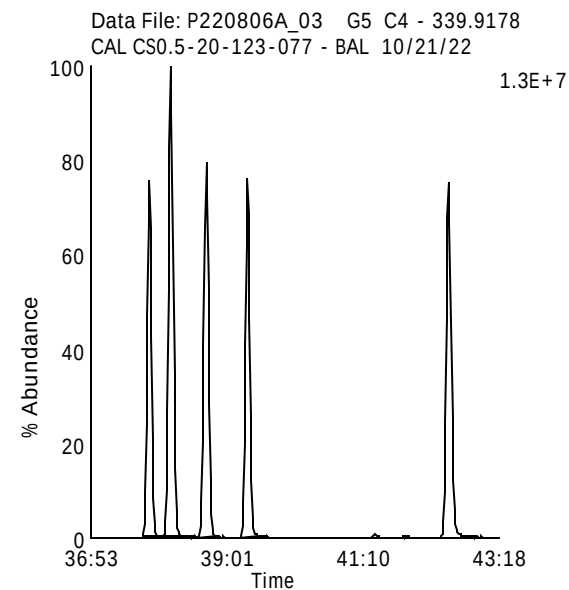
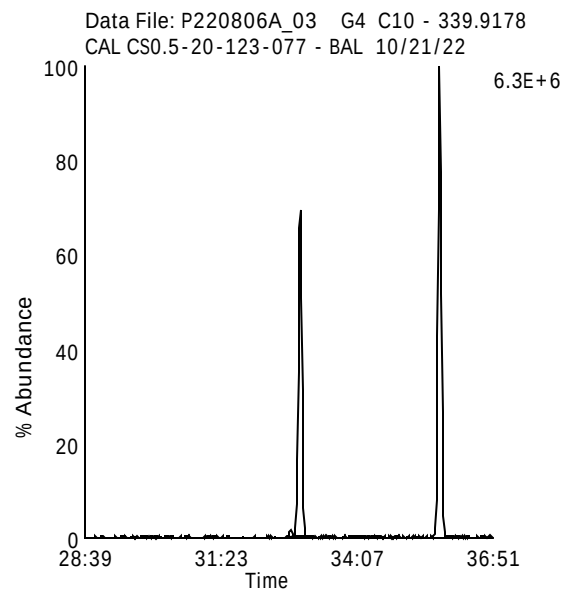
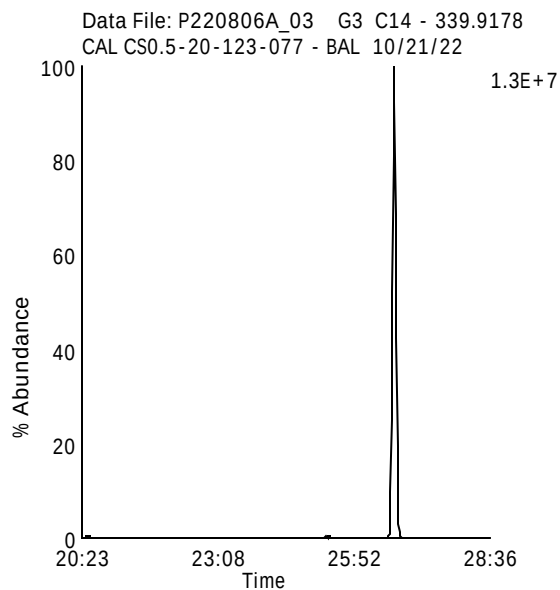
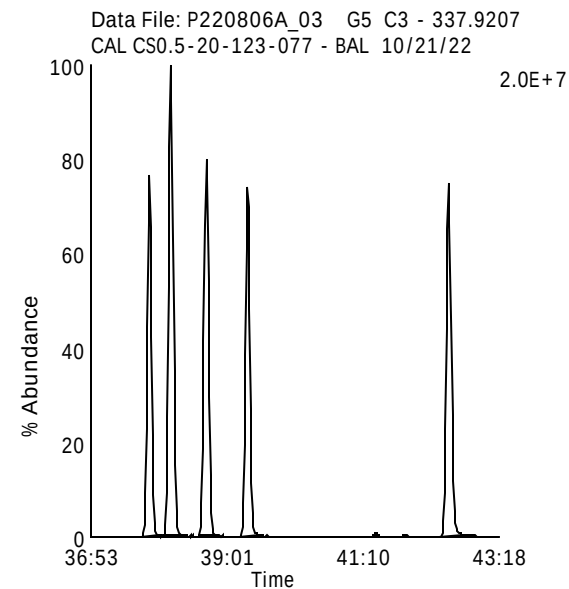
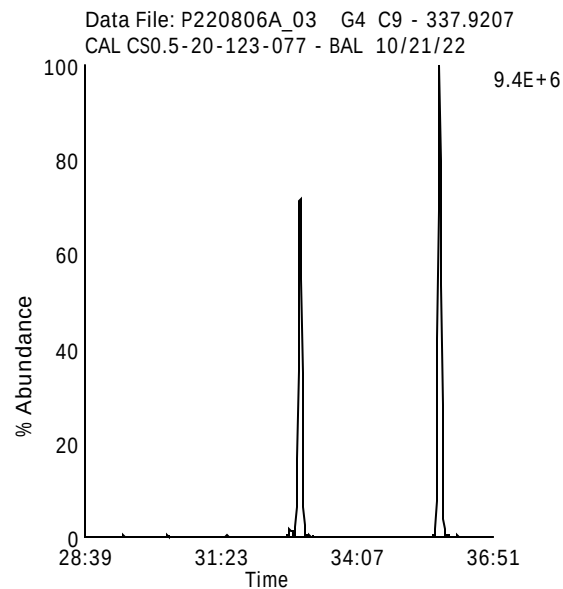
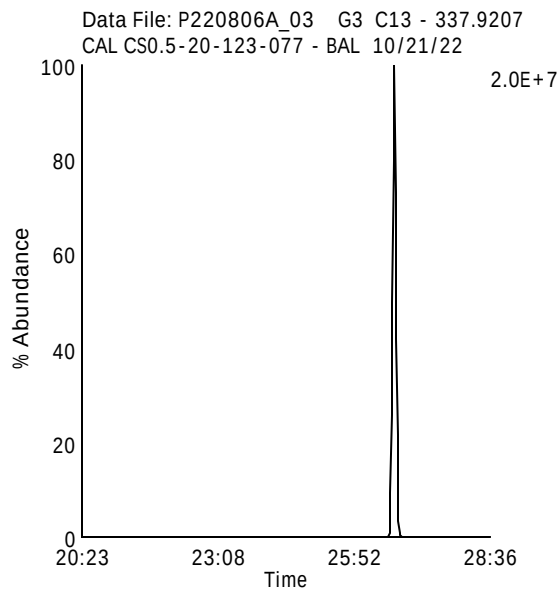
Data File Name: P220806A_03

Lab Sample ID: CS0.5-20-123-077

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22



Labeled Hexa Chlorinated Biphenyls

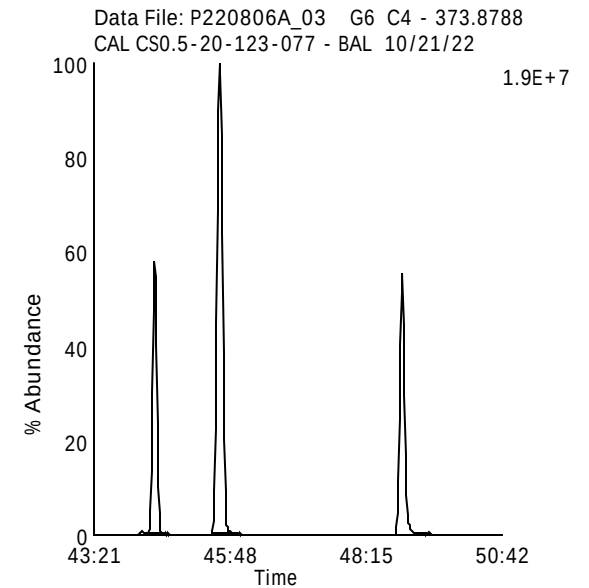
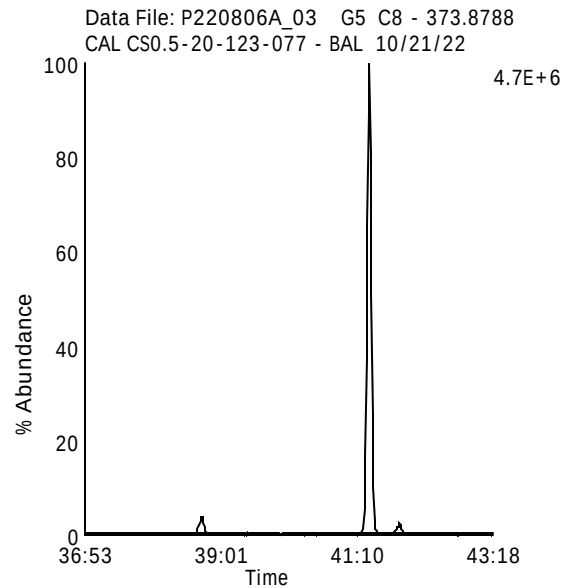
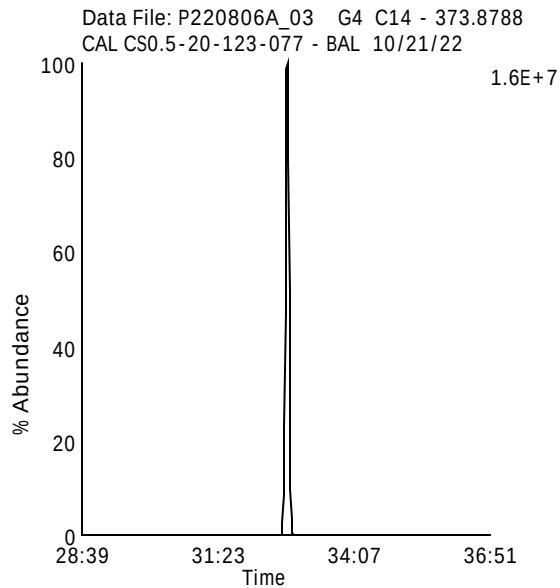
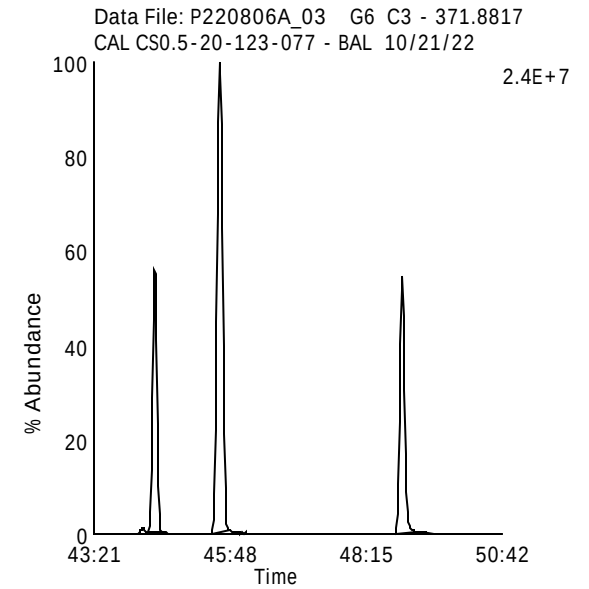
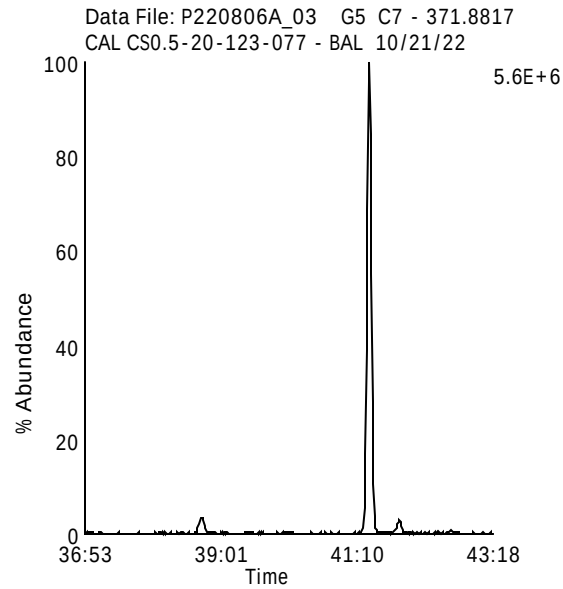
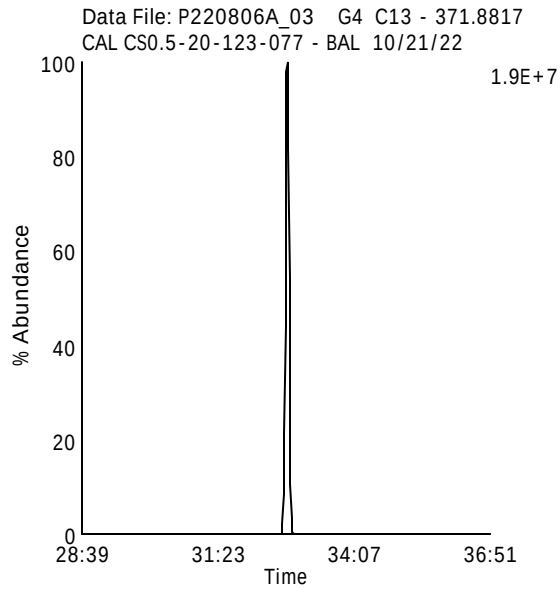
Data File Name: P220806A_03

Lab Sample ID: CS0.5-20-123-077

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22



Labeled Hepta Chlorinated Biphenyls

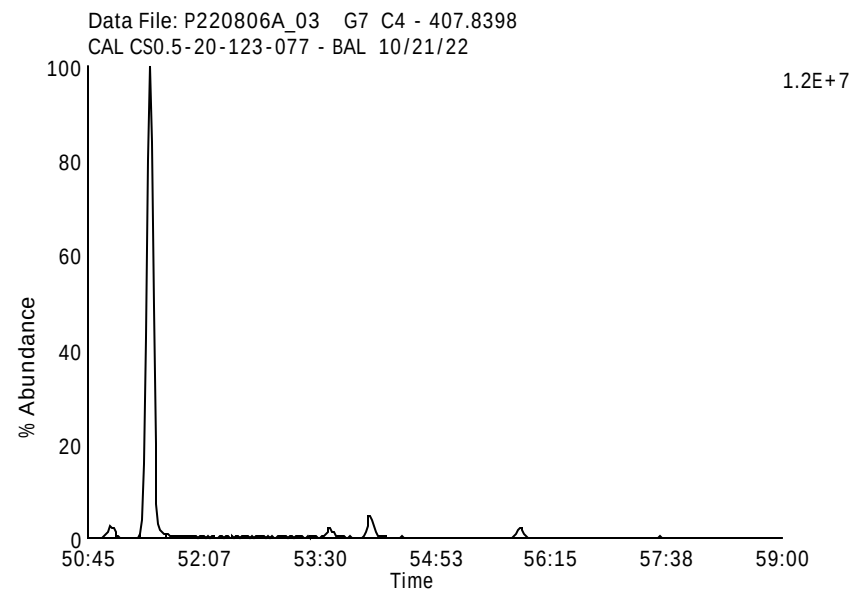
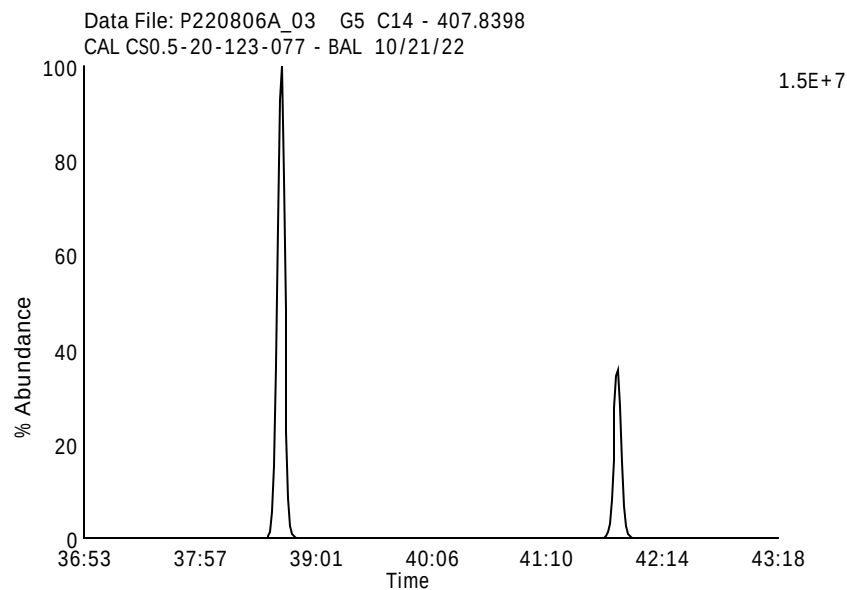
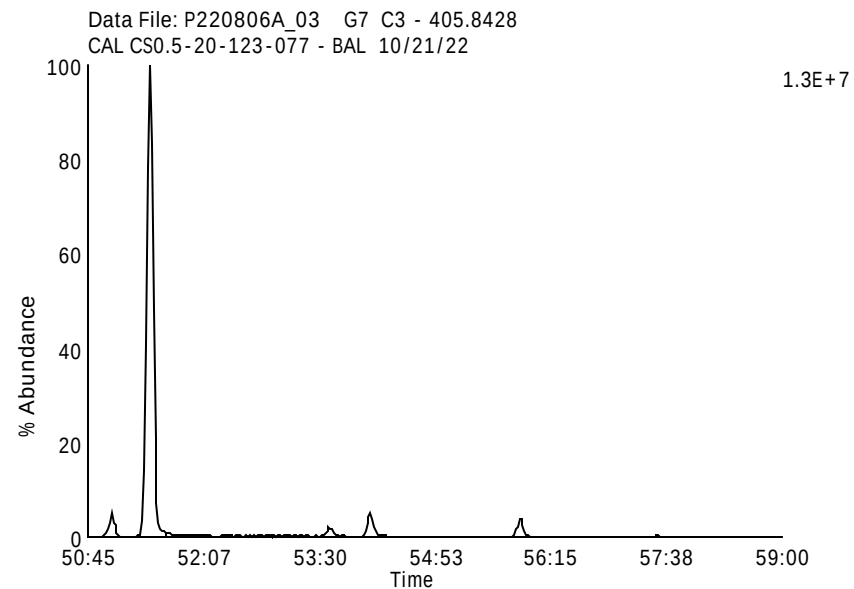
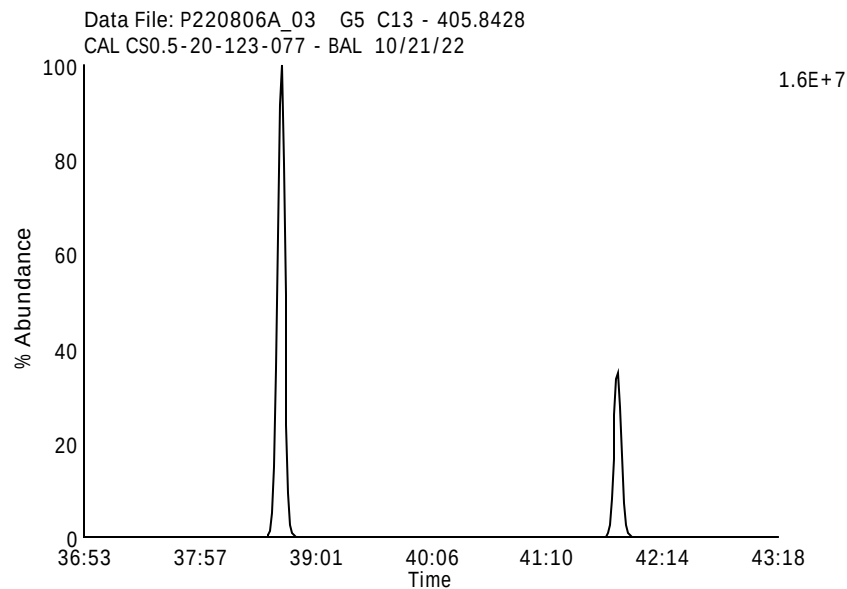
Data File Name: P220806A_03

Date Acquired: 8/6/2022

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22

Lab Sample ID: CS0.5-20-123-077

Instrument: 10MSHR09 (P)



Labeled Octa Chlorinated Biphenyls

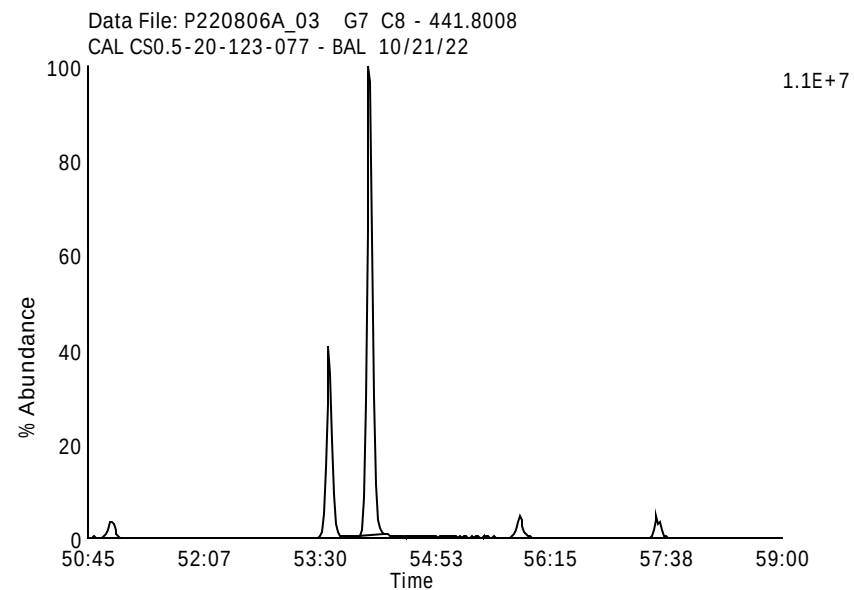
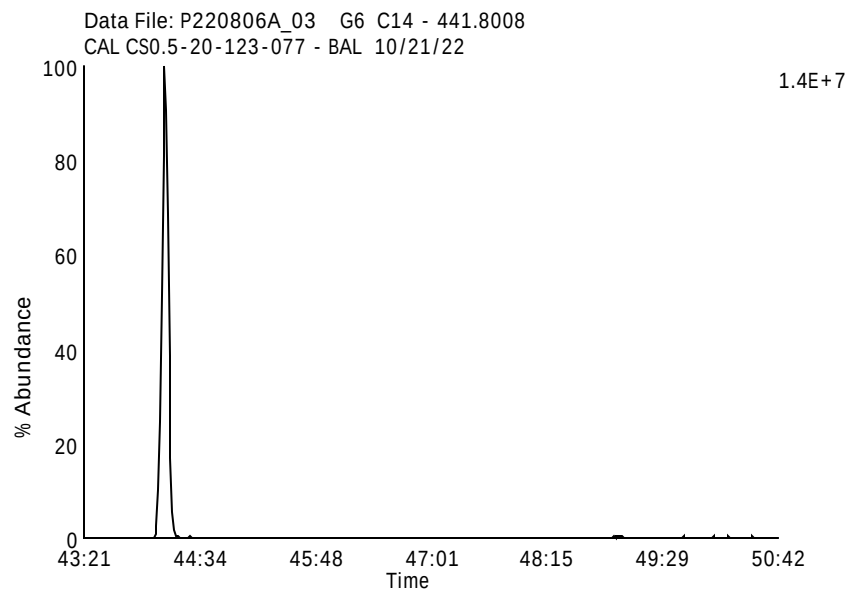
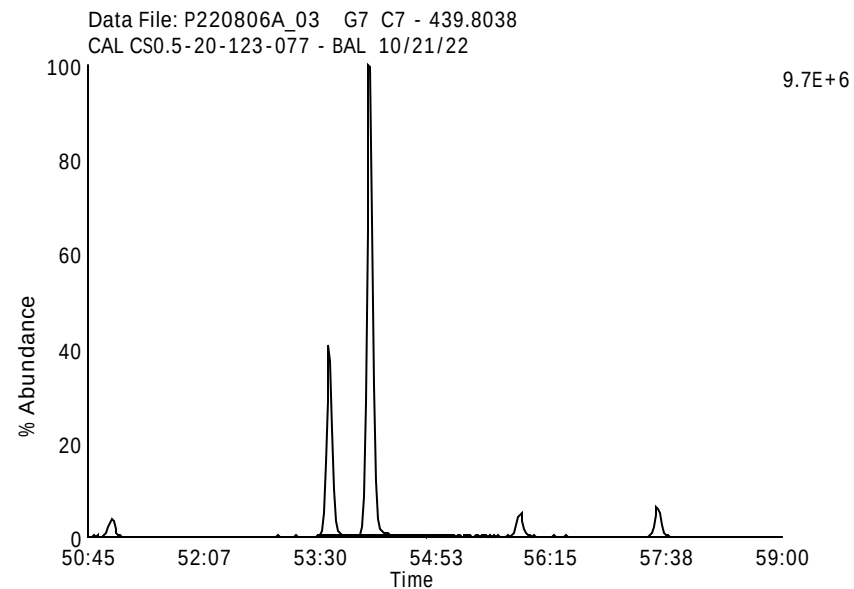
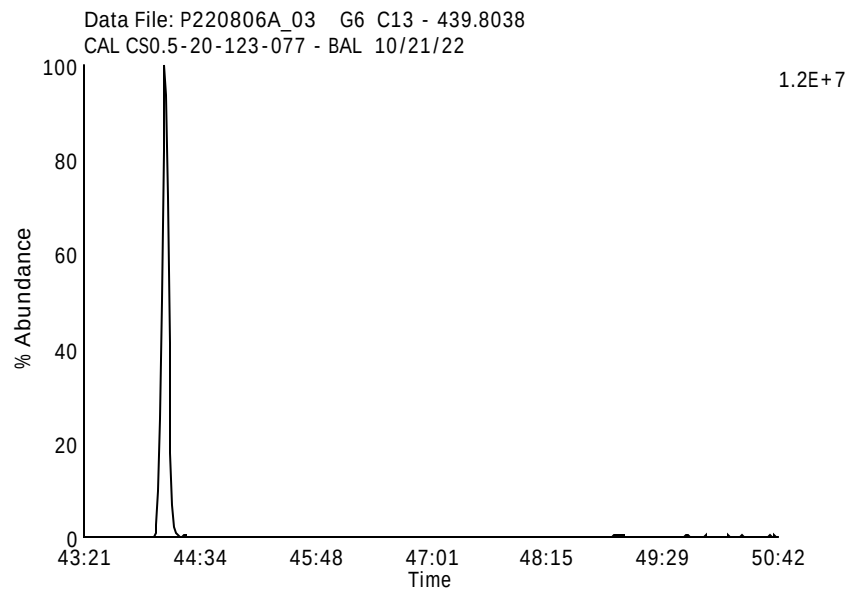
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Lab Sample ID: CS0.5-20-123-077

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22



Labeled Nona Chlorinated Biphenyls

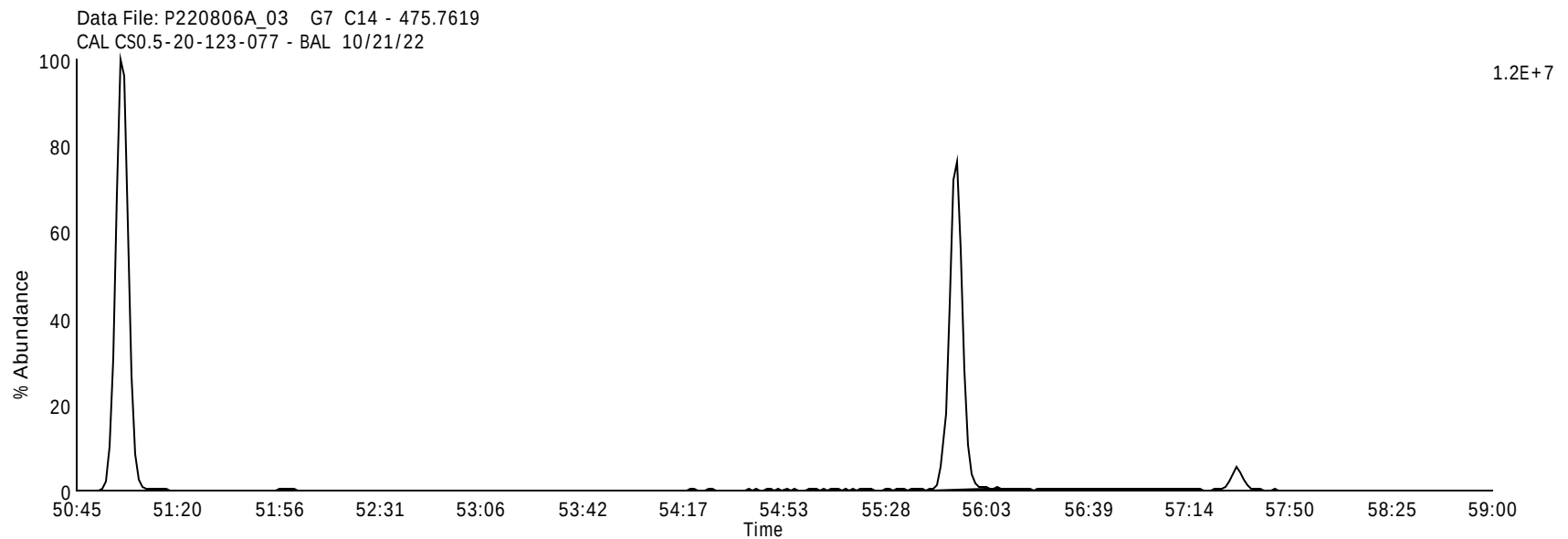
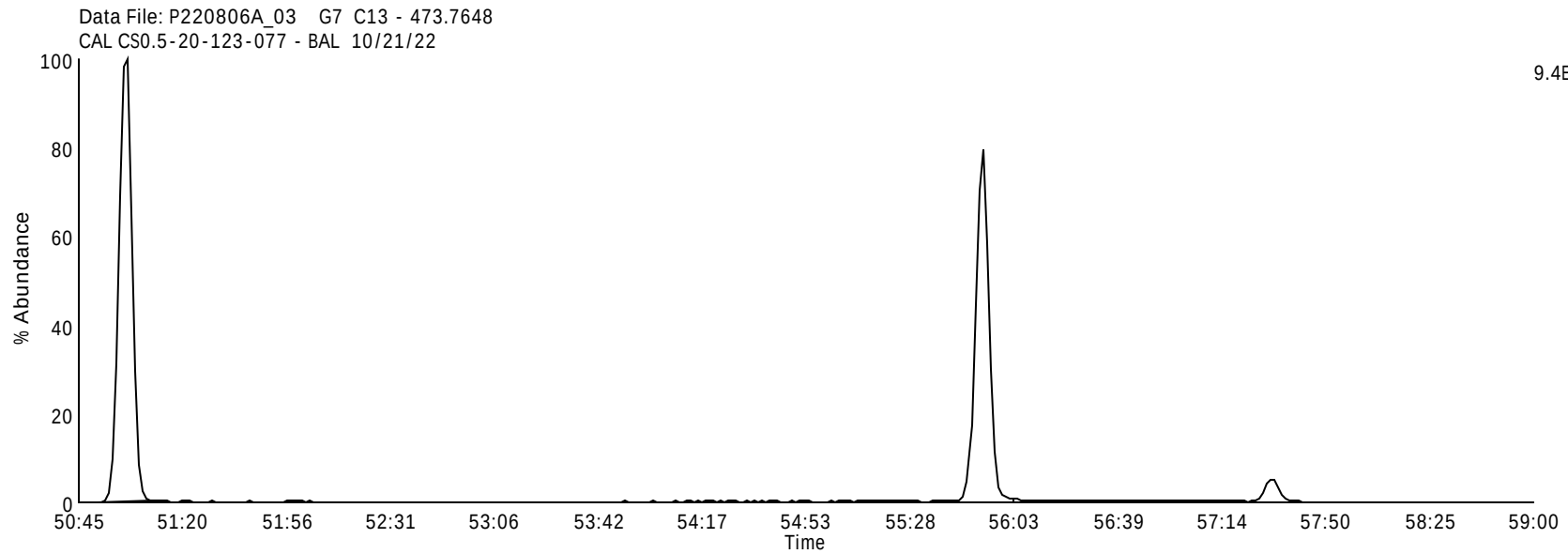
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Lab Sample ID: CS0.5-20-123-077

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22



Labeled Deca Chlorinated Biphenyl

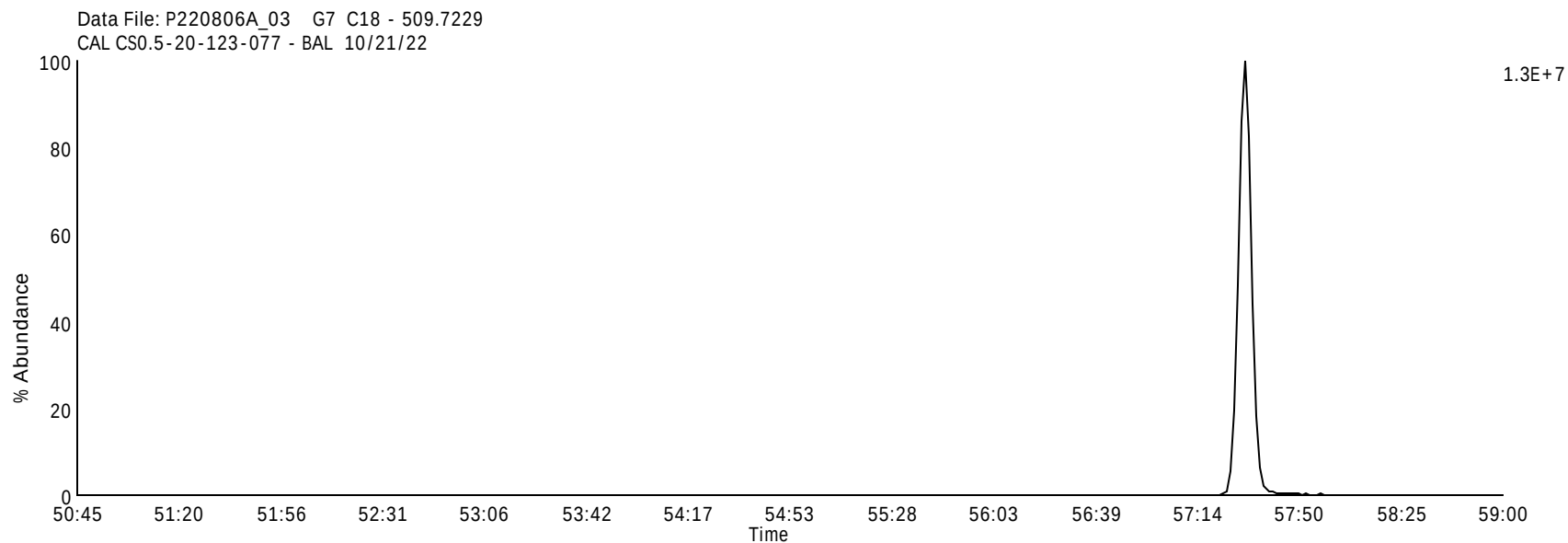
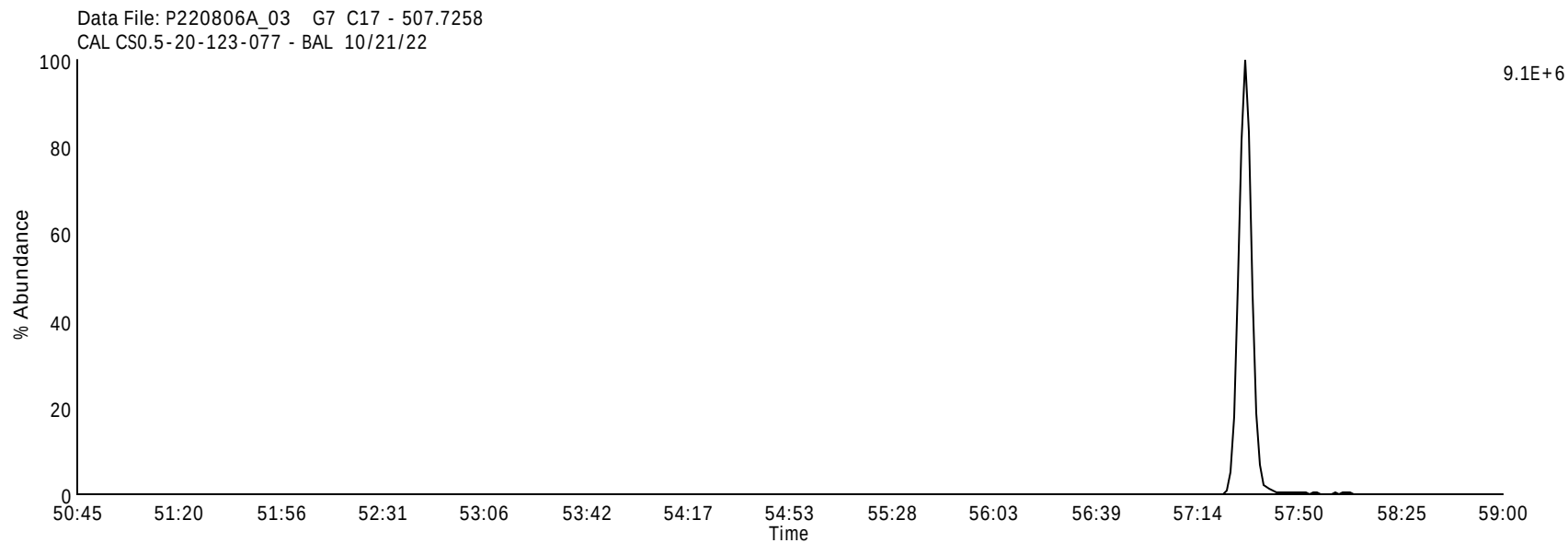
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Date Acquired: 8/6/2022

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22

Lab Sample ID: CS0.5-20-123-077

Instrument: 10MSHR09 (P)



Mono Chlorinated Biphenyls

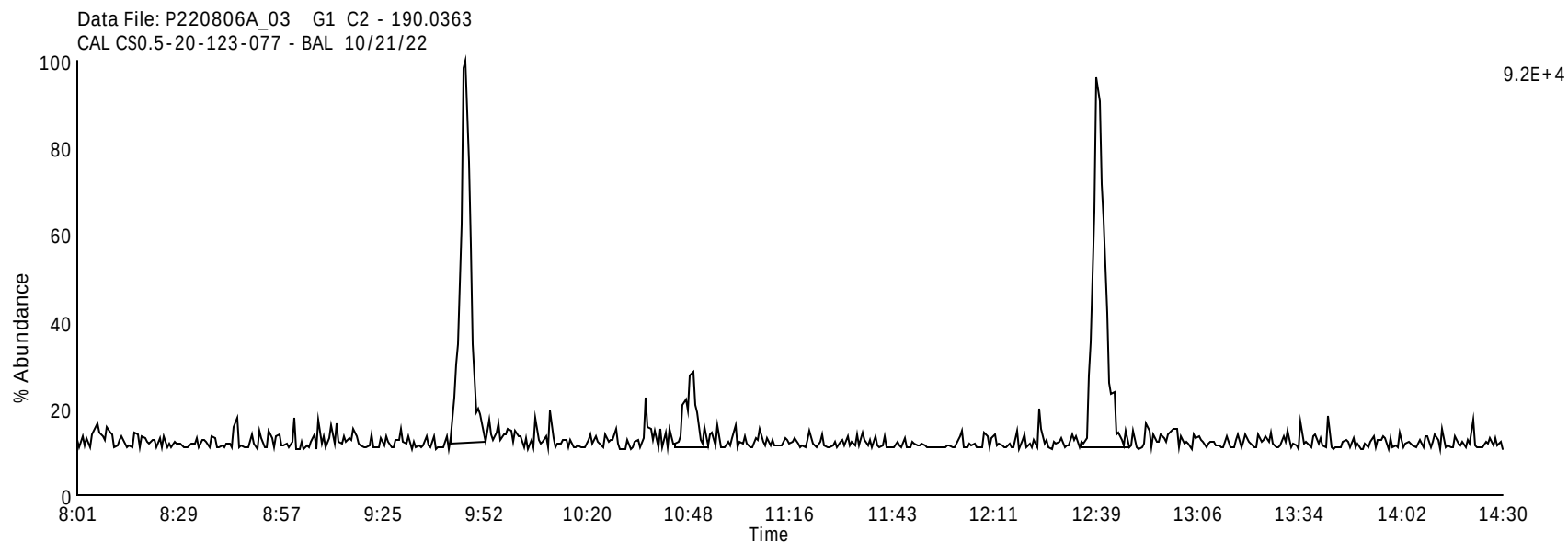
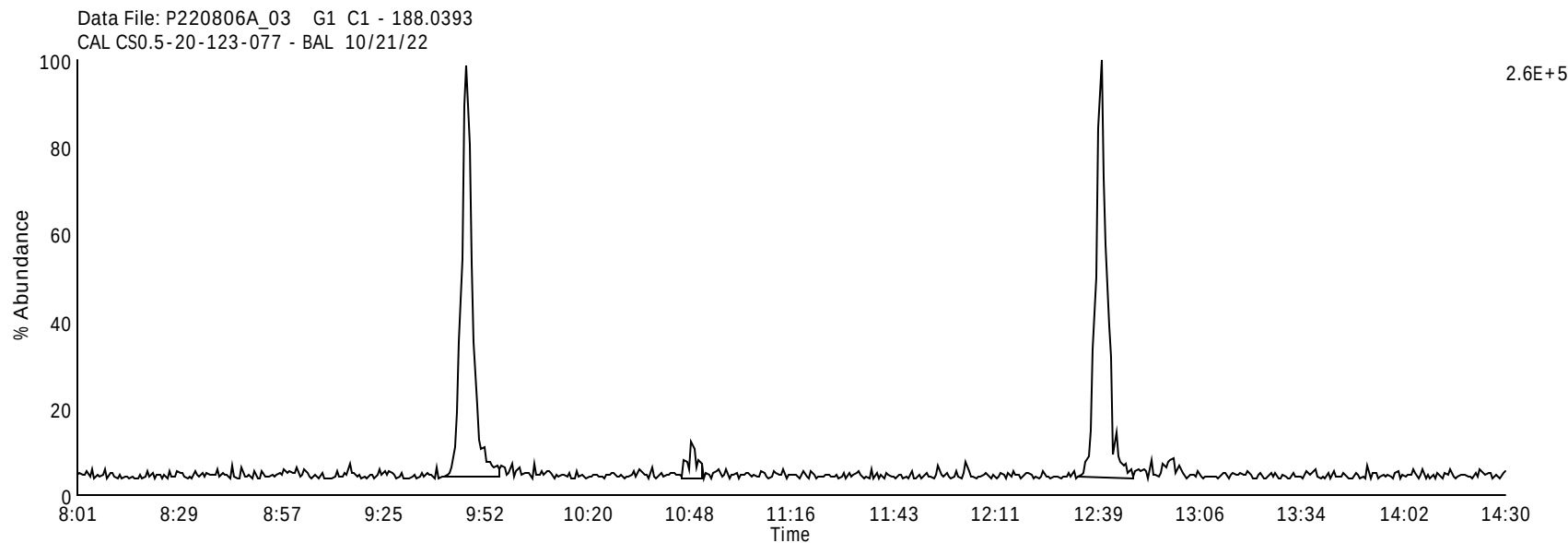
Data File Name: P220806A_03

Lab Sample ID: CS0.5-20-123-077

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22



Di Chlorinated Biphenyls

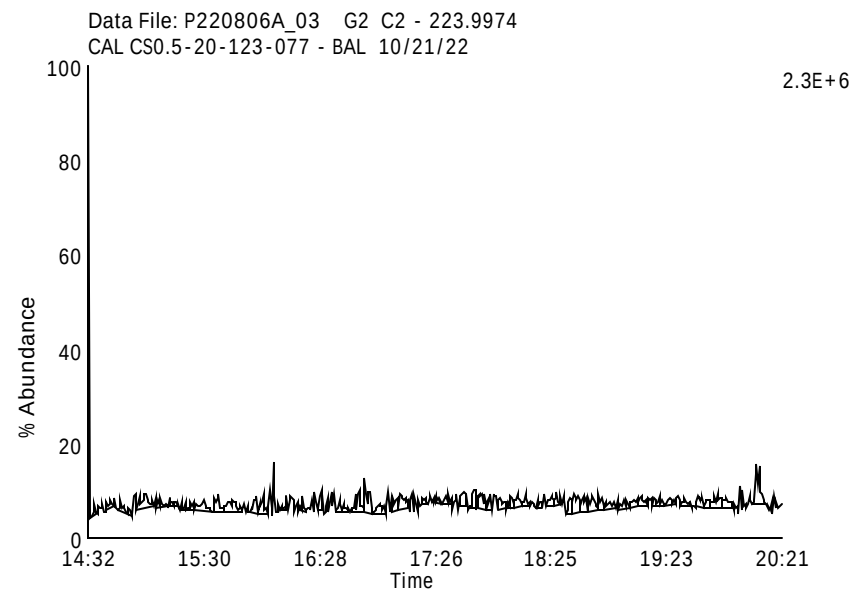
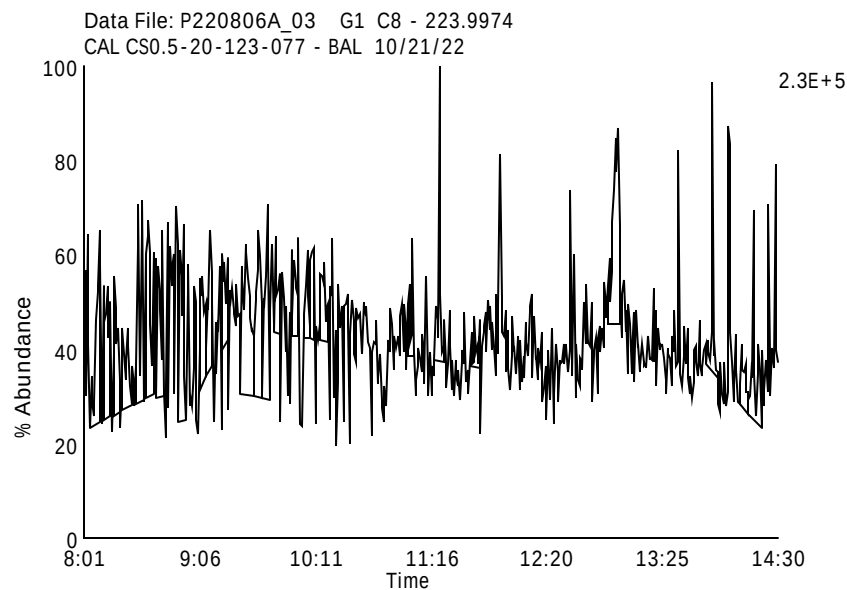
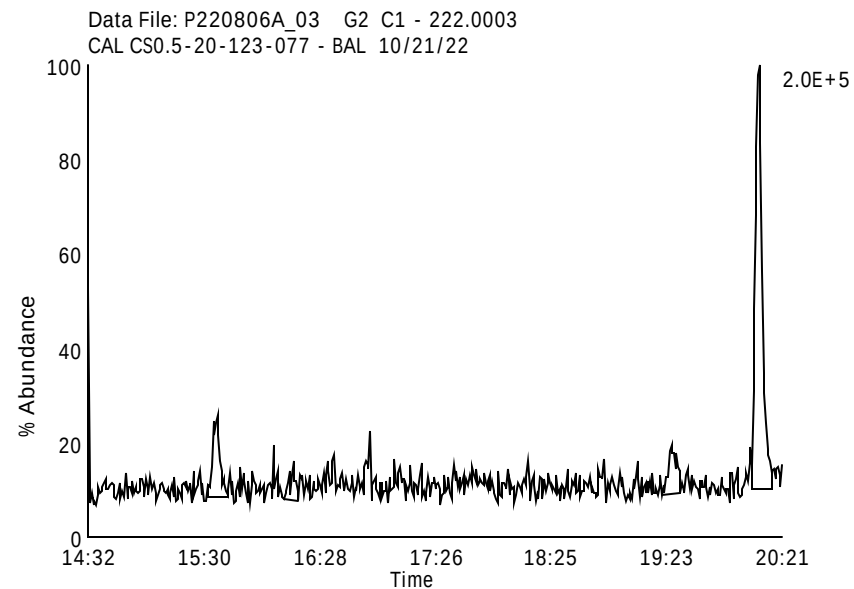
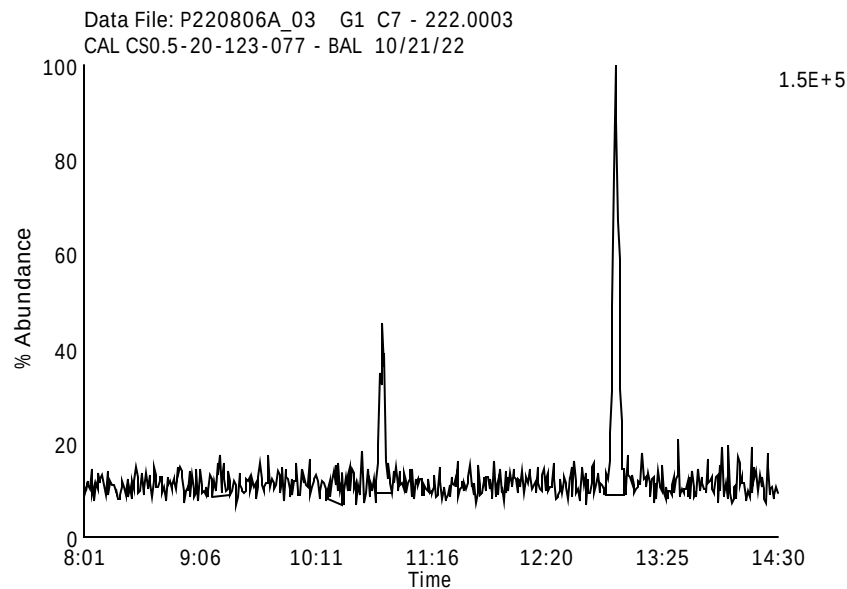
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Date Acquired: 8/6/2022

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22

Lab Sample ID: CS0.5-20-123-077

Instrument: 10MSHR09 (P)



Tri Chlorinated Biphenyls

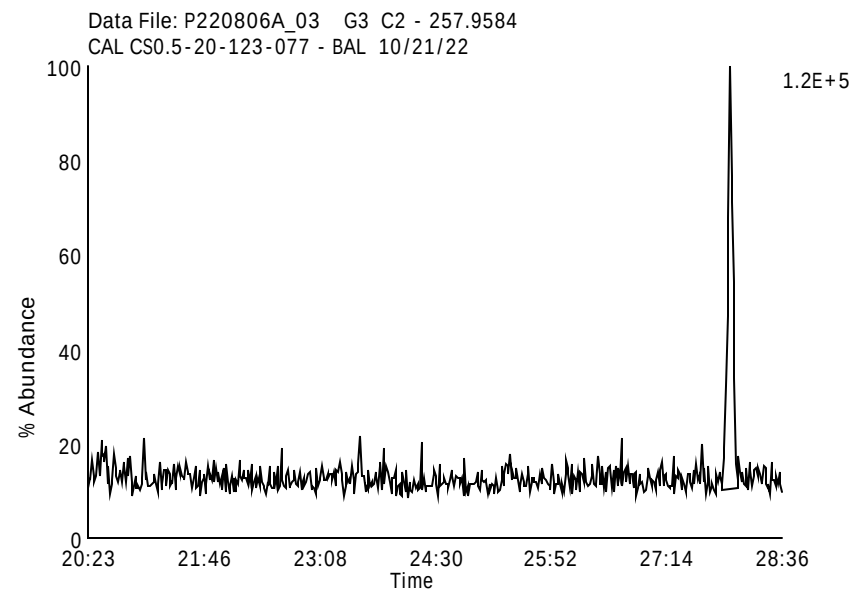
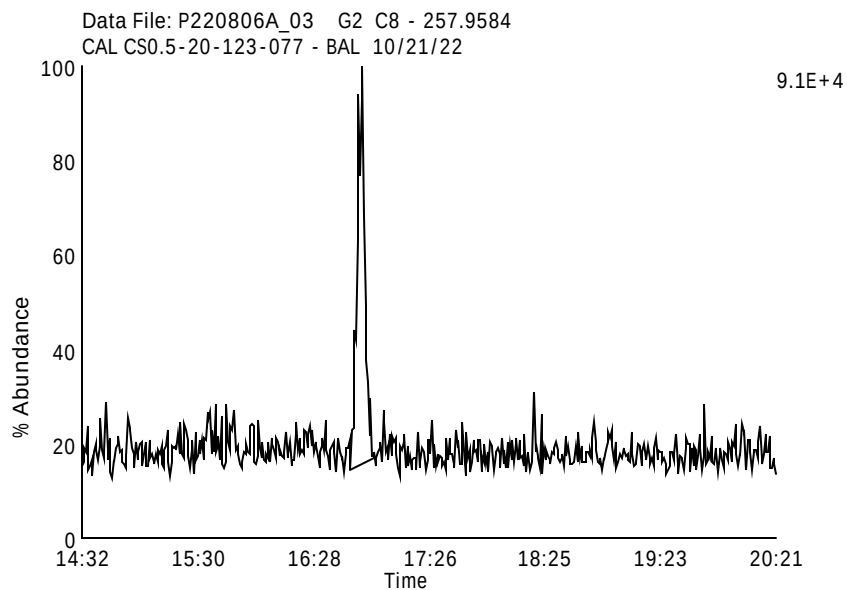
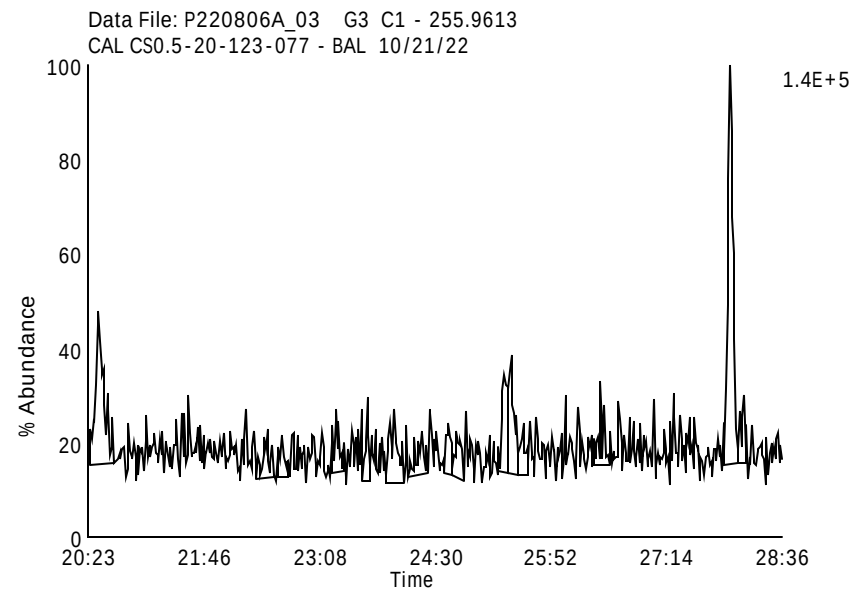
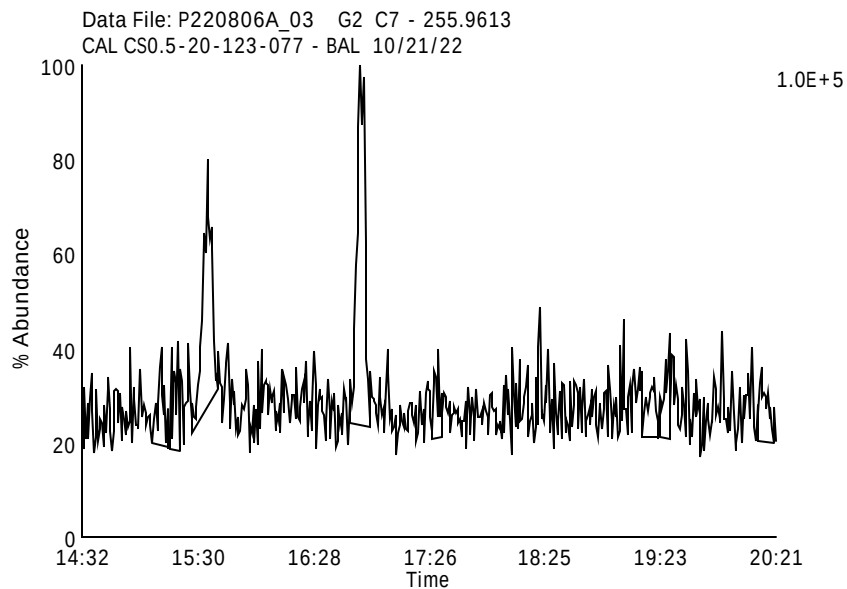
Data File Name: P220806A_03

Date Acquired: 8/6/2022

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22

Lab Sample ID: CS0.5-20-123-077

Instrument: 10MSHR09 (P)



Tetra Chlorinated Biphenyls

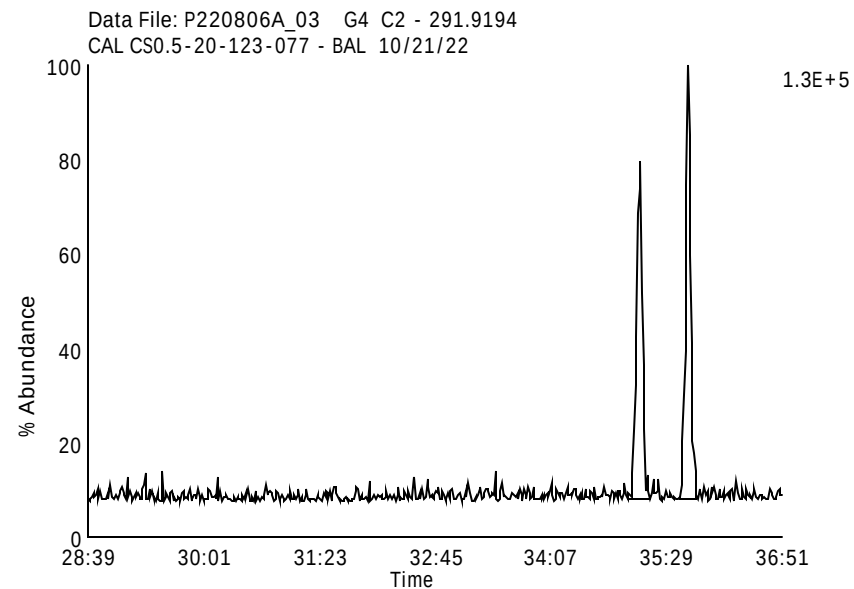
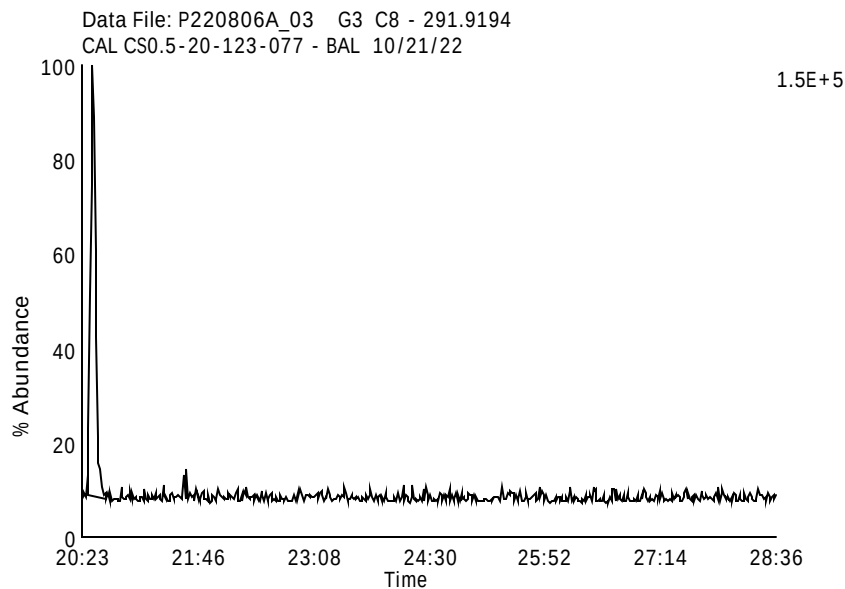
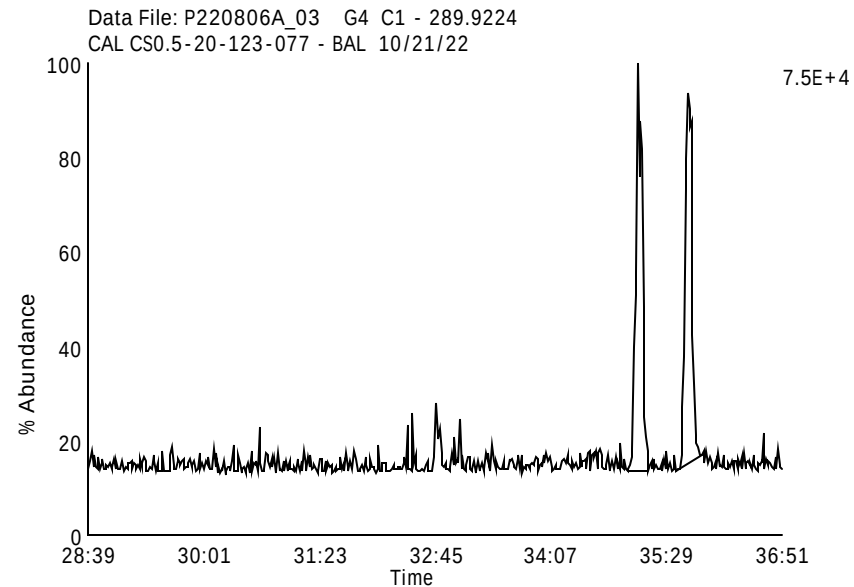
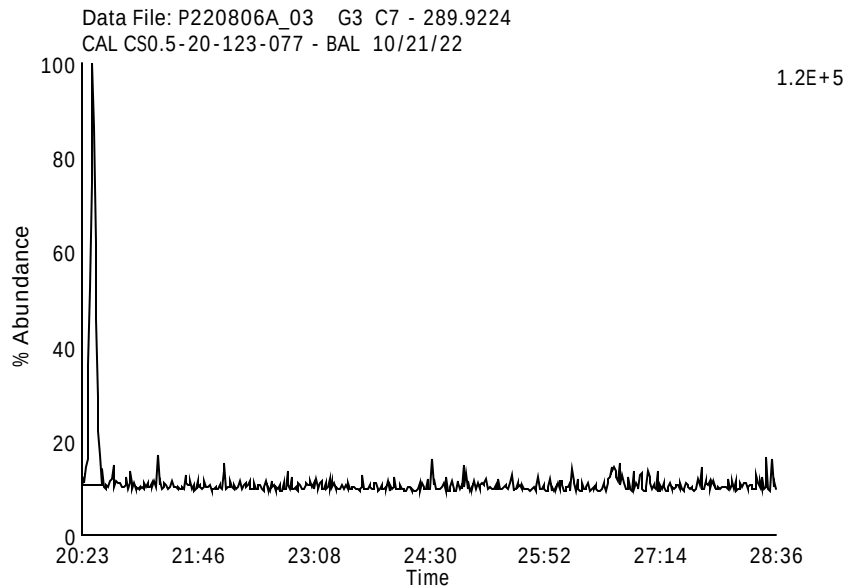
Data File Name: P220806A_03

Date Acquired: 8/6/2022

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22

Lab Sample ID: CS0.5-20-123-077

Instrument: 10MSHR09 (P)



Penta Chlorinated Biphenyls

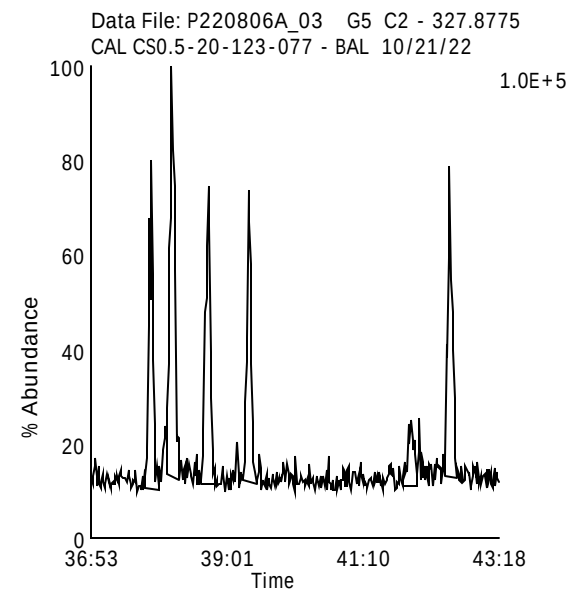
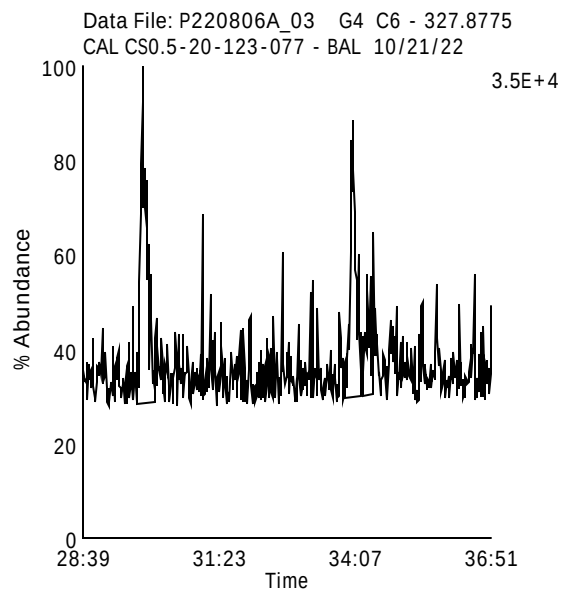
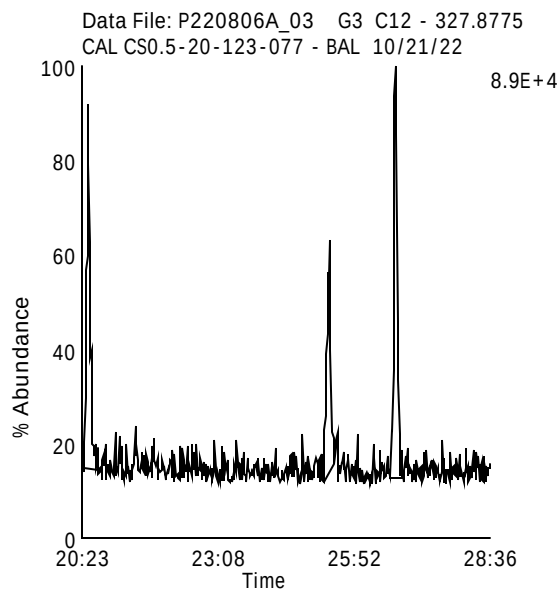
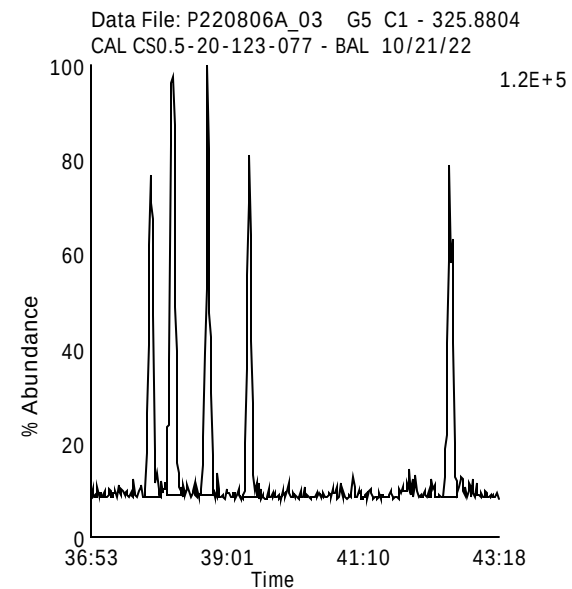
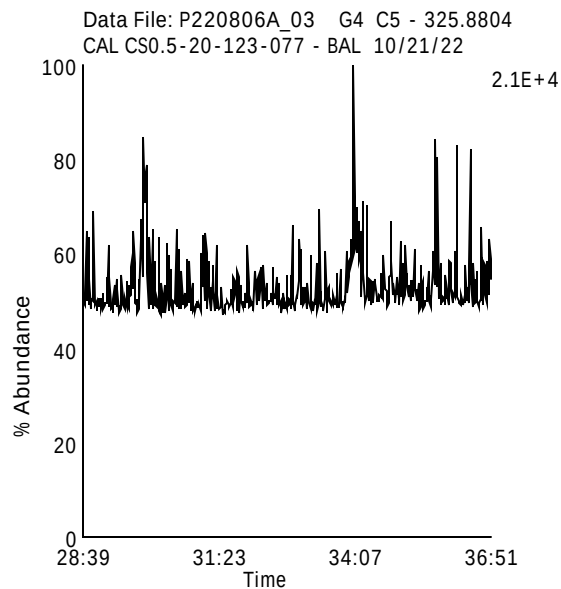
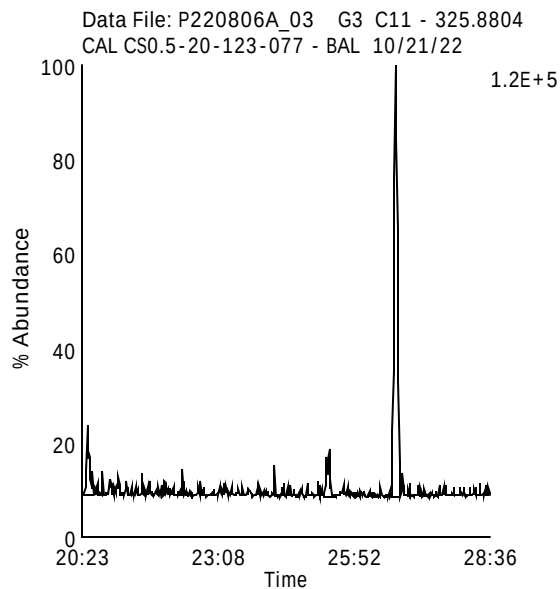
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Date Acquired: 8/6/2022

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22

Lab Sample ID: CS0.5-20-123-077

Instrument: 10MSHR09 (P)



Hexa Chlorinated Biphenyls

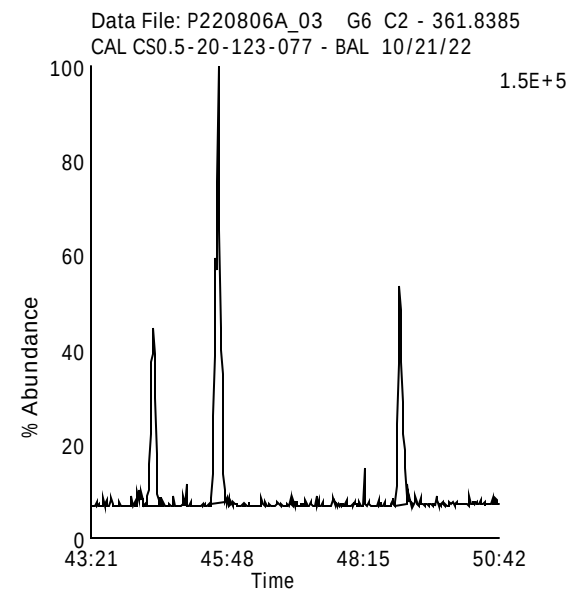
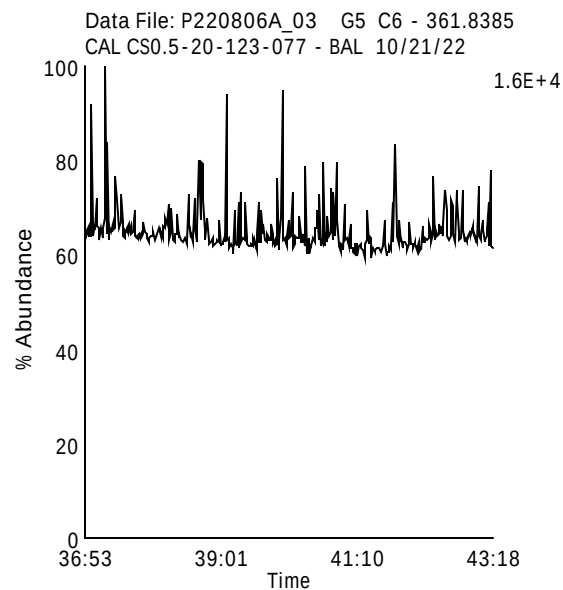
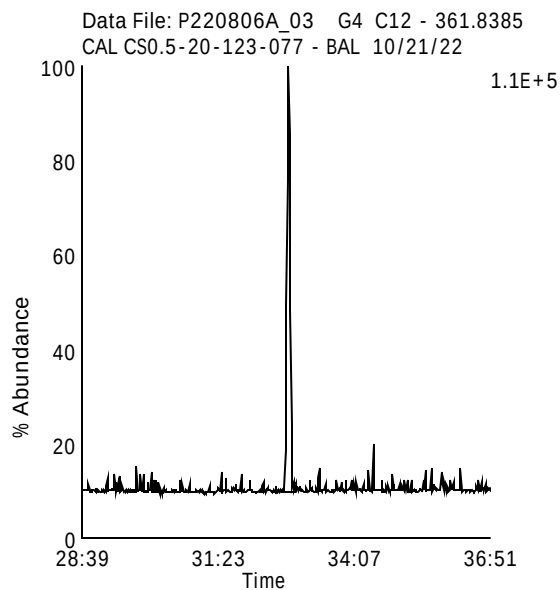
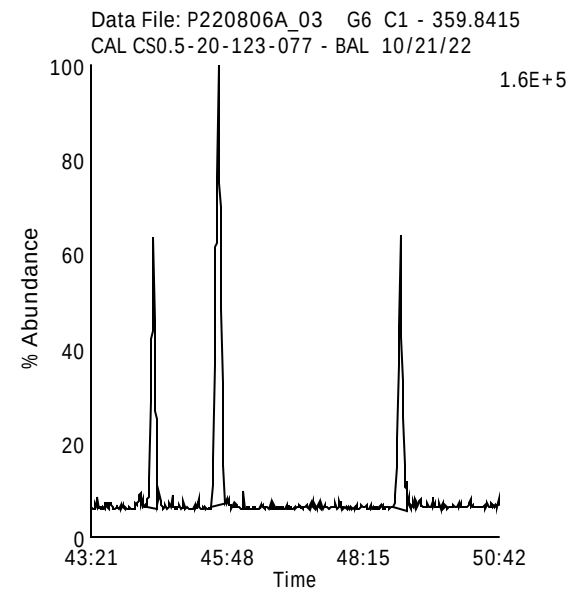
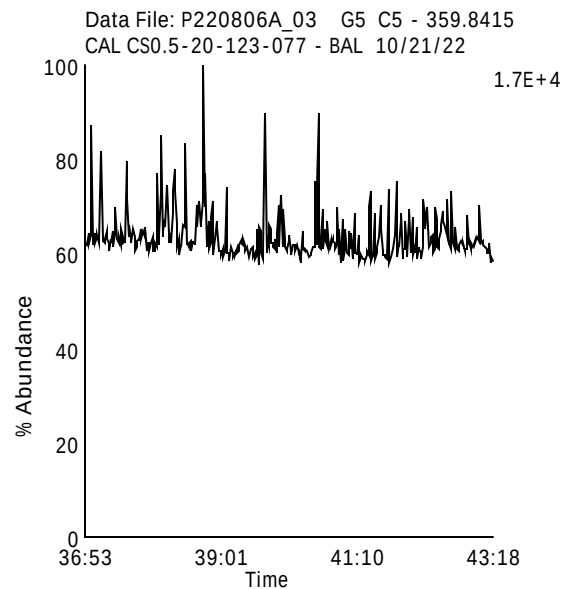
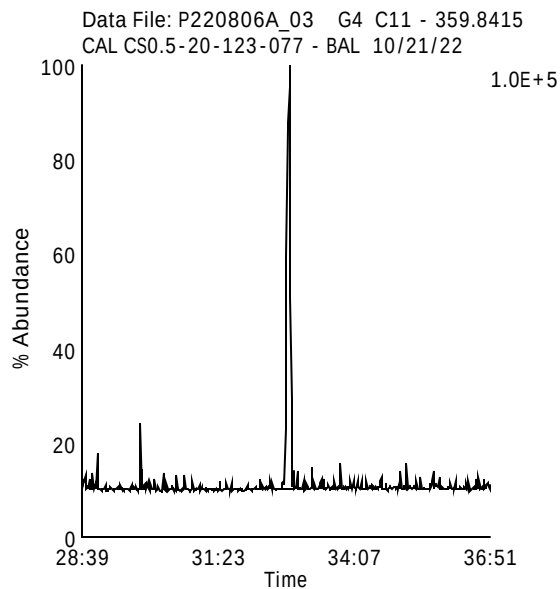
Data File Name: P220806A_03

Date Acquired: 8/6/2022

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22

Lab Sample ID: CS0.5-20-123-077

Instrument: 10MSHR09 (P)



Hepta Chlorinated Biphenyls

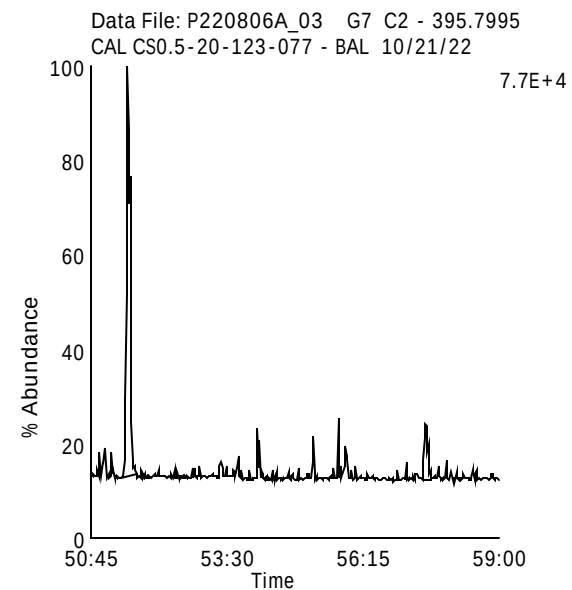
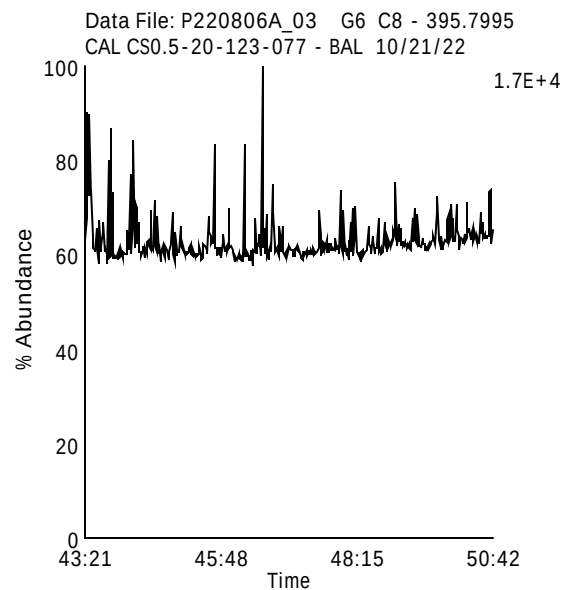
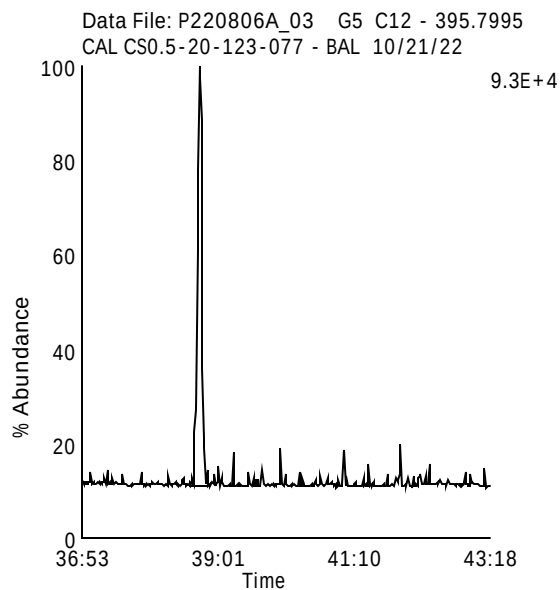
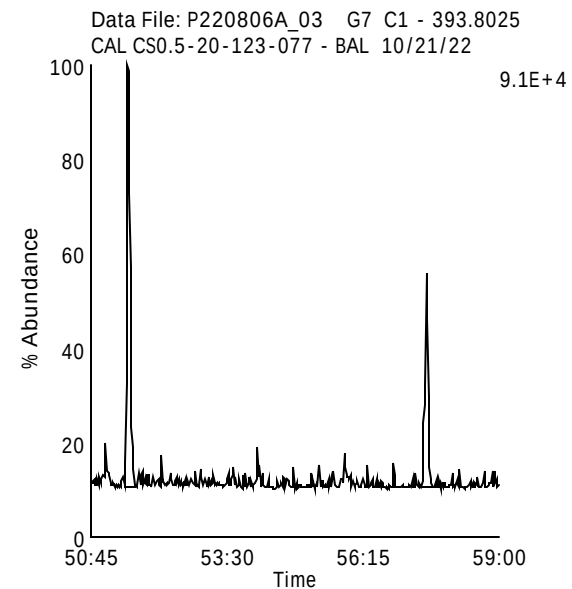
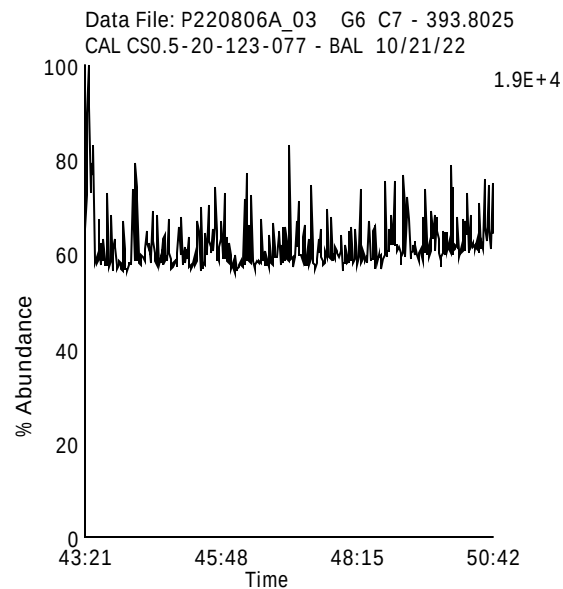
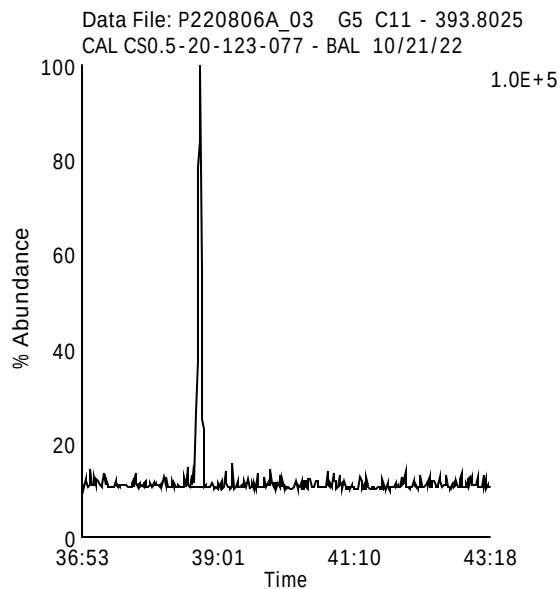
Data File Name: P220806A_03

Date Acquired: 8/6/2022

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22

Lab Sample ID: CS0.5-20-123-077

Instrument: 10MSHR09 (P)



Octa Chlorinated Biphenyls

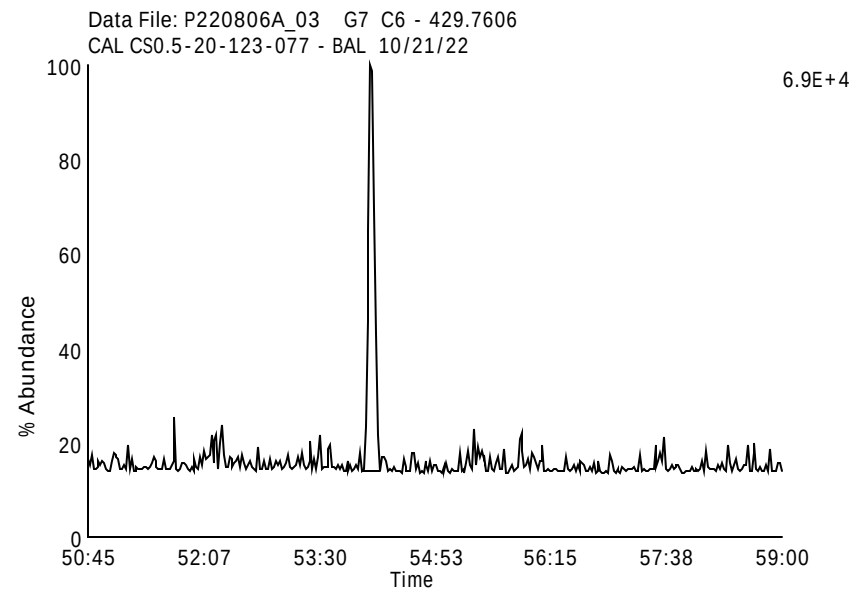
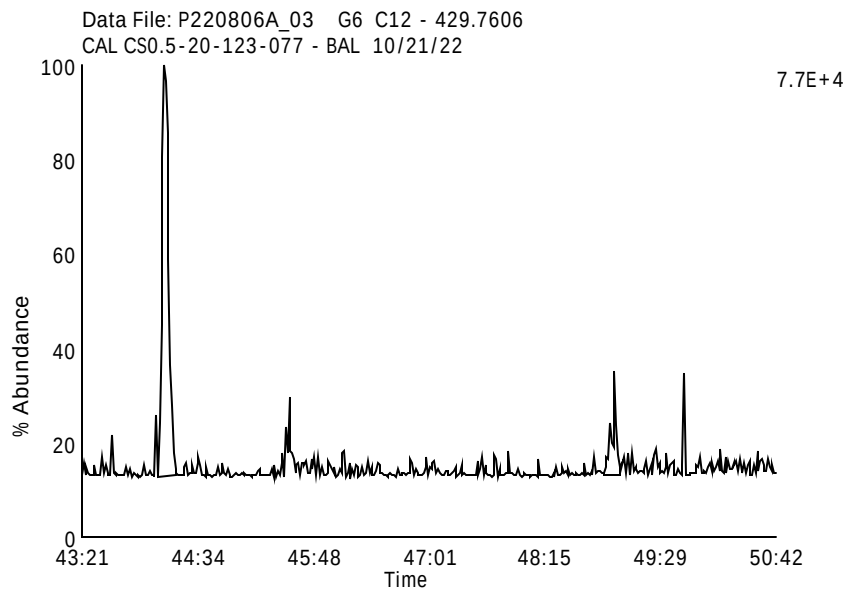
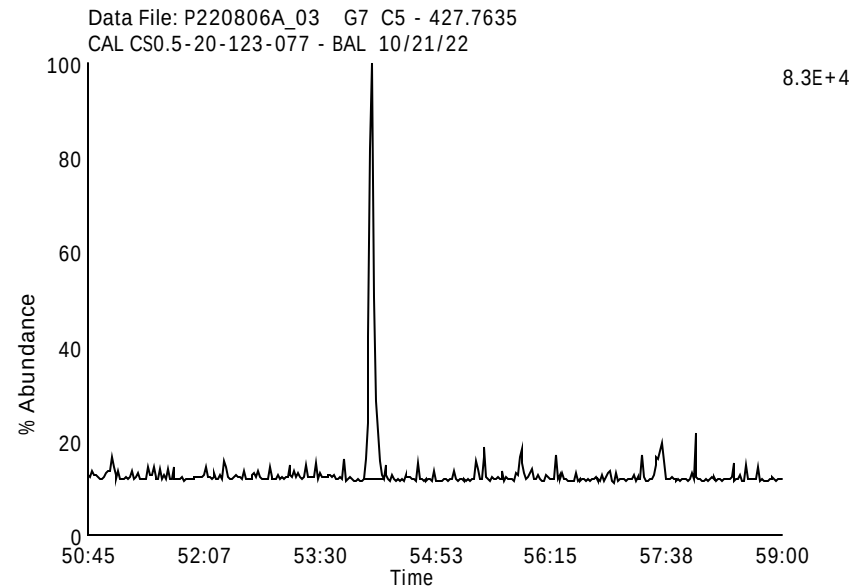
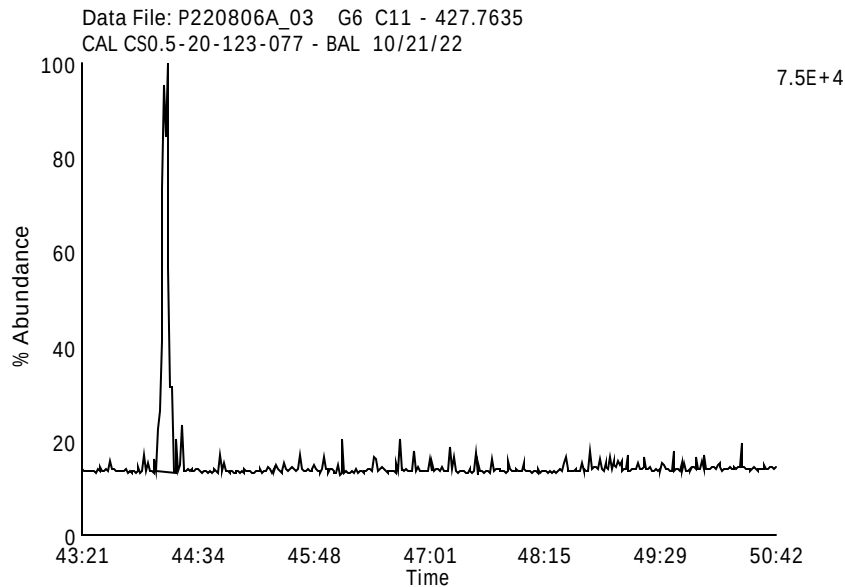
Data File Name: P220806A_03

Date Acquired: 8/6/2022

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22

Lab Sample ID: CS0.5-20-123-077

Instrument: 10MSHR09 (P)



Nona Chlorinated Biphenyls

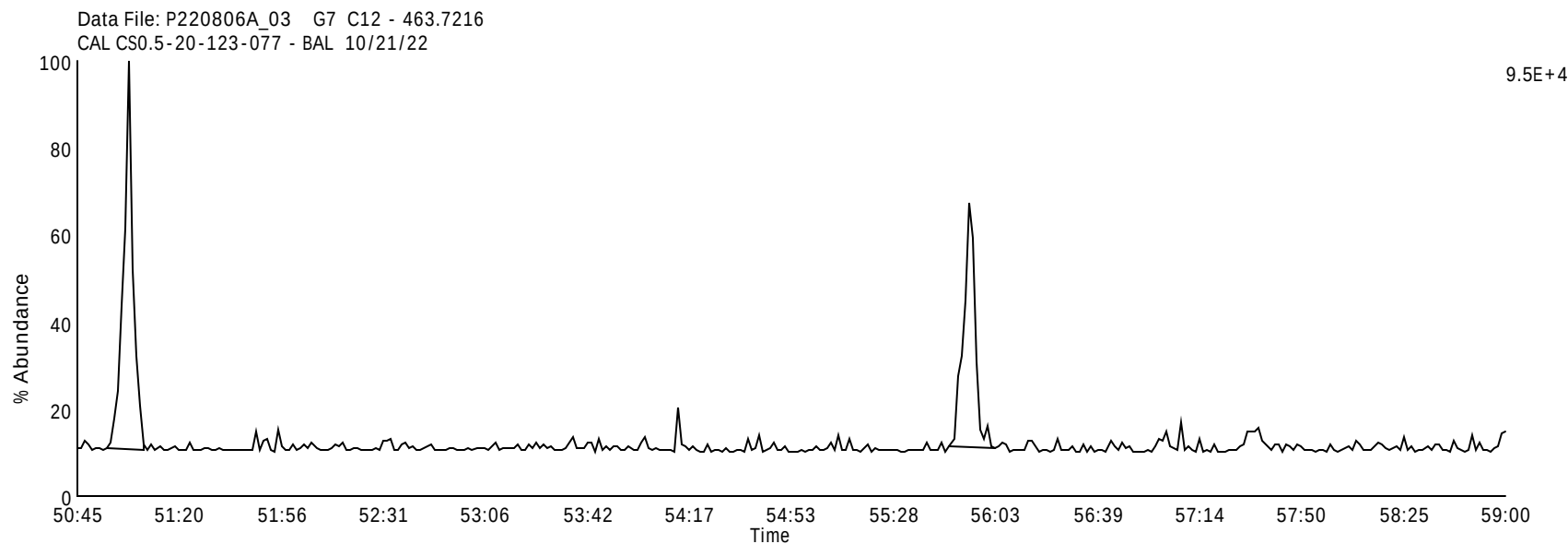
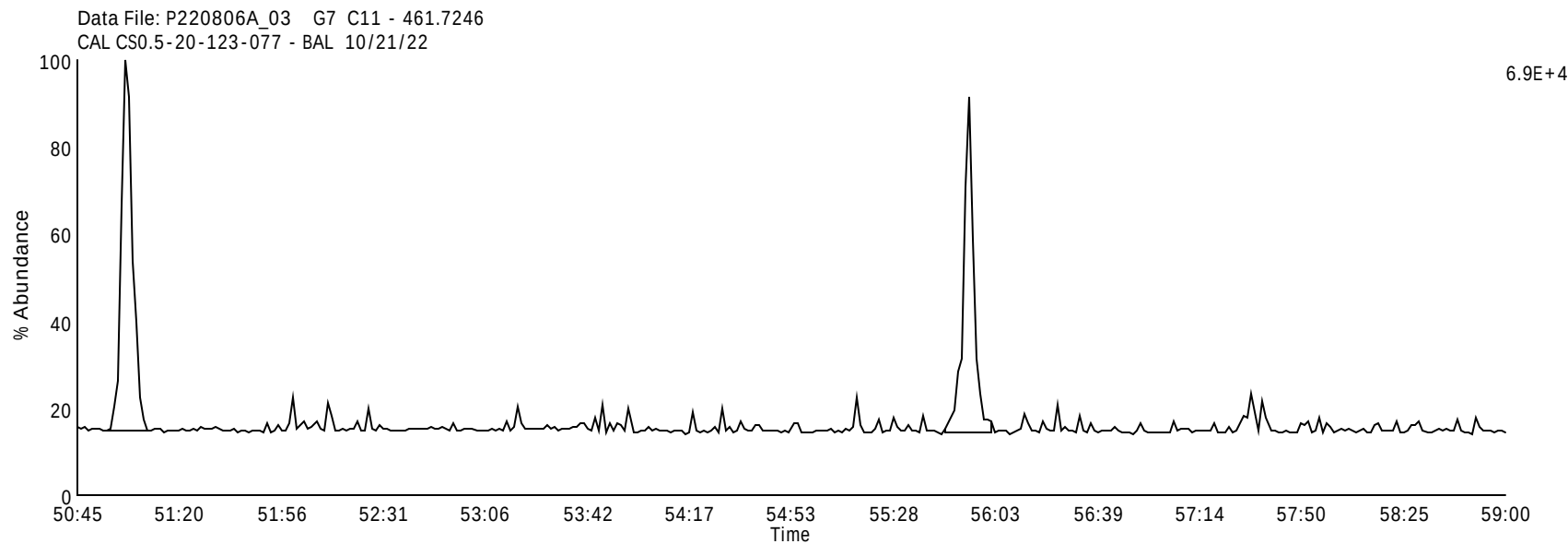
Data File Name: P220806A_03

Lab Sample ID: CS0.5-20-123-077

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22



Deca Chlorinated Biphenyl

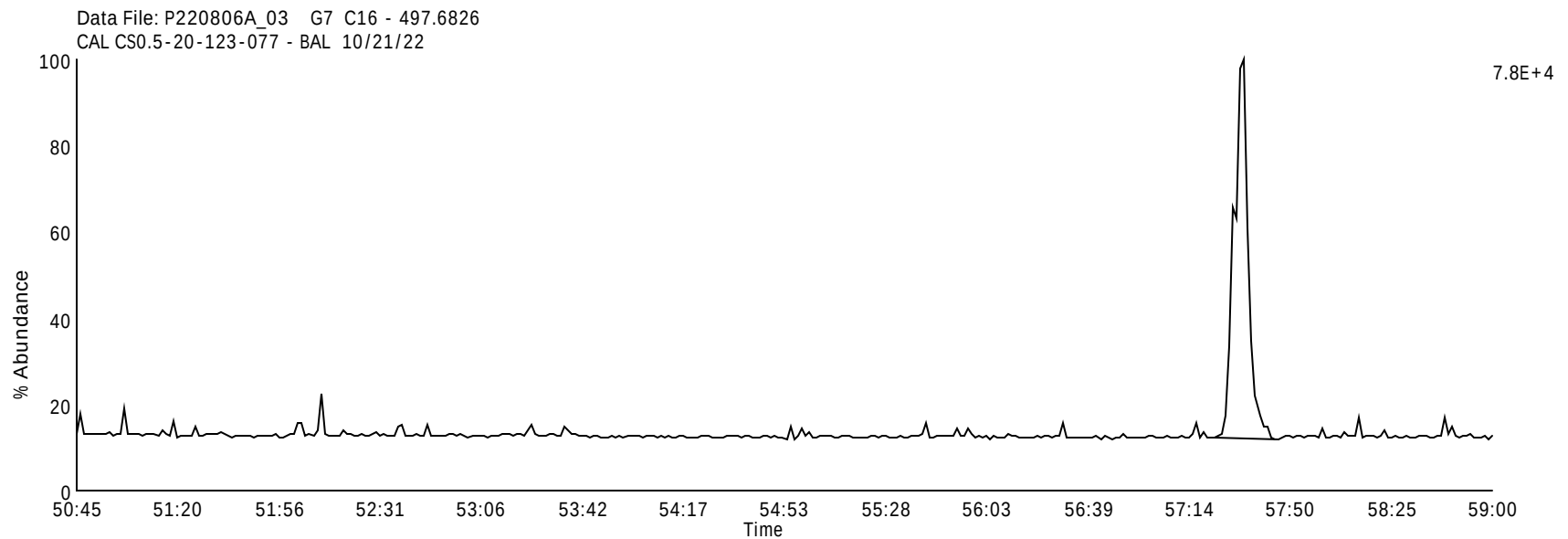
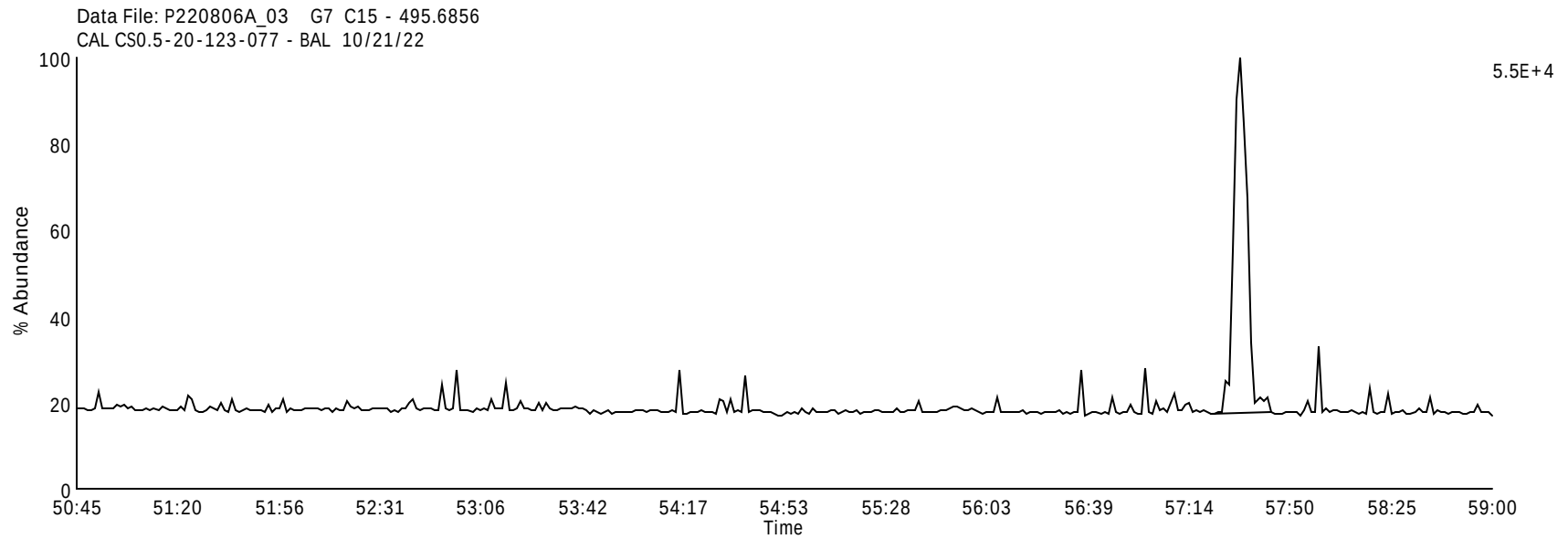
Data File Name: P220806A_03

Date Acquired: 8/6/2022

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22

Lab Sample ID: CS0.5-20-123-077

Instrument: 10MSHR09 (P)



Group 1 - 4 Lock mass

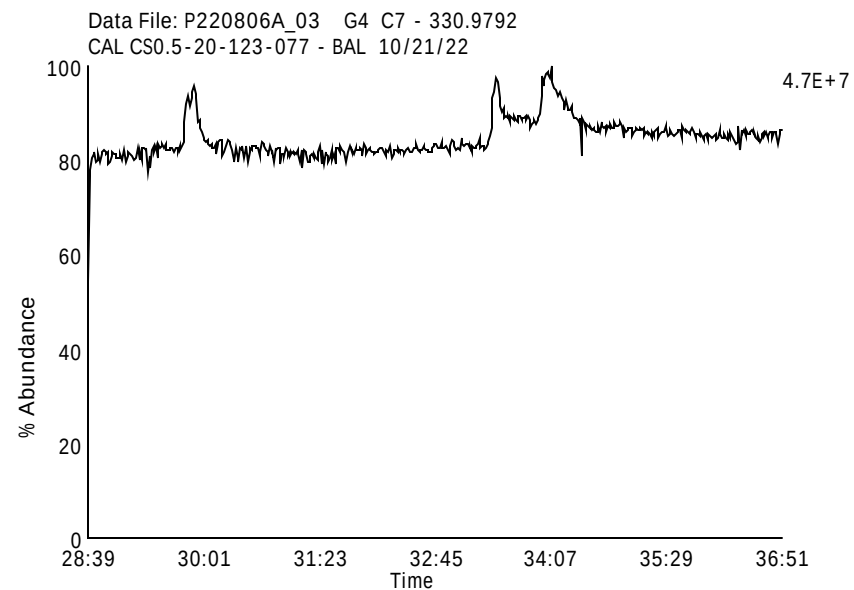
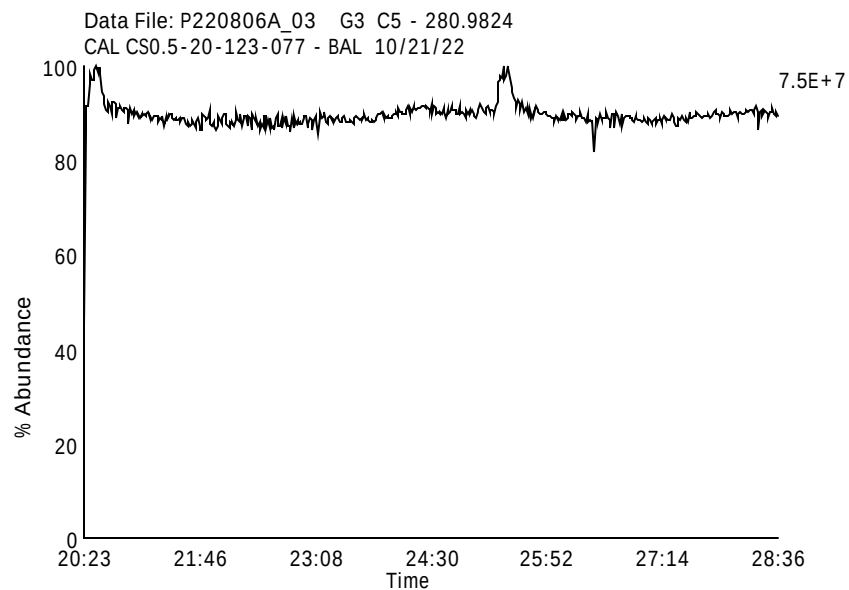
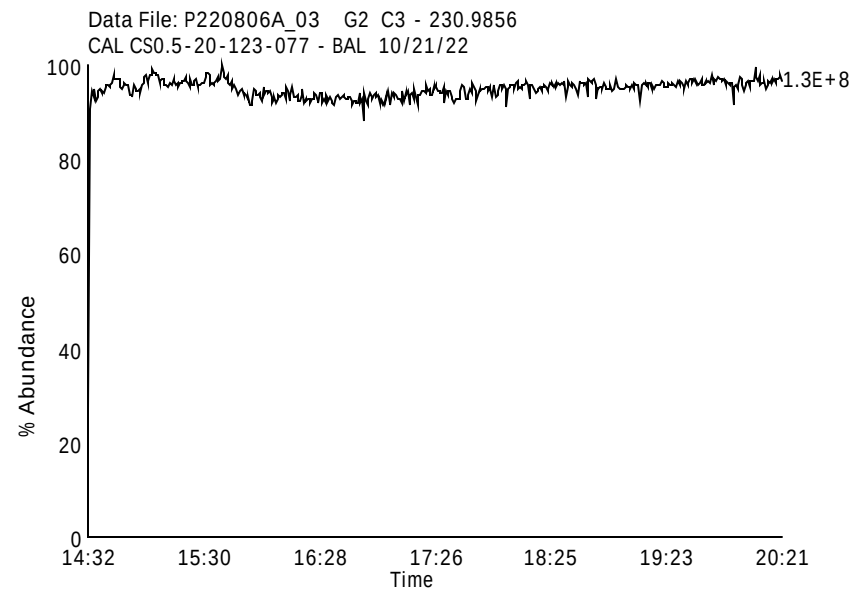
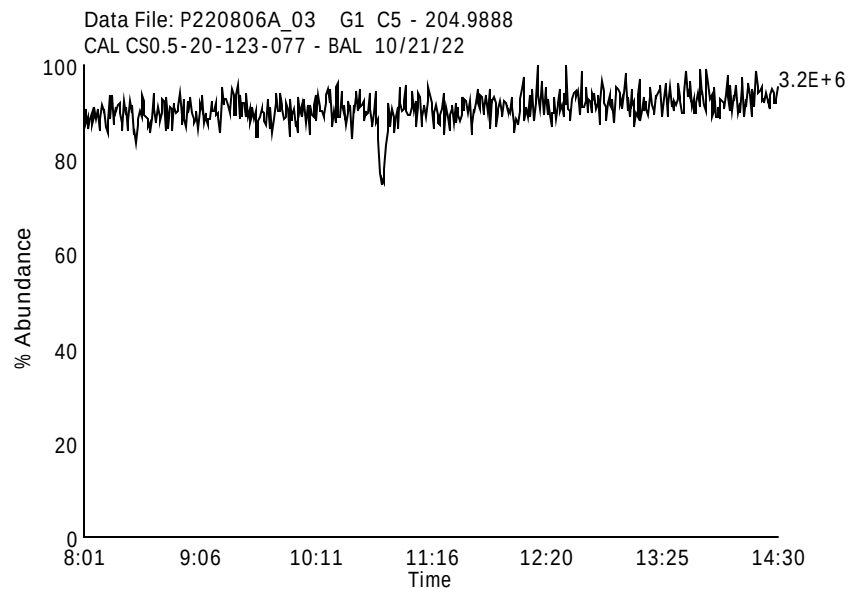
Data File Name: P220806A_03

Date Acquired: 8/6/2022

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22

Lab Sample ID: CS0.5-20-123-077

Instrument: 10MSHR09 (P)



Group 5 - 7 Lock mass

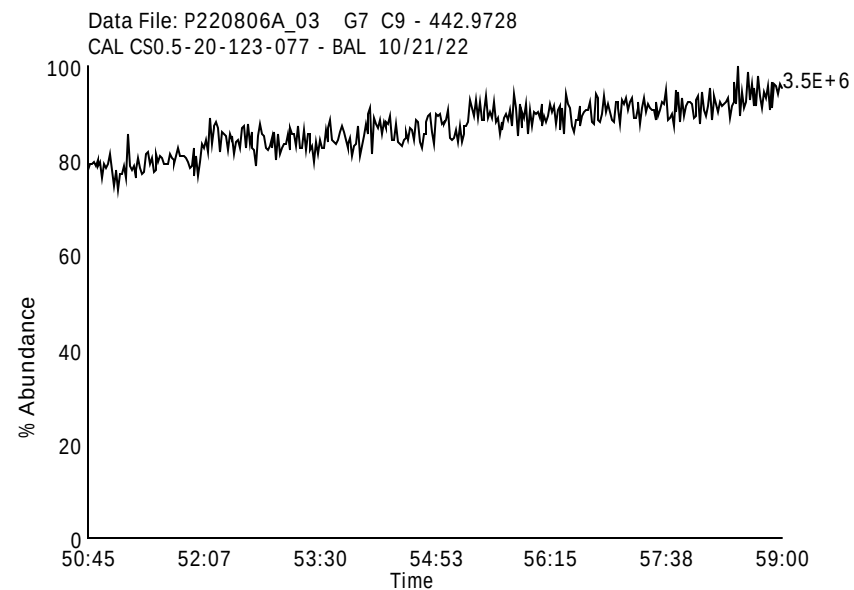
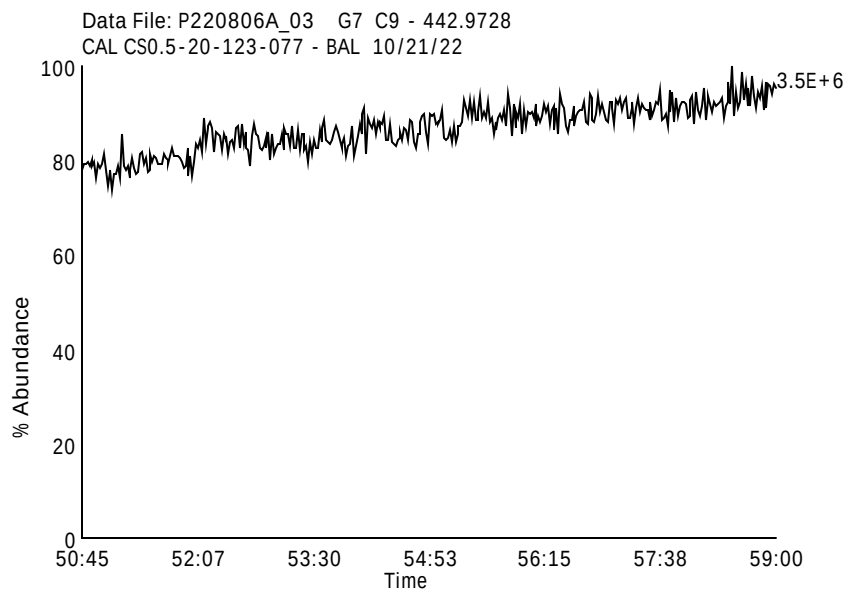
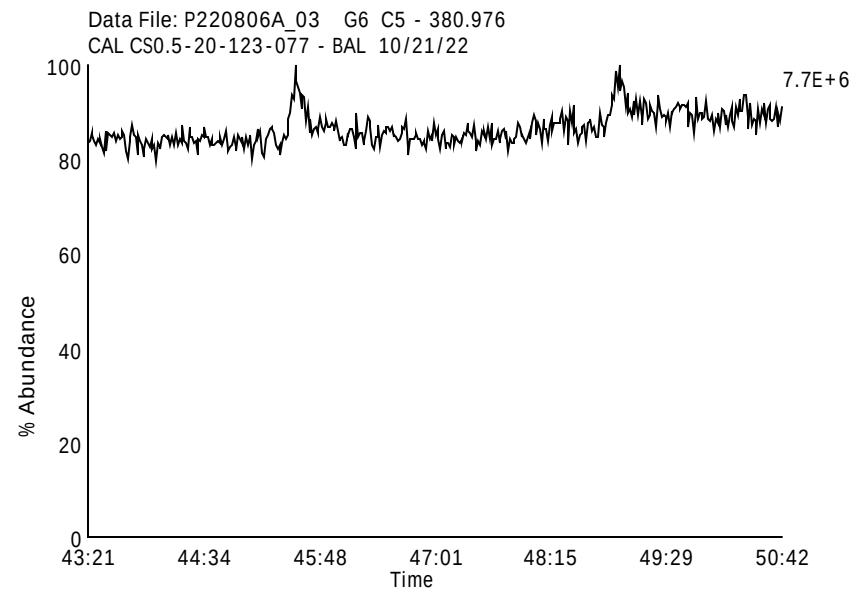
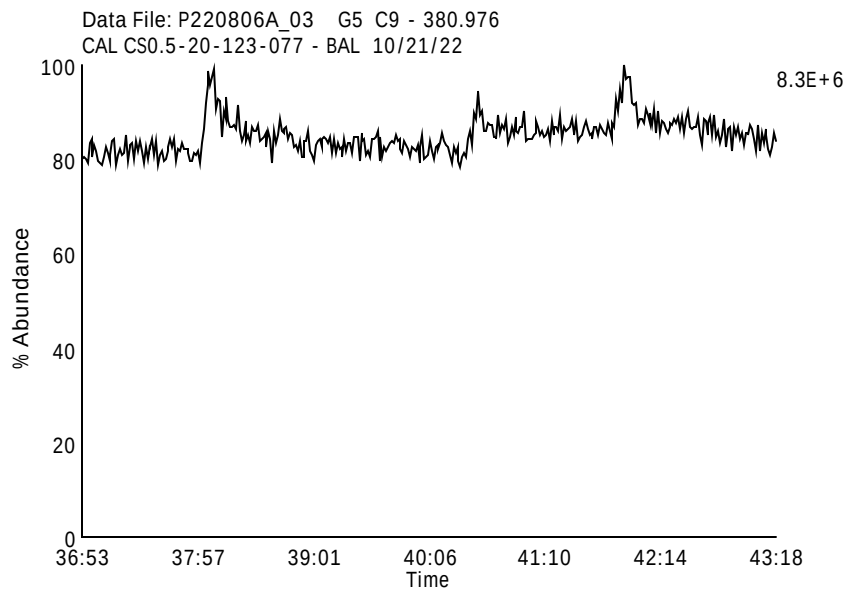
Data File Name: P220806A_03

Date Acquired: 8/6/2022

Sample Description: CAL CS0.5-20-123-077 - BAL 10/21/22

Lab Sample ID: CS0.5-20-123-077

Instrument: 10MSHR09 (P)



Labeled Mono Chlorinated Biphenyls

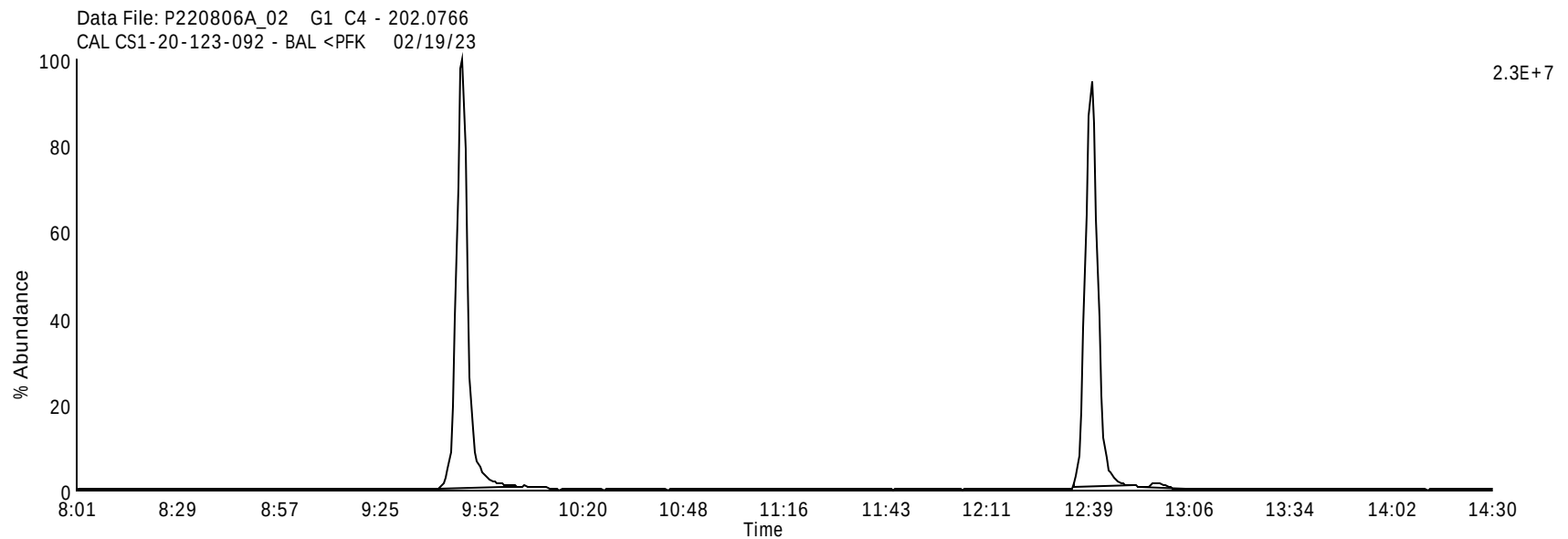
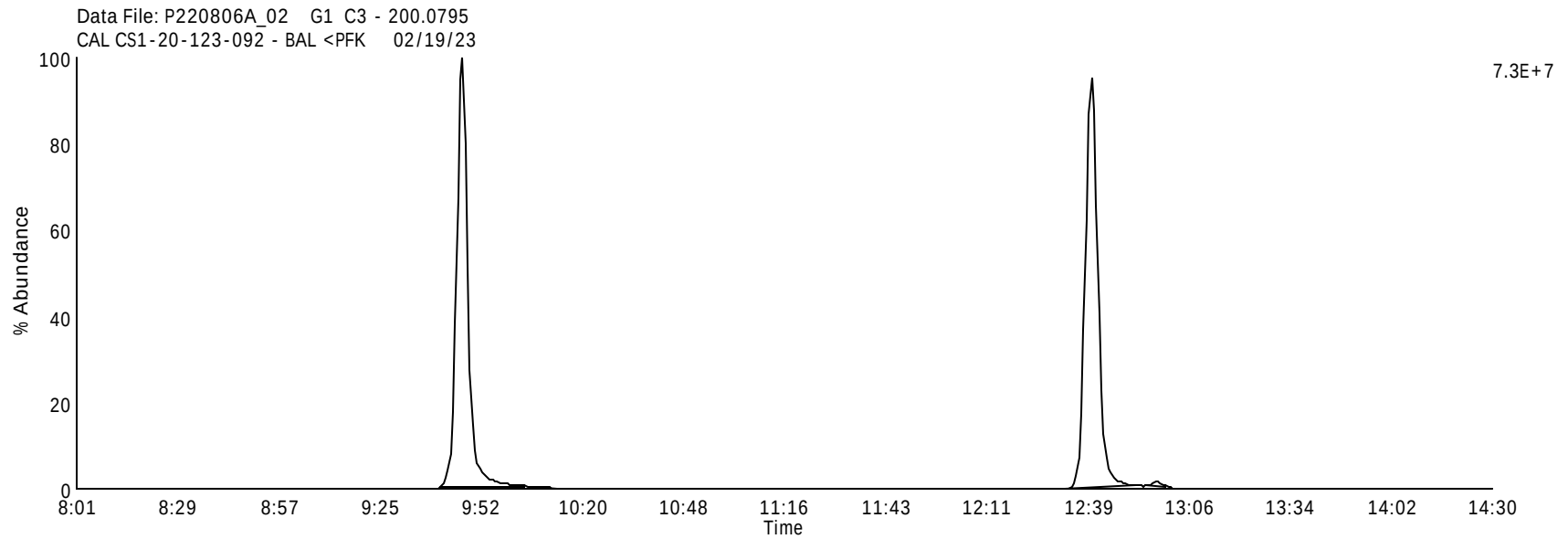
Data File Name: P220806A_02

Lab Sample ID: CS1-20-123-092

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23



Labeled Di Chlorinated Biphenyls

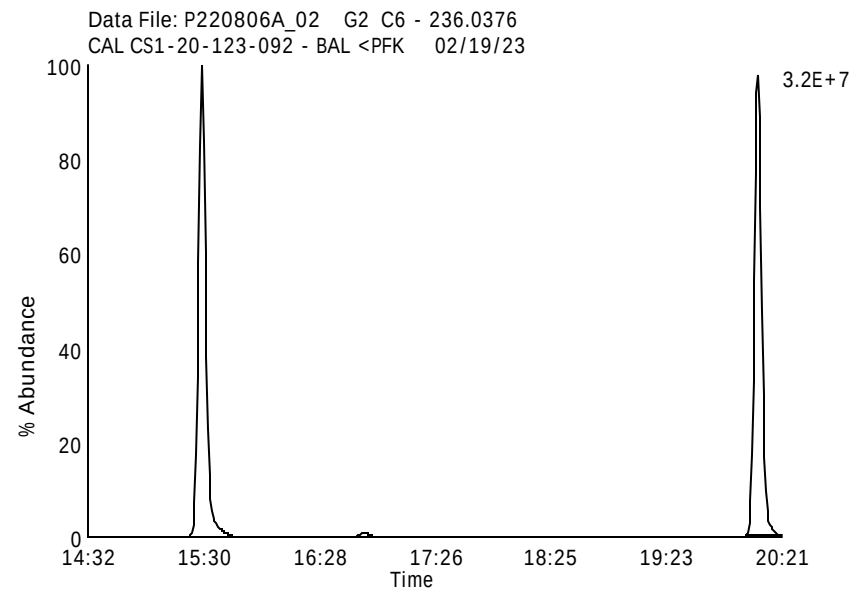
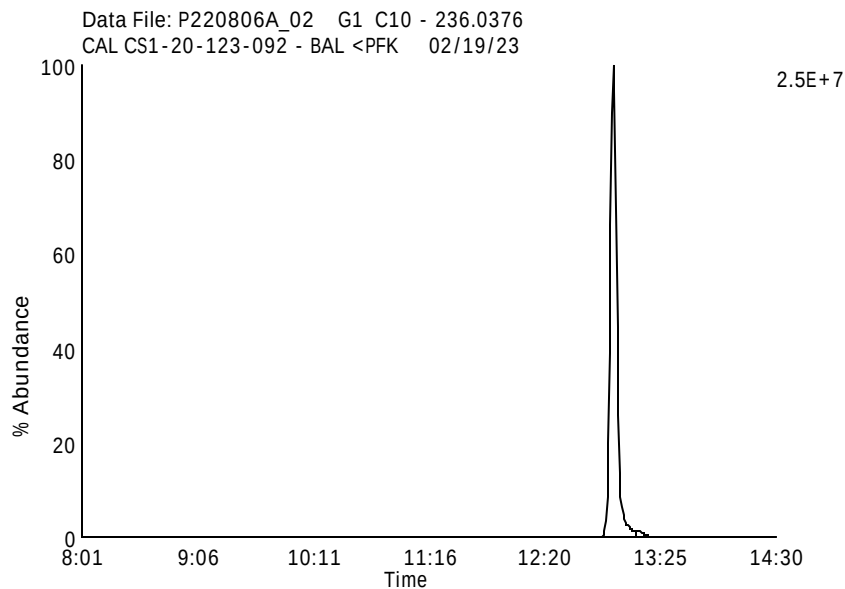
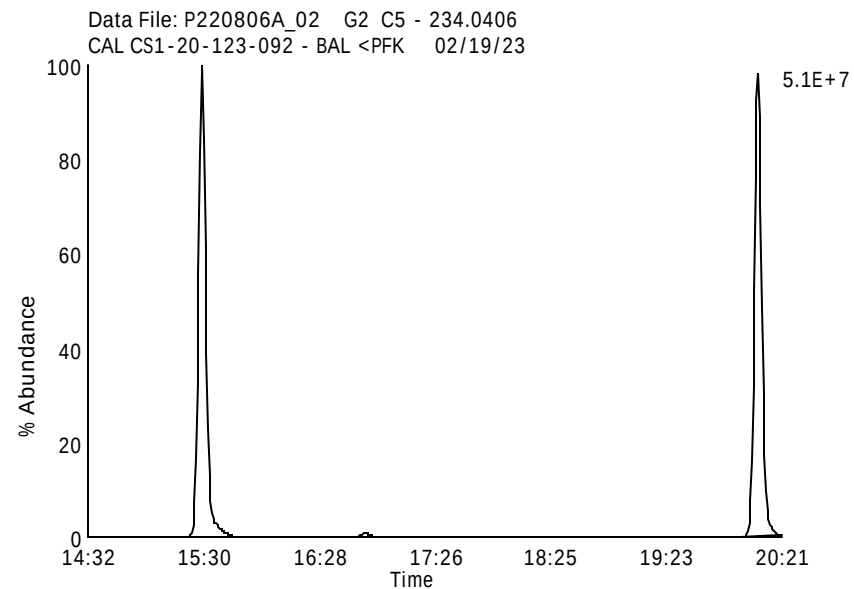
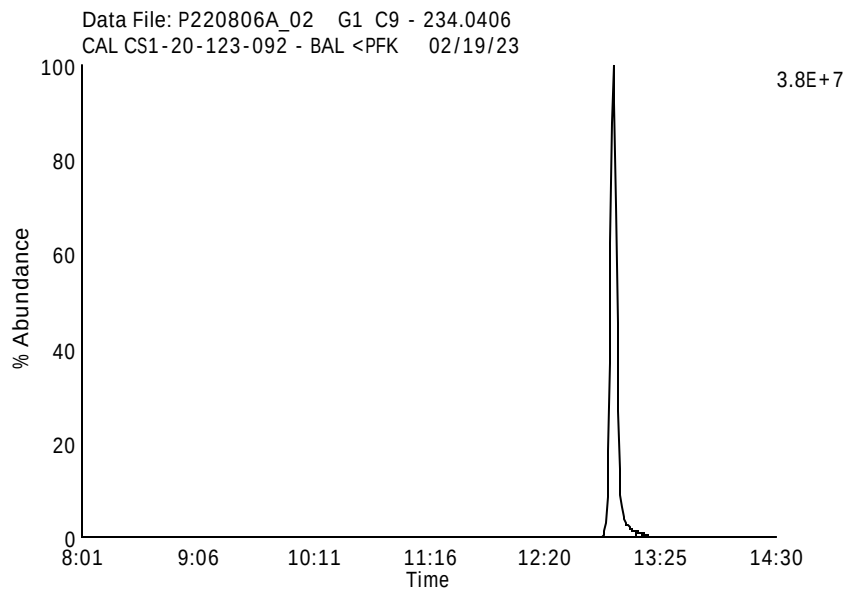
Data File Name: P220806A_02

Date Acquired: 8/6/2022

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23

Lab Sample ID: CS1-20-123-092

Instrument: 10MSHR09 (P)



Labeled Tri Chlorinated Biphenyls

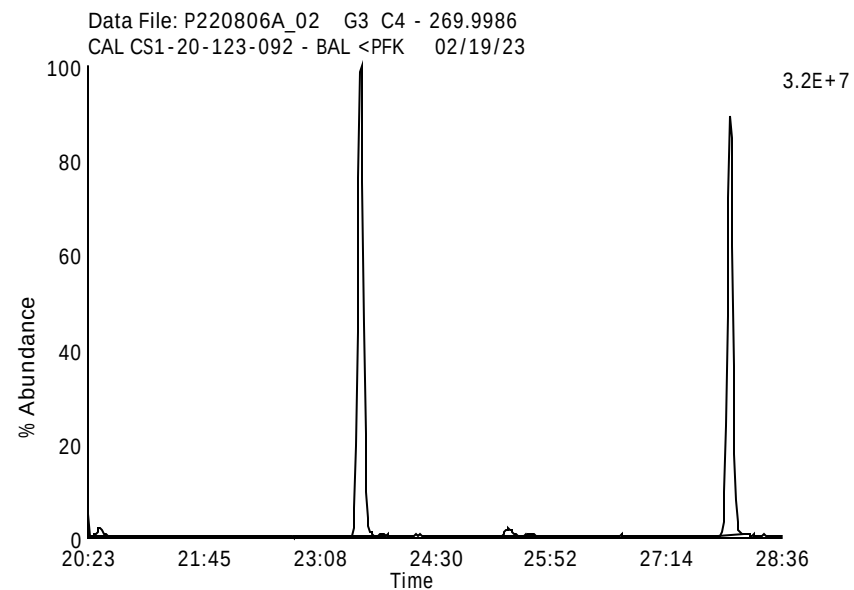
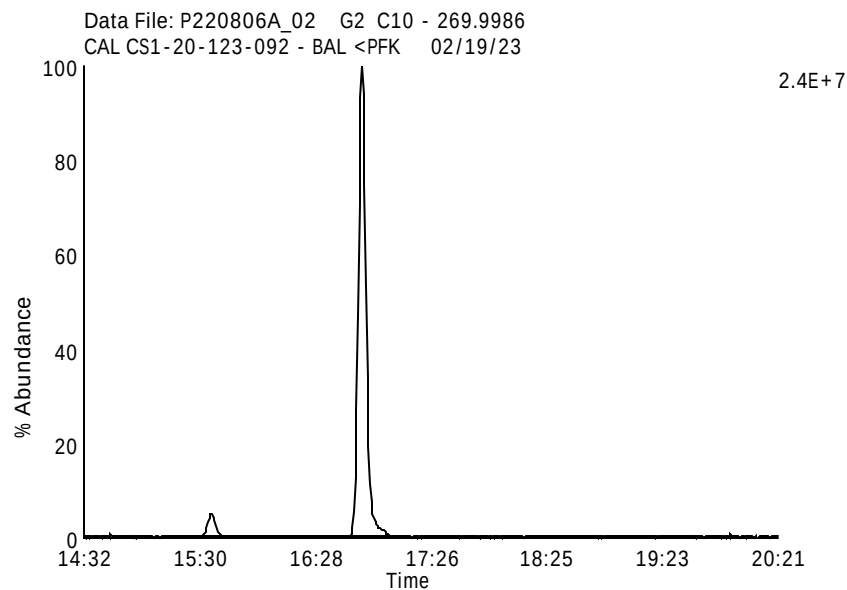
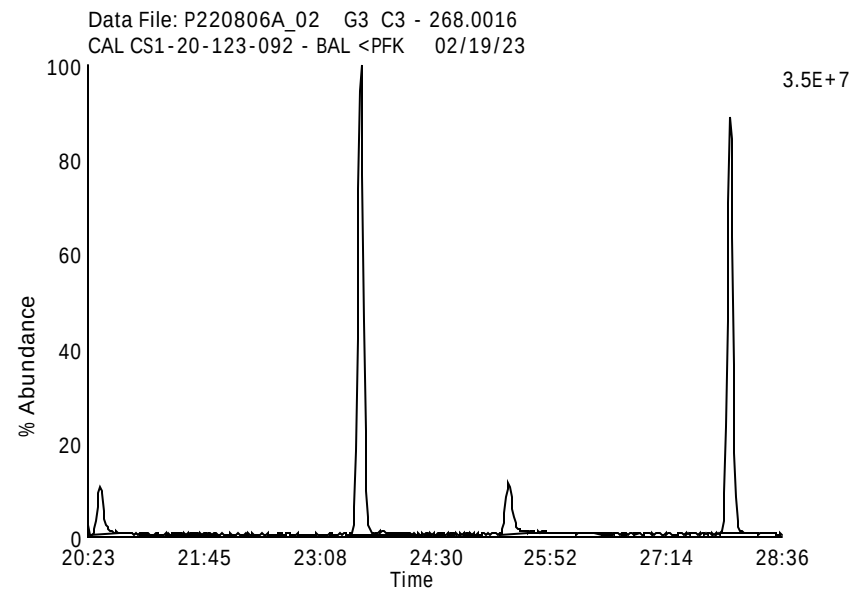
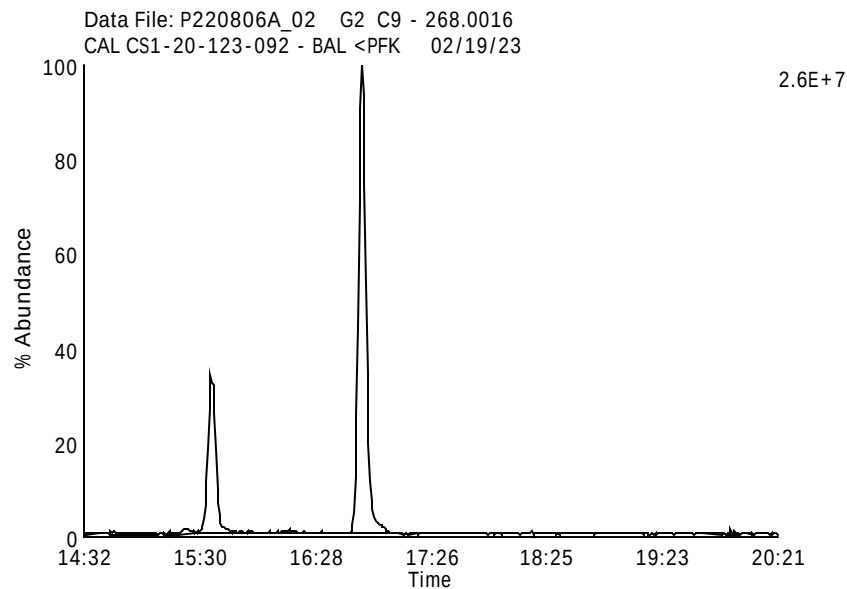
Data File Name: P220806A_02

Date Acquired: 8/6/2022

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23

Lab Sample ID: CS1-20-123-092

Instrument: 10MSHR09 (P)



Labeled Tetra Chlorinated Biphenyls

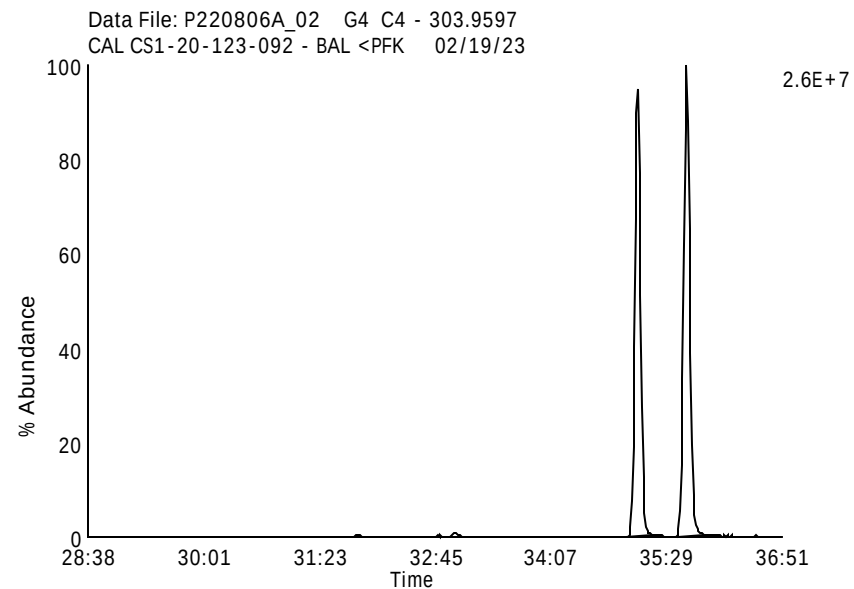
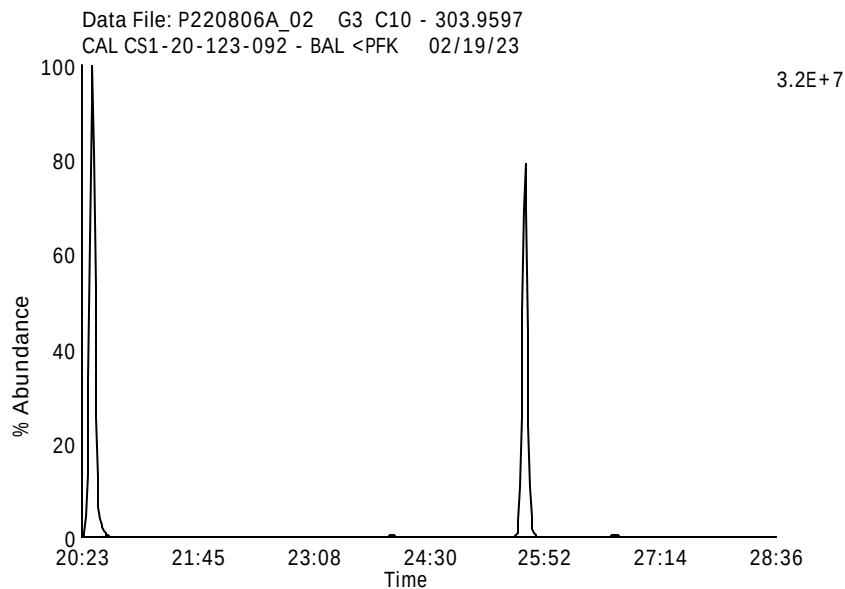
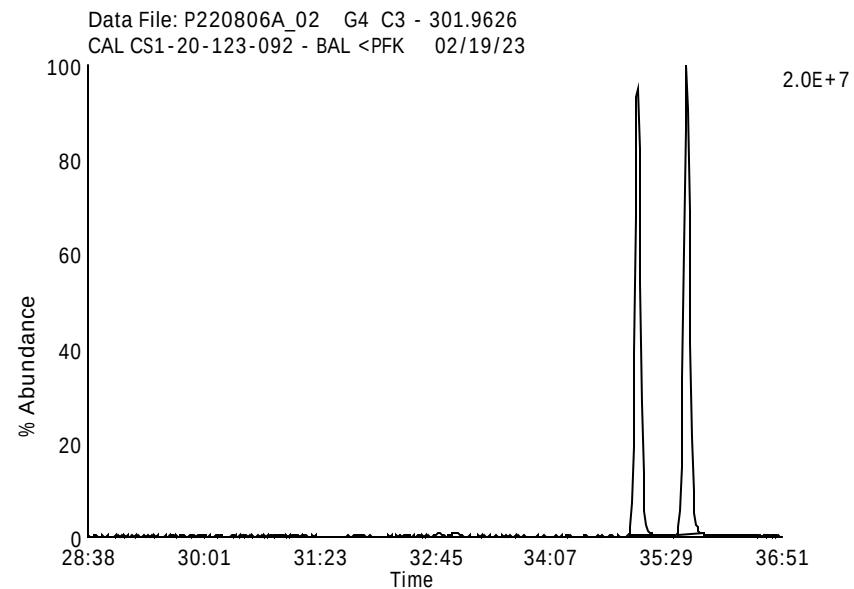
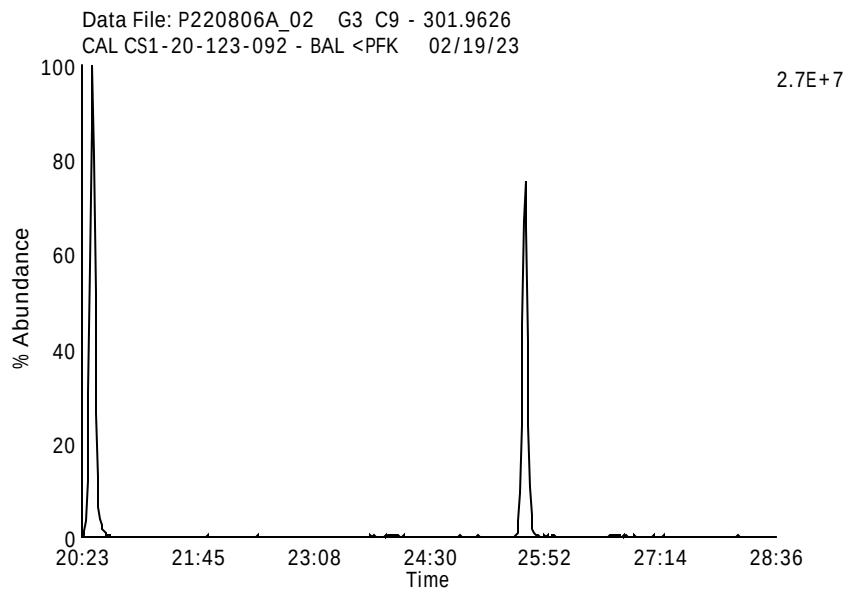
Data File Name: P220806A_02

Lab Sample ID: CS1-20-123-092

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23



Labeled Penta Chlorinated Biphenyls

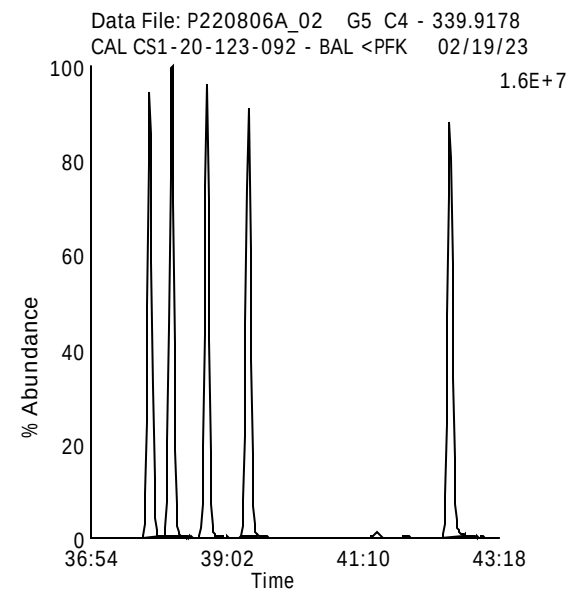
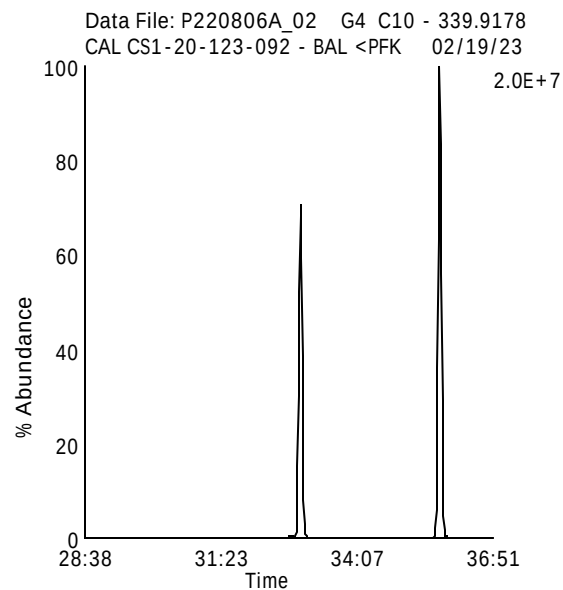
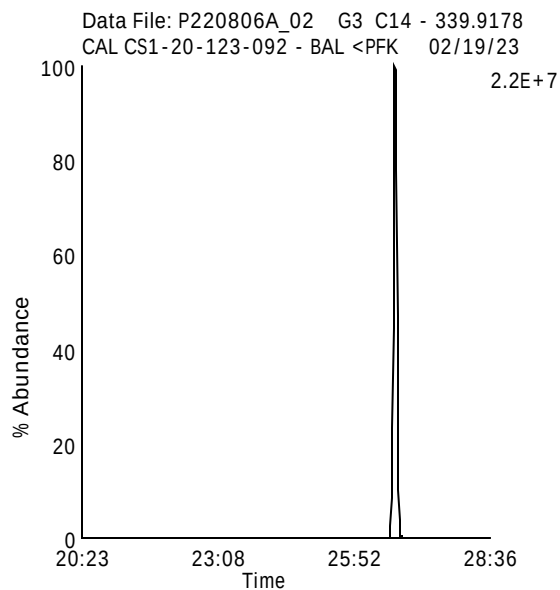
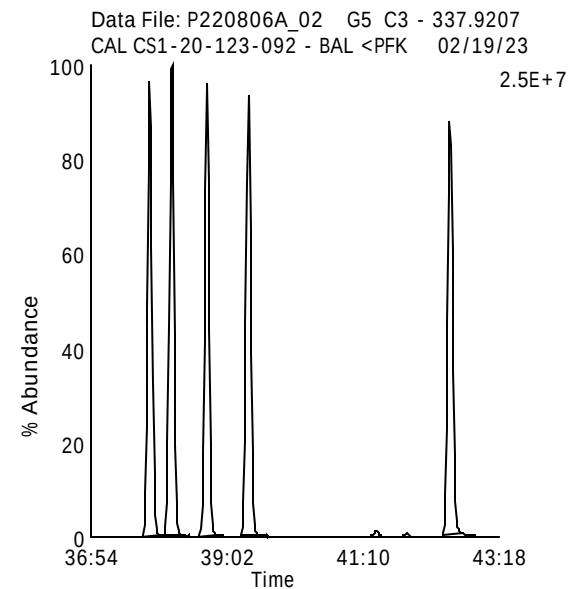
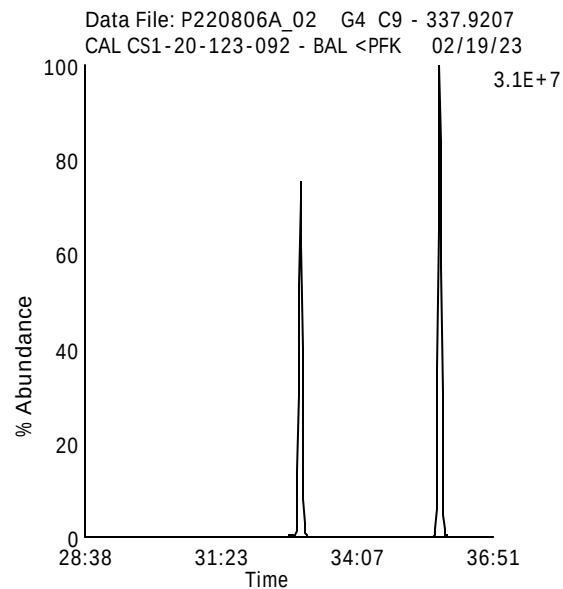
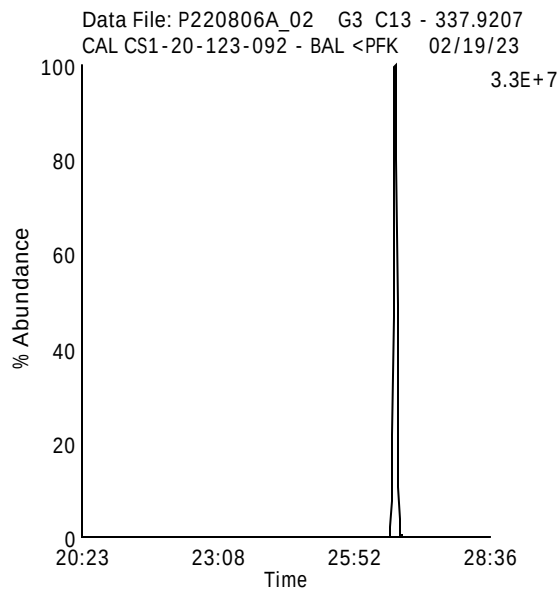
Data File Name: P220806A_02

Lab Sample ID: CS1-20-123-092

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23



Labeled Hexa Chlorinated Biphenyls

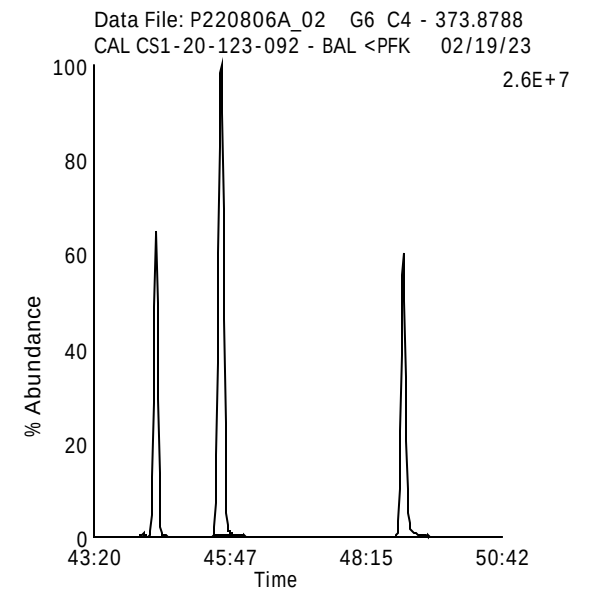
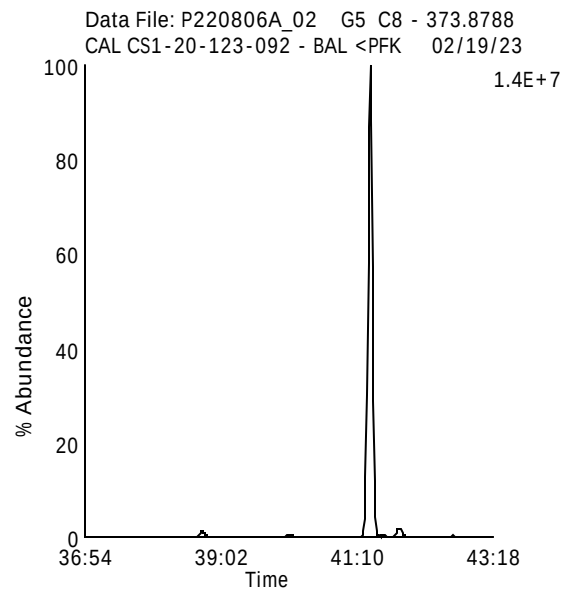
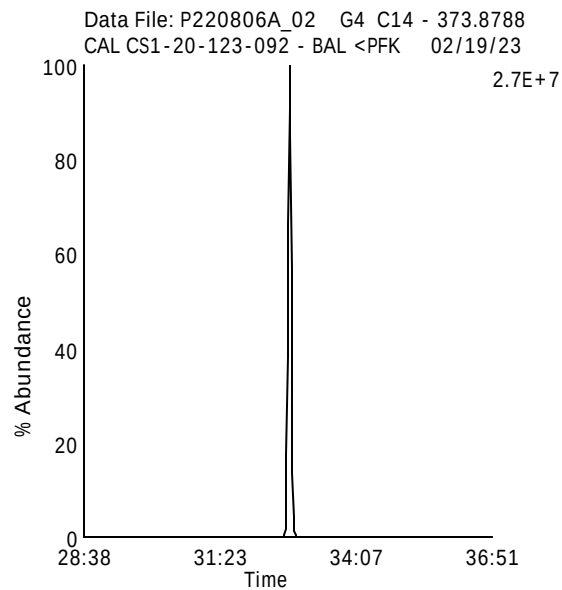
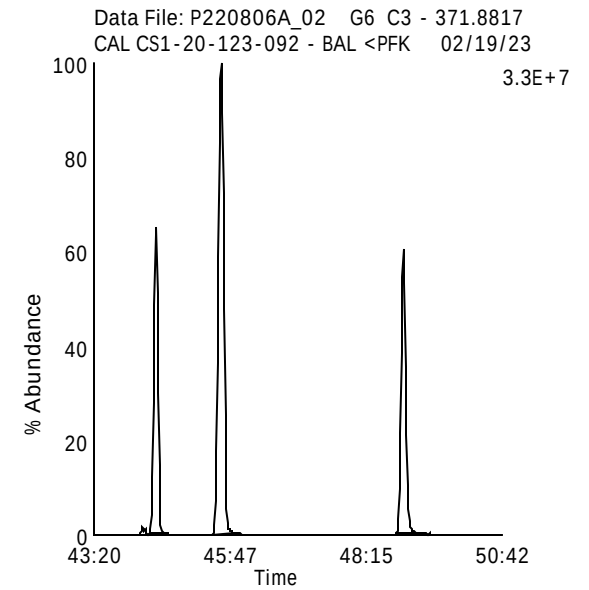
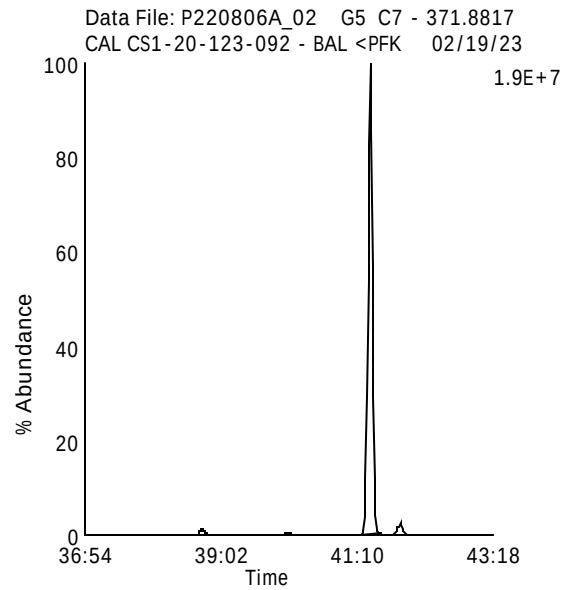
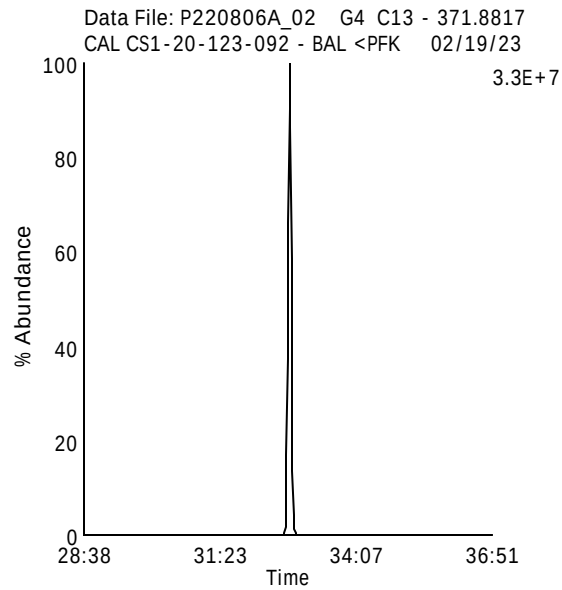
Data File Name: P220806A_02

Lab Sample ID: CS1-20-123-092

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23



Labeled Hepta Chlorinated Biphenyls

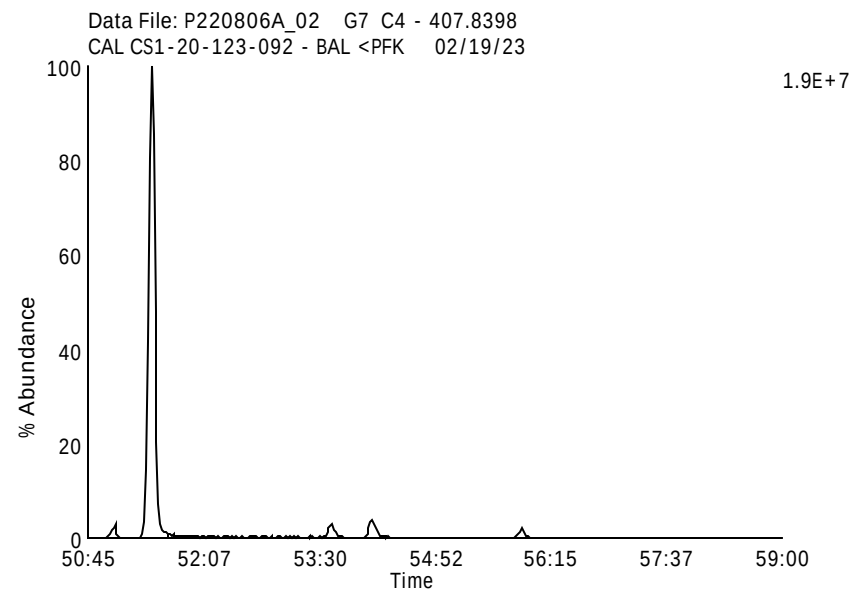
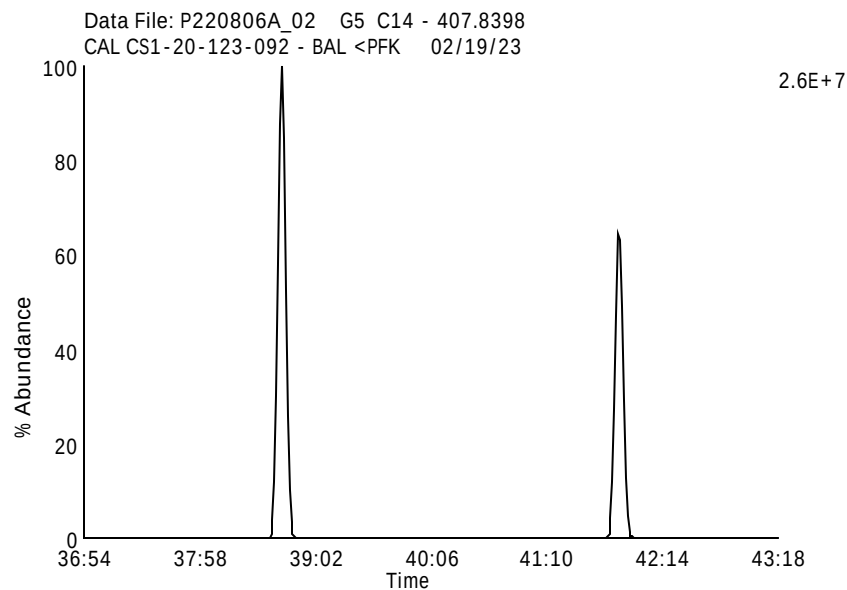
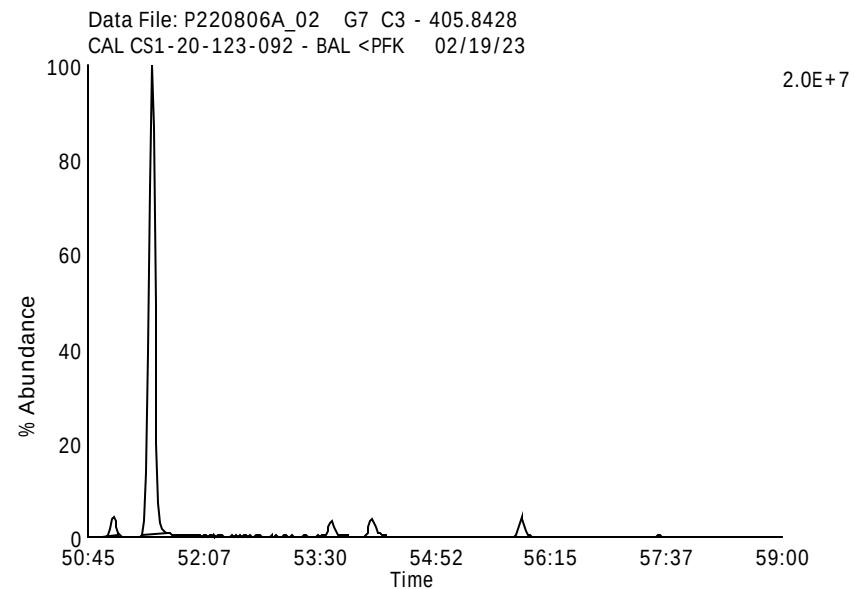
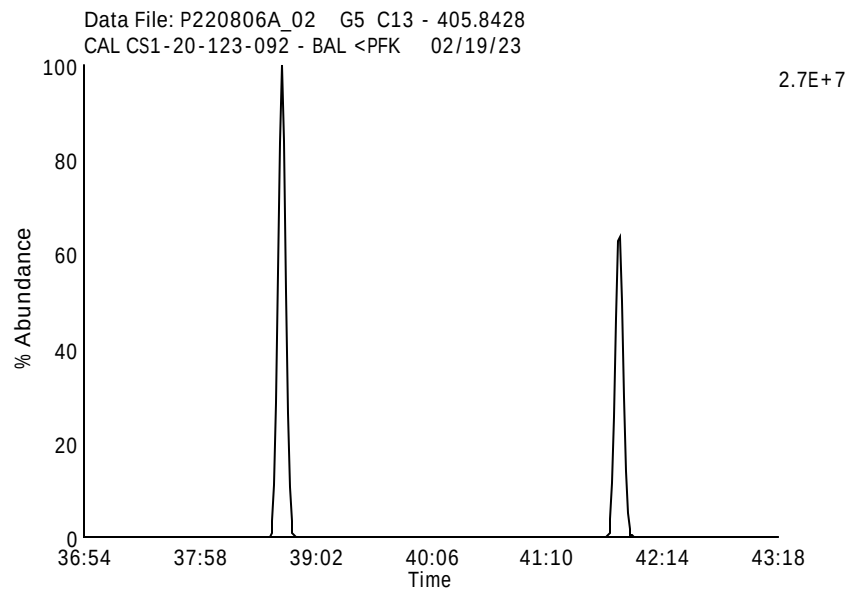
Data File Name: P220806A_02

Date Acquired: 8/6/2022

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23

Lab Sample ID: CS1-20-123-092

Instrument: 10MSHR09 (P)



Labeled Octa Chlorinated Biphenyls

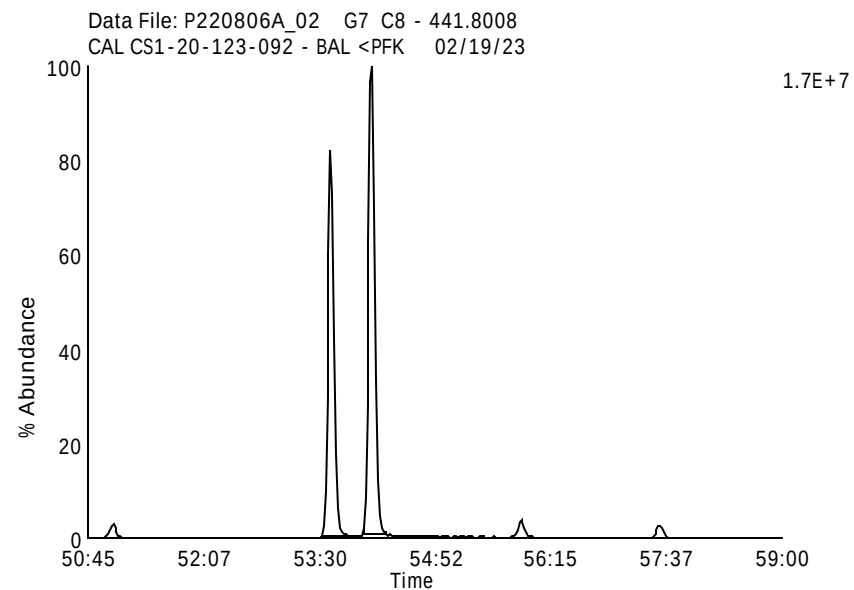
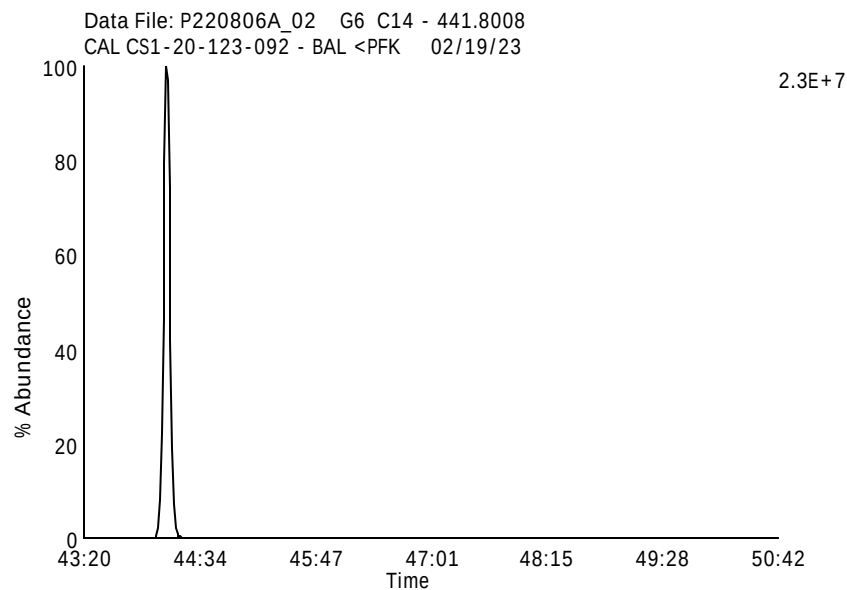
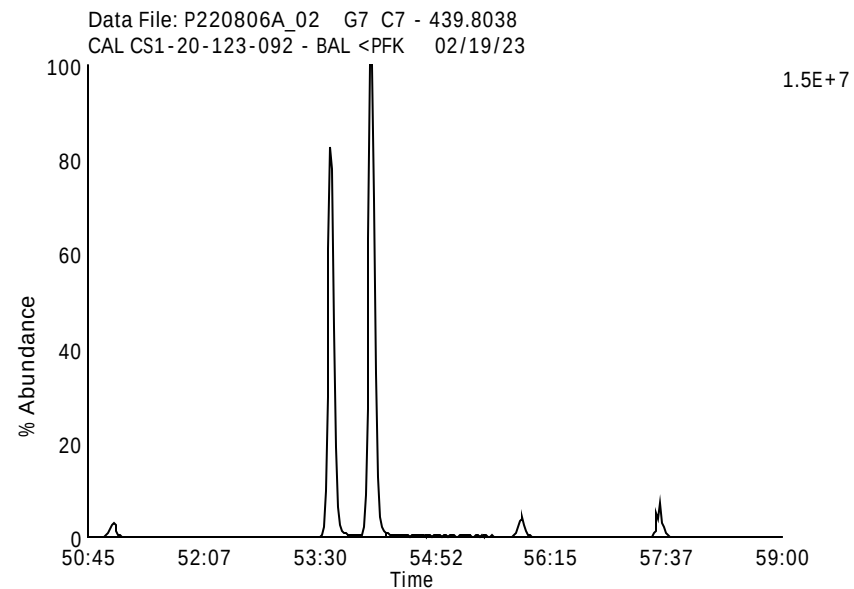
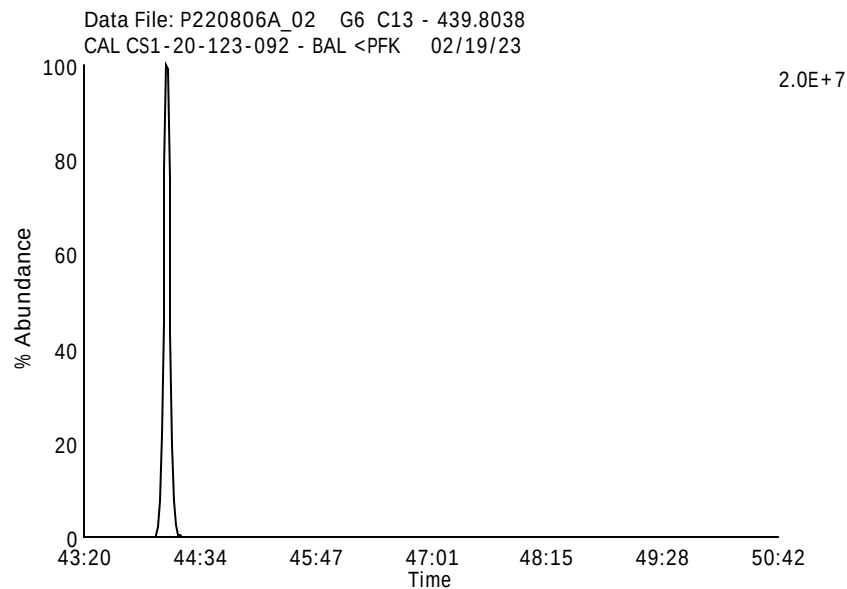
Data File Name: P220806A_02

Lab Sample ID: CS1-20-123-092

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23



Labeled Nona Chlorinated Biphenyls

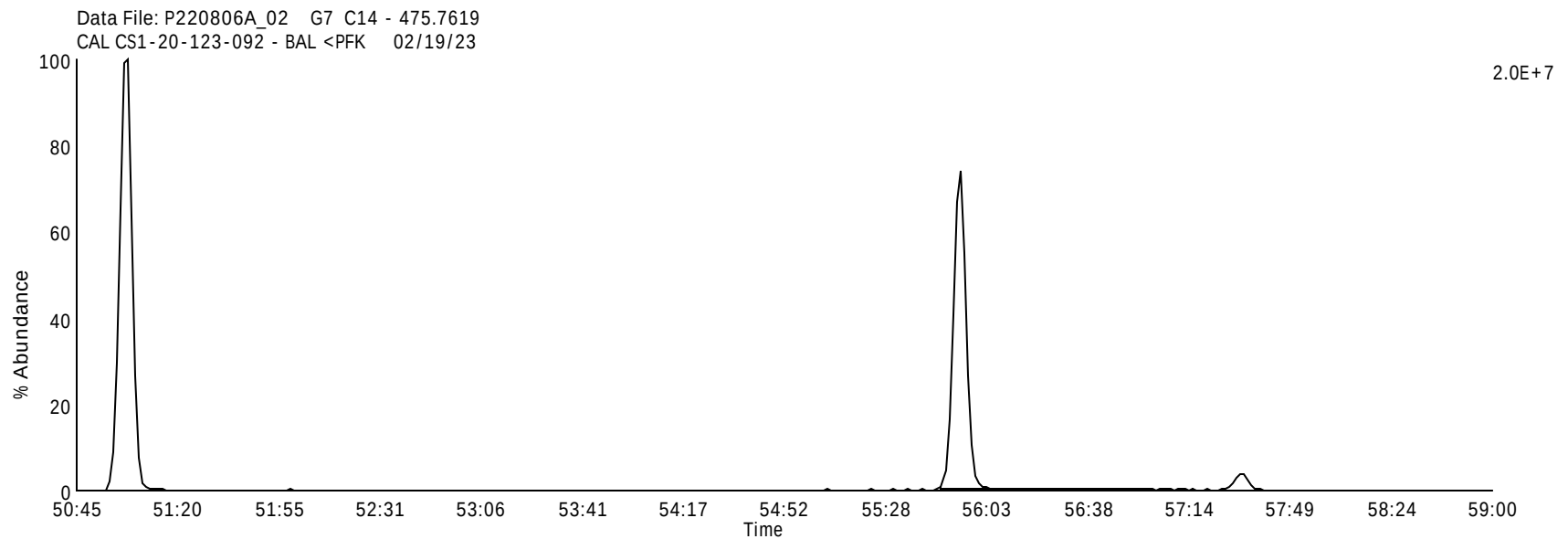
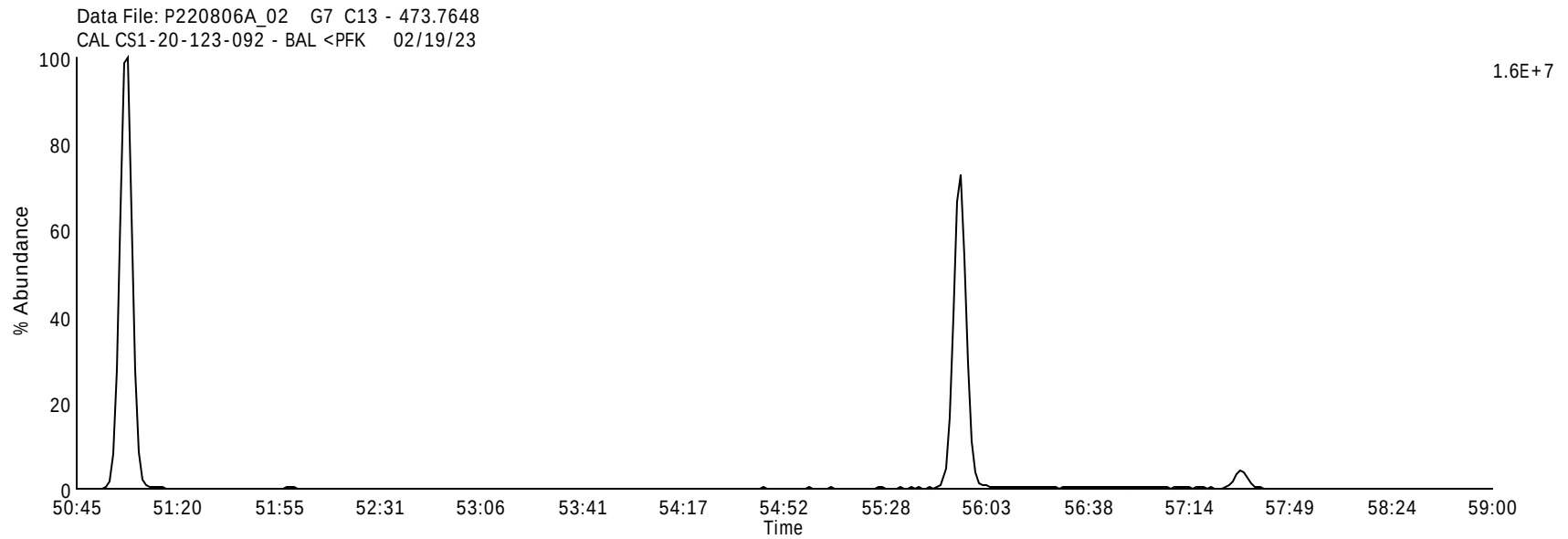
Data File Name: P220806A_02

Lab Sample ID: CS1-20-123-092

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23



Labeled Deca Chlorinated Biphenyl

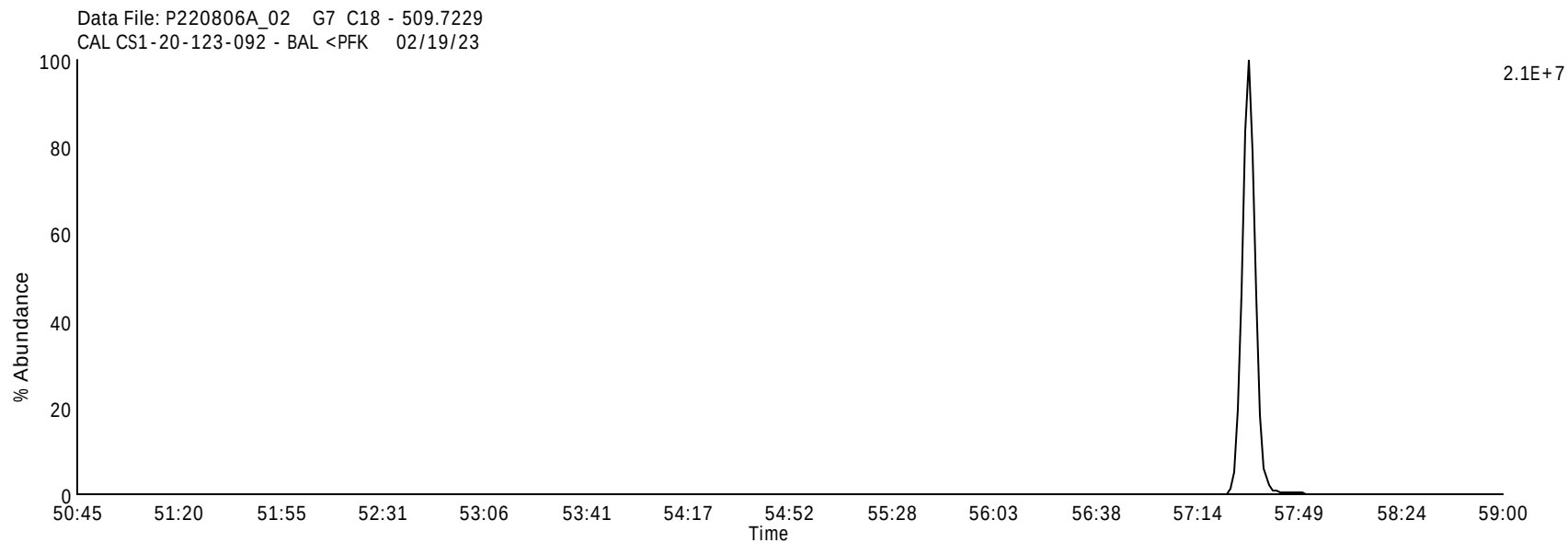
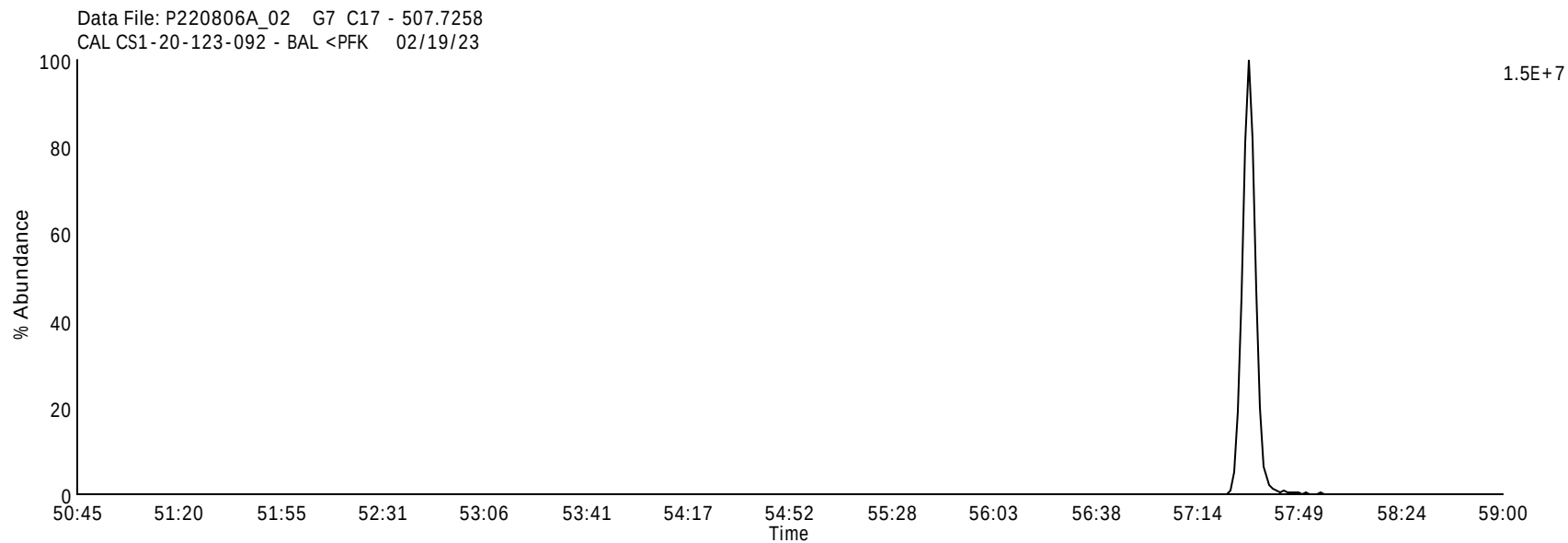
Data File Name: P220806A_02

Lab Sample ID: CS1-20-123-092

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23



Mono Chlorinated Biphenyls

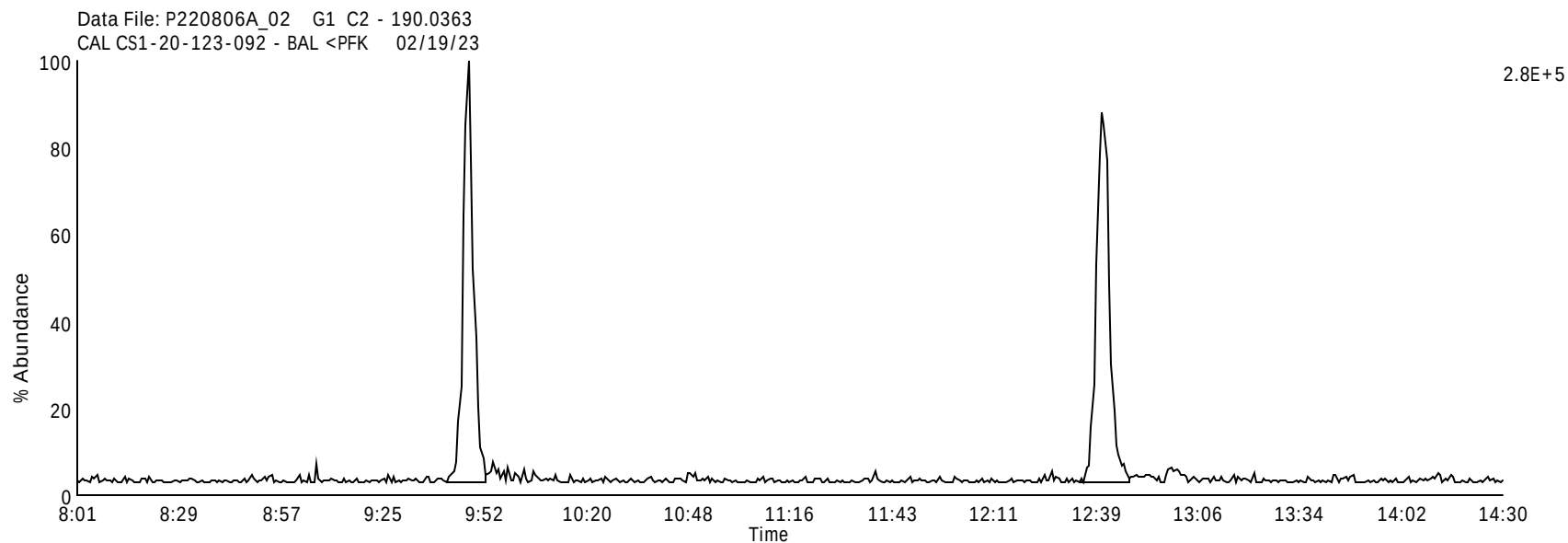
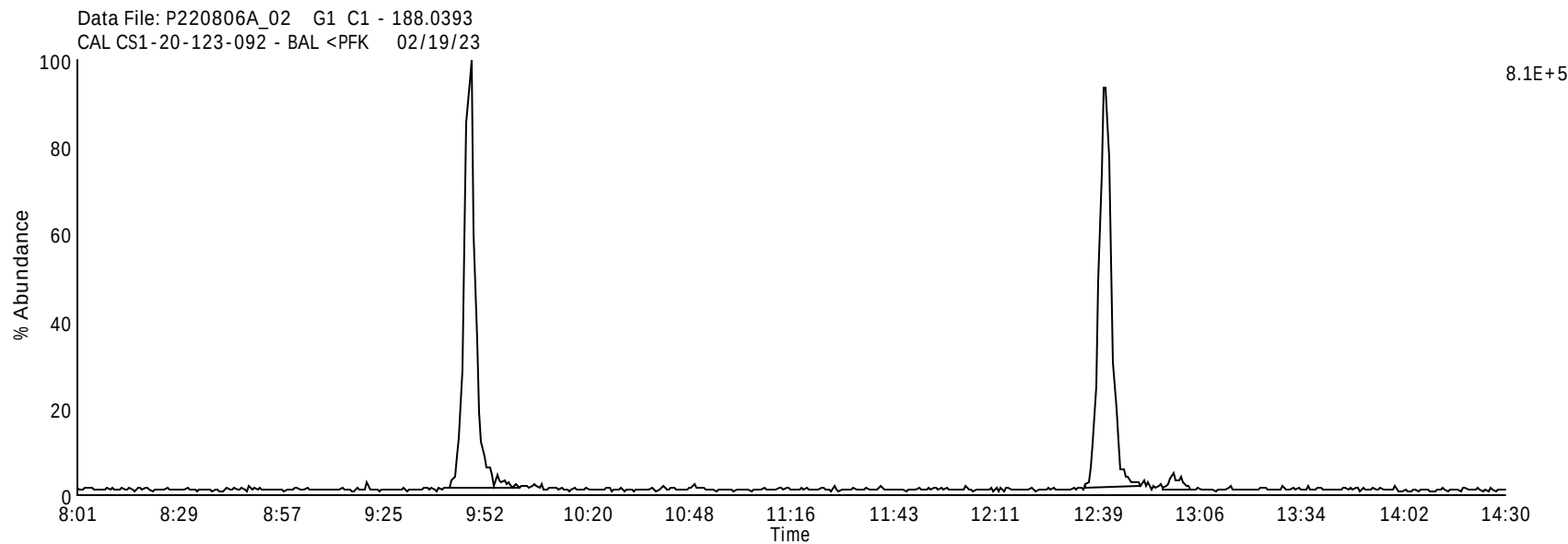
Data File Name: P220806A_02

Lab Sample ID: CS1-20-123-092

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23



Di Chlorinated Biphenyls

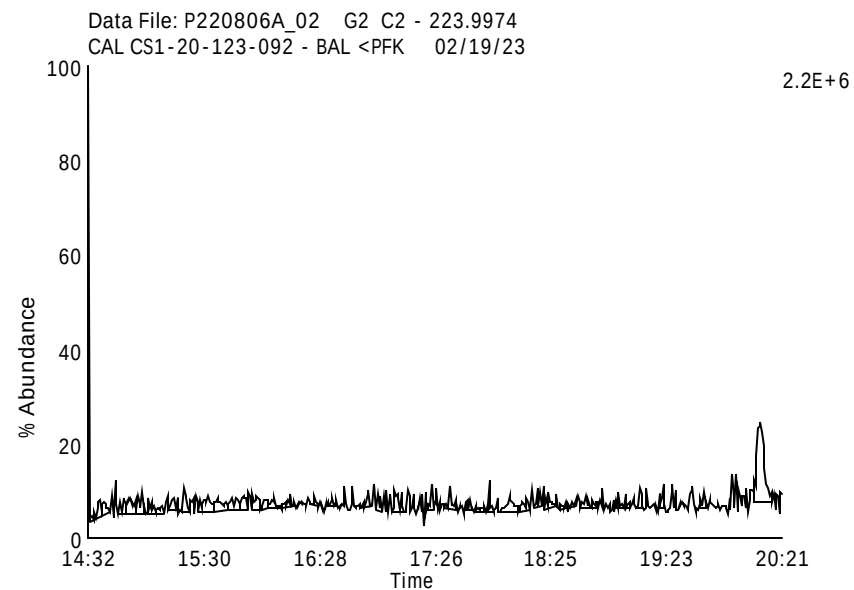
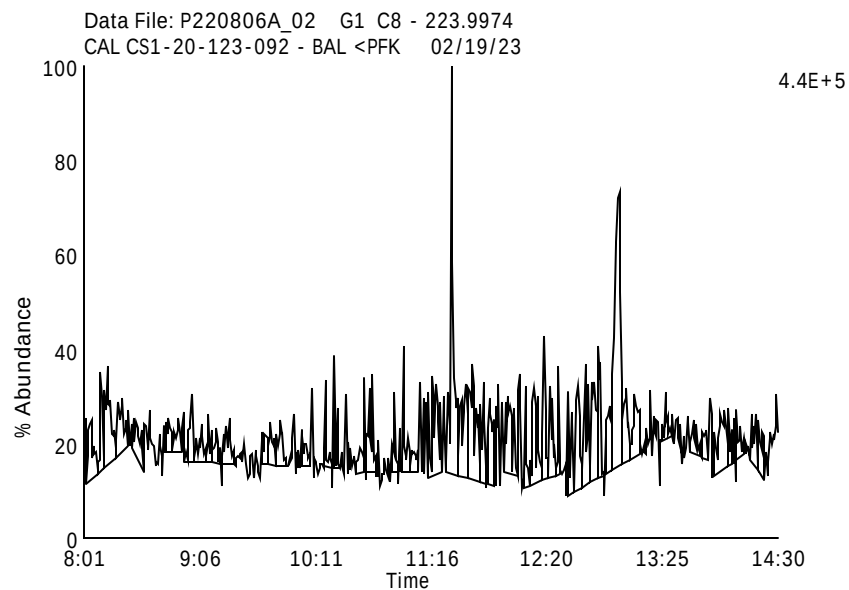
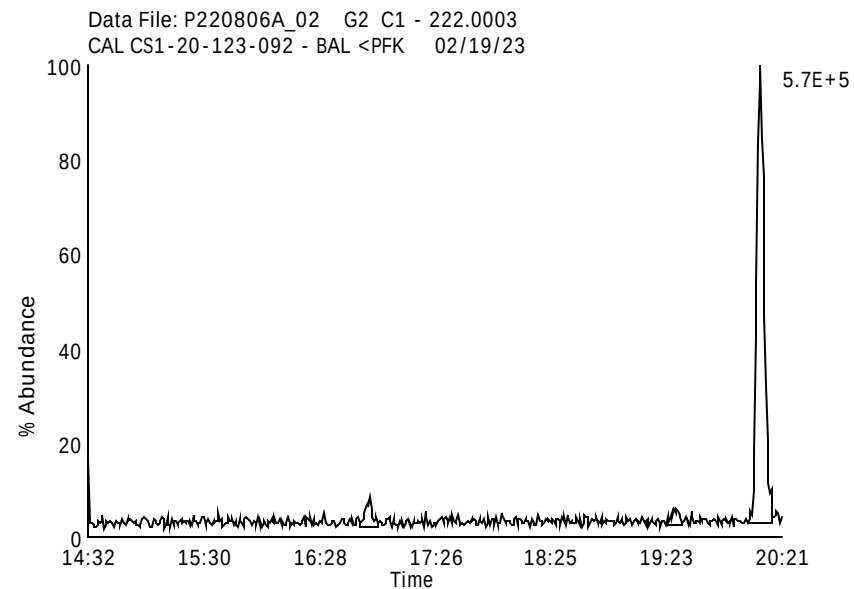
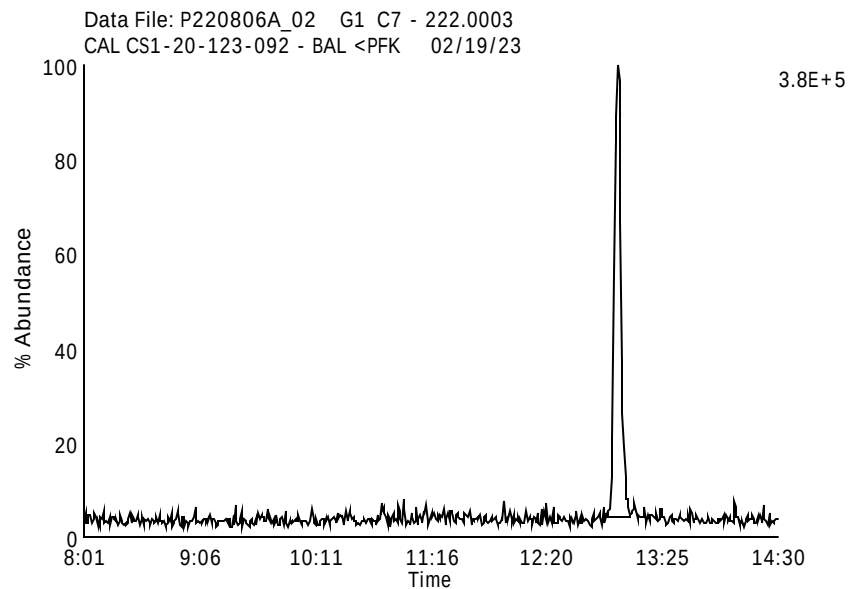
Data File Name: P220806A_02

Date Acquired: 8/6/2022

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23

Lab Sample ID: CS1-20-123-092

Instrument: 10MSHR09 (P)



Tri Chlorinated Biphenyls

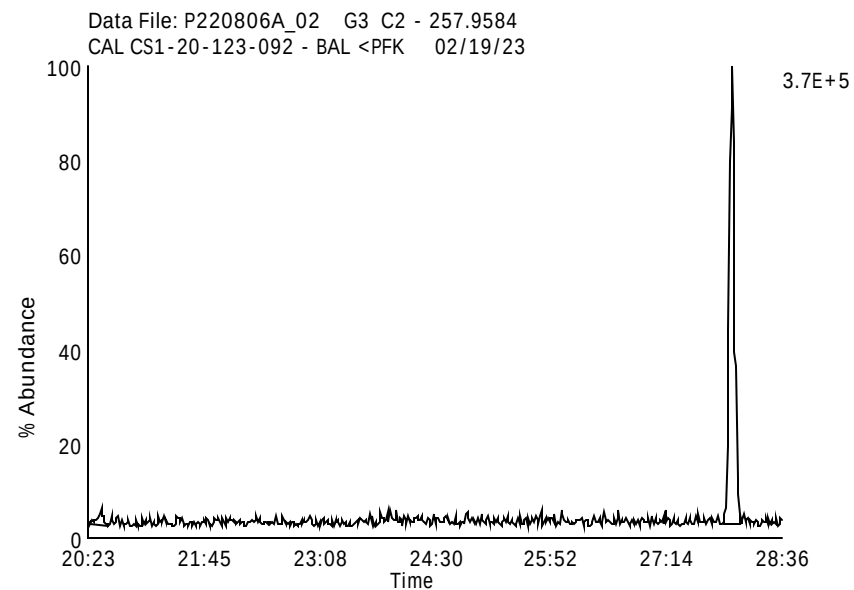
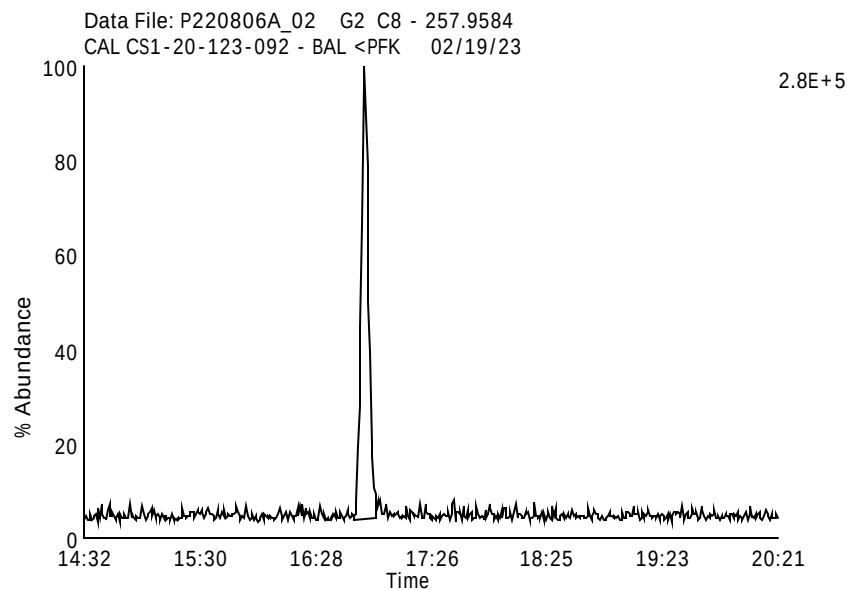
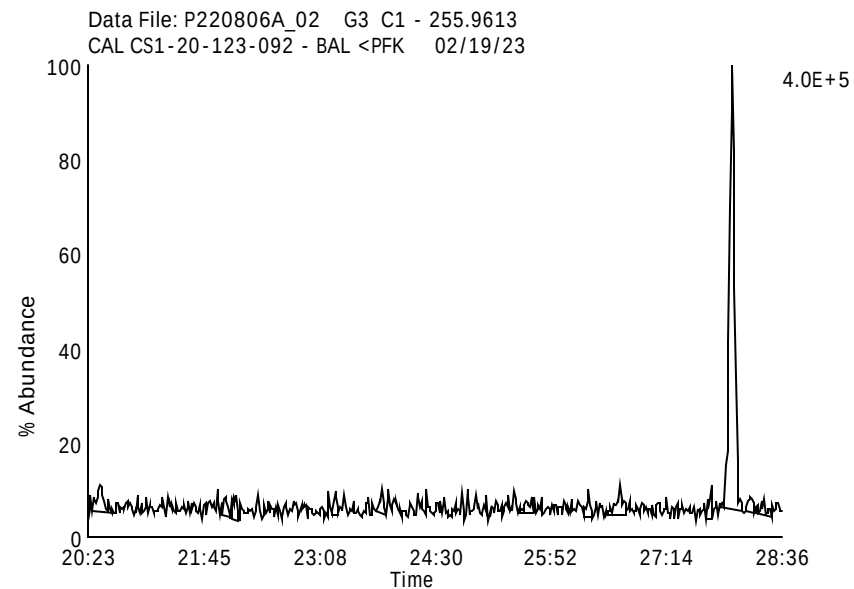
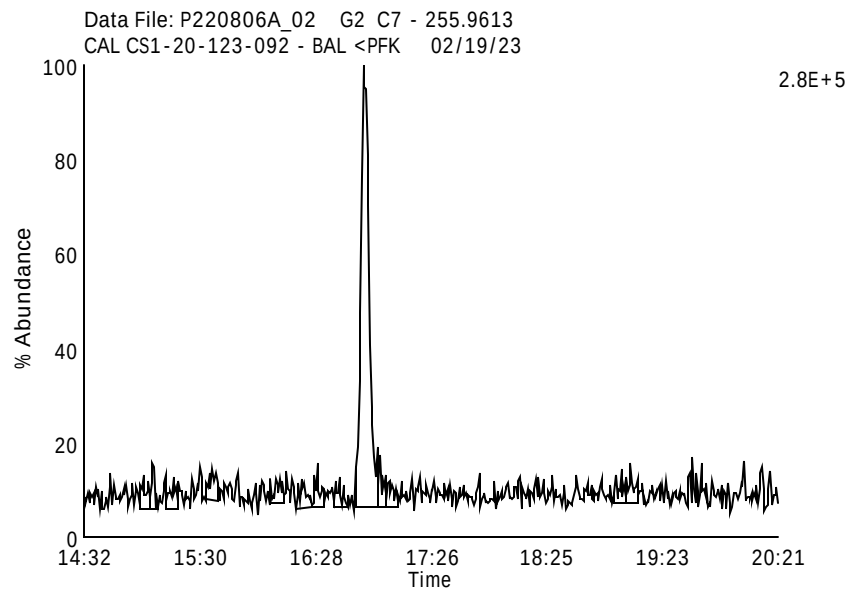
Data File Name: P220806A_02

Date Acquired: 8/6/2022

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23

Lab Sample ID: CS1-20-123-092

Instrument: 10MSHR09 (P)



Tetra Chlorinated Biphenyls

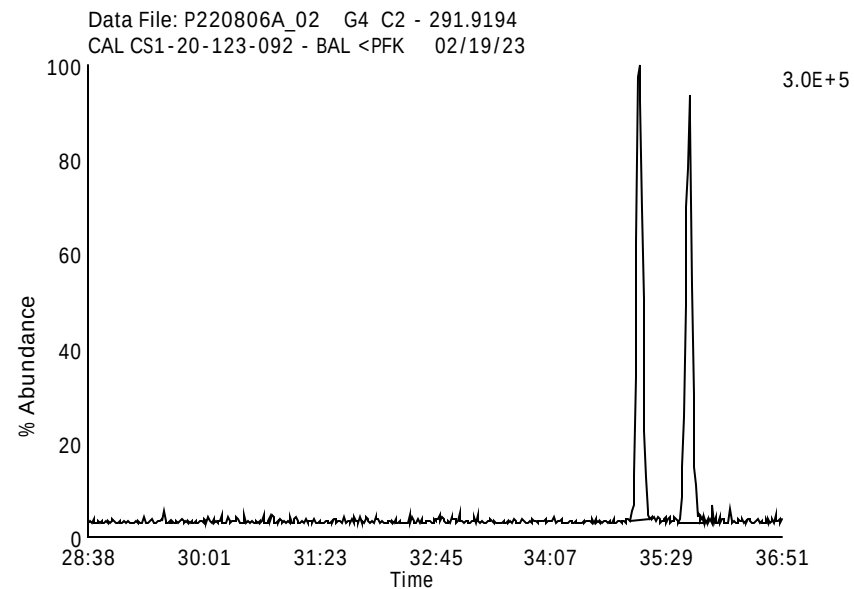
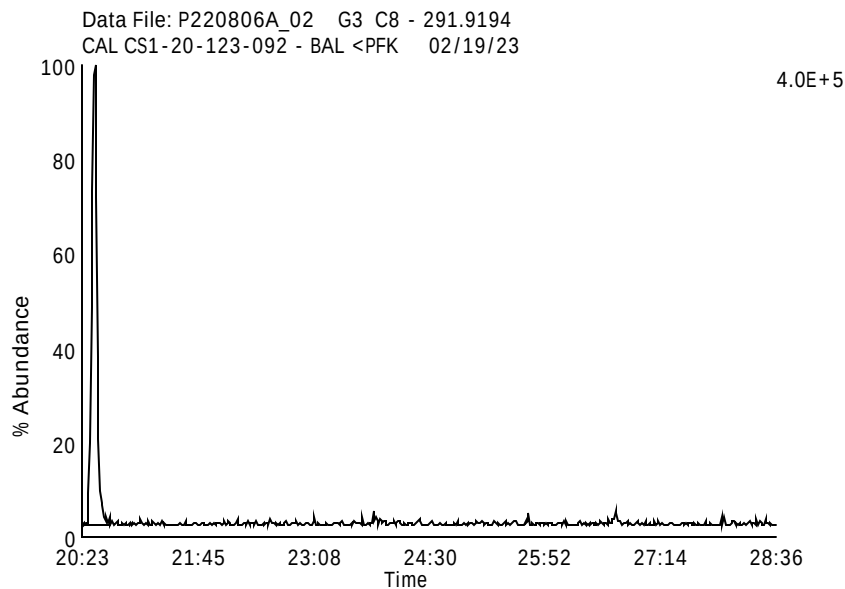
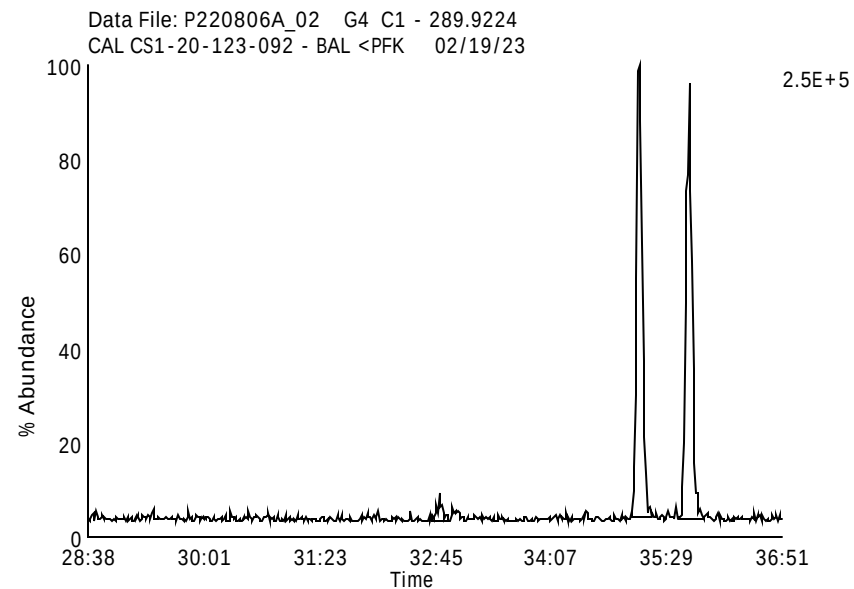
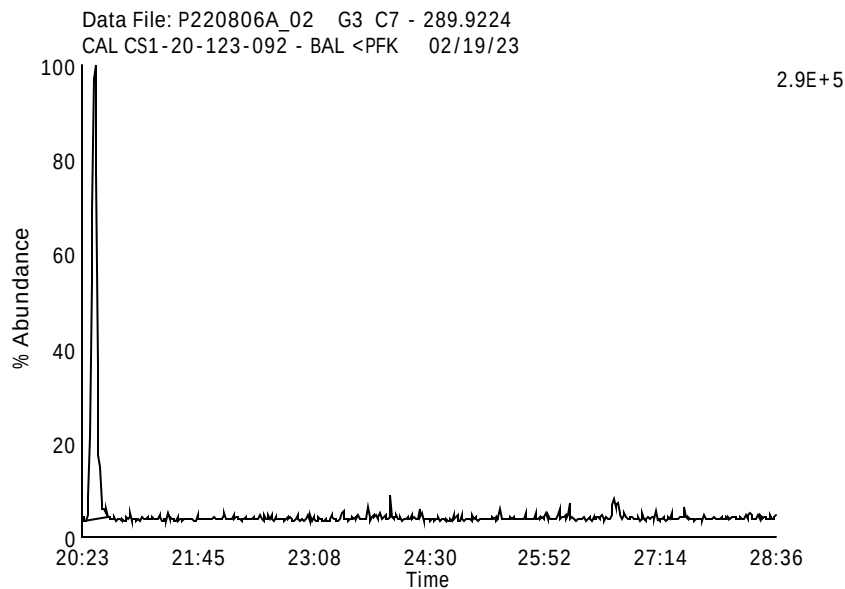
Data File Name: P220806A_02

Date Acquired: 8/6/2022

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23

Lab Sample ID: CS1-20-123-092

Instrument: 10MSHR09 (P)



Penta Chlorinated Biphenyls

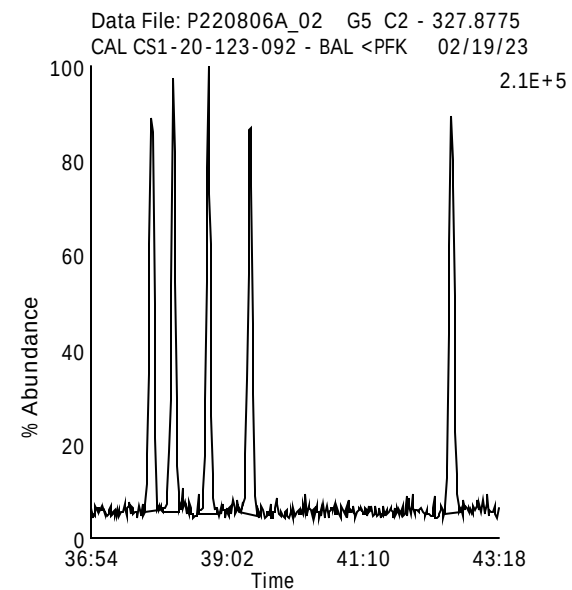
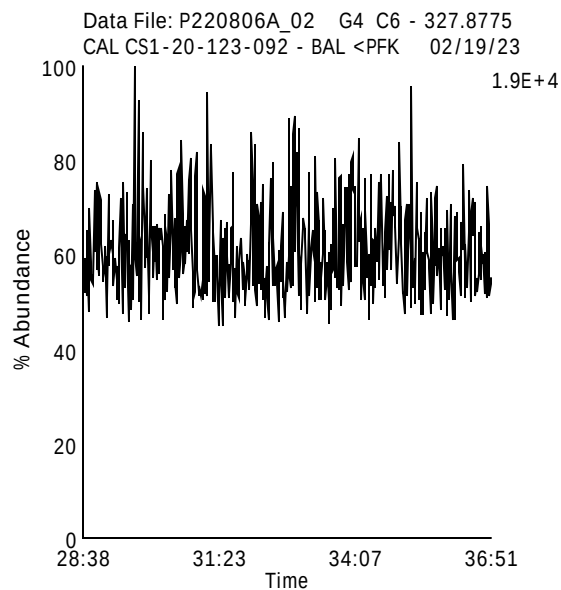
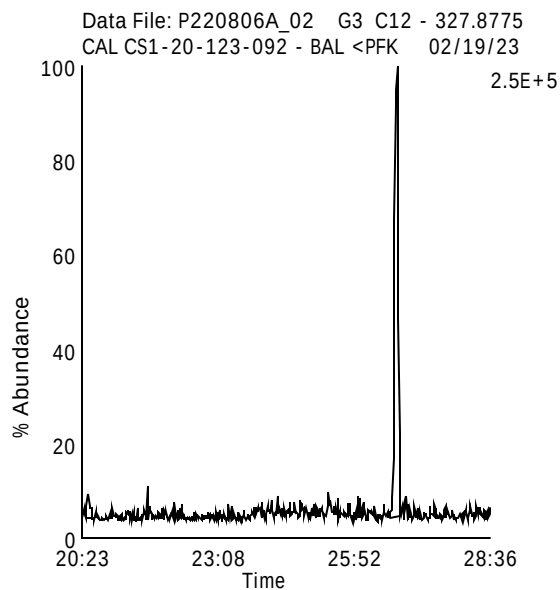
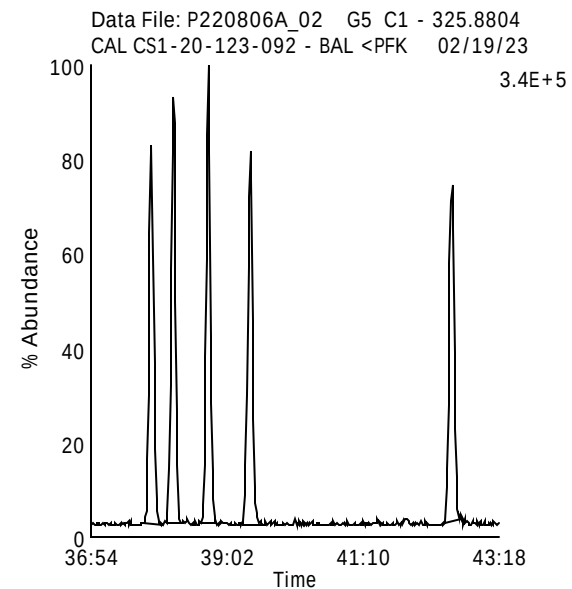
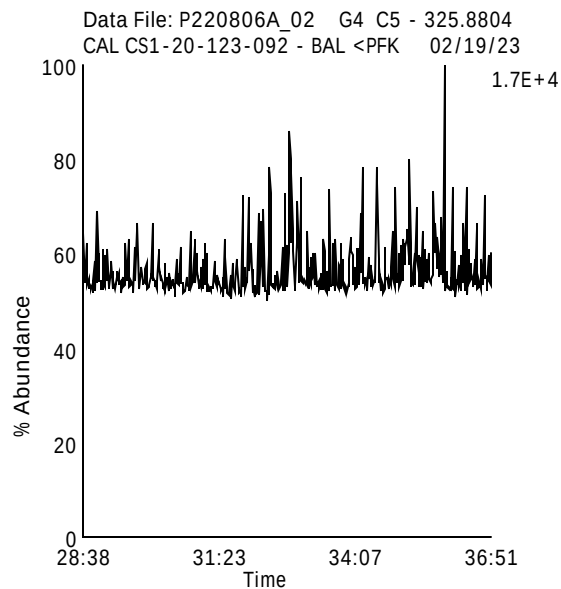
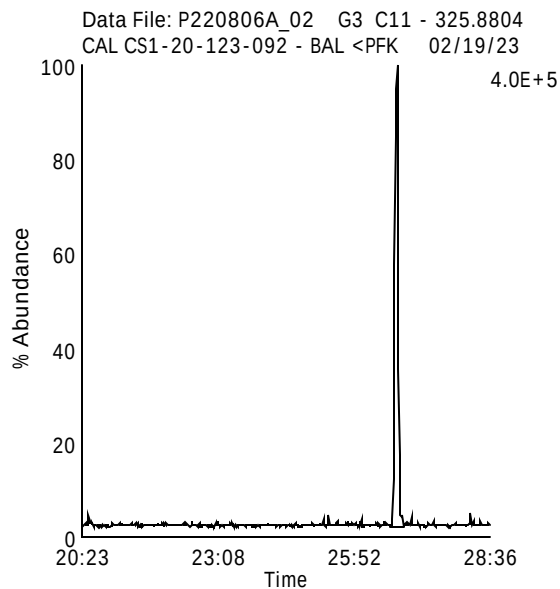
Data File Name: P220806A_02

Date Acquired: 8/6/2022

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23

Lab Sample ID: CS1-20-123-092

Instrument: 10MSHR09 (P)



Hexa Chlorinated Biphenyls

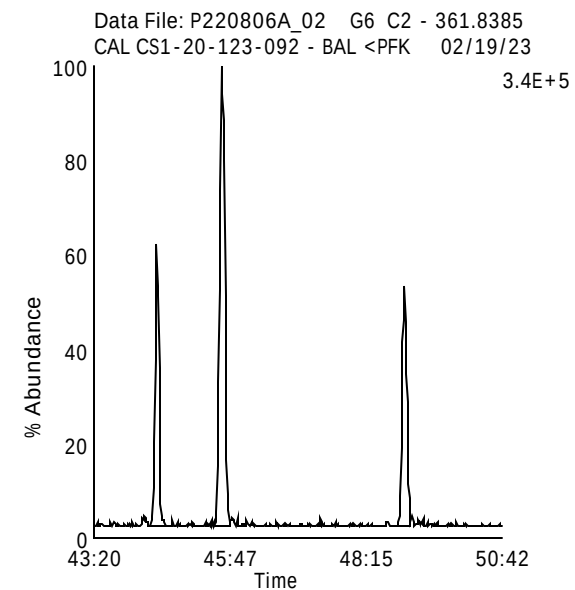
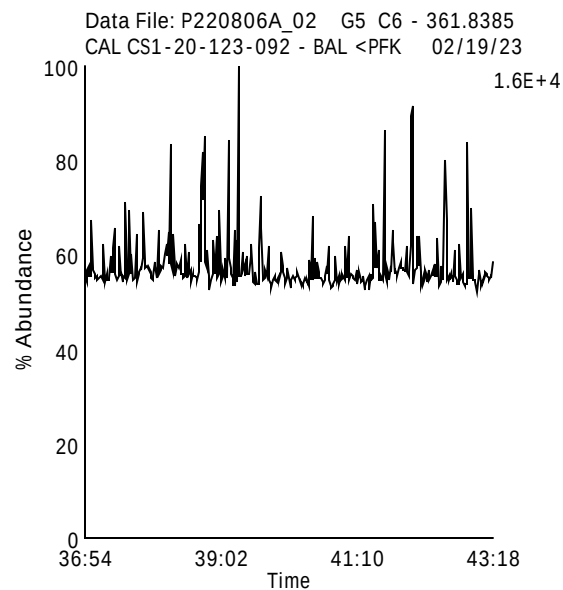
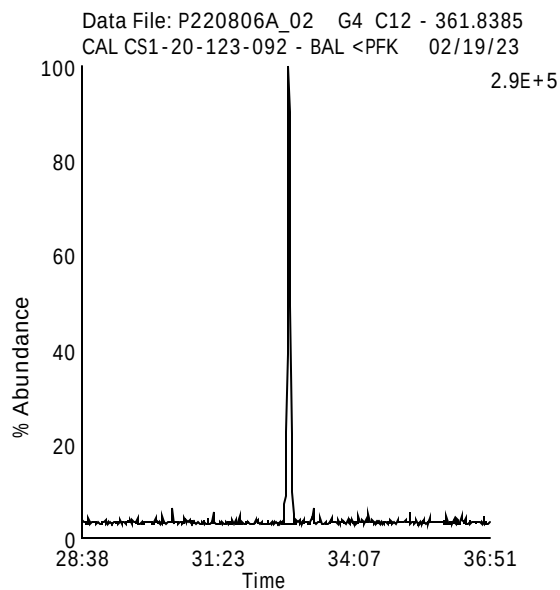
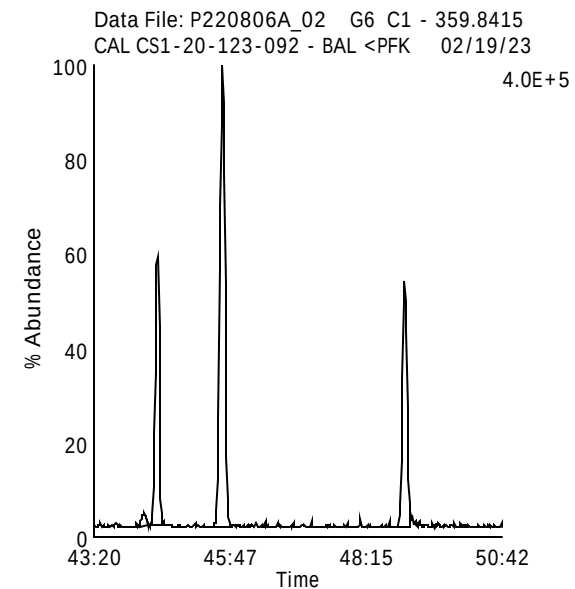
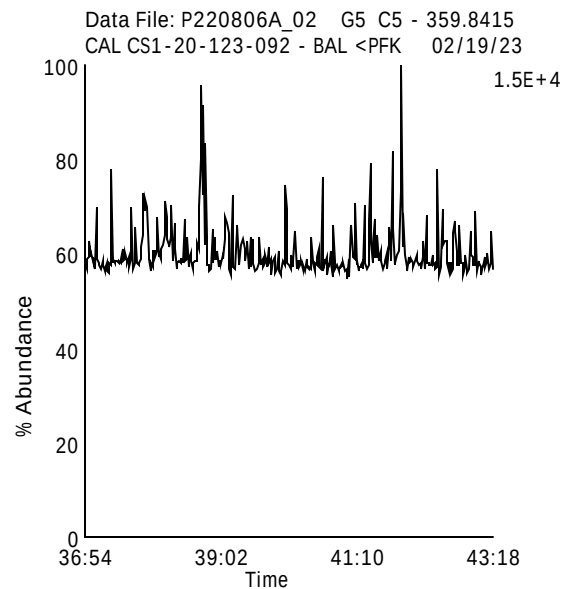
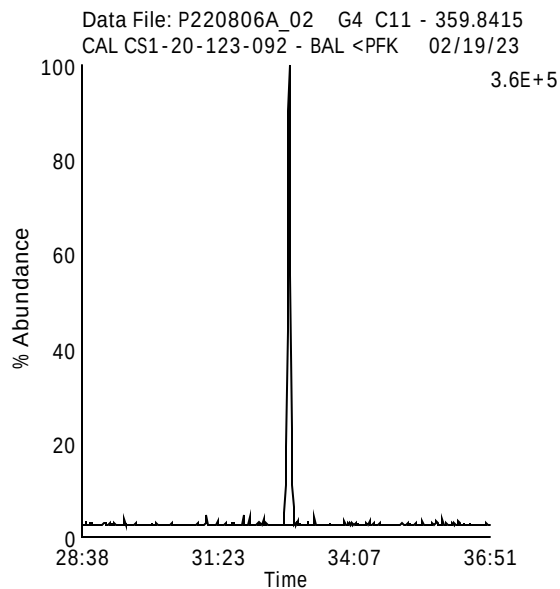
Data File Name: P220806A_02

Lab Sample ID: CS1-20-123-092

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23



Hepta Chlorinated Biphenyls

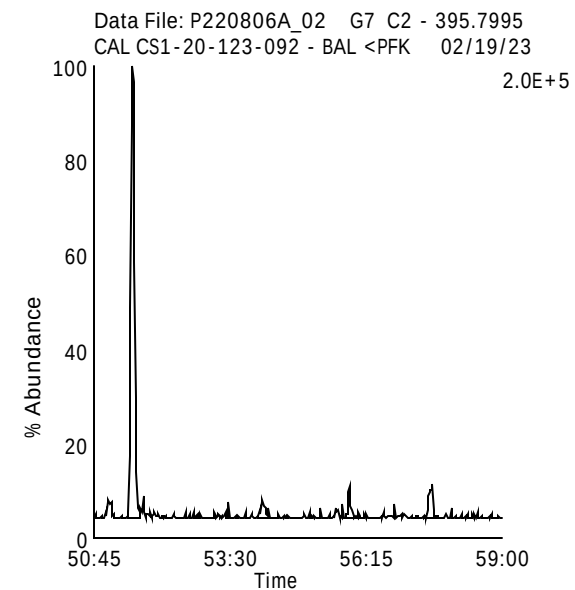
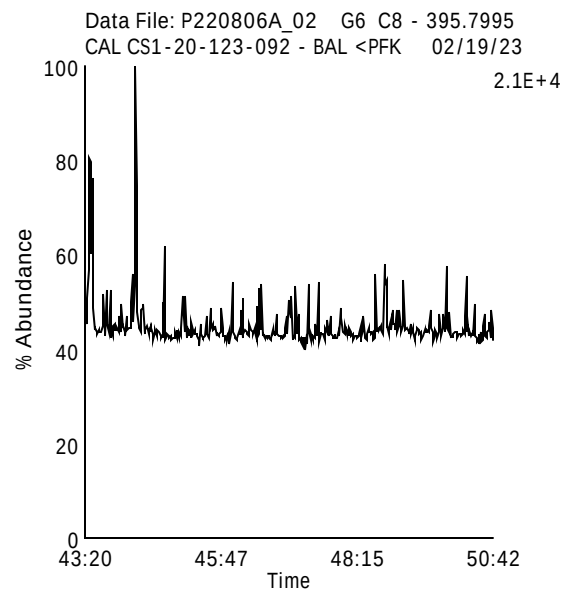
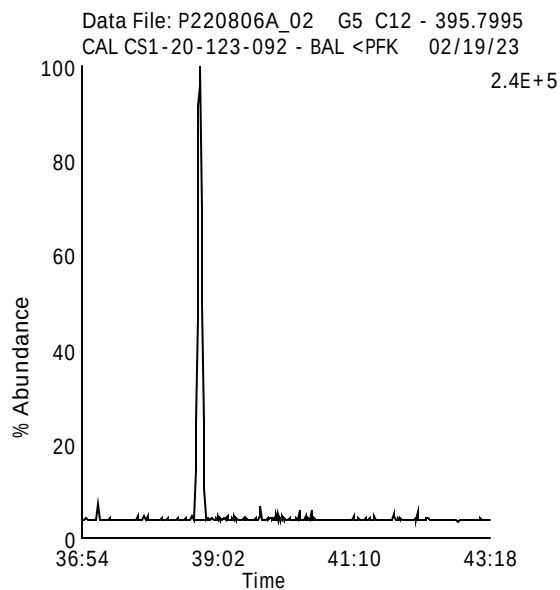
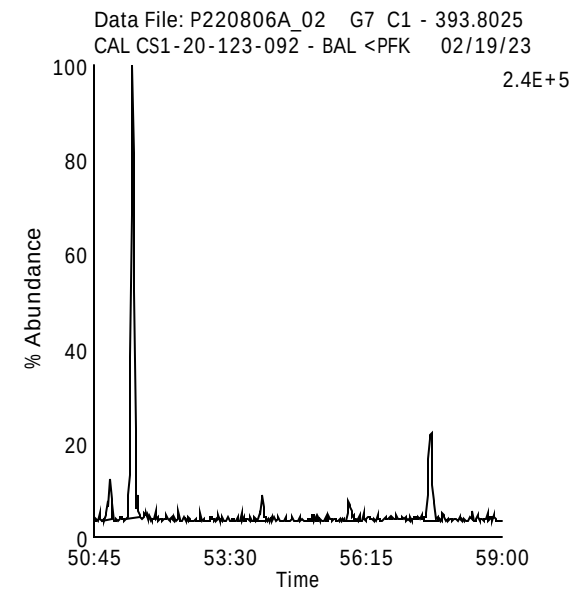
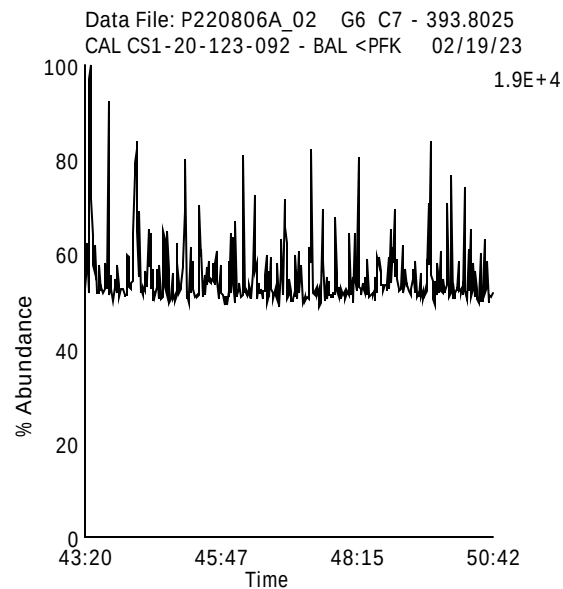
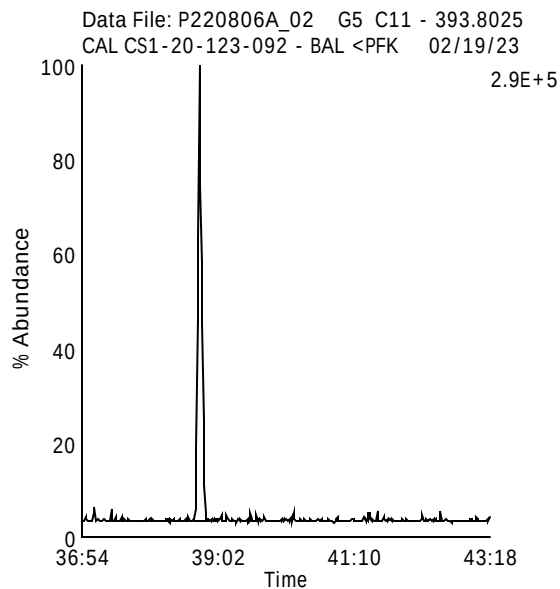
Data File Name: P220806A_02

Date Acquired: 8/6/2022

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23

Lab Sample ID: CS1-20-123-092

Instrument: 10MSHR09 (P)



Octa Chlorinated Biphenyls

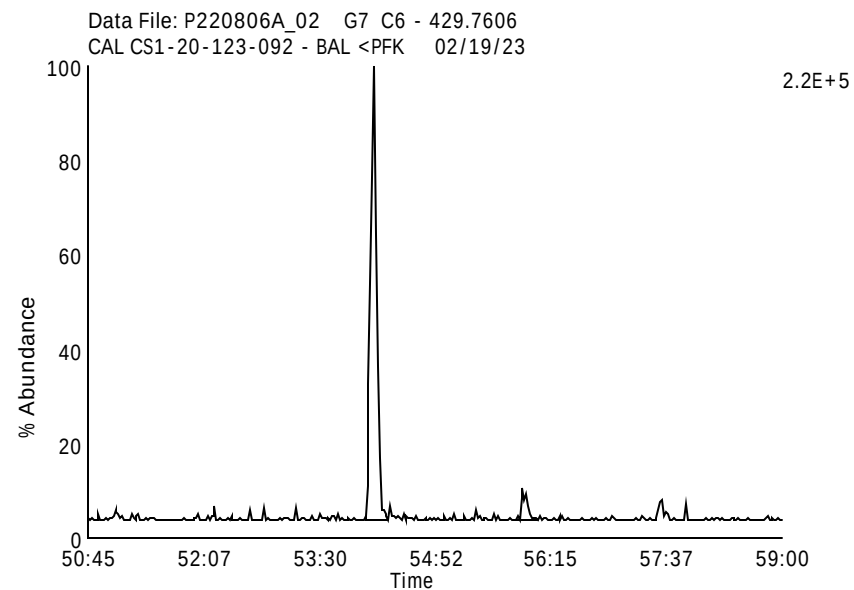
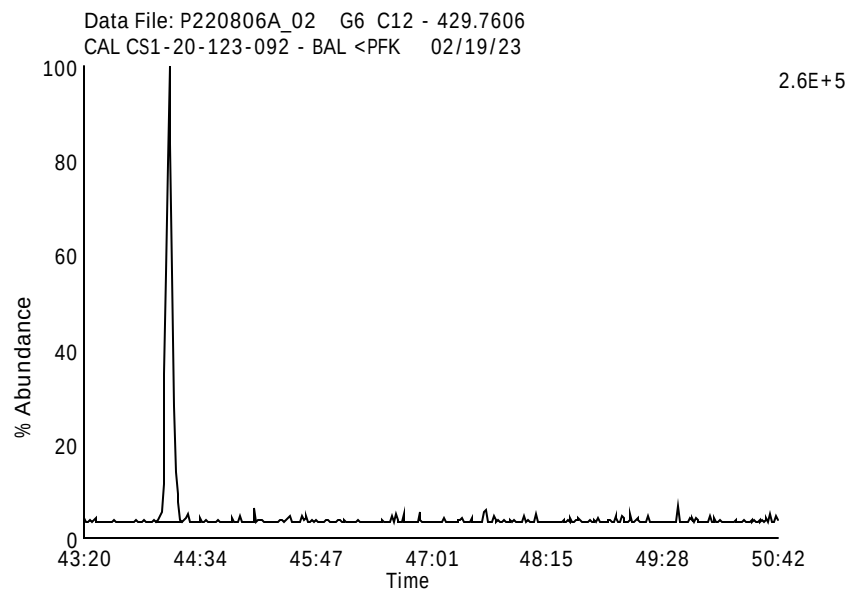
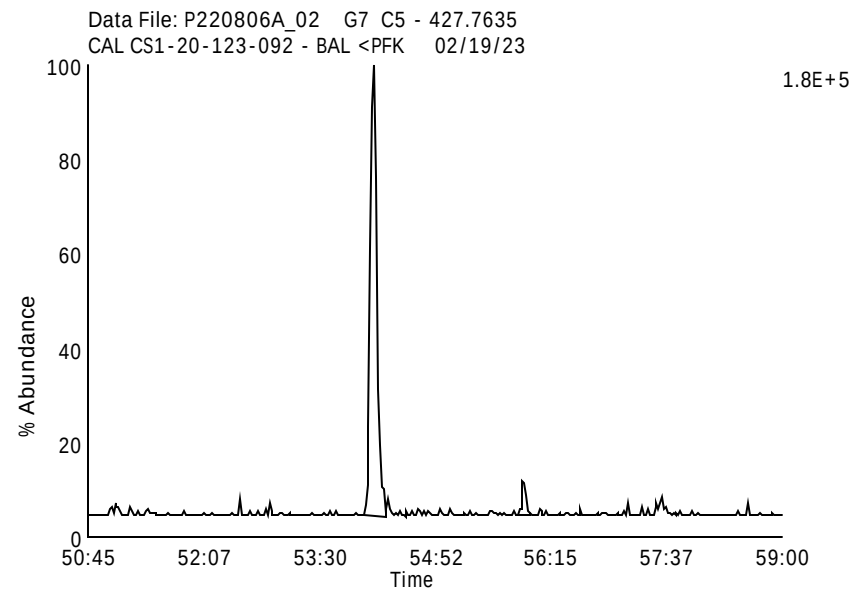
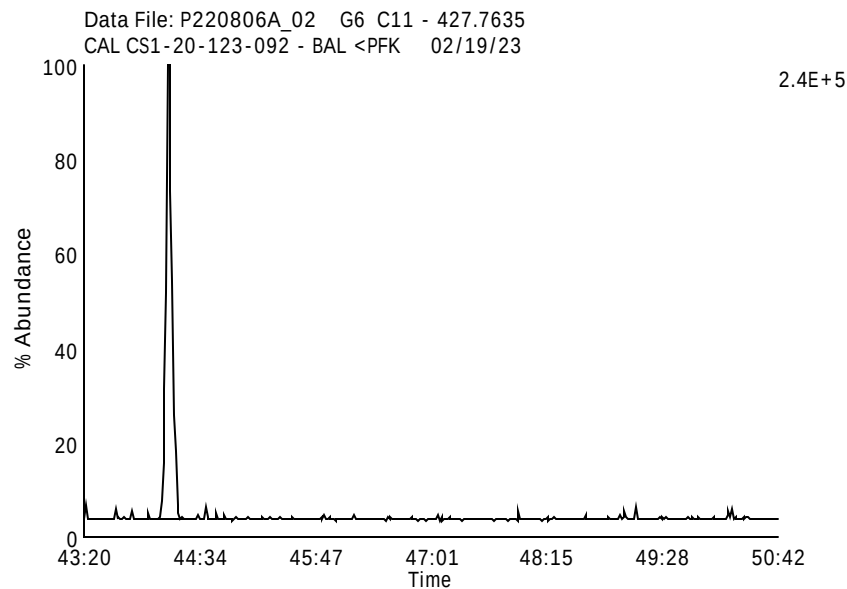
Data File Name: P220806A_02

Date Acquired: 8/6/2022

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23

Lab Sample ID: CS1-20-123-092

Instrument: 10MSHR09 (P)



Nona Chlorinated Biphenyls

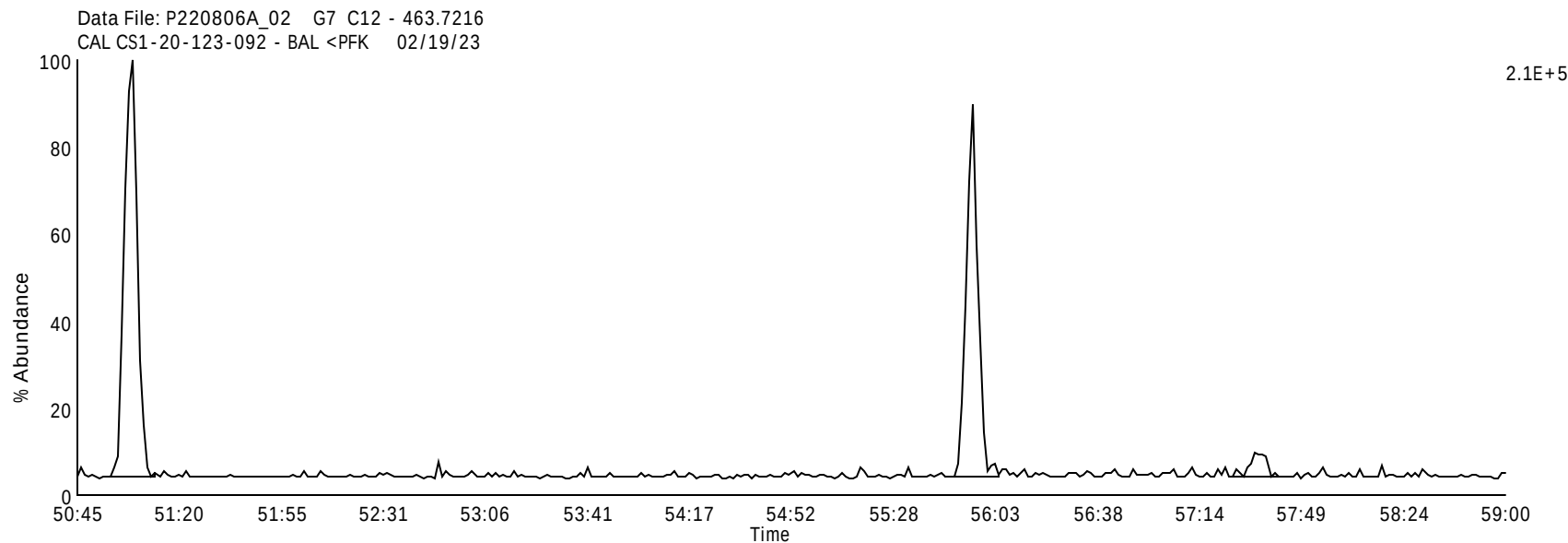
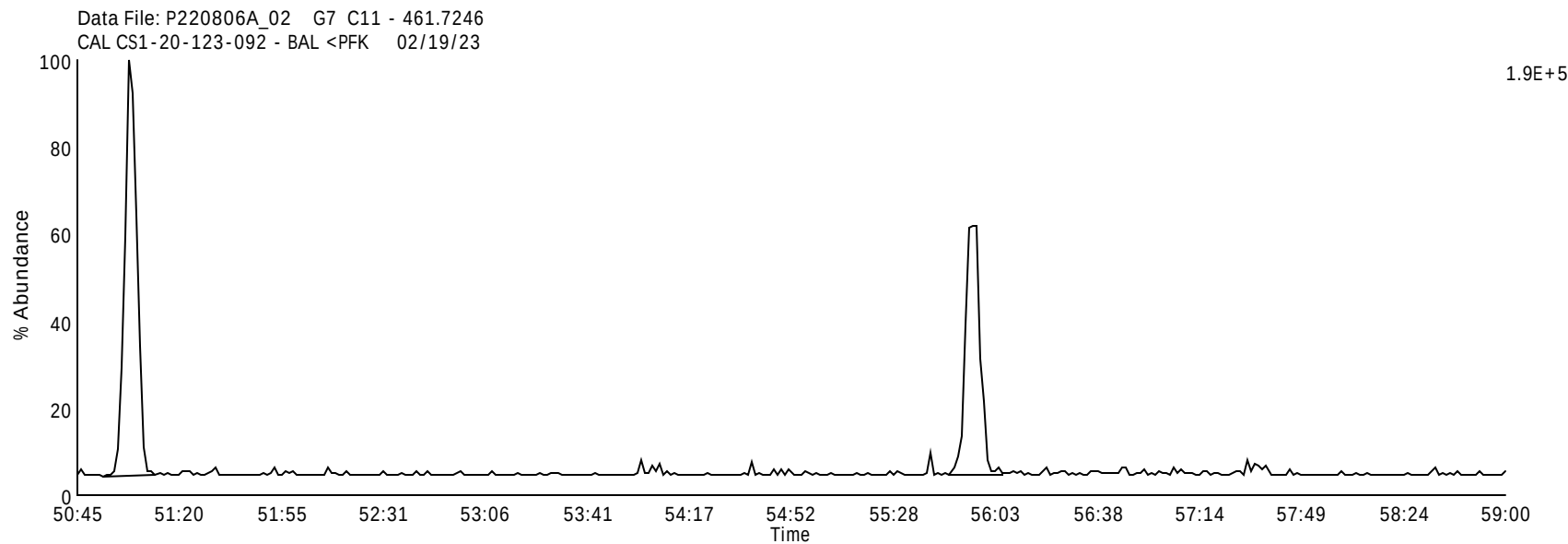
Data File Name: P220806A_02

Lab Sample ID: CS1-20-123-092

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23



Deca Chlorinated Biphenyl

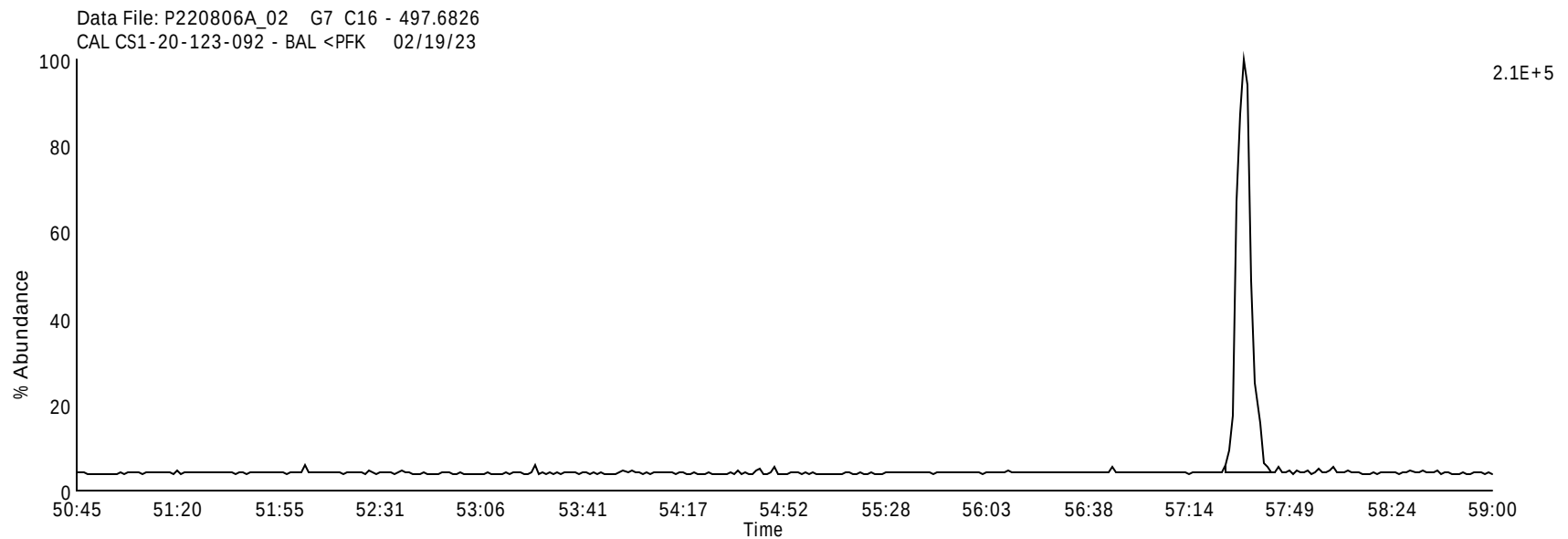
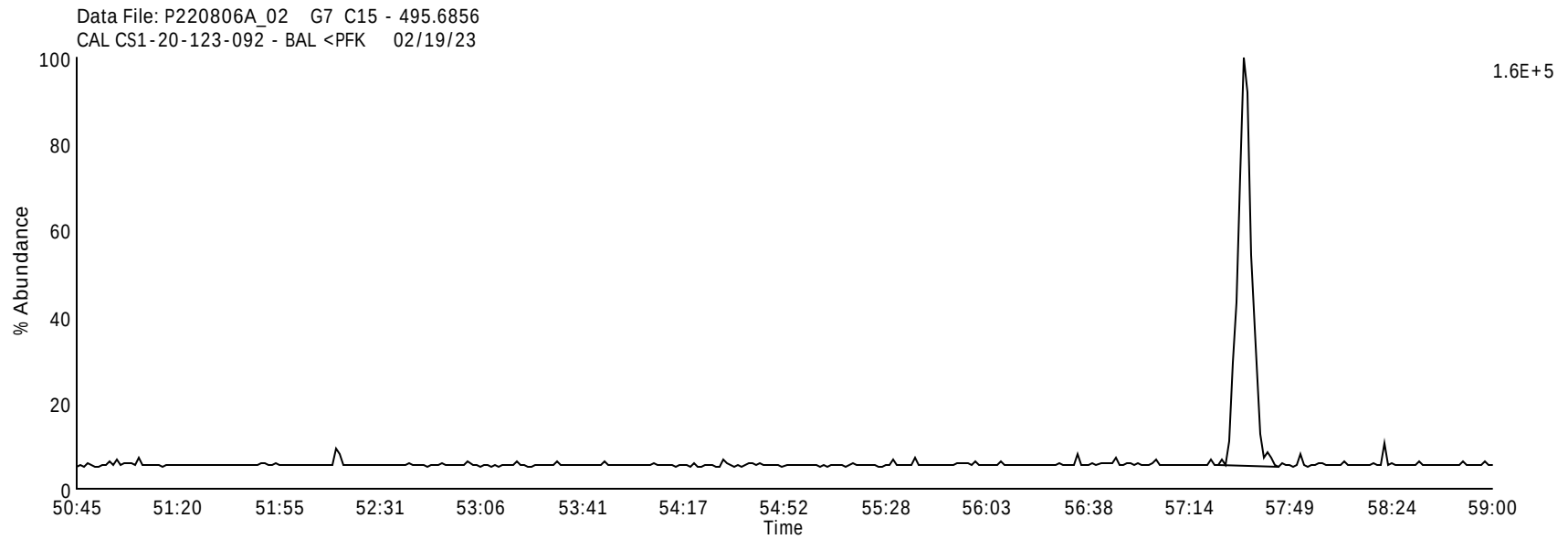
Data File Name: P220806A_02

Date Acquired: 8/6/2022

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23

Lab Sample ID: CS1-20-123-092

Instrument: 10MSHR09 (P)



Group 1 - 4 Lock mass

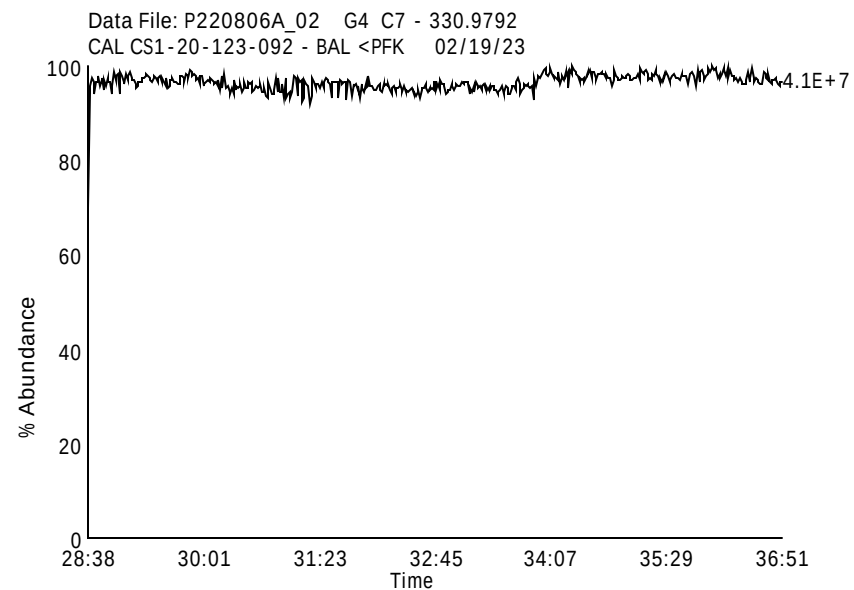
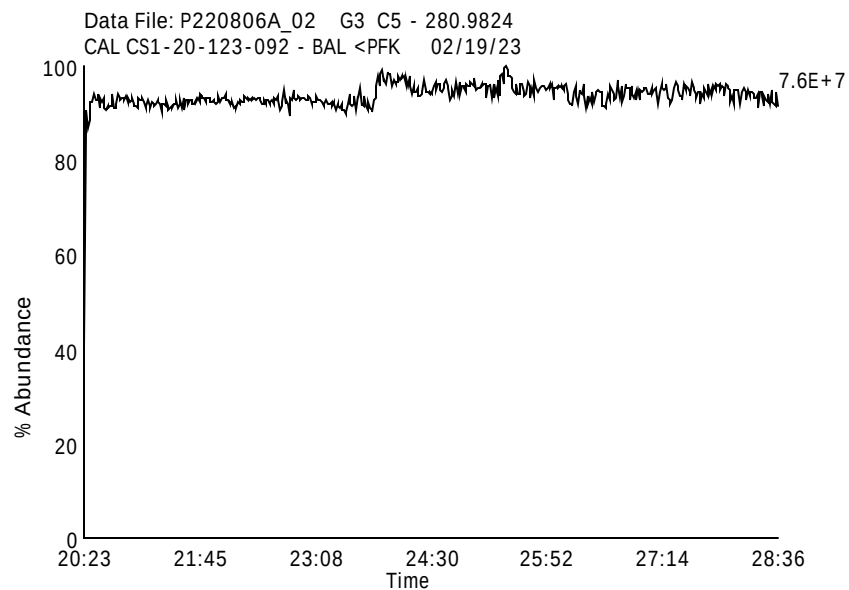
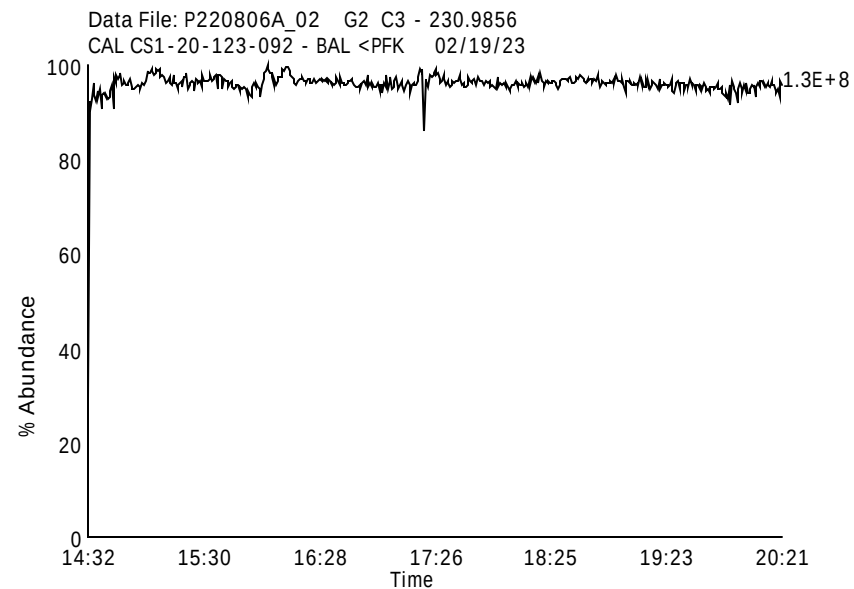
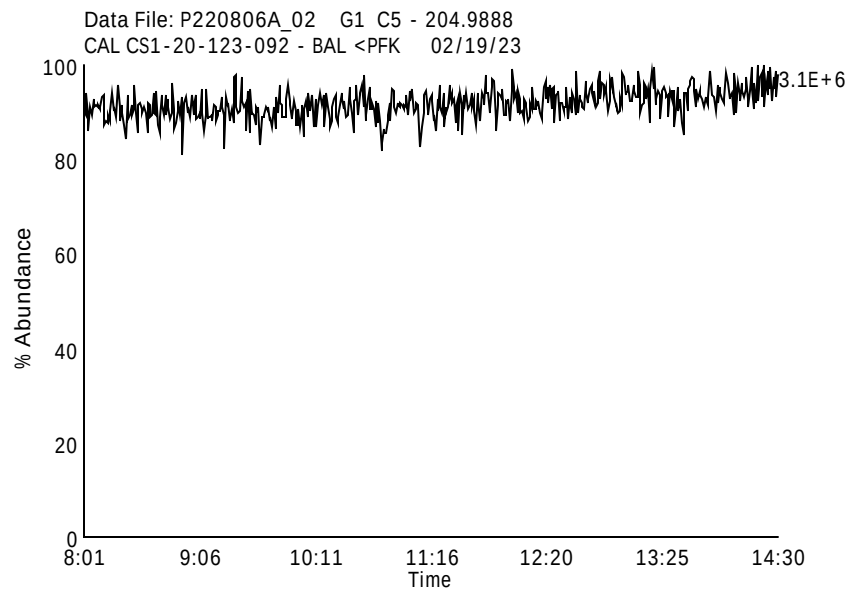
Data File Name: P220806A_02

Date Acquired: 8/6/2022

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23

Lab Sample ID: CS1-20-123-092

Instrument: 10MSHR09 (P)



Group 5 - 7 Lock mass

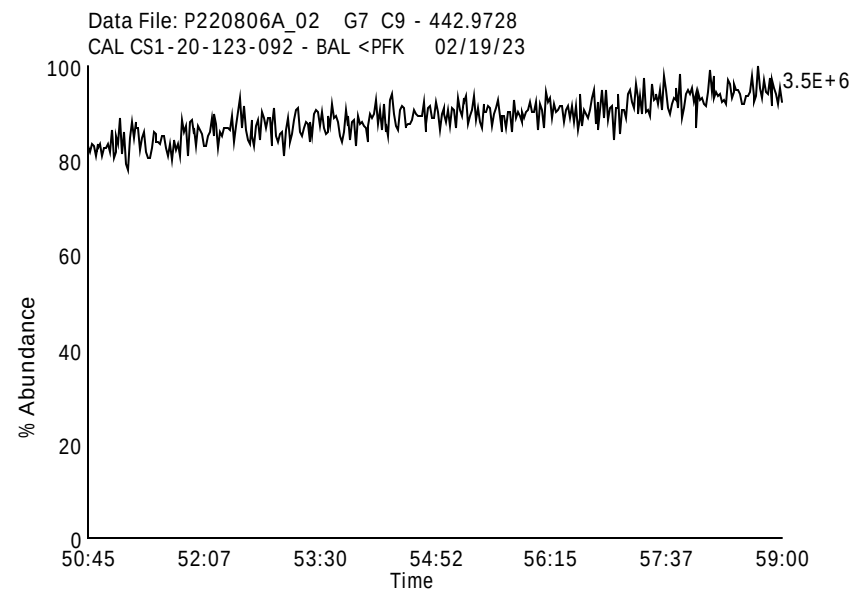
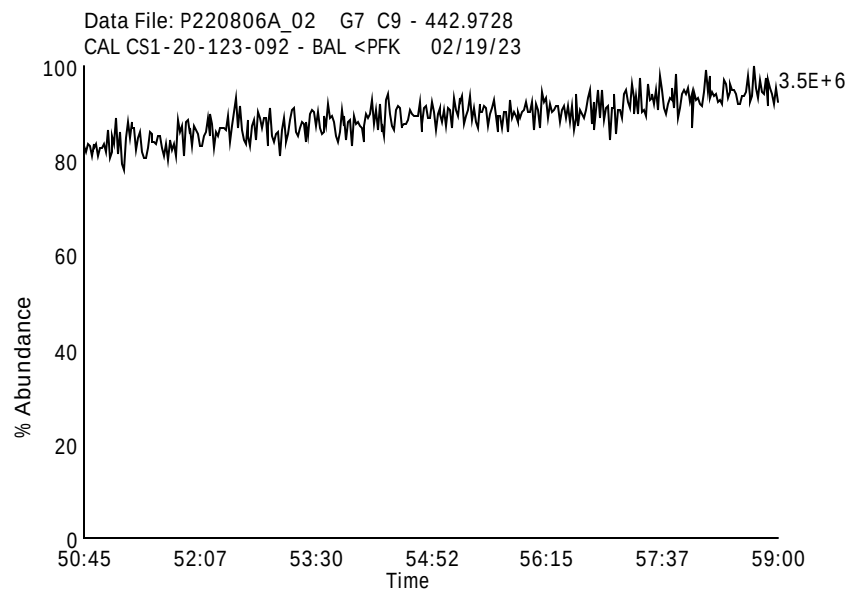
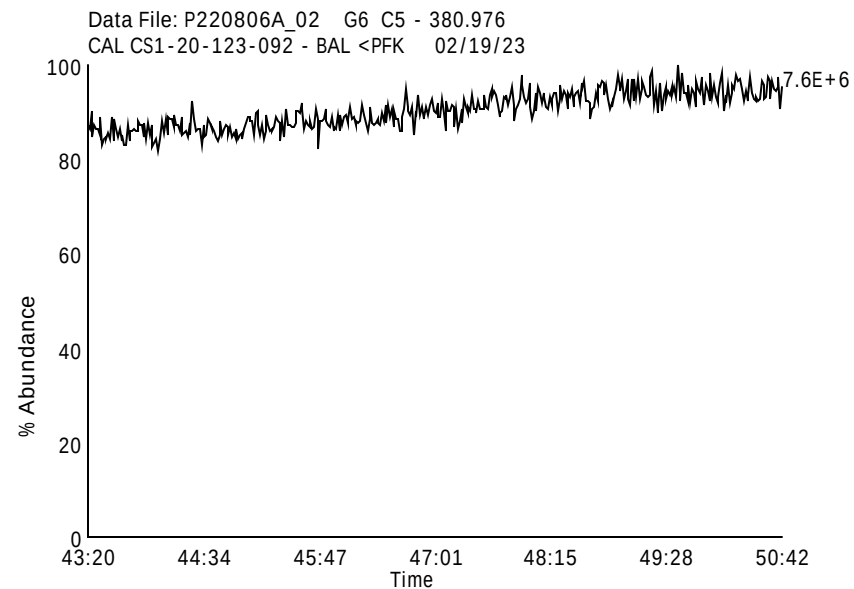
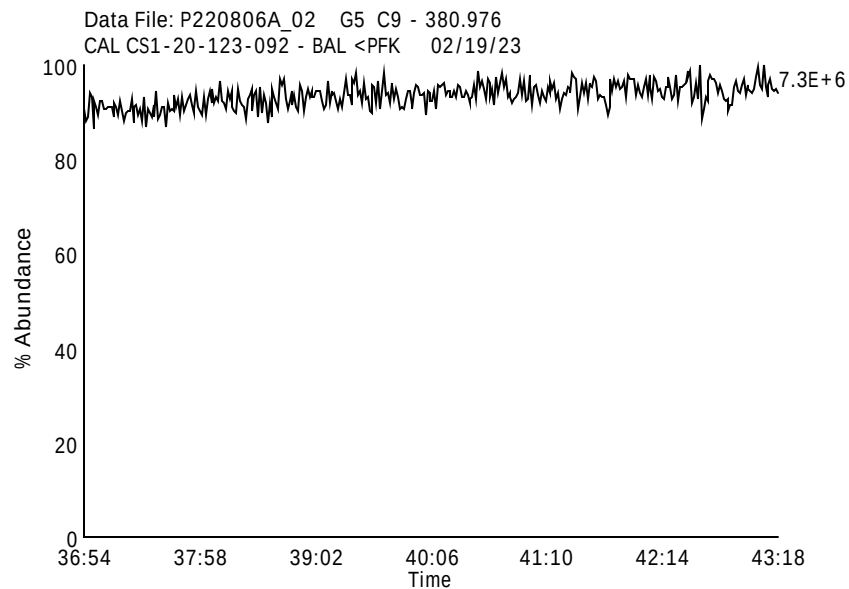
Data File Name: P220806A_02

Date Acquired: 8/6/2022

Sample Description: CAL CS1-20-123-092 - BAL <PFK 02/19/23

Lab Sample ID: CS1-20-123-092

Instrument: 10MSHR09 (P)



Labeled Mono Chlorinated Biphenyls

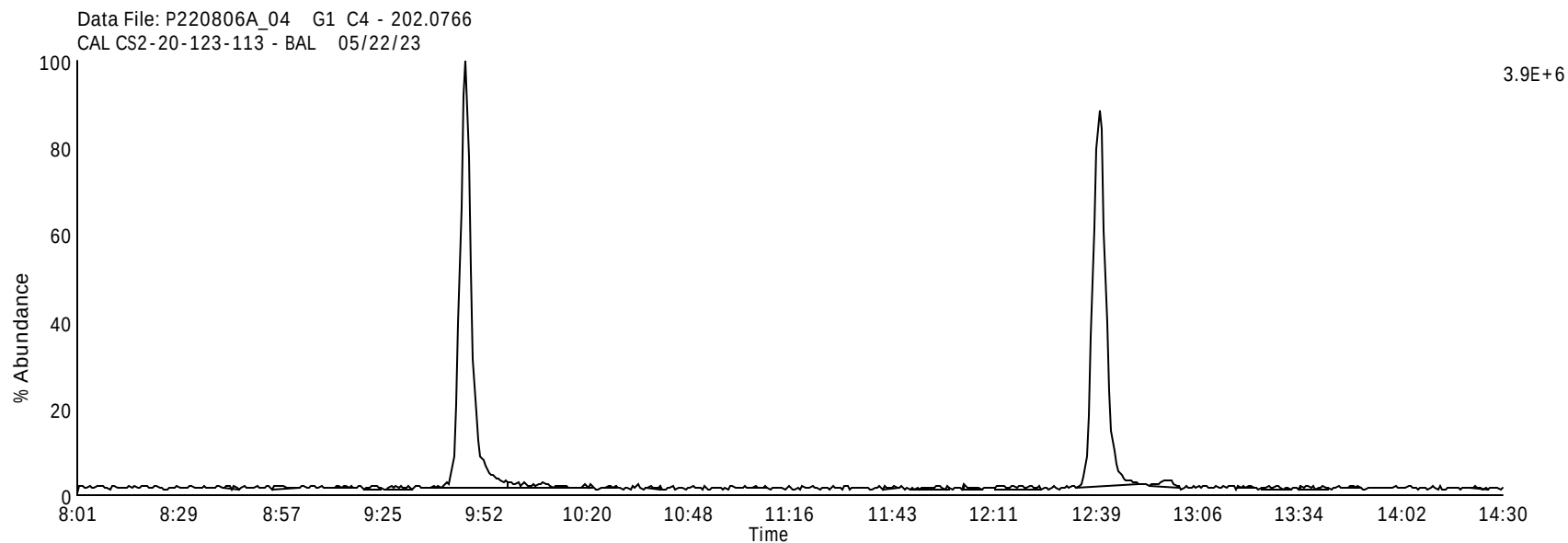
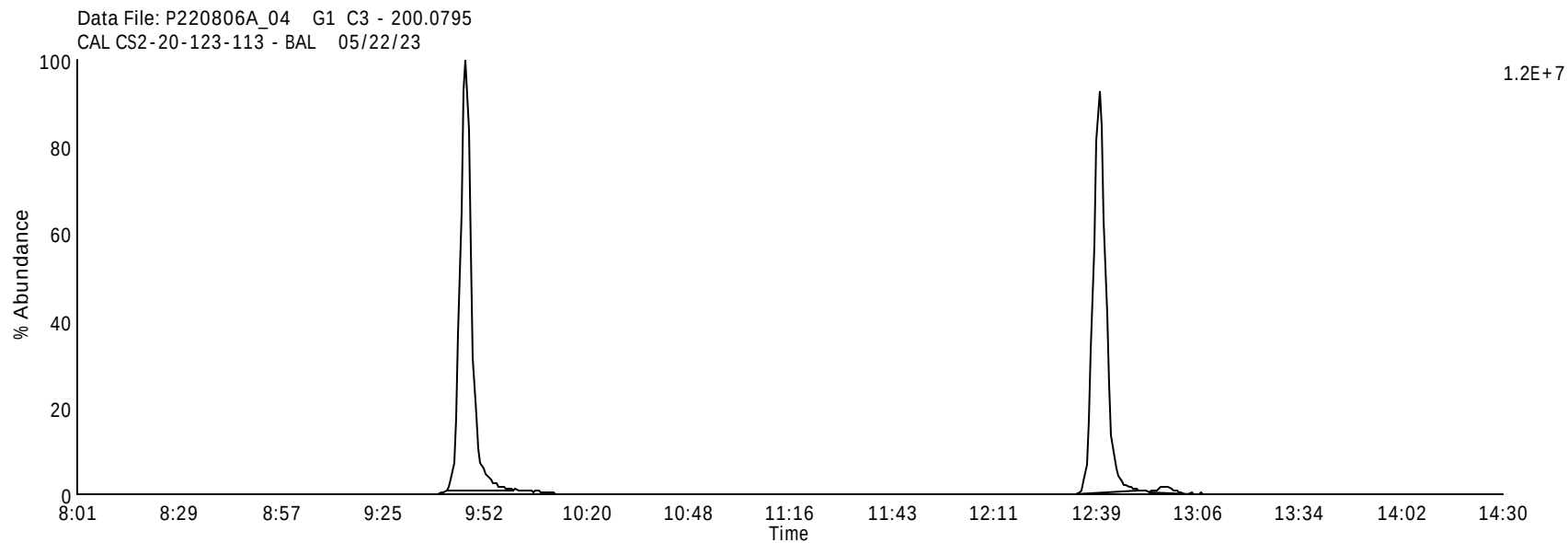
Data File Name: P220806A_04

Lab Sample ID: CS2-20-123-113

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23



Labeled Di Chlorinated Biphenyls

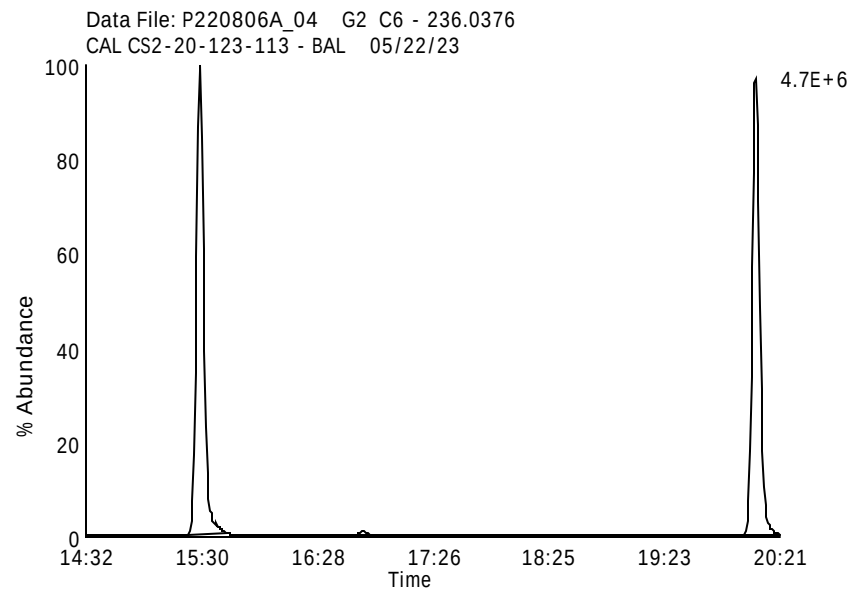
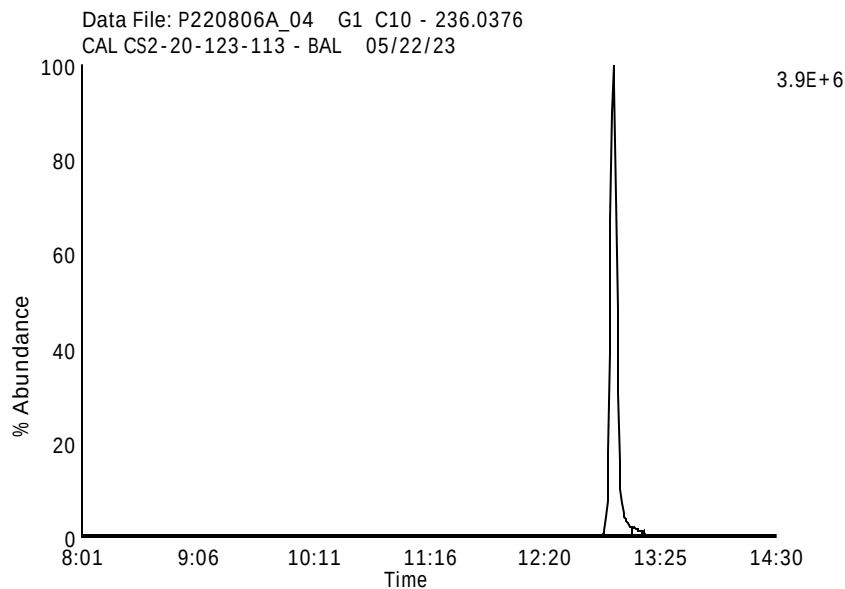
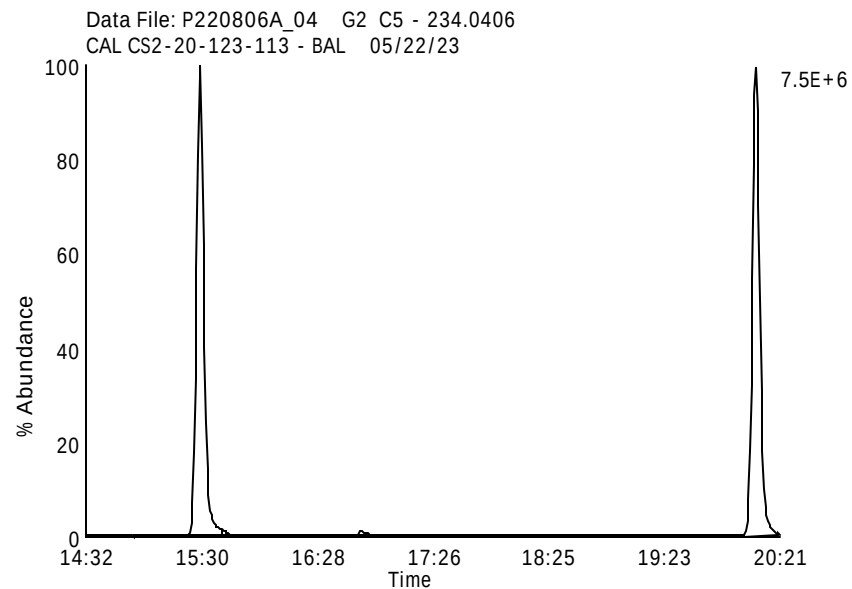
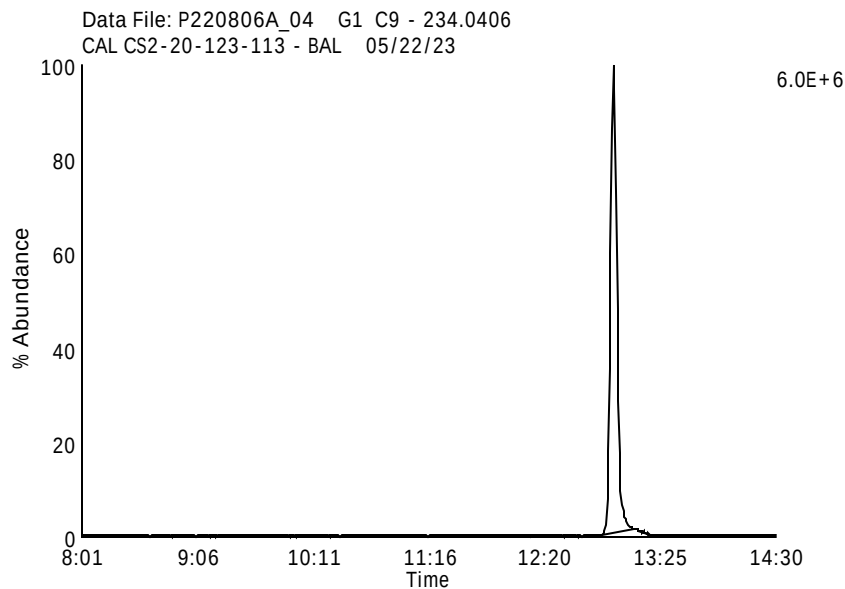
Data File Name: P220806A_04

Date Acquired: 8/6/2022

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23

Lab Sample ID: CS2-20-123-113

Instrument: 10MSHR09 (P)



Labeled Tri Chlorinated Biphenyls

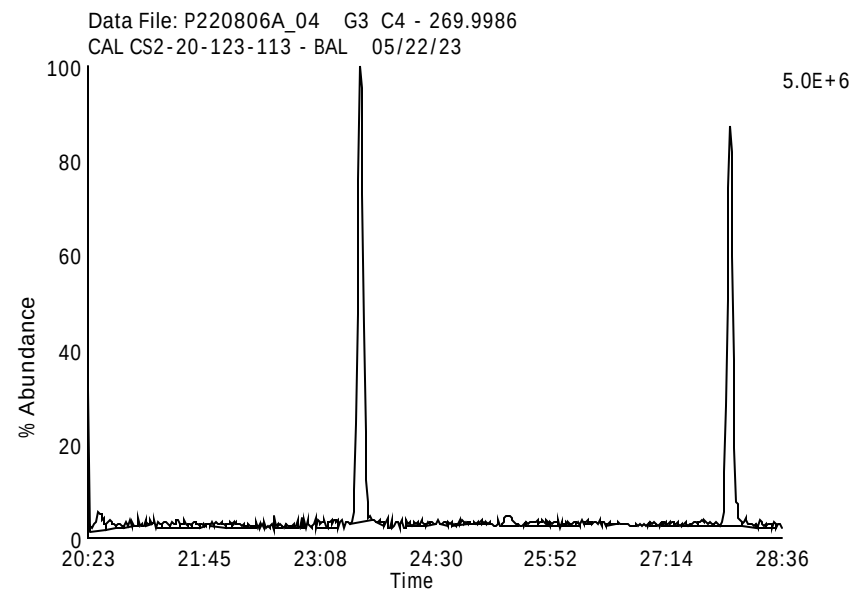
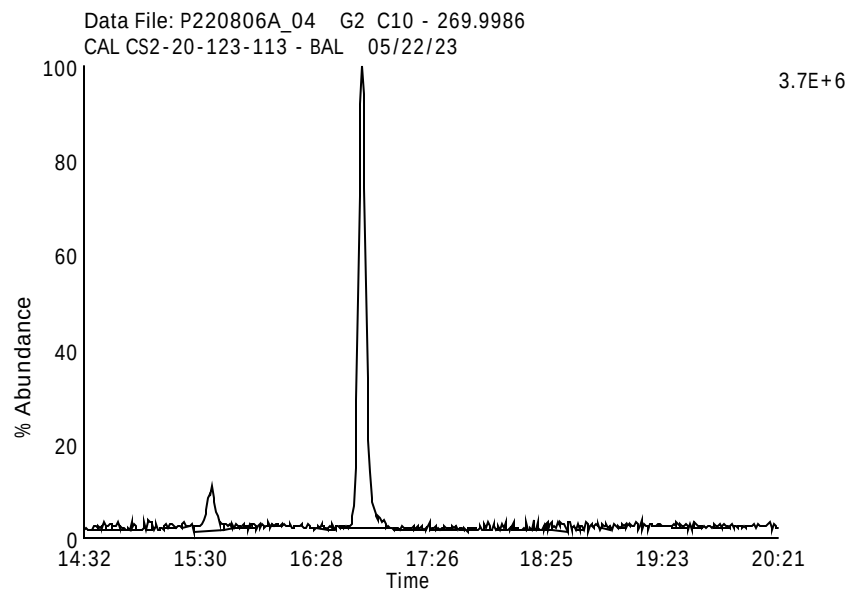
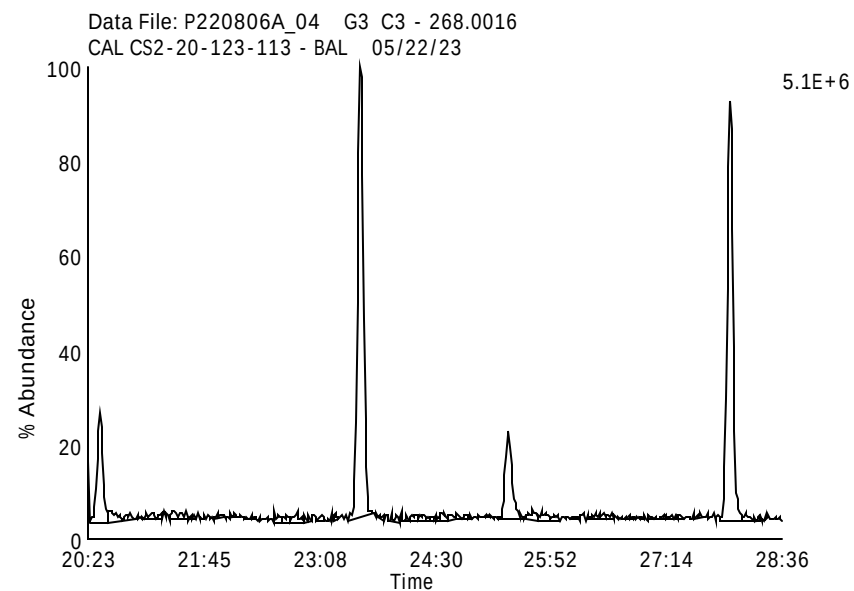
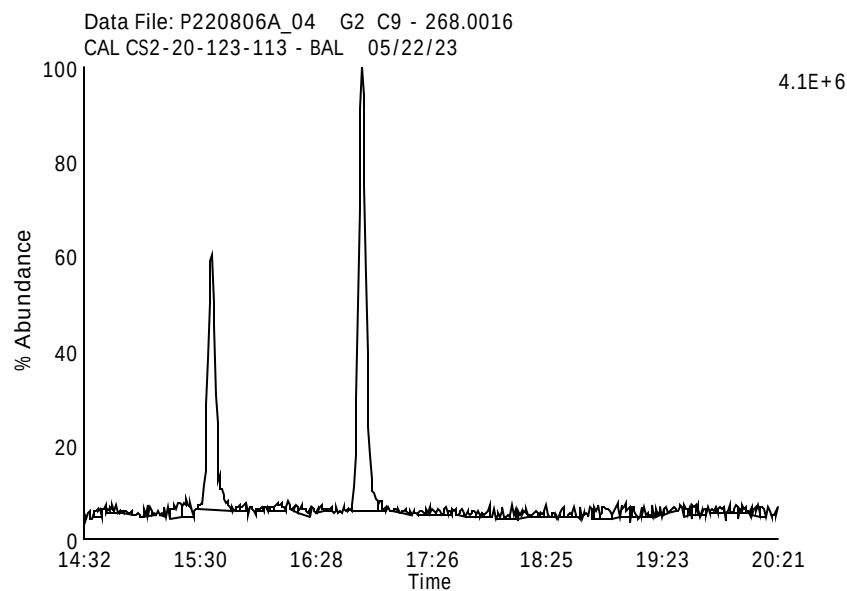
Data File Name: P220806A_04

Date Acquired: 8/6/2022

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23

Lab Sample ID: CS2-20-123-113

Instrument: 10MSHR09 (P)



Labeled Tetra Chlorinated Biphenyls

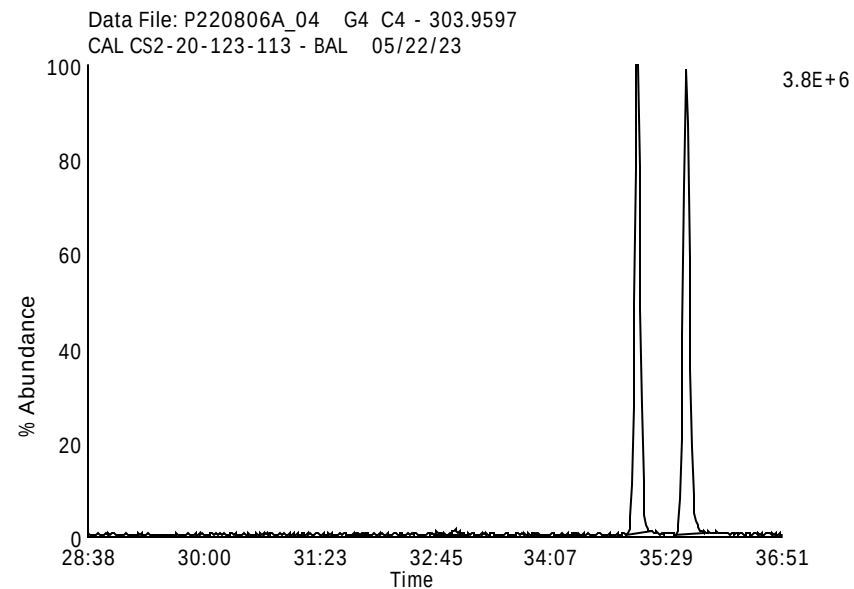
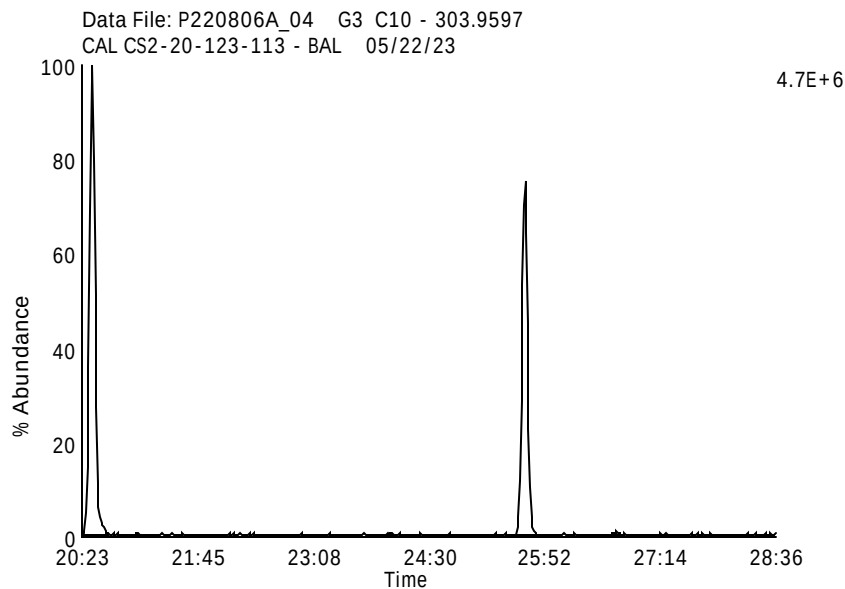
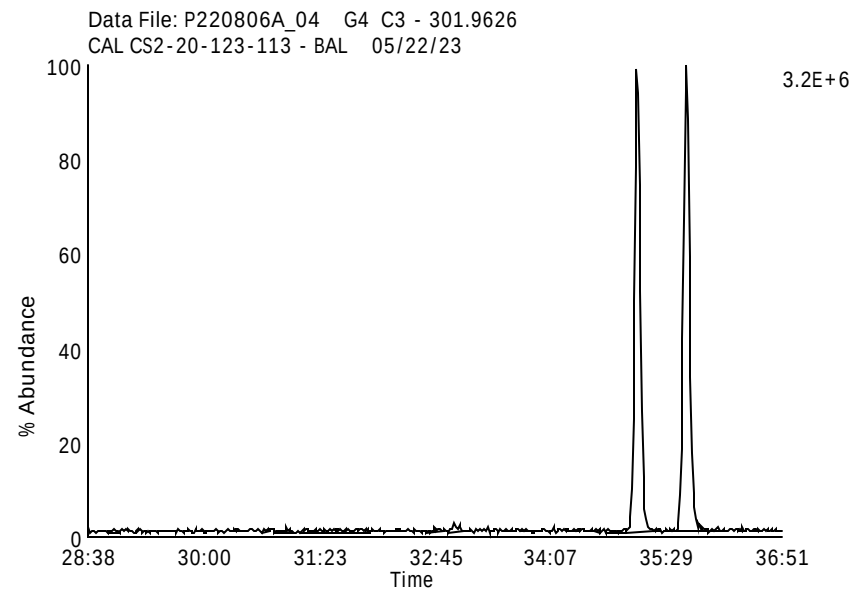
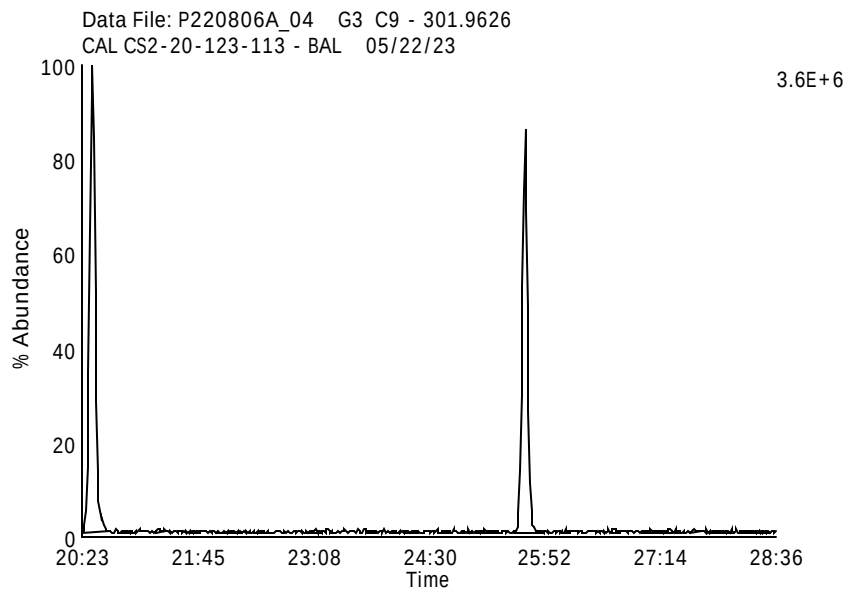
Data File Name: P220806A_04

Date Acquired: 8/6/2022

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23

Lab Sample ID: CS2-20-123-113

Instrument: 10MSHR09 (P)



Labeled Penta Chlorinated Biphenyls

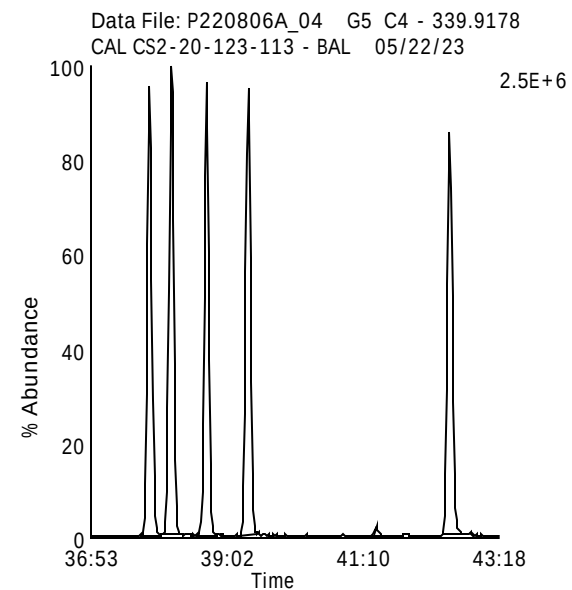
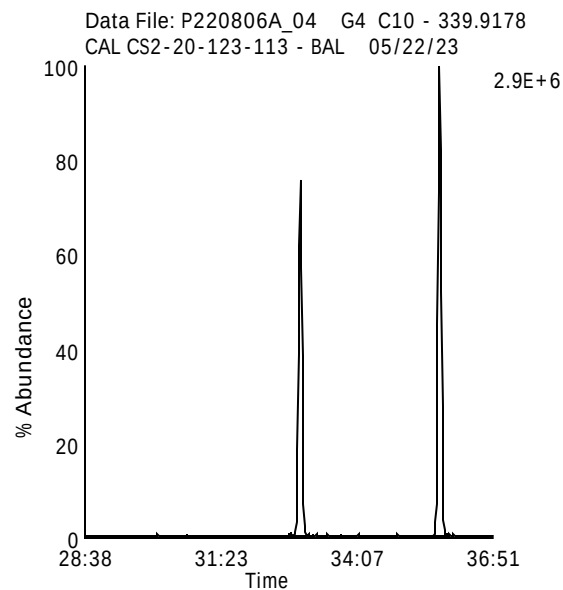
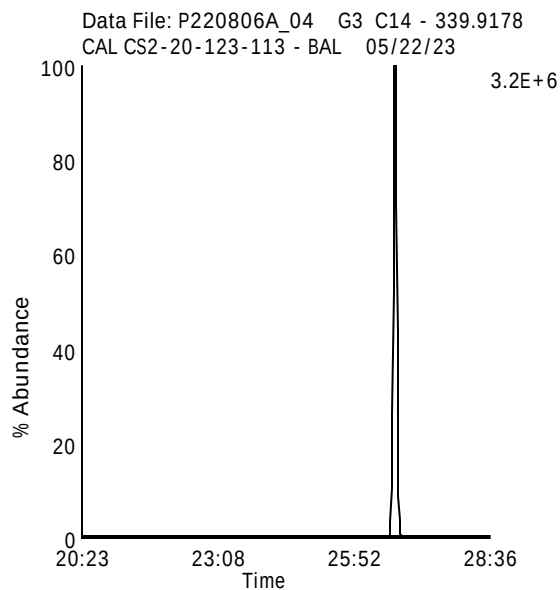
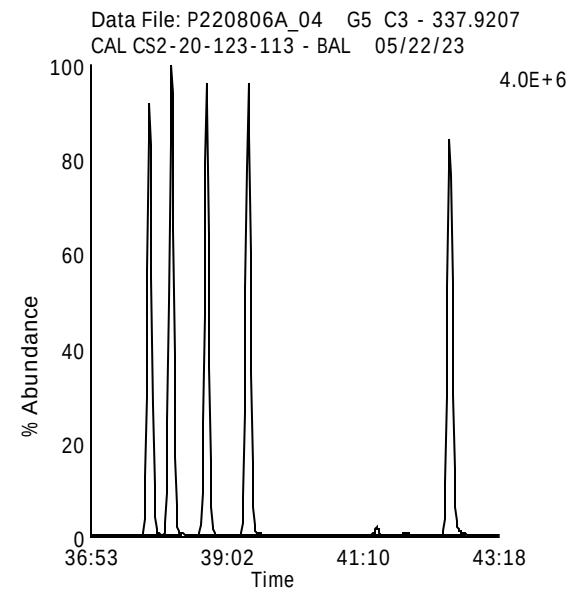
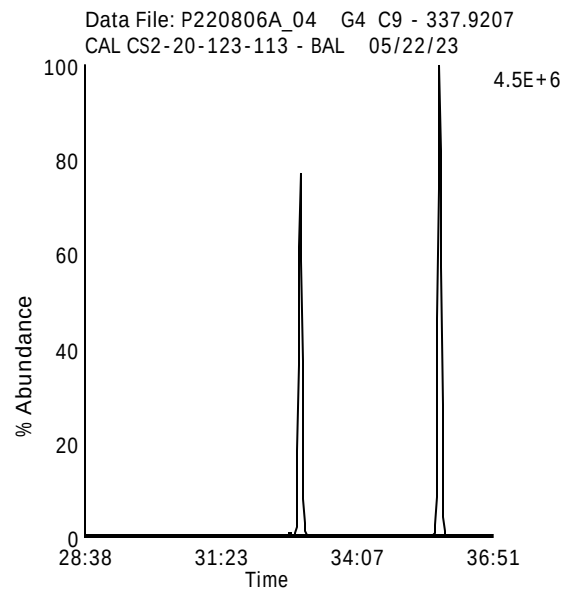
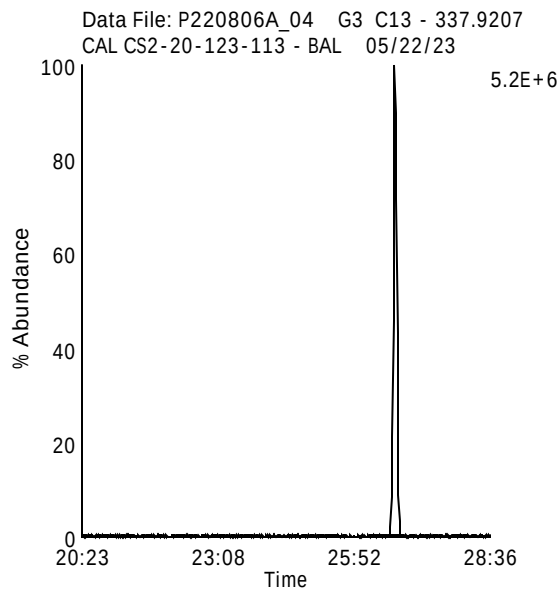
Data File Name: P220806A_04

Lab Sample ID: CS2-20-123-113

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23



Labeled Hexa Chlorinated Biphenyls

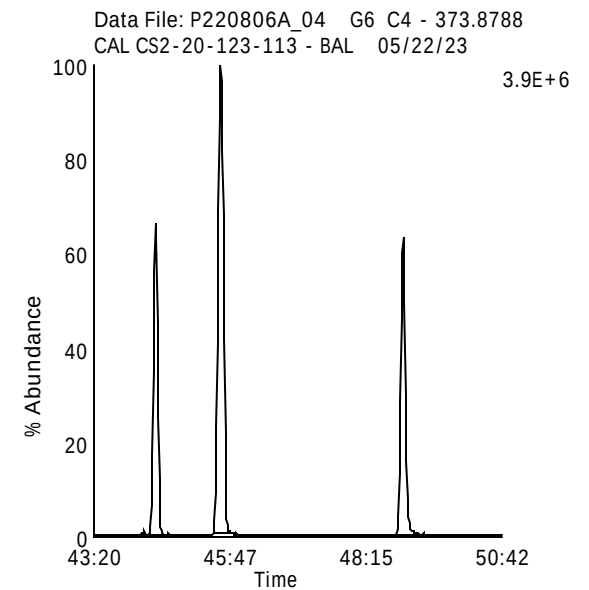
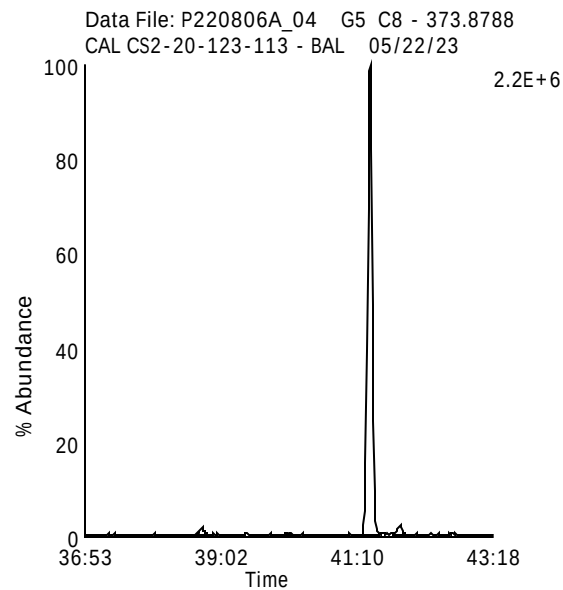
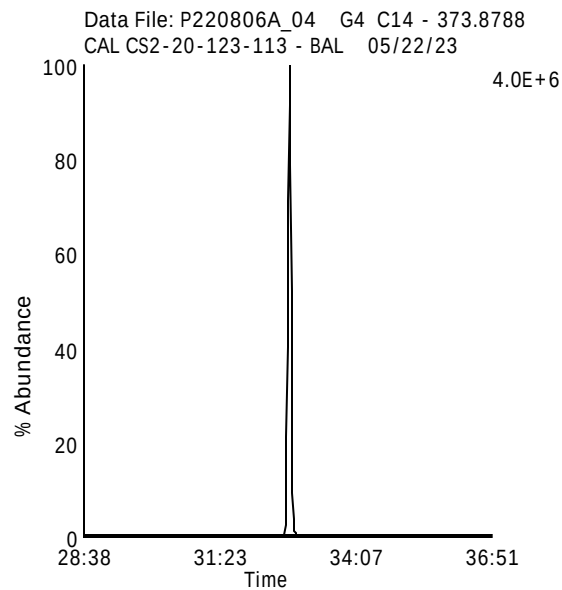
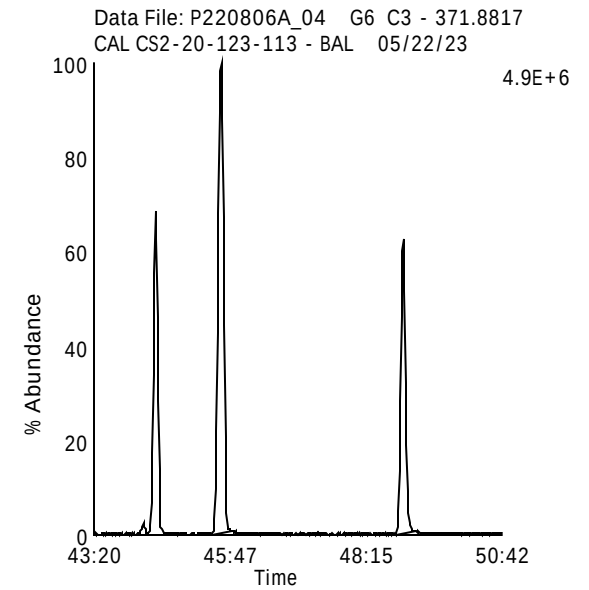
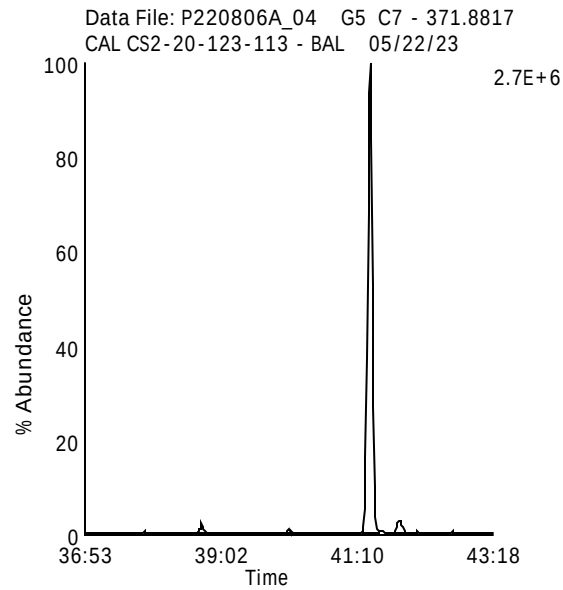
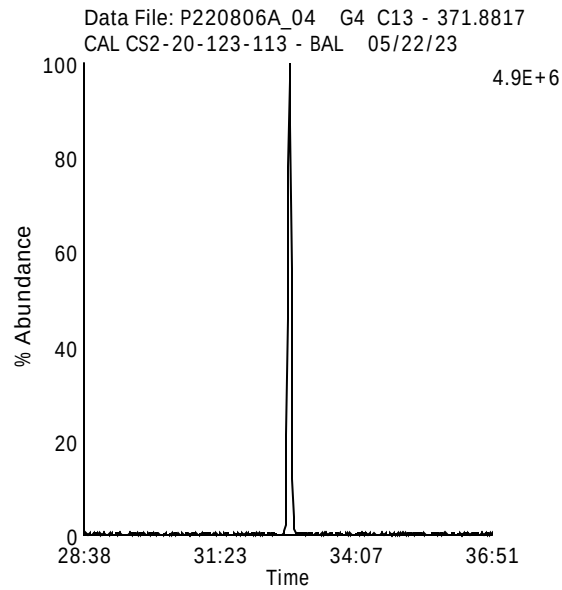
Data File Name: P220806A_04

Lab Sample ID: CS2-20-123-113

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23



Labeled Hepta Chlorinated Biphenyls

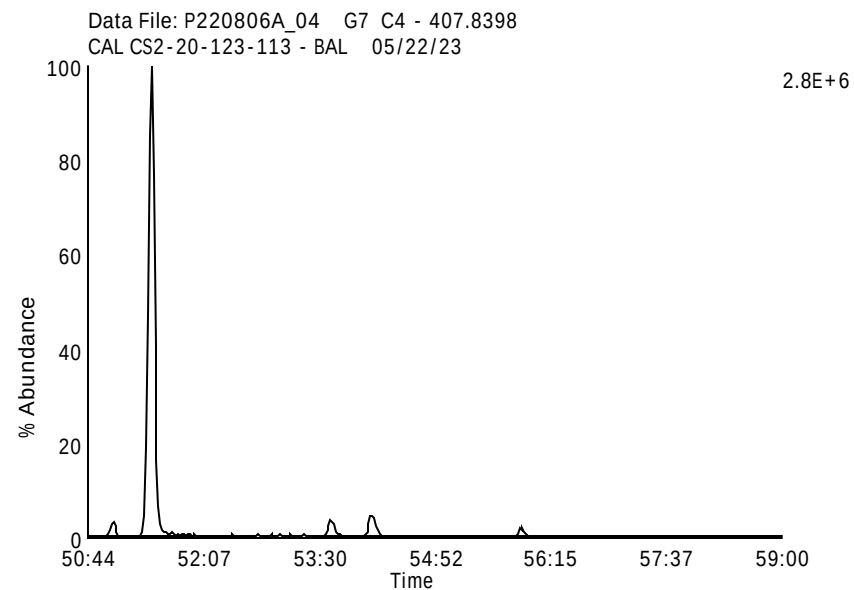
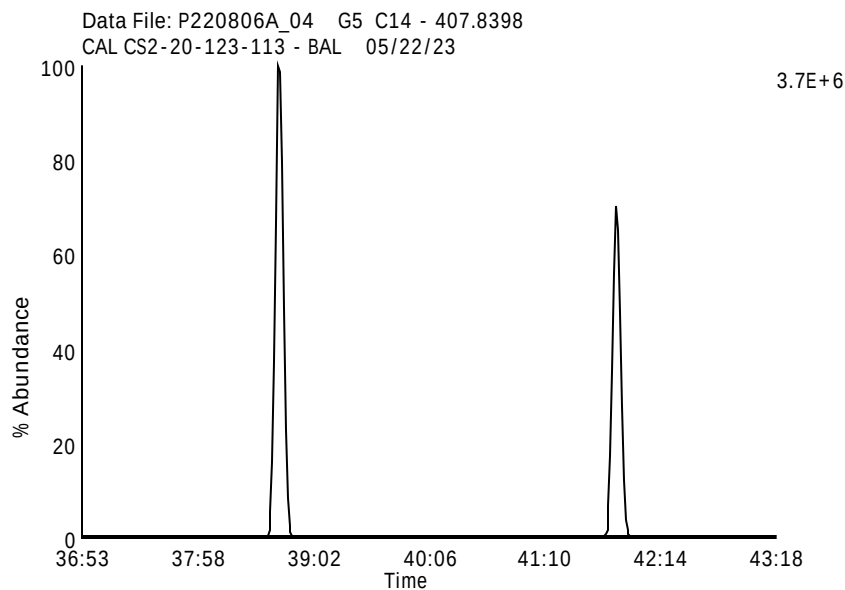
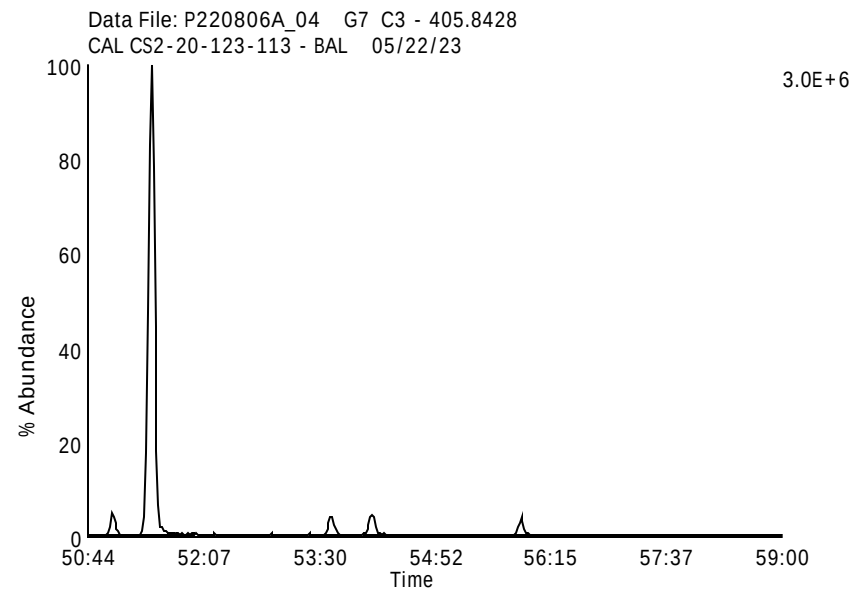
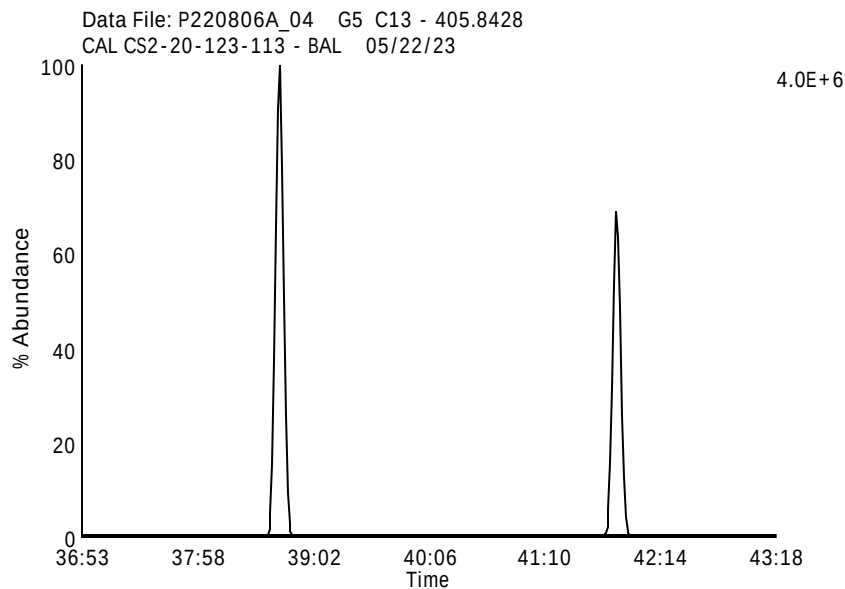
Data File Name: P220806A_04

Date Acquired: 8/6/2022

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23

Lab Sample ID: CS2-20-123-113

Instrument: 10MSHR09 (P)



Labeled Octa Chlorinated Biphenyls

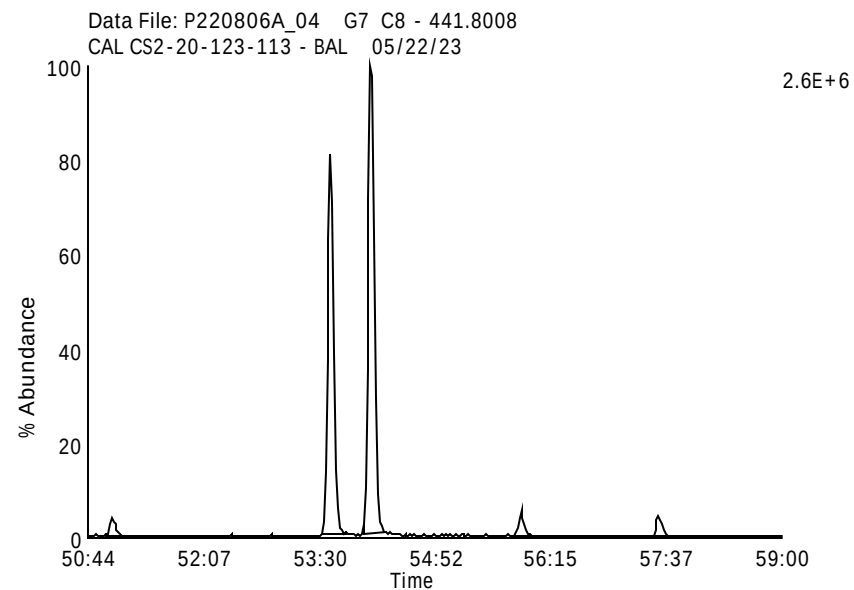
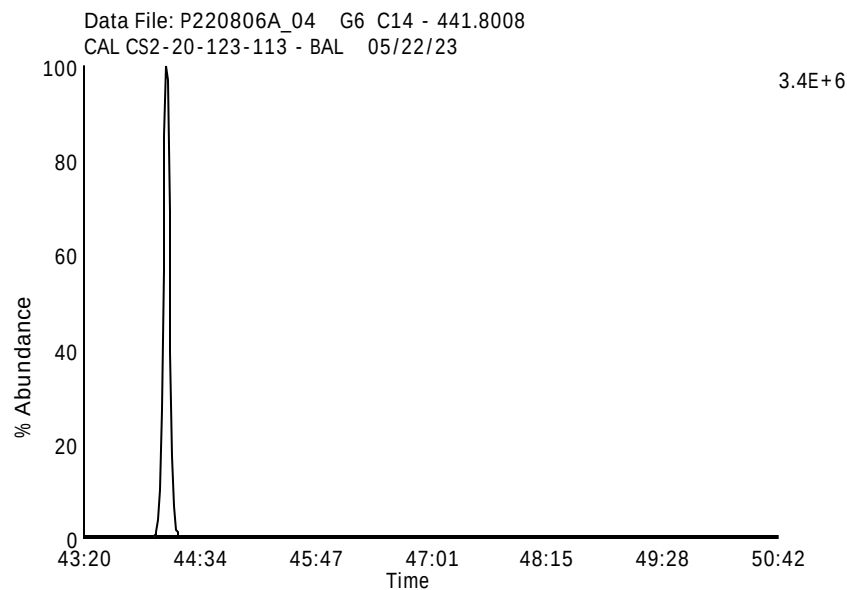
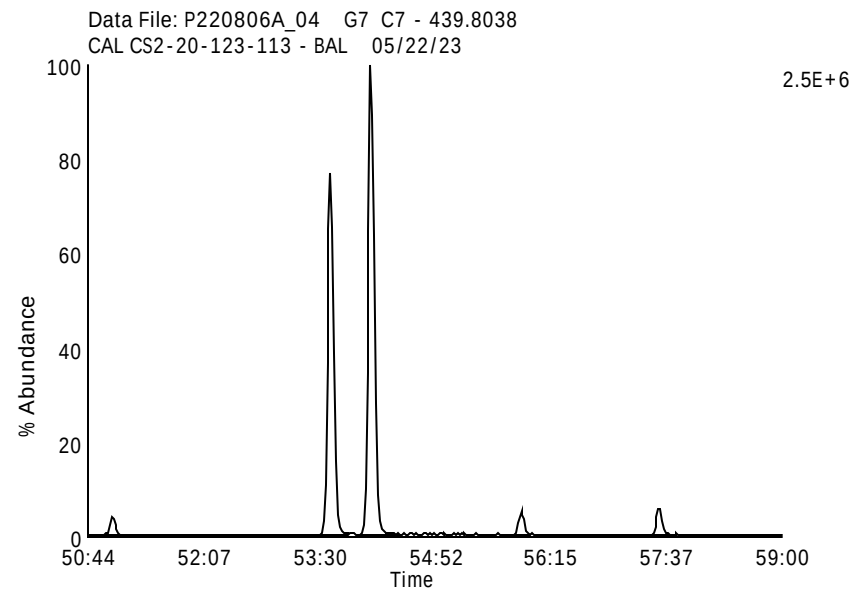
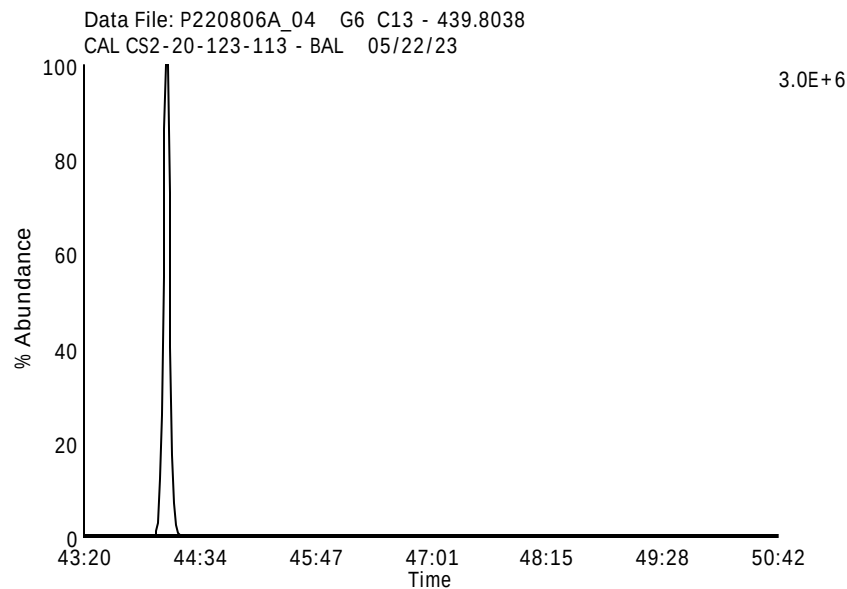
Data File Name: P220806A_04

Lab Sample ID: CS2-20-123-113

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23



Labeled Nona Chlorinated Biphenyls

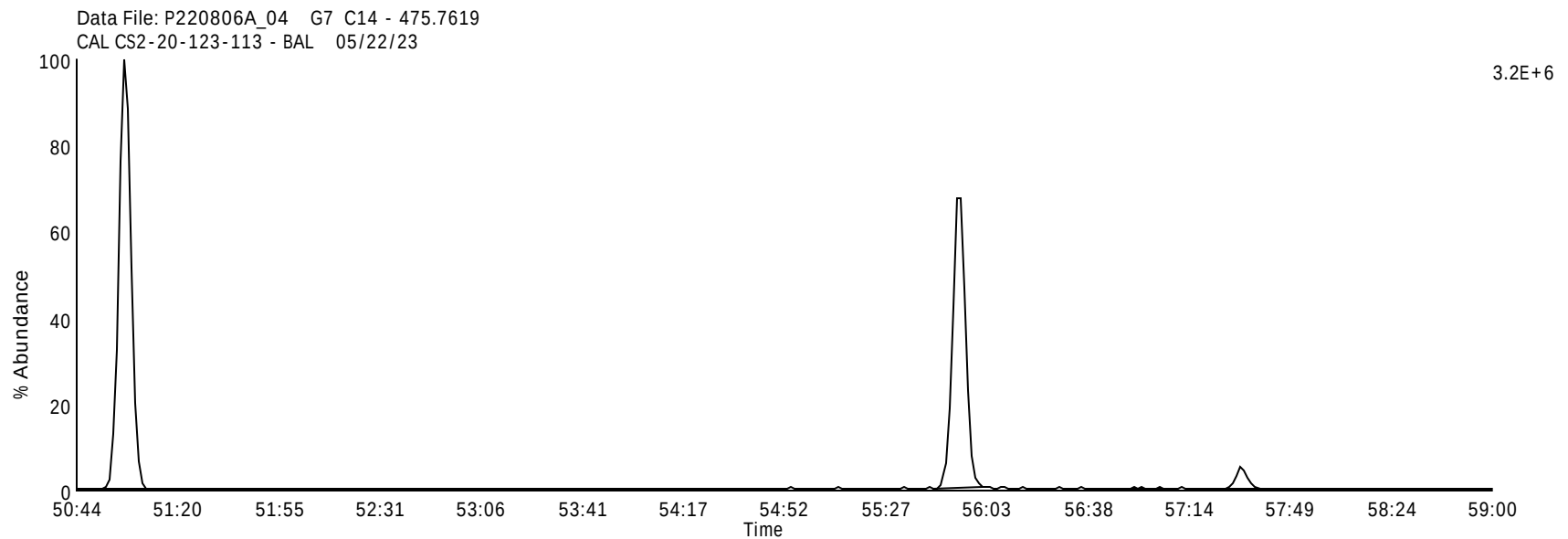
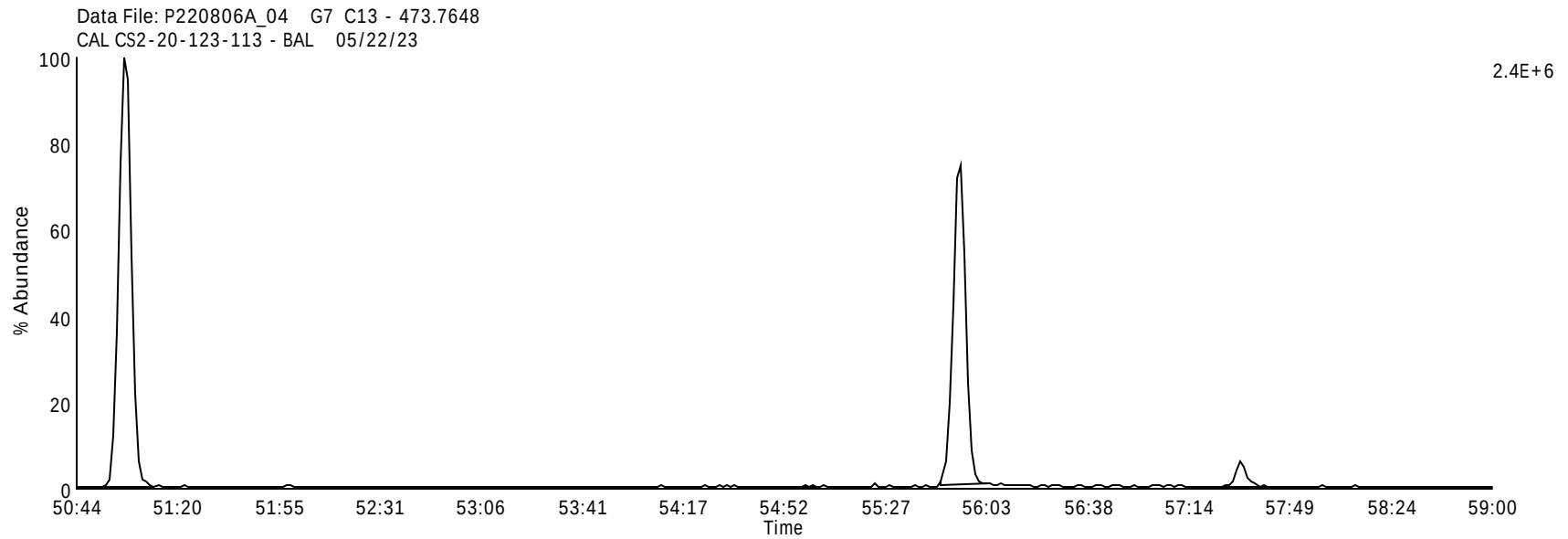
Data File Name: P220806A_04

Lab Sample ID: CS2-20-123-113

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23



Labeled Deca Chlorinated Biphenyl

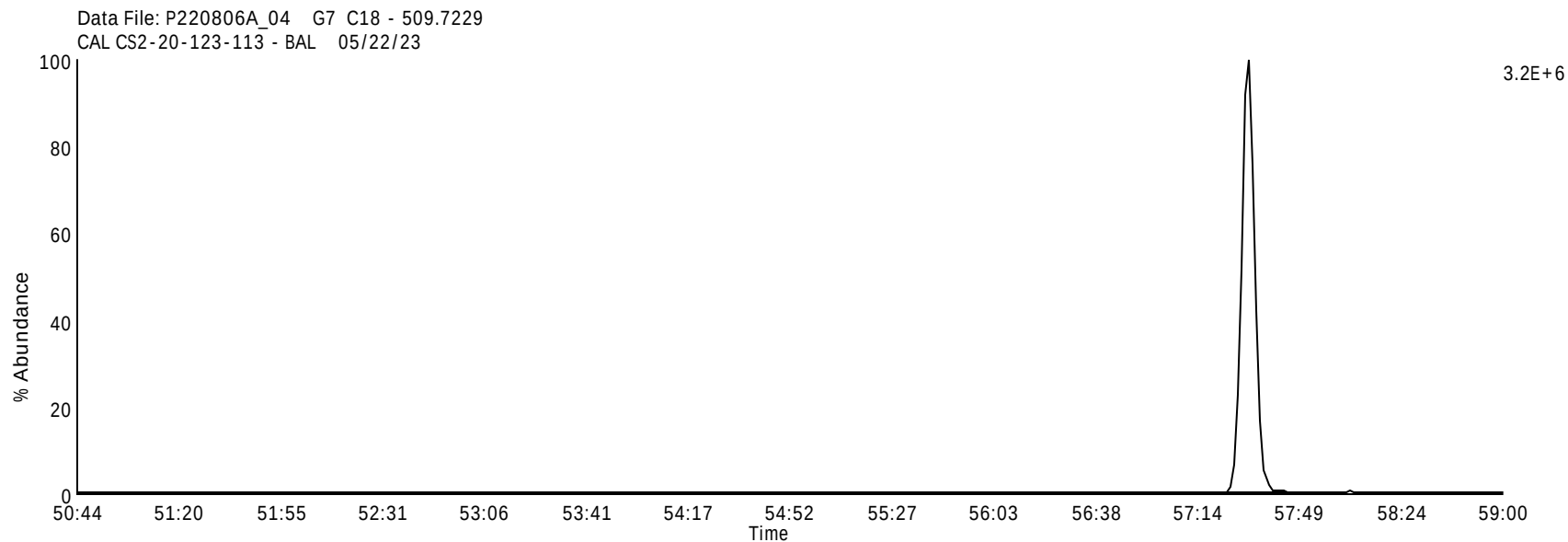
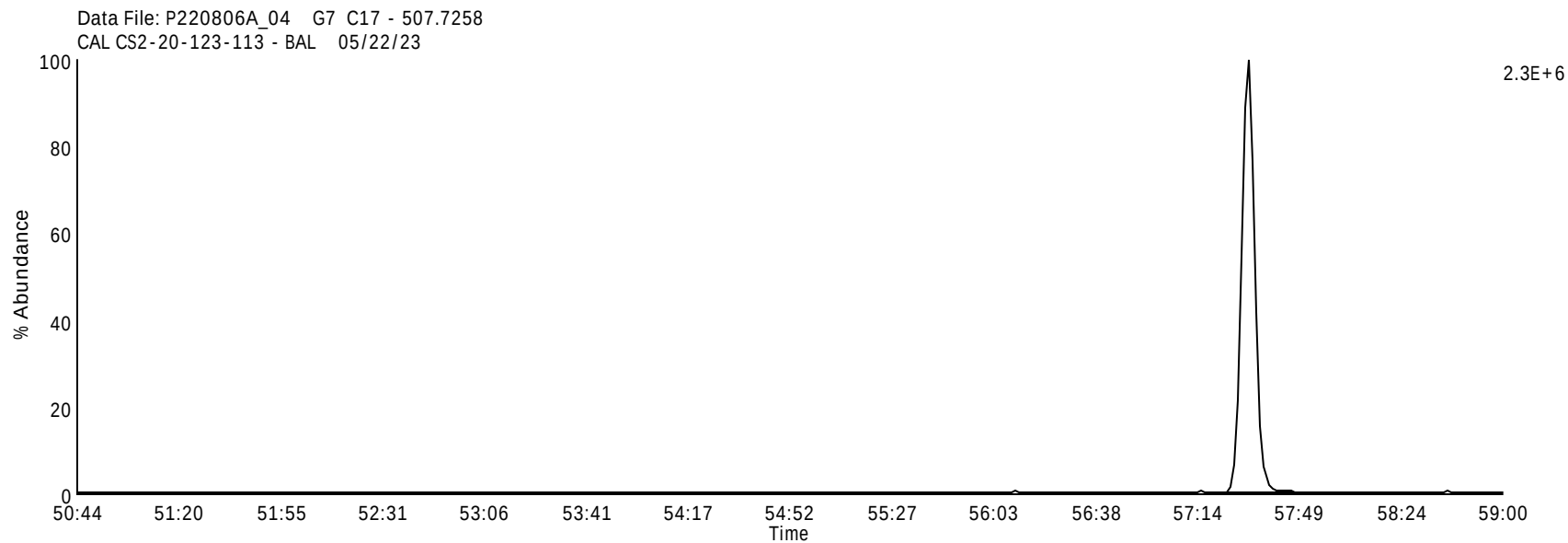
Data File Name: P220806A_04

Date Acquired: 8/6/2022

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23

Lab Sample ID: CS2-20-123-113

Instrument: 10MSHR09 (P)



Mono Chlorinated Biphenyls

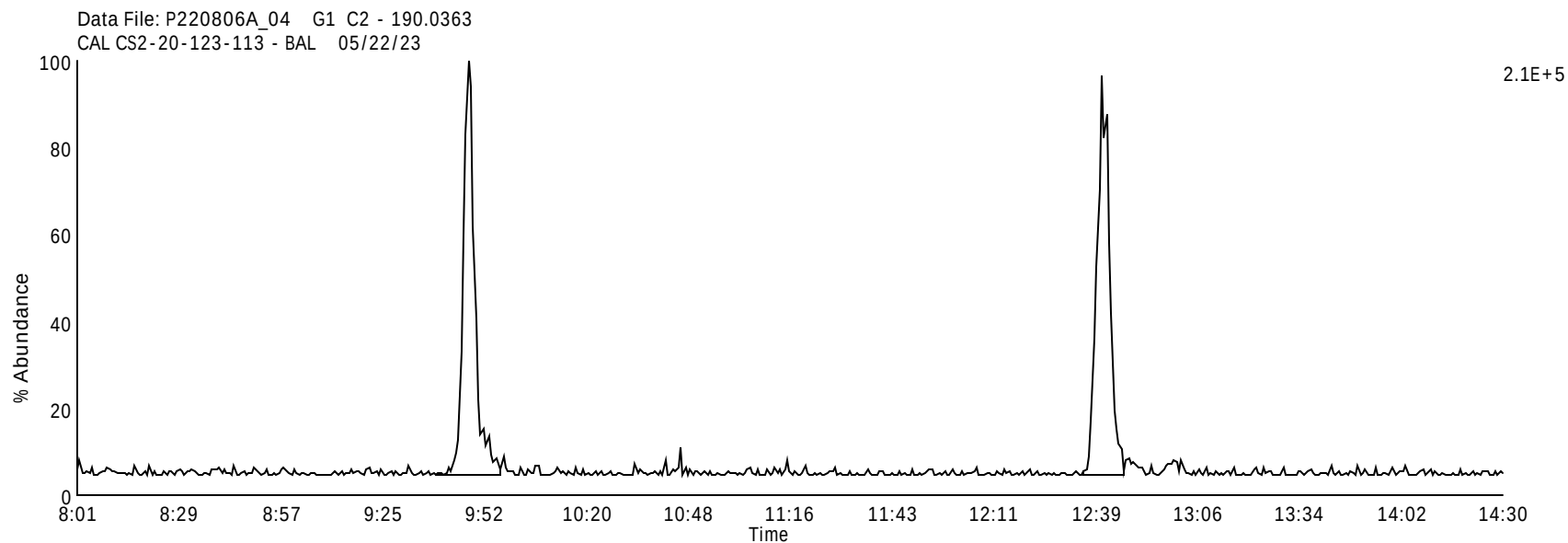
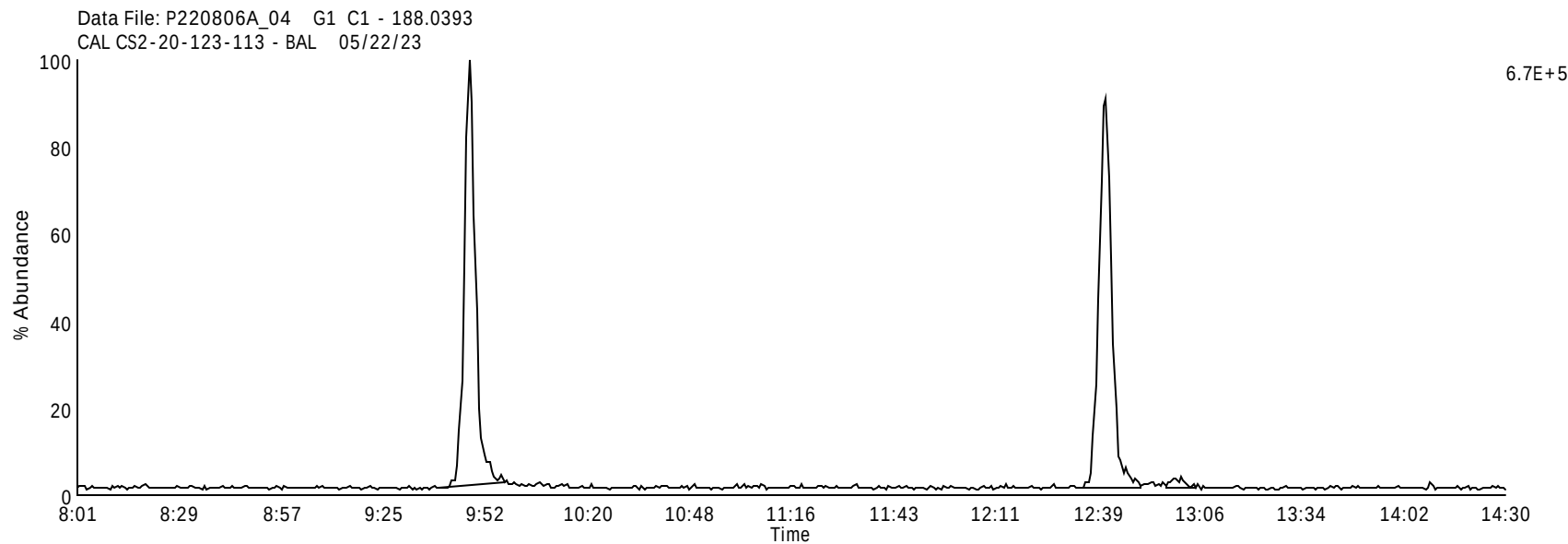
Data File Name: P220806A_04

Lab Sample ID: CS2-20-123-113

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23



Di Chlorinated Biphenyls

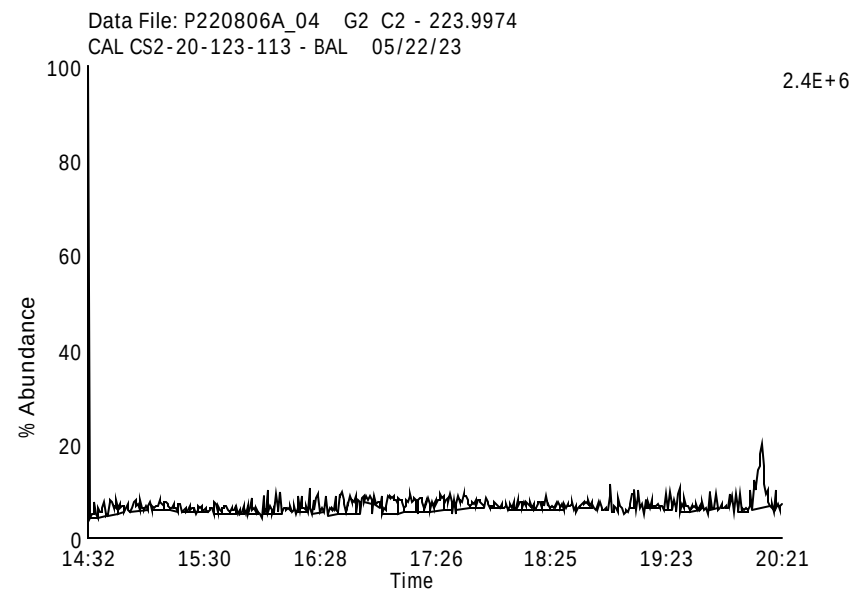
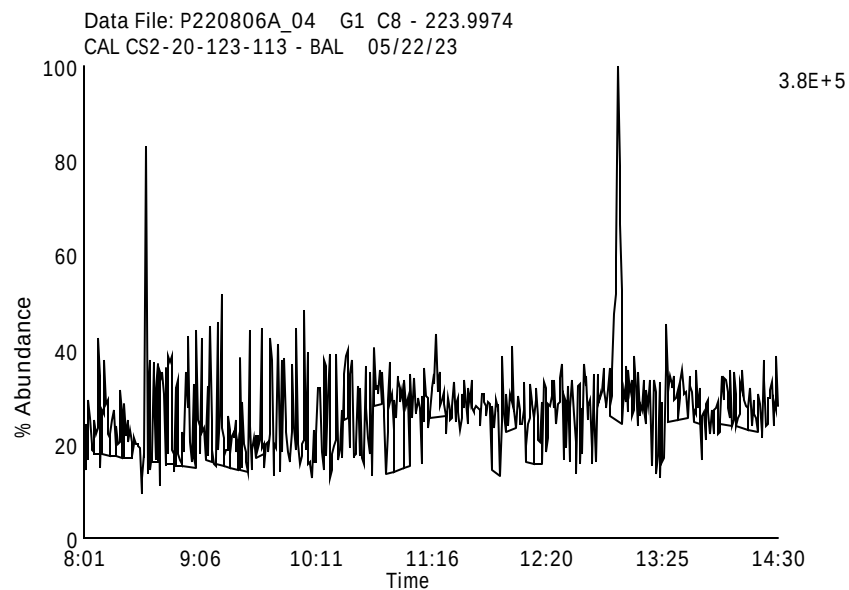
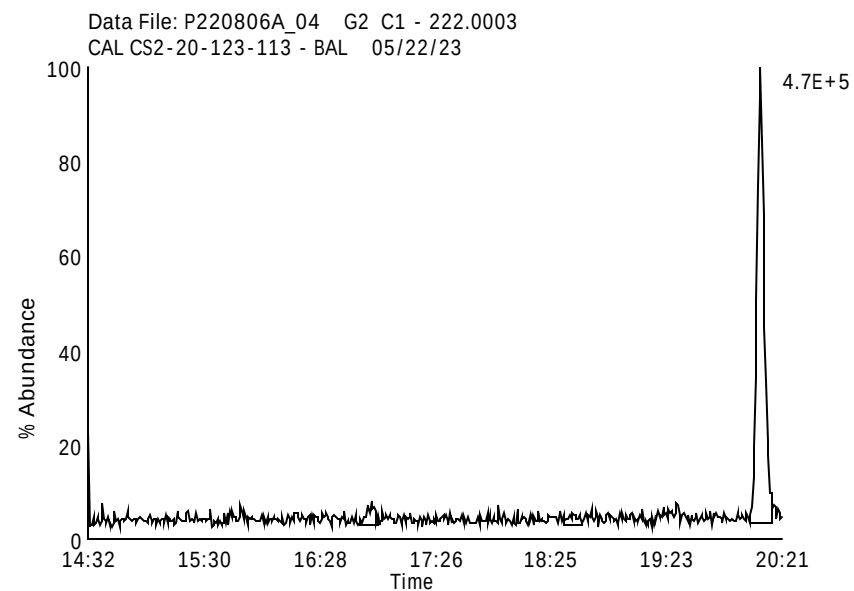
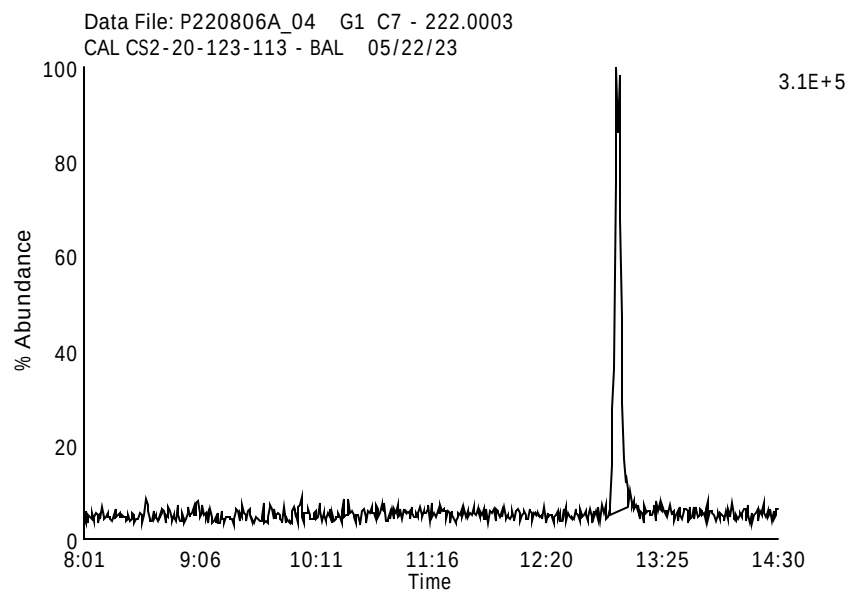
Data File Name: P220806A_04

Date Acquired: 8/6/2022

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23

Lab Sample ID: CS2-20-123-113

Instrument: 10MSHR09 (P)



Tri Chlorinated Biphenyls

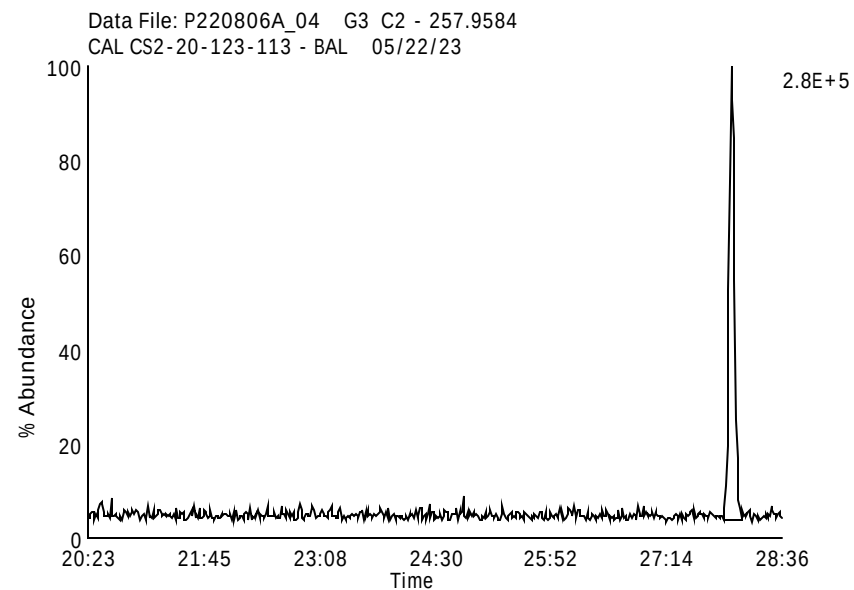
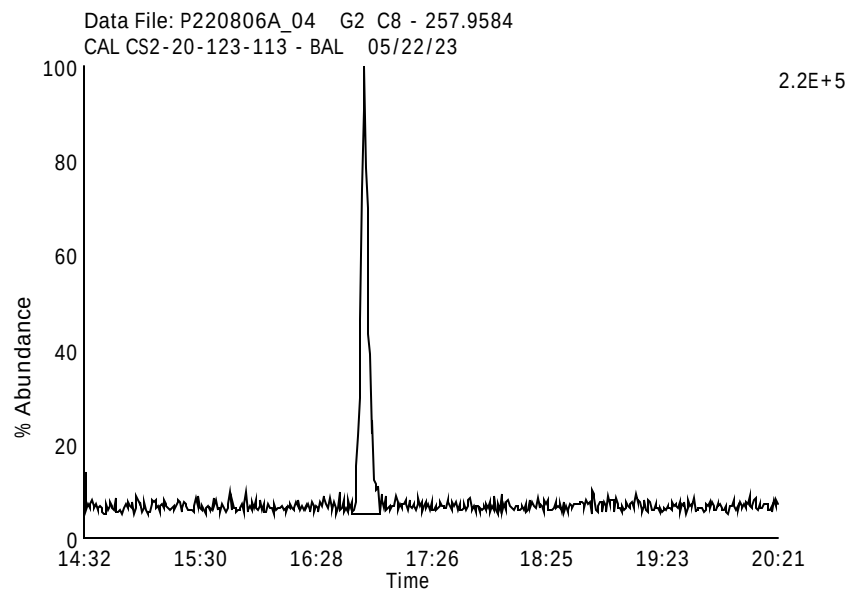
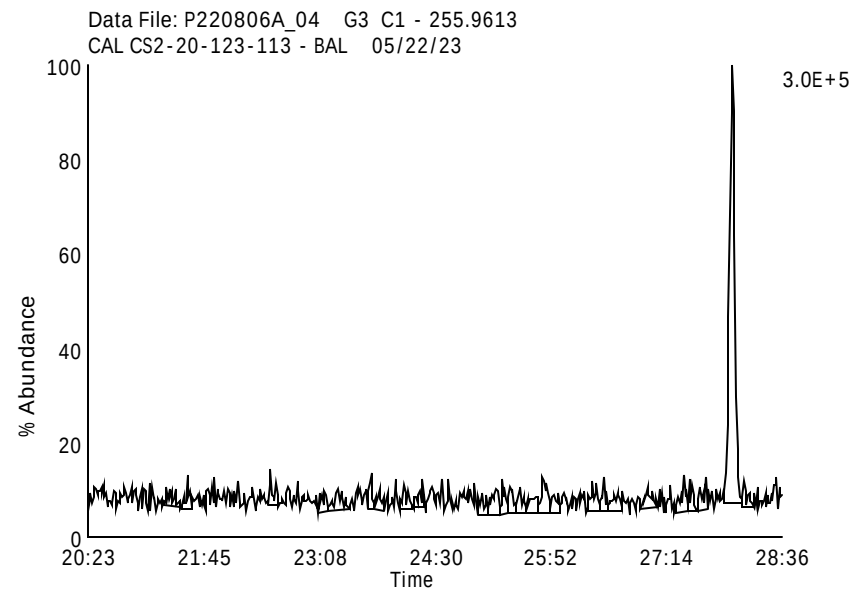
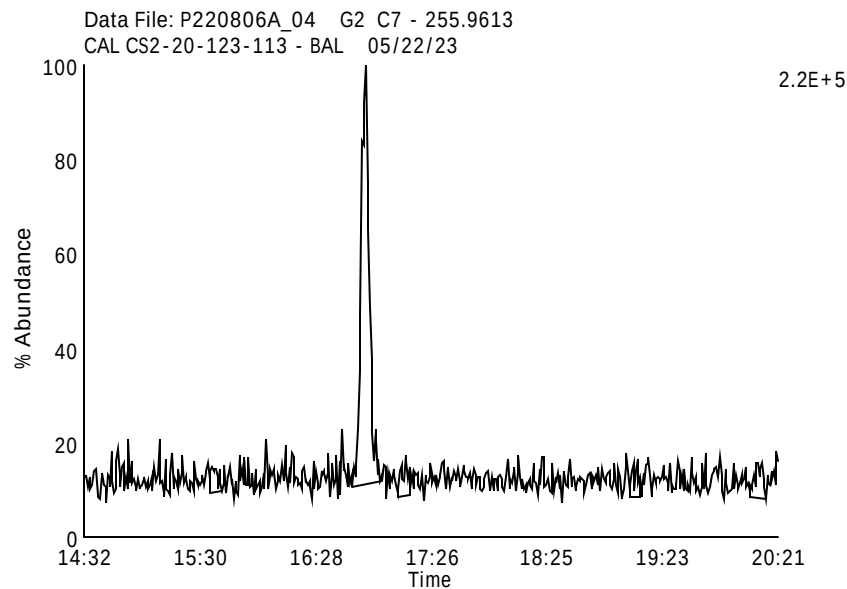
Data File Name: P220806A_04

Date Acquired: 8/6/2022

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23

Lab Sample ID: CS2-20-123-113

Instrument: 10MSHR09 (P)



Tetra Chlorinated Biphenyls

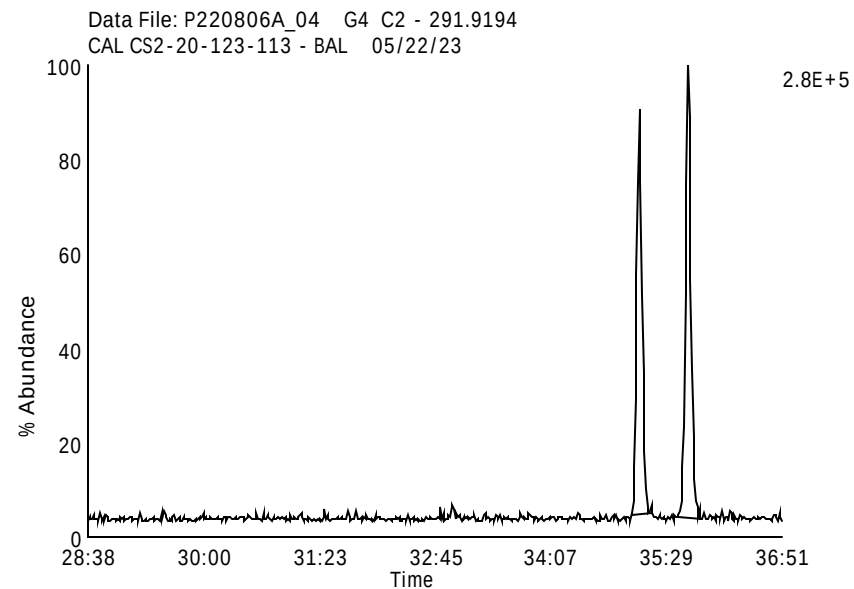
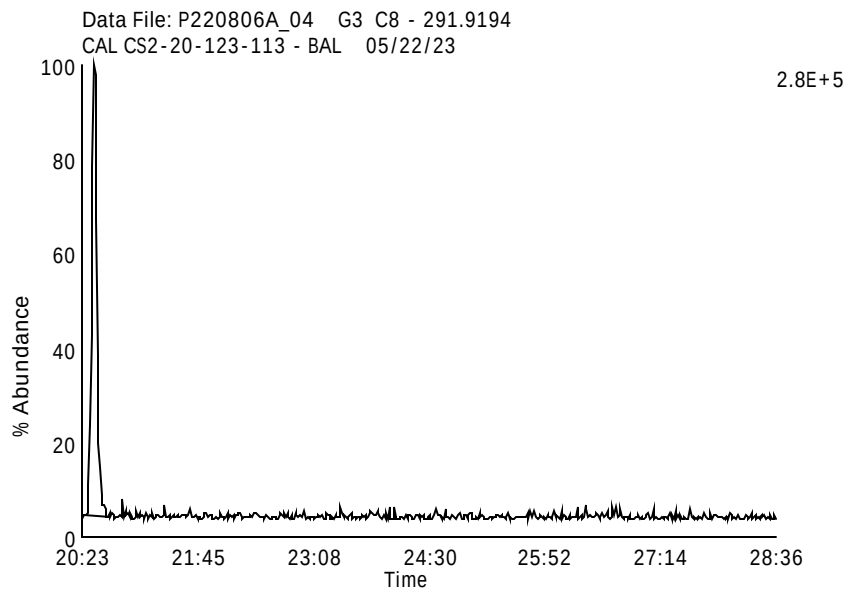
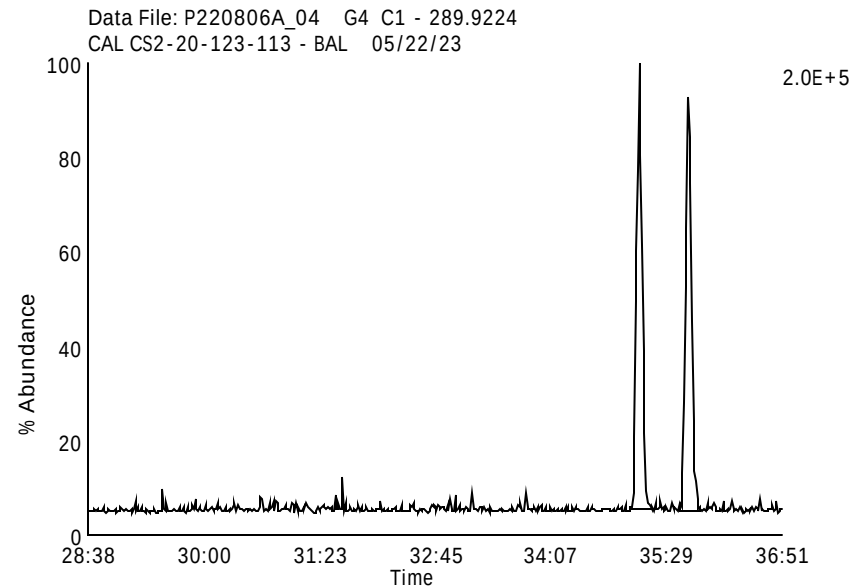
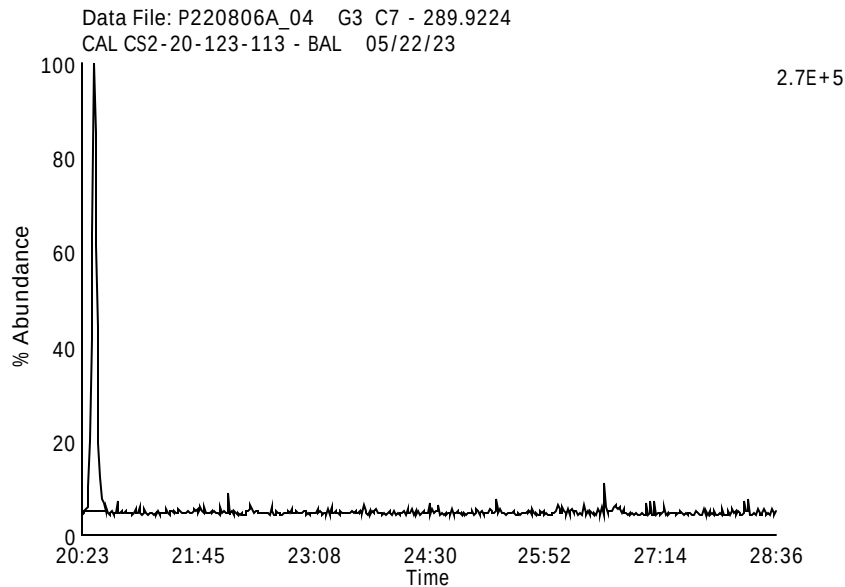
Data File Name: P220806A_04

Date Acquired: 8/6/2022

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23

Lab Sample ID: CS2-20-123-113

Instrument: 10MSHR09 (P)



Penta Chlorinated Biphenyls

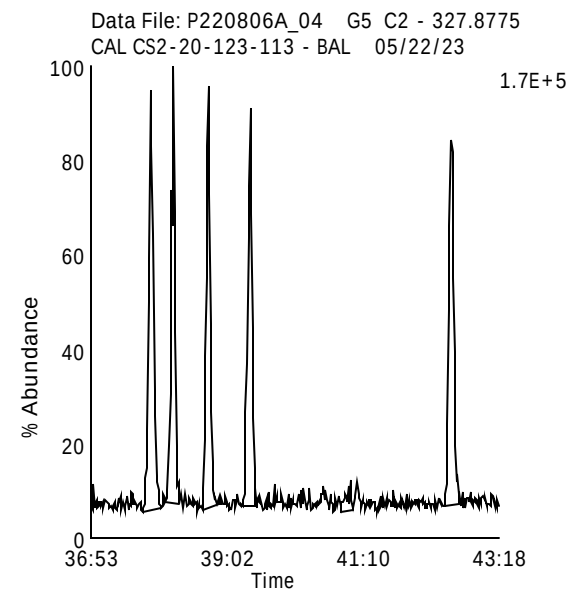
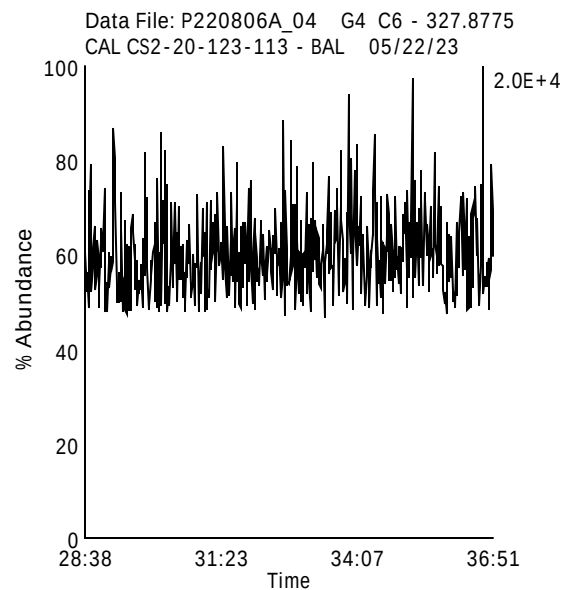
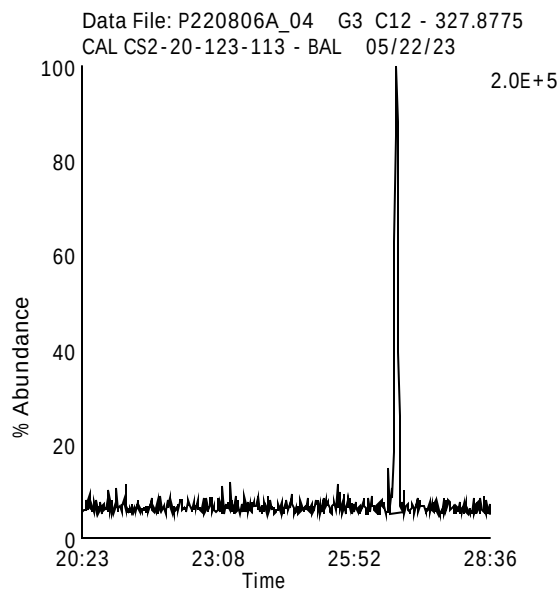
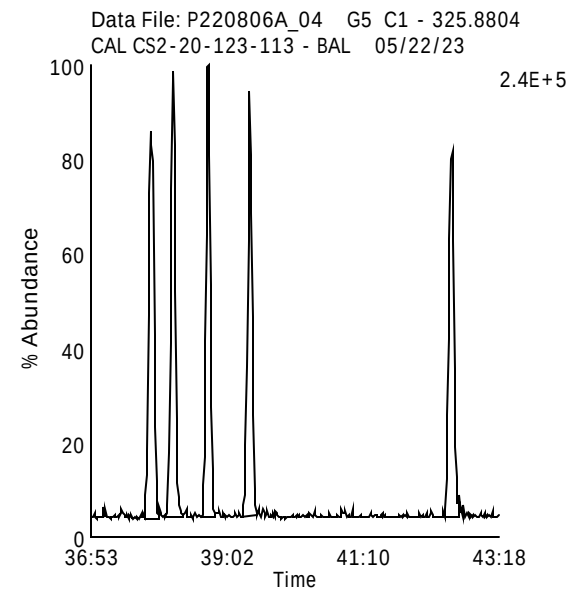
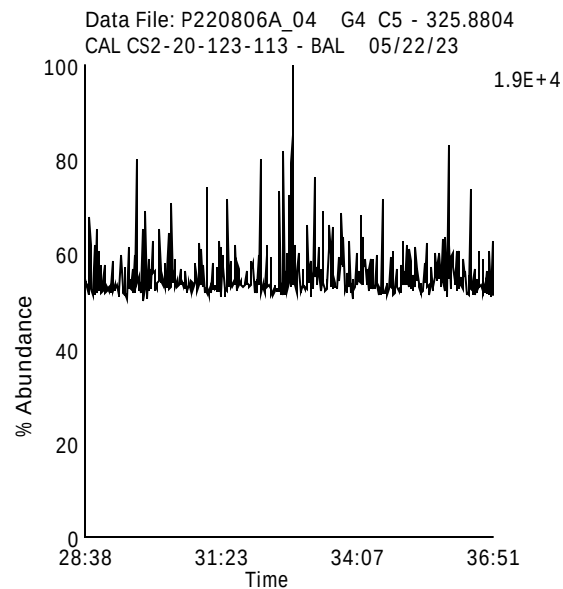
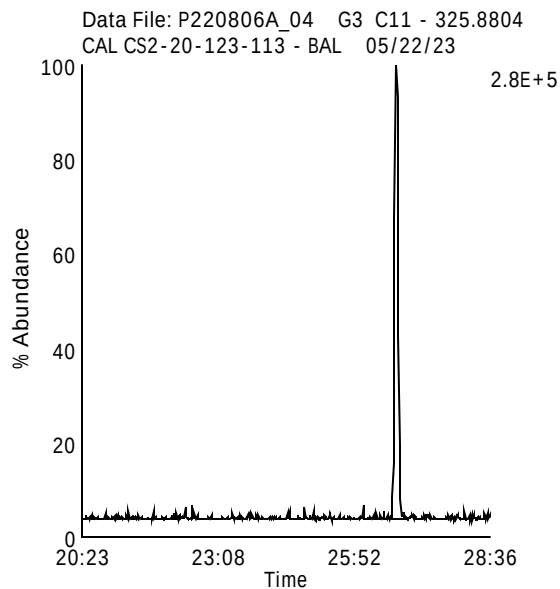
Data File Name: P220806A_04

Date Acquired: 8/6/2022

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23

Lab Sample ID: CS2-20-123-113

Instrument: 10MSHR09 (P)



Hexa Chlorinated Biphenyls

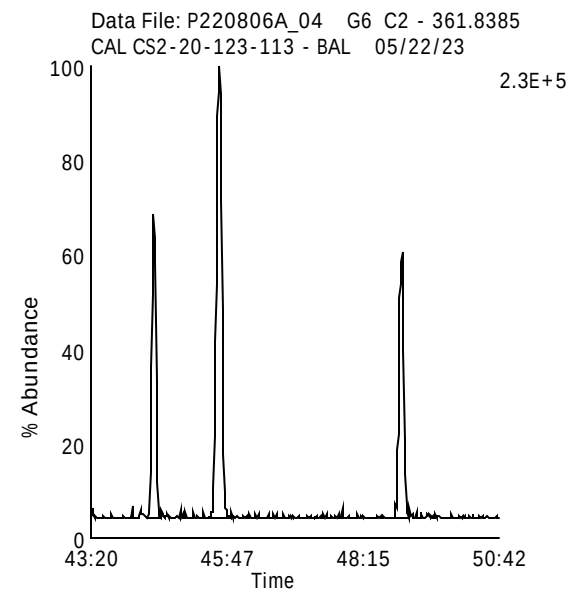
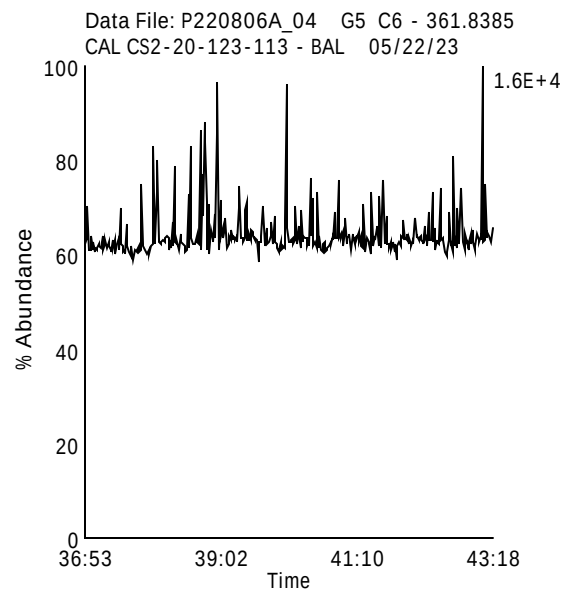
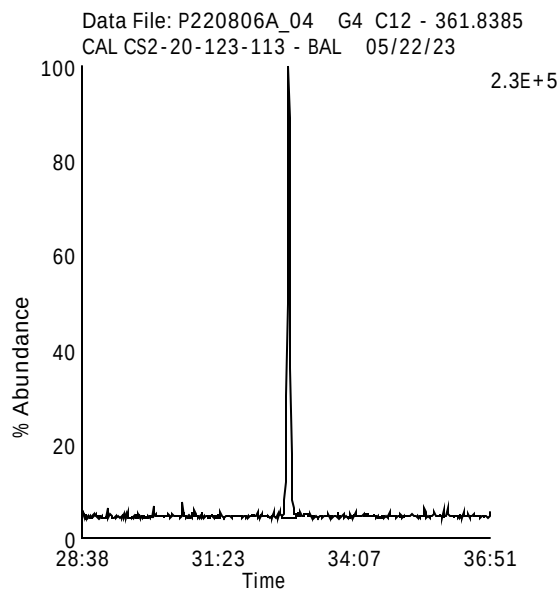
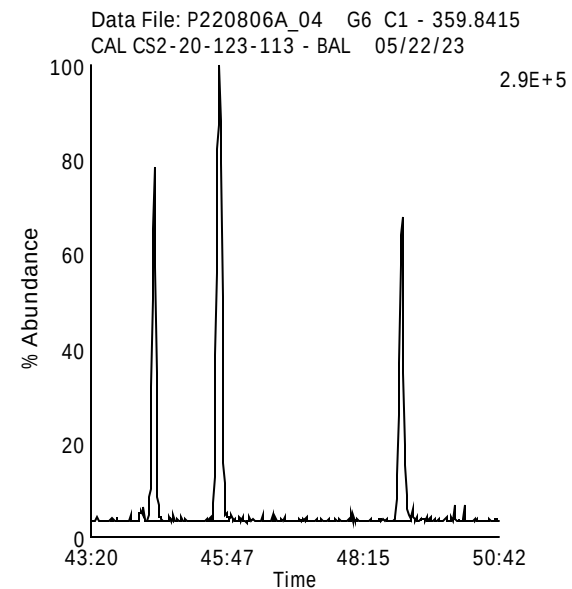
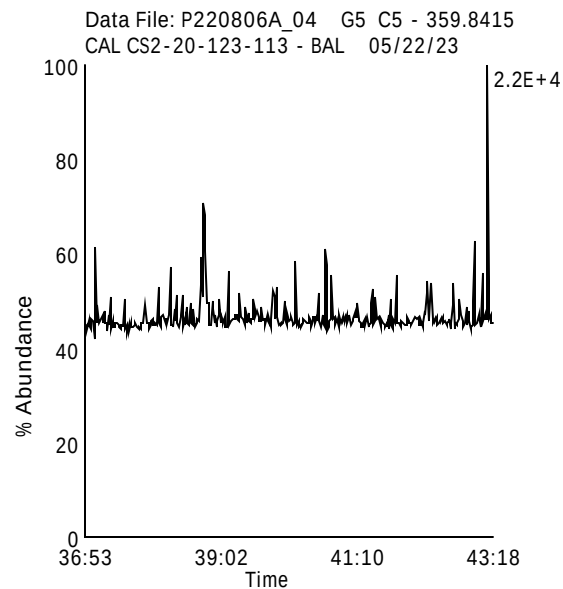
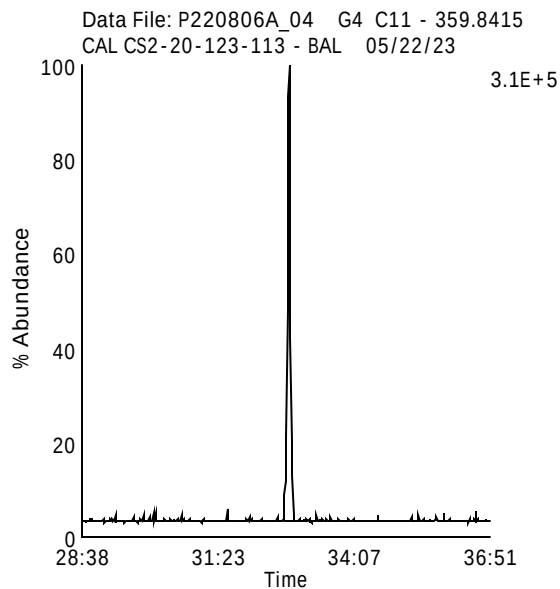
Data File Name: P220806A_04

Date Acquired: 8/6/2022

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23

Lab Sample ID: CS2-20-123-113

Instrument: 10MSHR09 (P)



Hepta Chlorinated Biphenyls

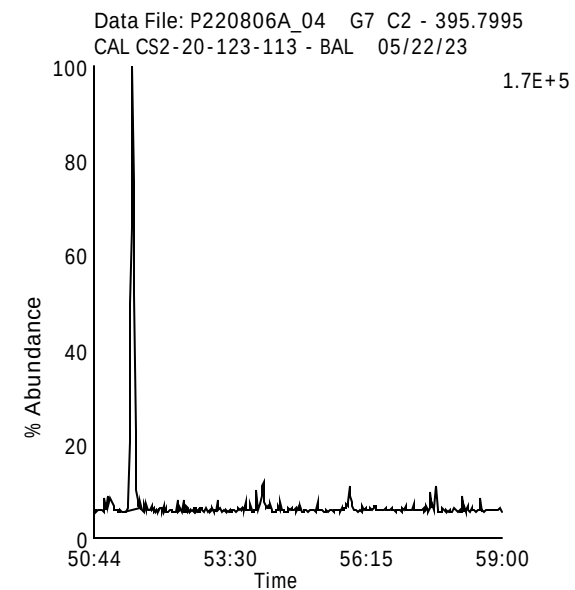
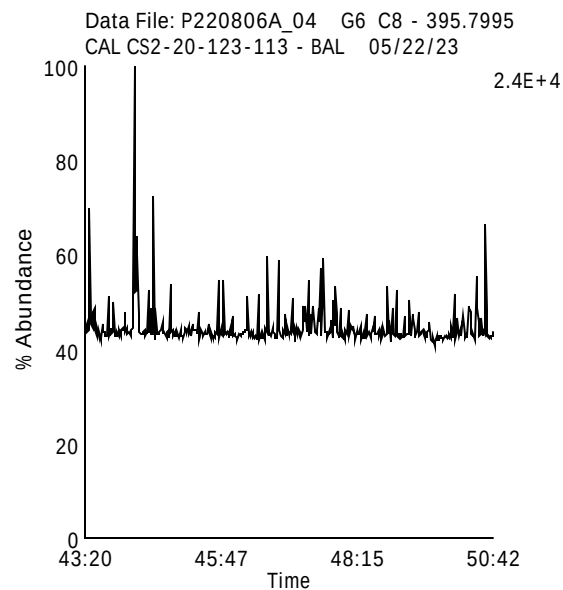
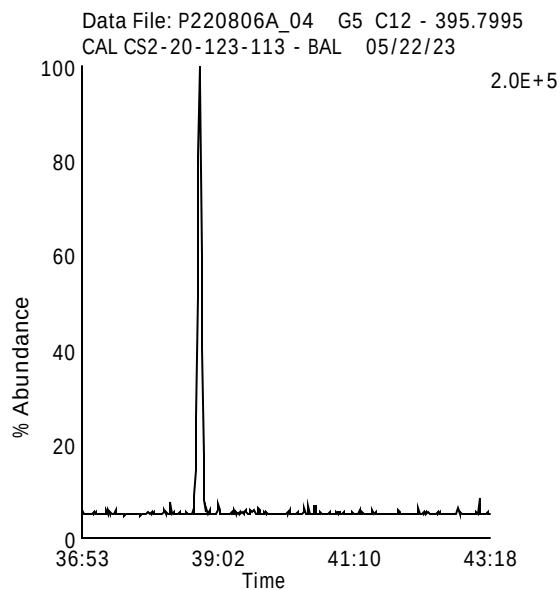
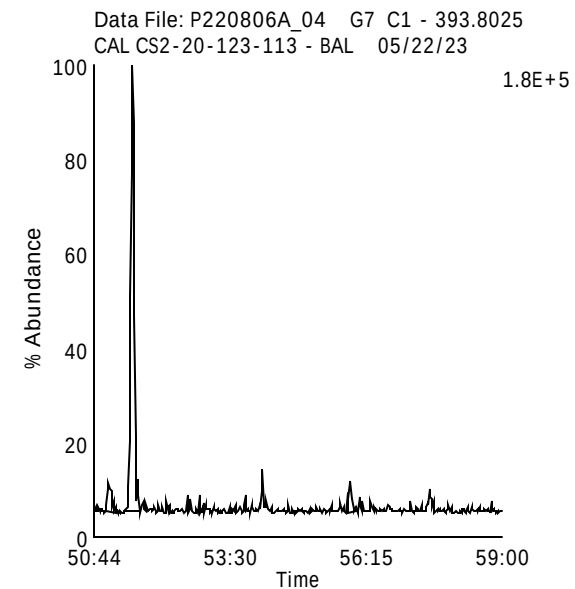
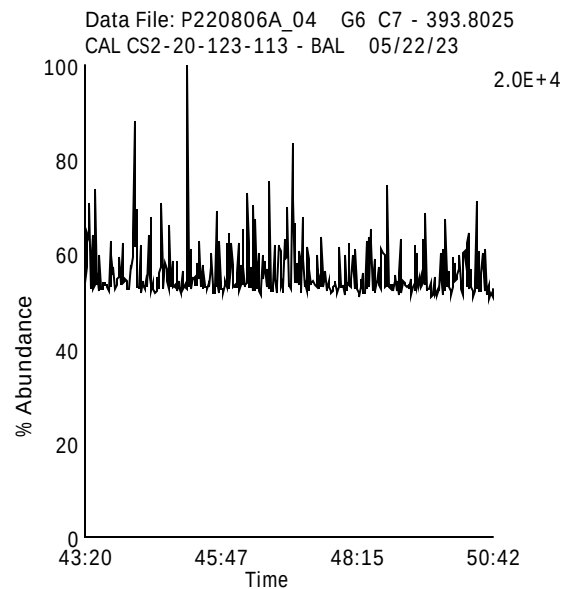
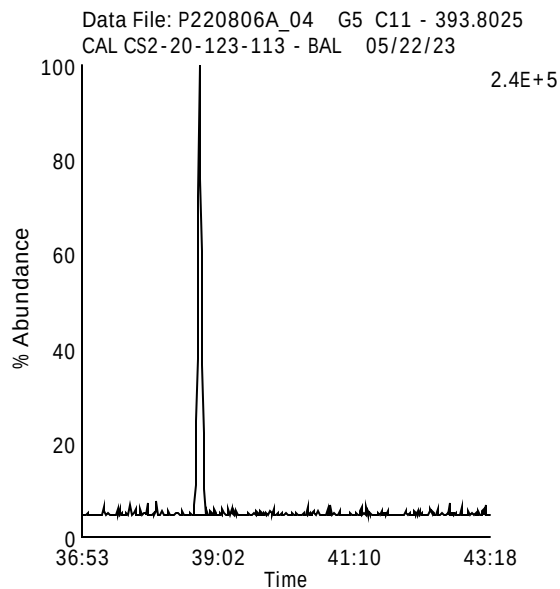
Data File Name: P220806A_04

Date Acquired: 8/6/2022

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23

Lab Sample ID: CS2-20-123-113

Instrument: 10MSHR09 (P)



Octa Chlorinated Biphenyls

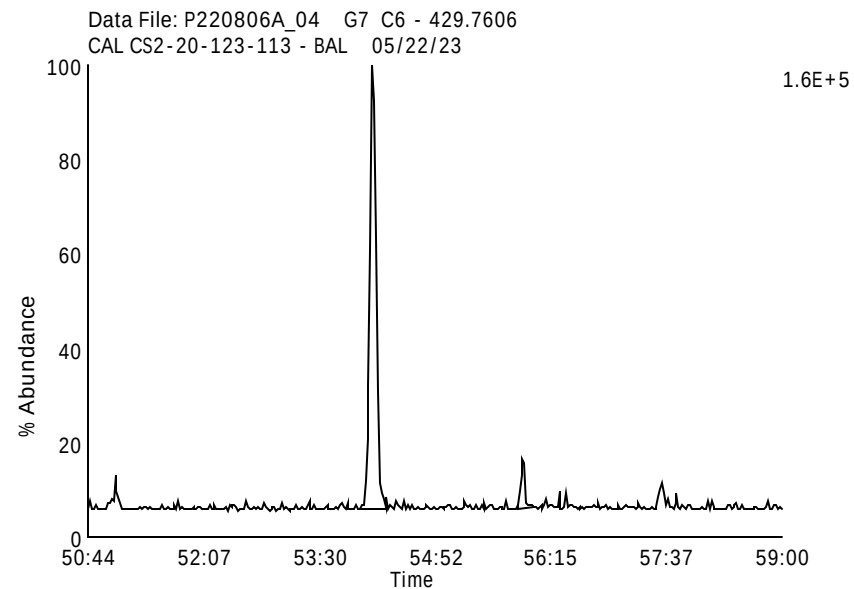
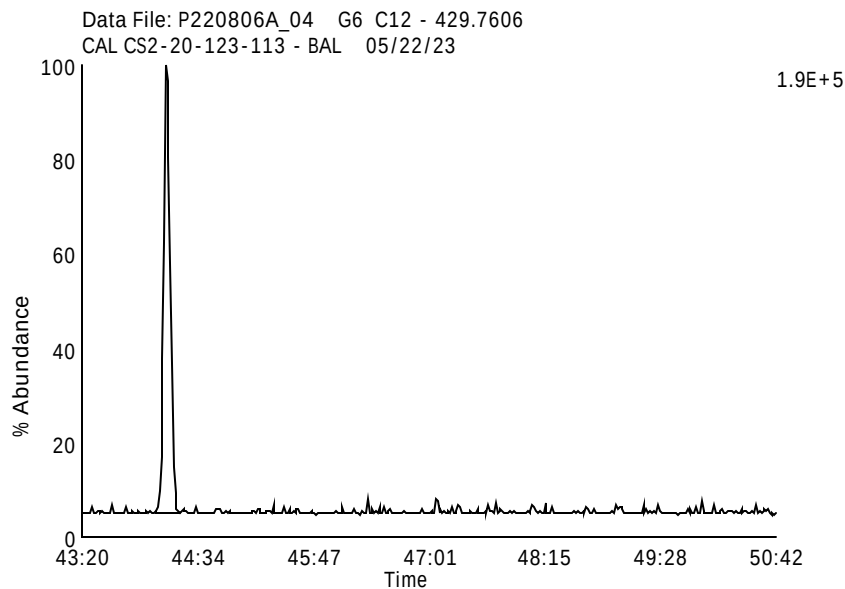
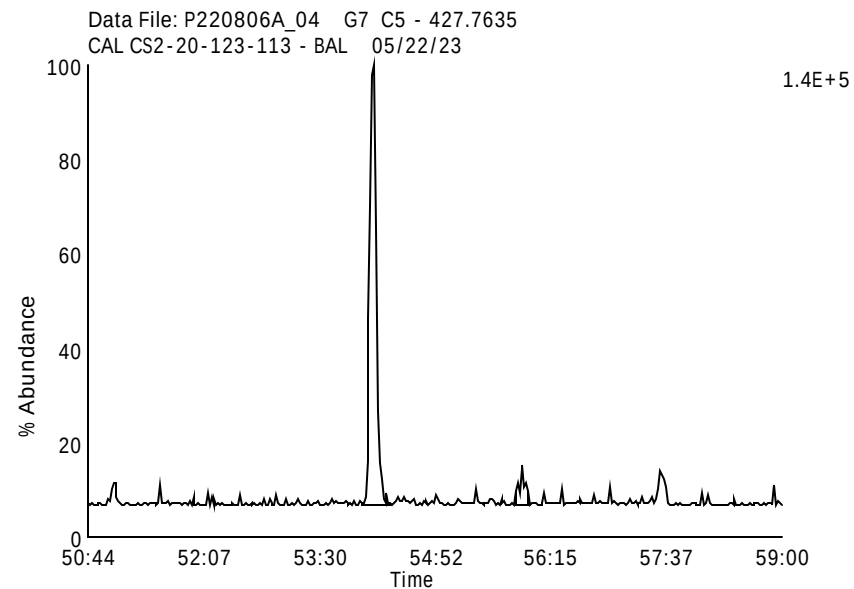
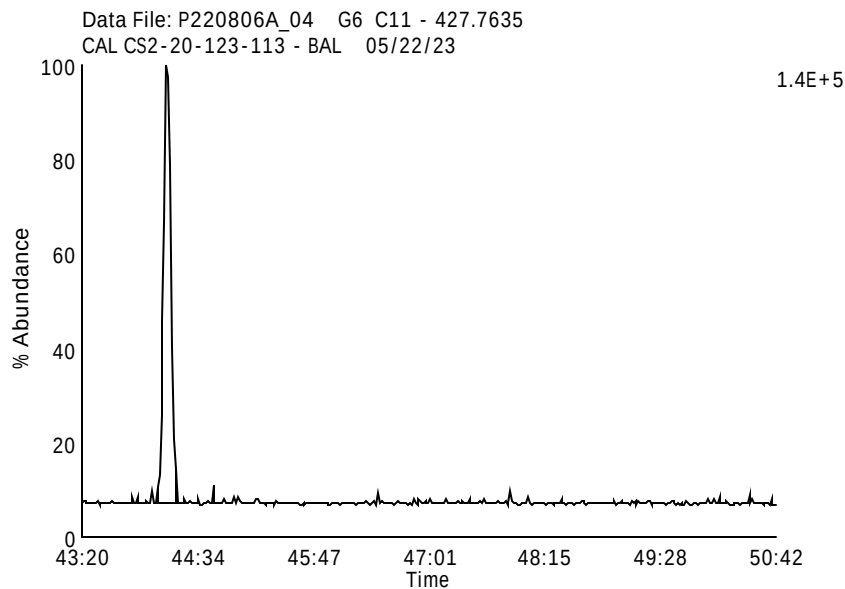
Data File Name: P220806A_04

Date Acquired: 8/6/2022

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23

Lab Sample ID: CS2-20-123-113

Instrument: 10MSHR09 (P)



Nona Chlorinated Biphenyls

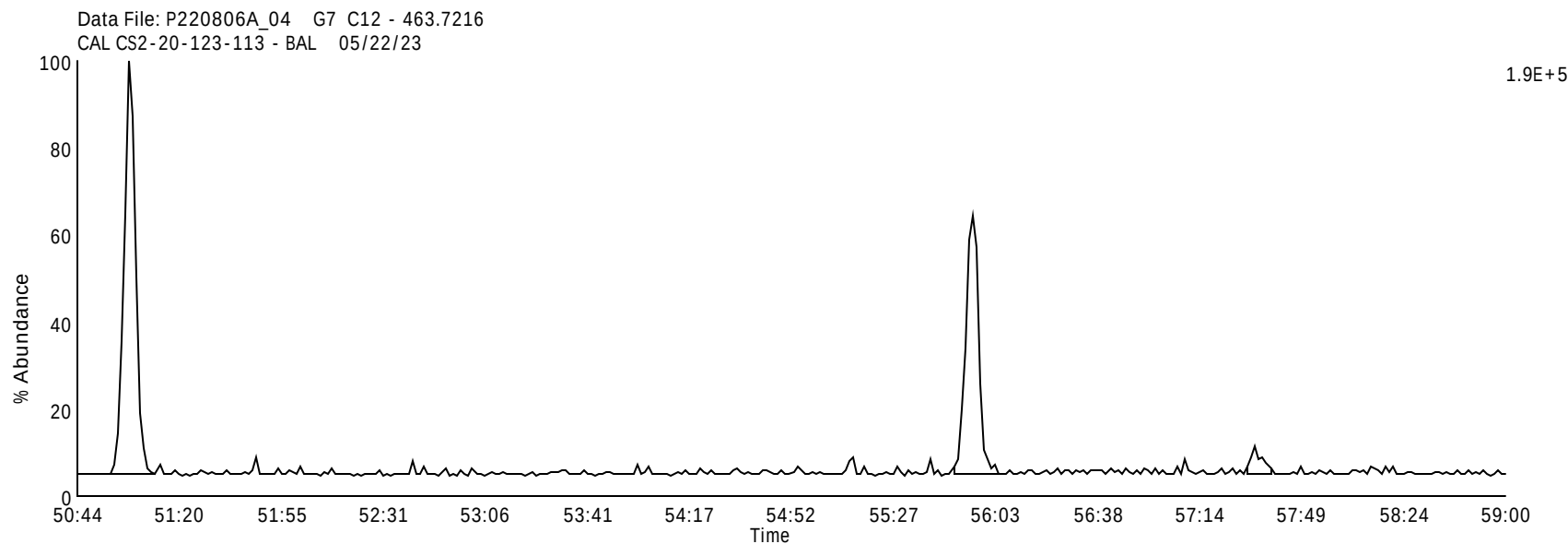
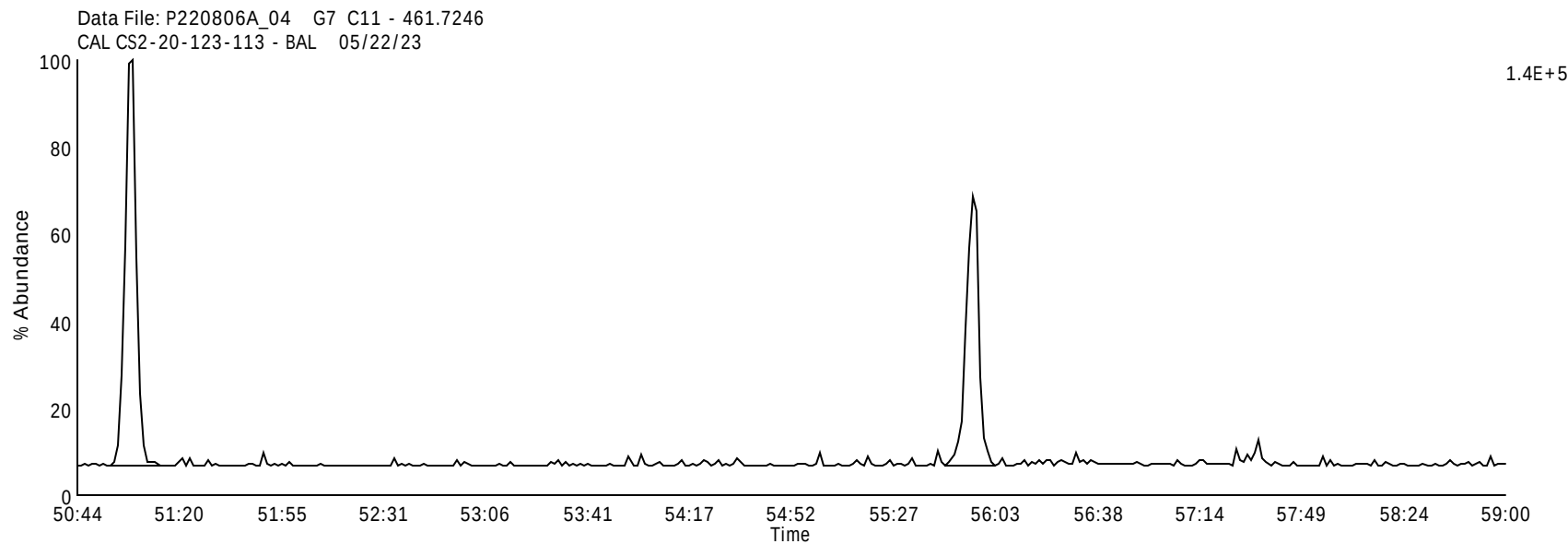
Data File Name: P220806A_04

Lab Sample ID: CS2-20-123-113

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23



Deca Chlorinated Biphenyl

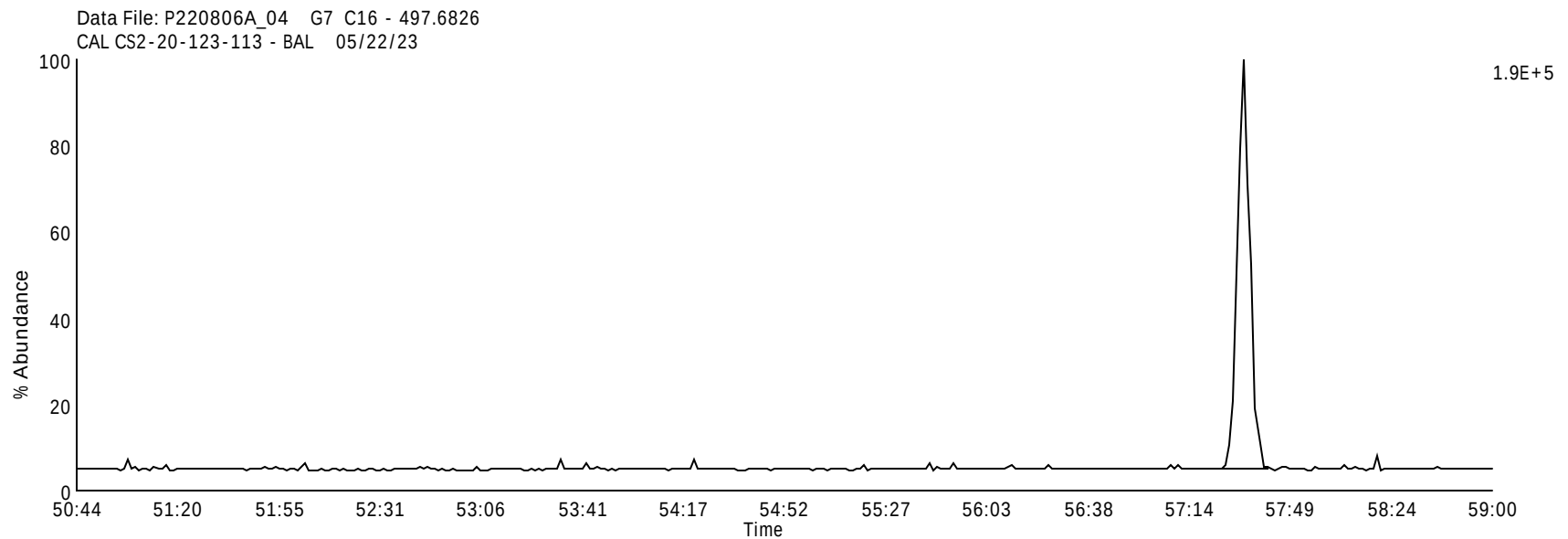
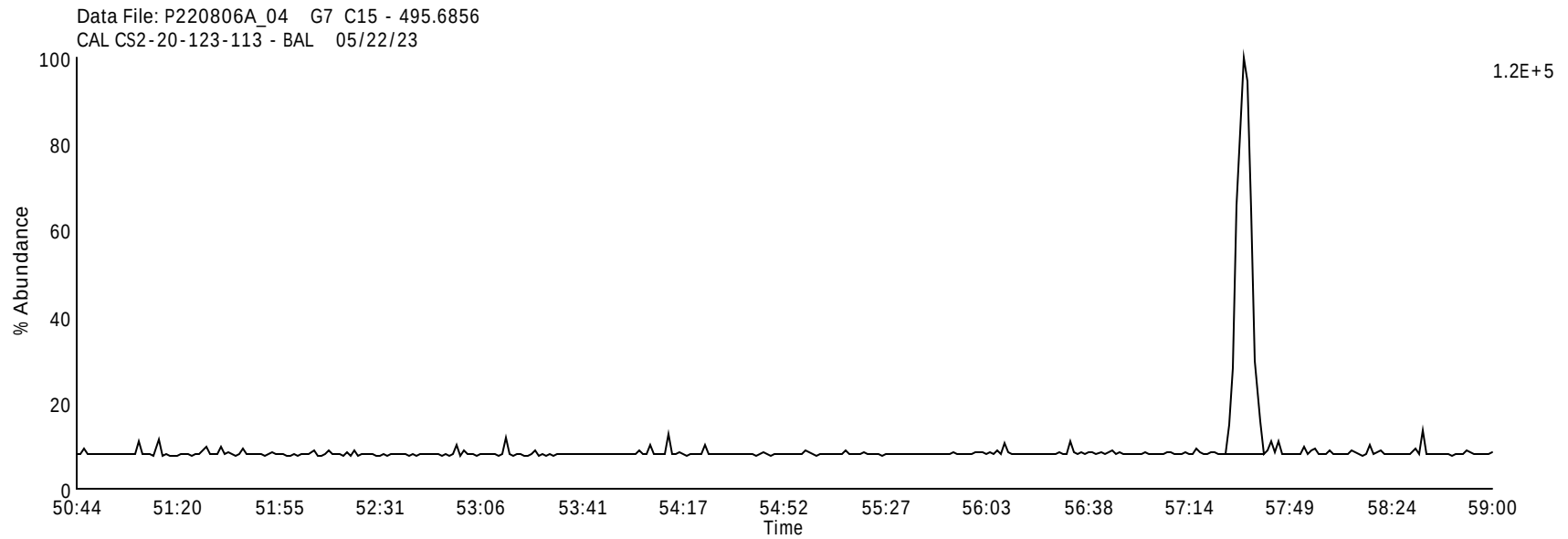
Data File Name: P220806A_04

Date Acquired: 8/6/2022

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23

Lab Sample ID: CS2-20-123-113

Instrument: 10MSHR09 (P)



Group 1 - 4 Lock mass

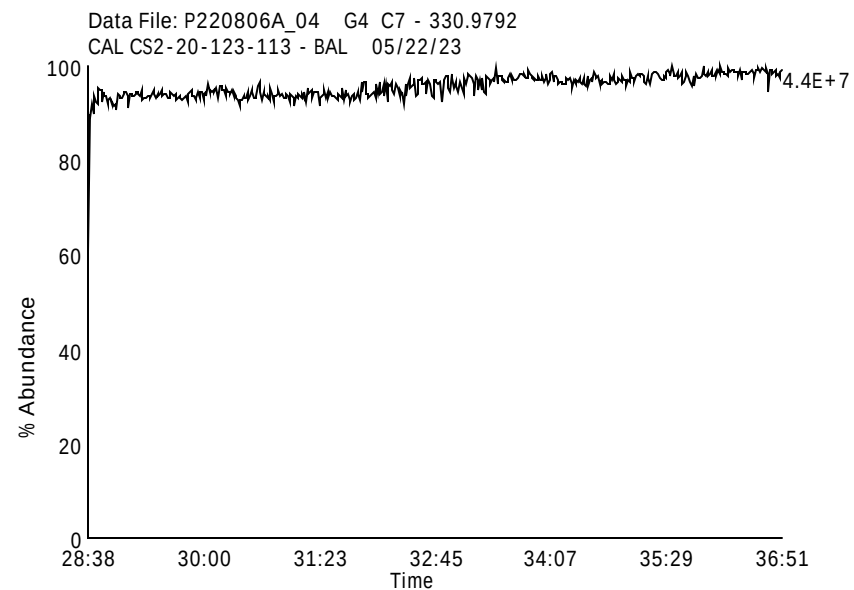
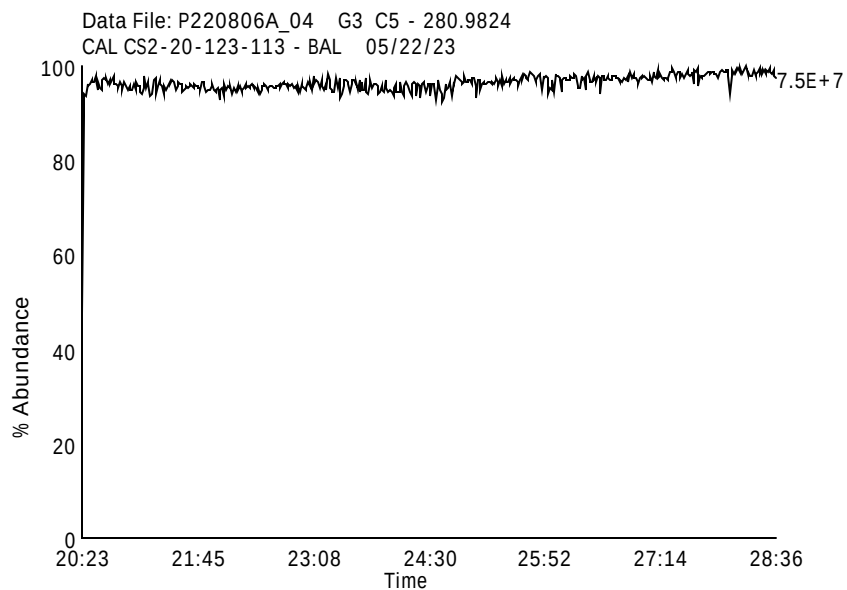
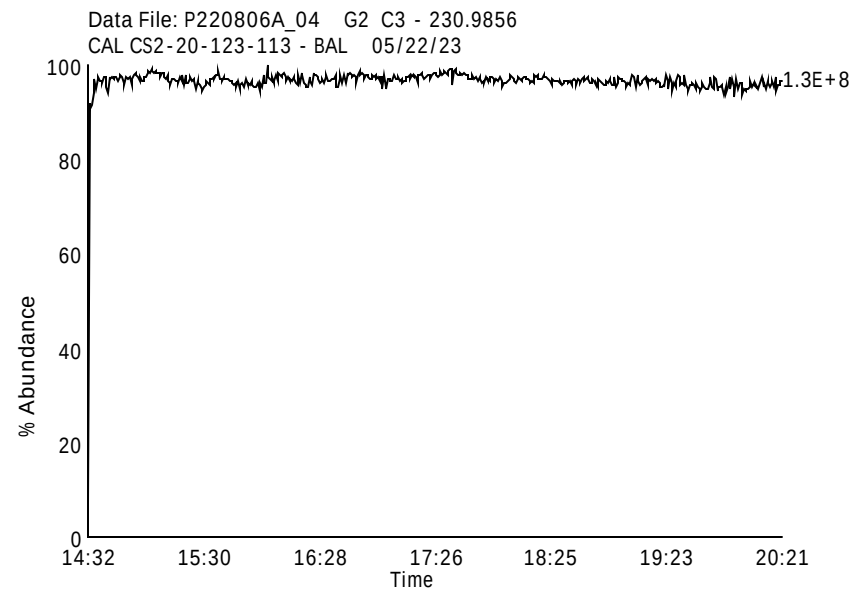
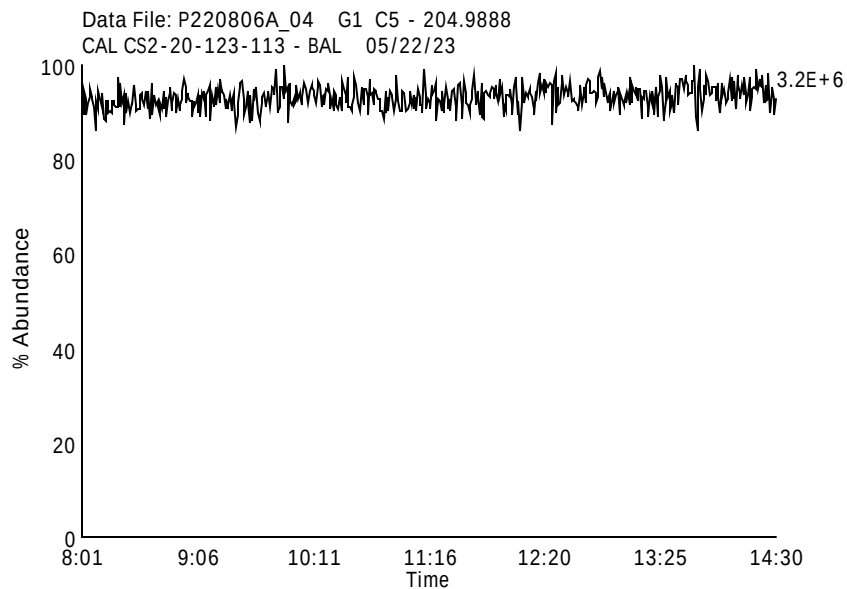
Data File Name: P220806A_04

Date Acquired: 8/6/2022

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23

Lab Sample ID: CS2-20-123-113

Instrument: 10MSHR09 (P)



Group 5 - 7 Lock mass

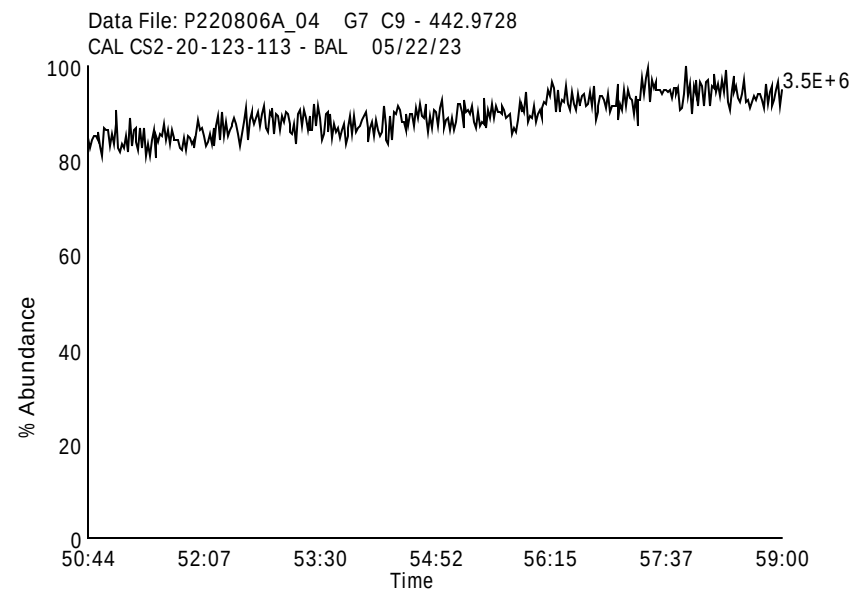
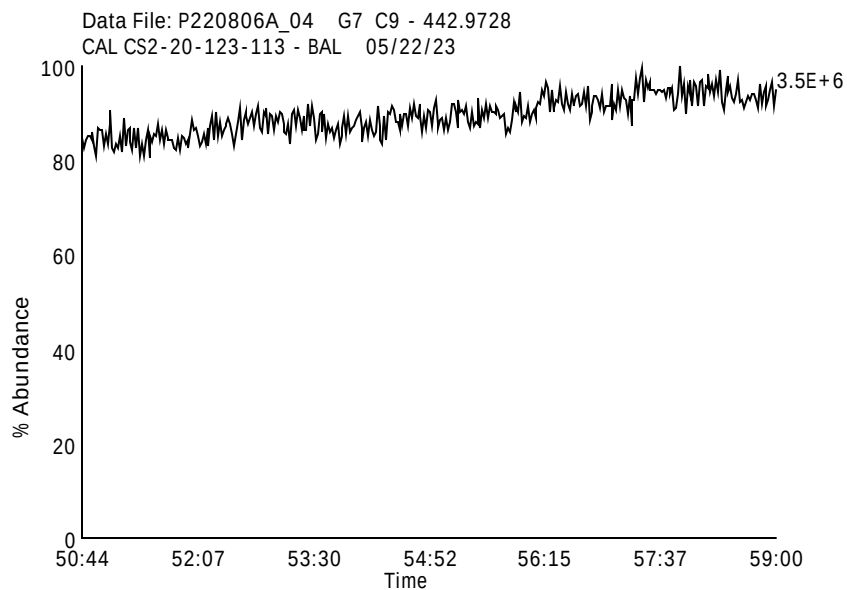
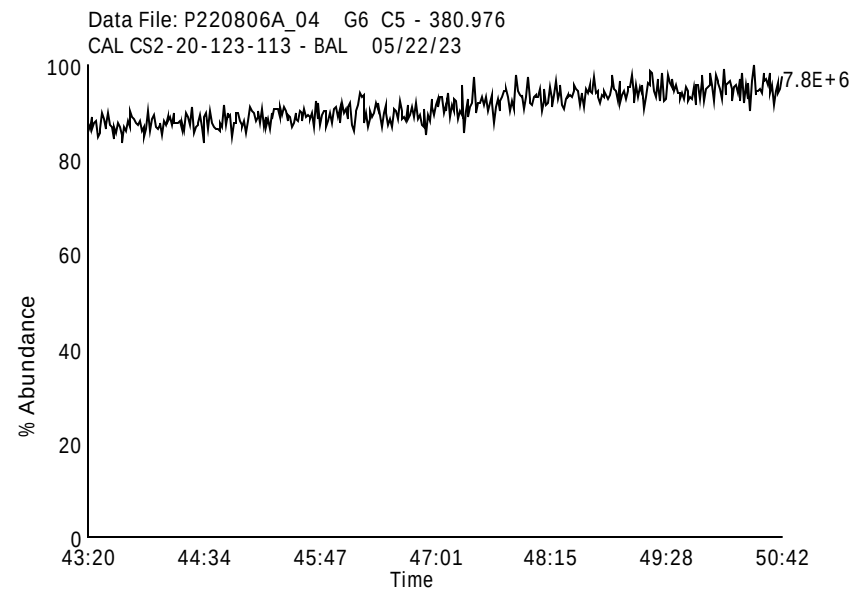
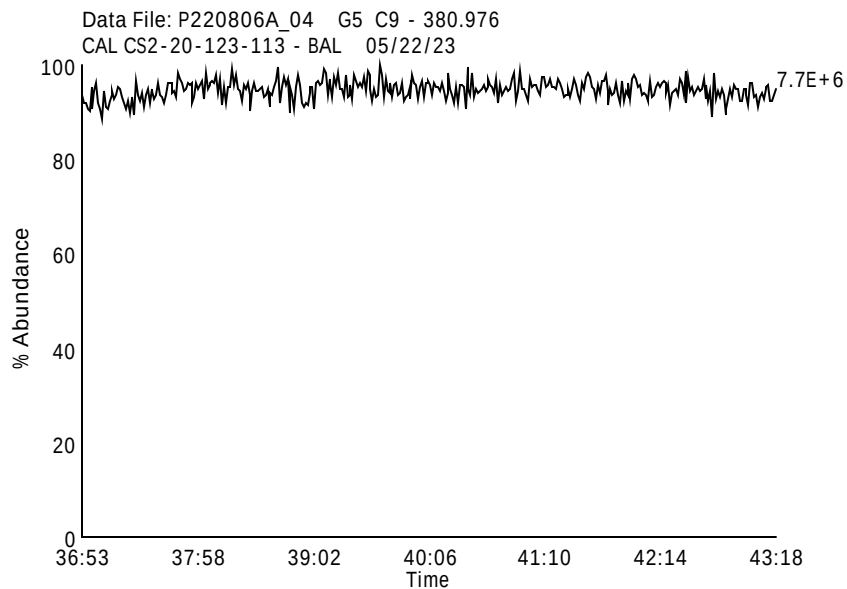
Data File Name: P220806A_04

Date Acquired: 8/6/2022

Sample Description: CAL CS2-20-123-113 - BAL 05/22/23

Lab Sample ID: CS2-20-123-113

Instrument: 10MSHR09 (P)



Labeled Mono Chlorinated Biphenyls

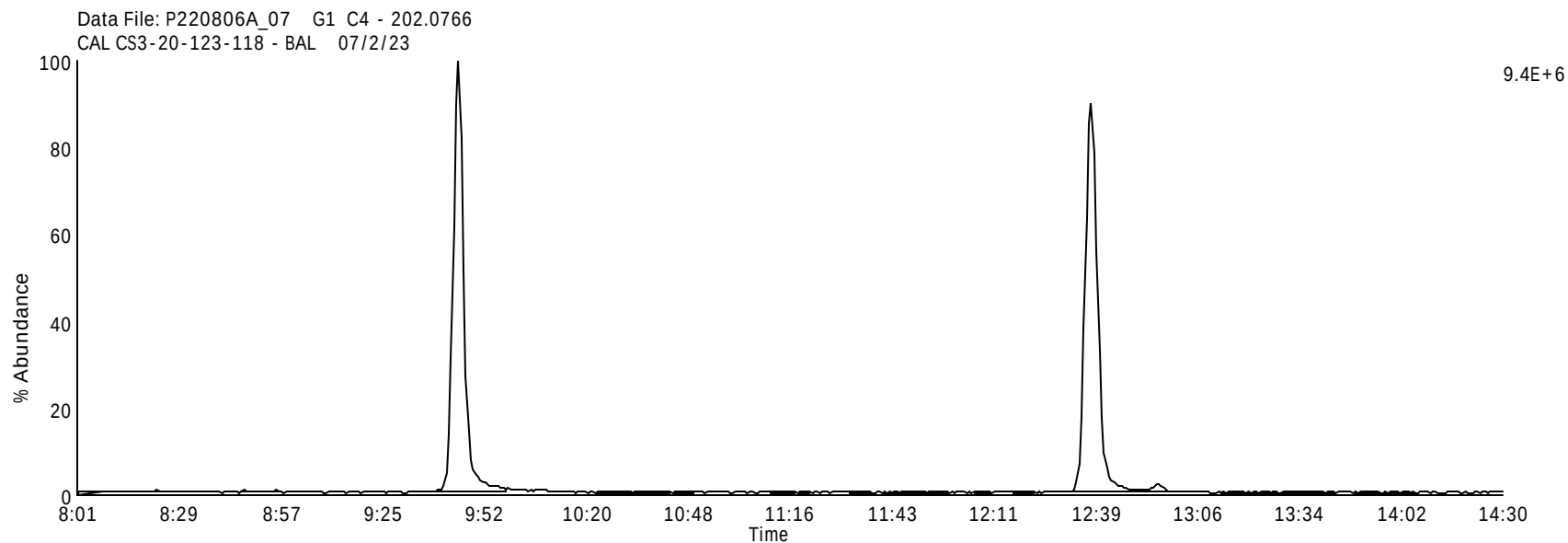
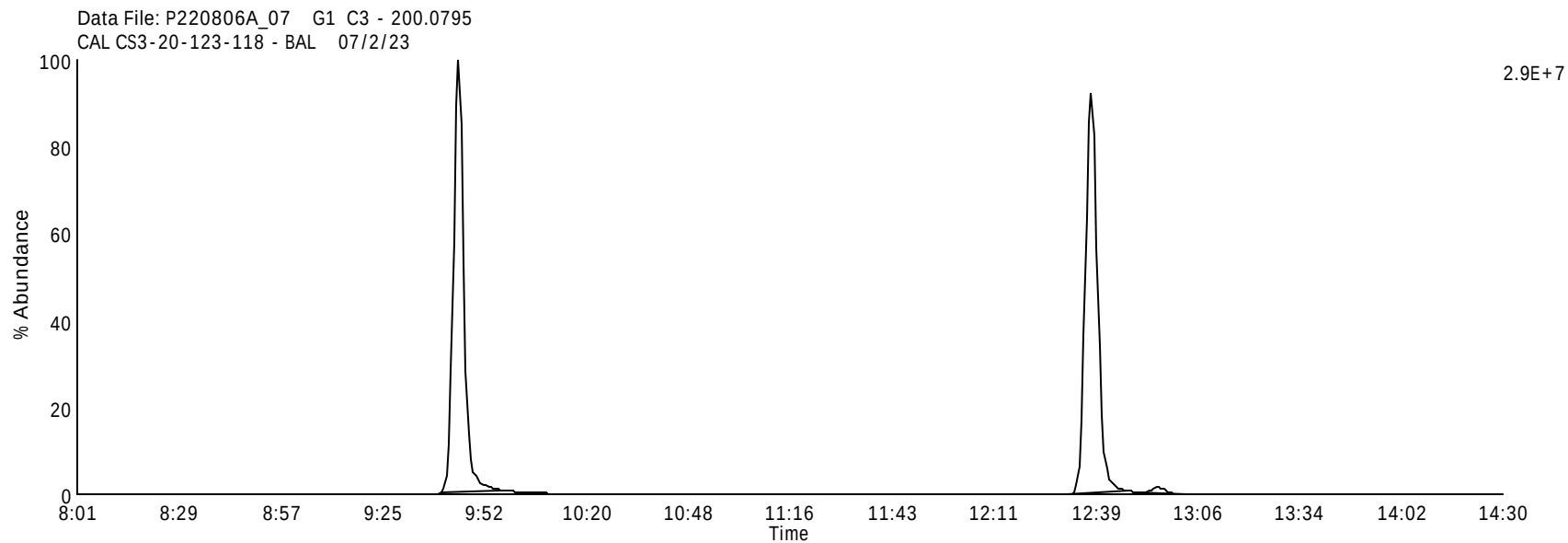
Data File Name: P220806A_07

Lab Sample ID: CS3-20-123-118

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23



Labeled Di Chlorinated Biphenyls

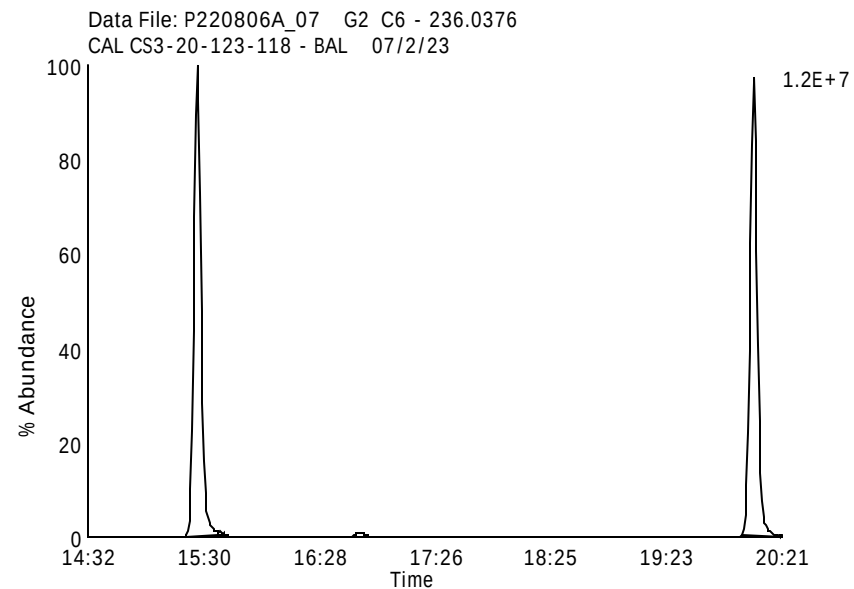
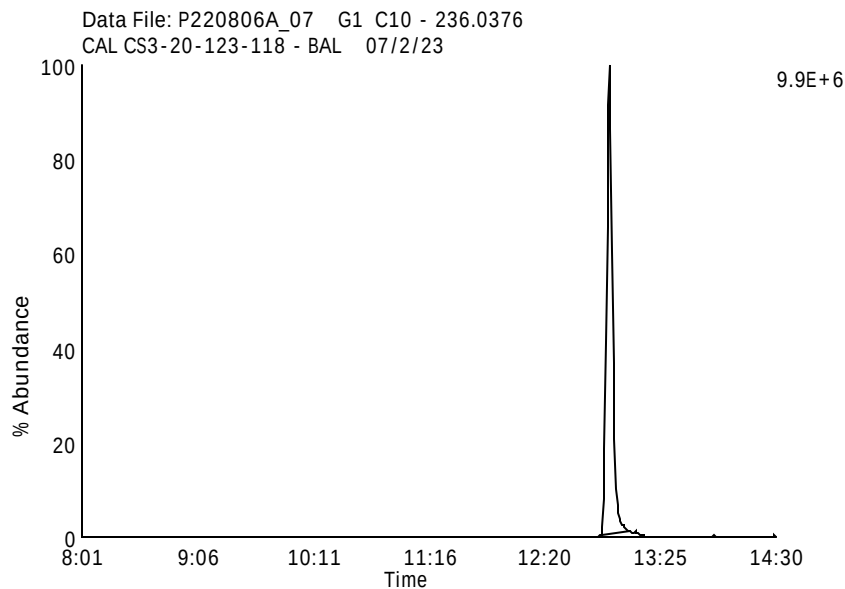
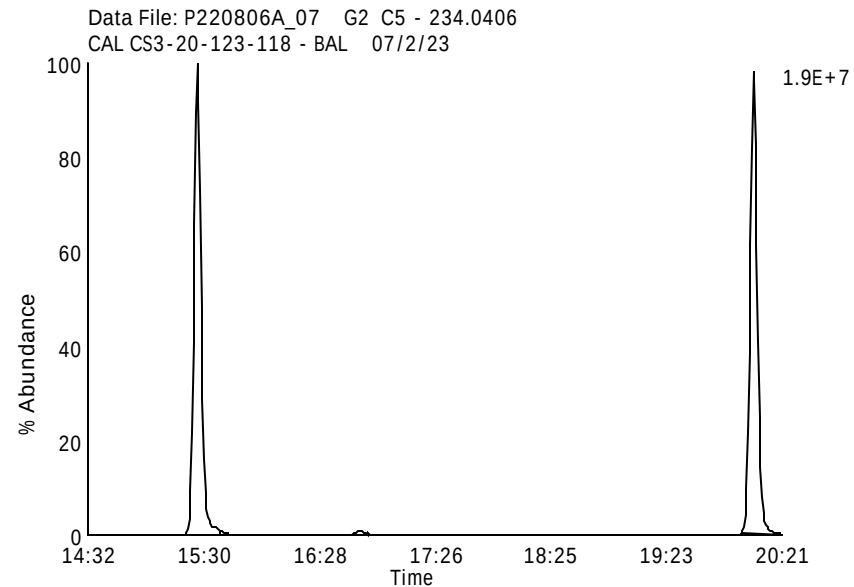
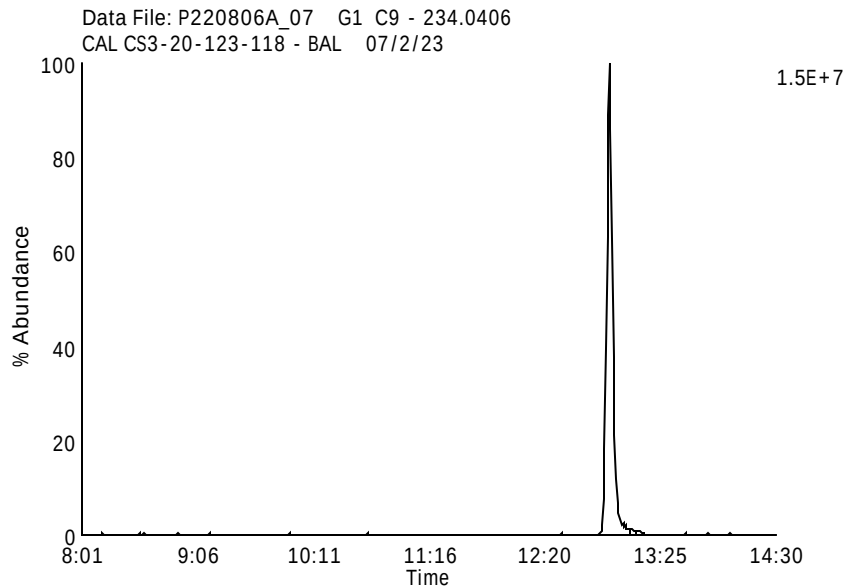
Data File Name: P220806A_07

Date Acquired: 8/6/2022

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23

Lab Sample ID: CS3-20-123-118

Instrument: 10MSHR09 (P)



Labeled Tri Chlorinated Biphenyls

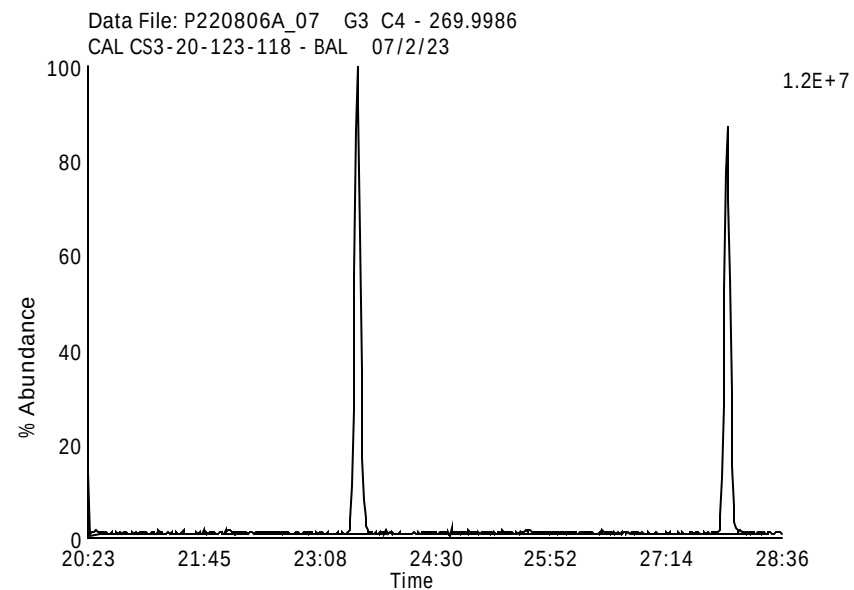
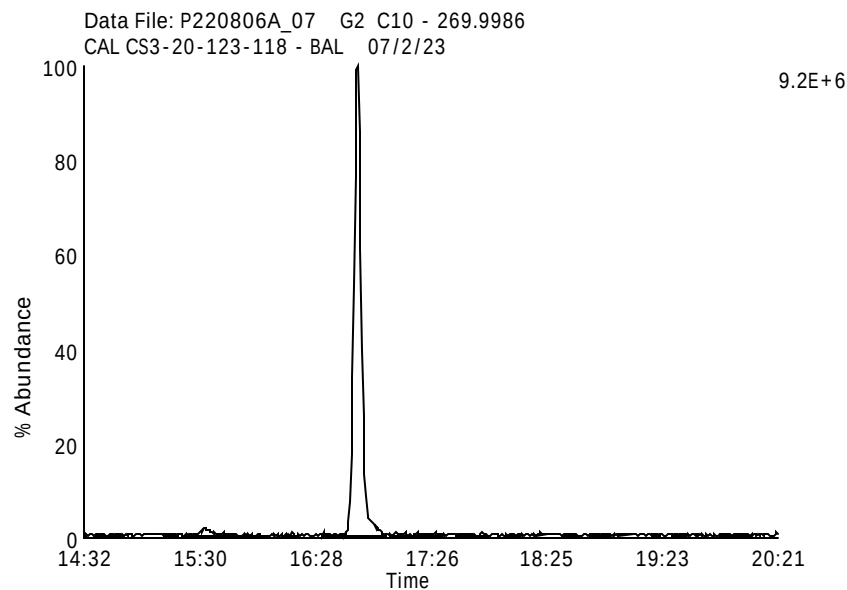
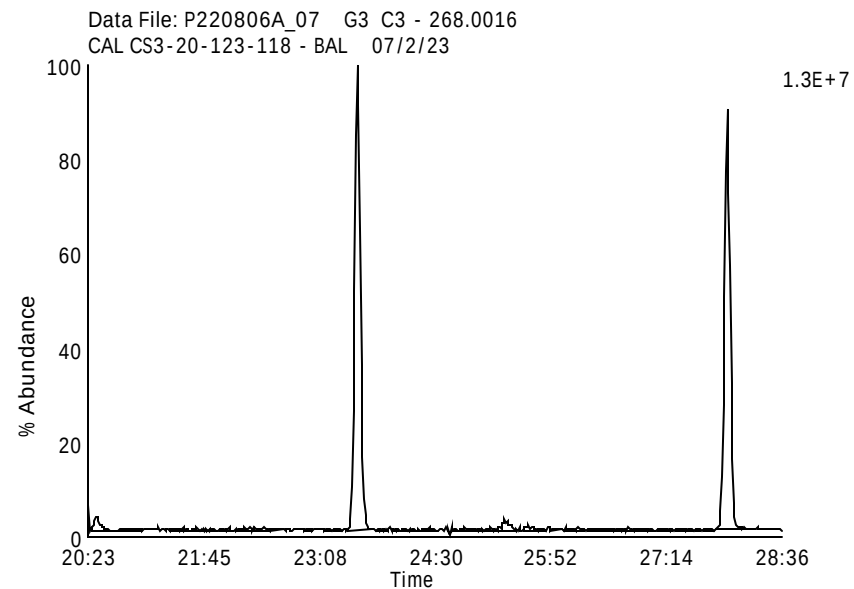
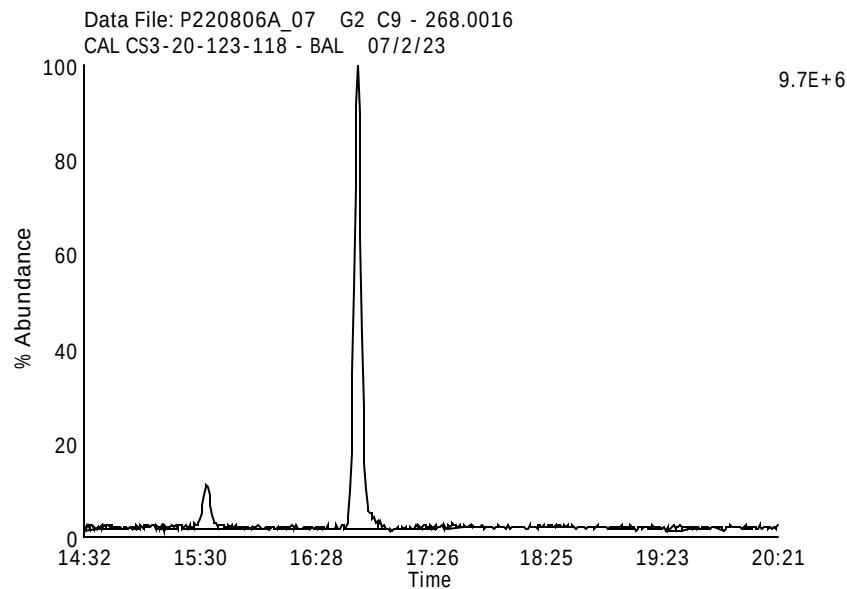
Data File Name: P220806A_07

Date Acquired: 8/6/2022

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23

Lab Sample ID: CS3-20-123-118

Instrument: 10MSHR09 (P)



Labeled Tetra Chlorinated Biphenyls

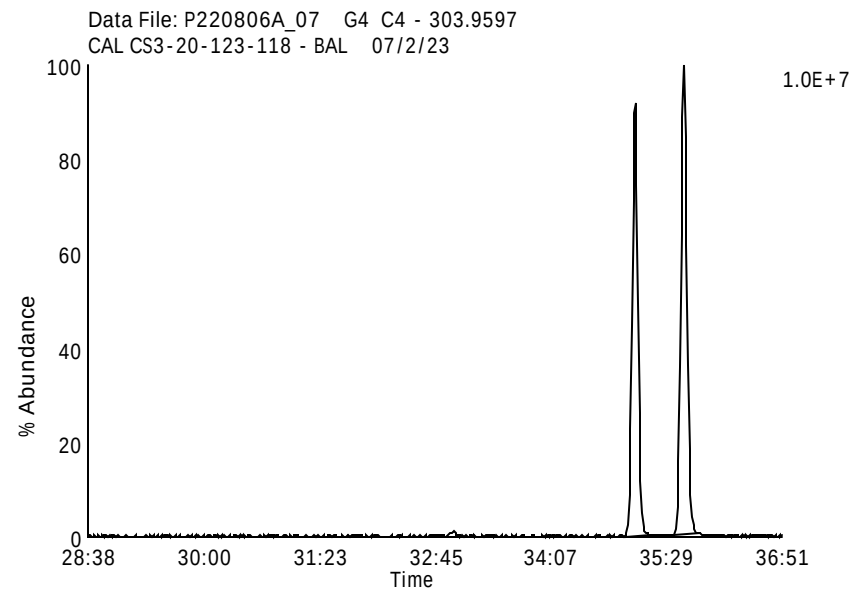
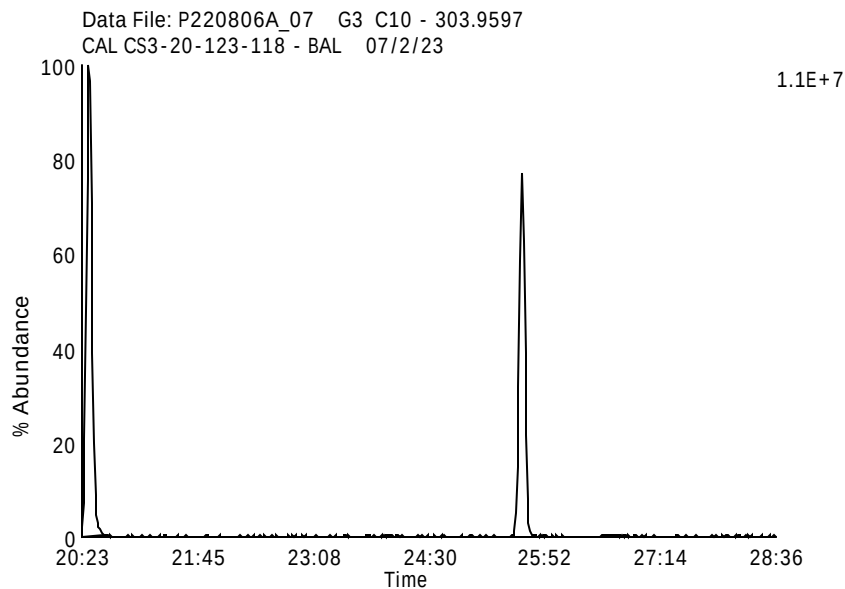
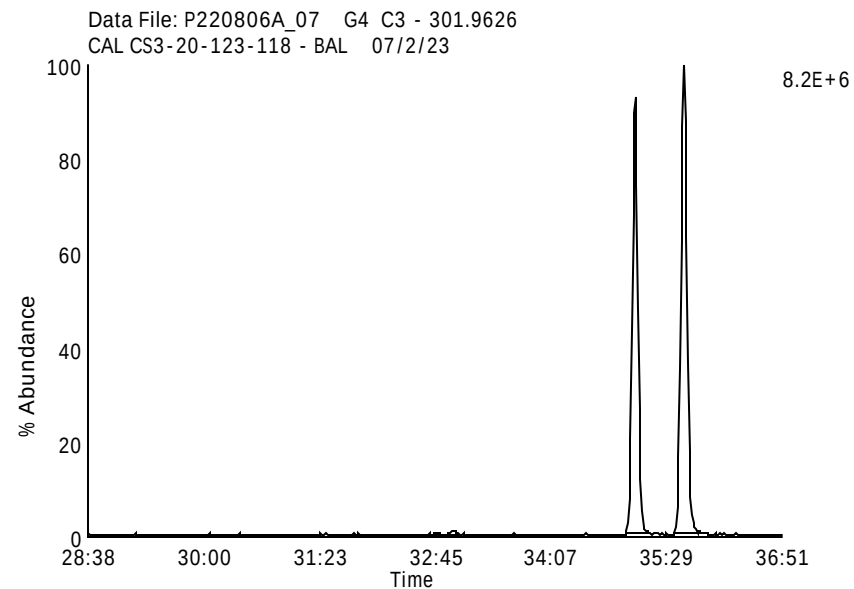
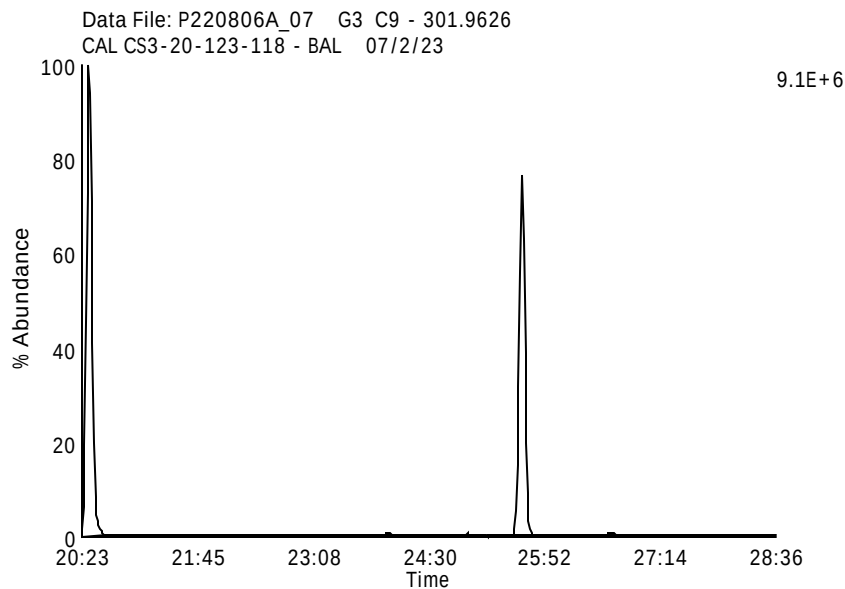
Data File Name: P220806A_07

Date Acquired: 8/6/2022

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23

Lab Sample ID: CS3-20-123-118

Instrument: 10MSHR09 (P)



Labeled Penta Chlorinated Biphenyls

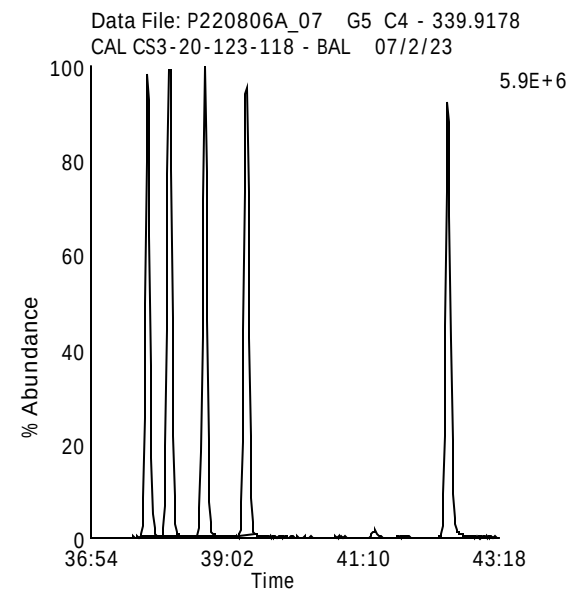
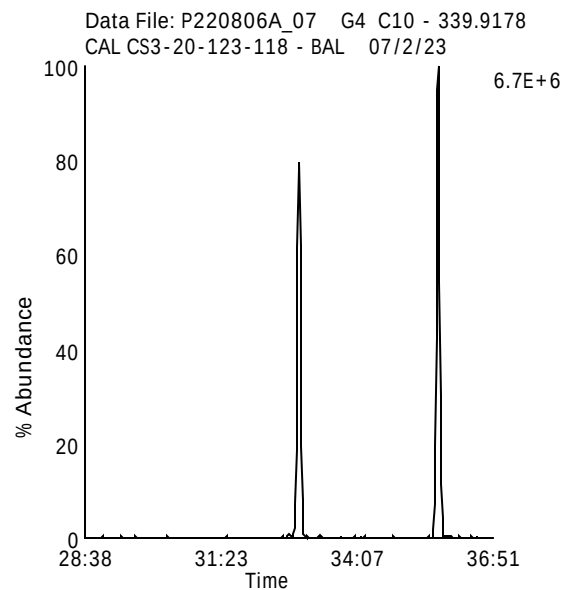
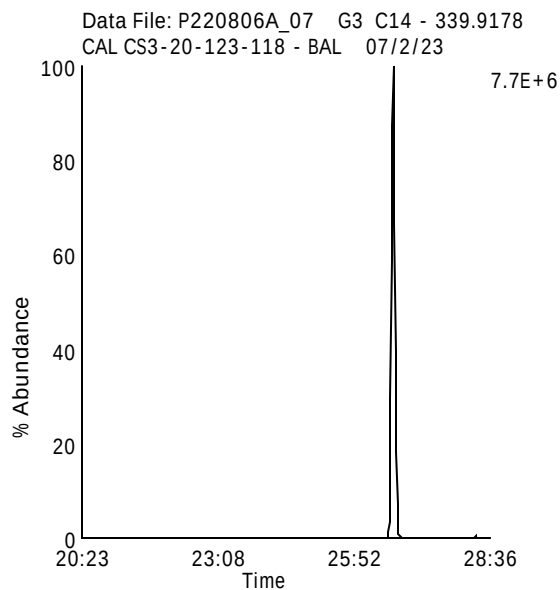
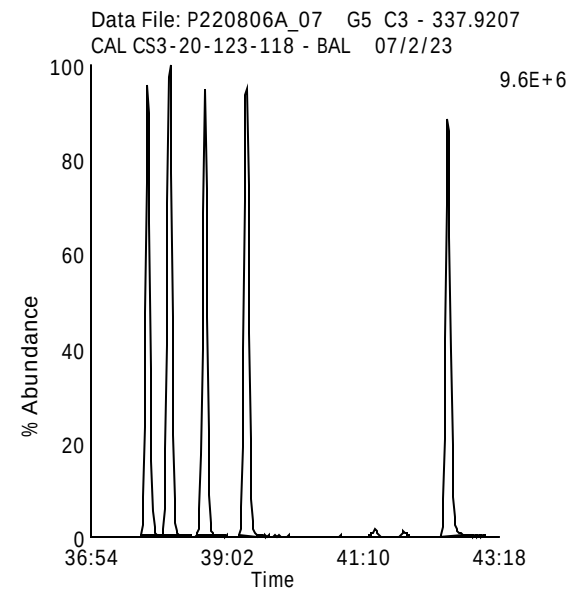
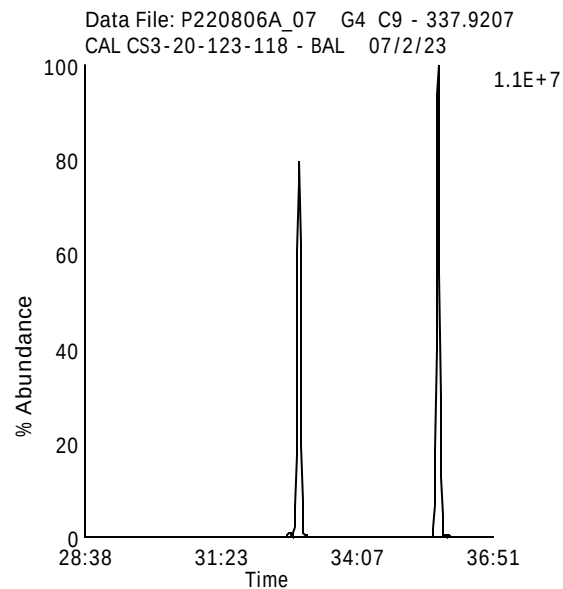
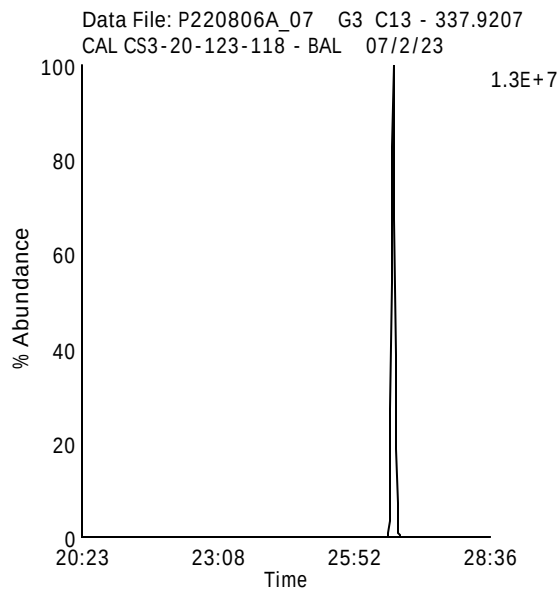
Data File Name: P220806A_07

Lab Sample ID: CS3-20-123-118

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23



Labeled Hexa Chlorinated Biphenyls

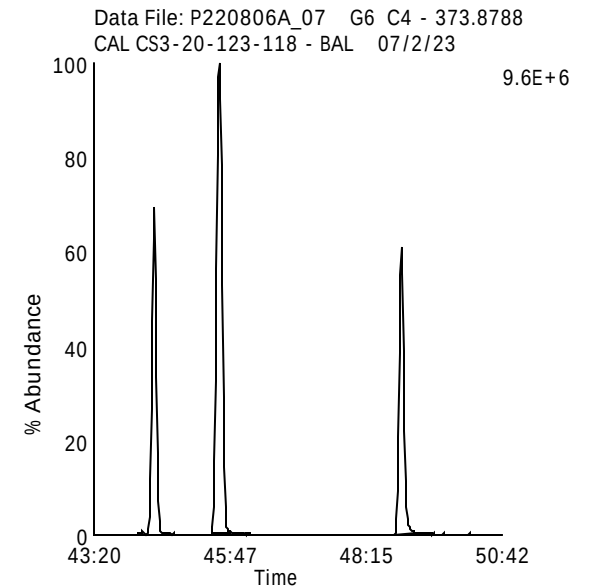
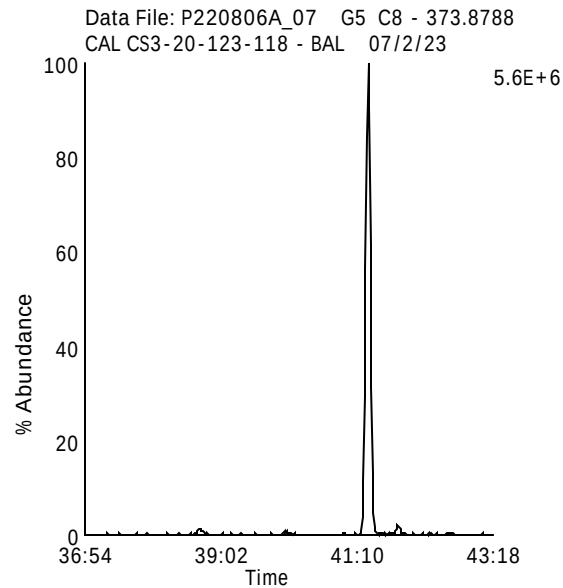
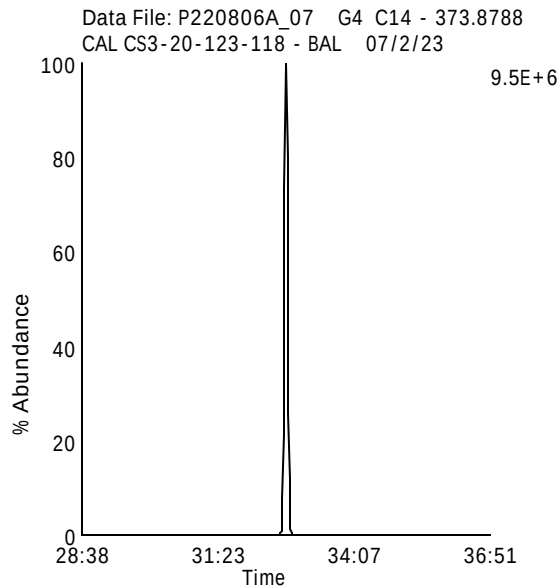
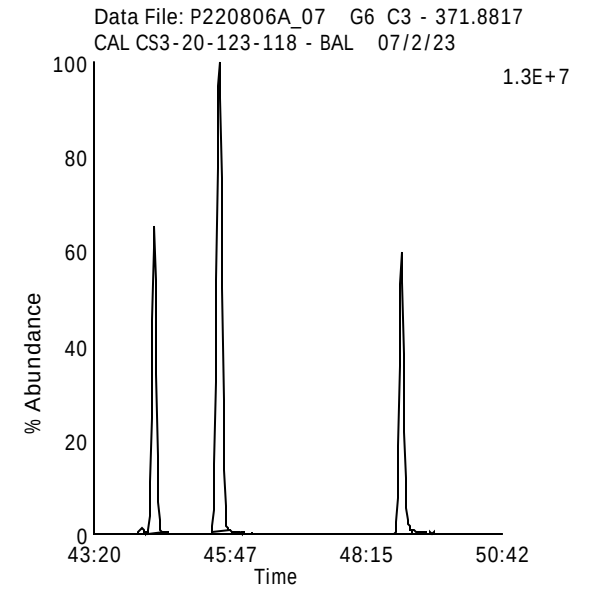
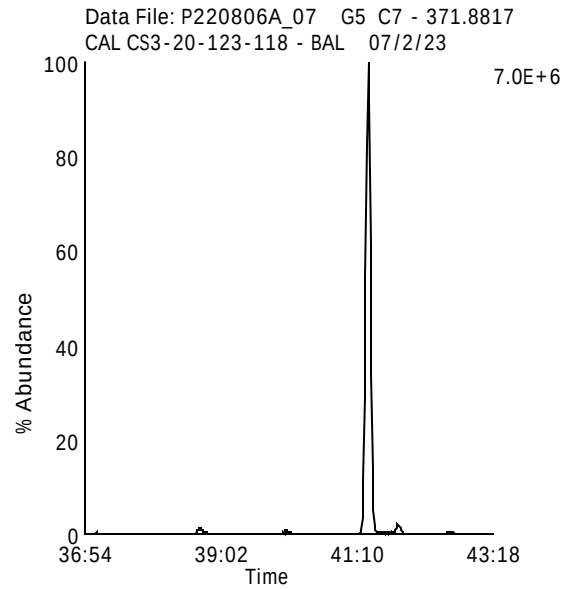
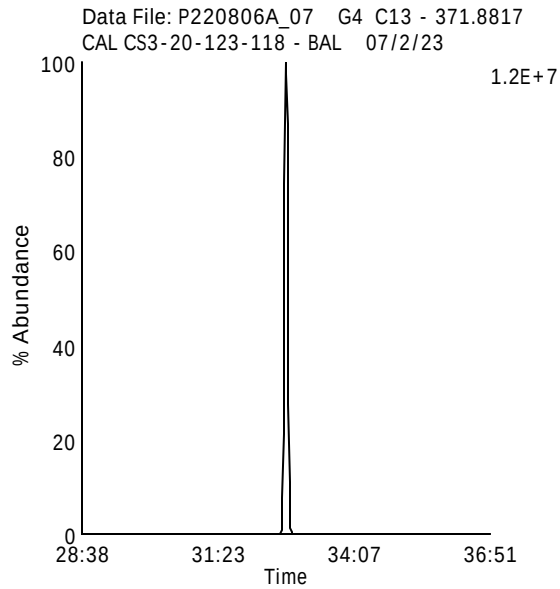
Data File Name: P220806A_07

Lab Sample ID: CS3-20-123-118

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23



Labeled Hepta Chlorinated Biphenyls

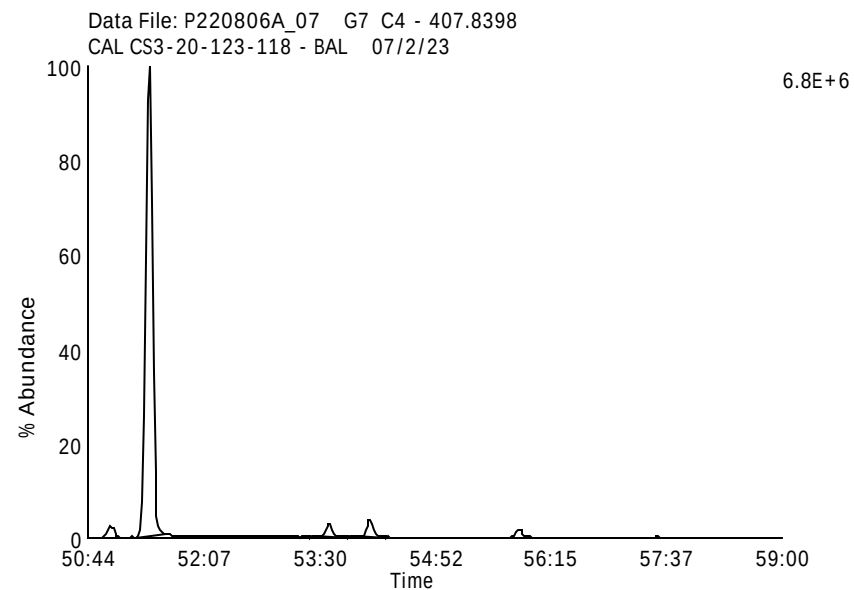
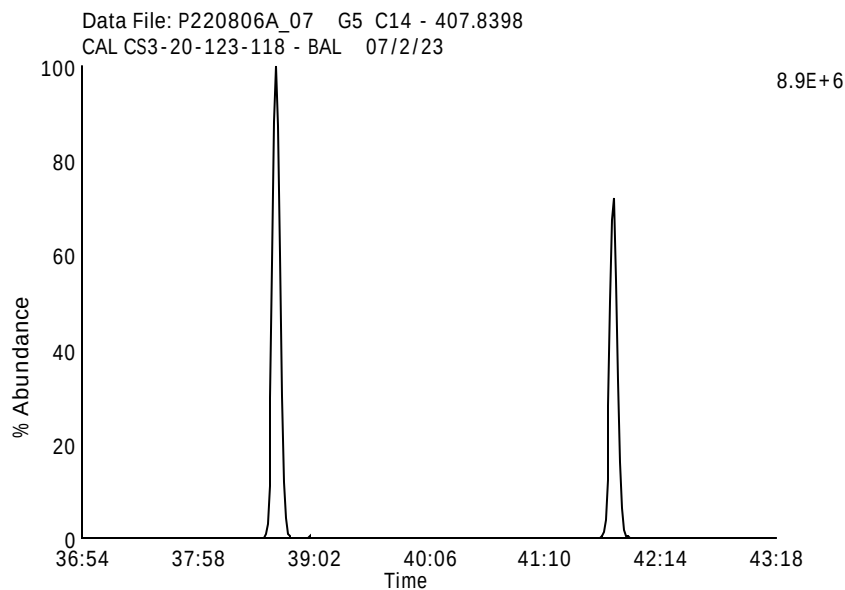
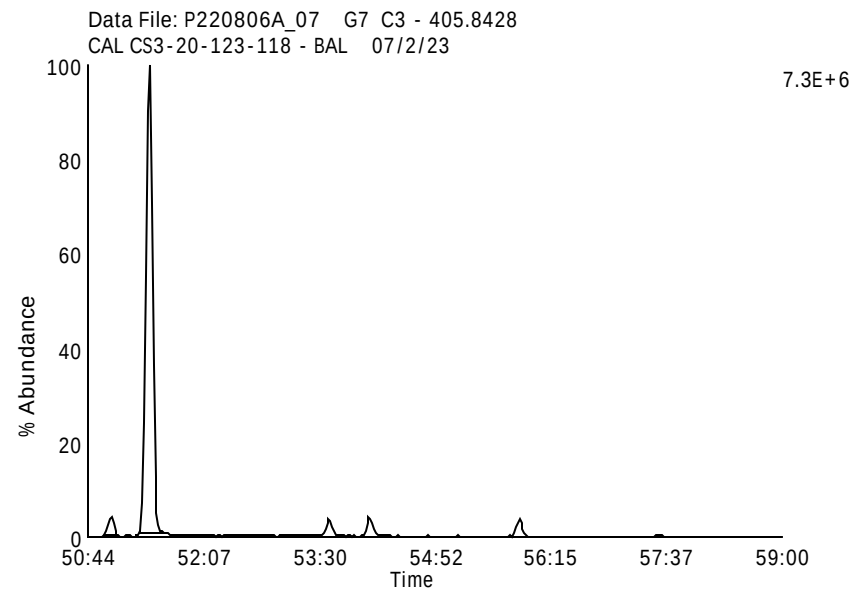
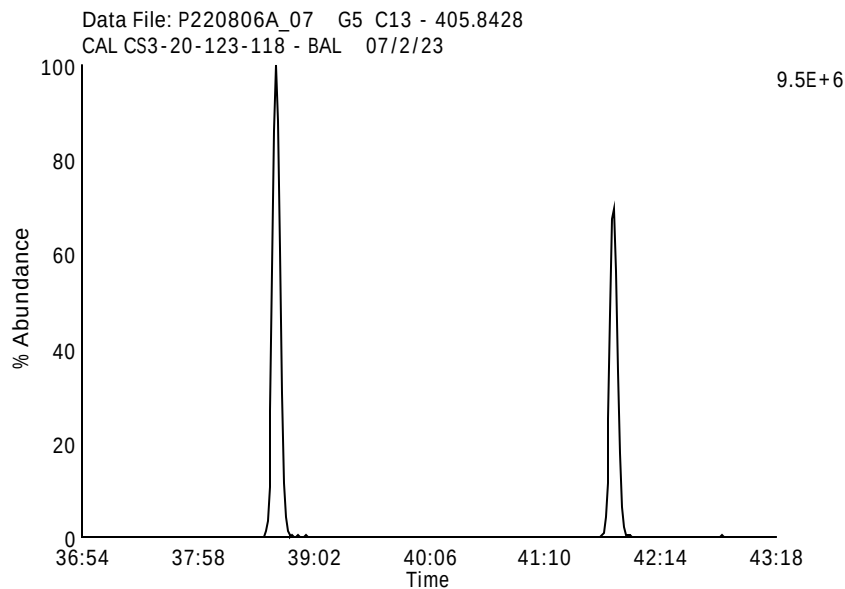
Data File Name: P220806A_07

Date Acquired: 8/6/2022

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23

Lab Sample ID: CS3-20-123-118

Instrument: 10MSHR09 (P)



Labeled Octa Chlorinated Biphenyls

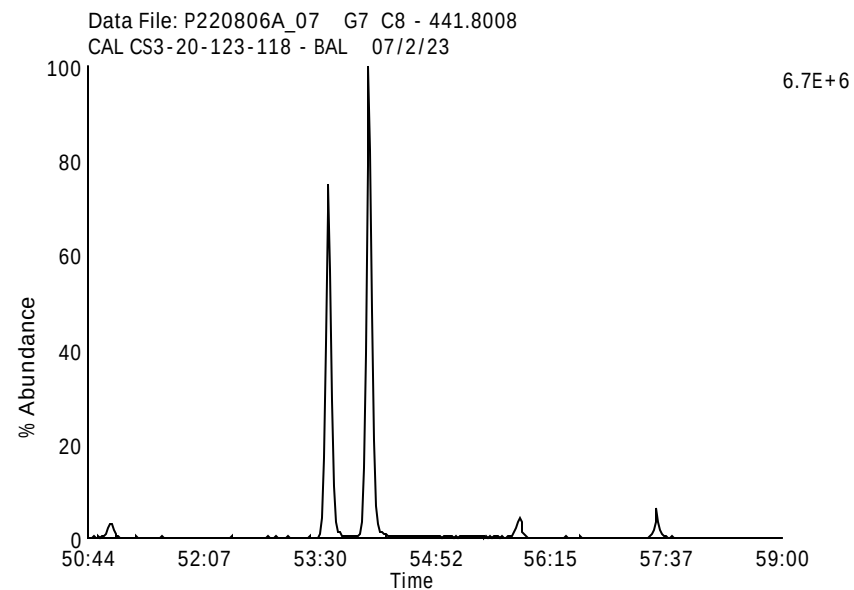
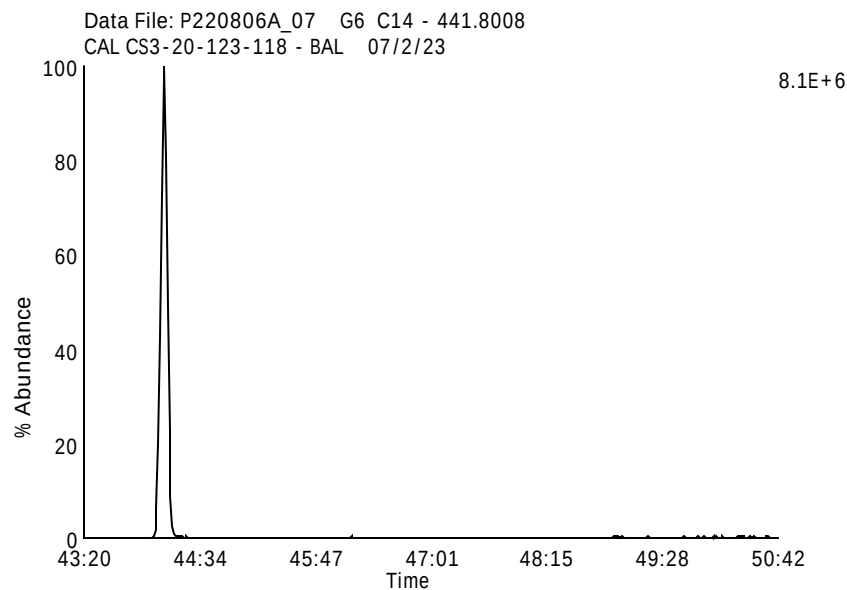
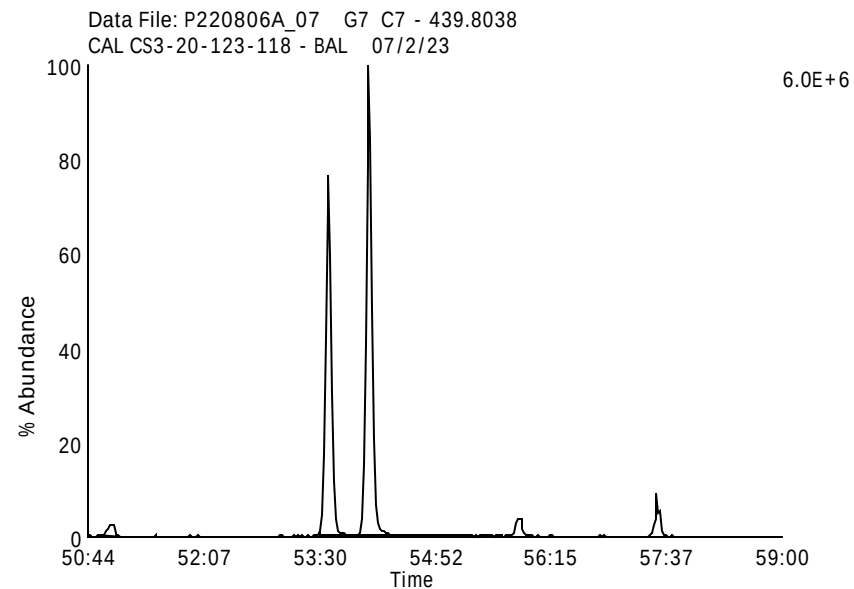
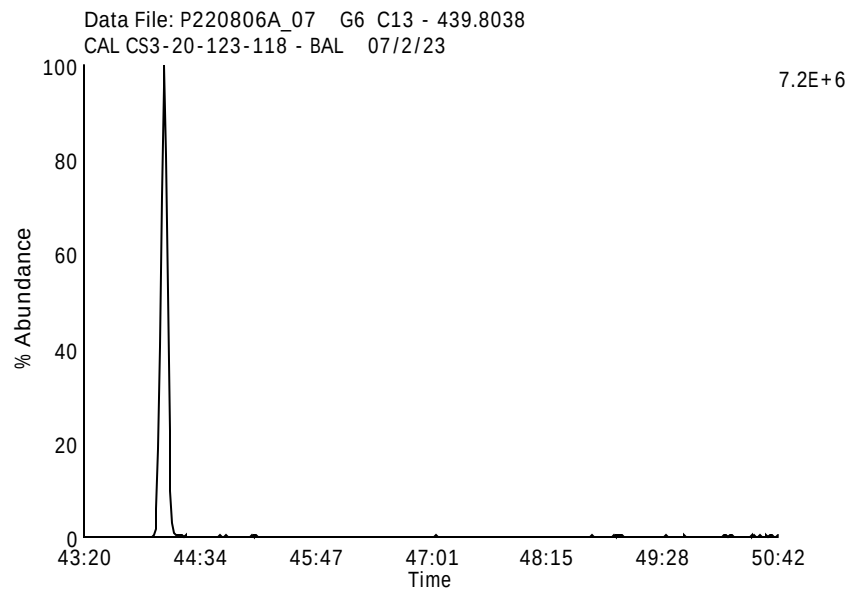
Data File Name: P220806A_07

Lab Sample ID: CS3-20-123-118

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23



Labeled Nona Chlorinated Biphenyls

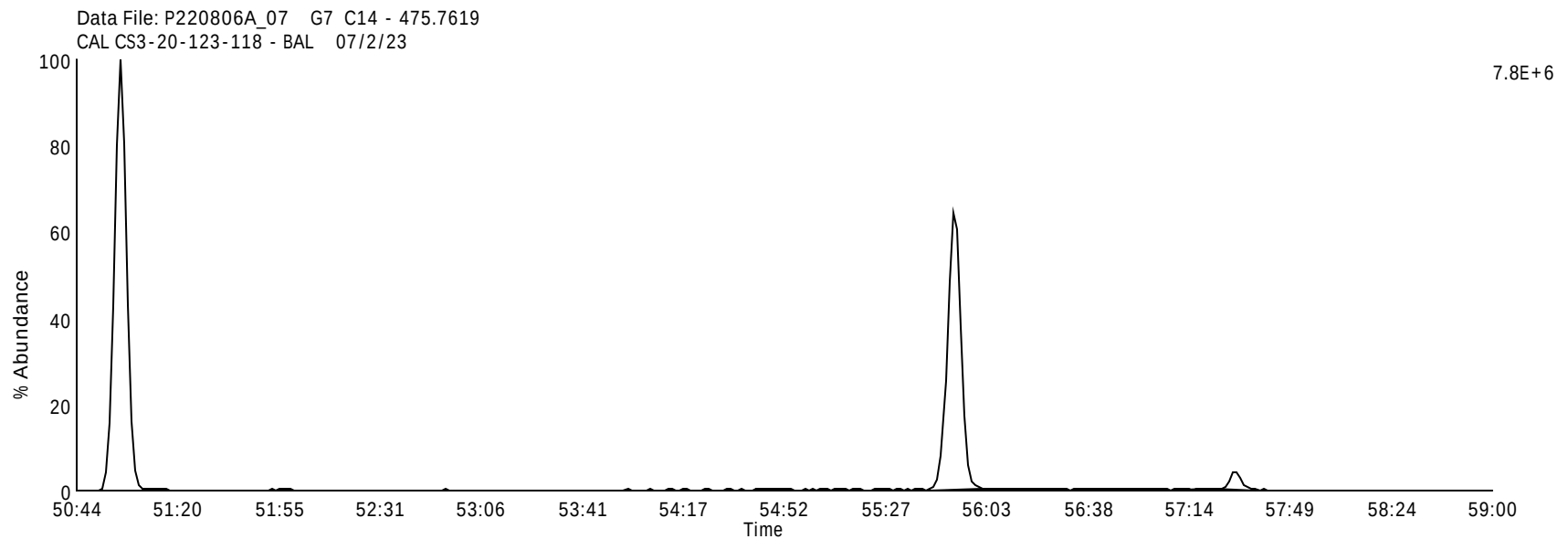
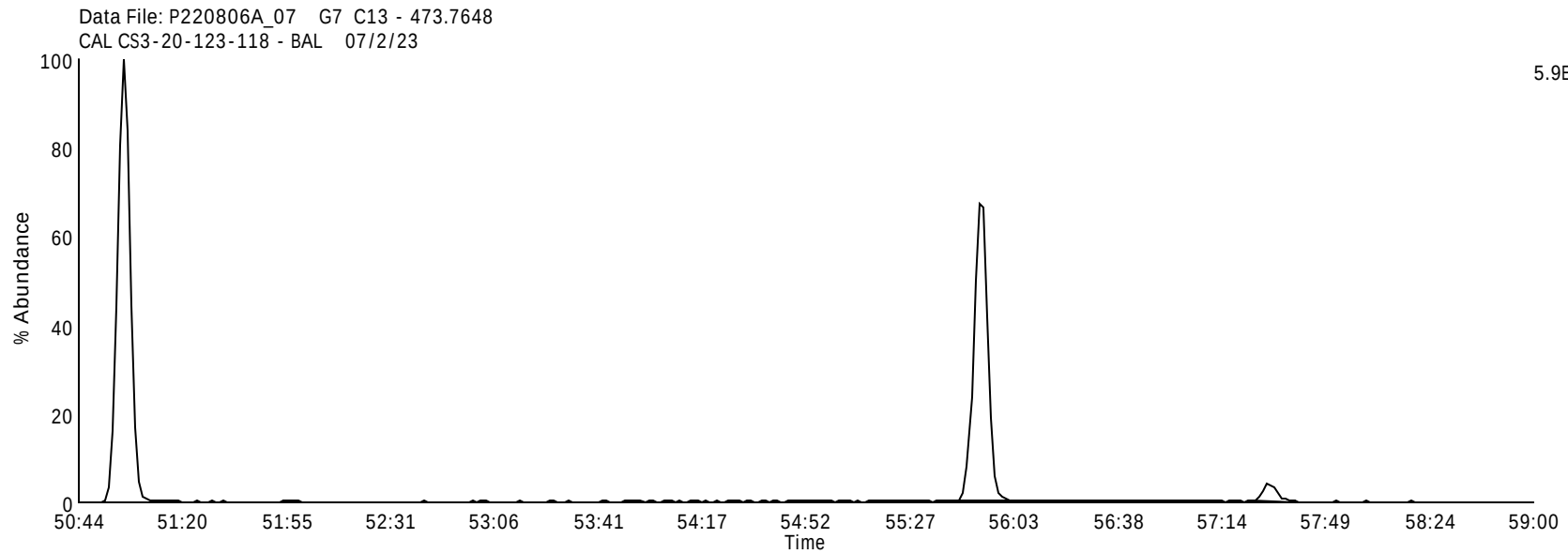
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Lab Sample ID: CS3-20-123-118

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23



Labeled Deca Chlorinated Biphenyl

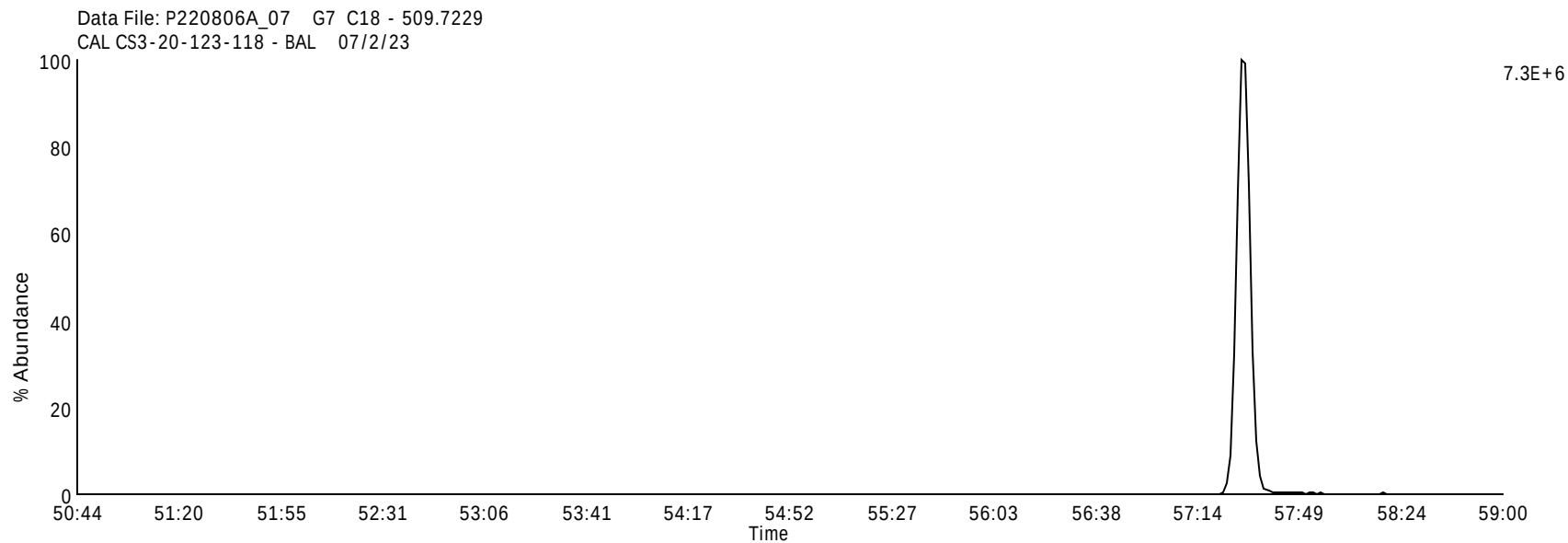
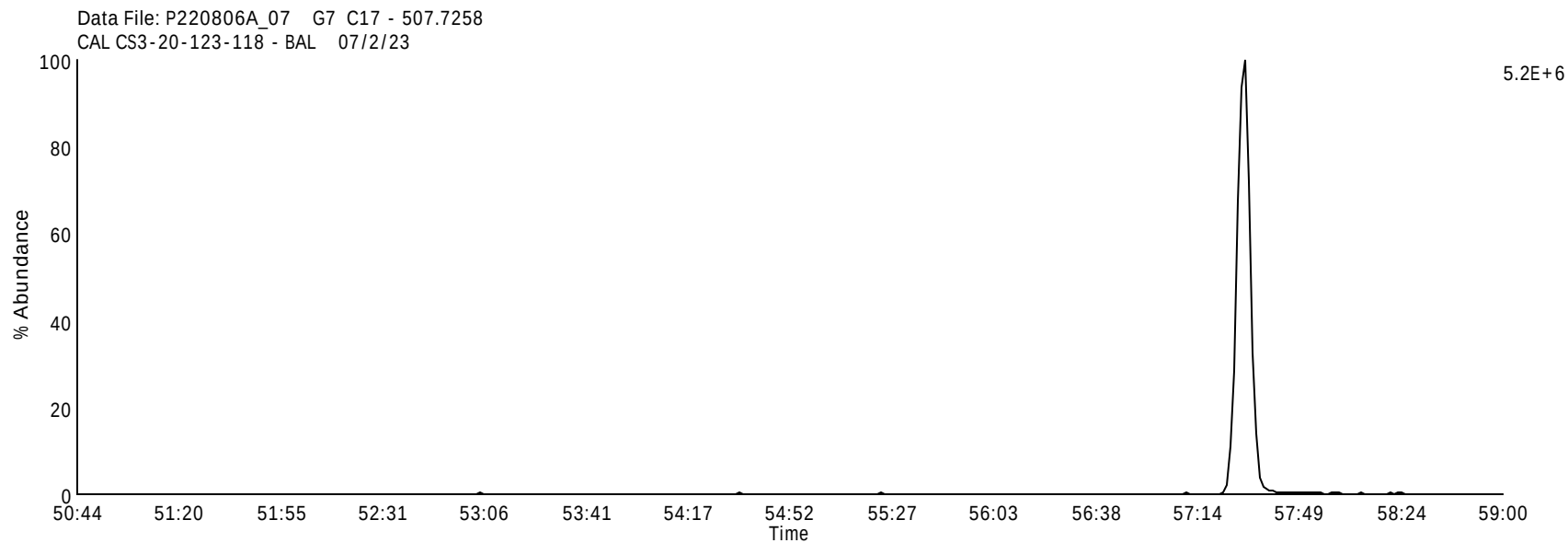
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Date Acquired: 8/6/2022

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23

Lab Sample ID: CS3-20-123-118

Instrument: 10MSHR09 (P)



Mono Chlorinated Biphenyls

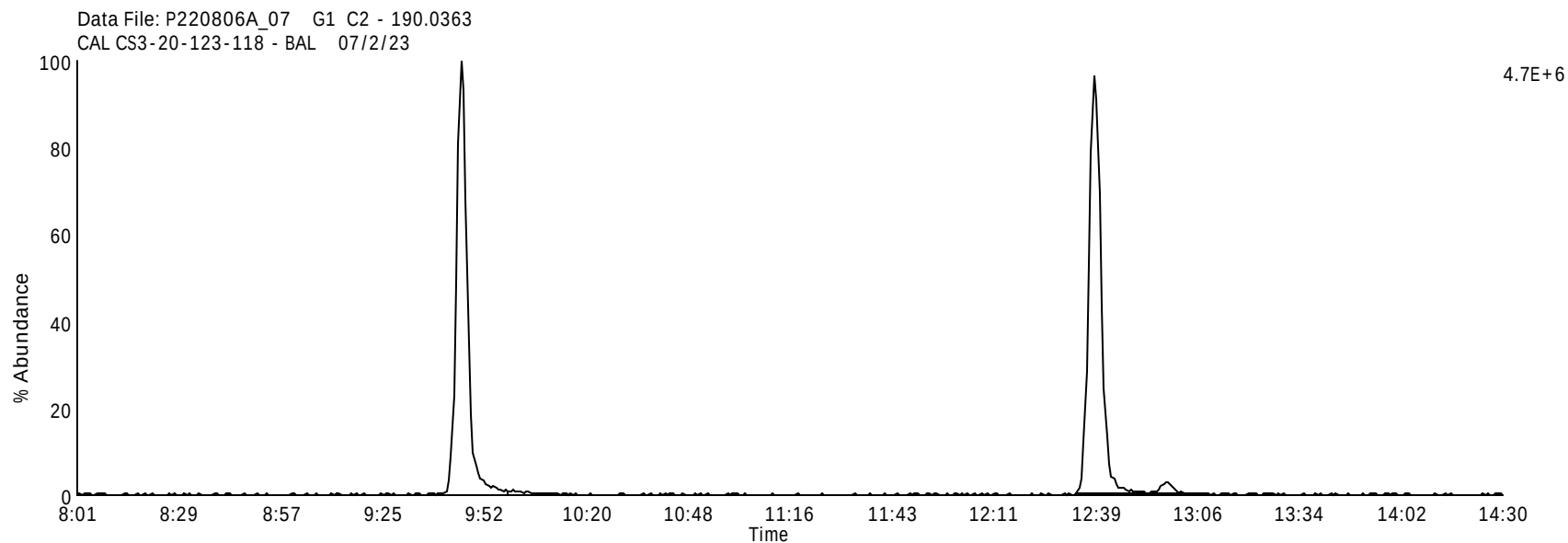
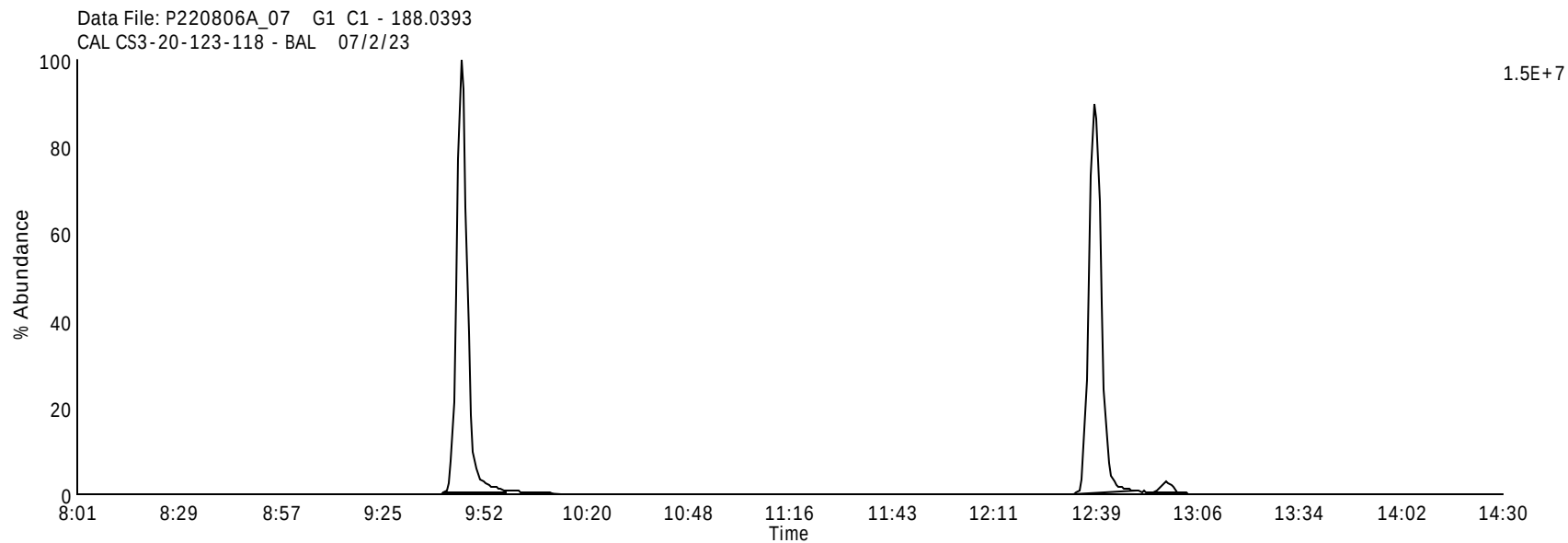
Data File Name: P220806A_07

Lab Sample ID: CS3-20-123-118

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23



Di Chlorinated Biphenyls

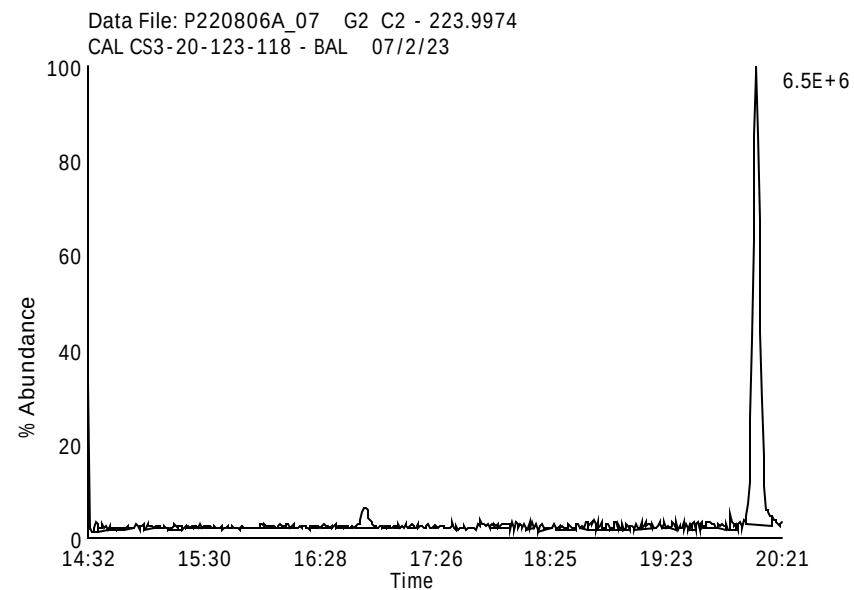
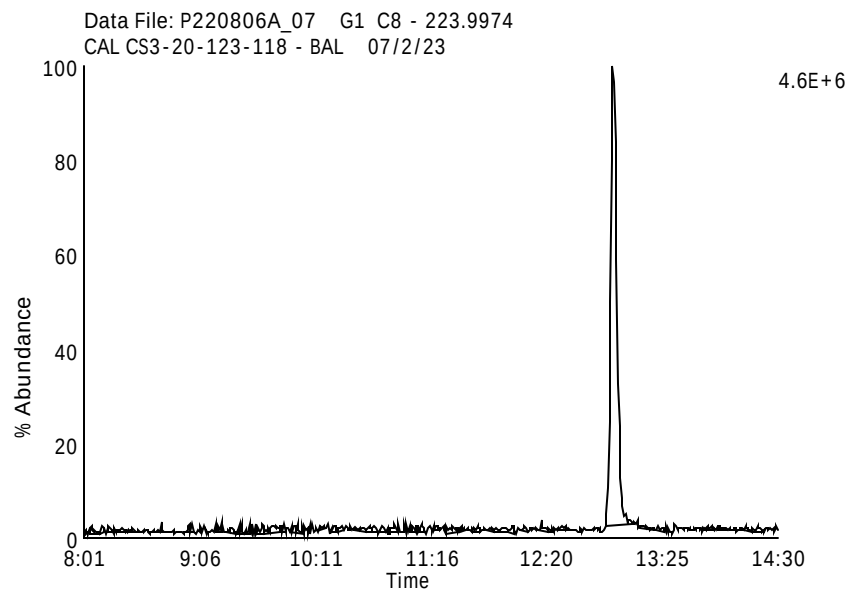
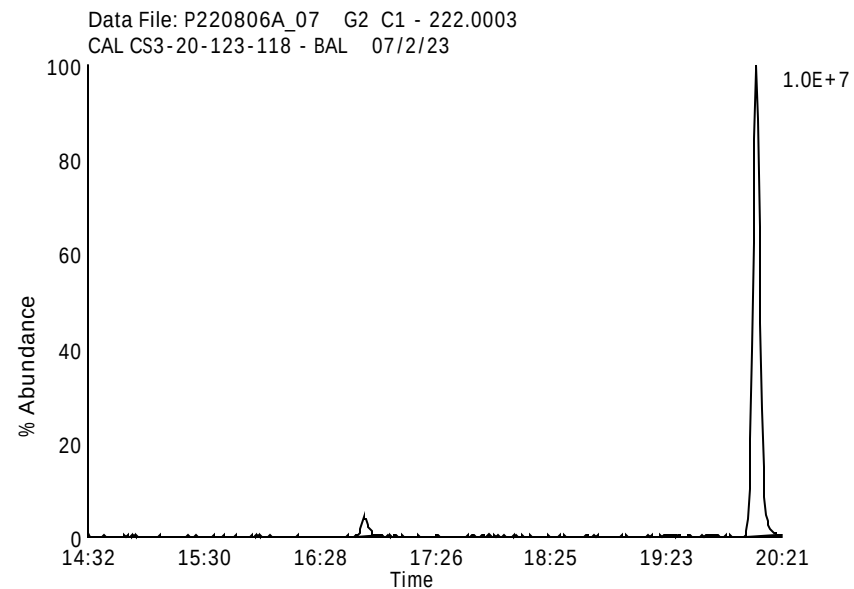
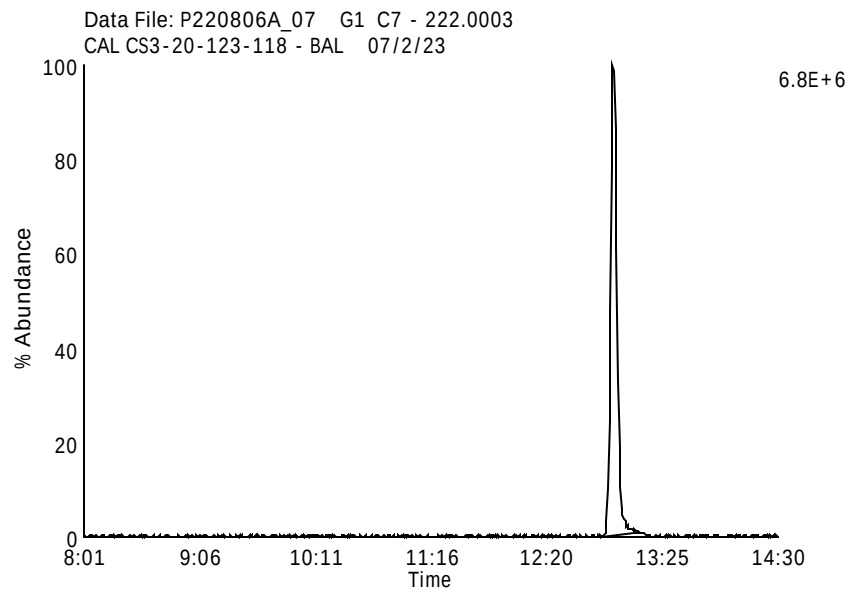
Data File Name: P220806A_07

Date Acquired: 8/6/2022

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23

Lab Sample ID: CS3-20-123-118

Instrument: 10MSHR09 (P)



Tri Chlorinated Biphenyls

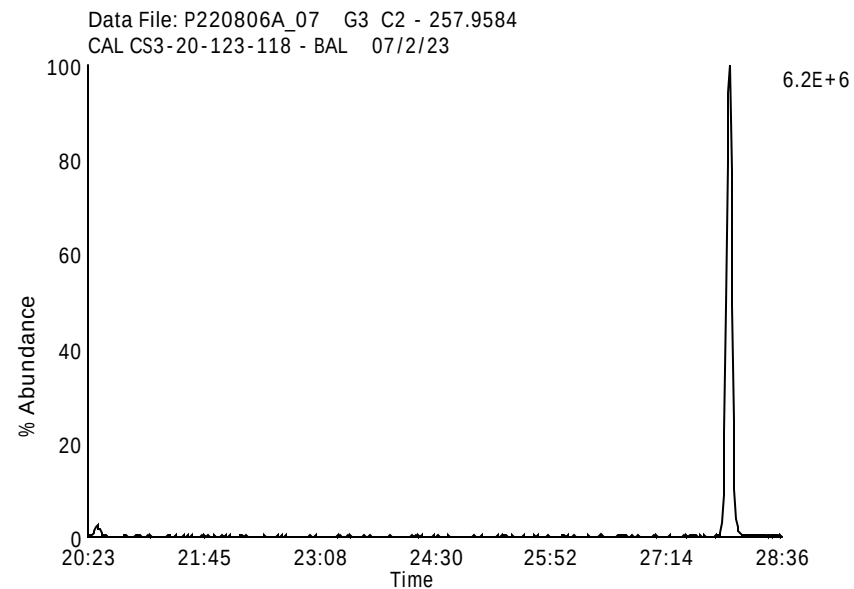
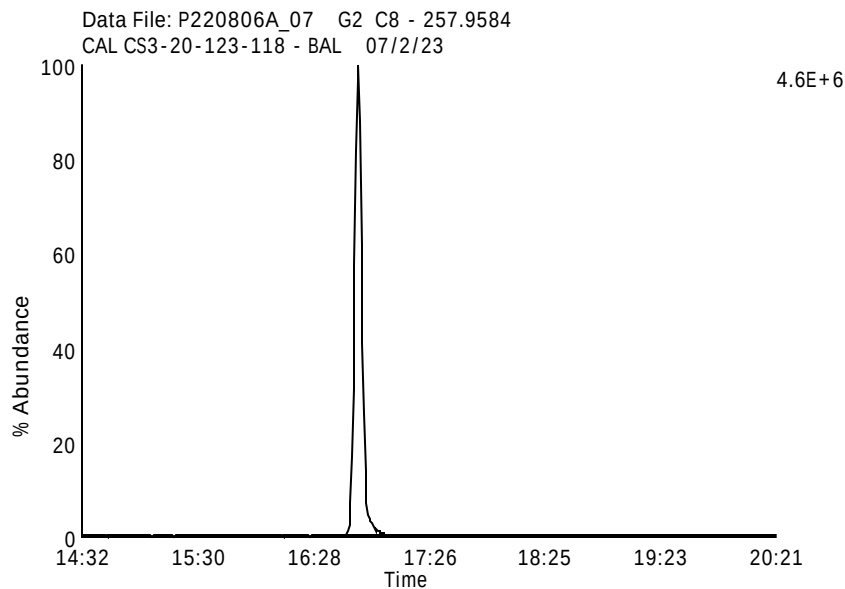
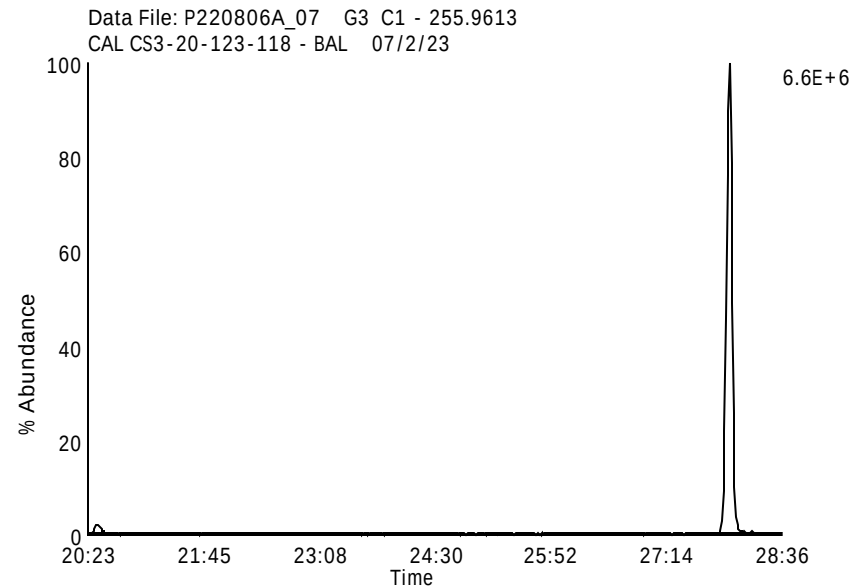
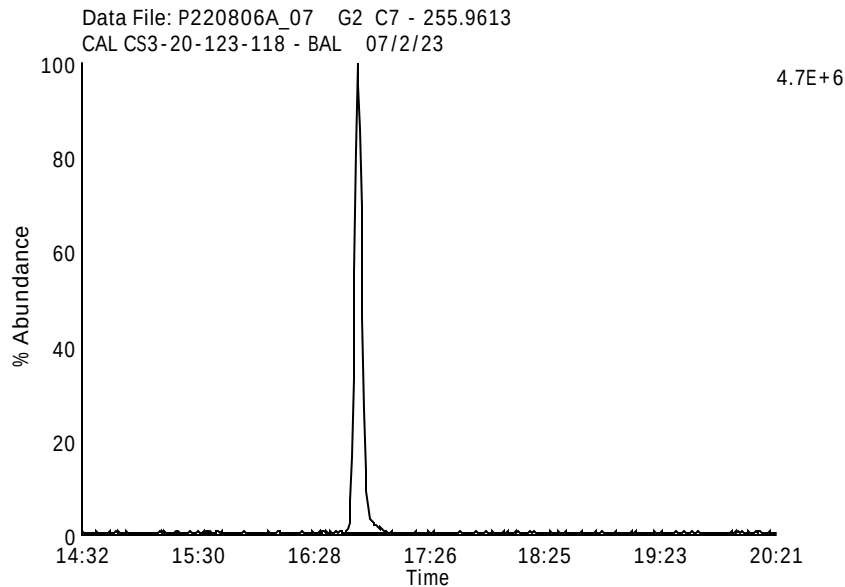
Data File Name: P220806A_07

Date Acquired: 8/6/2022

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23

Lab Sample ID: CS3-20-123-118

Instrument: 10MSHR09 (P)



Tetra Chlorinated Biphenyls

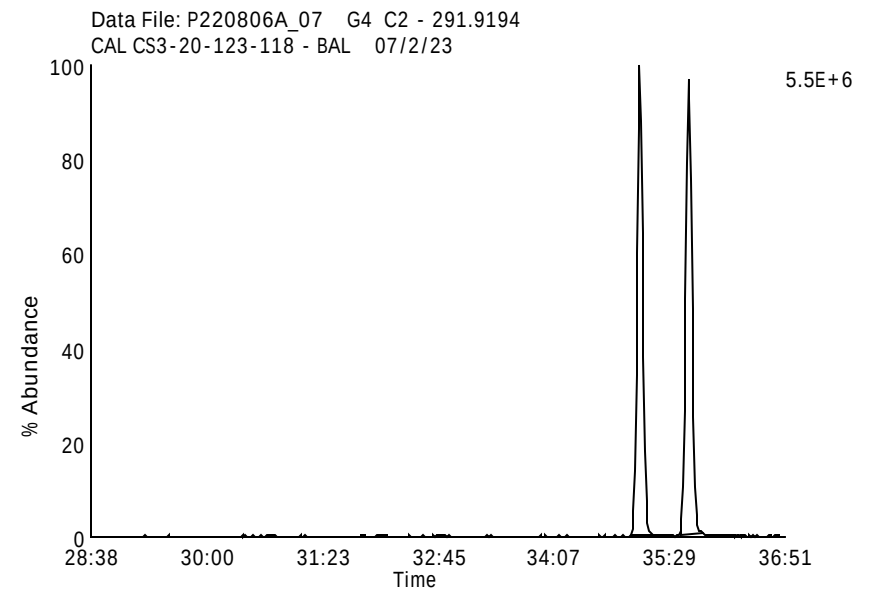
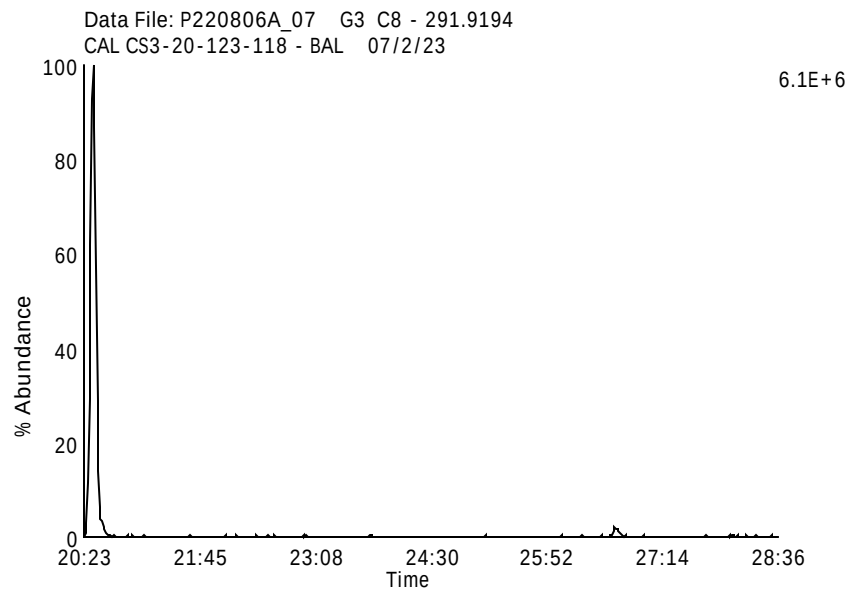
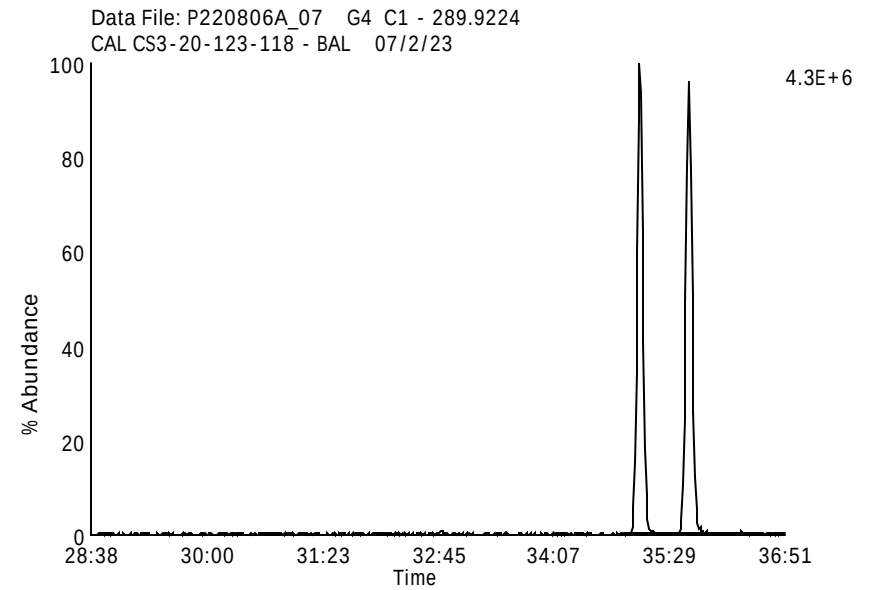
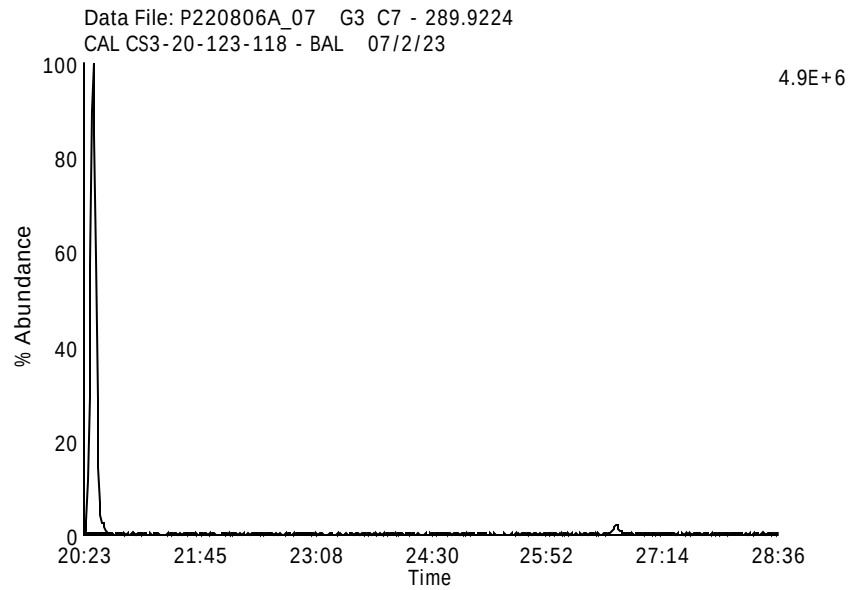
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Lab Sample ID: CS3-20-123-118

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23



Penta Chlorinated Biphenyls

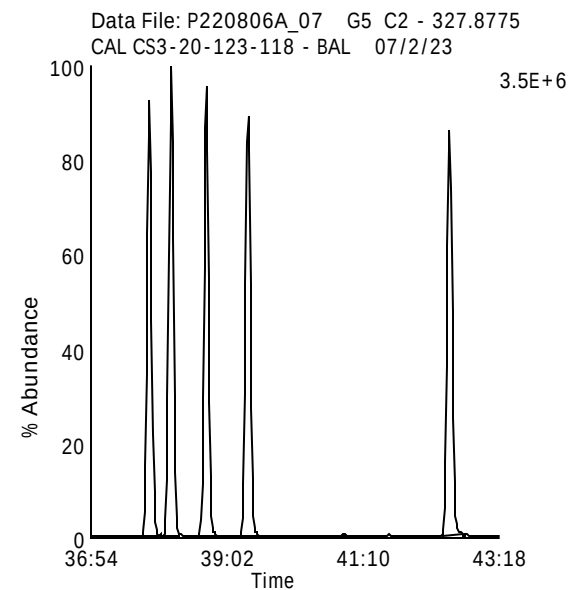
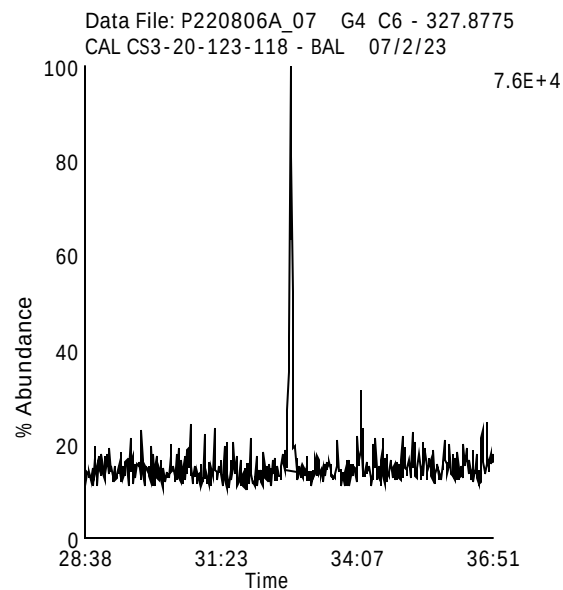
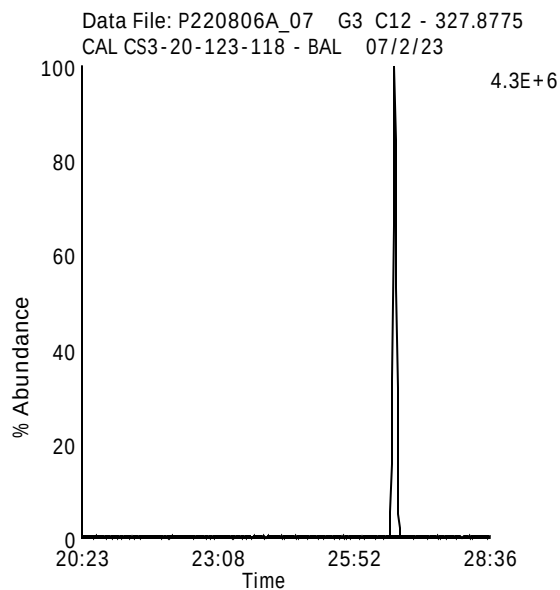
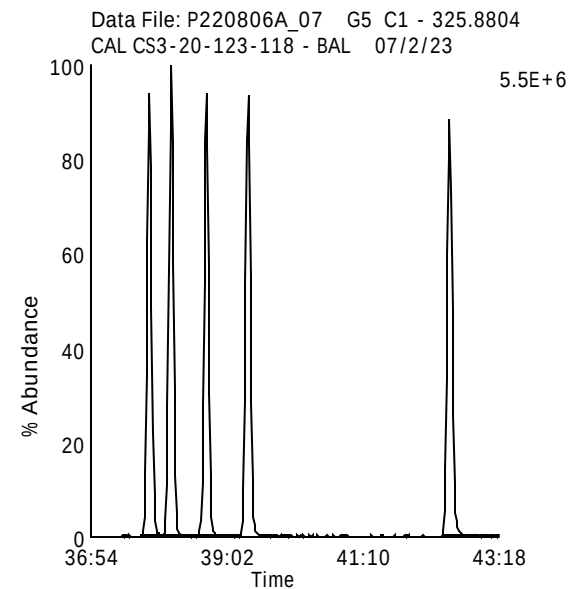
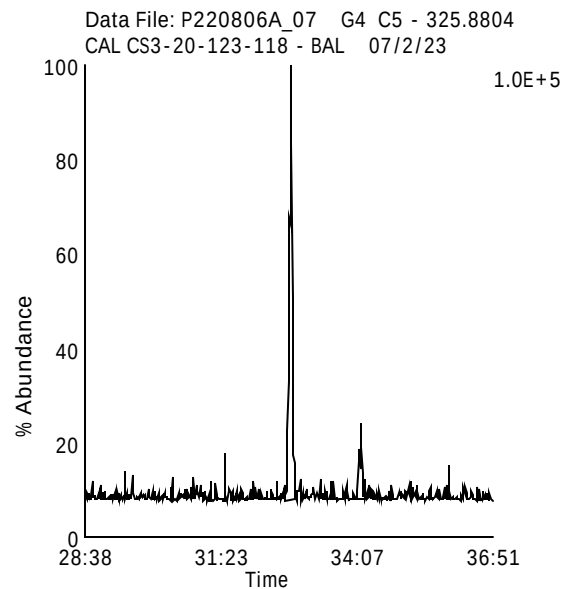
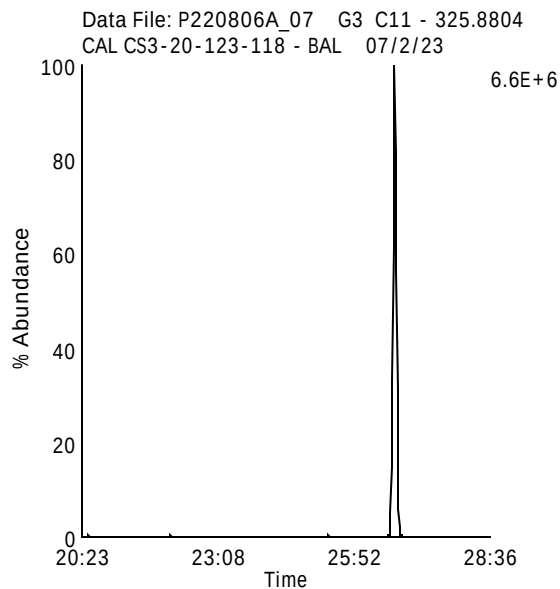
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Lab Sample ID: CS3-20-123-118

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23



Hexa Chlorinated Biphenyls

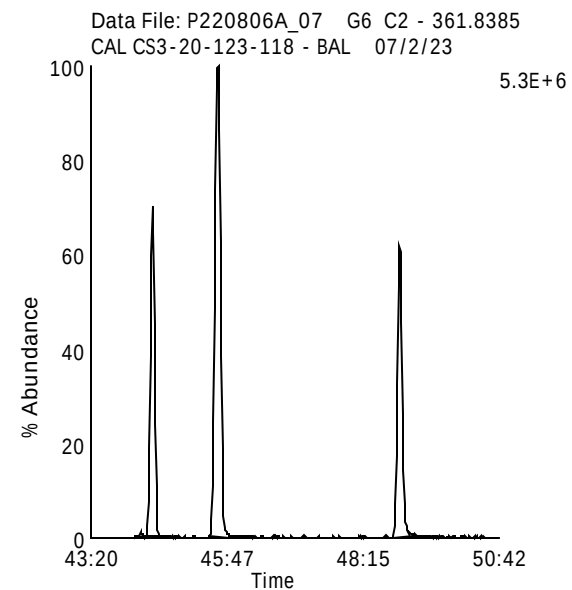
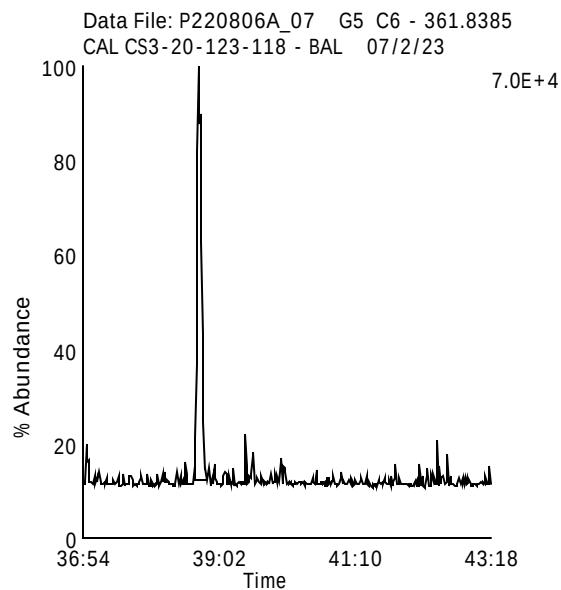
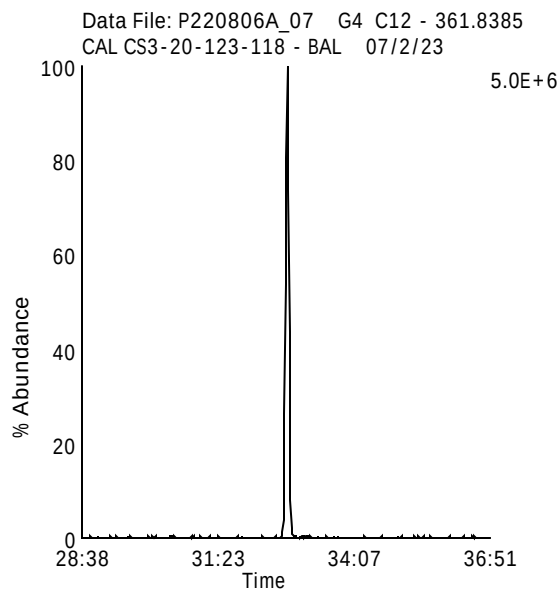
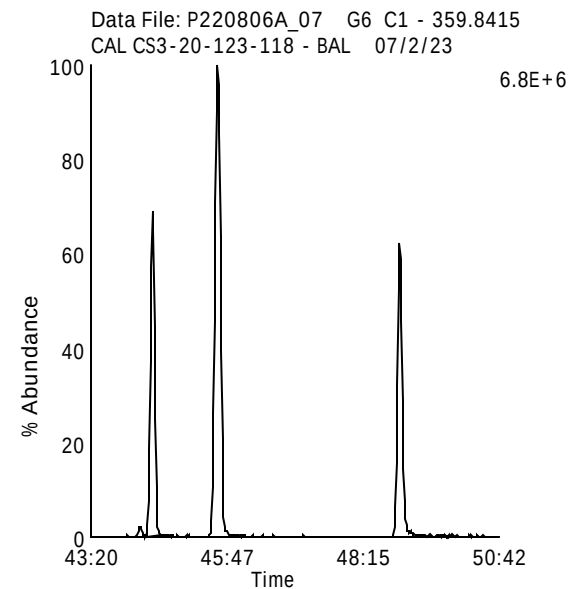
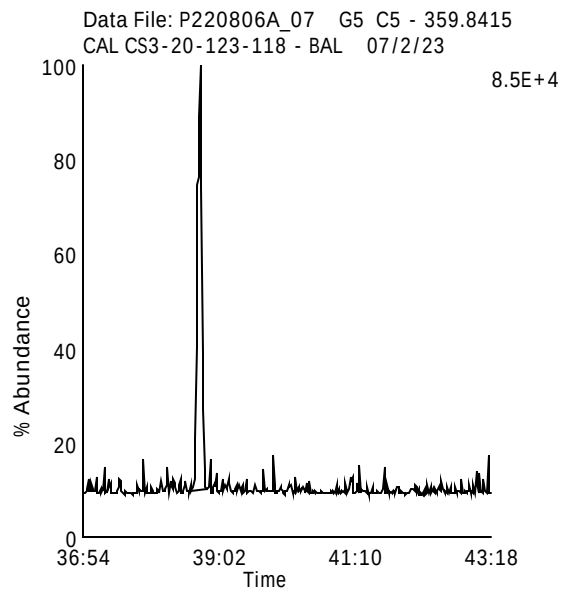
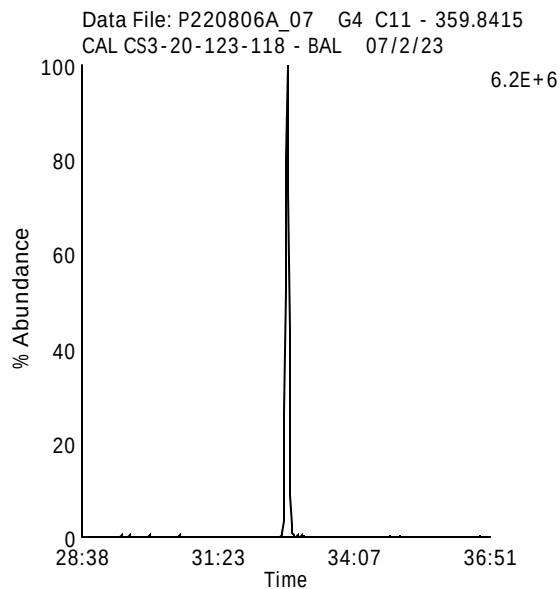
Data File Name: P220806A_07

Date Acquired: 8/6/2022

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23

Lab Sample ID: CS3-20-123-118

Instrument: 10MSHR09 (P)



Hepta Chlorinated Biphenyls

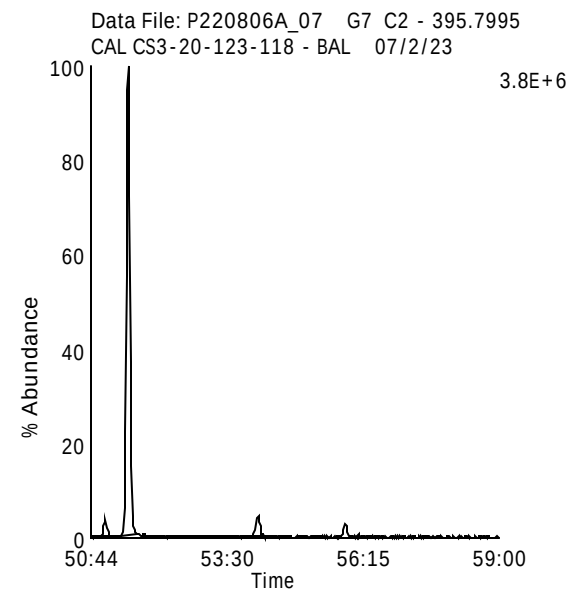
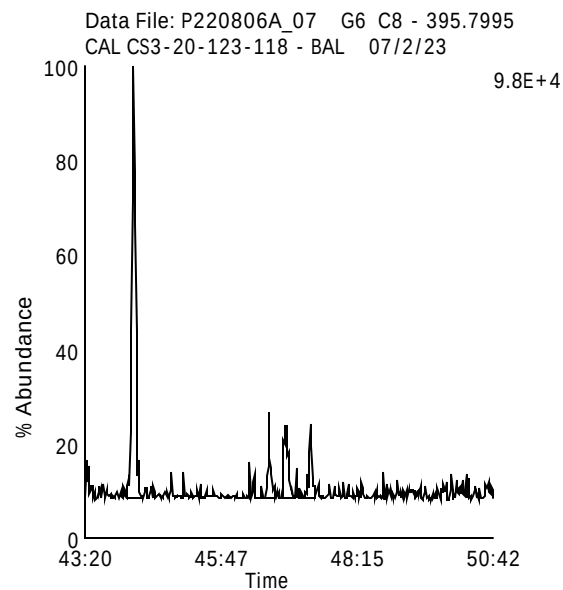
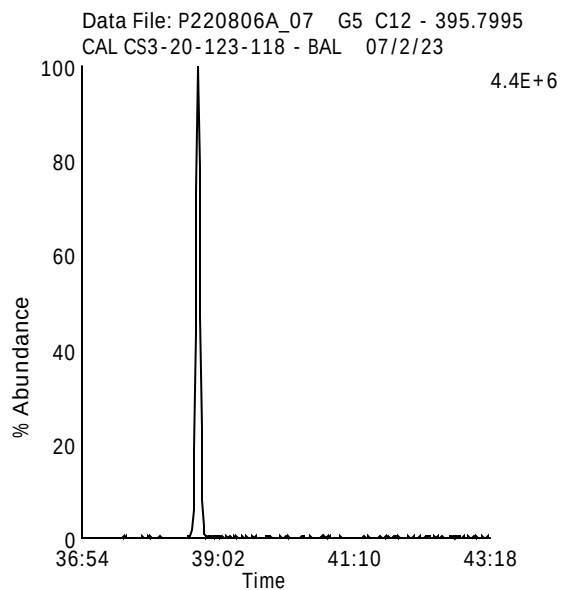
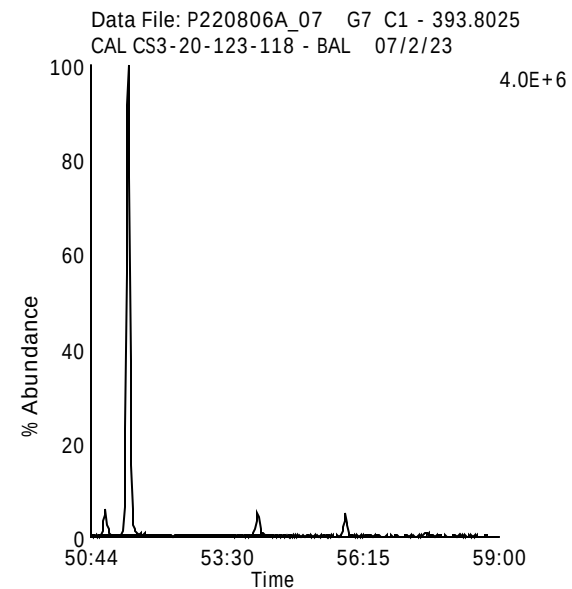
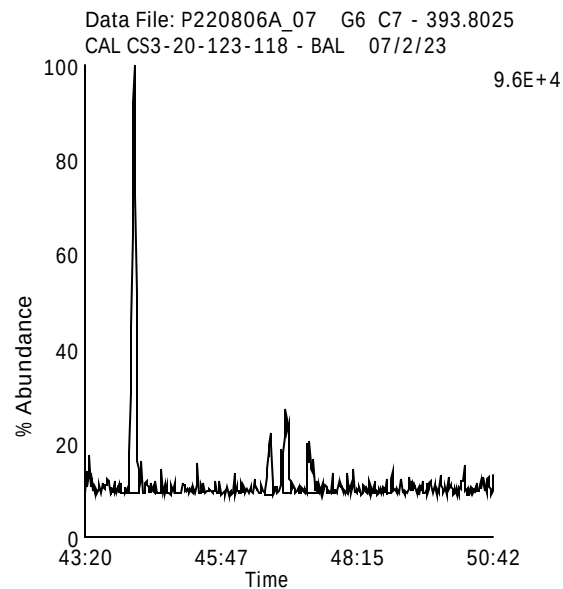
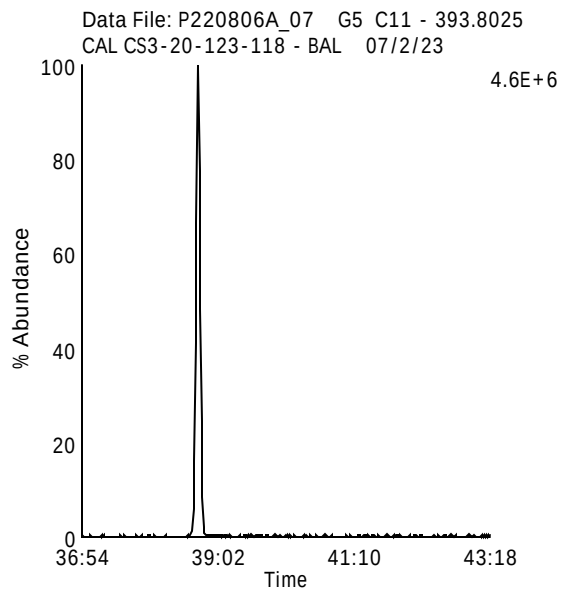
Data File Name: P220806A_07

Lab Sample ID: CS3-20-123-118

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23



Octa Chlorinated Biphenyls

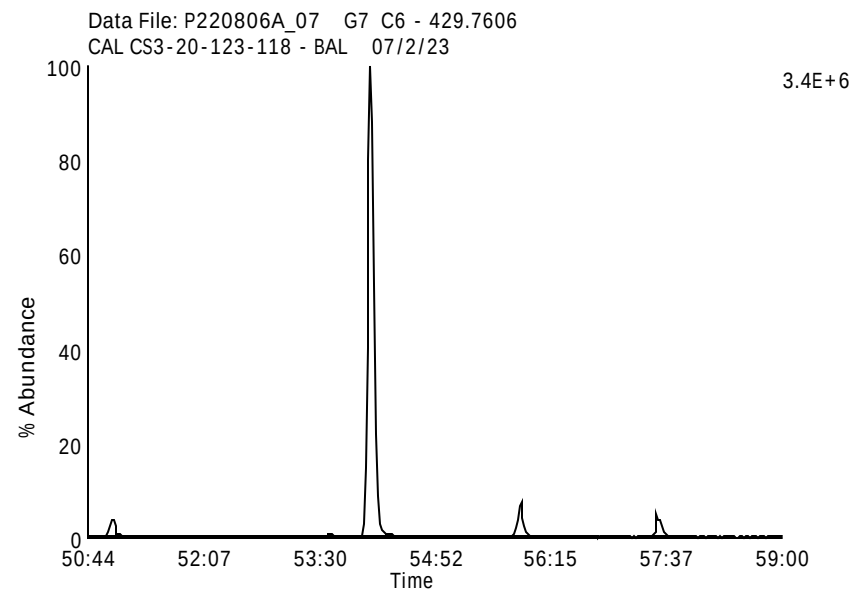
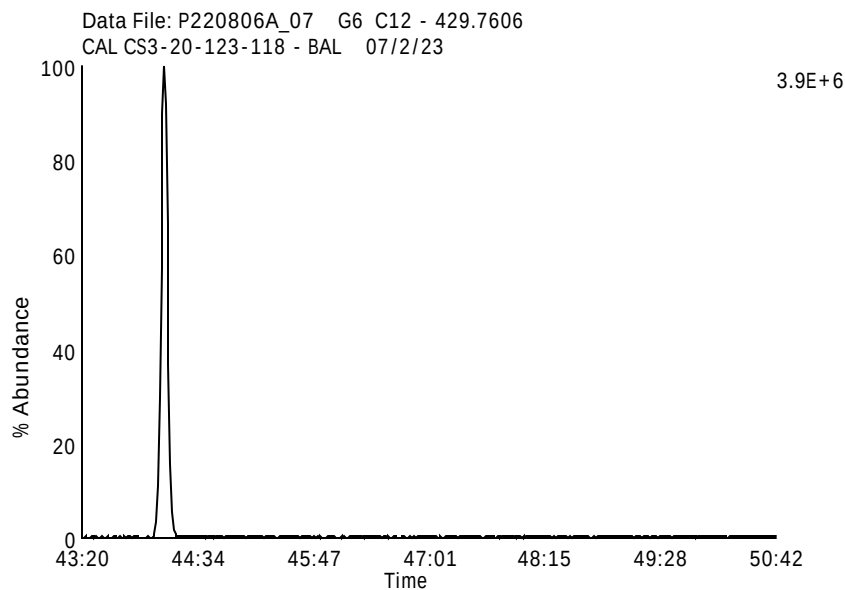
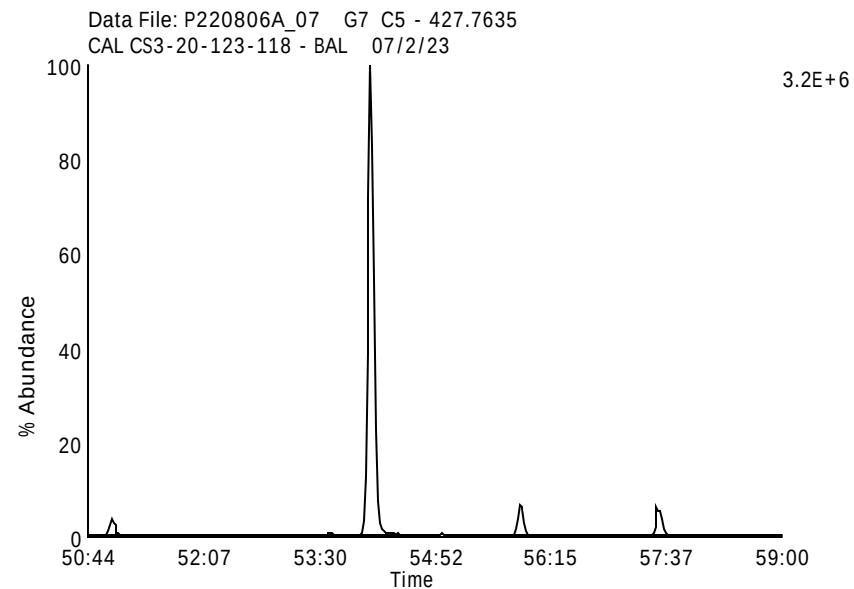
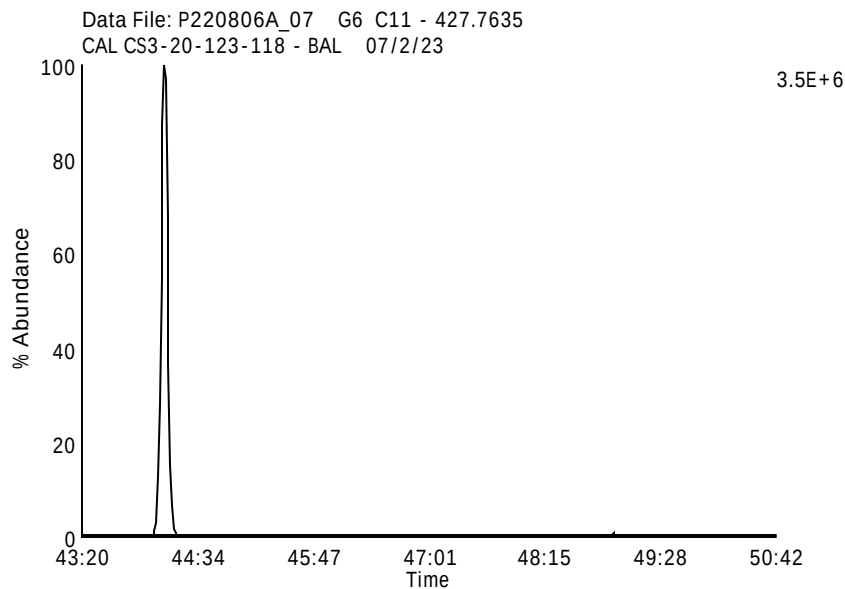
Data File Name: P220806A_07

Date Acquired: 8/6/2022

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23

Lab Sample ID: CS3-20-123-118

Instrument: 10MSHR09 (P)



Nona Chlorinated Biphenyls

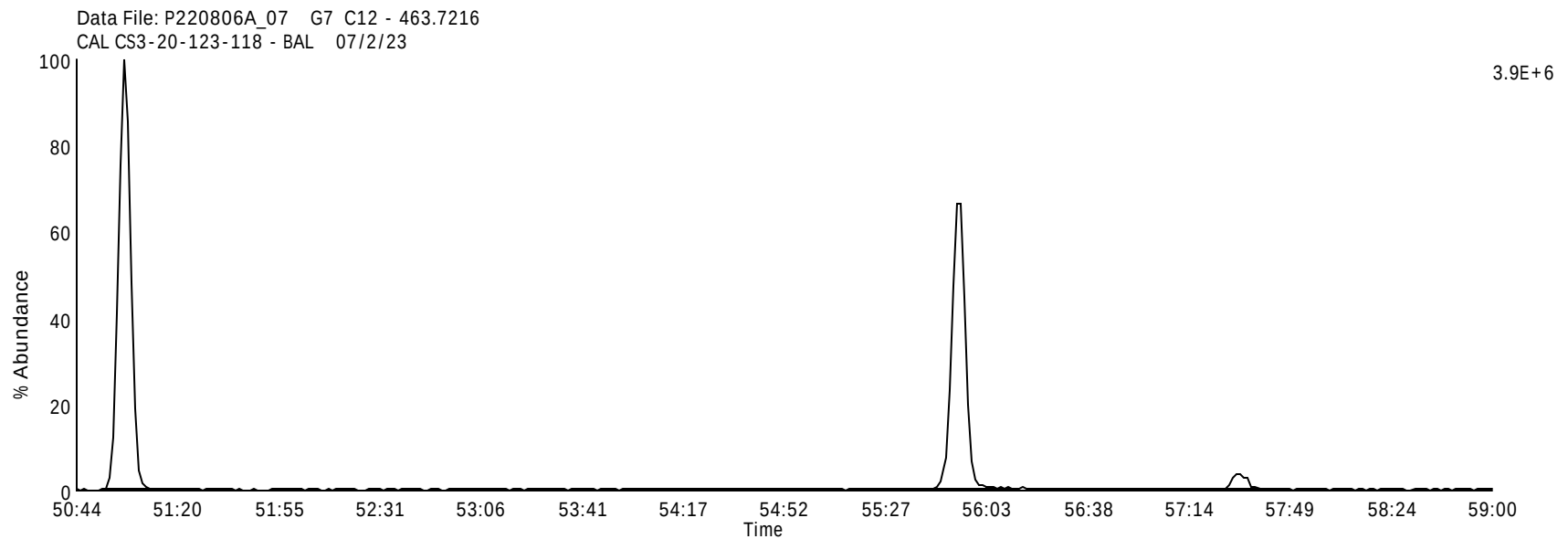
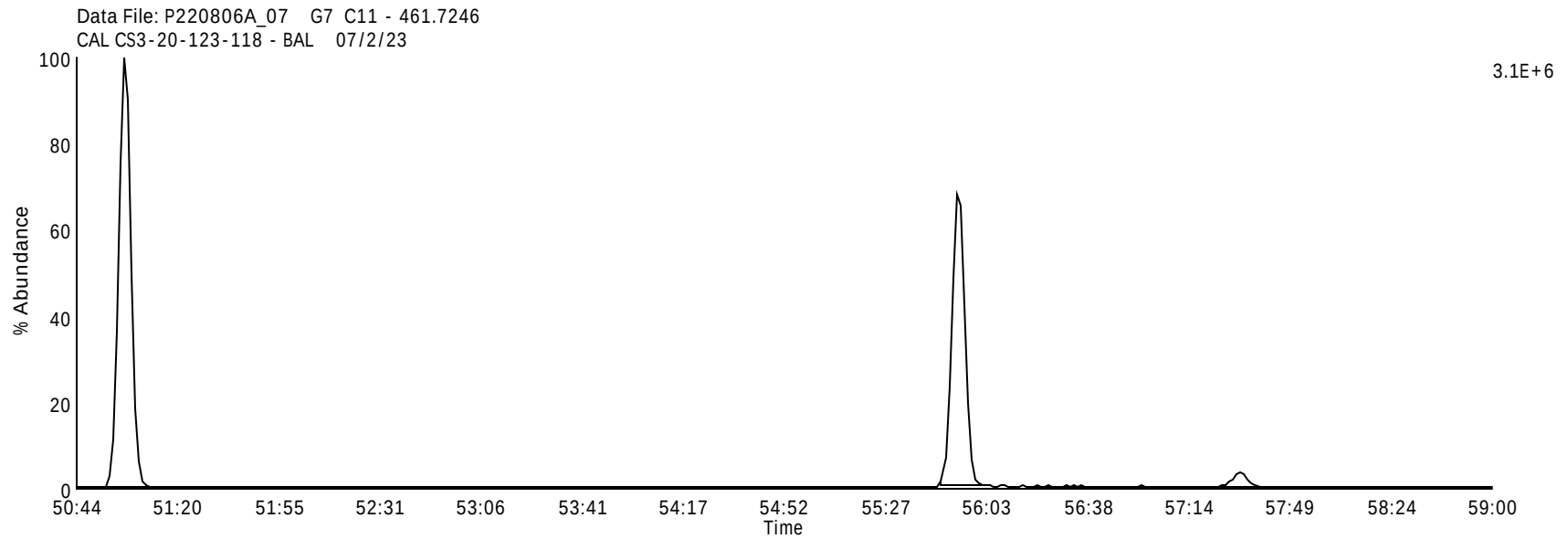
Data File Name: P220806A_07

Lab Sample ID: CS3-20-123-118

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23



Deca Chlorinated Biphenyl

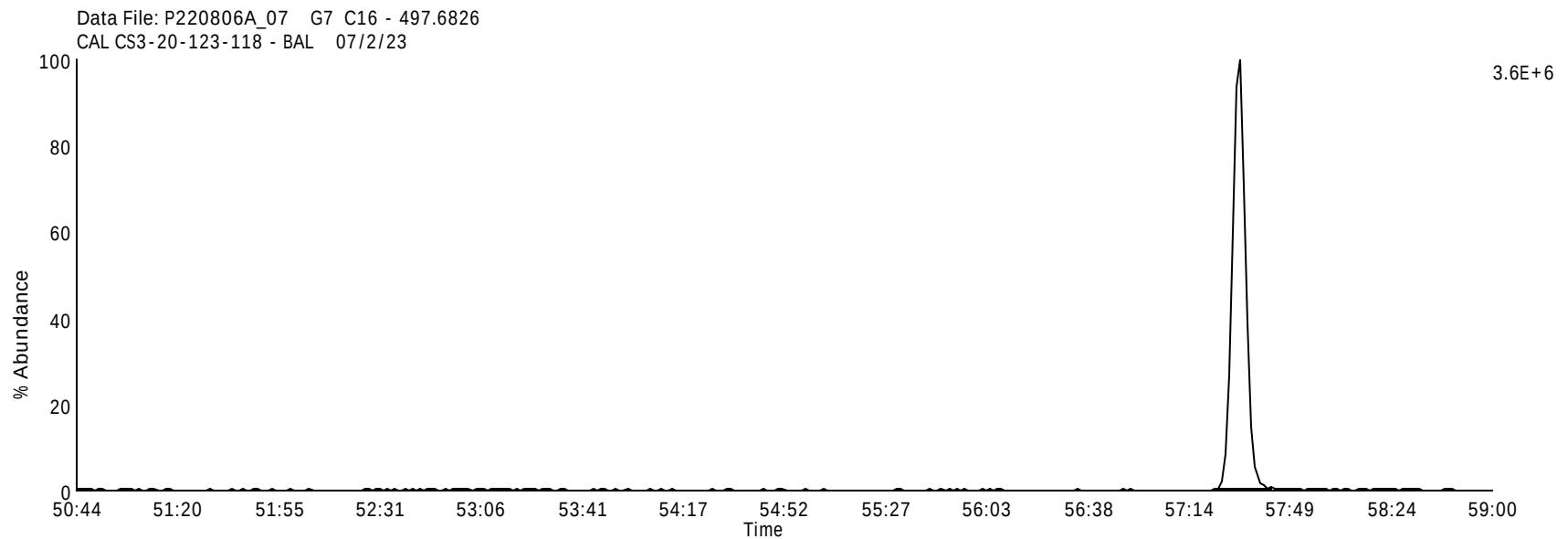
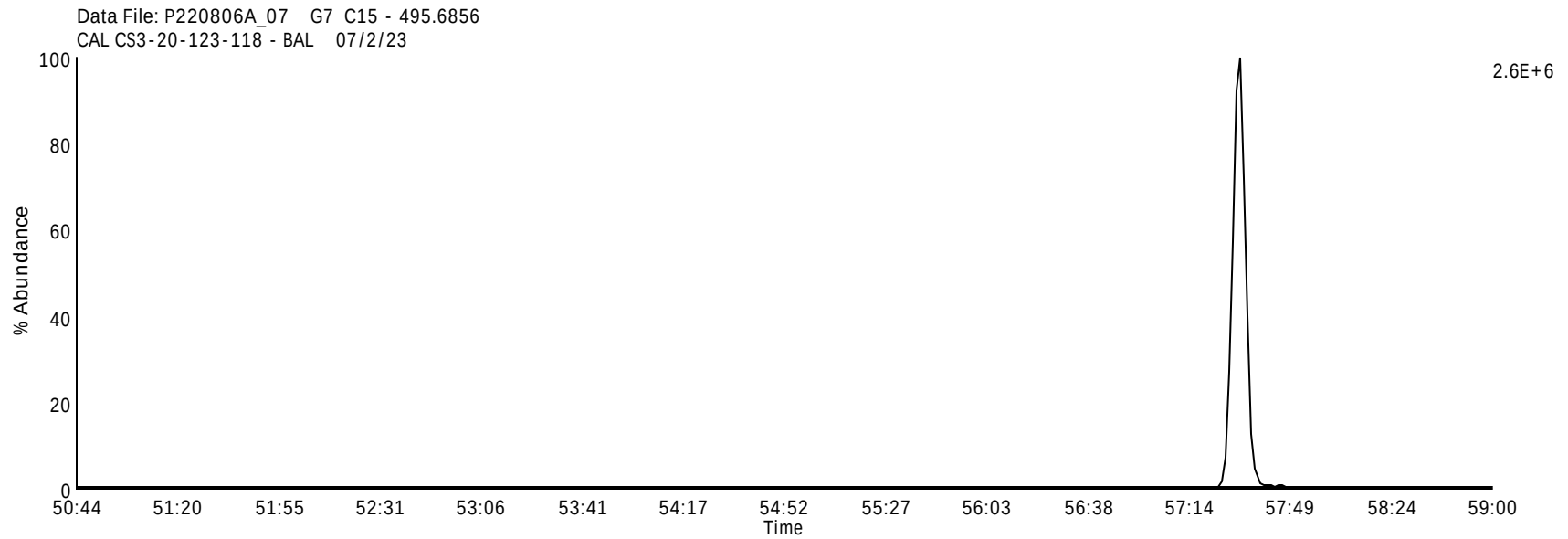
Data File Name: P220806A_07

Lab Sample ID: CS3-20-123-118

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23



Group 1 - 4 Lock mass

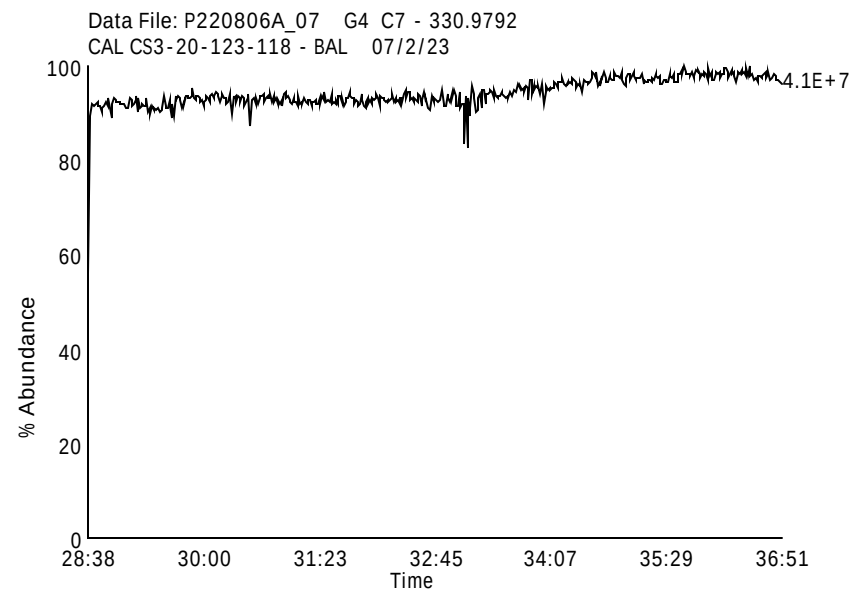
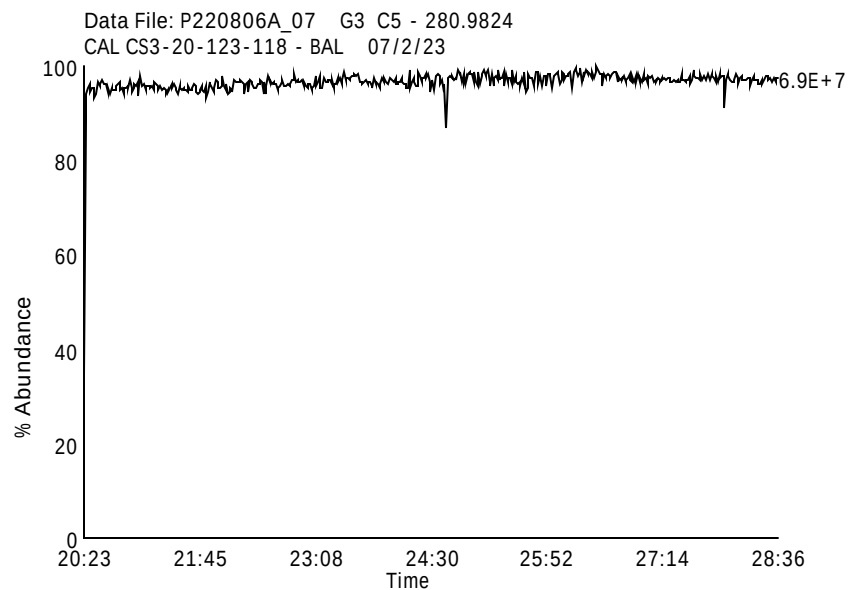
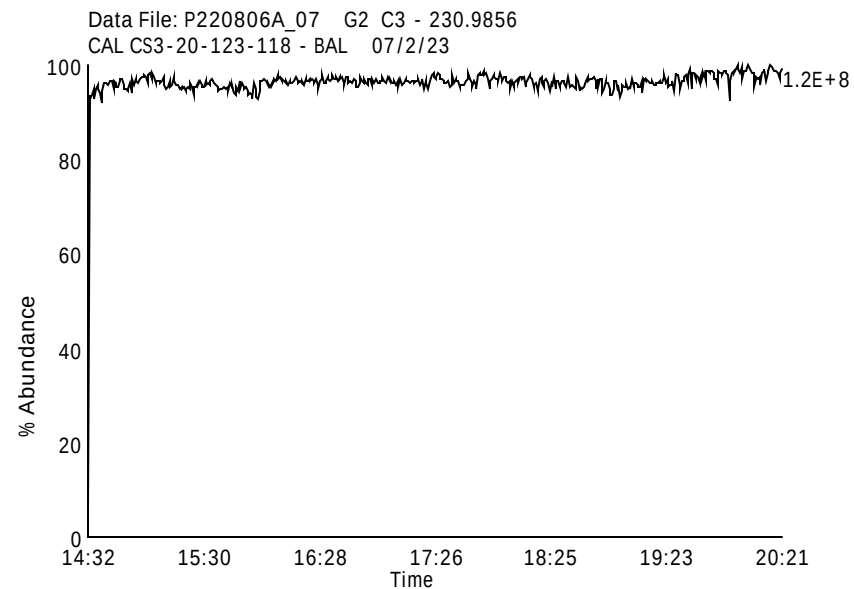
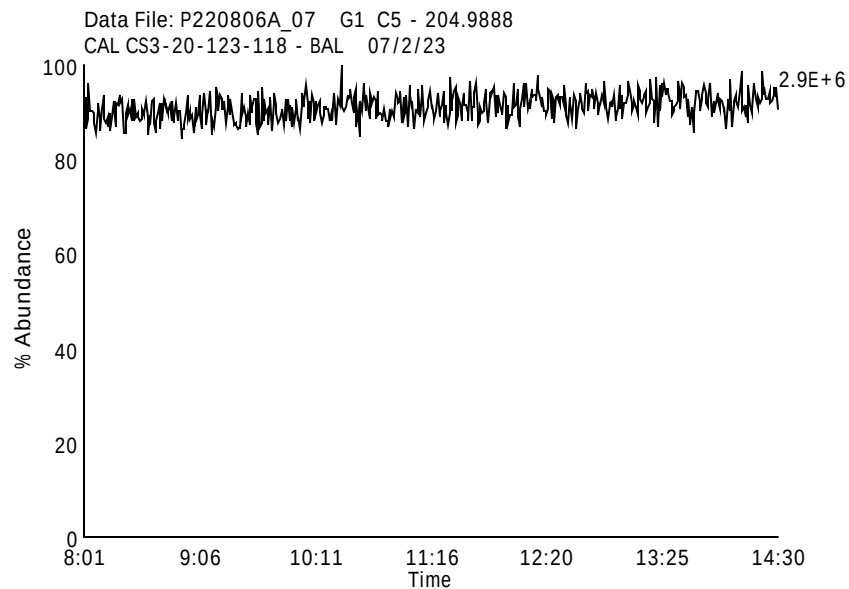
Data File Name: P220806A_07

Date Acquired: 8/6/2022

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23

Lab Sample ID: CS3-20-123-118

Instrument: 10MSHR09 (P)



Group 5 - 7 Lock mass

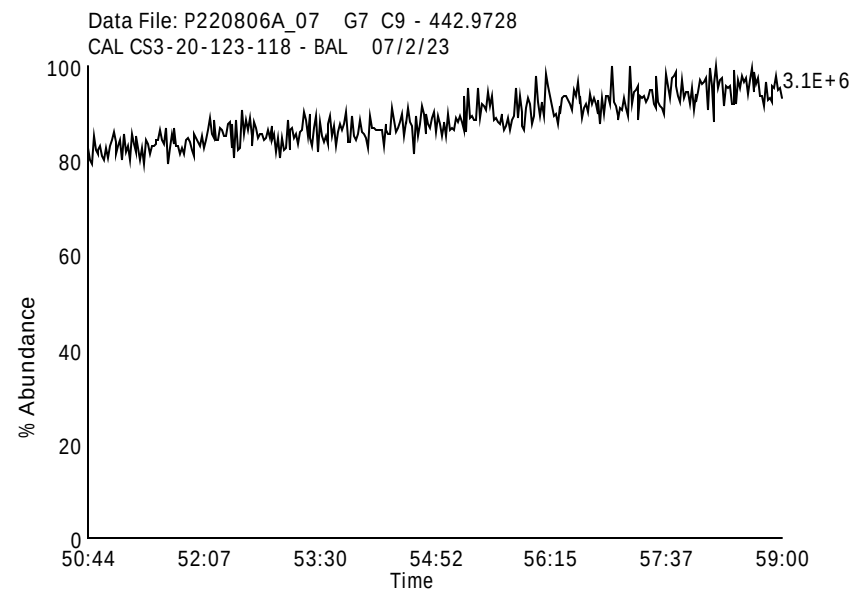
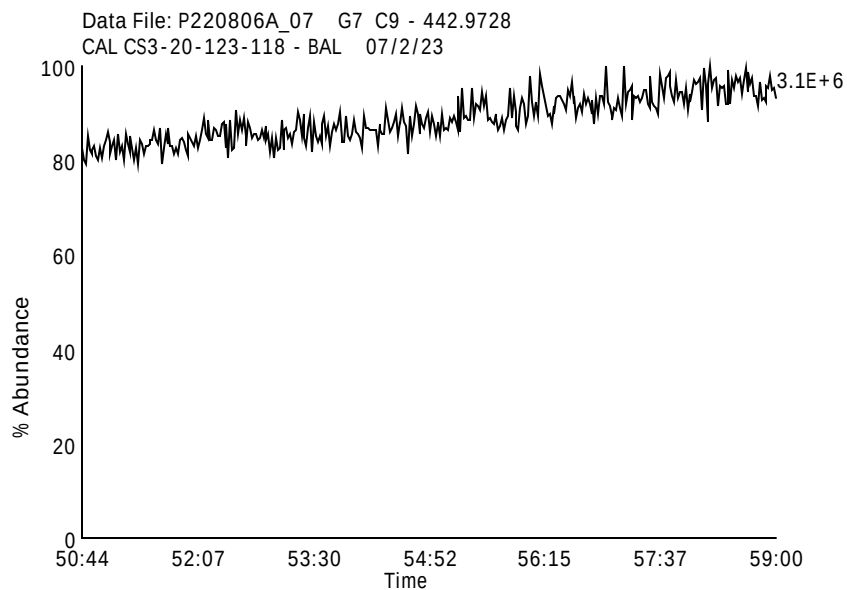
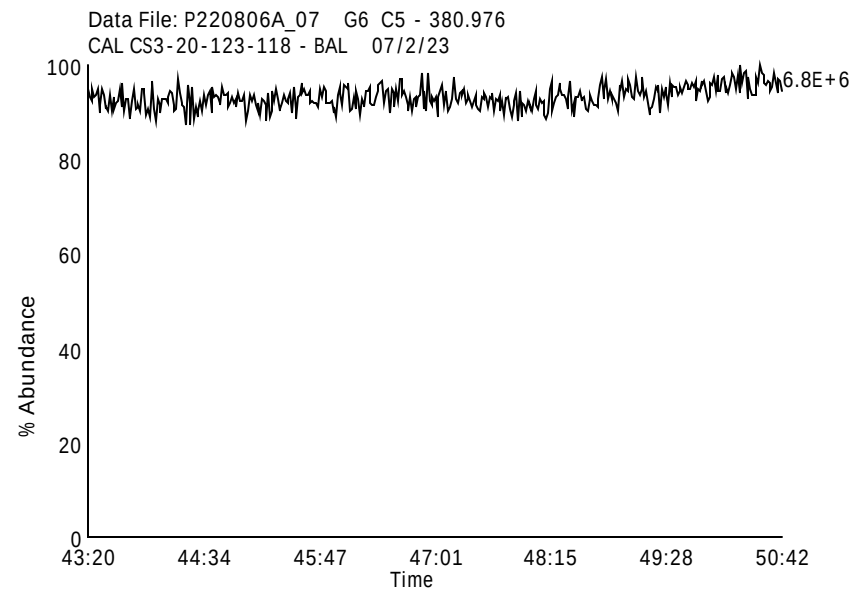
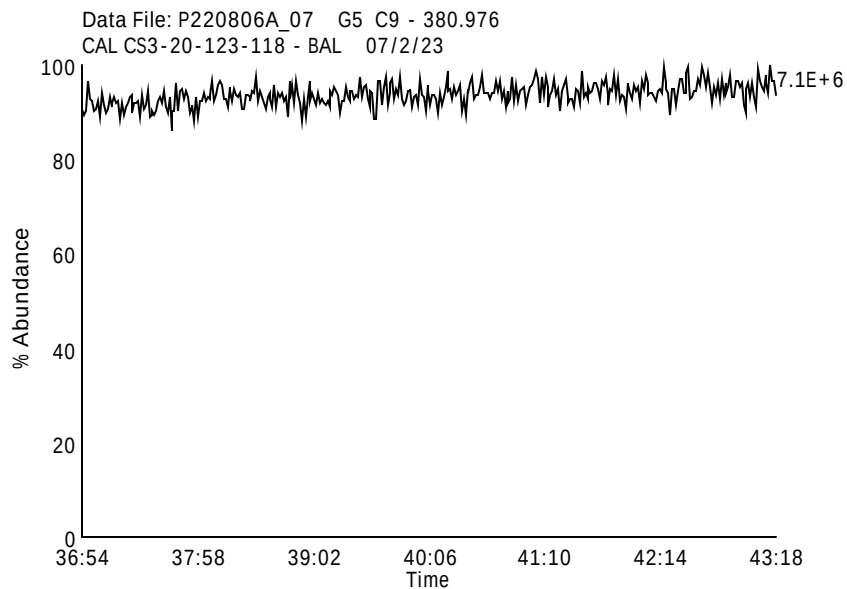
Data File Name: P220806A_07

Date Acquired: 8/6/2022

Sample Description: CAL CS3-20-123-118 - BAL 07/2/23

Lab Sample ID: CS3-20-123-118

Instrument: 10MSHR09 (P)



Labeled Mono Chlorinated Biphenyls

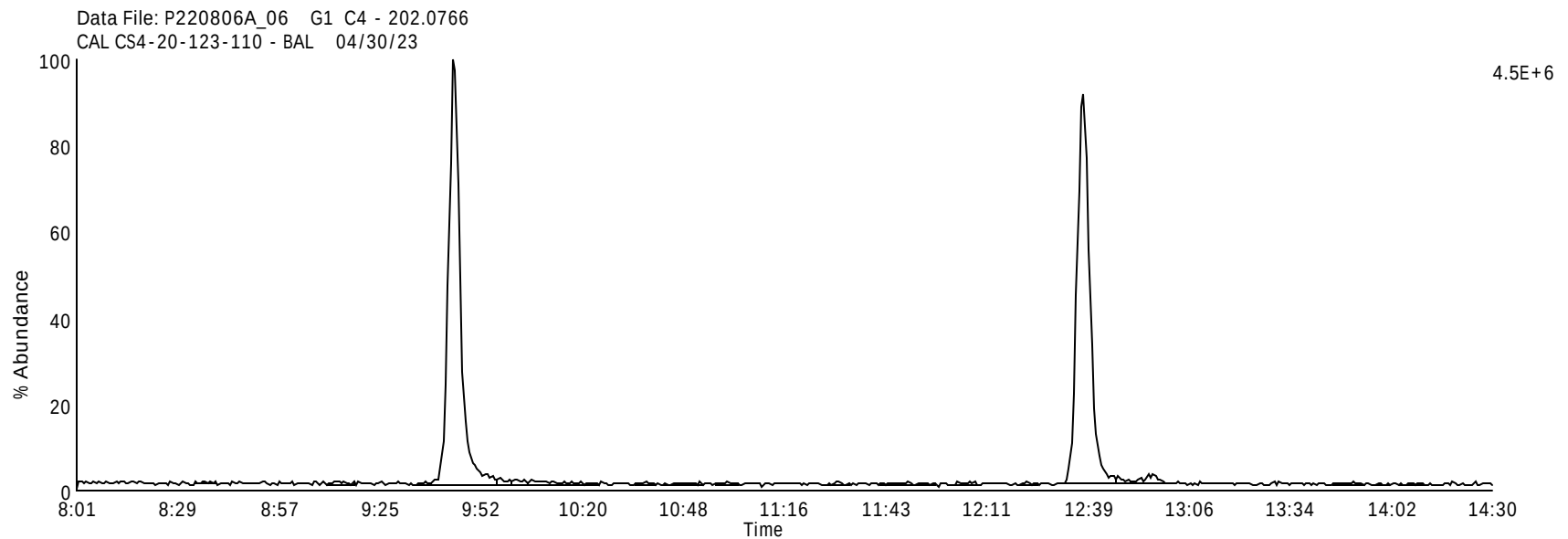
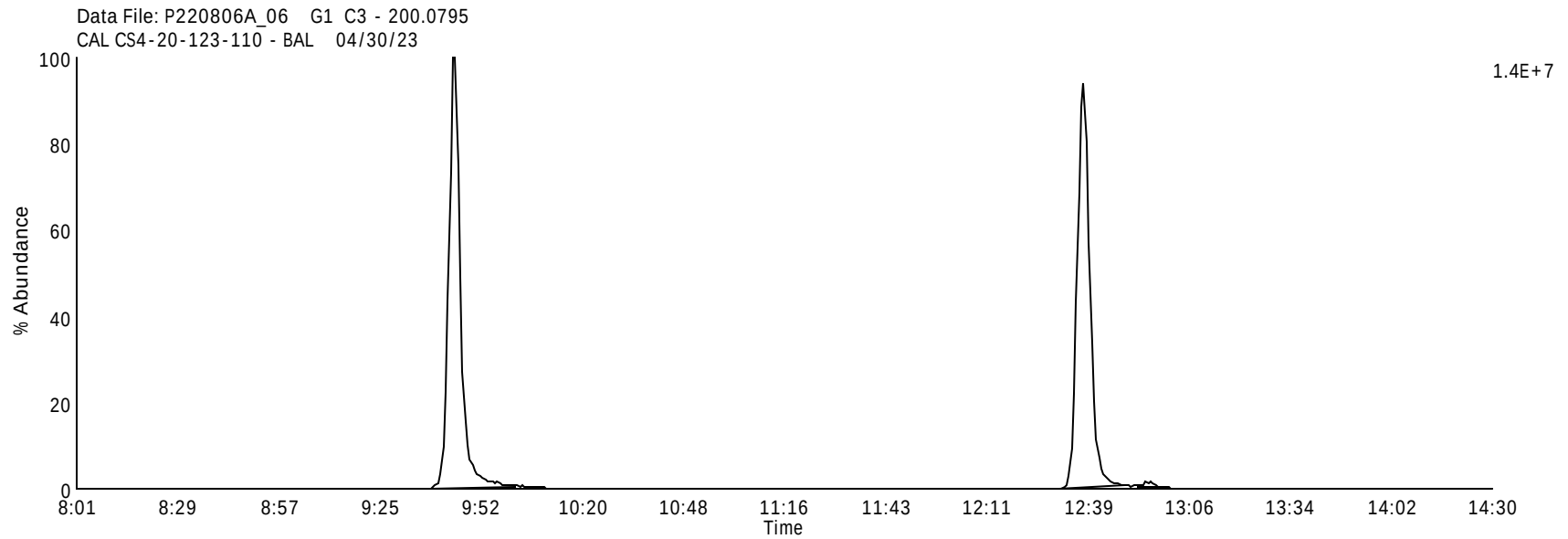
Data File Name: P220806A_06

Lab Sample ID: CS4-20-123-110

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23



Labeled Di Chlorinated Biphenyls

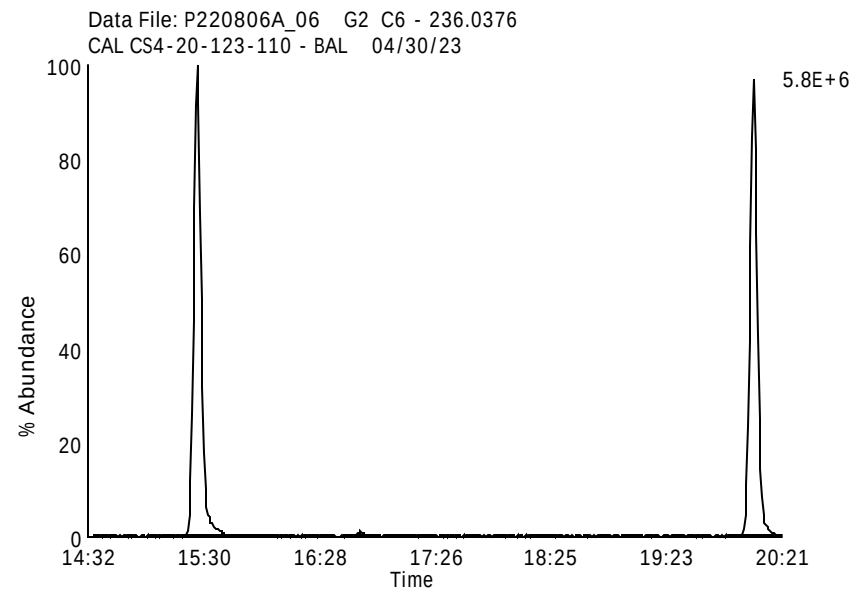
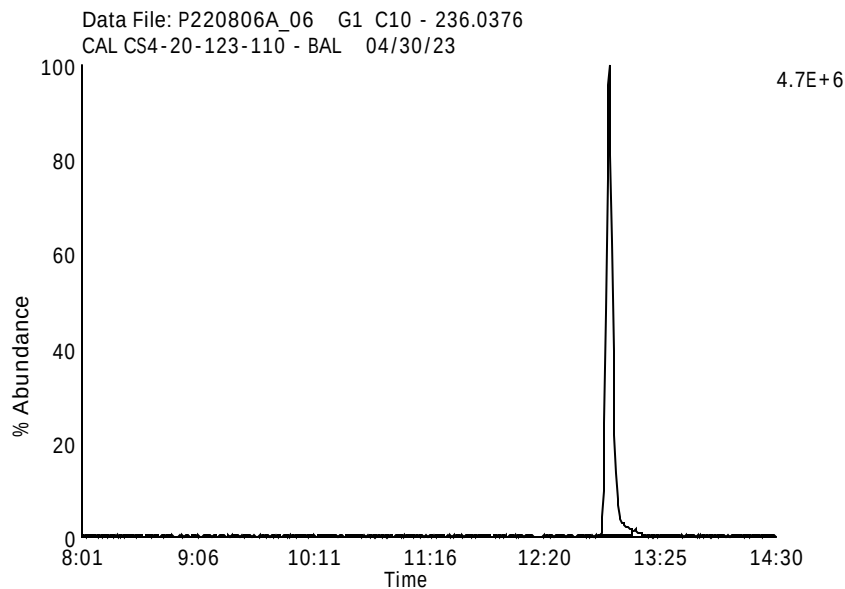
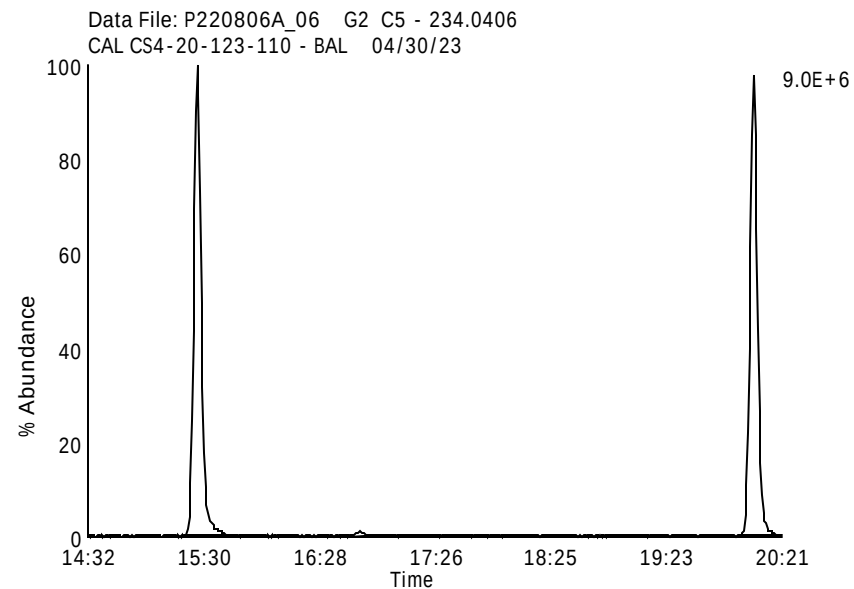
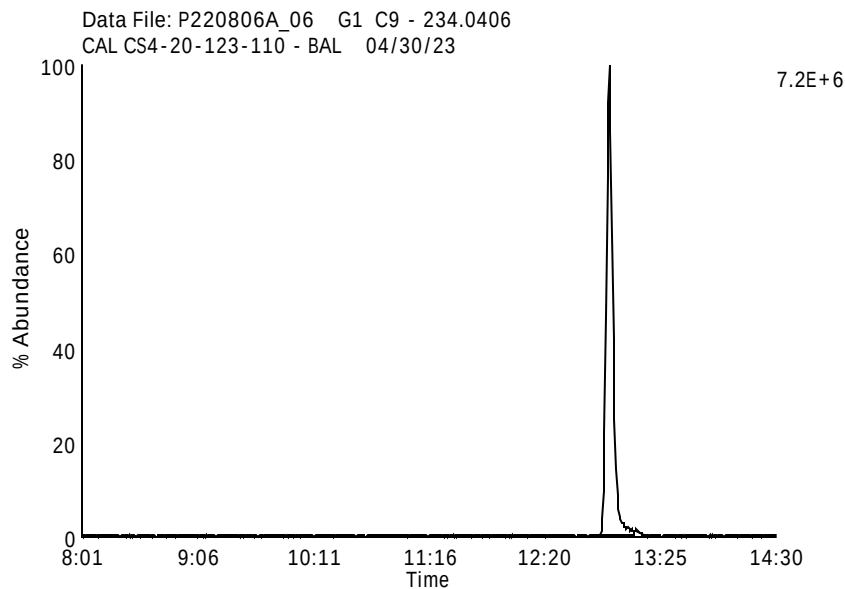
Data File Name: P220806A_06

Date Acquired: 8/6/2022

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23

Lab Sample ID: CS4-20-123-110

Instrument: 10MSHR09 (P)



Labeled Tri Chlorinated Biphenyls

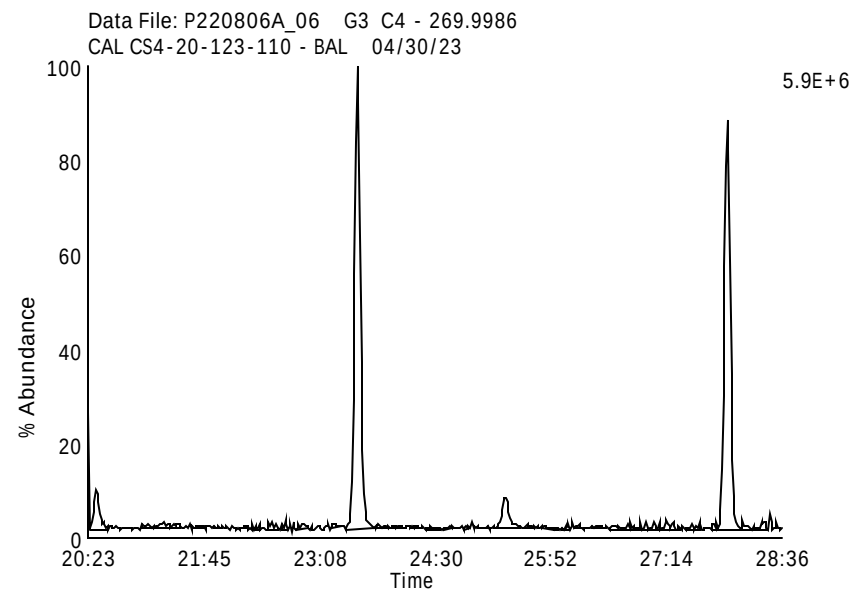
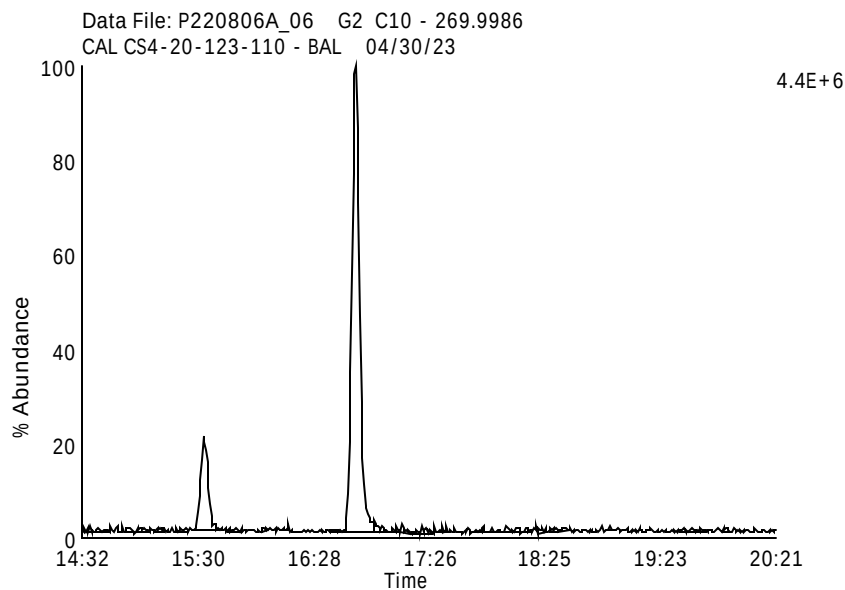
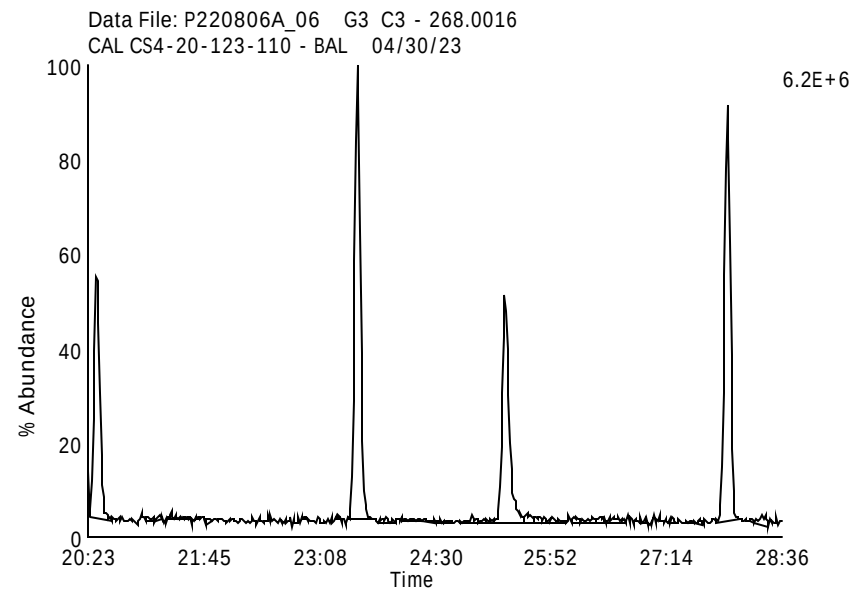
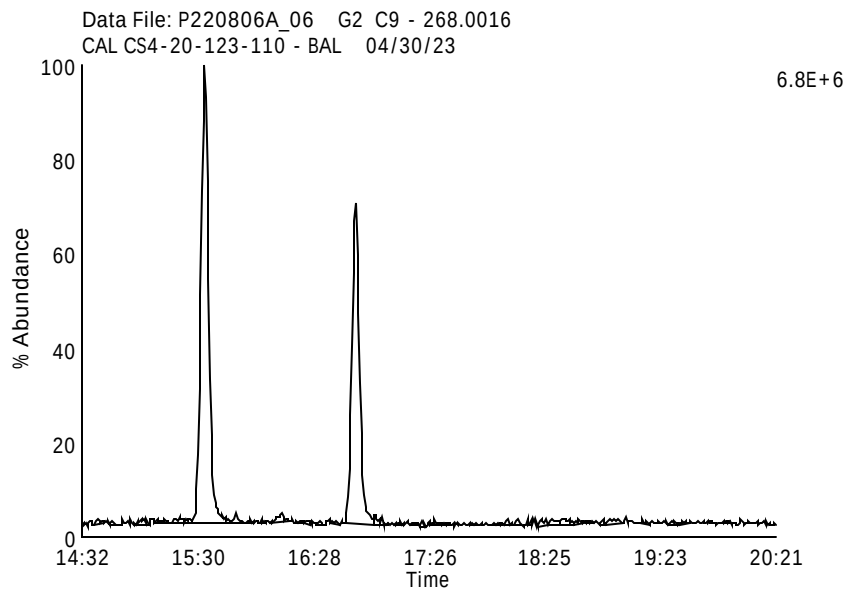
Data File Name: P220806A_06

Date Acquired: 8/6/2022

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23

Lab Sample ID: CS4-20-123-110

Instrument: 10MSHR09 (P)



Labeled Tetra Chlorinated Biphenyls

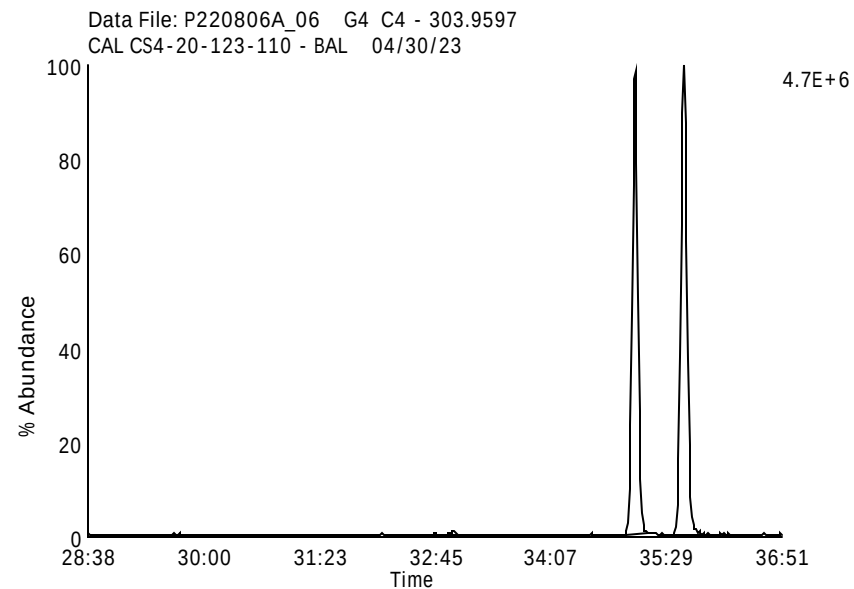
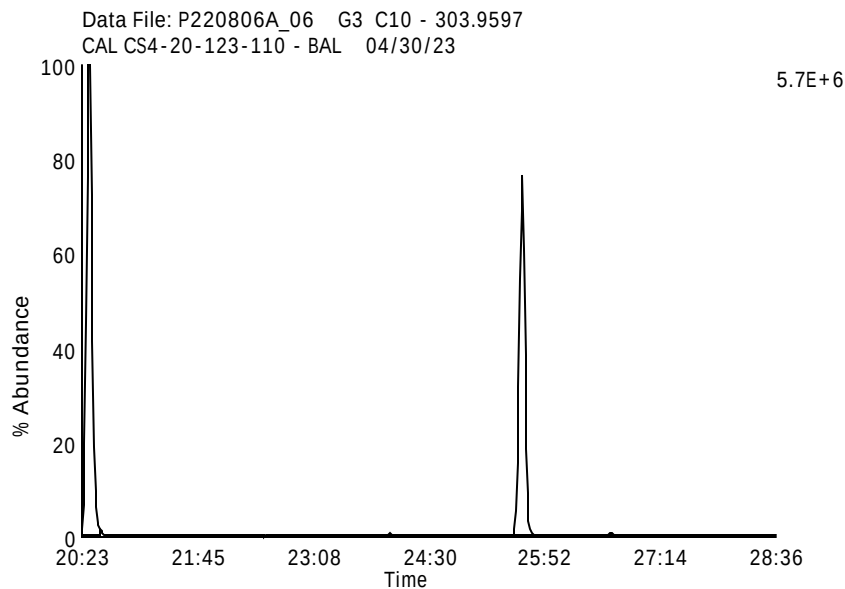
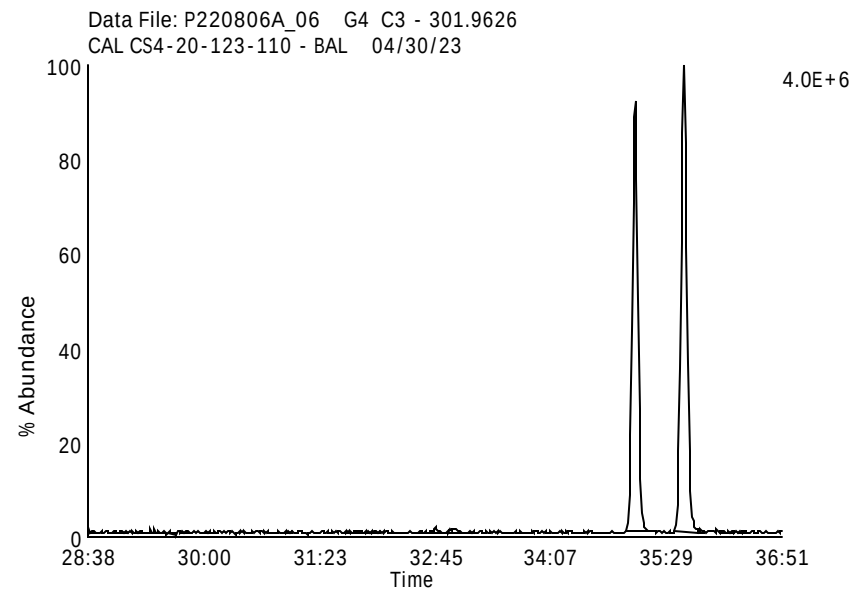
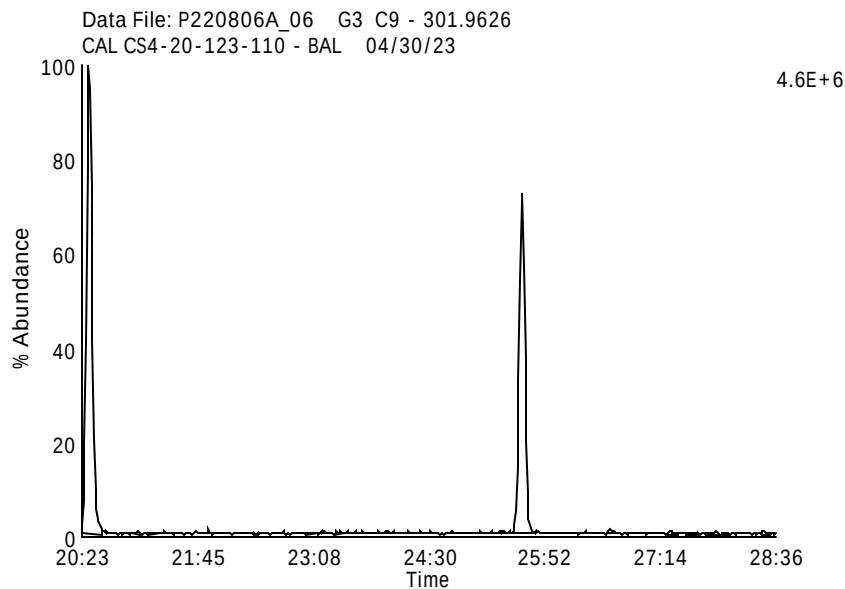
Data File Name: P220806A_06

Date Acquired: 8/6/2022

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23

Lab Sample ID: CS4-20-123-110

Instrument: 10MSHR09 (P)



Labeled Penta Chlorinated Biphenyls

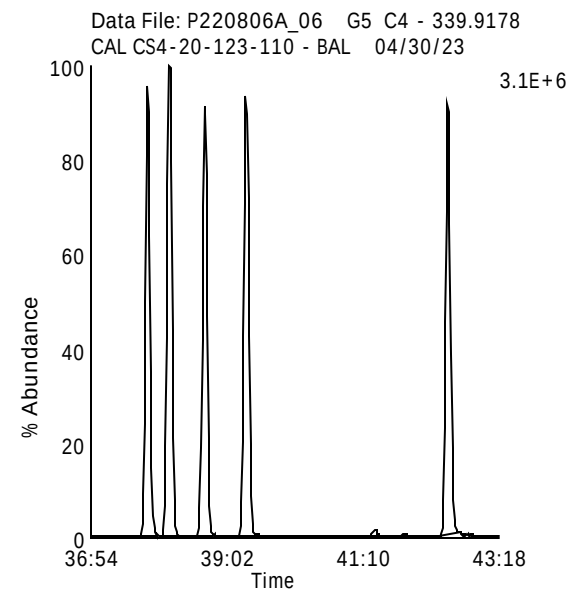
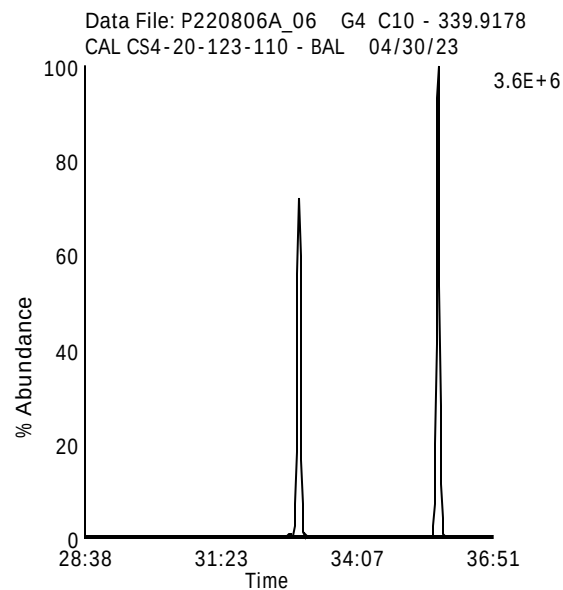
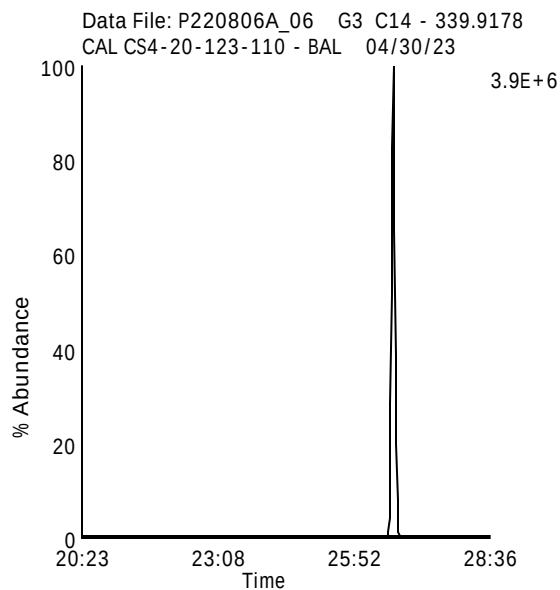
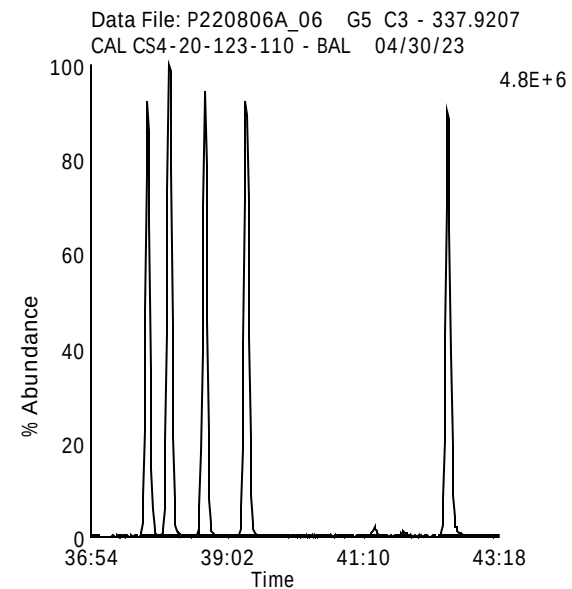
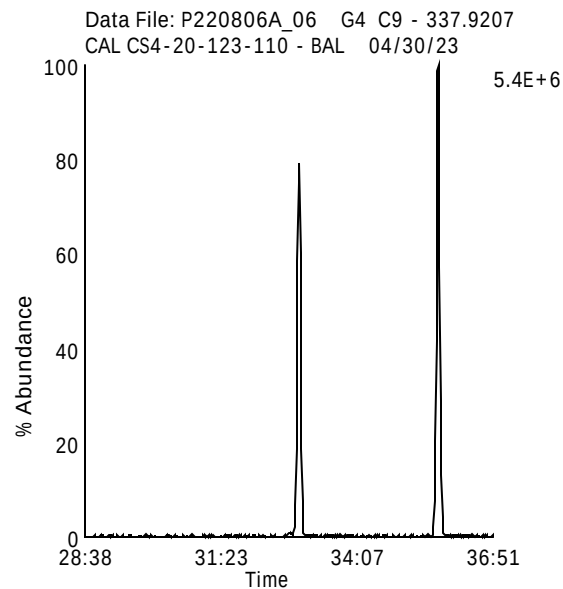
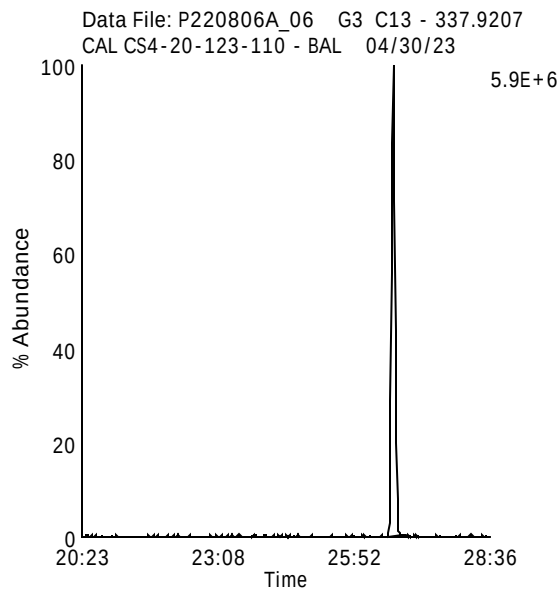
Data File Name: P220806A_06

Lab Sample ID: CS4-20-123-110

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23



Labeled Hexa Chlorinated Biphenyls

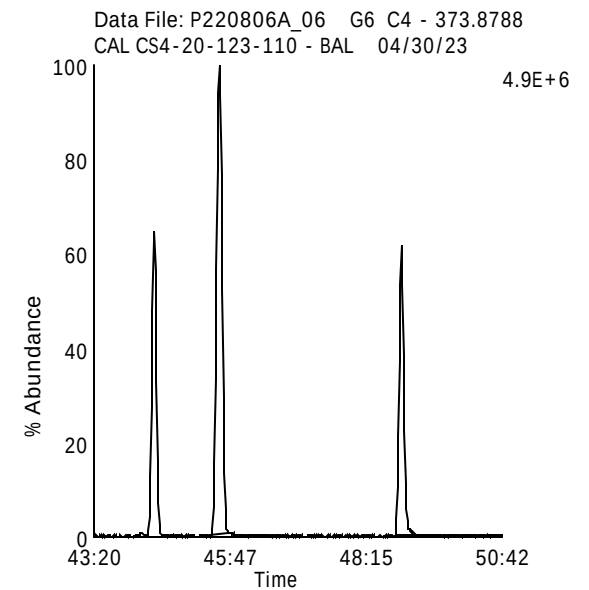
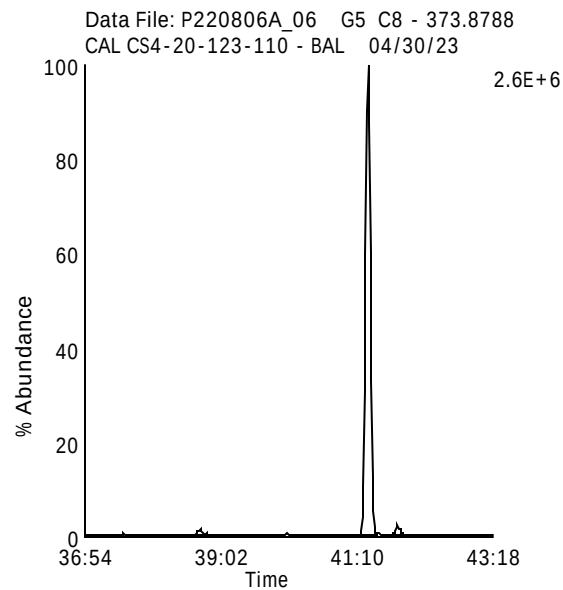
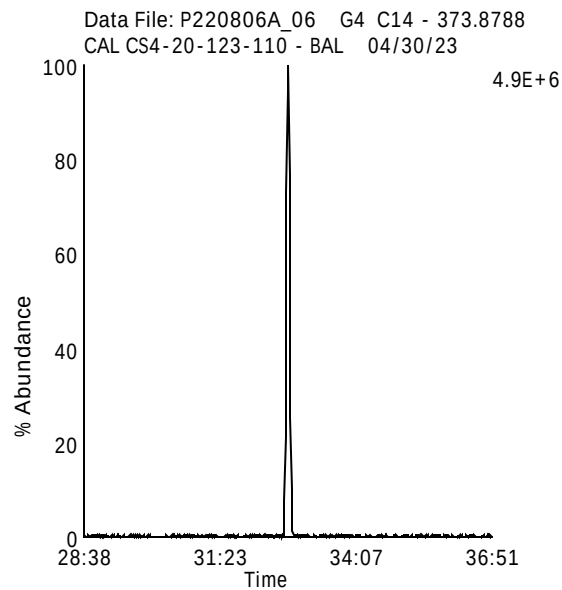
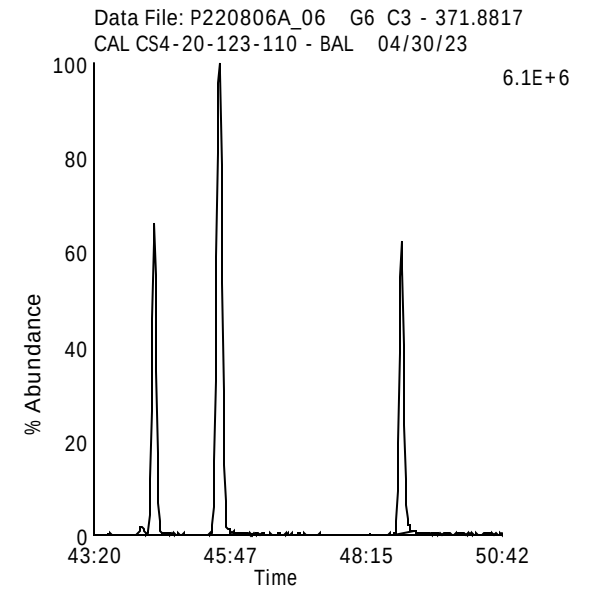
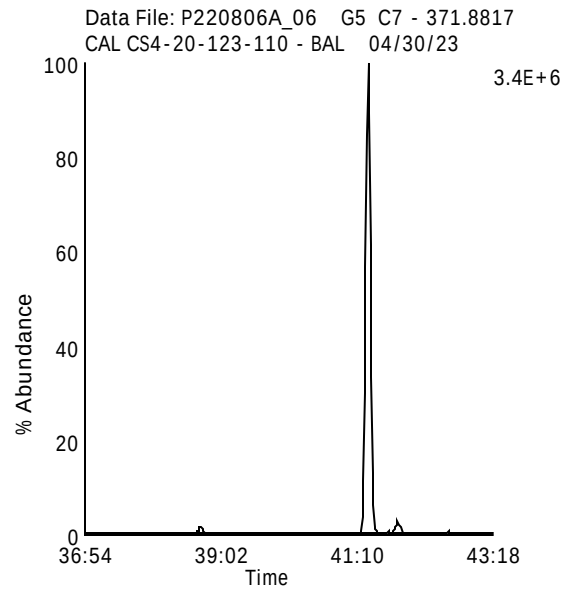
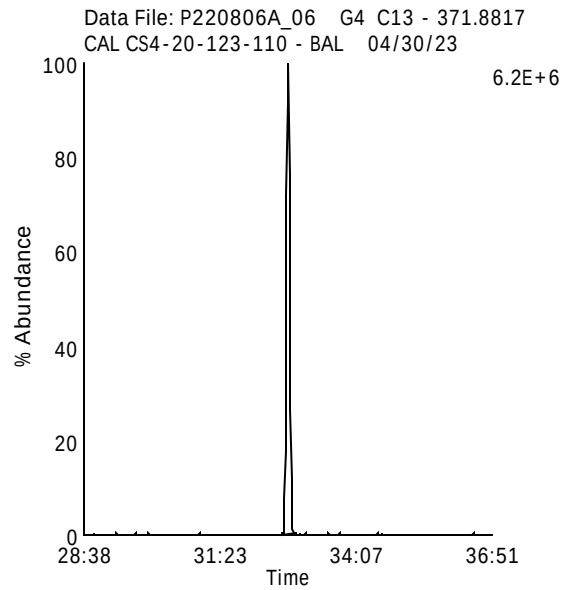
Data File Name: P220806A_06

Lab Sample ID: CS4-20-123-110

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23



Labeled Hepta Chlorinated Biphenyls

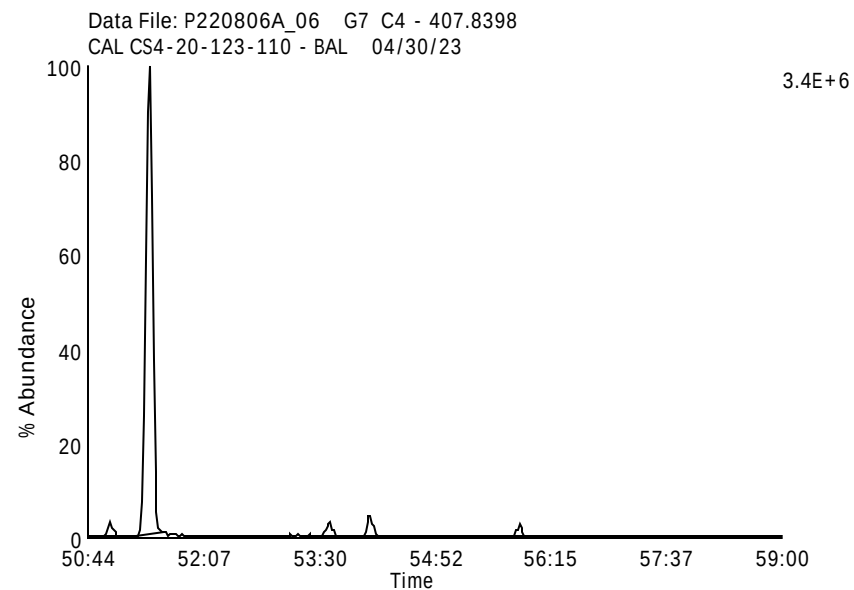
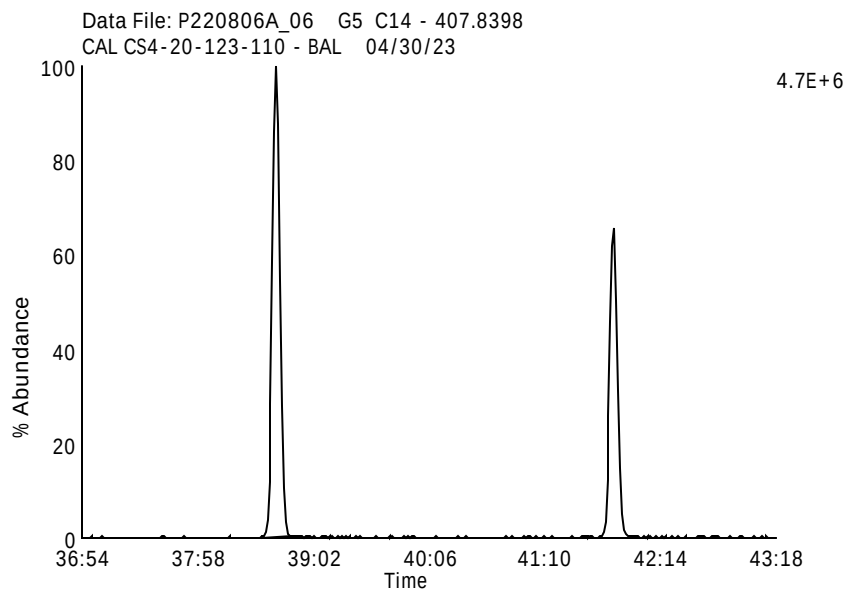
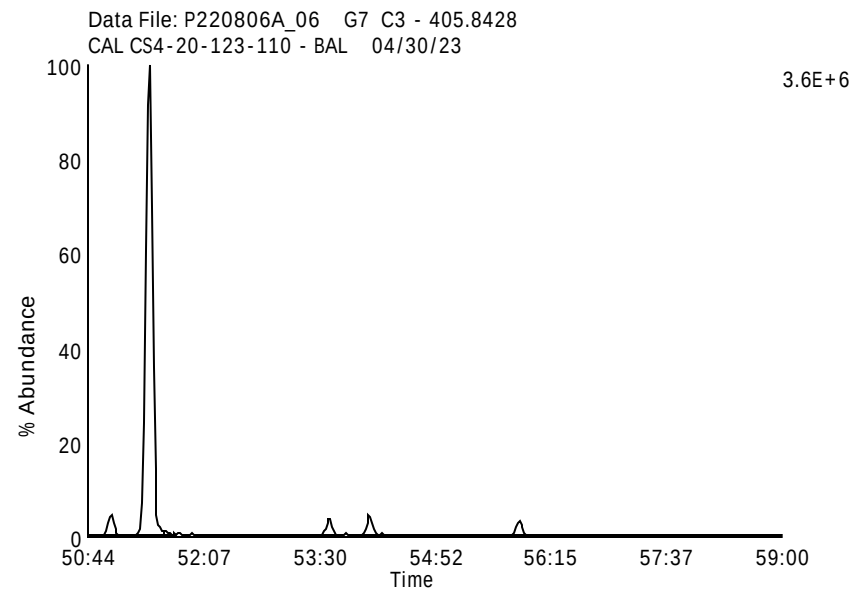
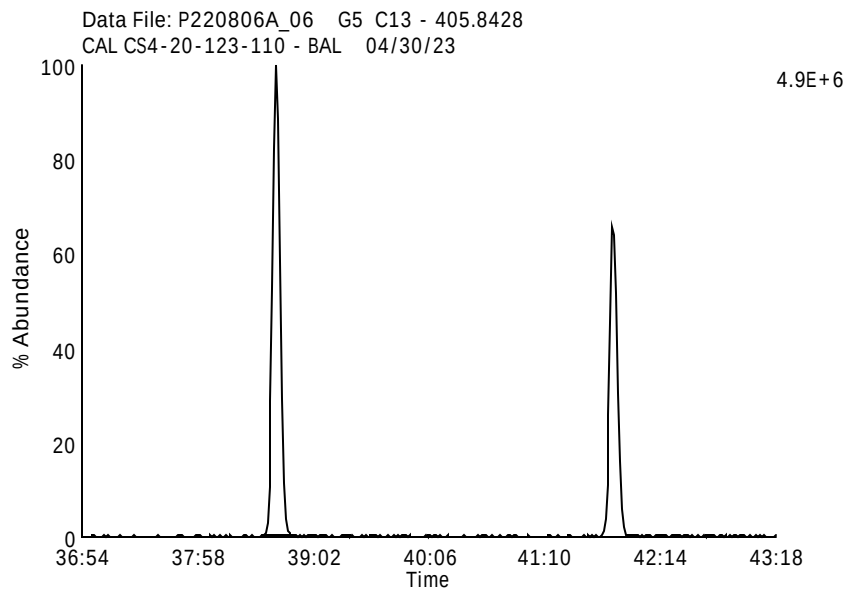
Data File Name: P220806A_06

Date Acquired: 8/6/2022

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23

Lab Sample ID: CS4-20-123-110

Instrument: 10MSHR09 (P)



Labeled Octa Chlorinated Biphenyls

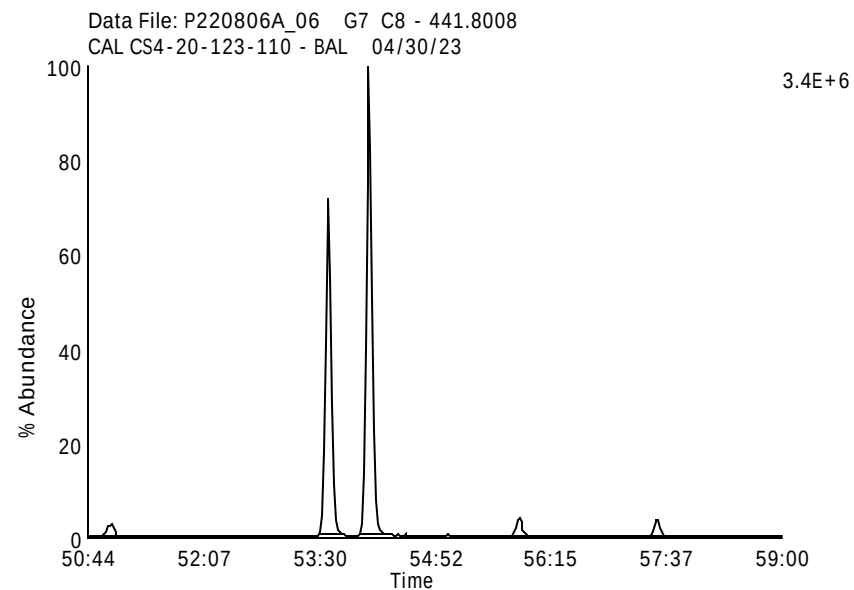
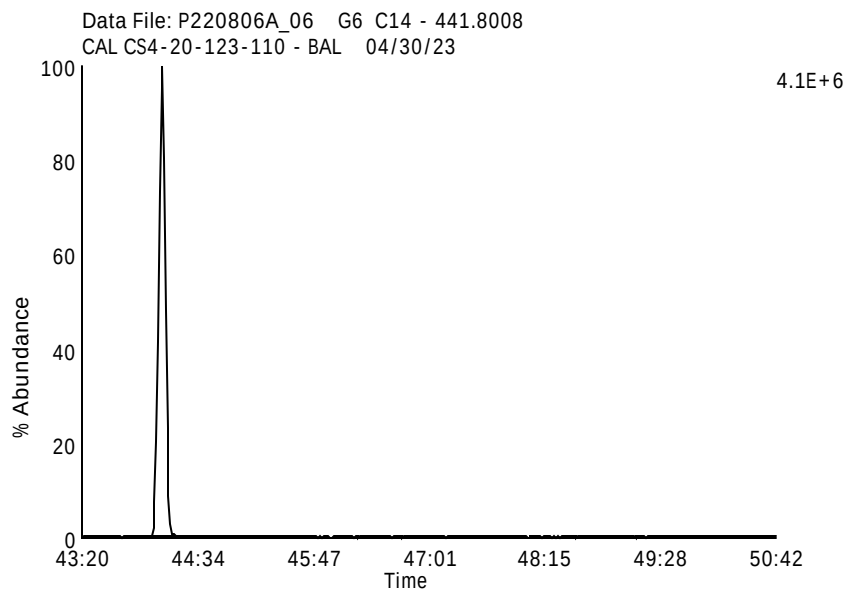
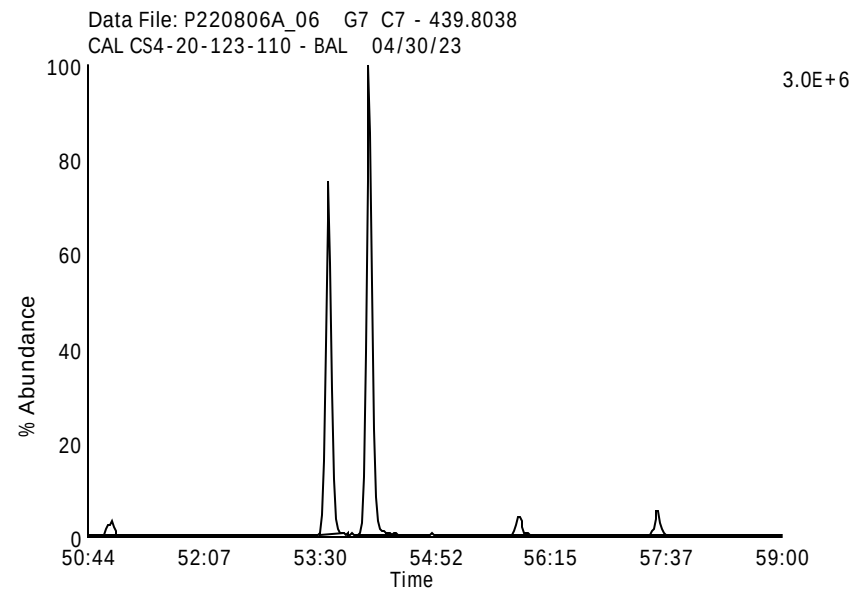
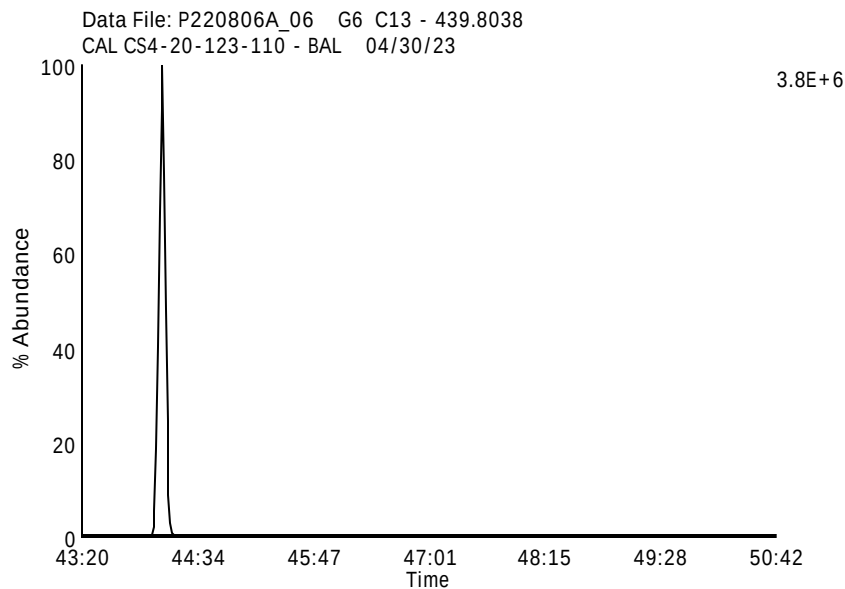
Data File Name: P220806A_06

Lab Sample ID: CS4-20-123-110

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23



Labeled Nona Chlorinated Biphenyls

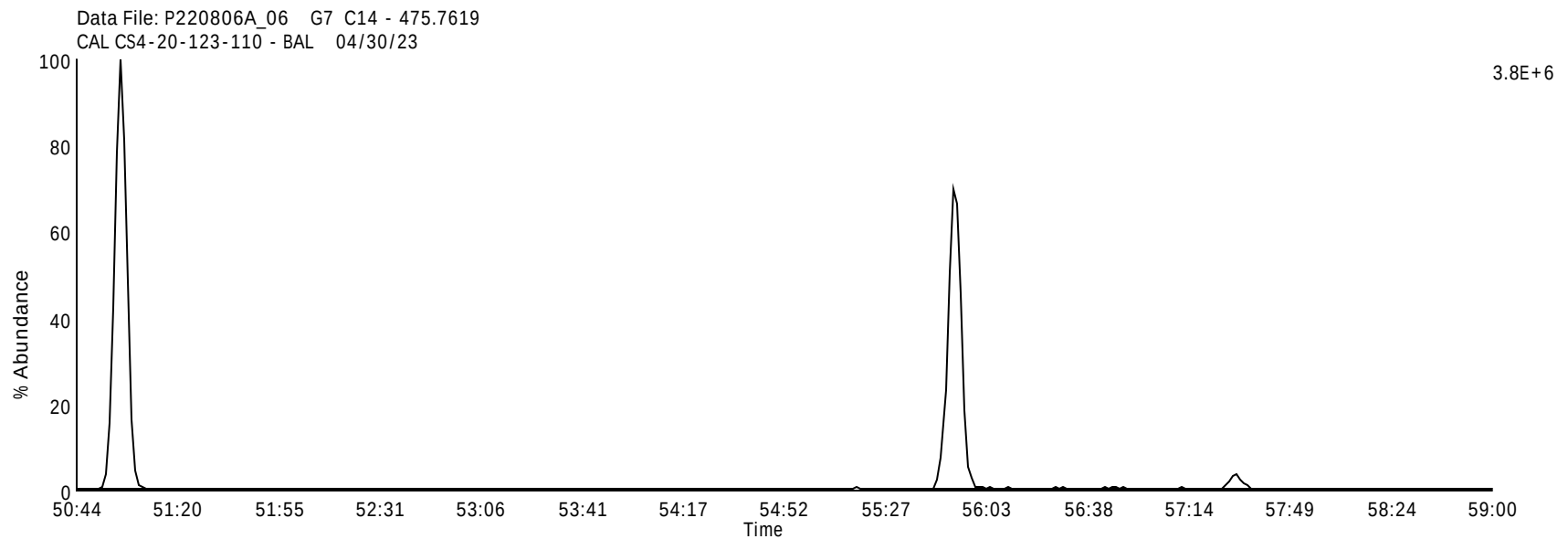
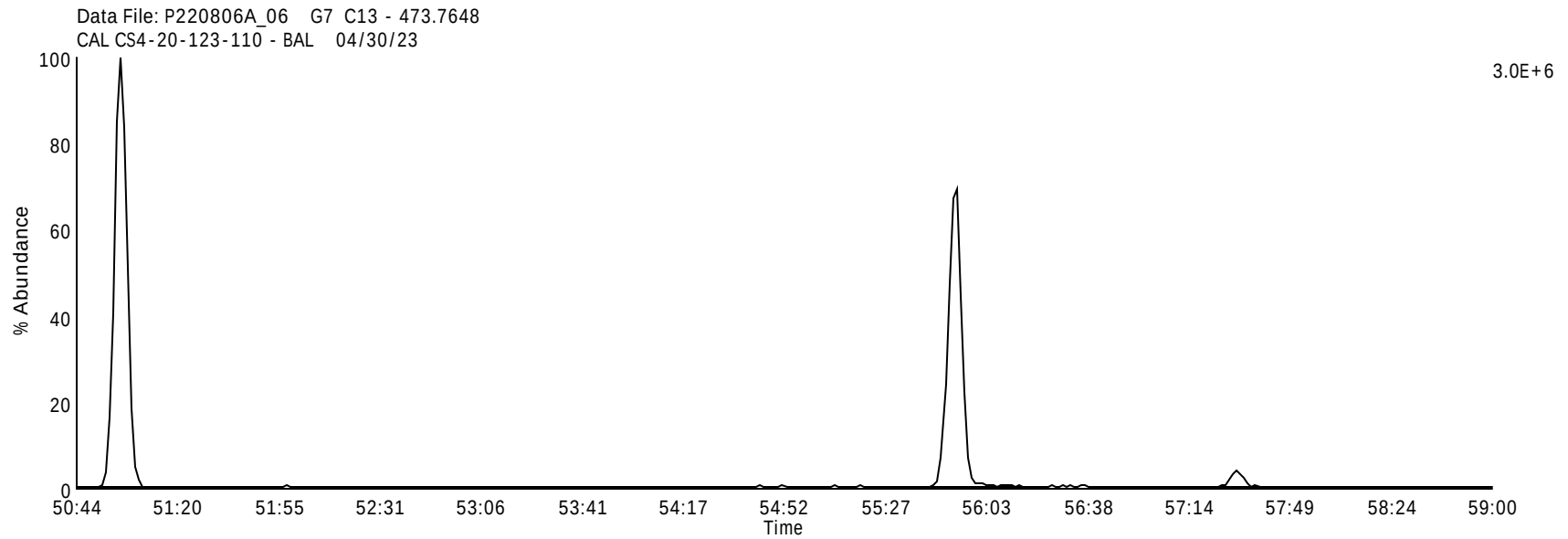
Data File Name: P220806A_06

Lab Sample ID: CS4-20-123-110

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23



Labeled Deca Chlorinated Biphenyl

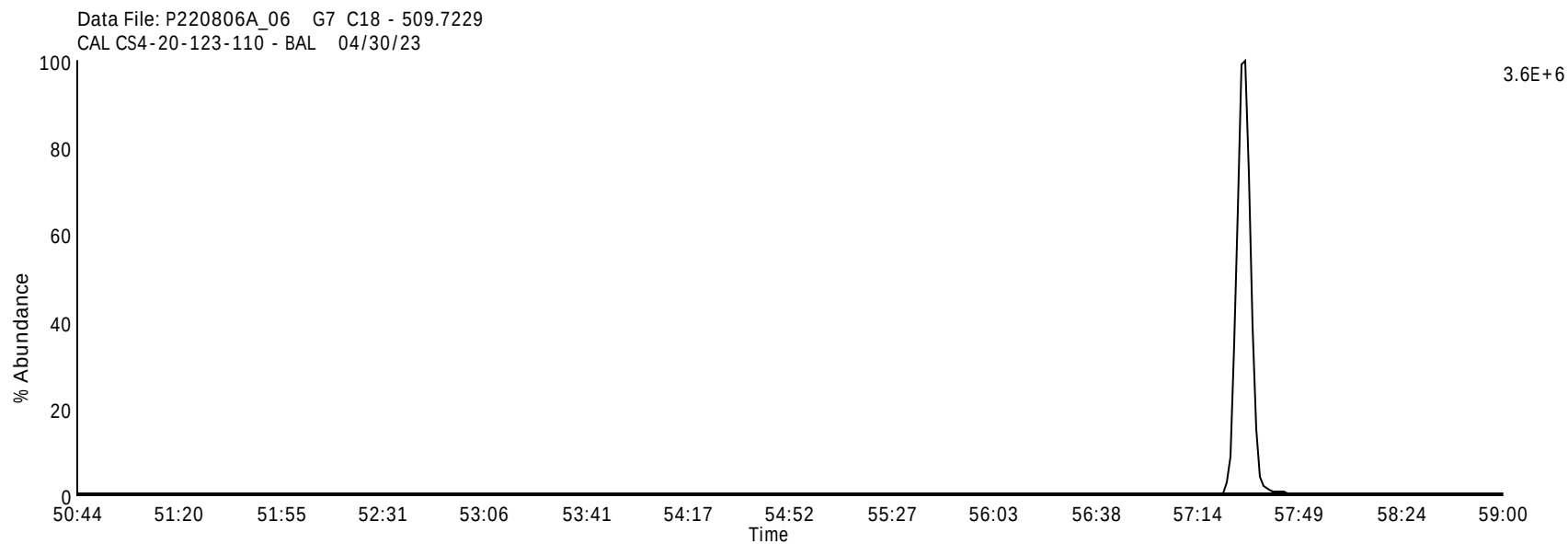
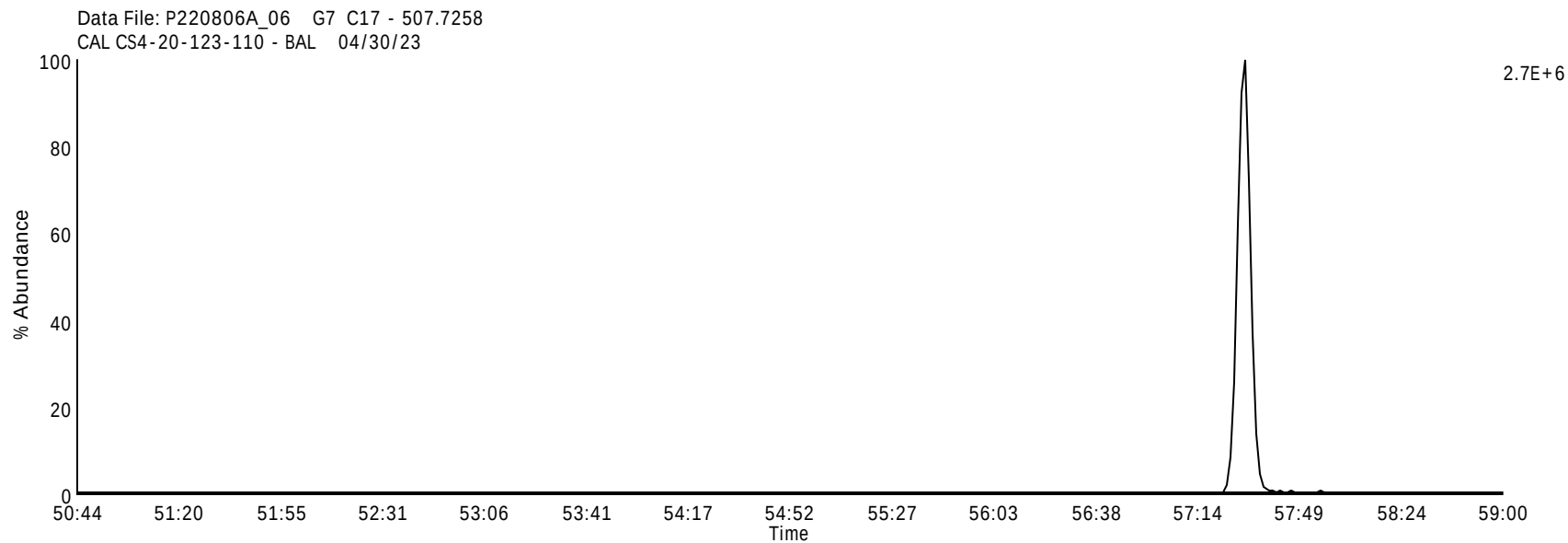
Data File Name: P220806A_06

Lab Sample ID: CS4-20-123-110

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23



Mono Chlorinated Biphenyls

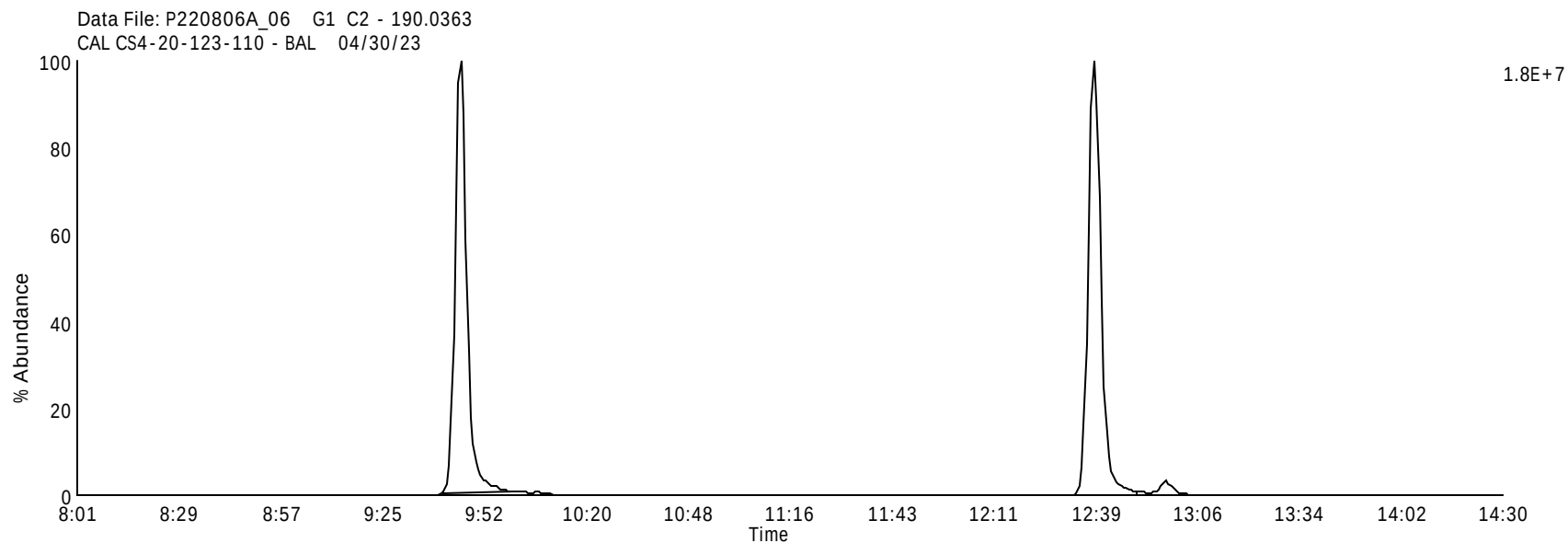
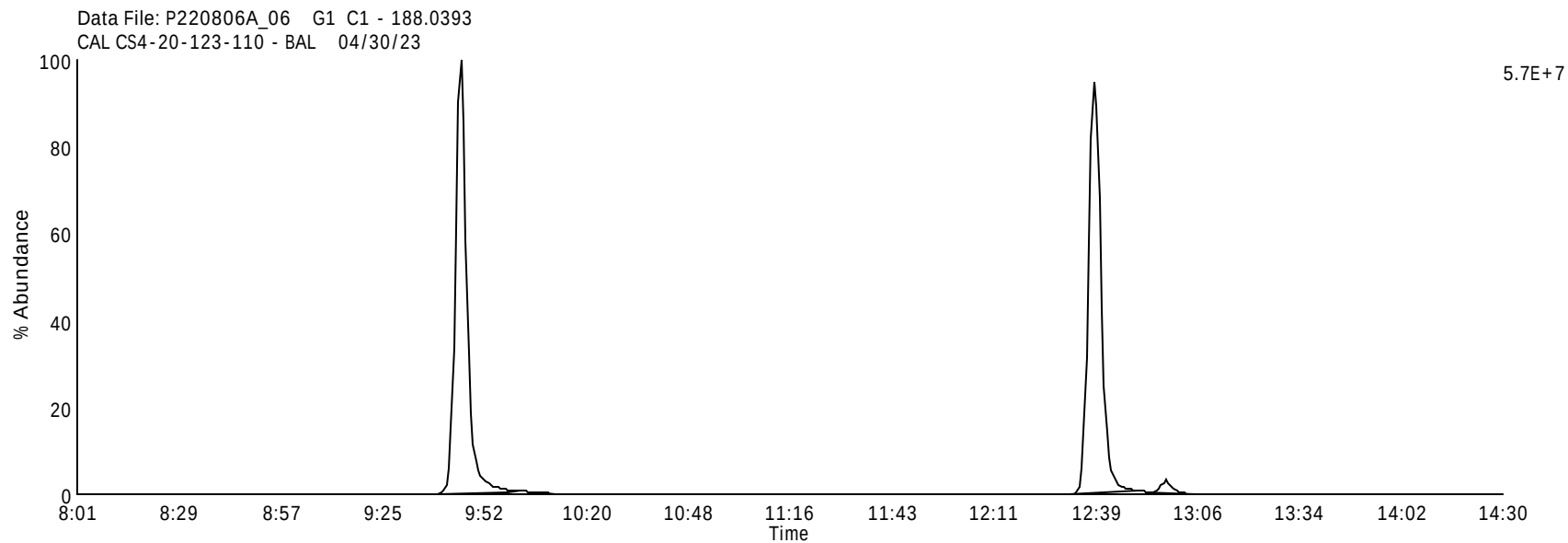
Data File Name: P220806A_06

Lab Sample ID: CS4-20-123-110

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23



Di Chlorinated Biphenyls

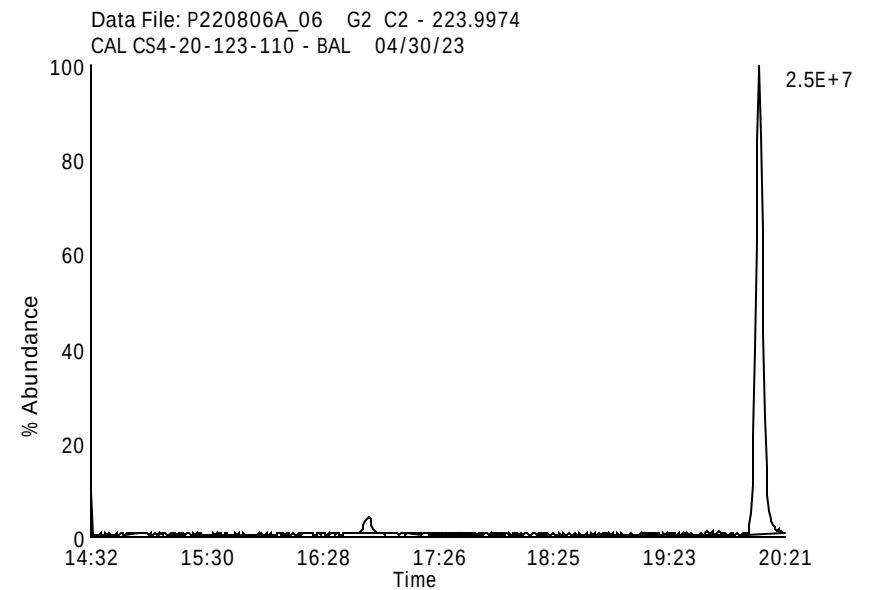
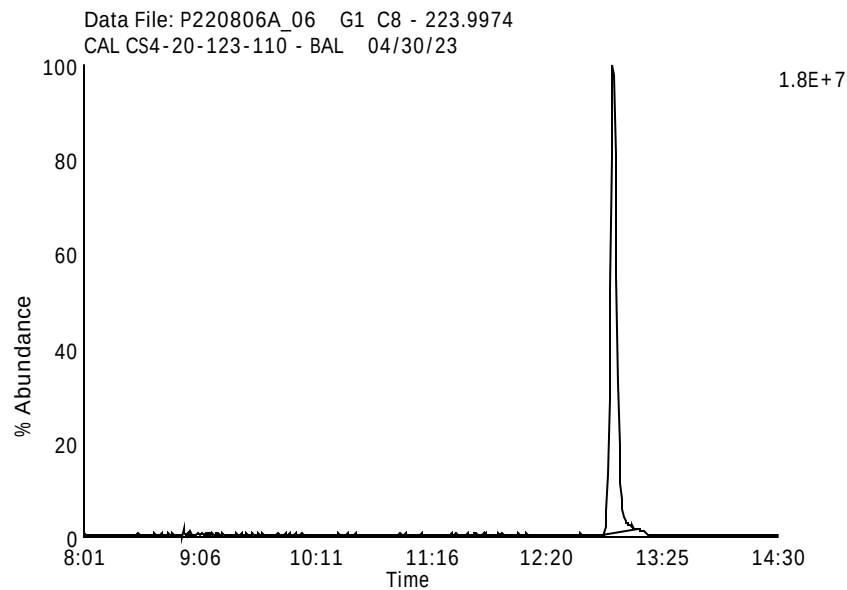
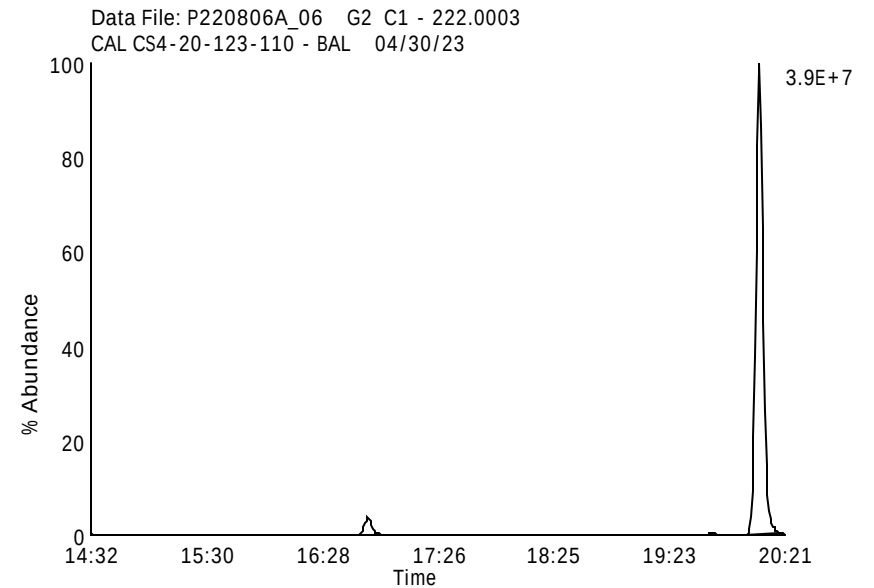
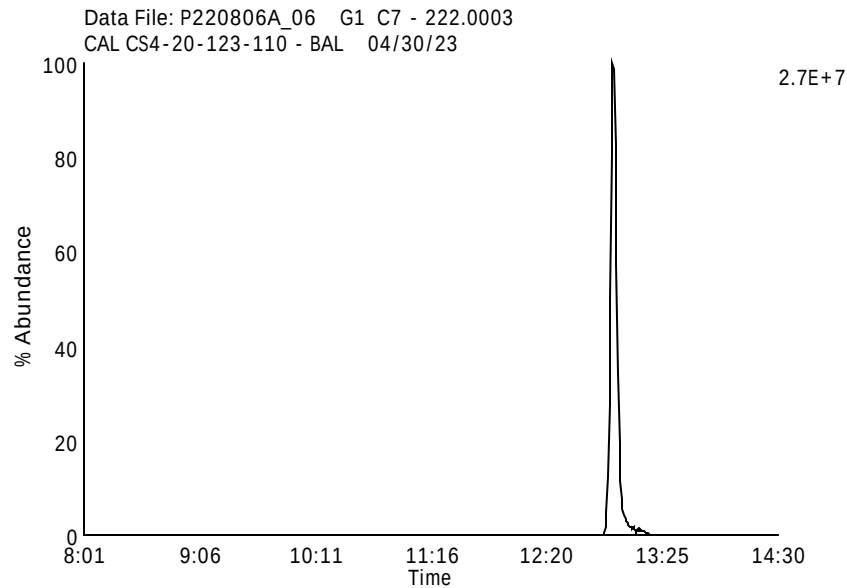
Data File Name: P220806A_06

Date Acquired: 8/6/2022

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23

Lab Sample ID: CS4-20-123-110

Instrument: 10MSHR09 (P)



Tri Chlorinated Biphenyls

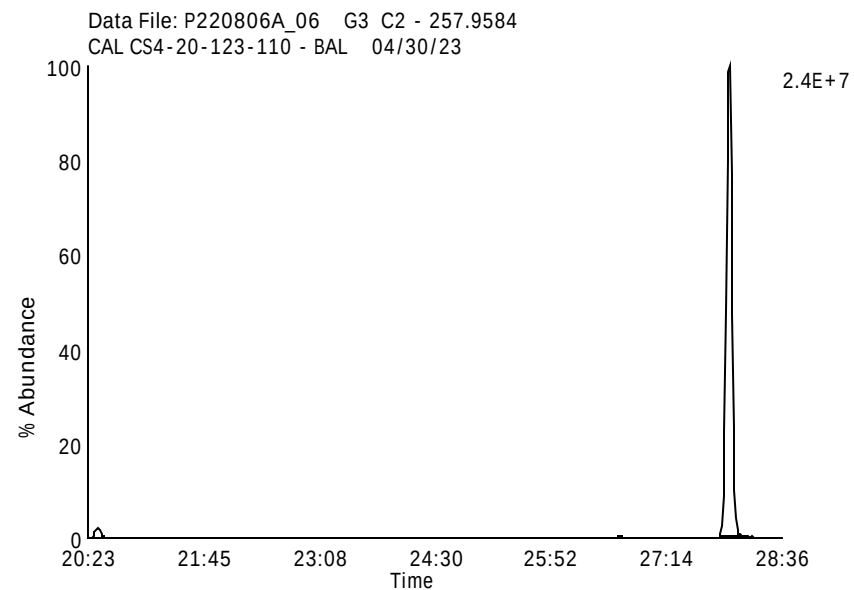
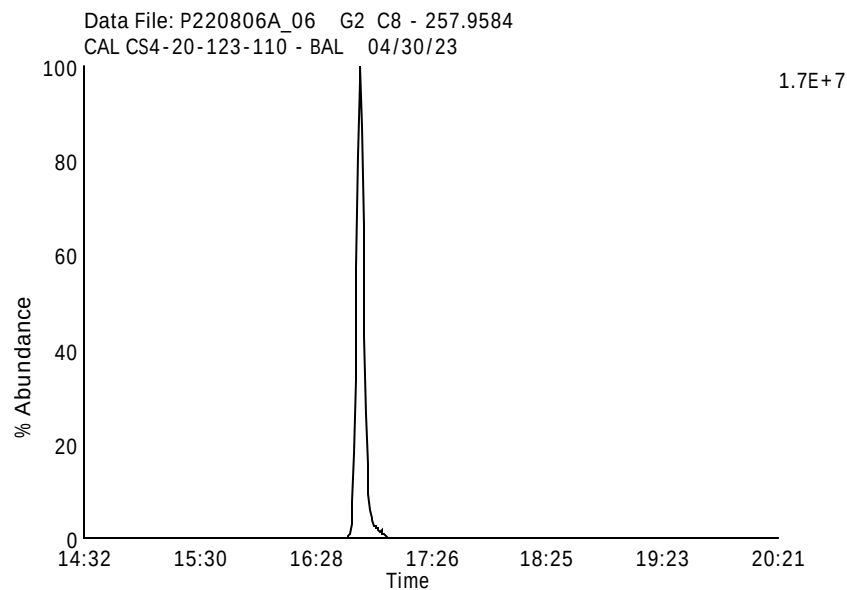
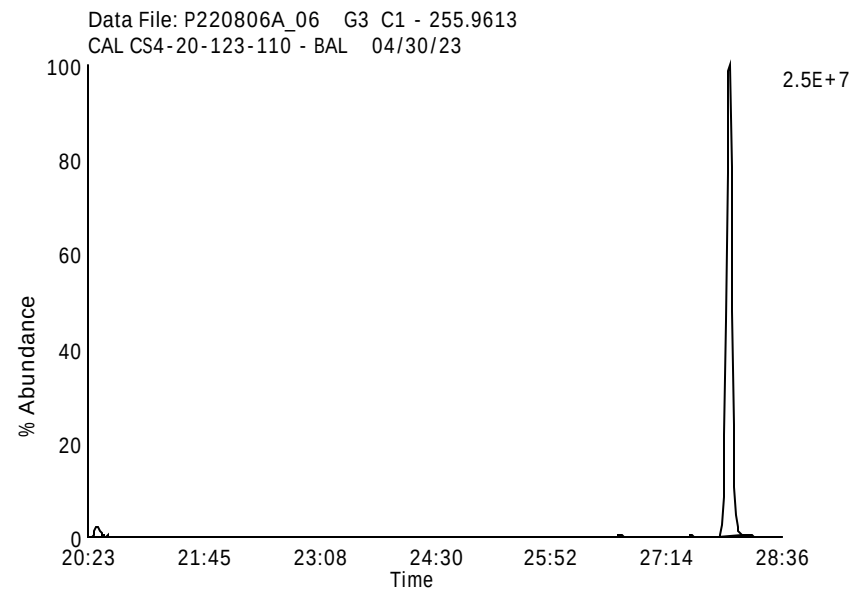
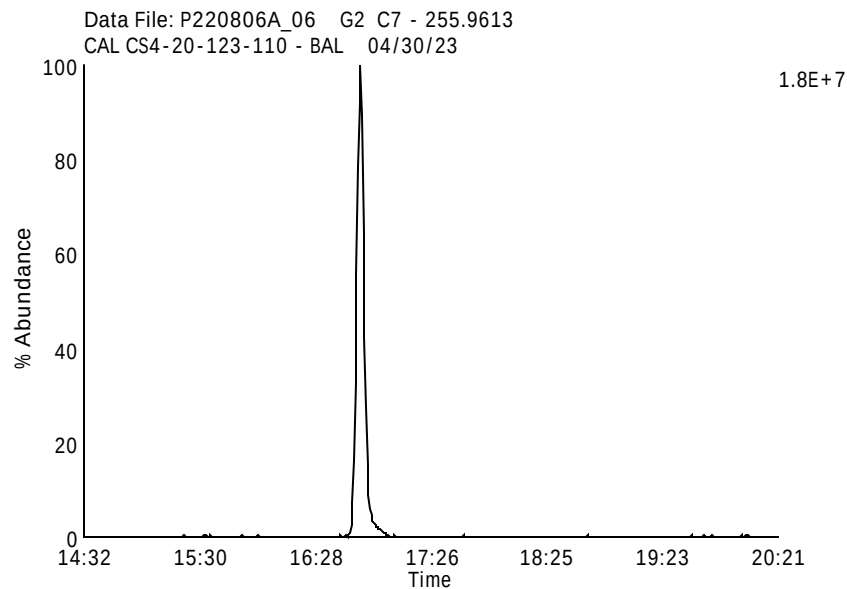
Data File Name: P220806A_06

Date Acquired: 8/6/2022

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23

Lab Sample ID: CS4-20-123-110

Instrument: 10MSHR09 (P)



Tetra Chlorinated Biphenyls

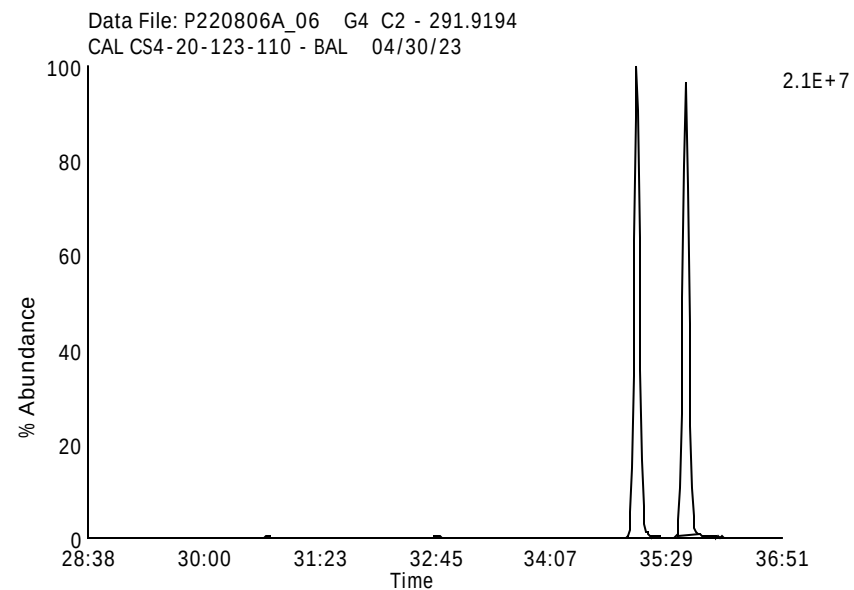
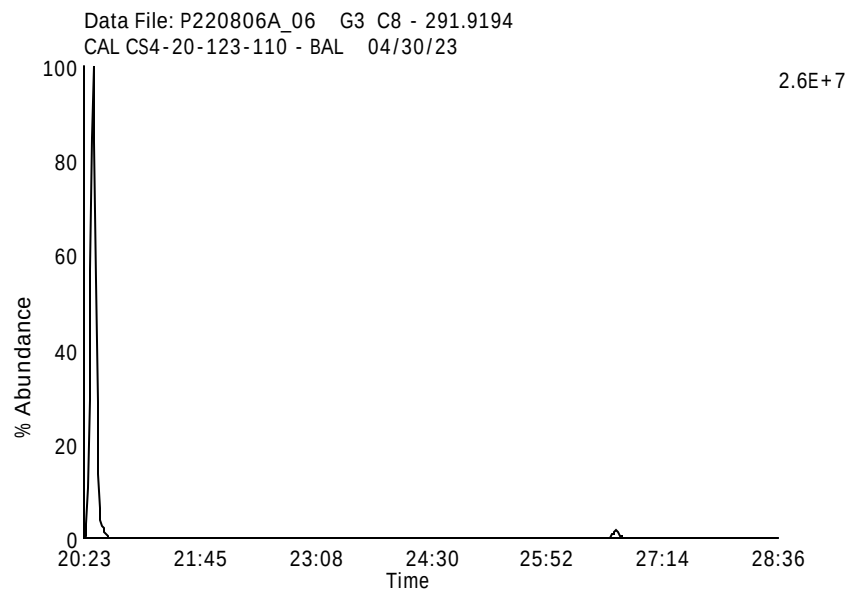
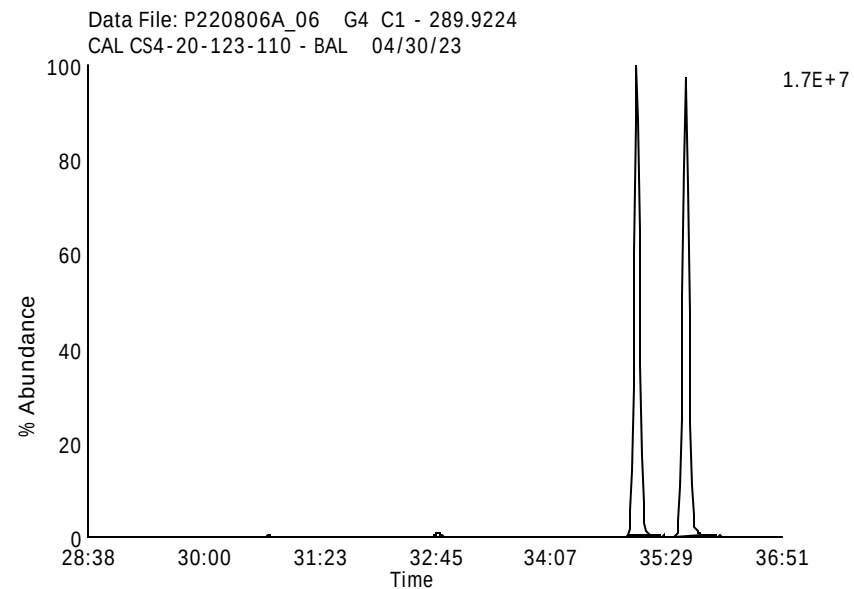
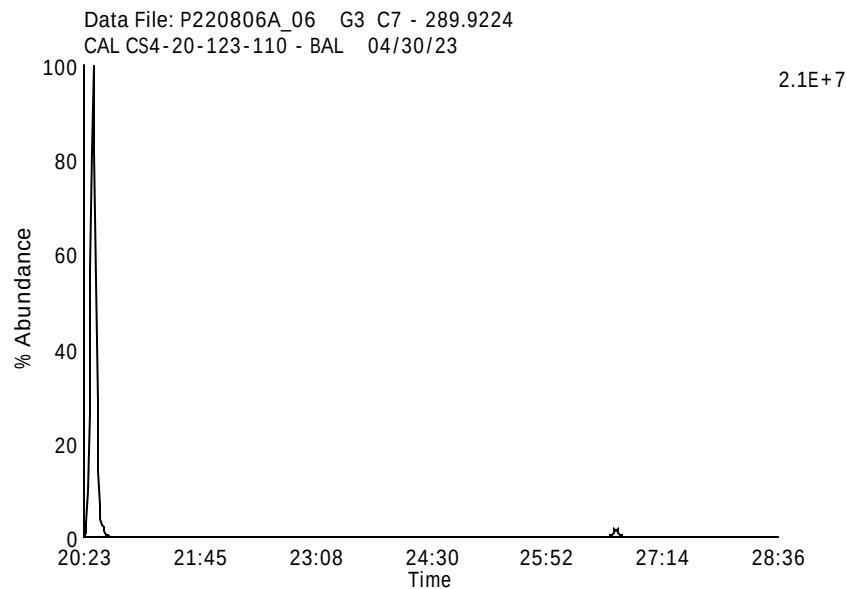
Data File Name: P220806A_06

Lab Sample ID: CS4-20-123-110

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23



Penta Chlorinated Biphenyls

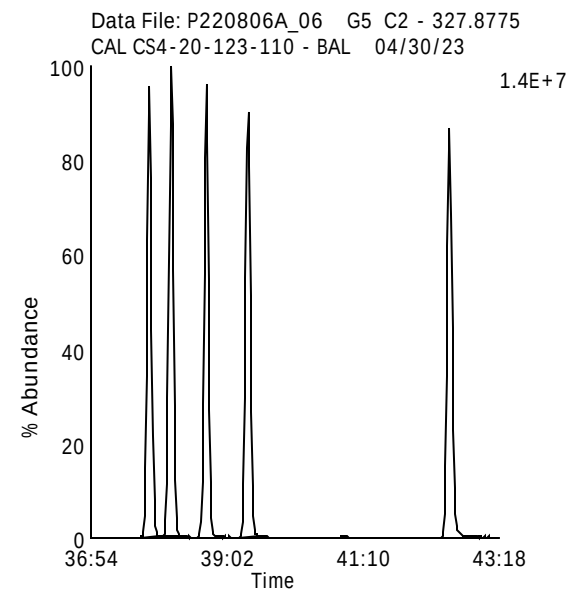
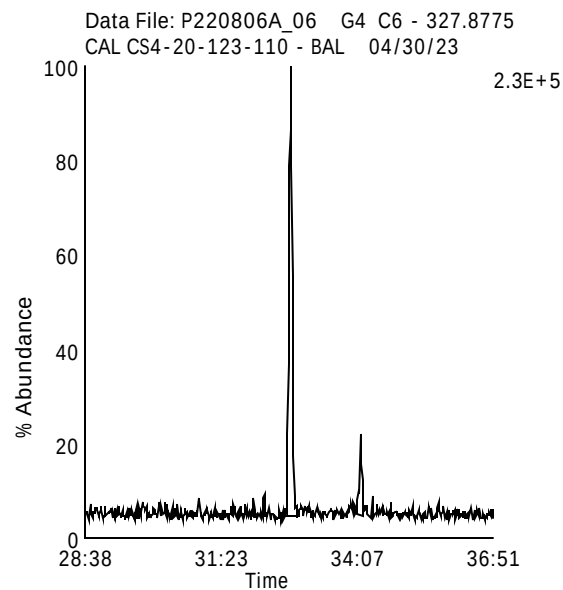
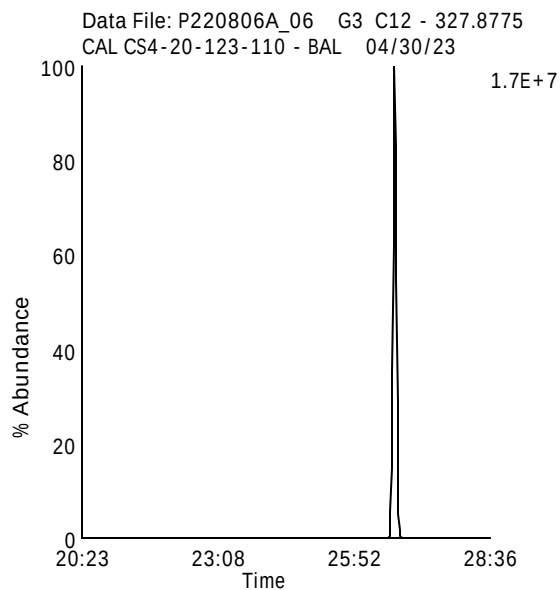
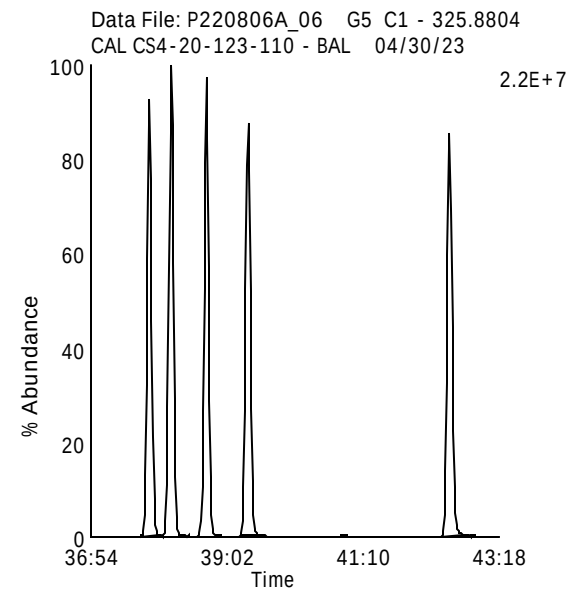
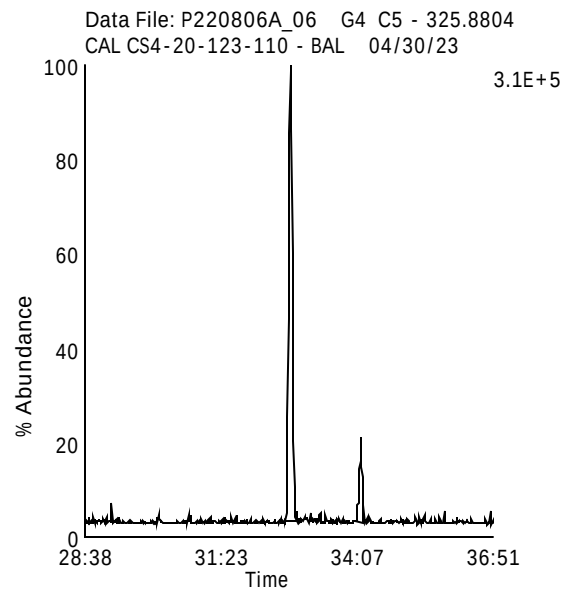
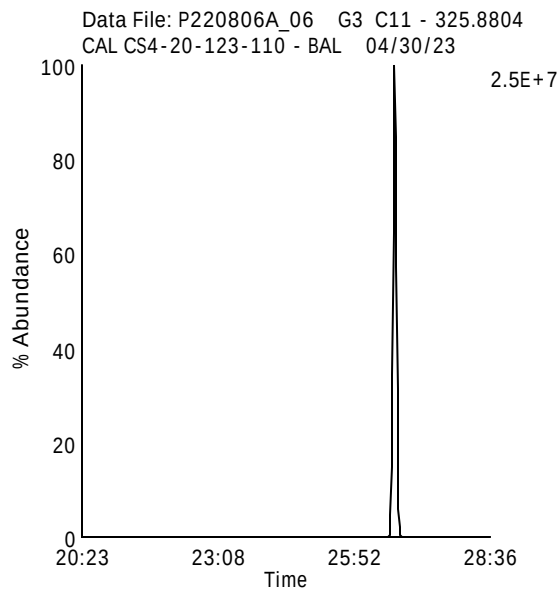
Data File Name: P220806A_06

Lab Sample ID: CS4-20-123-110

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23



Hexa Chlorinated Biphenyls

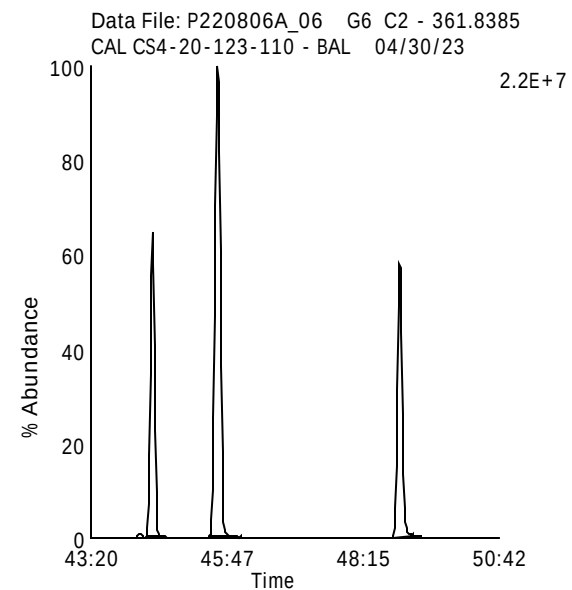
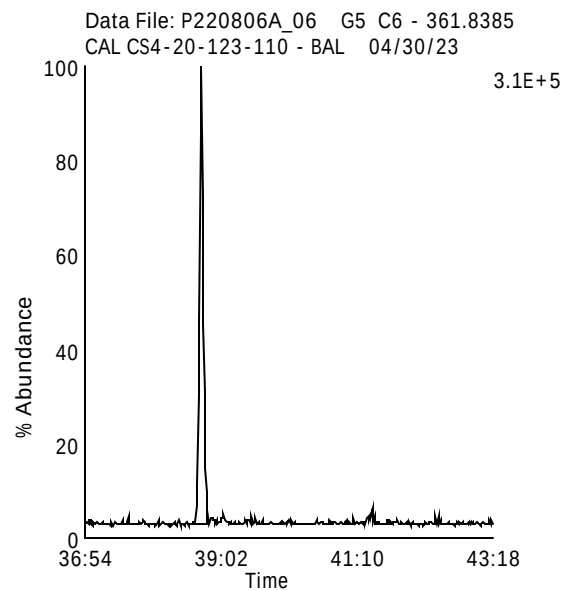
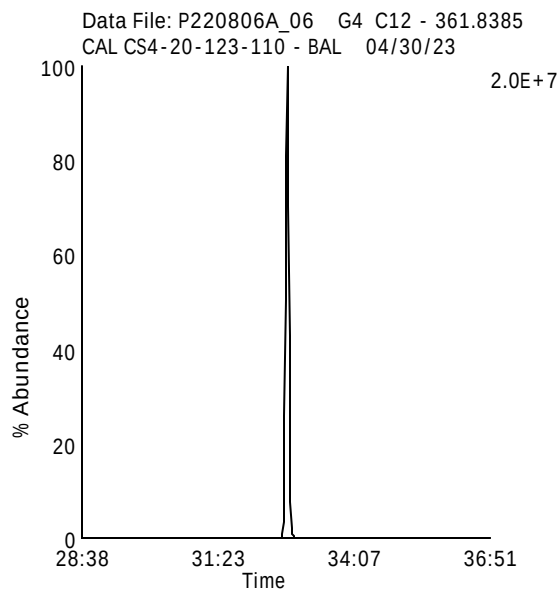
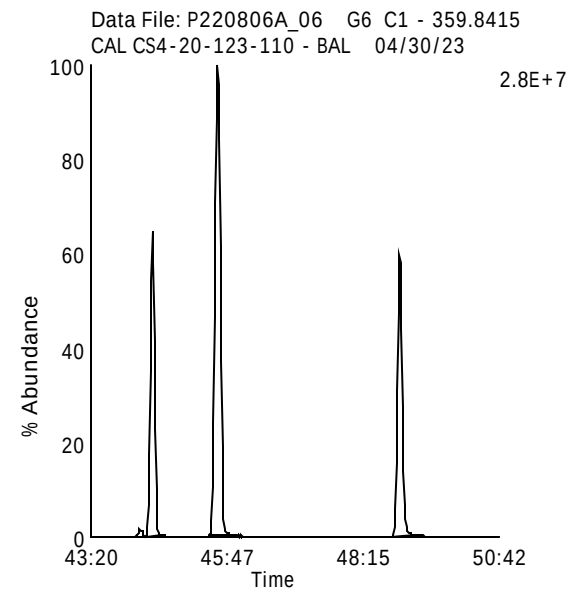
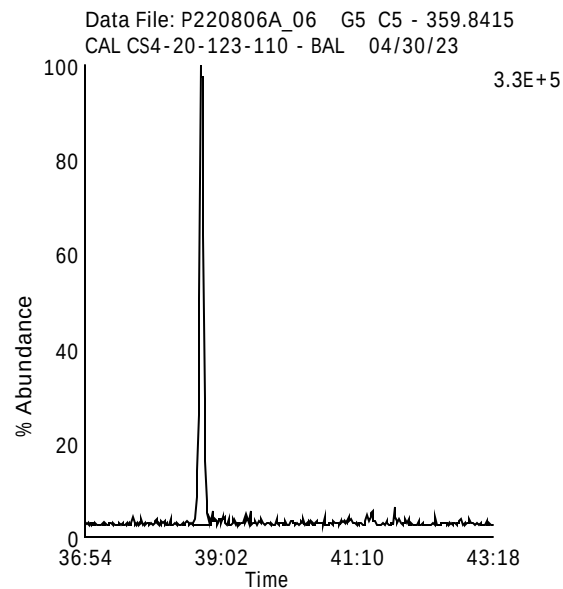
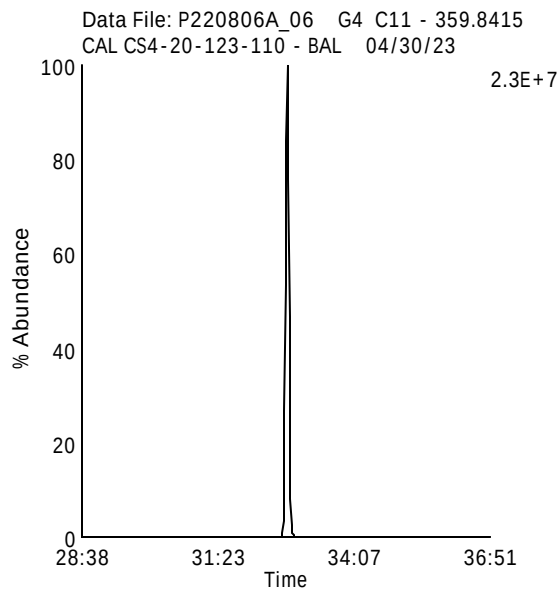
Data File Name: P220806A_06

Lab Sample ID: CS4-20-123-110

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23



Hepta Chlorinated Biphenyls

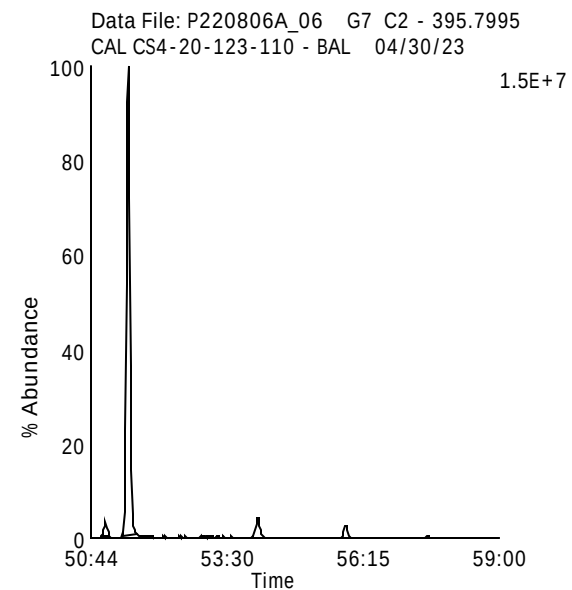
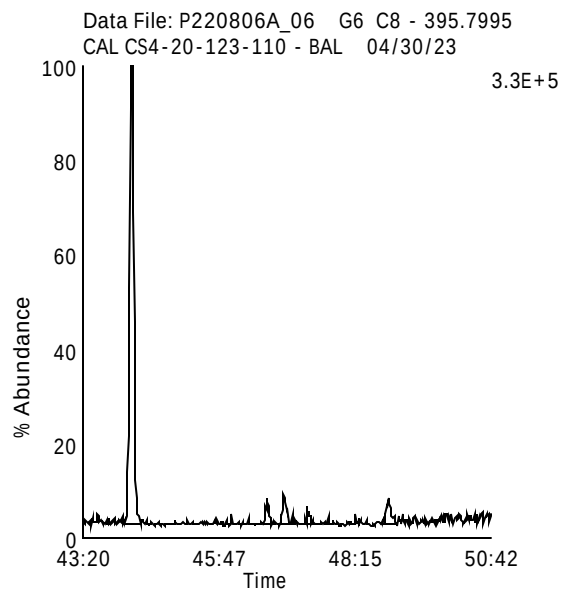
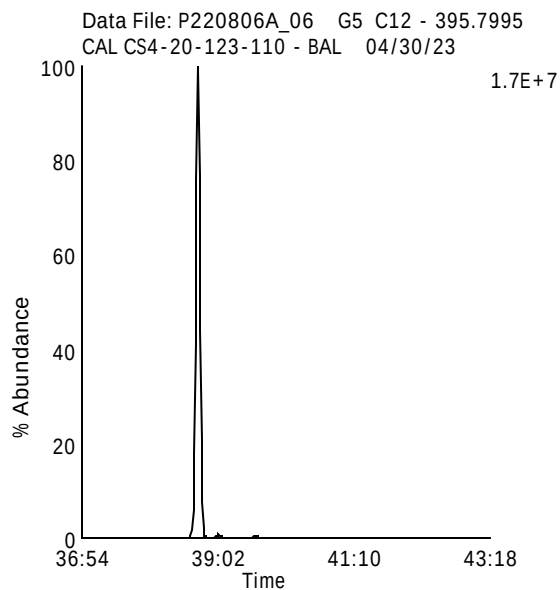
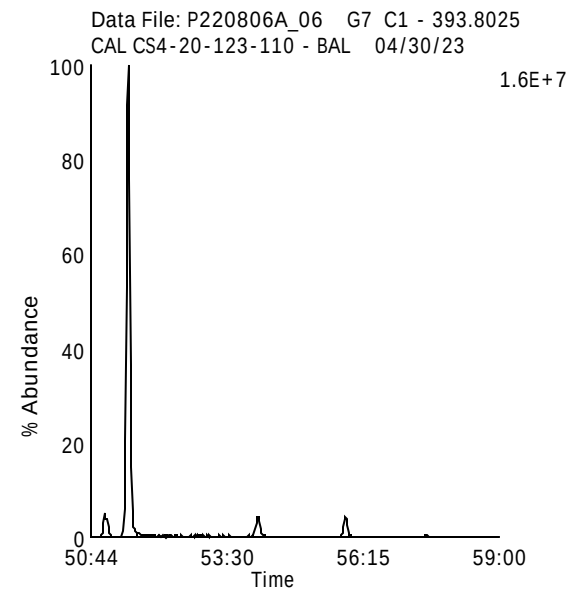
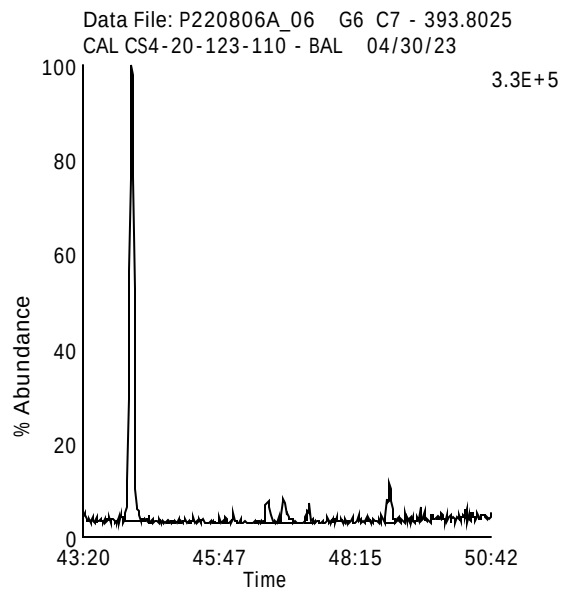
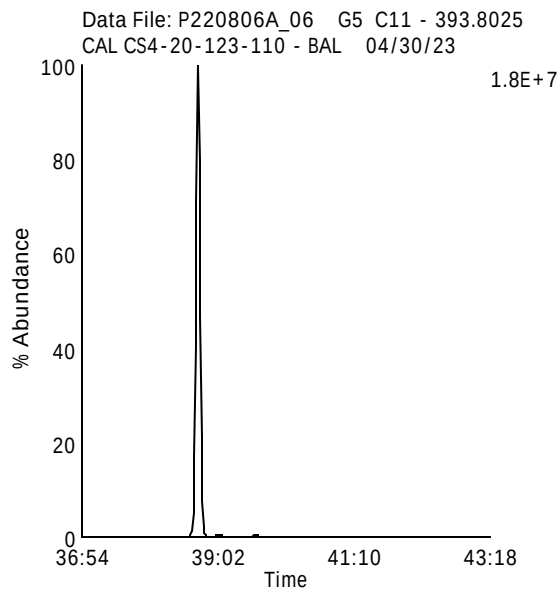
Data File Name: P220806A_06

Lab Sample ID: CS4-20-123-110

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23



Octa Chlorinated Biphenyls

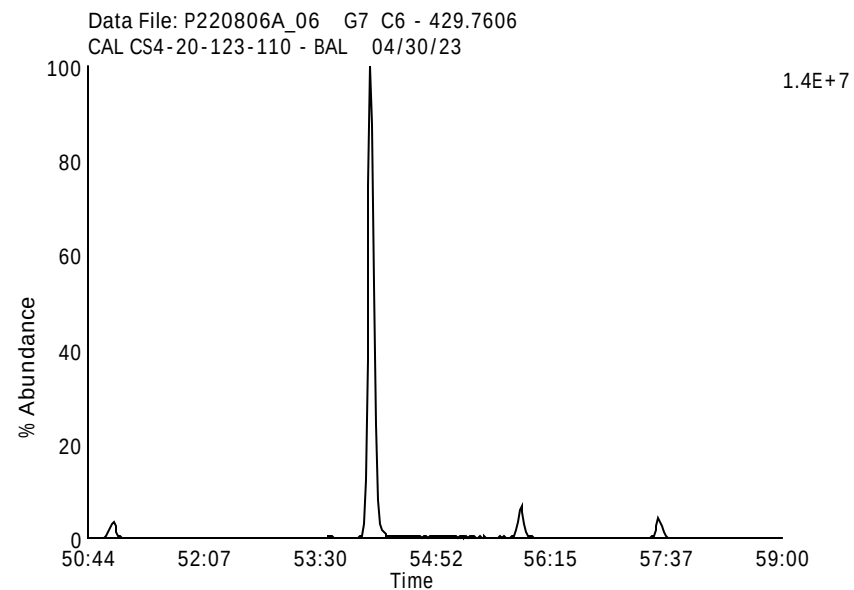
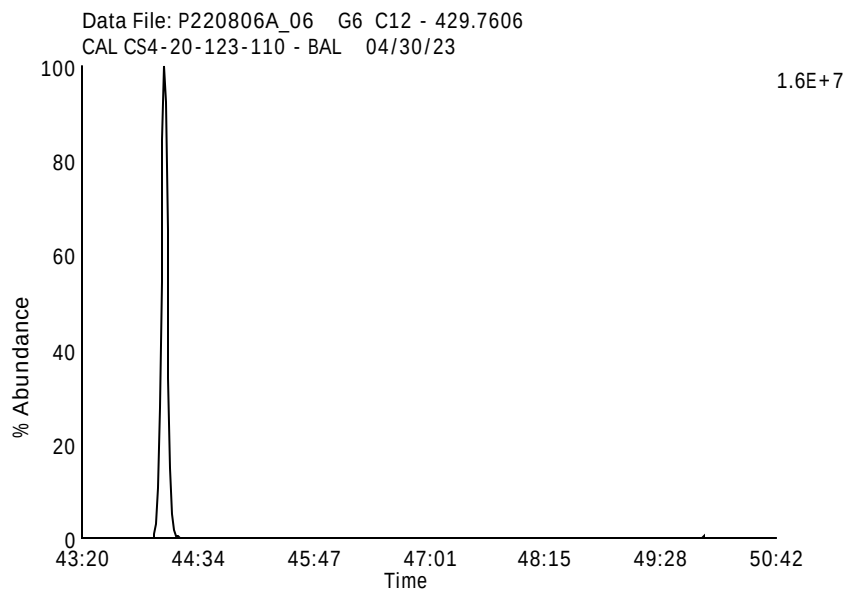
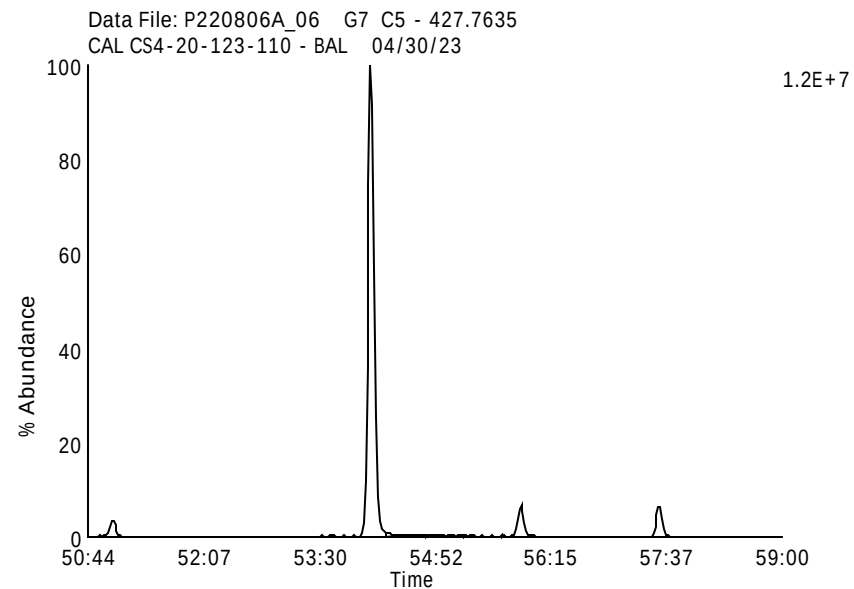
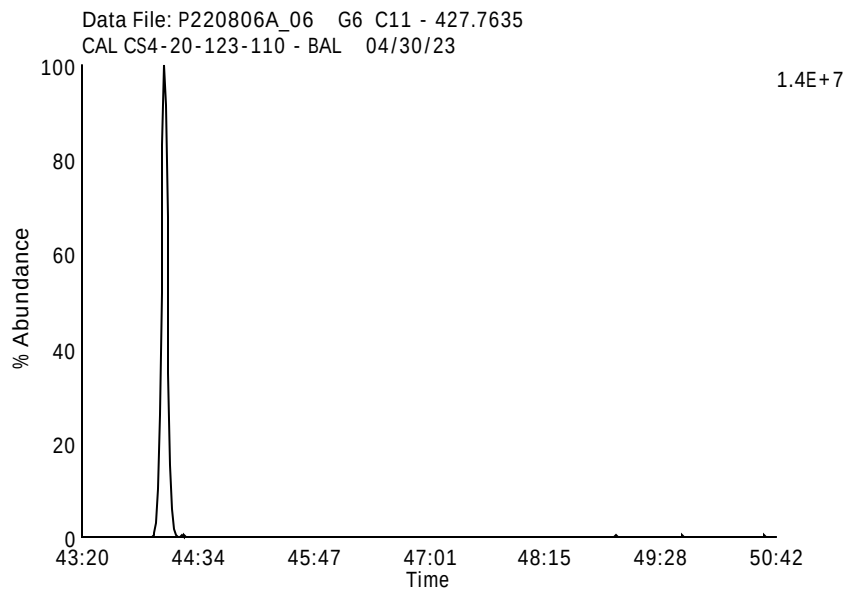
Data File Name: P220806A_06

Lab Sample ID: CS4-20-123-110

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23



Nona Chlorinated Biphenyls

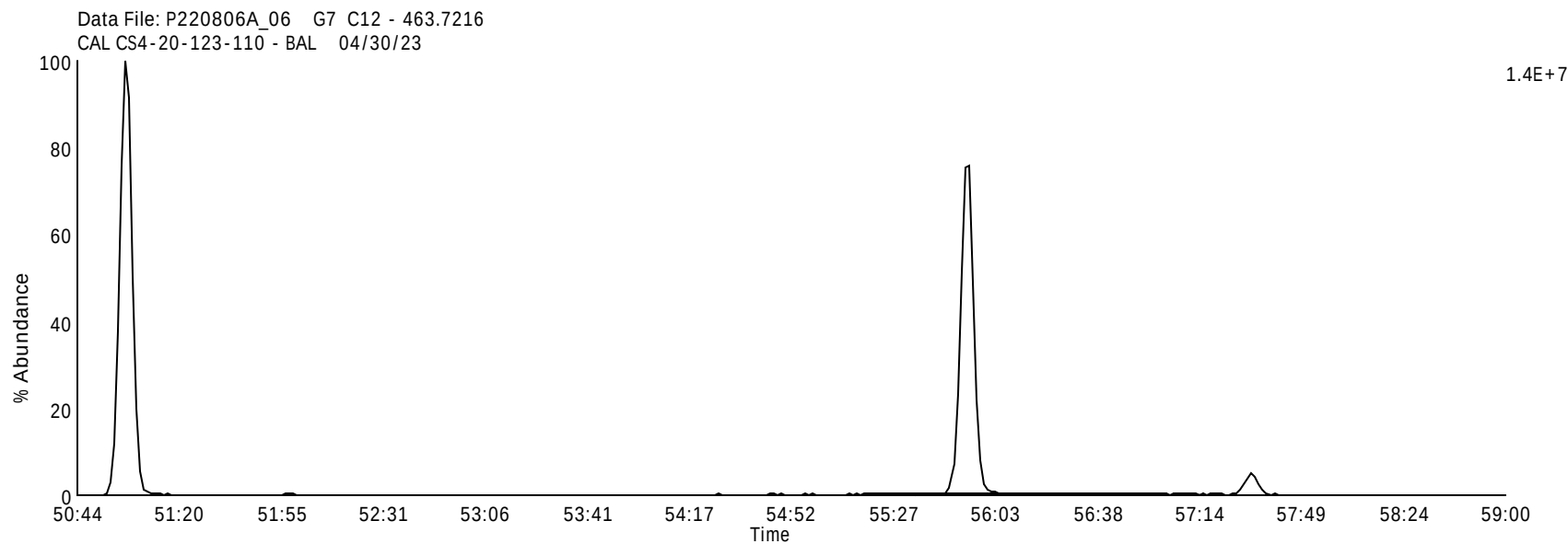
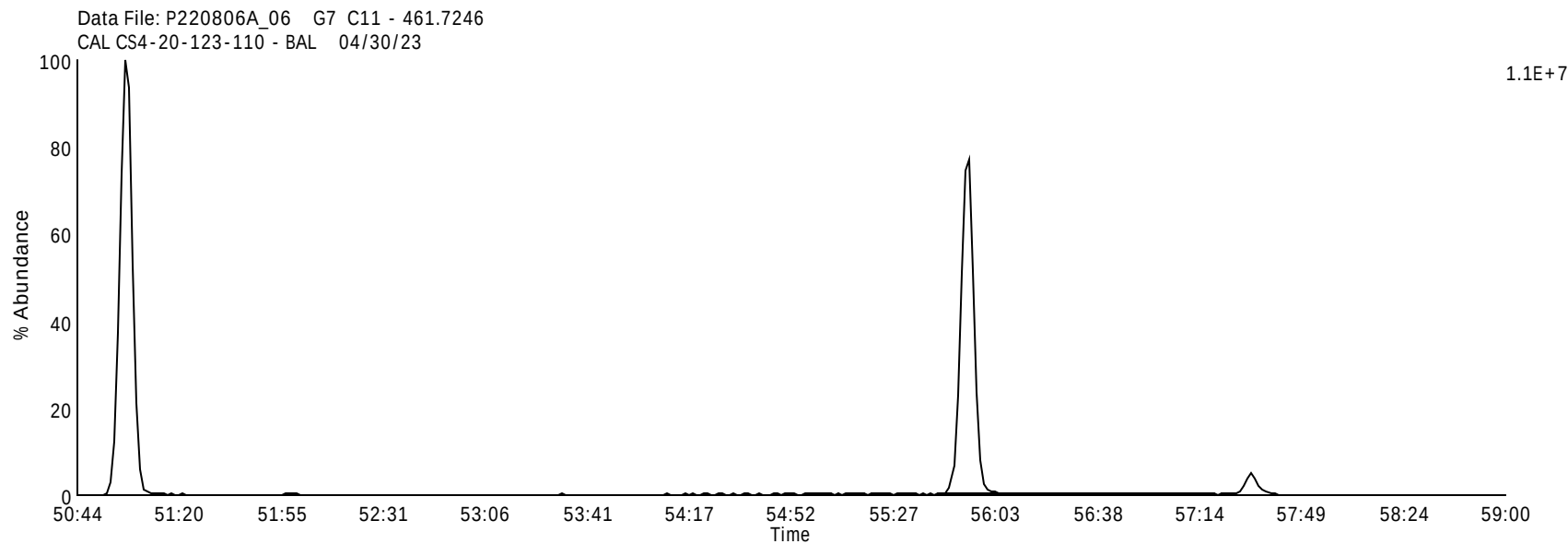
Data File Name: P220806A_06

Lab Sample ID: CS4-20-123-110

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23



Deca Chlorinated Biphenyl

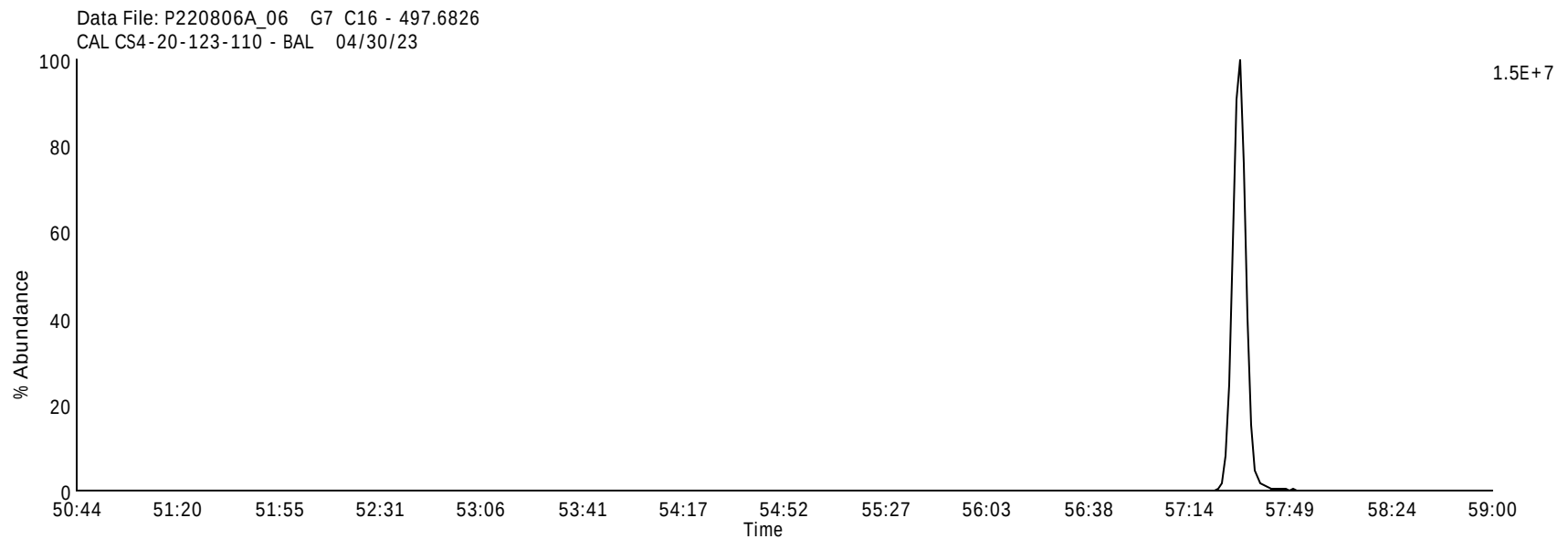
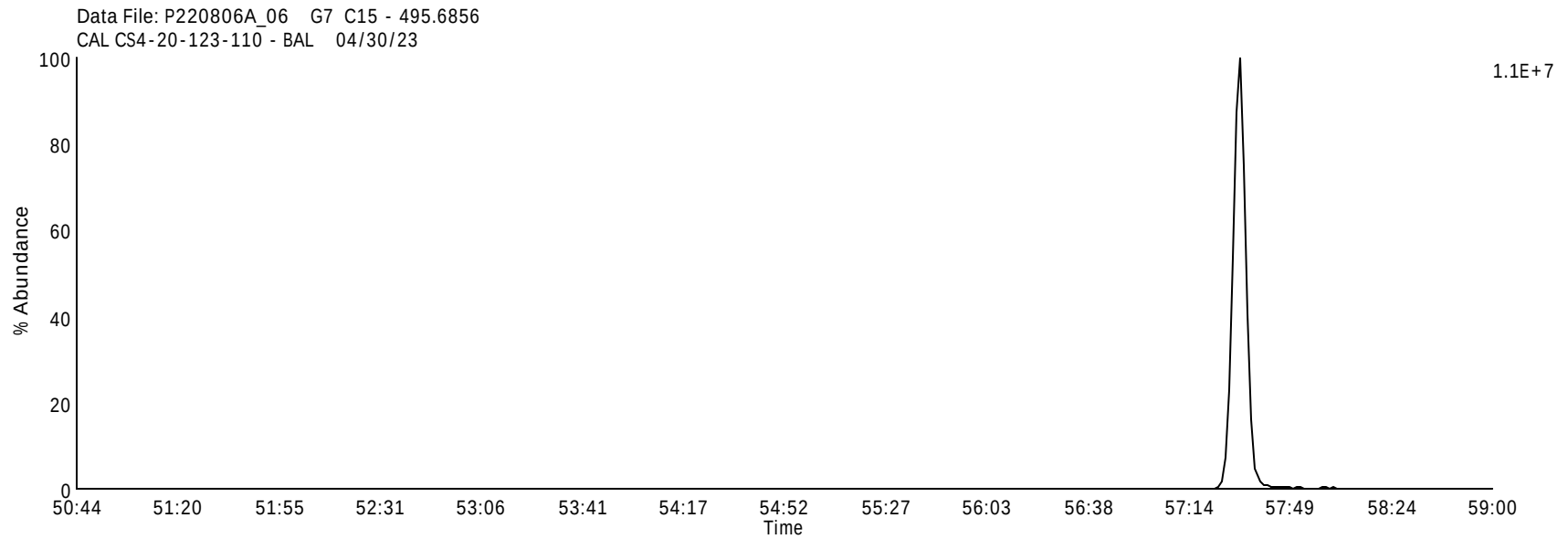
Data File Name: P220806A_06

Lab Sample ID: CS4-20-123-110

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23



Group 1 - 4 Lock mass

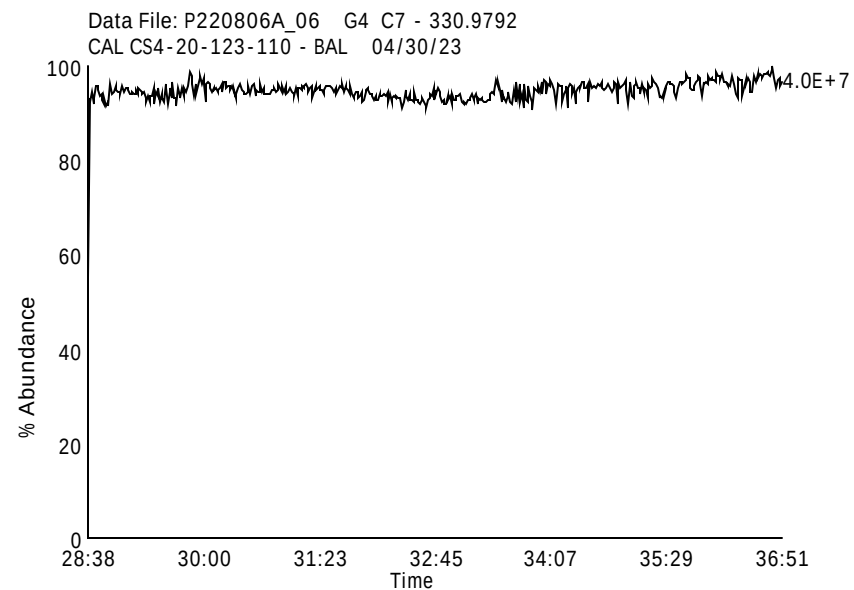
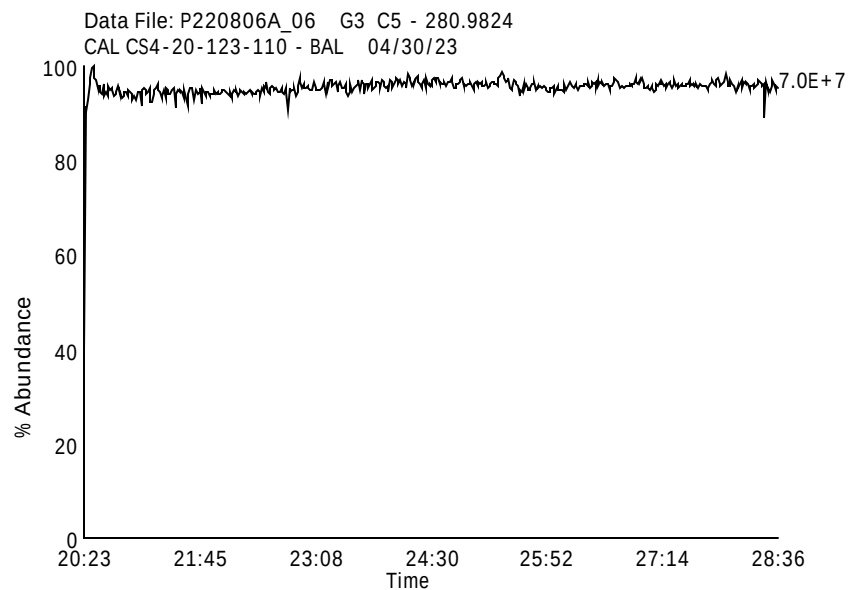
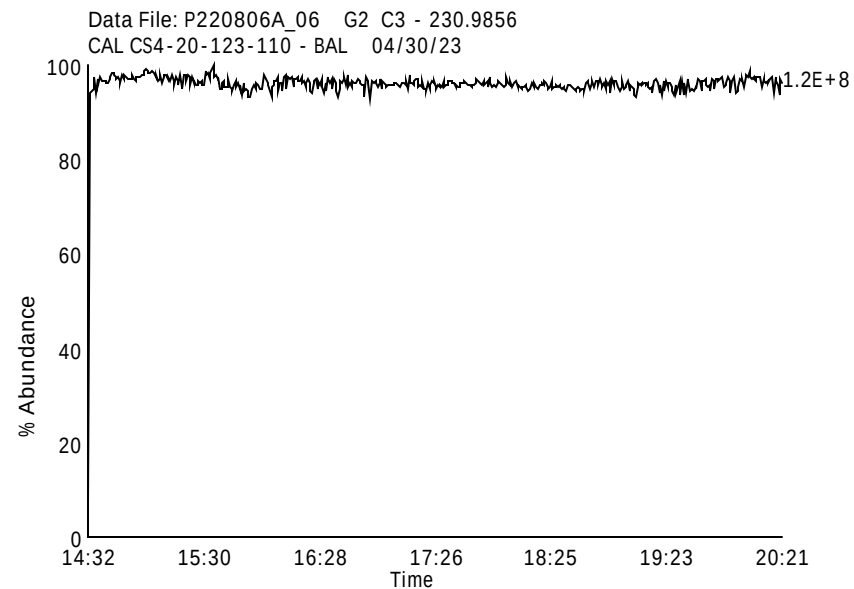
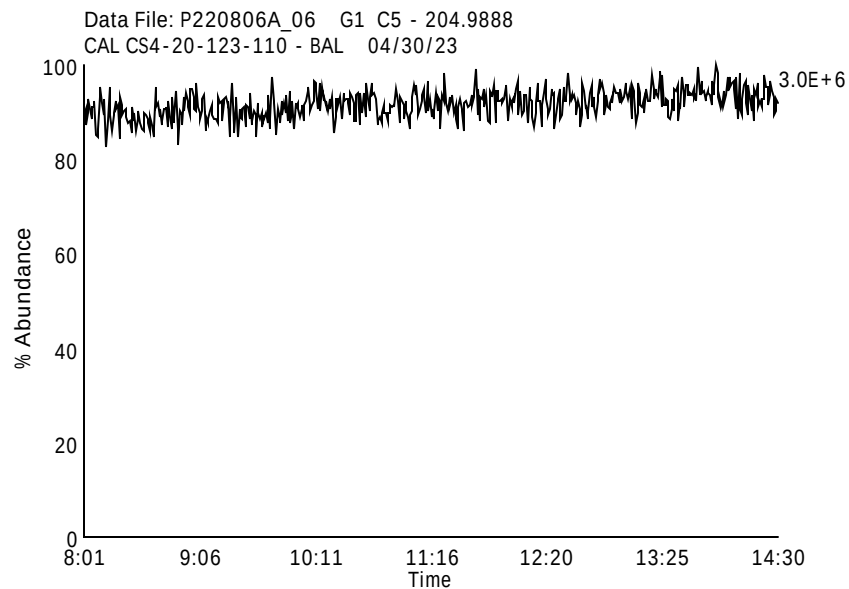
Data File Name: P220806A_06

Date Acquired: 8/6/2022

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23

Lab Sample ID: CS4-20-123-110

Instrument: 10MSHR09 (P)



Group 5 - 7 Lock mass

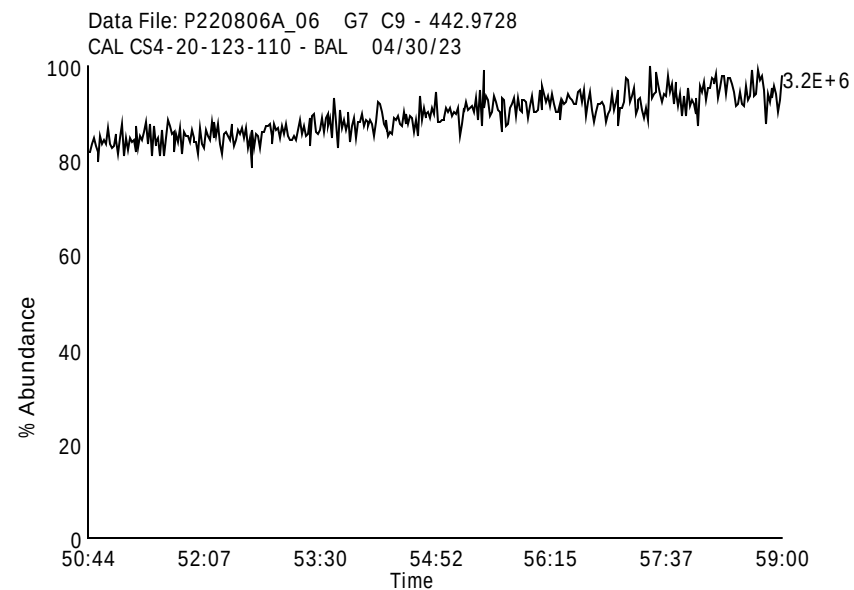
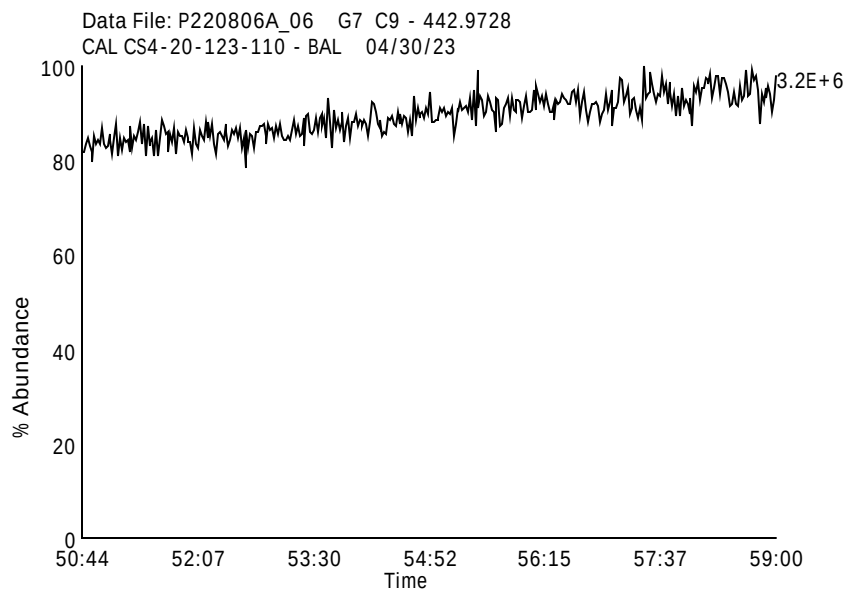
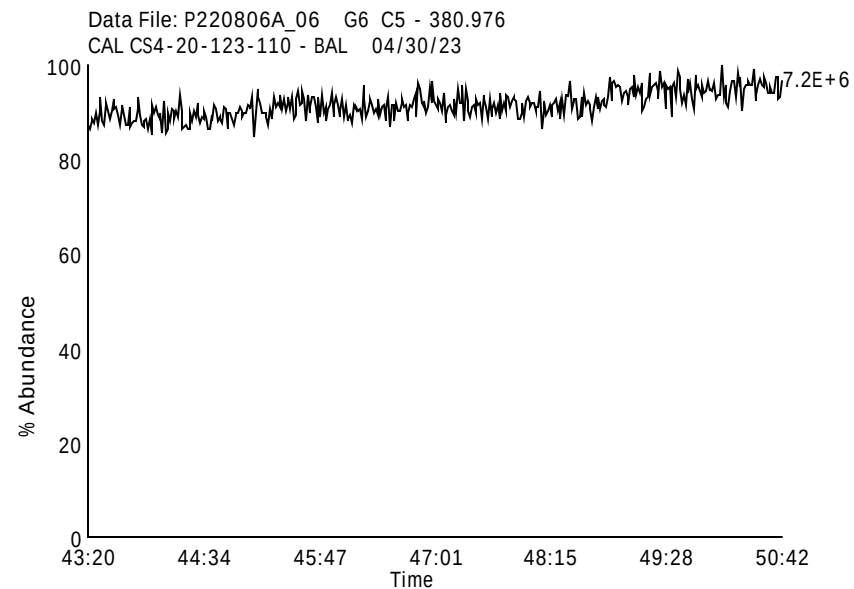
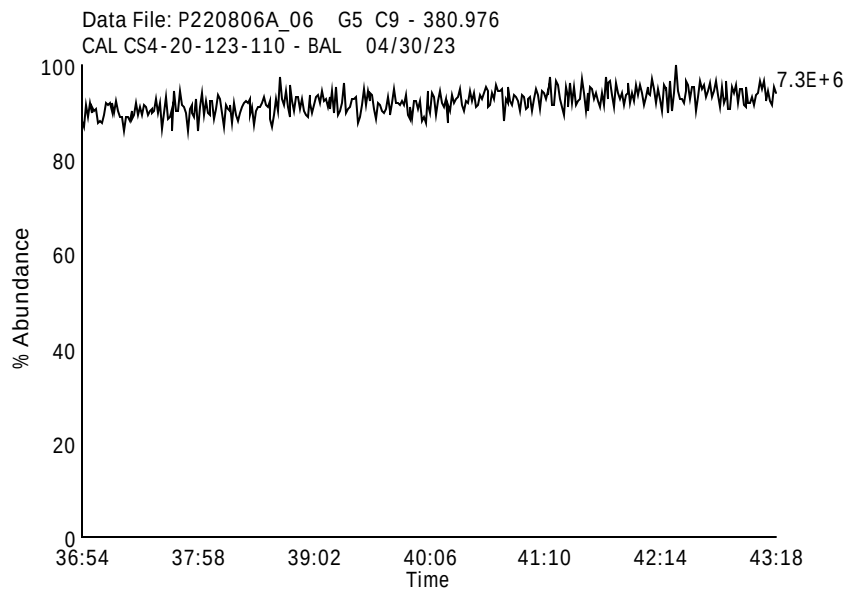
Data File Name: P220806A_06

Date Acquired: 8/6/2022

Sample Description: CAL CS4-20-123-110 - BAL 04/30/23

Lab Sample ID: CS4-20-123-110

Instrument: 10MSHR09 (P)



Labeled Mono Chlorinated Biphenyls

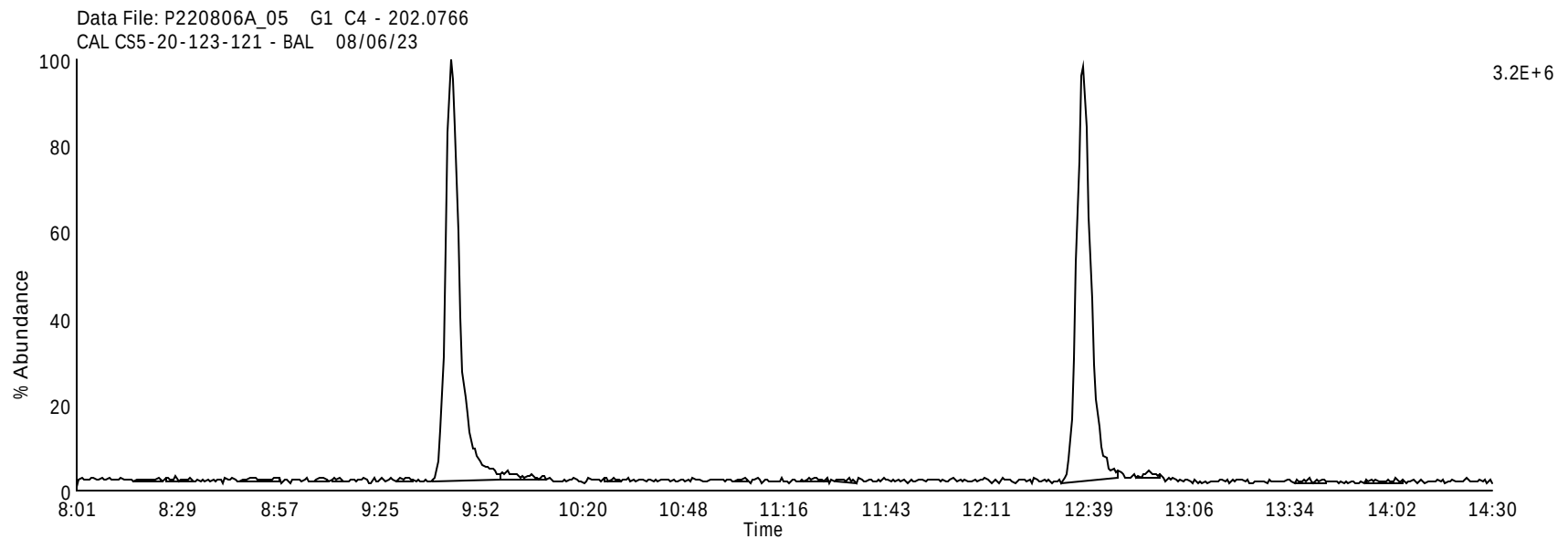
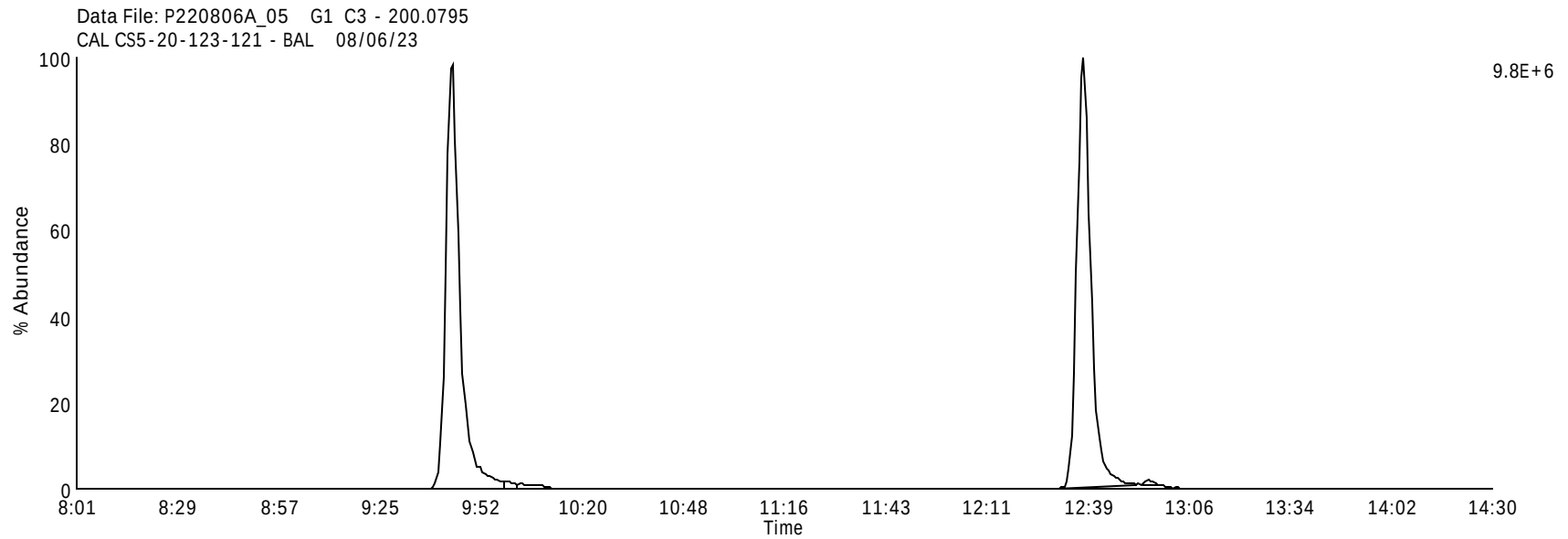
Data File Name: P220806A_05

Date Acquired: 8/6/2022

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23

Lab Sample ID: CS5-20-123-121

Instrument: 10MSHR09 (P)



Labeled Di Chlorinated Biphenyls

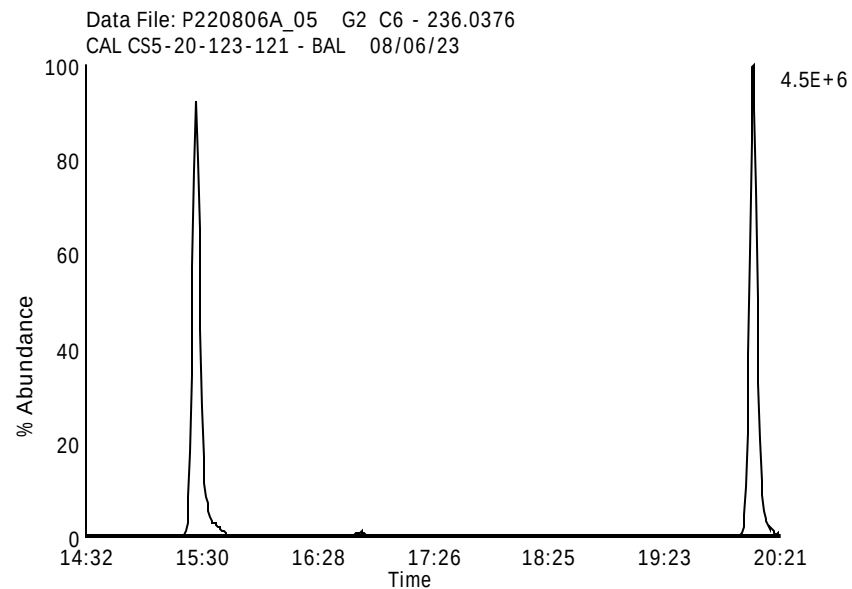
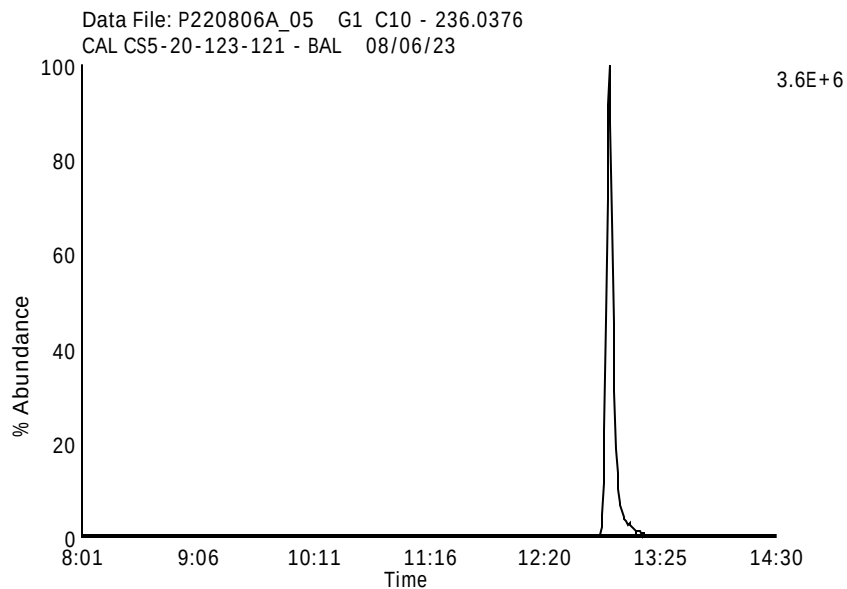
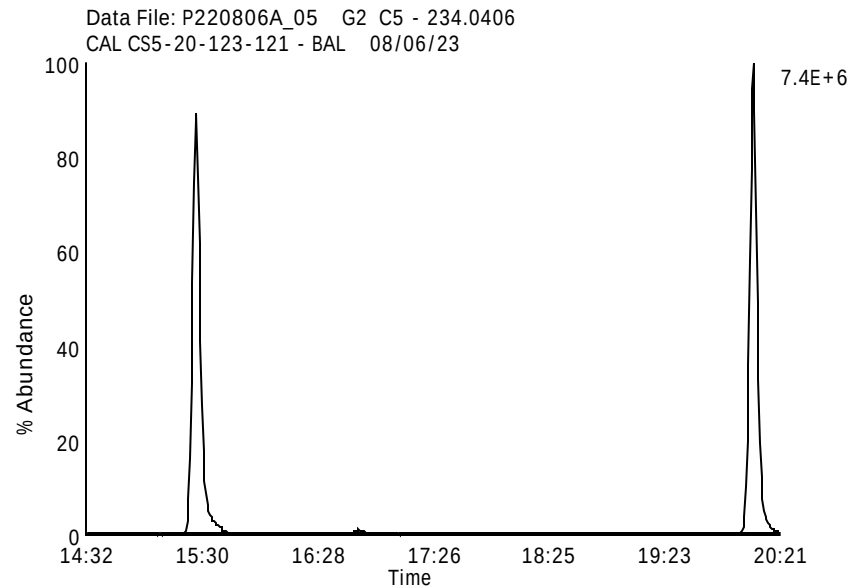
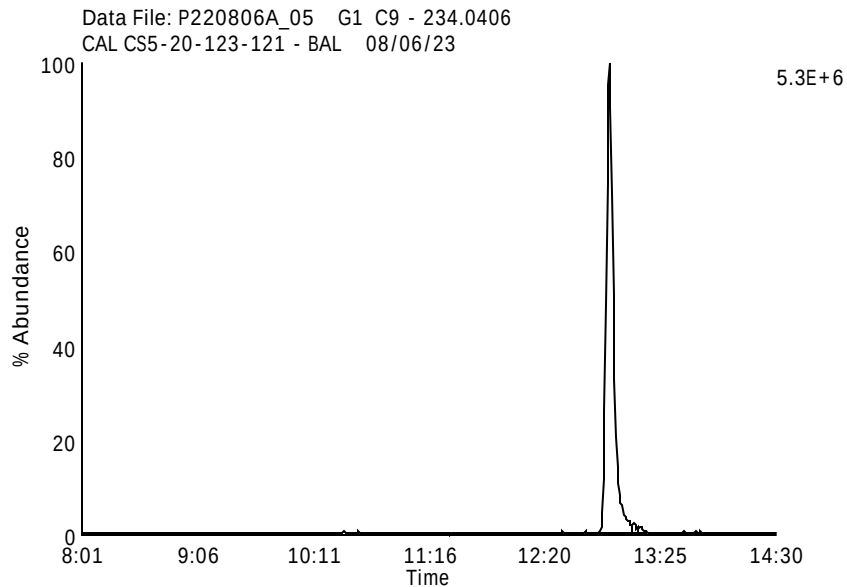
Data File Name: P220806A_05

Date Acquired: 8/6/2022

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23

Lab Sample ID: CS5-20-123-121

Instrument: 10MSHR09 (P)



Labeled Tri Chlorinated Biphenyls

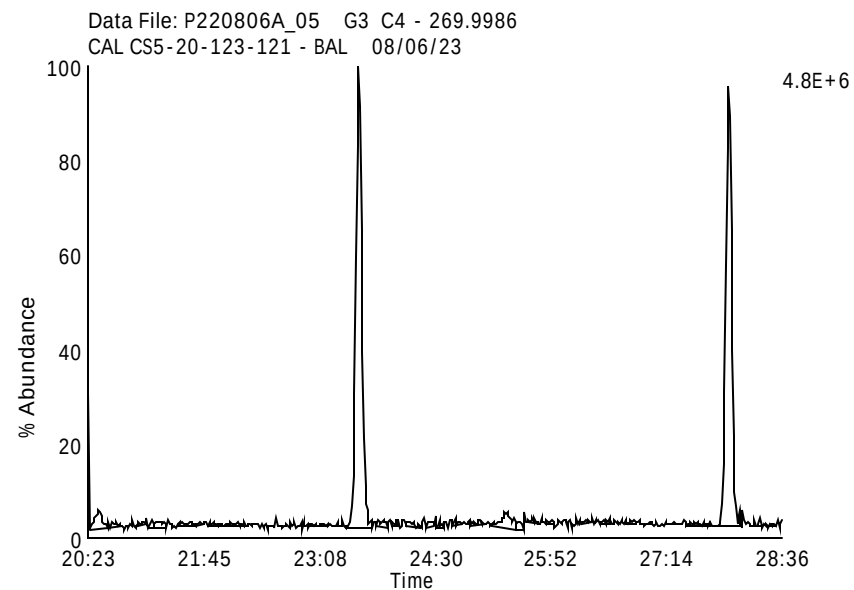
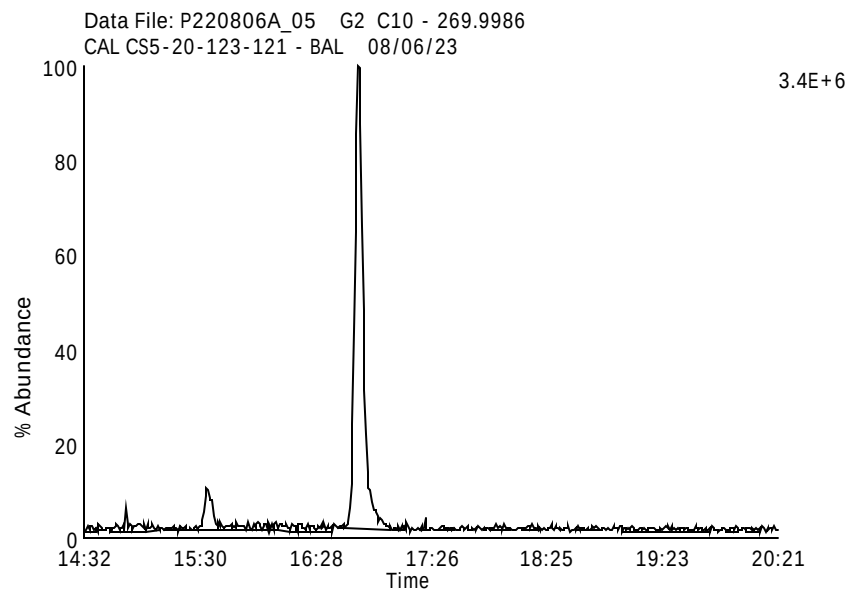
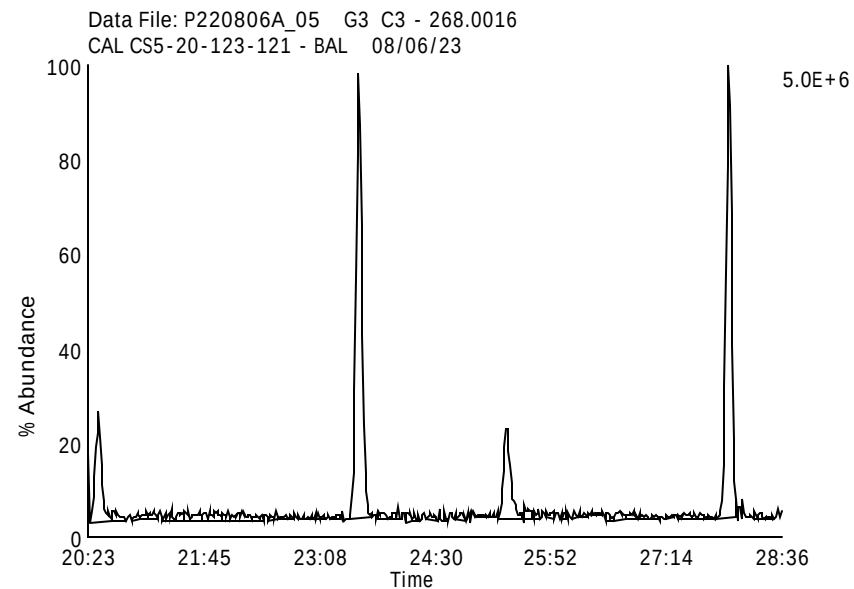
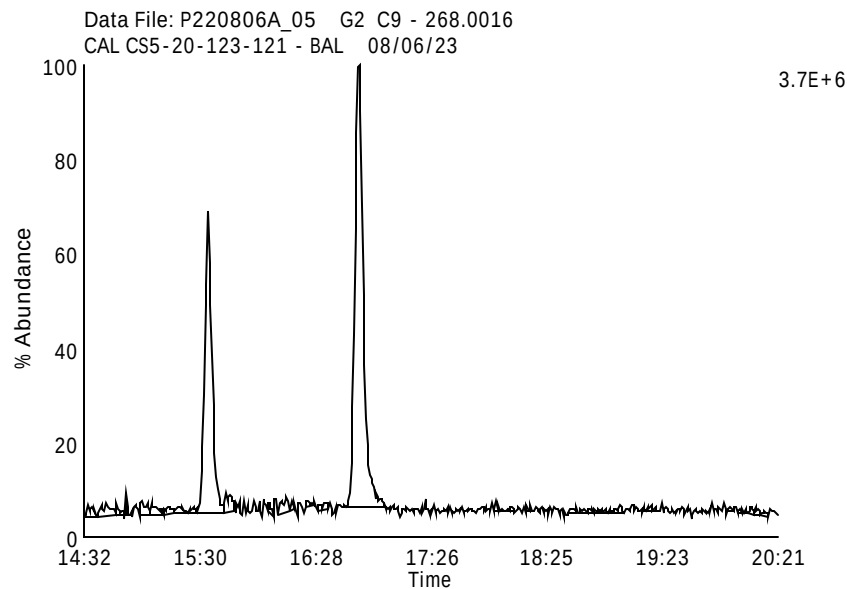
Data File Name: P220806A_05

Date Acquired: 8/6/2022

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23

Lab Sample ID: CS5-20-123-121

Instrument: 10MSHR09 (P)



Labeled Tetra Chlorinated Biphenyls

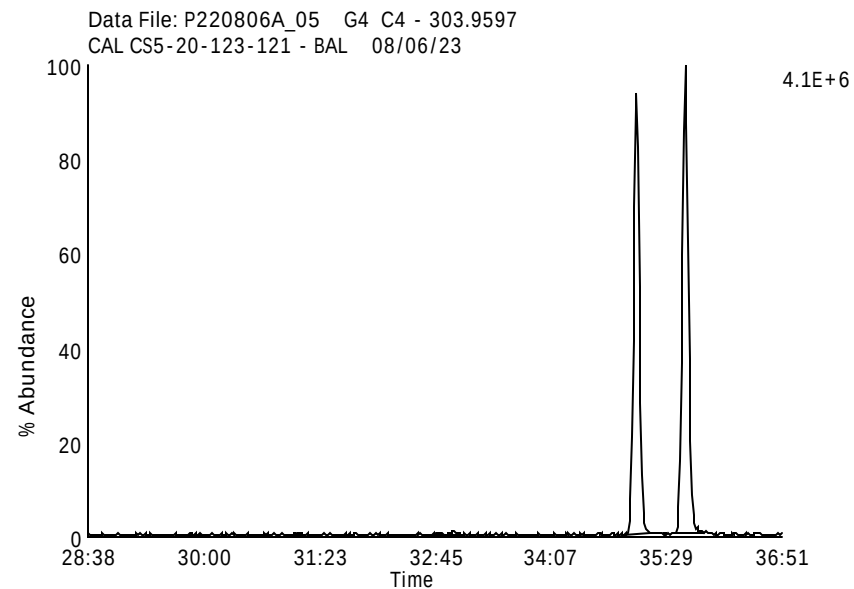
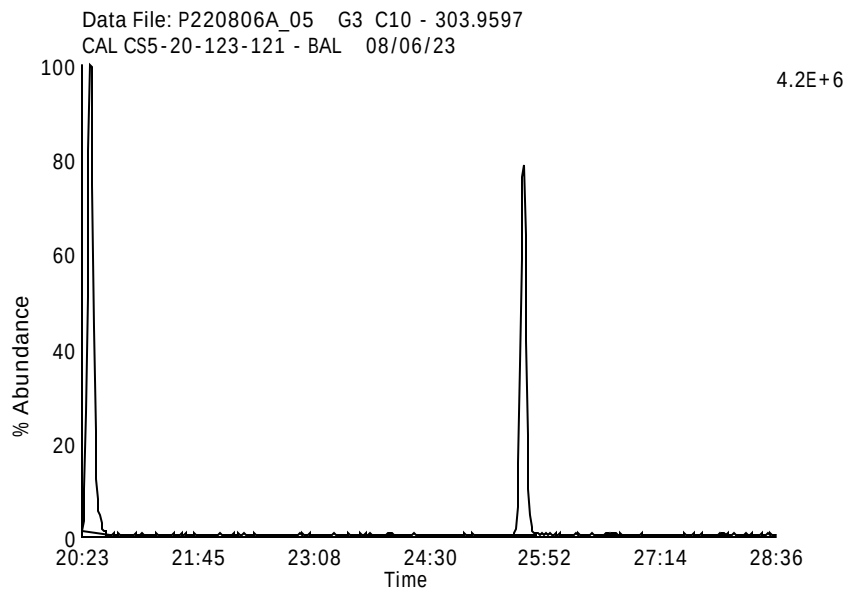
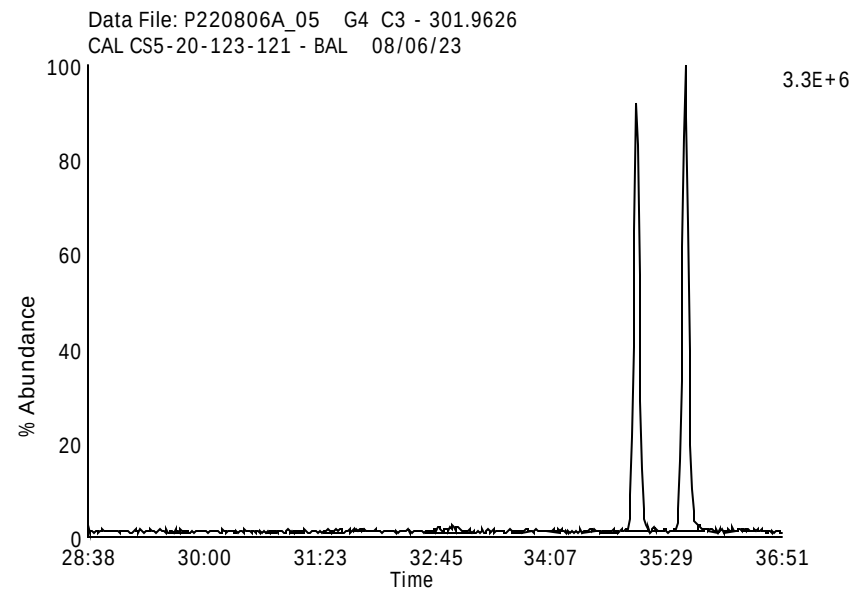
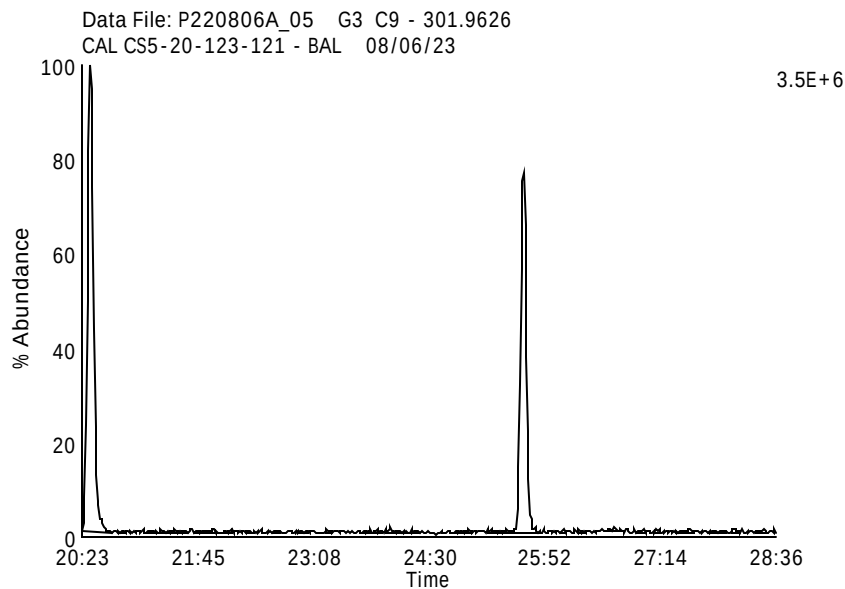
Data File Name: P220806A_05

Date Acquired: 8/6/2022

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23

Lab Sample ID: CS5-20-123-121

Instrument: 10MSHR09 (P)



Labeled Penta Chlorinated Biphenyls

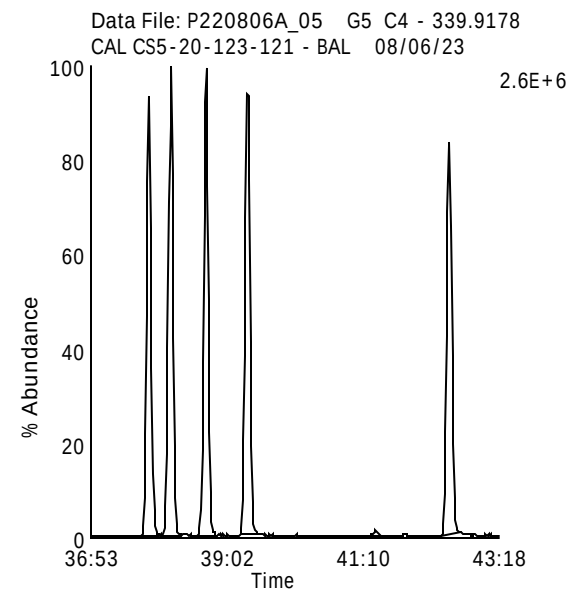
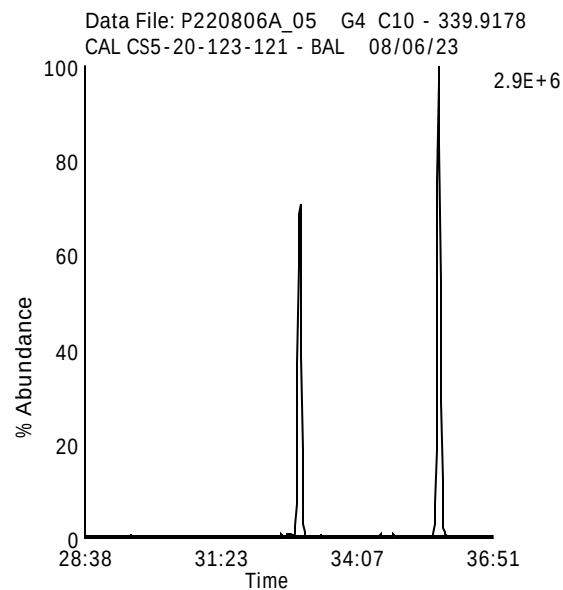
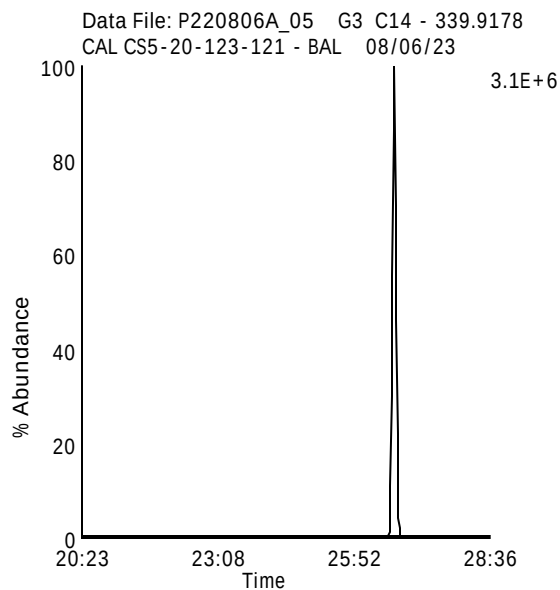
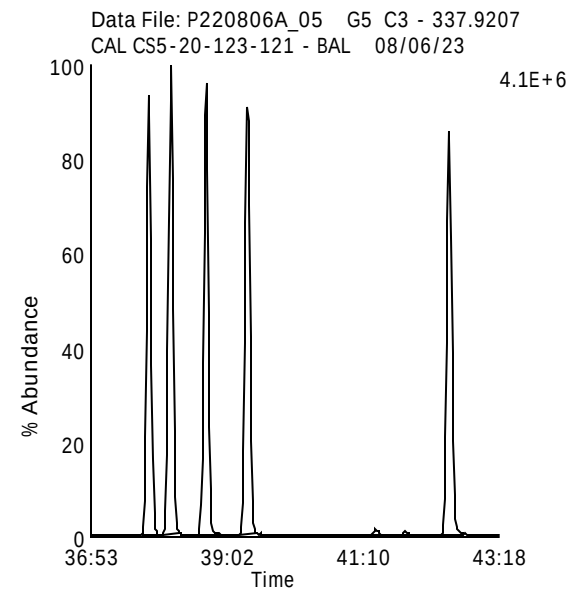
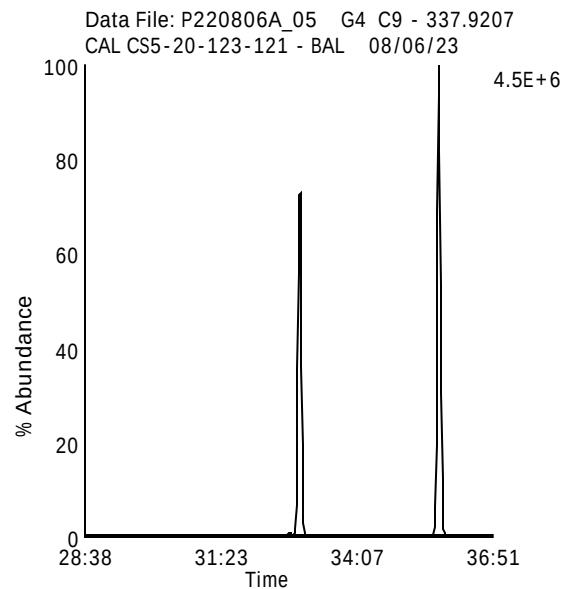
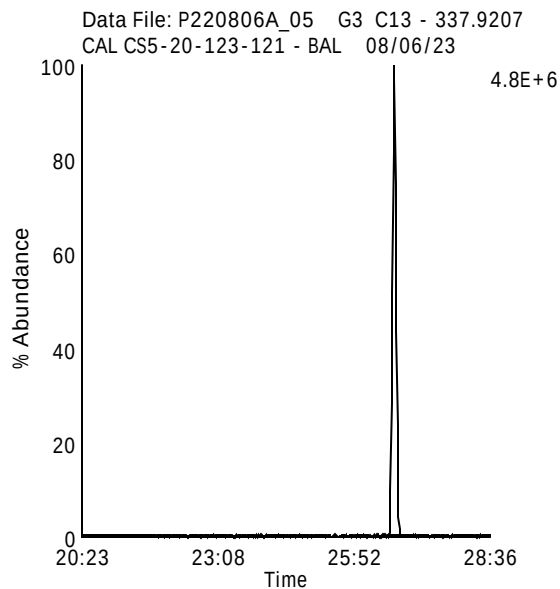
Data File Name: P220806A_05

Lab Sample ID: CS5-20-123-121

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23



Labeled Hexa Chlorinated Biphenyls

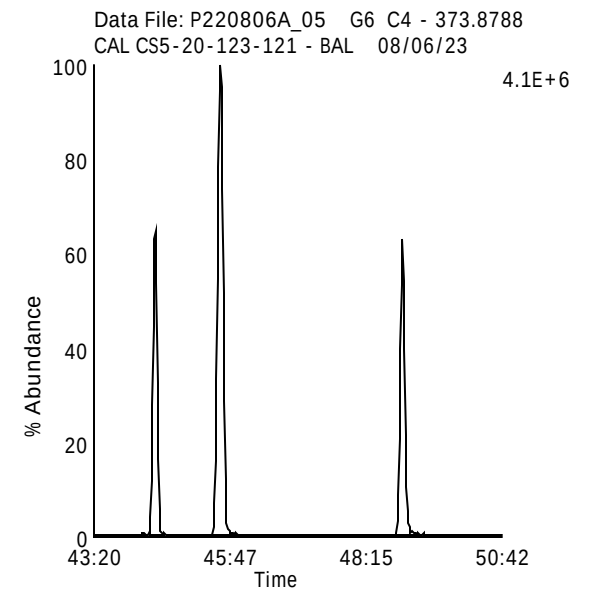
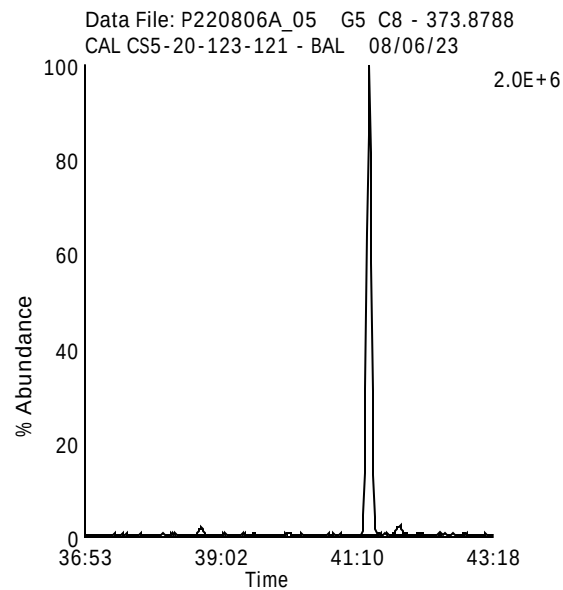
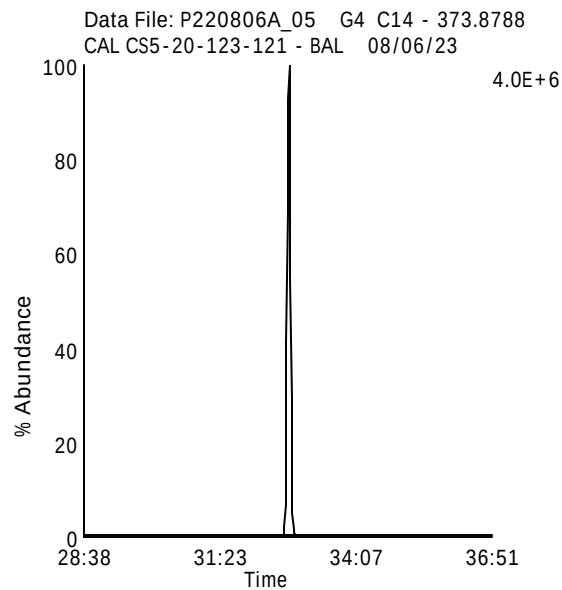
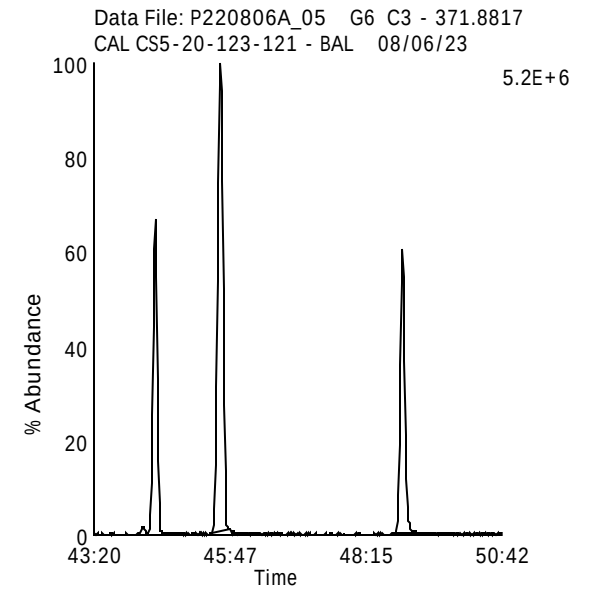
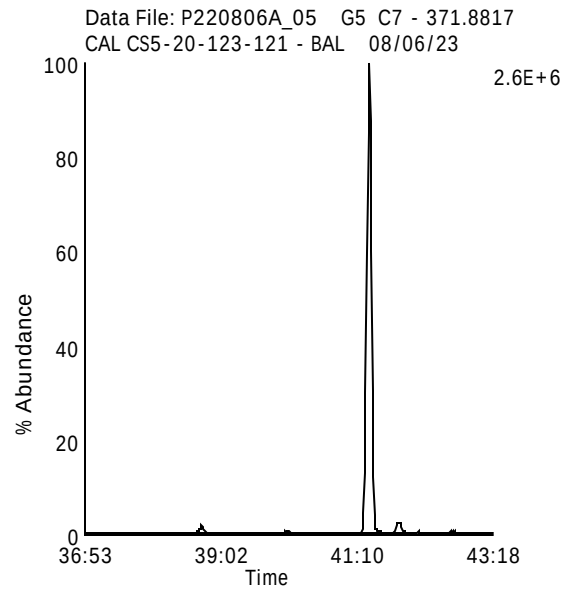
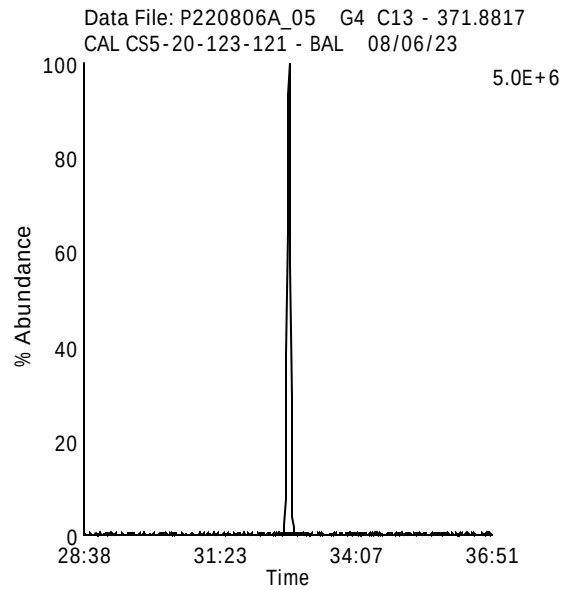
Data File Name: P220806A_05

Lab Sample ID: CS5-20-123-121

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23



Labeled Hepta Chlorinated Biphenyls

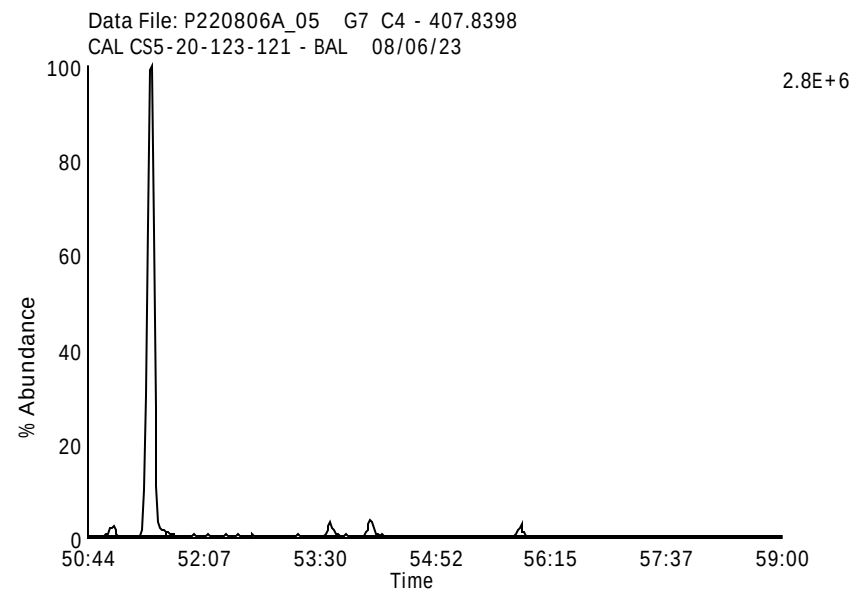
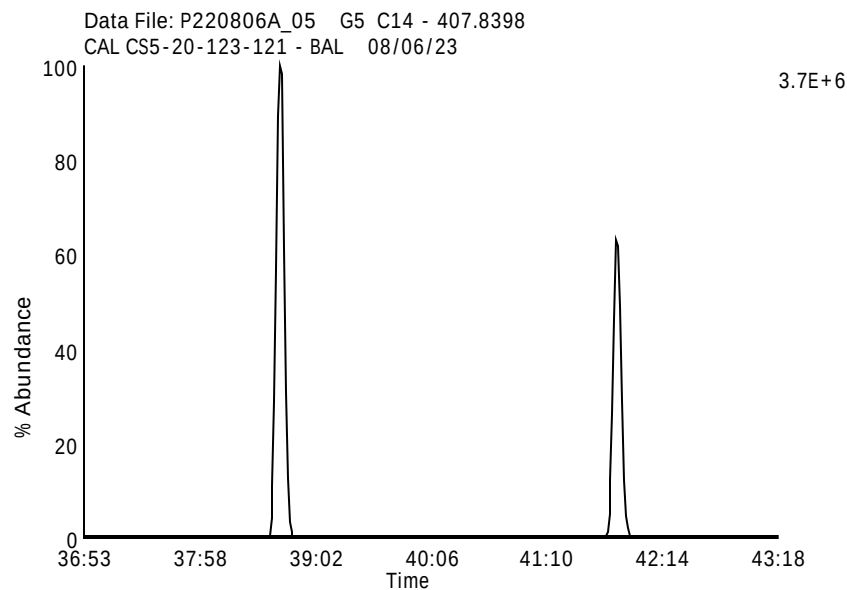
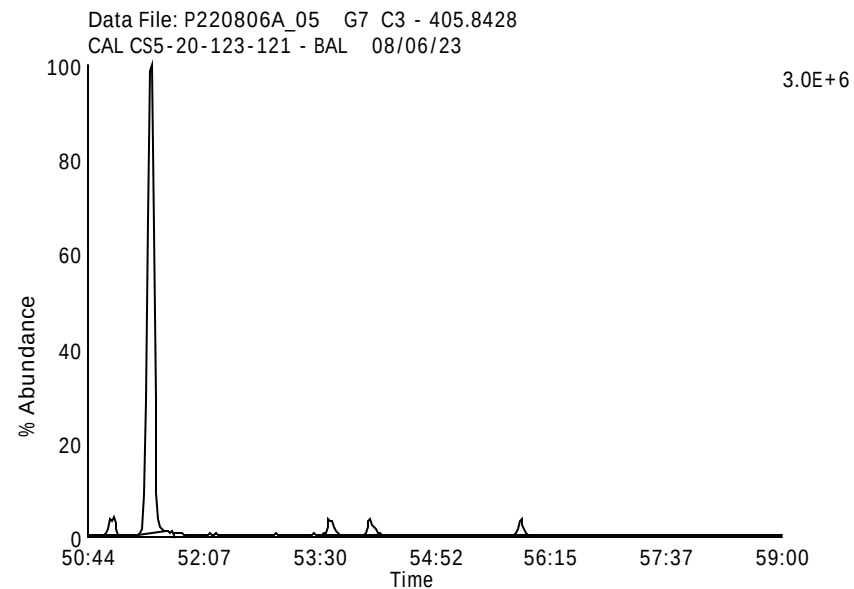
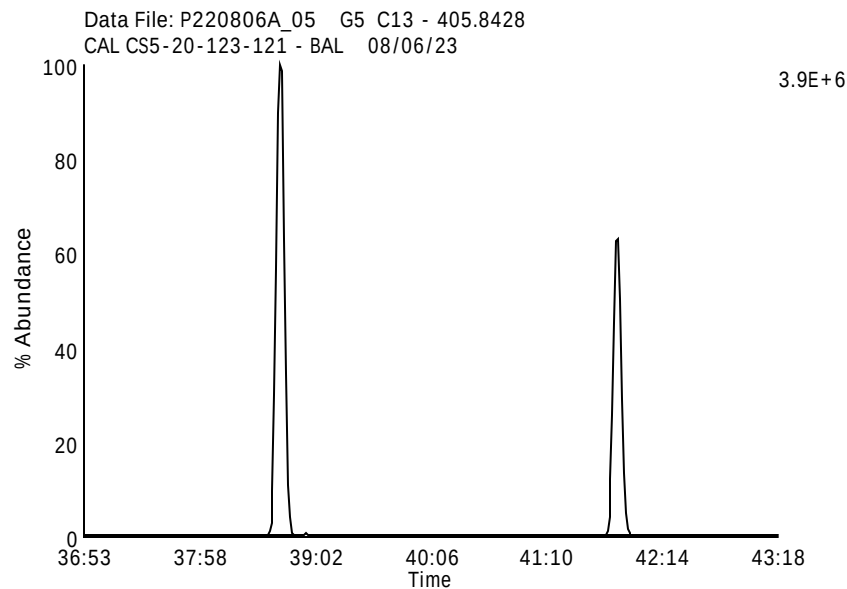
Data File Name: P220806A_05

Date Acquired: 8/6/2022

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23

Lab Sample ID: CS5-20-123-121

Instrument: 10MSHR09 (P)



Labeled Octa Chlorinated Biphenyls

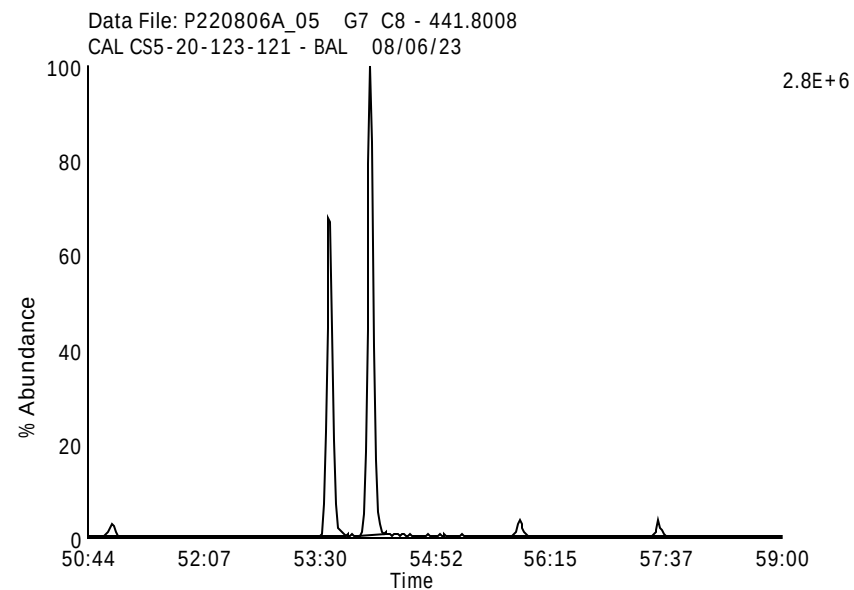
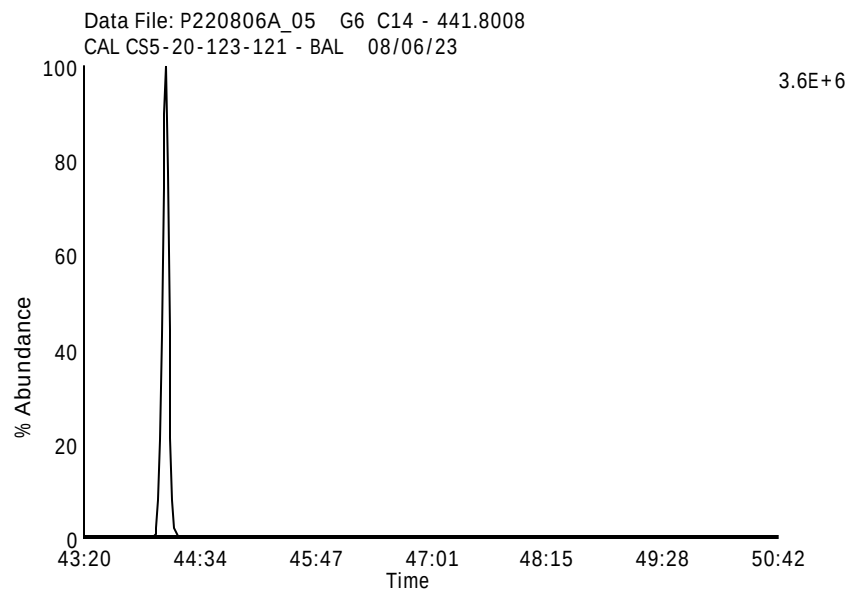
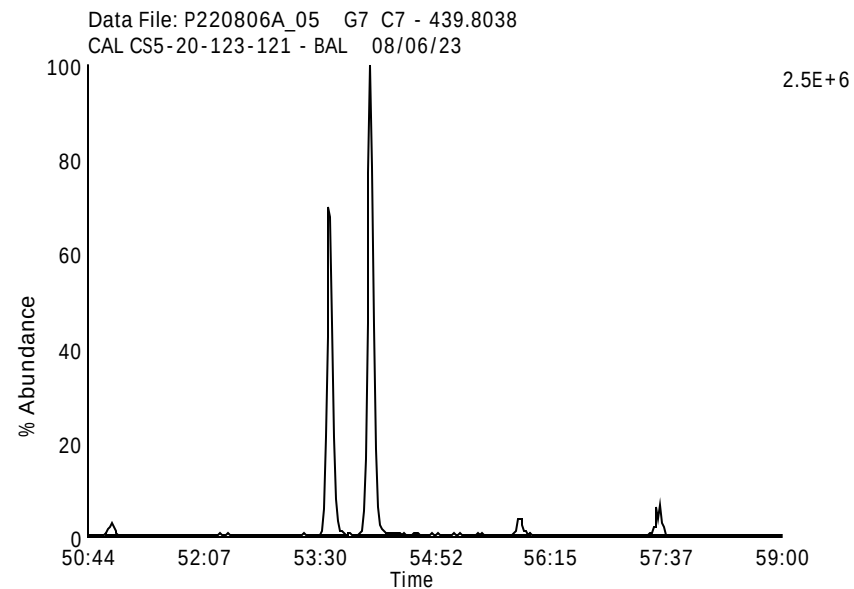
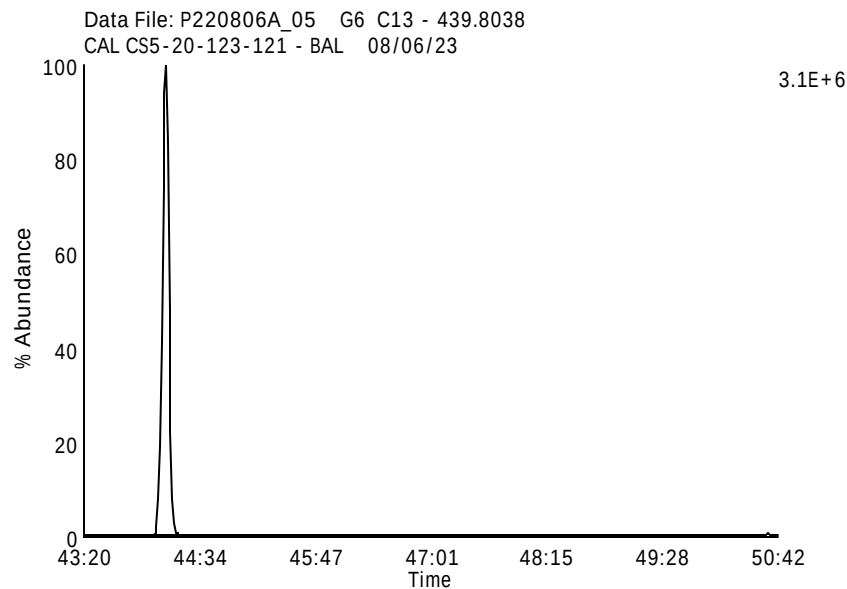
Data File Name: P220806A_05

Lab Sample ID: CS5-20-123-121

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23



Labeled Nona Chlorinated Biphenyls

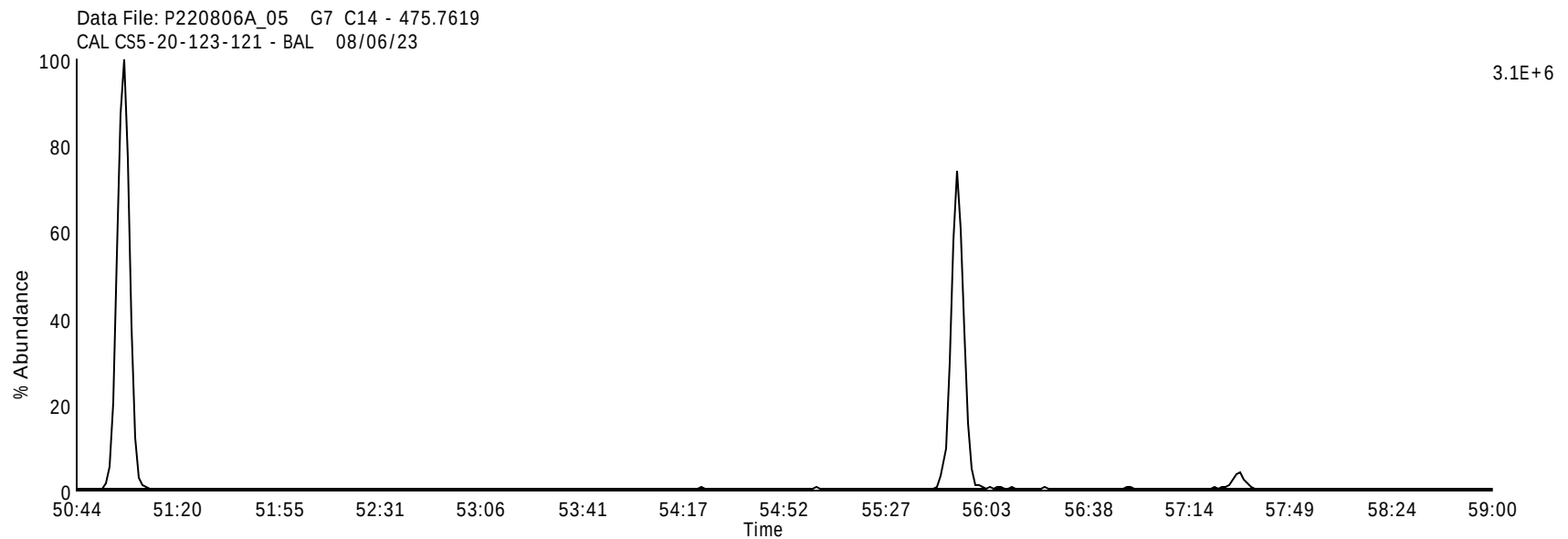
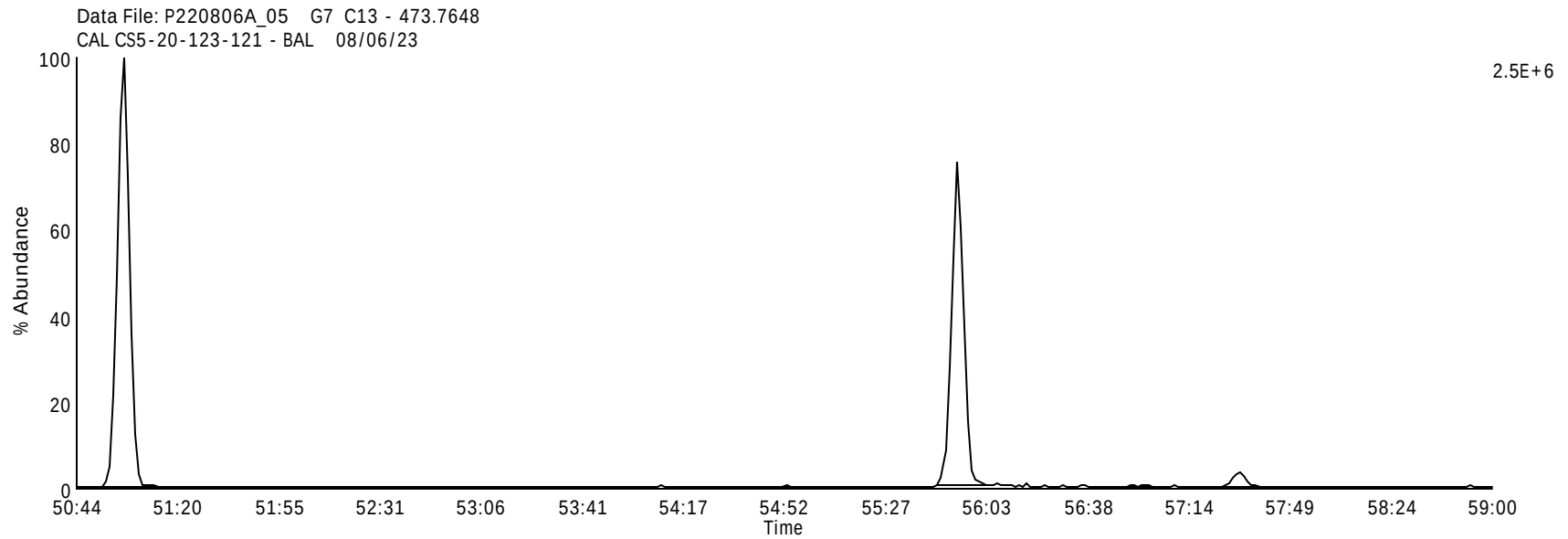
Data File Name: P220806A_05

Lab Sample ID: CS5-20-123-121

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23



Labeled Deca Chlorinated Biphenyl

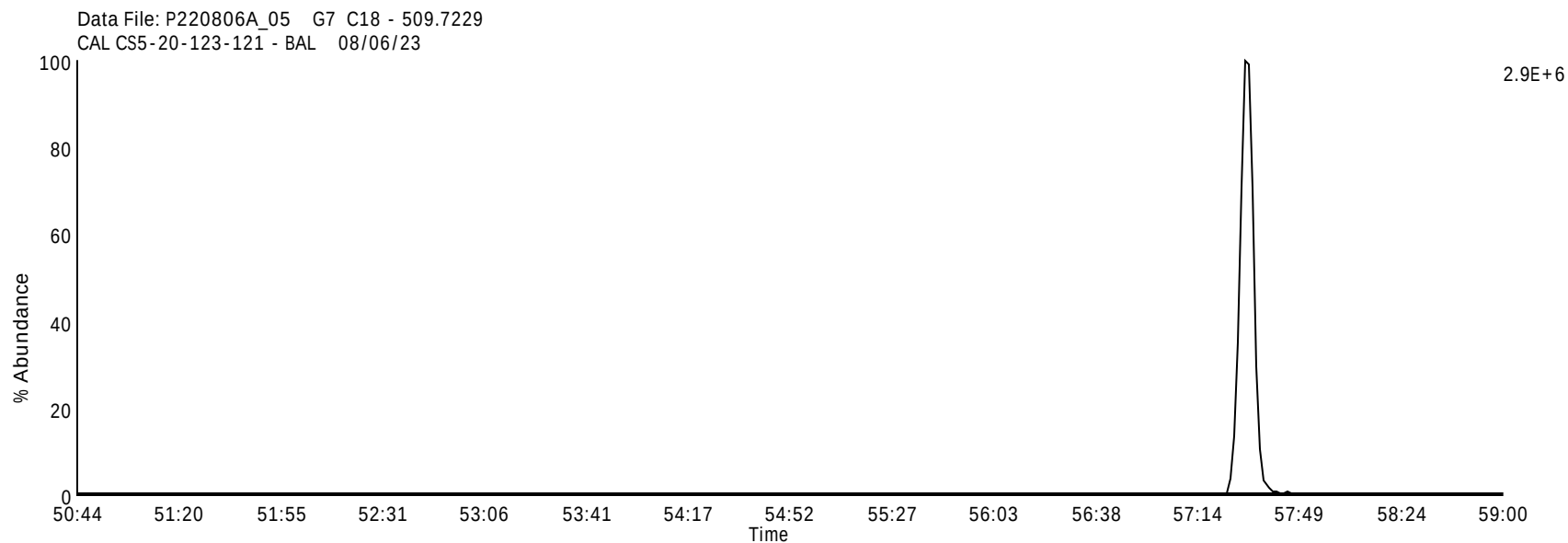
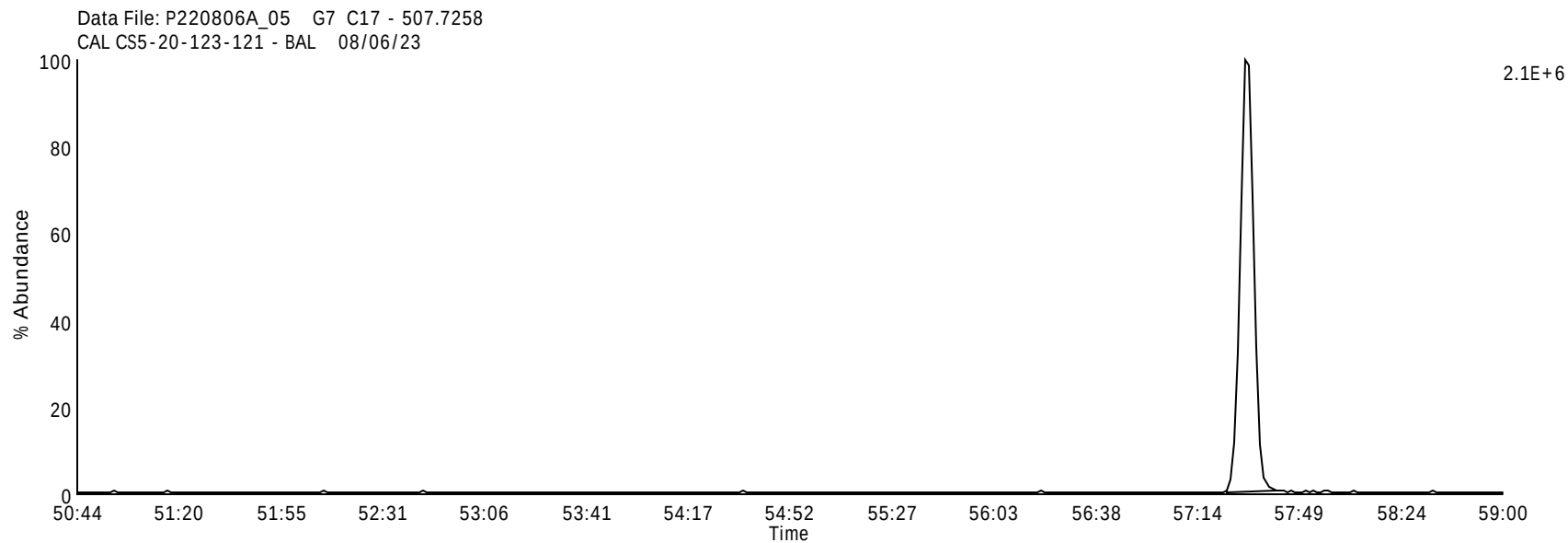
Data File Name: P220806A_05

Date Acquired: 8/6/2022

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23

Lab Sample ID: CS5-20-123-121

Instrument: 10MSHR09 (P)



Mono Chlorinated Biphenyls

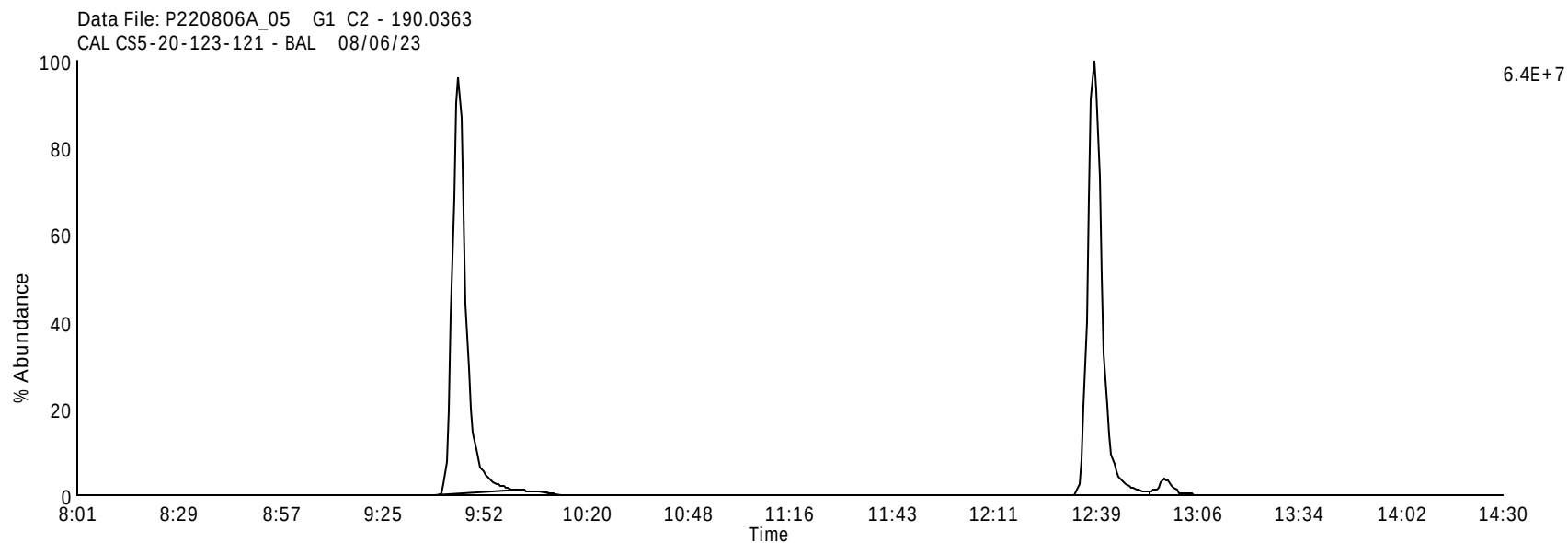
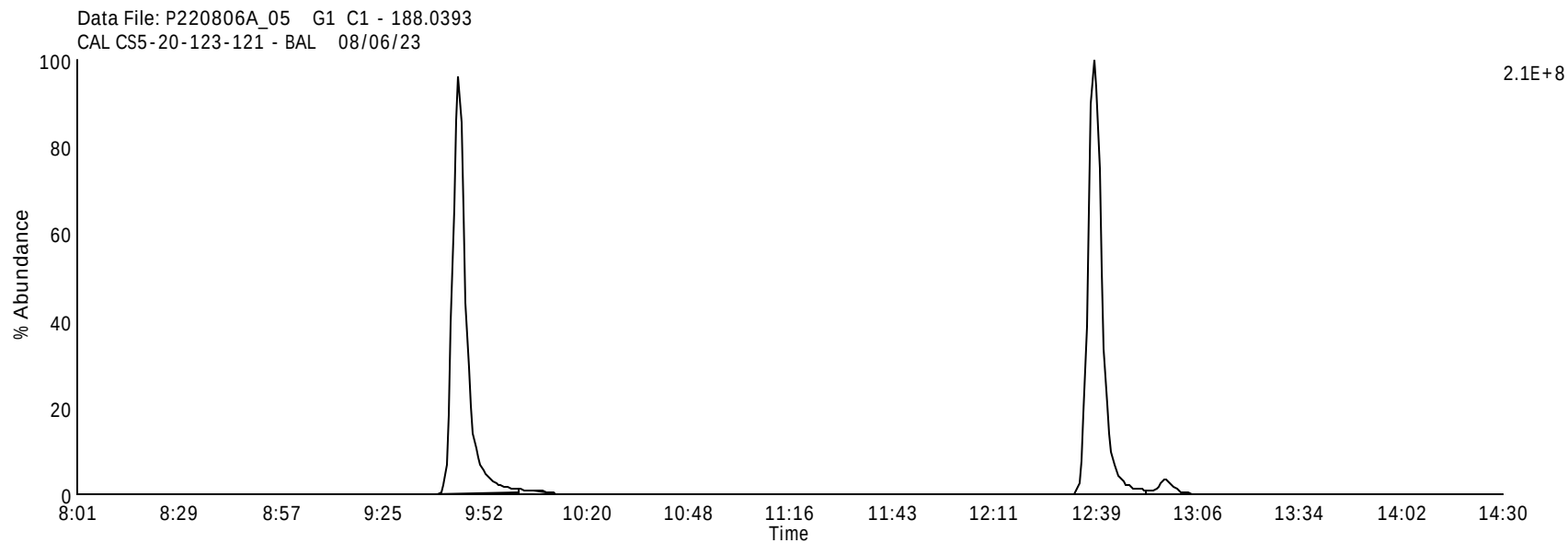
Data File Name: P220806A_05

Lab Sample ID: CS5-20-123-121

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23



Di Chlorinated Biphenyls

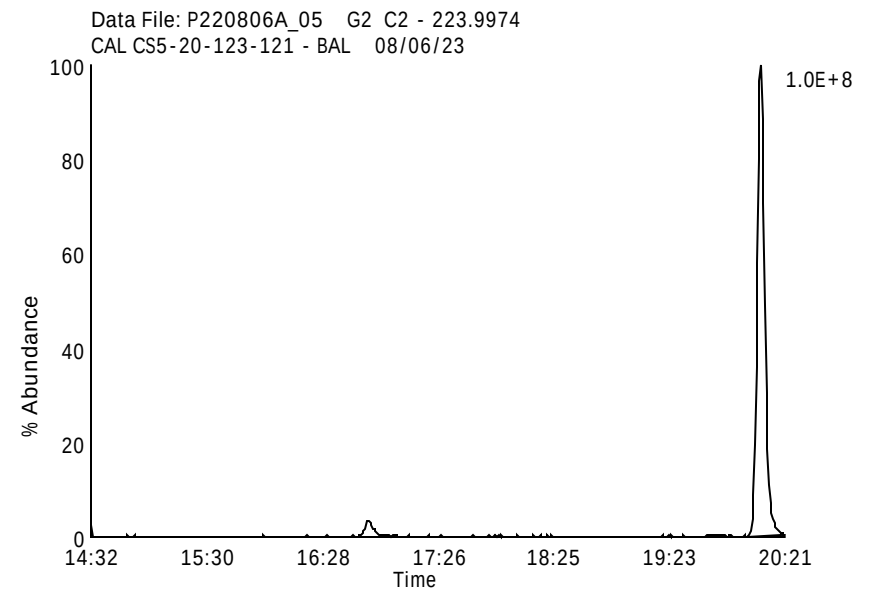
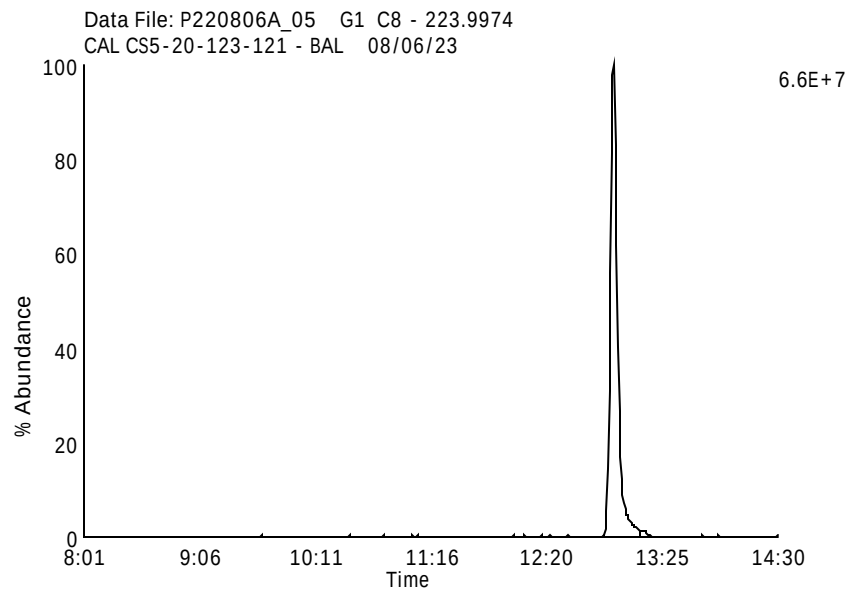
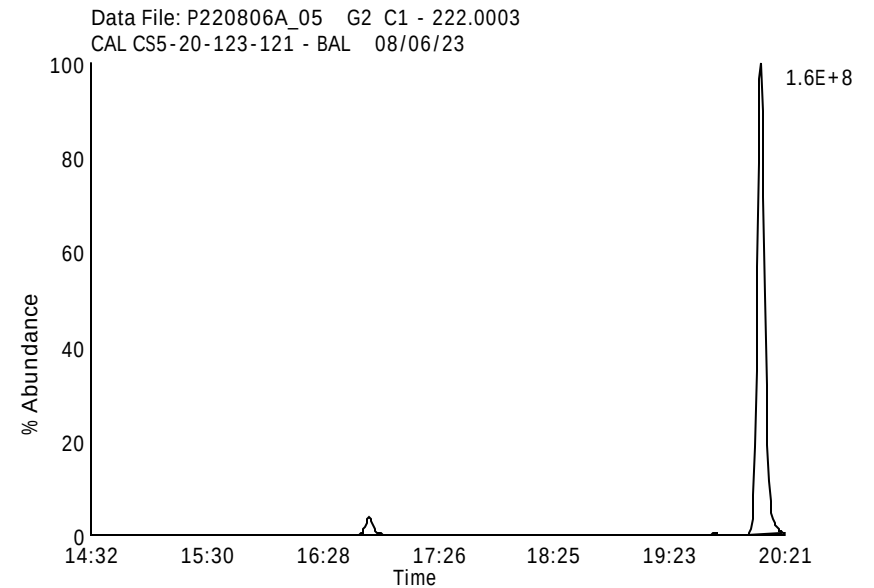
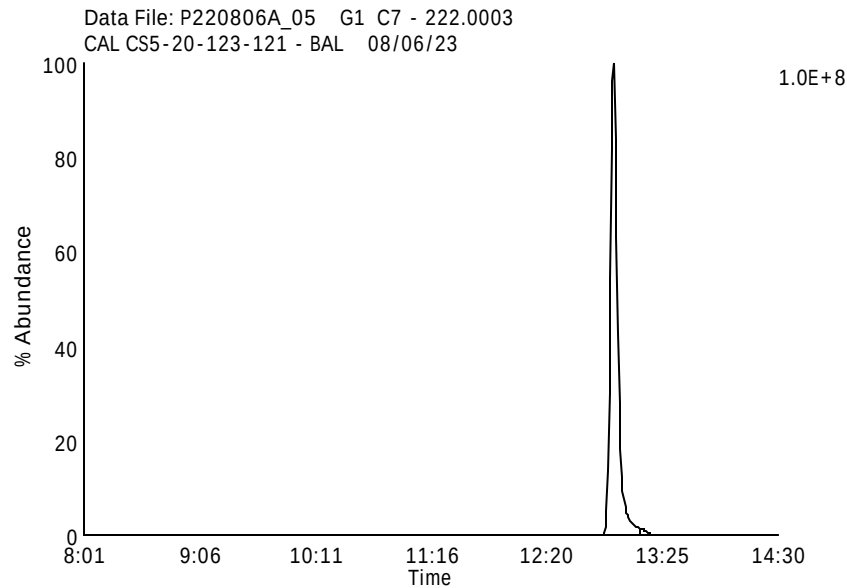
Data File Name: P220806A_05

Date Acquired: 8/6/2022

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23

Lab Sample ID: CS5-20-123-121

Instrument: 10MSHR09 (P)



Tri Chlorinated Biphenyls

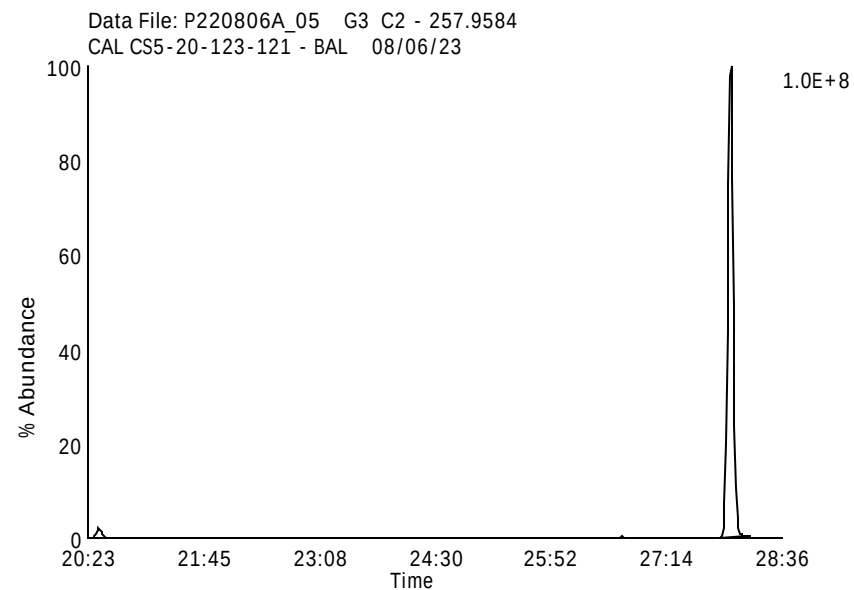
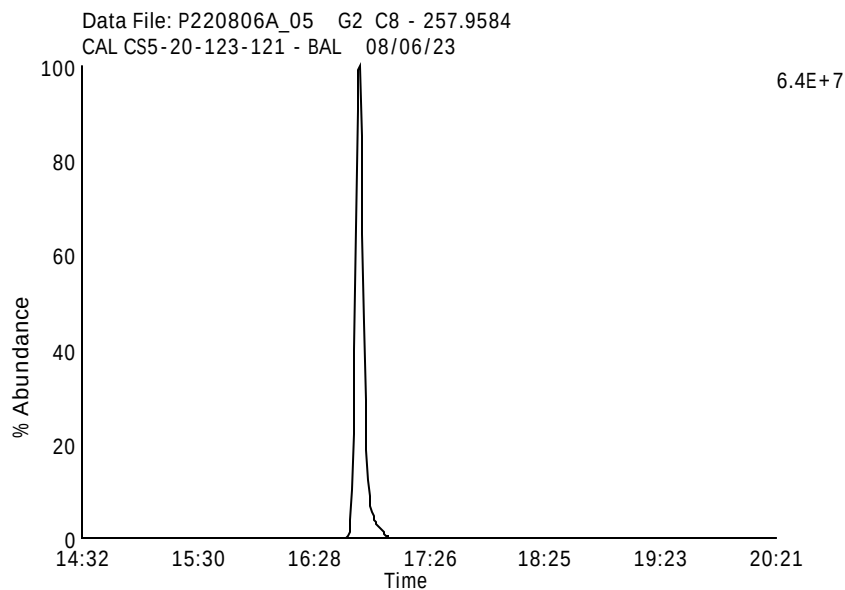
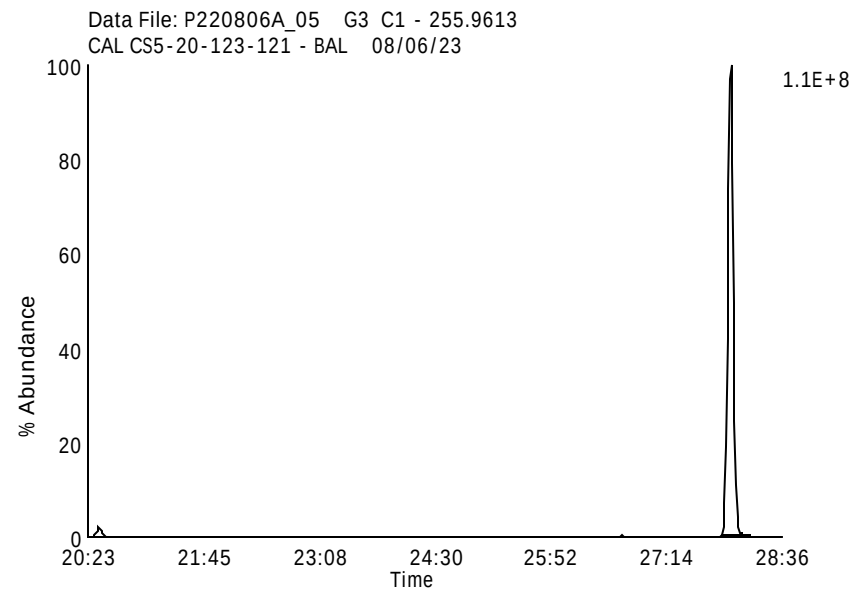
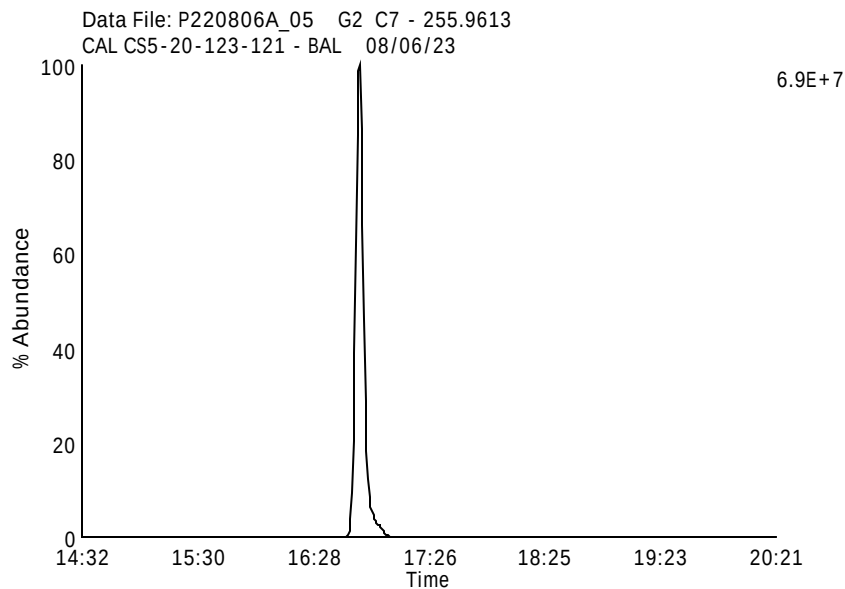
Data File Name: P220806A_05

Date Acquired: 8/6/2022

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23

Lab Sample ID: CS5-20-123-121

Instrument: 10MSHR09 (P)



Tetra Chlorinated Biphenyls

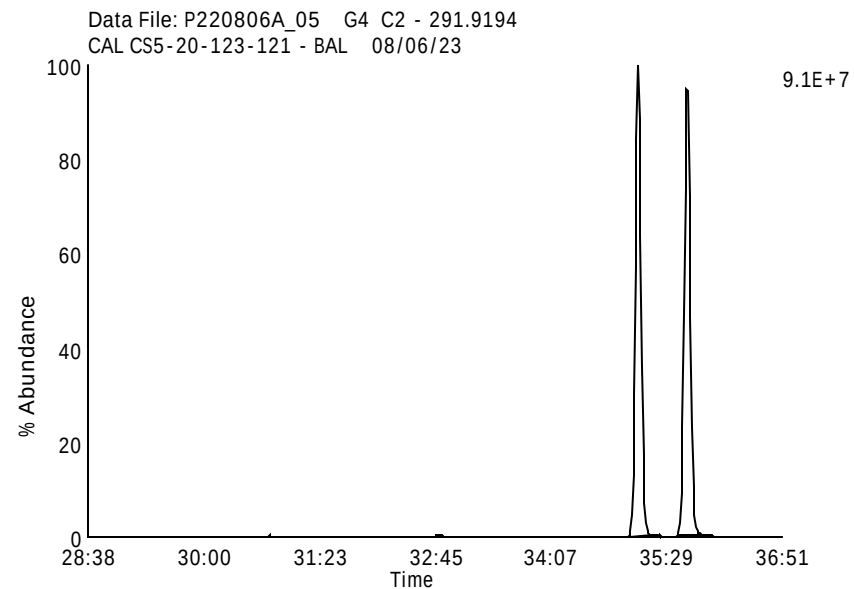
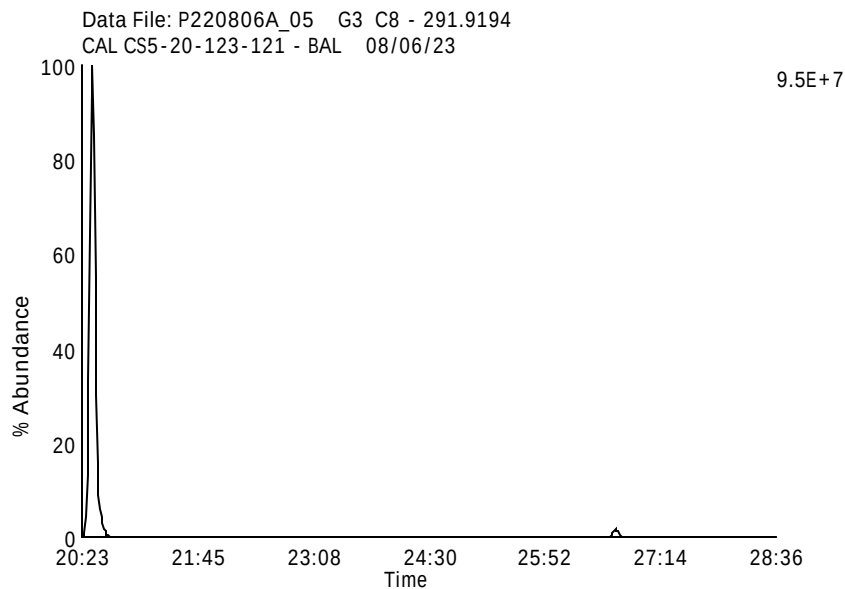
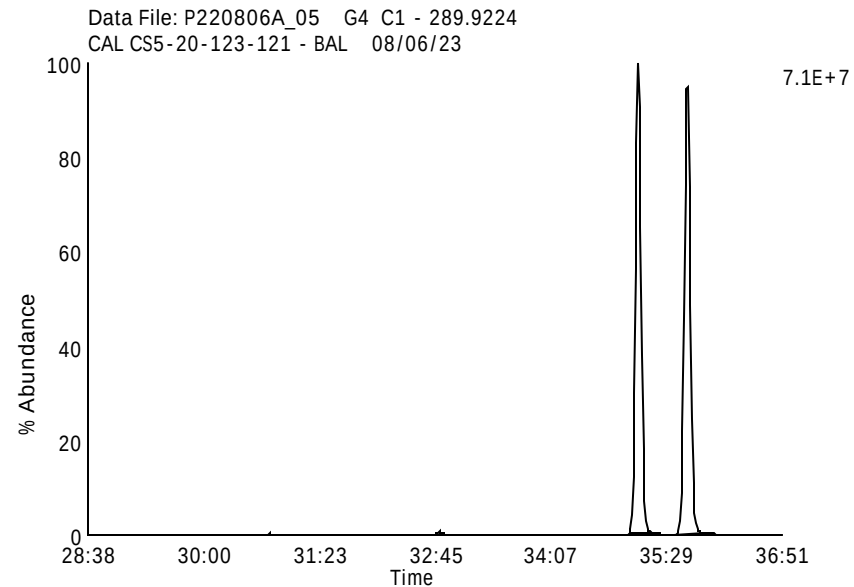
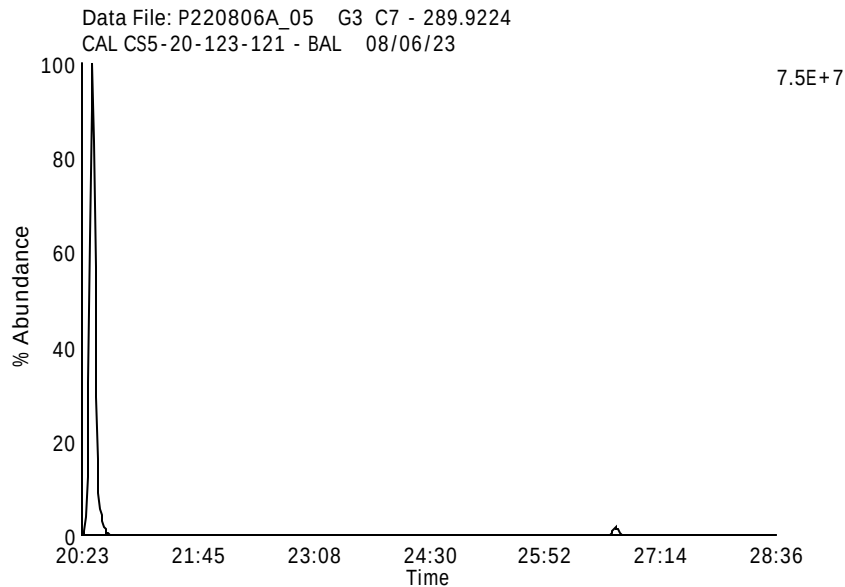
Data File Name: P220806A_05

Lab Sample ID: CS5-20-123-121

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23



Penta Chlorinated Biphenyls

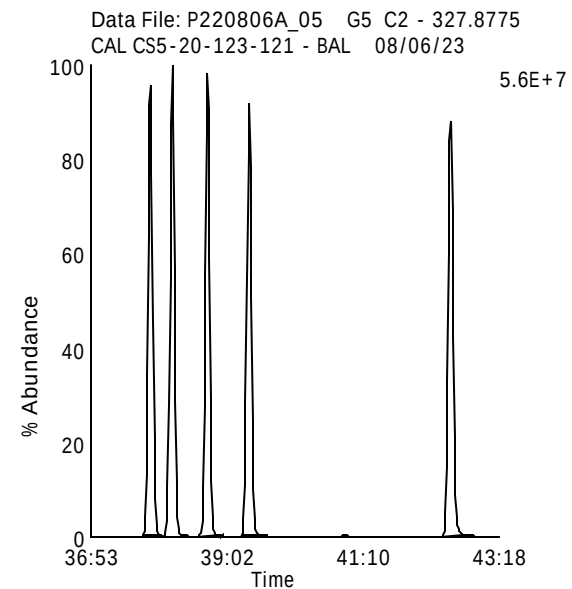
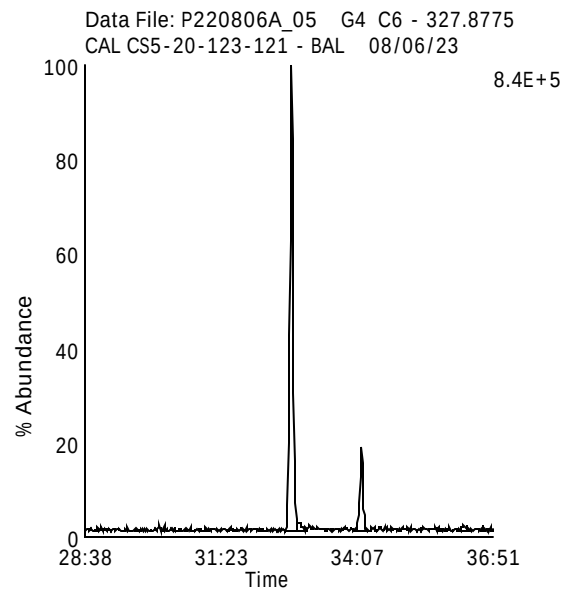
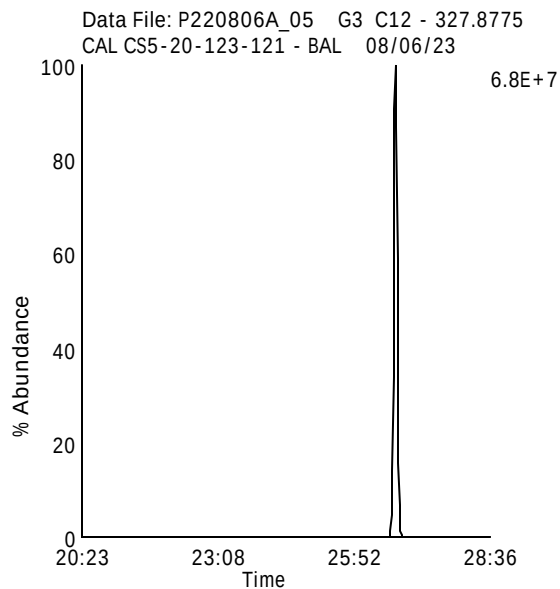
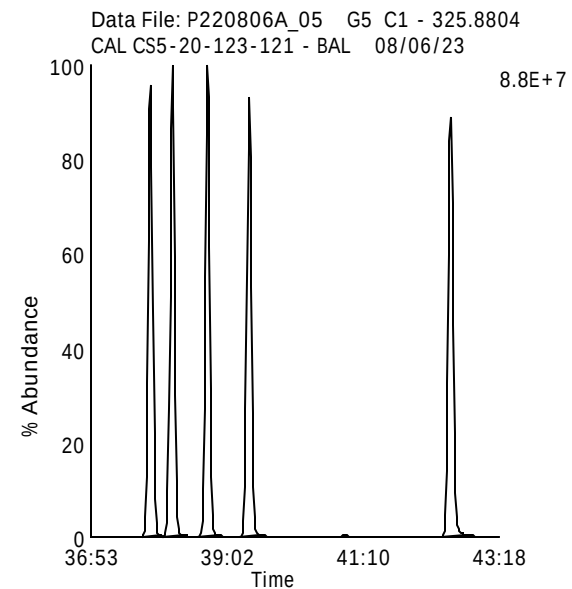
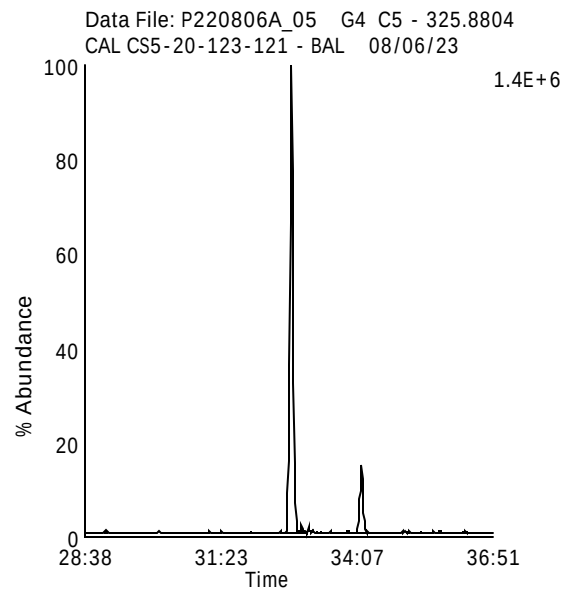
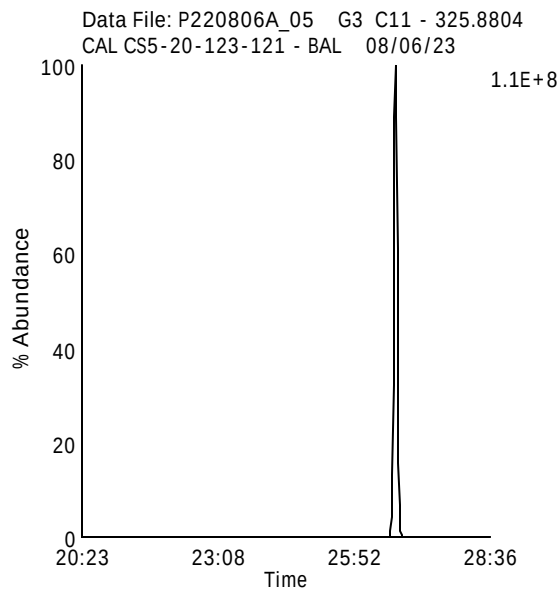
Data File Name: P220806A_05

Lab Sample ID: CS5-20-123-121

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23



Hexa Chlorinated Biphenyls

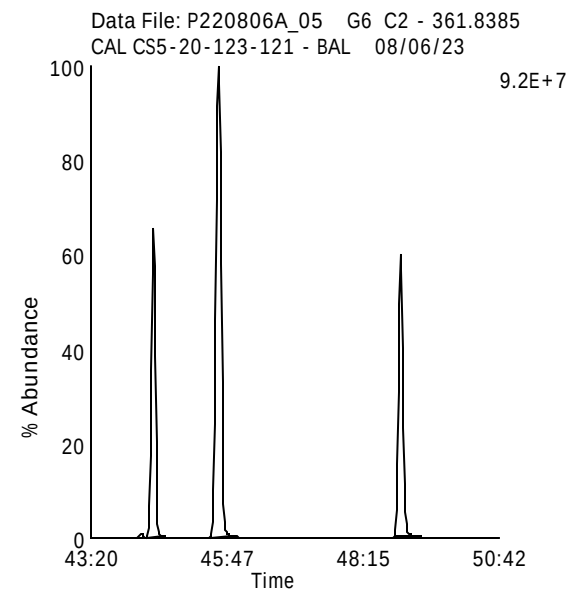
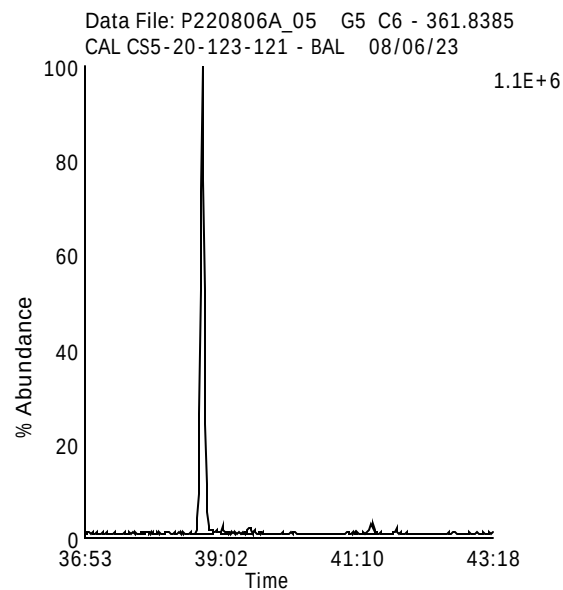
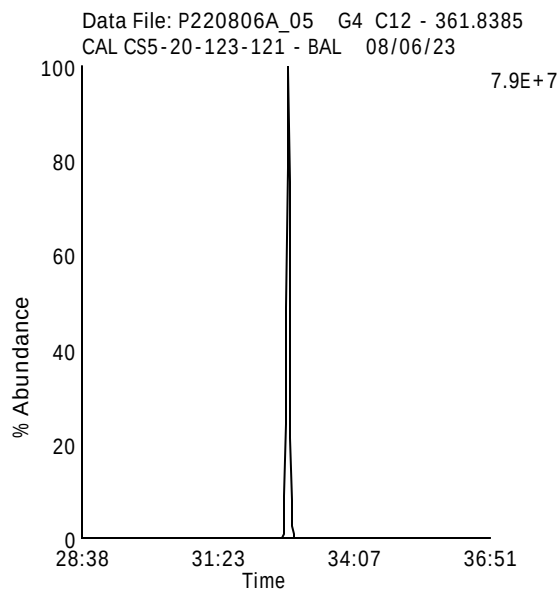
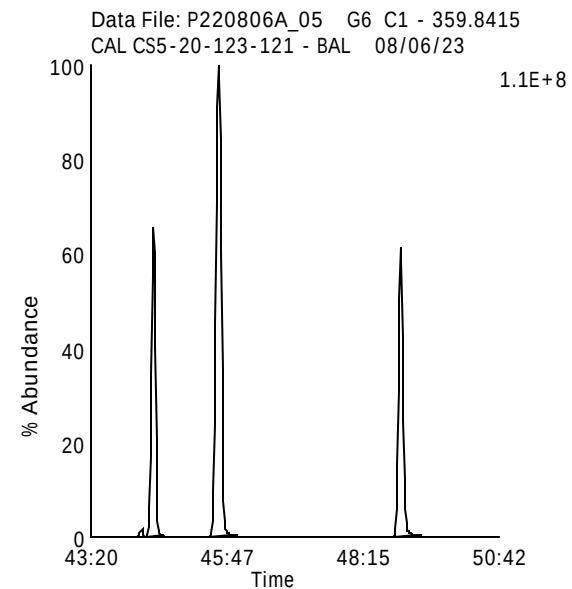
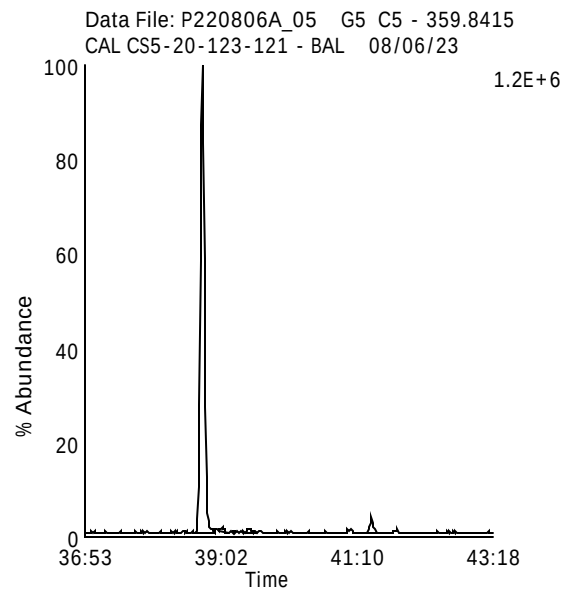
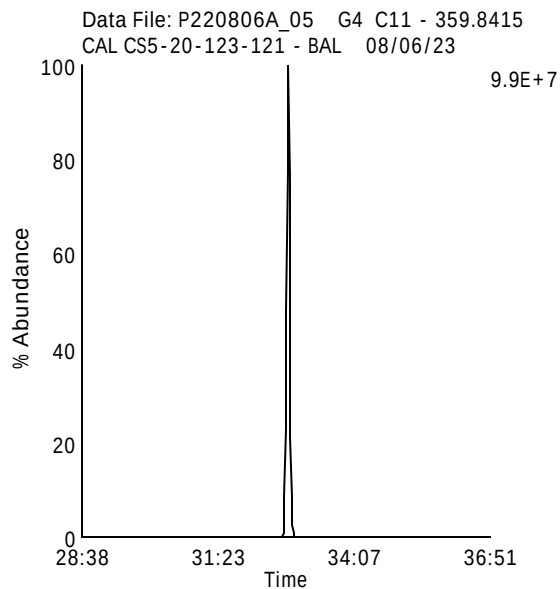
Data File Name: P220806A_05

Date Acquired: 8/6/2022

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23

Lab Sample ID: CS5-20-123-121

Instrument: 10MSHR09 (P)



Hepta Chlorinated Biphenyls

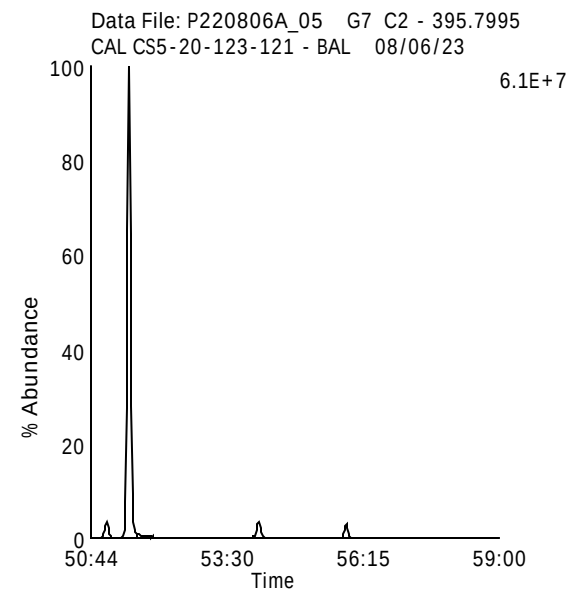
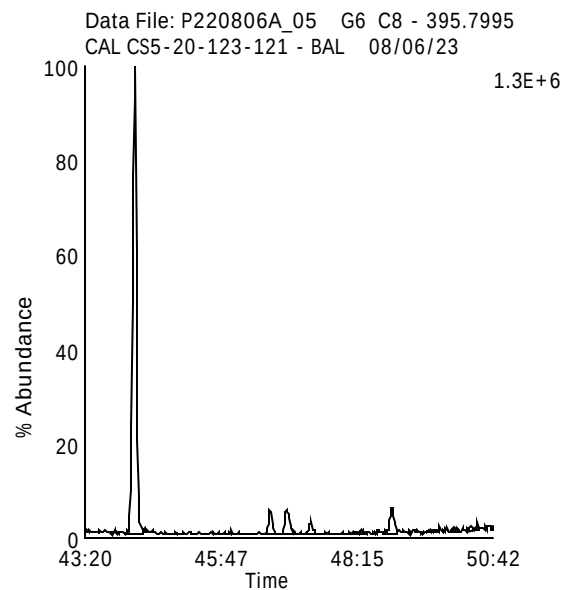
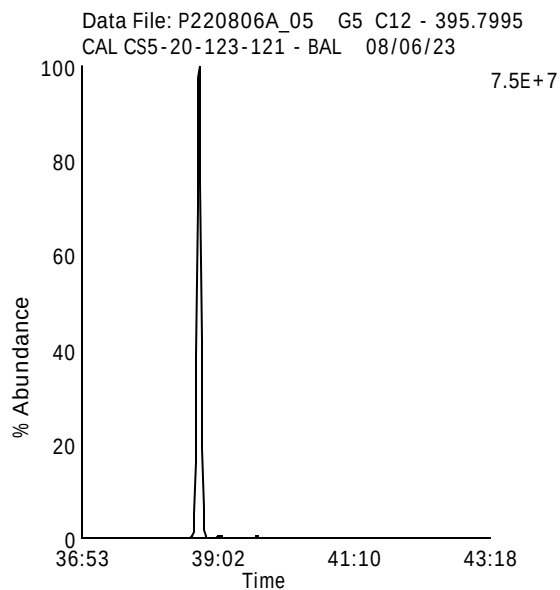
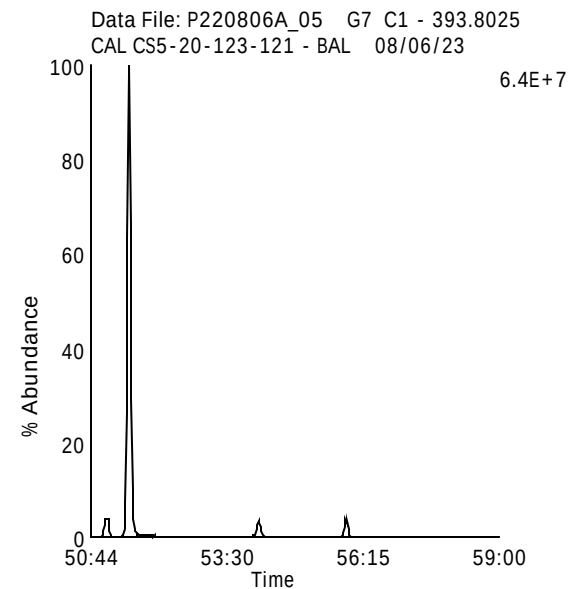
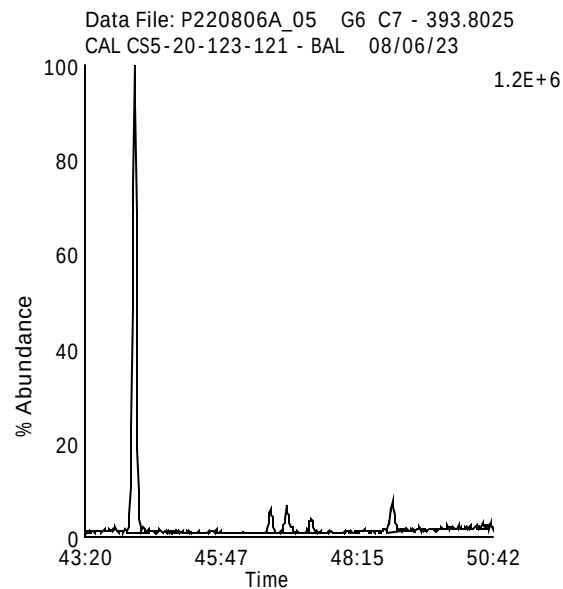
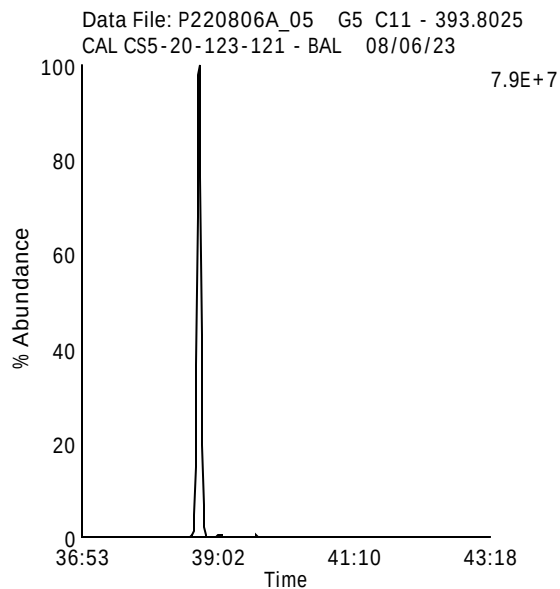
Data File Name: P220806A_05

Lab Sample ID: CS5-20-123-121

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23



Octa Chlorinated Biphenyls

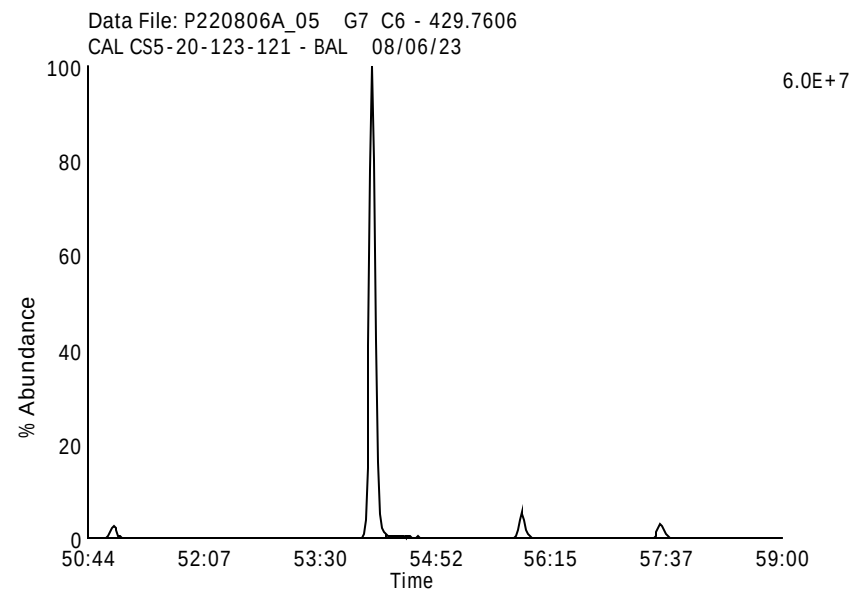
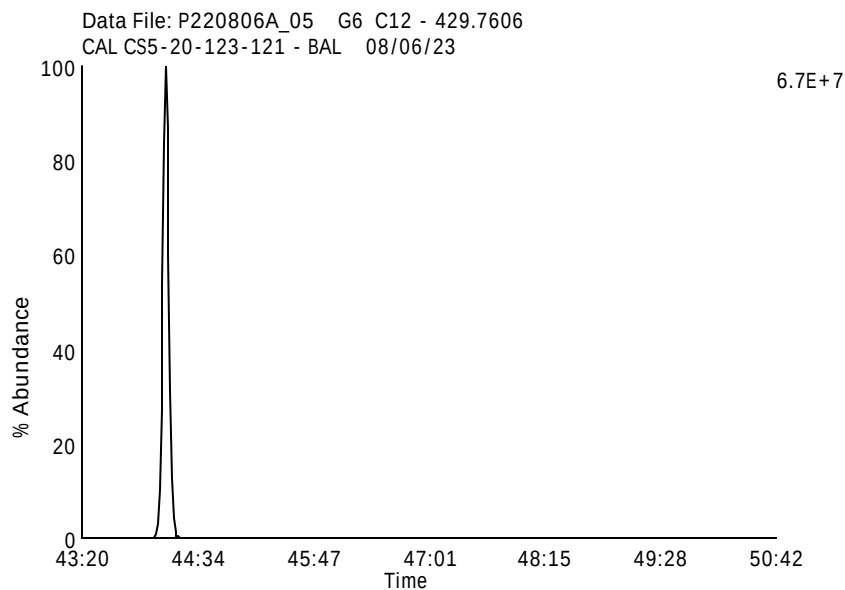
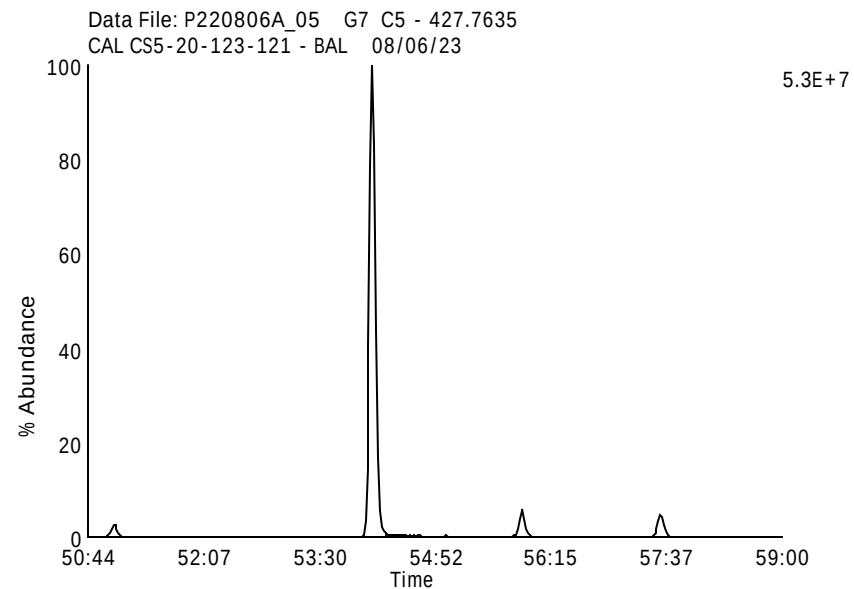
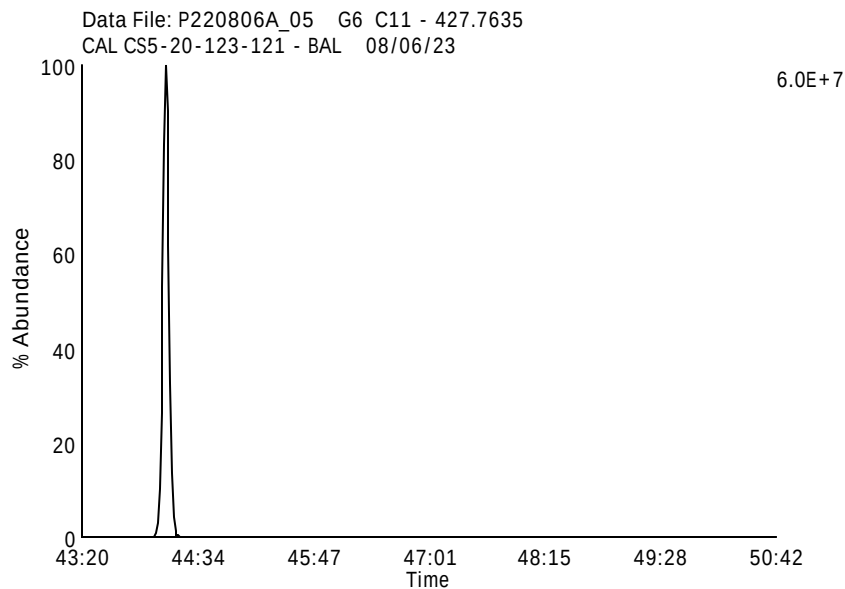
Data File Name: P220806A_05

Date Acquired: 8/6/2022

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23

Lab Sample ID: CS5-20-123-121

Instrument: 10MSHR09 (P)



Nona Chlorinated Biphenyls

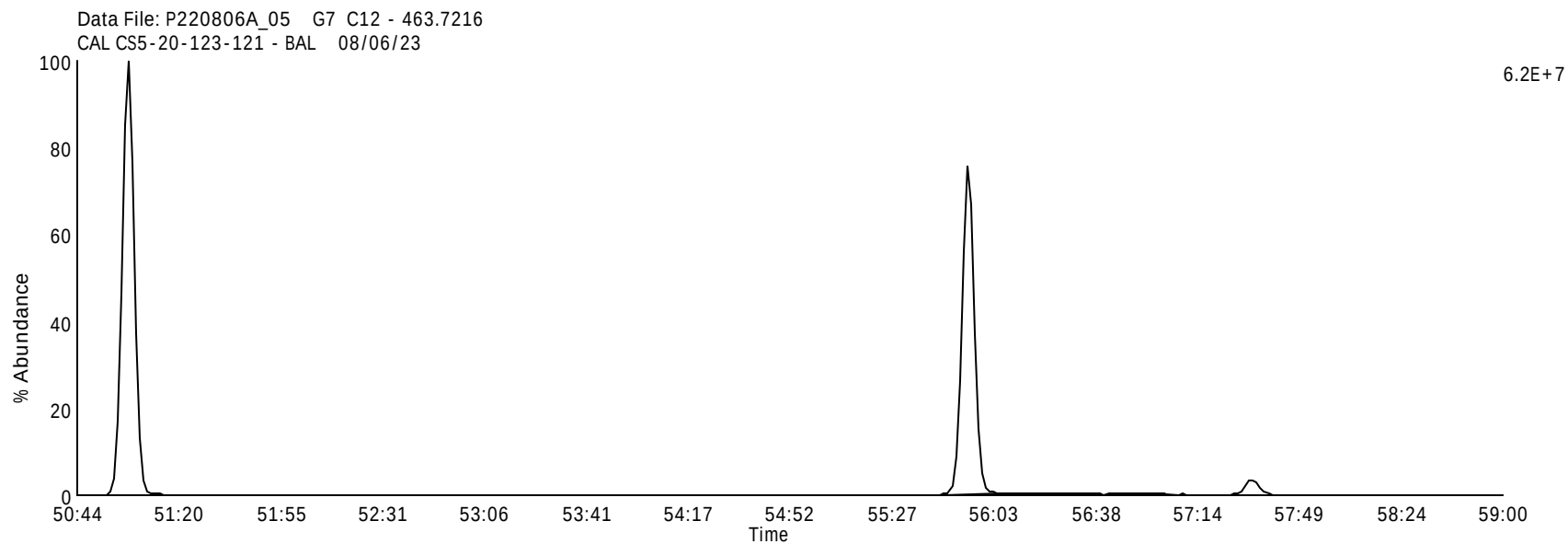
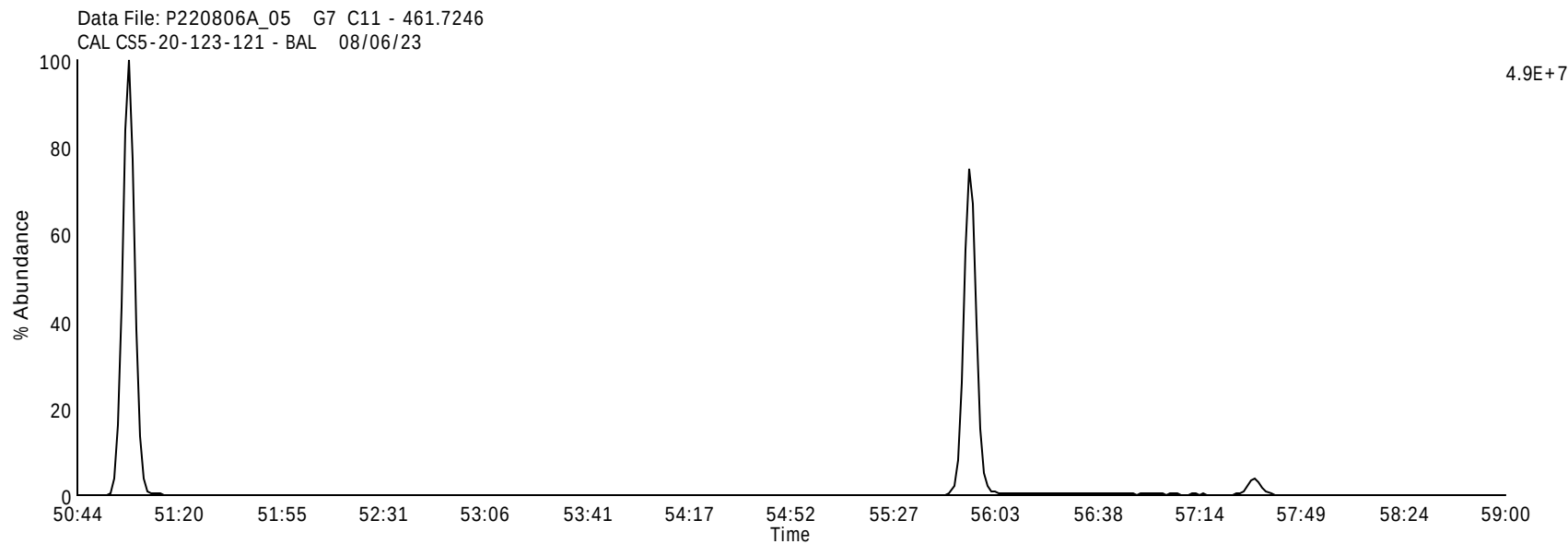
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Lab Sample ID: CS5-20-123-121

Date Acquired: 8/6/2022

Instrument: 10MSHR09 (P)

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23



Deca Chlorinated Biphenyl

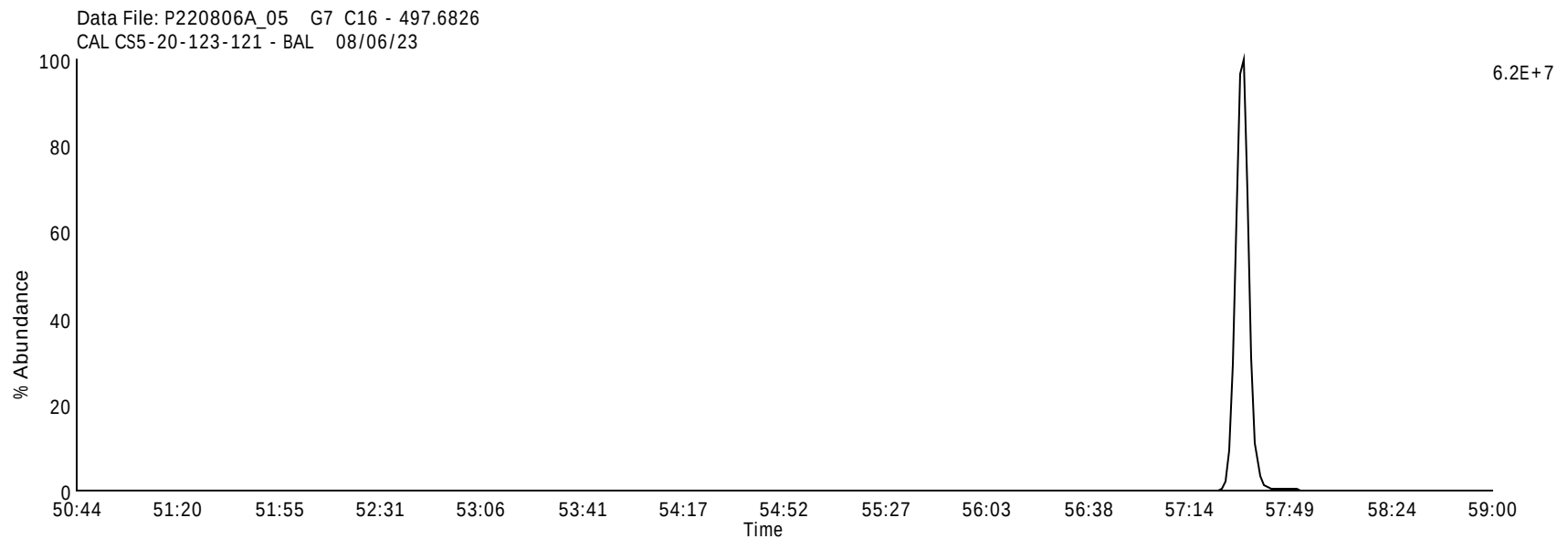
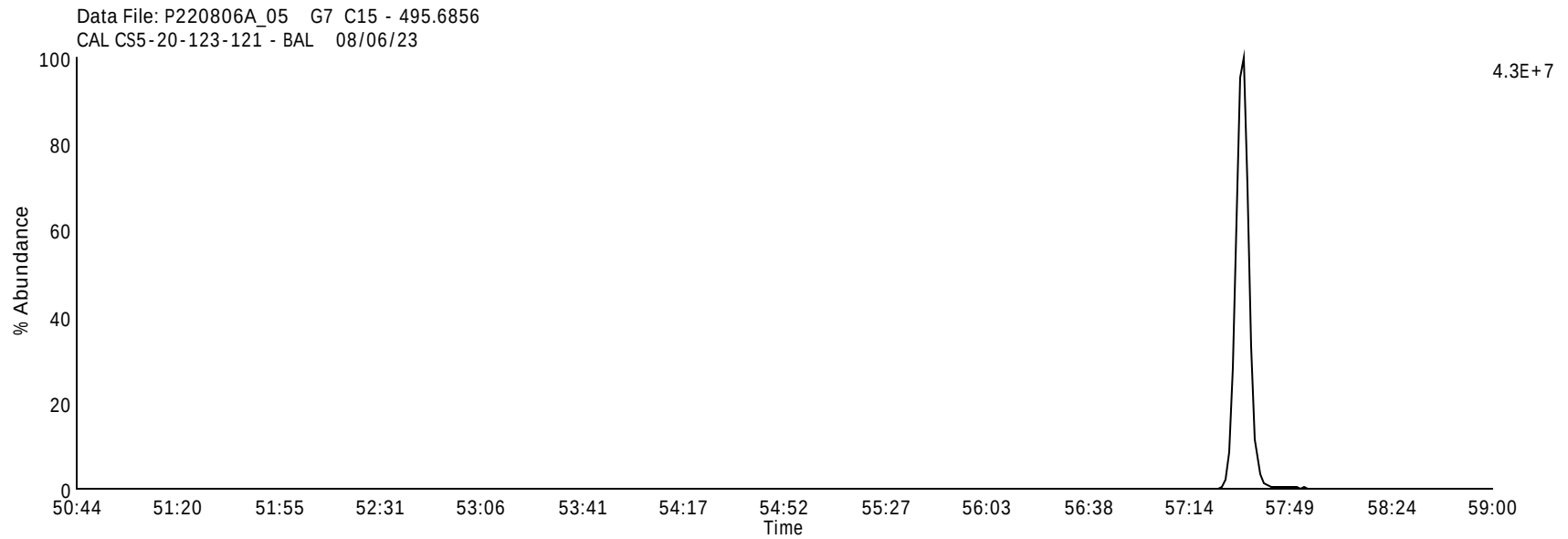
Data File Name: P220806A_05

Date Acquired: 8/6/2022

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23

Lab Sample ID: CS5-20-123-121

Instrument: 10MSHR09 (P)



Group 1 - 4 Lock mass

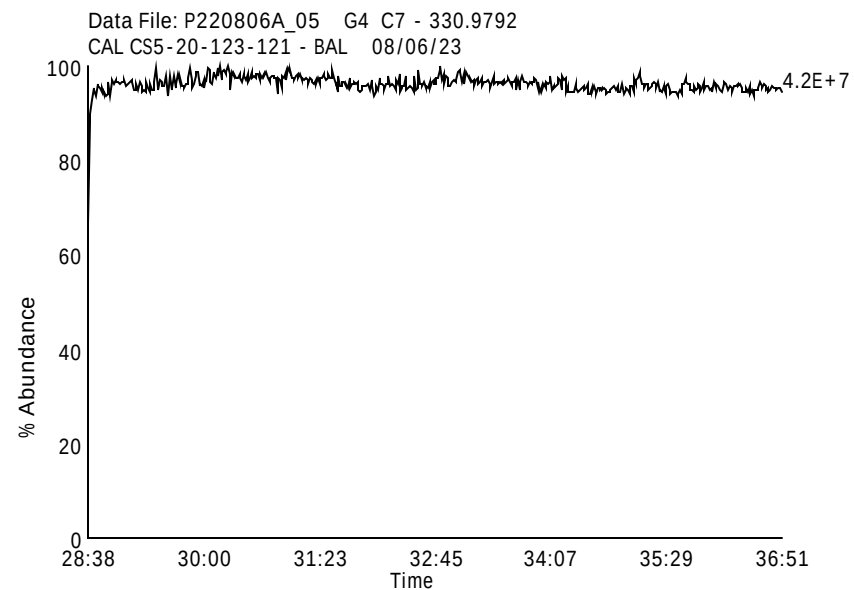
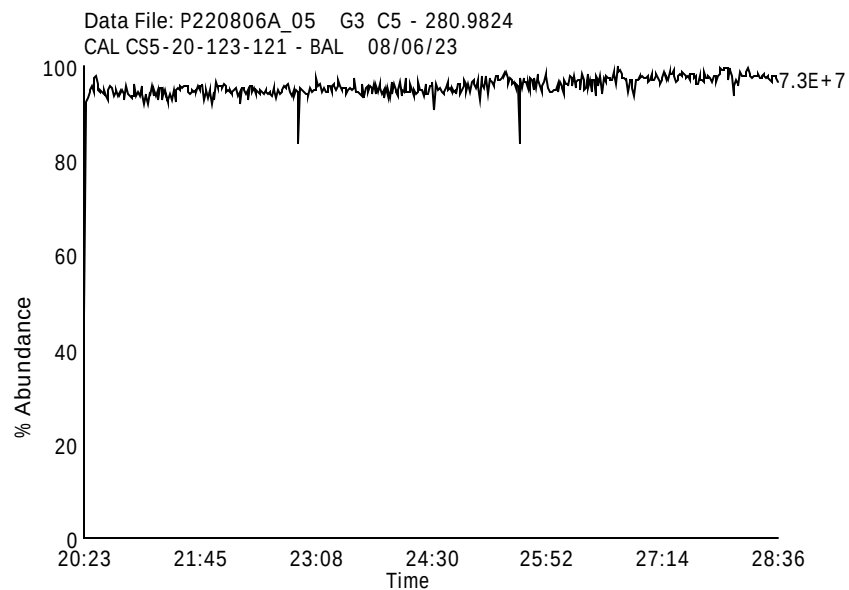
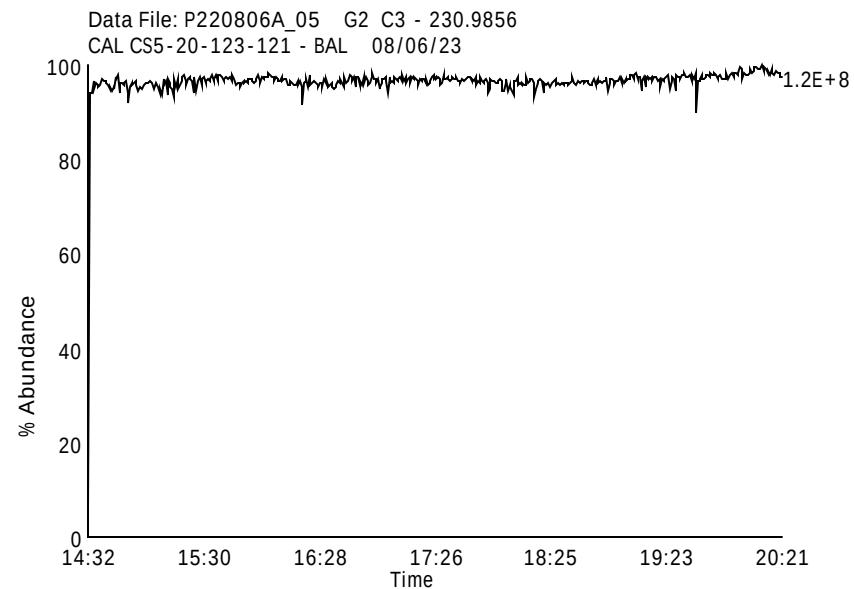
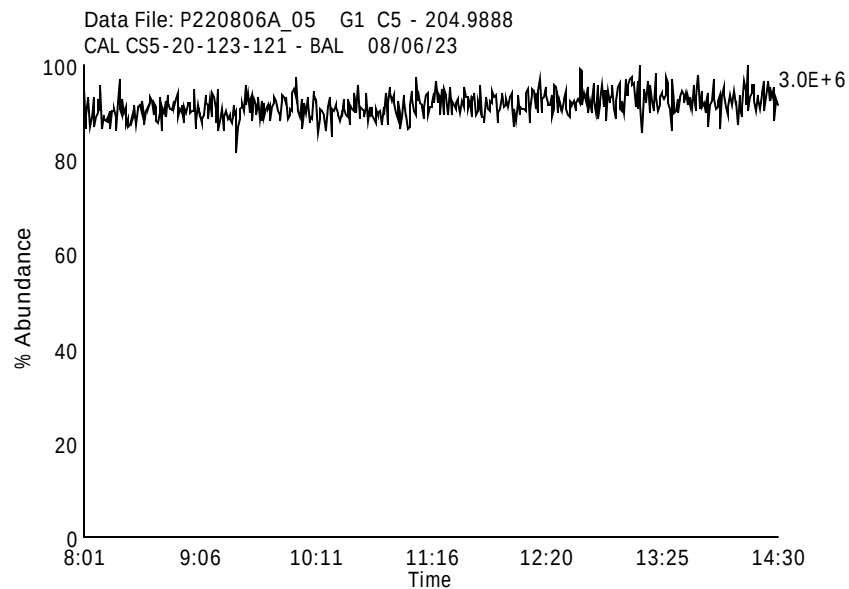
Data File Name: P220806A_05

Date Acquired: 8/6/2022

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23

Lab Sample ID: CS5-20-123-121

Instrument: 10MSHR09 (P)



Group 5 - 7 Lock mass

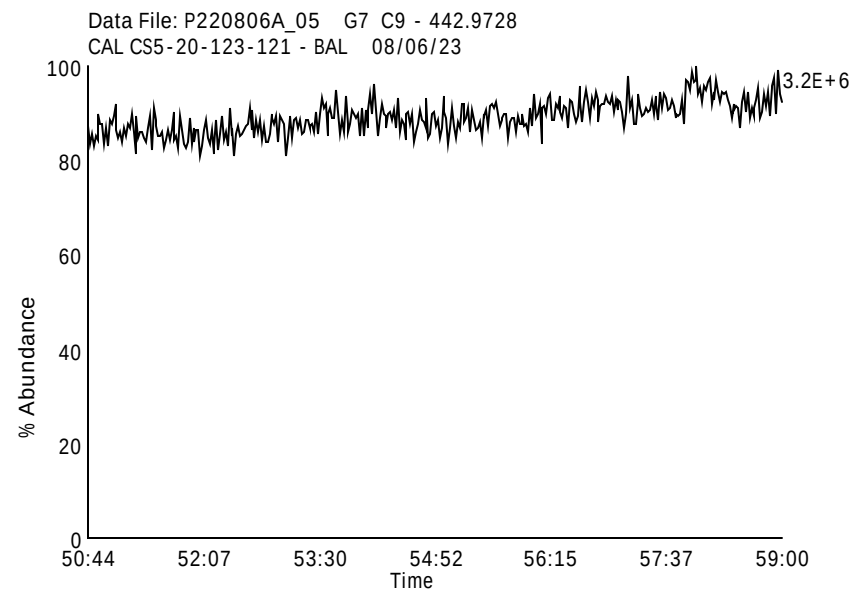
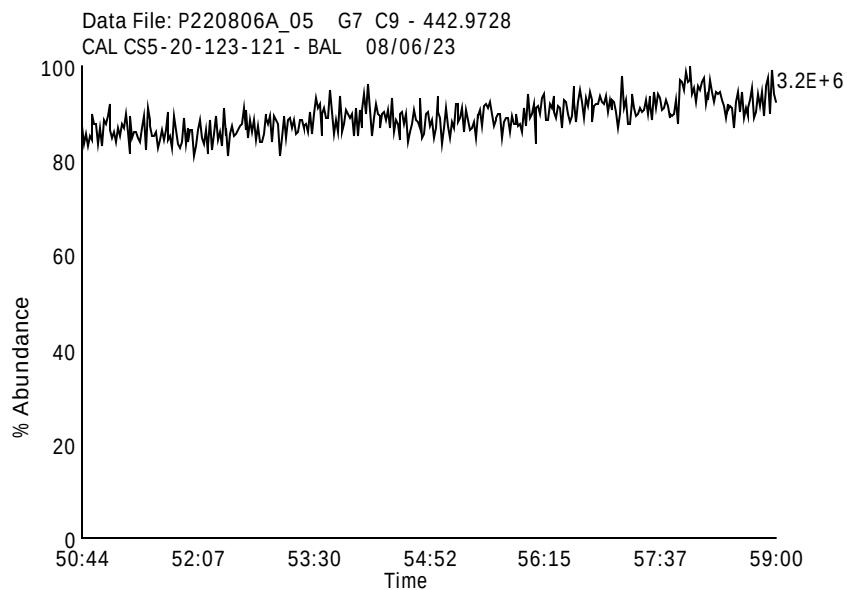
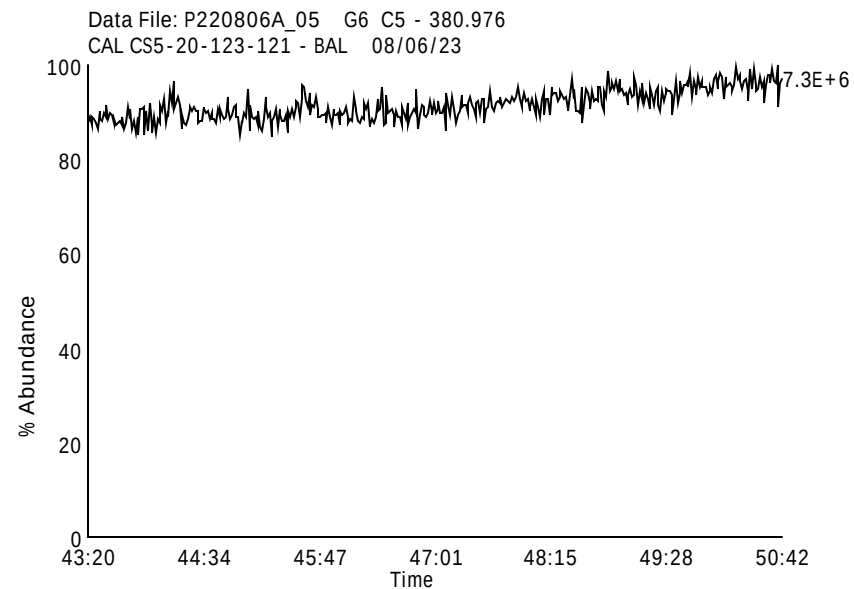
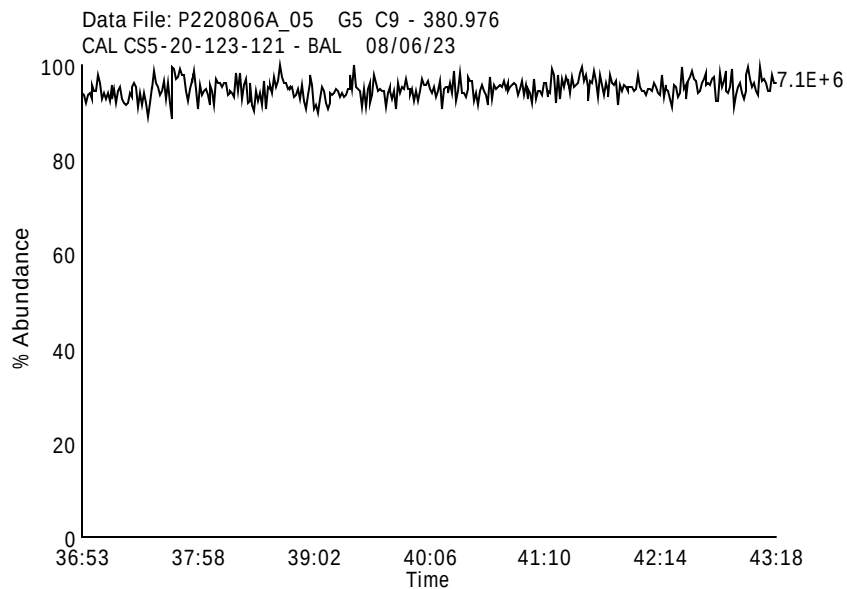
Data File Name: P220806A_05

Date Acquired: 8/6/2022

Sample Description: CAL CS5-20-123-121 - BAL 08/06/23

Lab Sample ID: CS5-20-123-121

Instrument: 10MSHR09 (P)



Labeled Mono Chlorinated Biphenyls

Data File Name: P230112A_04

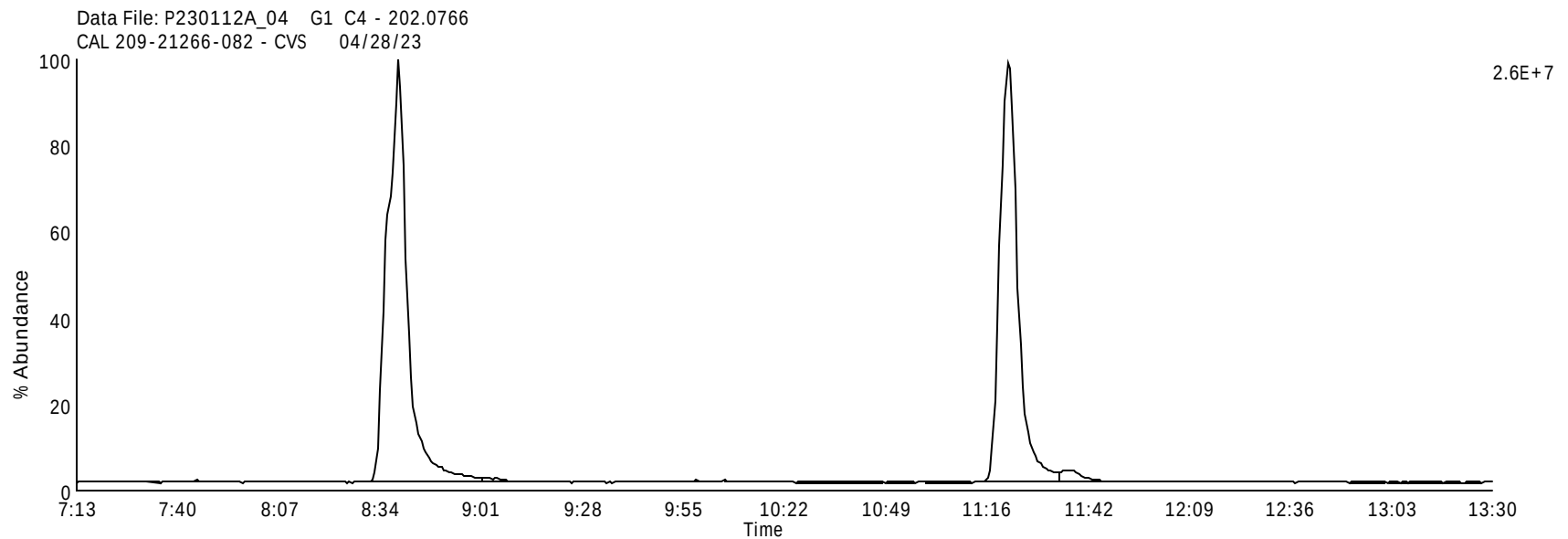
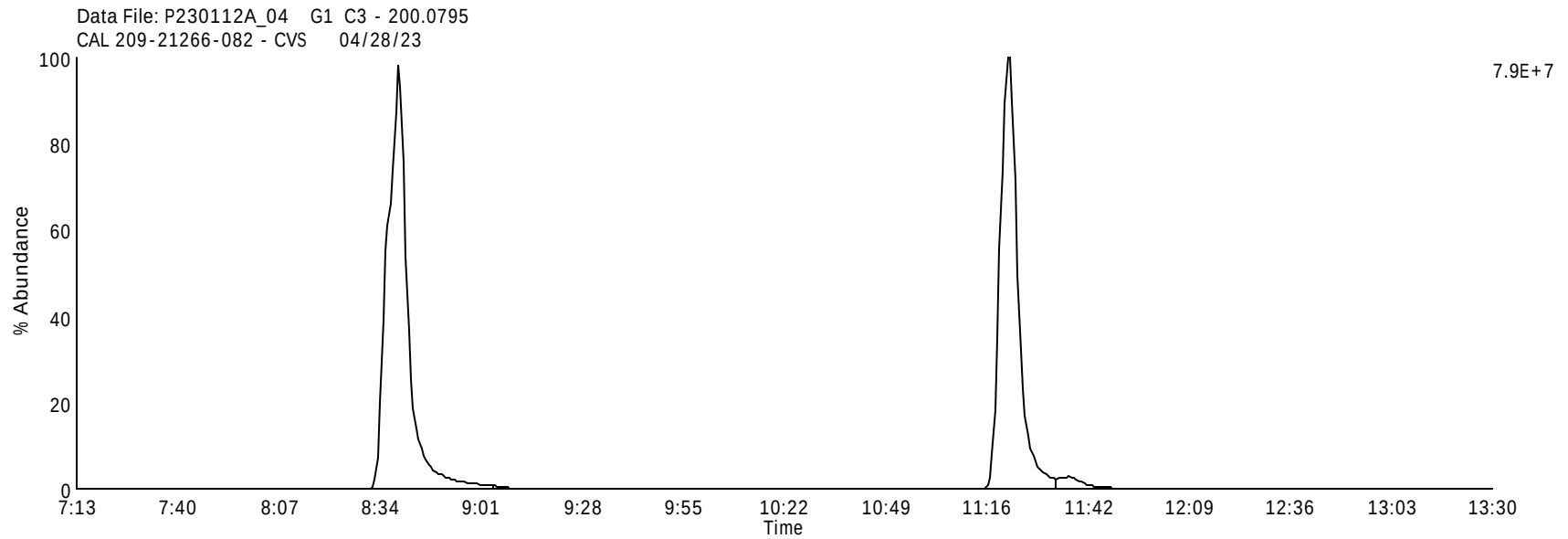
Date Acquired: 1/12/2023

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Di Chlorinated Biphenyls

Data File Name: P230112A_04

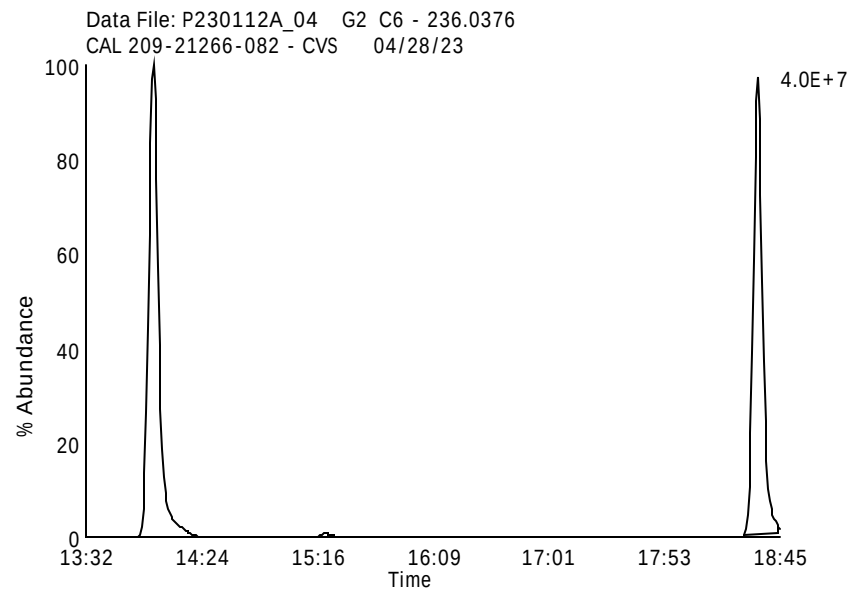
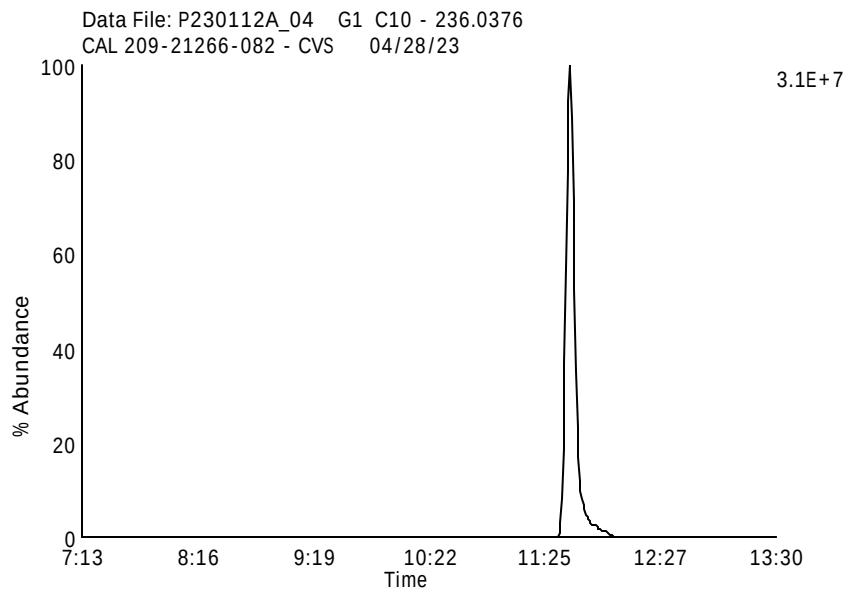
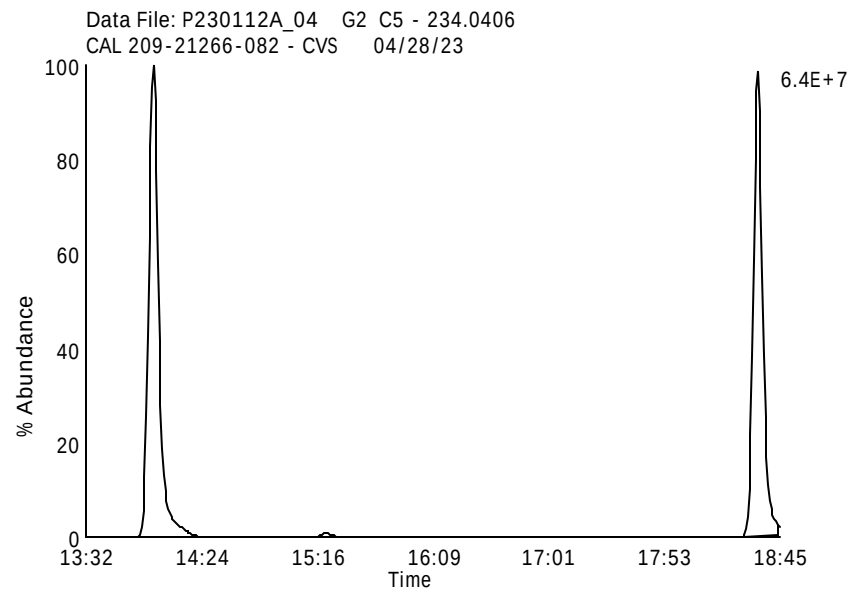
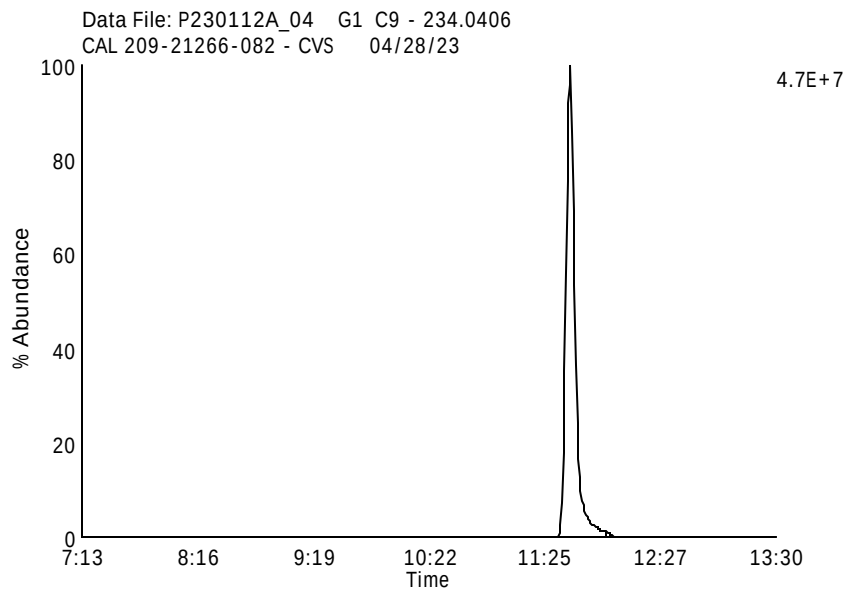
Date Acquired: 1/12/2023

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Tri Chlorinated Biphenyls

Data File Name: P230112A_04

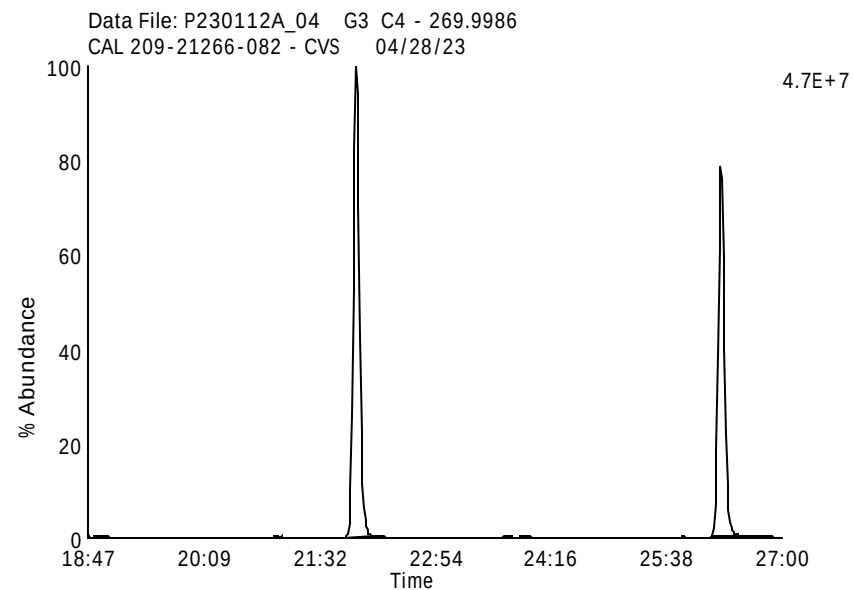
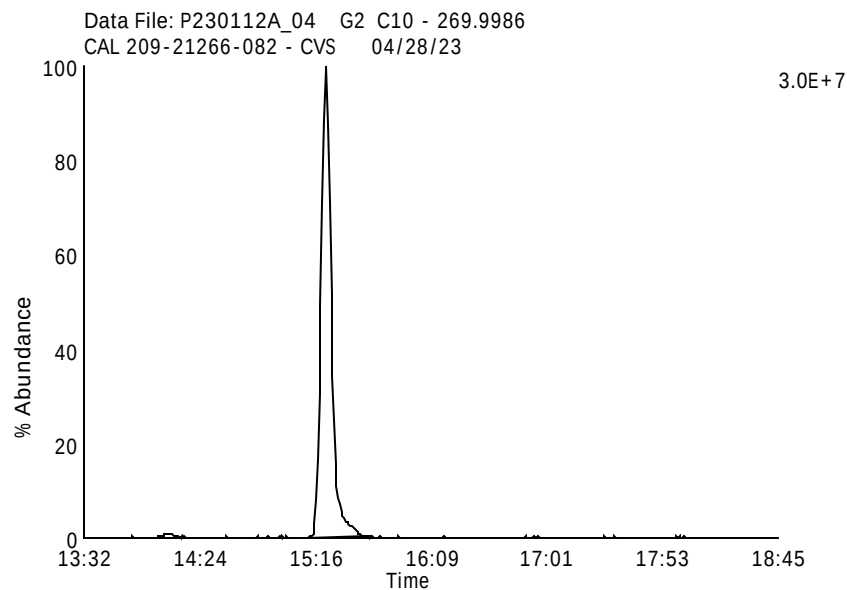
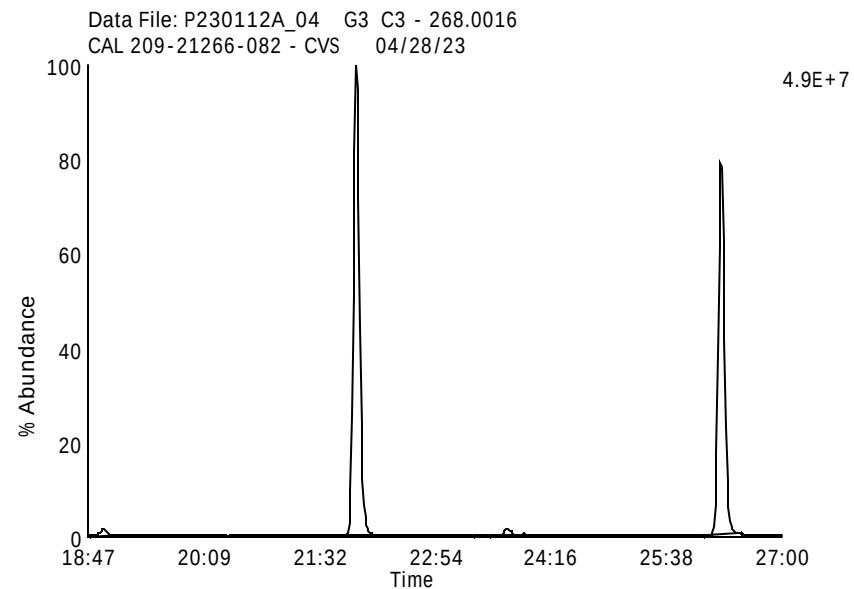
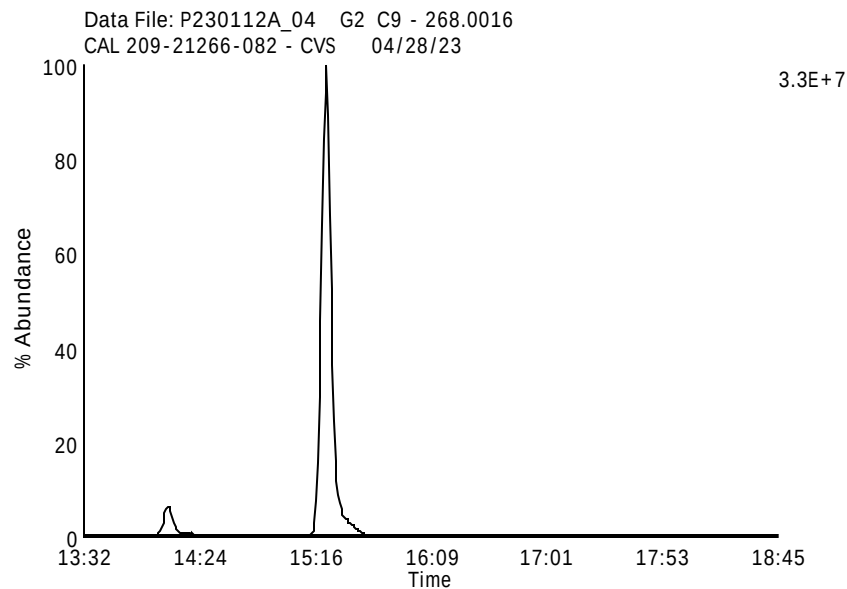
Date Acquired: 1/12/2023

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Tetra Chlorinated Biphenyls

Data File Name: P230112A_04

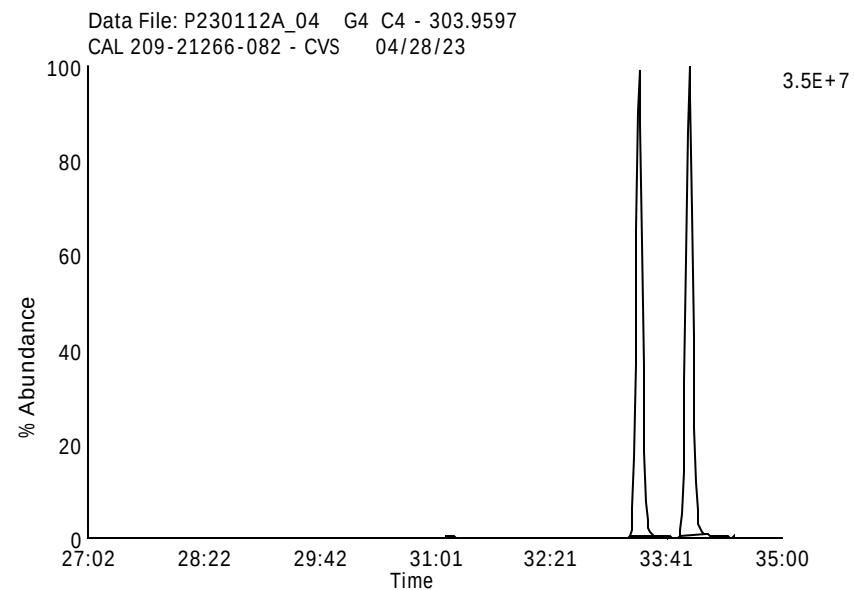
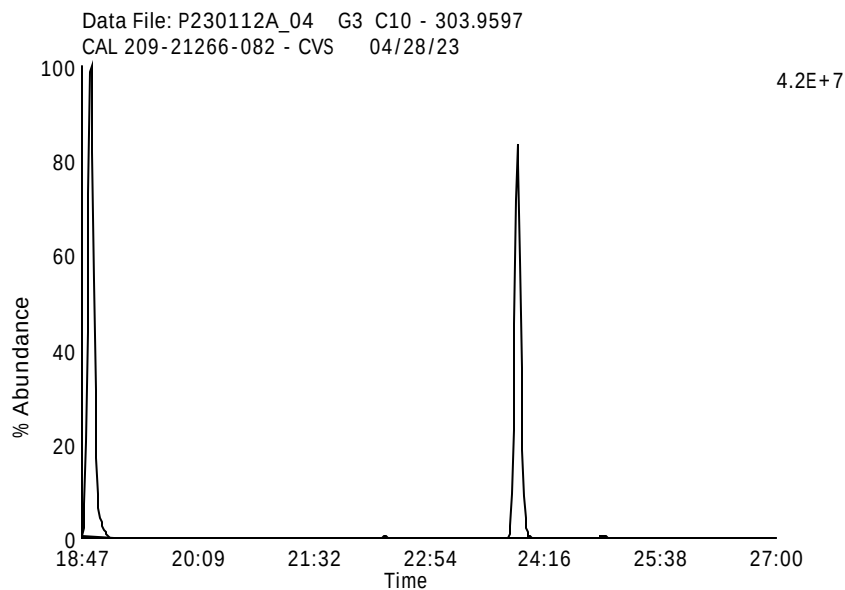
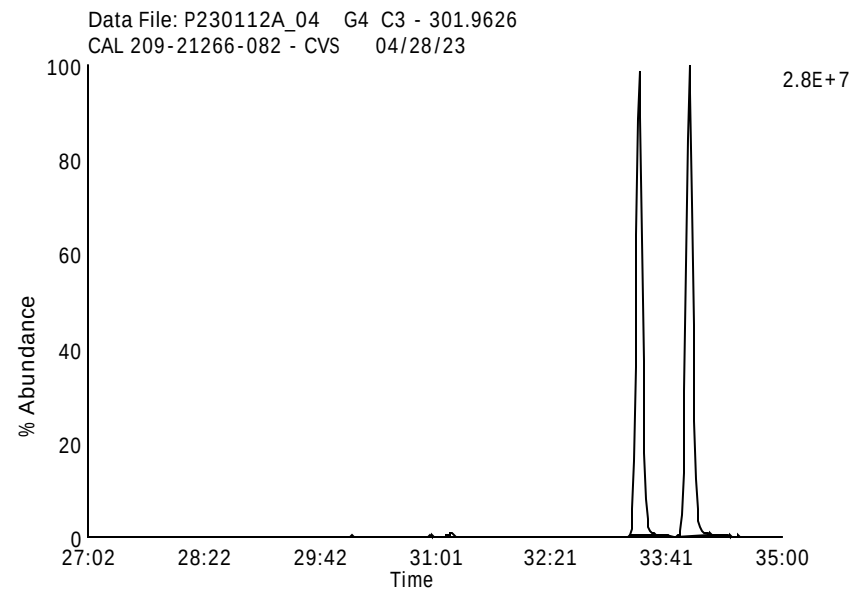
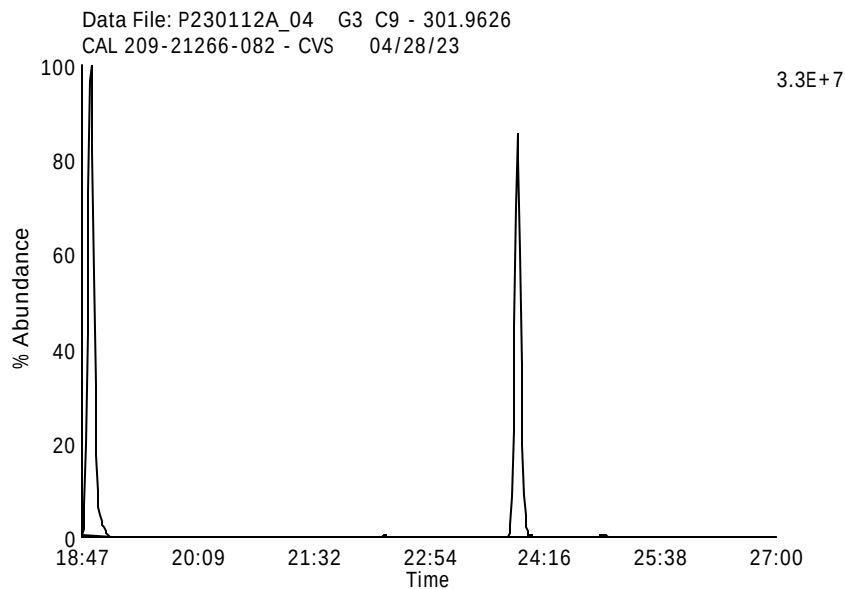
Date Acquired: 1/12/2023

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Penta Chlorinated Biphenyls

Data File Name: P230112A_04

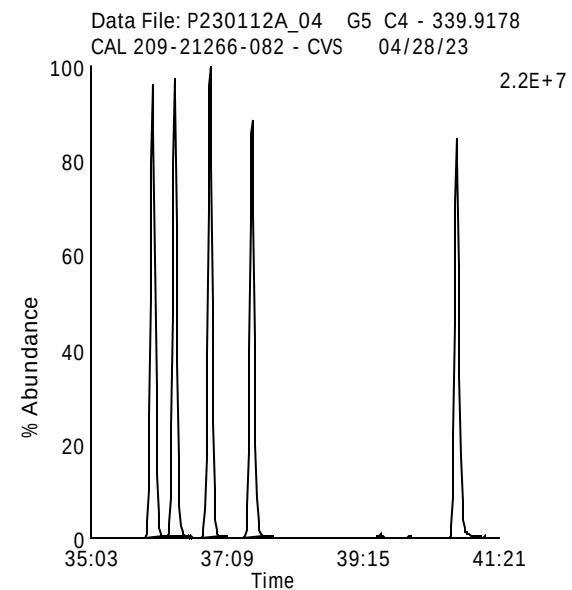
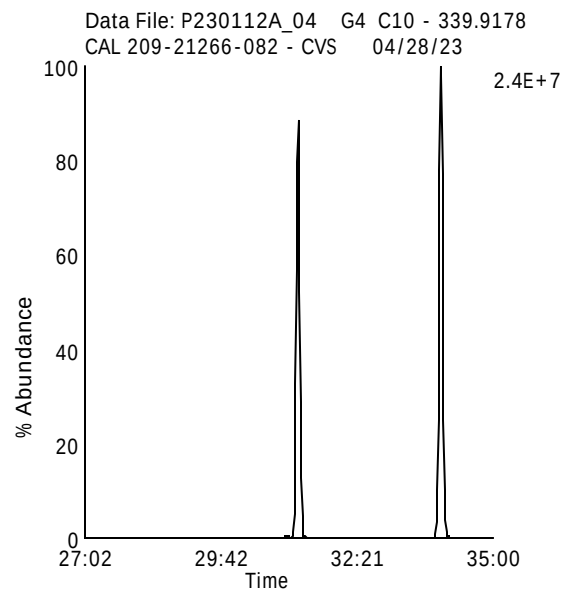
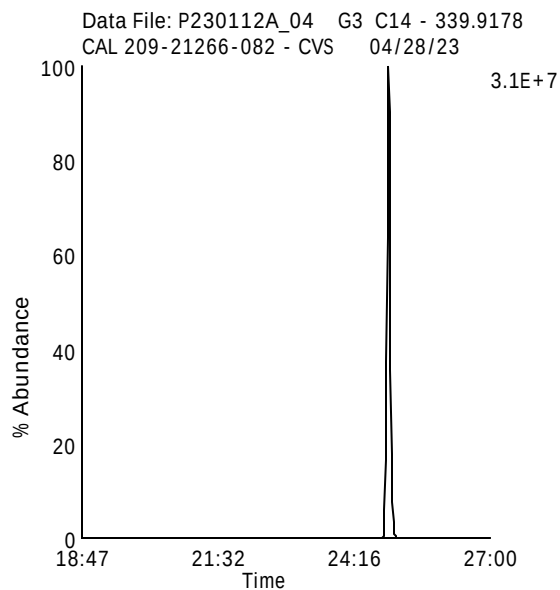
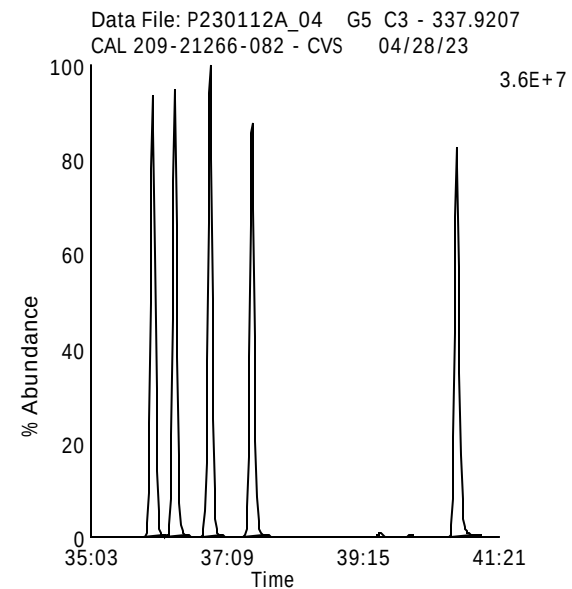
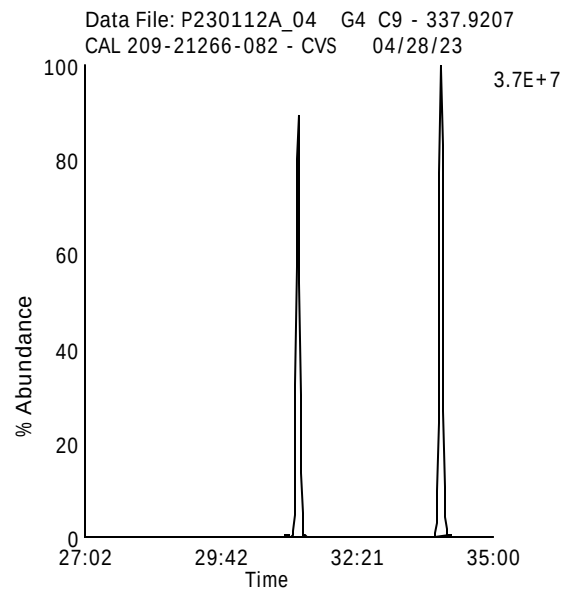
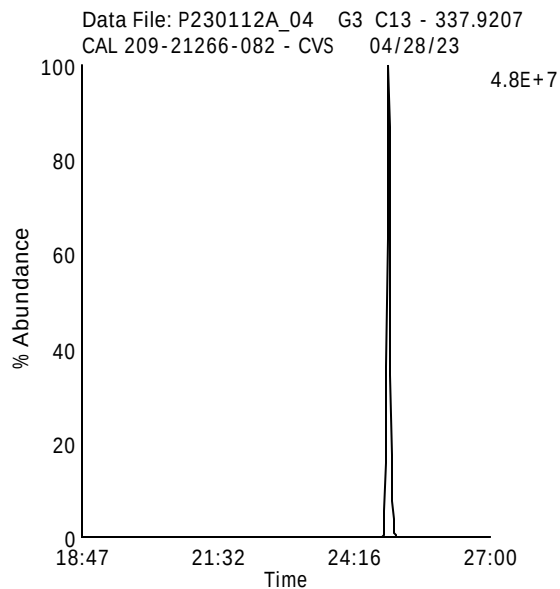
Date Acquired: 1/12/2023

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Hexa Chlorinated Biphenyls

Data File Name: P230112A_04

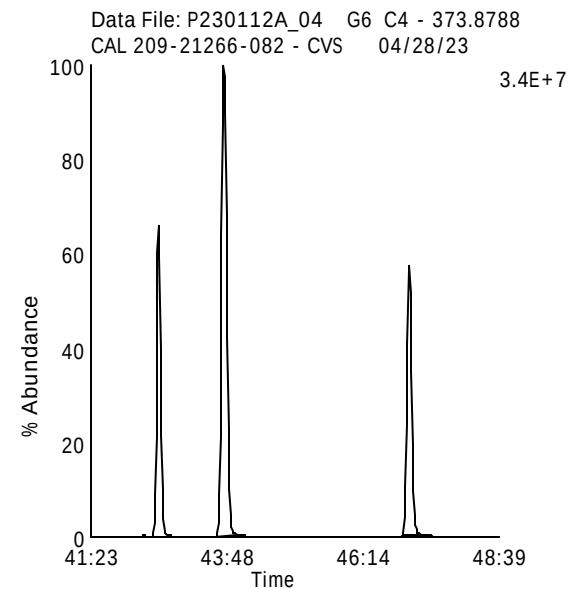
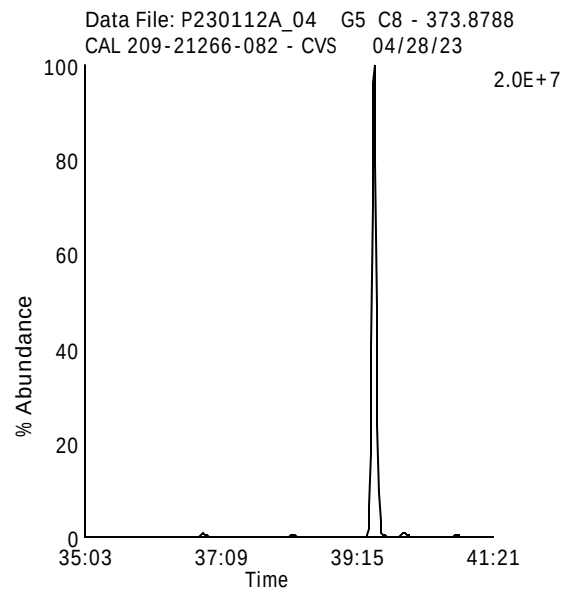
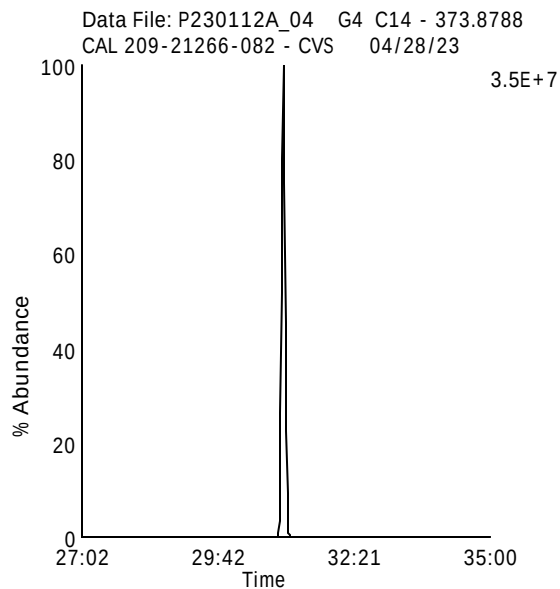
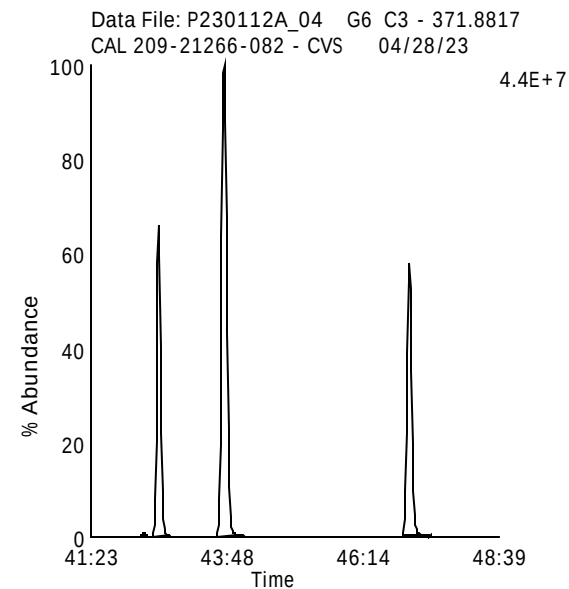
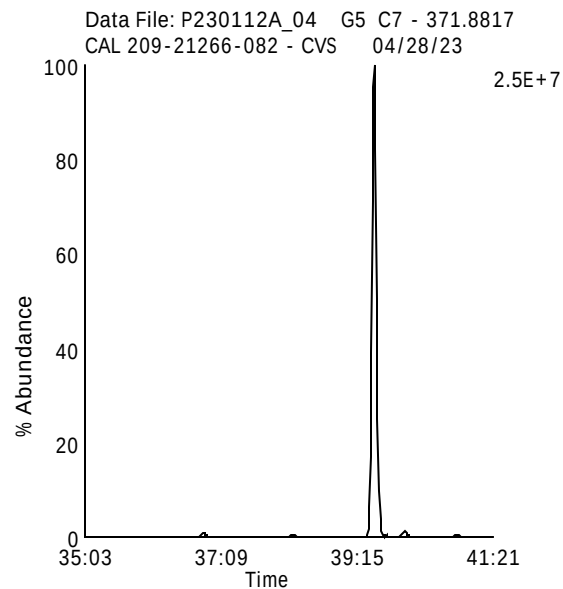
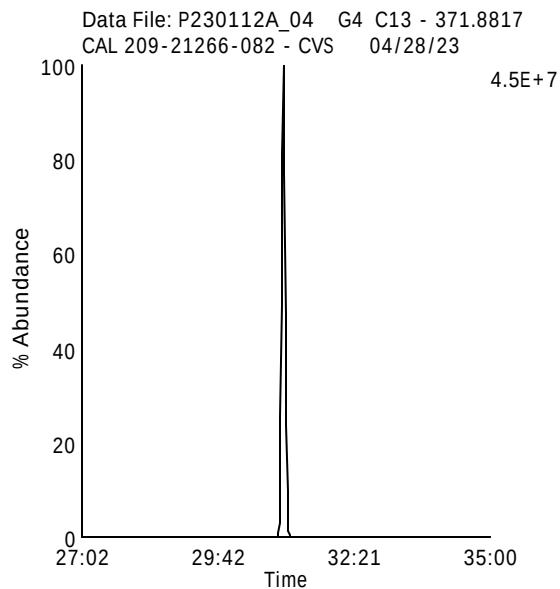
Date Acquired: 1/12/2023

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Hepta Chlorinated Biphenyls

Data File Name: P230112A_04

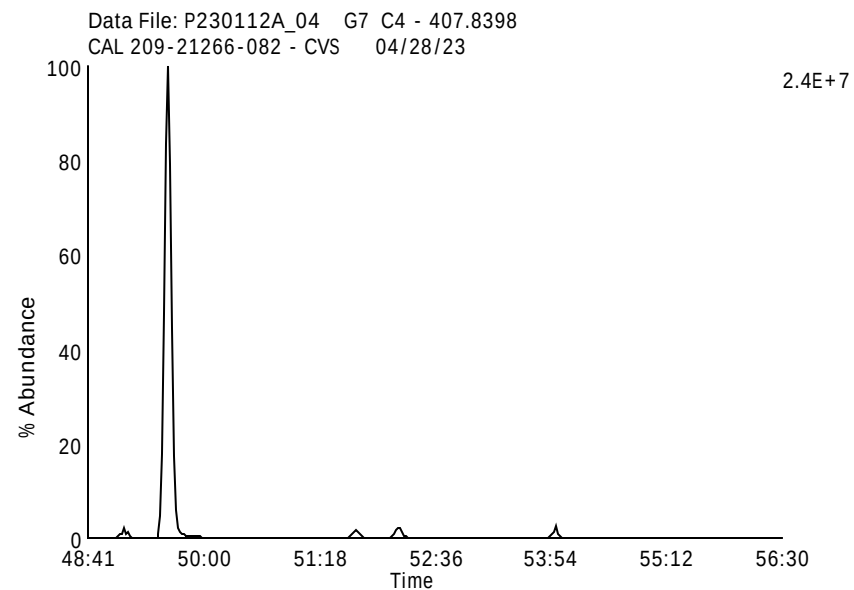
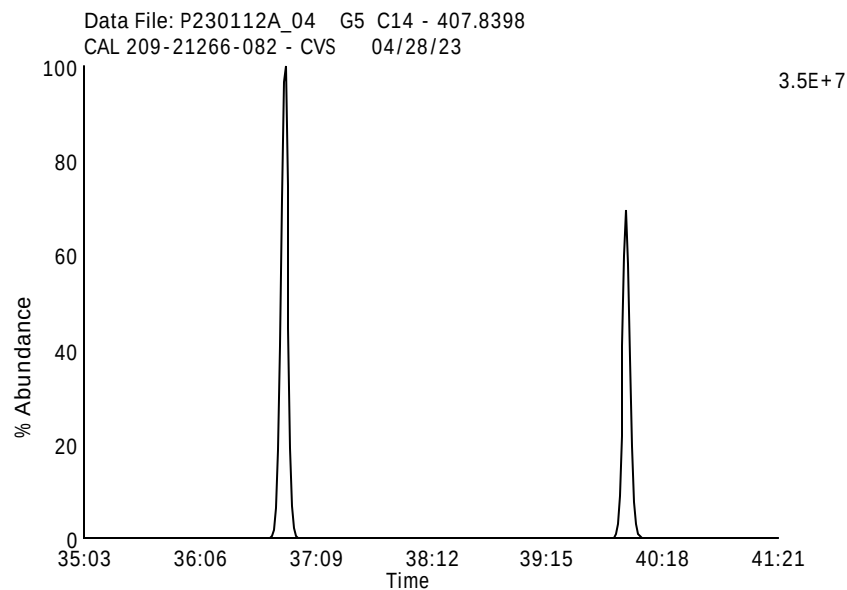
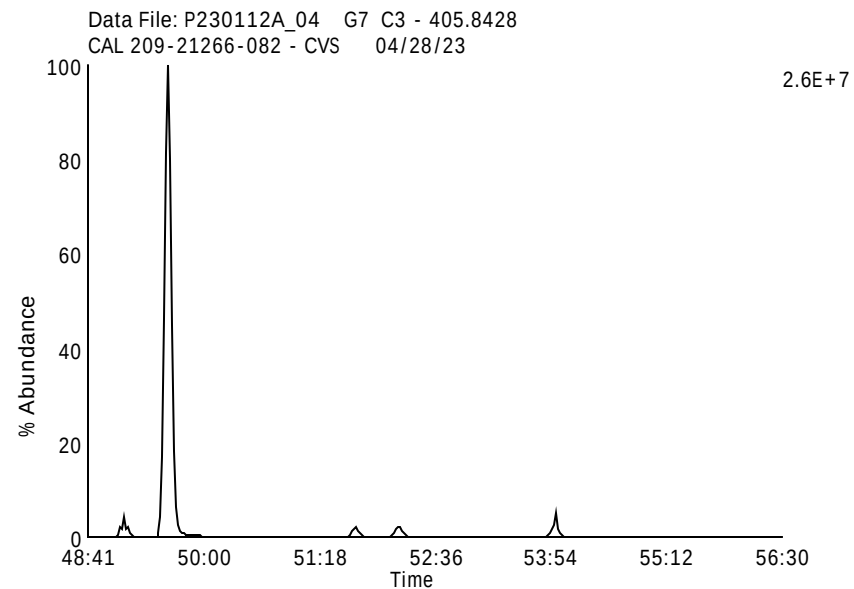
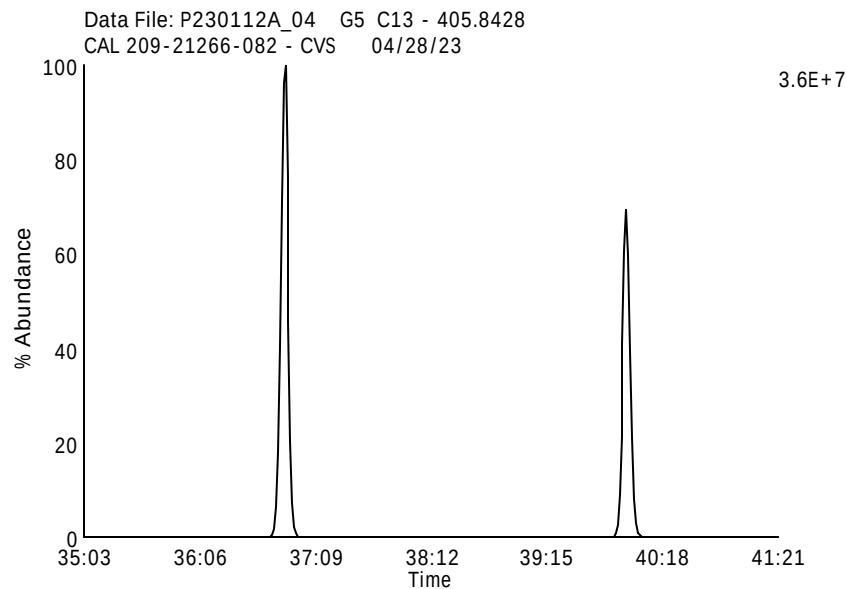
Date Acquired: 1/12/2023

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Octa Chlorinated Biphenyls

Data File Name: P230112A_04

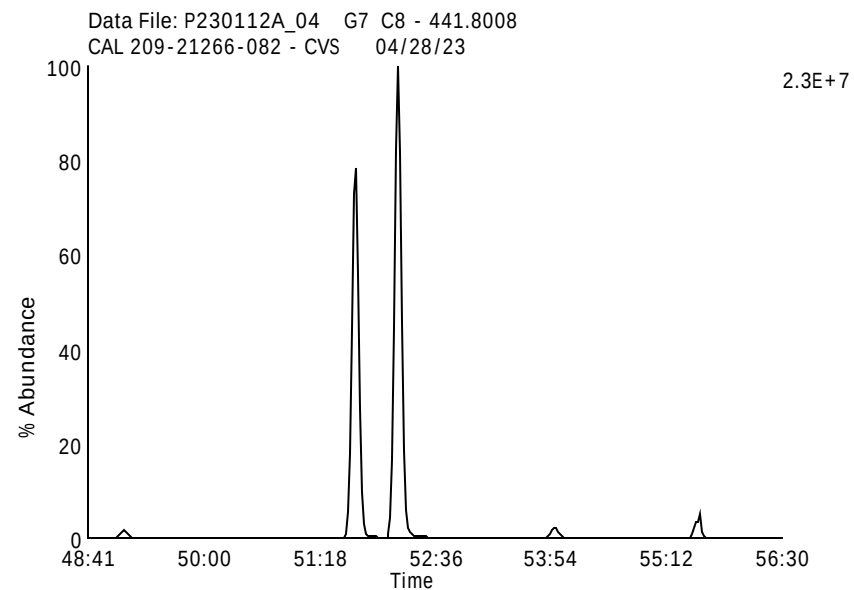
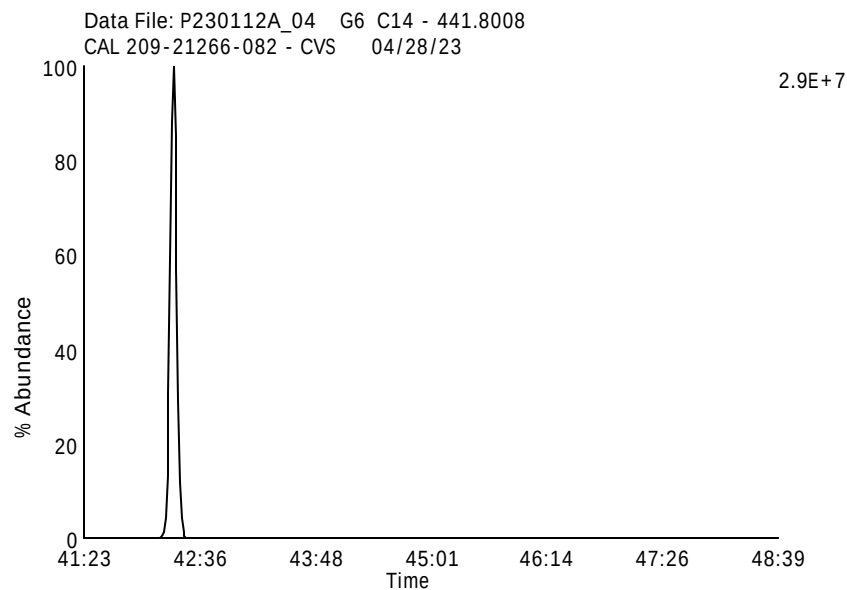
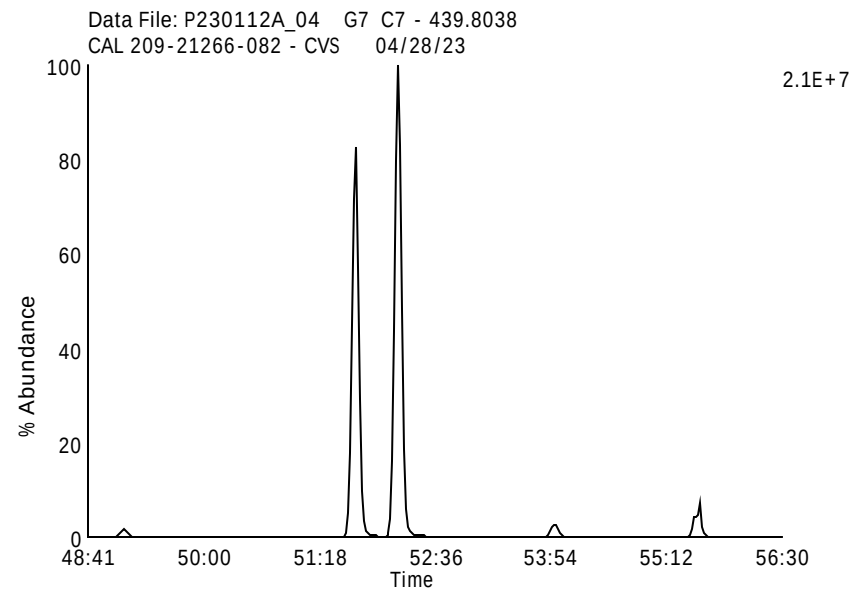
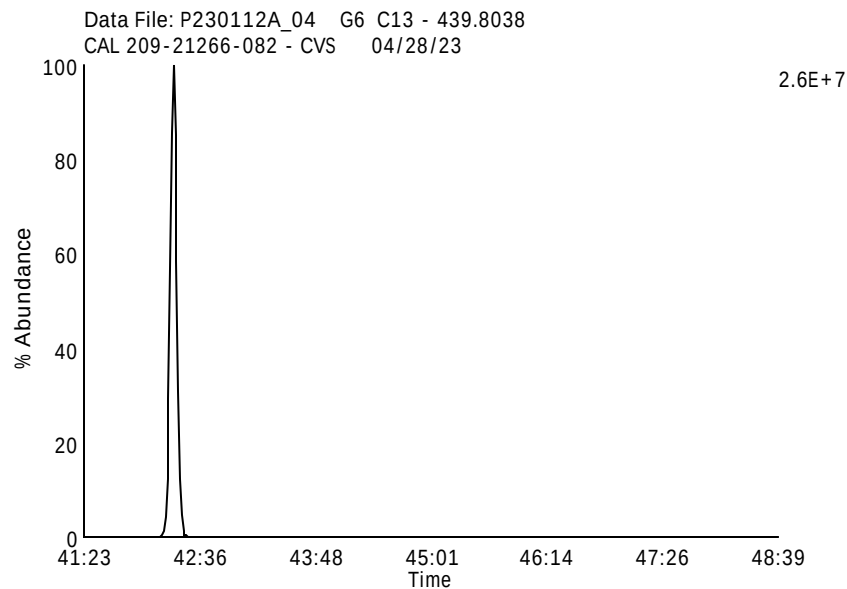
Date Acquired: 1/12/2023

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Nona Chlorinated Biphenyls

Data File Name: P230112A_04

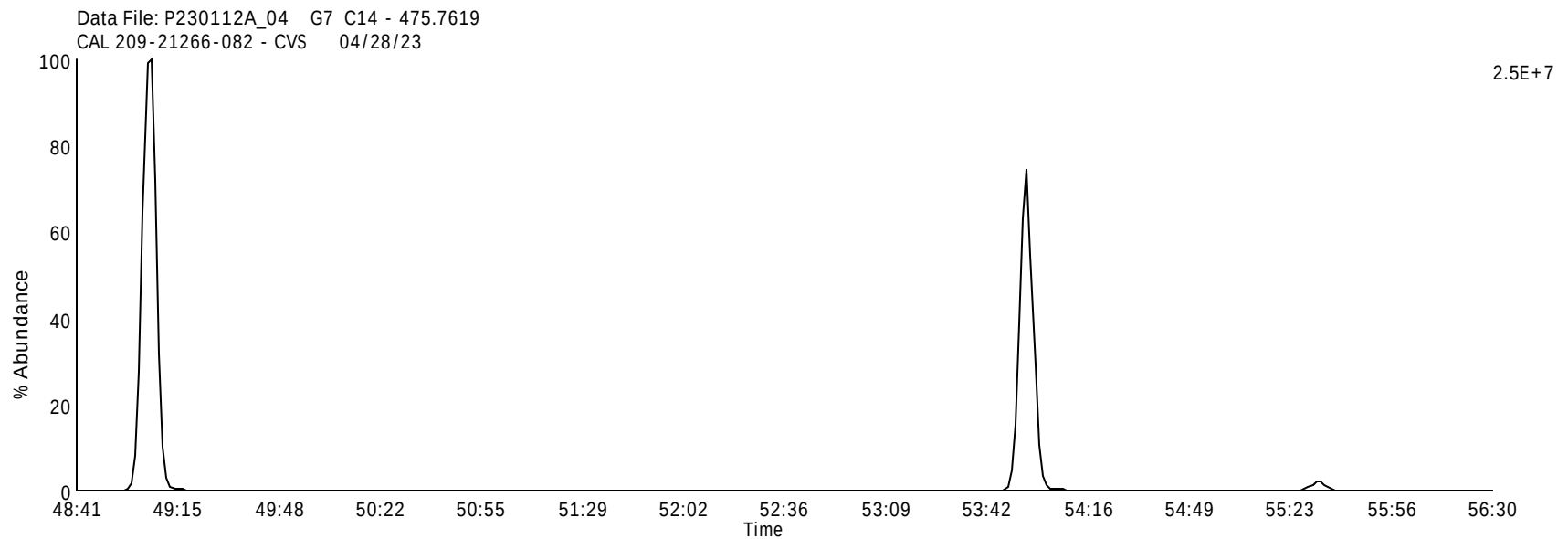
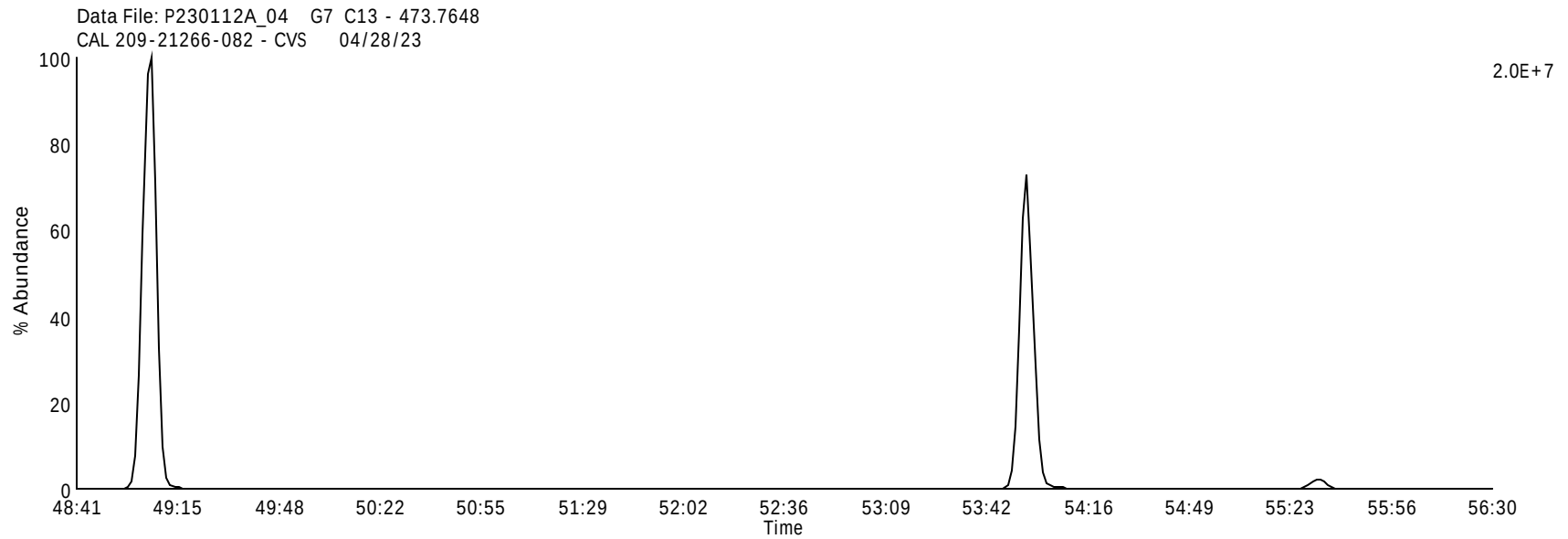
Lab Sample ID: 209-21266-082

Date Acquired: 1/12/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Client Sample ID: 209 Mix



Labeled Deca Chlorinated Biphenyl

Data File Name: P230112A_04

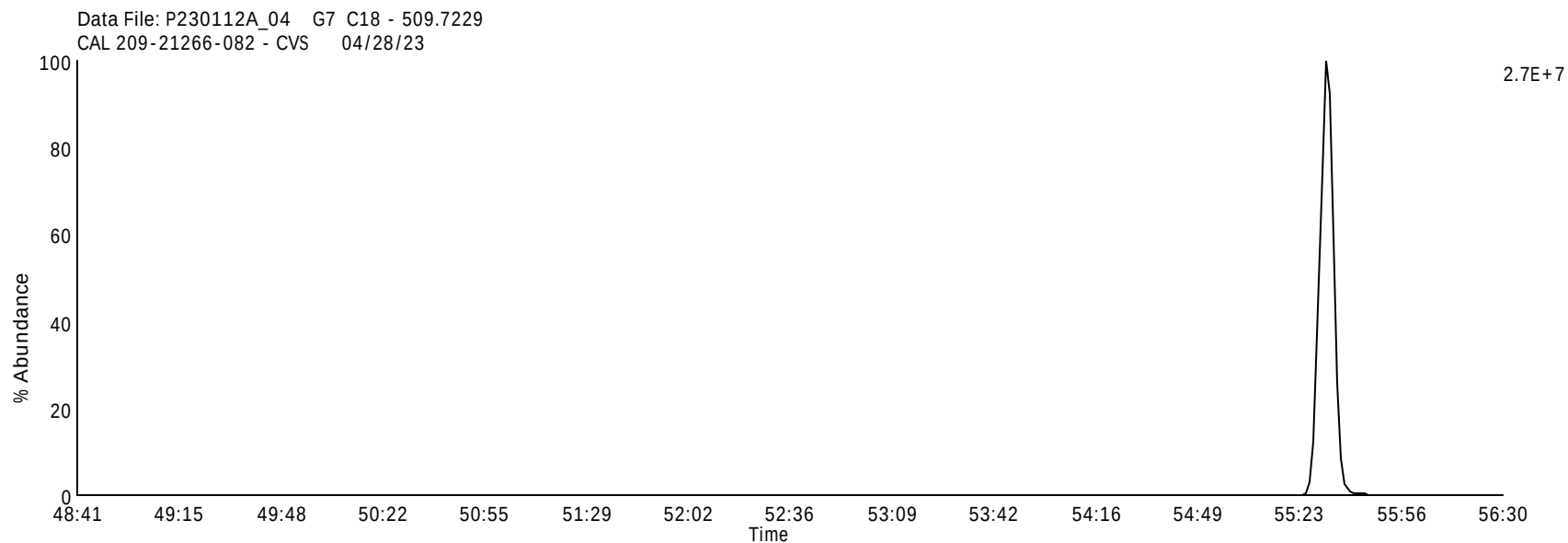
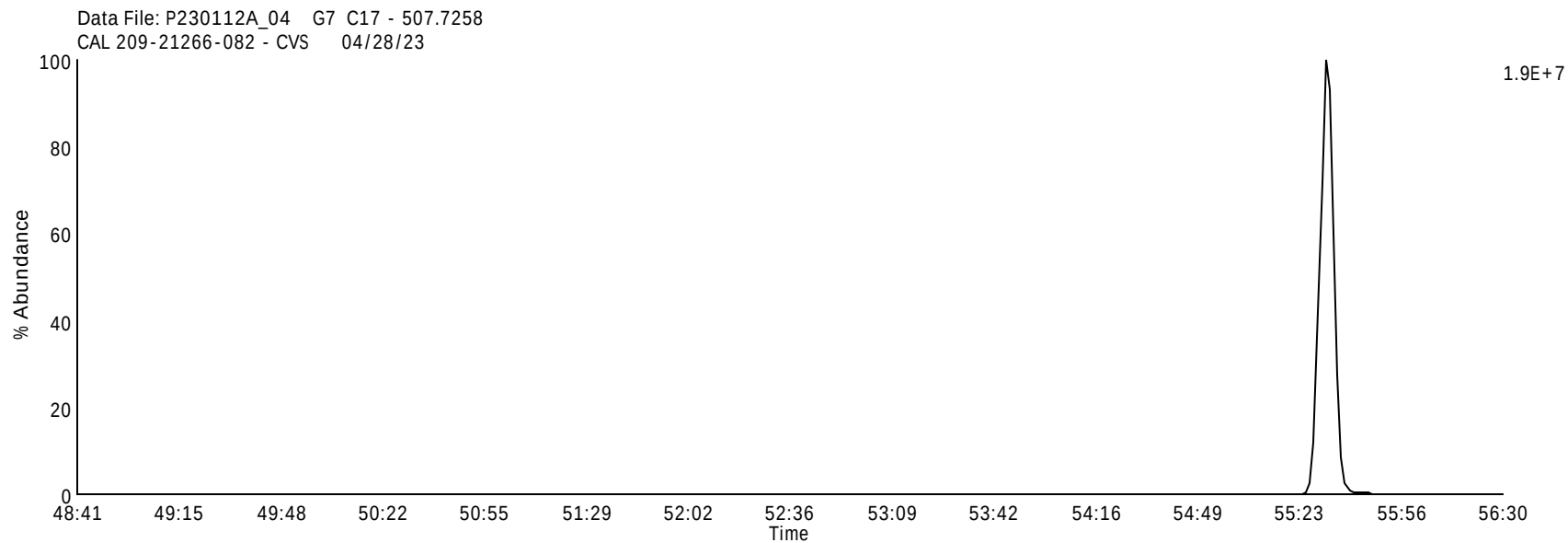
Date Acquired: 1/12/2023

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Mono Chlorinated Biphenyls

Data File Name: P230112A_04

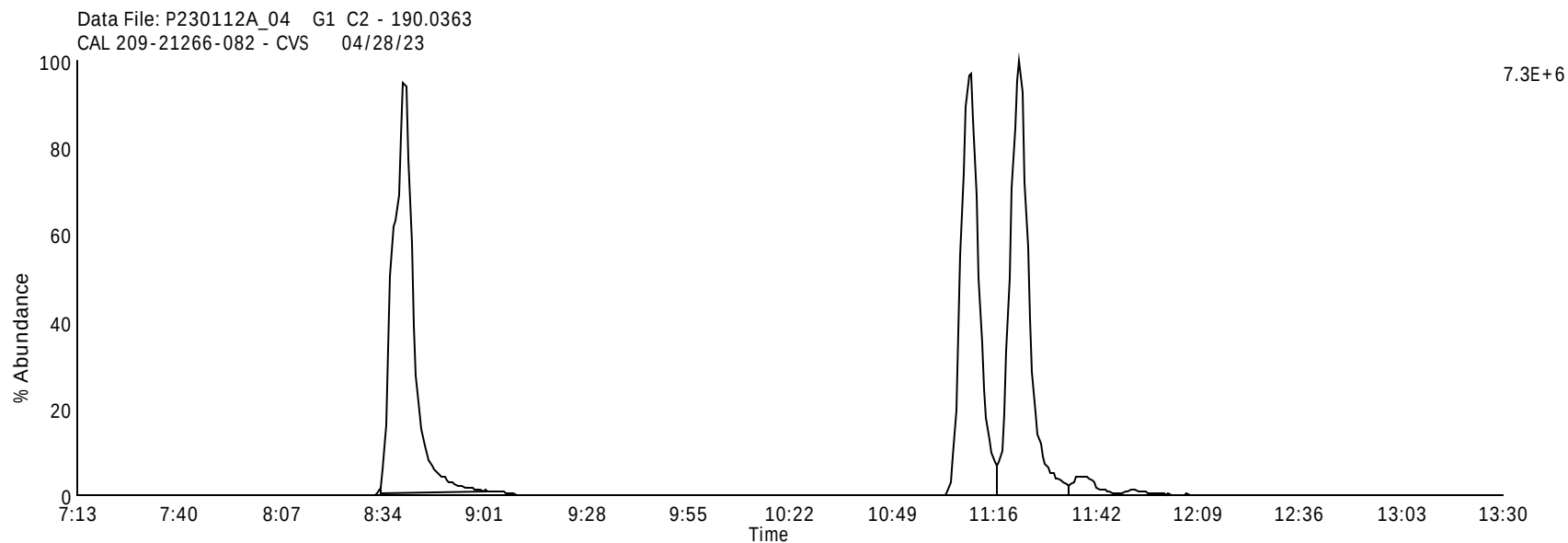
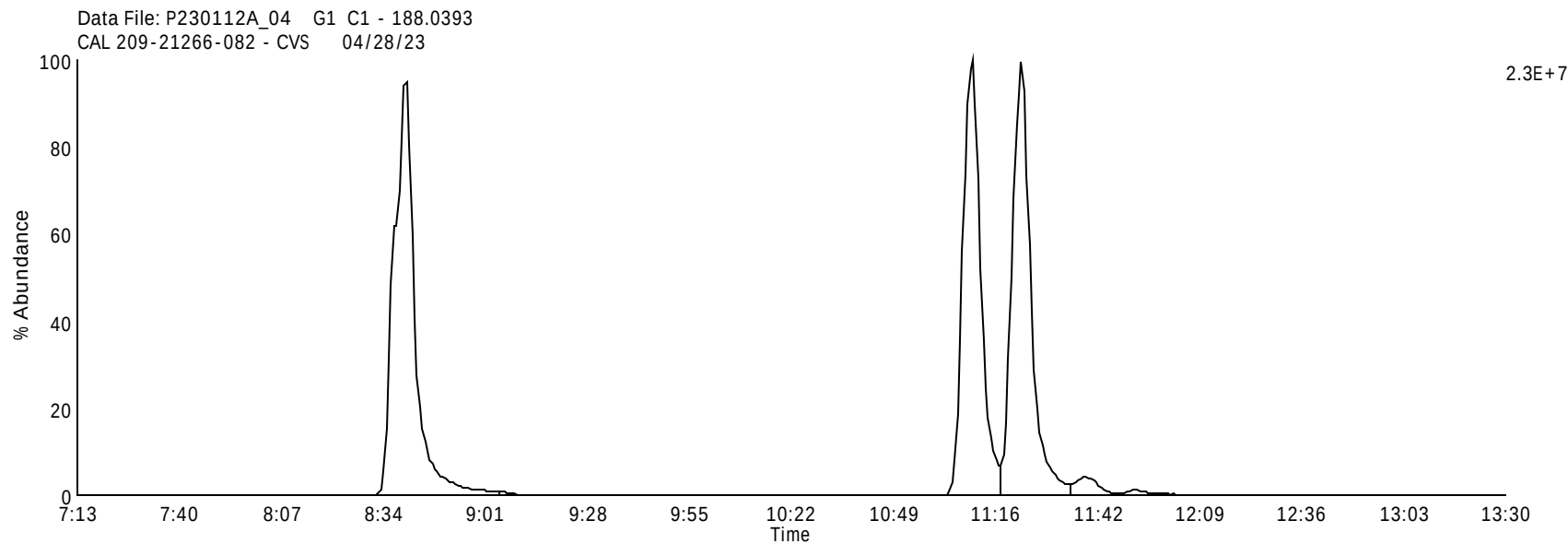
Date Acquired: 1/12/2023

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Di Chlorinated Biphenyls

Data File Name: P230112A_04

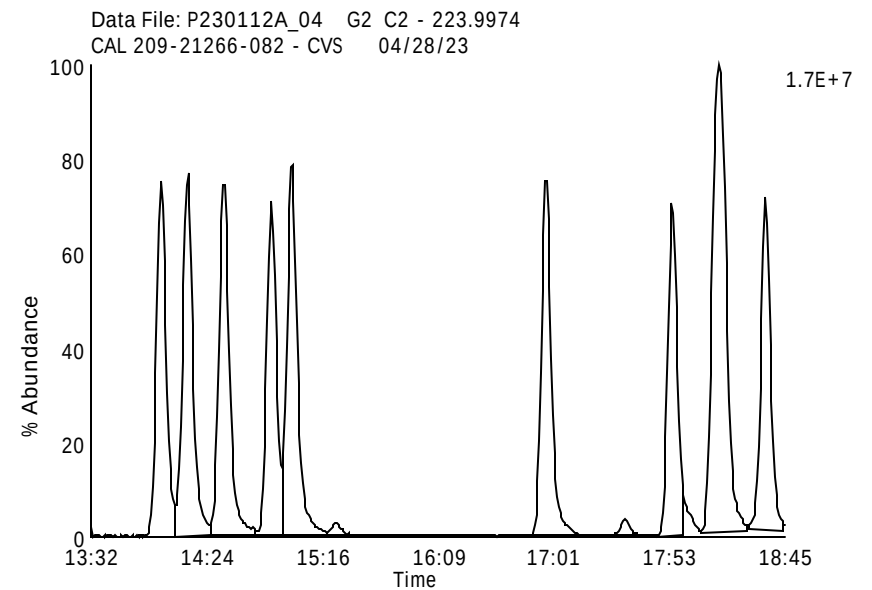
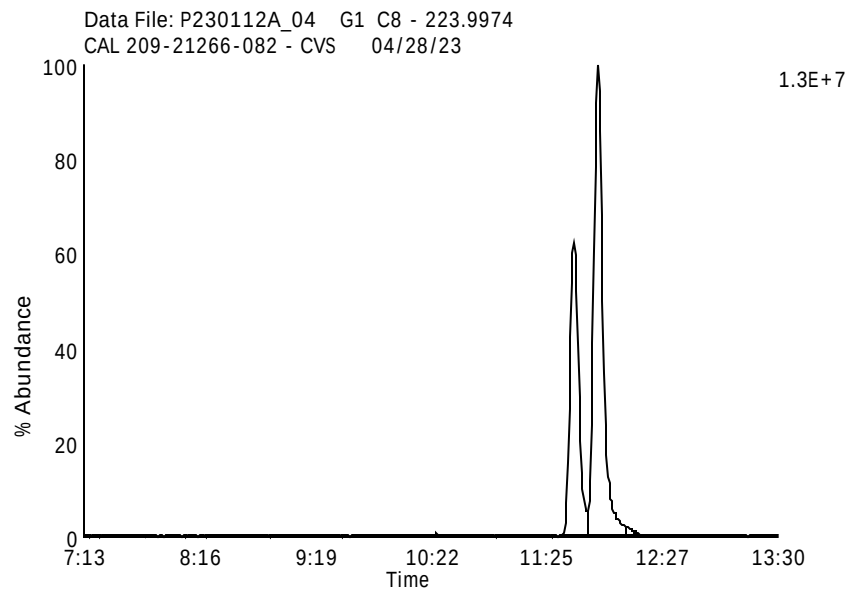
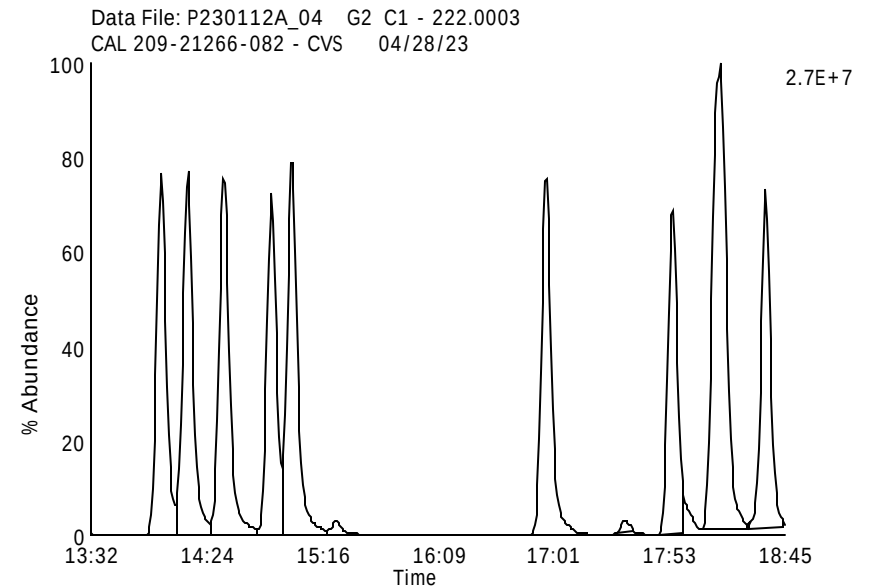
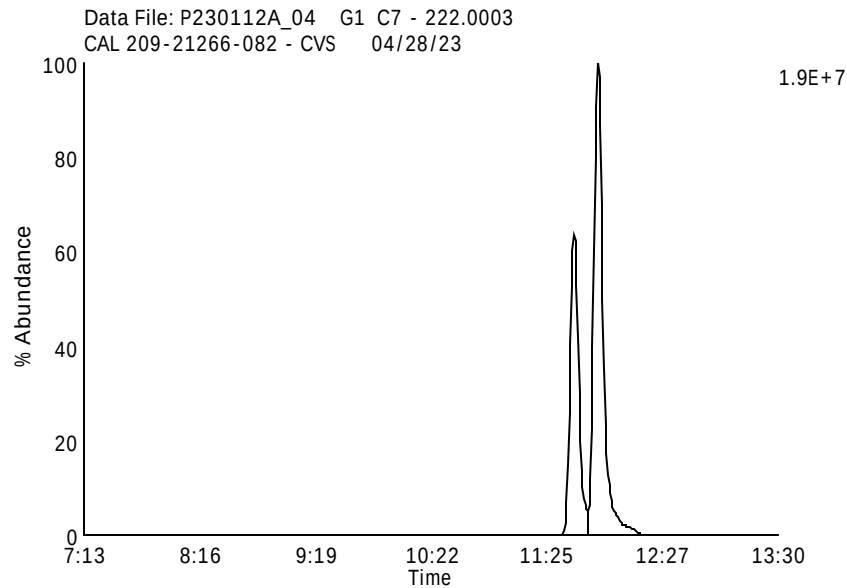
Date Acquired: 1/12/2023

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Tri Chlorinated Biphenyls

Data File Name: P230112A_04

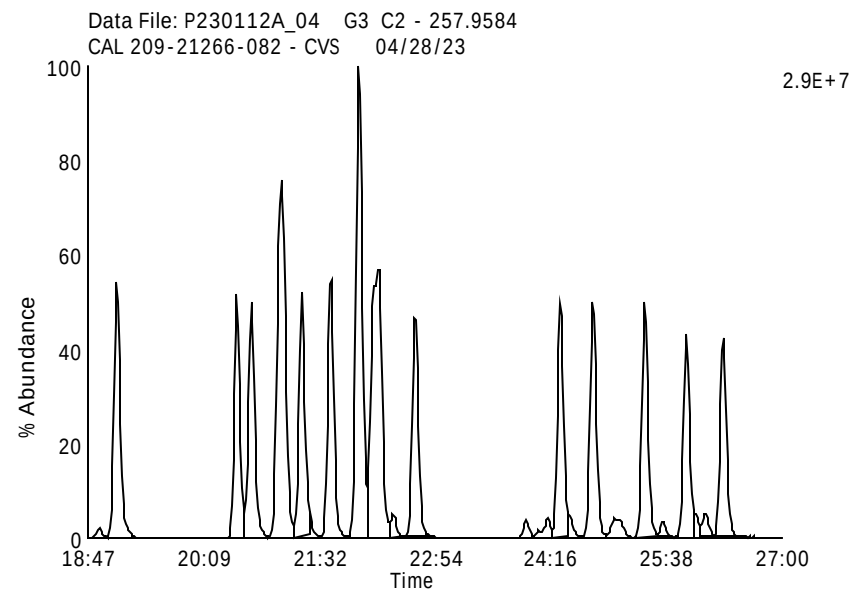
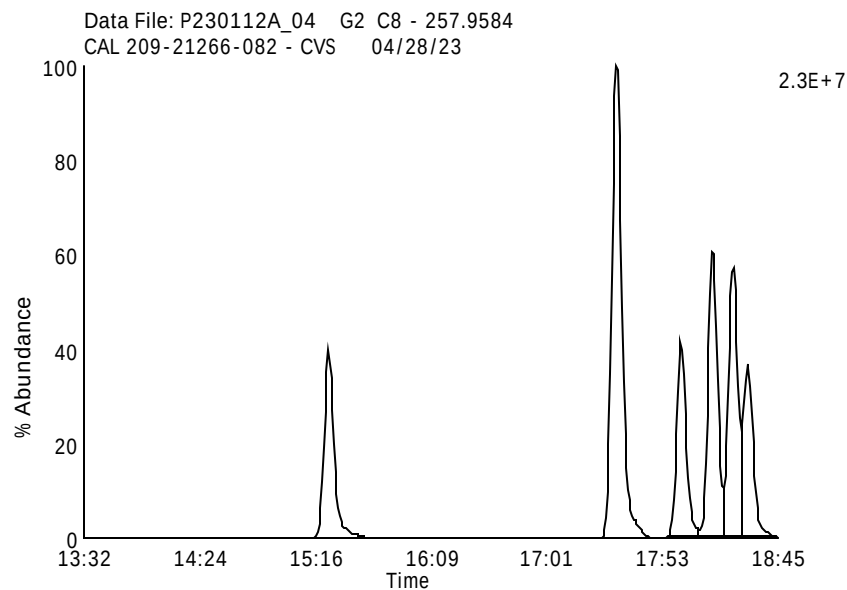
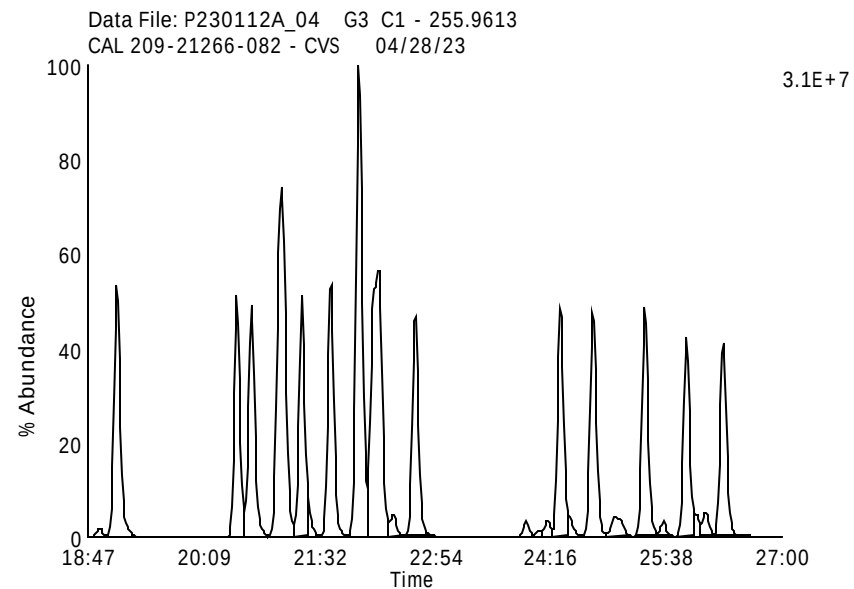
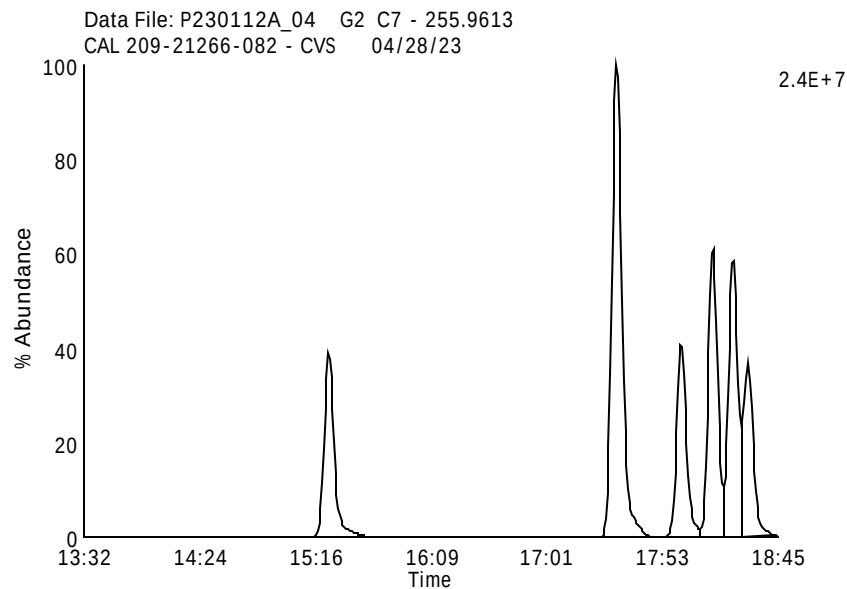
Date Acquired: 1/12/2023

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Tetra Chlorinated Biphenyls

Data File Name: P230112A_04

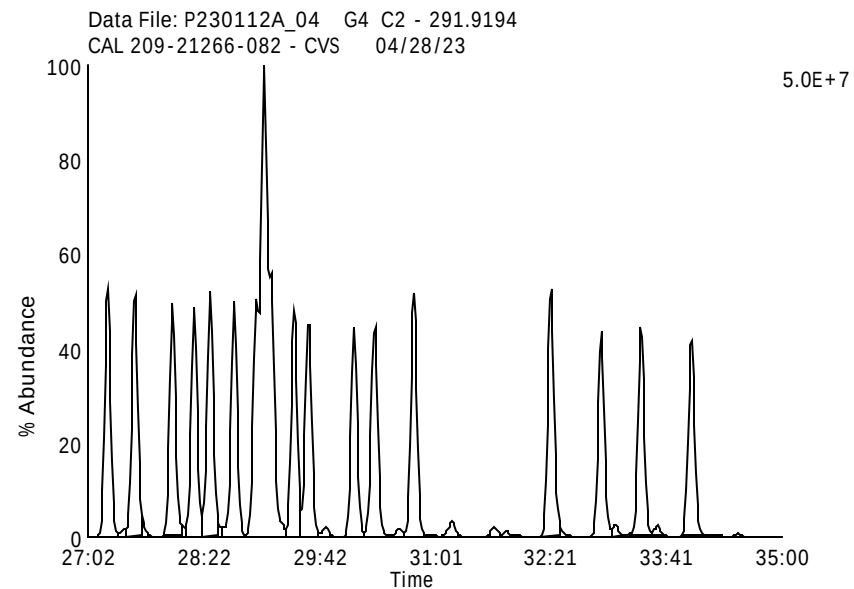
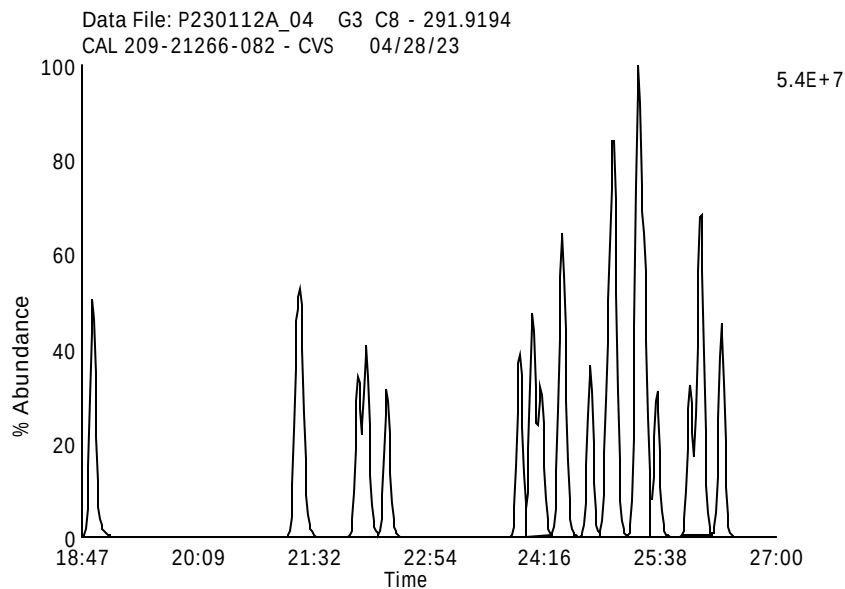
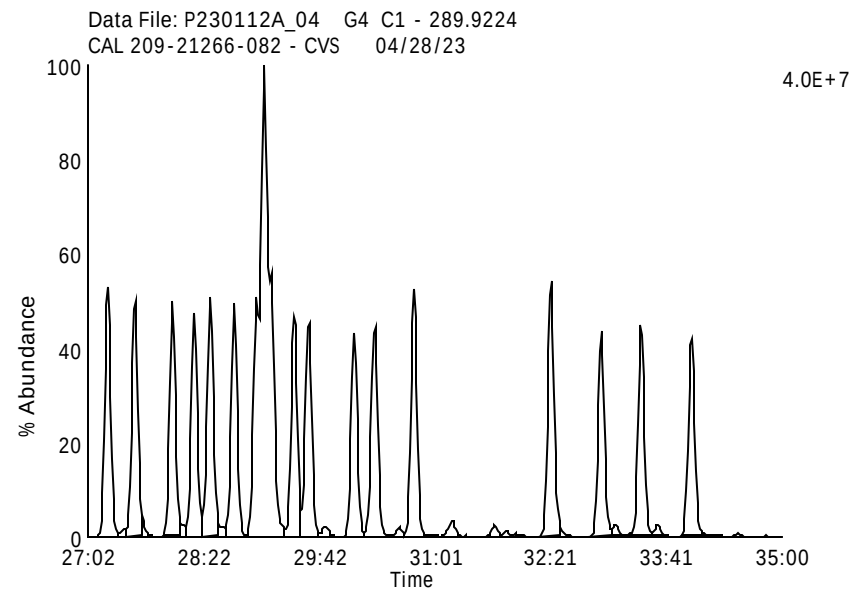
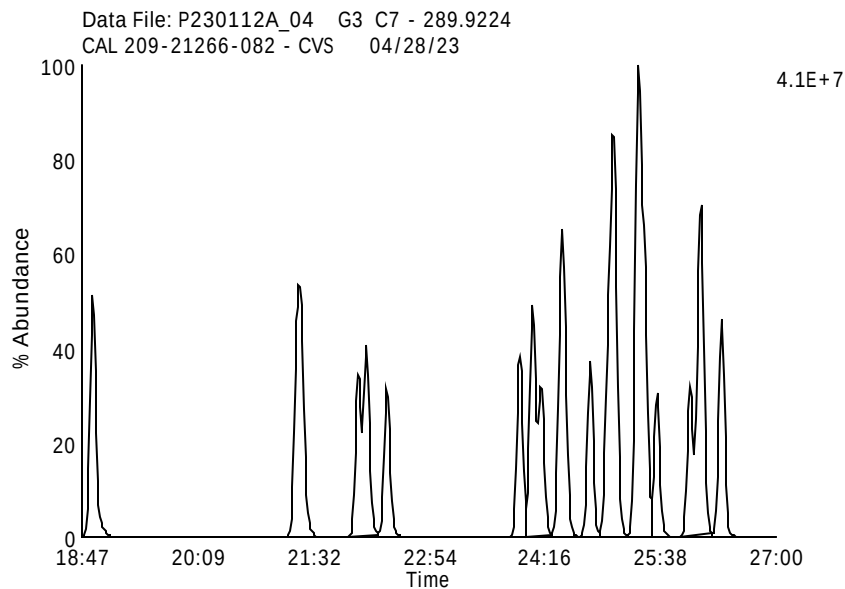
Date Acquired: 1/12/2023

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Penta Chlorinated Biphenyls

Data File Name: P230112A_04

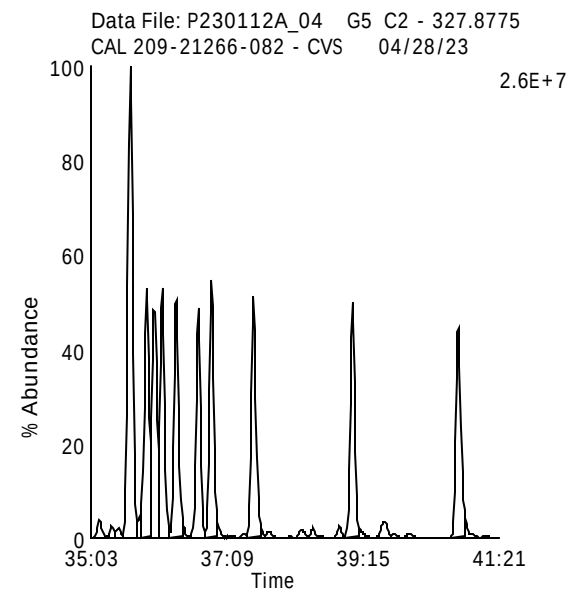
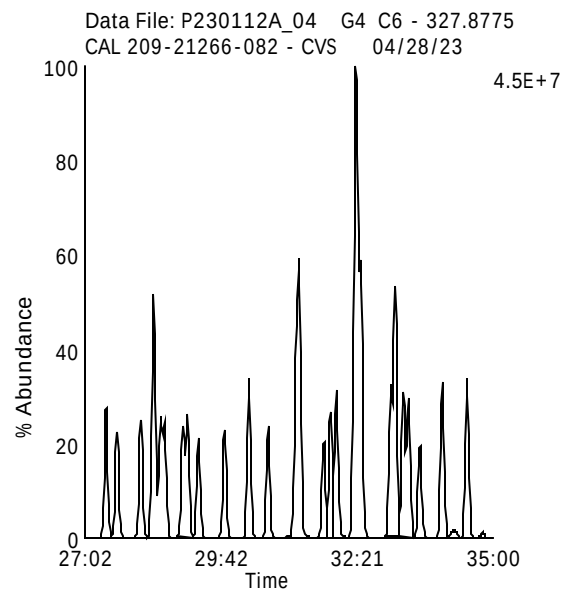
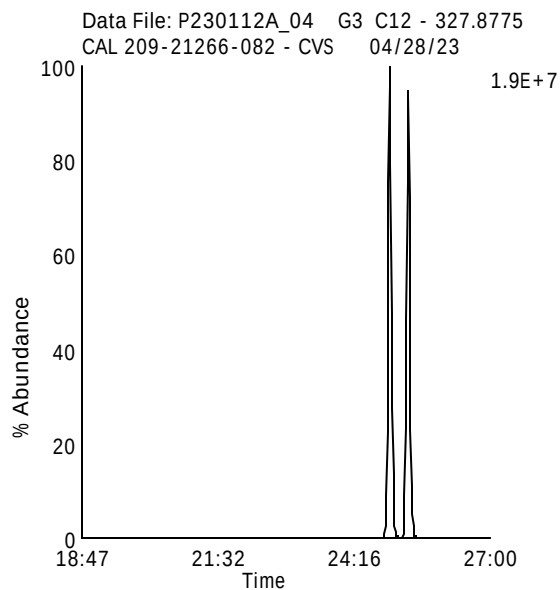
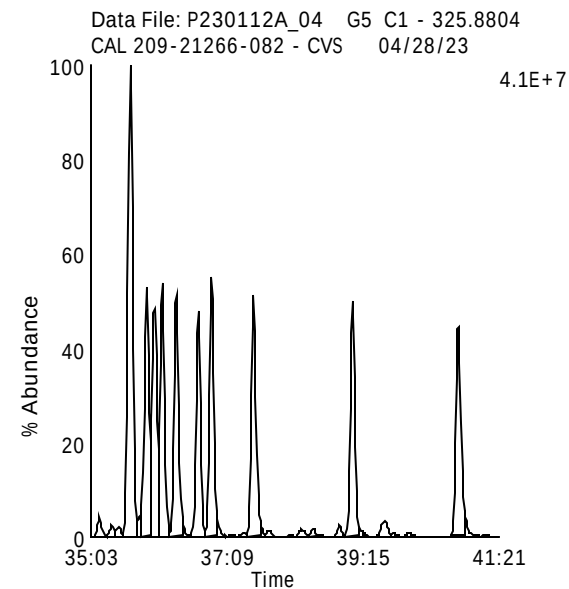
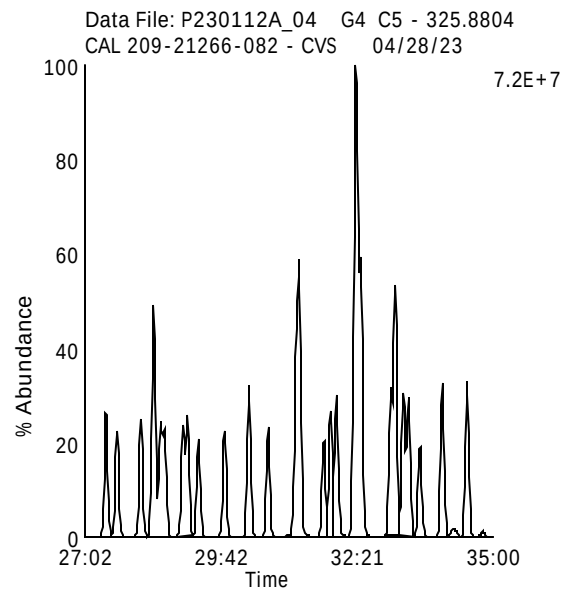
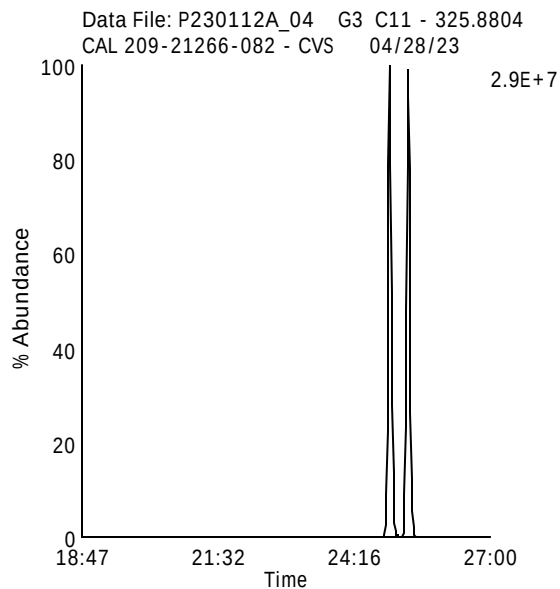
Date Acquired: 1/12/2023

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Hexa Chlorinated Biphenyls

Data File Name: P230112A_04

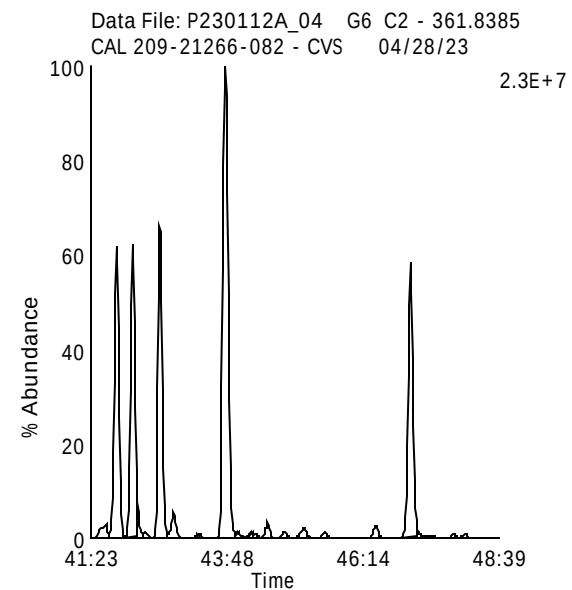
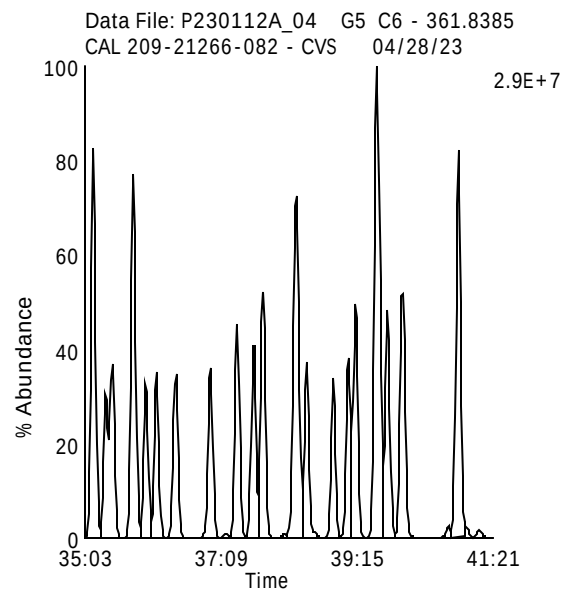
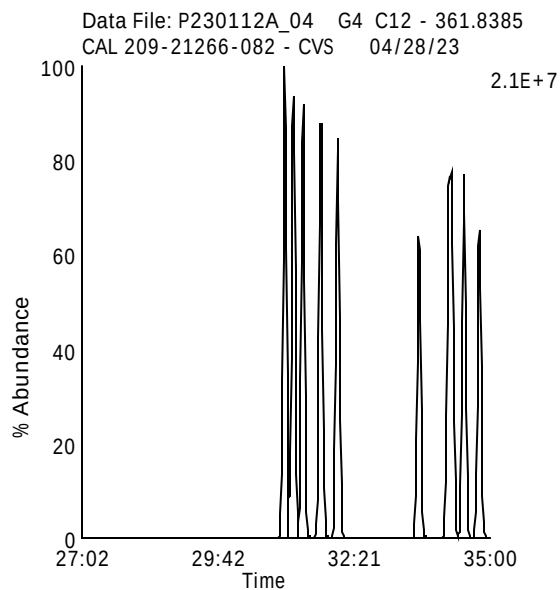
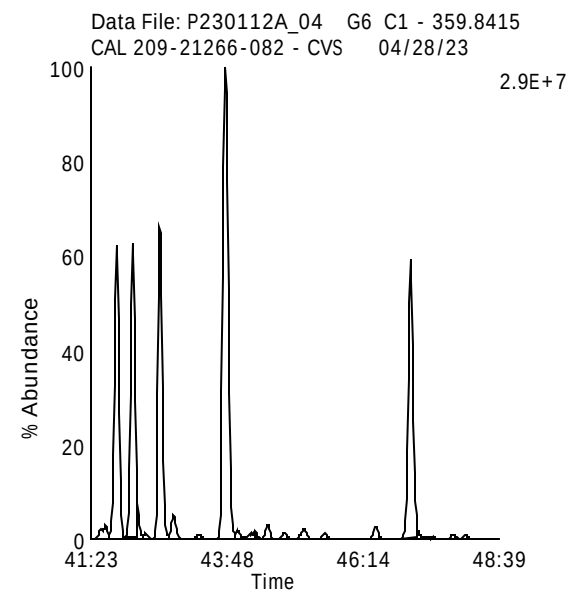
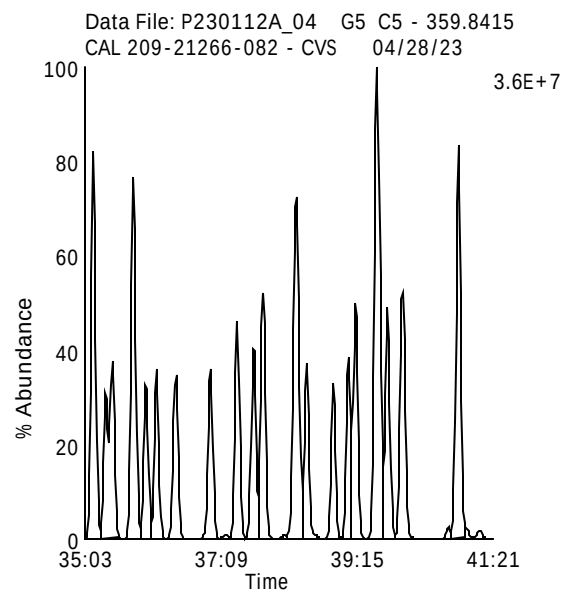
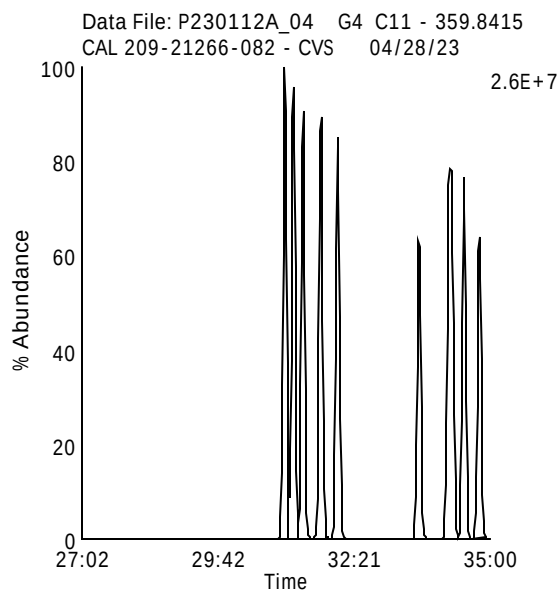
Date Acquired: 1/12/2023

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Hepta Chlorinated Biphenyls

Data File Name: P230112A_04

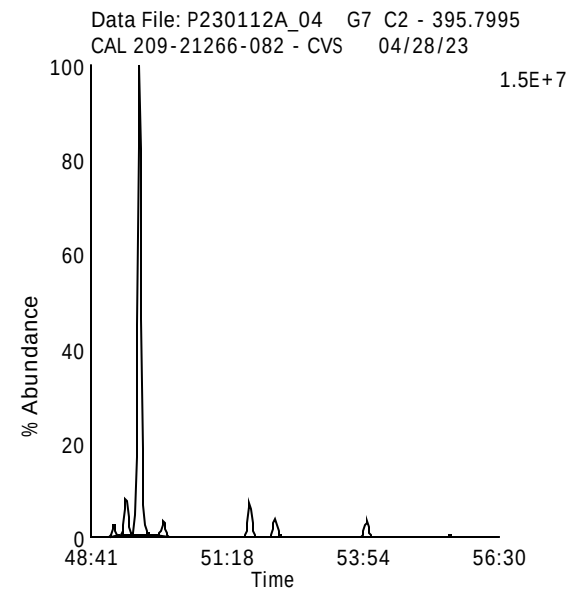
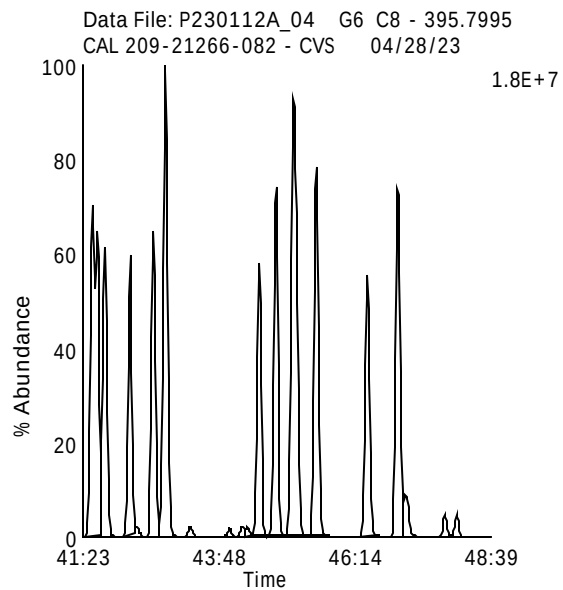
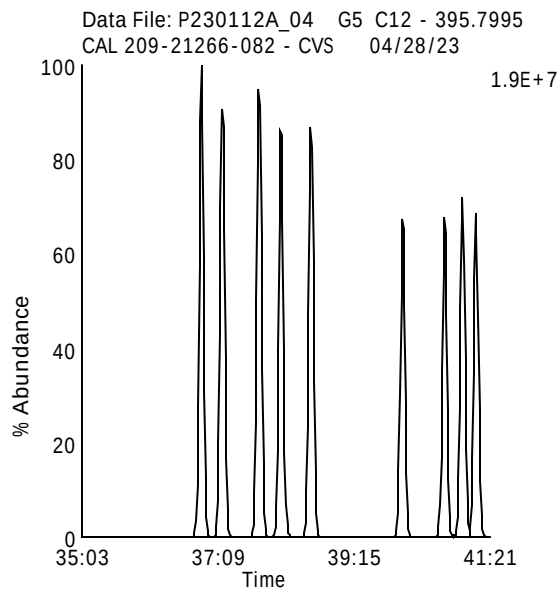
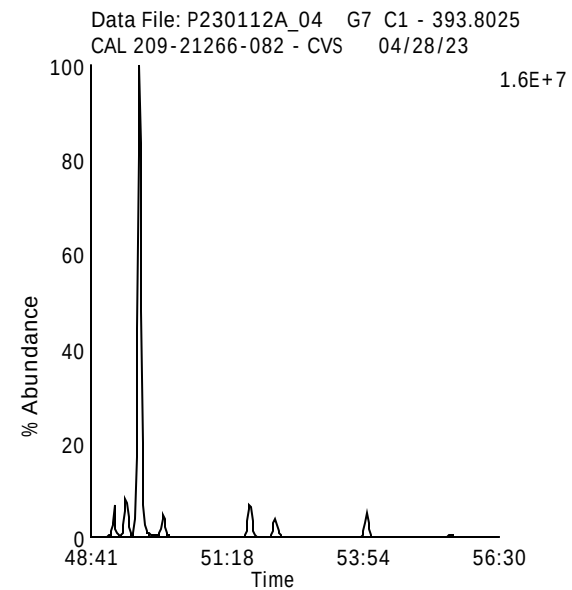
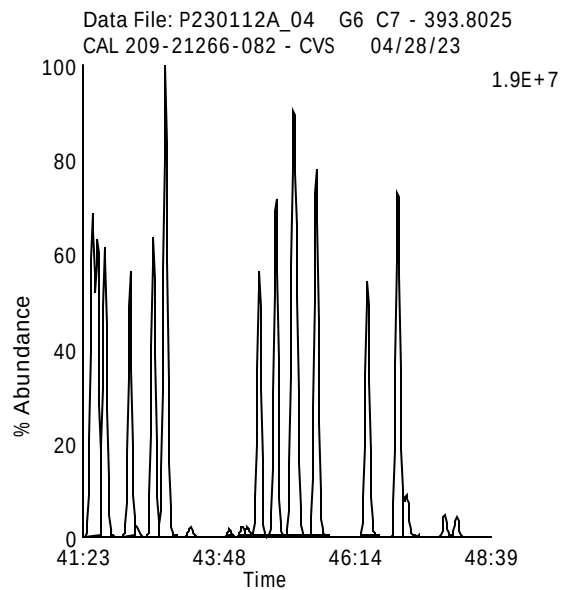
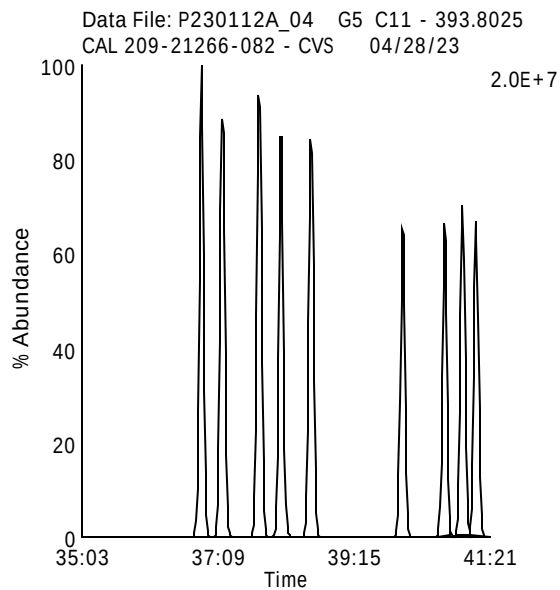
Date Acquired: 1/12/2023

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Octa Chlorinated Biphenyls

Data File Name: P230112A_04

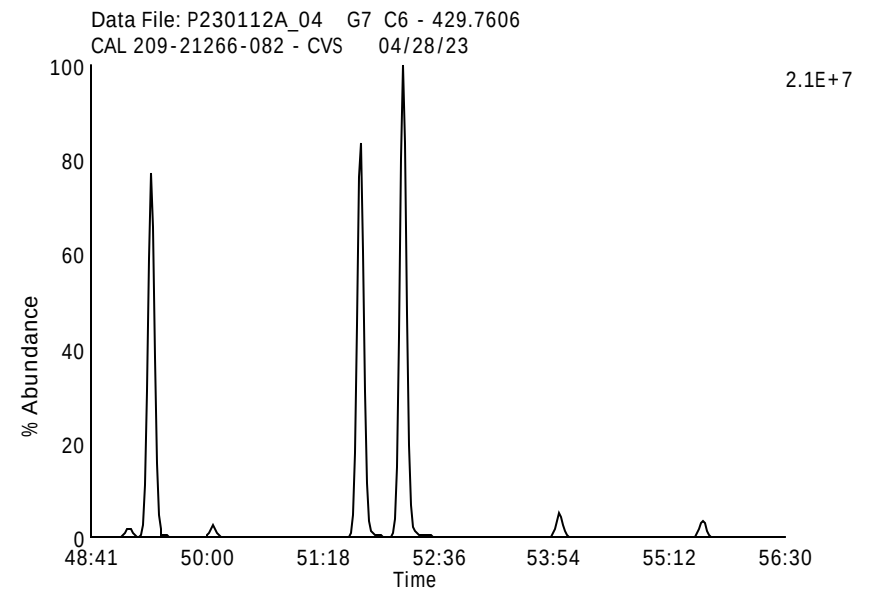
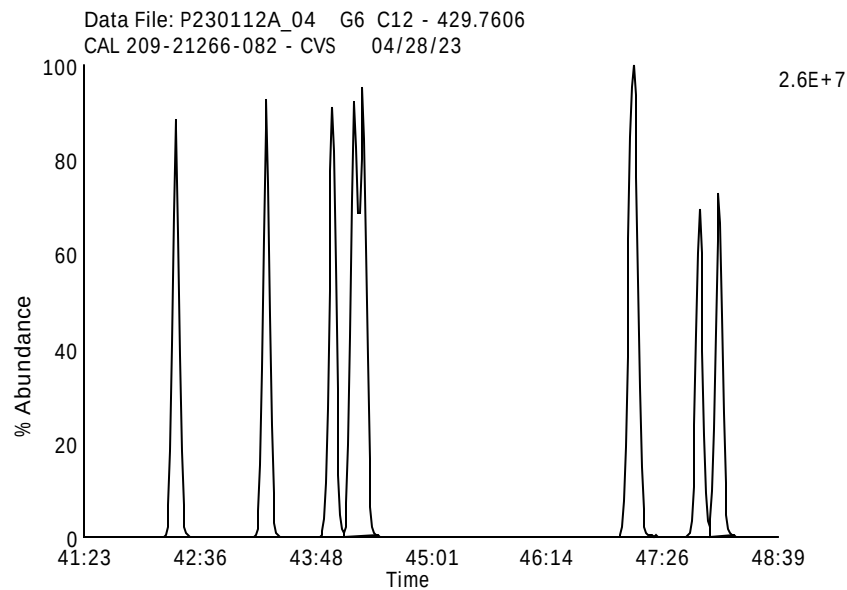
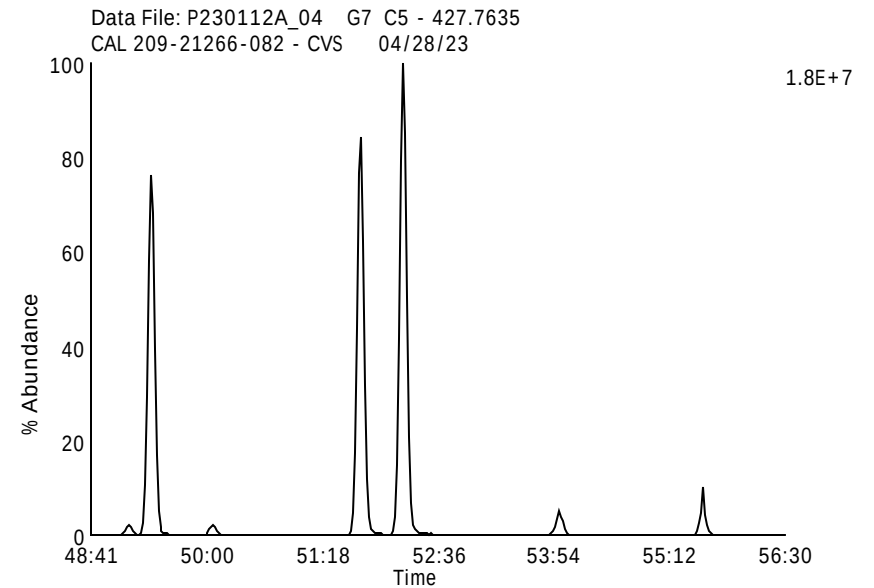
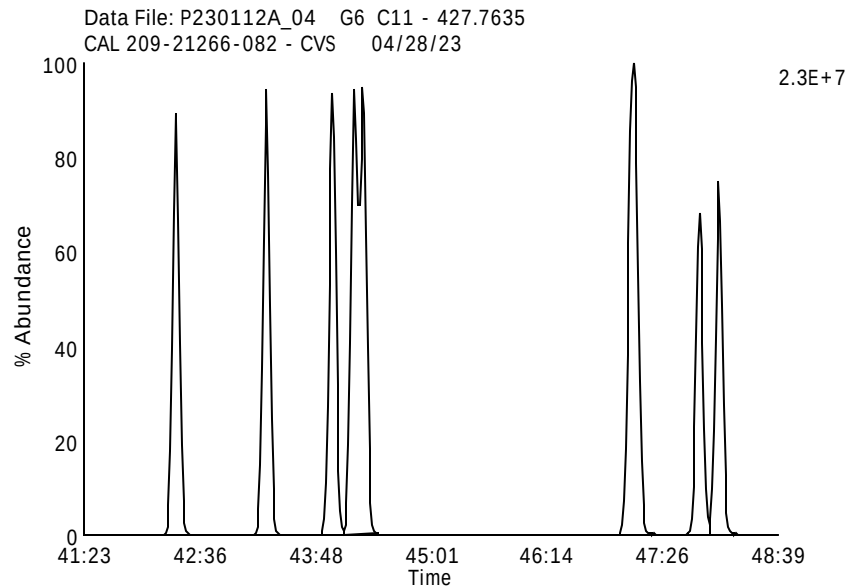
Date Acquired: 1/12/2023

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Nona Chlorinated Biphenyls

Data File Name: P230112A_04

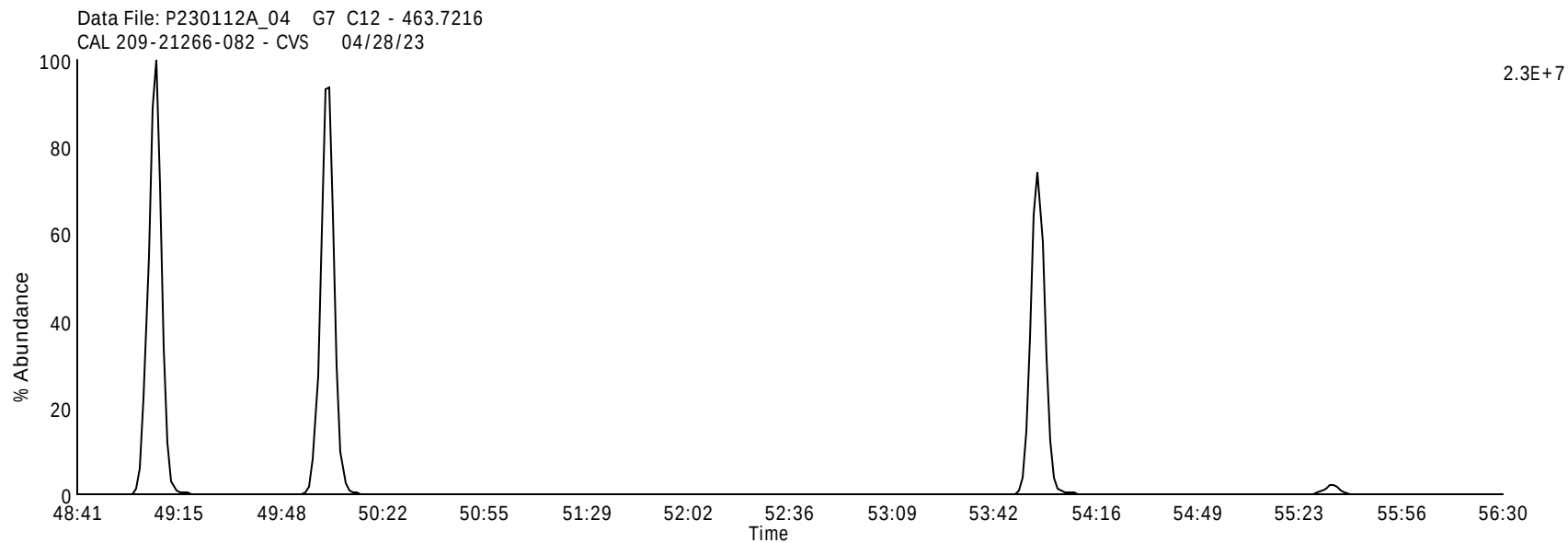
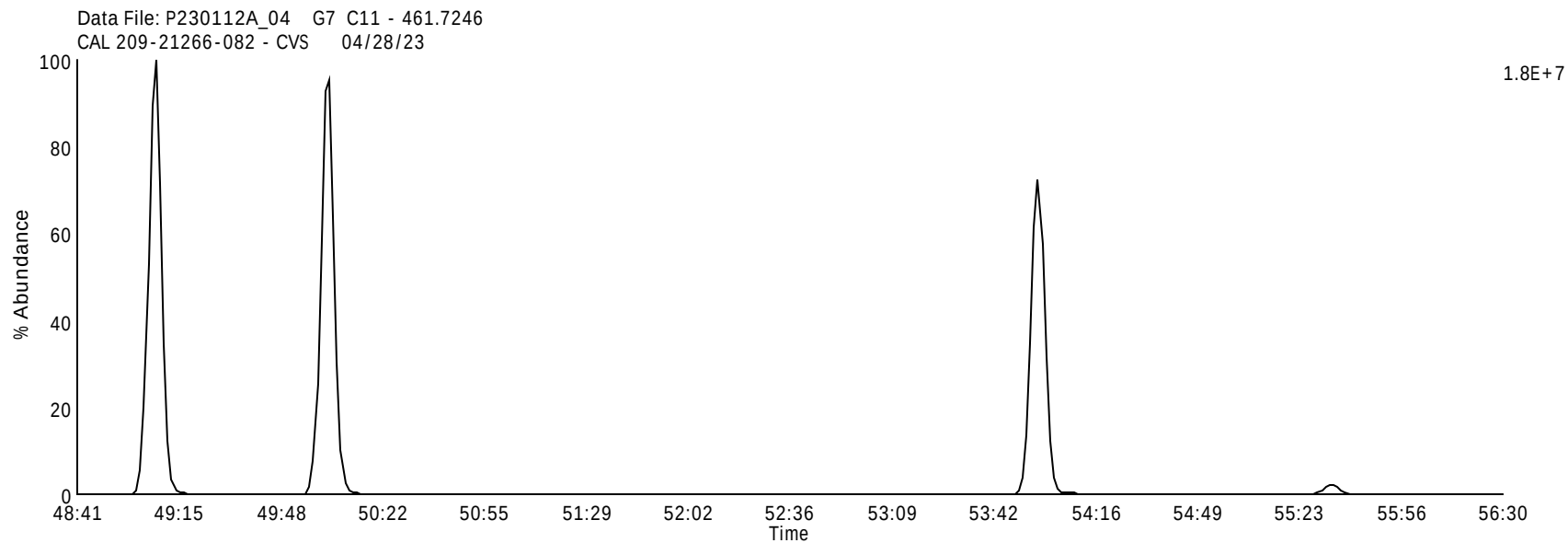
Date Acquired: 1/12/2023

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Deca Chlorinated Biphenyl

Data File Name: P230112A_04

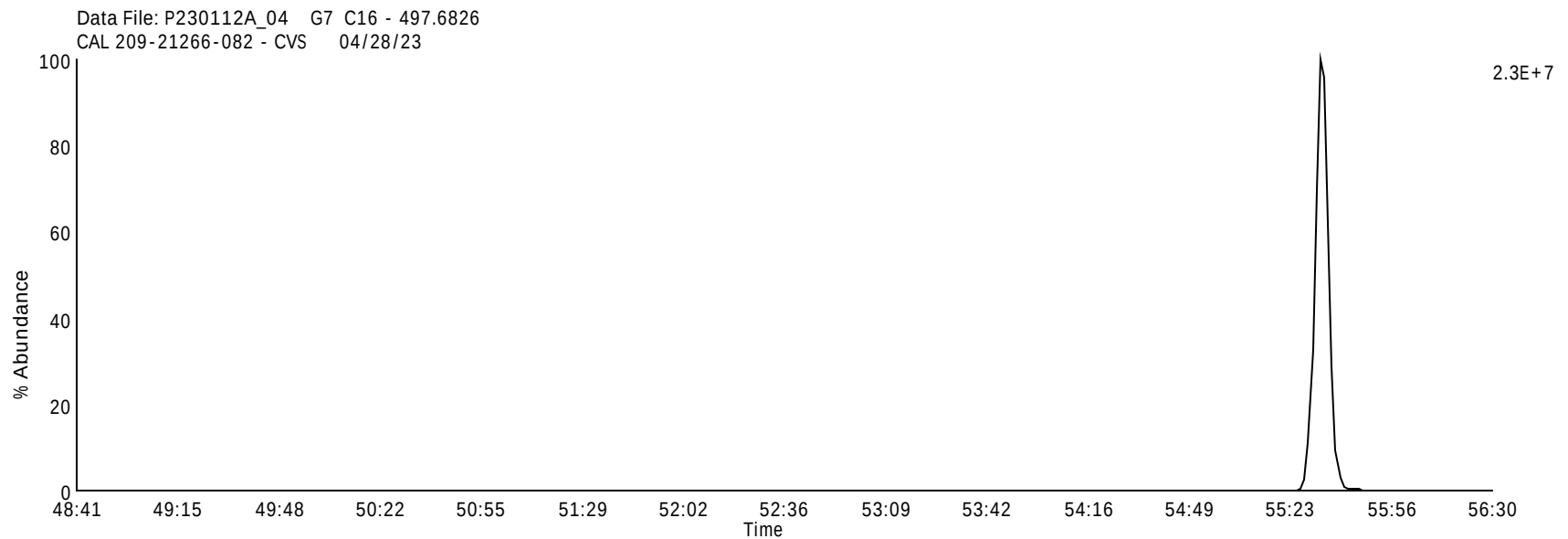
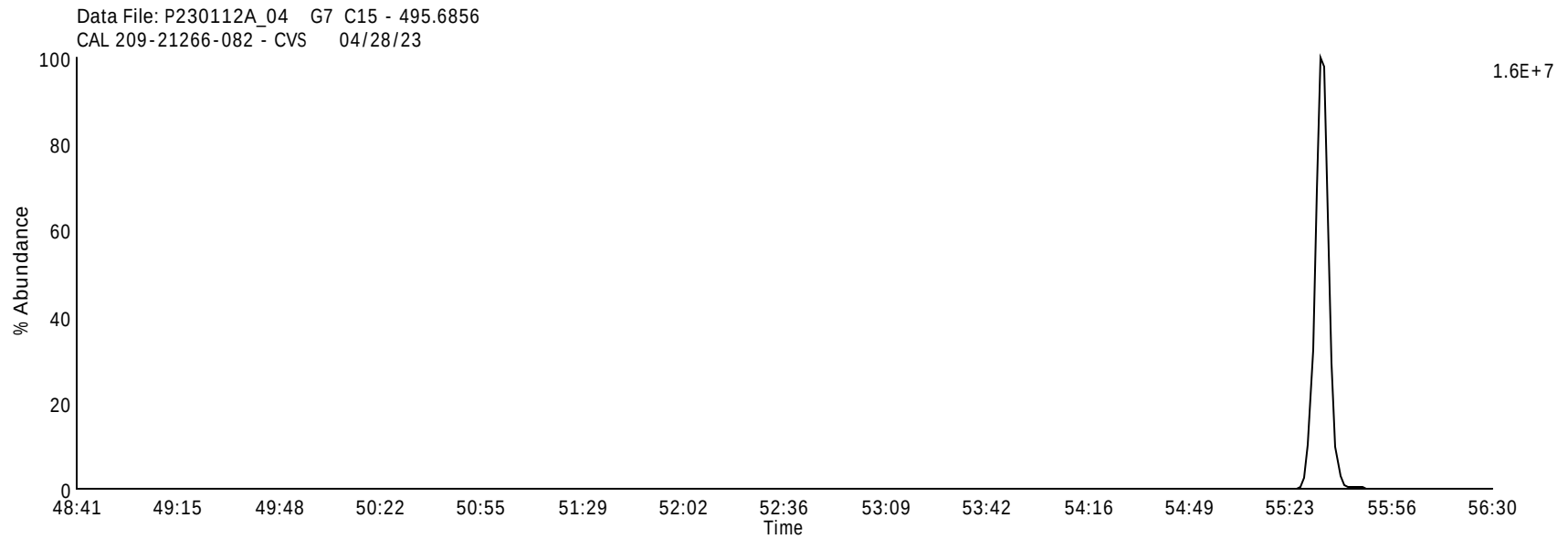
Date Acquired: 1/12/2023

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Group 1 - 4 Lock mass

Data File Name: P230112A_04

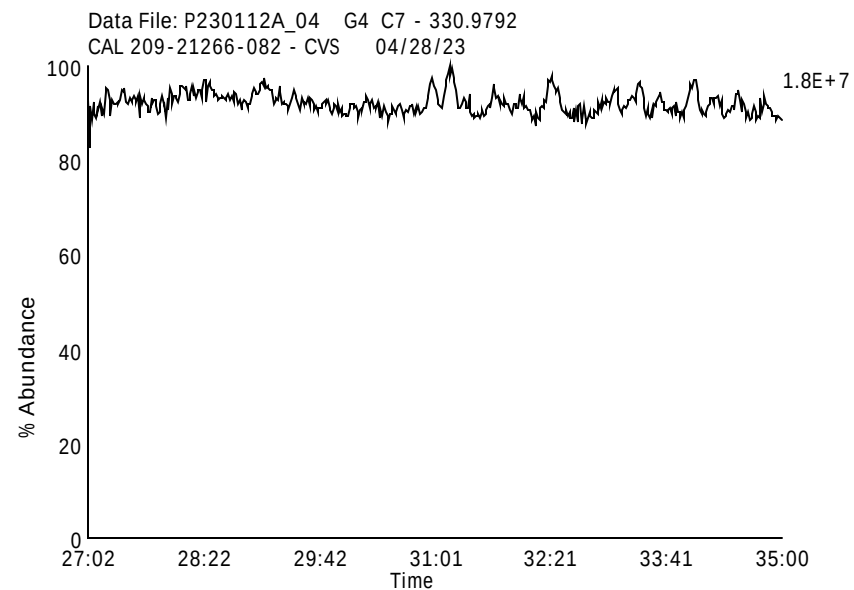
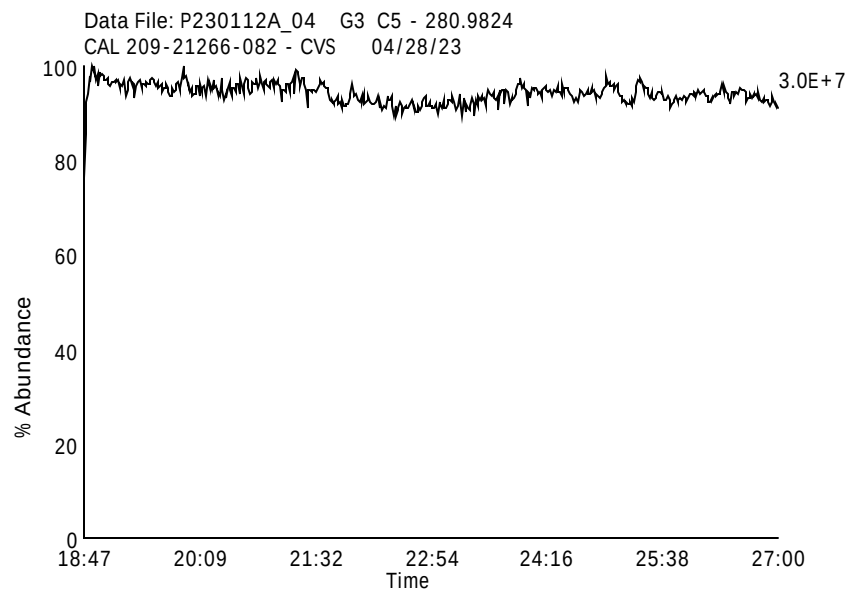
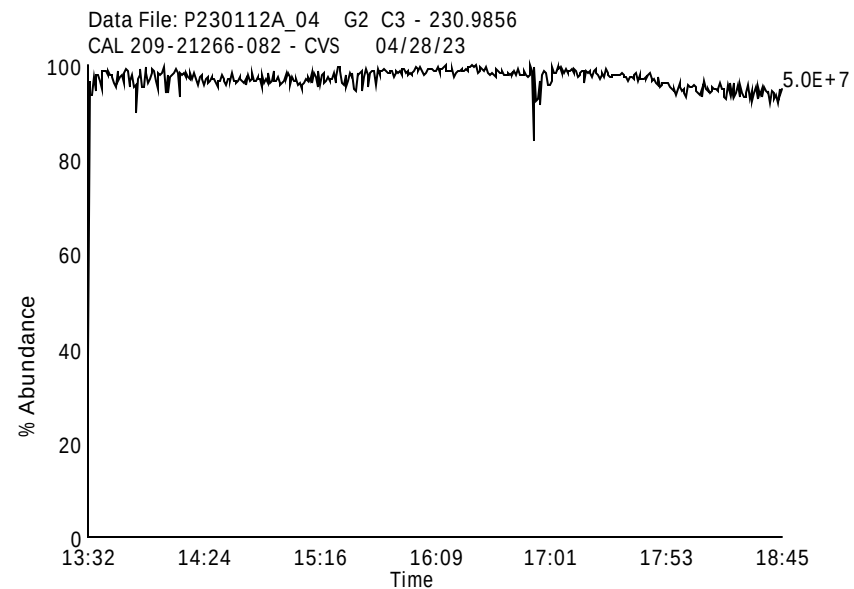
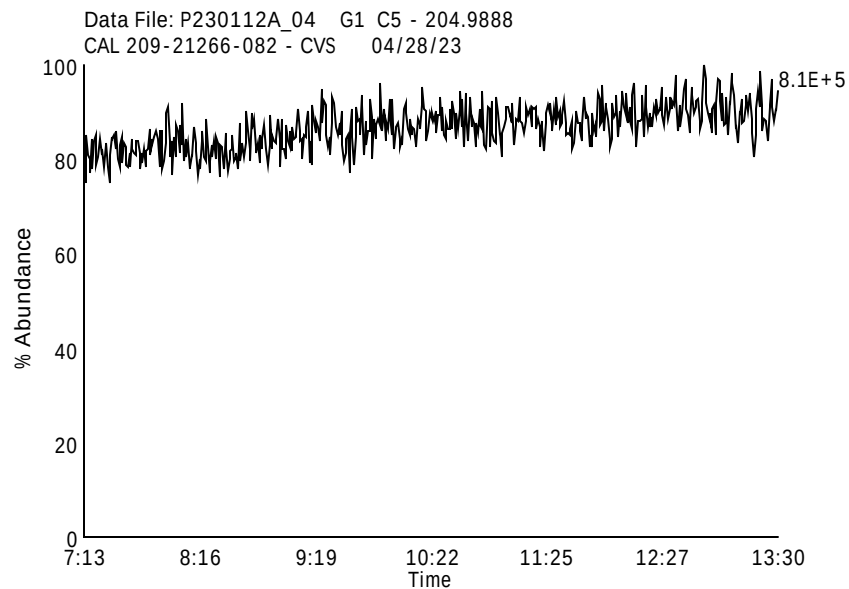
Date Acquired: 1/12/2023

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Group 5 - 7 Lock mass

Data File Name: P230112A_04

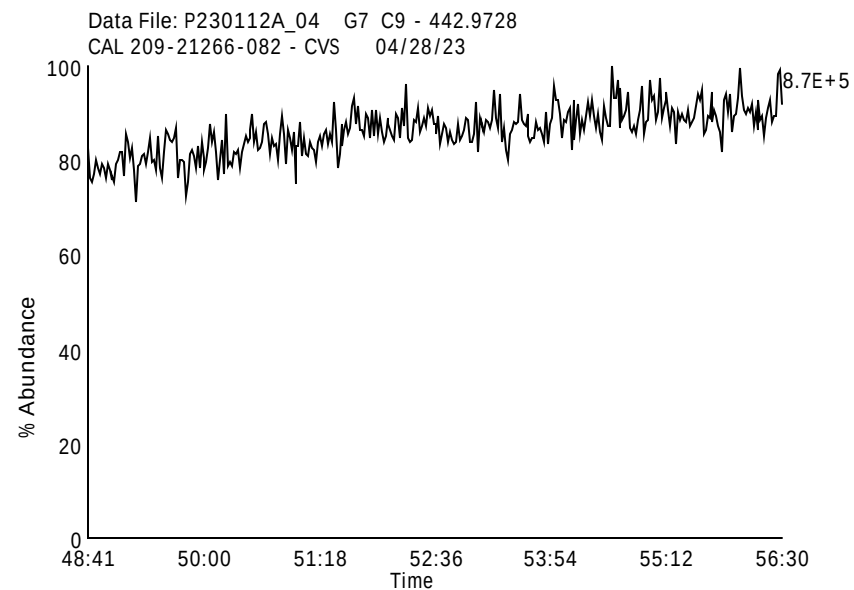
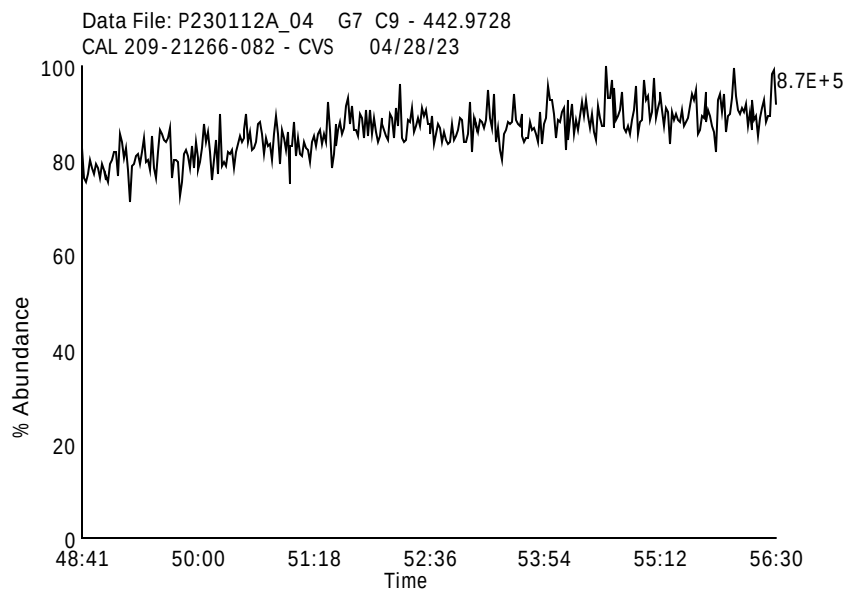
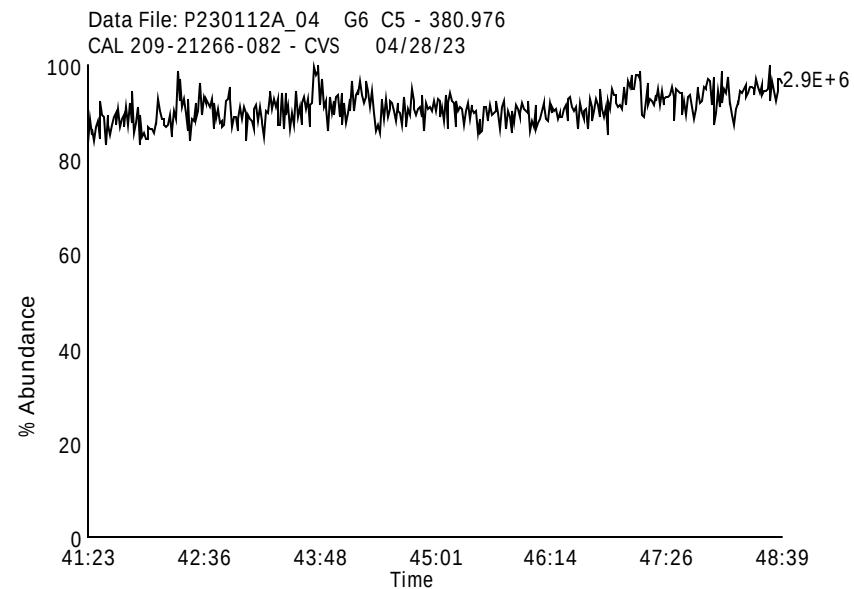
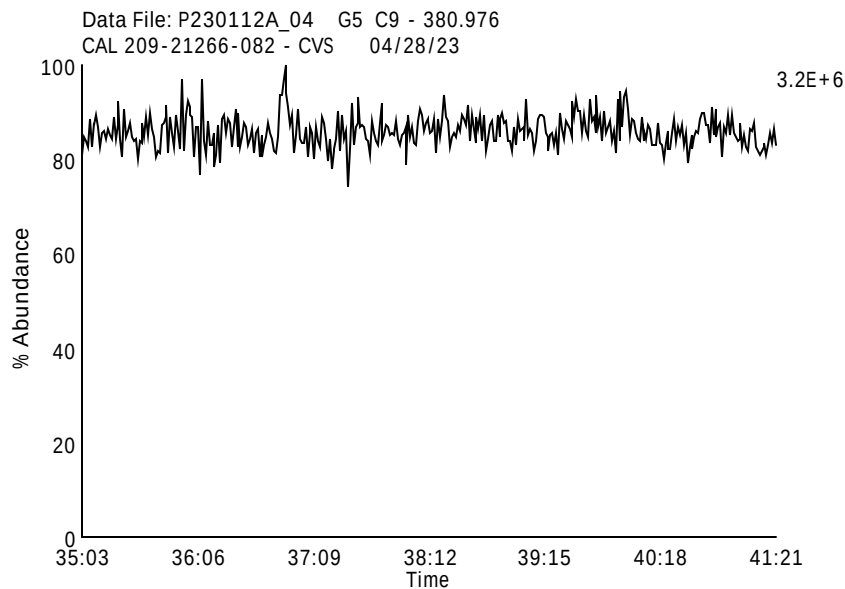
Date Acquired: 1/12/2023

Sample Description: CAL 209-21266-082 - CVS 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Mono Chlorinated Biphenyls

Data File Name: P230113A_03

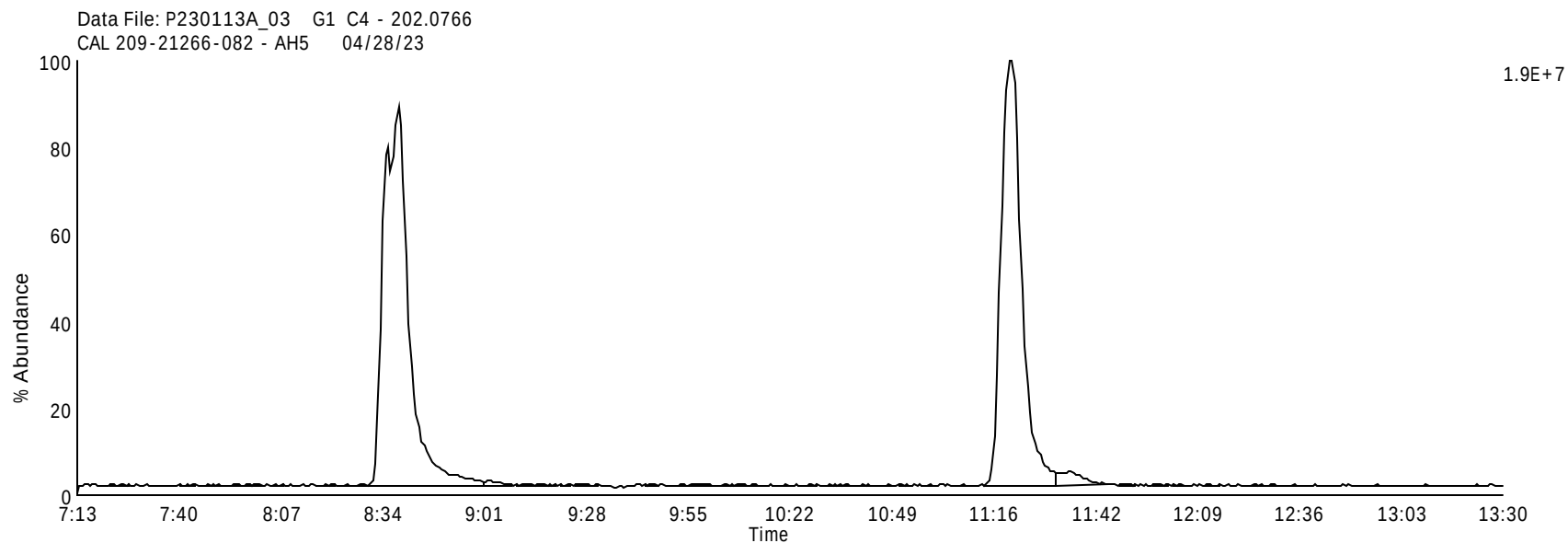
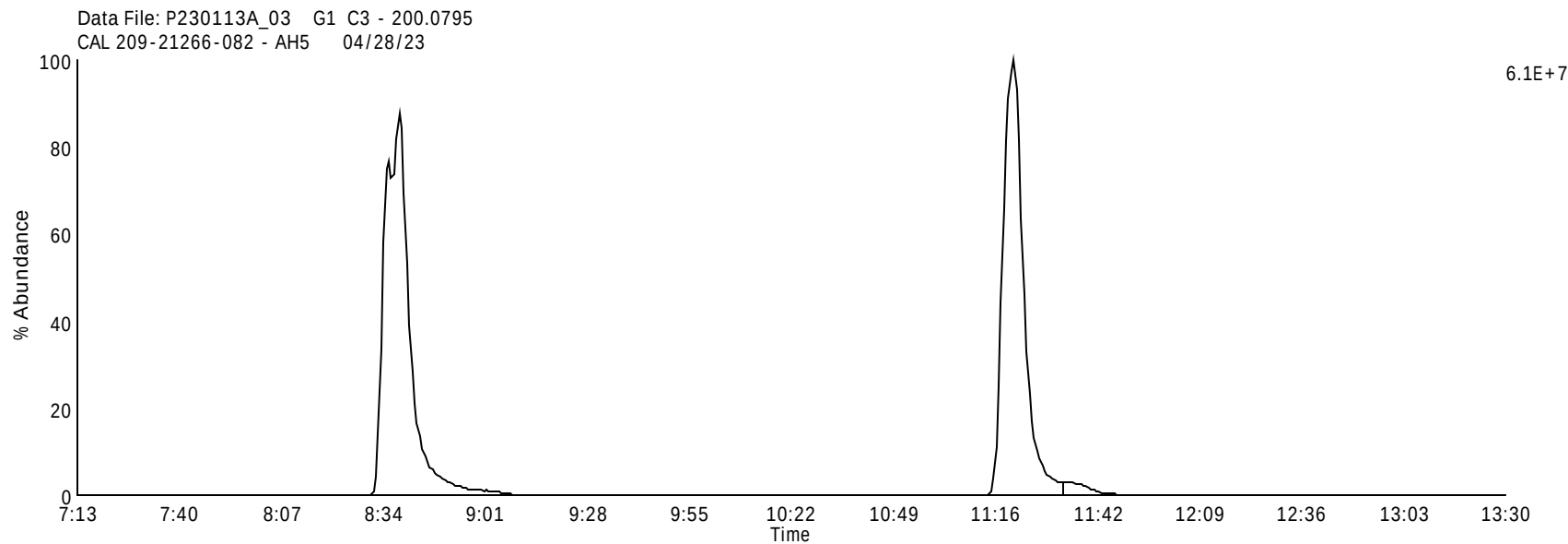
Date Acquired: 1/13/2023

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Di Chlorinated Biphenyls

Data File Name: P230113A_03

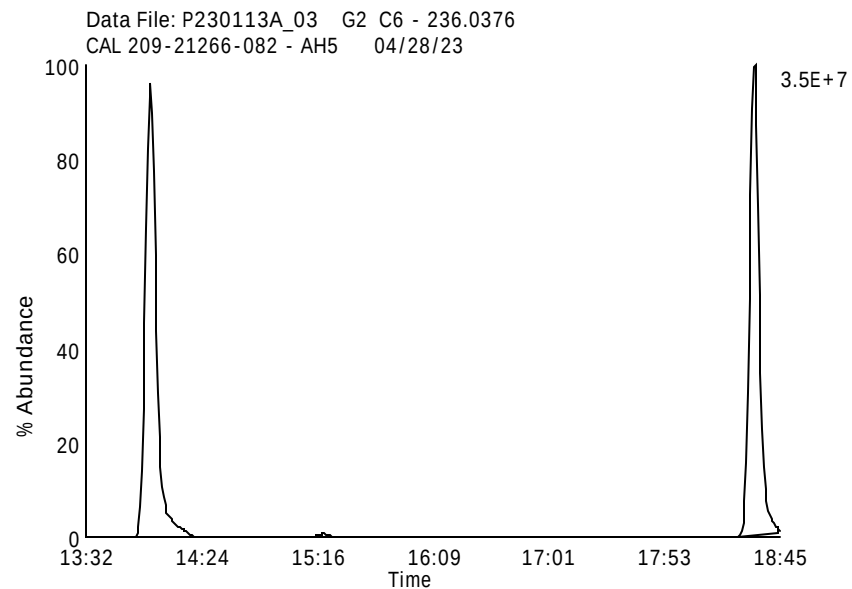
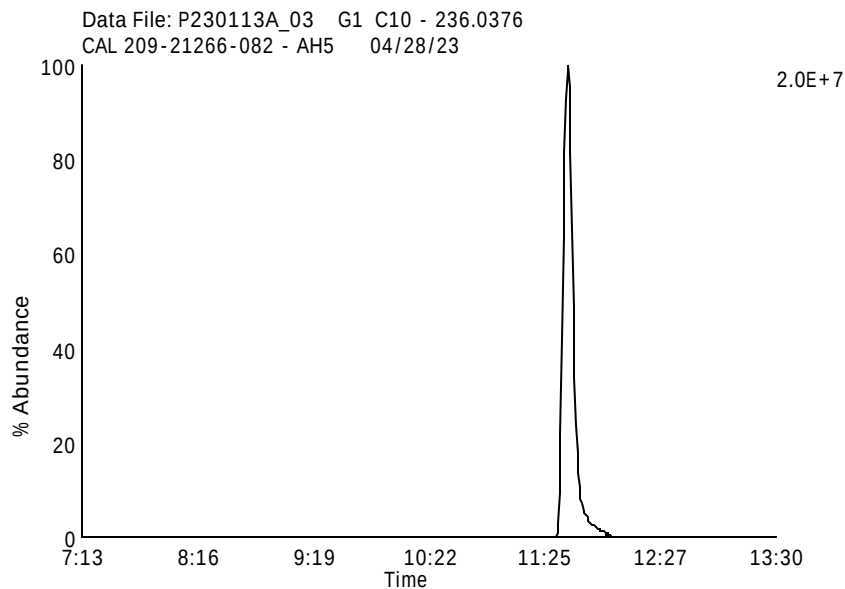
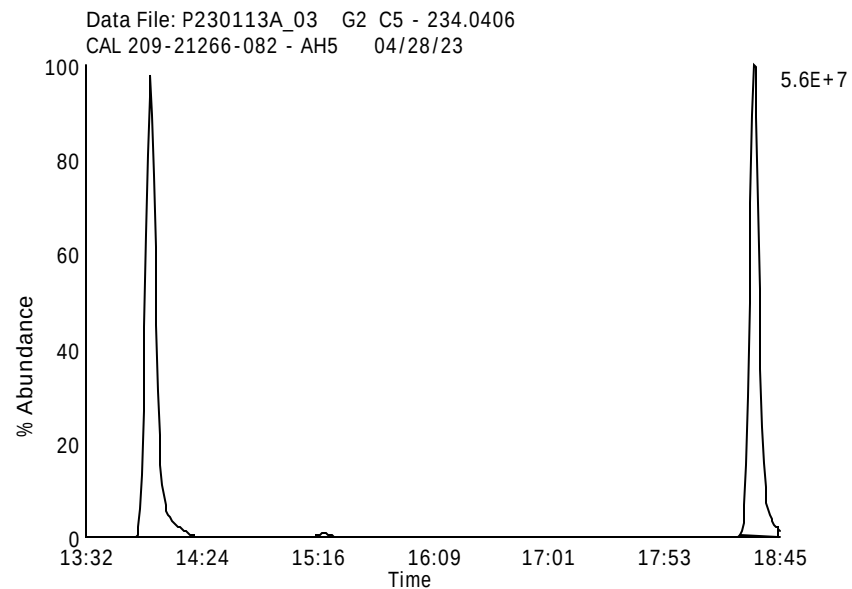
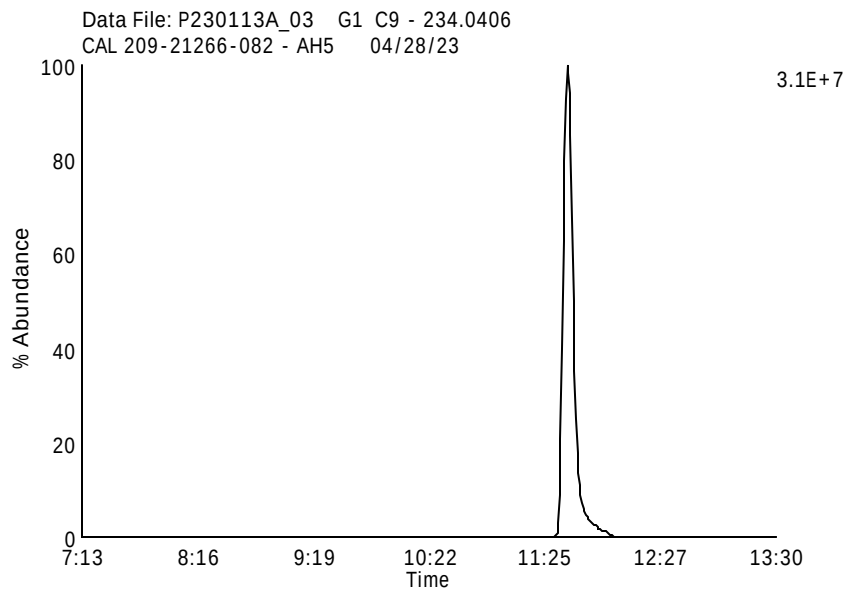
Date Acquired: 1/13/2023

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Tri Chlorinated Biphenyls

Data File Name: P230113A_03

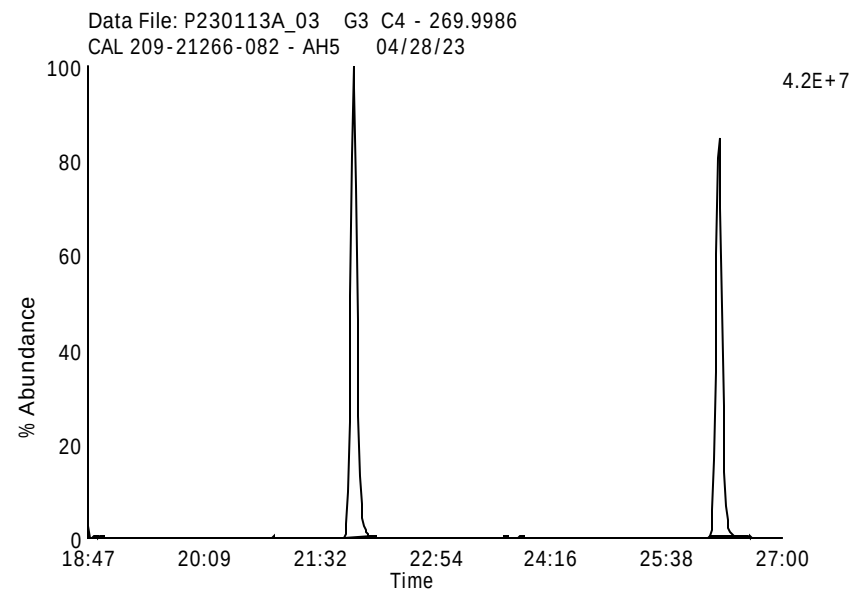
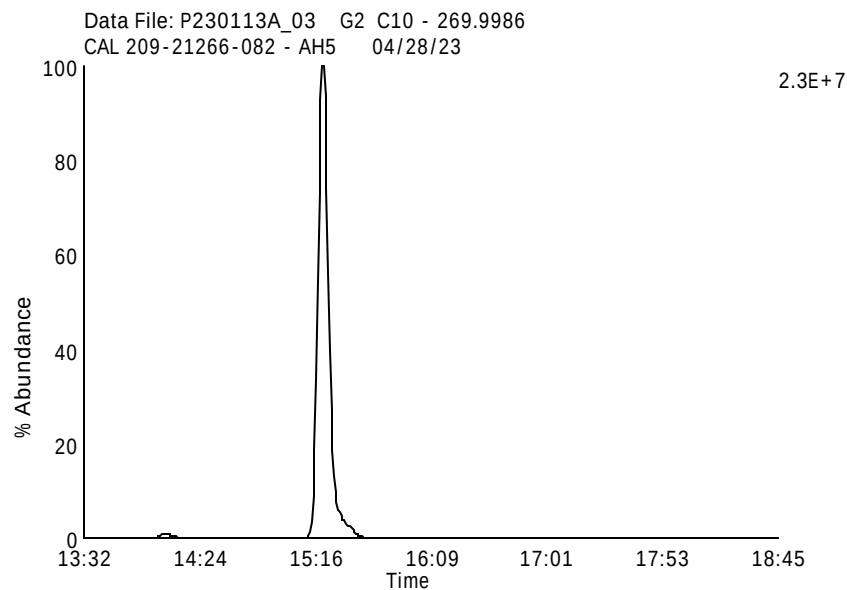
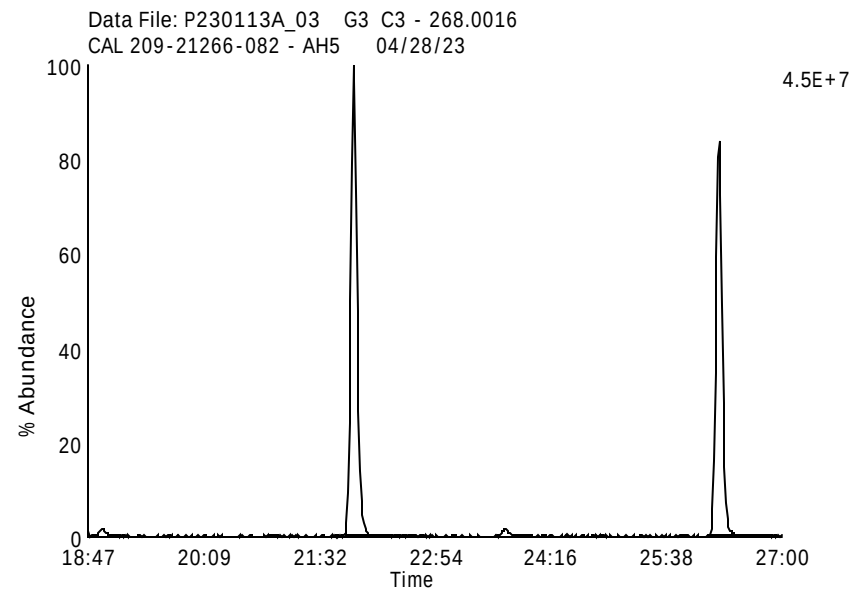
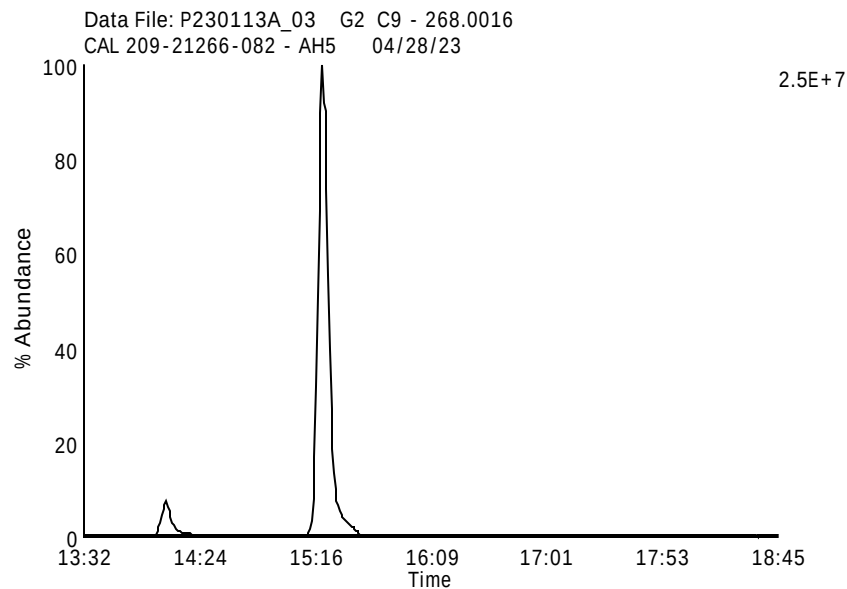
Date Acquired: 1/13/2023

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Tetra Chlorinated Biphenyls

Data File Name: P230113A_03

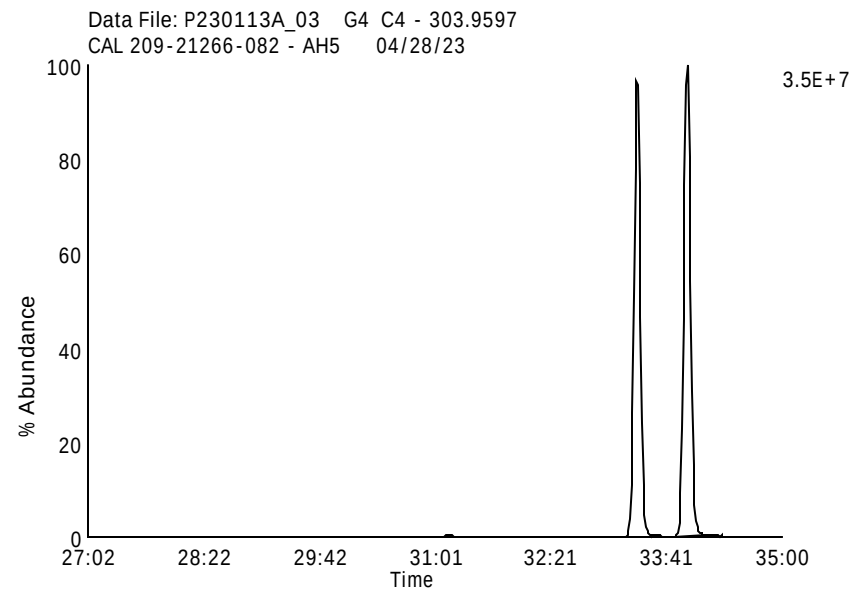
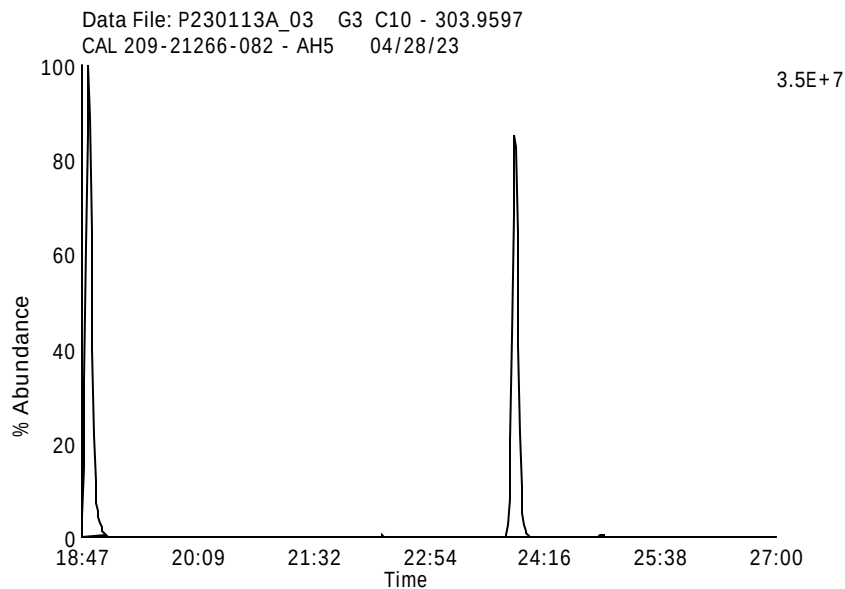
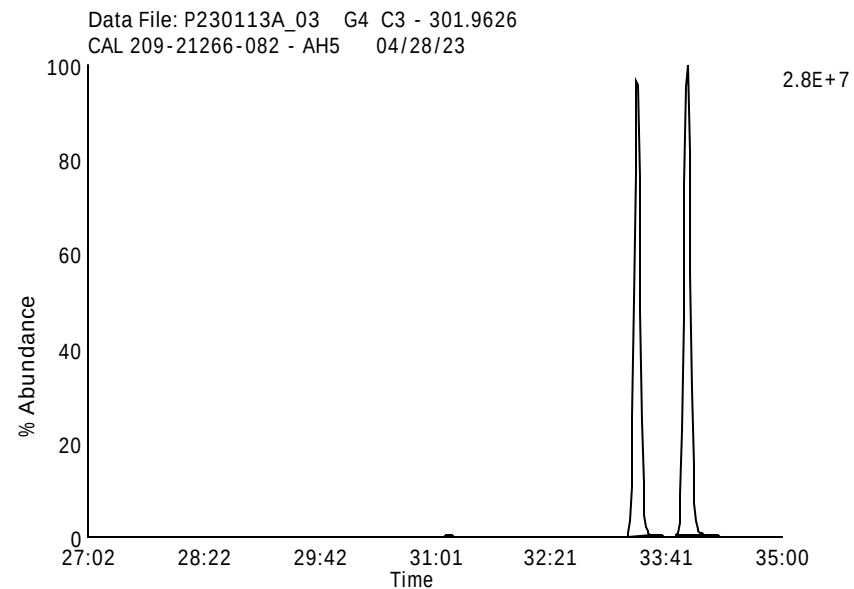
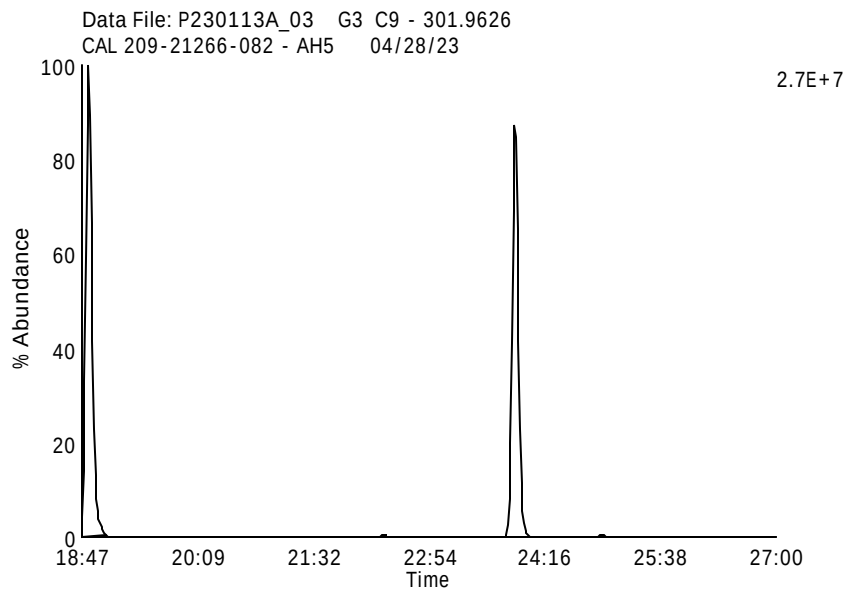
Date Acquired: 1/13/2023

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Penta Chlorinated Biphenyls

Data File Name: P230113A_03

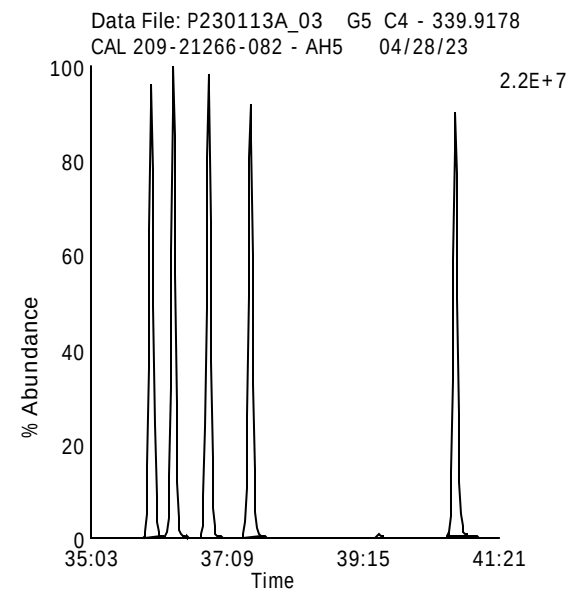
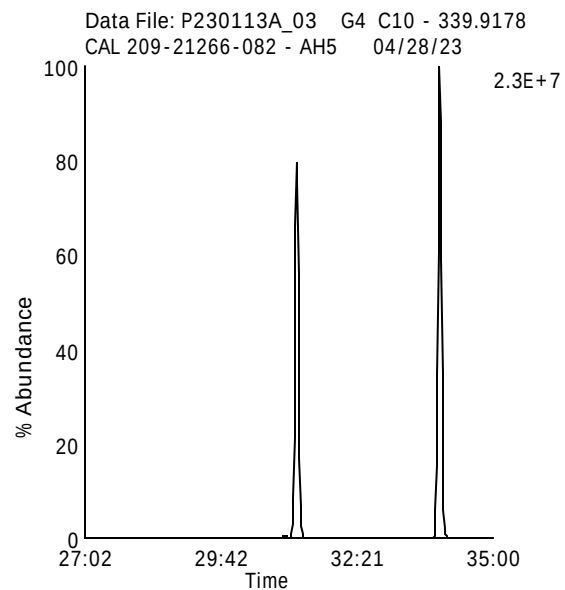
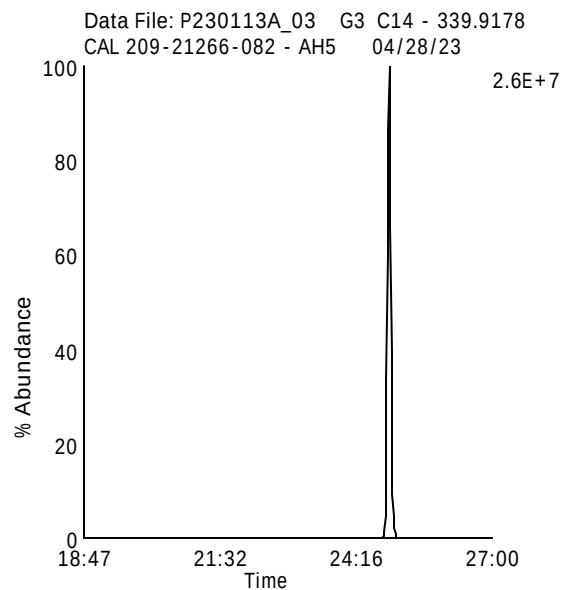
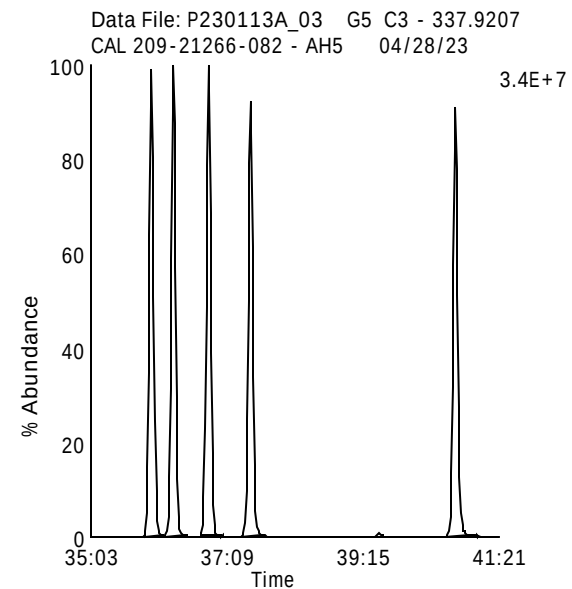
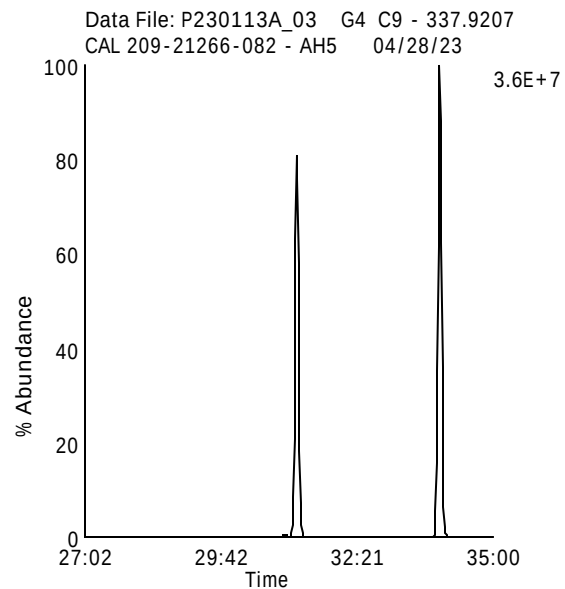
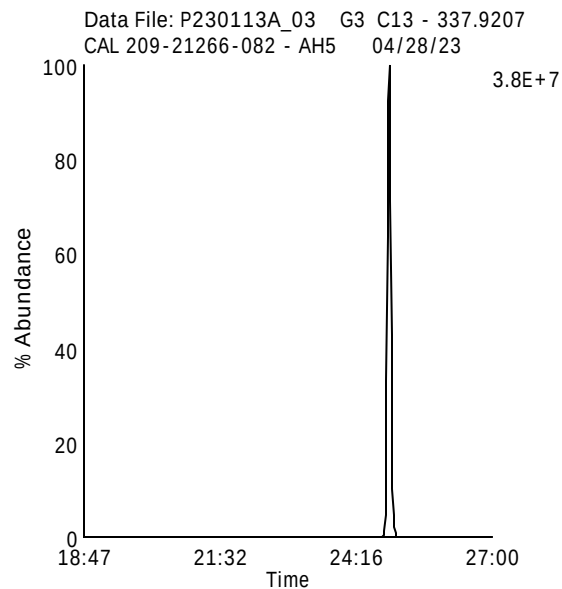
Date Acquired: 1/13/2023

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Hexa Chlorinated Biphenyls

Data File Name: P230113A_03

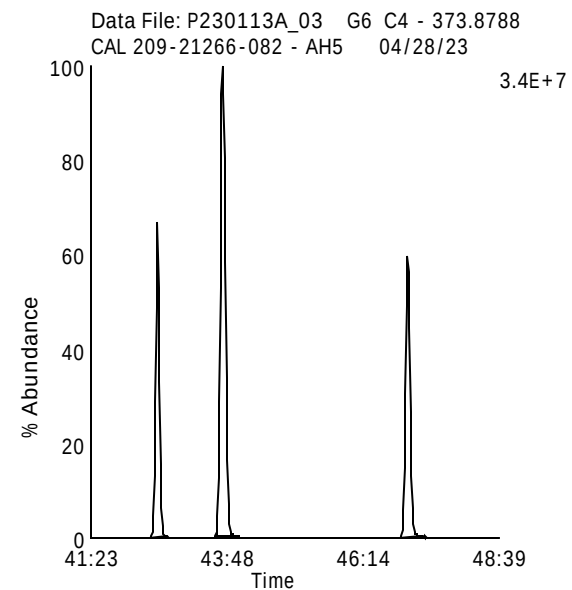
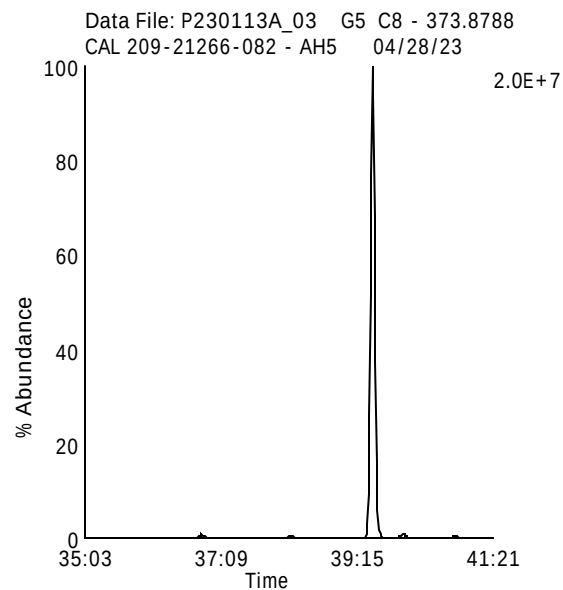
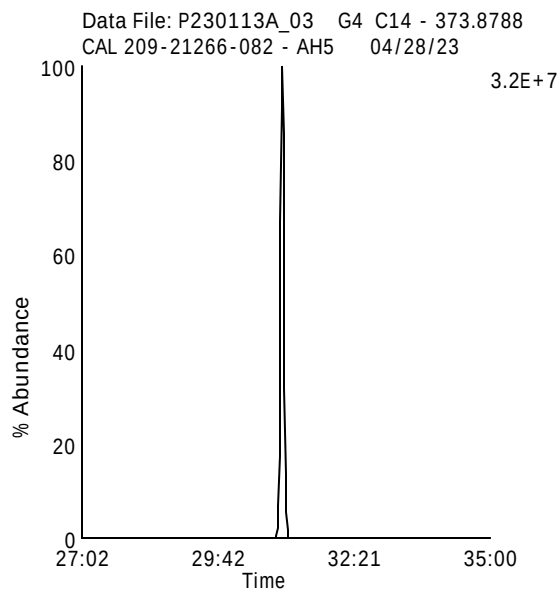
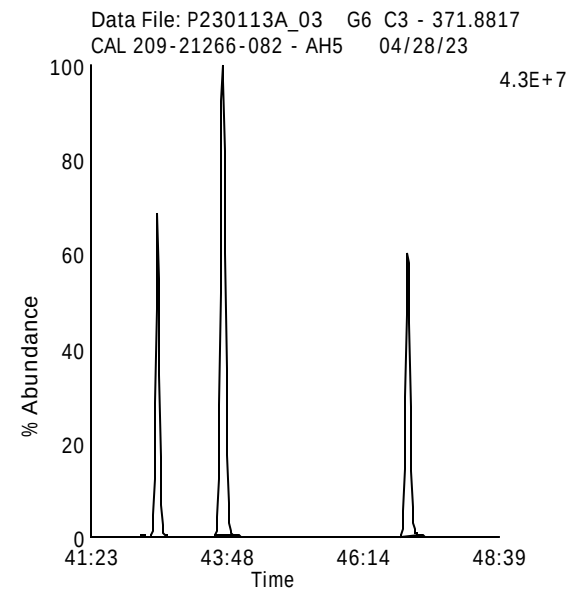
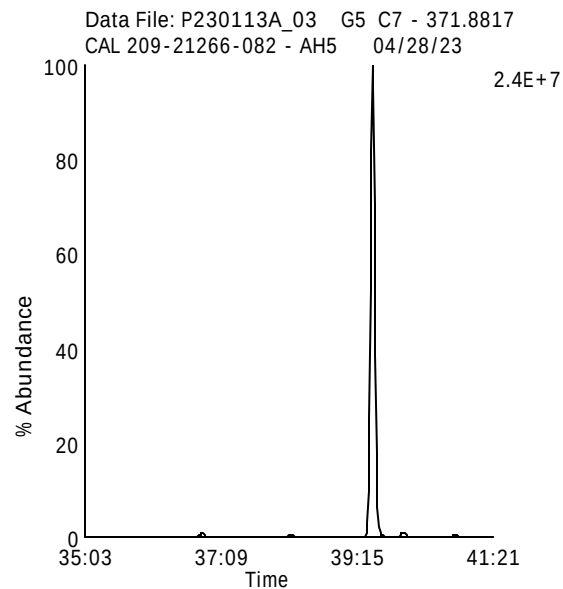
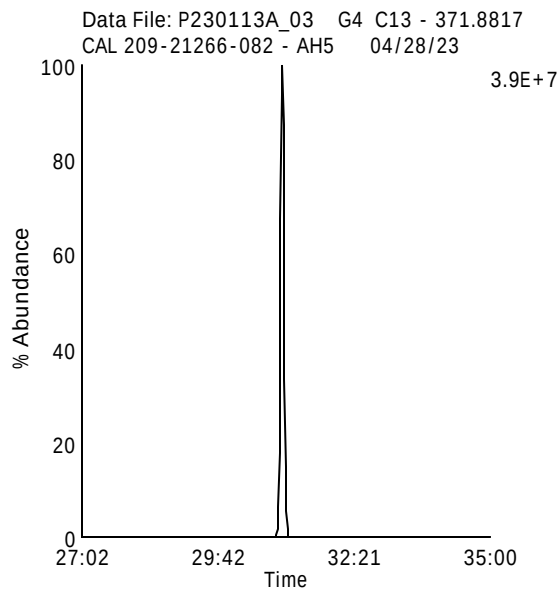
Date Acquired: 1/13/2023

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Hepta Chlorinated Biphenyls

Data File Name: P230113A_03

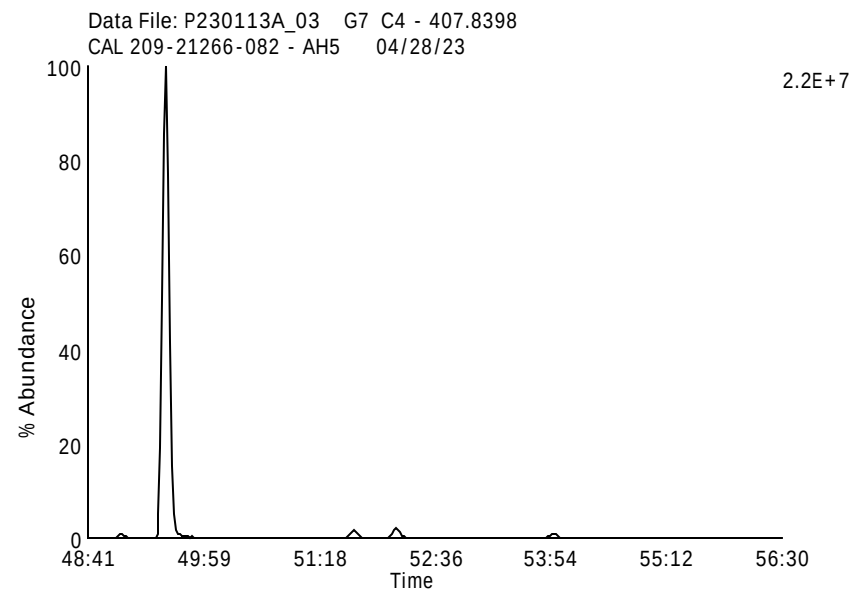
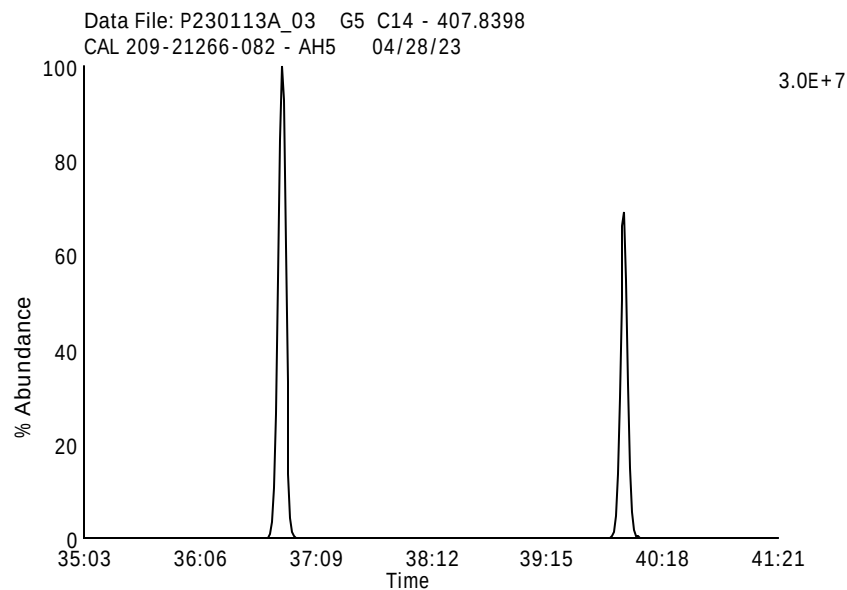
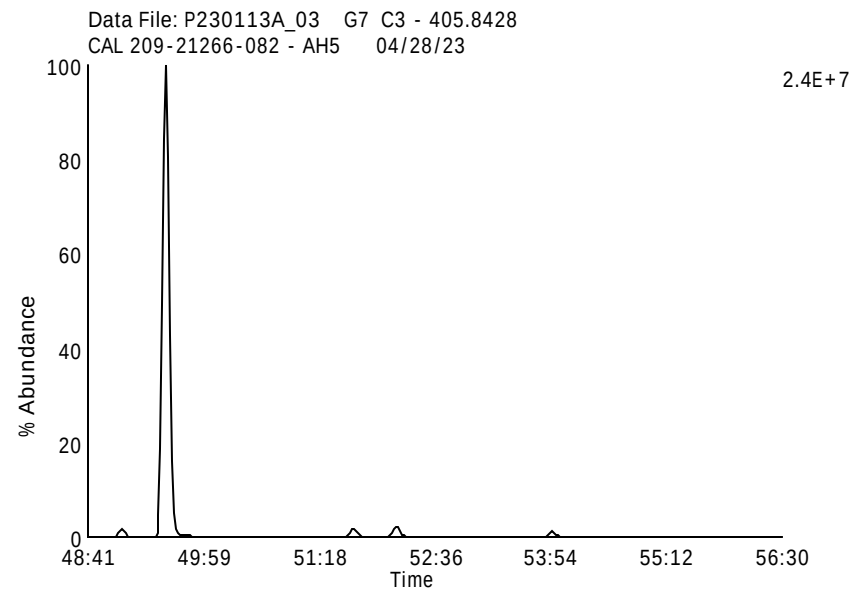
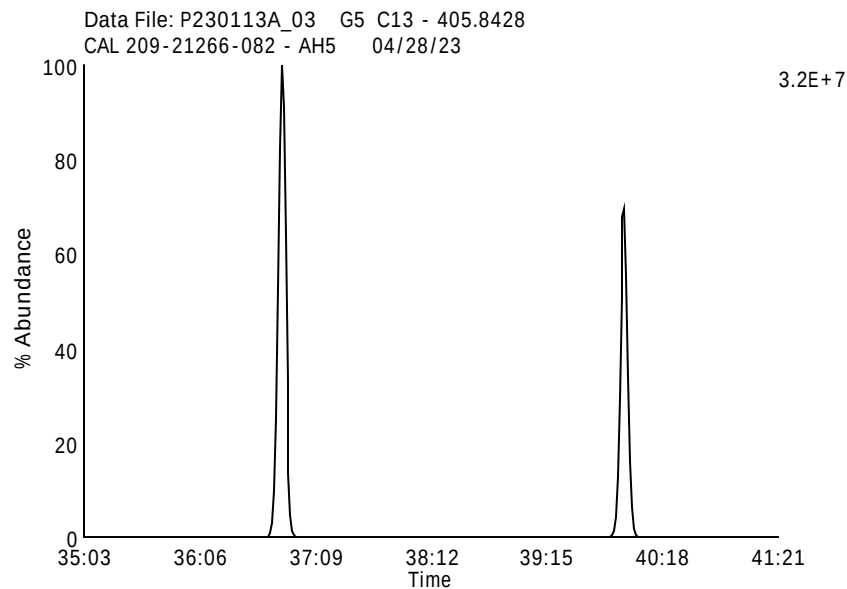
Date Acquired: 1/13/2023

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Octa Chlorinated Biphenyls

Data File Name: P230113A_03

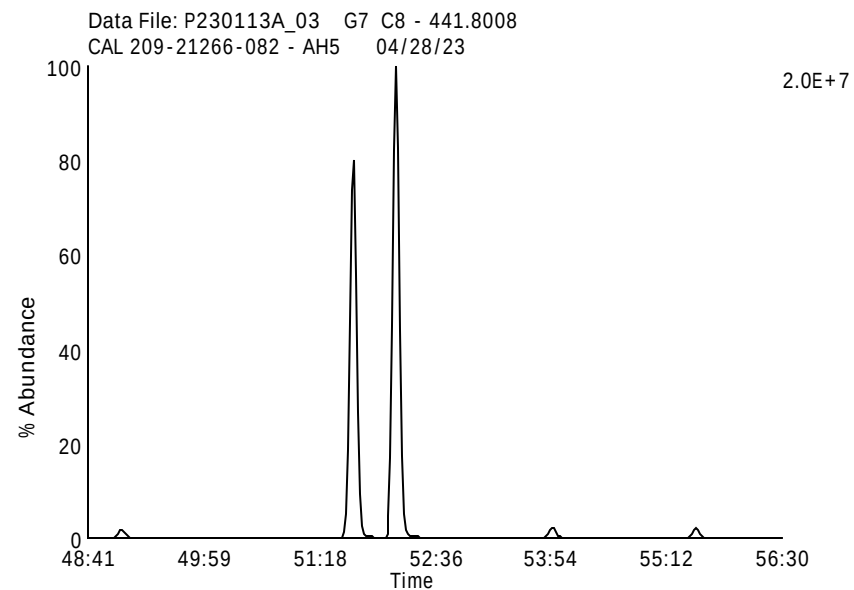
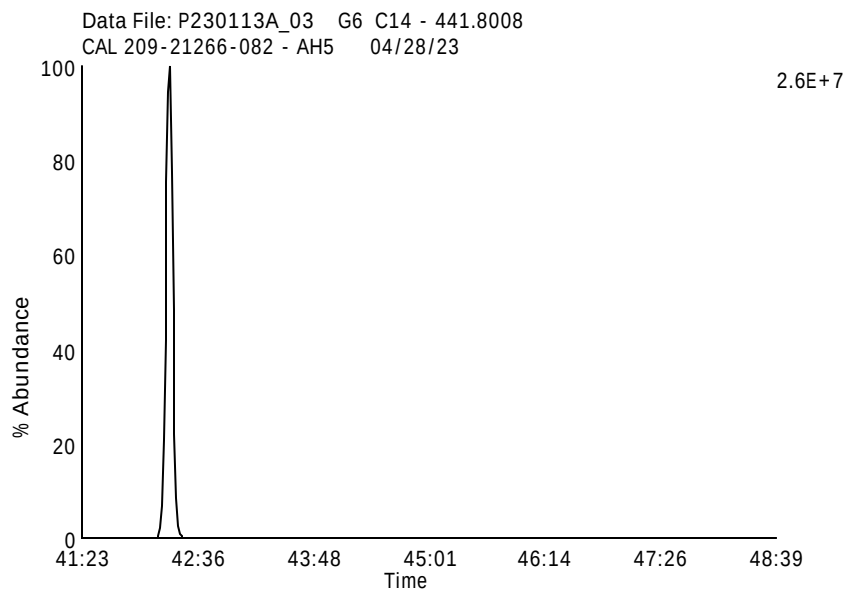
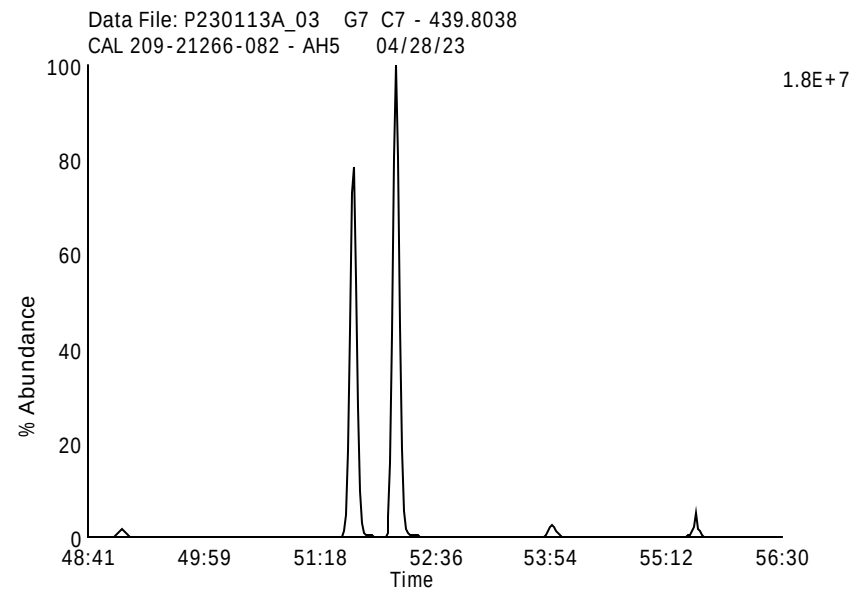
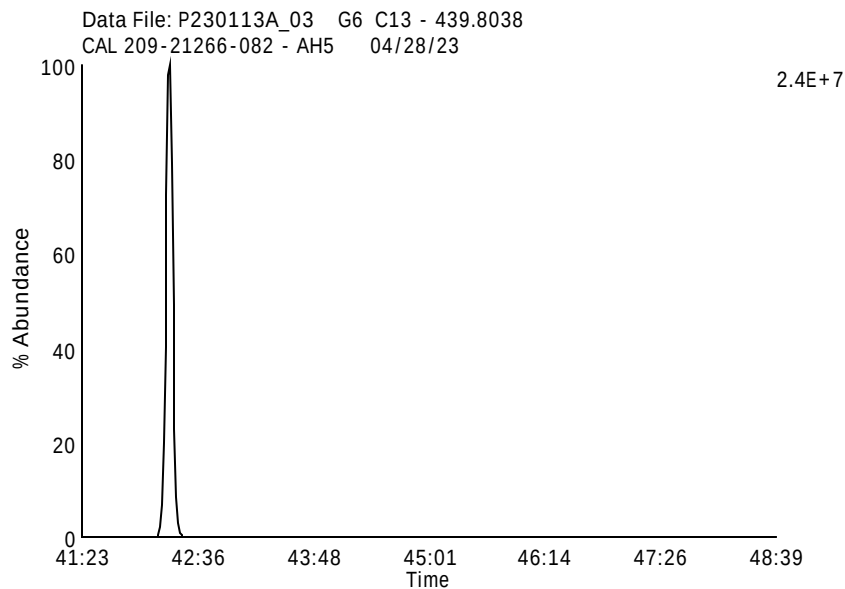
Date Acquired: 1/13/2023

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Nona Chlorinated Biphenyls

Data File Name: P230113A_03

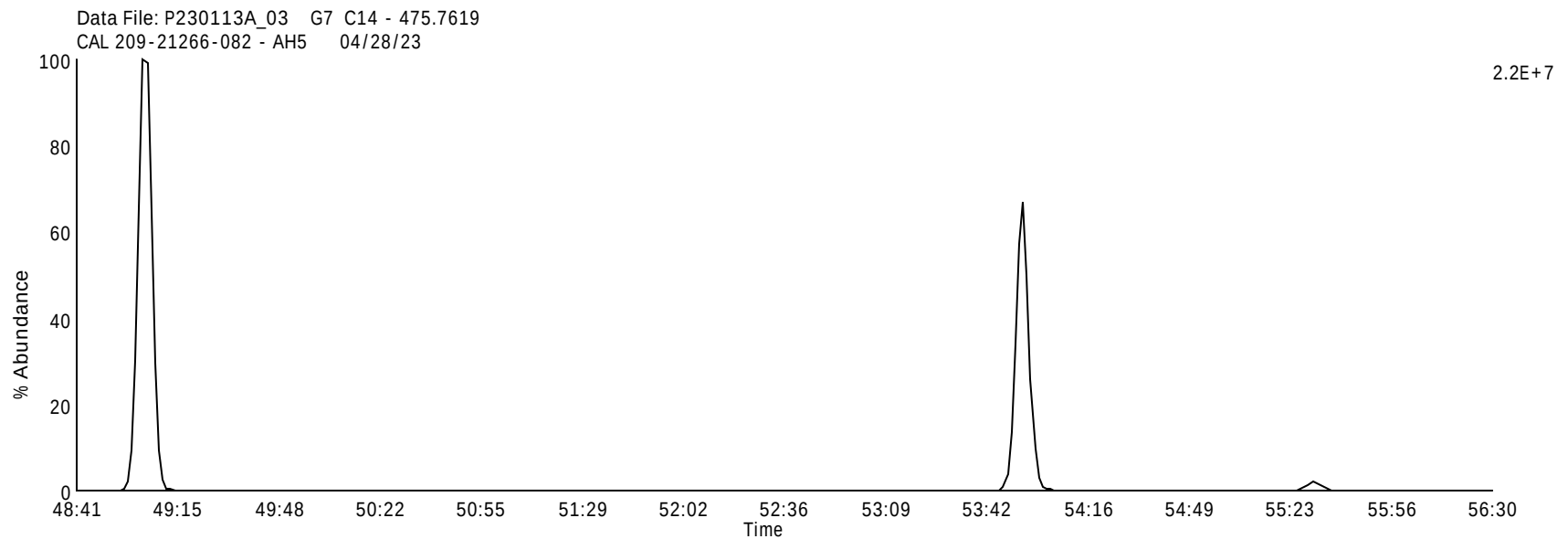
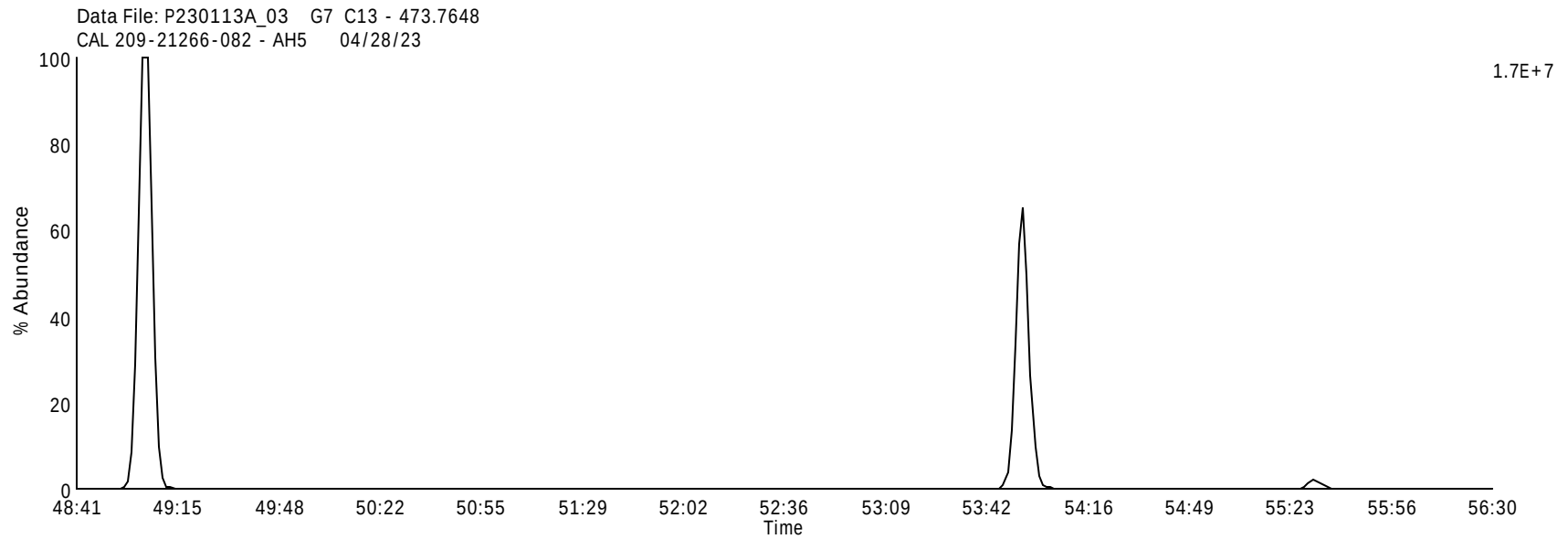
Lab Sample ID: 209-21266-082

Date Acquired: 1/13/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Client Sample ID: 209 Mix



Labeled Deca Chlorinated Biphenyl

Data File Name: P230113A_03

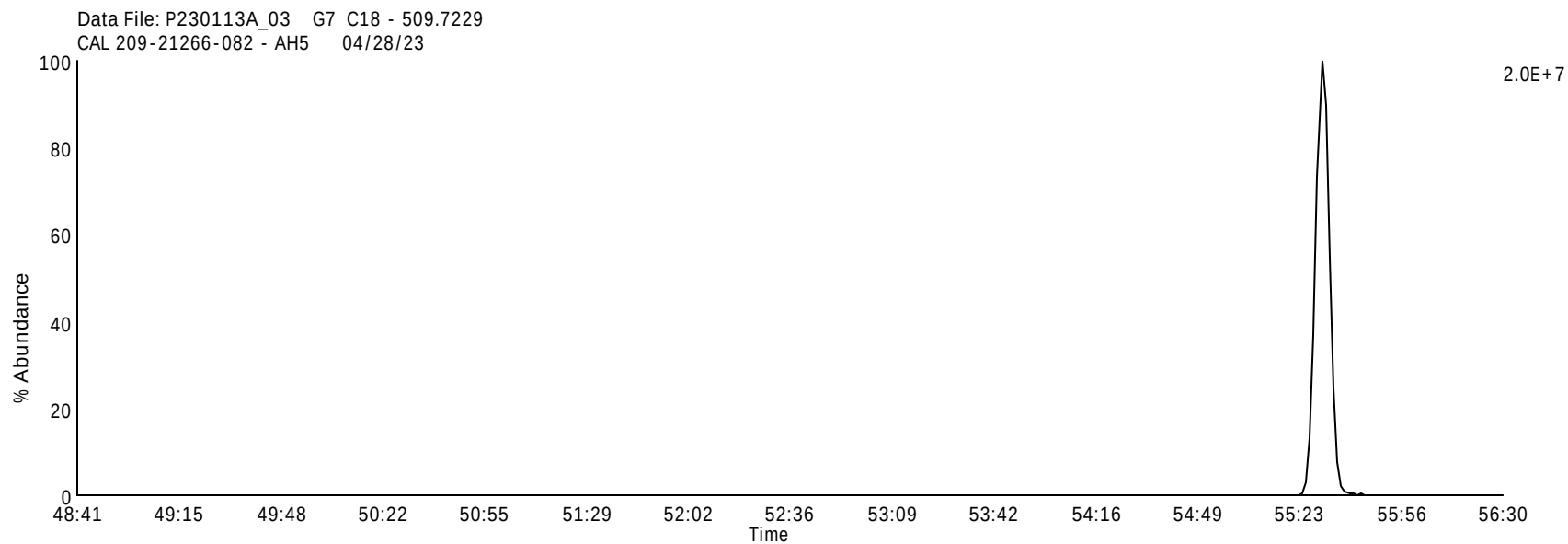
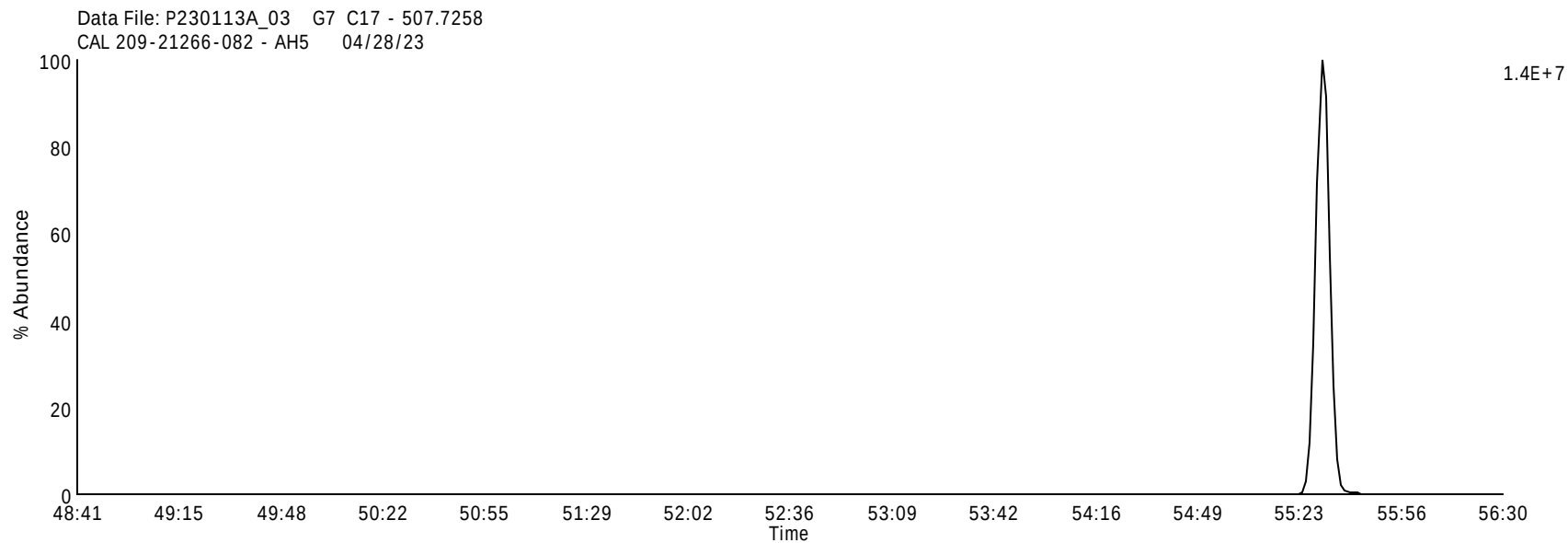
Date Acquired: 1/13/2023

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Mono Chlorinated Biphenyls

Data File Name: P230113A_03

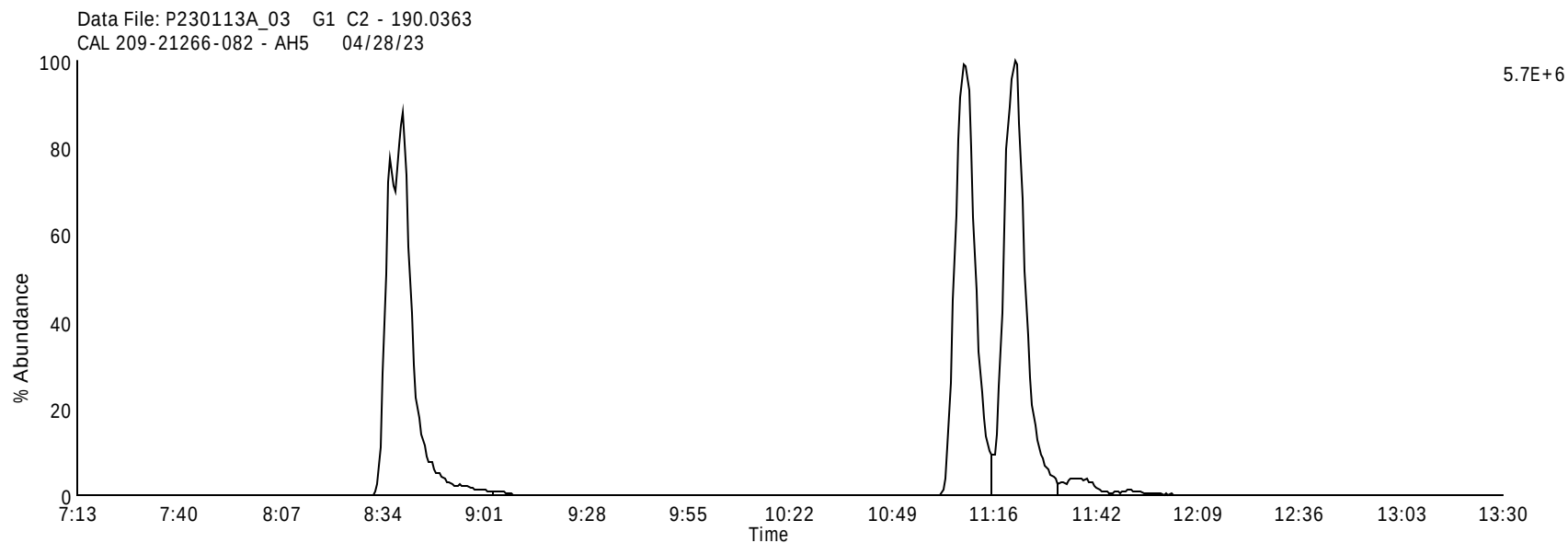
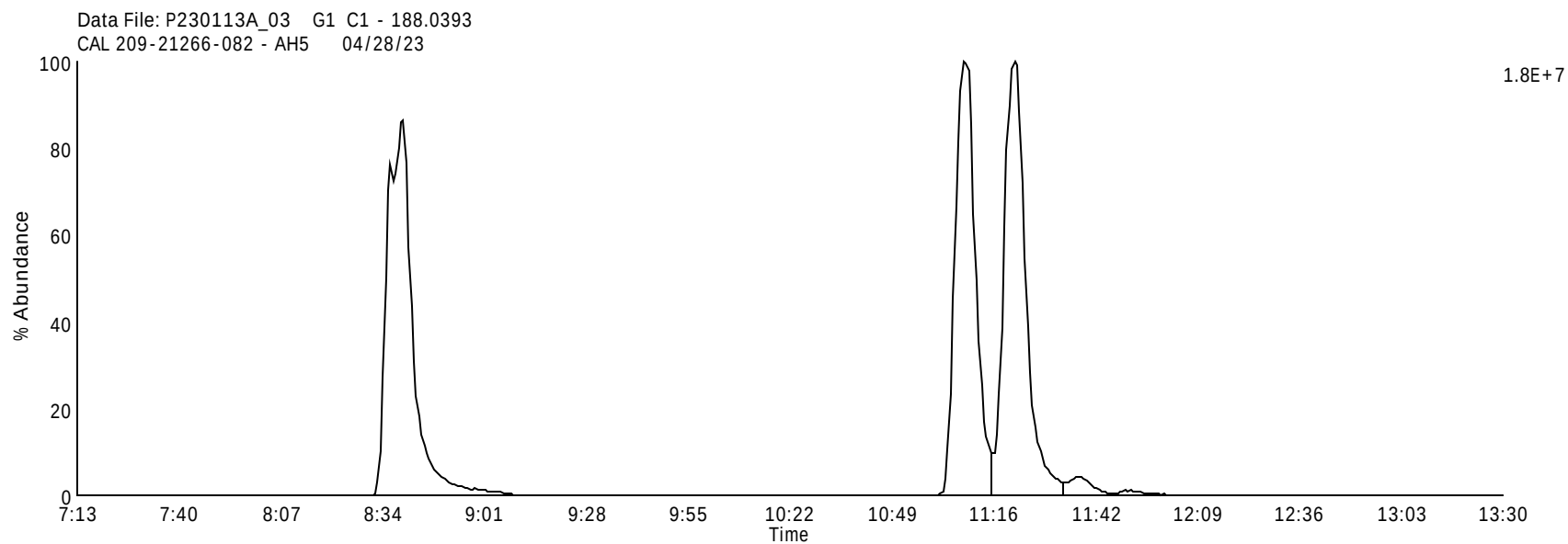
Date Acquired: 1/13/2023

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Di Chlorinated Biphenyls

Data File Name: P230113A_03

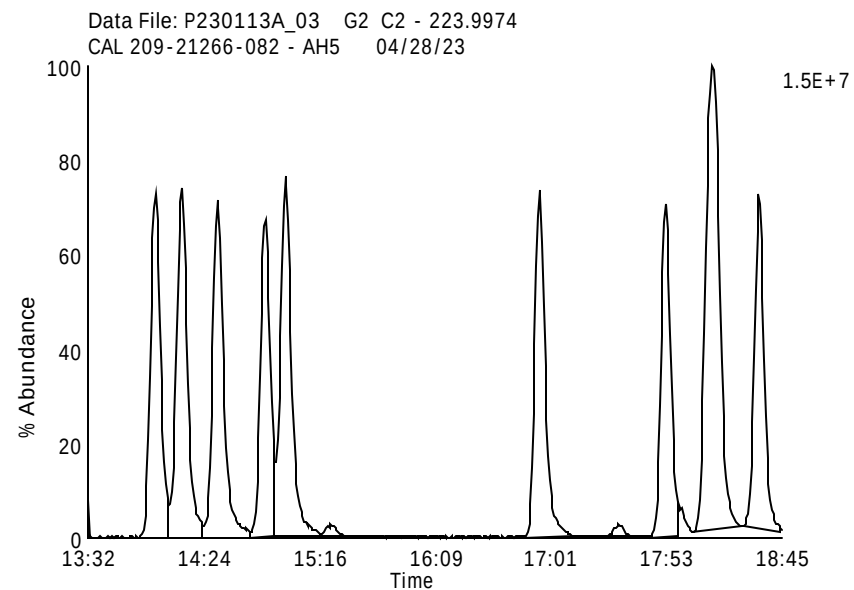
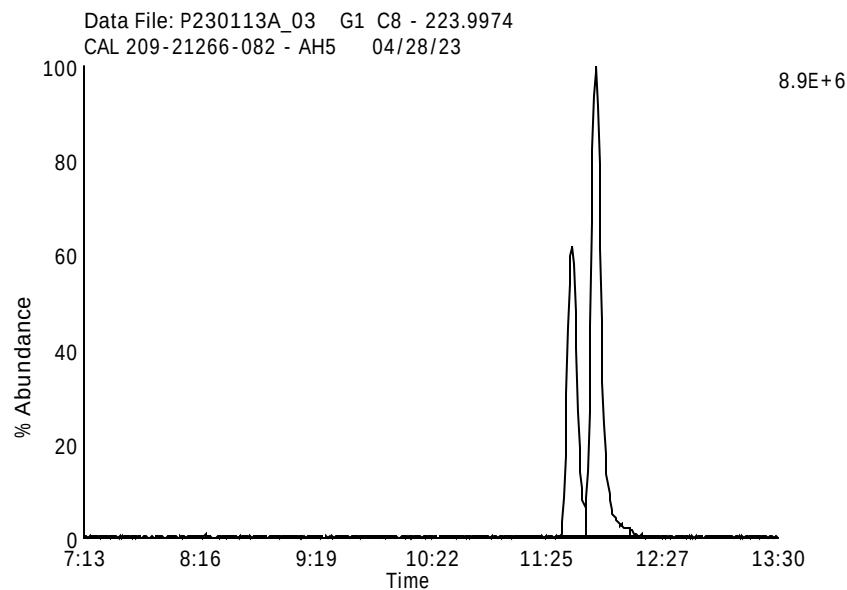
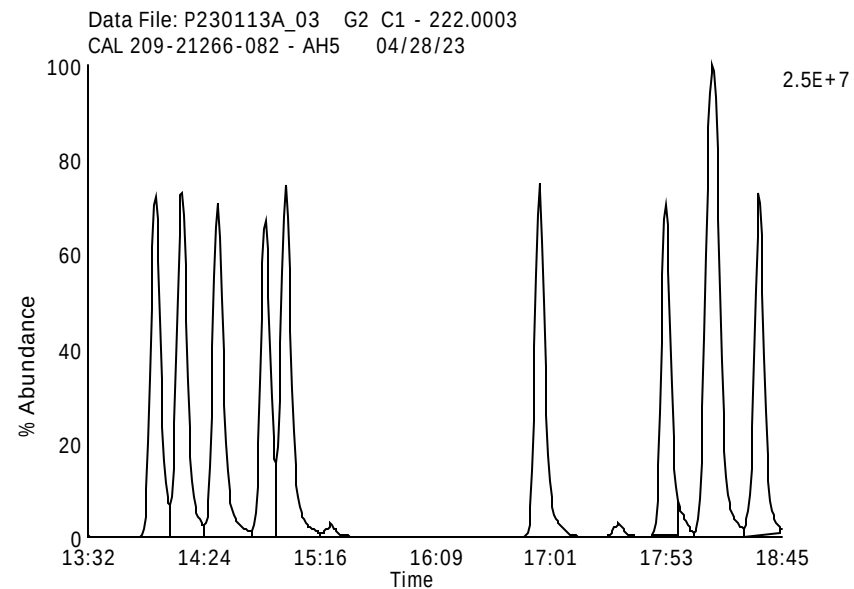
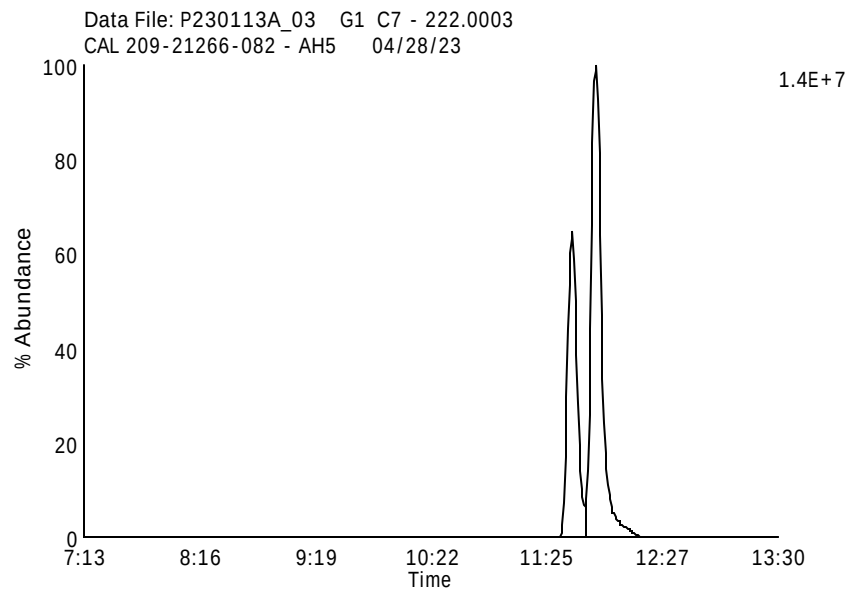
Date Acquired: 1/13/2023

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Tri Chlorinated Biphenyls

Data File Name: P230113A_03

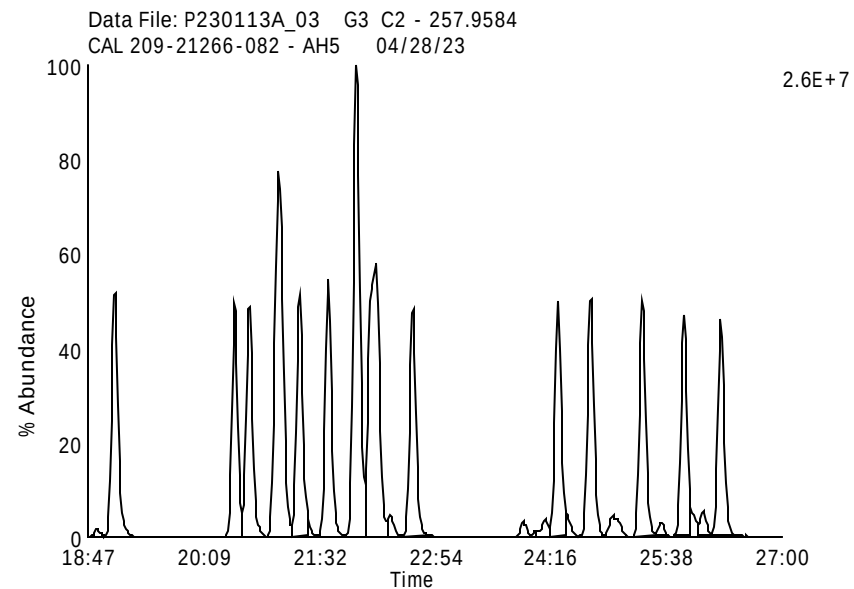
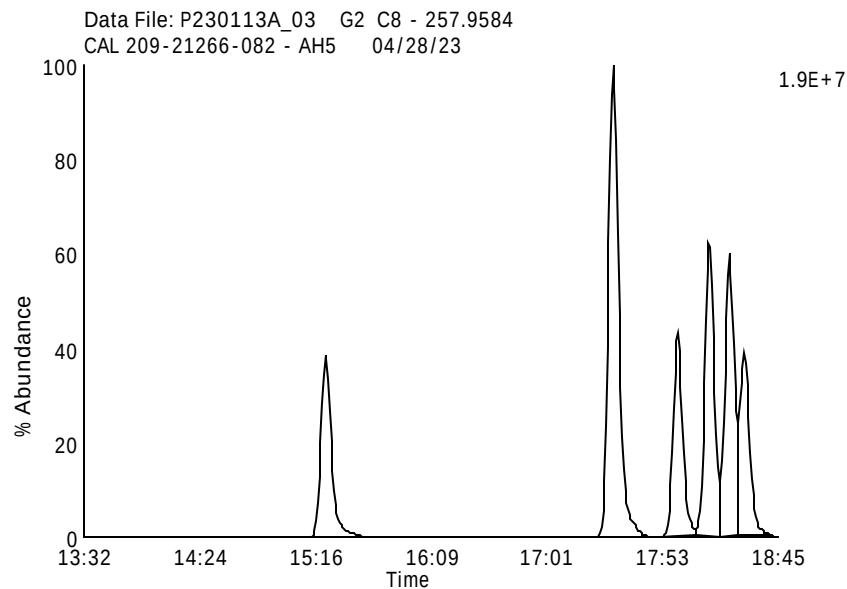
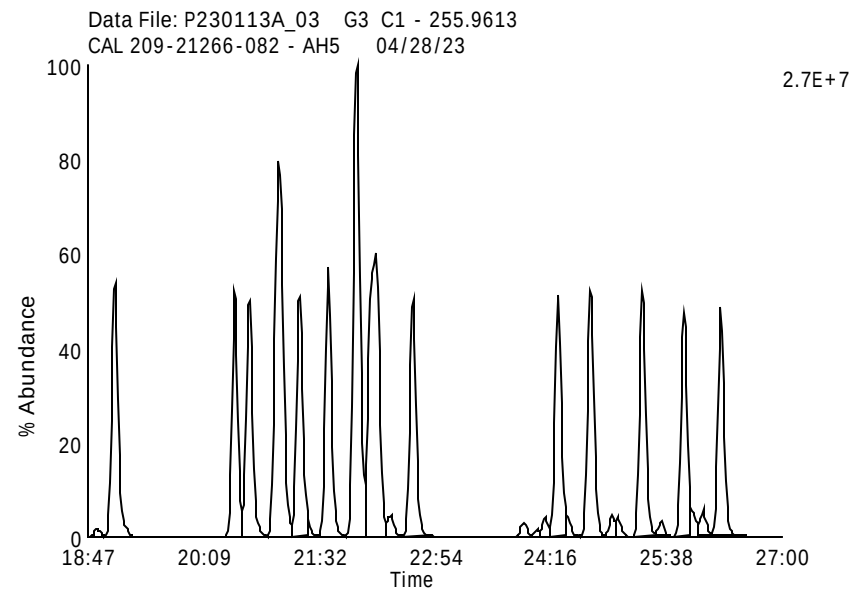
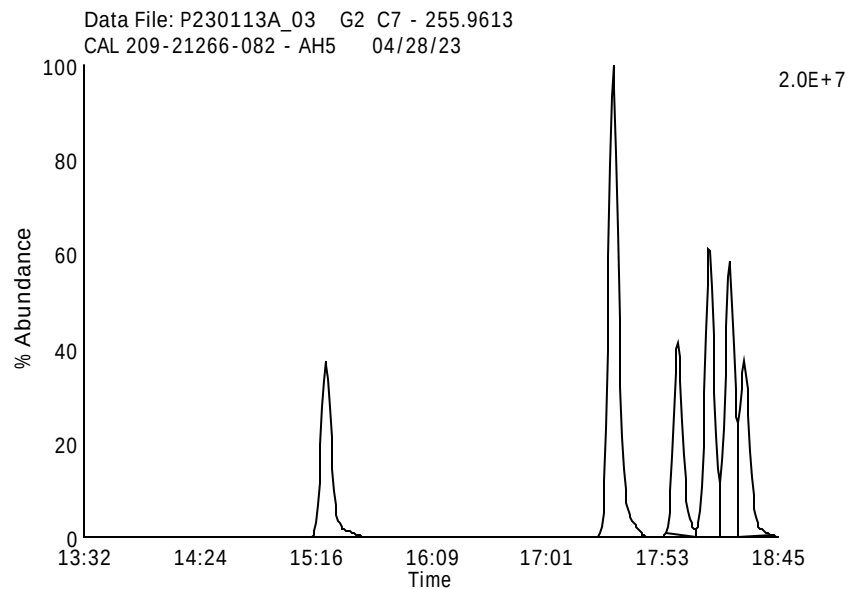
Date Acquired: 1/13/2023

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Tetra Chlorinated Biphenyls

Data File Name: P230113A_03

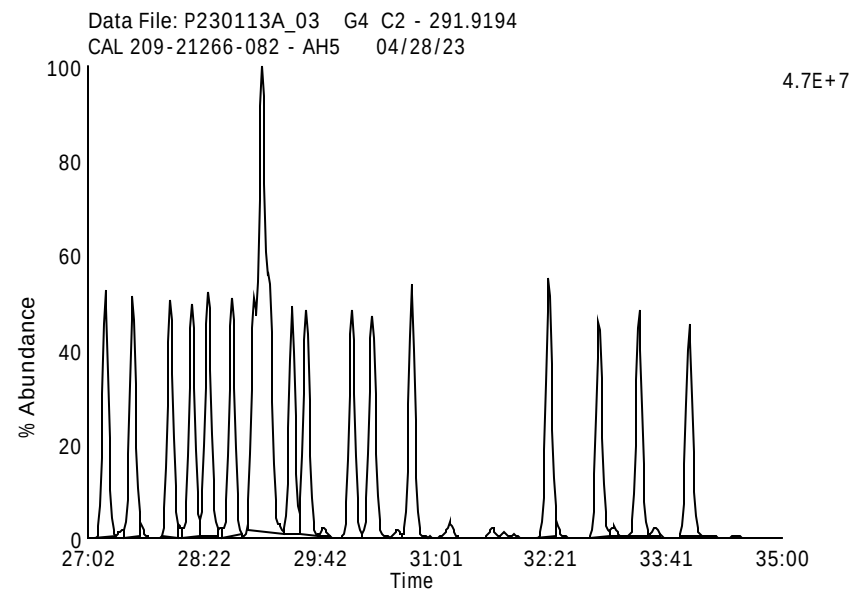
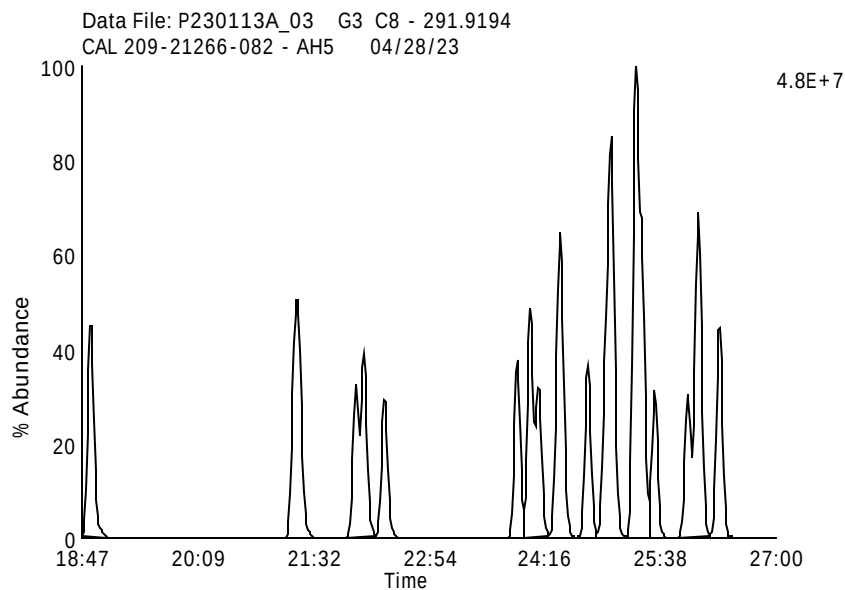
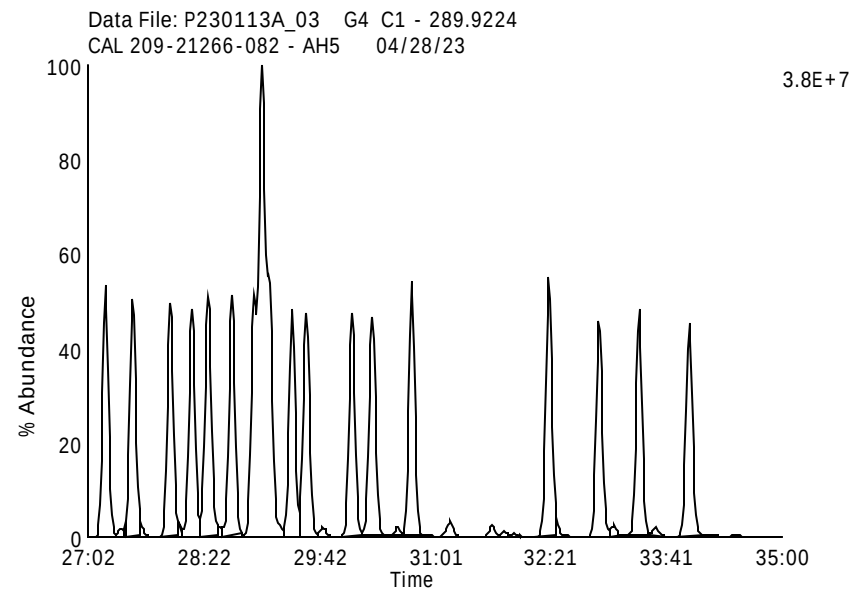
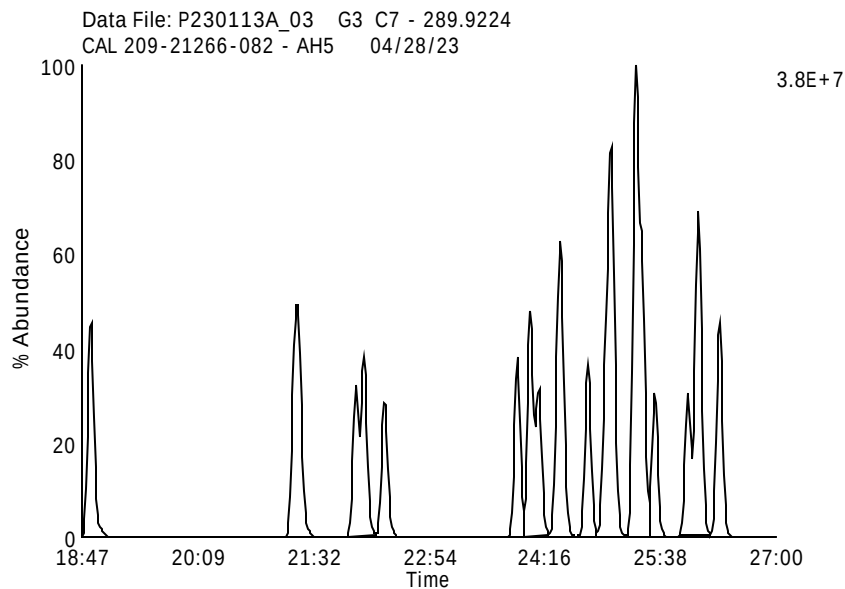
Date Acquired: 1/13/2023

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Penta Chlorinated Biphenyls

Data File Name: P230113A_03

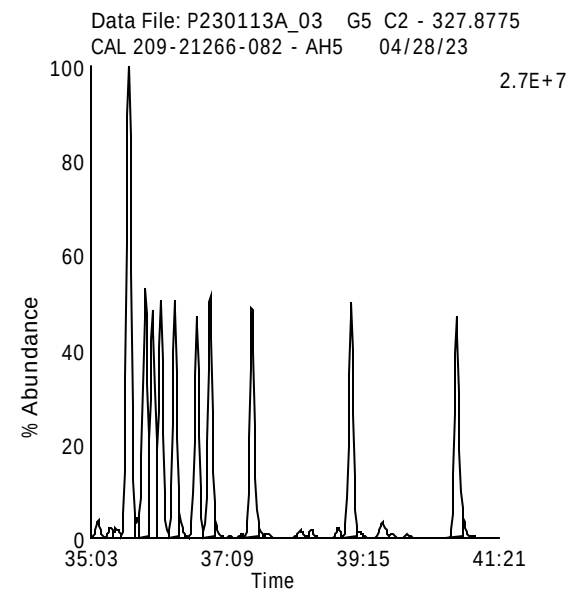
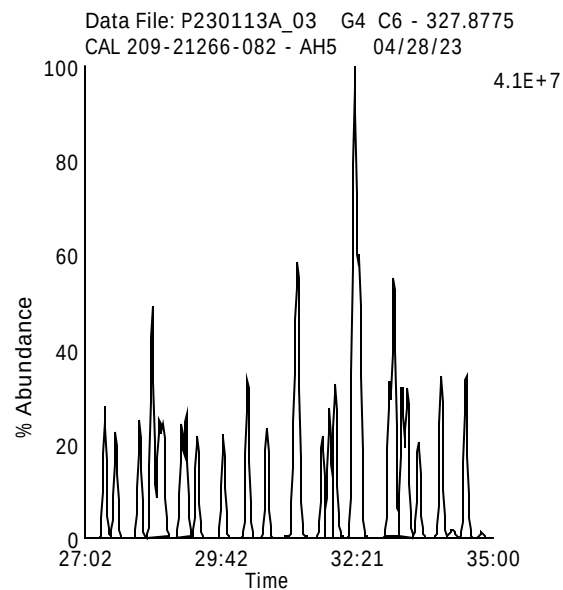
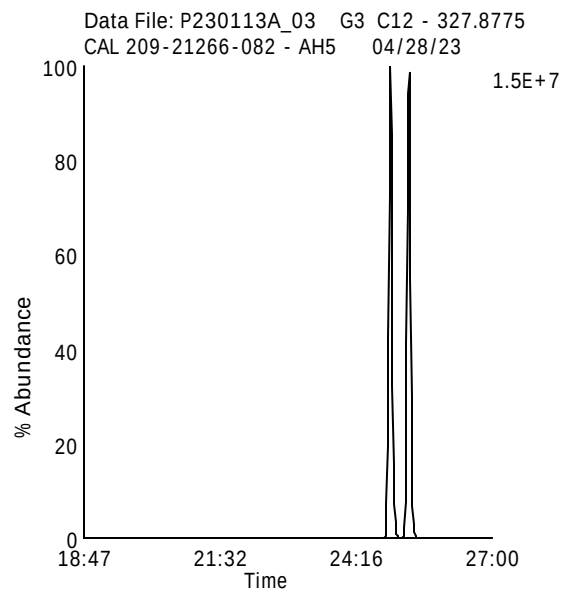
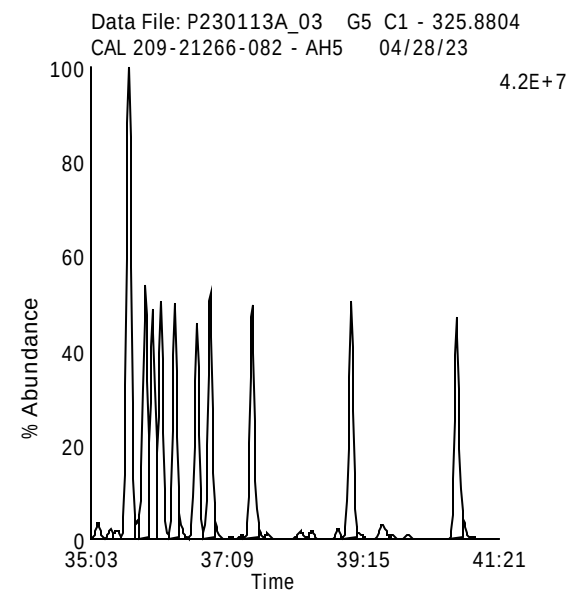
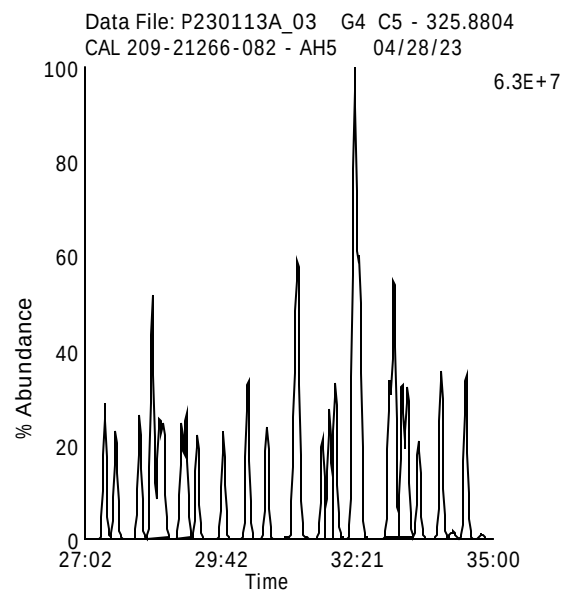
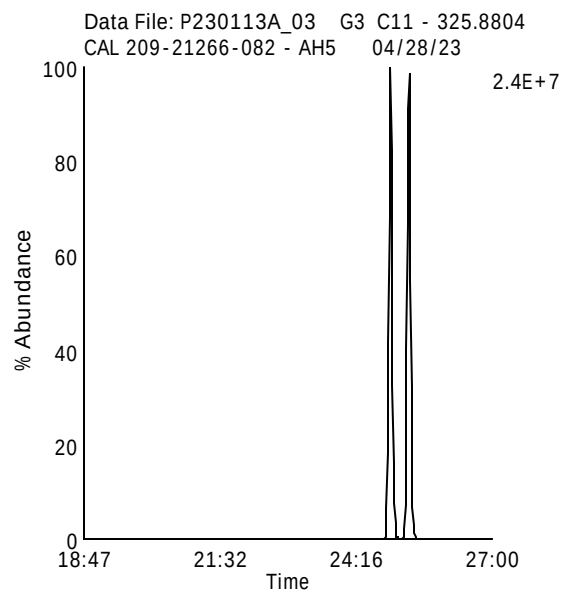
Date Acquired: 1/13/2023

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Hexa Chlorinated Biphenyls

Data File Name: P230113A_03

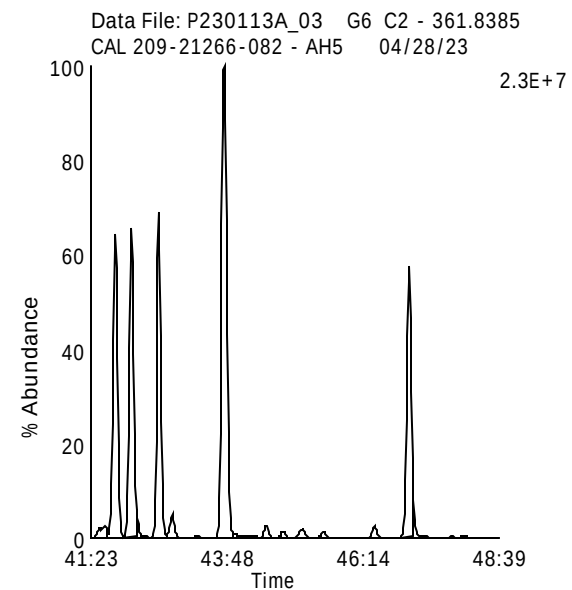
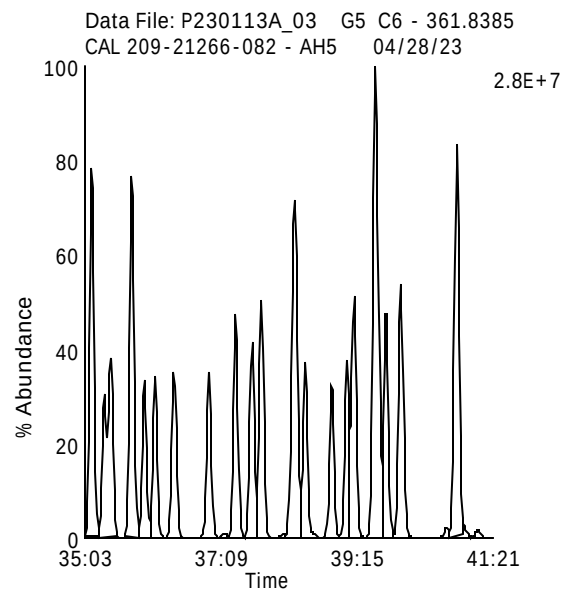
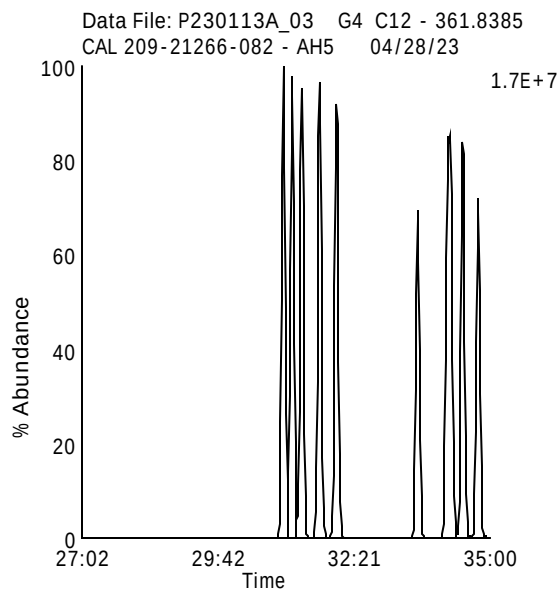
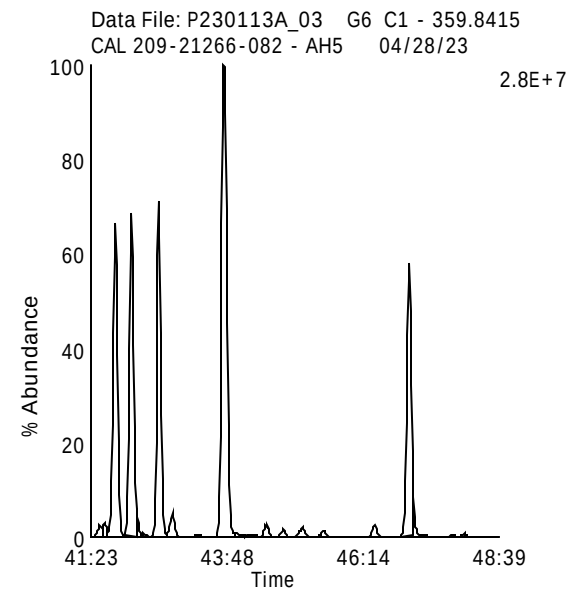
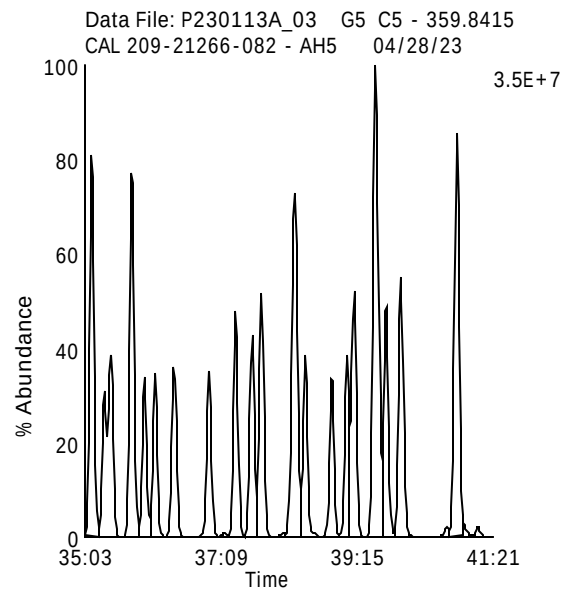
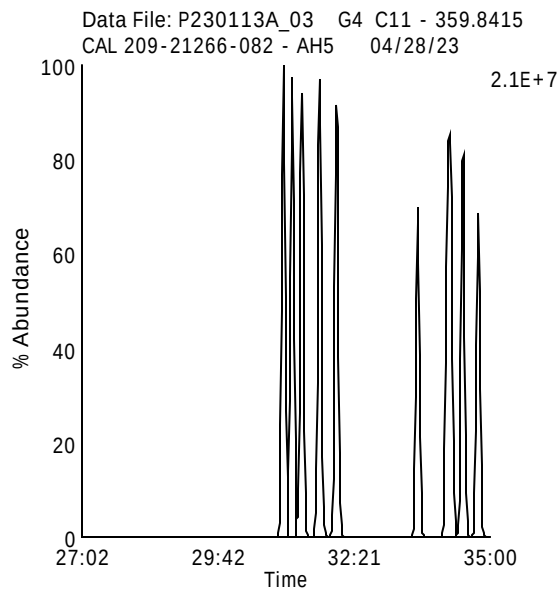
Date Acquired: 1/13/2023

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Hepta Chlorinated Biphenyls

Data File Name: P230113A_03

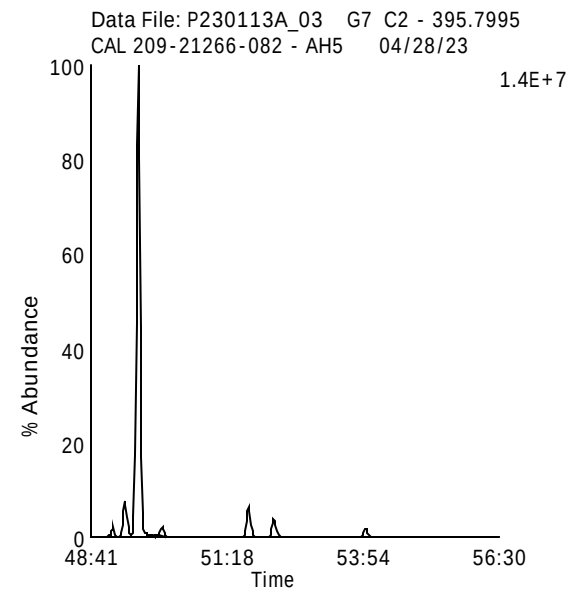
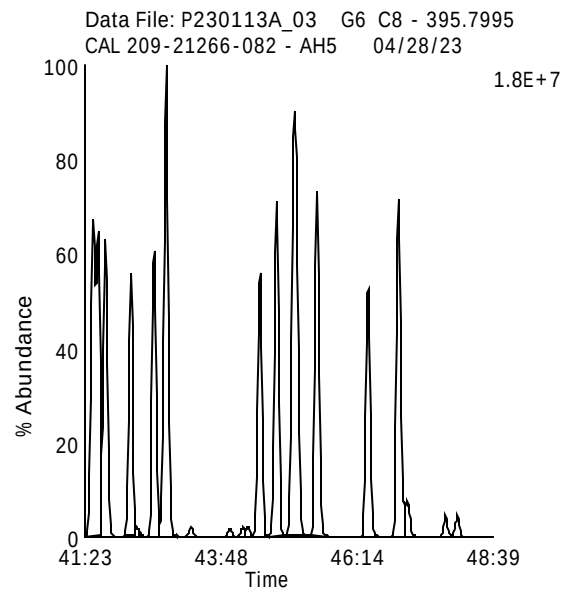
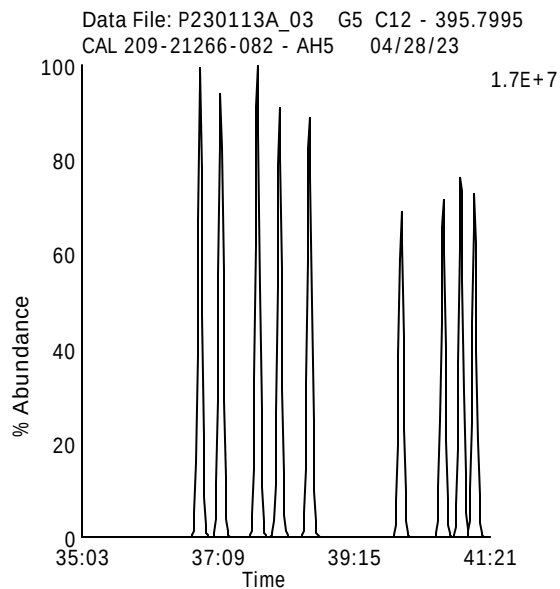
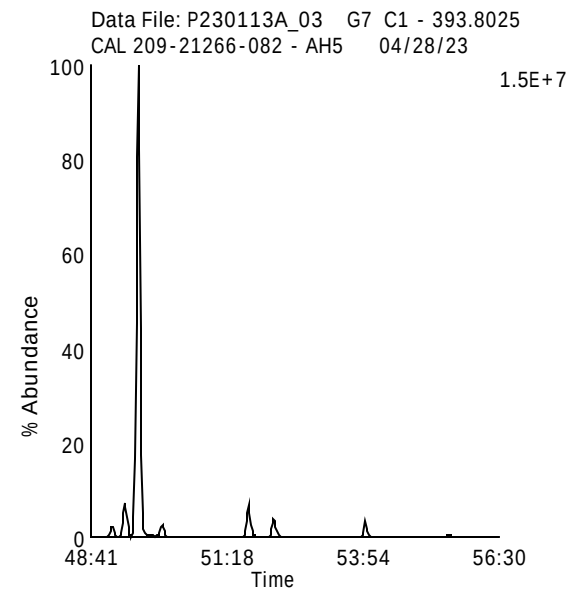
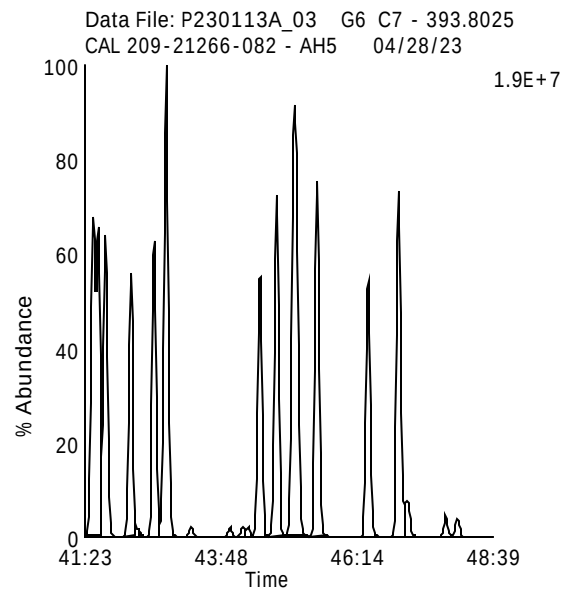
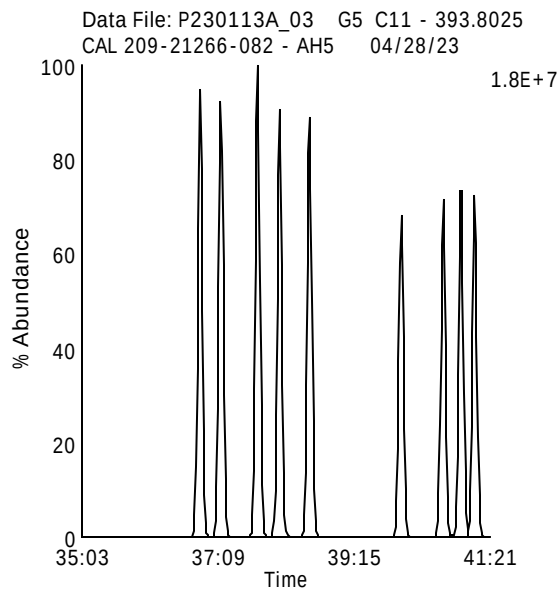
Date Acquired: 1/13/2023

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Octa Chlorinated Biphenyls

Data File Name: P230113A_03

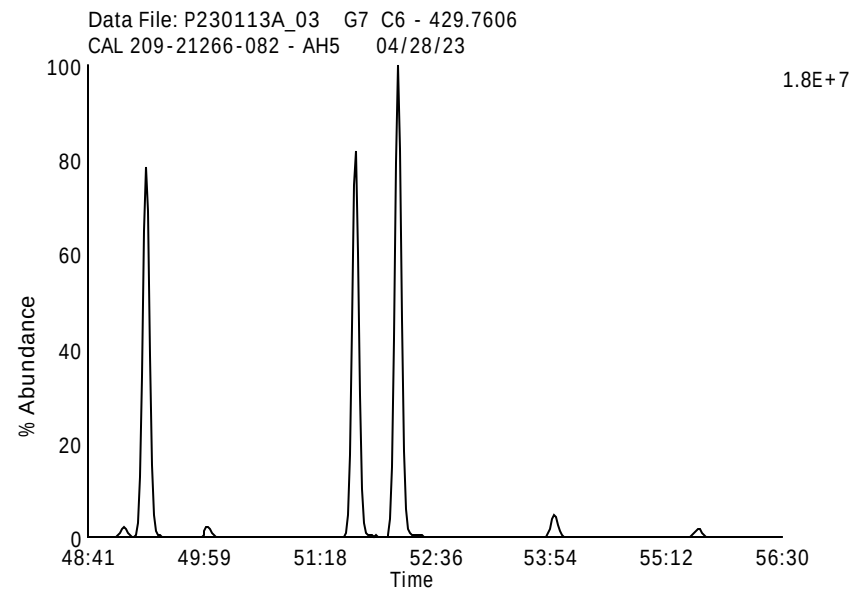
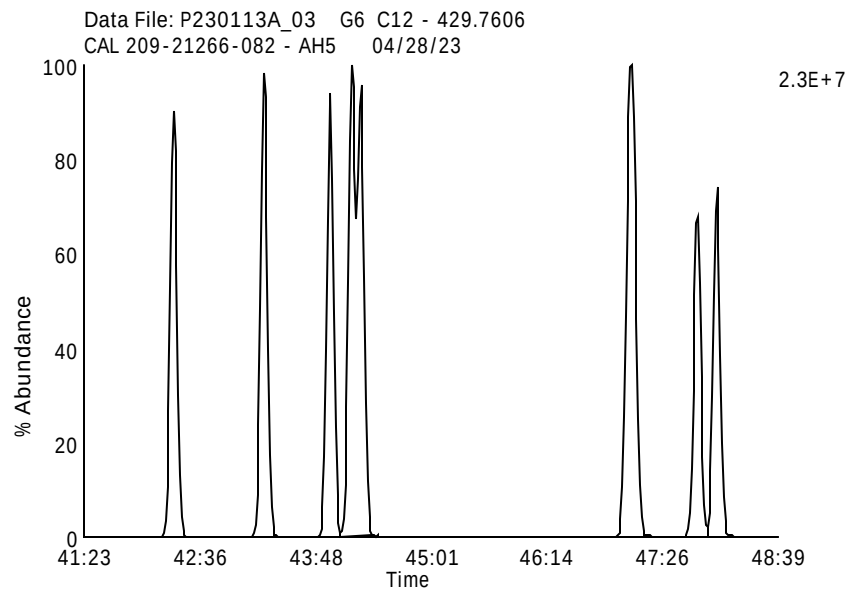
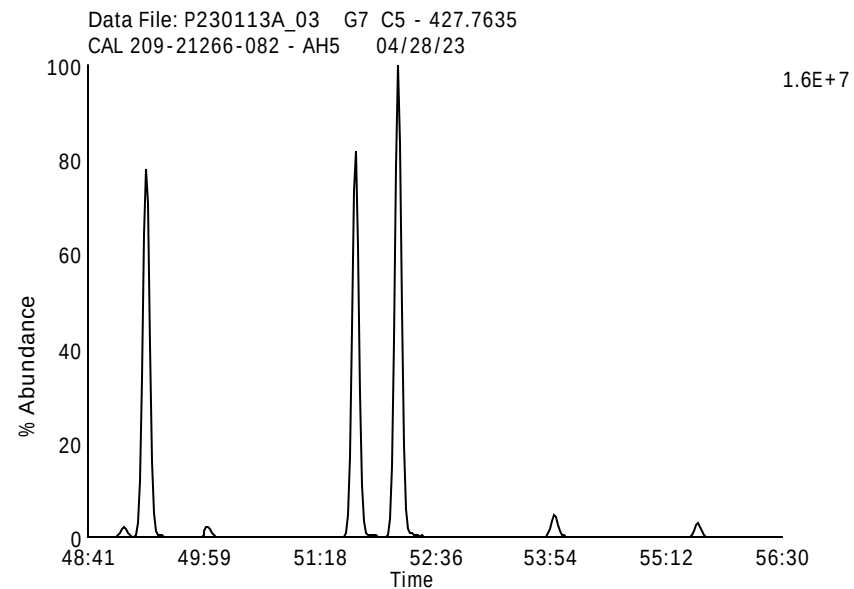
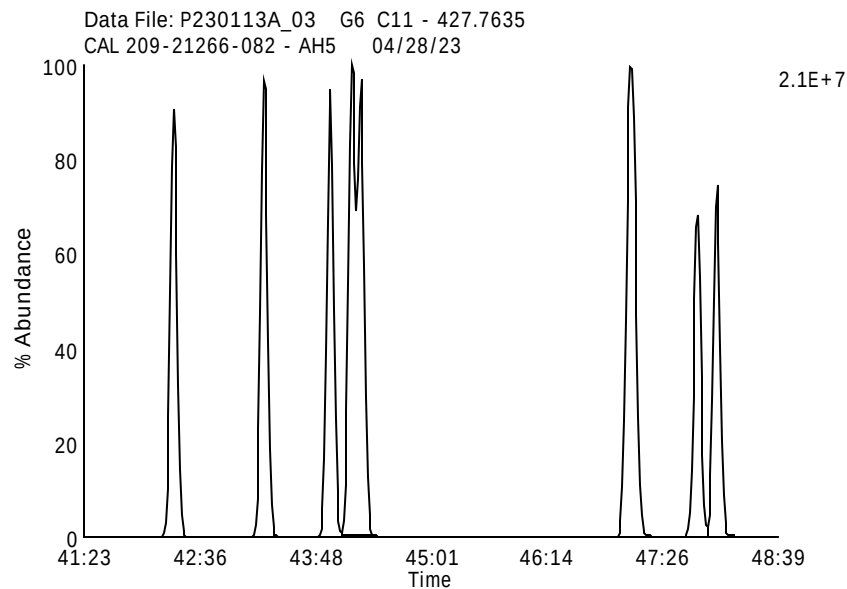
Date Acquired: 1/13/2023

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Nona Chlorinated Biphenyls

Data File Name: P230113A_03

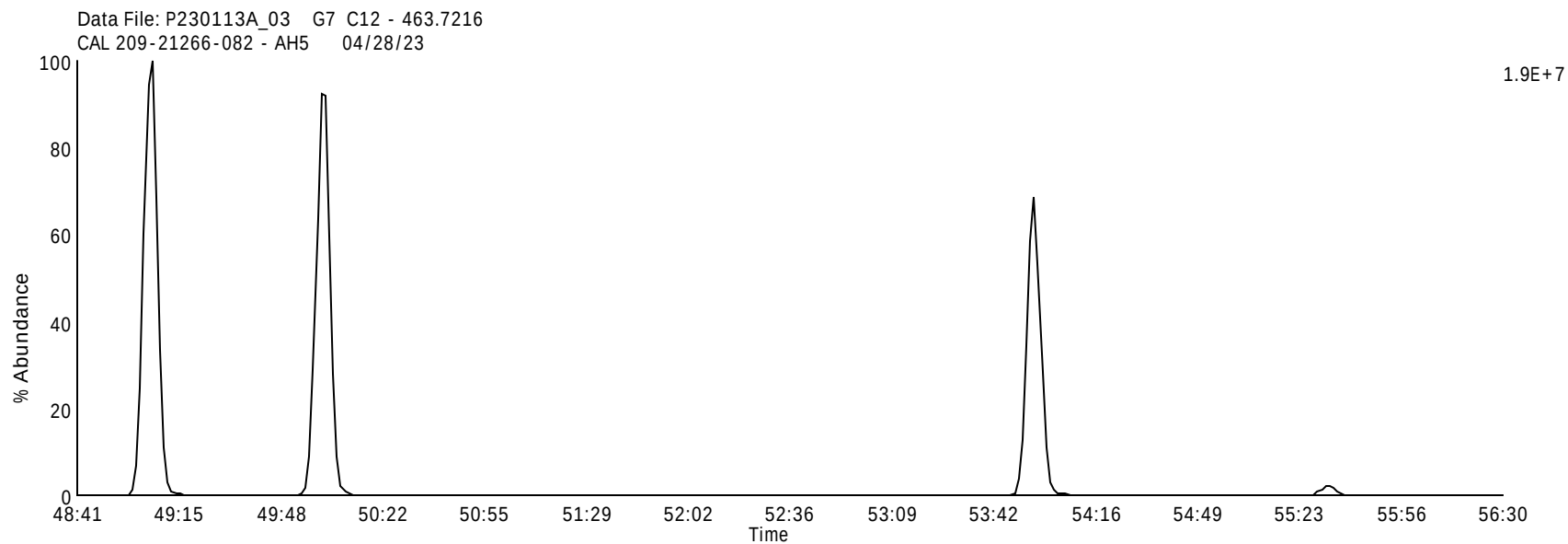
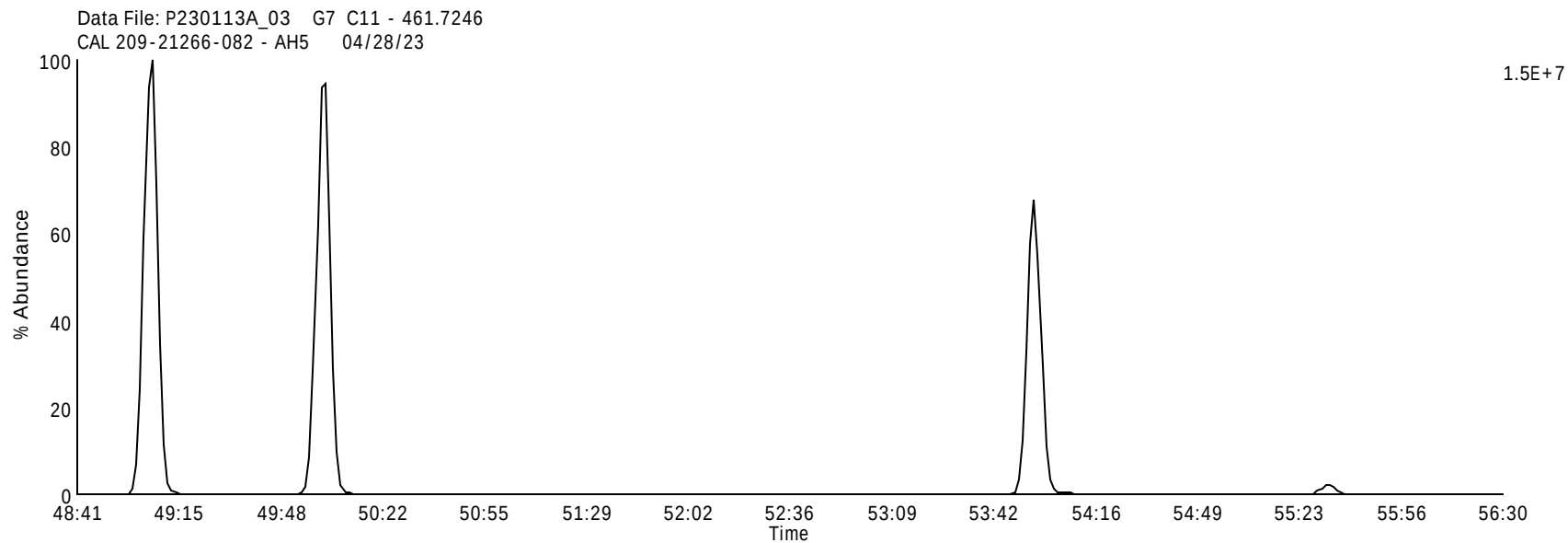
Date Acquired: 1/13/2023

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Deca Chlorinated Biphenyl

Data File Name: P230113A_03

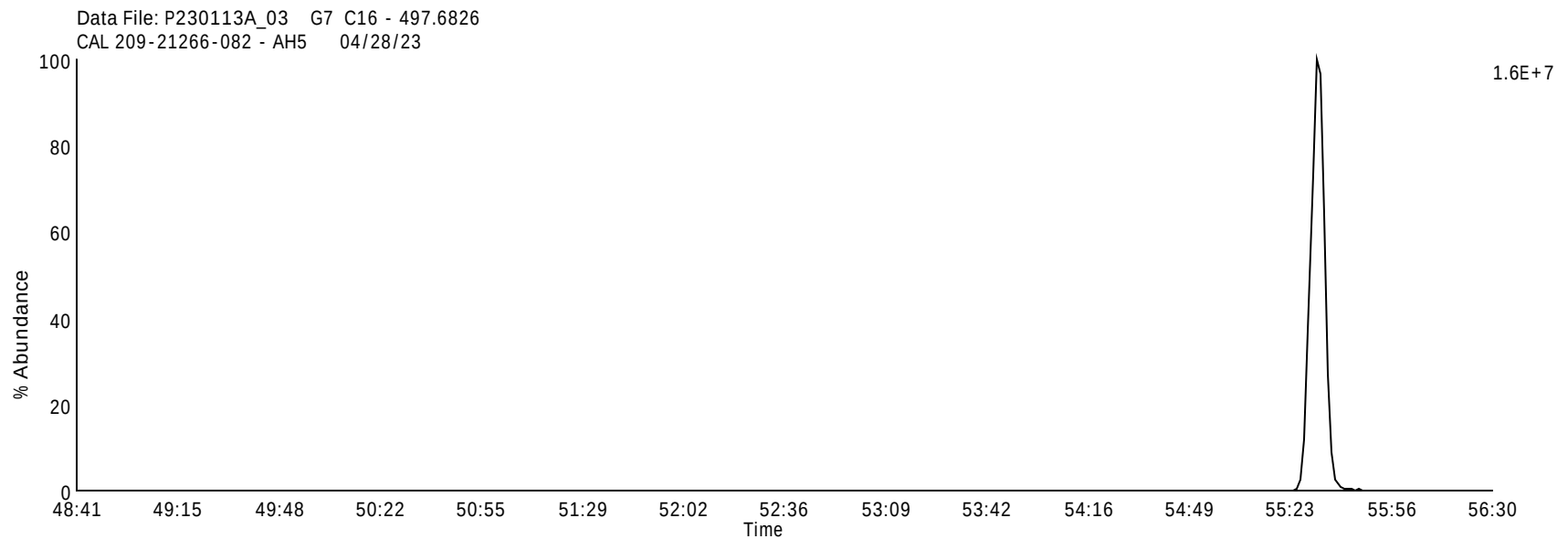
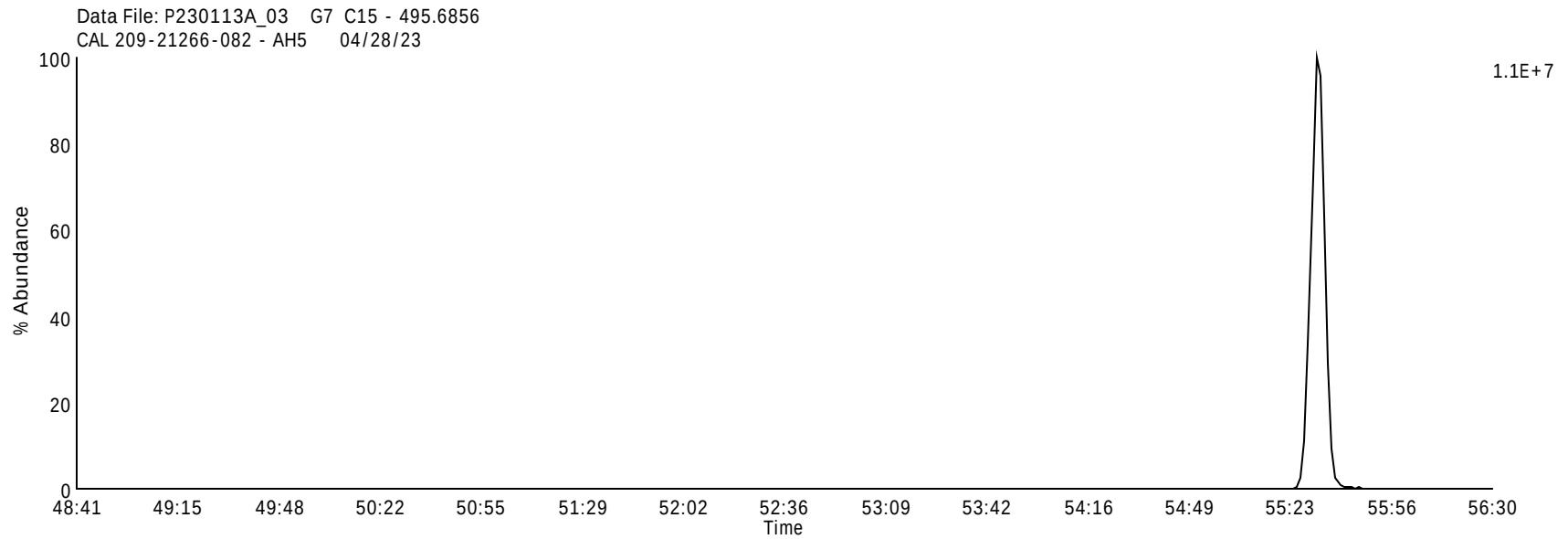
Date Acquired: 1/13/2023

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Group 1 - 4 Lock mass

Data File Name: P230113A_03

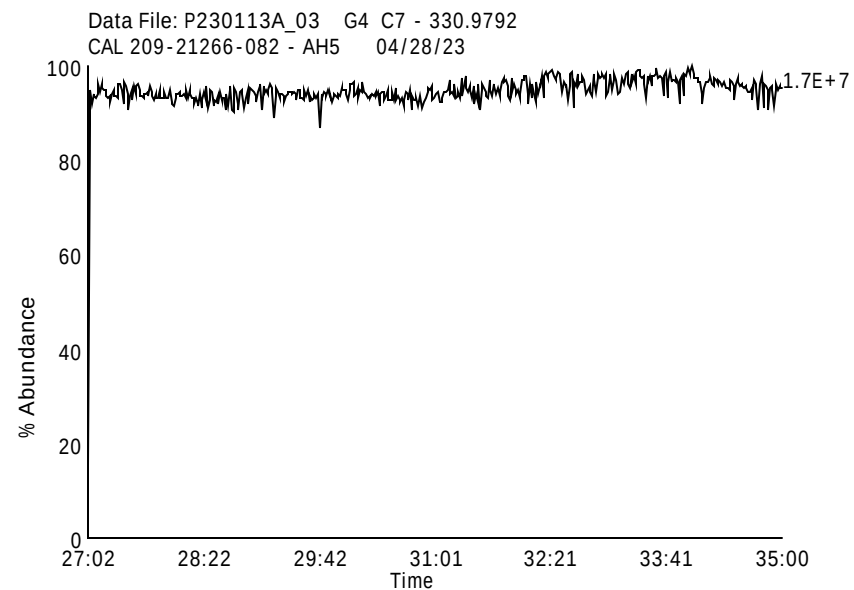
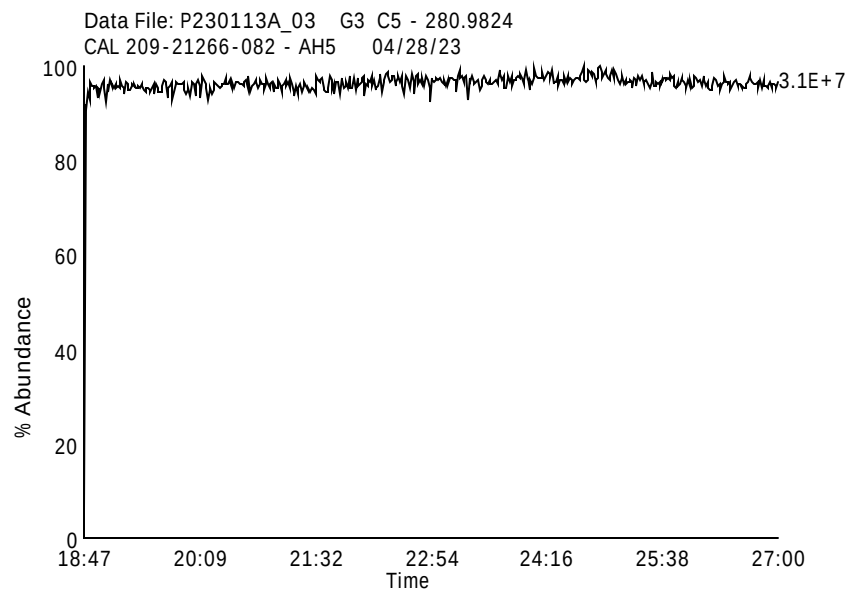
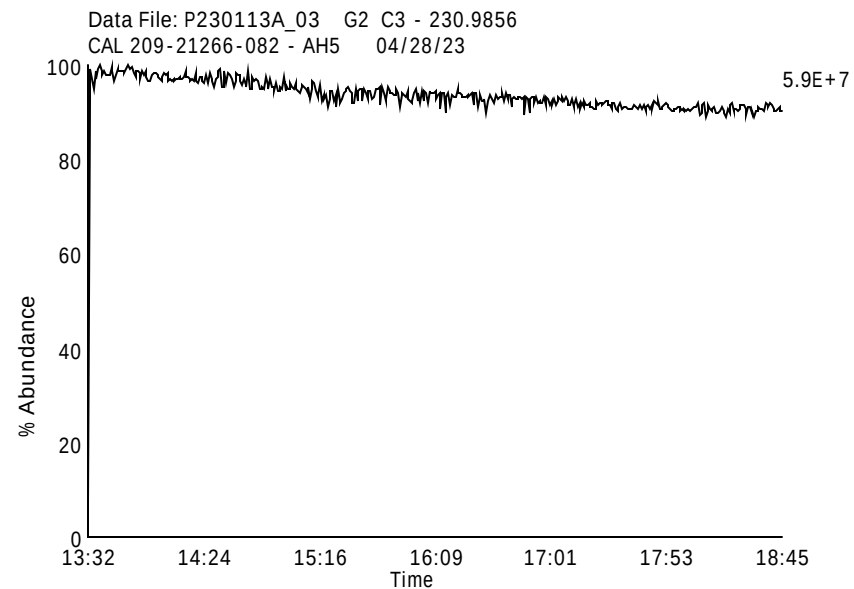
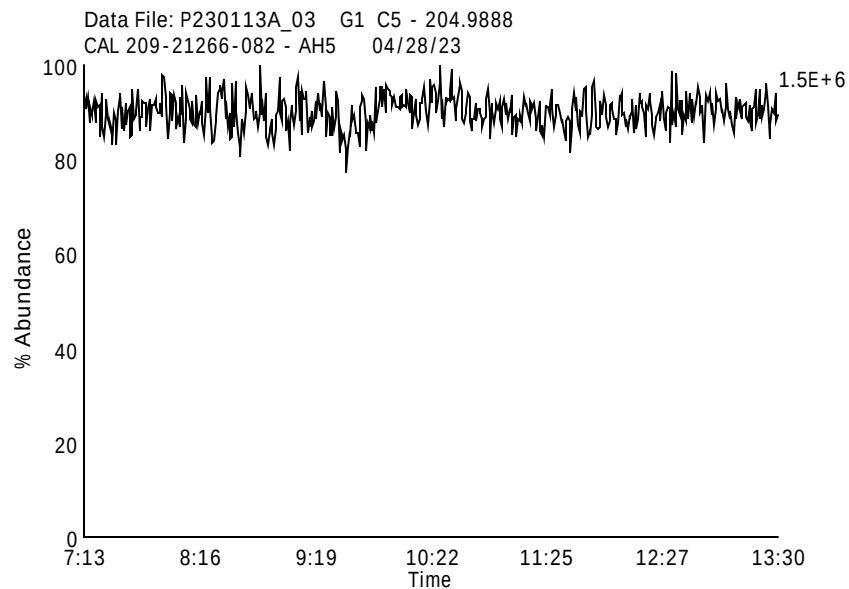
Date Acquired: 1/13/2023

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Group 5 - 7 Lock mass

Data File Name: P230113A_03

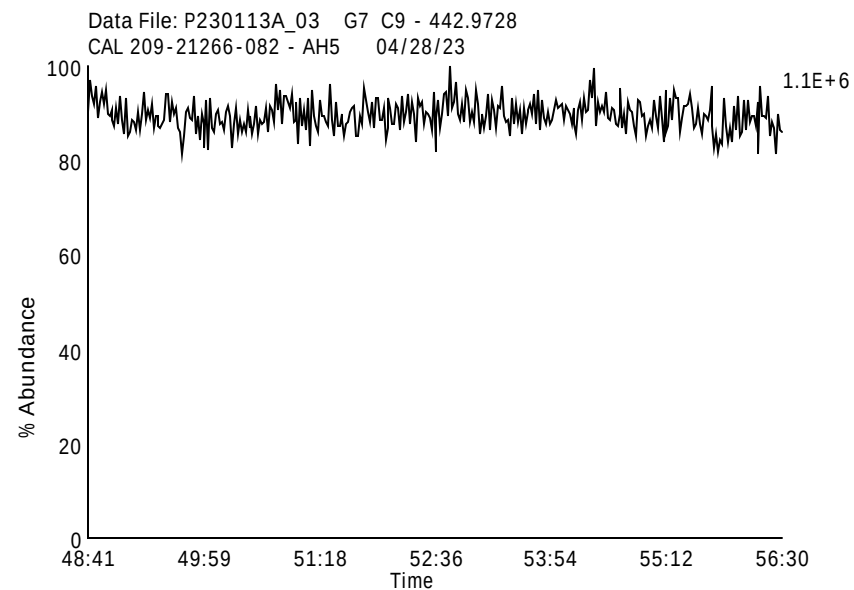
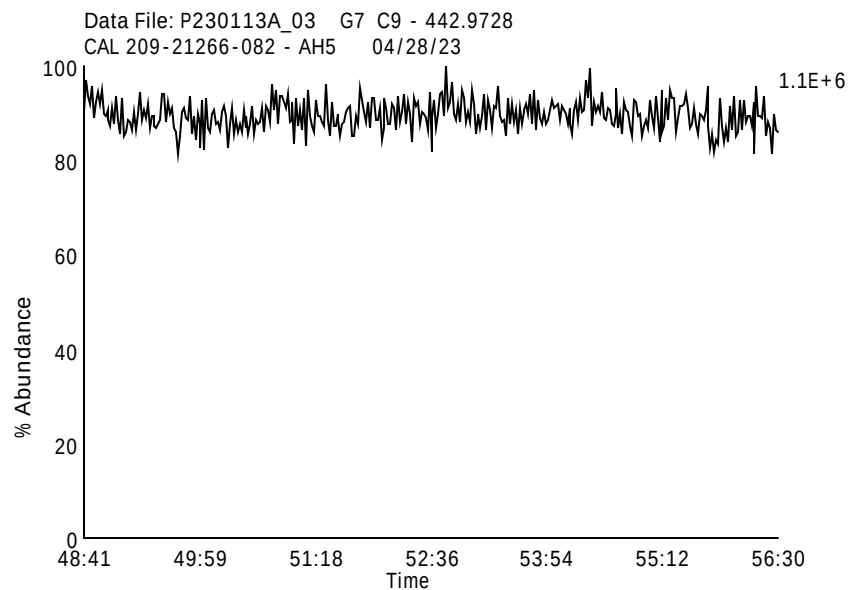
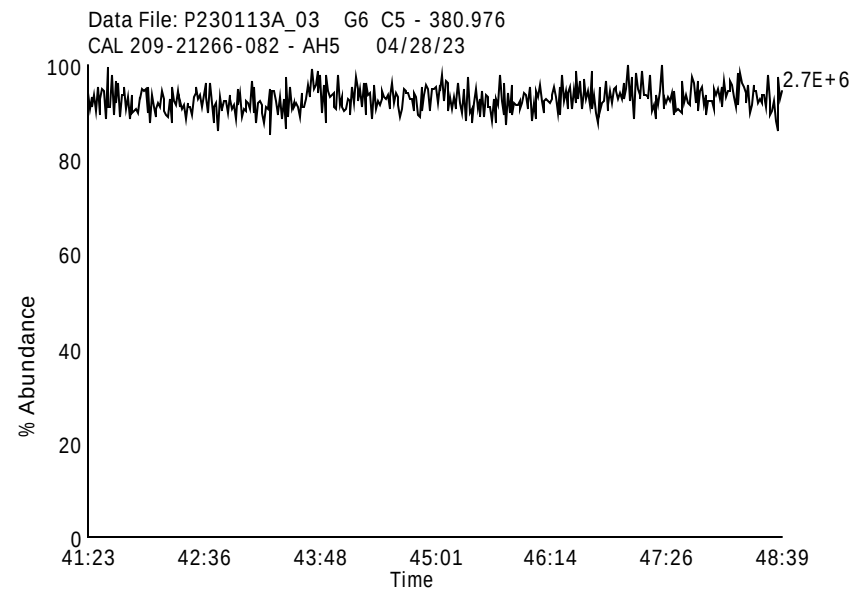
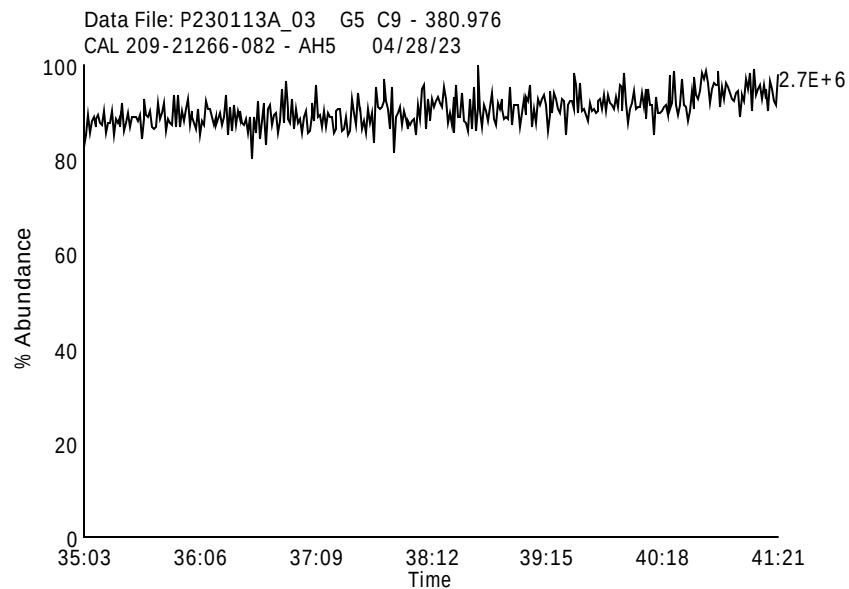
Date Acquired: 1/13/2023

Sample Description: CAL 209-21266-082 - AH5 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Mono Chlorinated Biphenyls

Data File Name: P230115A_02

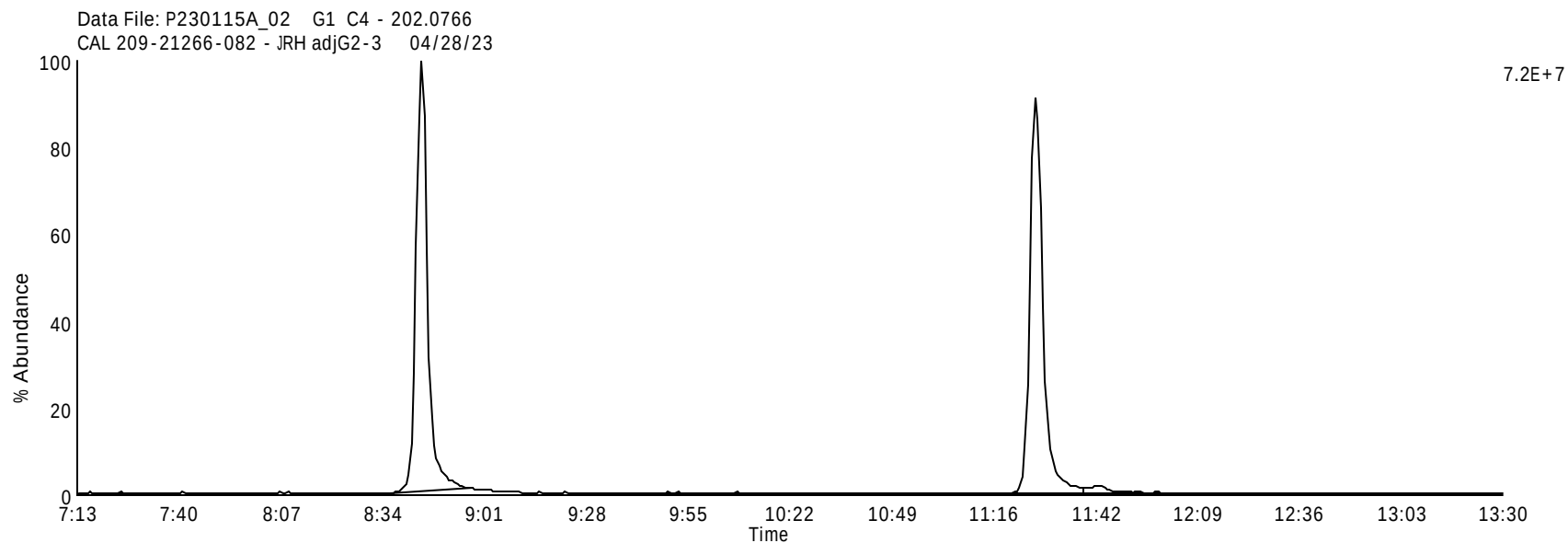
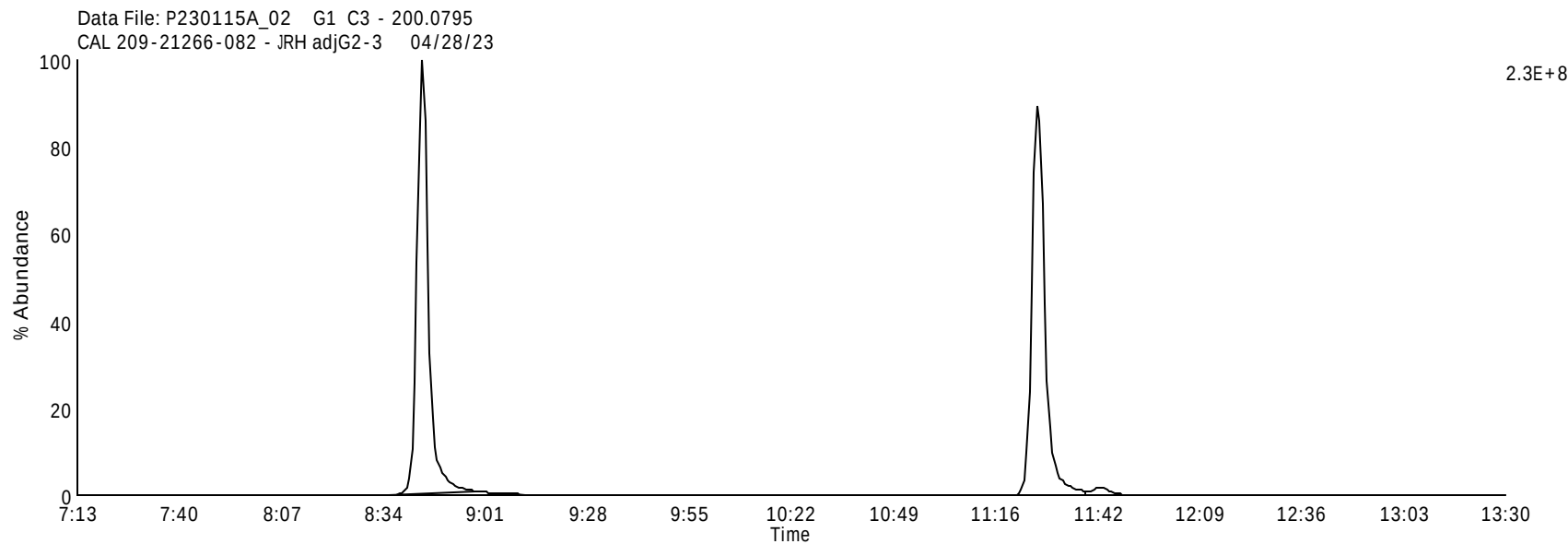
Date Acquired: 1/15/2023

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Di Chlorinated Biphenyls

Data File Name: P230115A_02

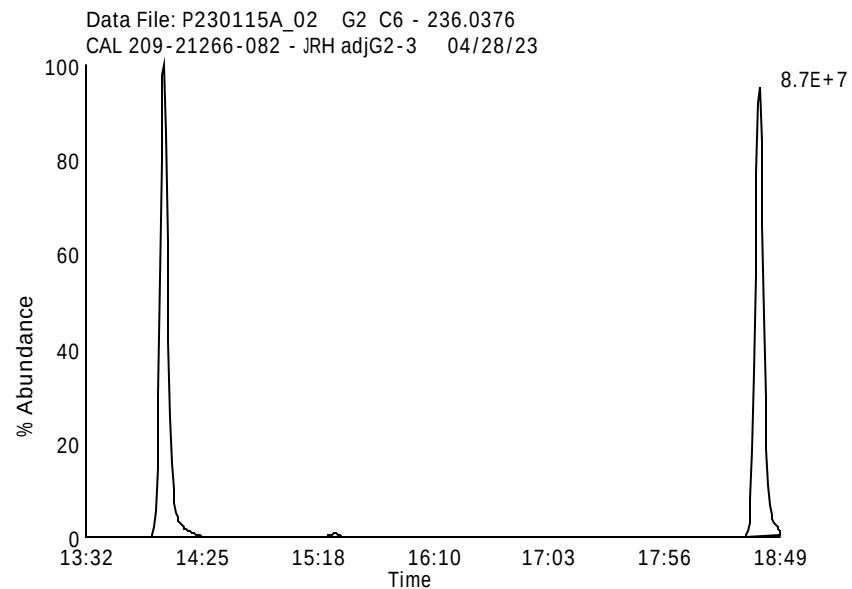
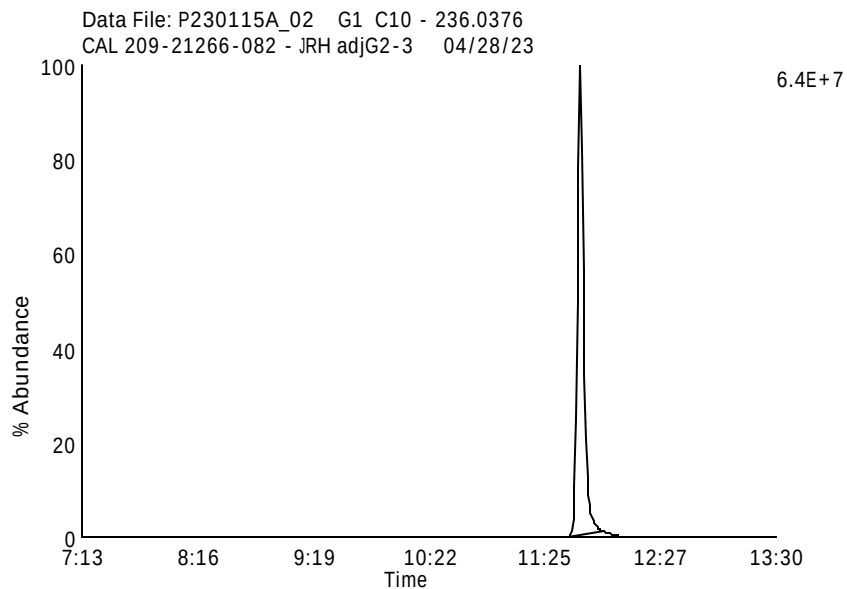
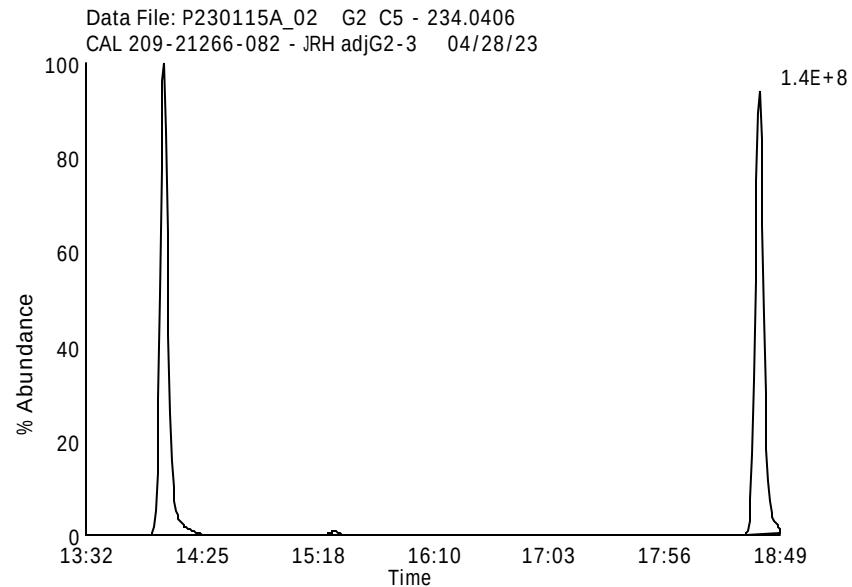
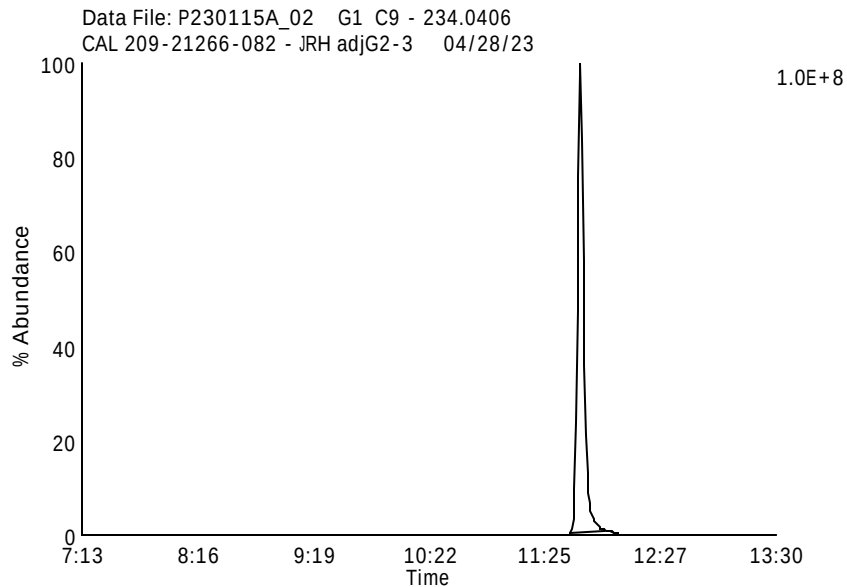
Date Acquired: 1/15/2023

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Tri Chlorinated Biphenyls

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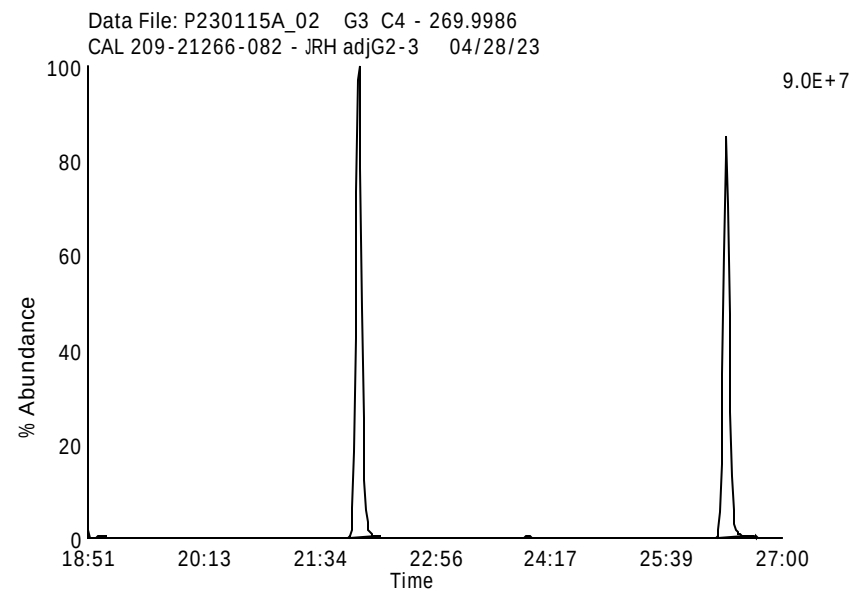
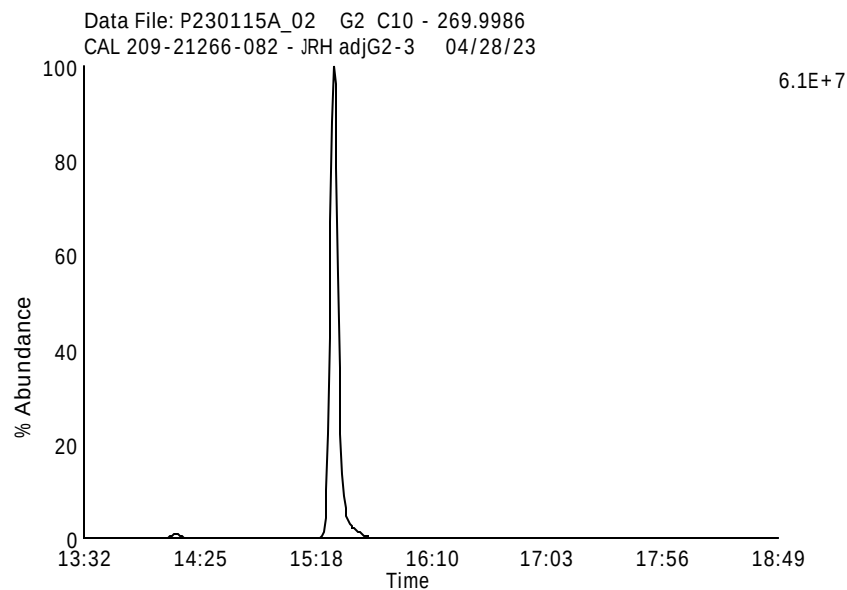
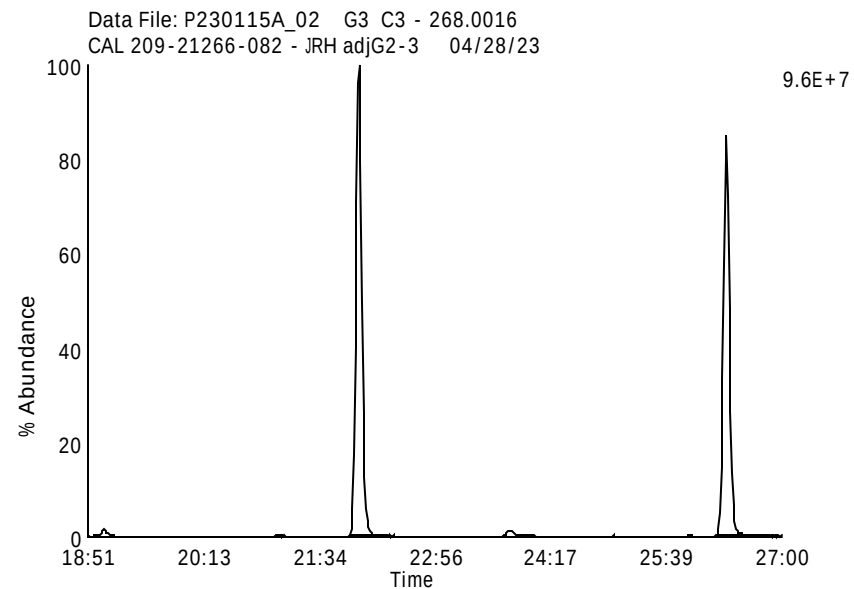
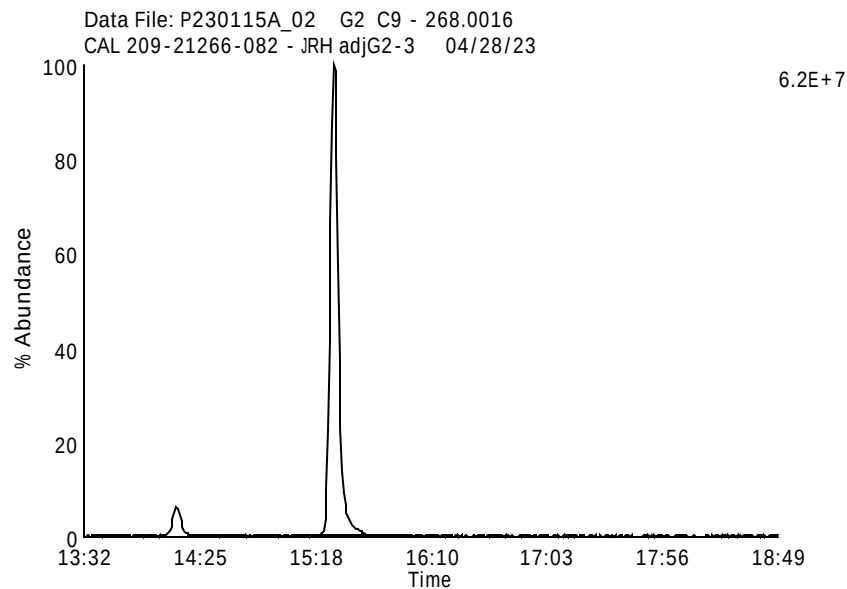
Date Acquired: 1/15/2023

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Tetra Chlorinated Biphenyls

Data File Name: P230115A_02

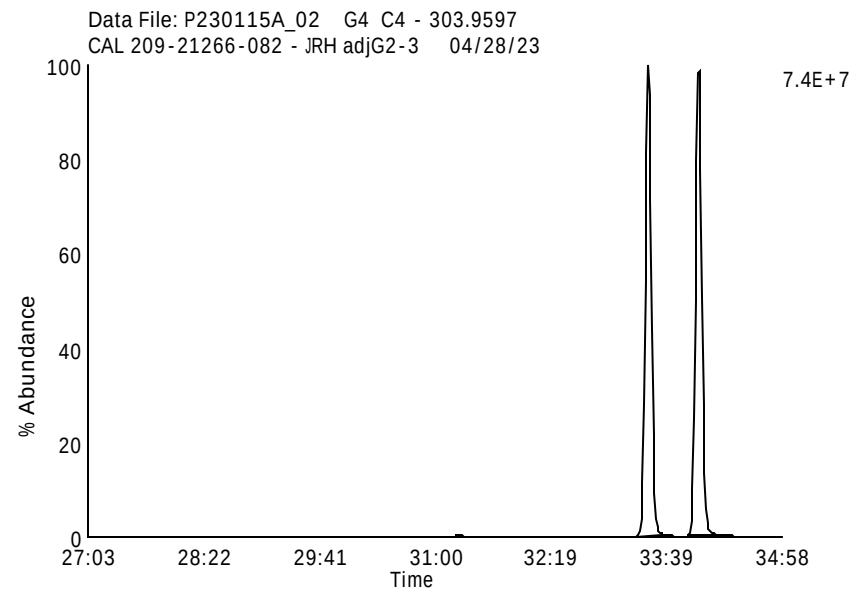
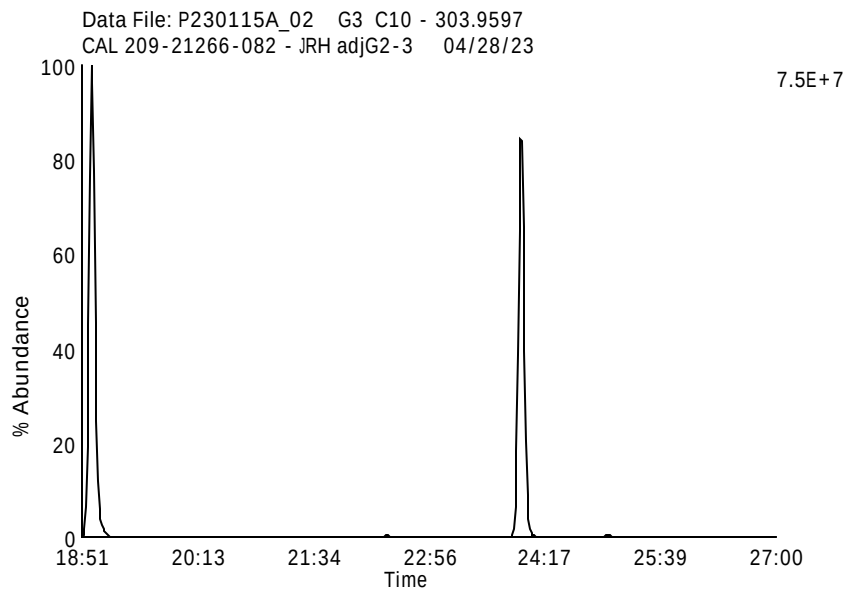
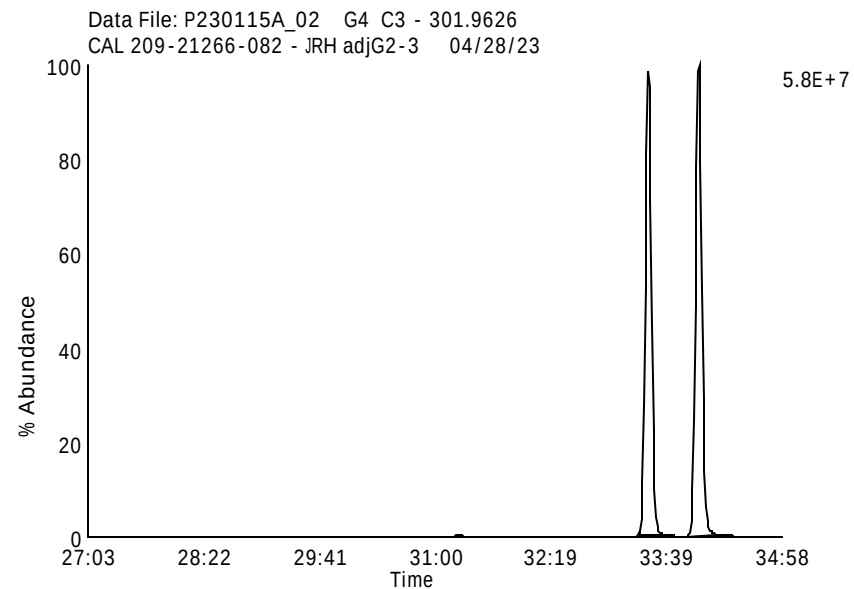
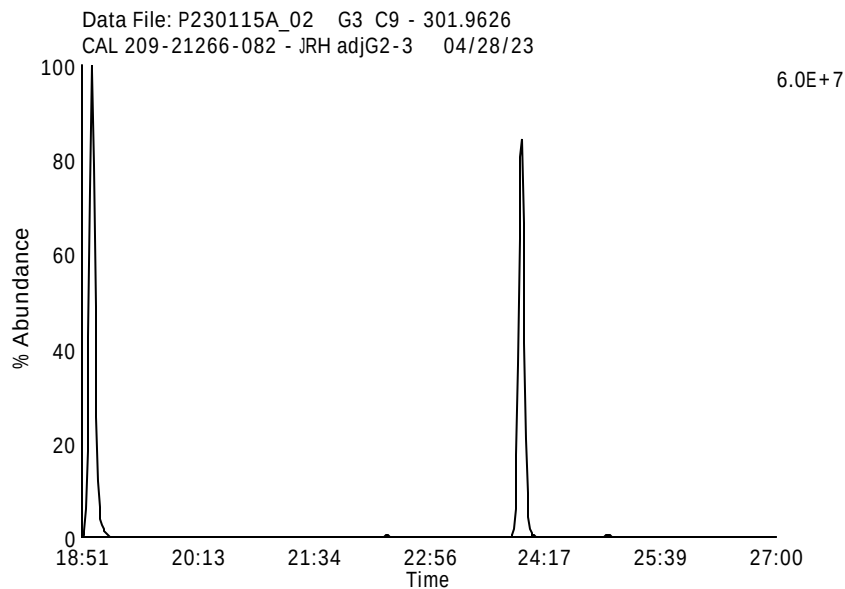
Date Acquired: 1/15/2023

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Penta Chlorinated Biphenyls

Data File Name: P230115A_02

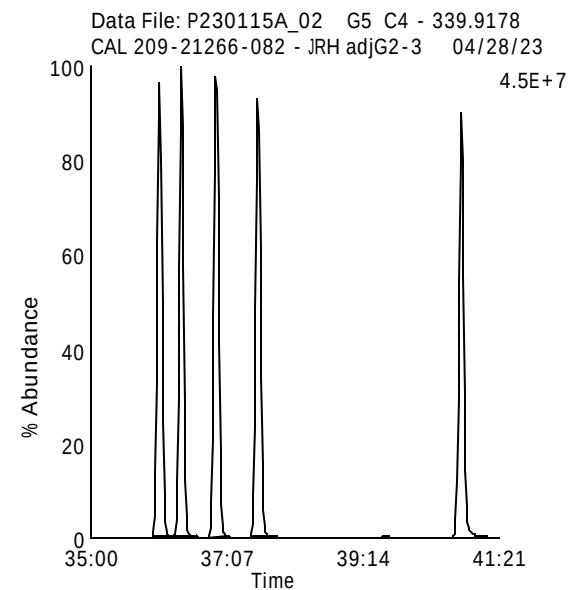
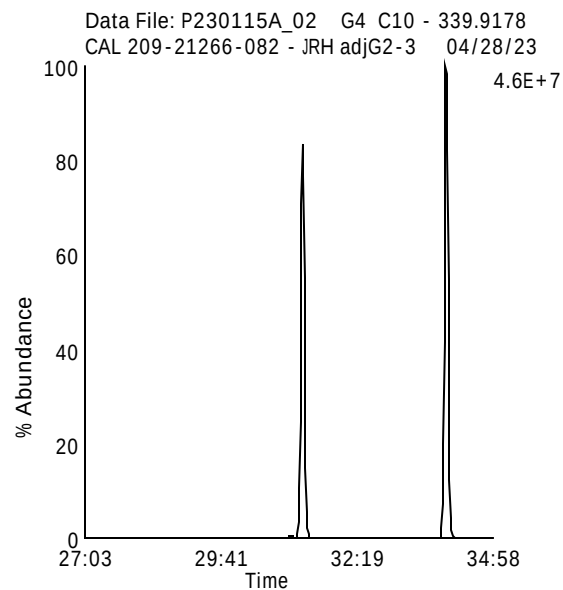
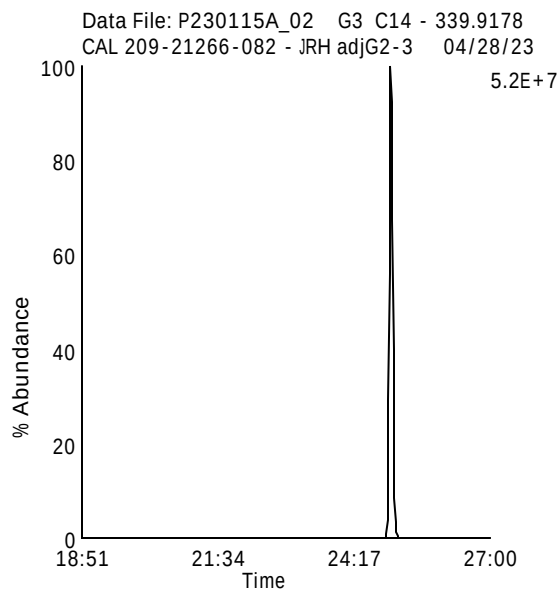
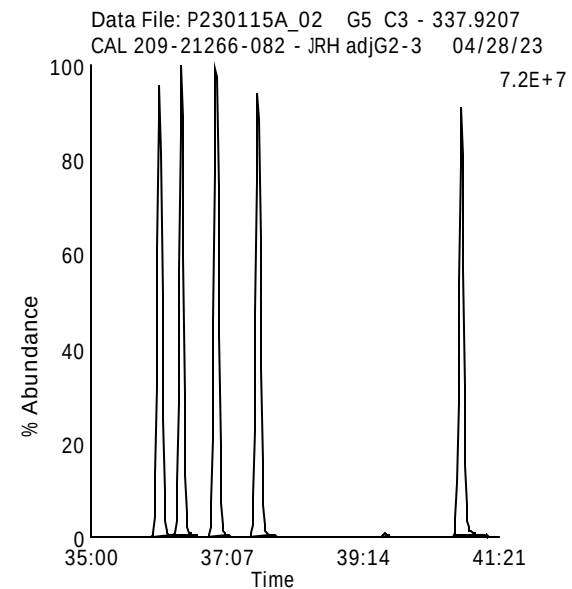
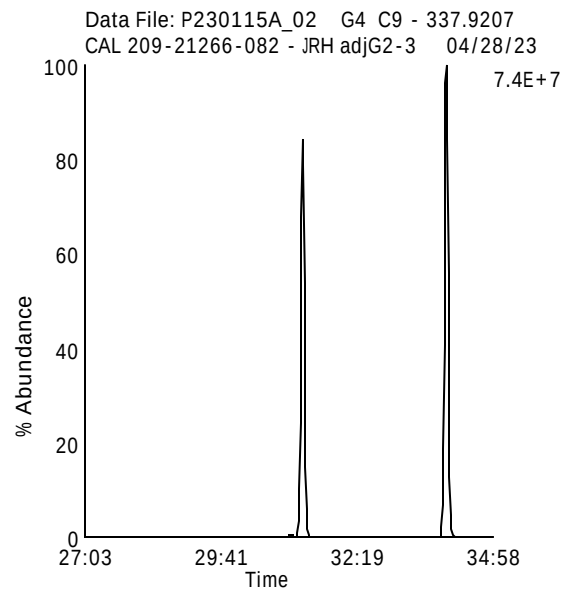
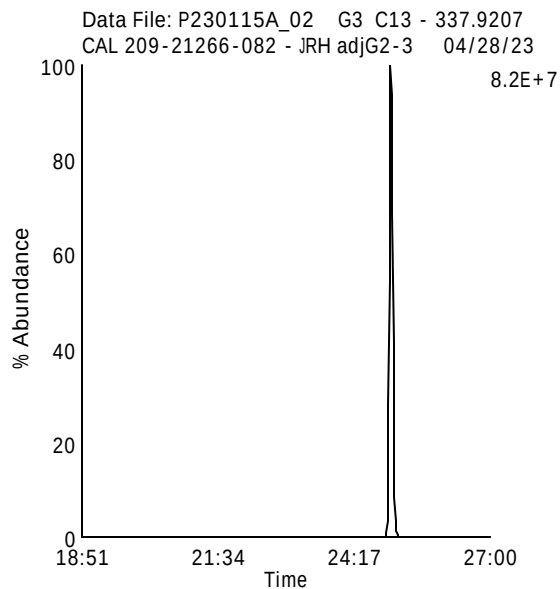
Date Acquired: 1/15/2023

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Hexa Chlorinated Biphenyls

Data File Name: P230115A_02

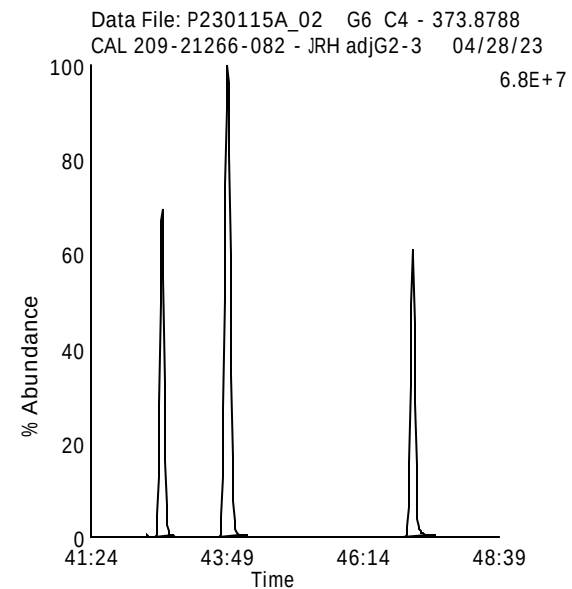
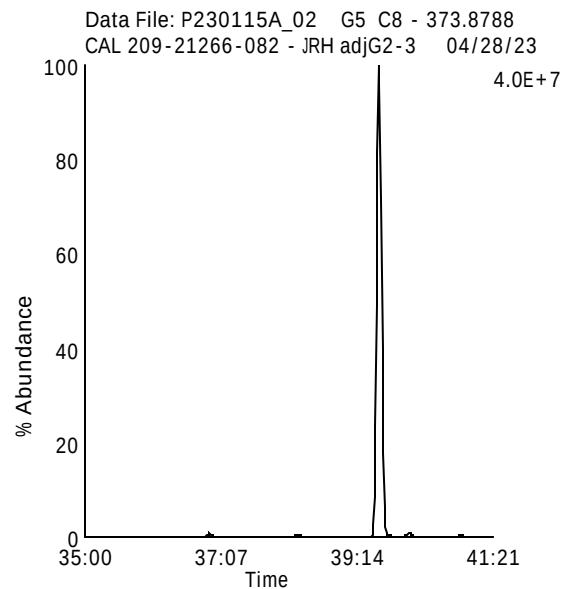
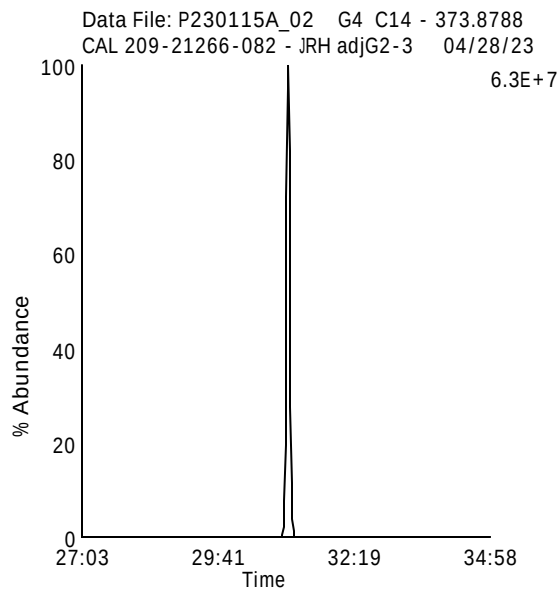
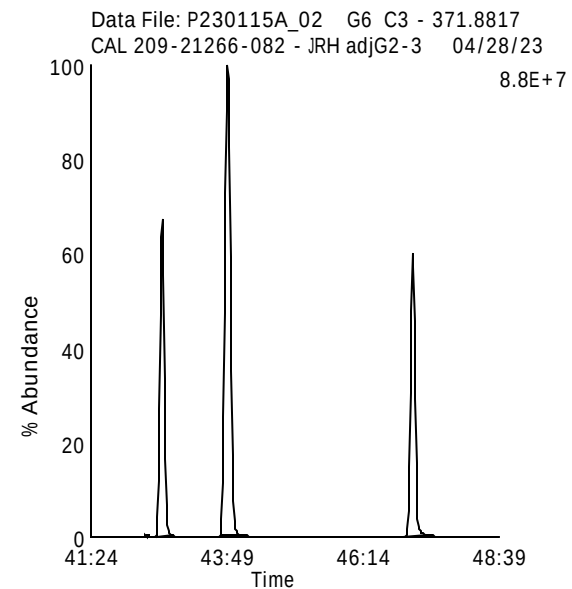
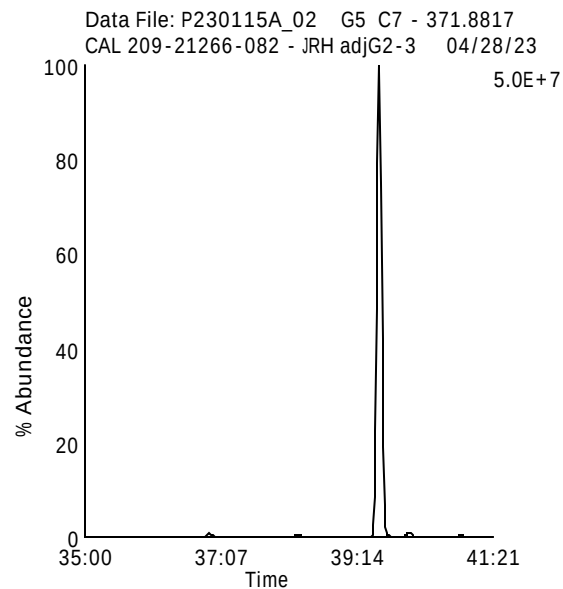
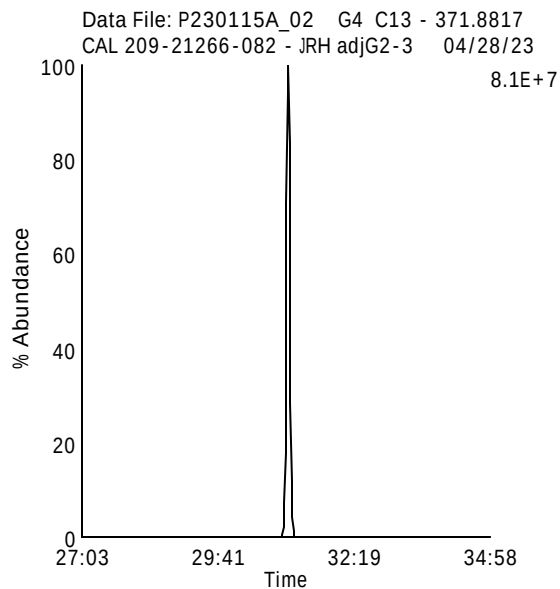
Date Acquired: 1/15/2023

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Hepta Chlorinated Biphenyls

Data File Name: P230115A_02

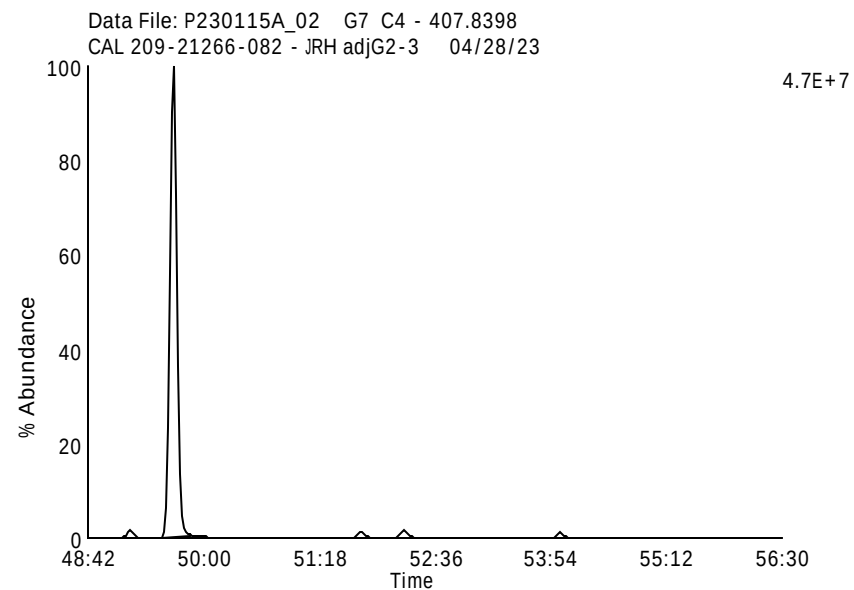
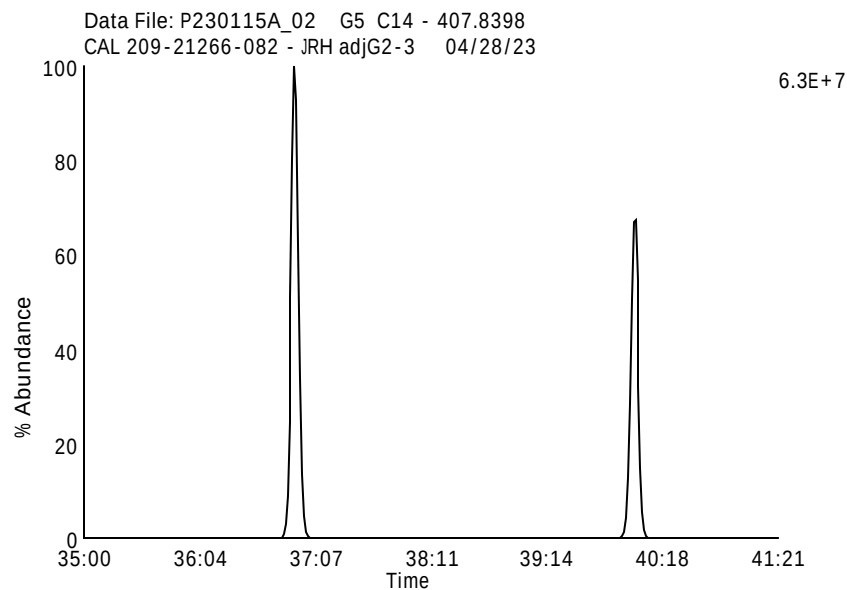
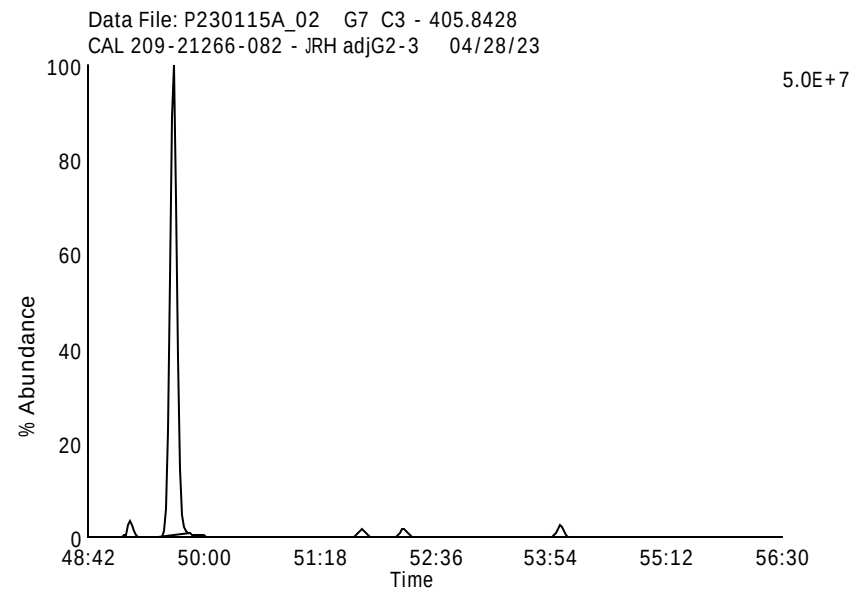
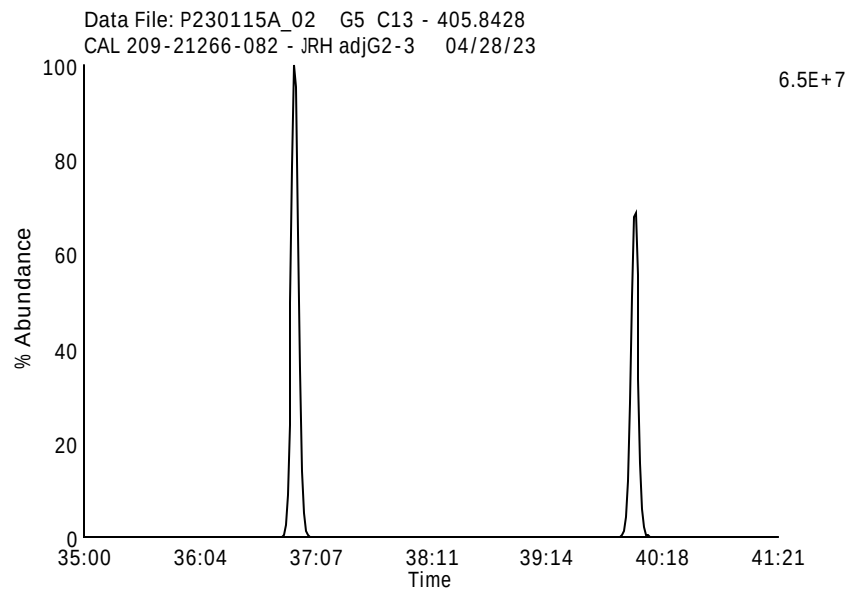
Date Acquired: 1/15/2023

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Octa Chlorinated Biphenyls

Data File Name: P230115A_02

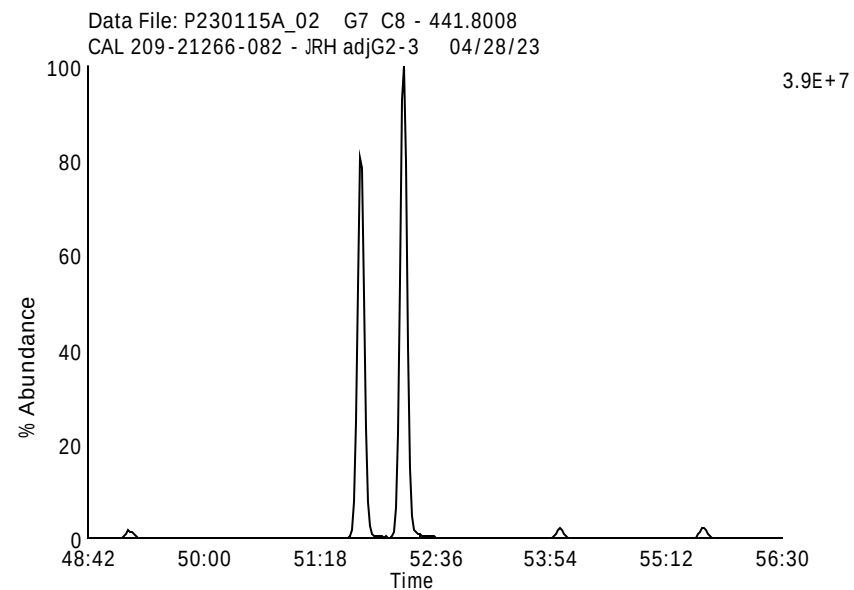
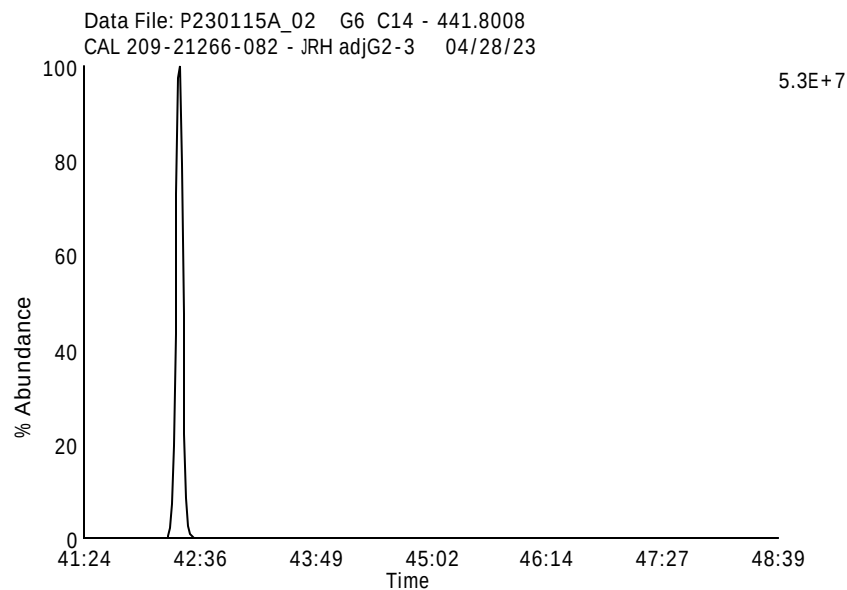
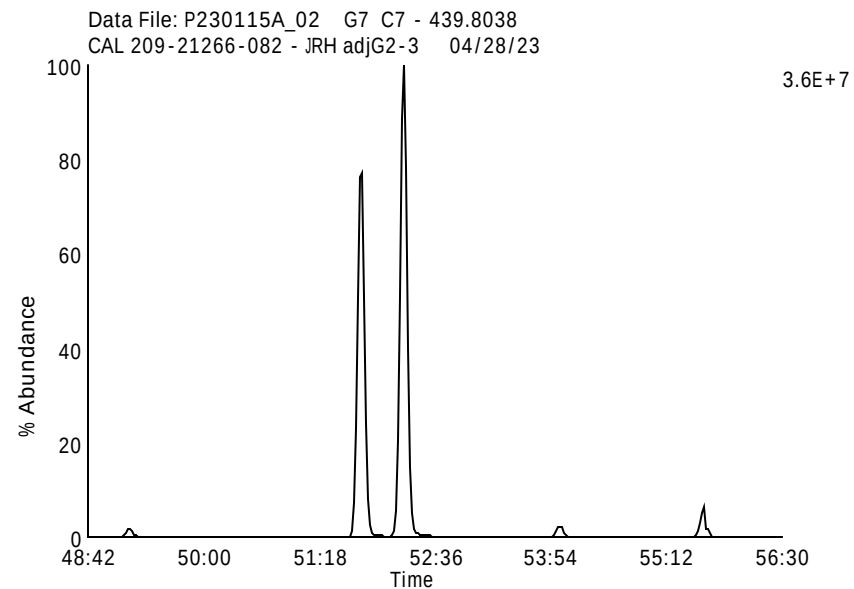
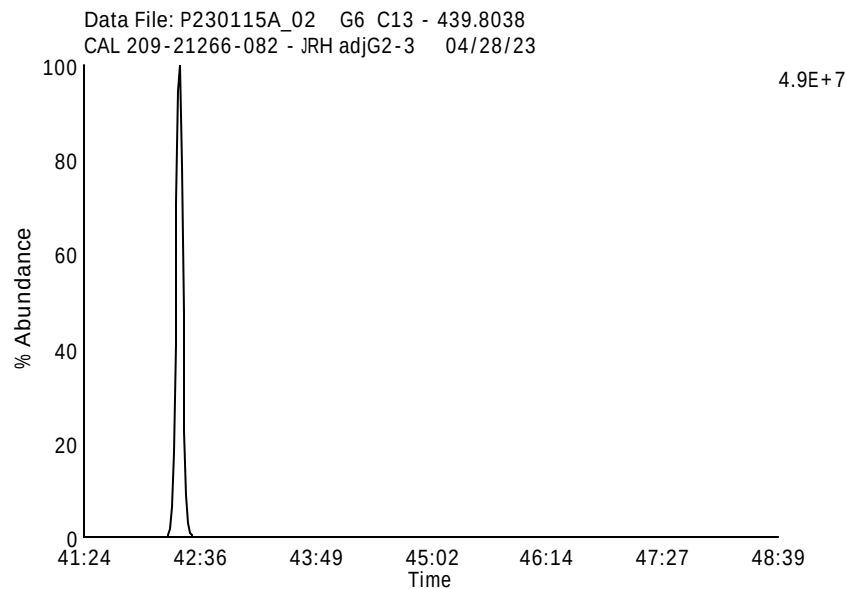
Date Acquired: 1/15/2023

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Nona Chlorinated Biphenyls

Data File Name: P230115A_02

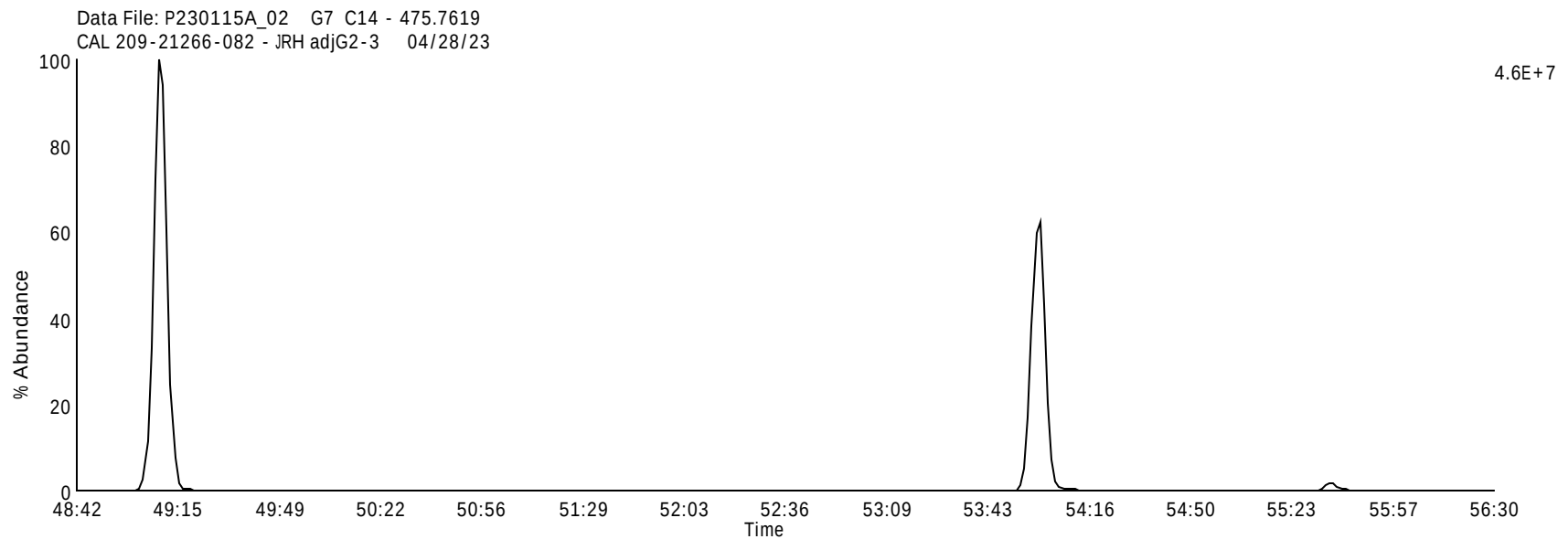
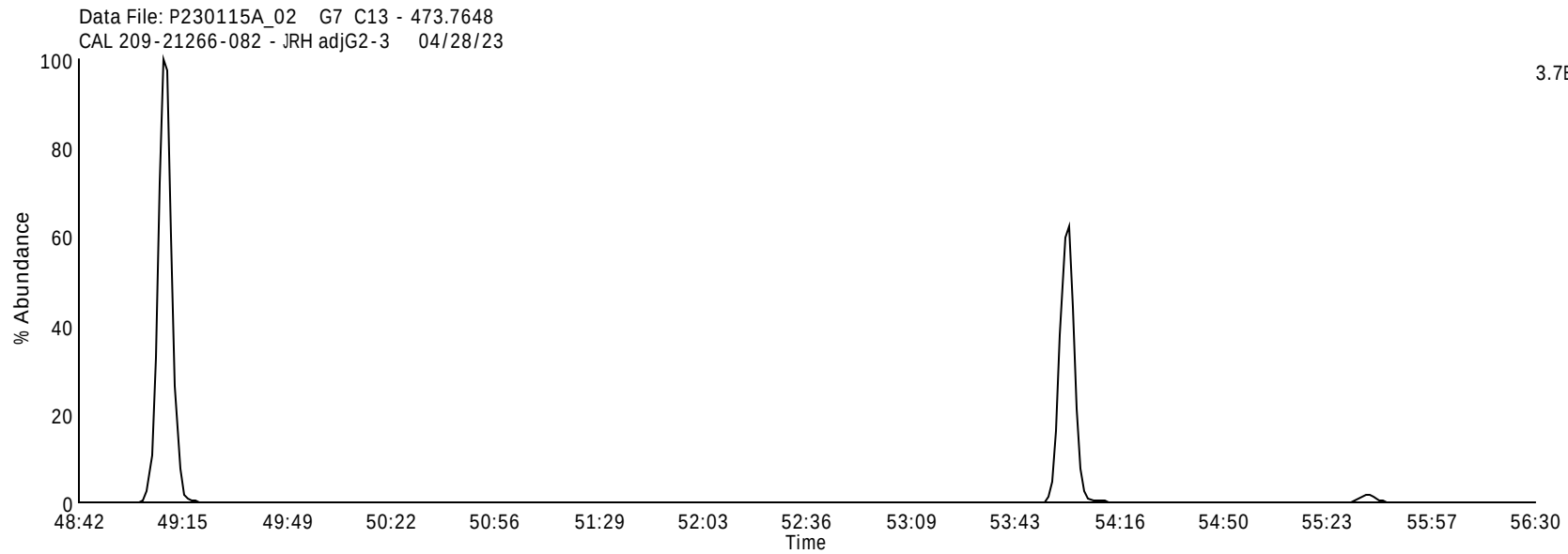
Lab Sample ID: 209-21266-082

Date Acquired: 1/15/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Client Sample ID: 209 Mix



Labeled Deca Chlorinated Biphenyl

Data File Name: P230115A_02

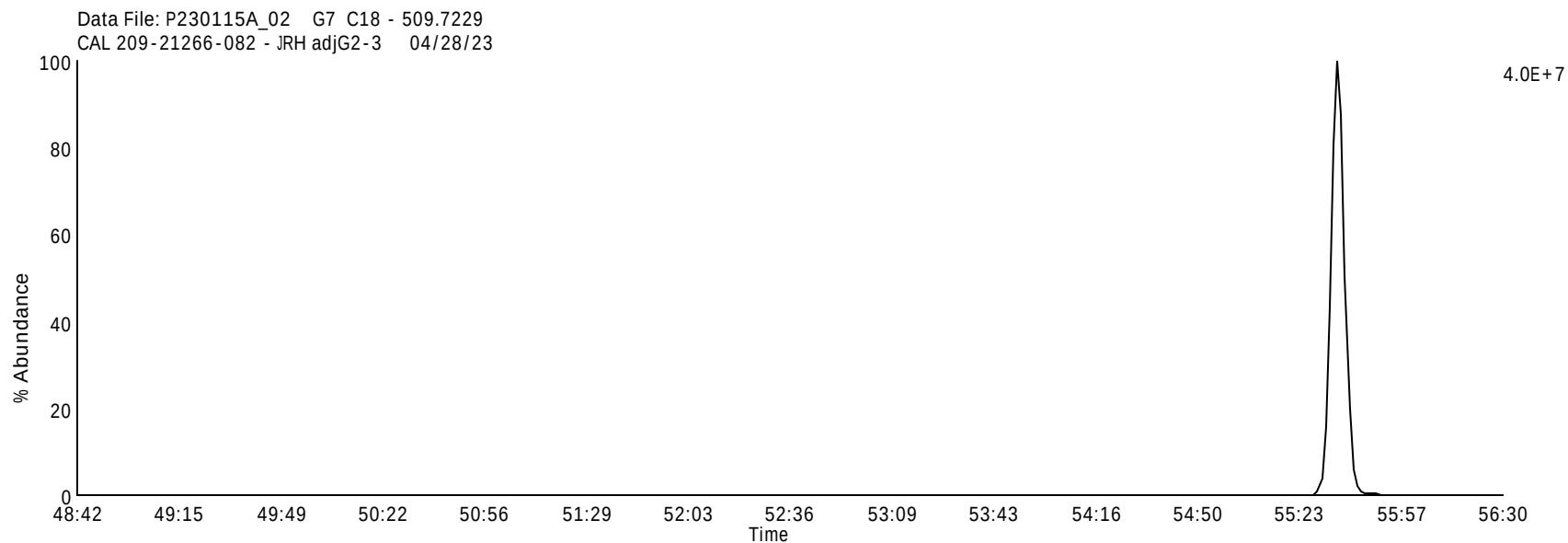
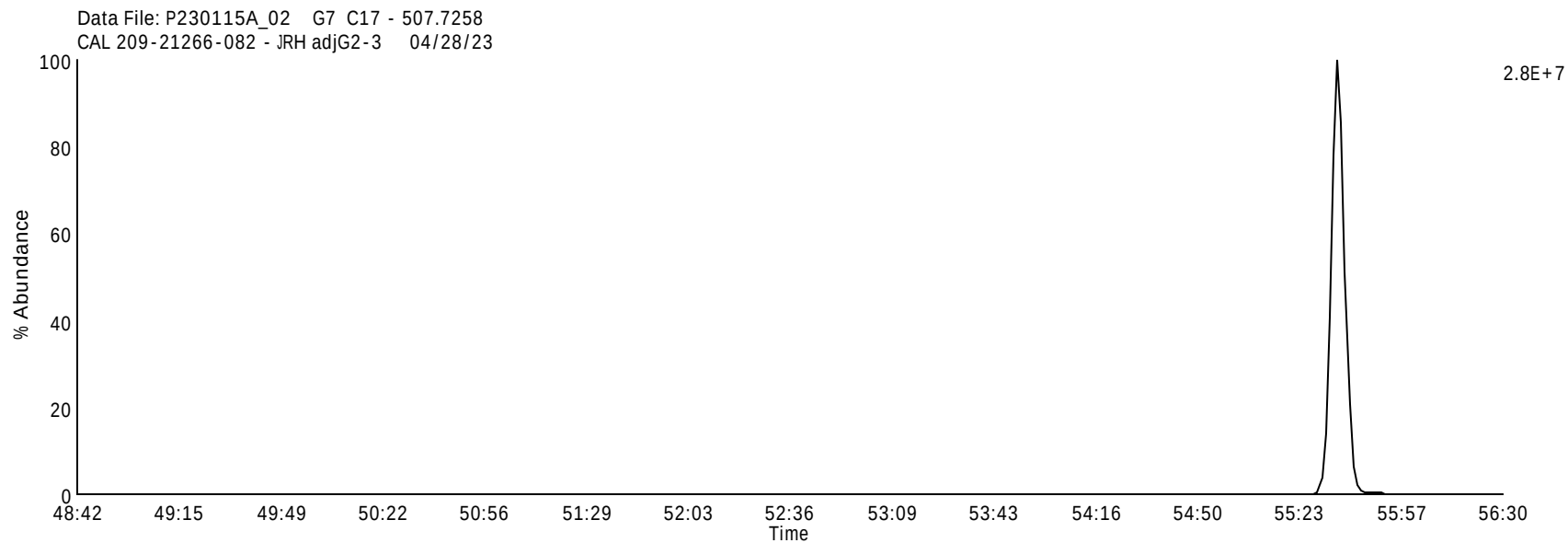
Date Acquired: 1/15/2023

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Mono Chlorinated Biphenyls

Data File Name: P230115A_02

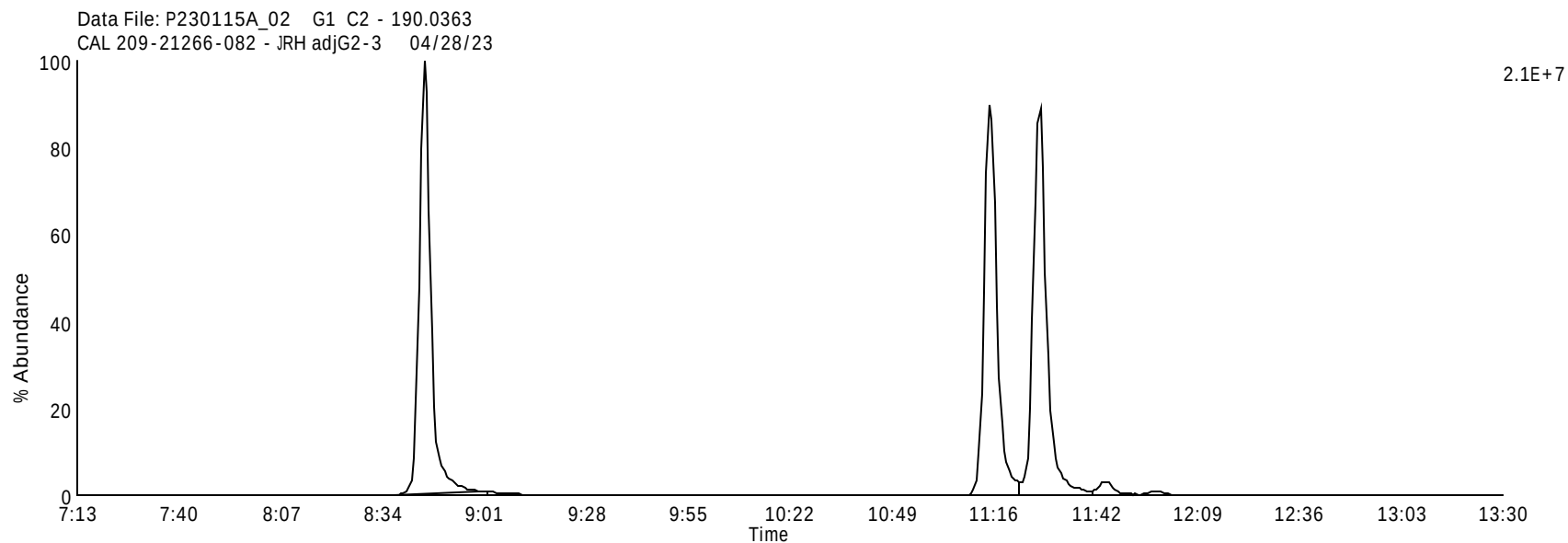
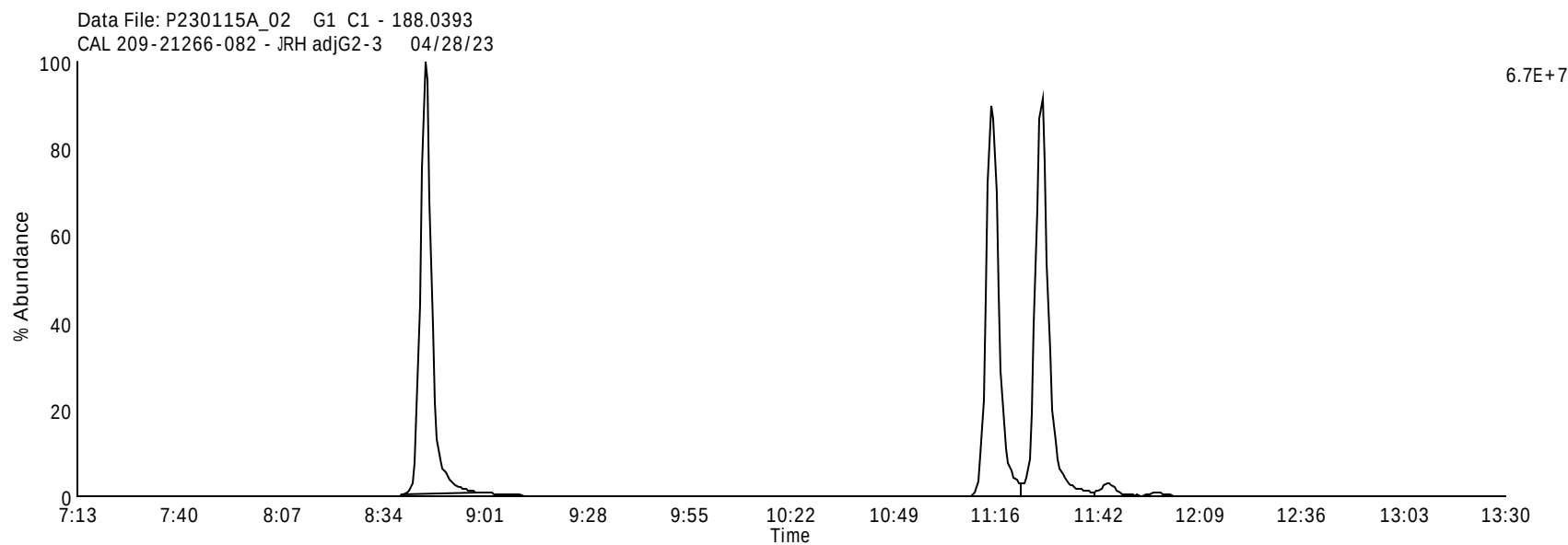
Date Acquired: 1/15/2023

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Di Chlorinated Biphenyls

Data File Name: P230115A_02

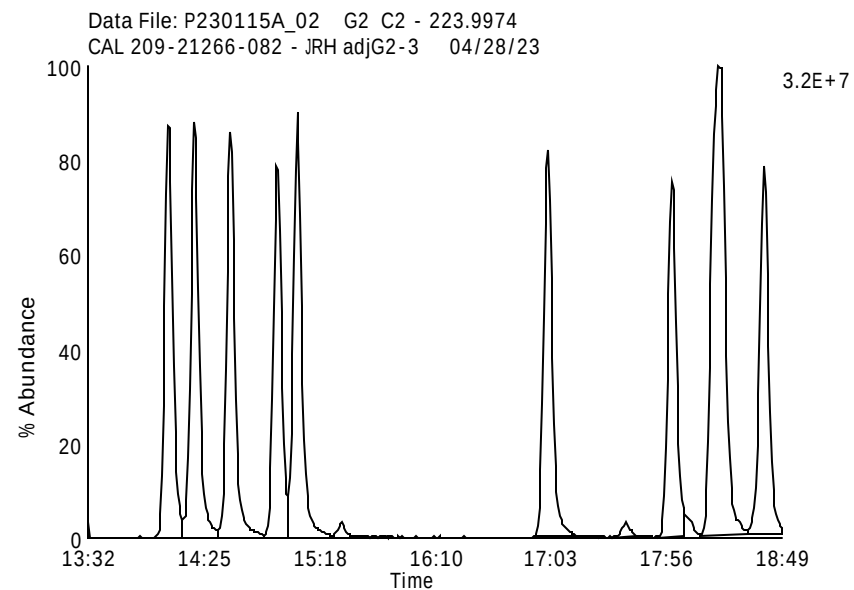
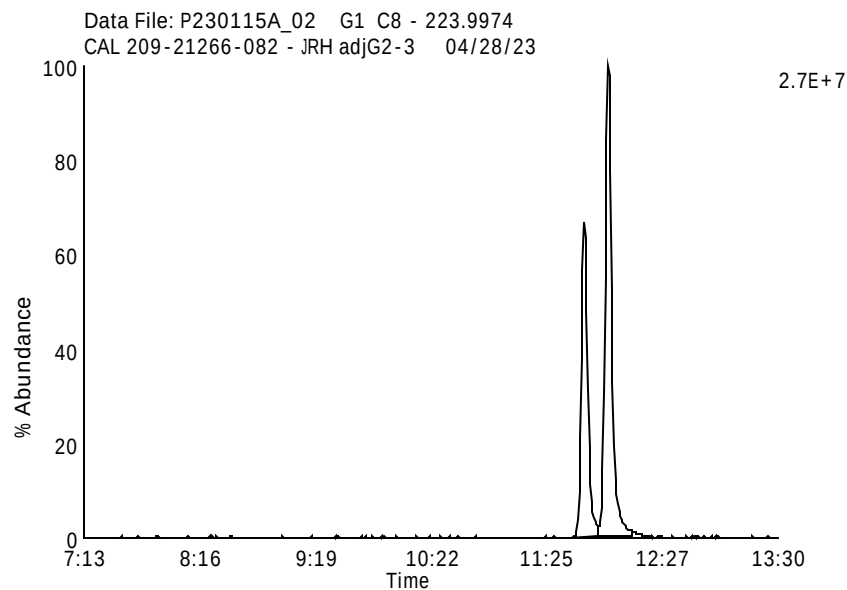
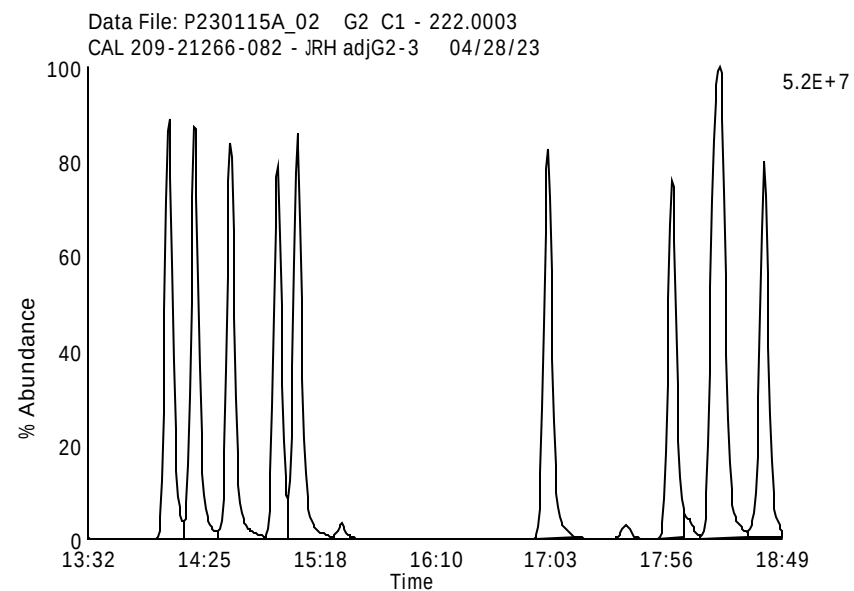
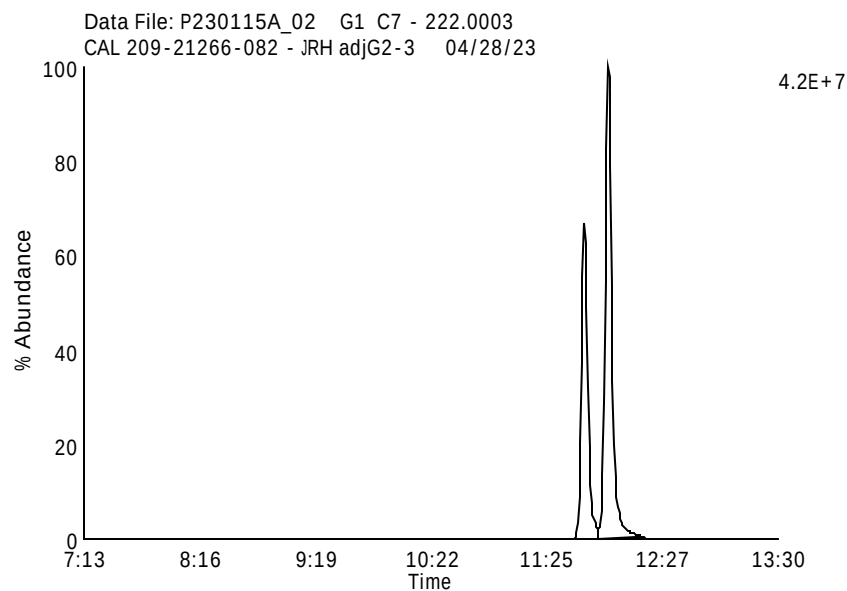
Date Acquired: 1/15/2023

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Tri Chlorinated Biphenyls

Data File Name: P230115A_02

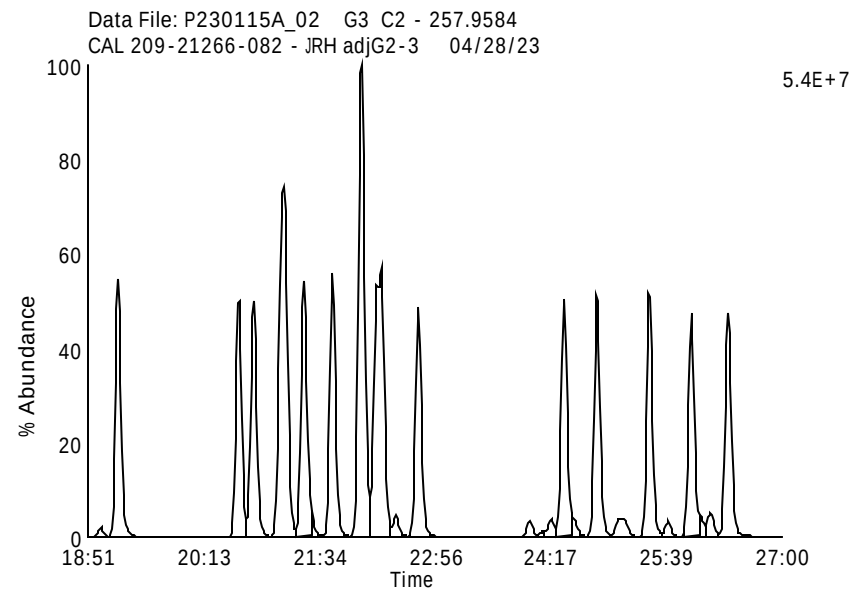
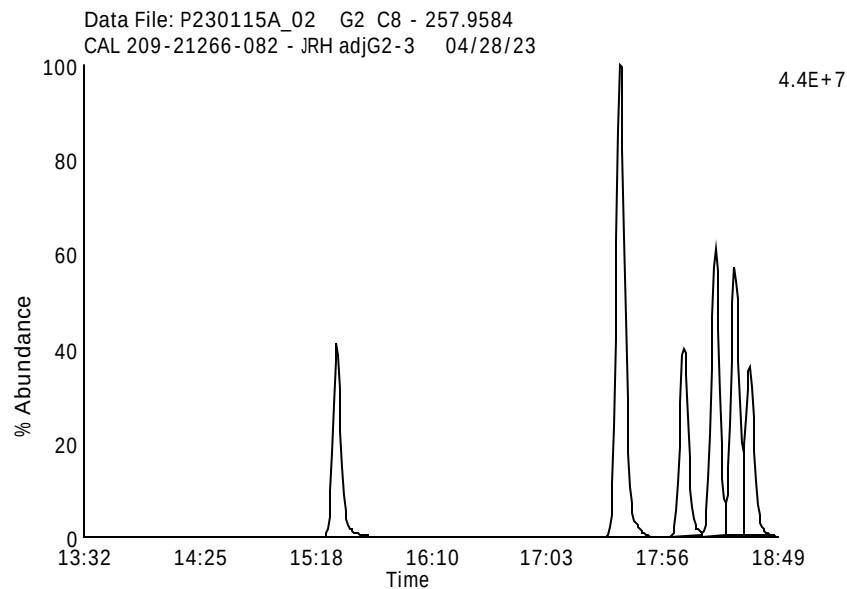
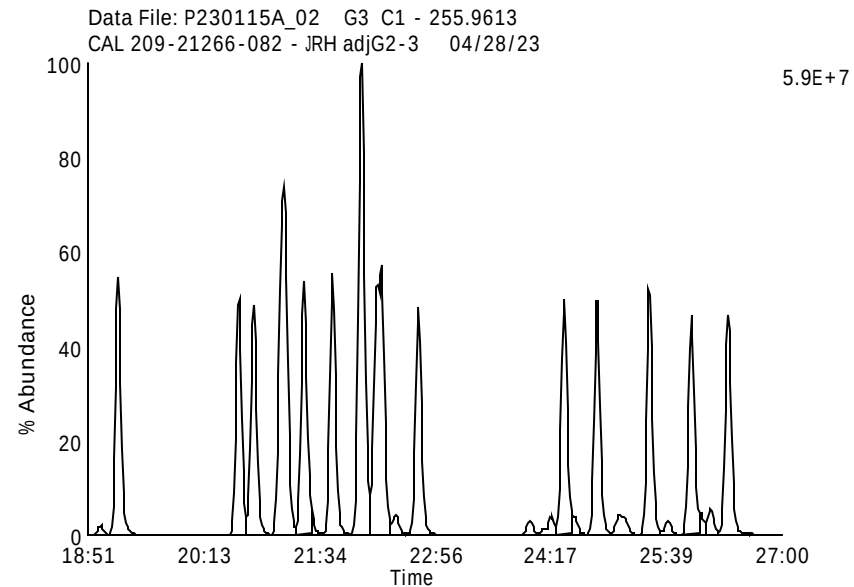
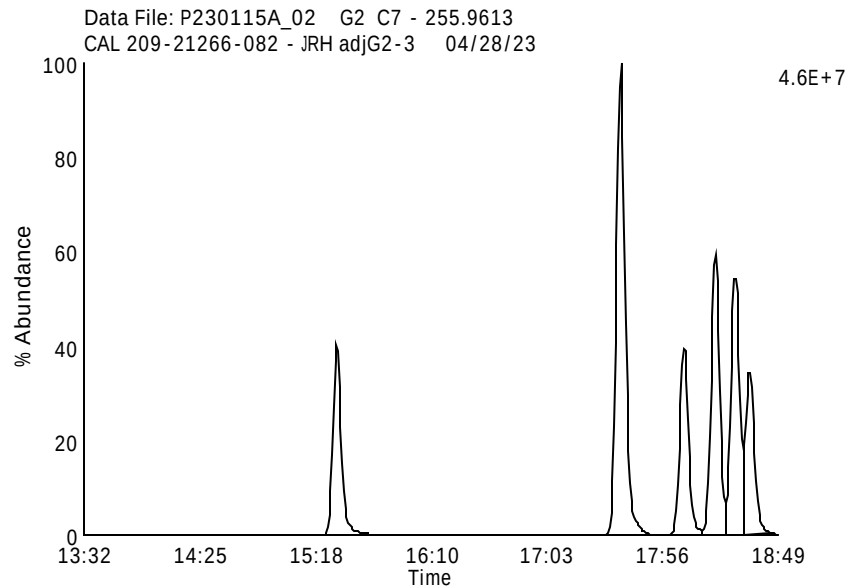
Date Acquired: 1/15/2023

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Tetra Chlorinated Biphenyls

Data File Name: P230115A_02

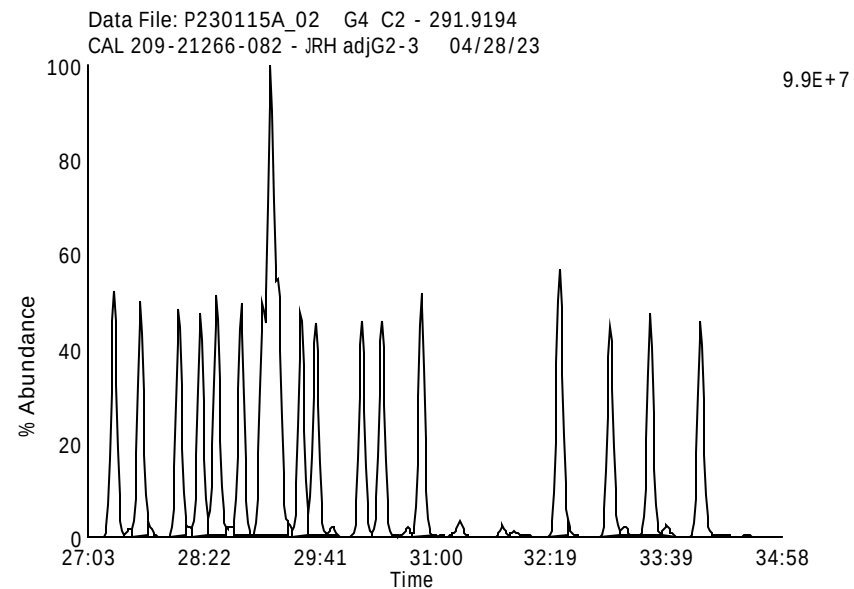
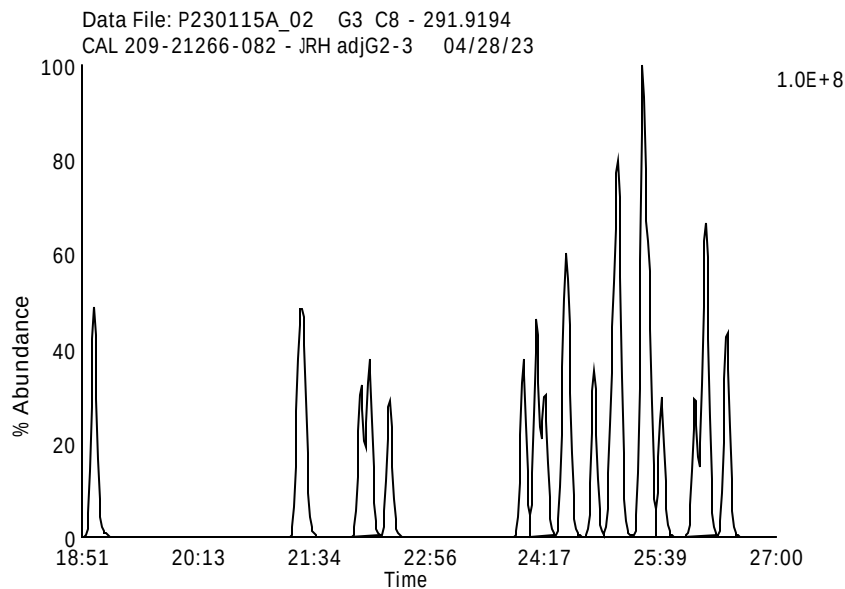
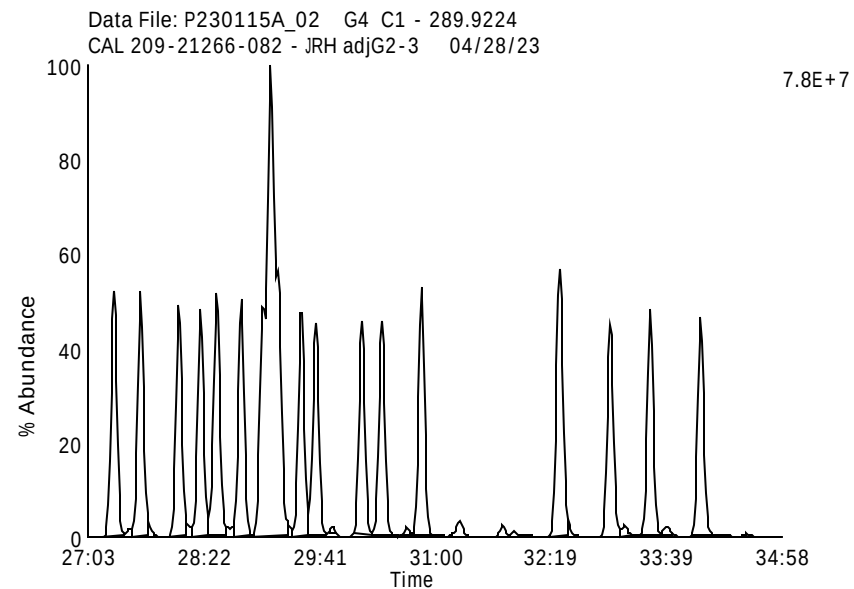
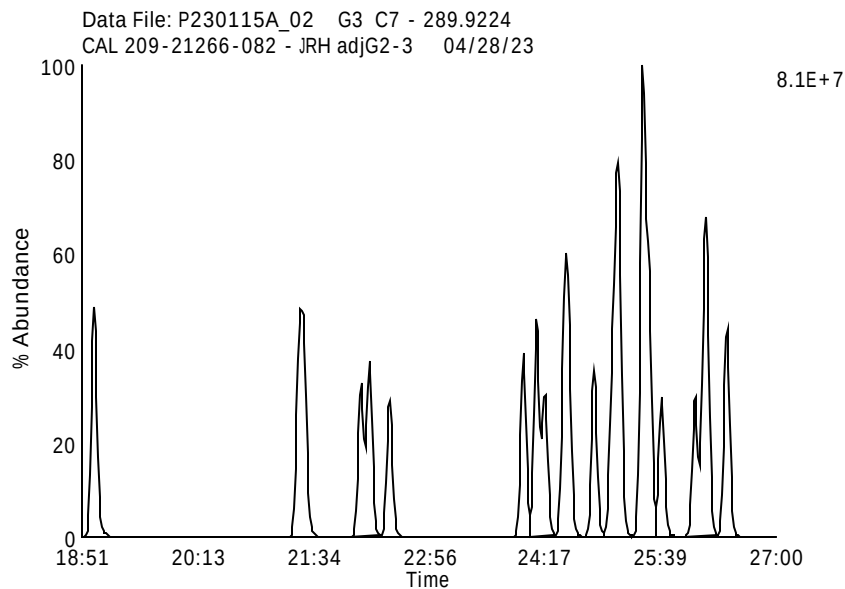
Date Acquired: 1/15/2023

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Penta Chlorinated Biphenyls

Data File Name: P230115A_02

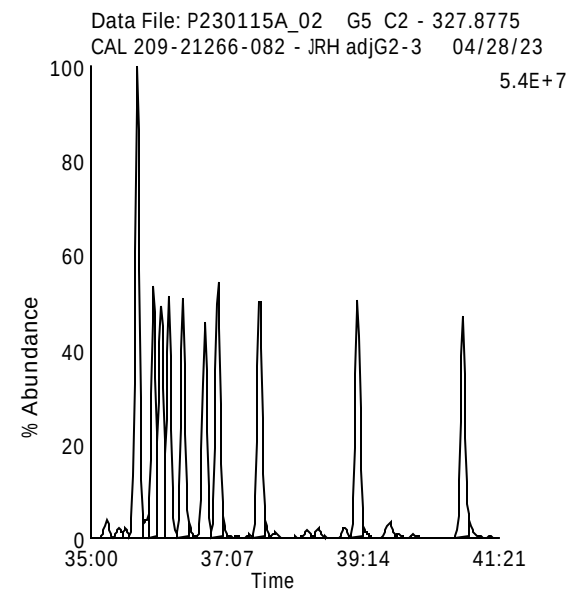
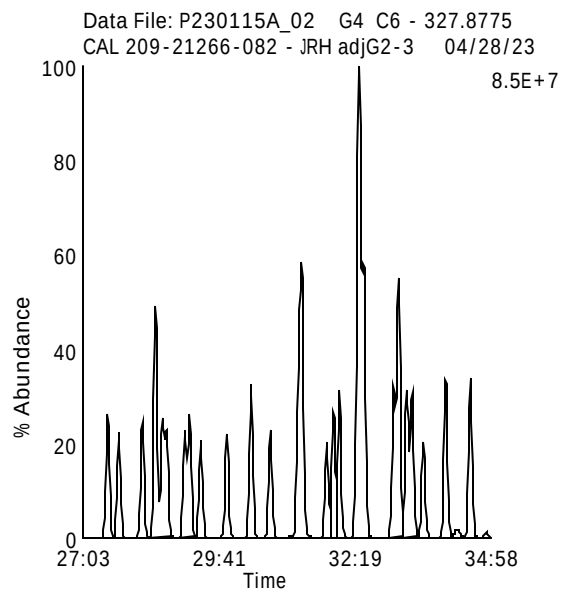
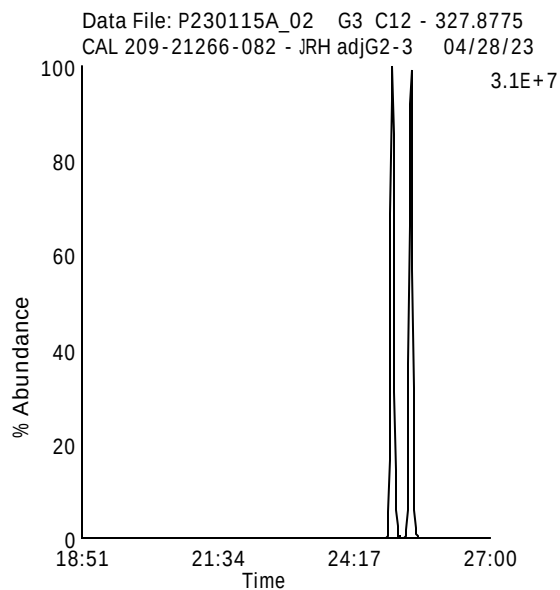
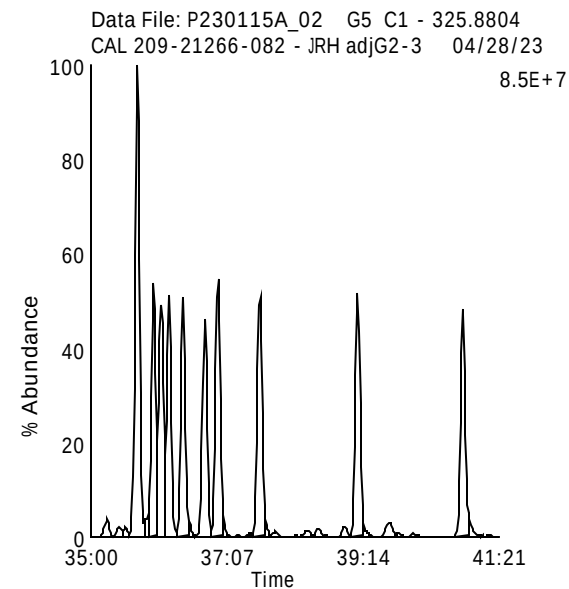
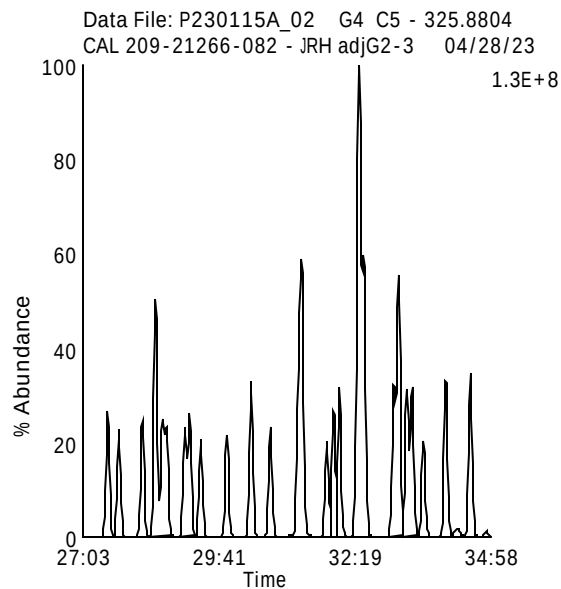
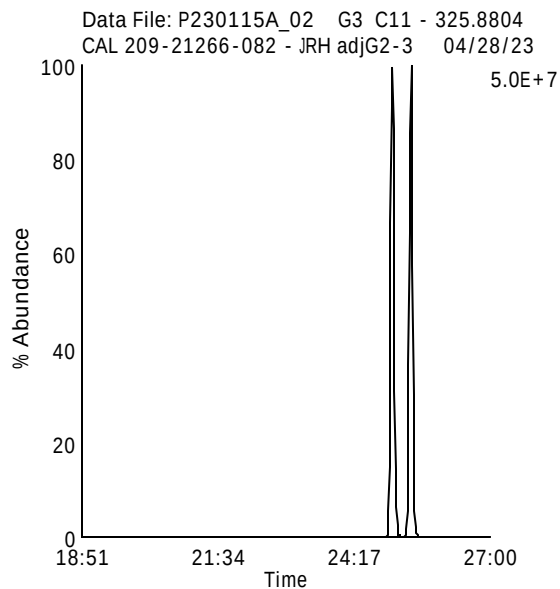
Date Acquired: 1/15/2023

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Hexa Chlorinated Biphenyls

Data File Name: P230115A_02

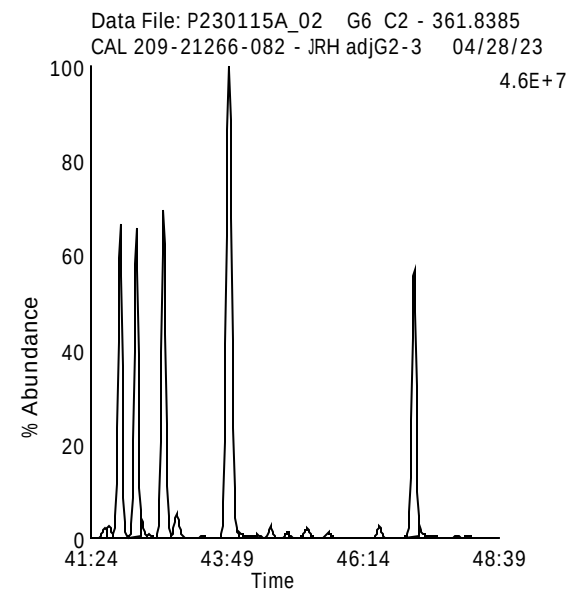
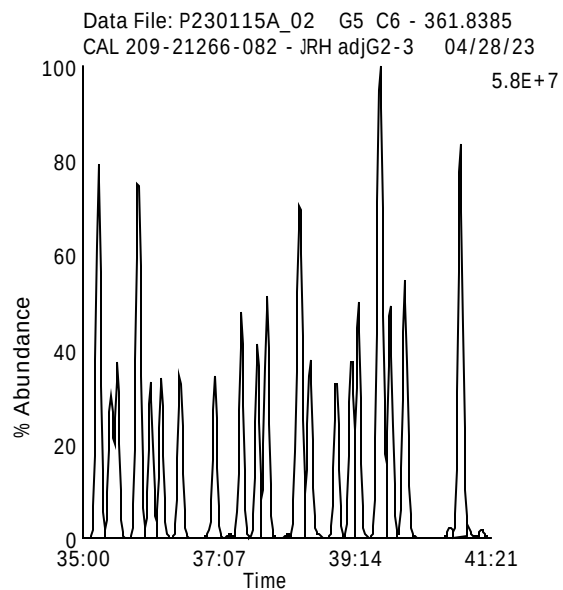
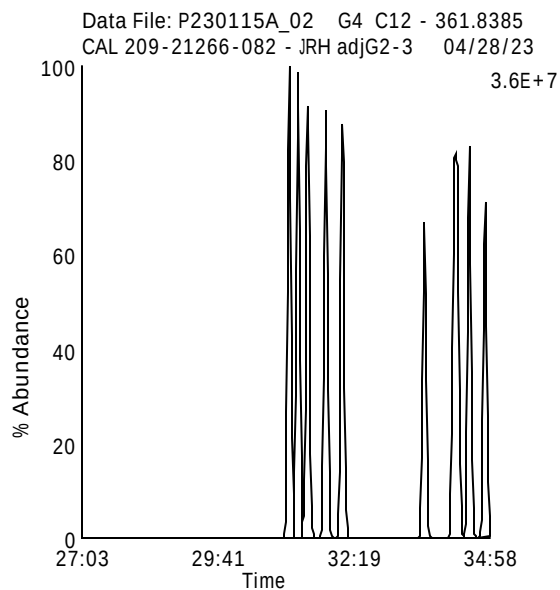
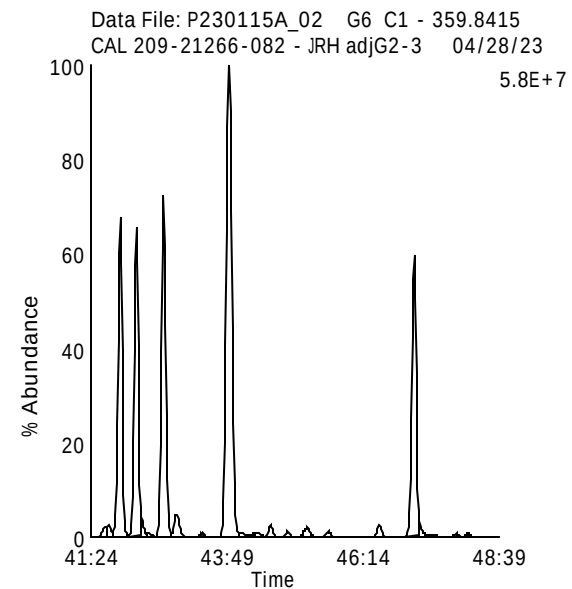
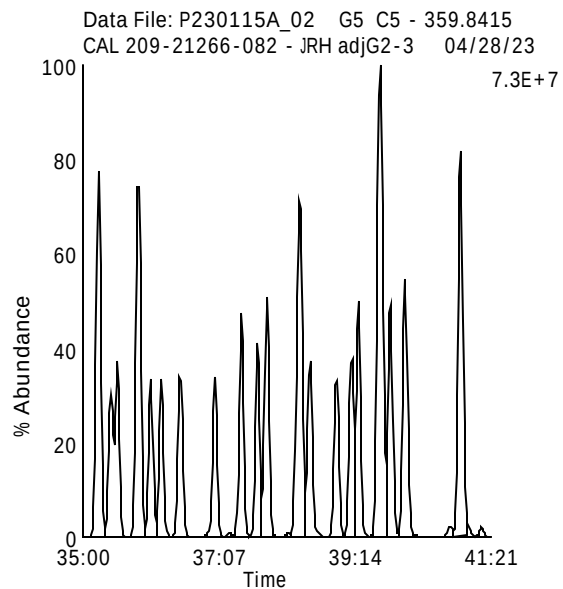
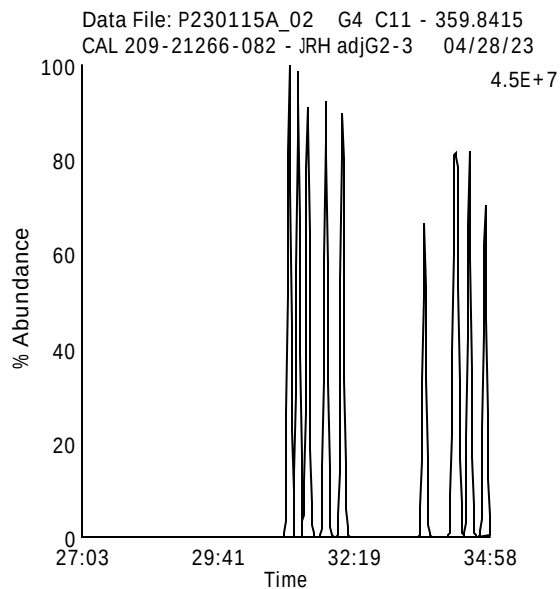
Date Acquired: 1/15/2023

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Hepta Chlorinated Biphenyls

Data File Name: P230115A_02

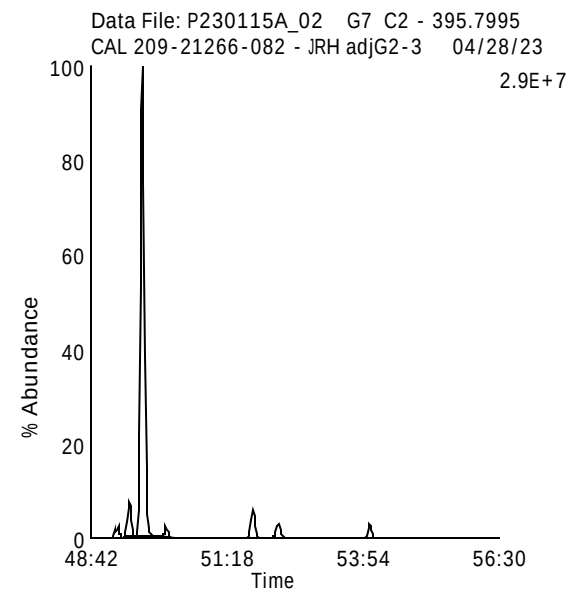
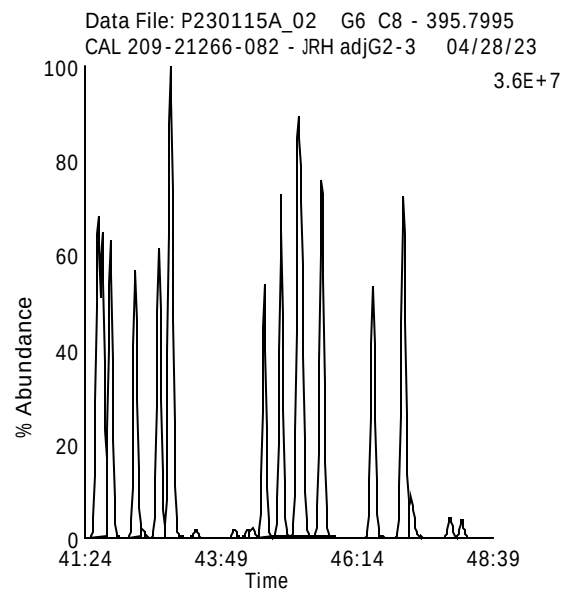
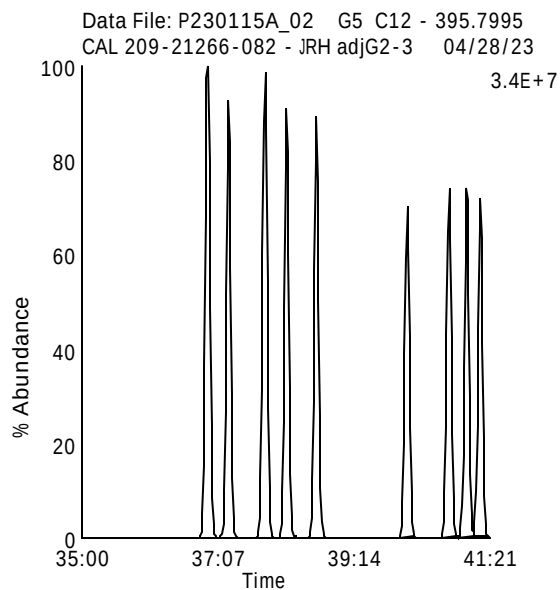
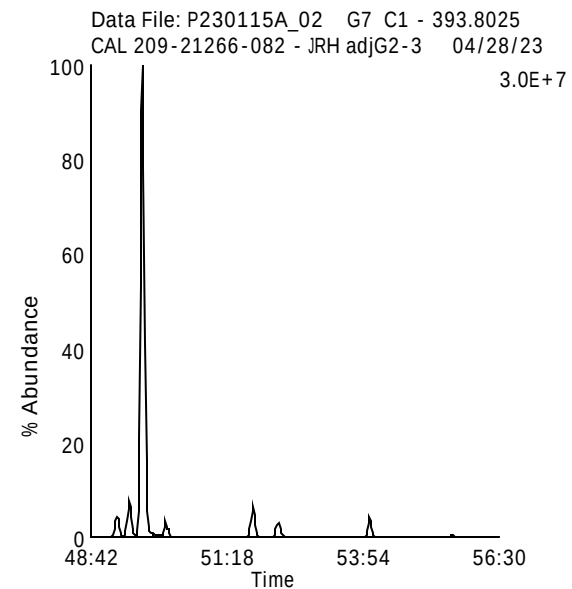
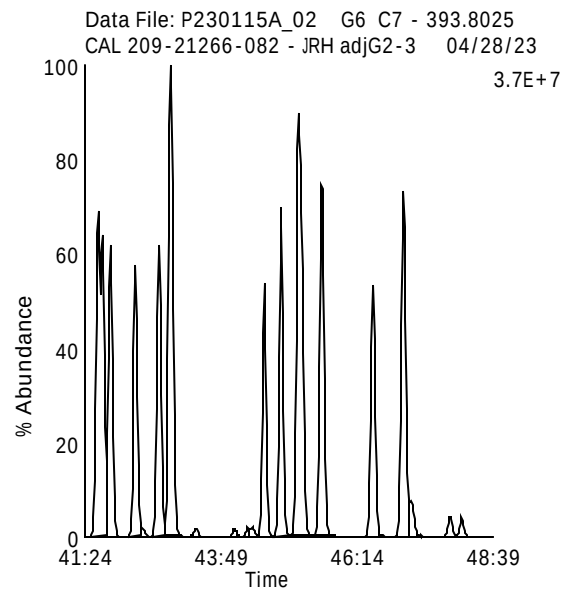
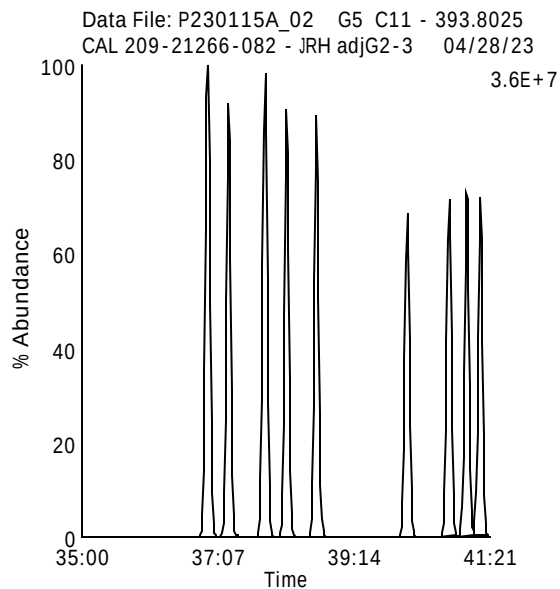
Date Acquired: 1/15/2023

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Octa Chlorinated Biphenyls

Data File Name: P230115A_02

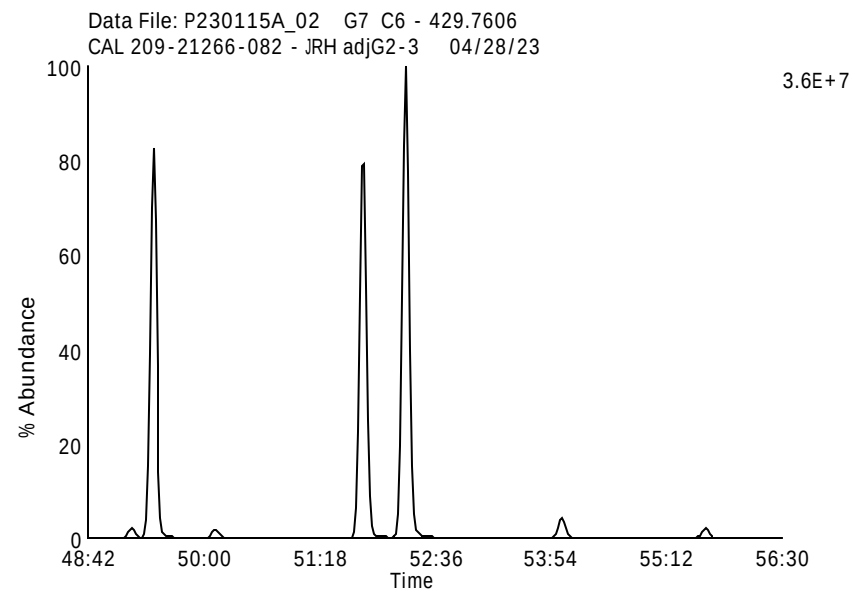
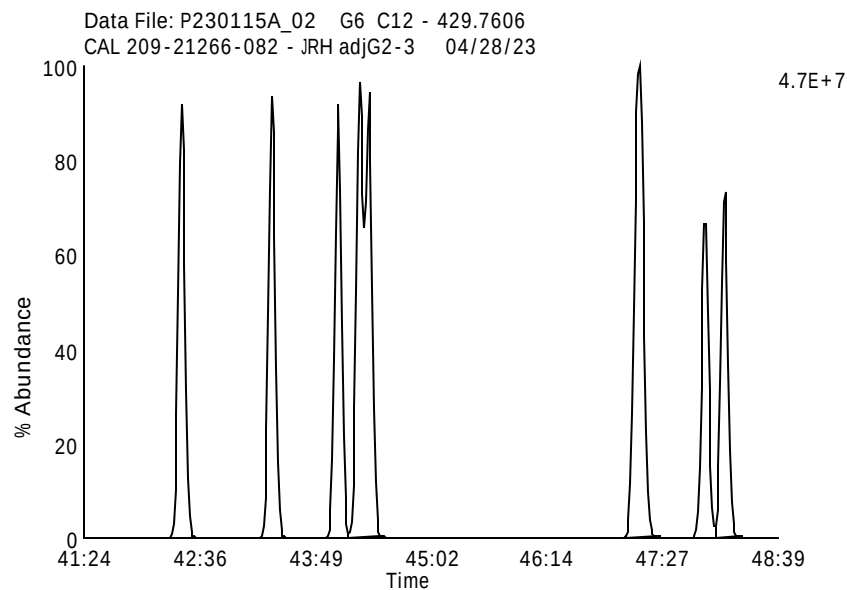
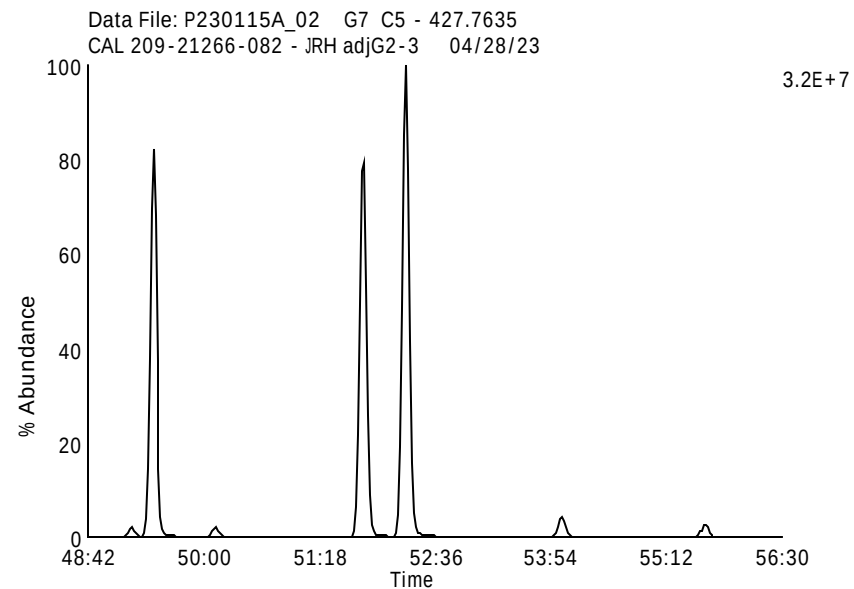
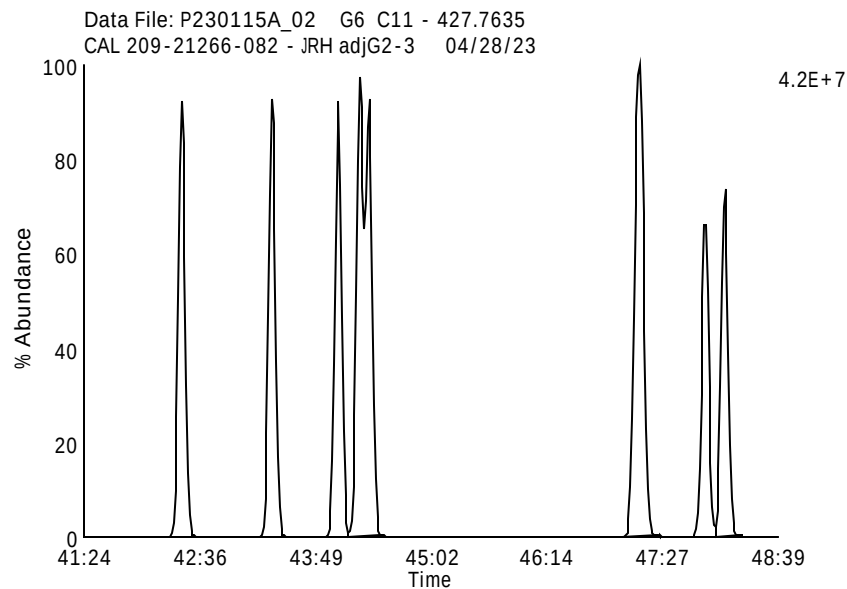
Date Acquired: 1/15/2023

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Nona Chlorinated Biphenyls

Data File Name: P230115A_02

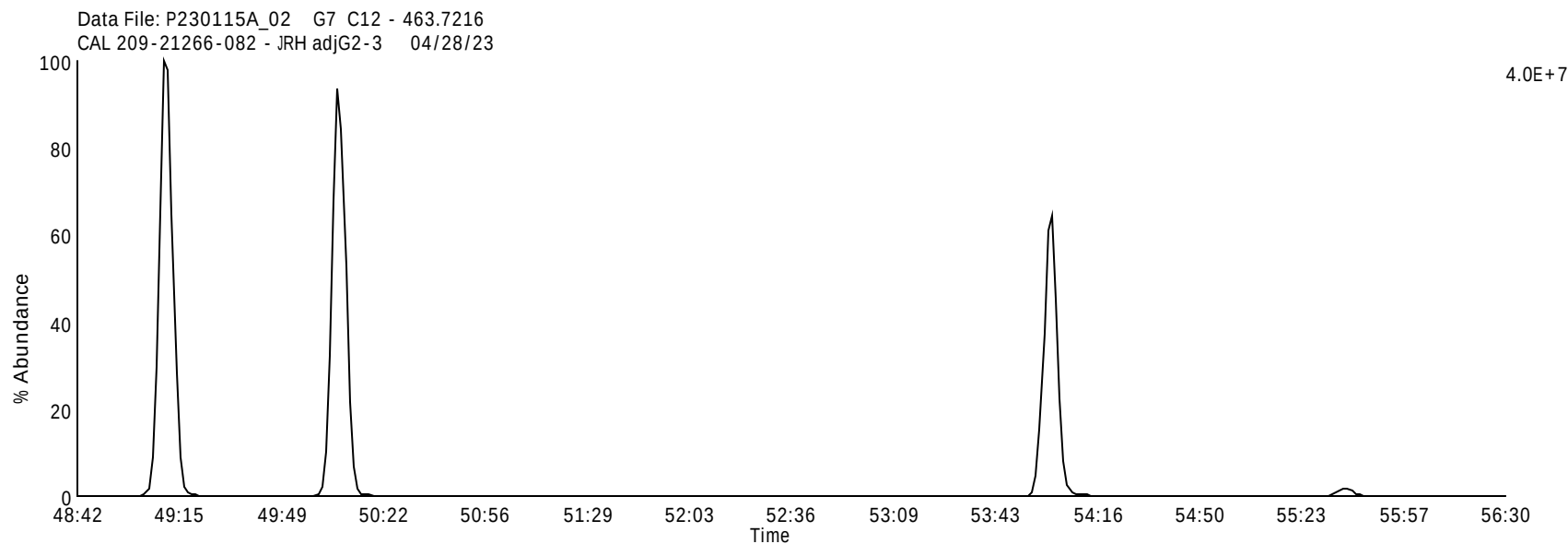
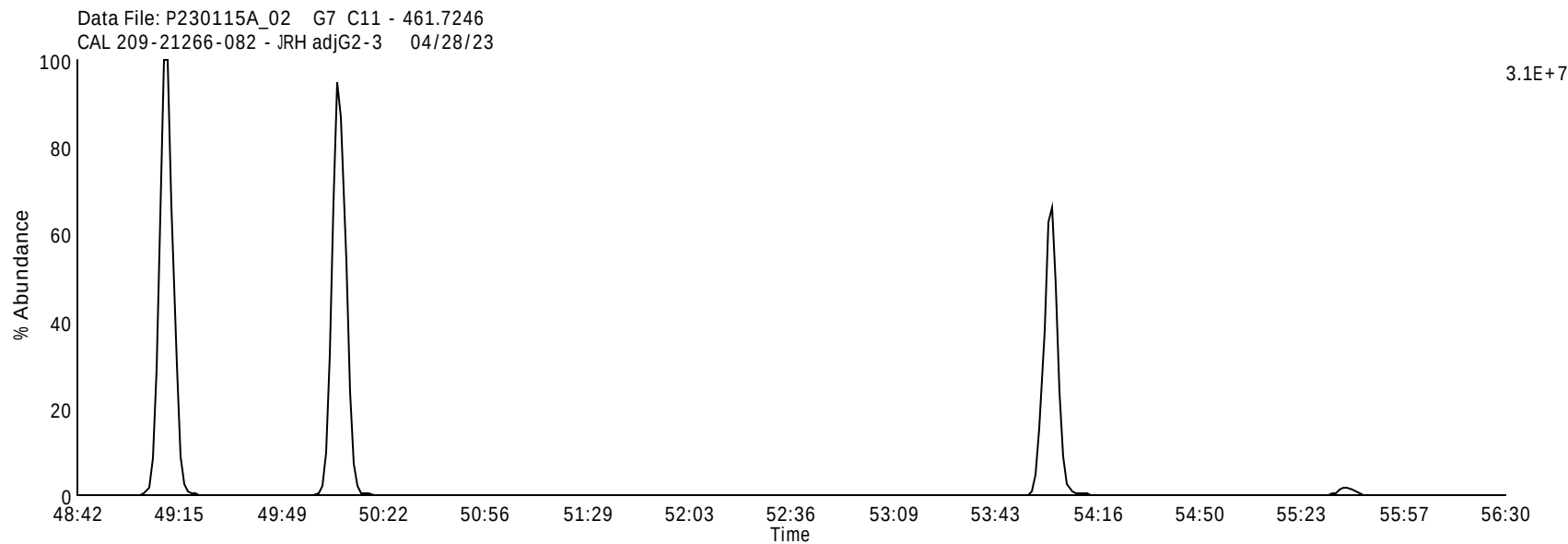
Date Acquired: 1/15/2023

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Deca Chlorinated Biphenyl

Data File Name: P230115A_02

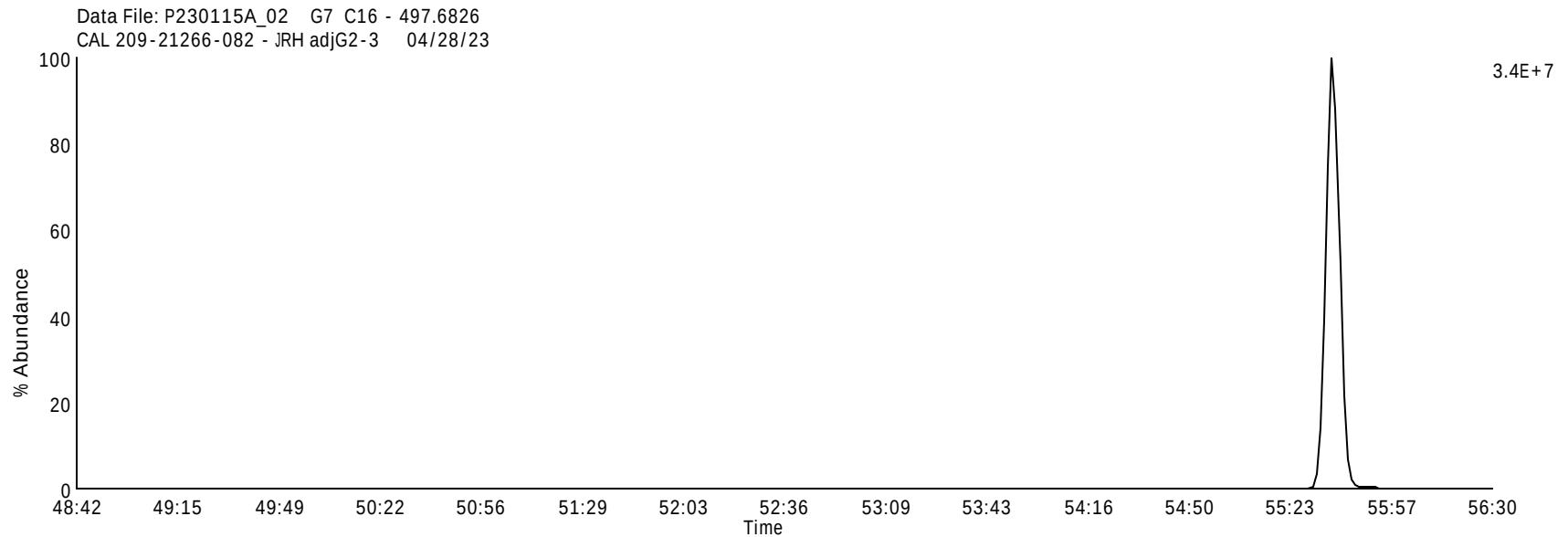
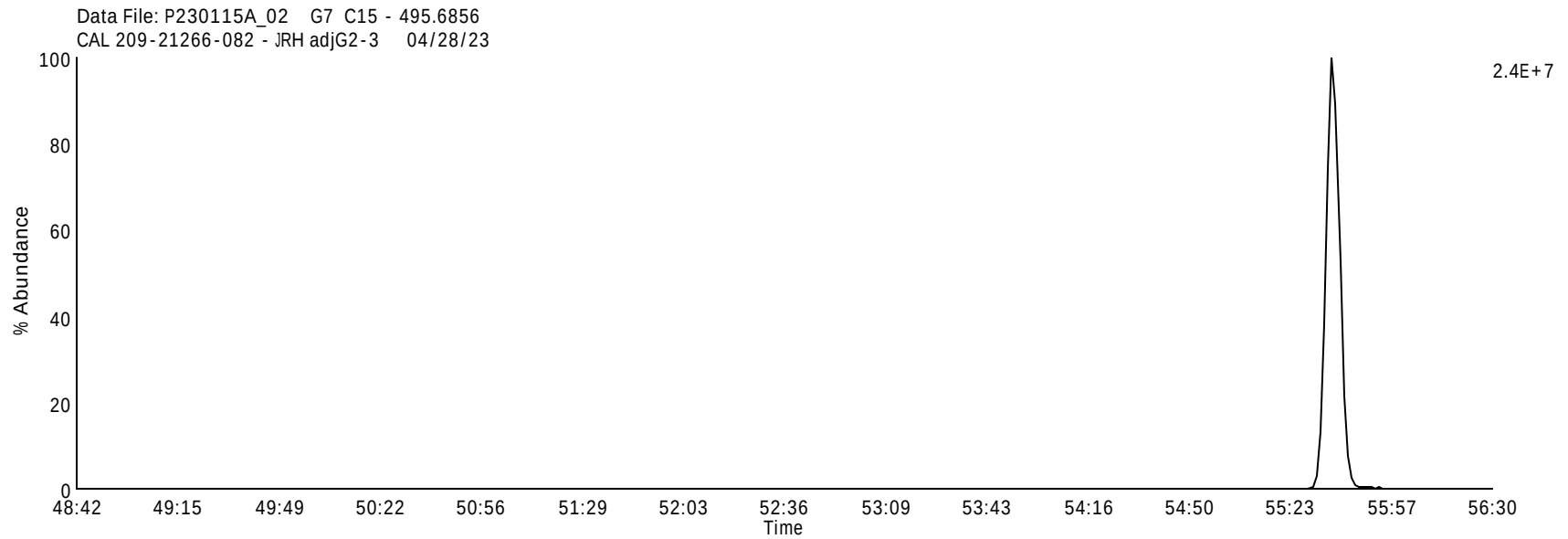
Date Acquired: 1/15/2023

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Group 1 - 4 Lock mass

Data File Name: P230115A_02

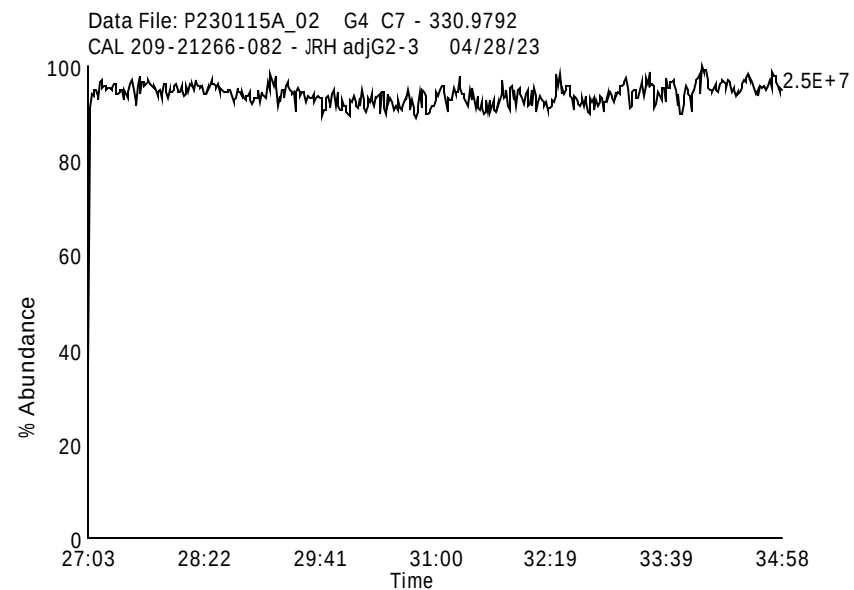
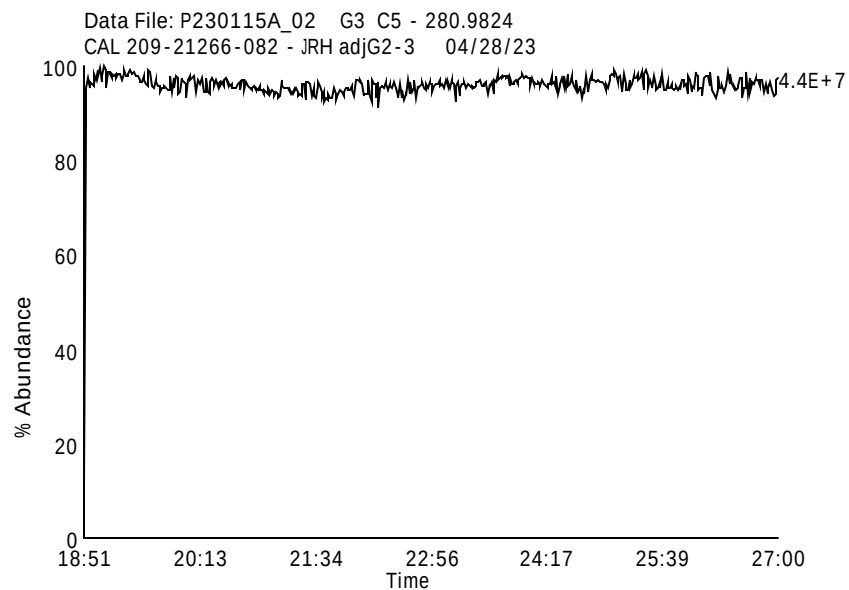
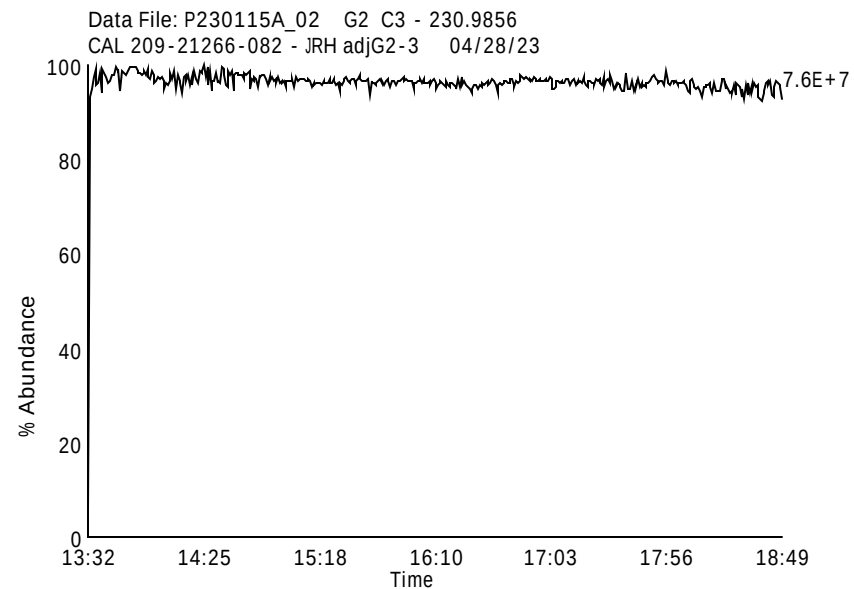
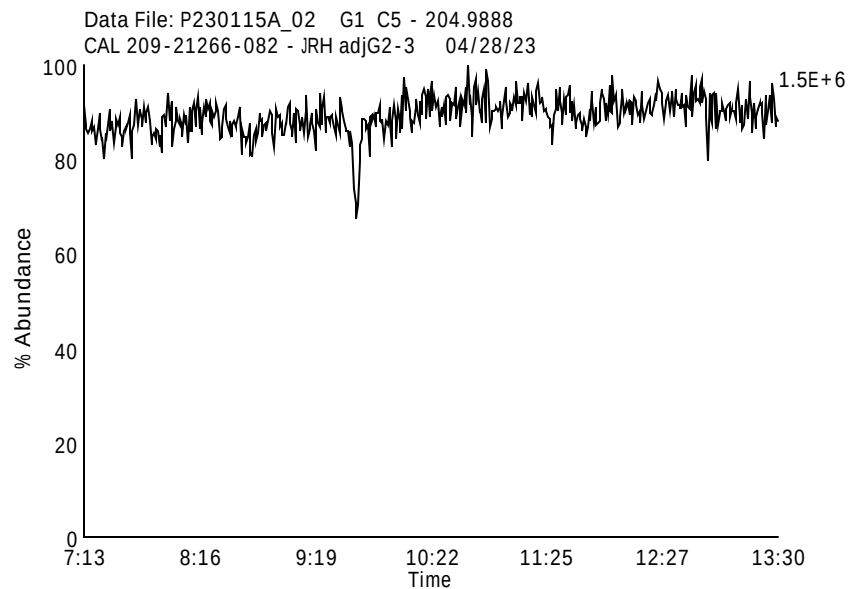
Date Acquired: 1/15/2023

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Group 5 - 7 Lock mass

Data File Name: P230115A_02

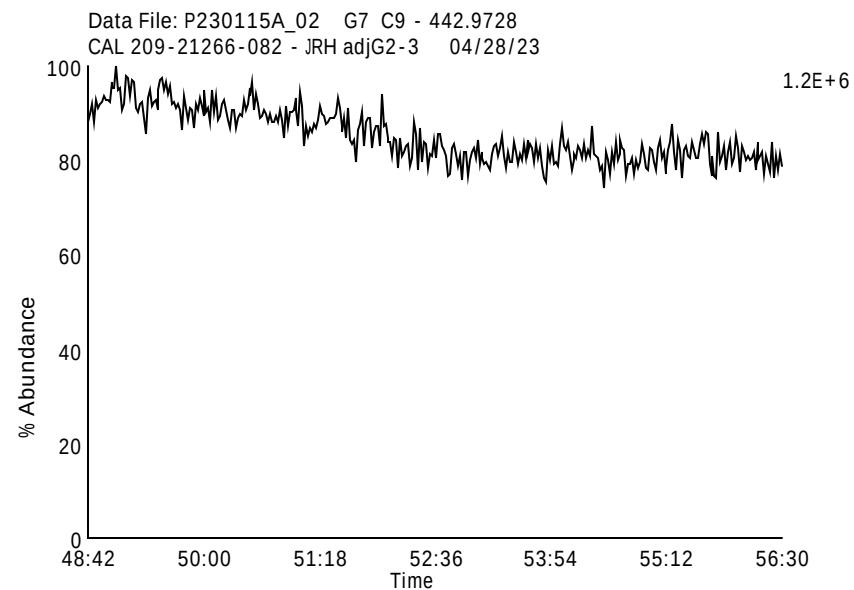
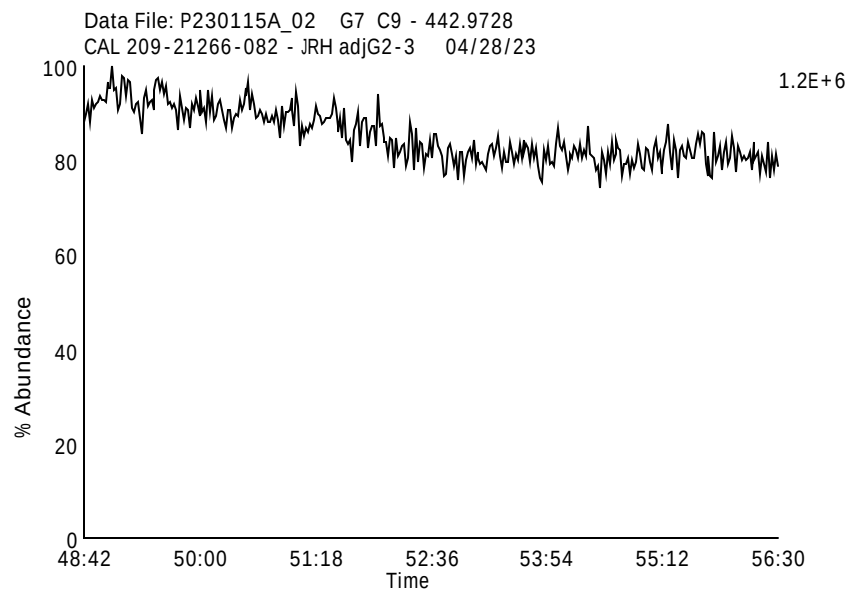
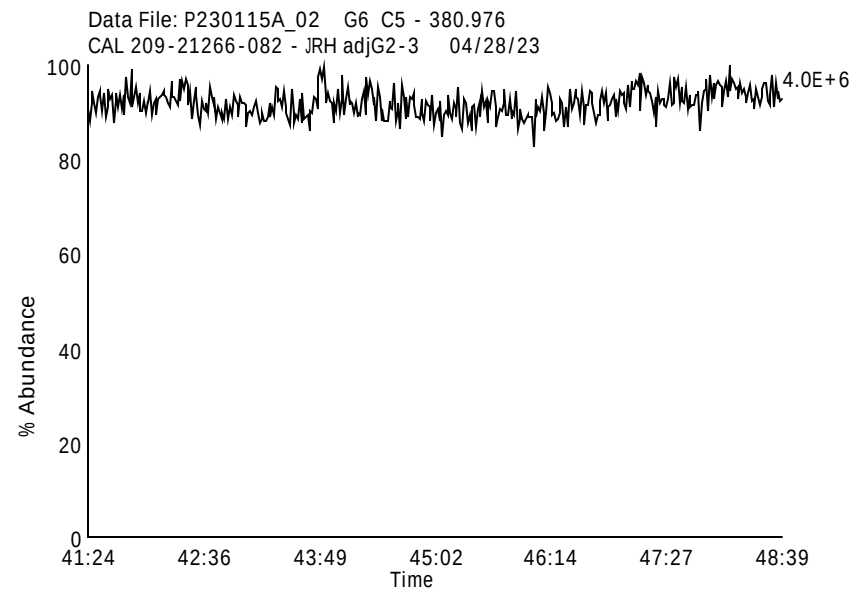
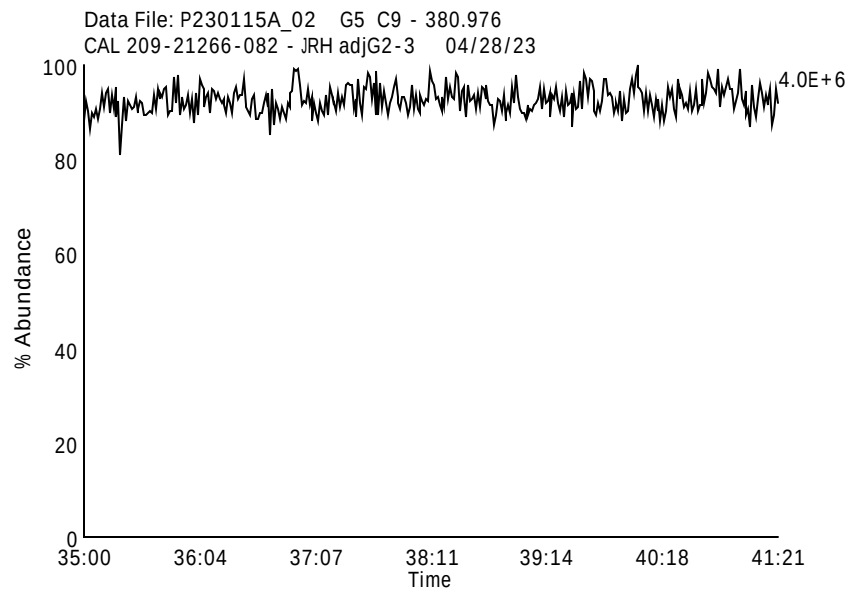
Date Acquired: 1/15/2023

Sample Description: CAL 209-21266-082 - JRH adjG2-3 04/28/23

Lab Sample ID: 209-21266-082

Instrument: 10MSHR09 (P)

Client Sample ID: 209 Mix



Labeled Mono Chlorinated Biphenyls

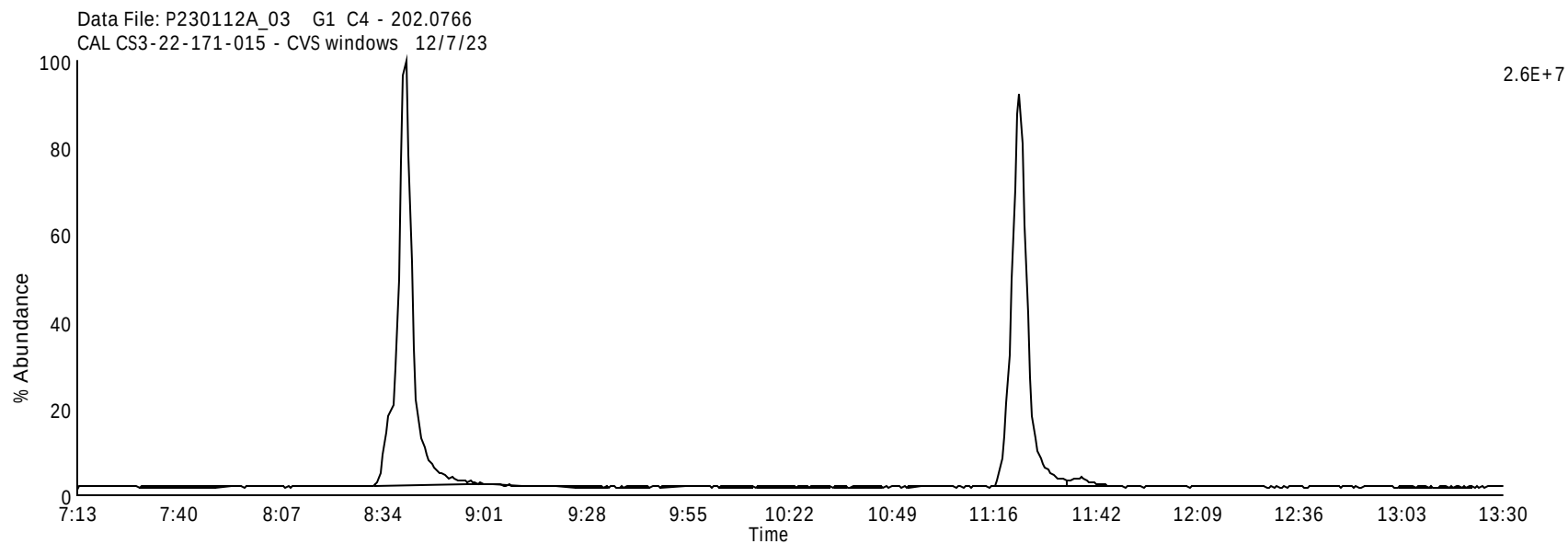
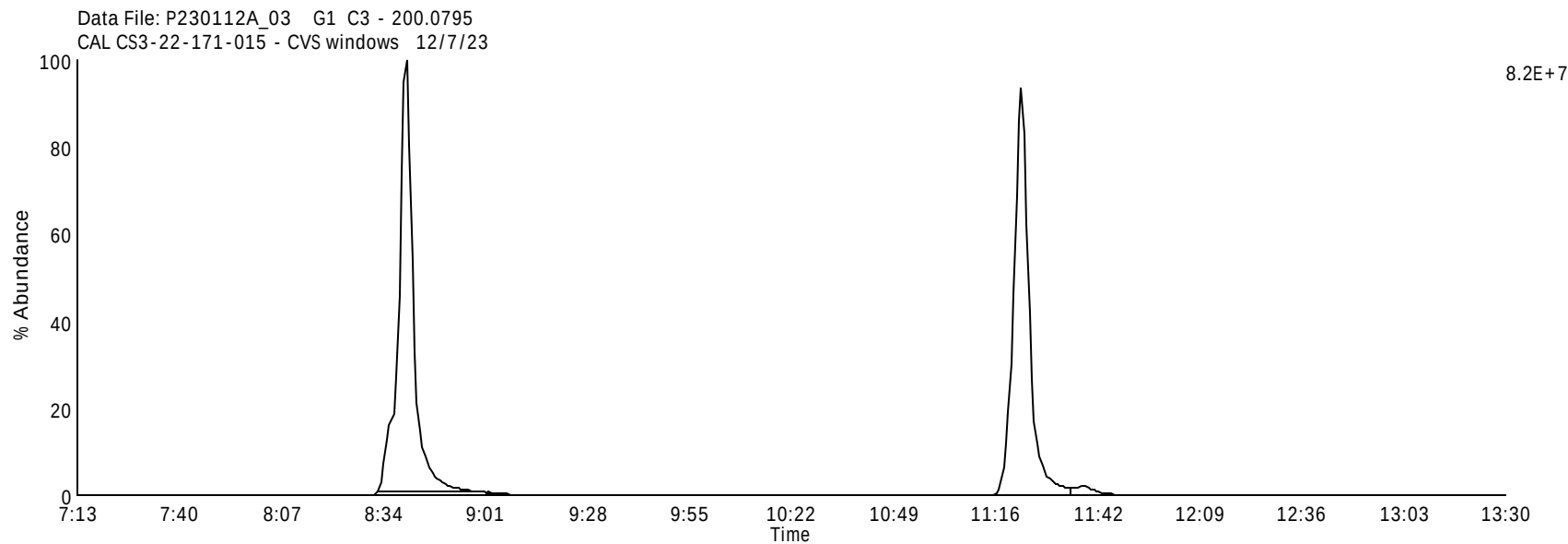
Data File Name: P230112A_03

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/12/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23



Labeled Di Chlorinated Biphenyls

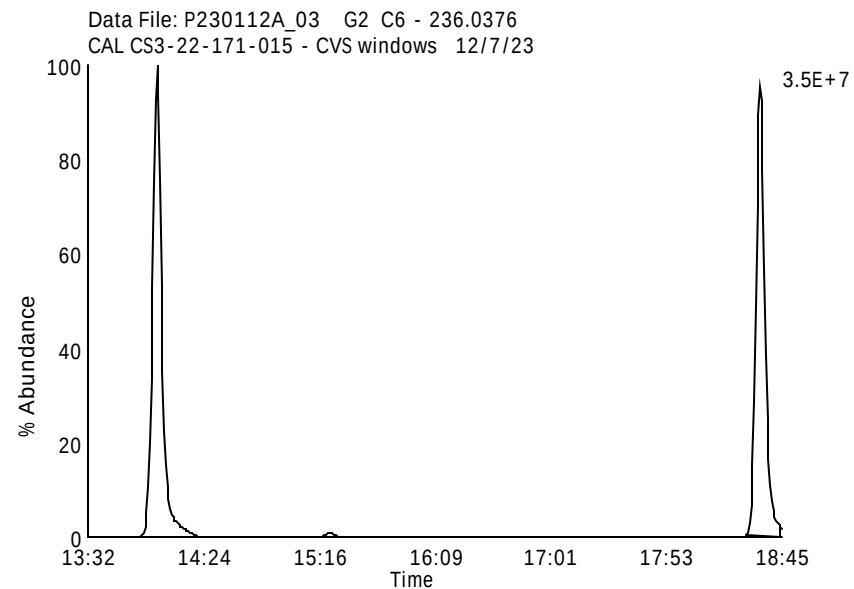
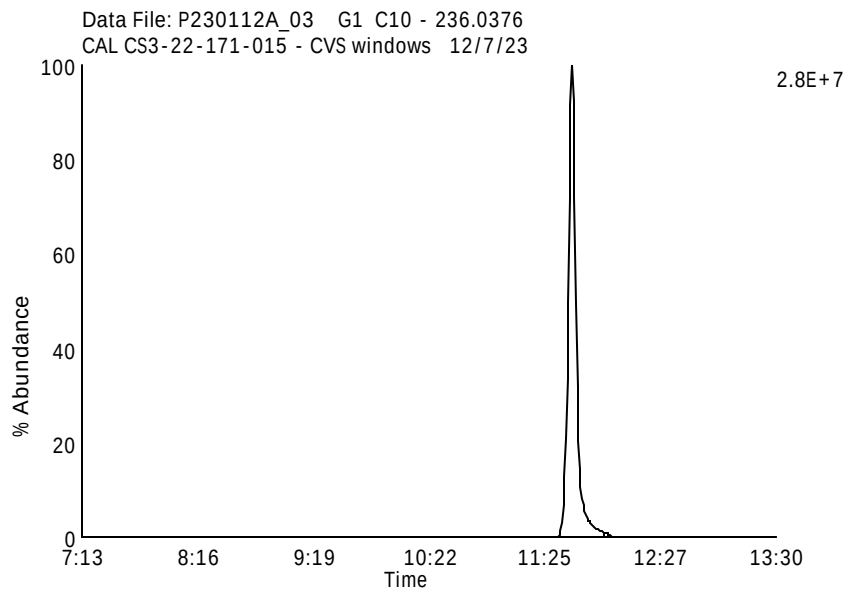
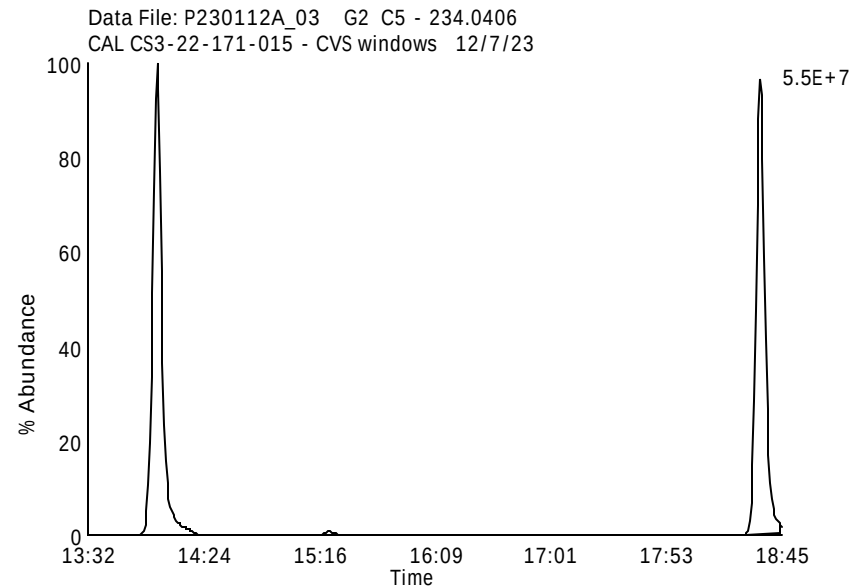
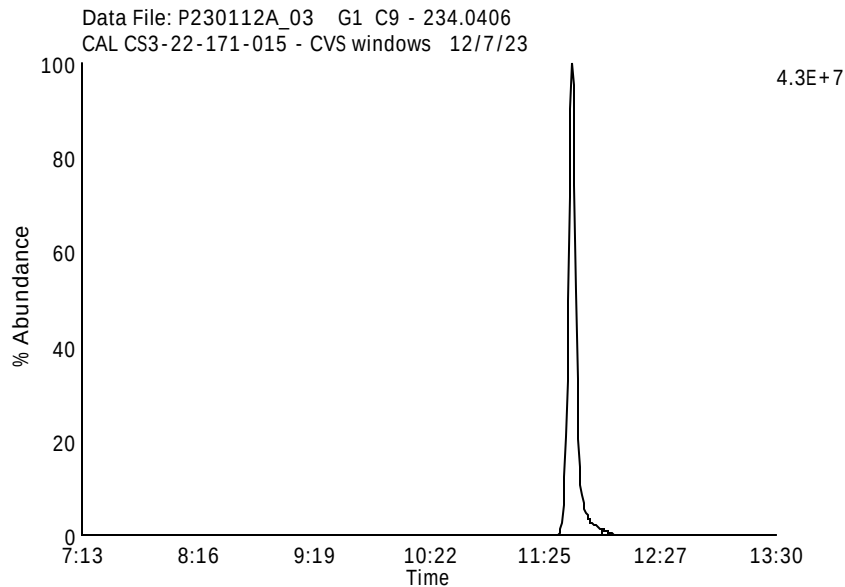
Data File Name: P230112A_03

Date Acquired: 1/12/2023

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Labeled Tri Chlorinated Biphenyls

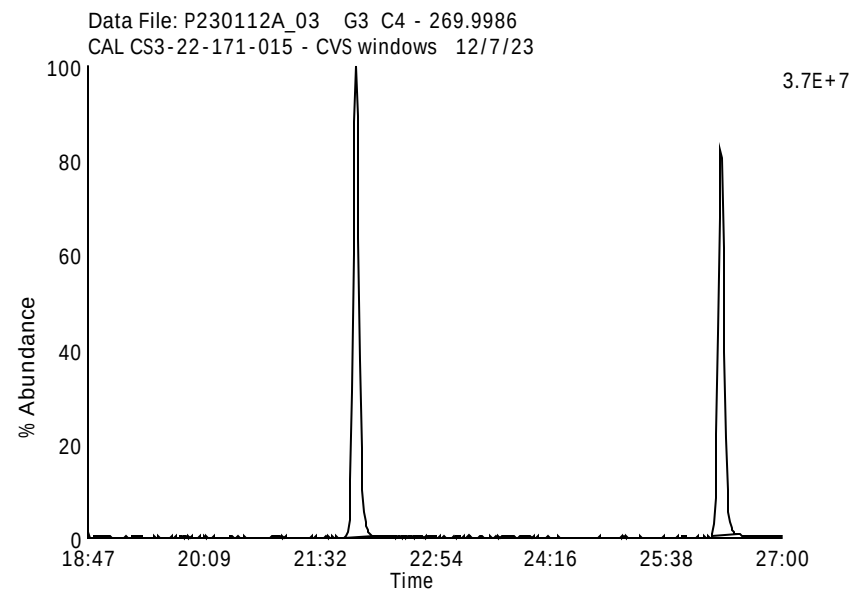
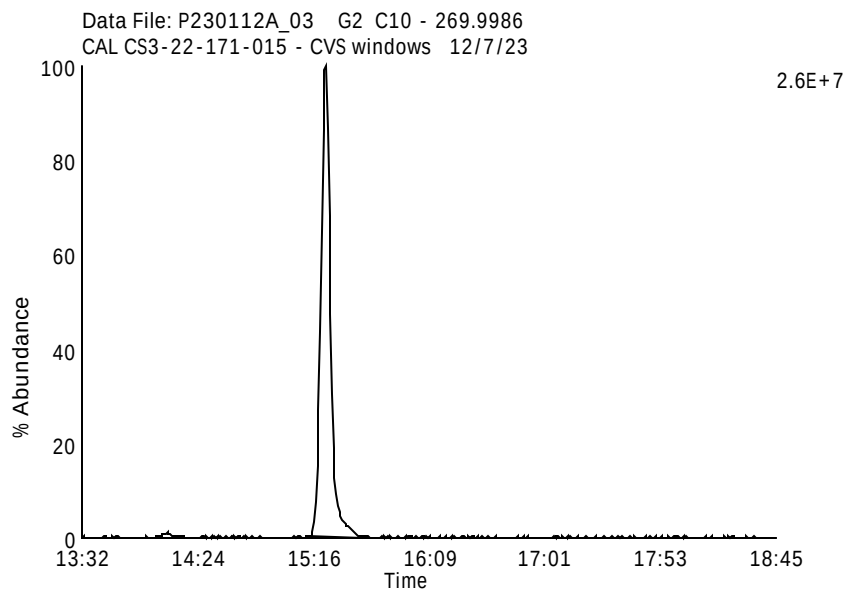
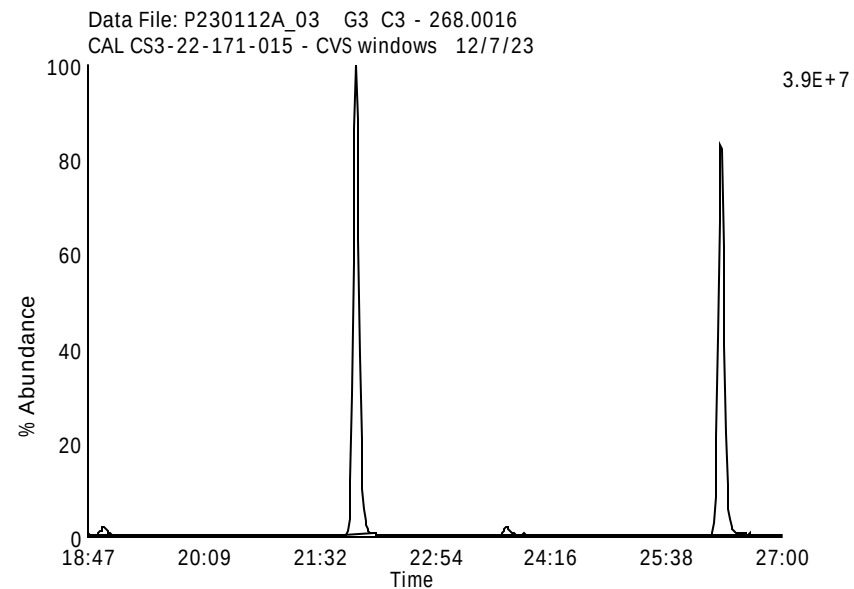
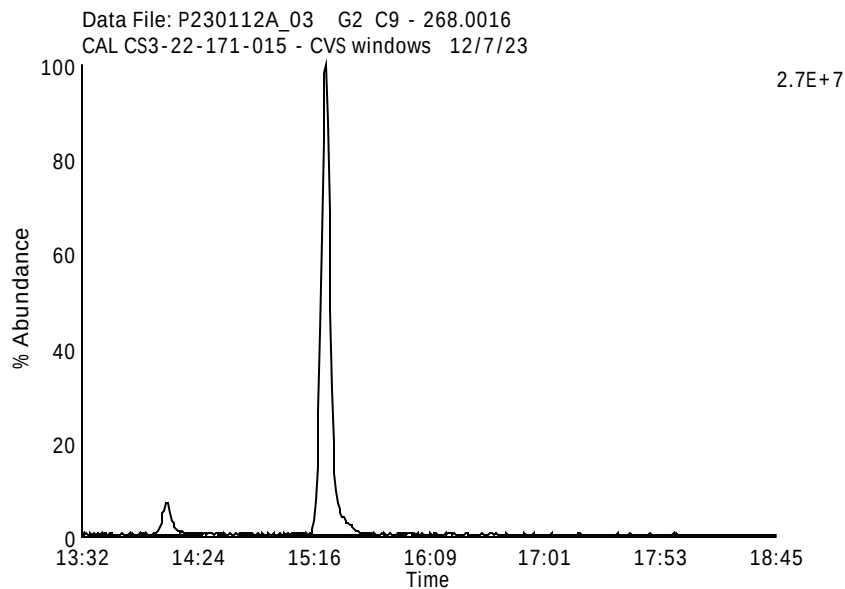
Data File Name: P230112A_03

Date Acquired: 1/12/2023

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Labeled Tetra Chlorinated Biphenyls

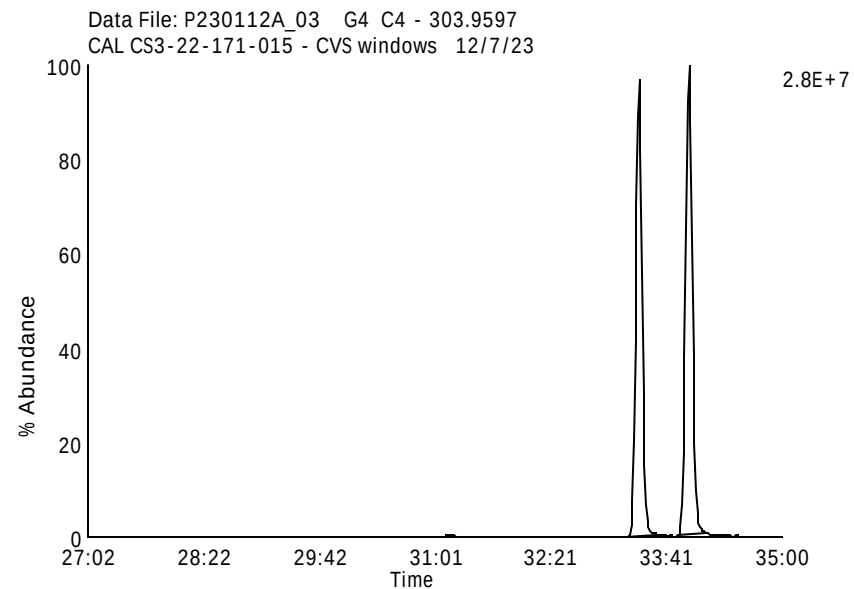
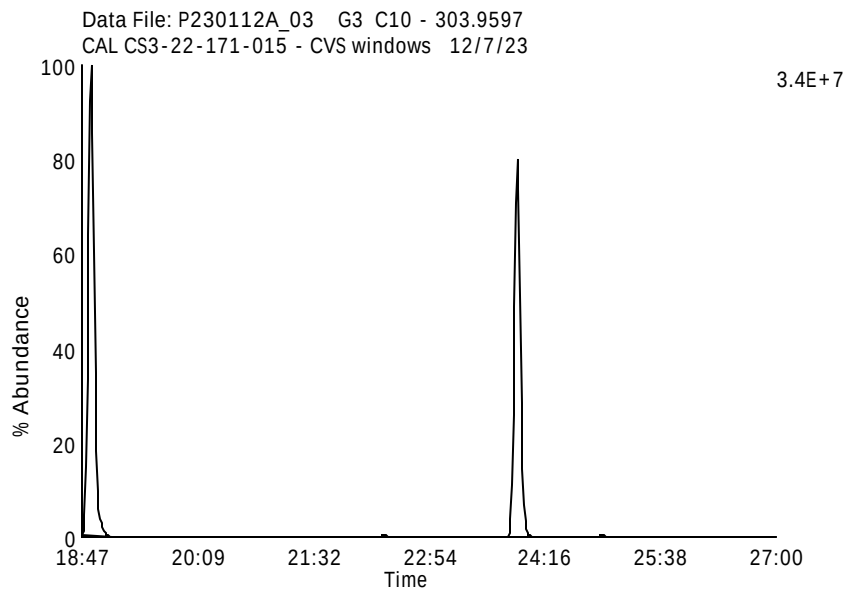
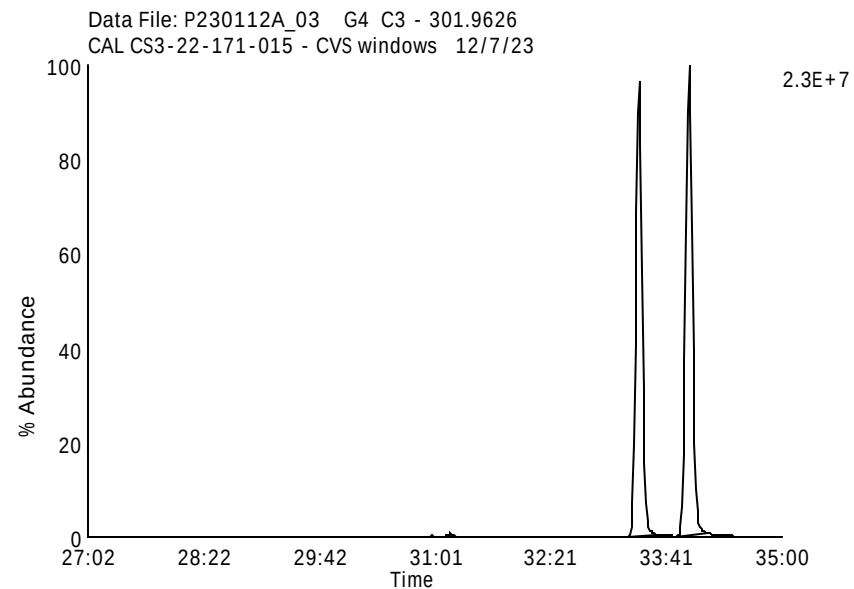
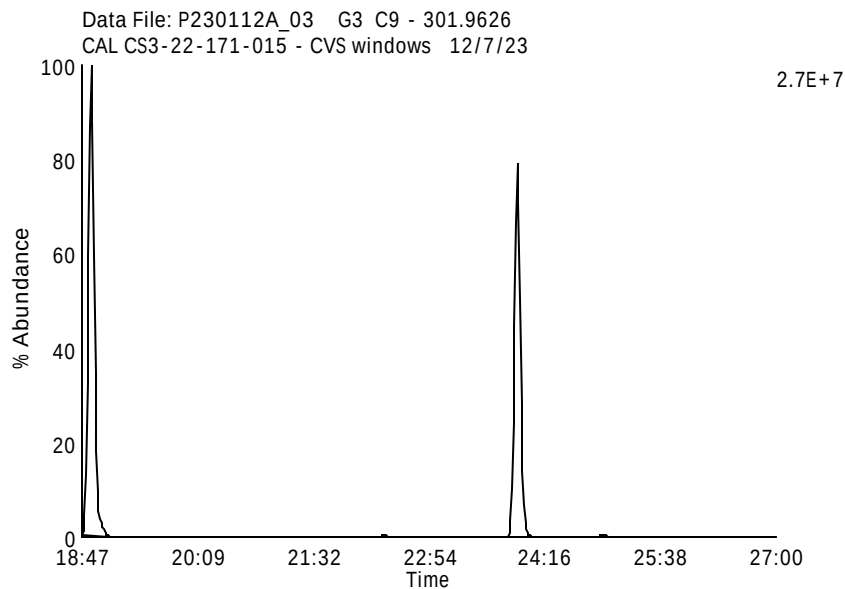
Data File Name: P230112A_03

Date Acquired: 1/12/2023

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Labeled Penta Chlorinated Biphenyls

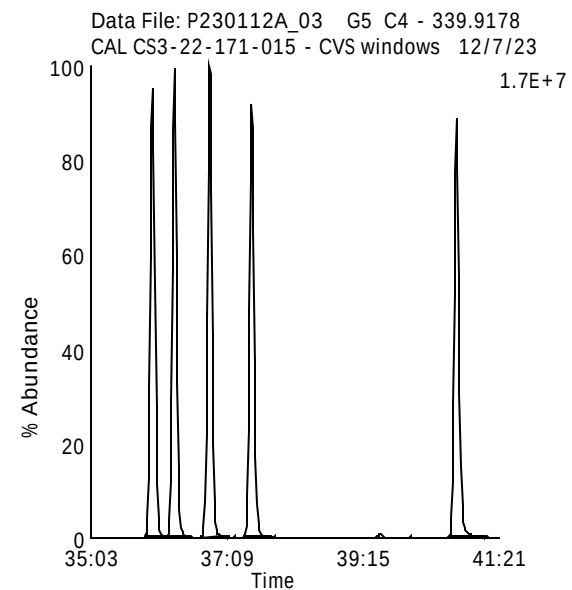
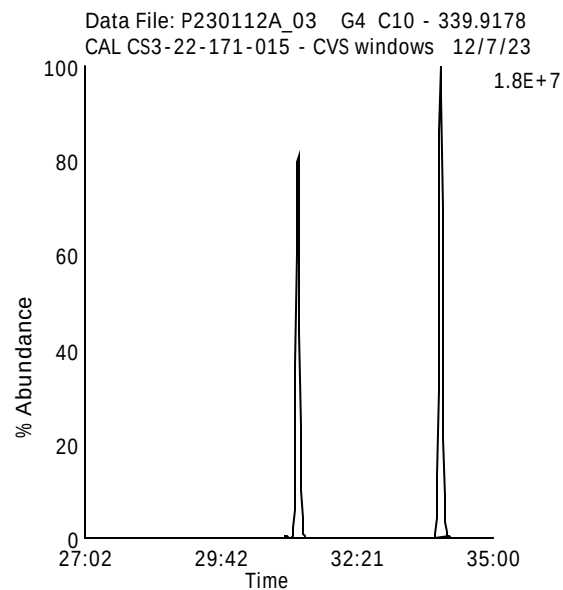
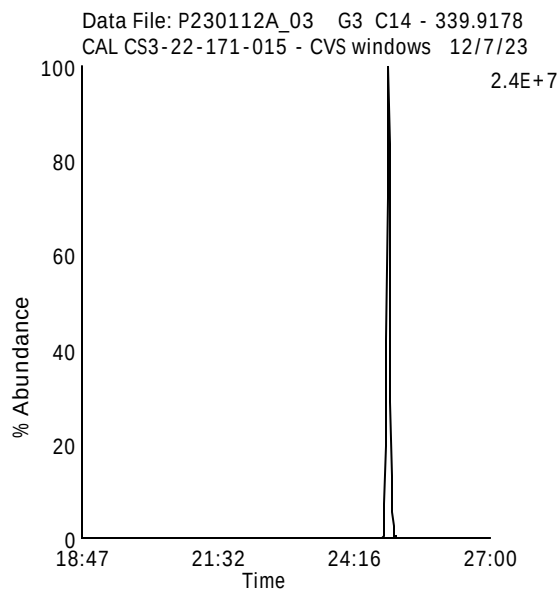
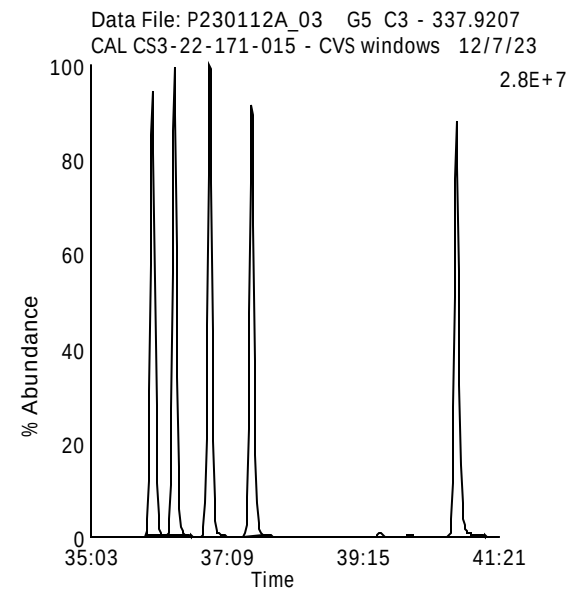
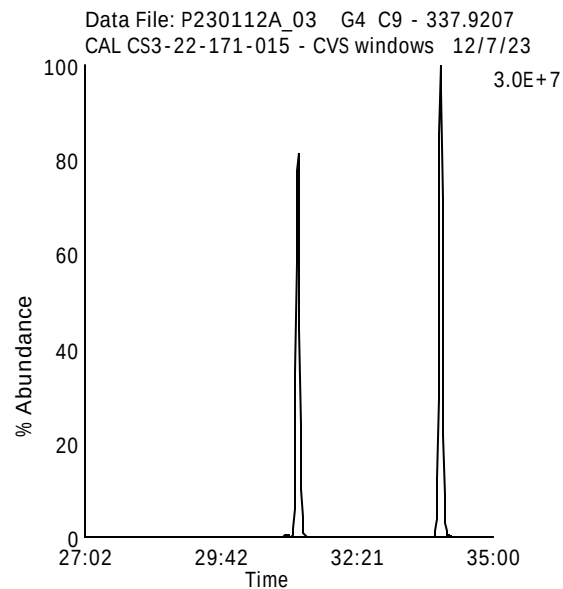
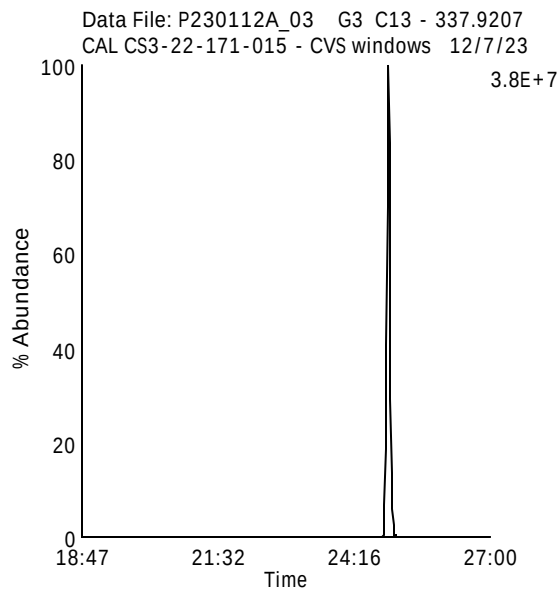
Data File Name: P230112A_03

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/12/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23



Labeled Hexa Chlorinated Biphenyls

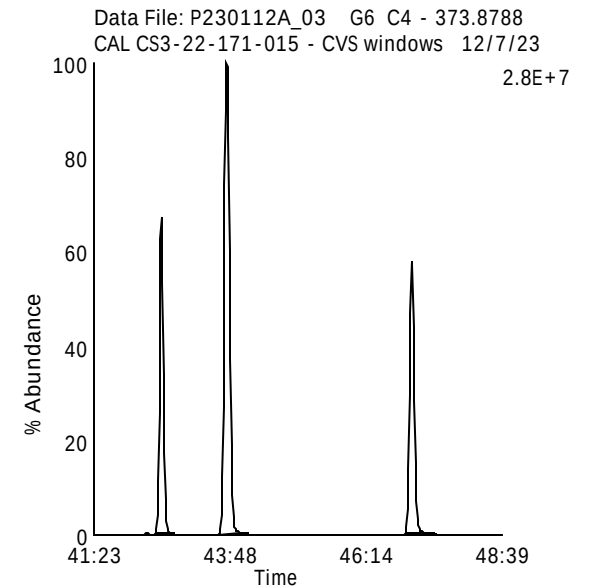
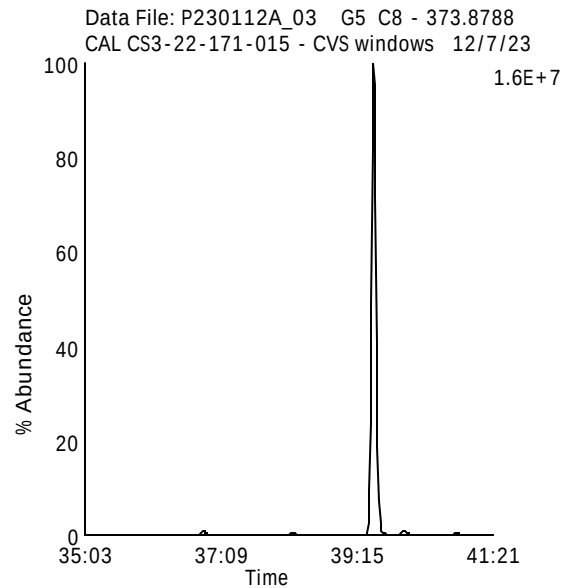
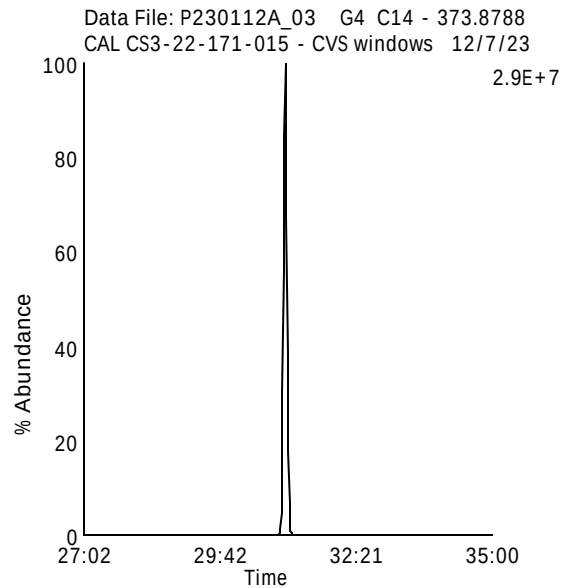
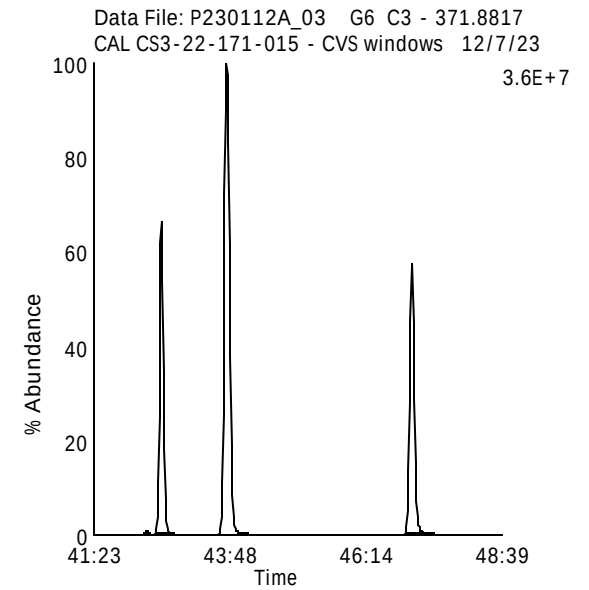
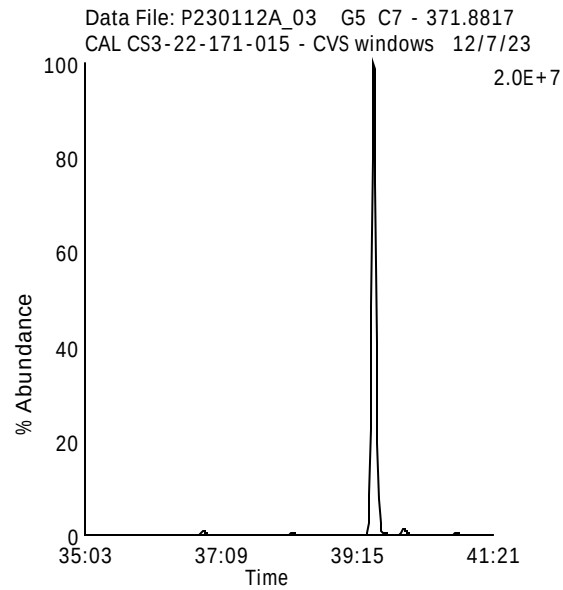
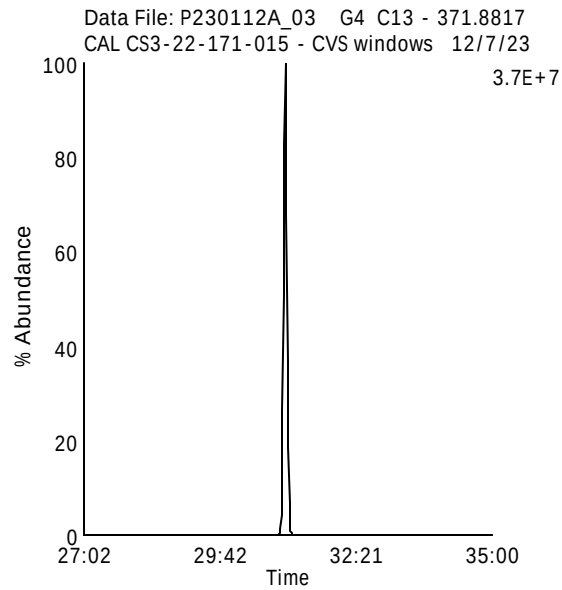
Data File Name: P230112A_03

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/12/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23



Labeled Hepta Chlorinated Biphenyls

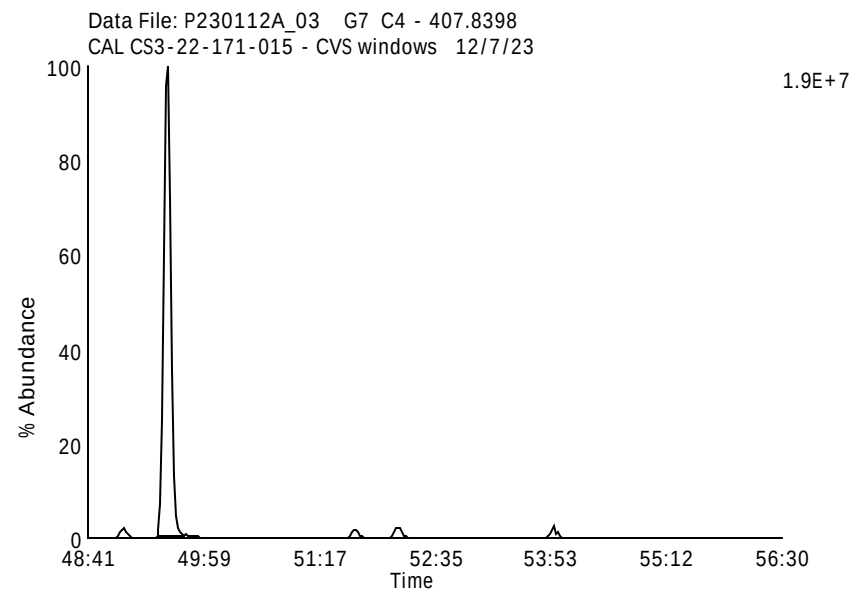
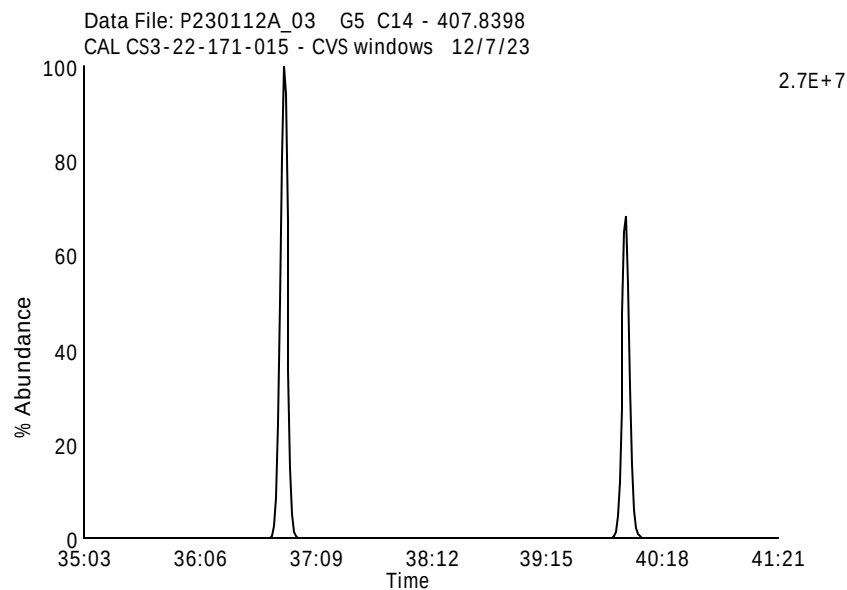
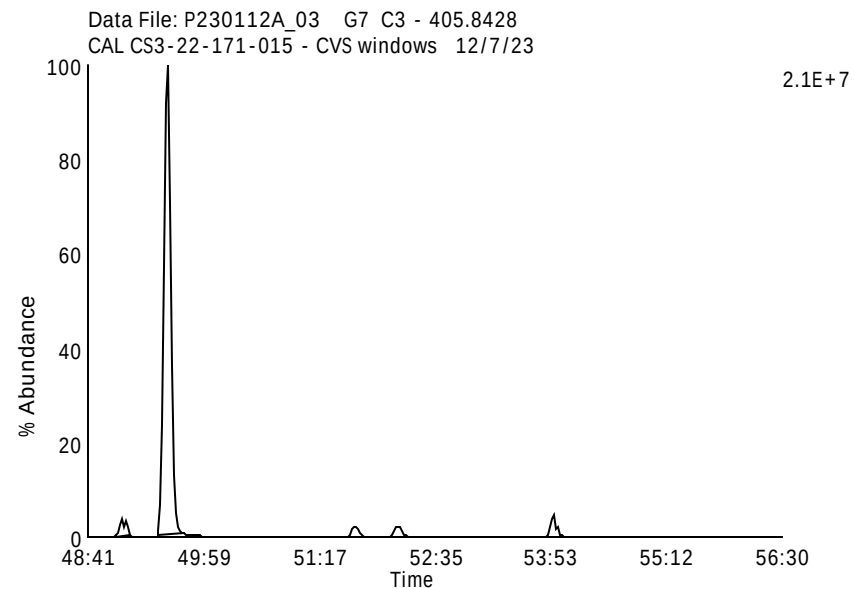
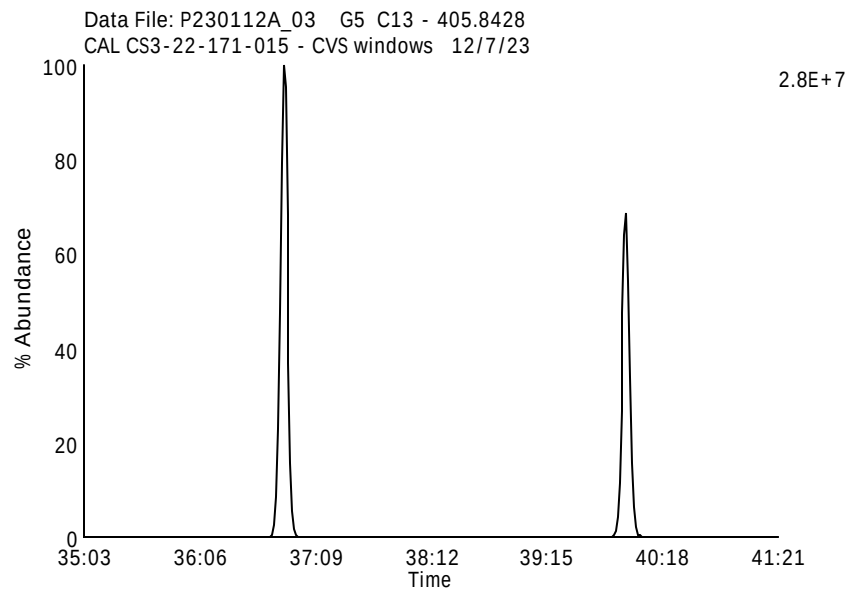
Data File Name: P230112A_03

Date Acquired: 1/12/2023

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Labeled Octa Chlorinated Biphenyls

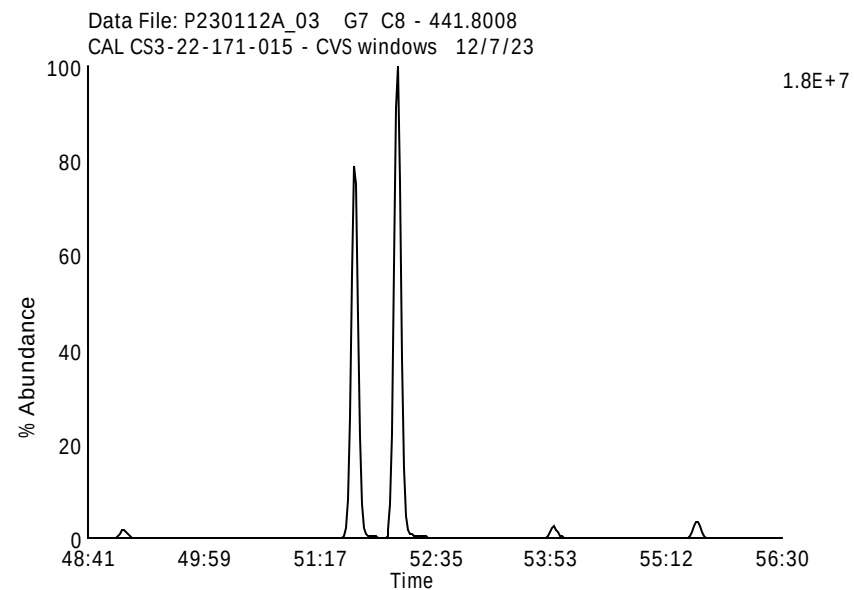
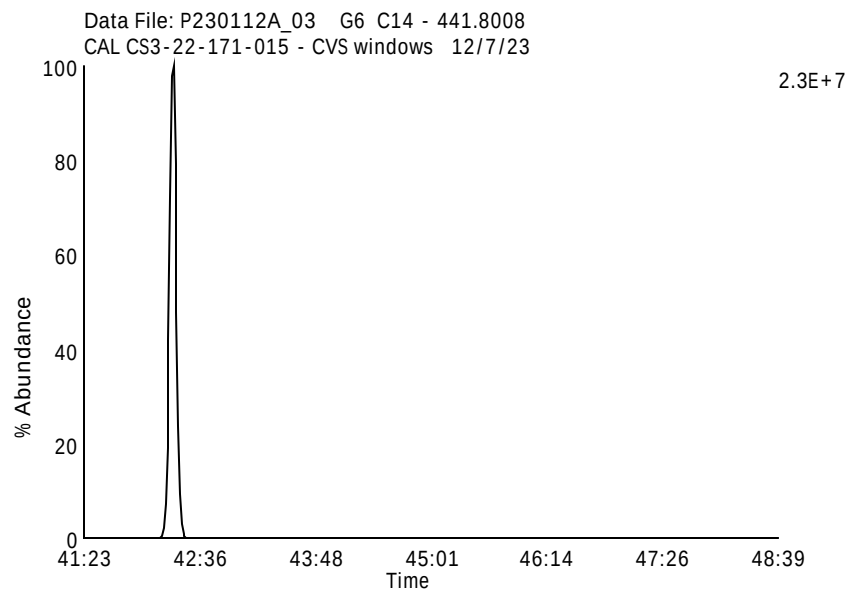
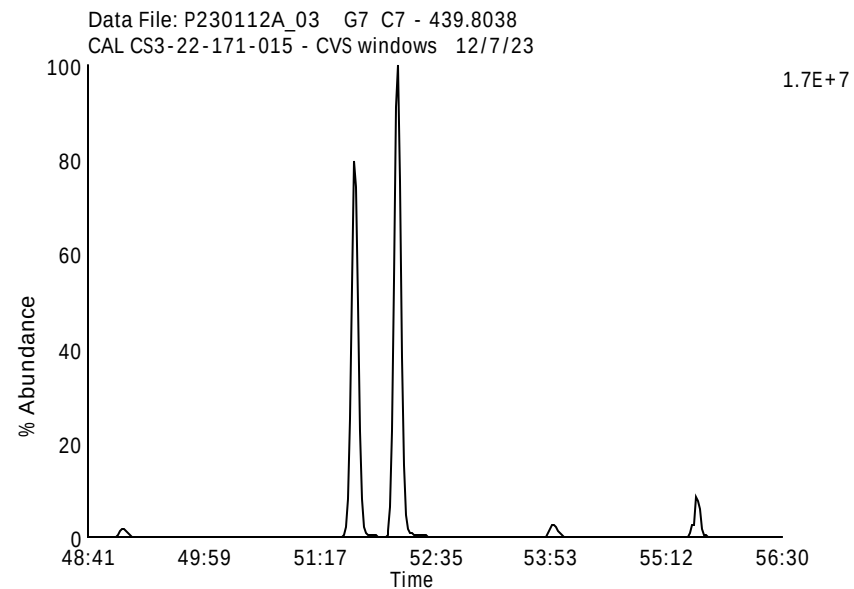
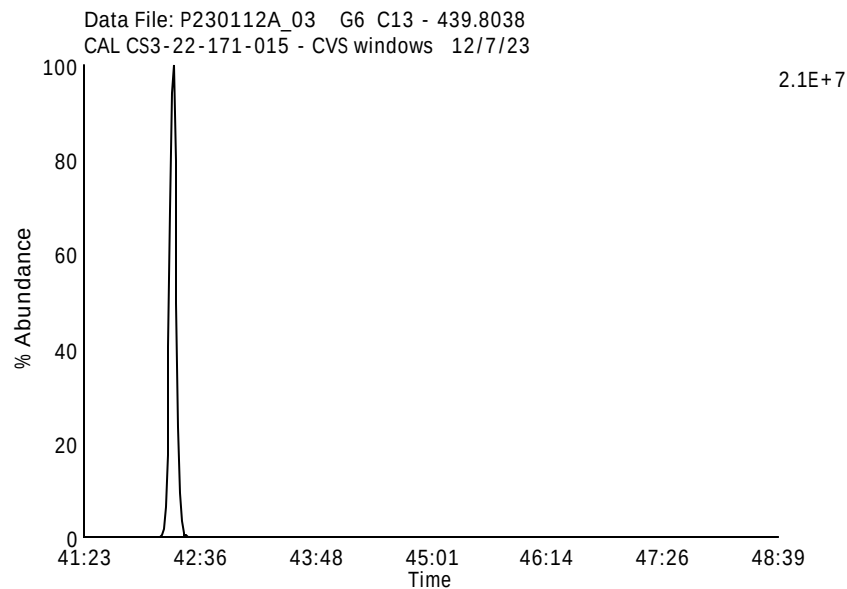
Data File Name: P230112A_03

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/12/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23



Labeled Nona Chlorinated Biphenyls

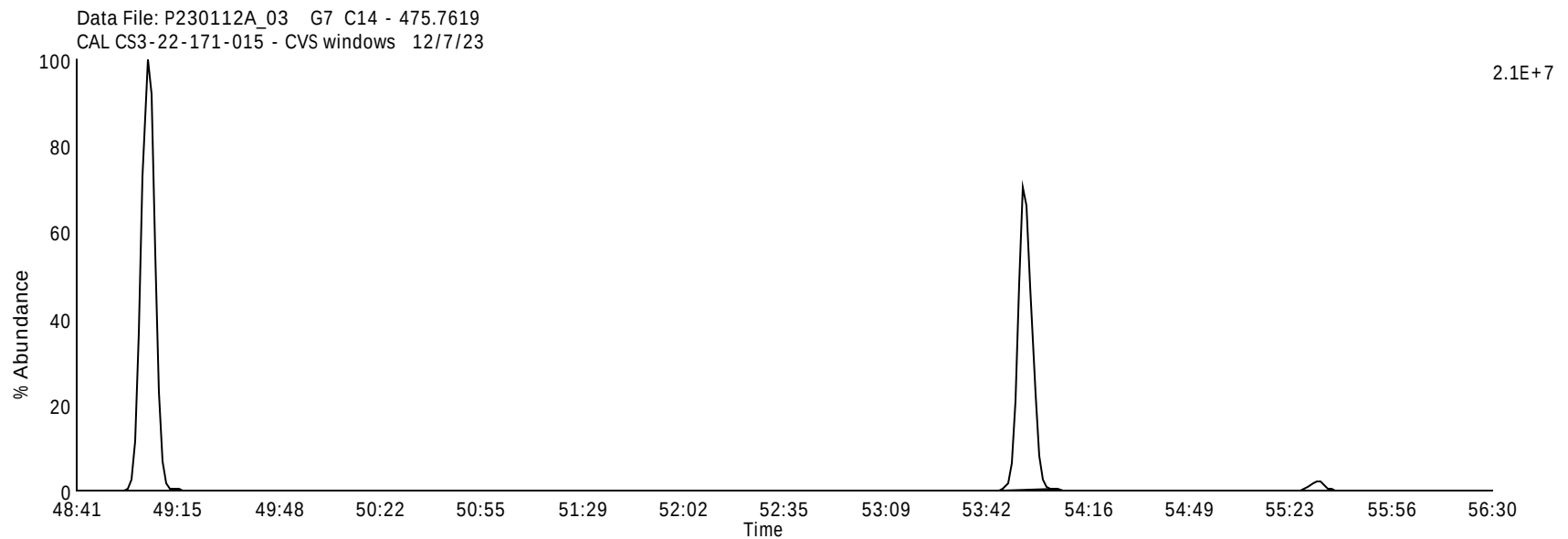
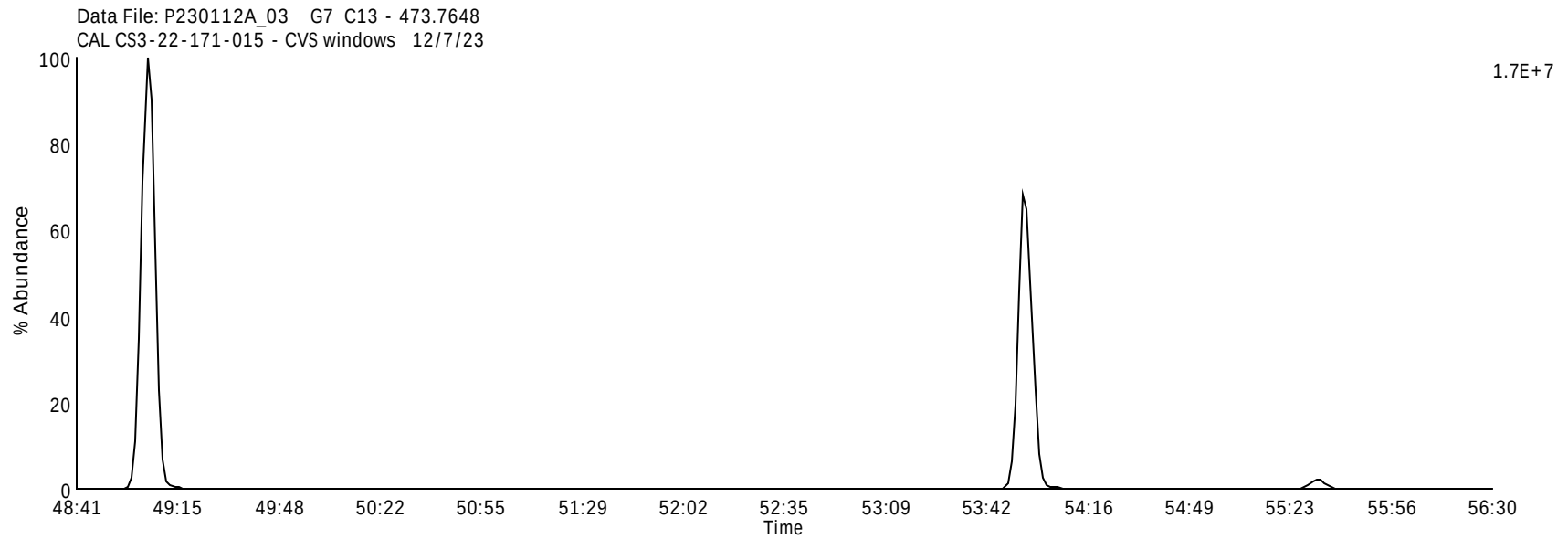
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Lab Sample ID: CS3-22-171-015

Date Acquired: 1/12/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23



Labeled Deca Chlorinated Biphenyl

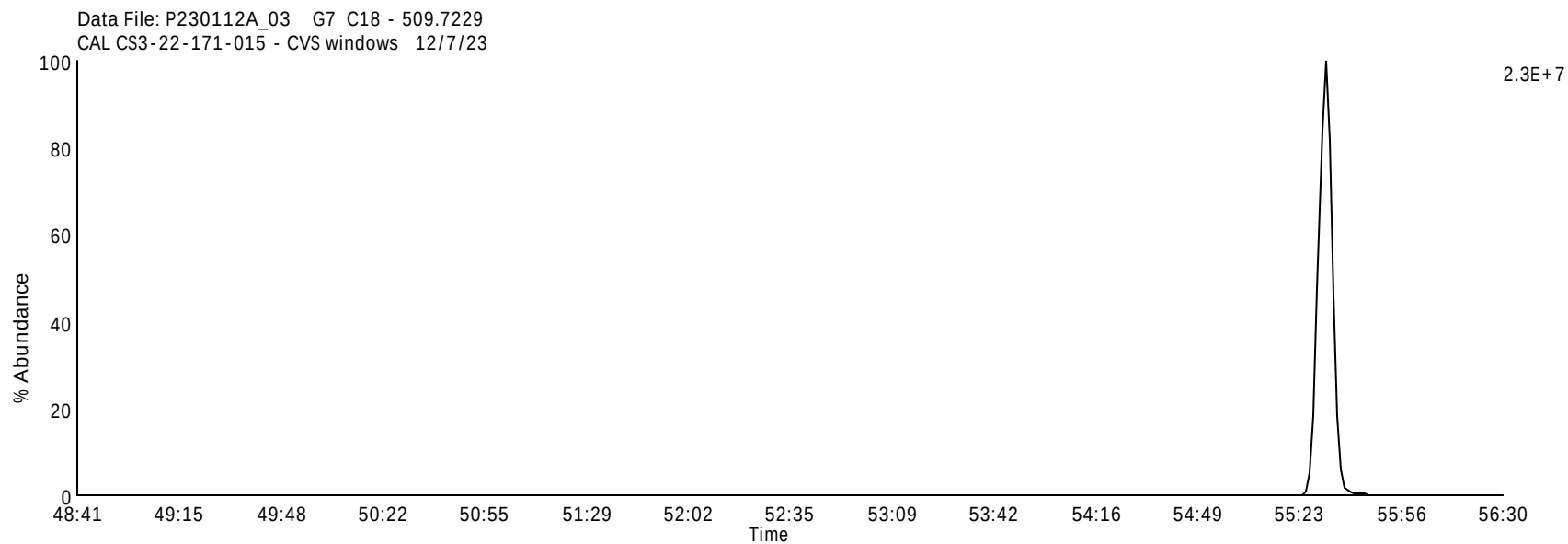
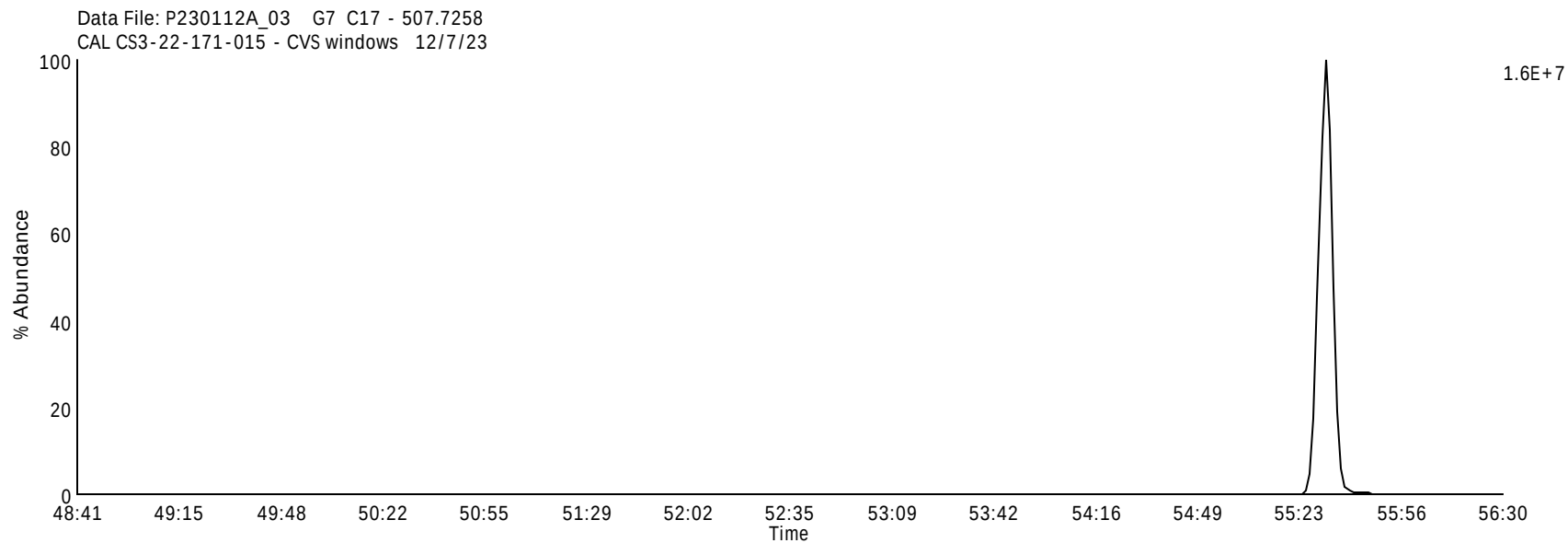
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Lab Sample ID: CS3-22-171-015

Date Acquired: 1/12/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23



Mono Chlorinated Biphenyls

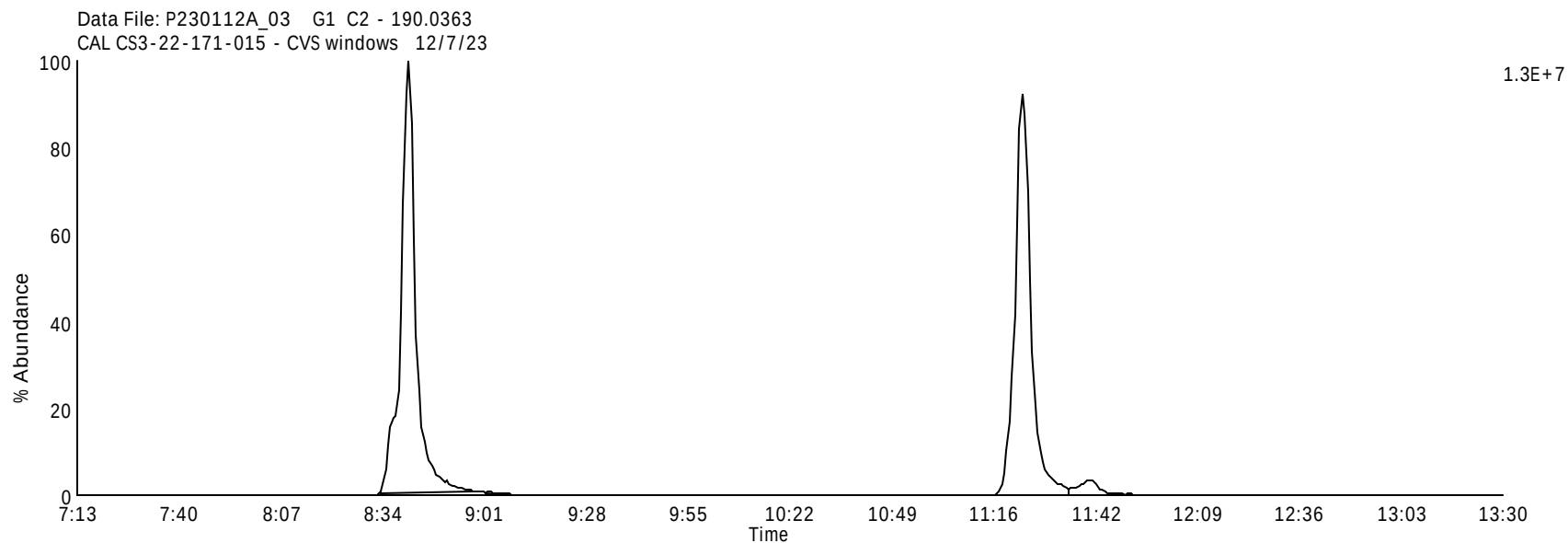
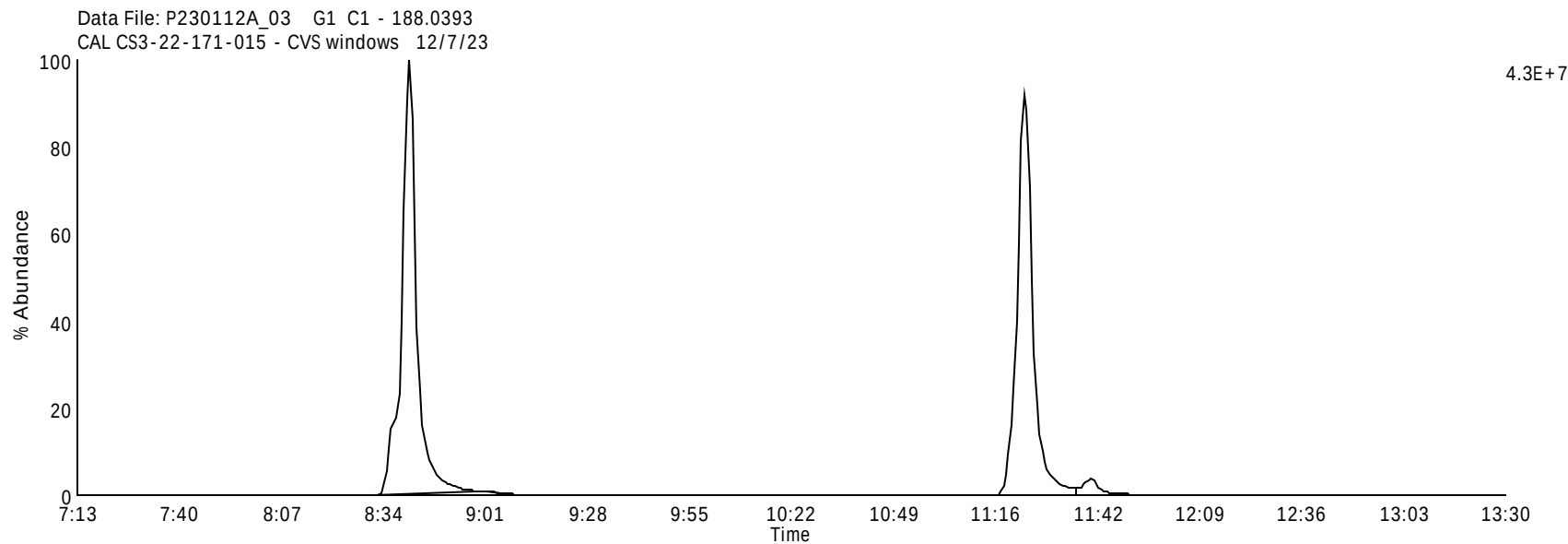
Data File Name: P230112A_03

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/12/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23



Di Chlorinated Biphenyls

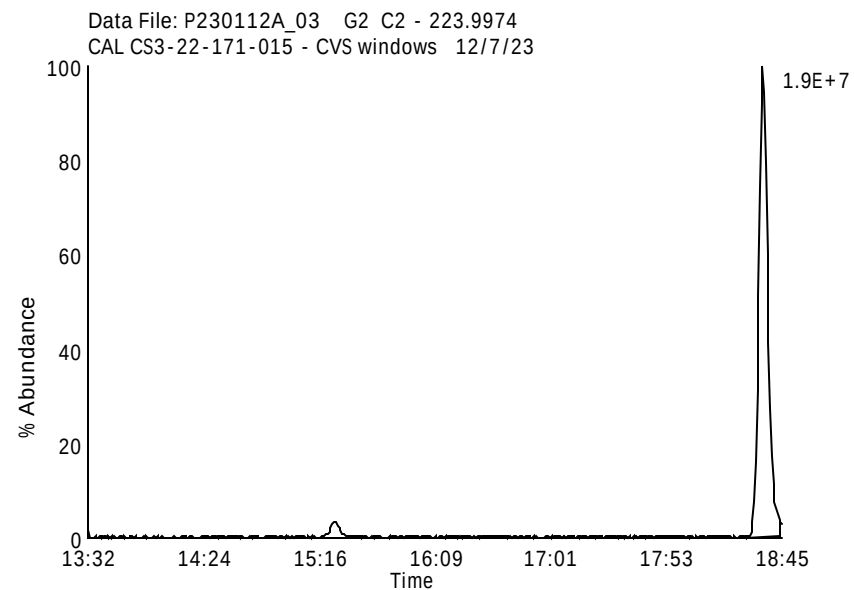
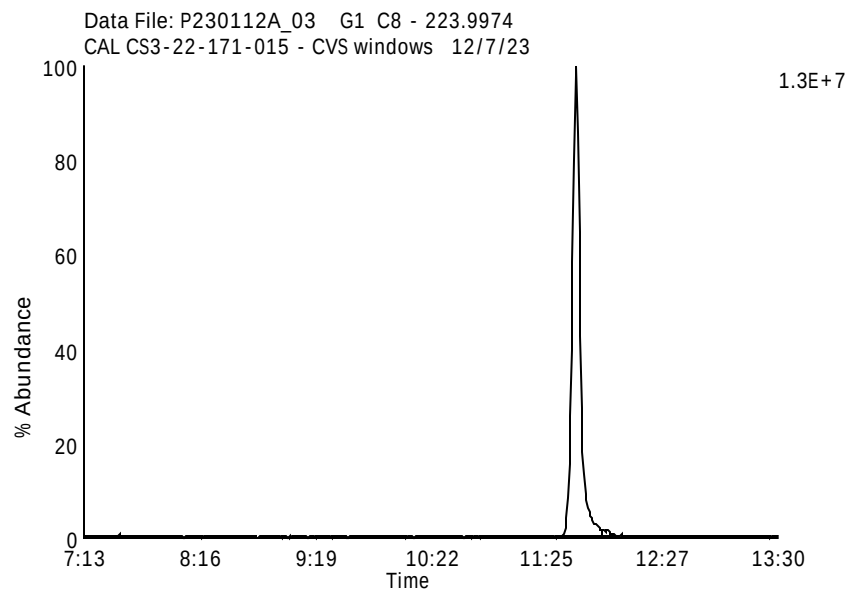
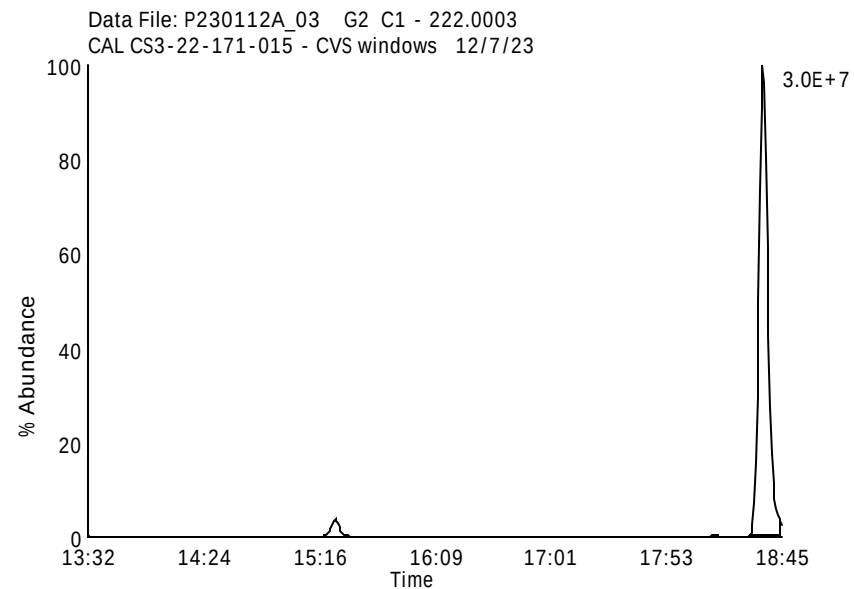
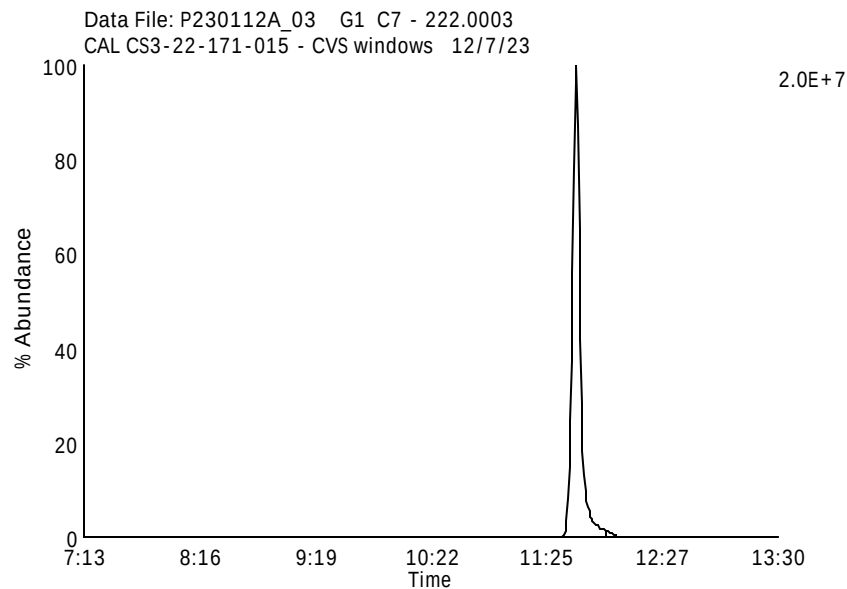
Data File Name: P230112A_03

Date Acquired: 1/12/2023

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Tri Chlorinated Biphenyls

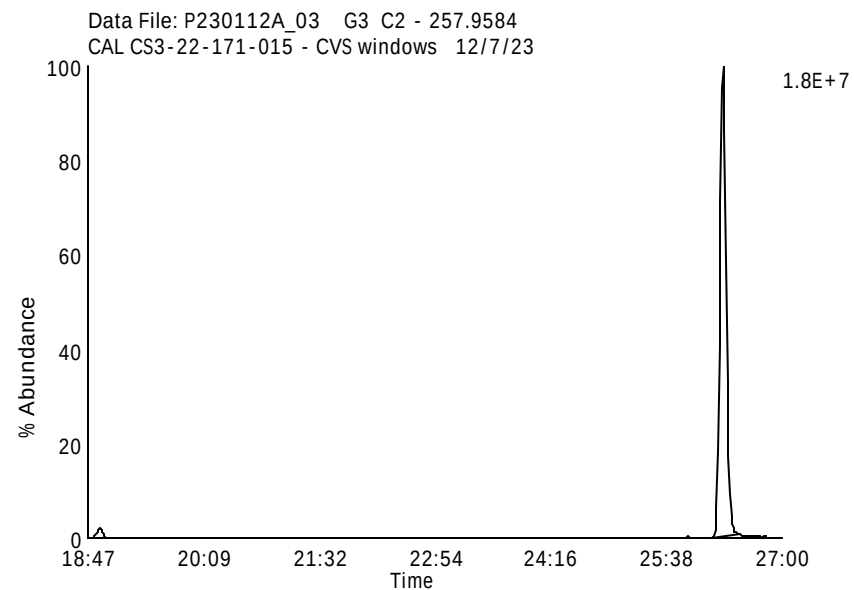
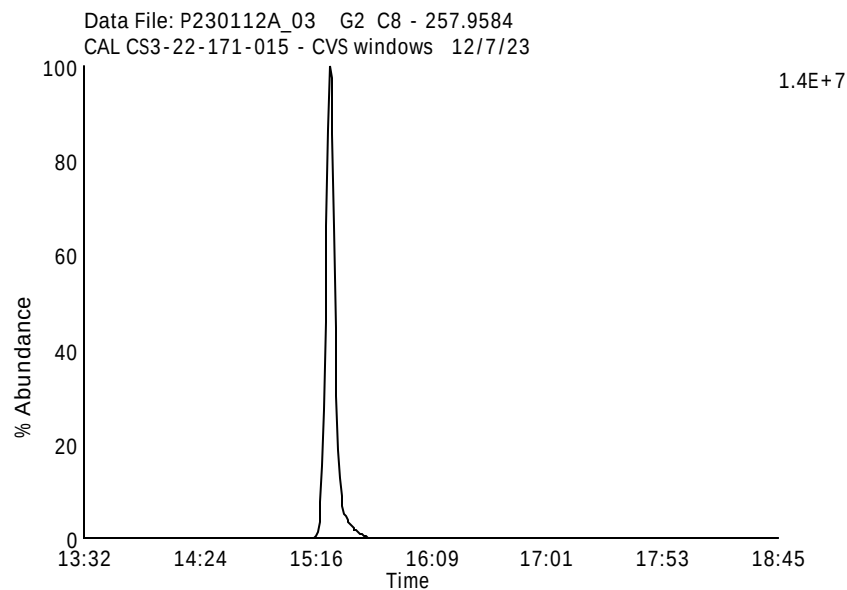
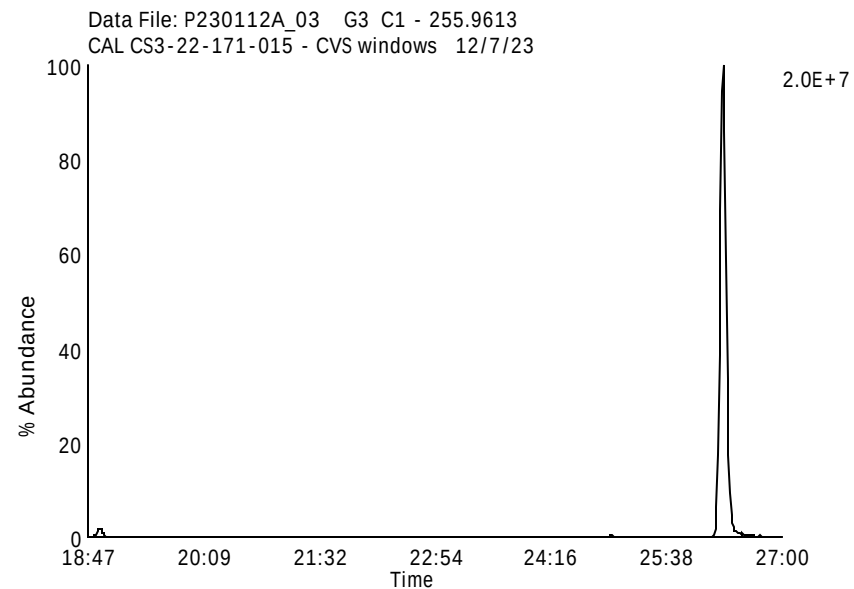
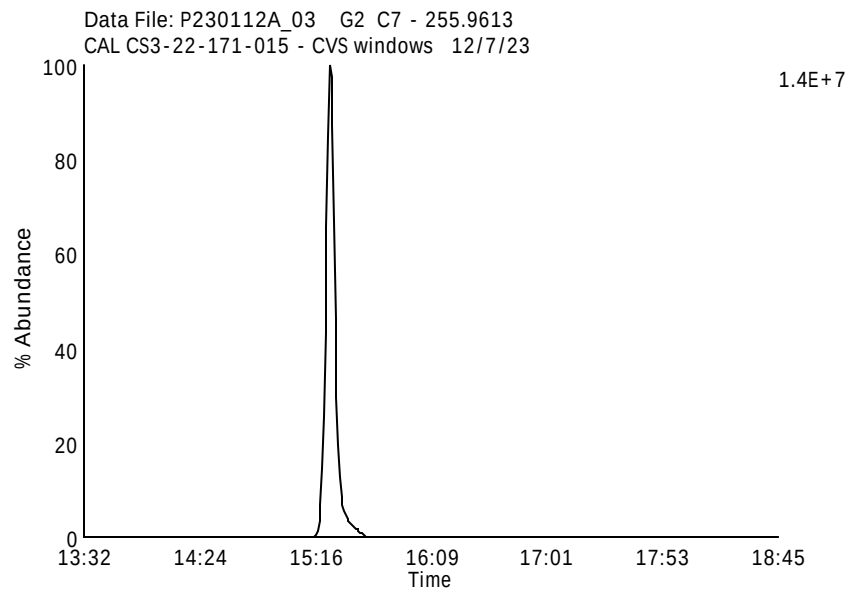
Data File Name: P230112A_03

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/12/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23



Tetra Chlorinated Biphenyls

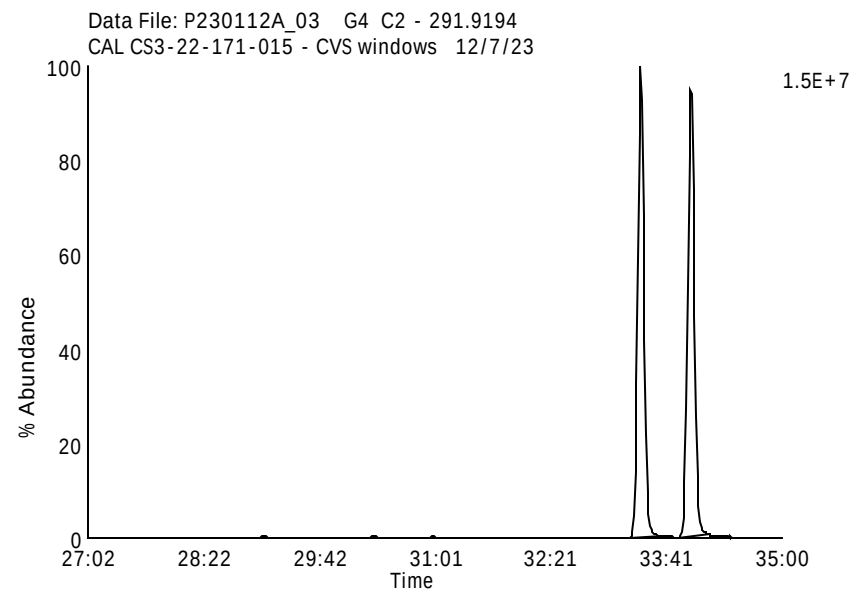
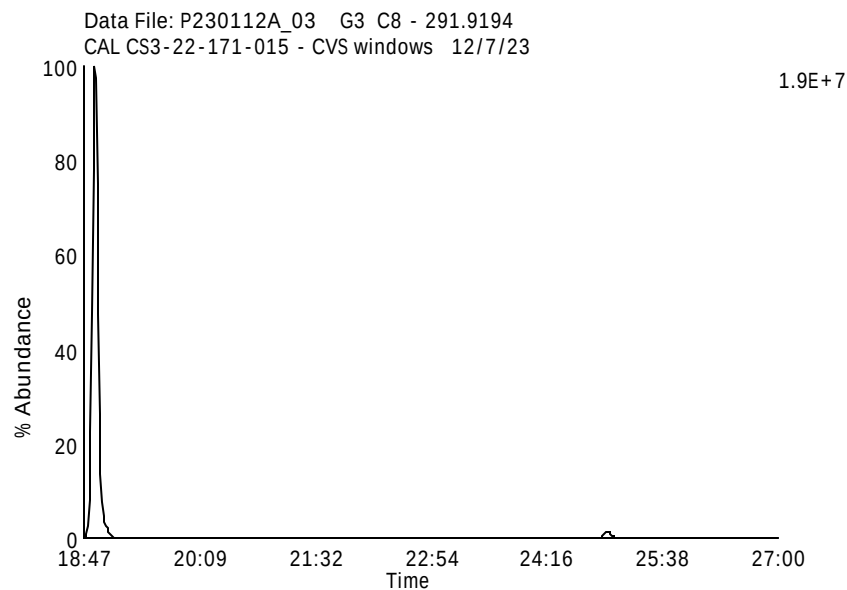
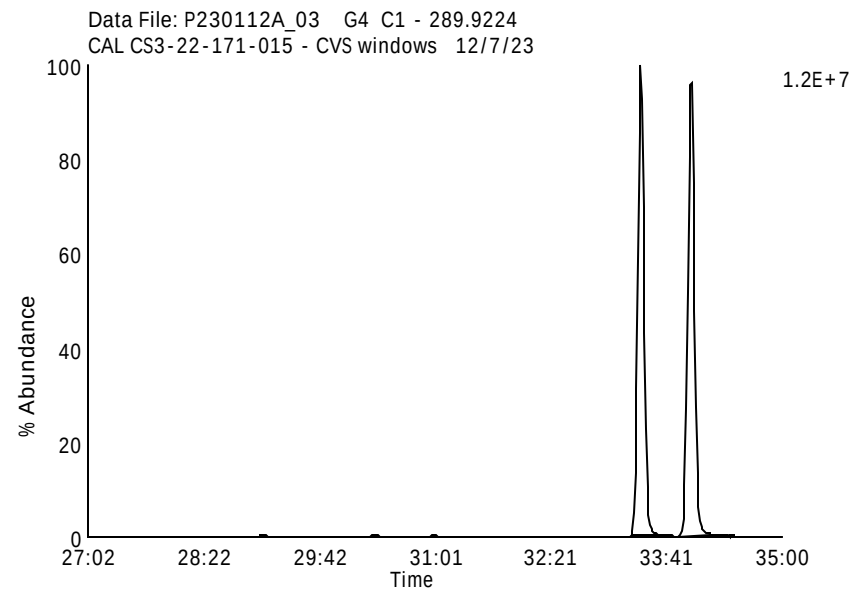
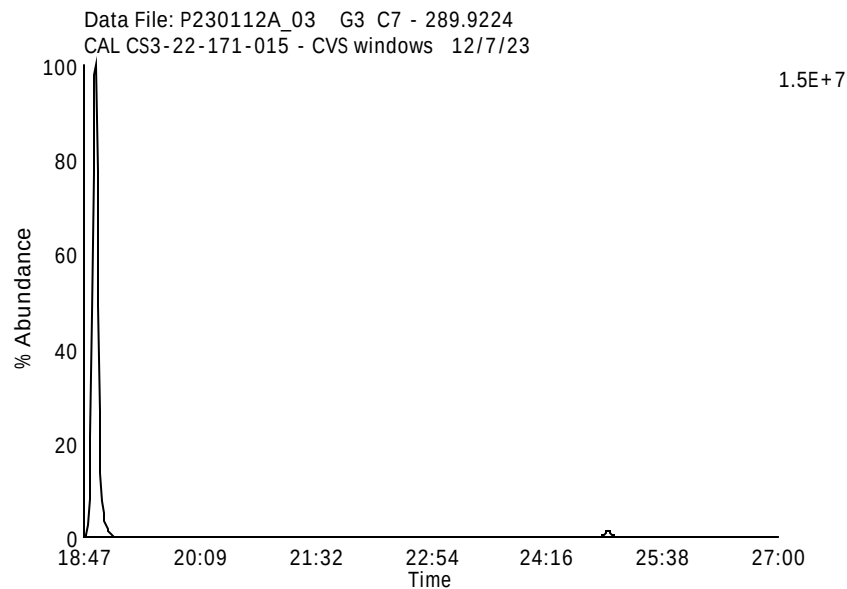
Data File Name: P230112A_03

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/12/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23



Penta Chlorinated Biphenyls

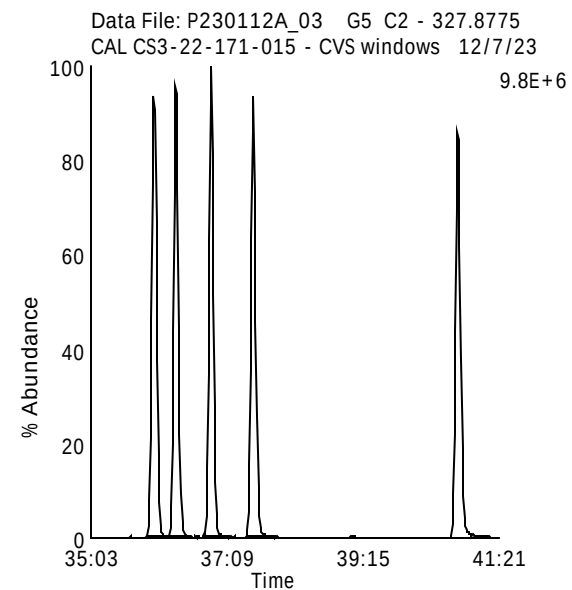
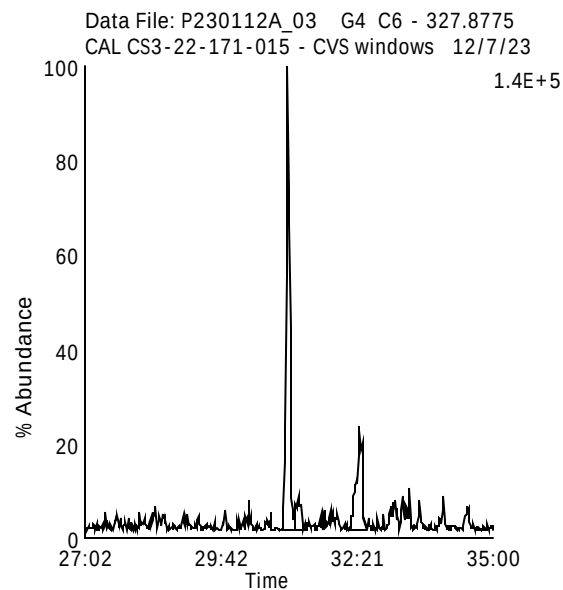
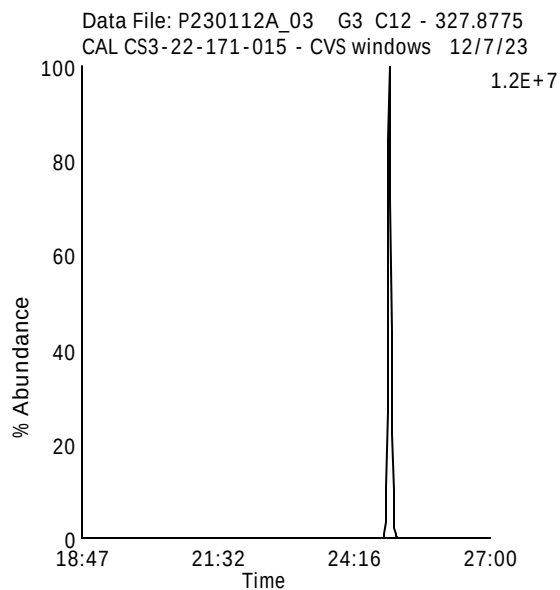
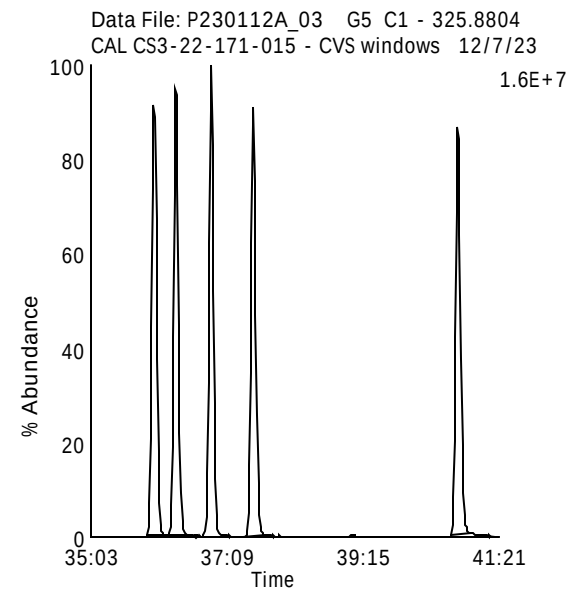
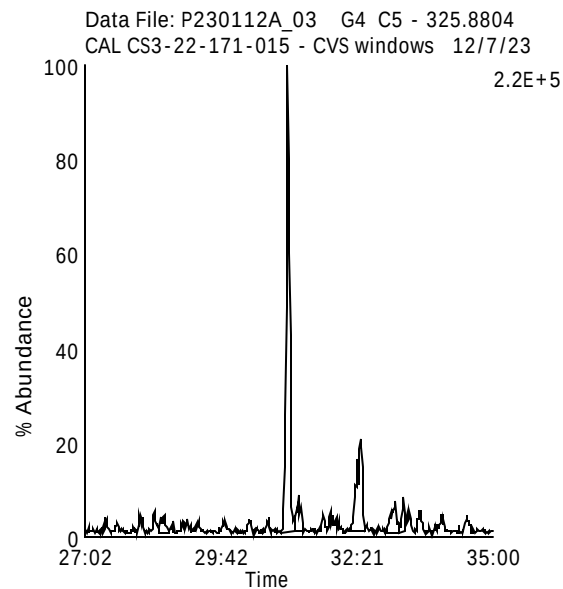
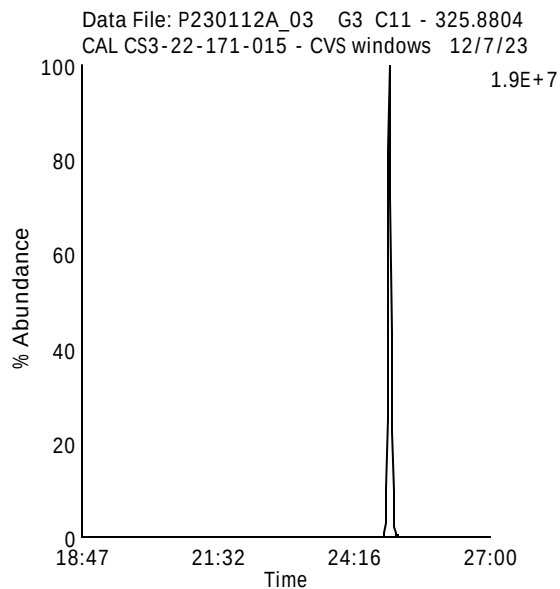
Data File Name: P230112A_03

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/12/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23



Hexa Chlorinated Biphenyls

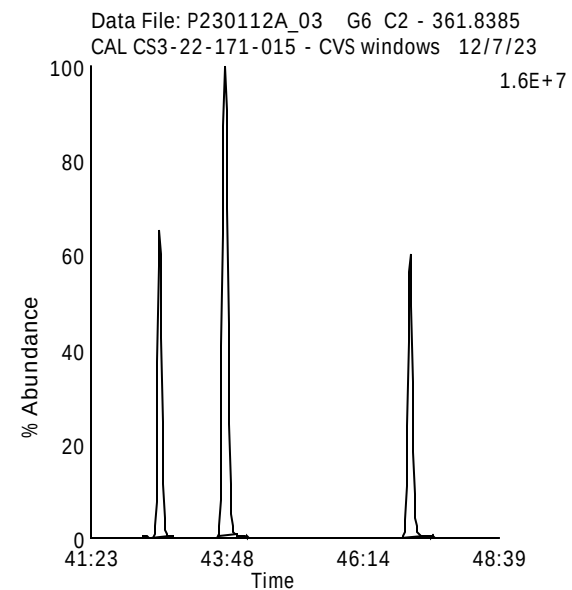
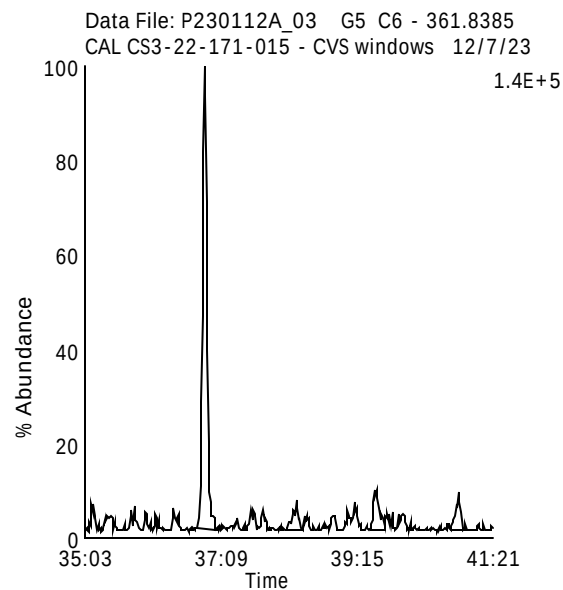
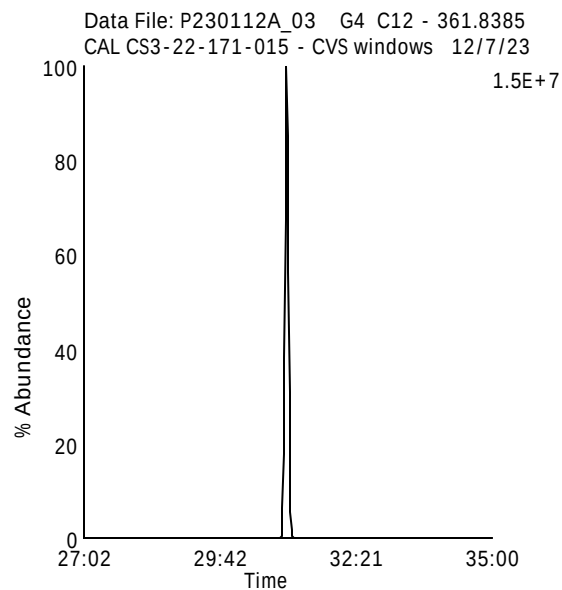
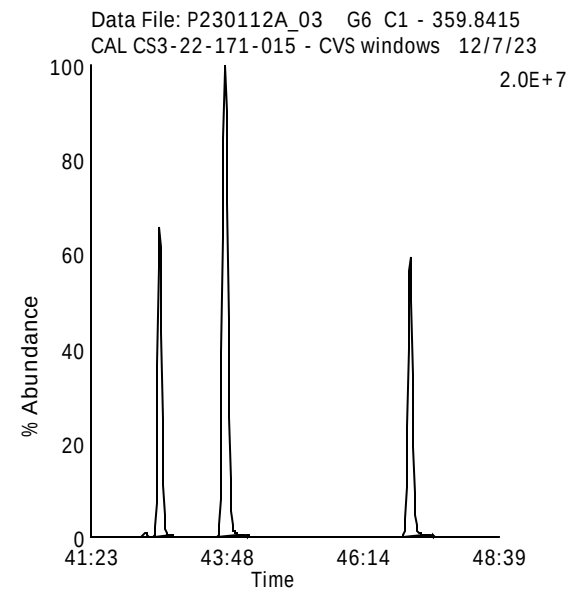
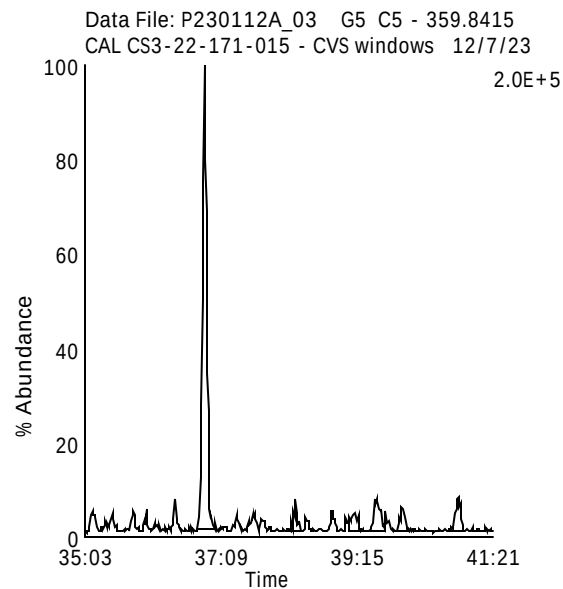
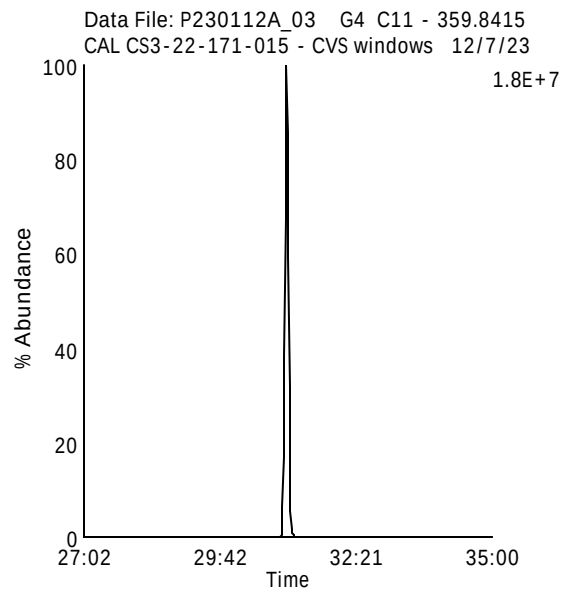
Data File Name: P230112A_03

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/12/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23



Hepta Chlorinated Biphenyls

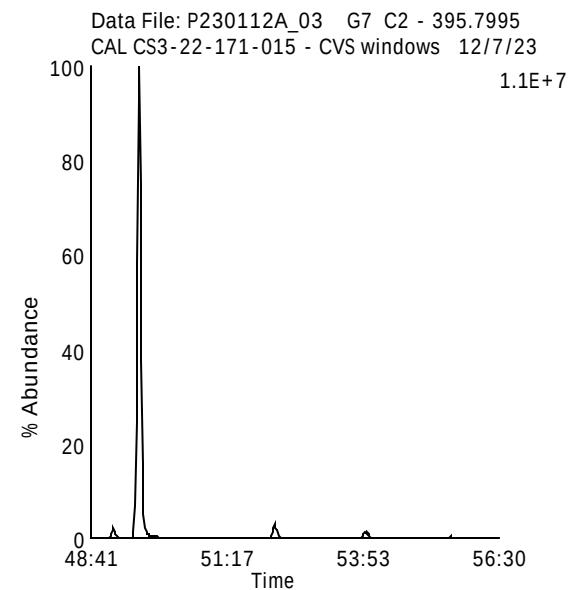
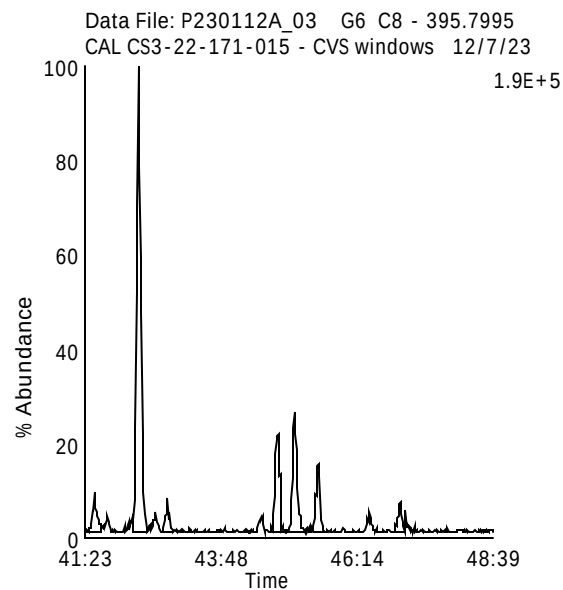
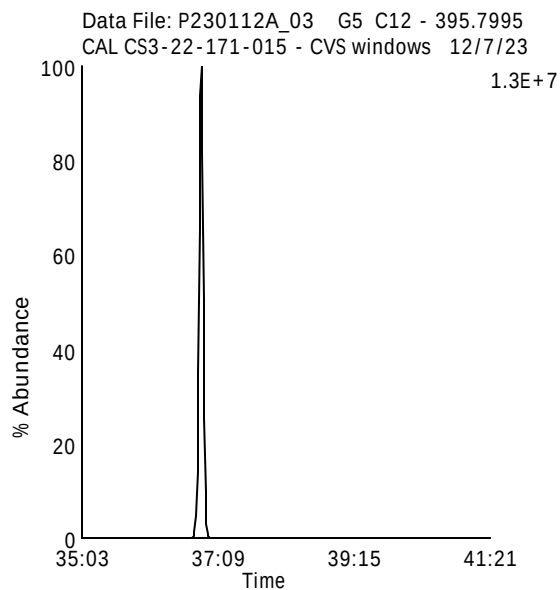
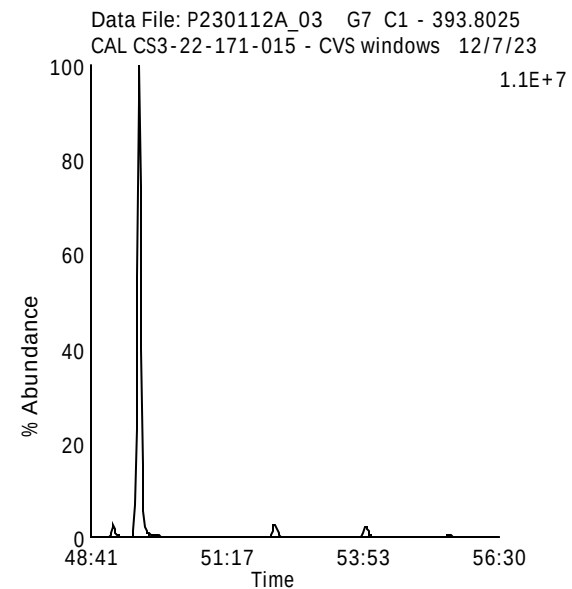
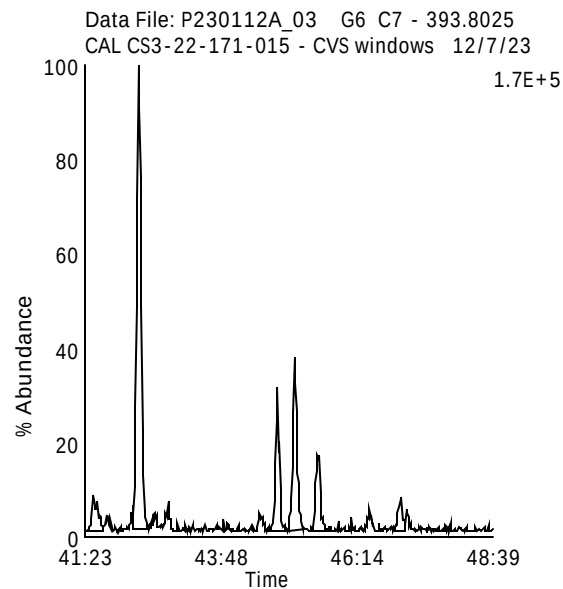
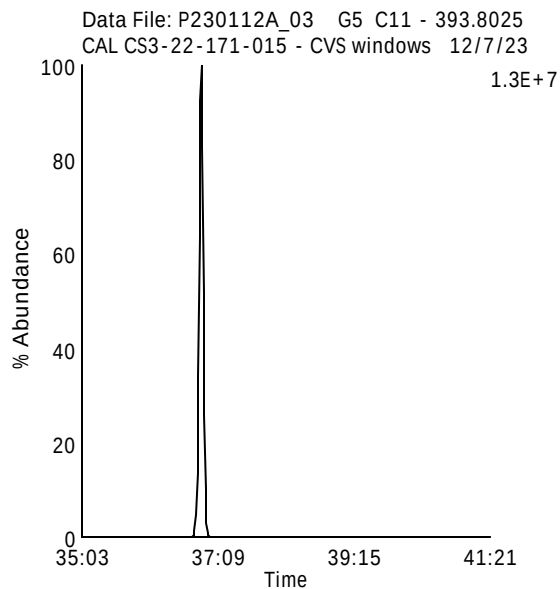
Data File Name: P230112A_03

Date Acquired: 1/12/2023

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Octa Chlorinated Biphenyls

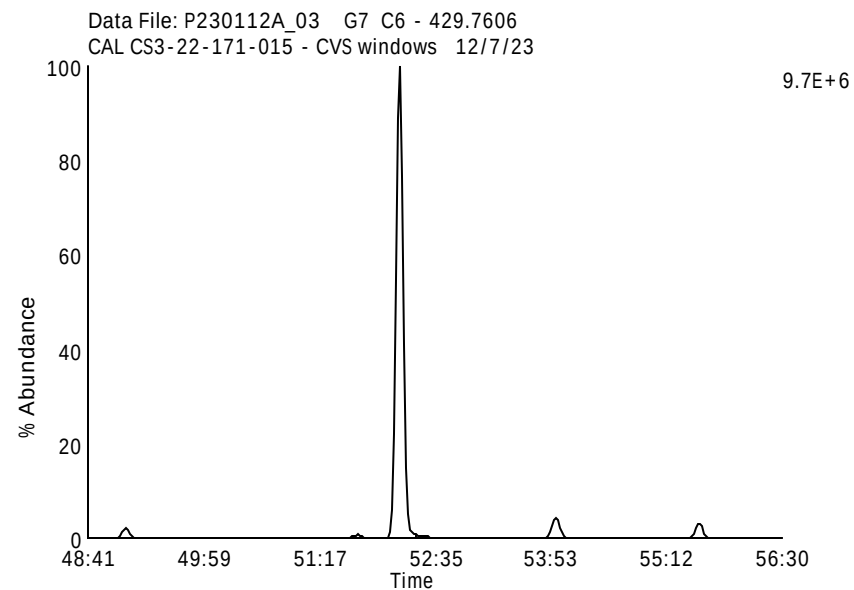
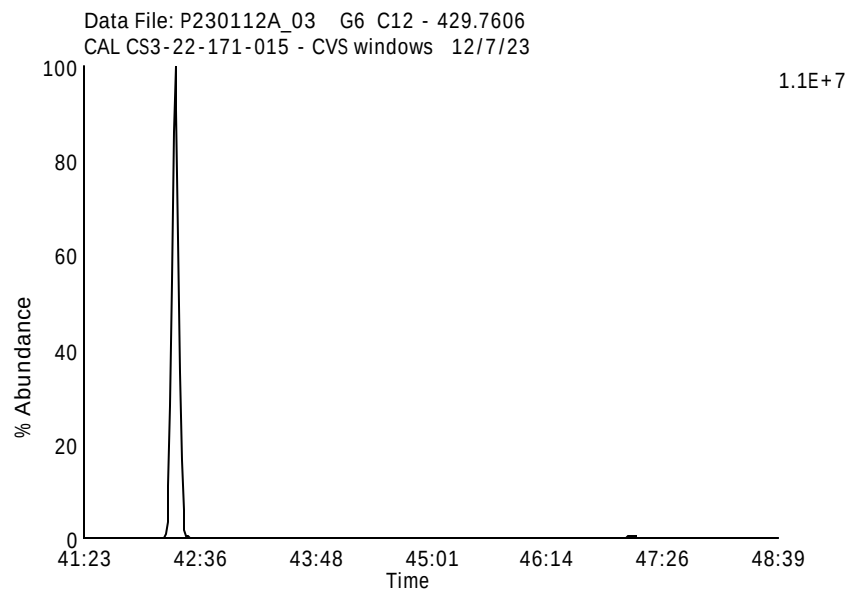
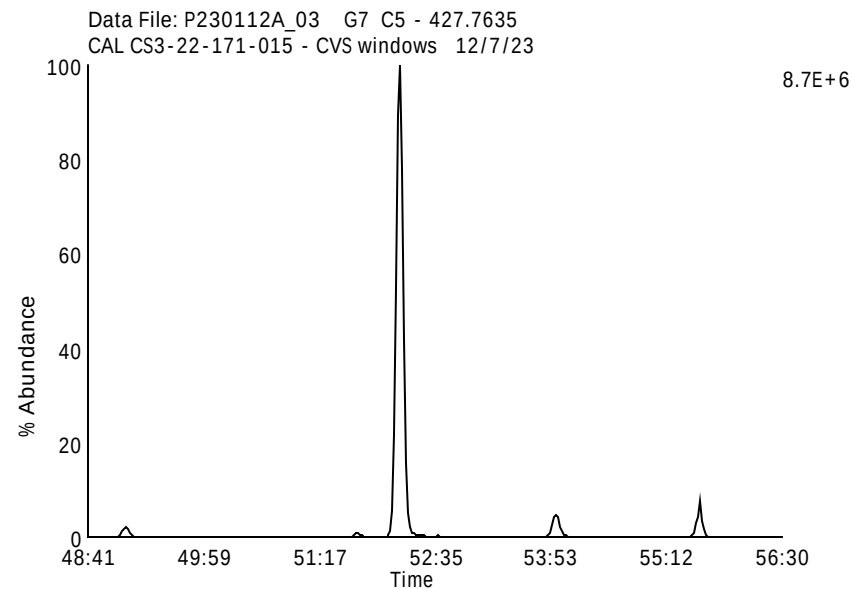
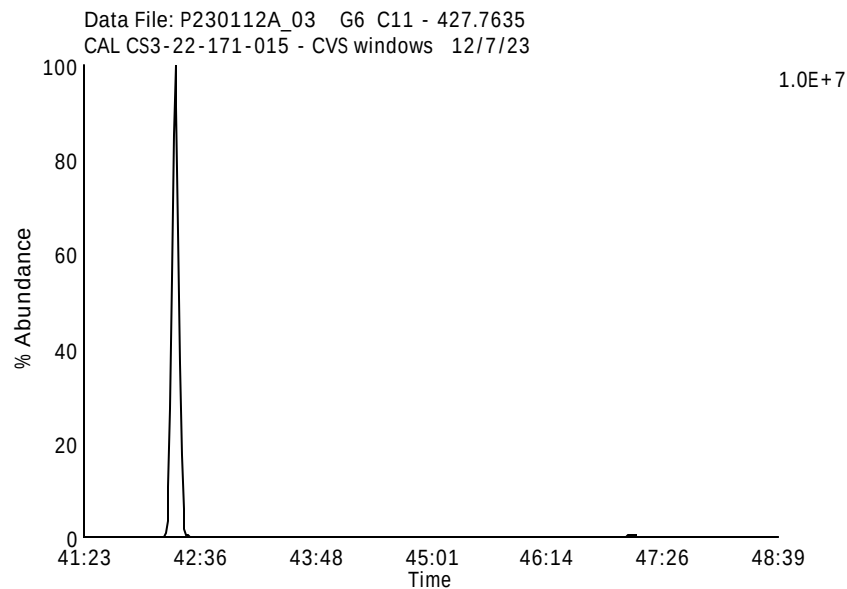
Data File Name: P230112A_03

Date Acquired: 1/12/2023

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Nona Chlorinated Biphenyls

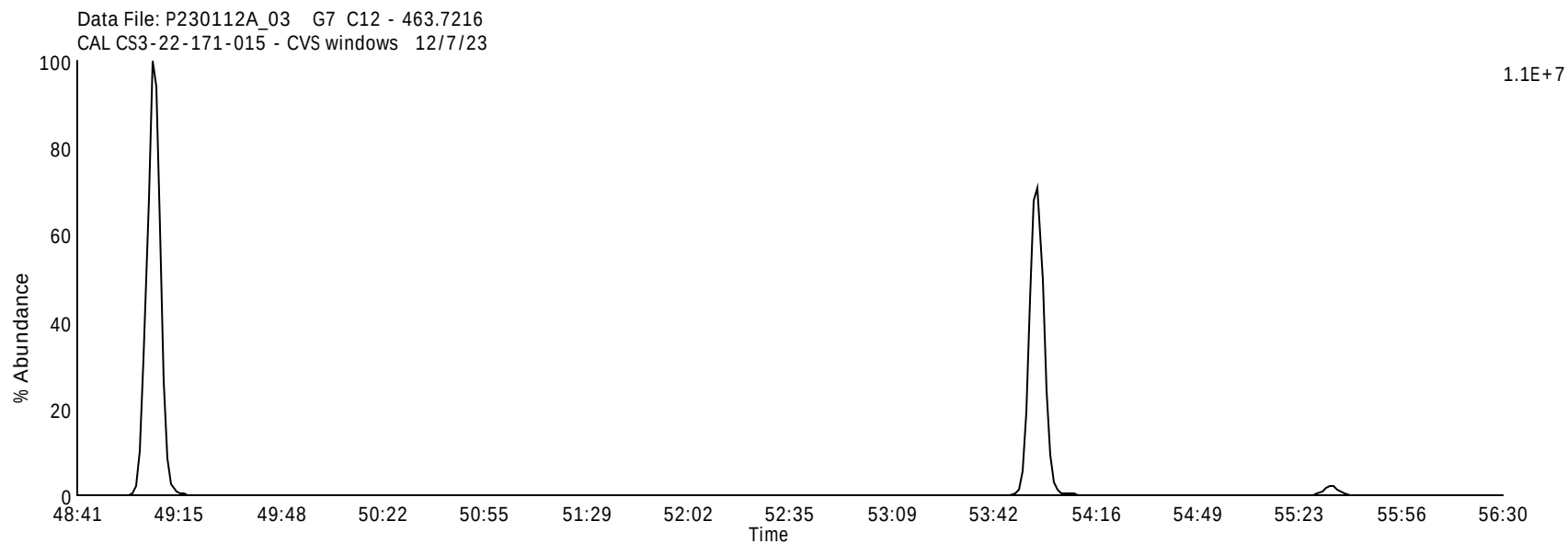
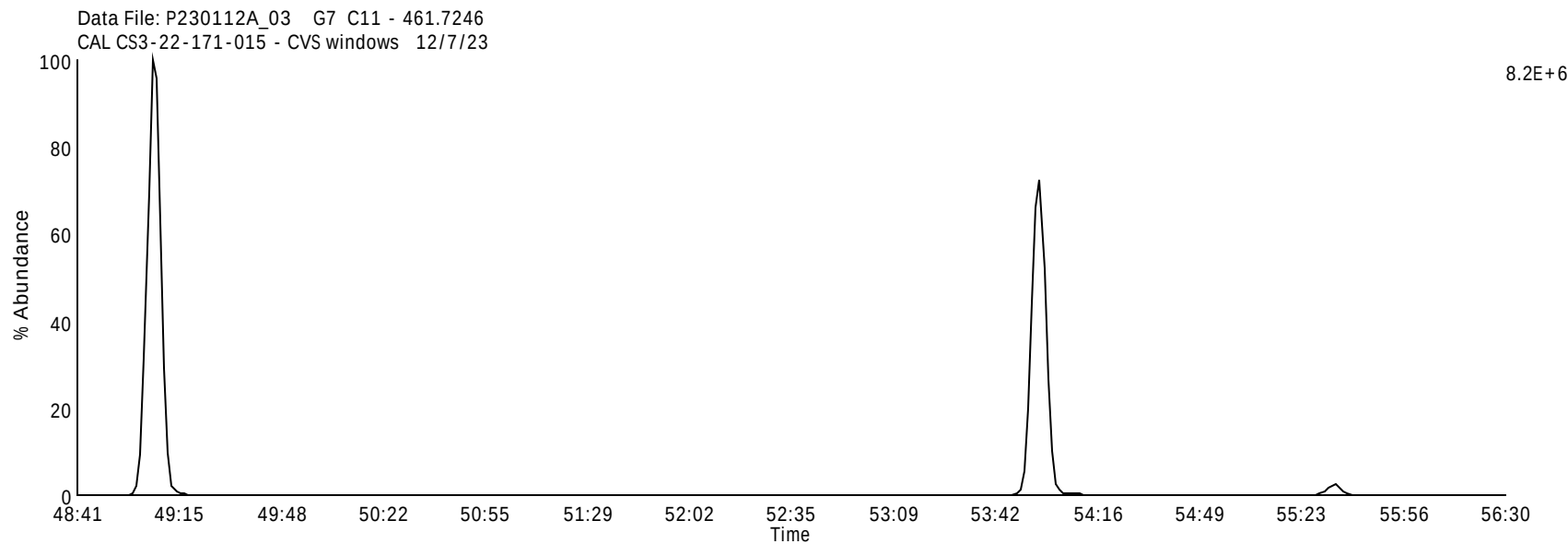
Data File Name: P230112A_03

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/12/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23



Deca Chlorinated Biphenyl

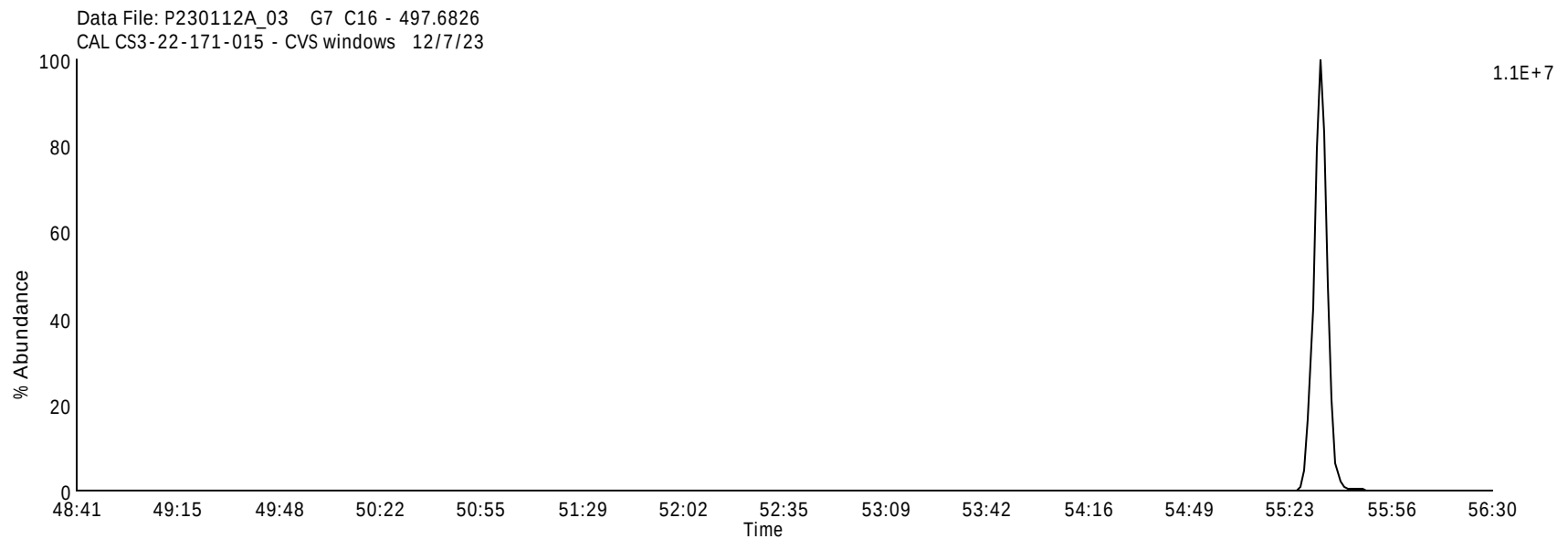
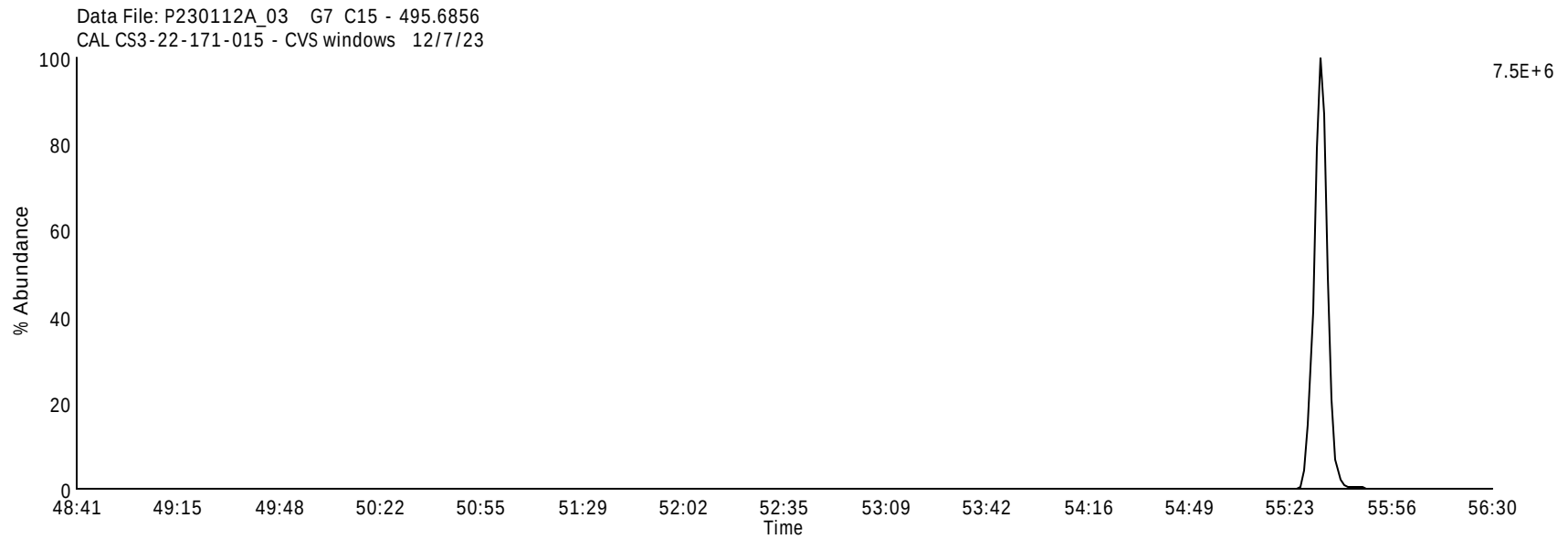
Data File Name: P230112A_03

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/12/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23



Group 1 - 4 Lock mass

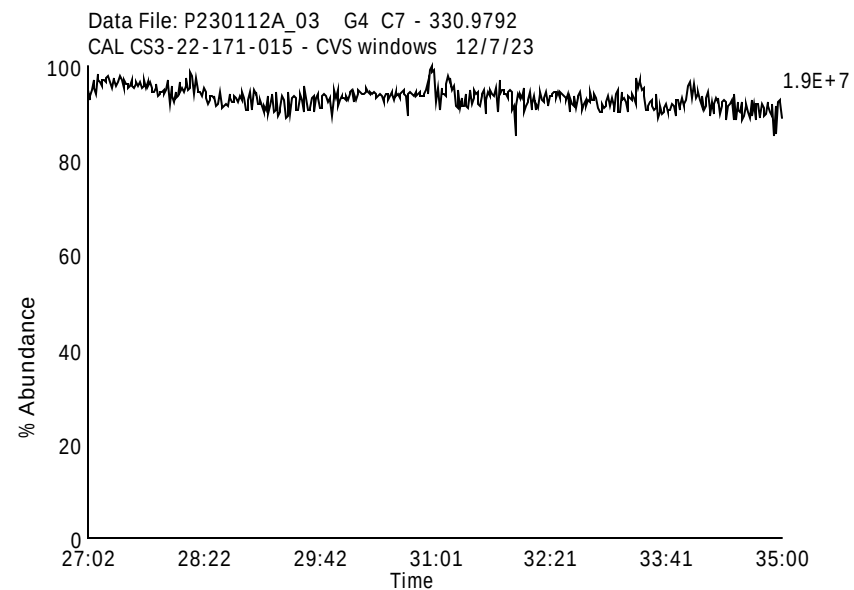
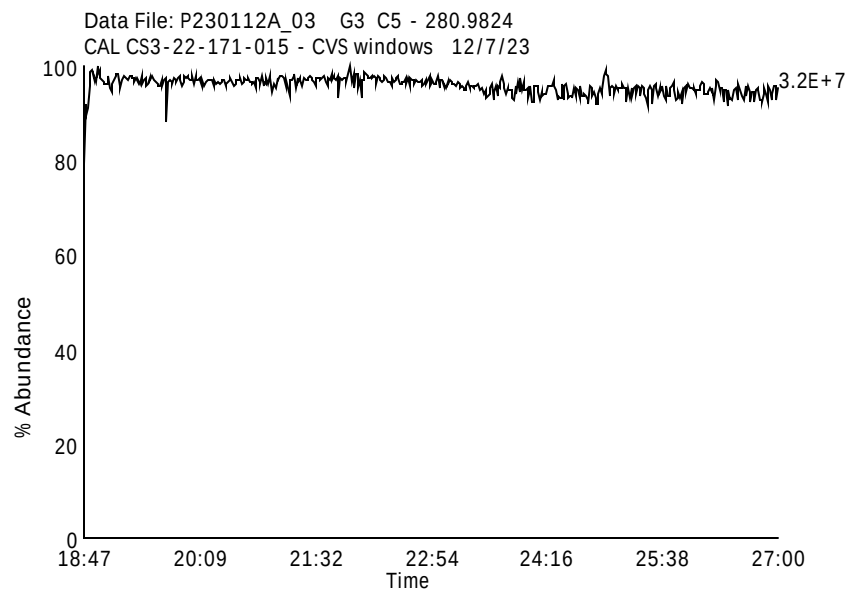
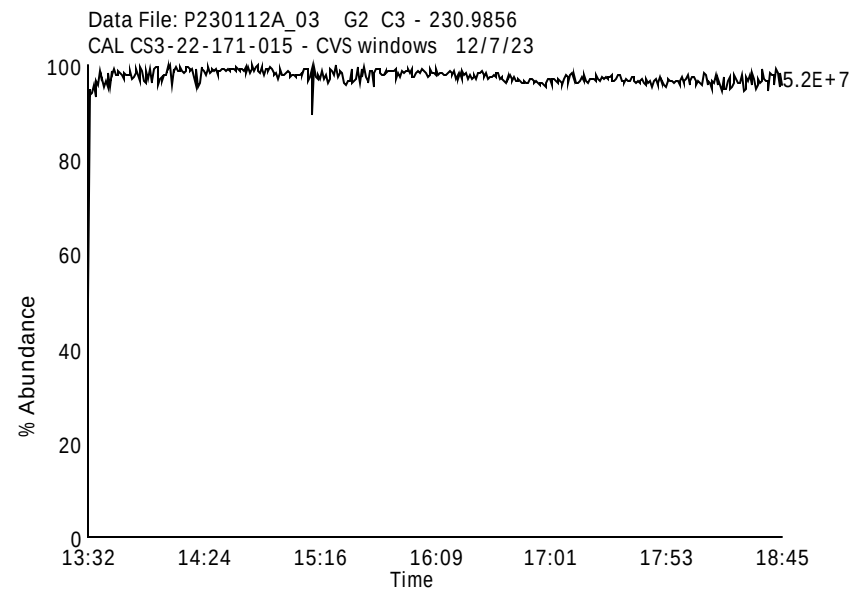
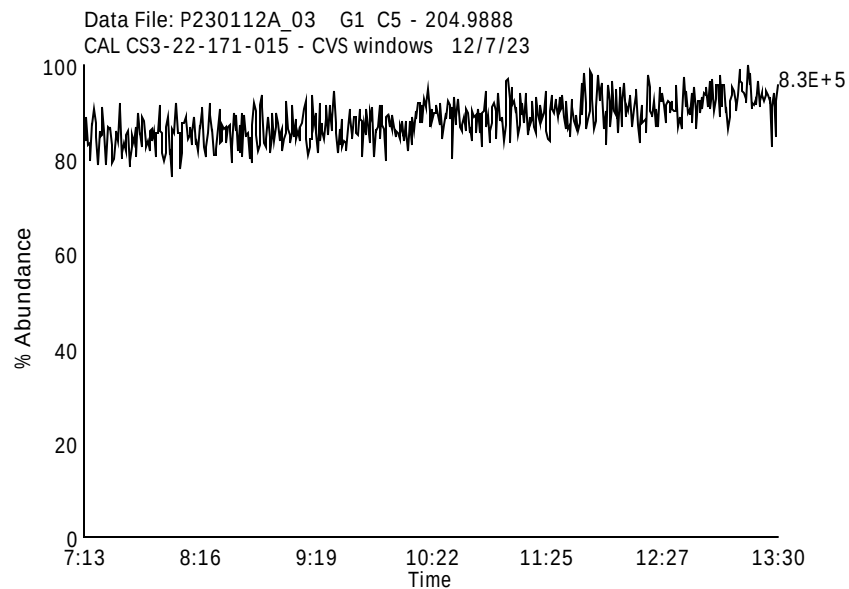
Data File Name: P230112A_03

Date Acquired: 1/12/2023

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Group 5 - 7 Lock mass

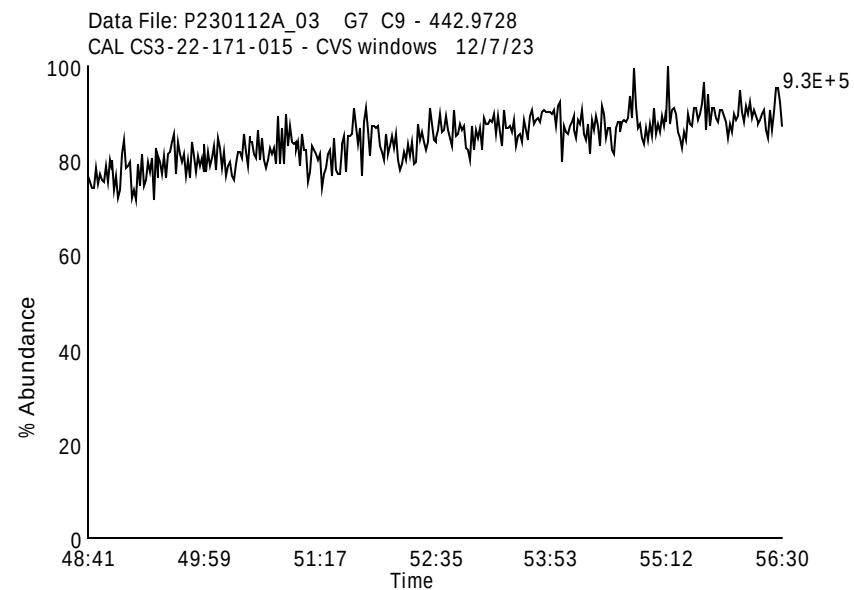
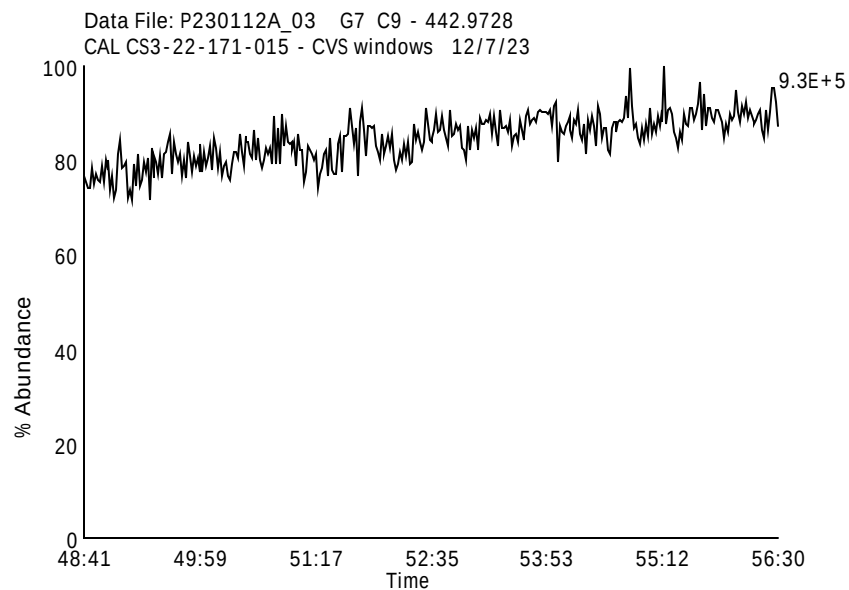
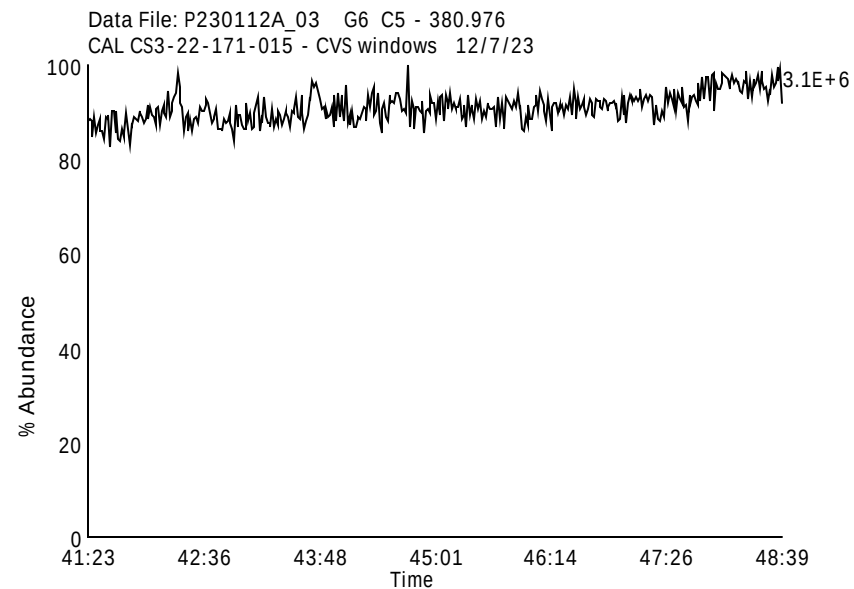
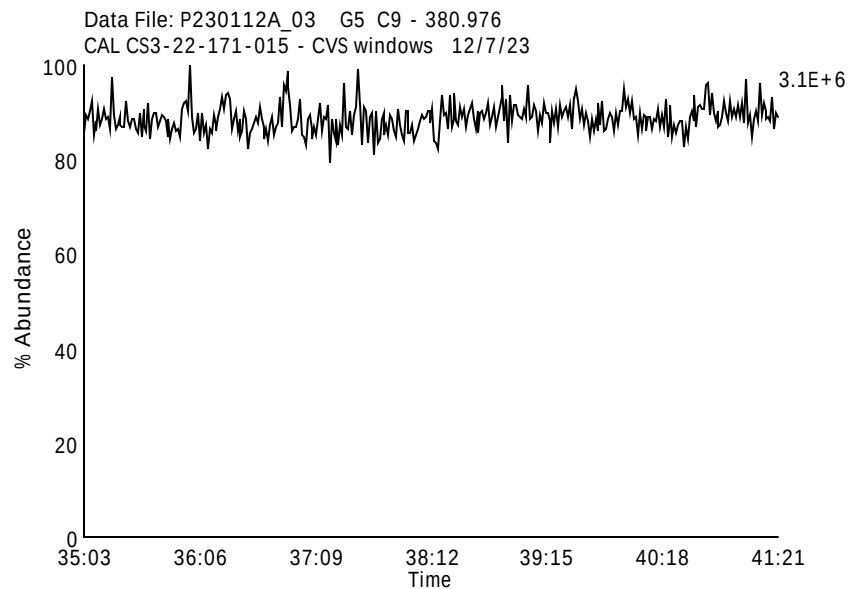
Data File Name: P230112A_03

Date Acquired: 1/12/2023

Sample Description: CAL CS3-22-171-015 - CVS windows 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Labeled Mono Chlorinated Biphenyls

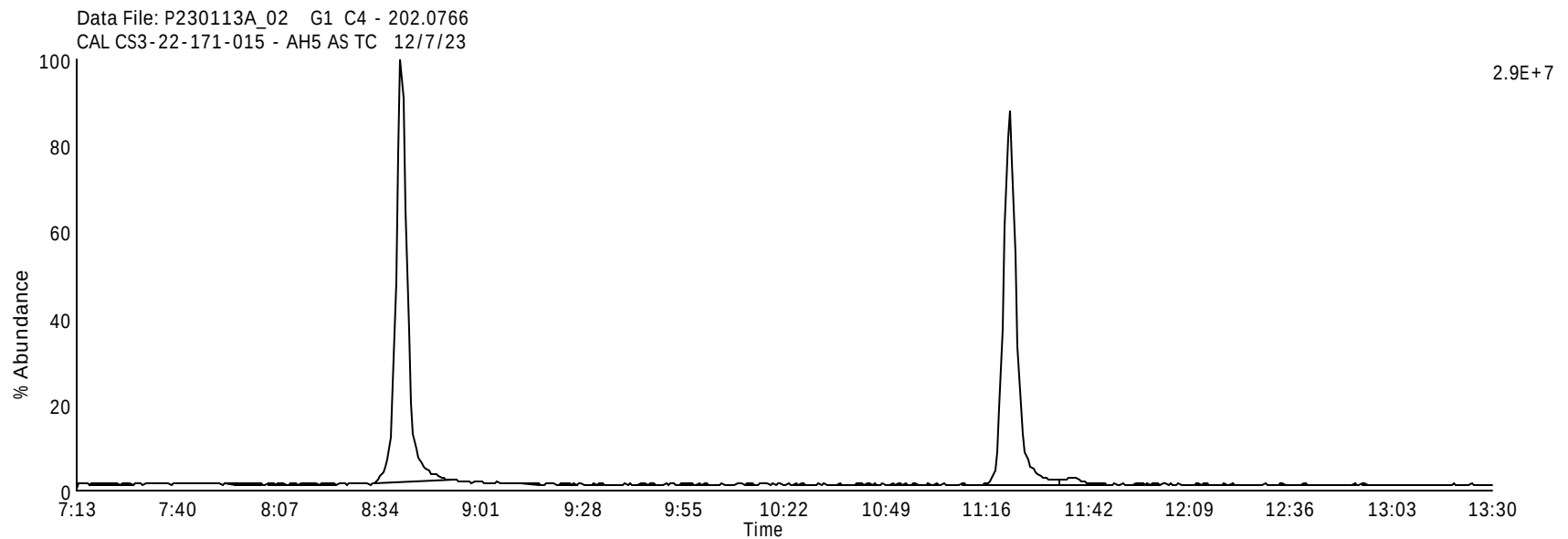
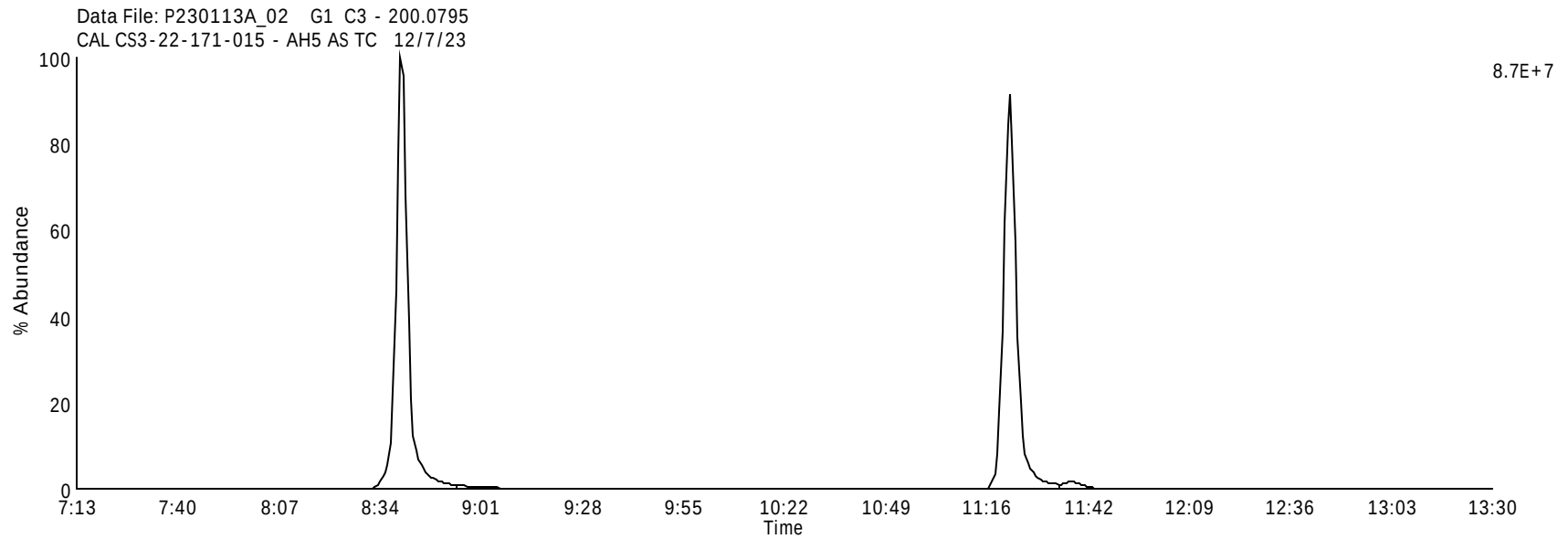
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Lab Sample ID: CS3-22-171-015

Date Acquired: 1/13/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23



Labeled Di Chlorinated Biphenyls

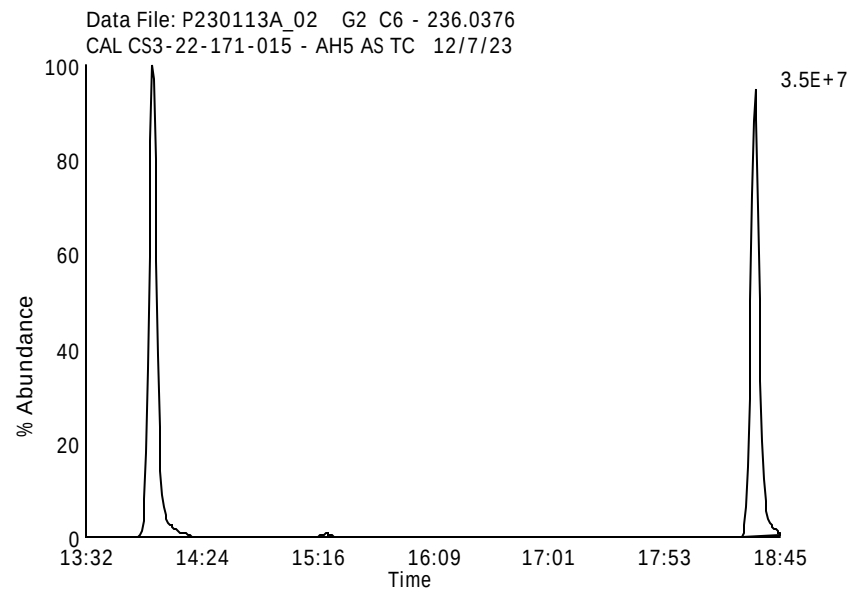
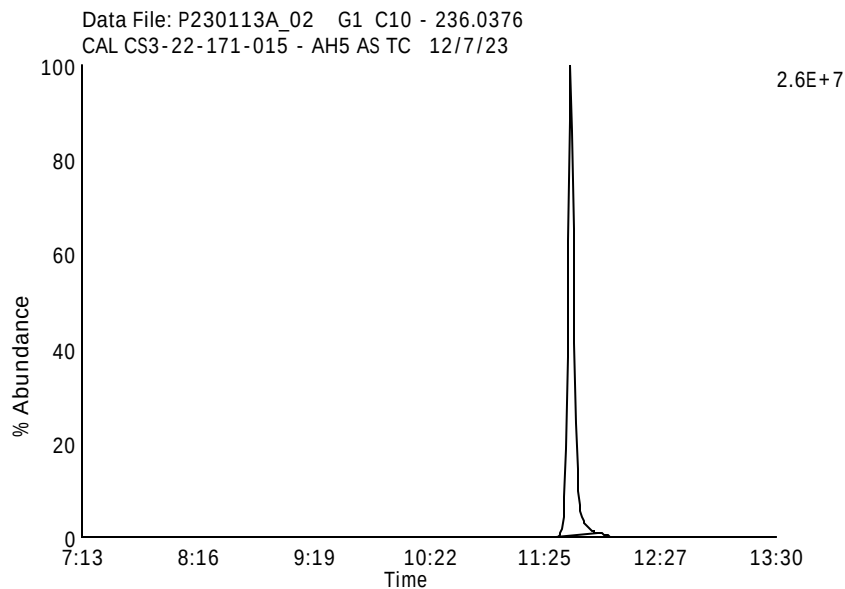
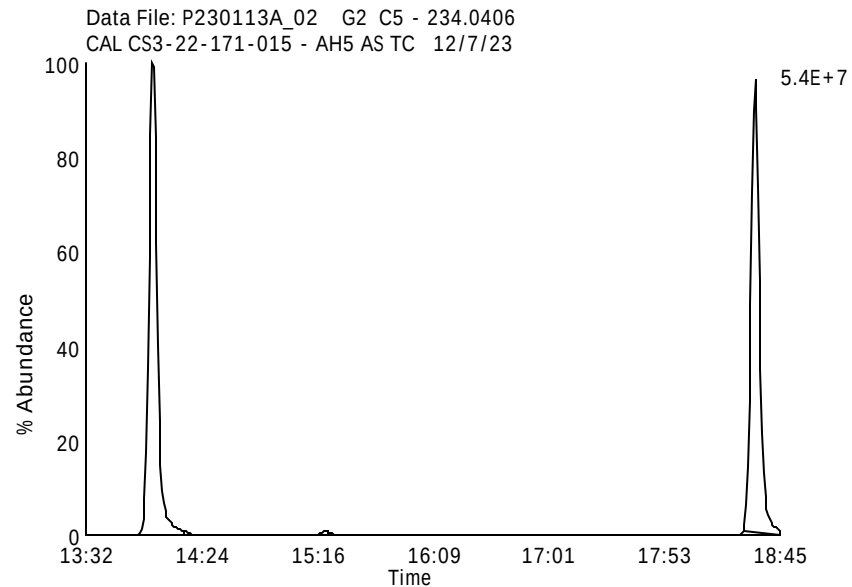
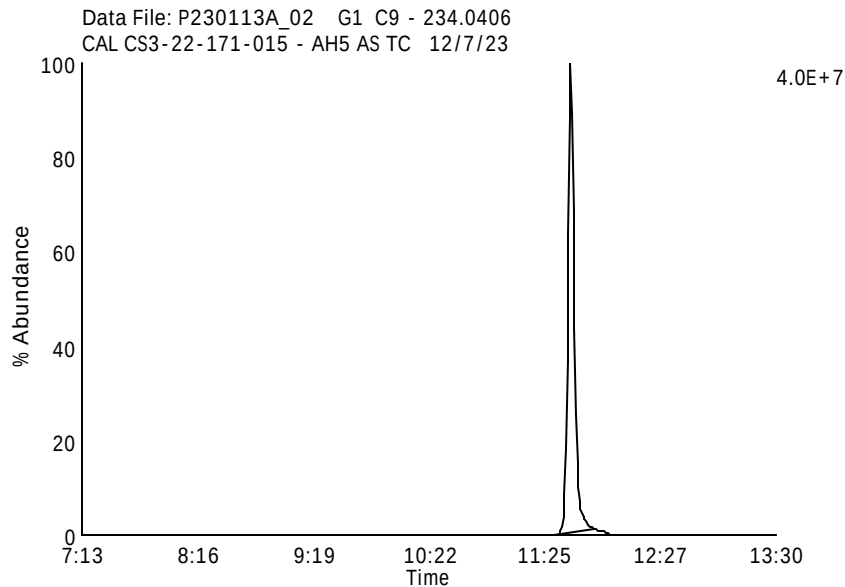
Data File Name: P230113A_02

Date Acquired: 1/13/2023

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Labeled Tri Chlorinated Biphenyls

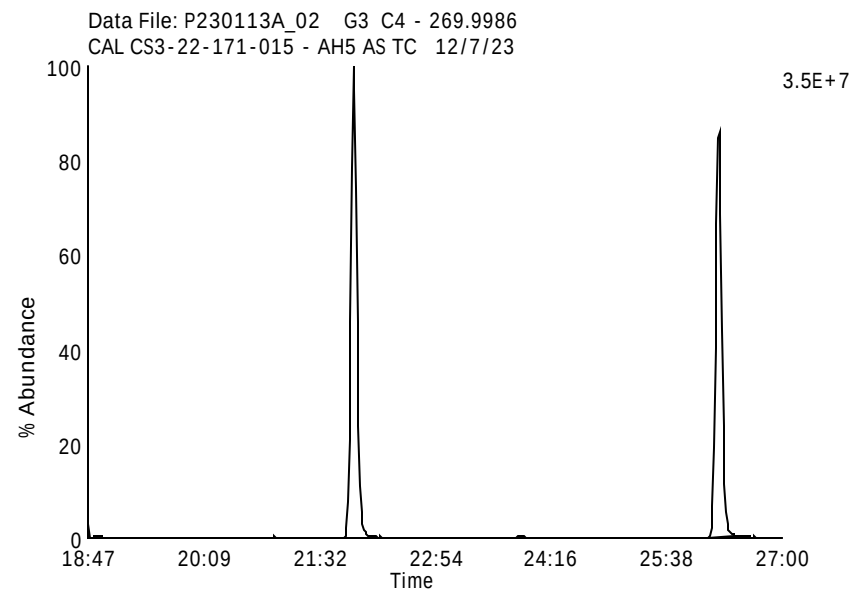
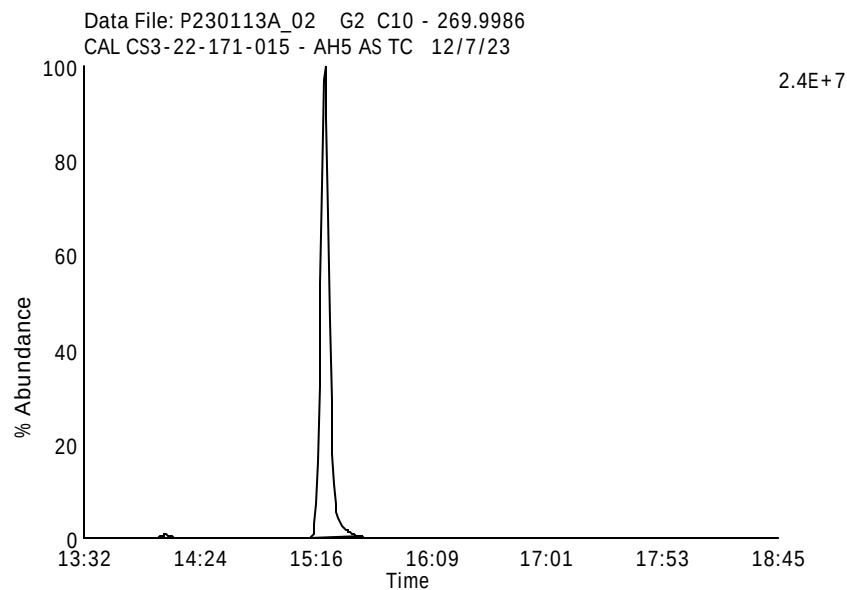
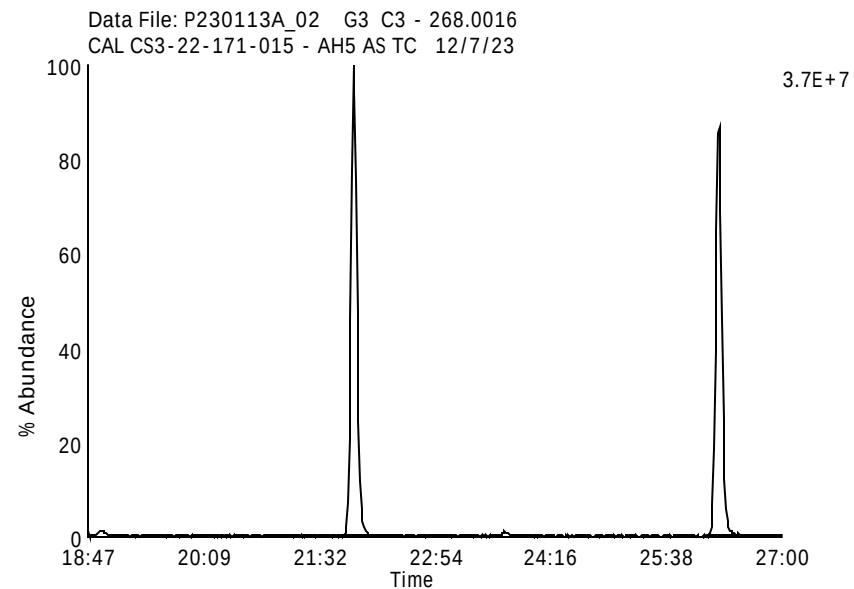
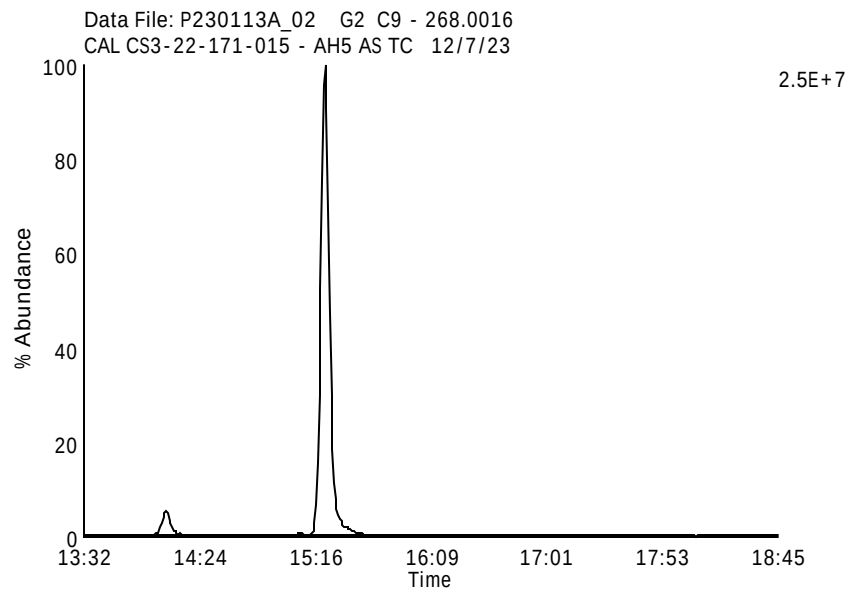
Data File Name: P230113A_02

Date Acquired: 1/13/2023

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Labeled Tetra Chlorinated Biphenyls

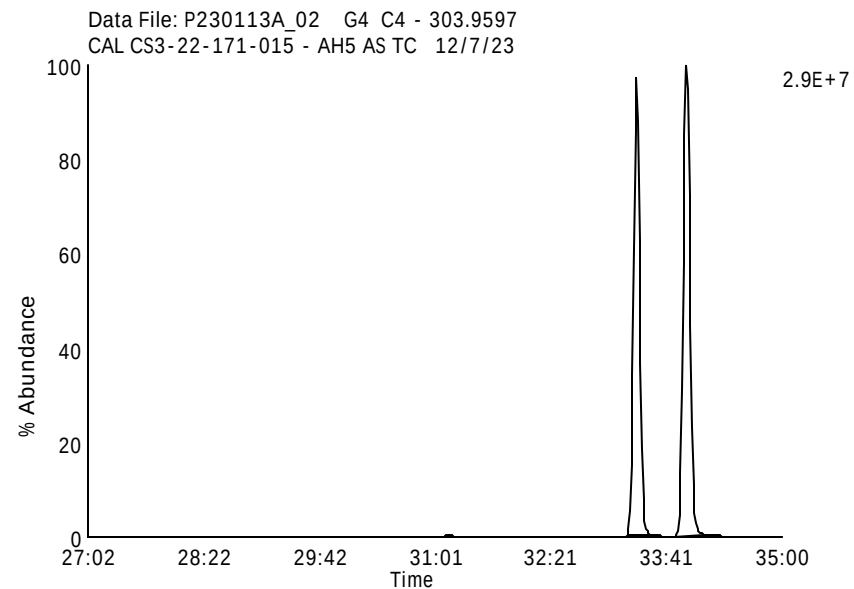
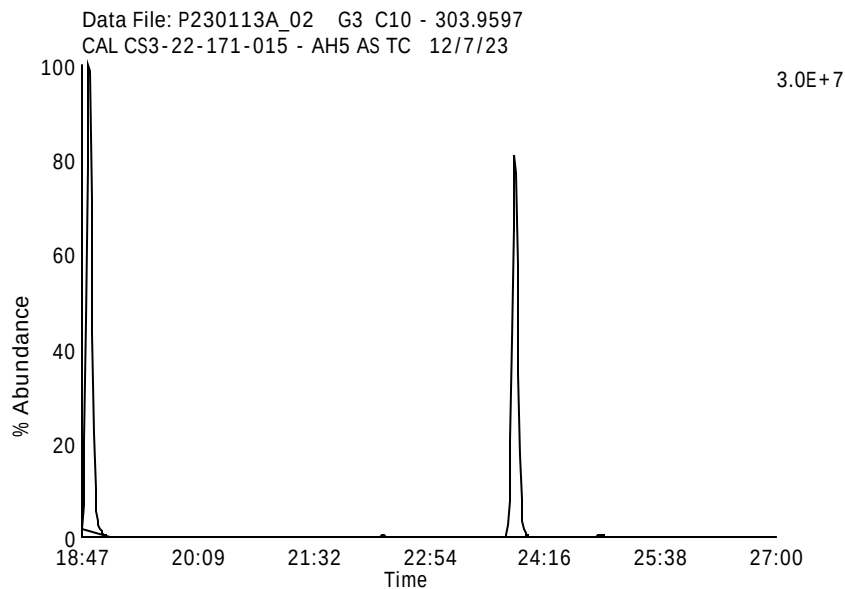
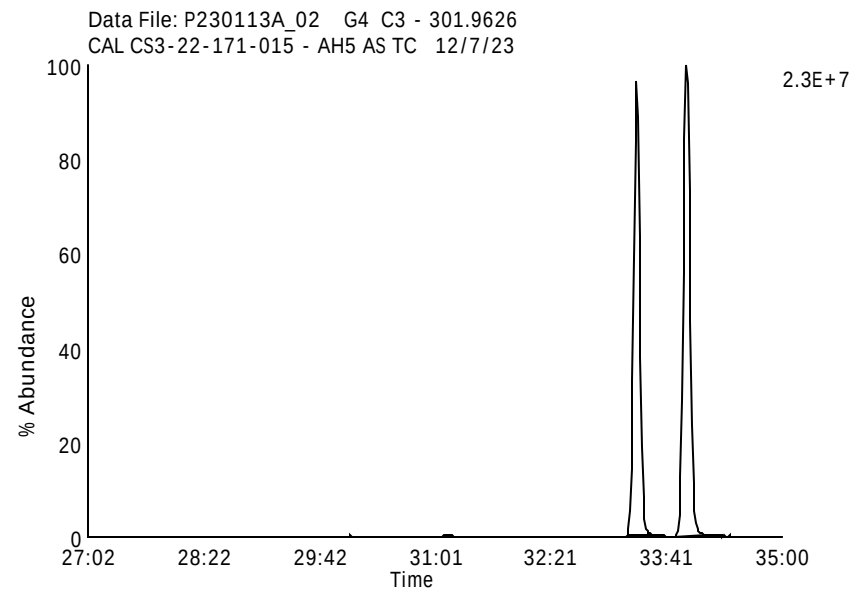
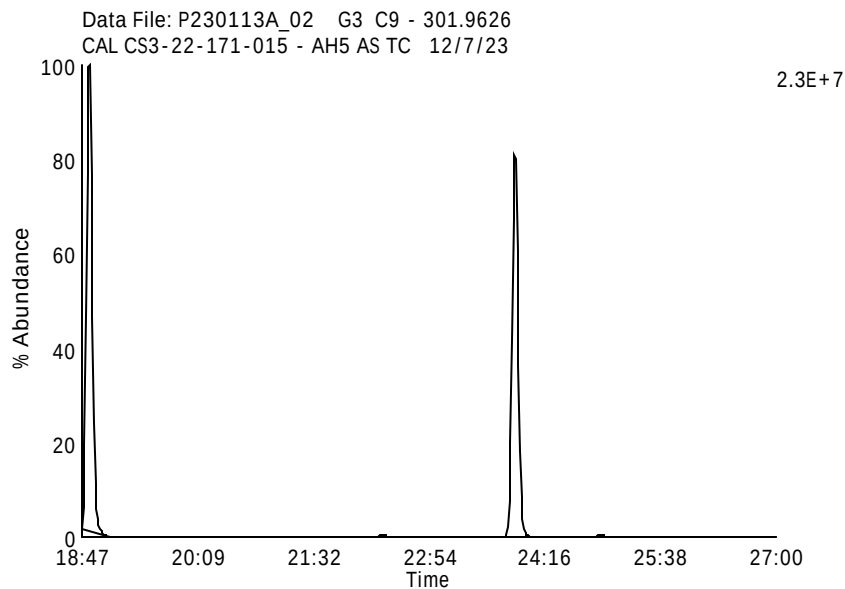
Data File Name: P230113A_02

Date Acquired: 1/13/2023

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Labeled Penta Chlorinated Biphenyls

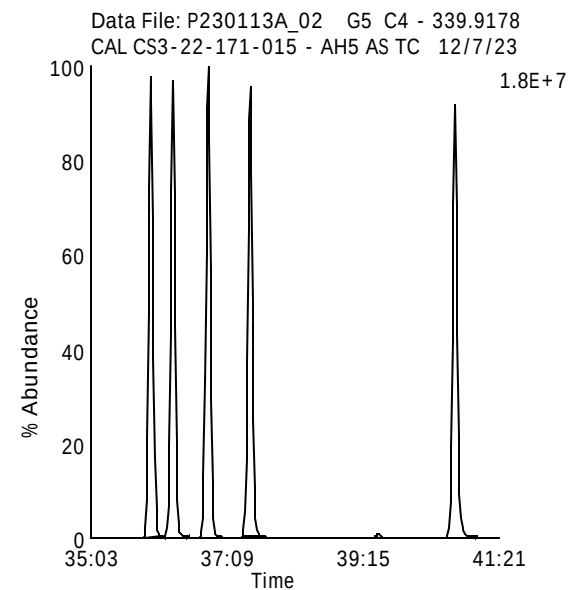
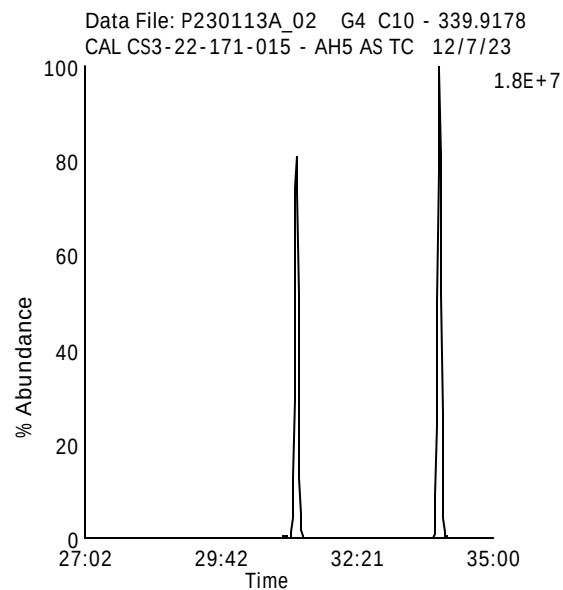
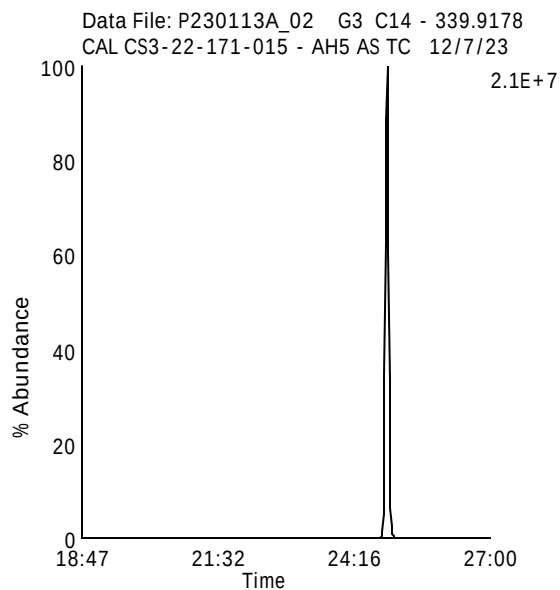
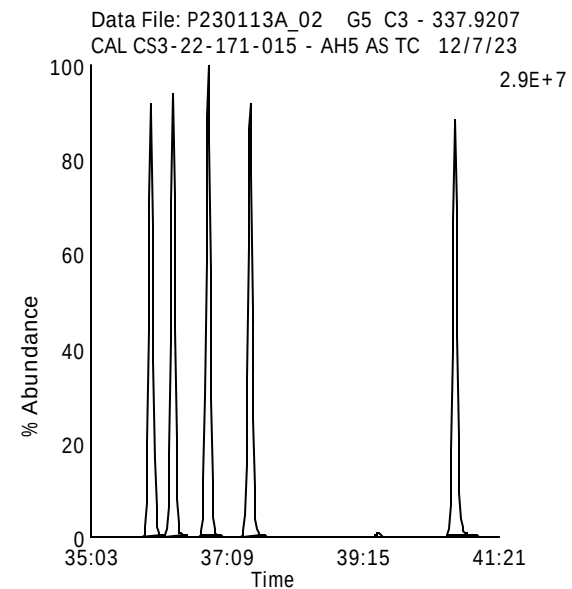
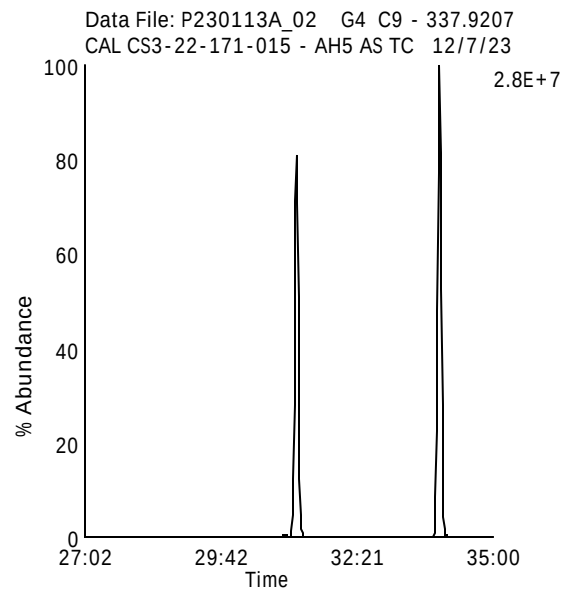
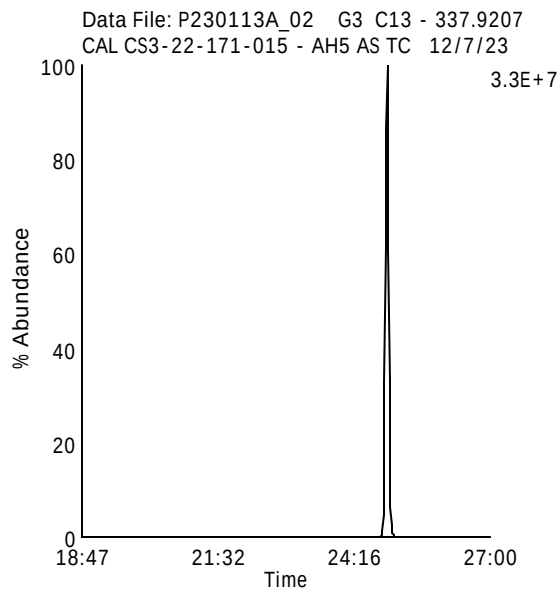
Data File Name: P230113A_02

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/13/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23



Labeled Hexa Chlorinated Biphenyls

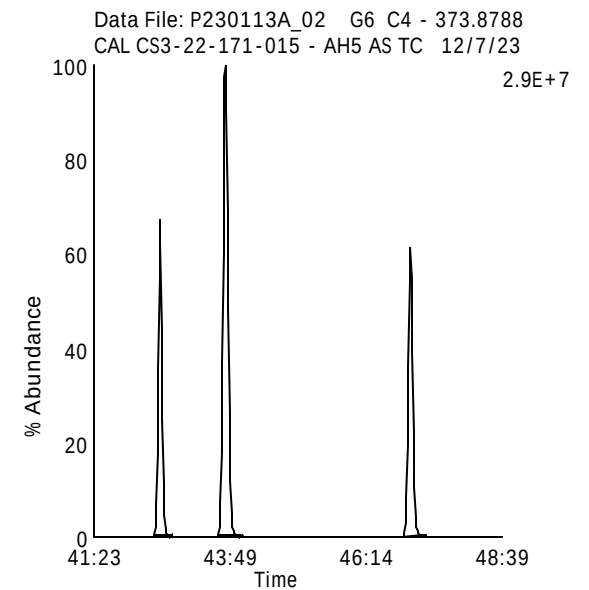
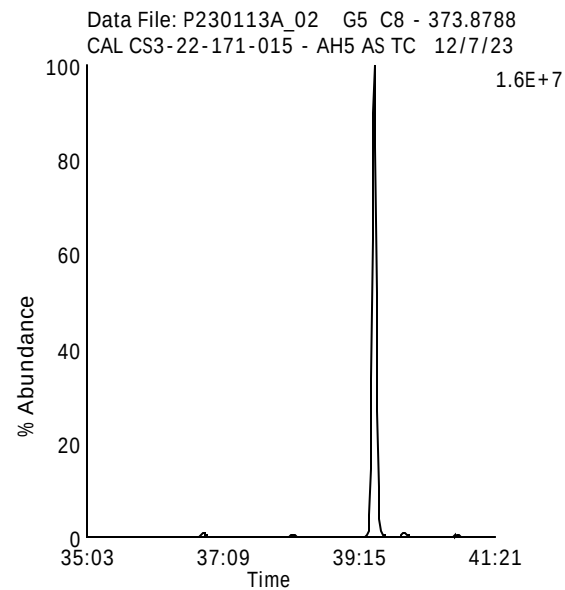
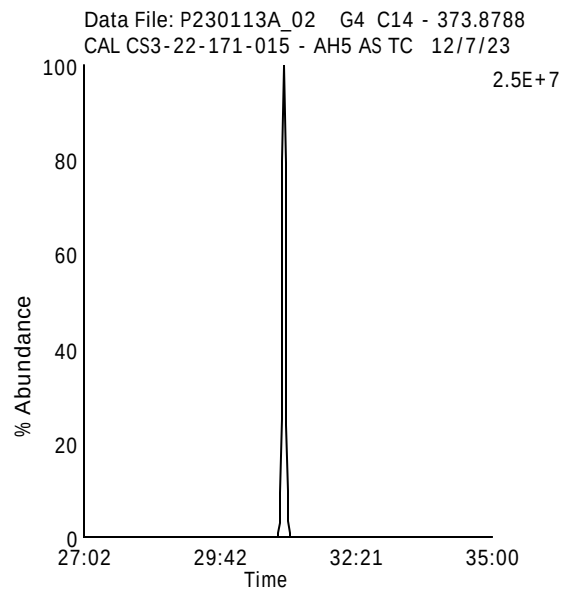
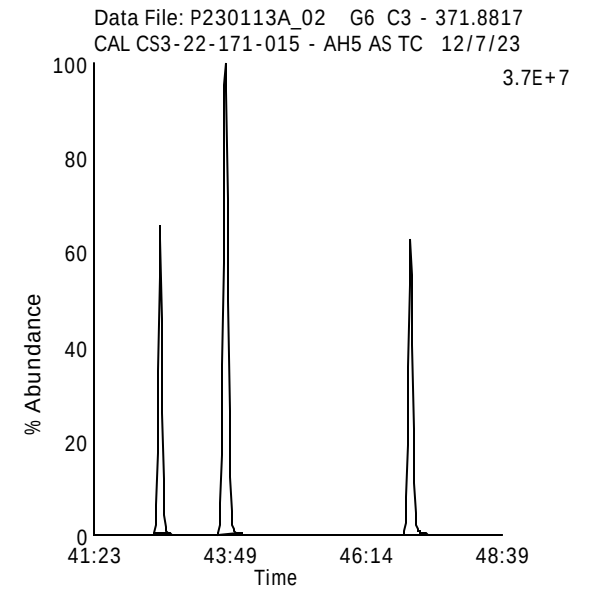
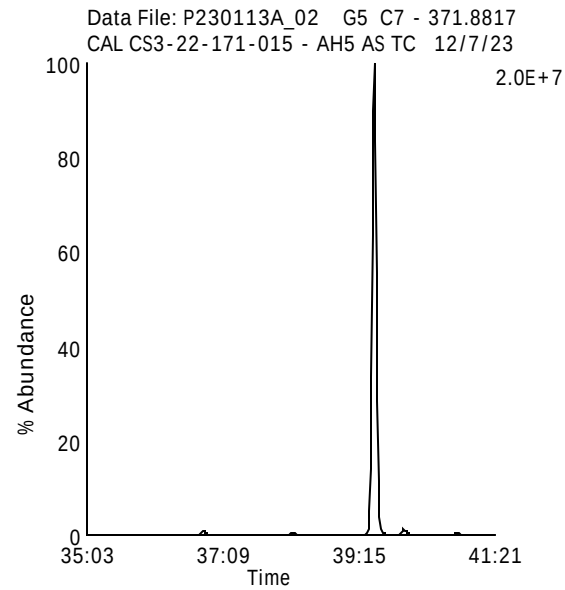
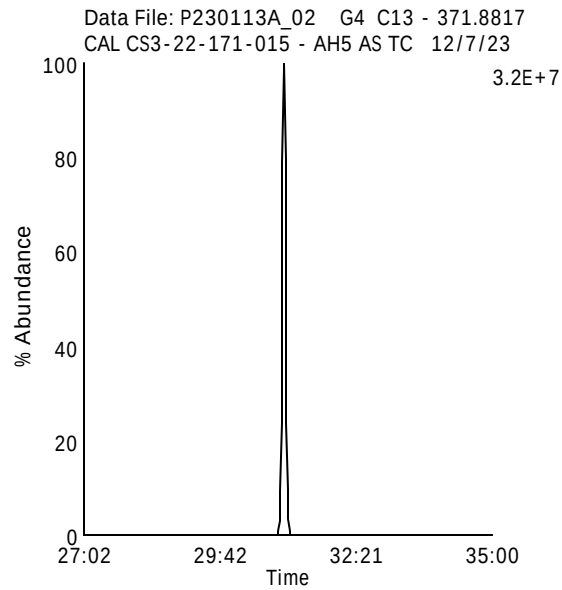
Data File Name: P230113A_02

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/13/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23



Labeled Hepta Chlorinated Biphenyls

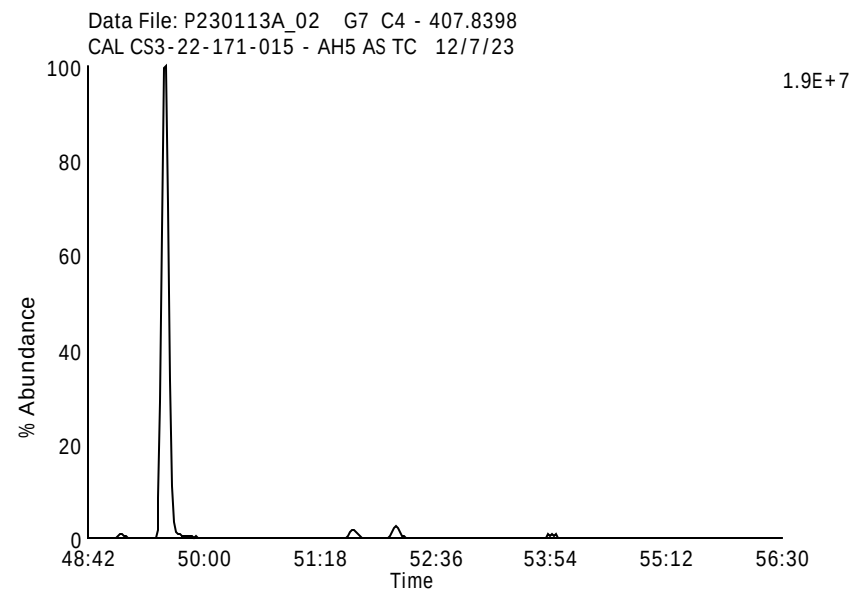
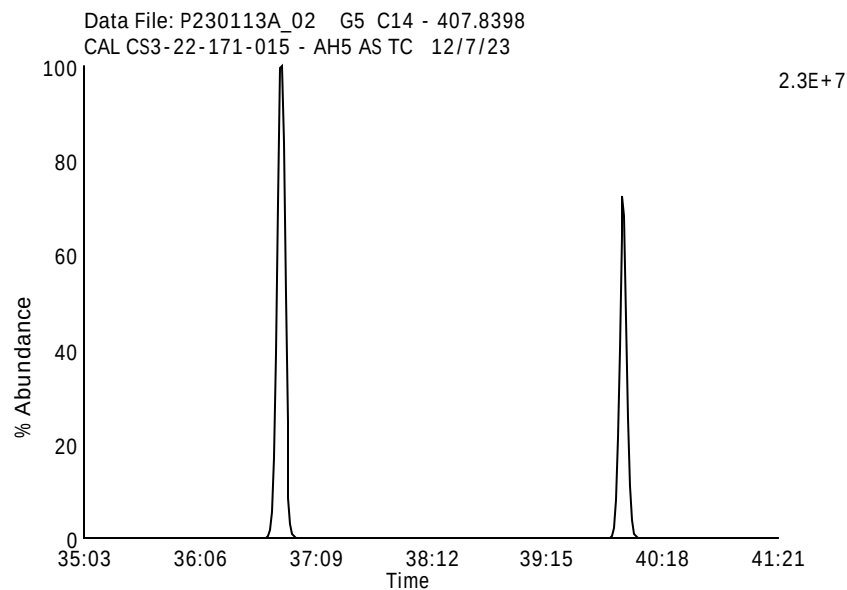
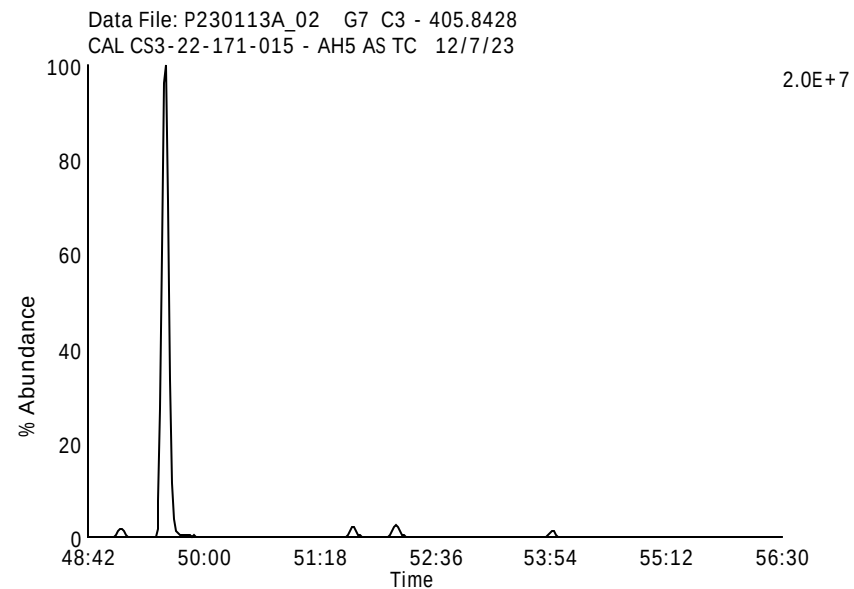
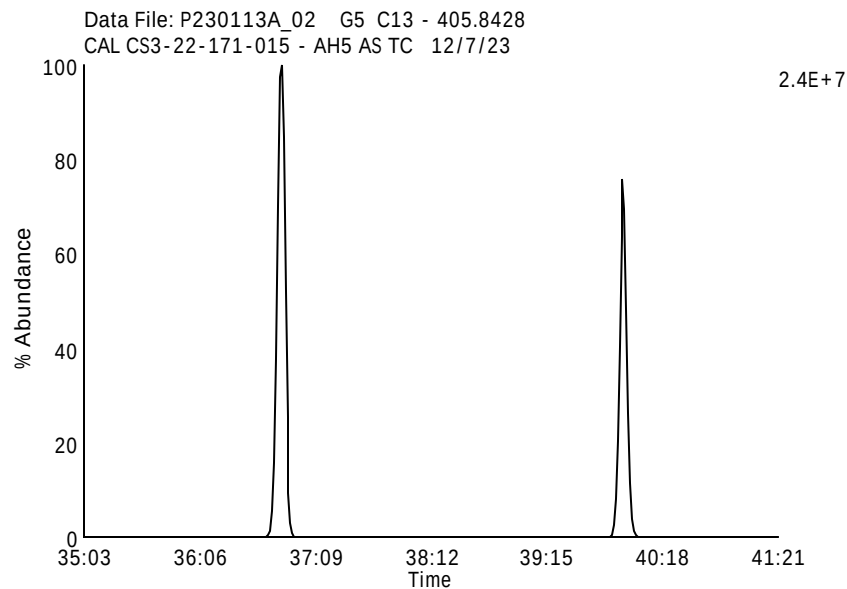
Data File Name: P230113A_02

Date Acquired: 1/13/2023

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Labeled Octa Chlorinated Biphenyls

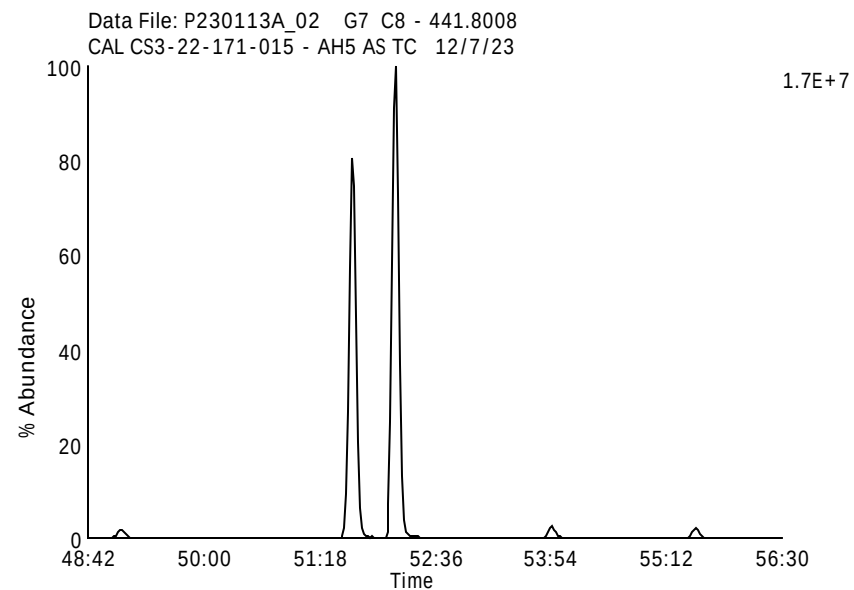
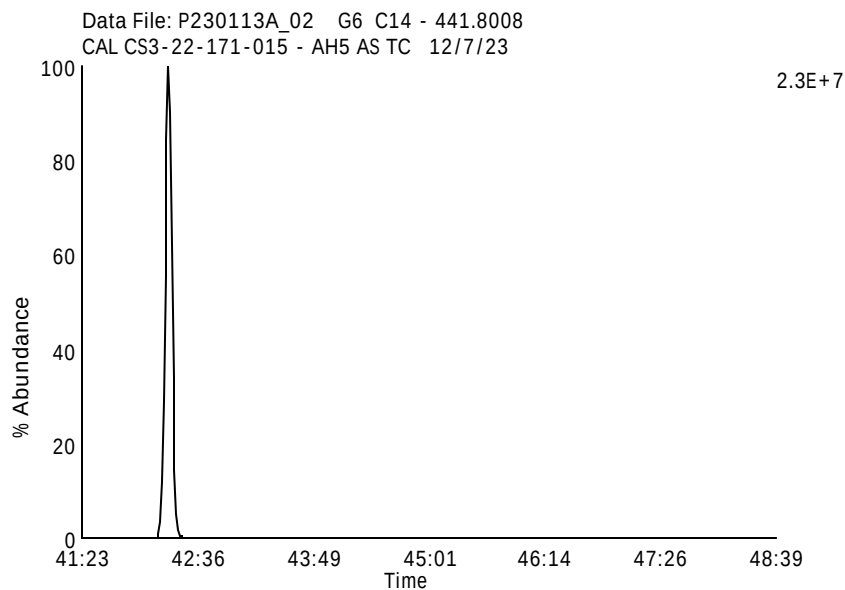
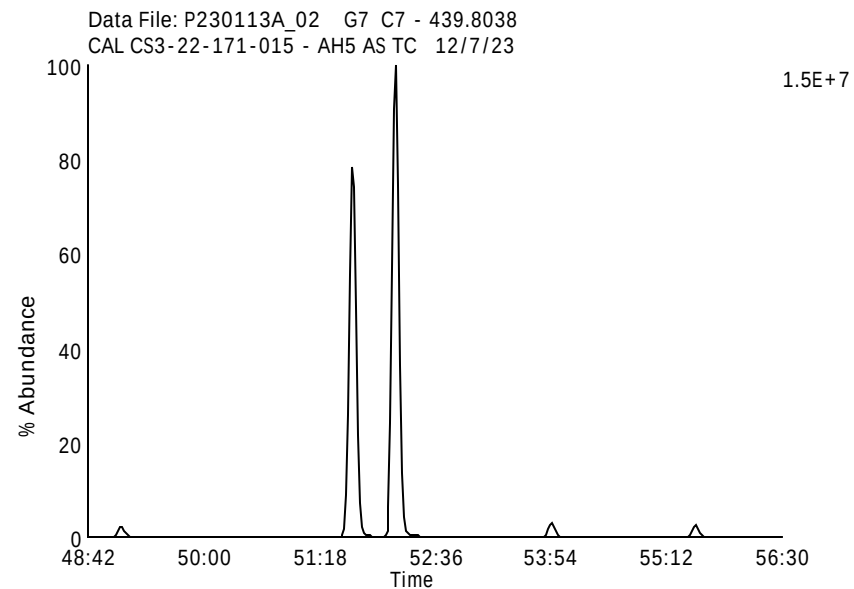
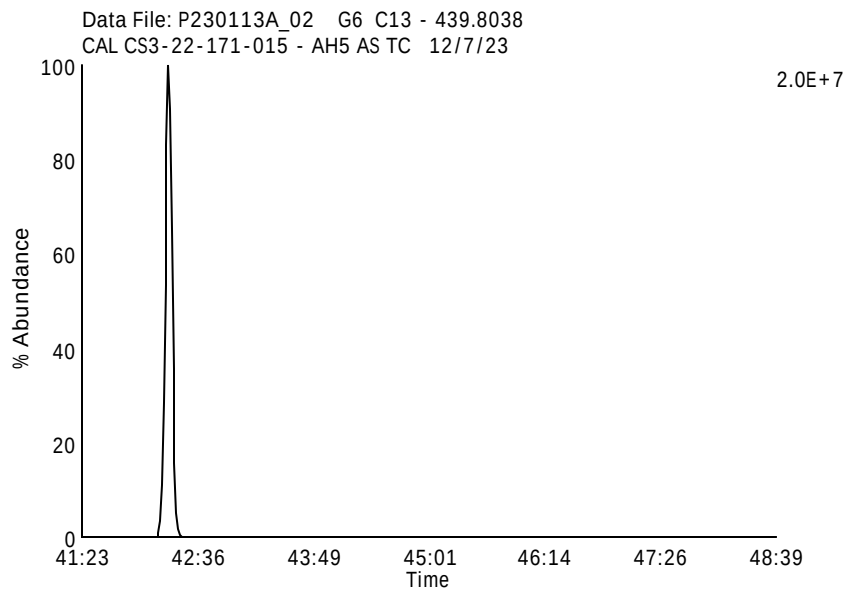
Data File Name: P230113A_02

Date Acquired: 1/13/2023

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Labeled Nona Chlorinated Biphenyls

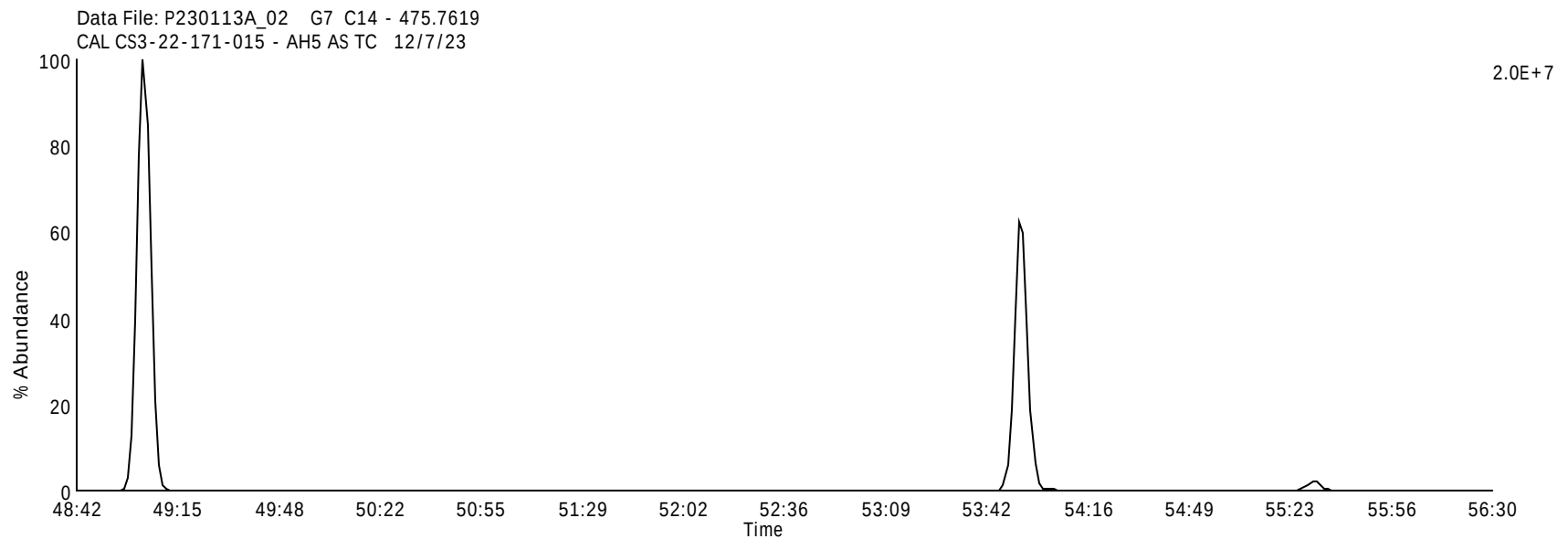
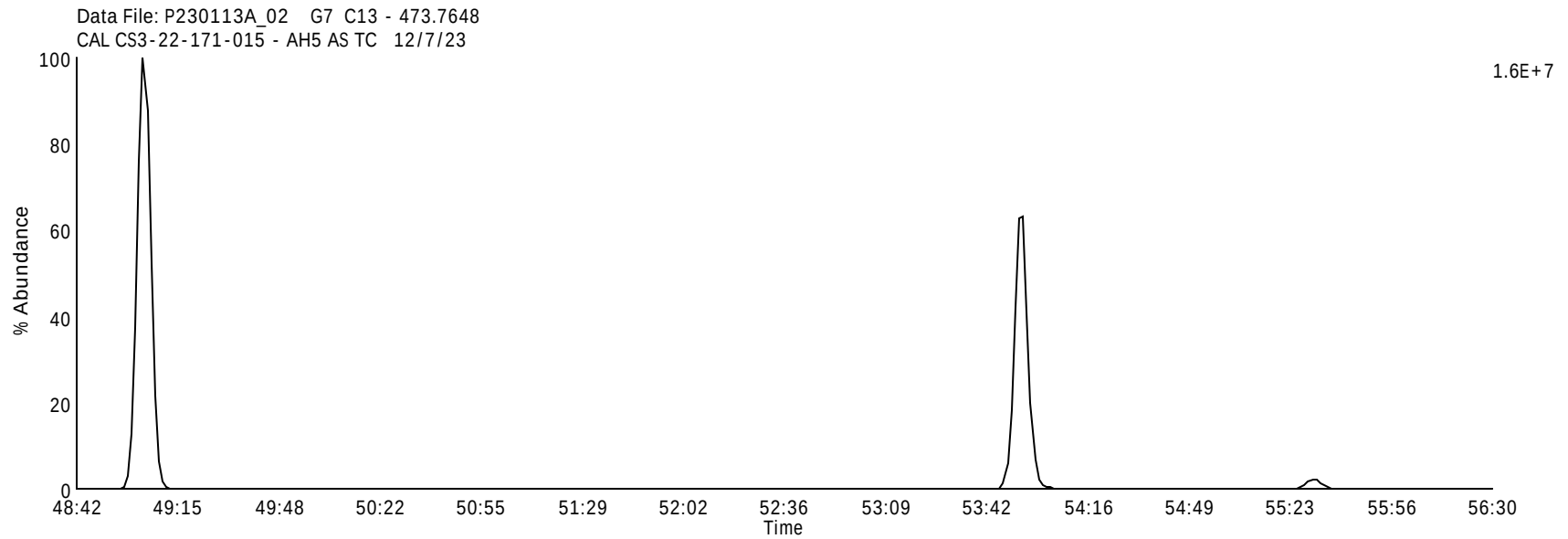
Data File Name: P230113A_02

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/13/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23



Labeled Deca Chlorinated Biphenyl

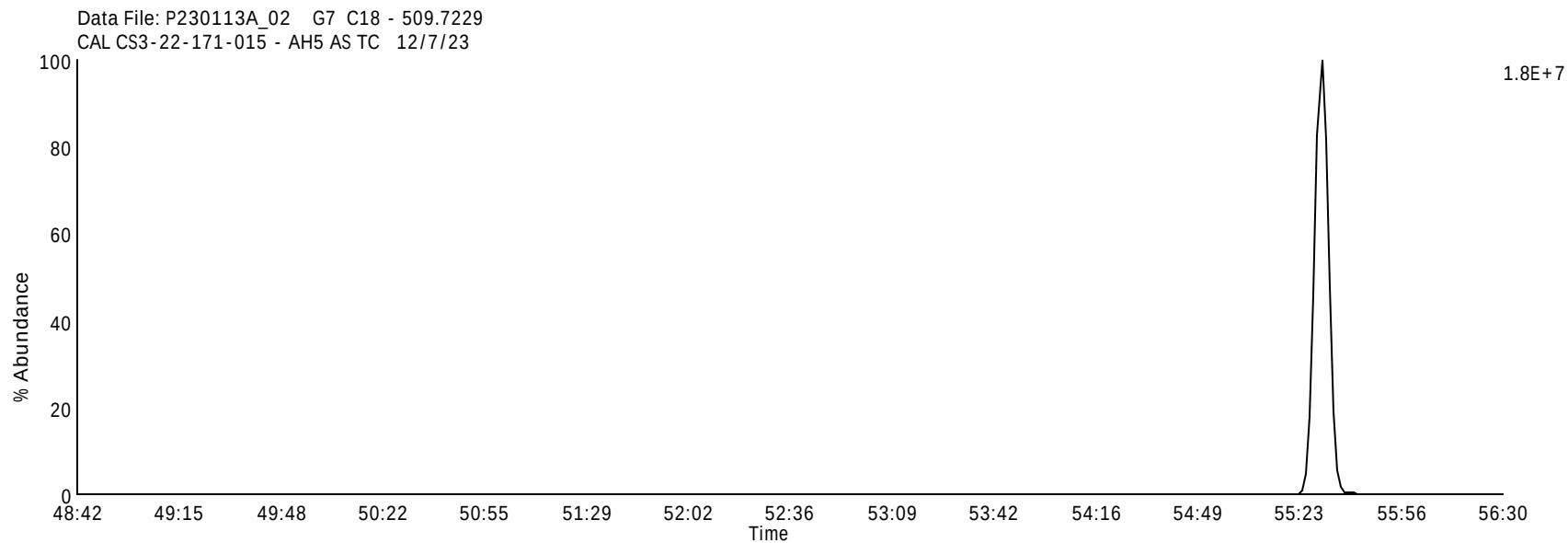
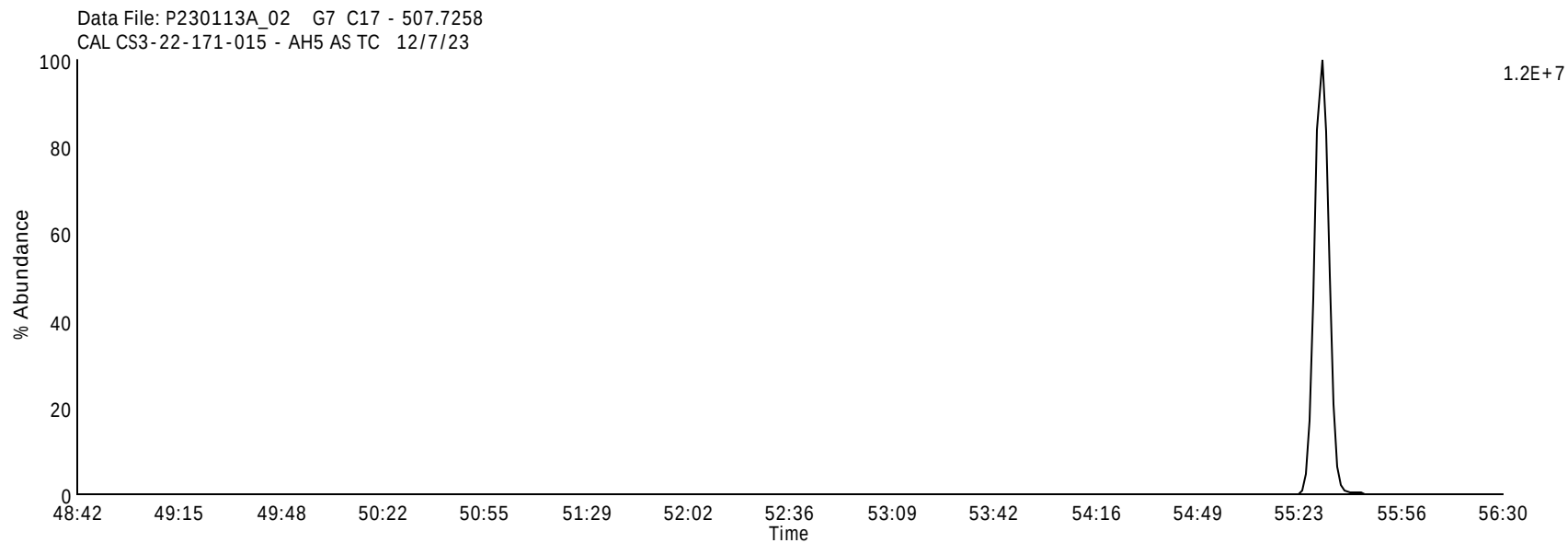
Data File Name: P230113A_02

Date Acquired: 1/13/2023

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Mono Chlorinated Biphenyls

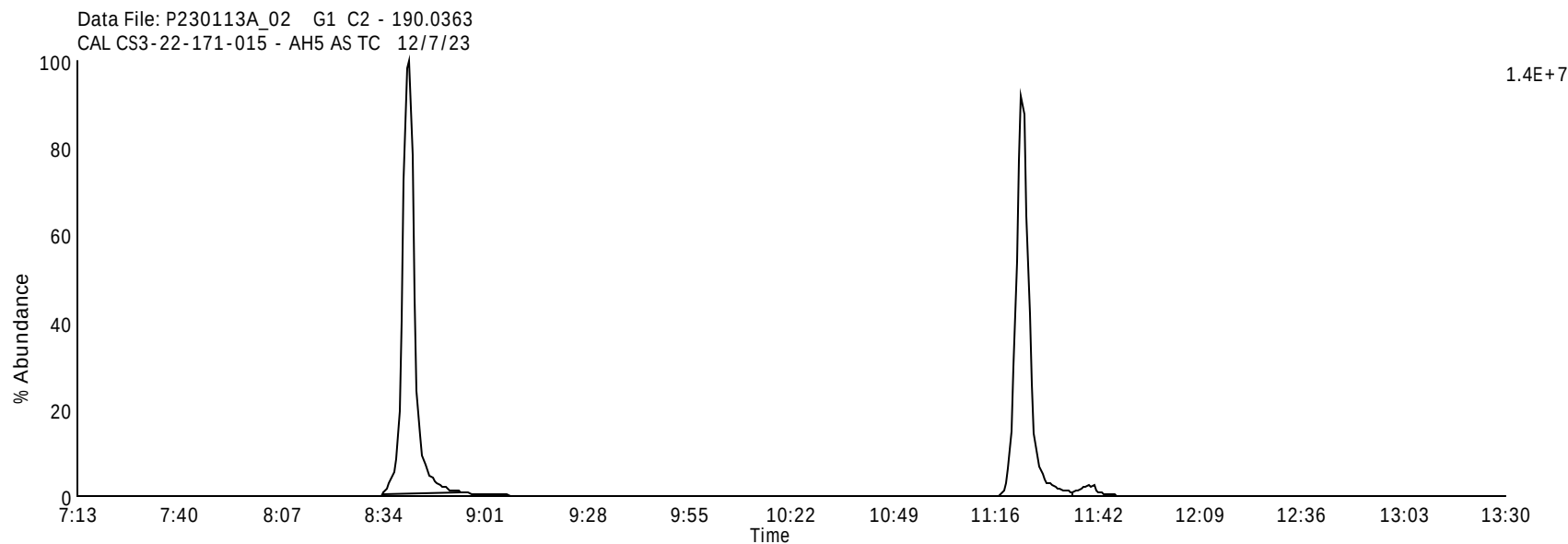
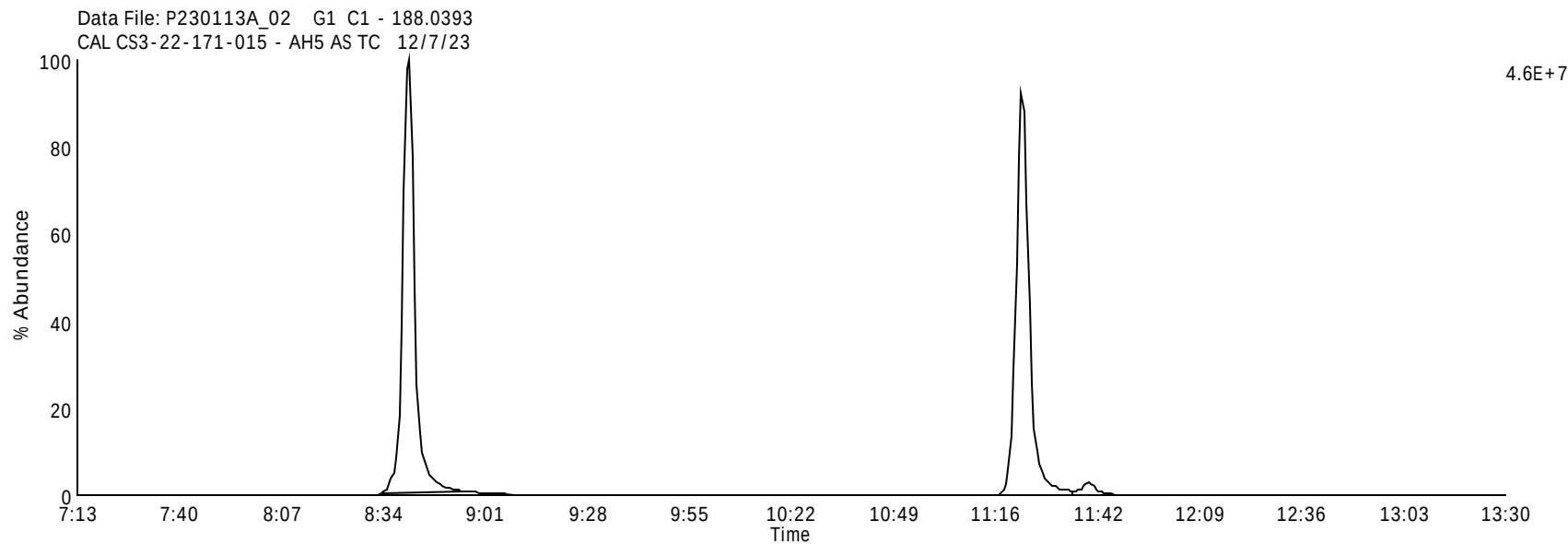
Data File Name: P230113A_02

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/13/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23



Di Chlorinated Biphenyls

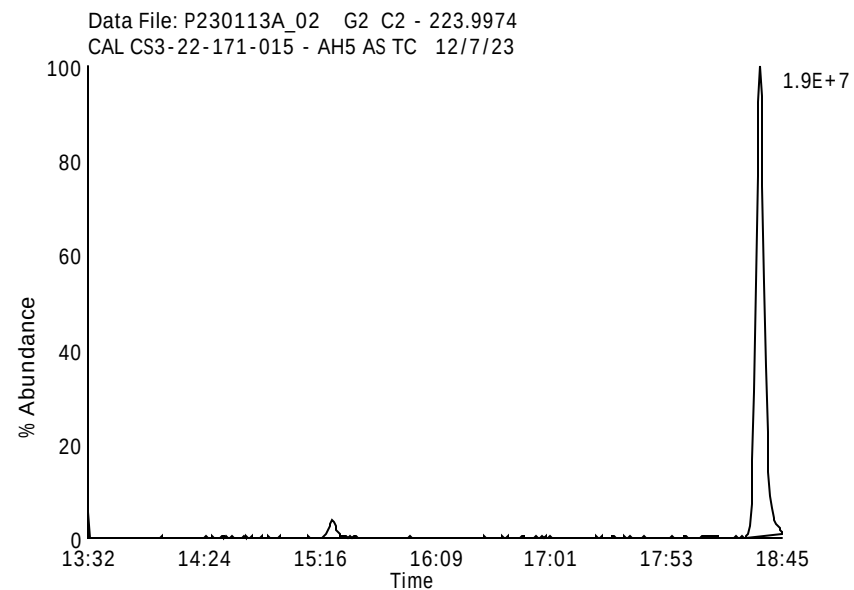
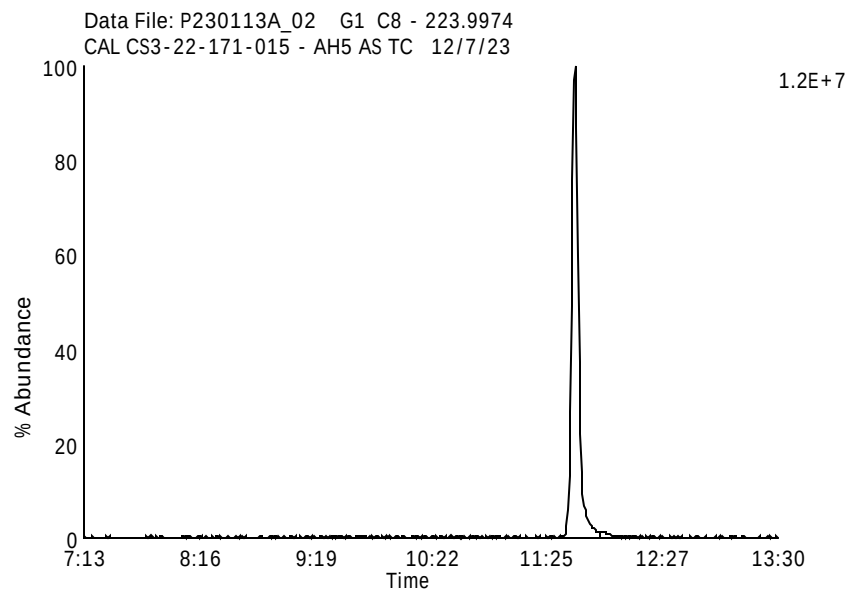
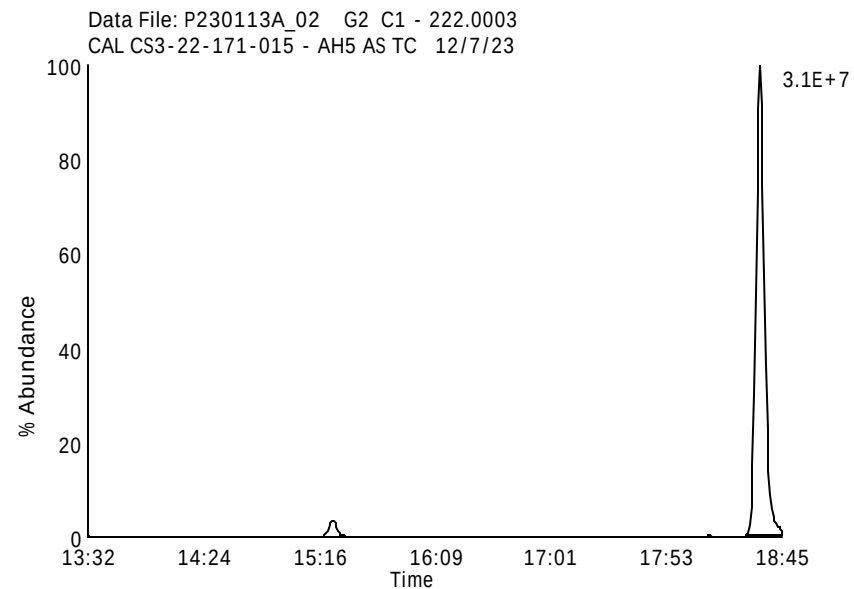
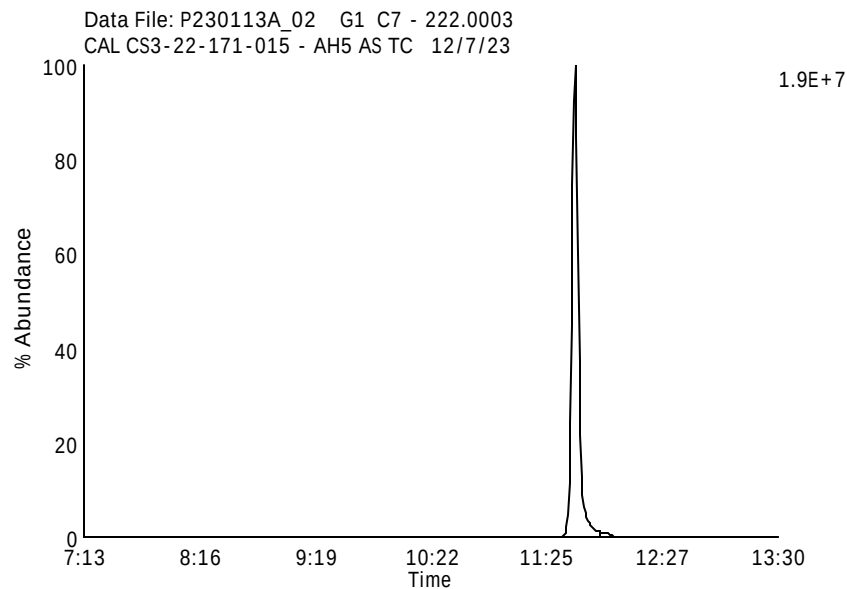
Data File Name: P230113A_02

Date Acquired: 1/13/2023

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Tri Chlorinated Biphenyls

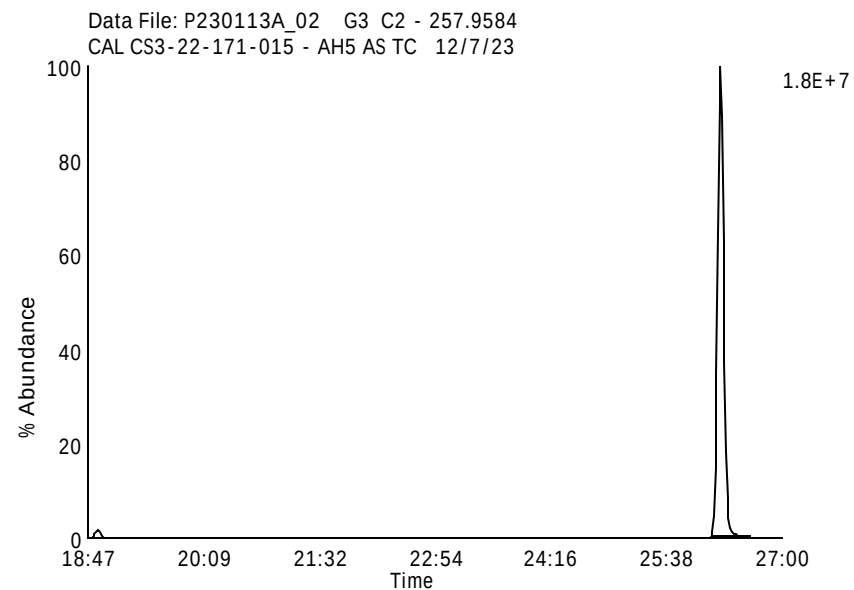
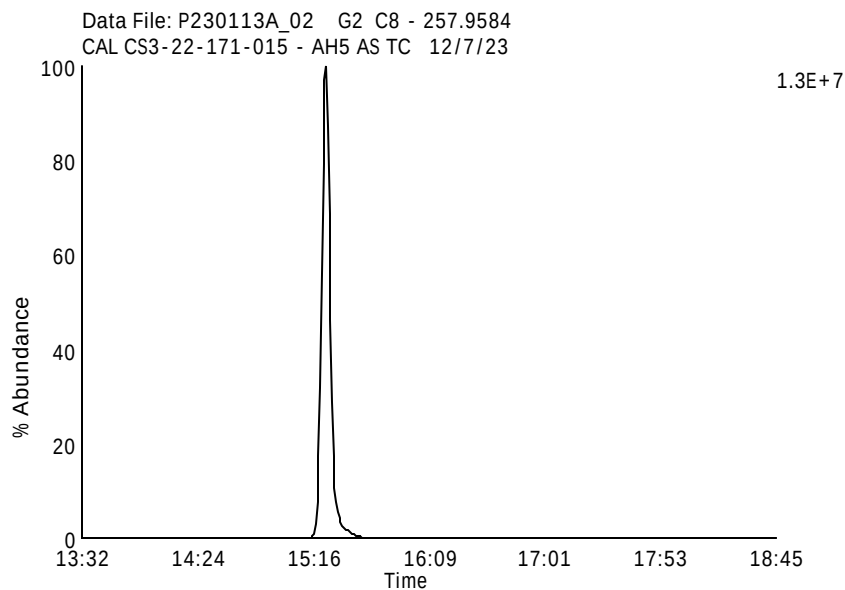
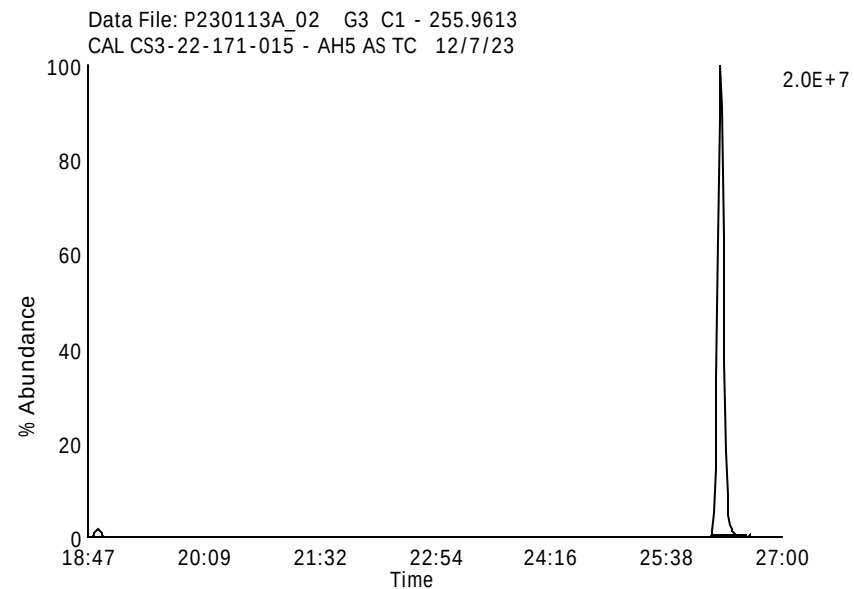
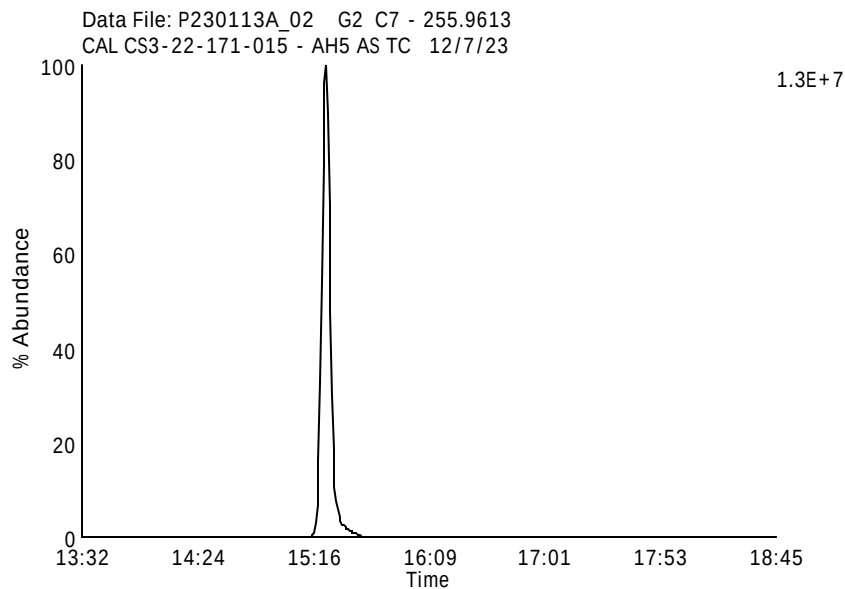
Data File Name: P230113A_02

Date Acquired: 1/13/2023

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Tetra Chlorinated Biphenyls

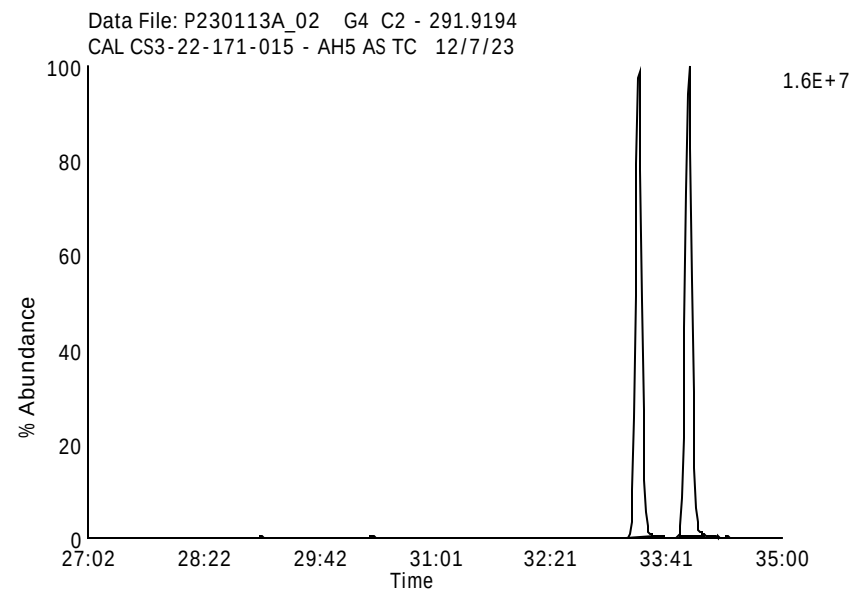
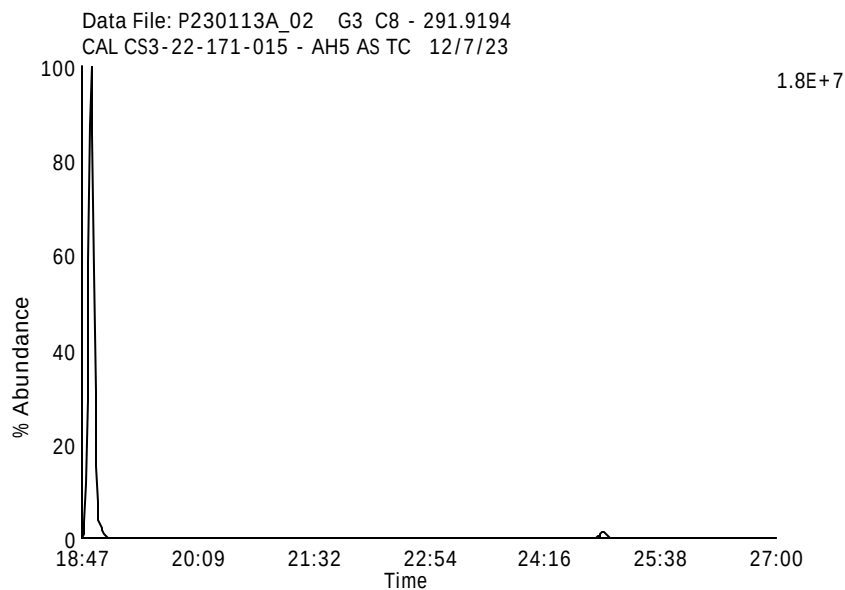
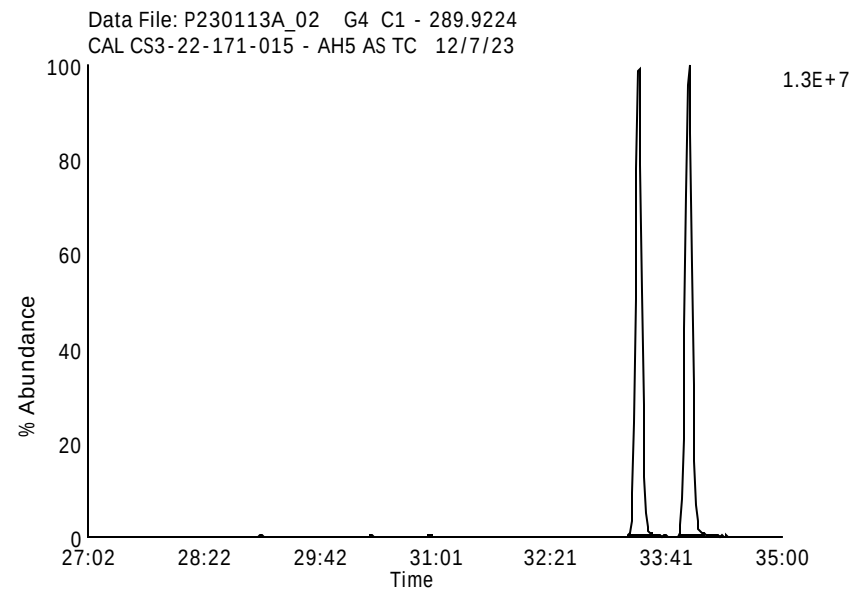
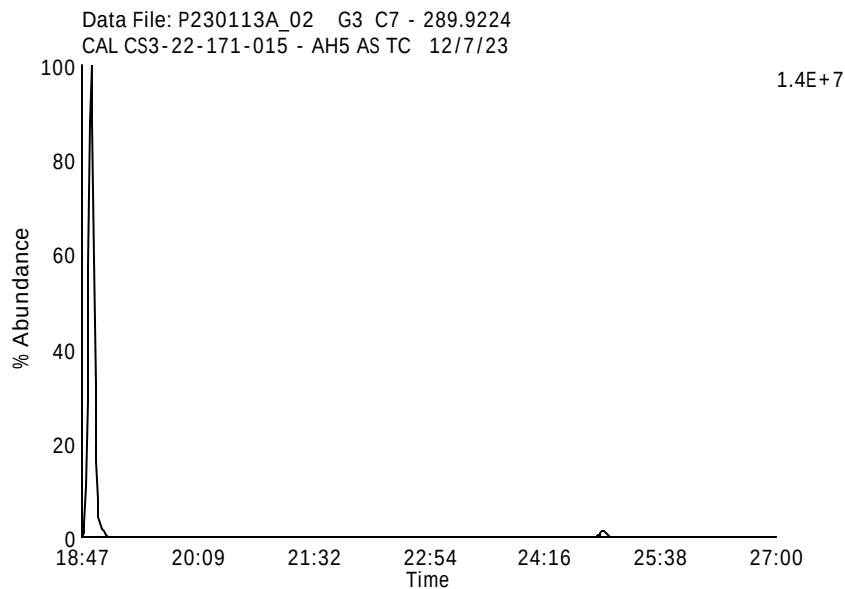
Data File Name: P230113A_02

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/13/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23



Penta Chlorinated Biphenyls

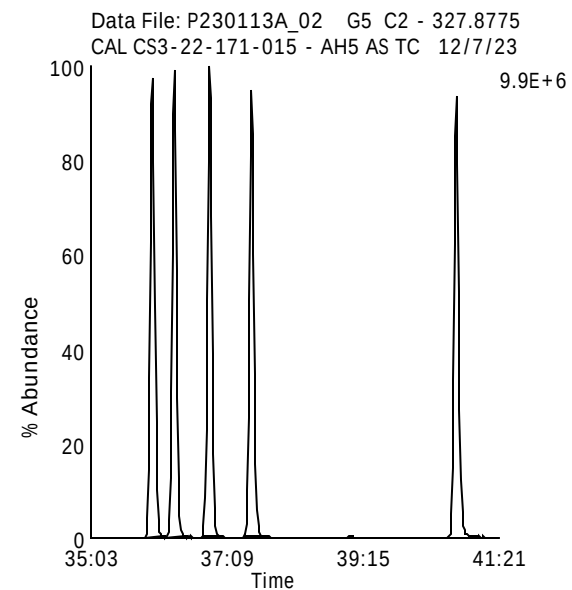
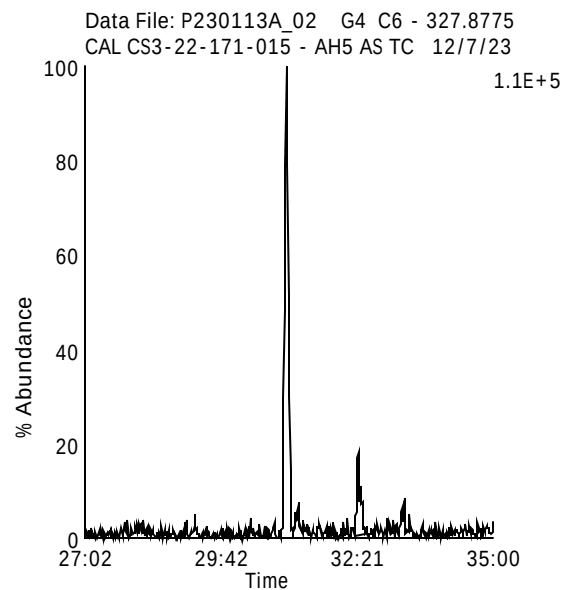
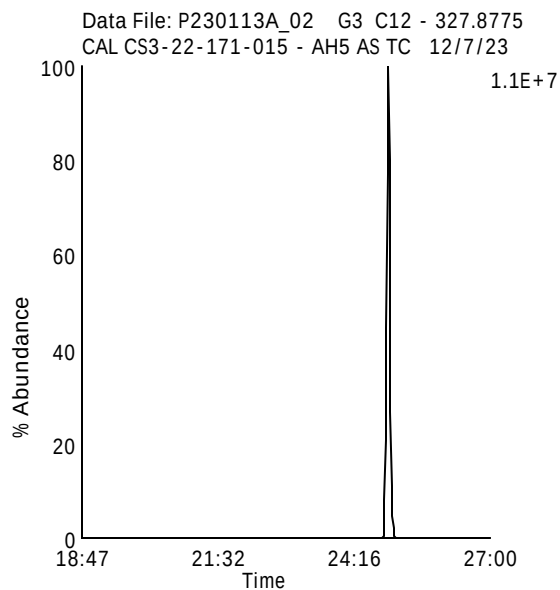
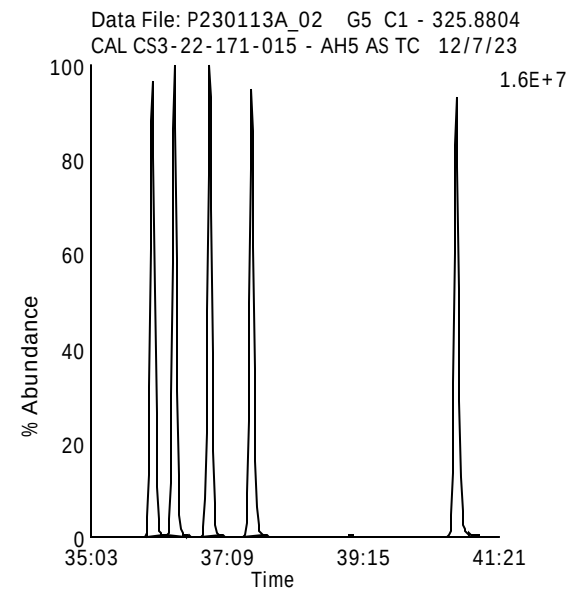
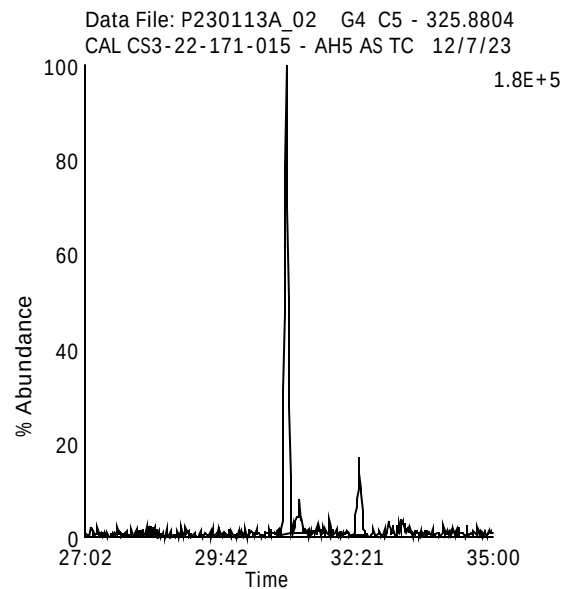
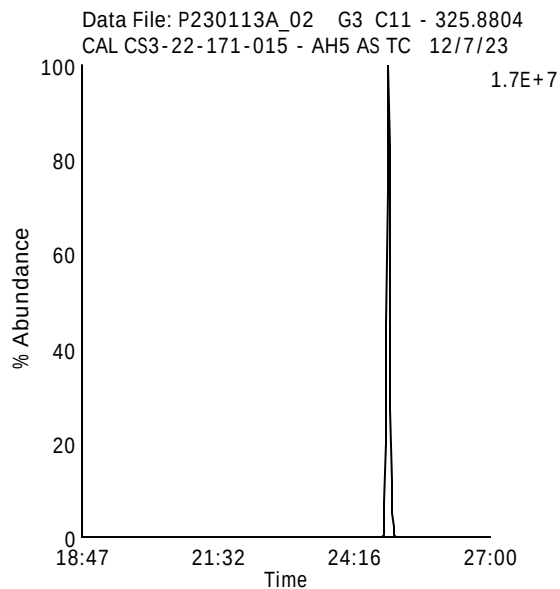
Data File Name: P230113A_02

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/13/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23



Hexa Chlorinated Biphenyls

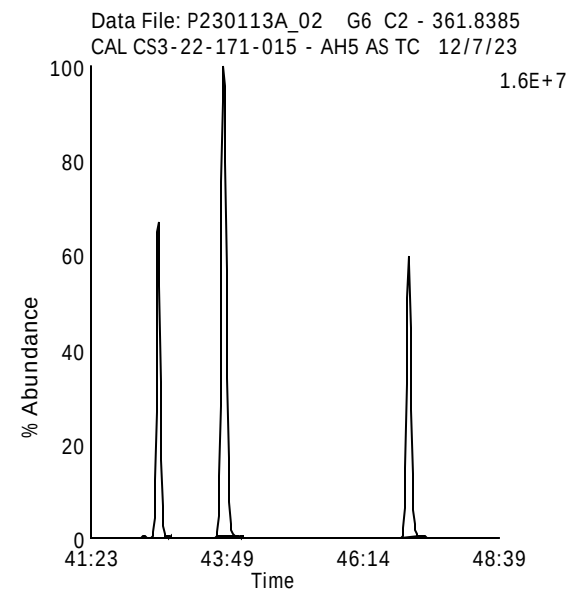
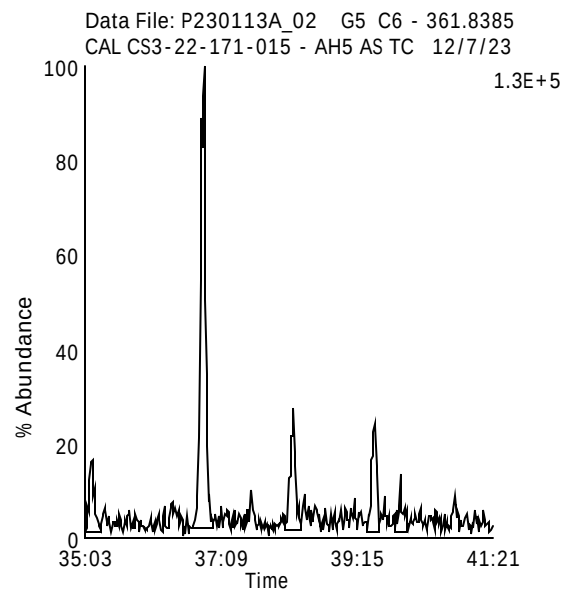
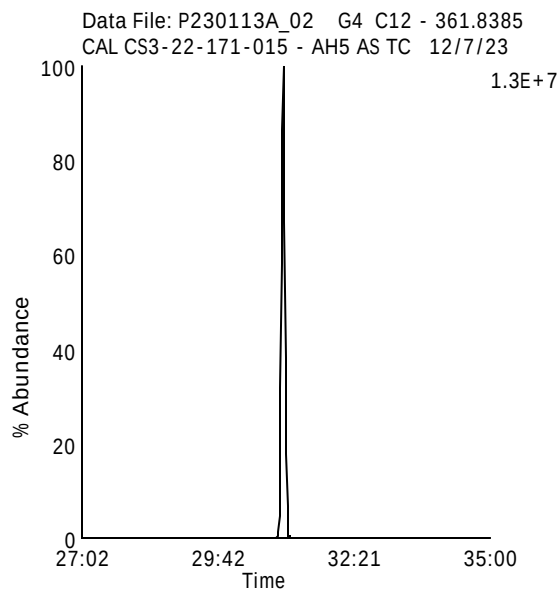
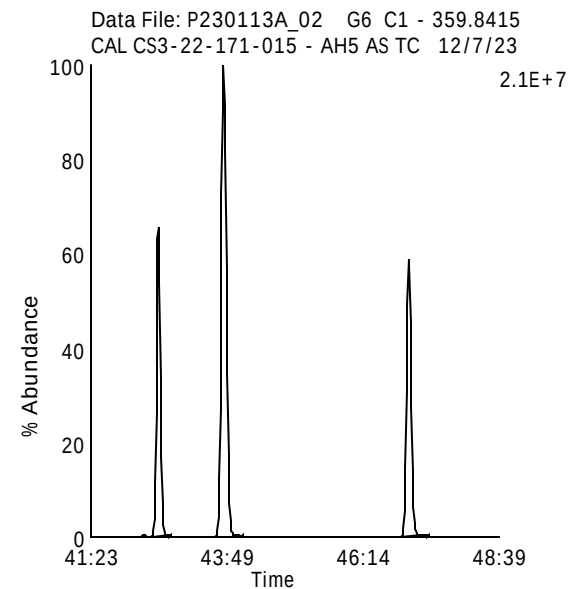
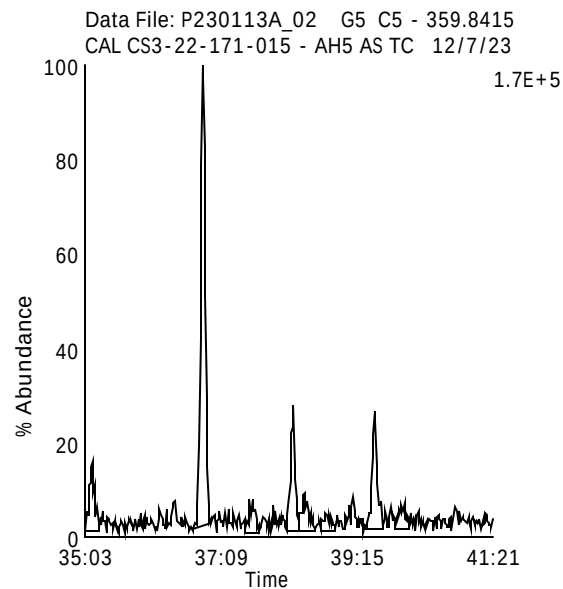
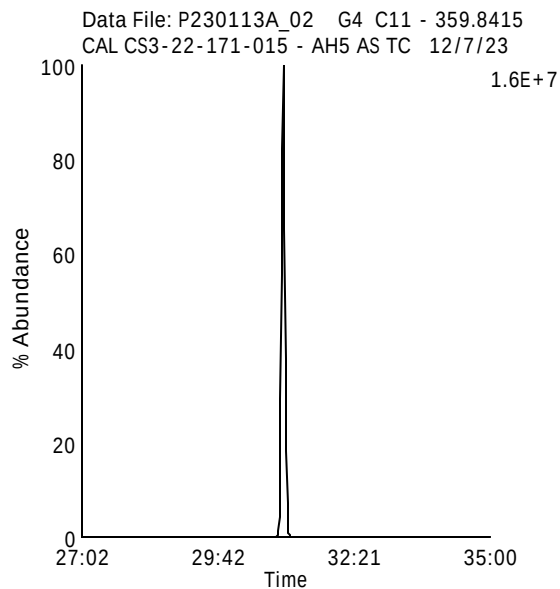
Data File Name: P230113A_02

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/13/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23



Hepta Chlorinated Biphenyls

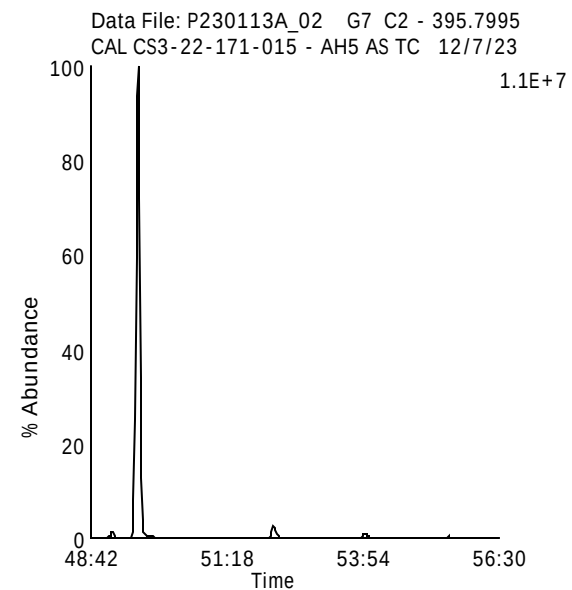
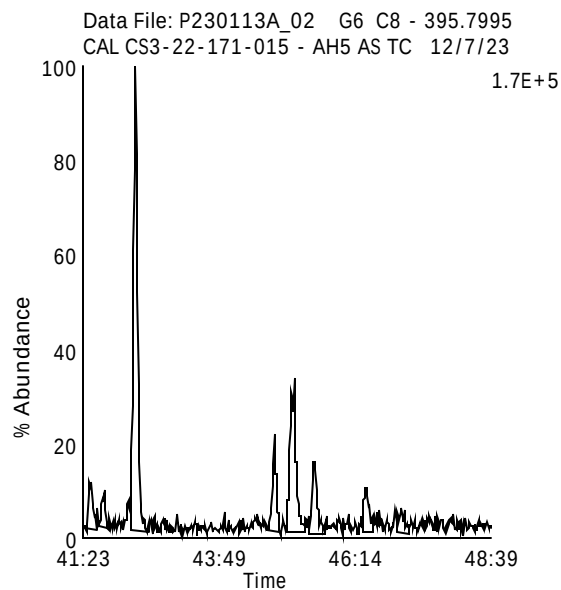
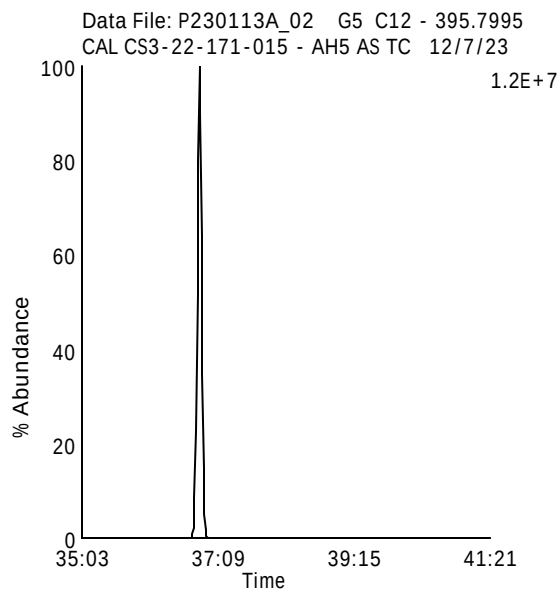
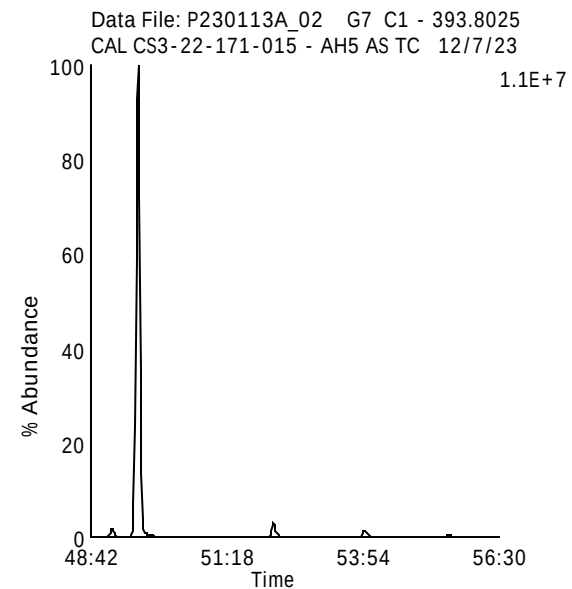
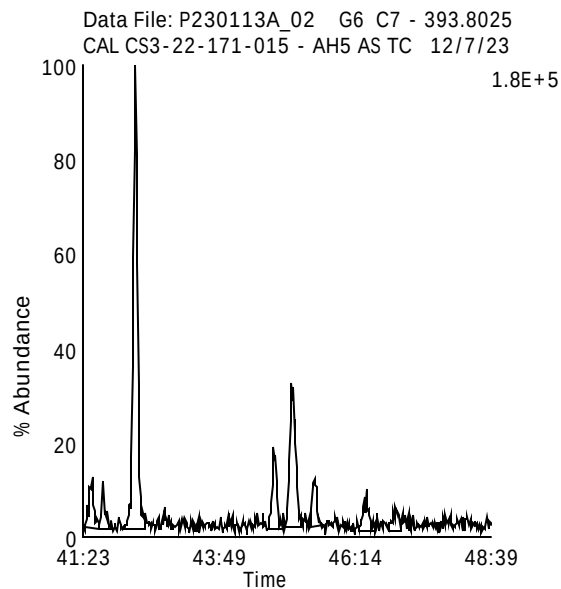
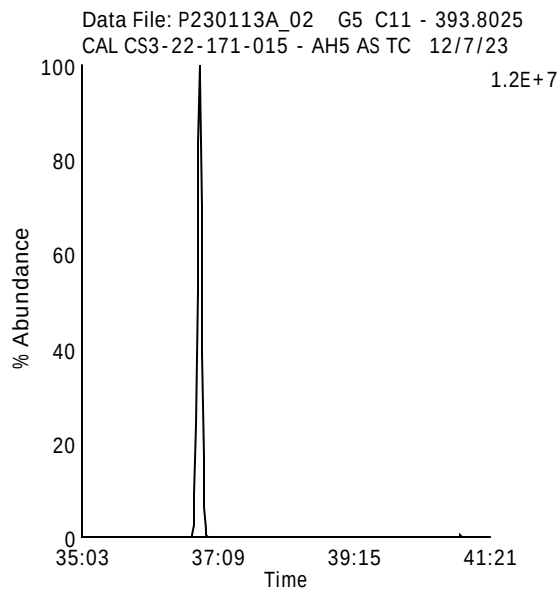
Data File Name: P230113A_02

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/13/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23



Octa Chlorinated Biphenyls

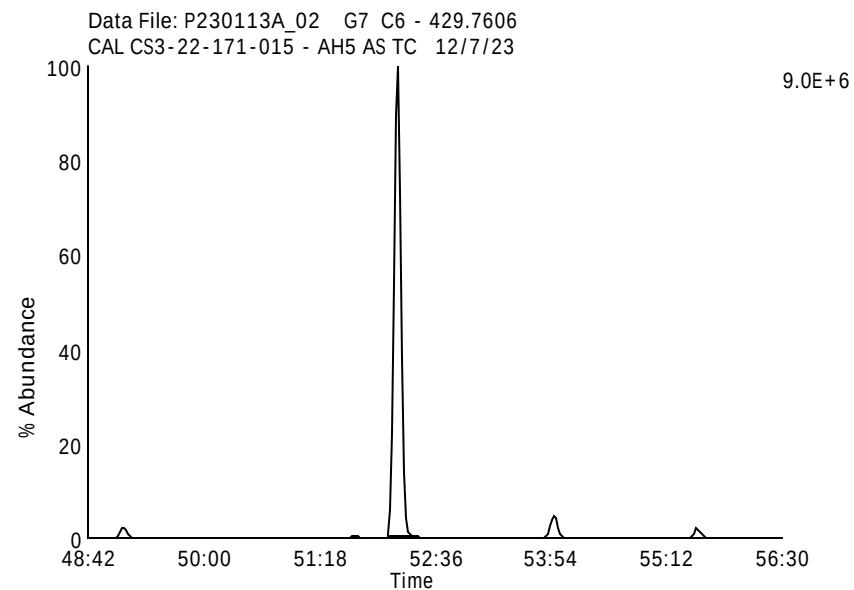
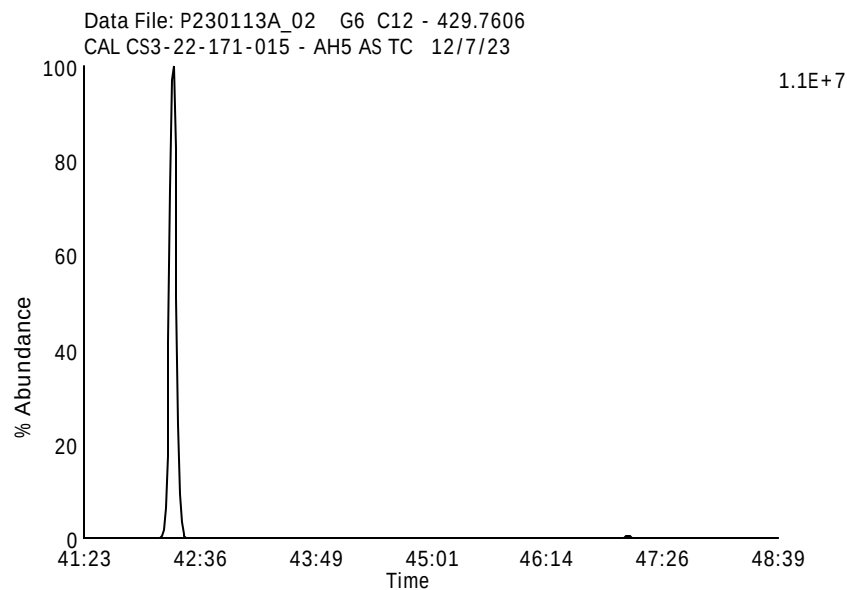
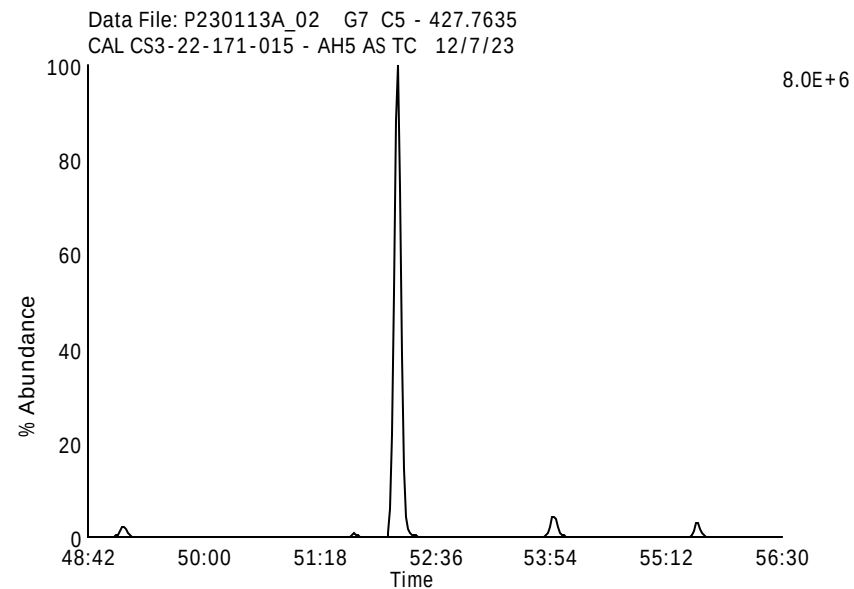
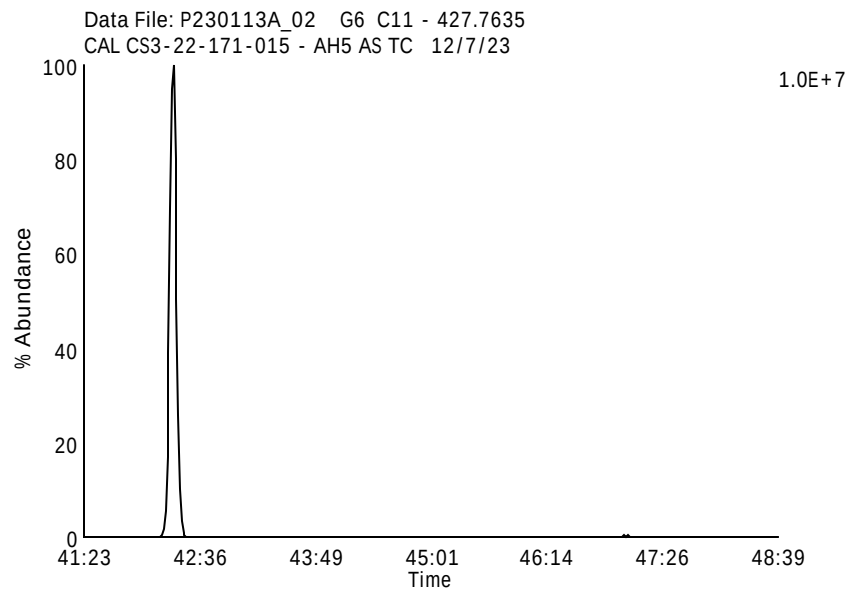
Data File Name: P230113A_02

Date Acquired: 1/13/2023

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Nona Chlorinated Biphenyls

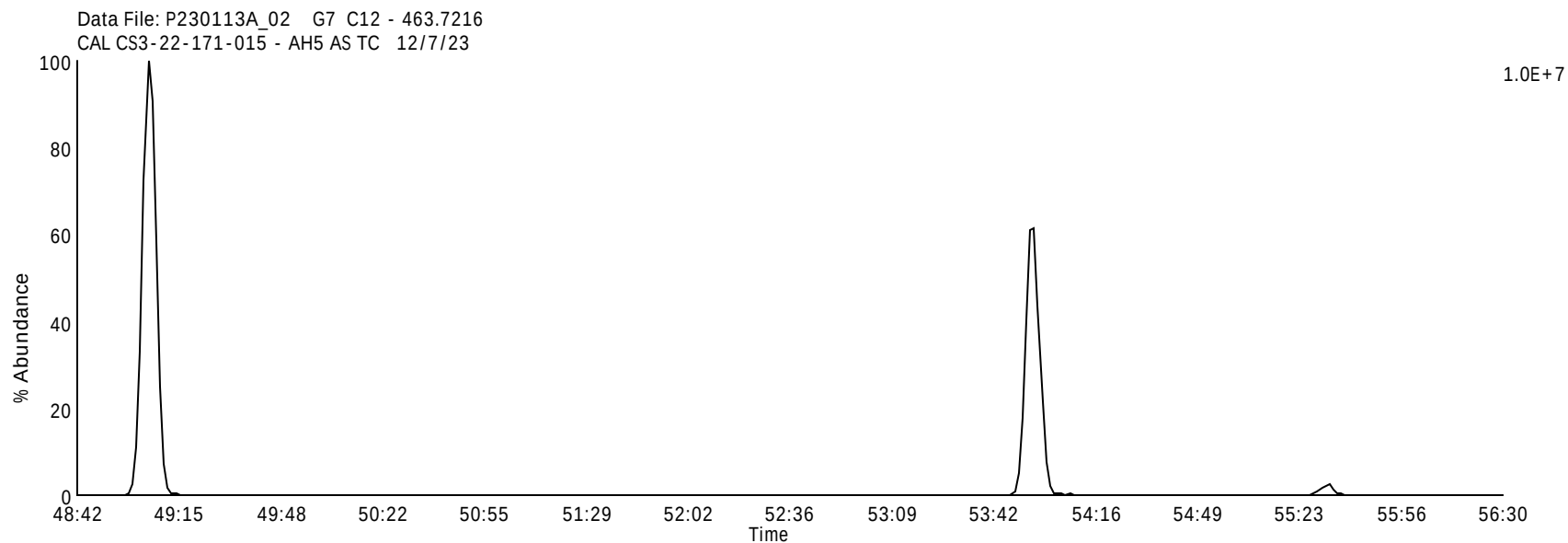
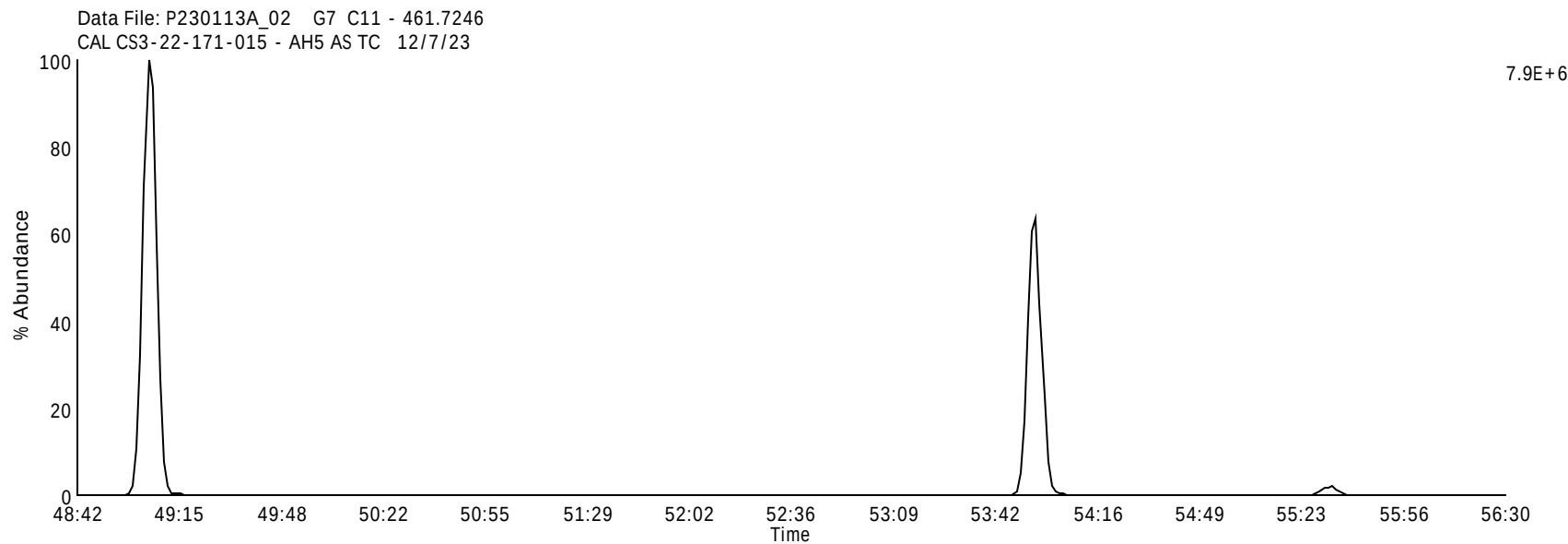
Data File Name: P230113A_02

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/13/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23



Deca Chlorinated Biphenyl

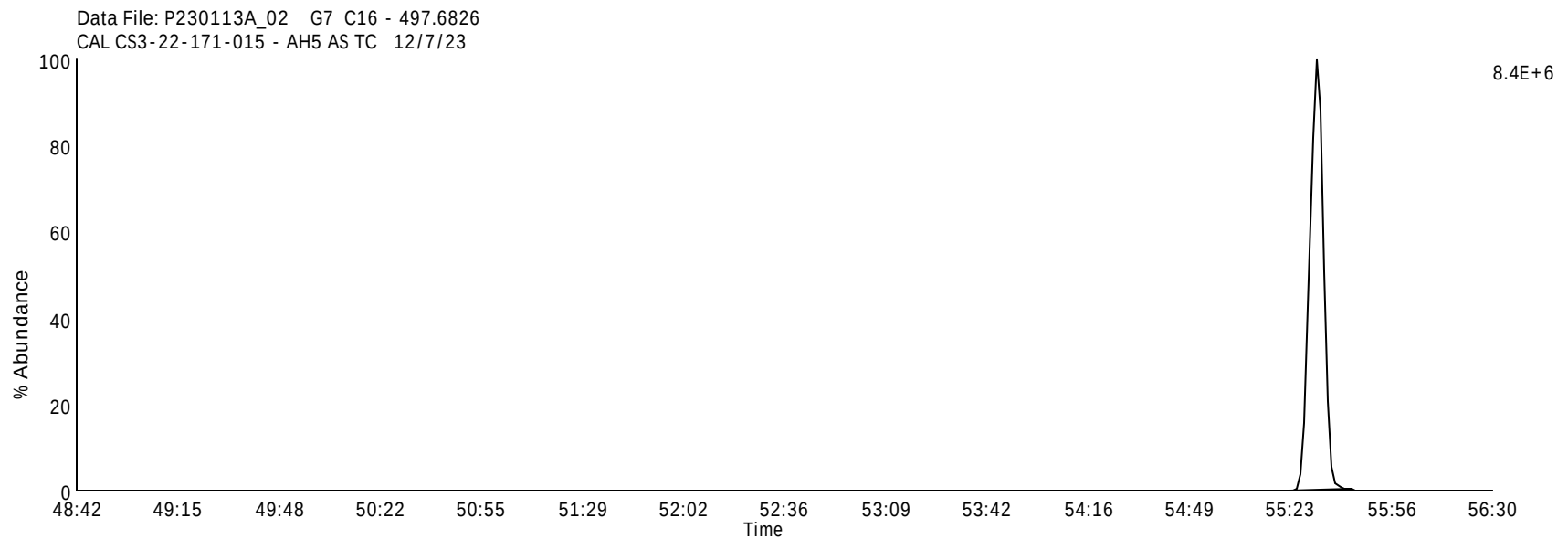
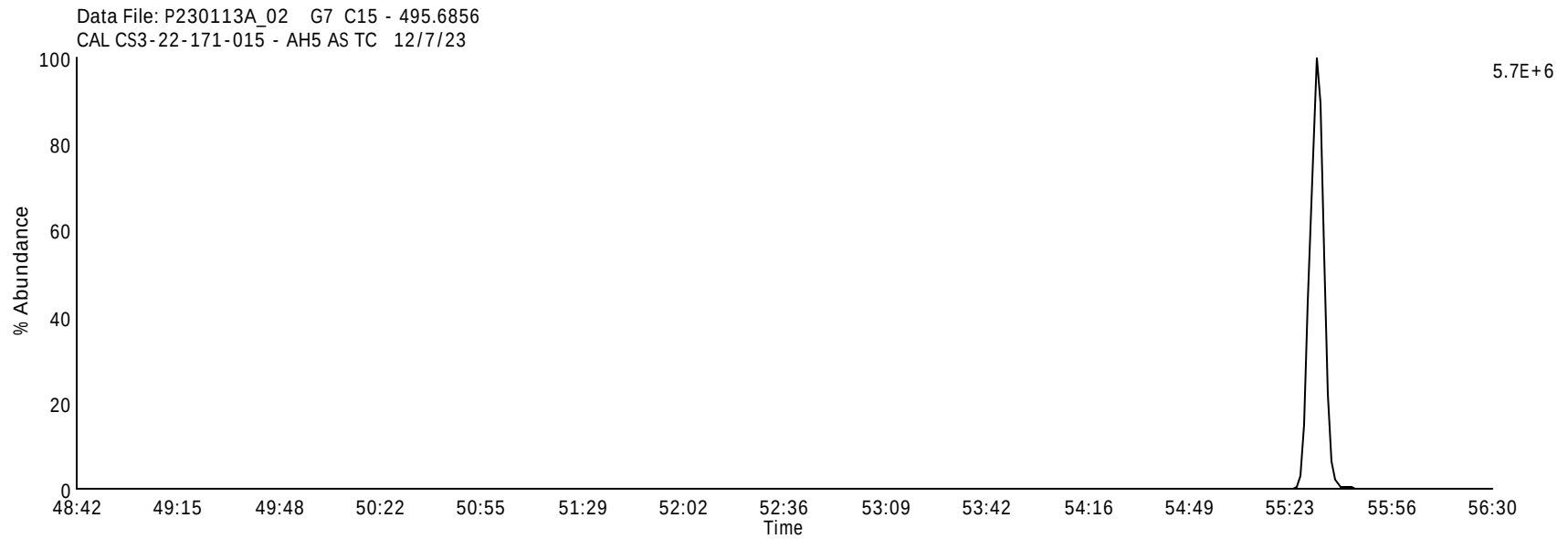
Data File Name: P230113A_02

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/13/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23



Group 1 - 4 Lock mass

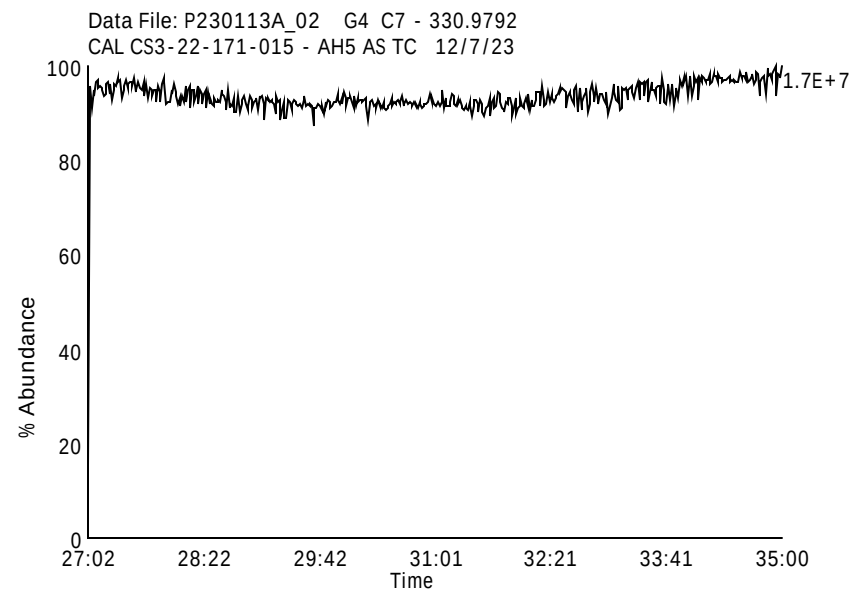
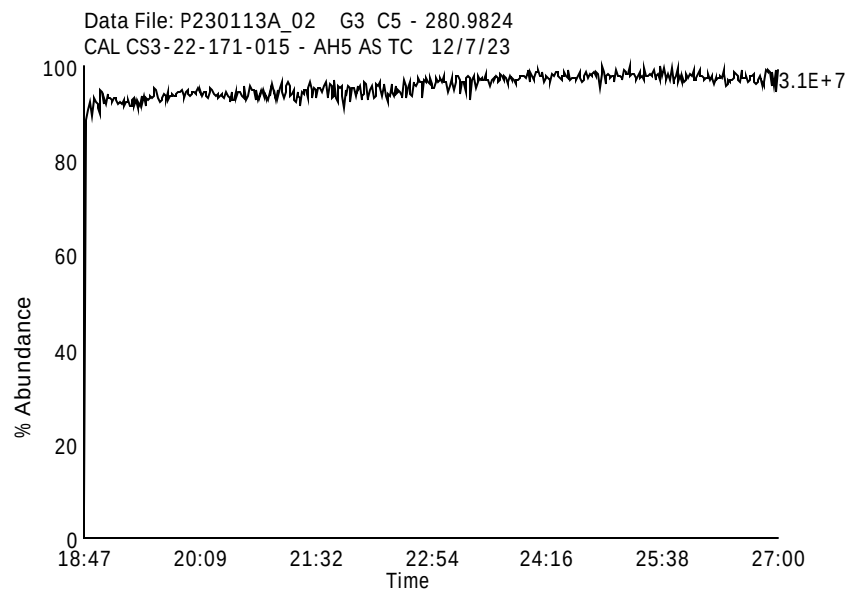
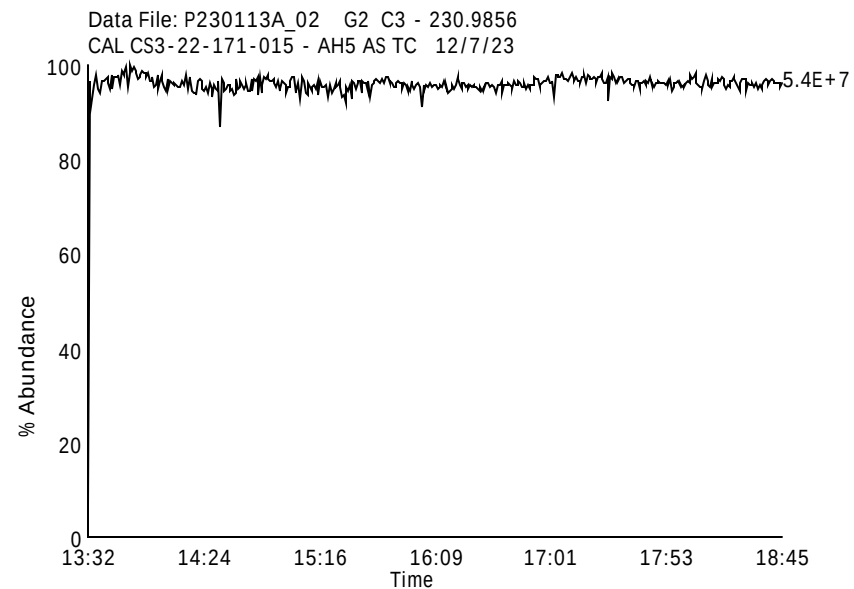
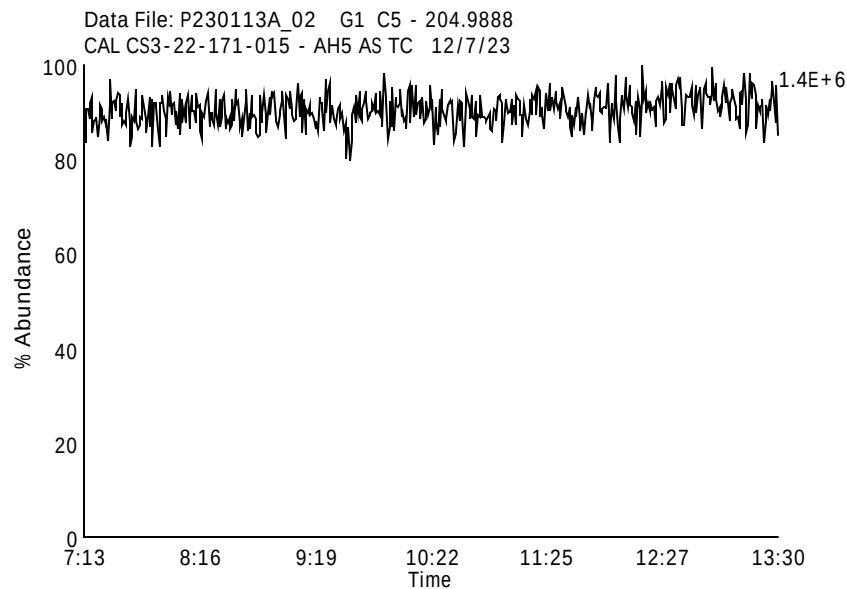
Data File Name: P230113A_02

Date Acquired: 1/13/2023

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Group 5 - 7 Lock mass

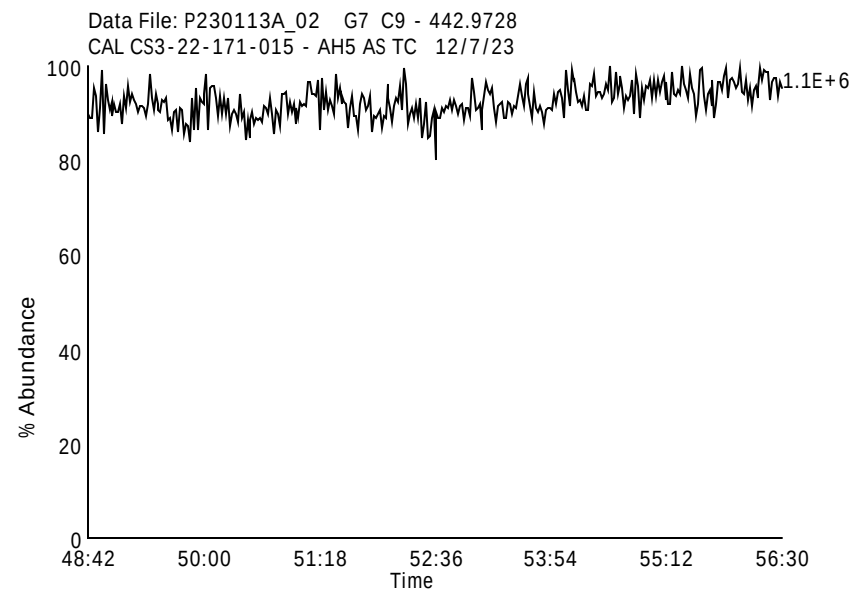
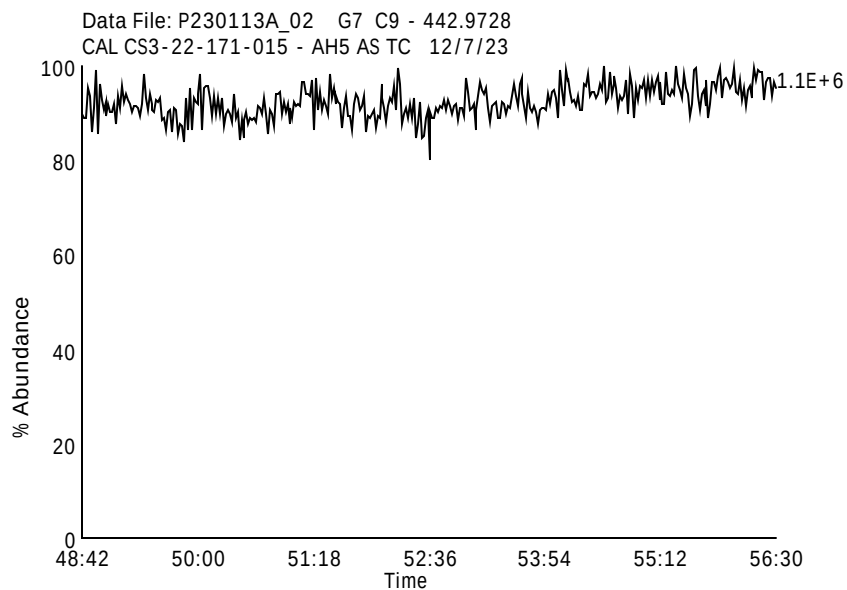
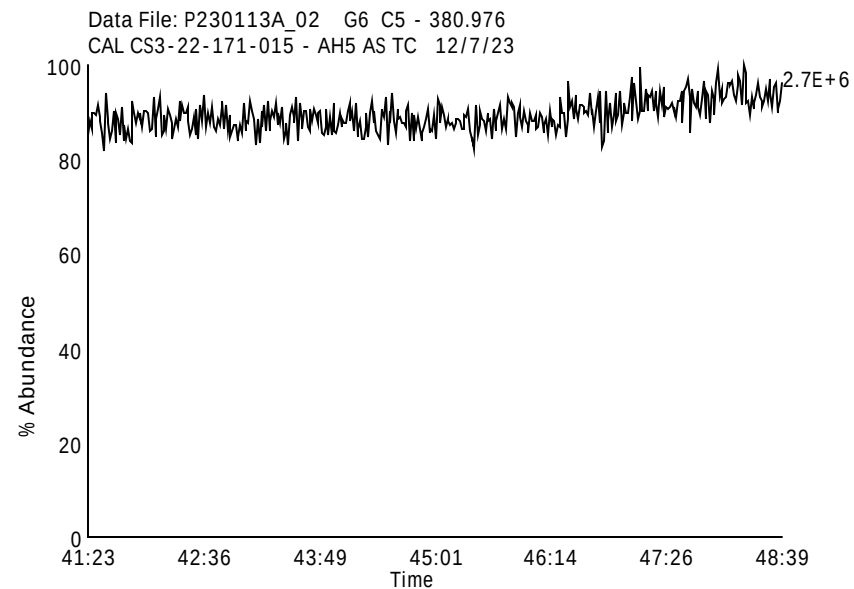
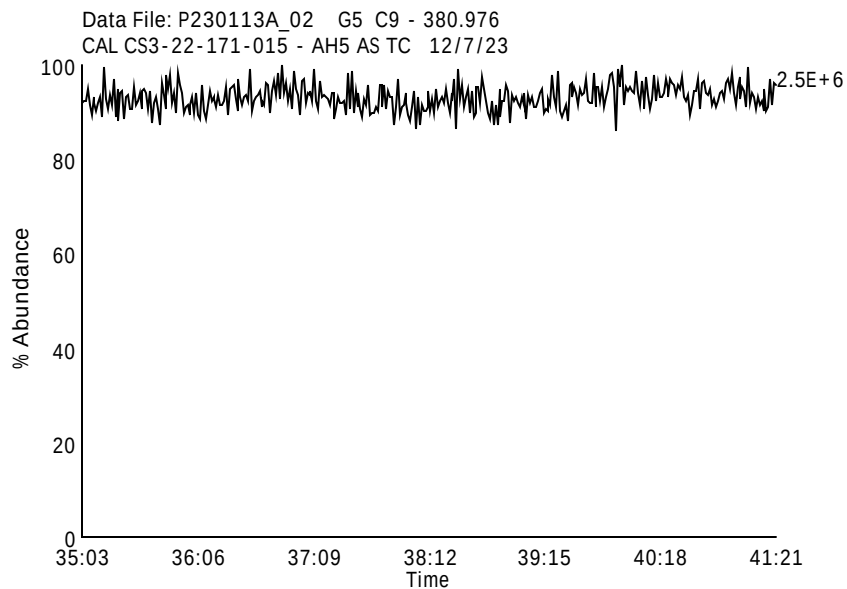
Data File Name: P230113A_02

Date Acquired: 1/13/2023

Sample Description: CAL CS3-22-171-015 - AH5 AS TC 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Labeled Mono Chlorinated Biphenyls

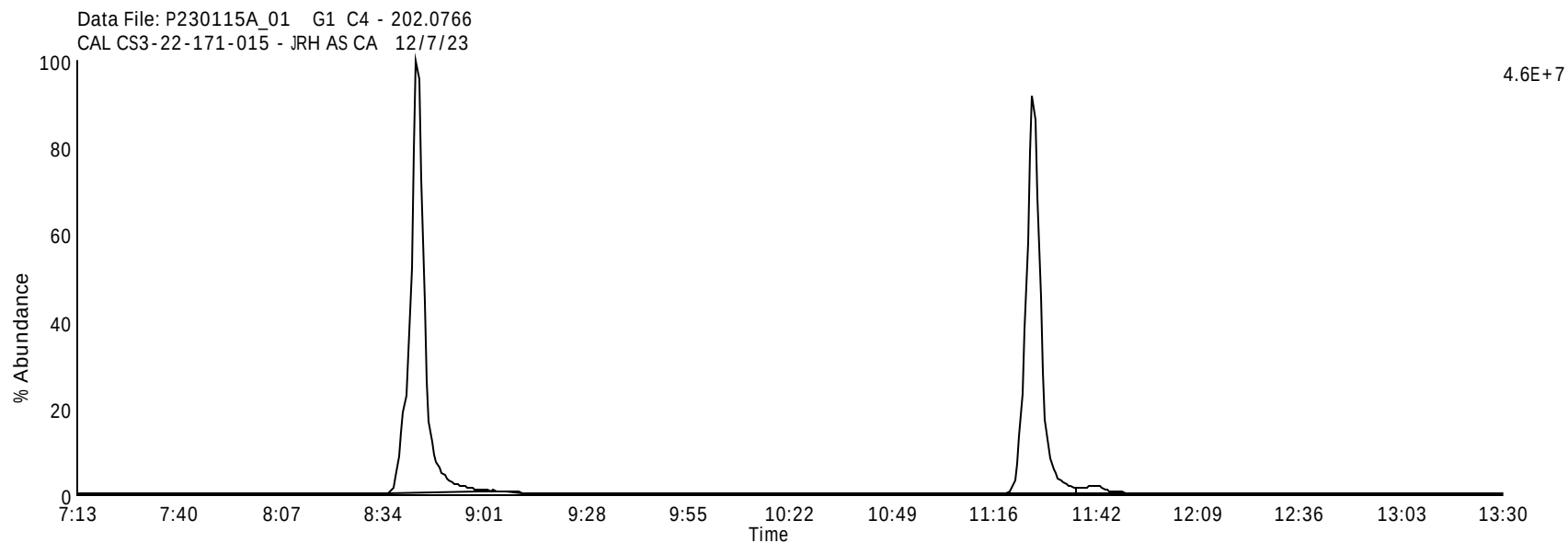
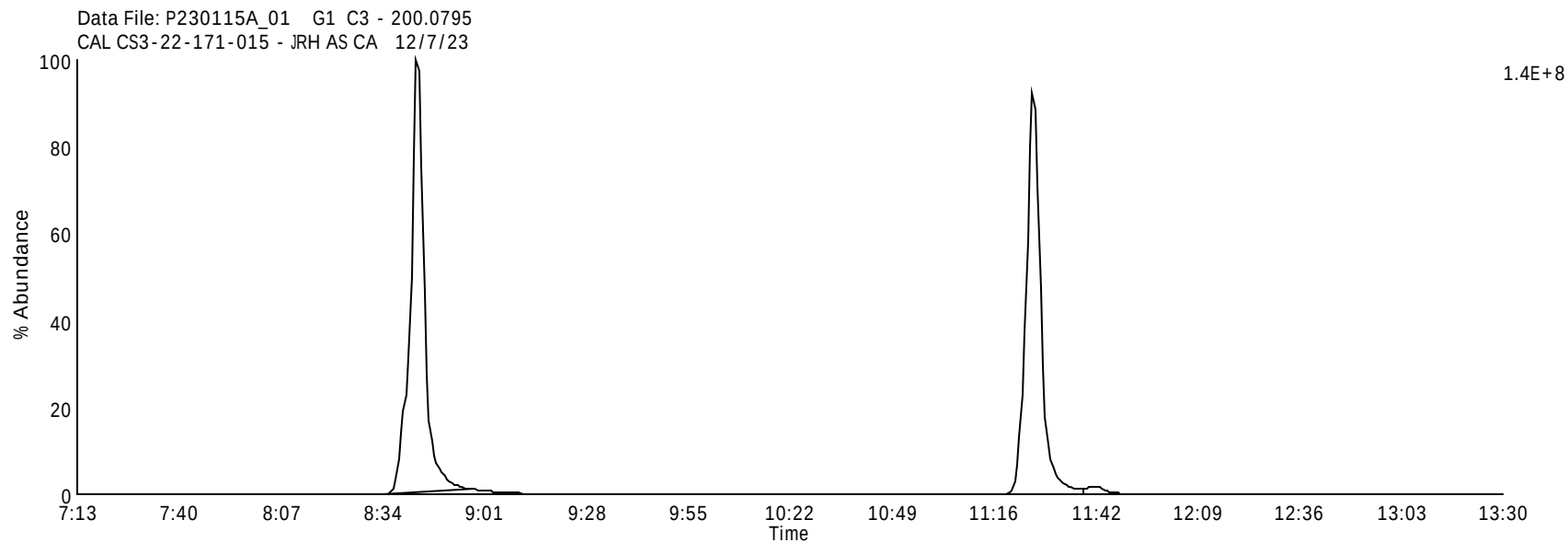
Data File Name: P230115A_01

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/15/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23



Labeled Di Chlorinated Biphenyls

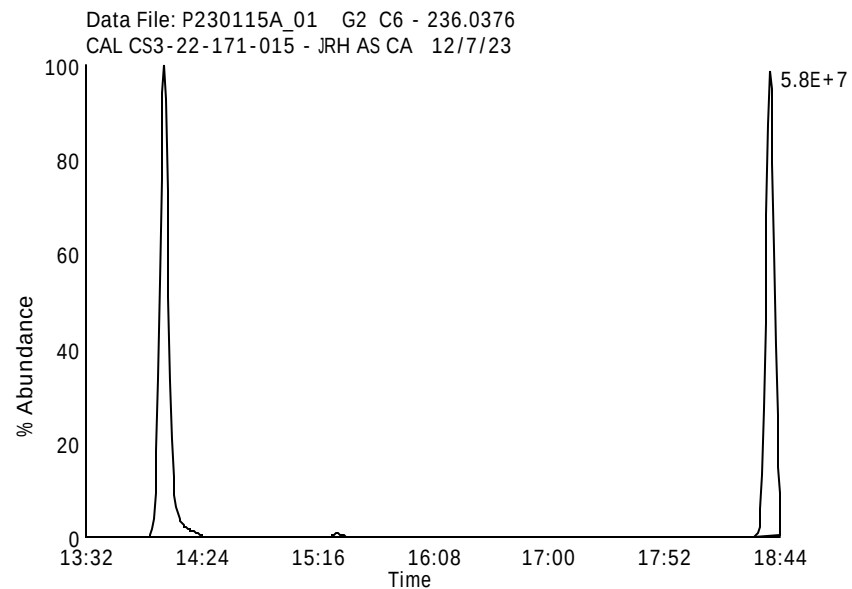
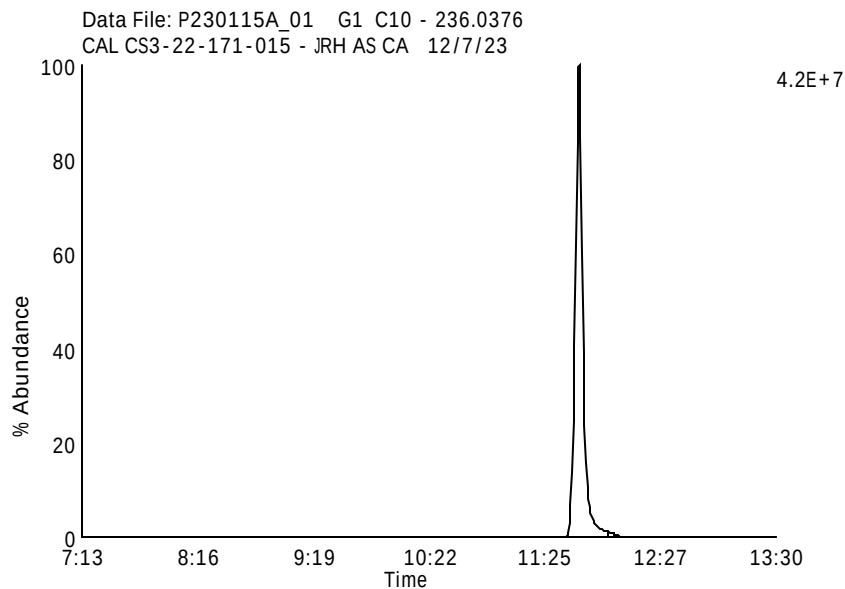
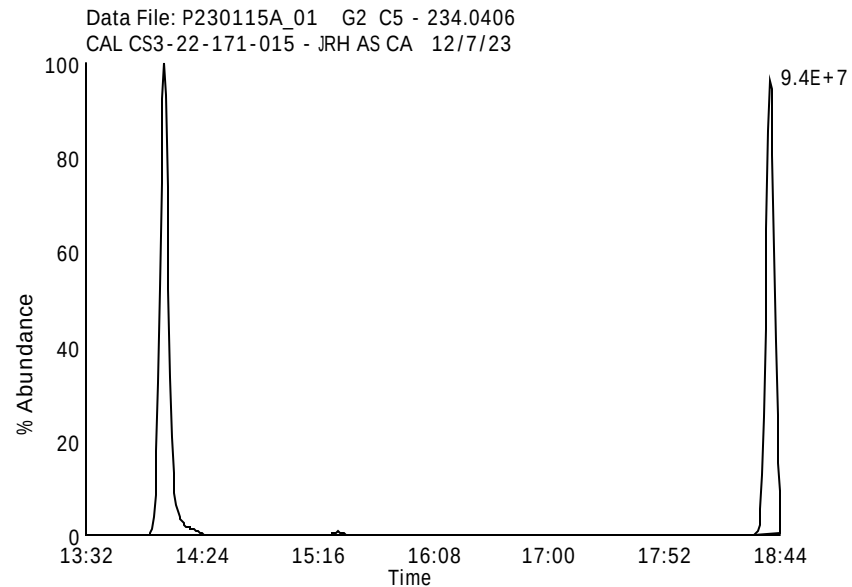
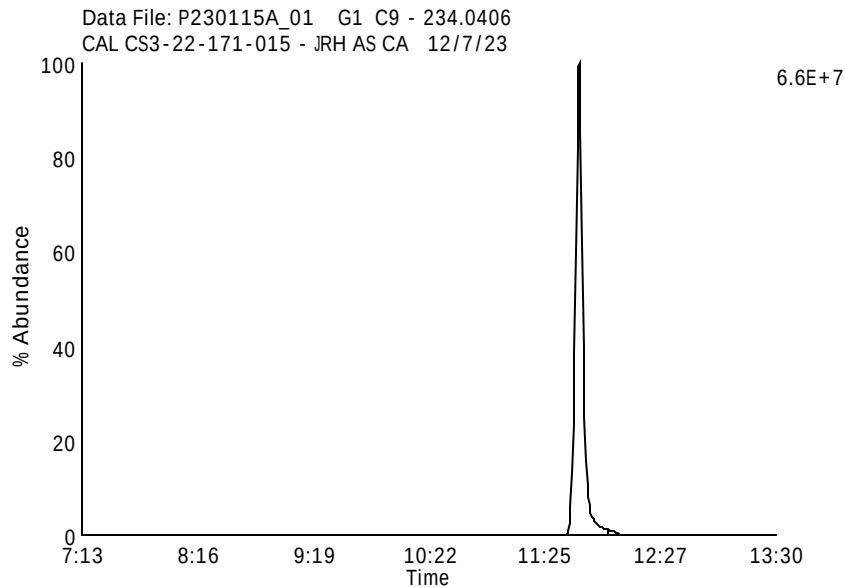
Data File Name: P230115A_01

Date Acquired: 1/15/2023

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Labeled Tri Chlorinated Biphenyls

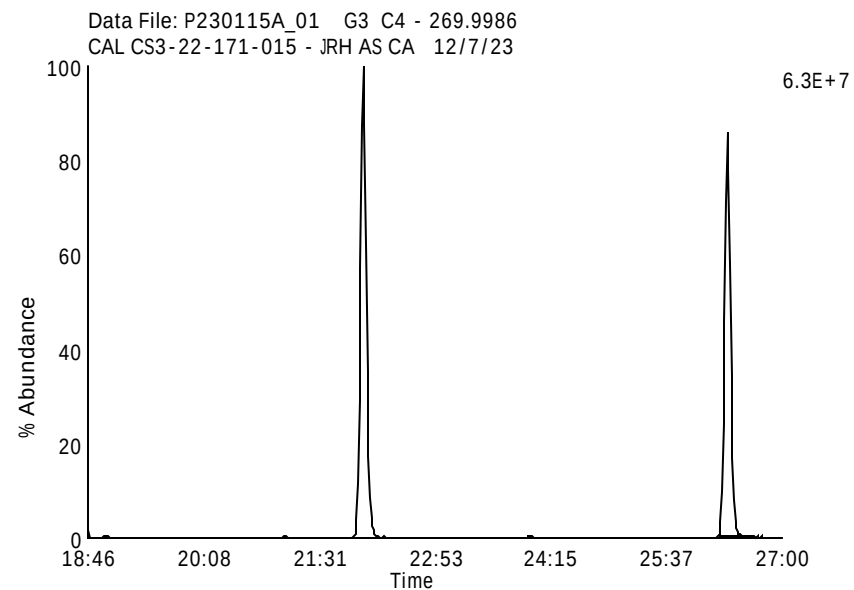
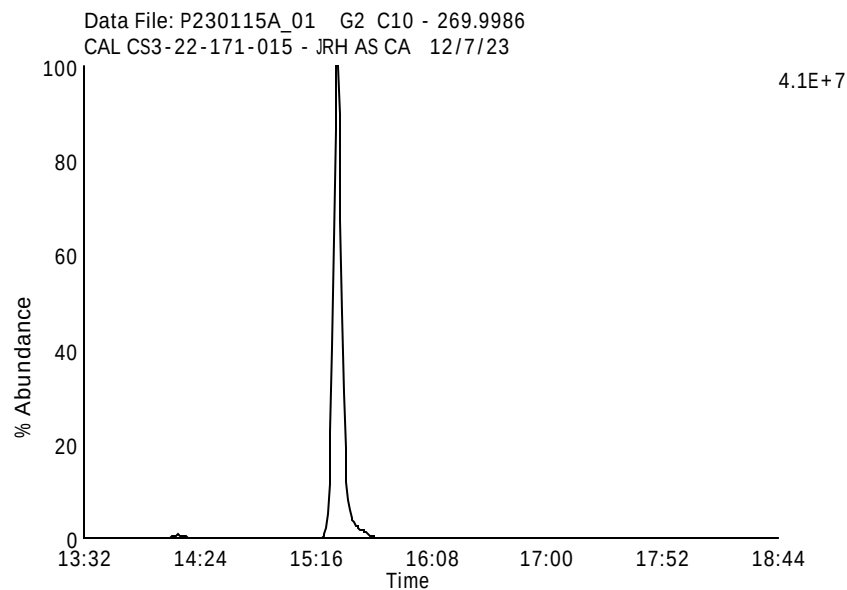
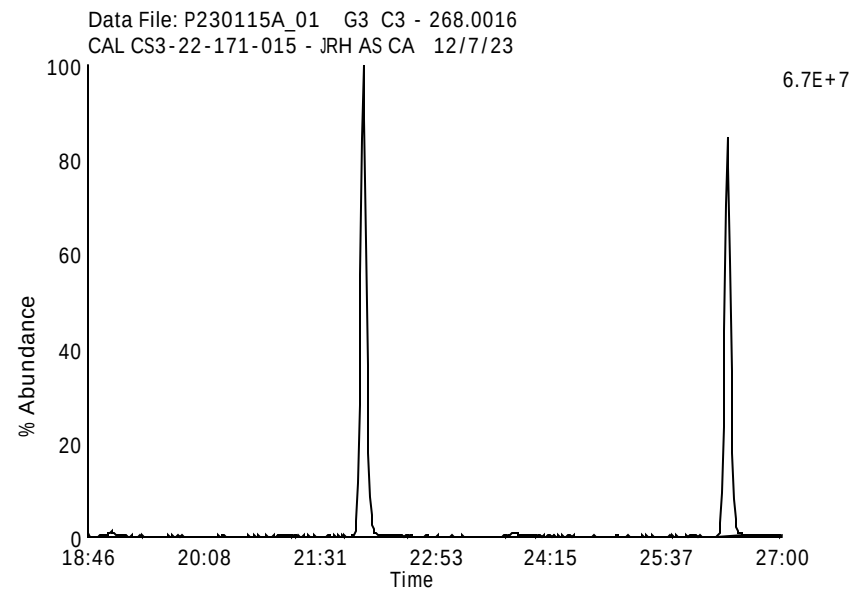
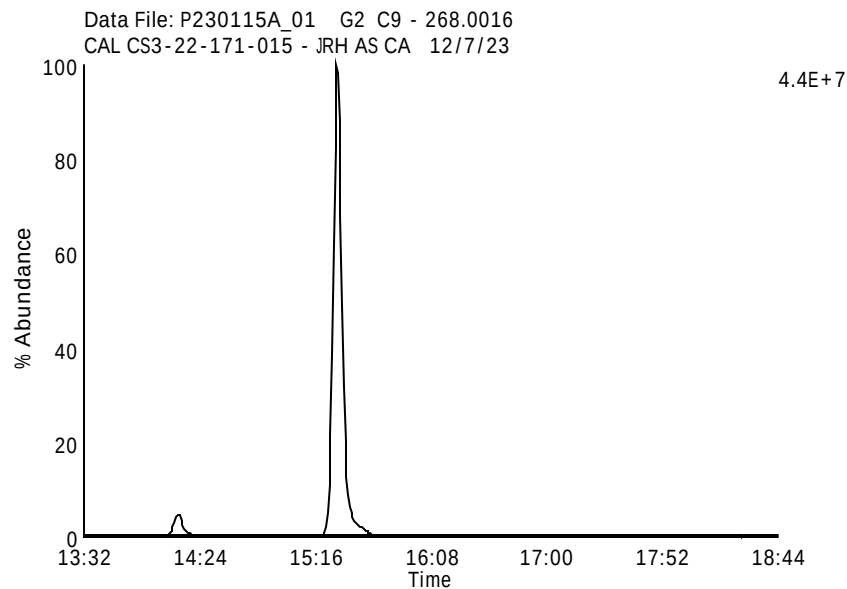
Data File Name: P230115A_01

Date Acquired: 1/15/2023

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Labeled Tetra Chlorinated Biphenyls

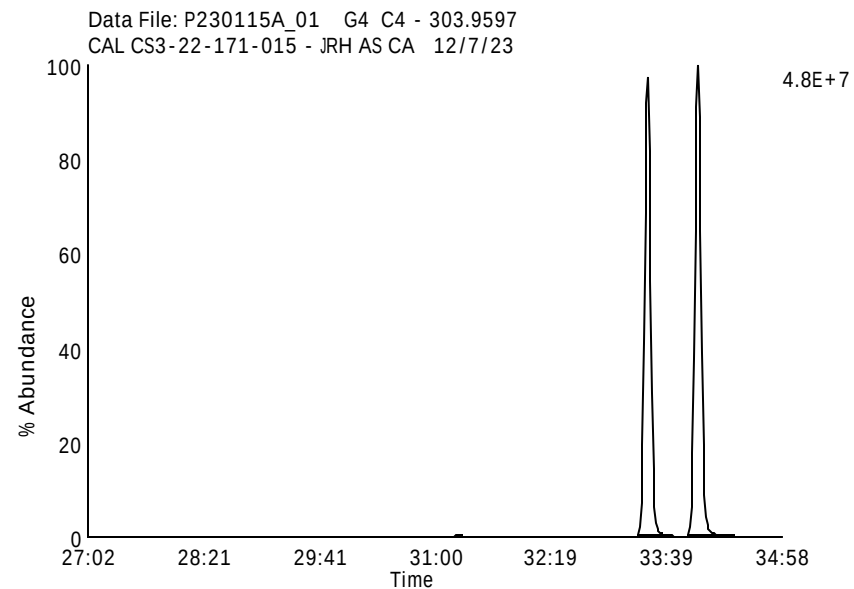
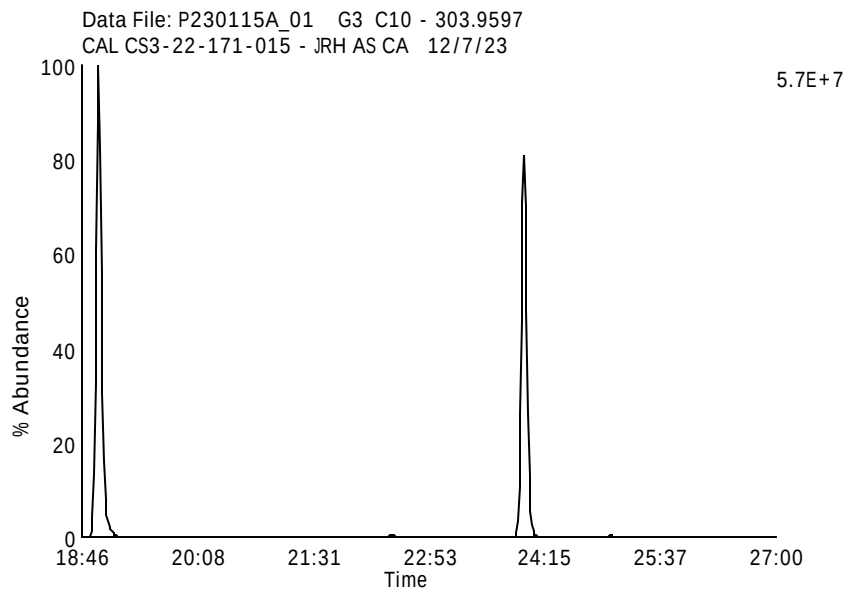
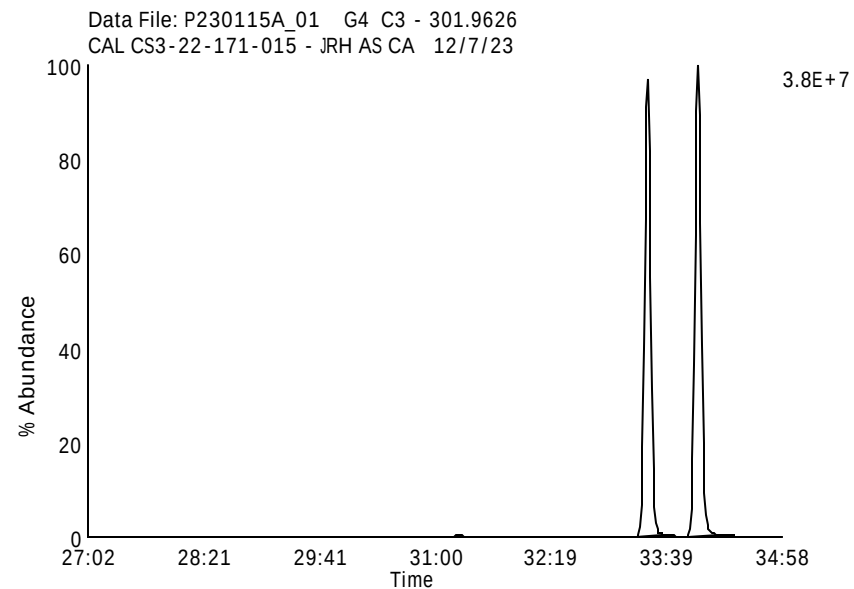
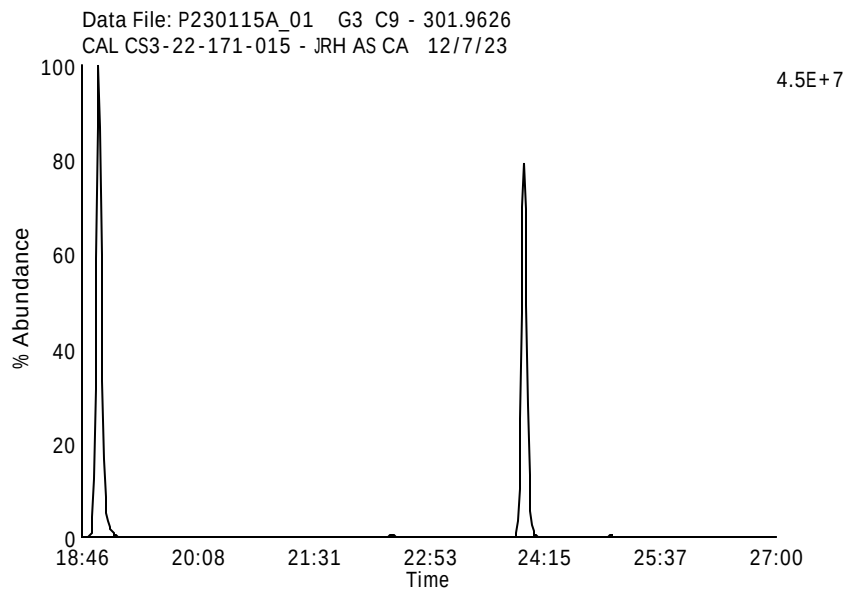
Data File Name: P230115A_01

Date Acquired: 1/15/2023

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Labeled Penta Chlorinated Biphenyls

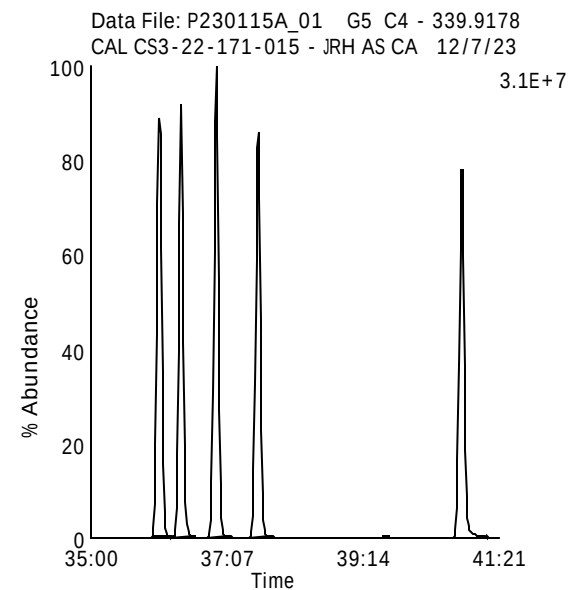
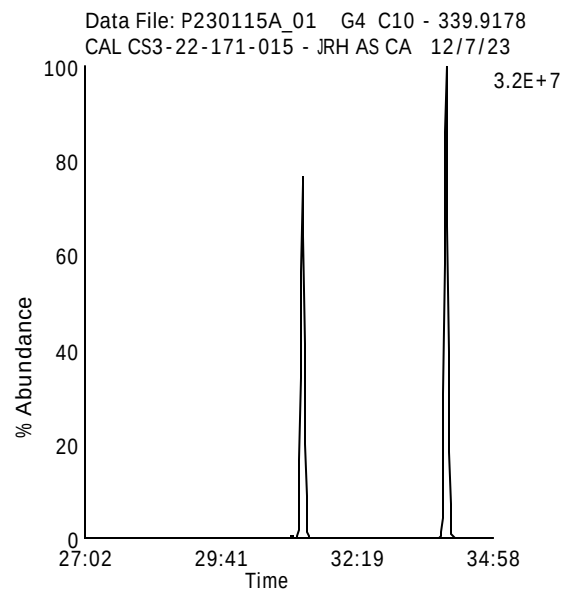
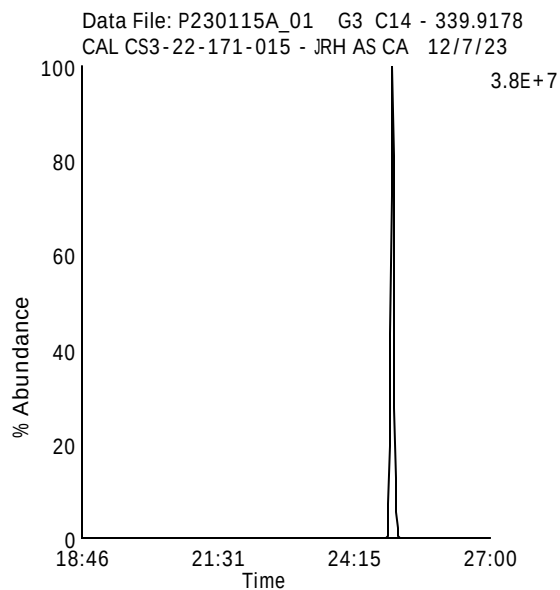
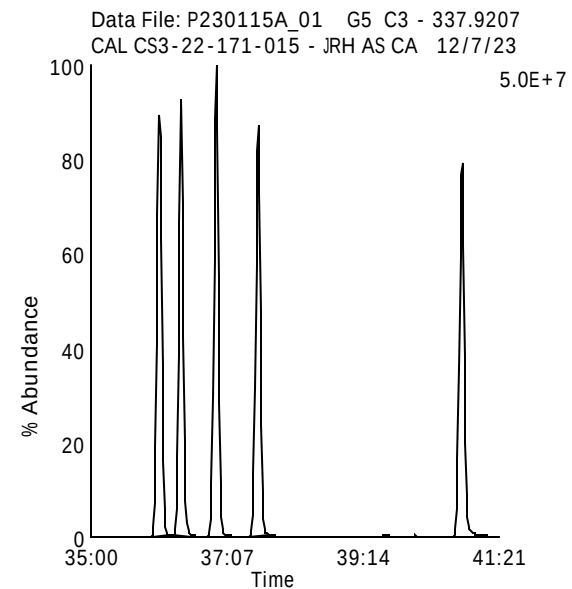
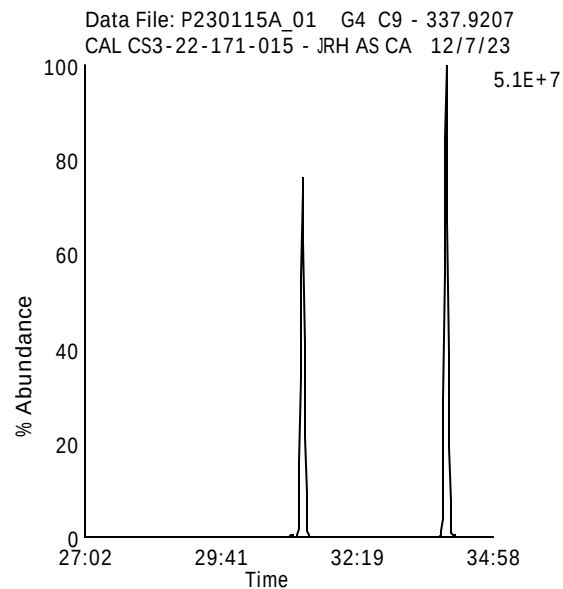
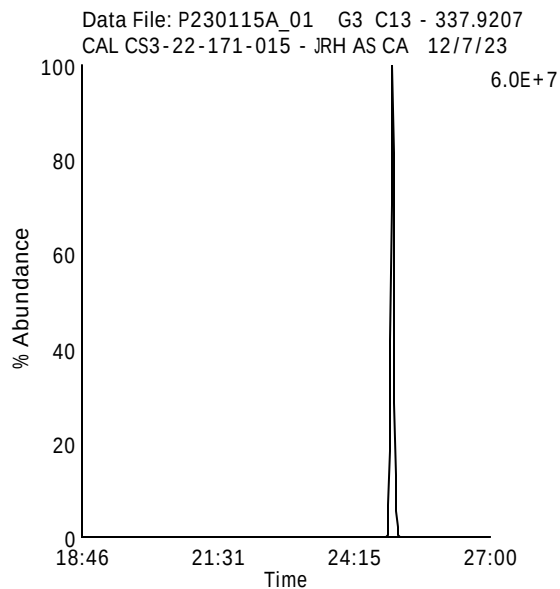
Data File Name: P230115A_01

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/15/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23



Labeled Hexa Chlorinated Biphenyls

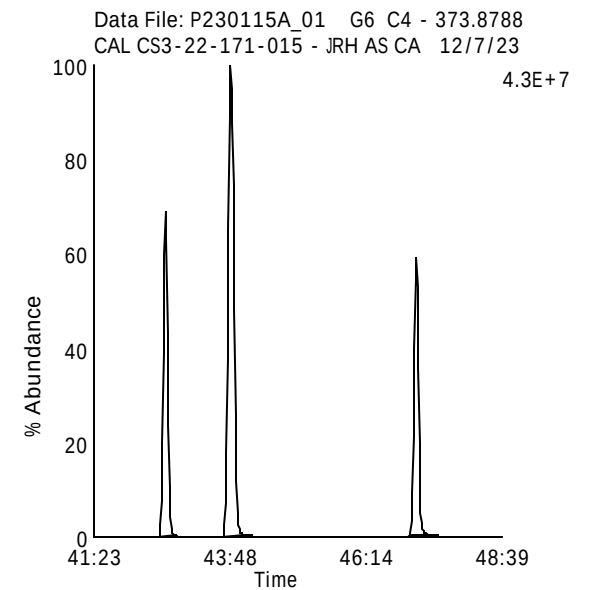
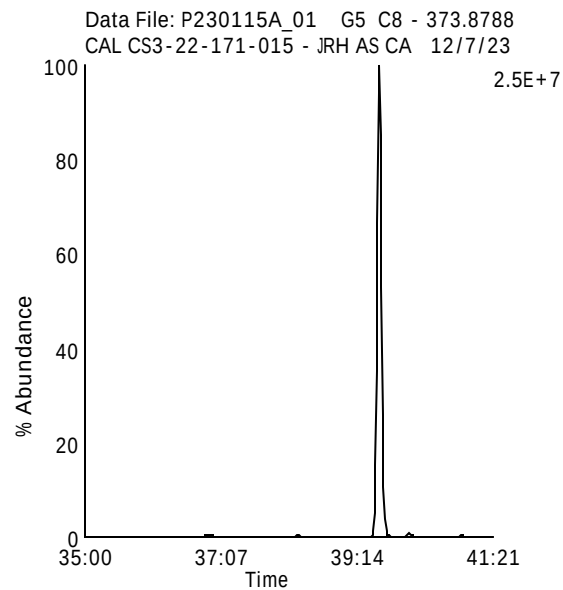
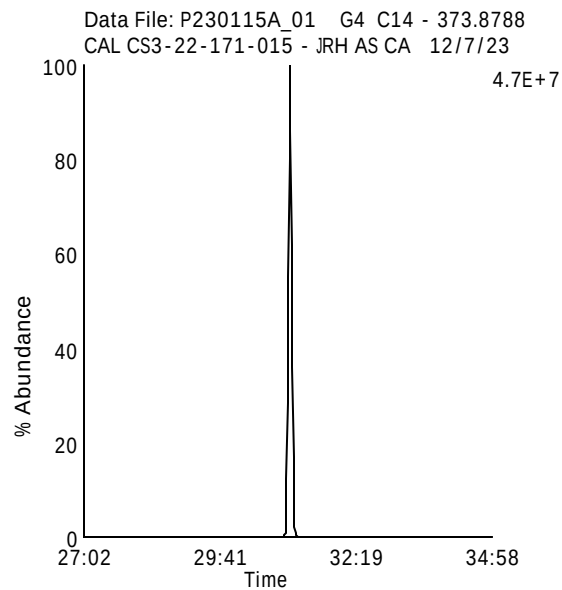
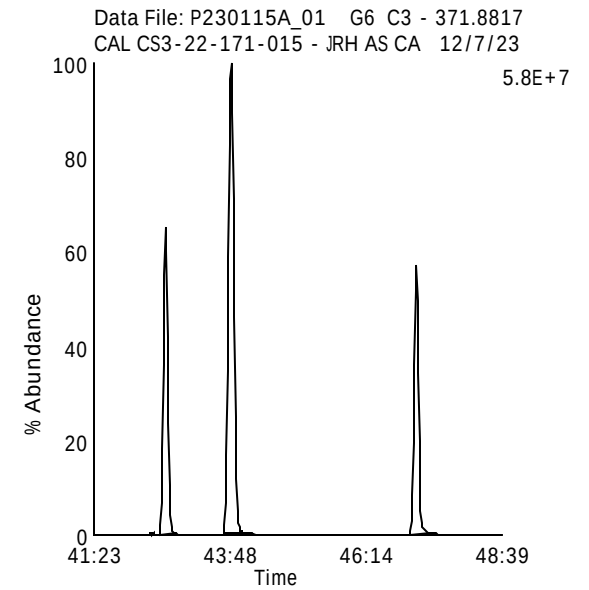
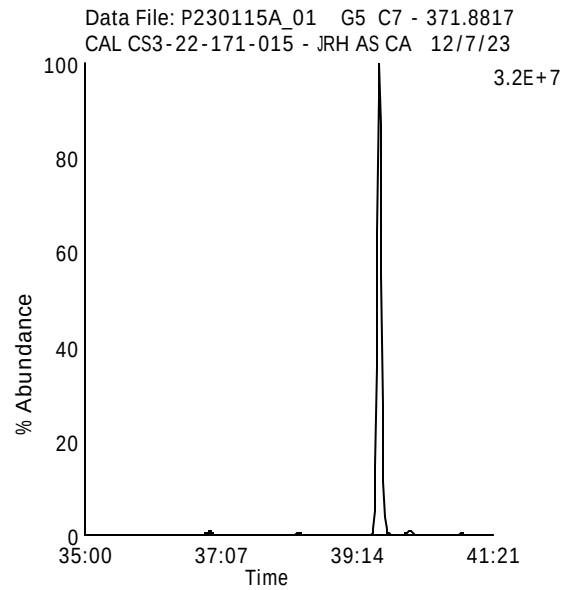
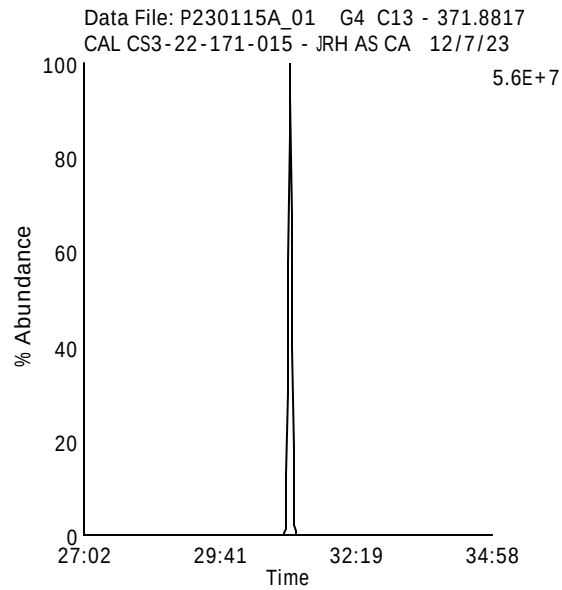
Data File Name: P230115A_01

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/15/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23



Labeled Hepta Chlorinated Biphenyls

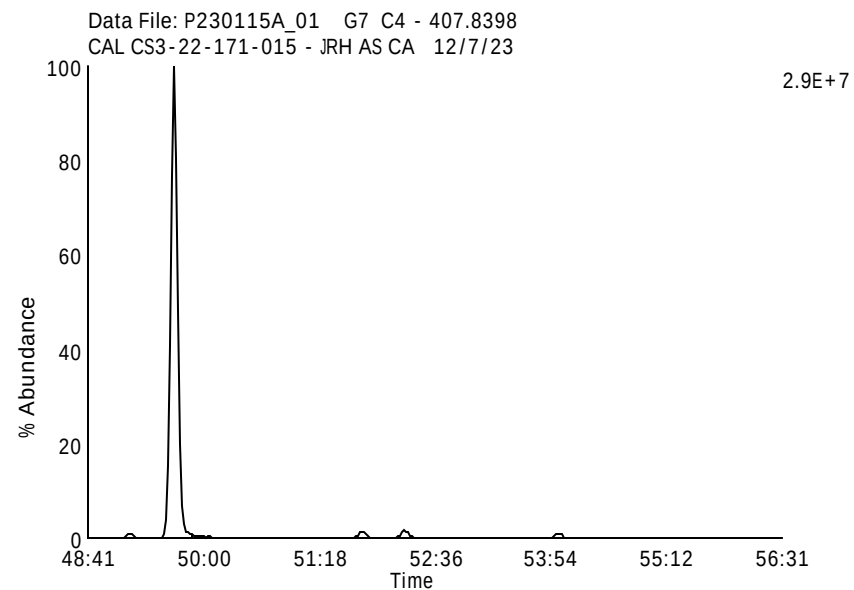
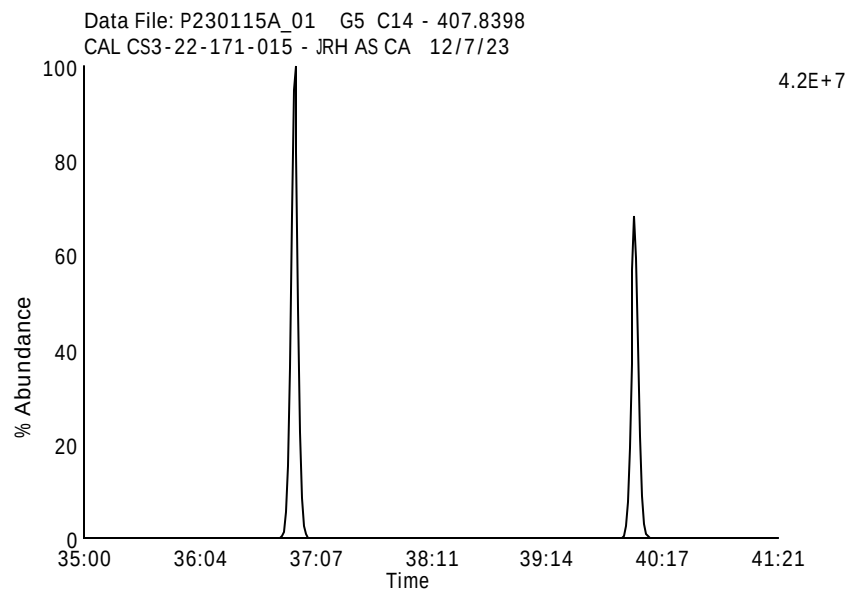
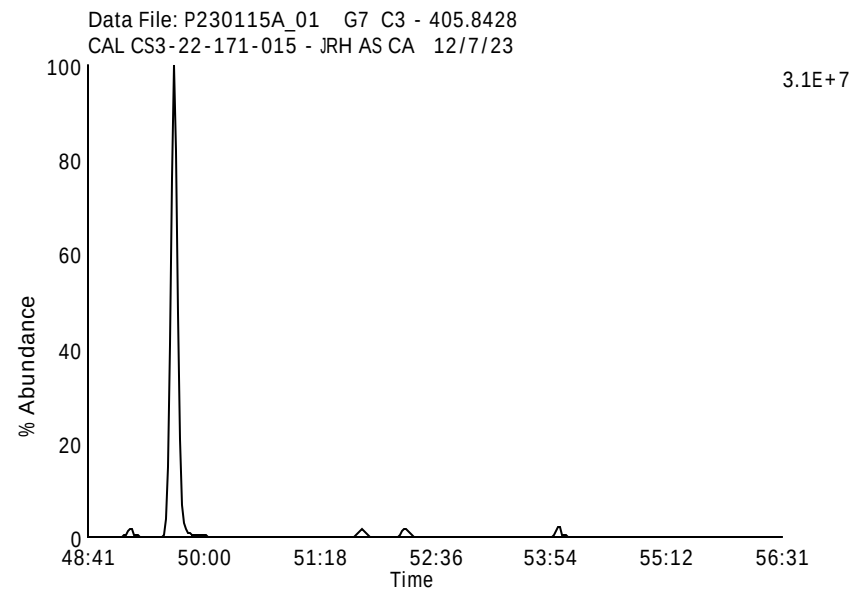
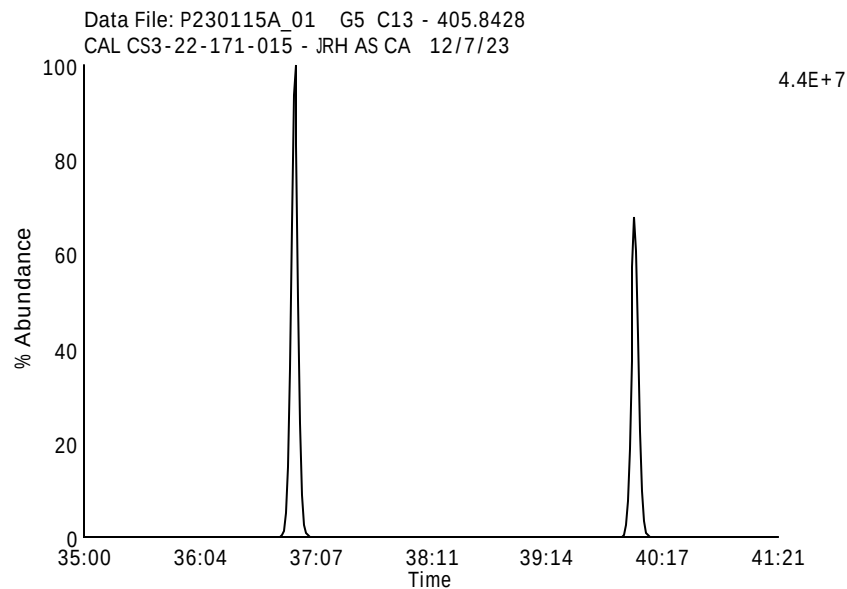
Data File Name: P230115A_01

Date Acquired: 1/15/2023

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Labeled Octa Chlorinated Biphenyls

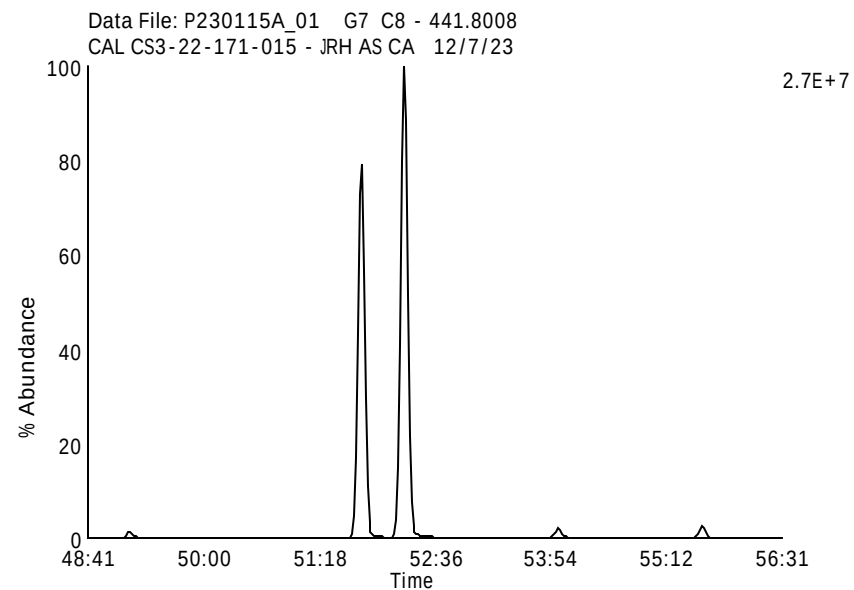
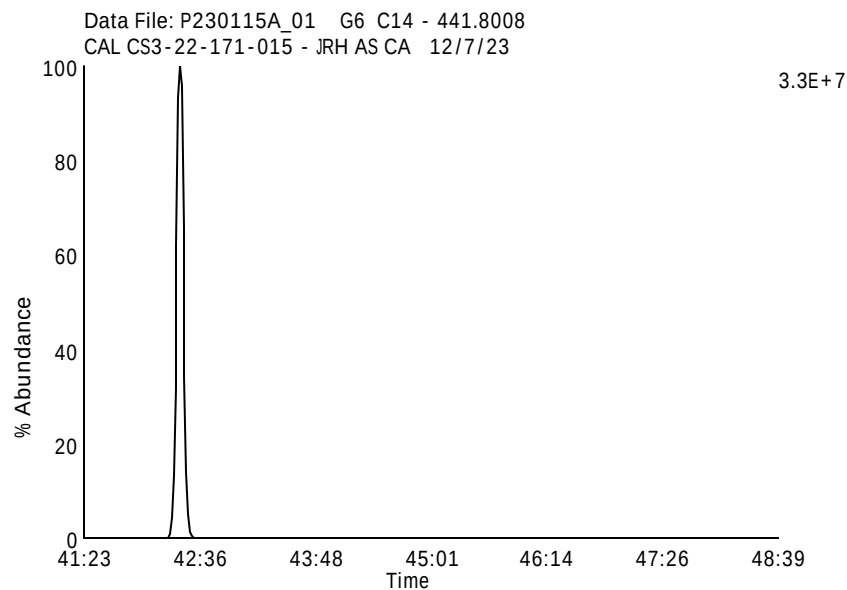
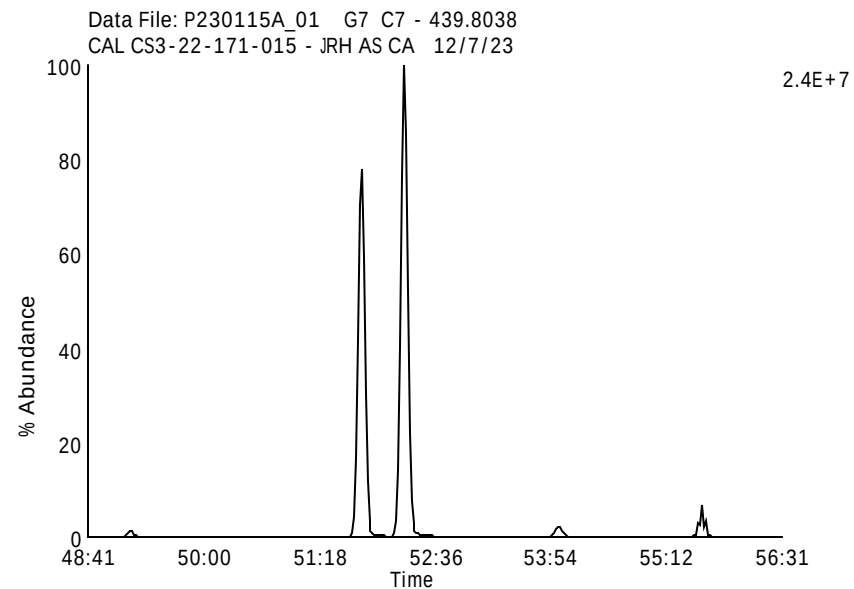
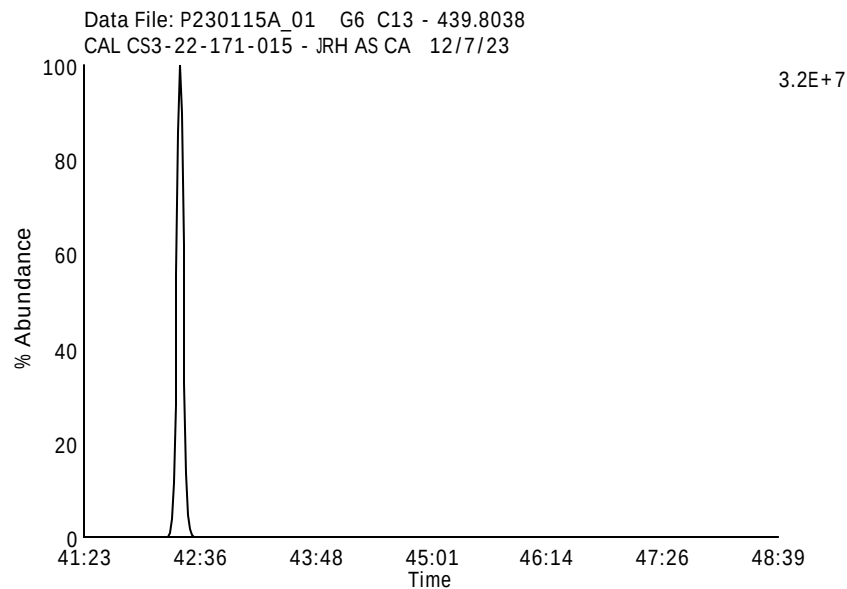
Data File Name: P230115A_01

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/15/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23



Labeled Nona Chlorinated Biphenyls

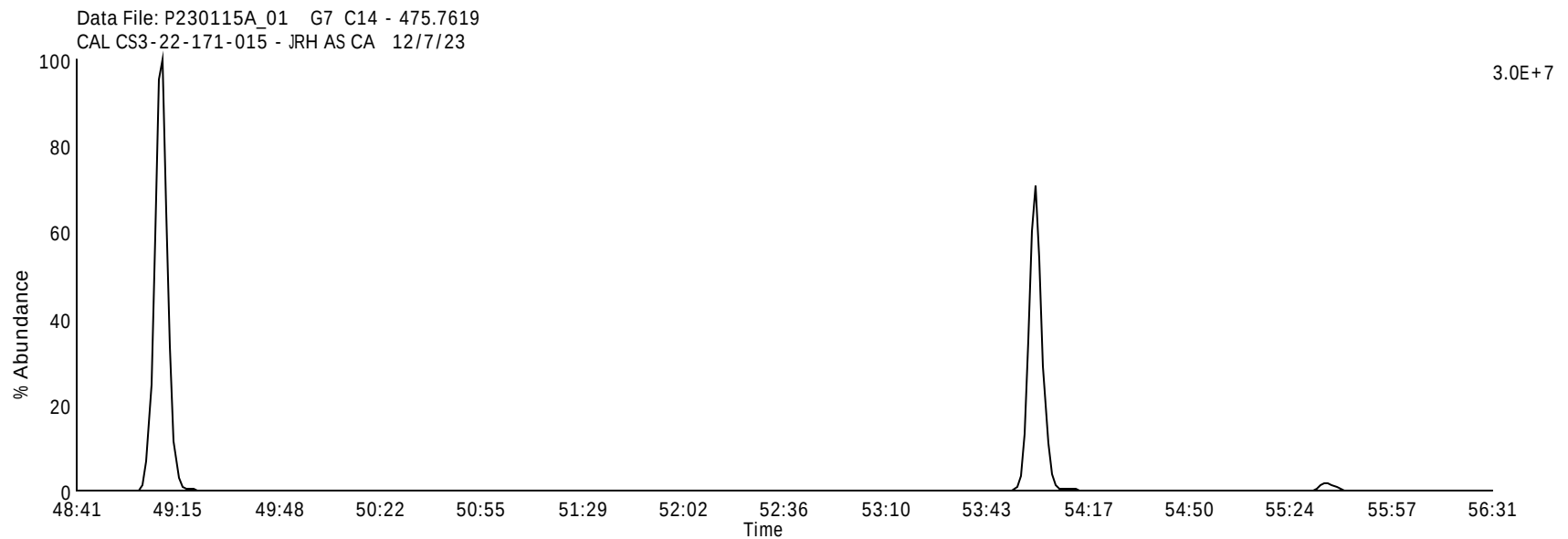
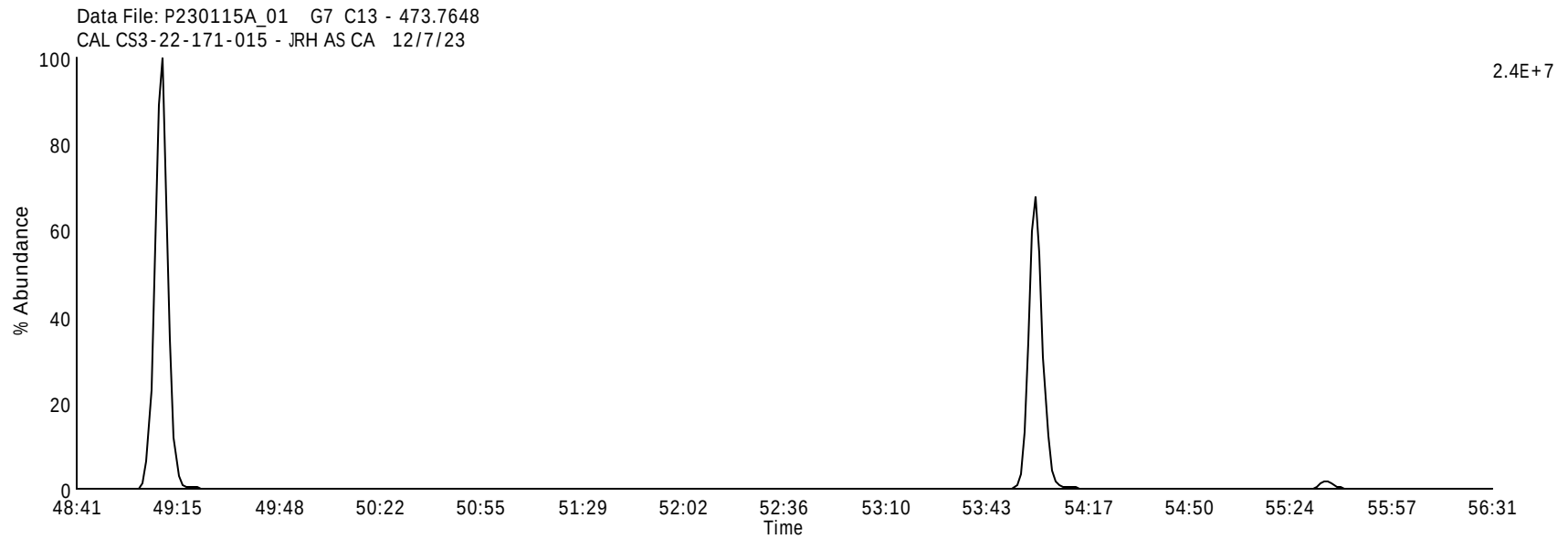
Data File Name: P230115A_01

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/15/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23



Labeled Deca Chlorinated Biphenyl

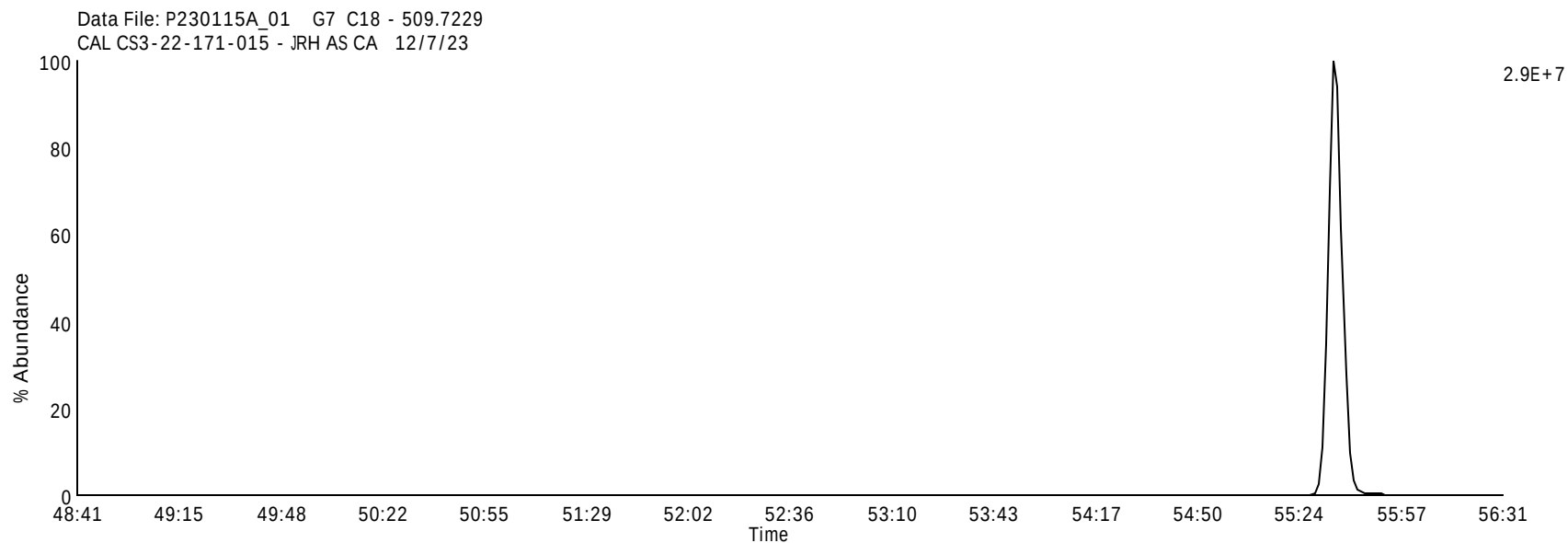
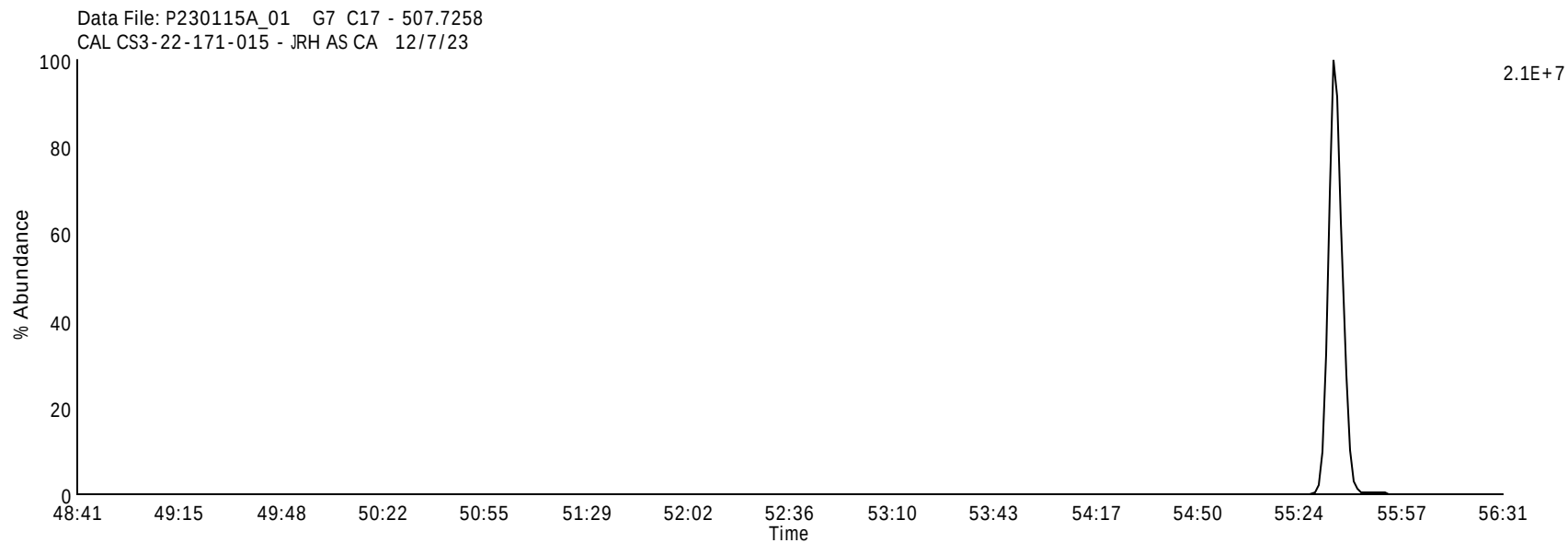
Data File Name: P230115A_01

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/15/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23



Mono Chlorinated Biphenyls

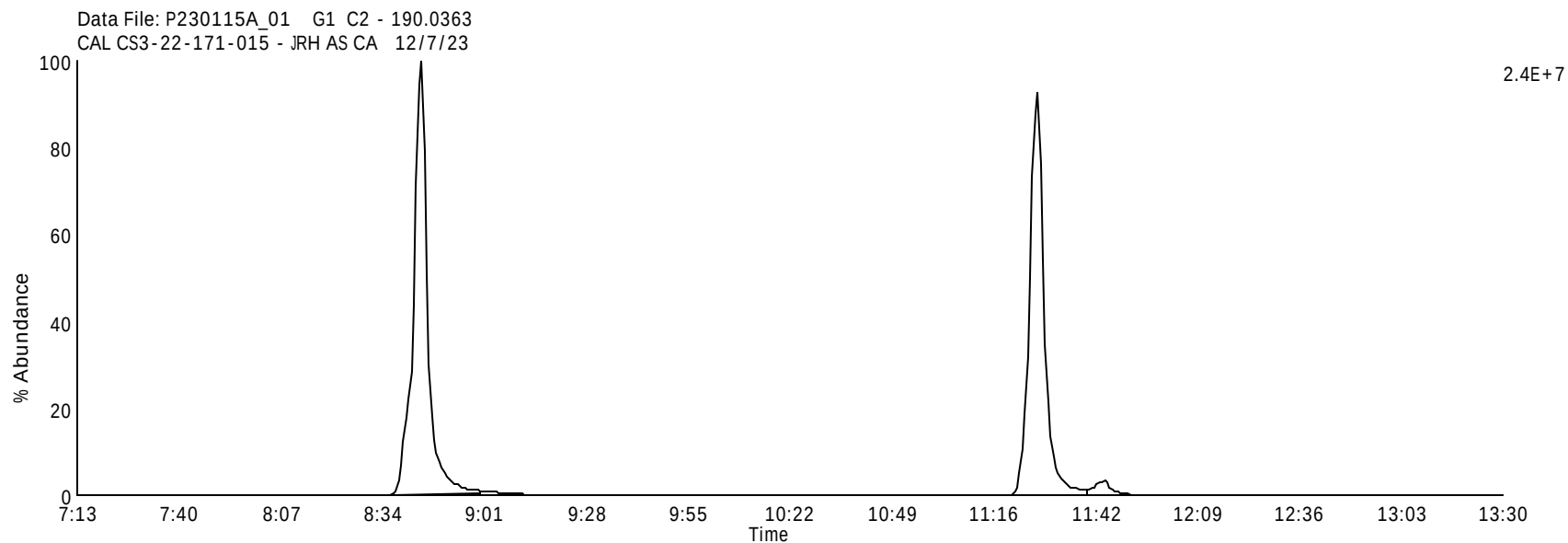
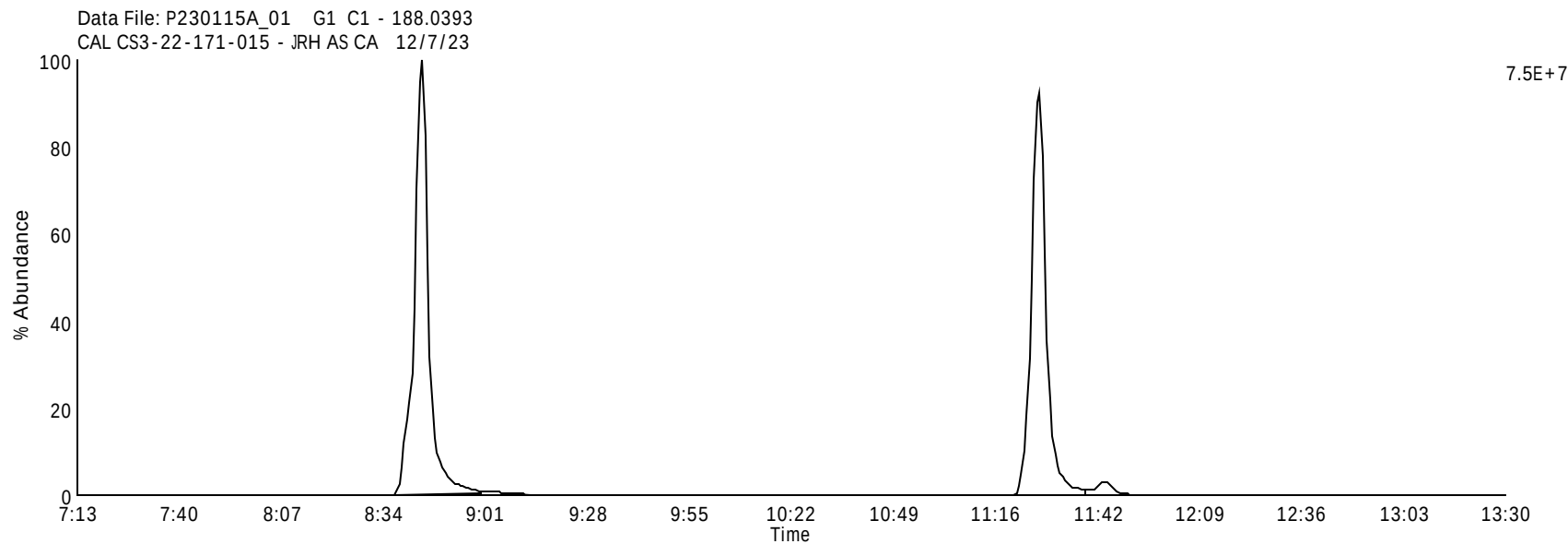
Data File Name: P230115A_01

Date Acquired: 1/15/2023

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Di Chlorinated Biphenyls

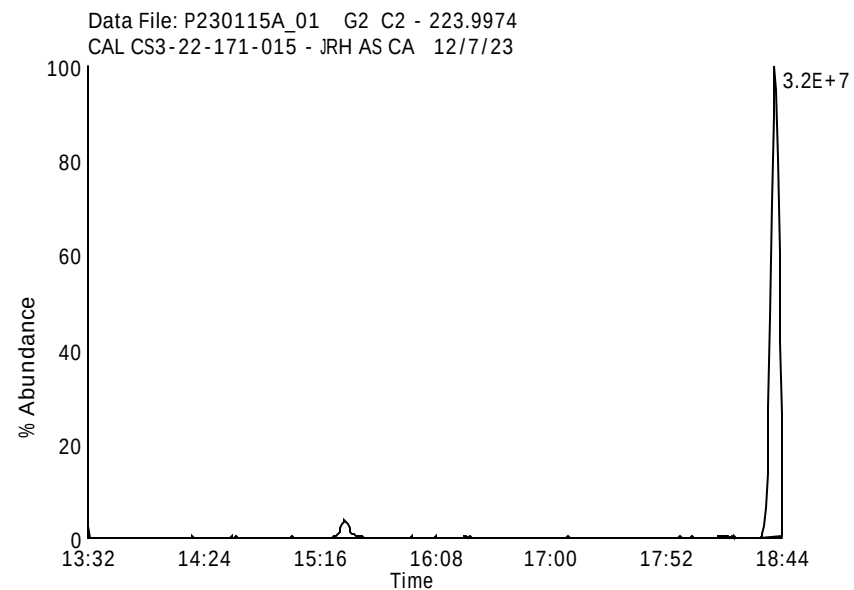
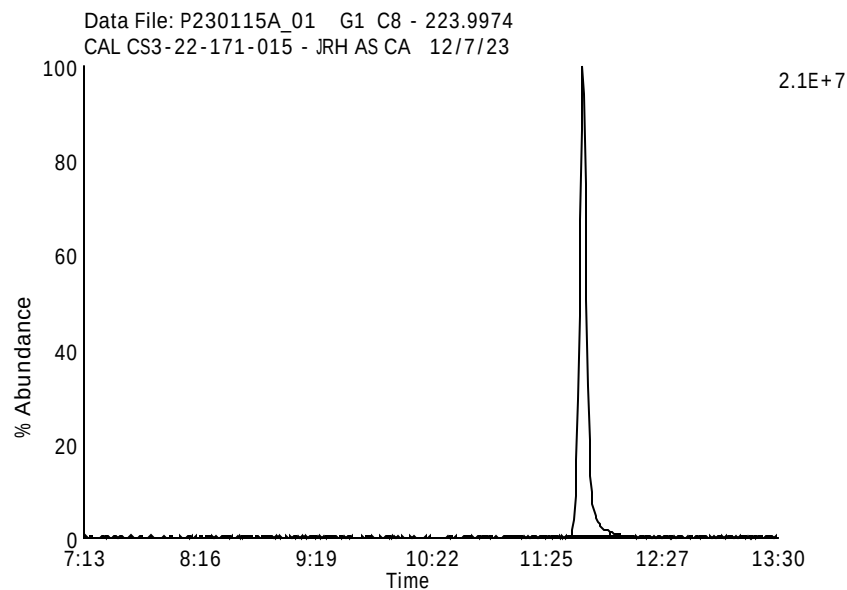
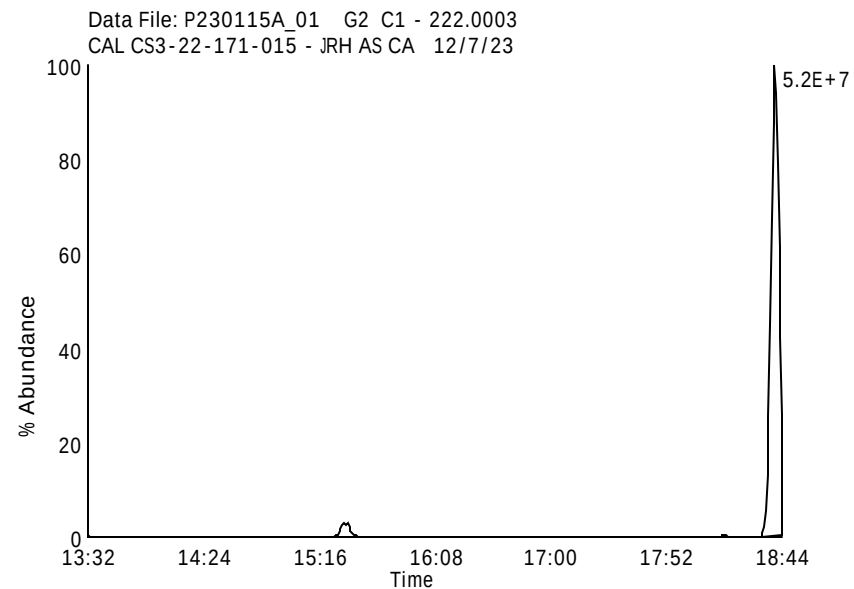
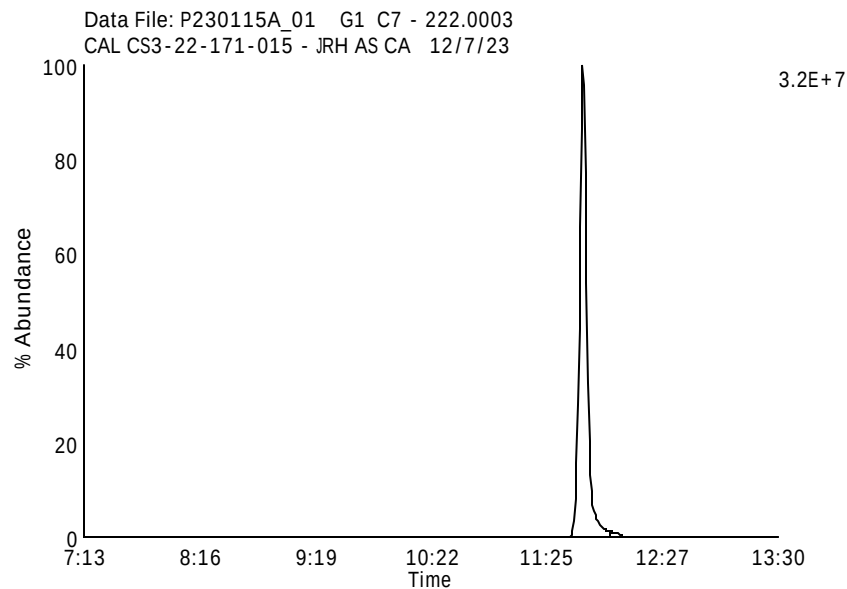
Data File Name: P230115A_01

Date Acquired: 1/15/2023

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Tri Chlorinated Biphenyls

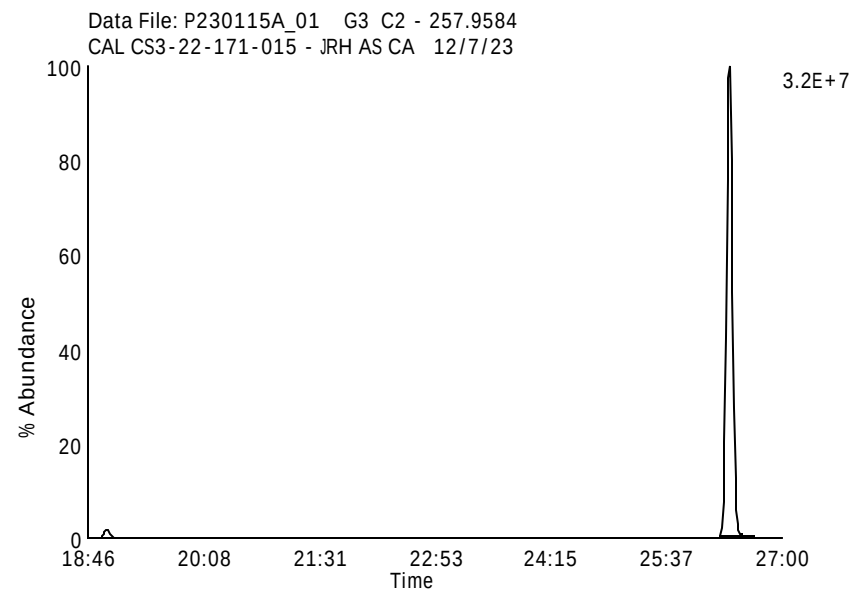
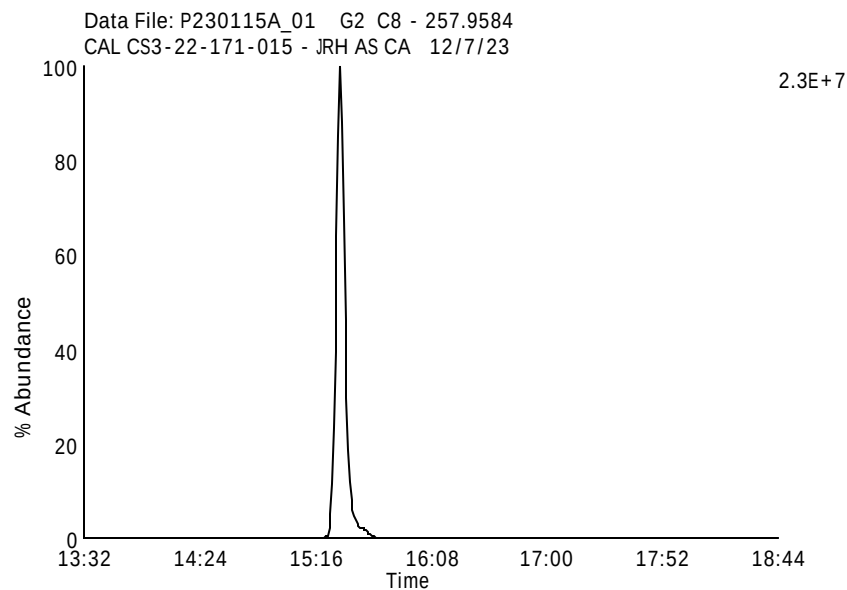
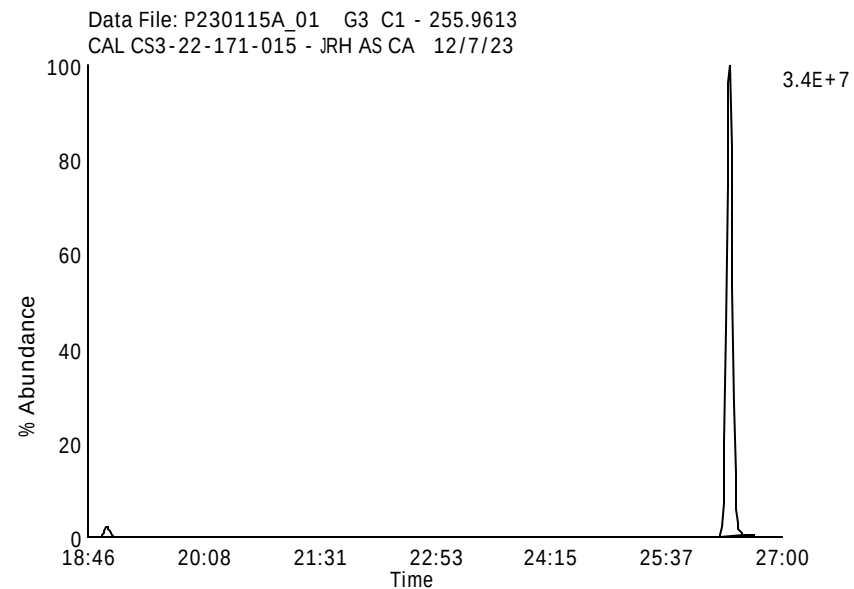
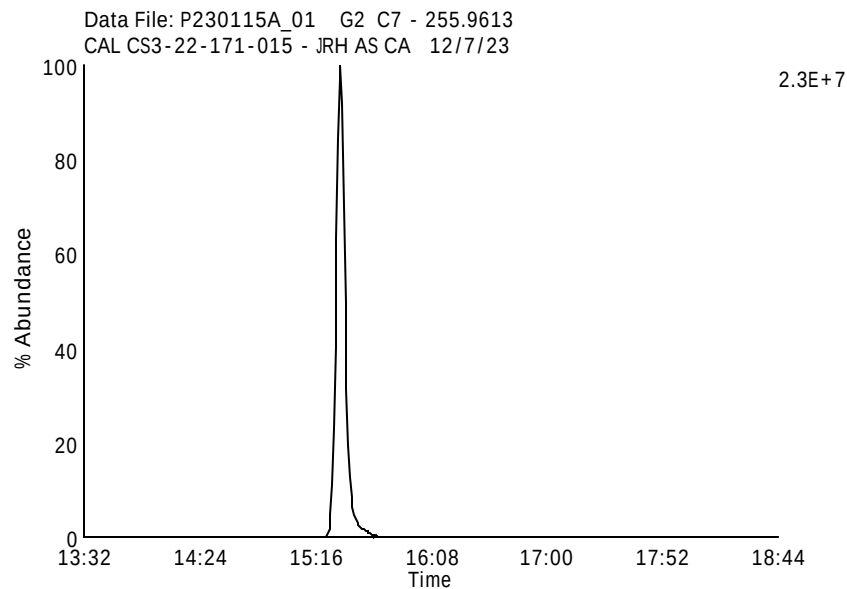
Data File Name: P230115A_01

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/15/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23



Tetra Chlorinated Biphenyls

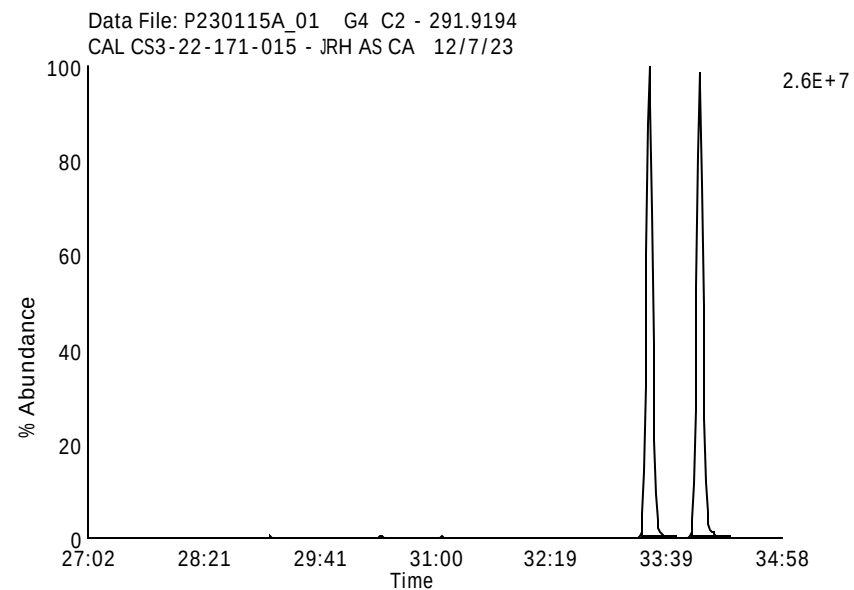
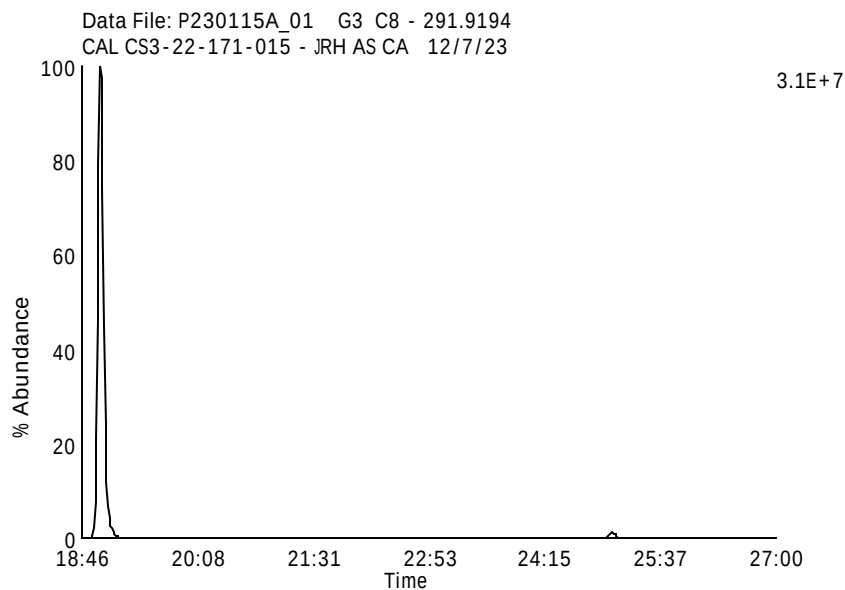
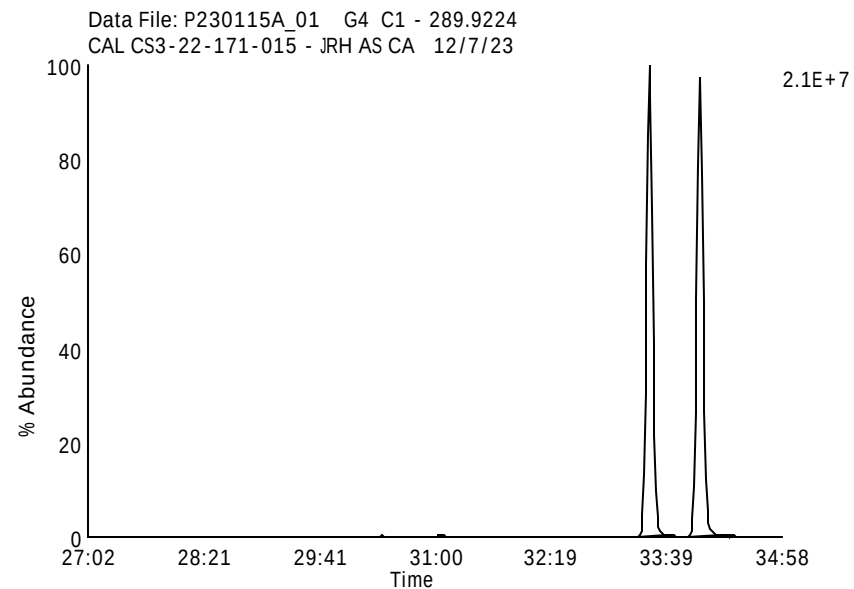
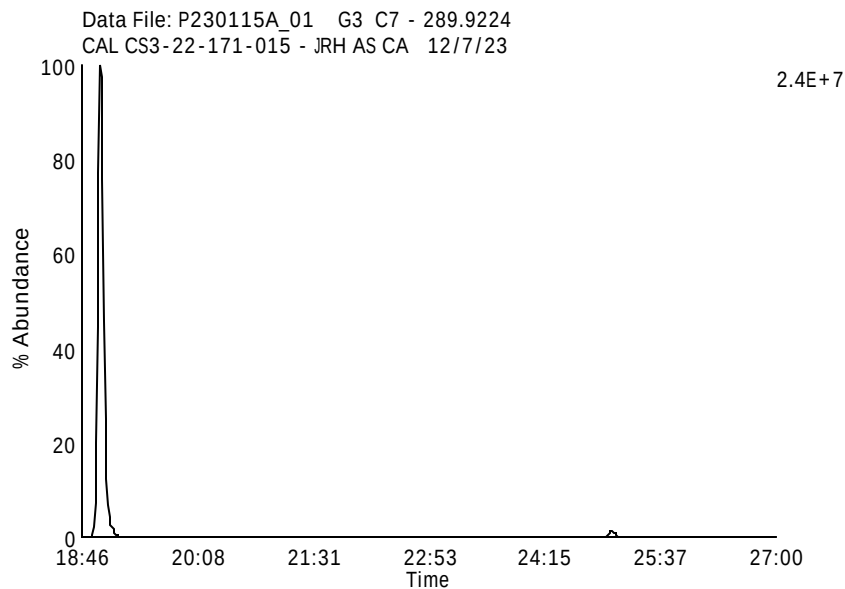
Data File Name: P230115A_01

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/15/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23



Penta Chlorinated Biphenyls

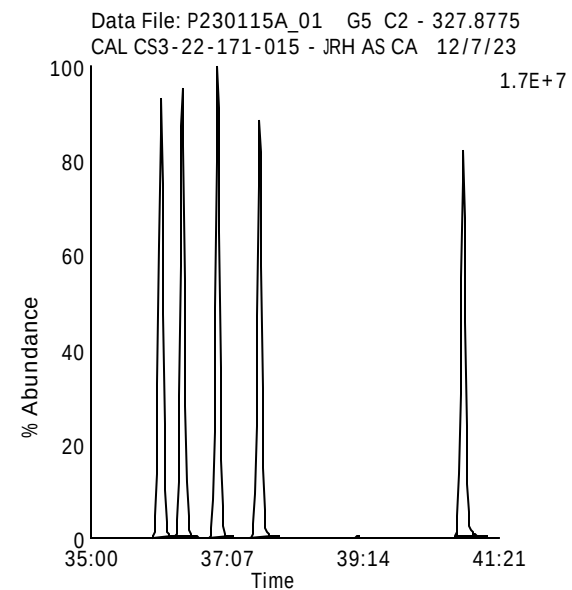
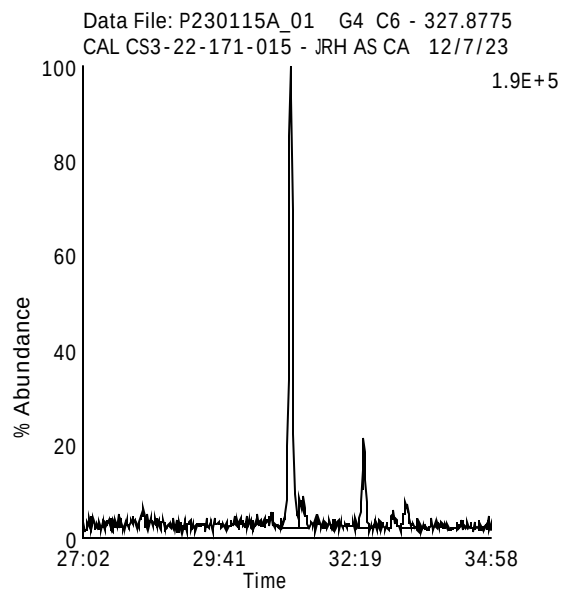
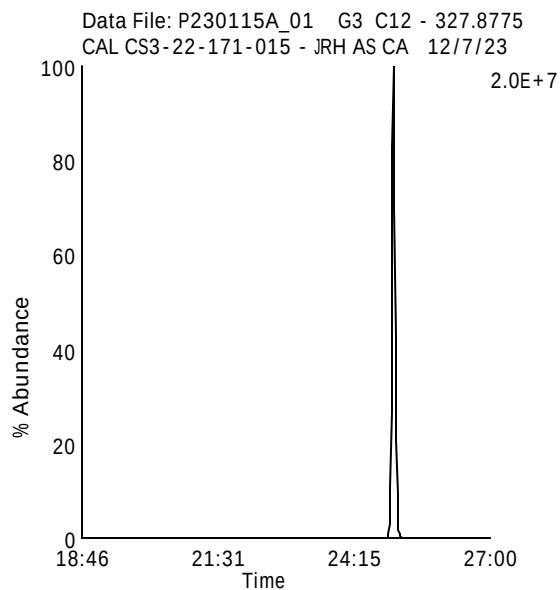
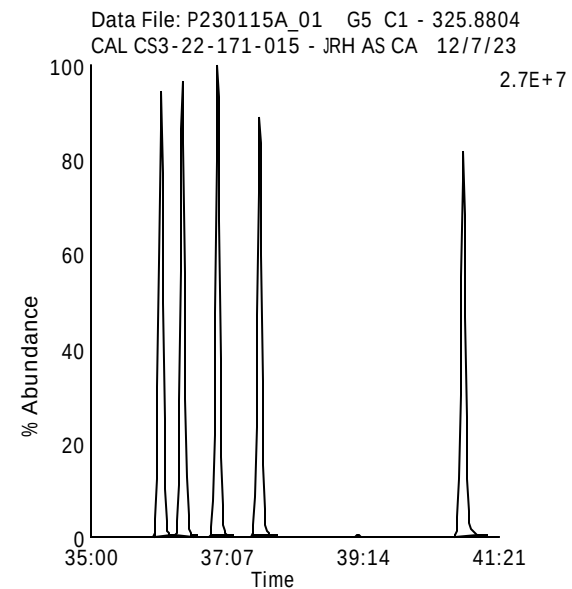
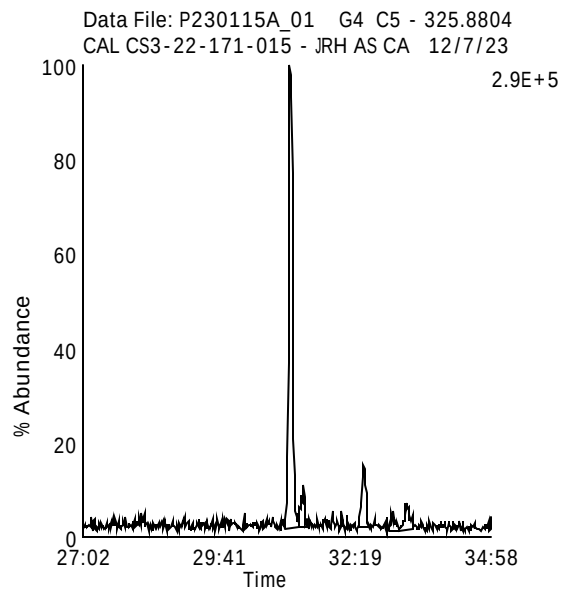
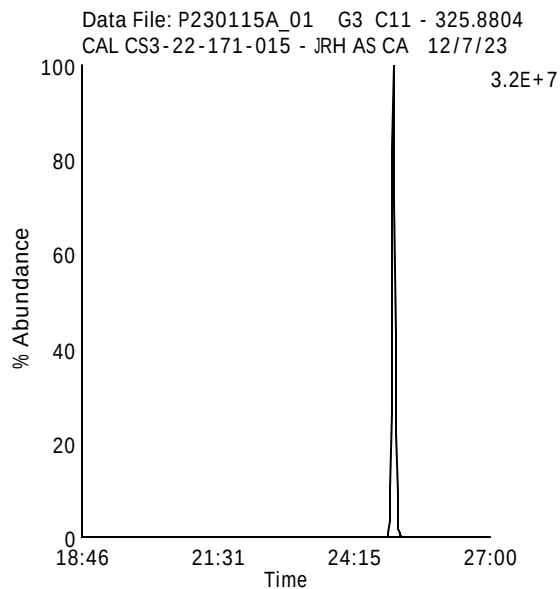
Data File Name: P230115A_01

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/15/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23



Hexa Chlorinated Biphenyls

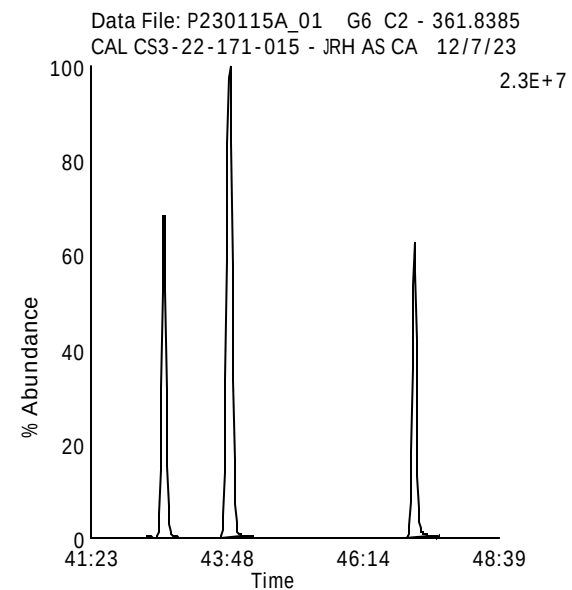
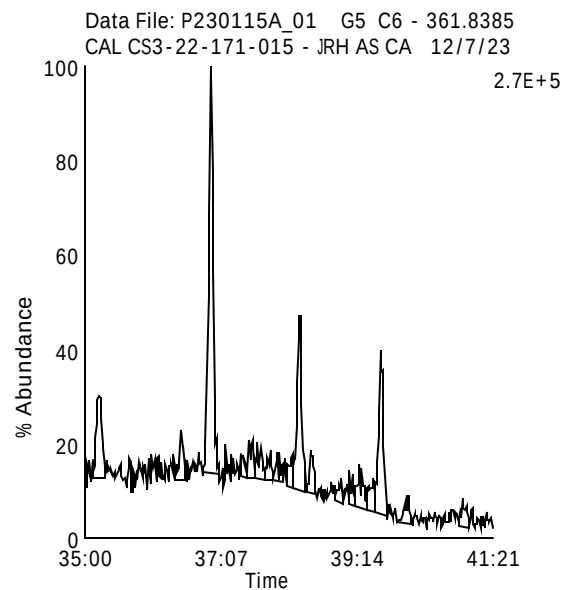
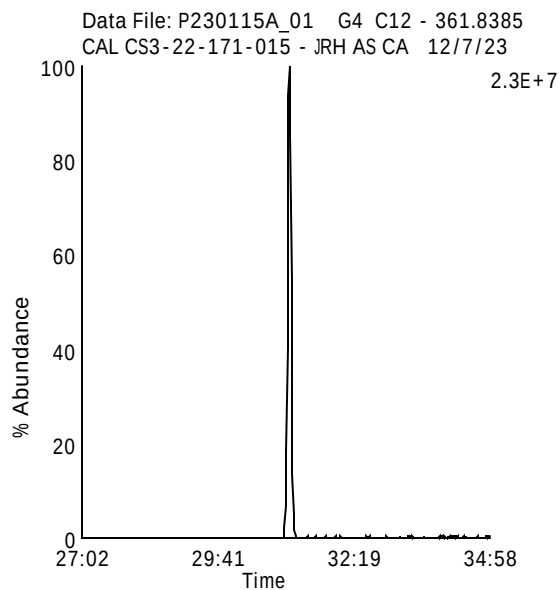
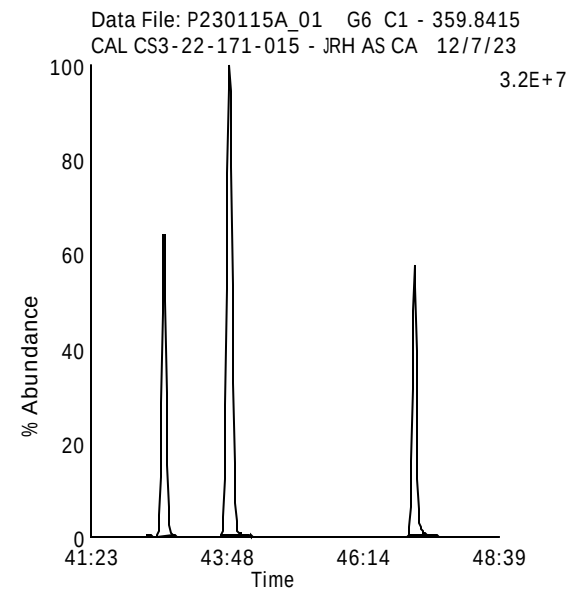
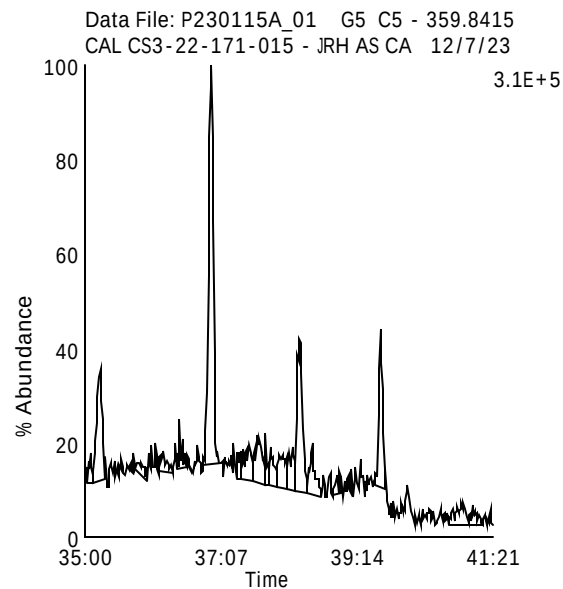
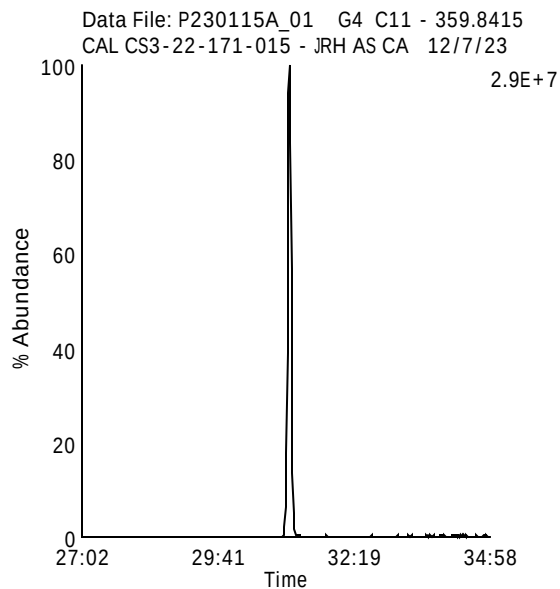
Data File Name: P230115A_01

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/15/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23



Hepta Chlorinated Biphenyls

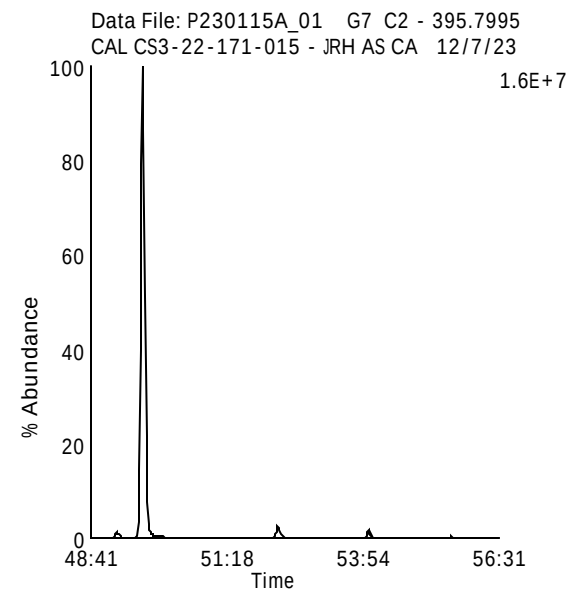
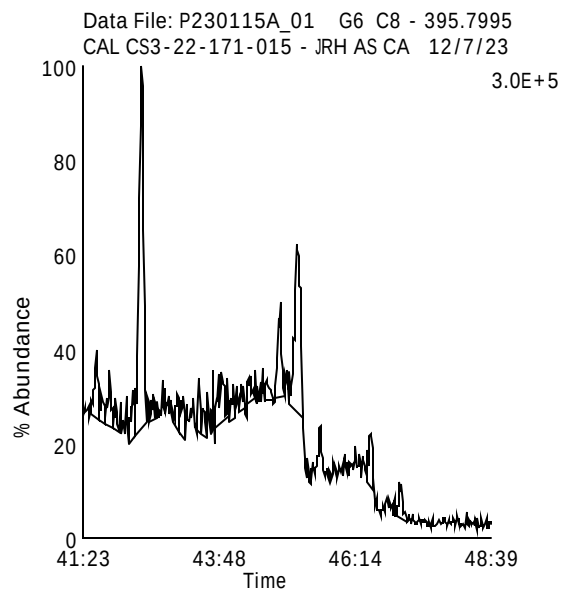
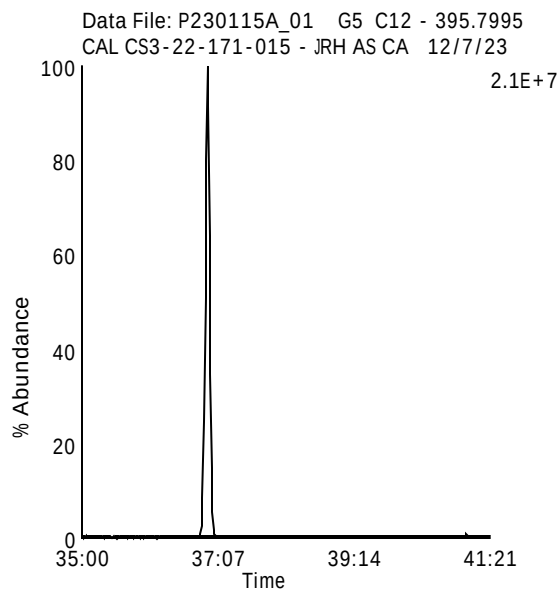
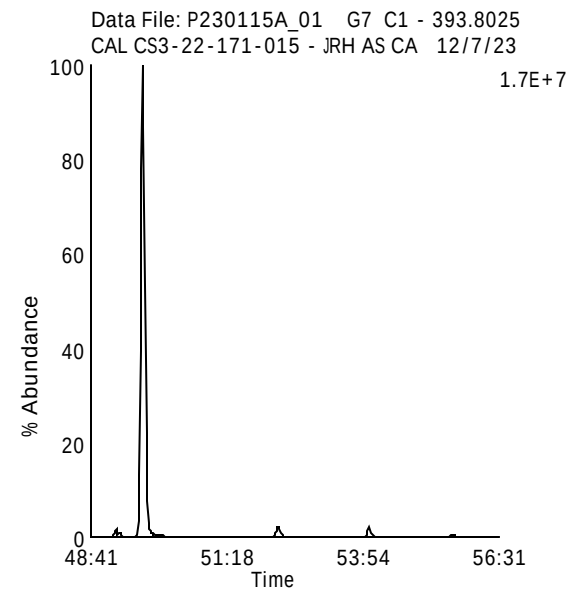
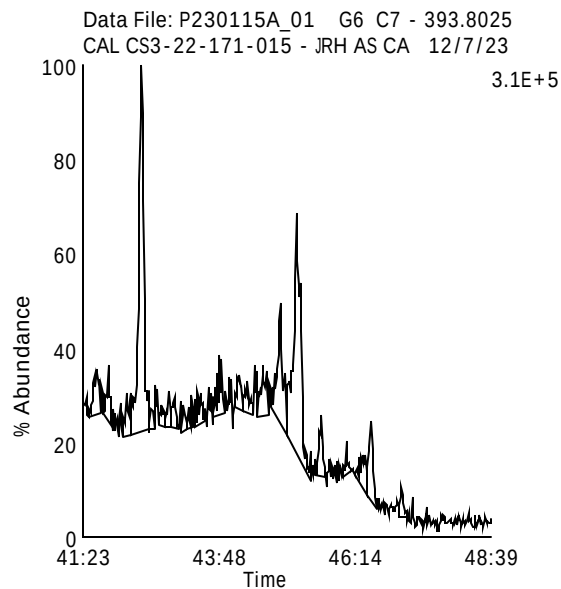
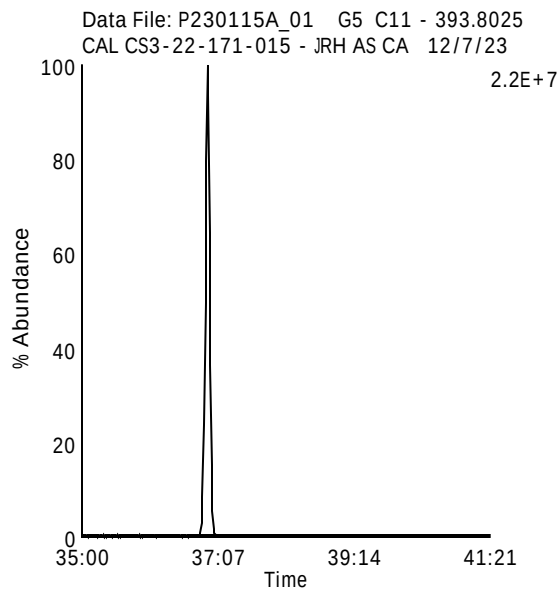
Data File Name: P230115A_01

Date Acquired: 1/15/2023

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Octa Chlorinated Biphenyls

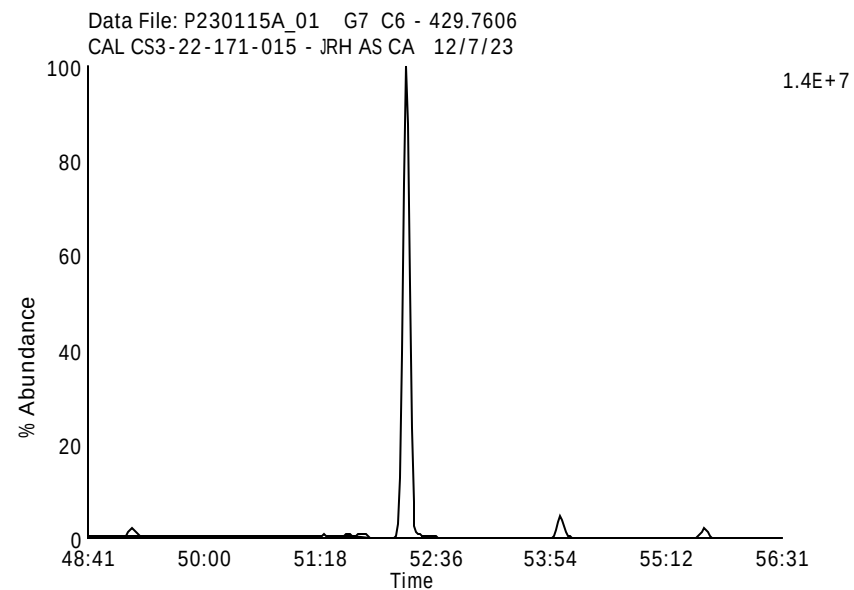
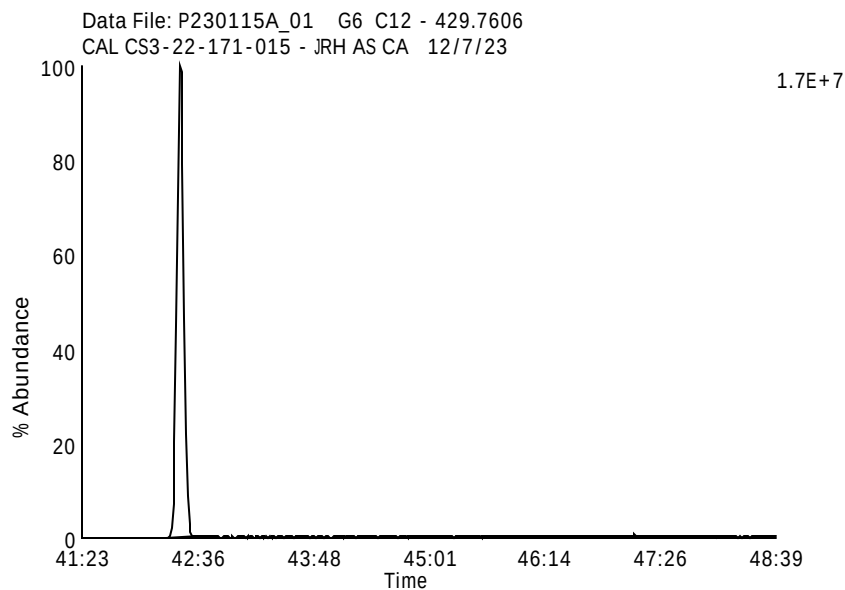
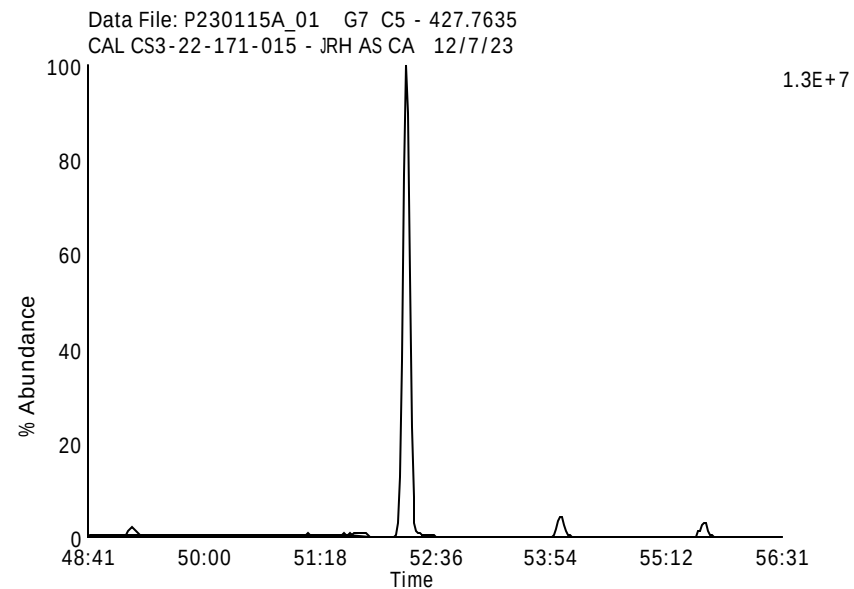
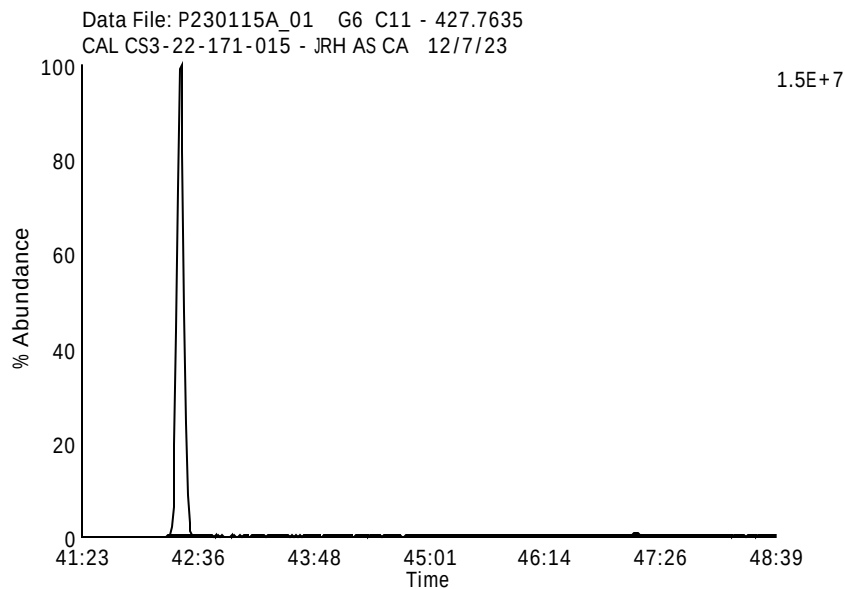
Data File Name: P230115A_01

Date Acquired: 1/15/2023

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Nona Chlorinated Biphenyls

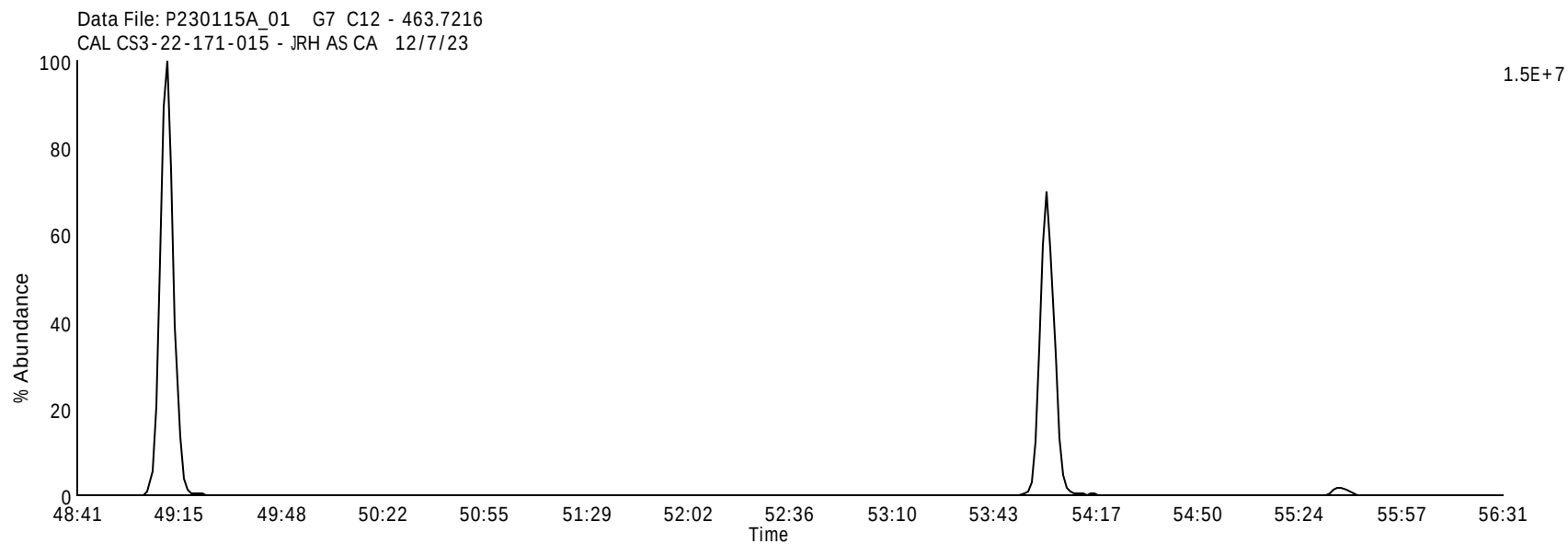
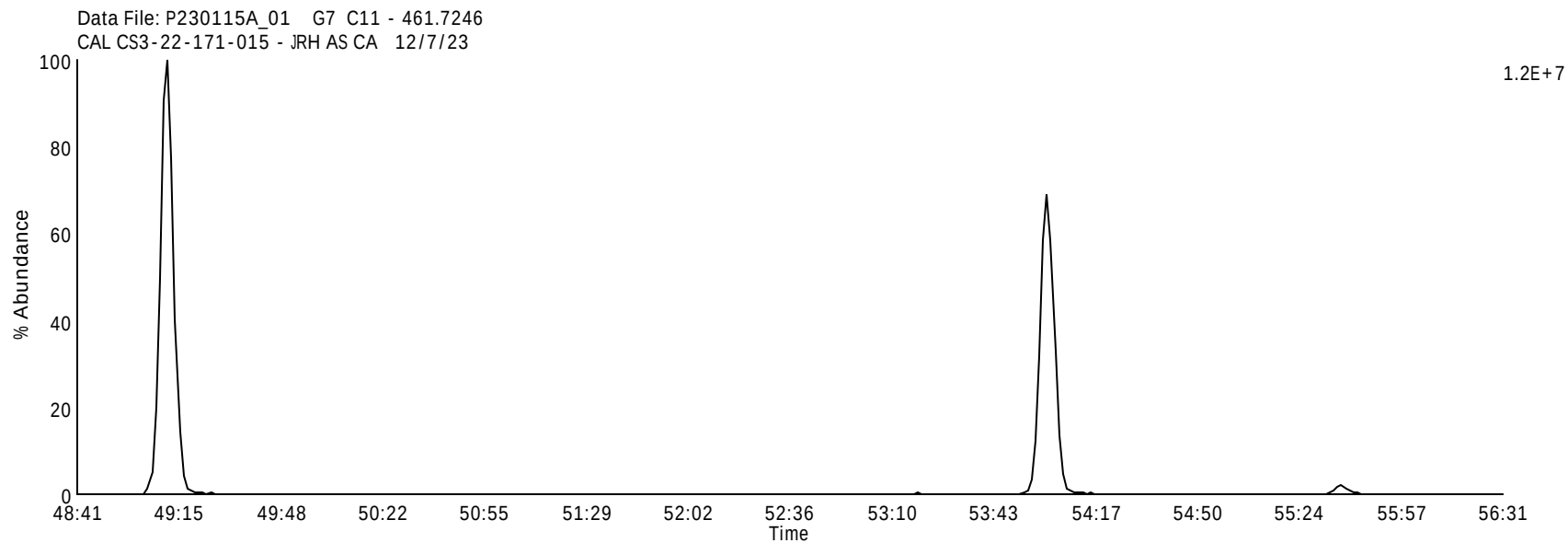
Data File Name: P230115A_01

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/15/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23



Deca Chlorinated Biphenyl

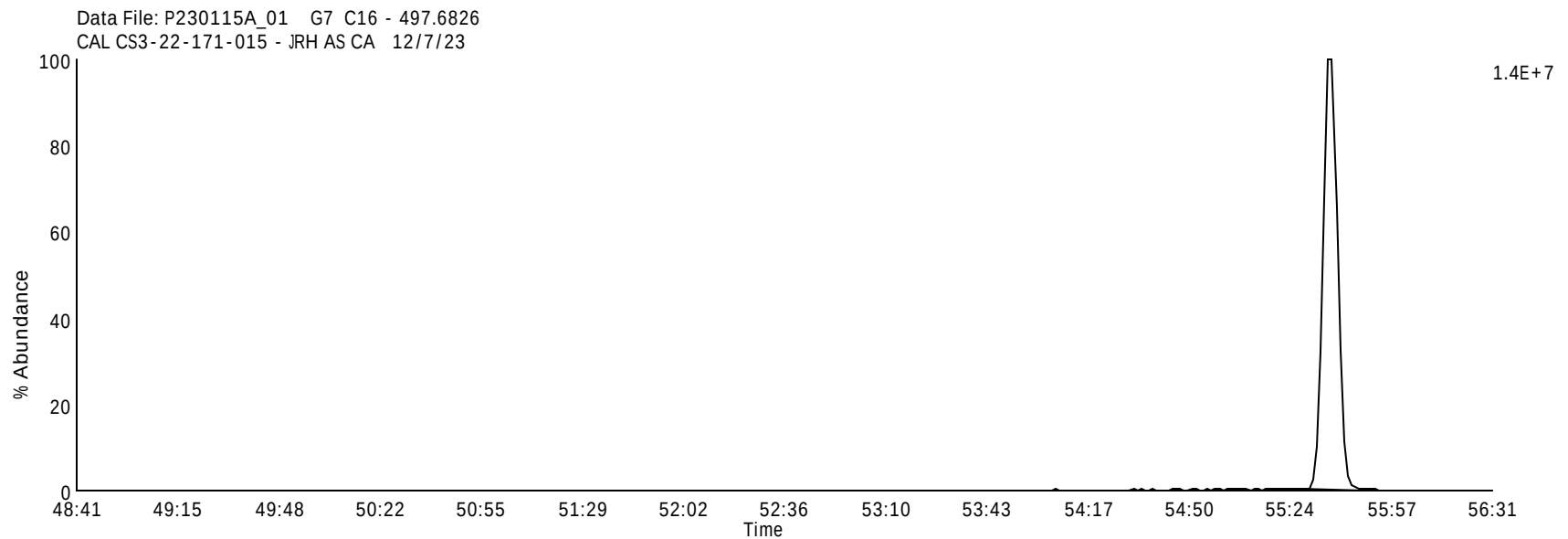
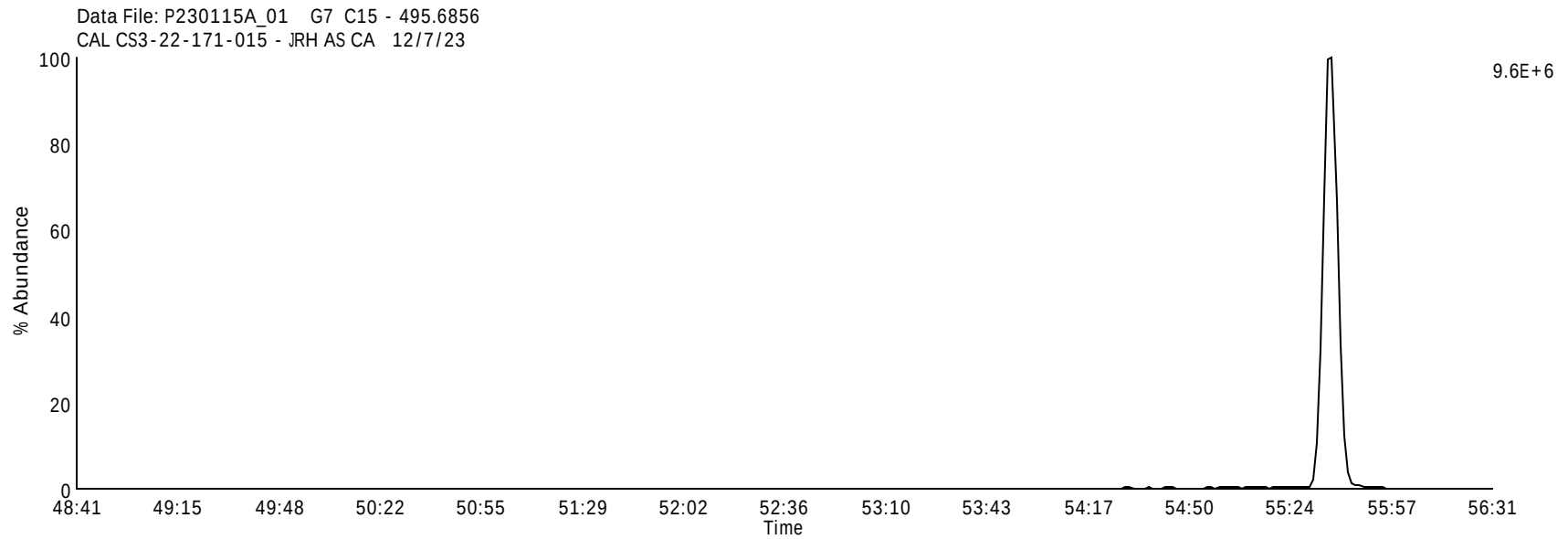
Data File Name: P230115A_01

Lab Sample ID: CS3-22-171-015

Date Acquired: 1/15/2023

Instrument: 10MSHR09 (P)

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23



Group 1 - 4 Lock mass

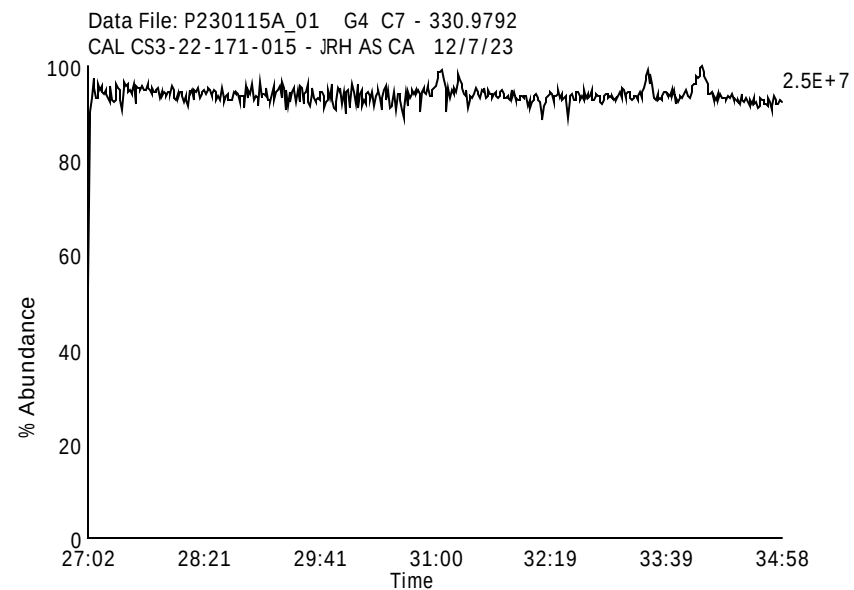
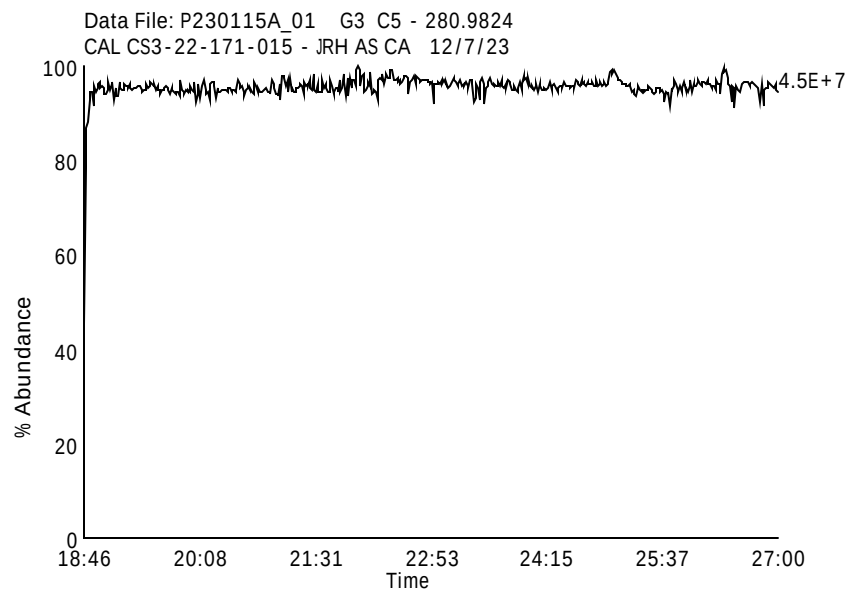
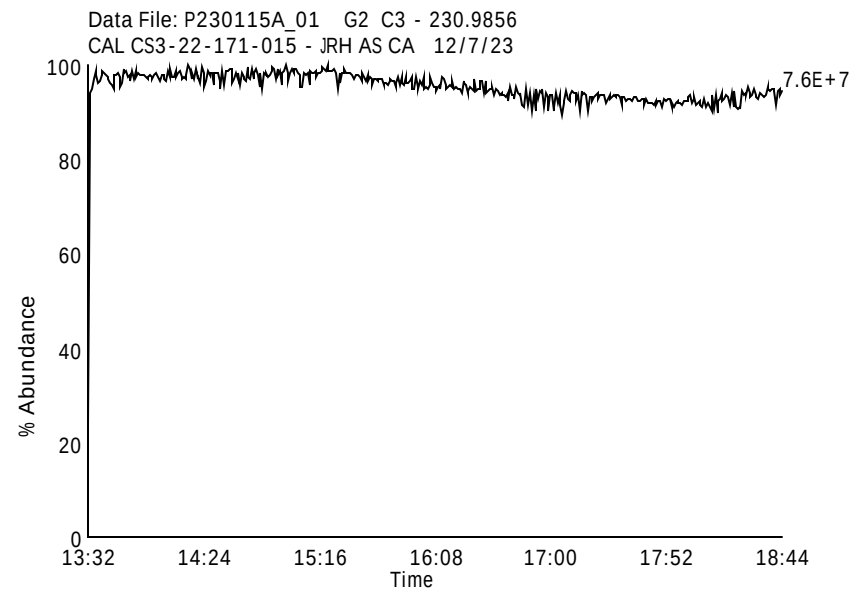
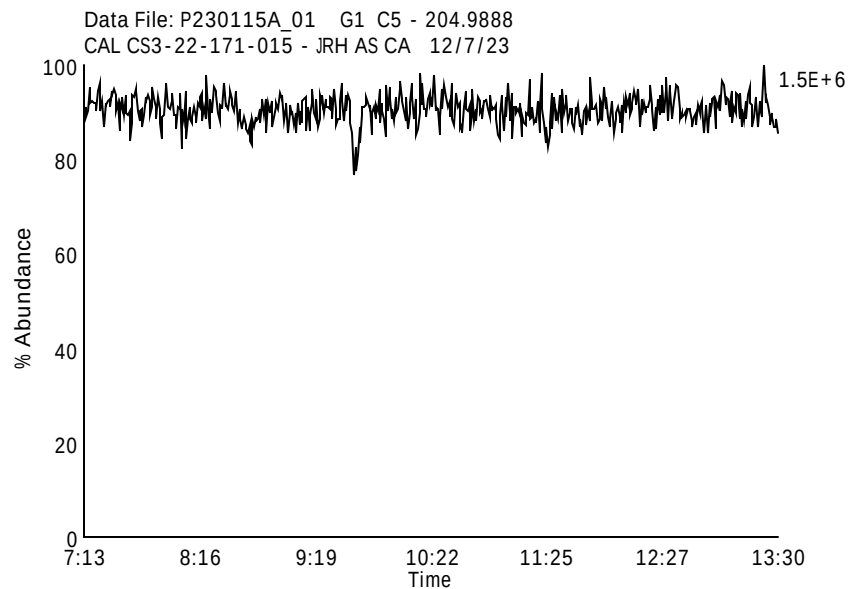
Data File Name: P230115A_01

Date Acquired: 1/15/2023

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Group 5 - 7 Lock mass

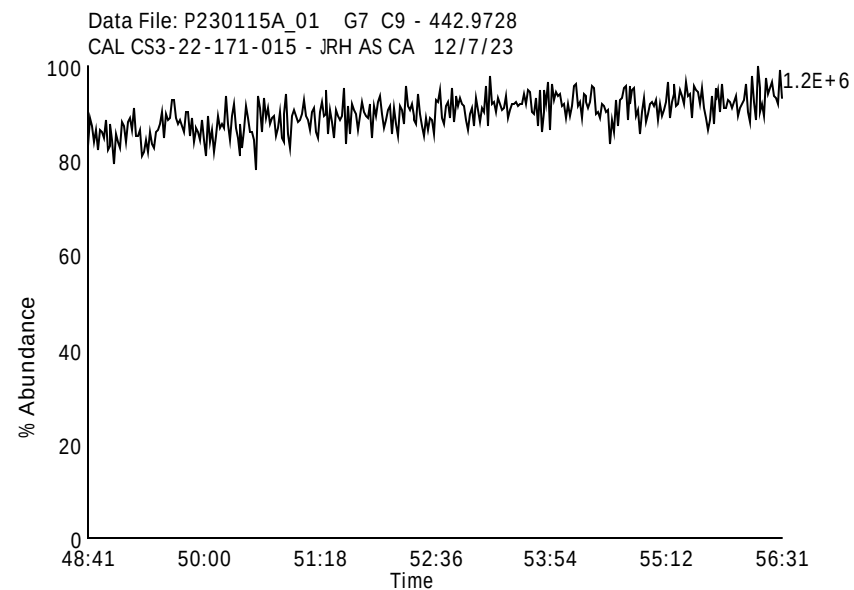
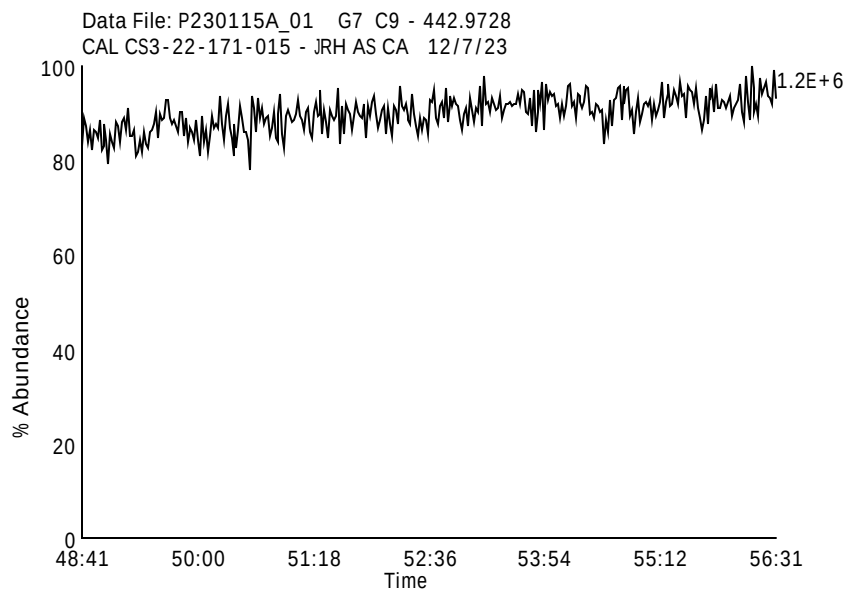
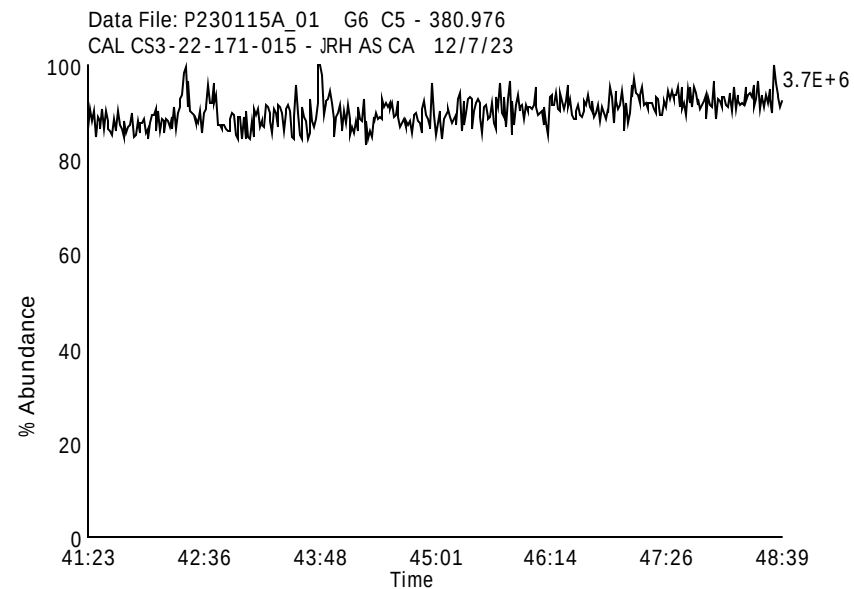
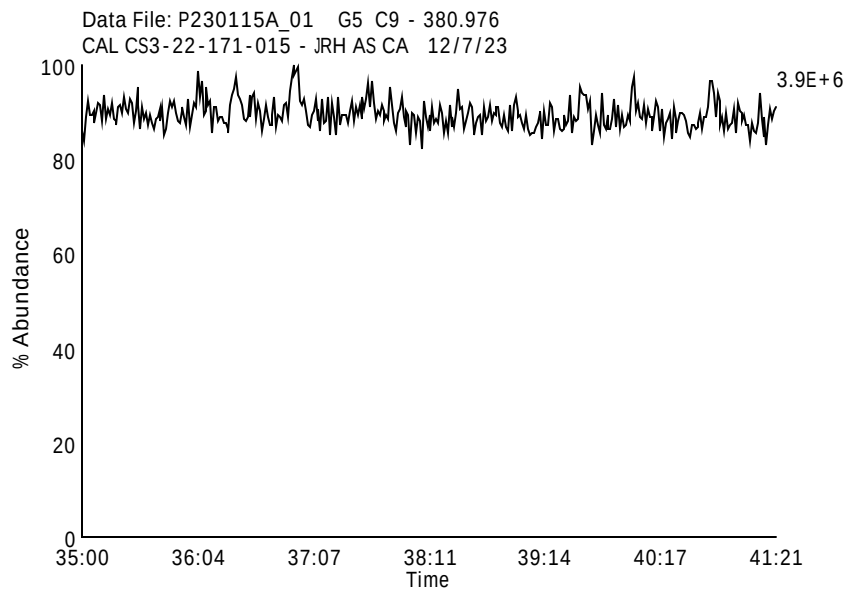
Data File Name: P230115A_01

Date Acquired: 1/15/2023

Sample Description: CAL CS3-22-171-015 - JRH AS CA 12/7/23

Lab Sample ID: CS3-22-171-015

Instrument: 10MSHR09 (P)



Labeled Mono Chlorinated Biphenyls

Data File Name: P230112A_09

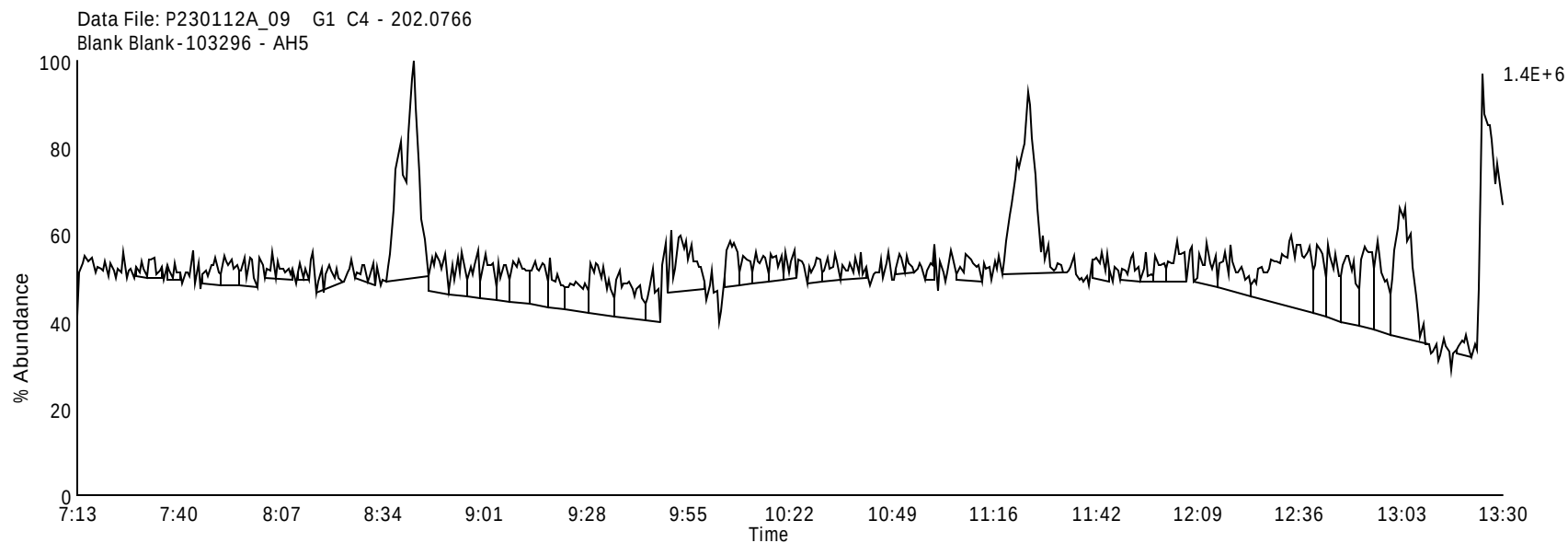
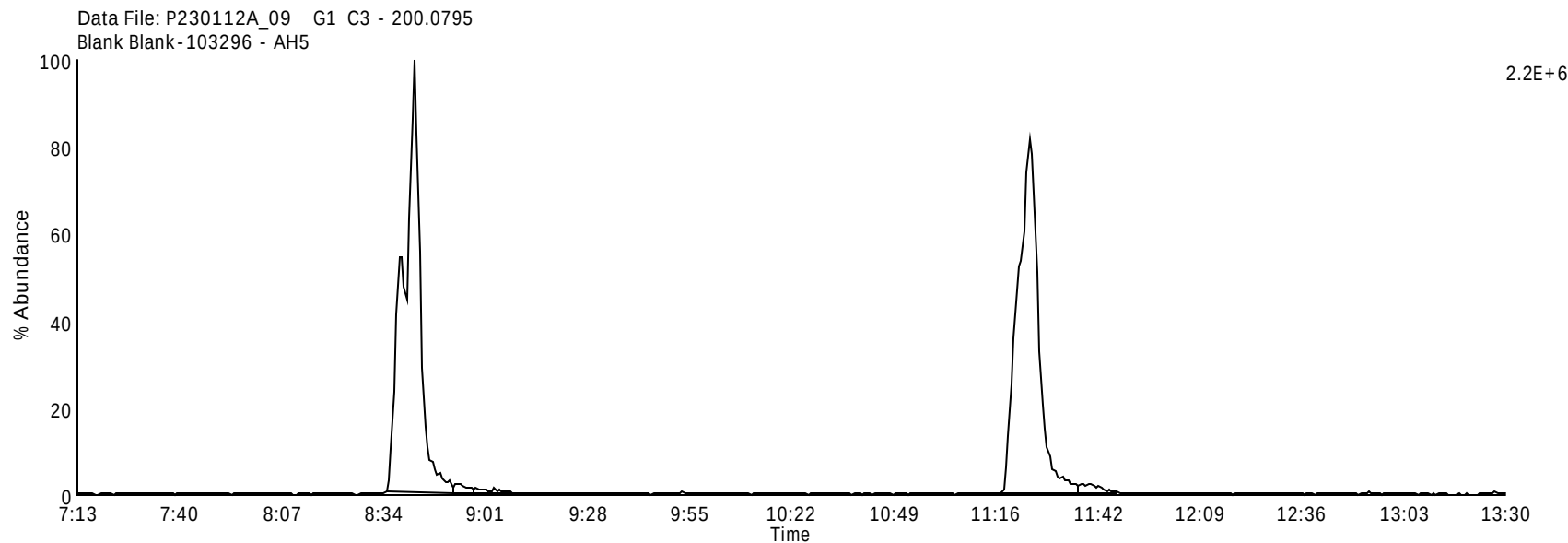
Date Acquired: 1/12/2023

Sample Description: Blank Blank-103296 - AH5

Lab Sample ID: BLANK-103296

Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC



Labeled Di Chlorinated Biphenyls

Data File Name: P230112A_09

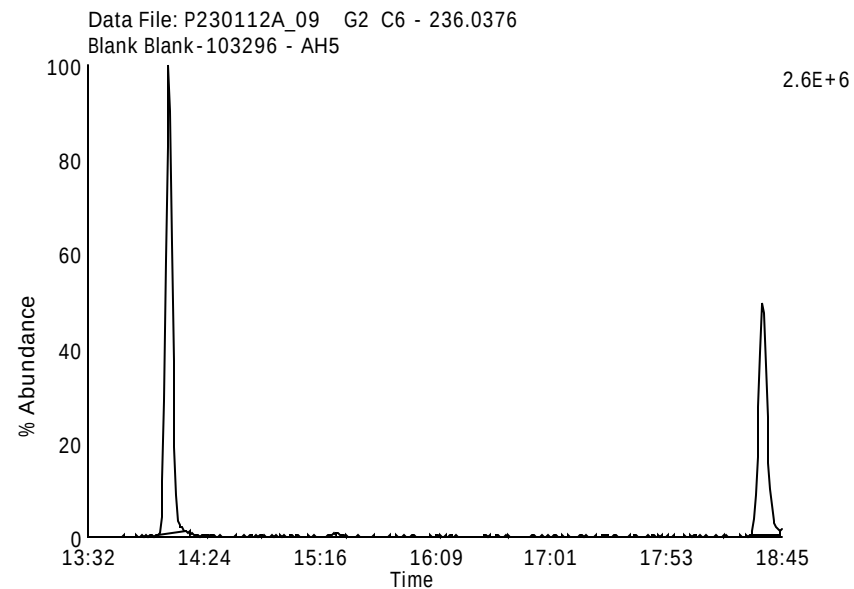
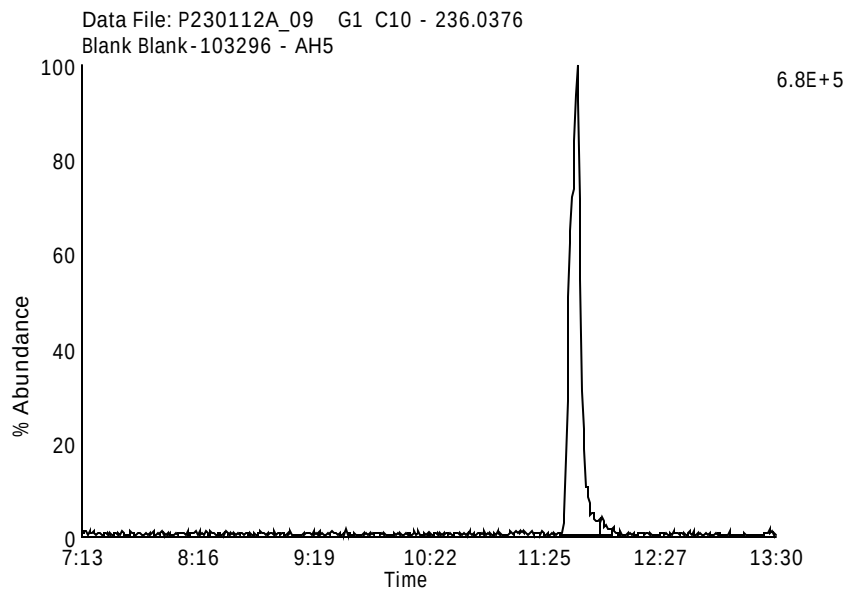
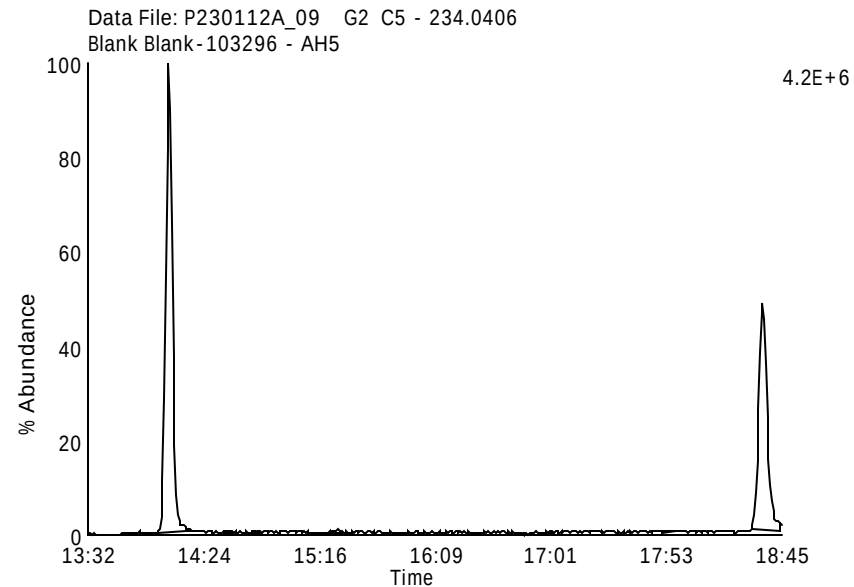
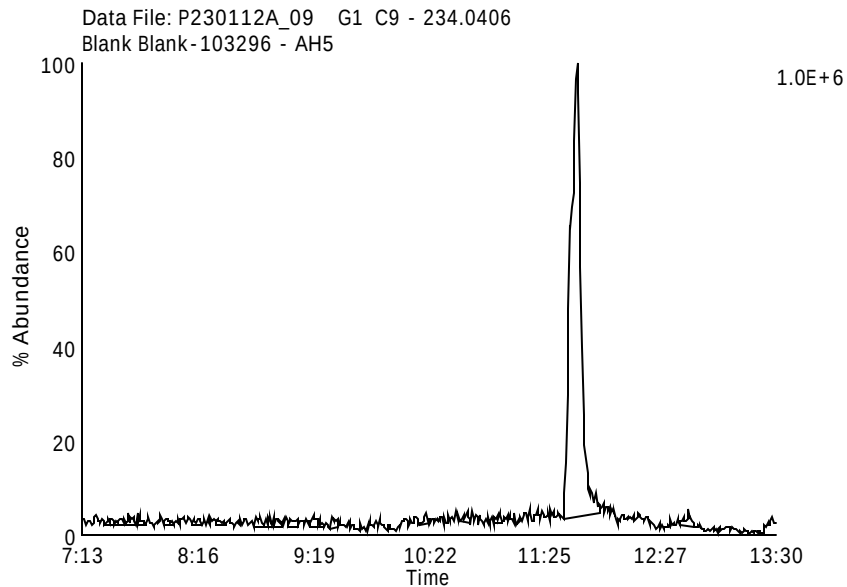
Date Acquired: 1/12/2023

Sample Description: Blank Blank-103296 - AH5

Lab Sample ID: BLANK-103296

Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC



Labeled Tri Chlorinated Biphenyls

Data File Name: P230112A_09

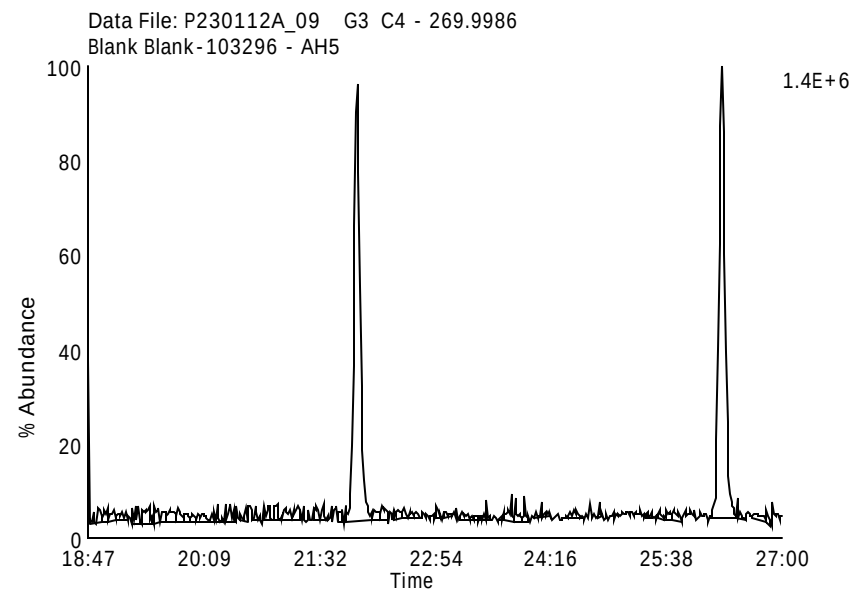
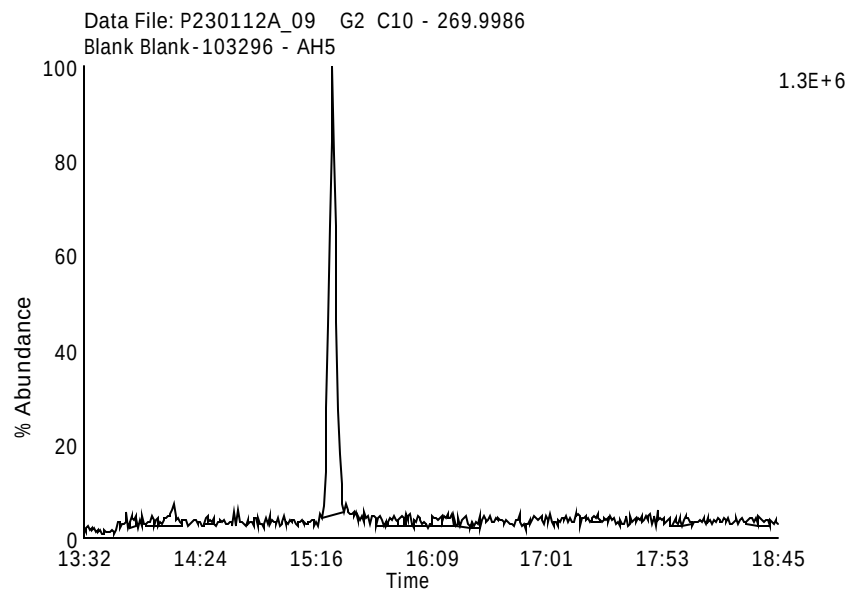
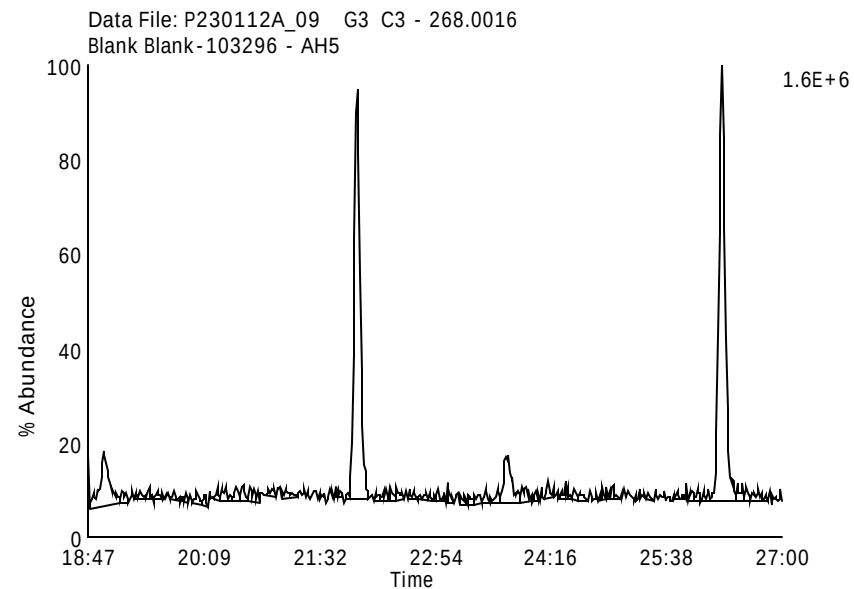
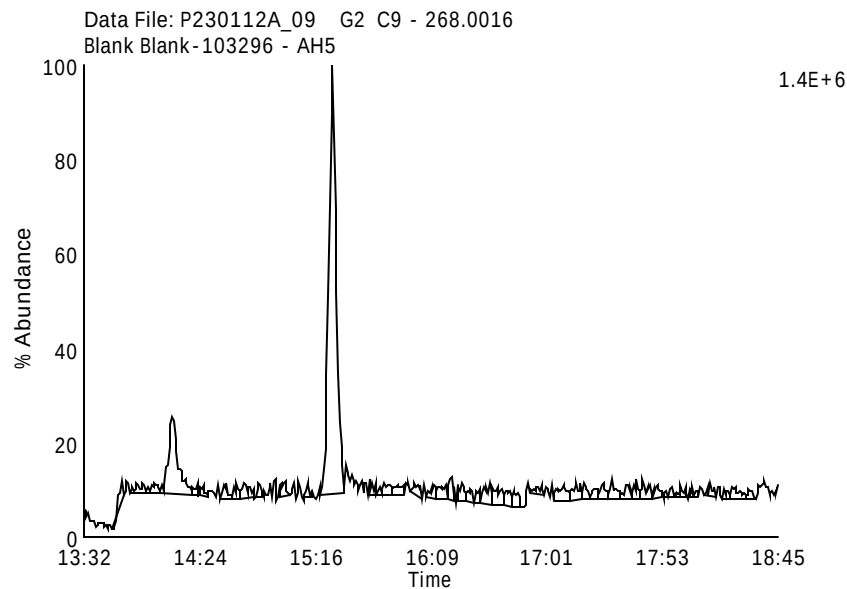
Date Acquired: 1/12/2023

Sample Description: Blank Blank-103296 - AH5

Lab Sample ID: BLANK-103296

Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC



Labeled Tetra Chlorinated Biphenyls

Data File Name: P230112A_09

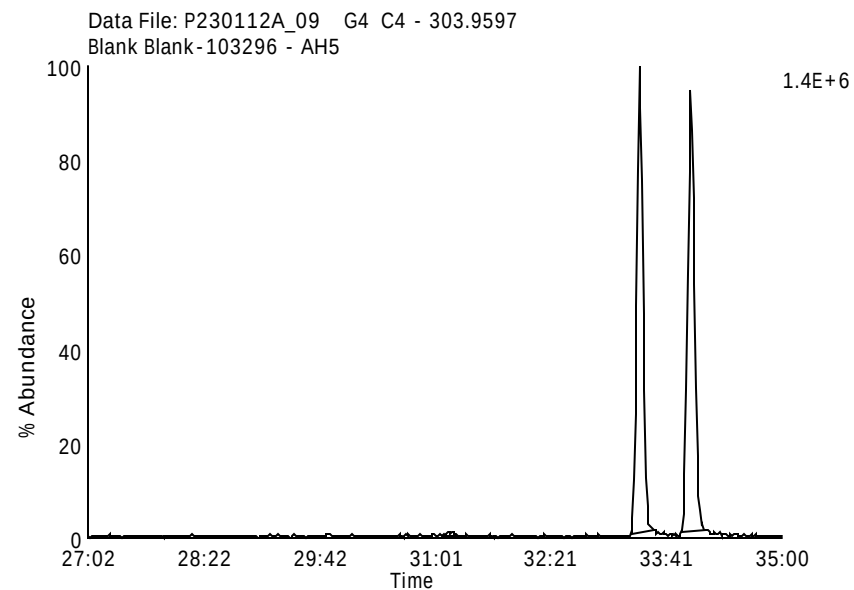
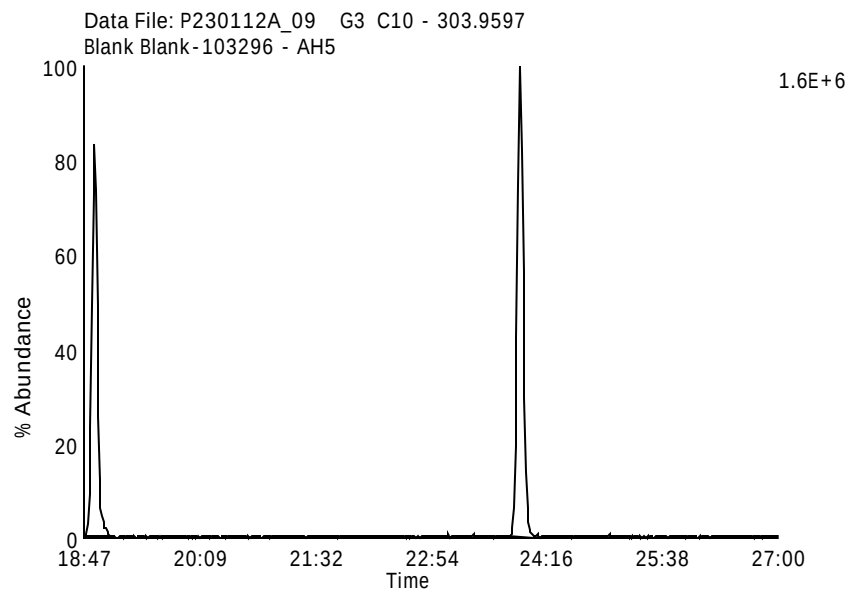
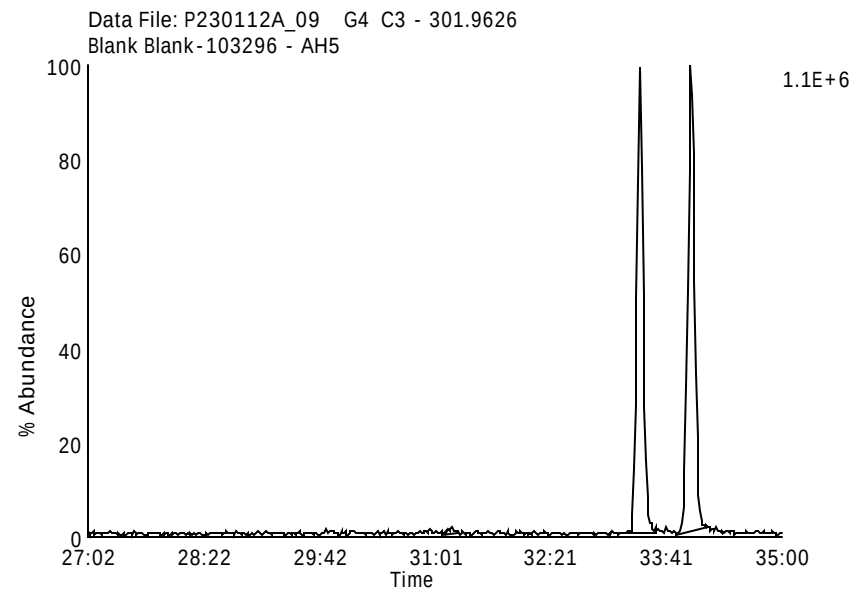
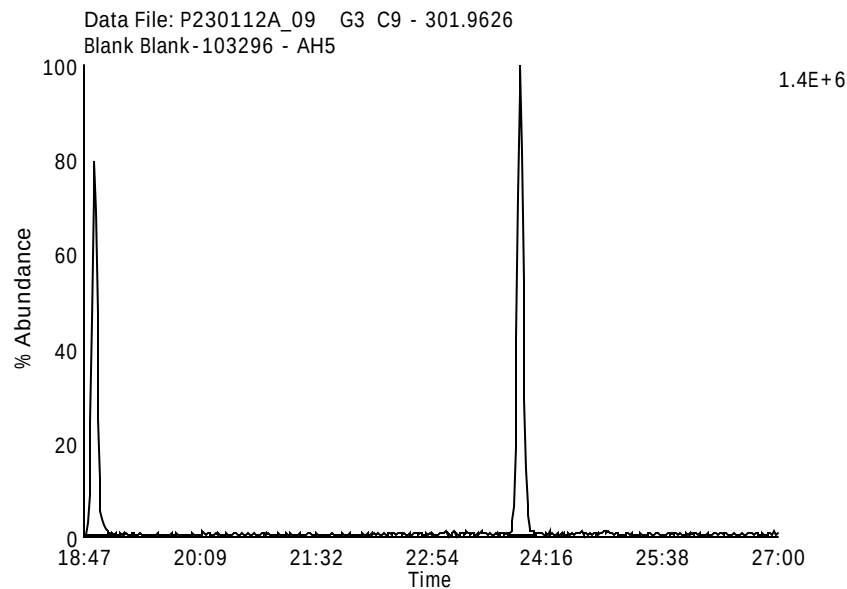
Date Acquired: 1/12/2023

Sample Description: Blank Blank-103296 - AH5

Lab Sample ID: BLANK-103296

Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC



Labeled Penta Chlorinated Biphenyls

Data File Name: P230112A_09

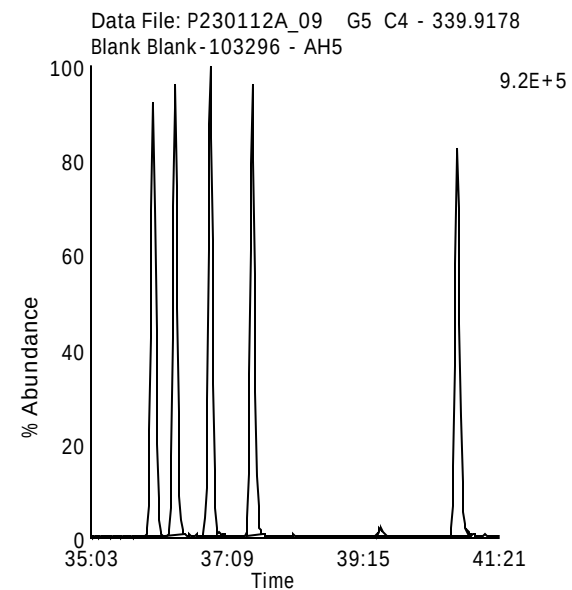
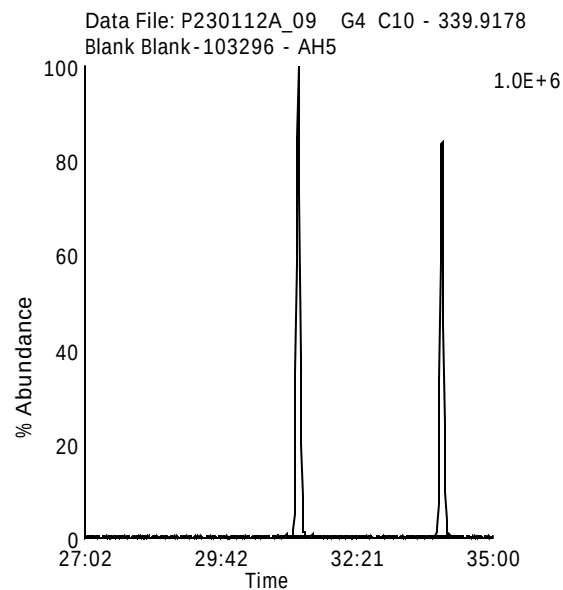
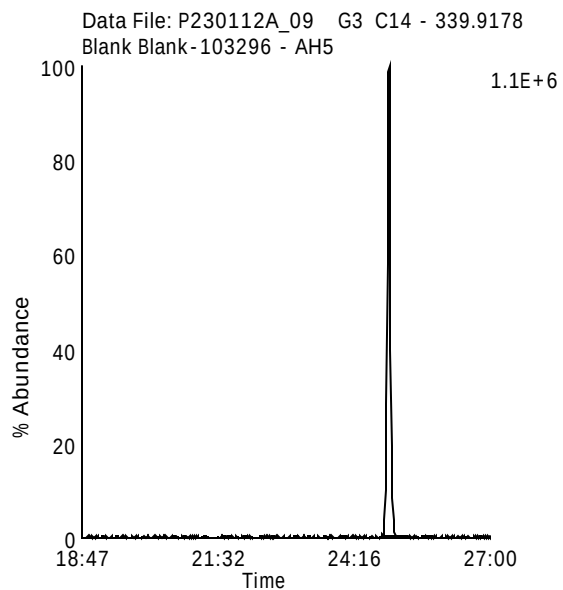
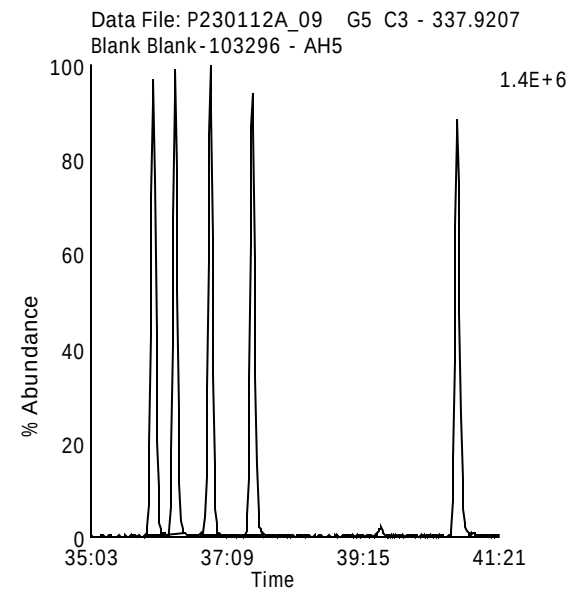
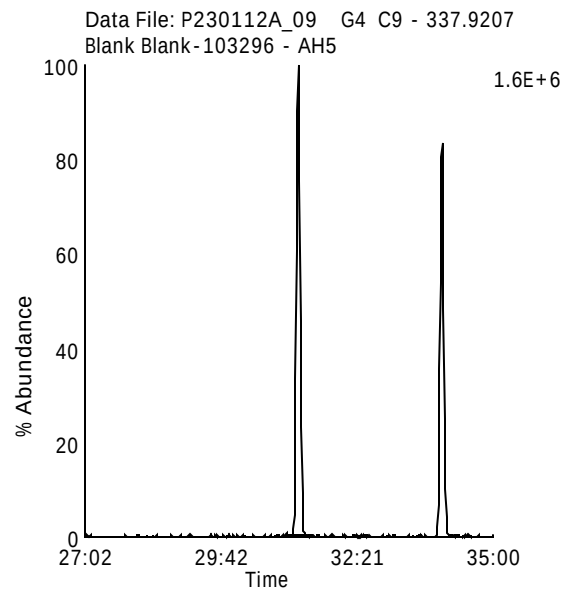
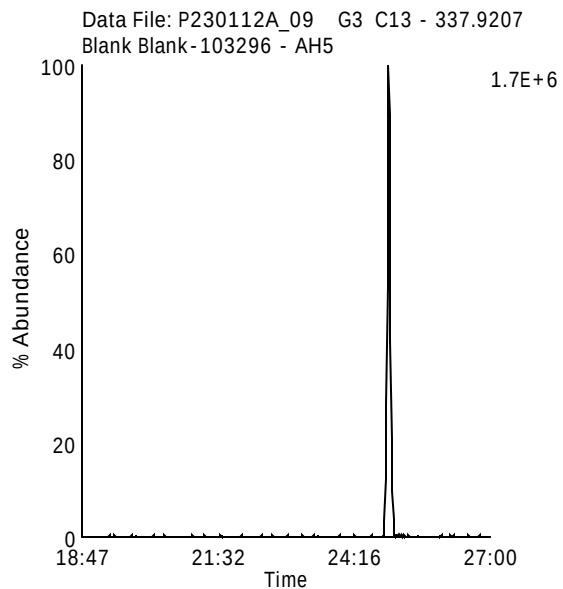
Date Acquired: 1/12/2023

Sample Description: Blank Blank-103296 - AH5

Lab Sample ID: BLANK-103296

Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC



Labeled Hexa Chlorinated Biphenyls

Data File Name: P230112A_09

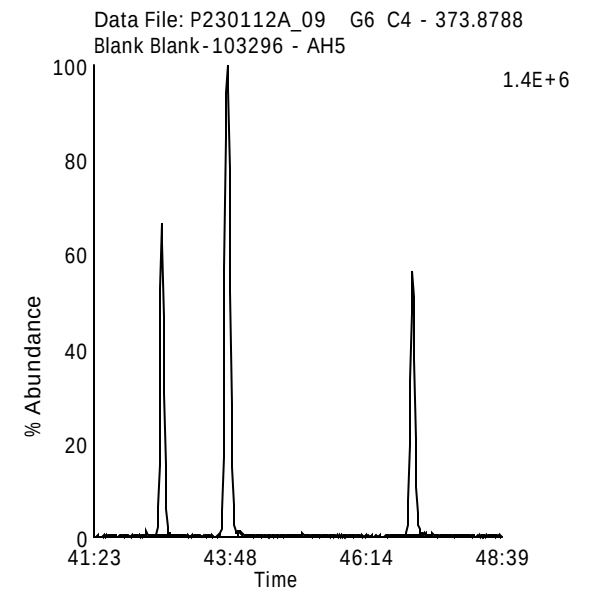
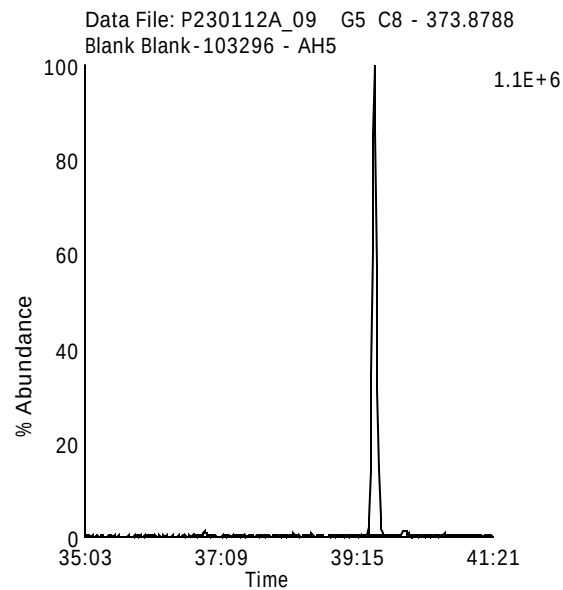
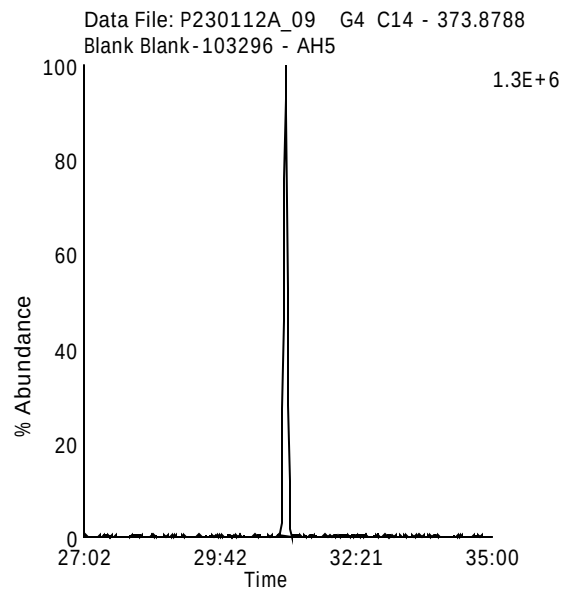
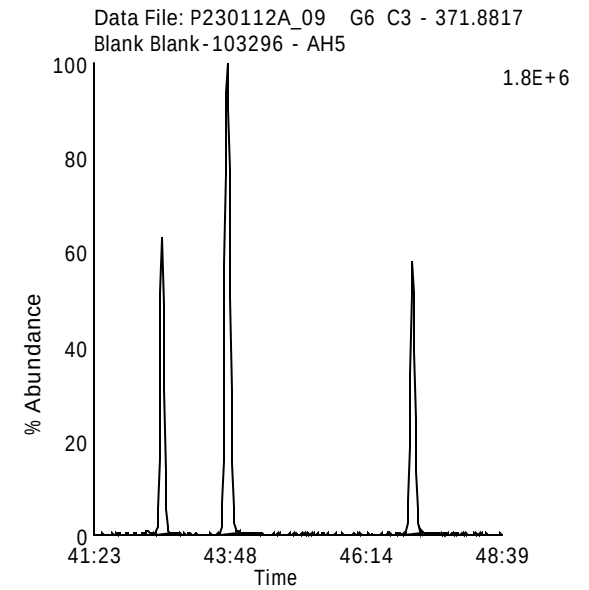
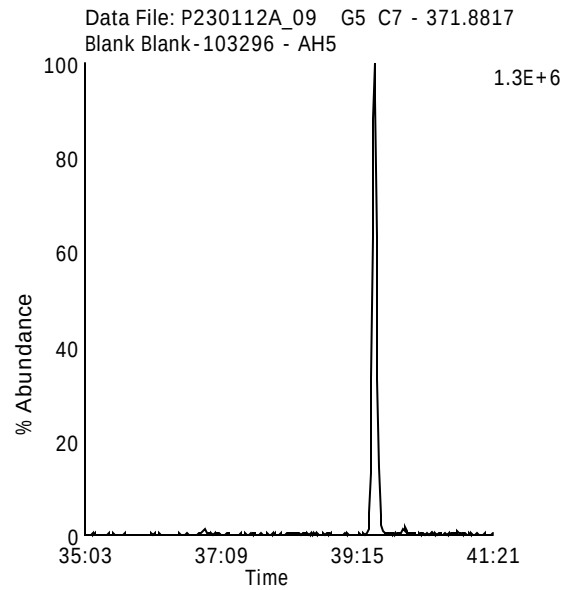
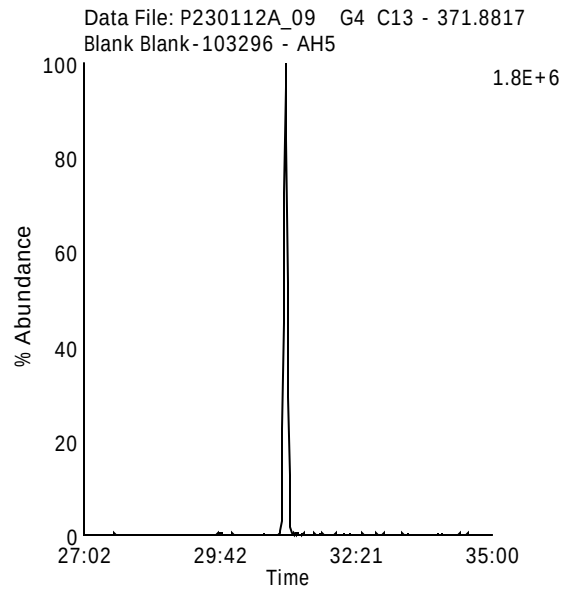
Date Acquired: 1/12/2023

Sample Description: Blank Blank-103296 - AH5

Lab Sample ID: BLANK-103296

Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC



Labeled Hepta Chlorinated Biphenyls

Data File Name: P230112A_09

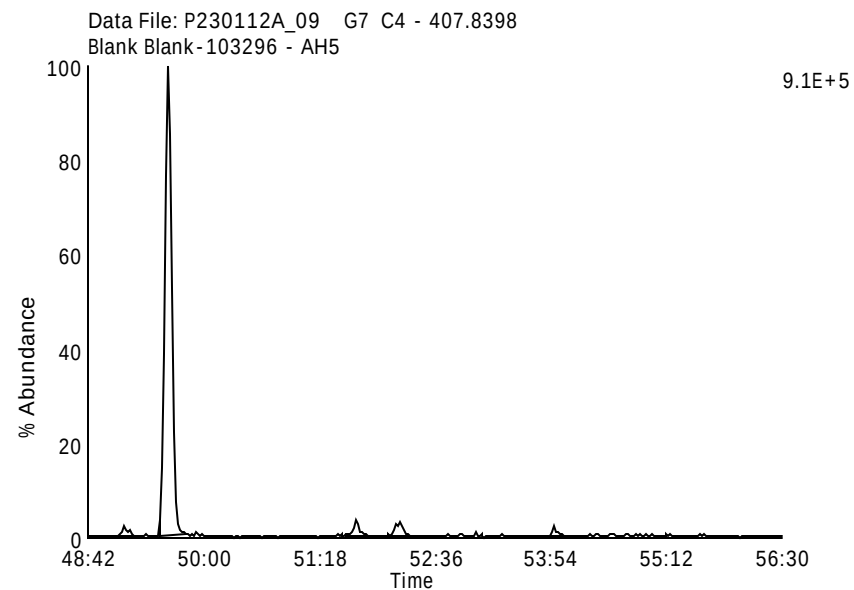
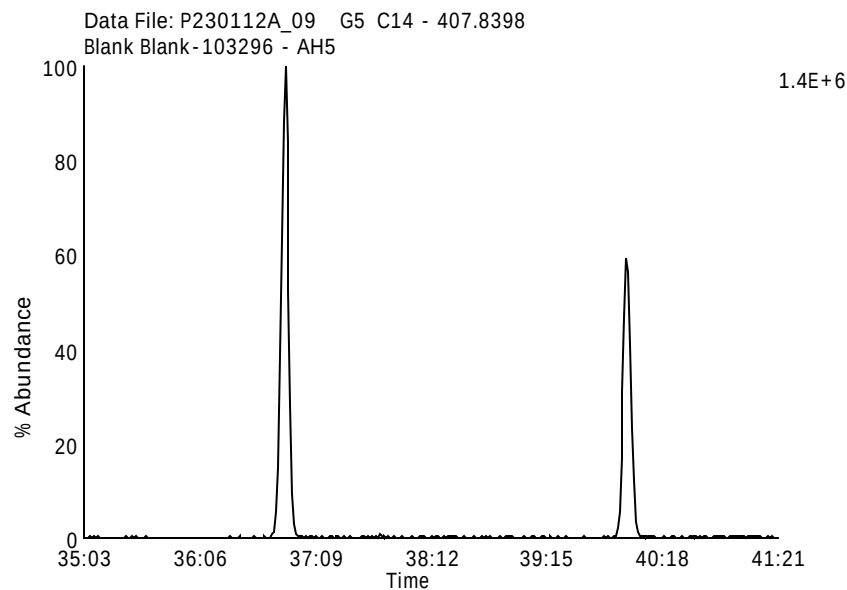
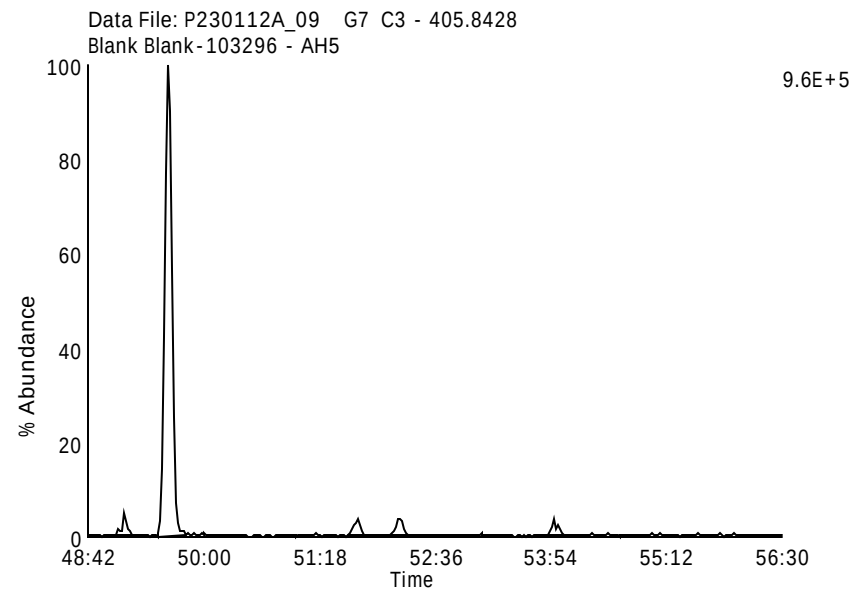
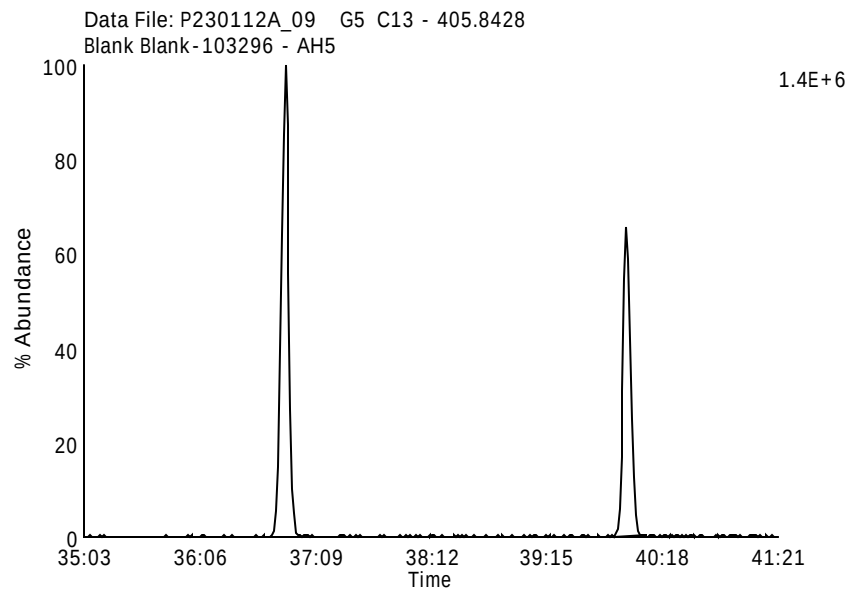
Date Acquired: 1/12/2023

Sample Description: Blank Blank-103296 - AH5

Lab Sample ID: BLANK-103296

Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC



Labeled Octa Chlorinated Biphenyls

Data File Name: P230112A_09

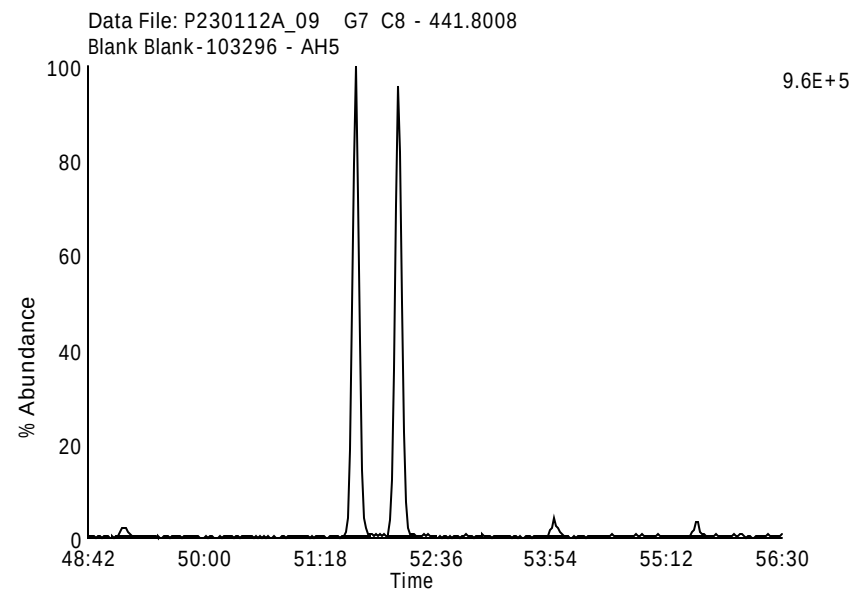
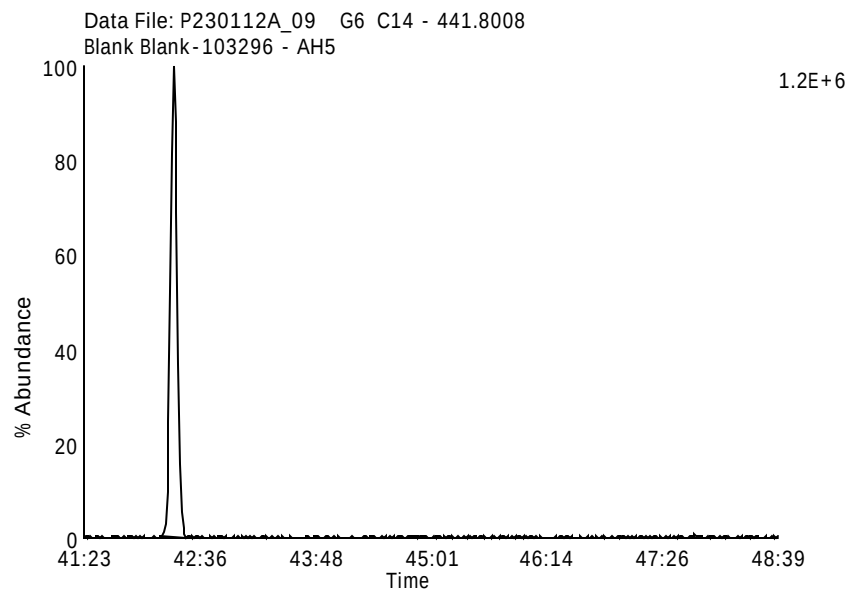
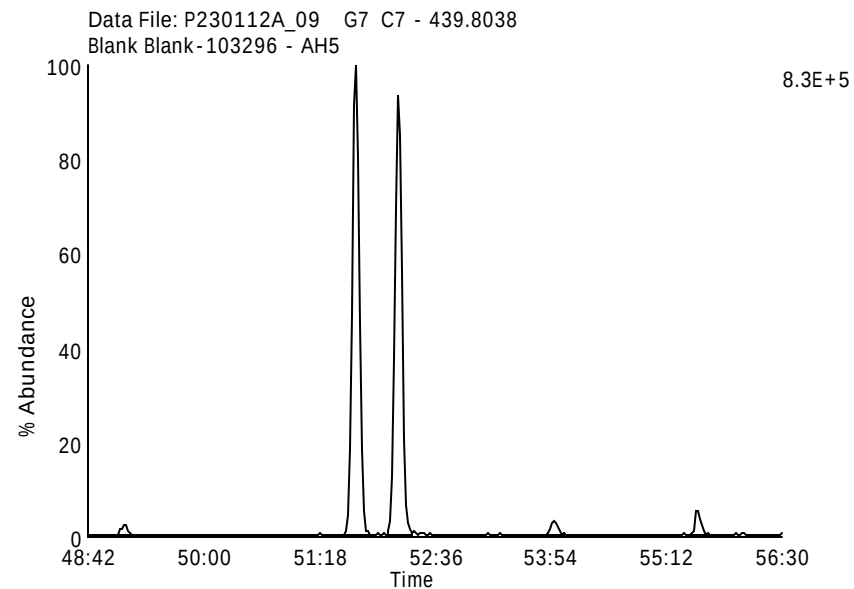
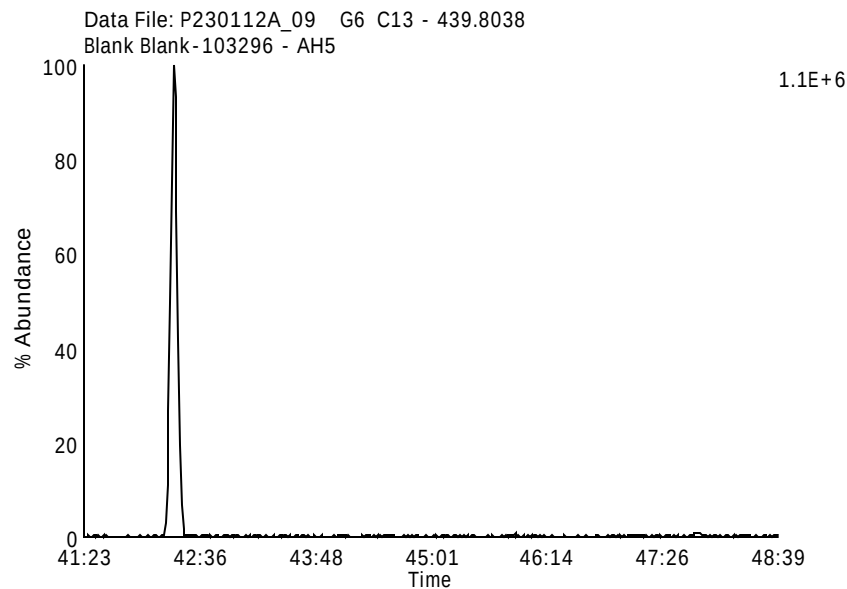
Date Acquired: 1/12/2023

Sample Description: Blank Blank-103296 - AH5

Lab Sample ID: BLANK-103296

Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC



Labeled Nona Chlorinated Biphenyls

Data File Name: P230112A_09

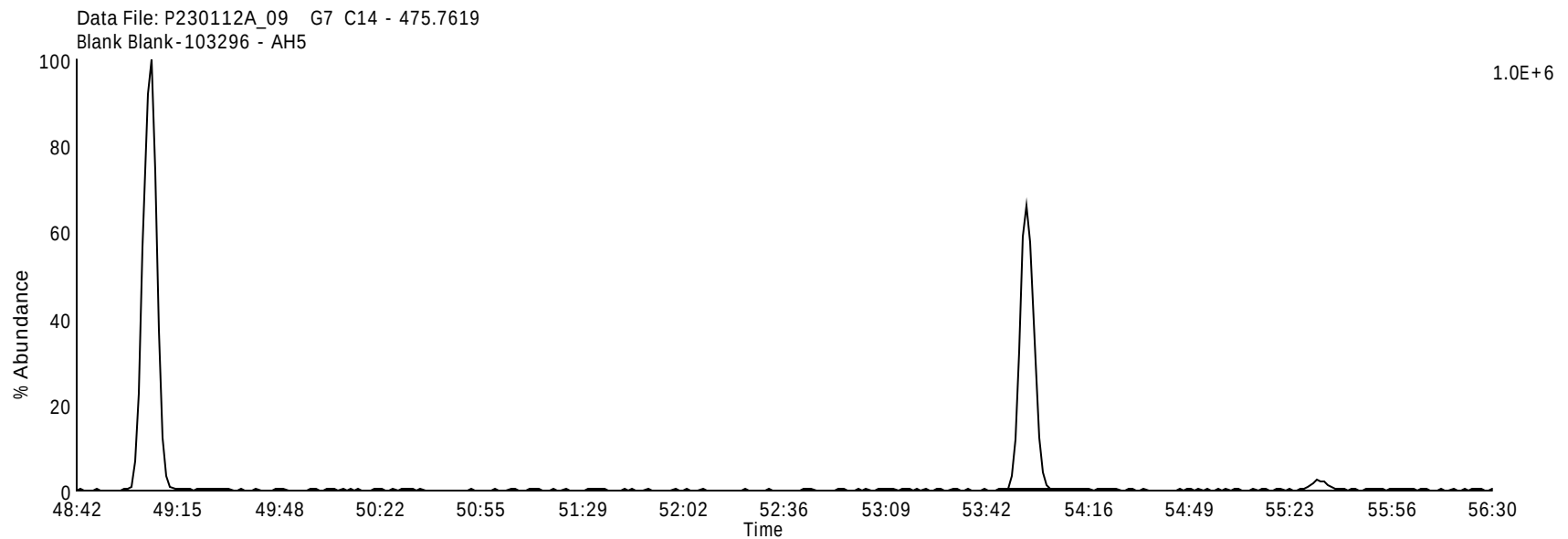
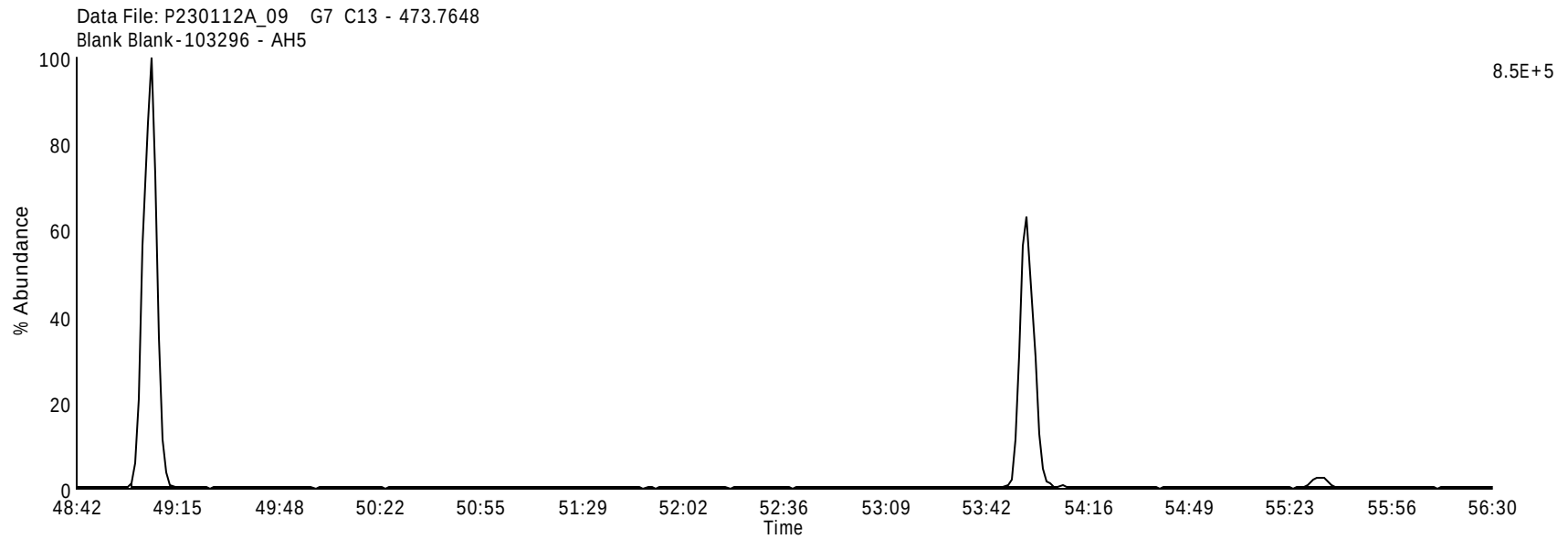
Date Acquired: 1/12/2023

Sample Description: Blank Blank-103296 - AH5

Lab Sample ID: BLANK-103296

Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC



Labeled Deca Chlorinated Biphenyl

Data File Name: P230112A_09

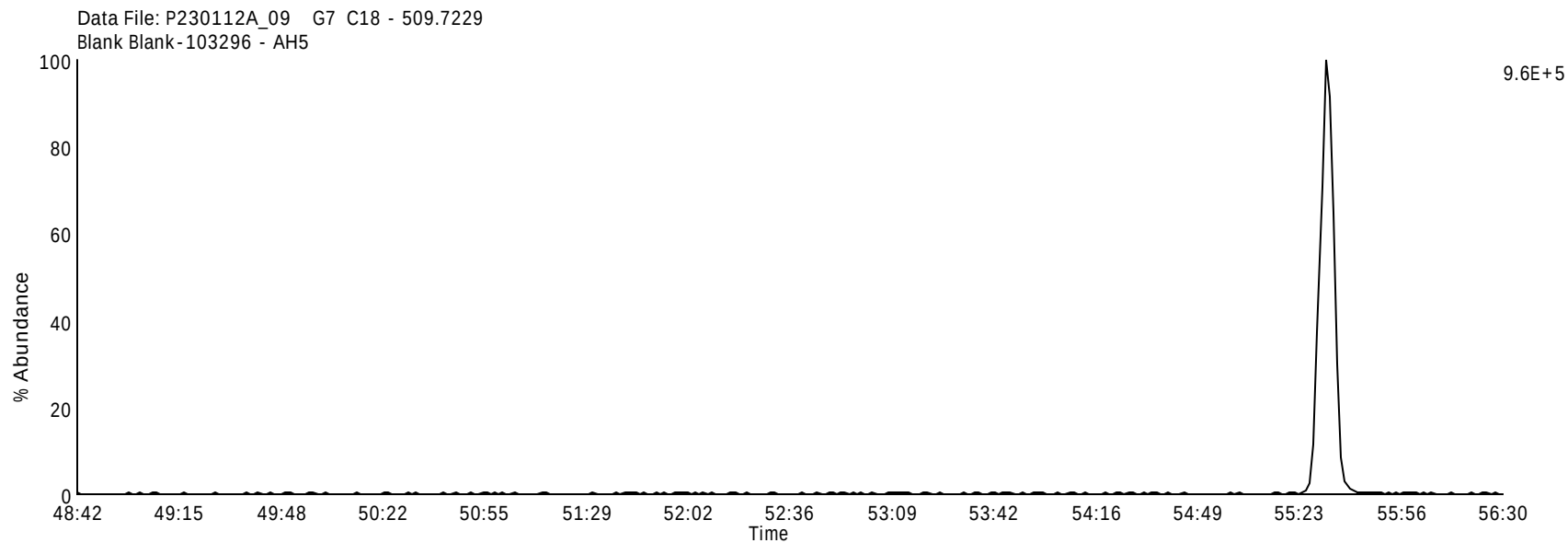
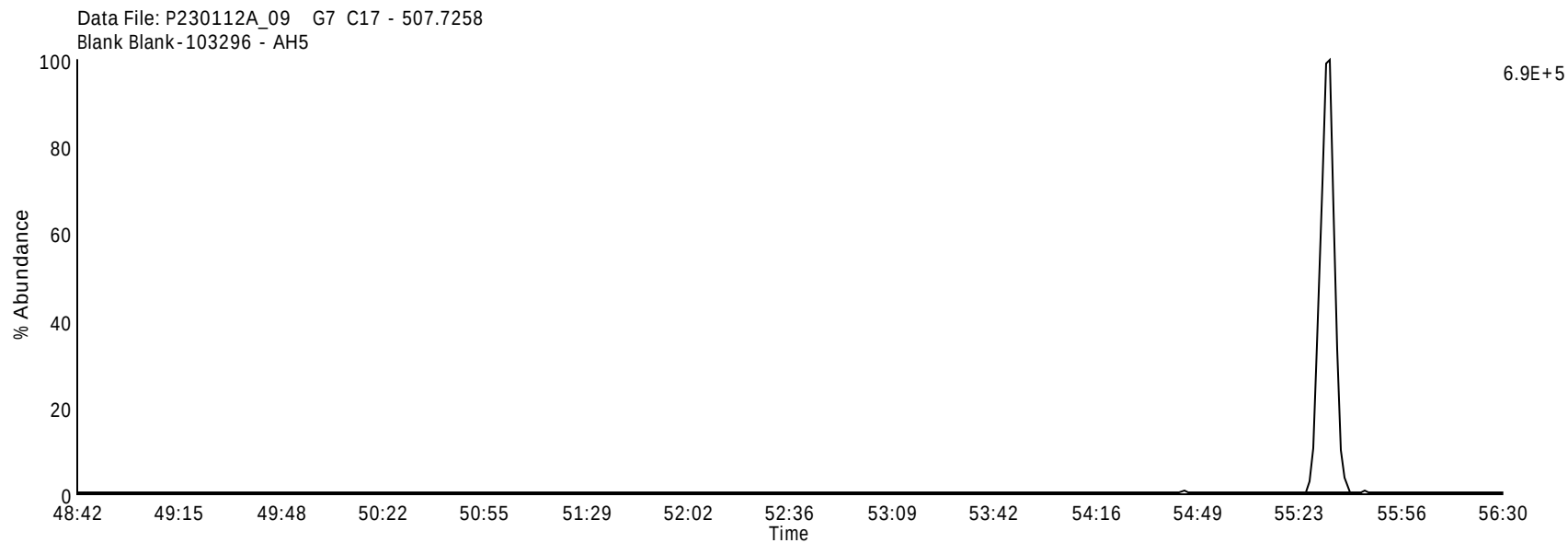
Date Acquired: 1/12/2023

Sample Description: Blank Blank-103296 - AH5

Lab Sample ID: BLANK-103296

Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC



Mono Chlorinated Biphenyls

Data File Name: P230112A_09

Date Acquired: 1/12/2023

Sample Description: Blank Blank-103296 - AH5

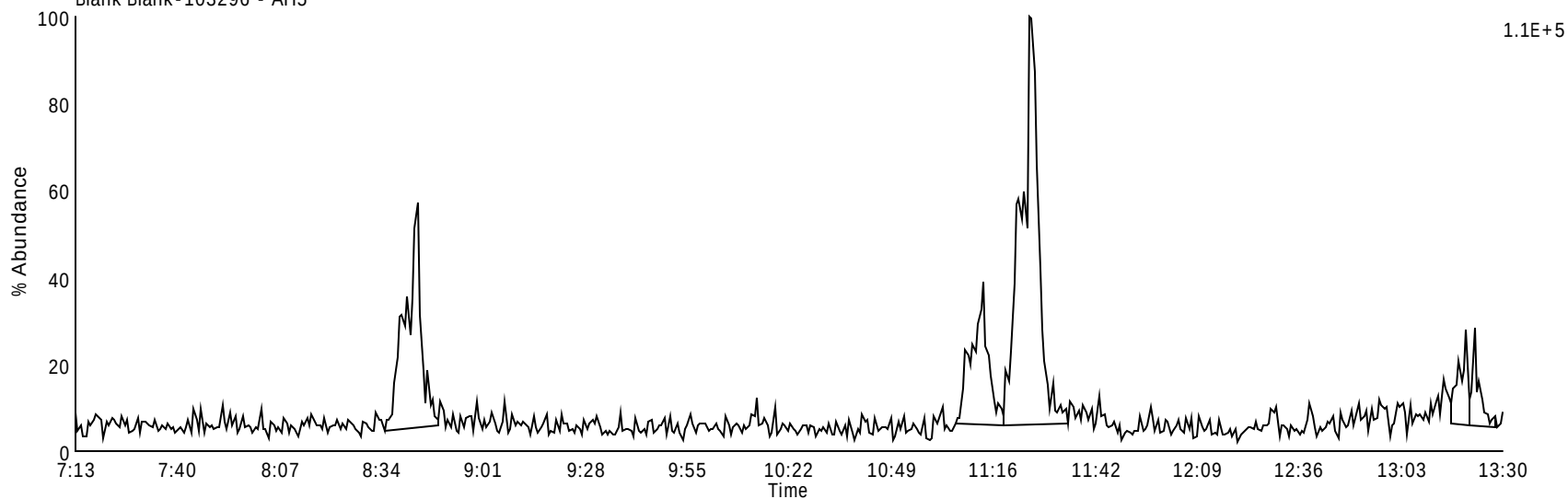
Lab Sample ID: BLANK-103296

Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC

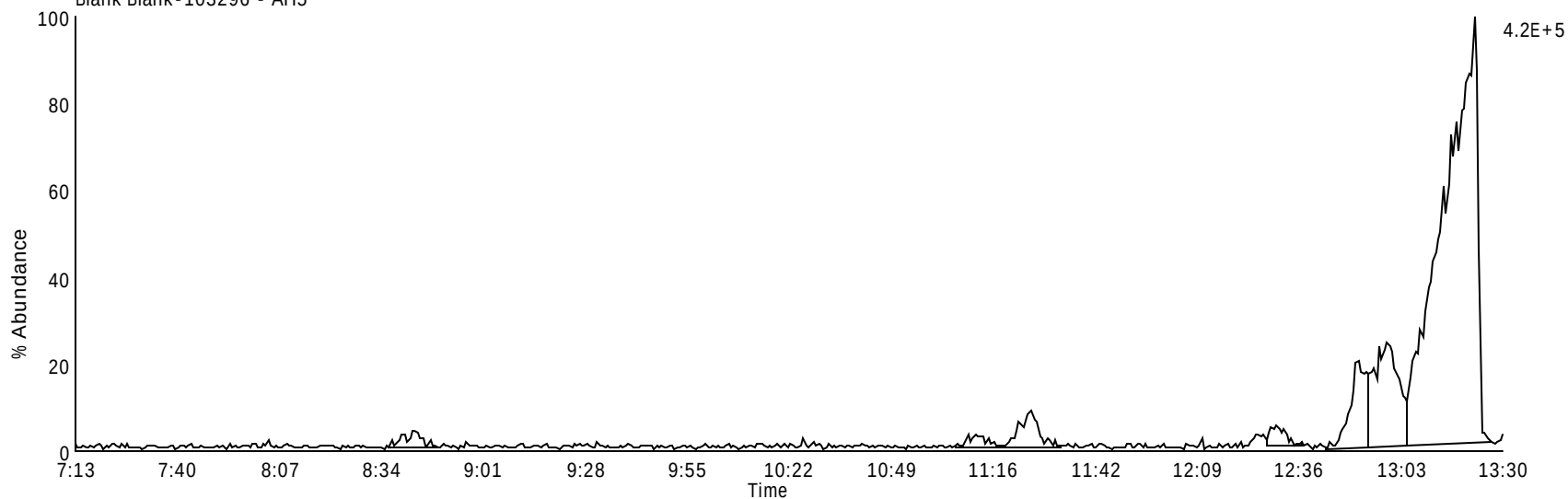
Data File: P230112A_09 G1 C1 - 188.0393

Blank Blank-103296 - AH5



Data File: P230112A_09 G1 C2 - 190.0363

Blank Blank-103296 - AH5



Di Chlorinated Biphenyls

Data File Name: P230112A_09

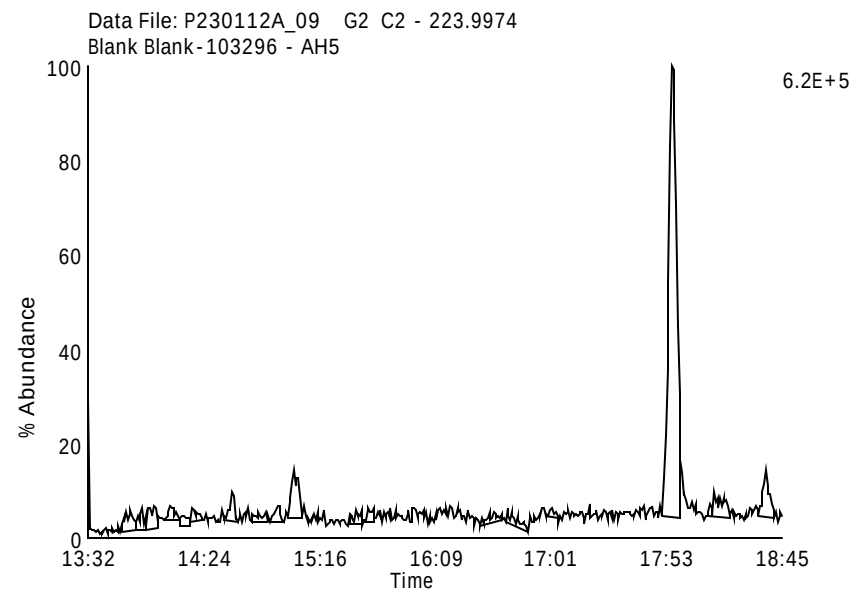
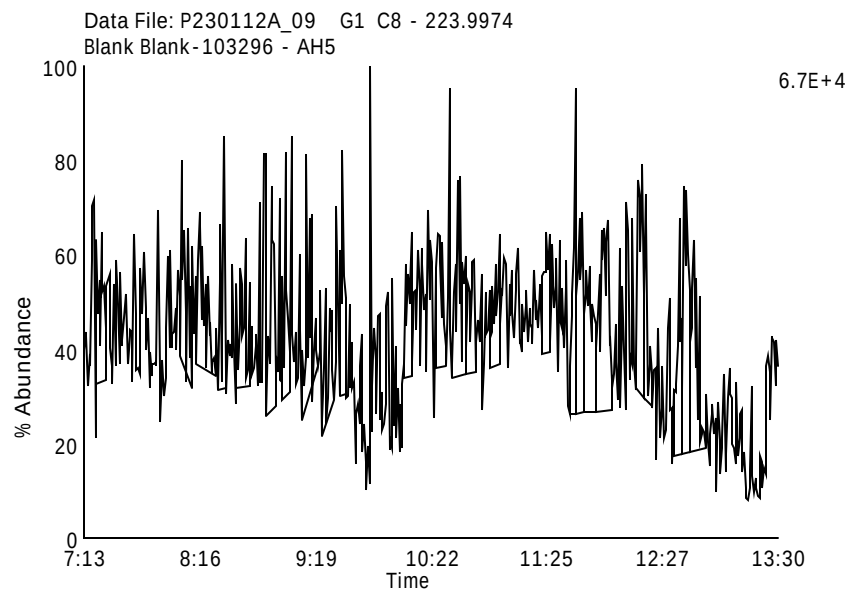
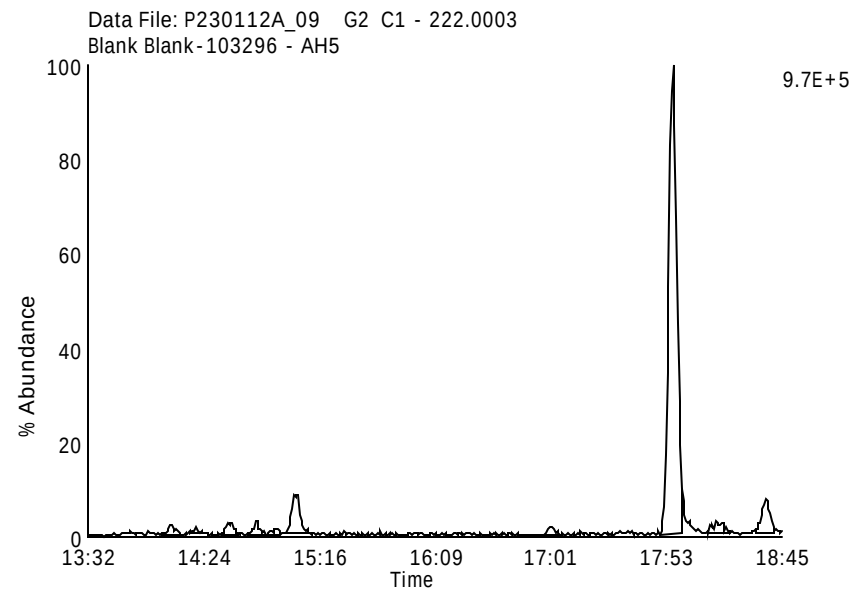
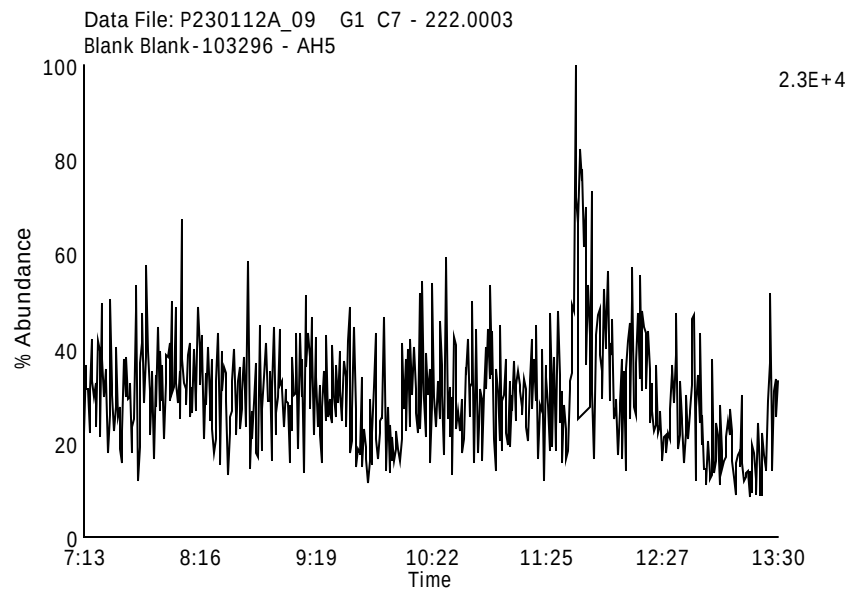
Date Acquired: 1/12/2023

Sample Description: Blank Blank-103296 - AH5

Lab Sample ID: BLANK-103296

Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC



Tri Chlorinated Biphenyls

Data File Name: P230112A_09

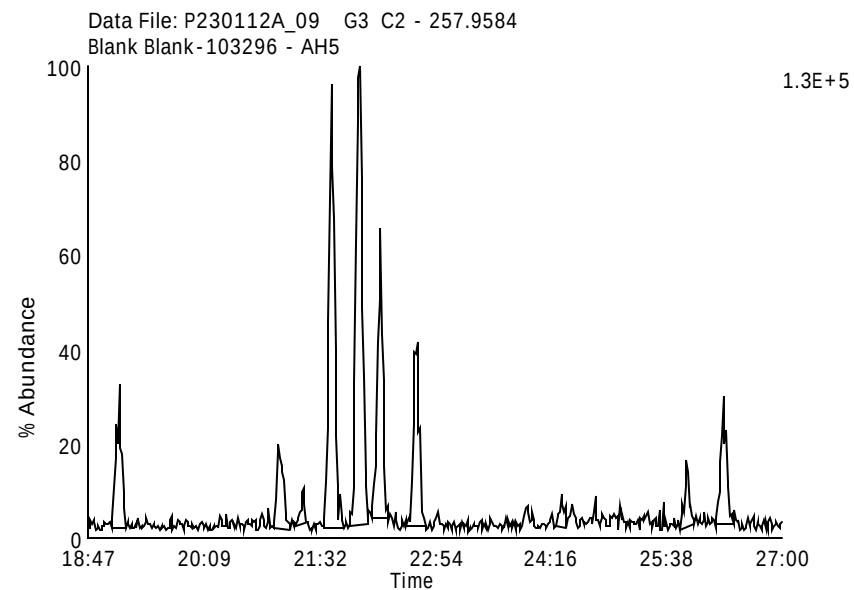
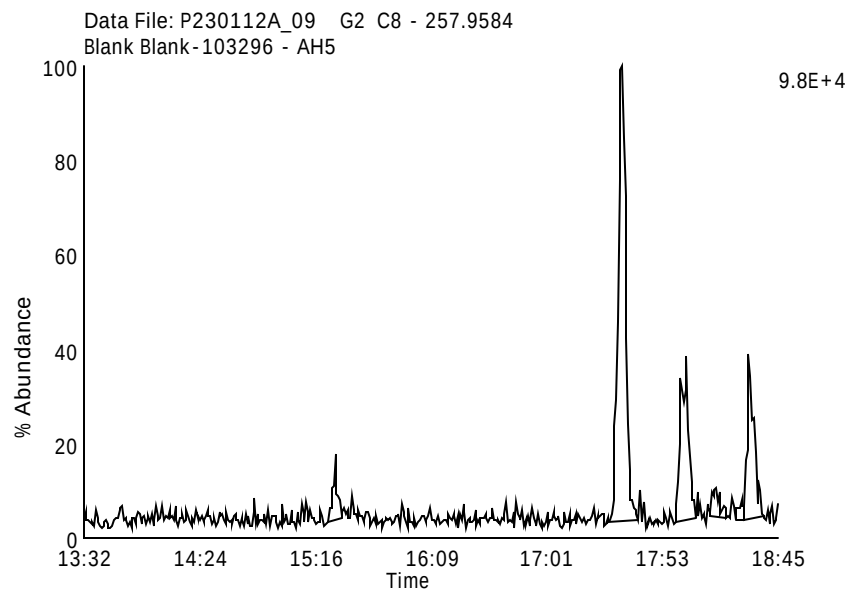
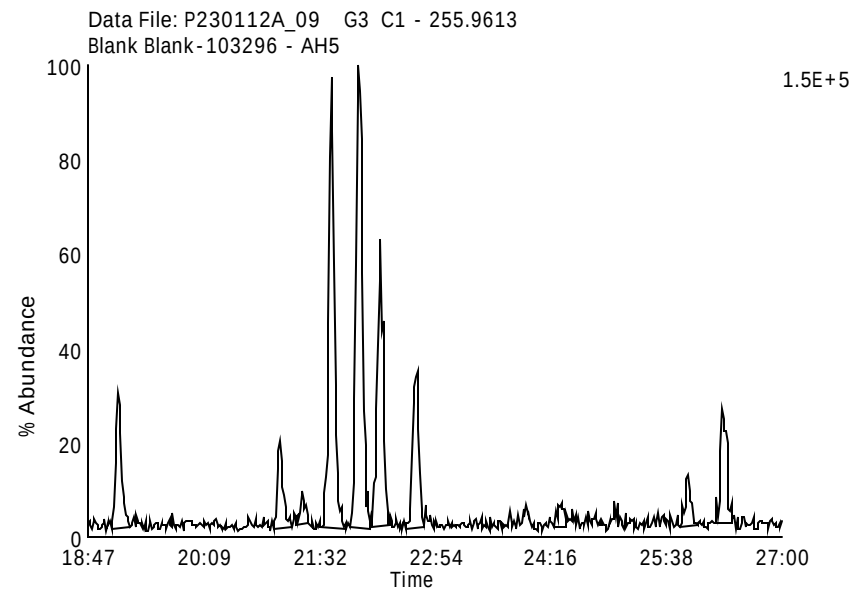
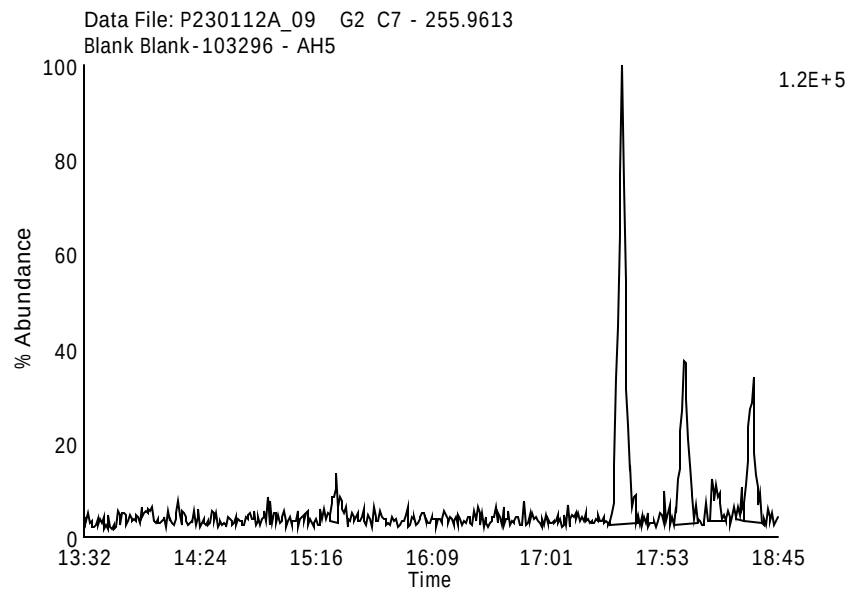
Date Acquired: 1/12/2023

Sample Description: Blank Blank-103296 - AH5

Lab Sample ID: BLANK-103296

Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC



Tetra Chlorinated Biphenyls

Data File Name: P230112A_09

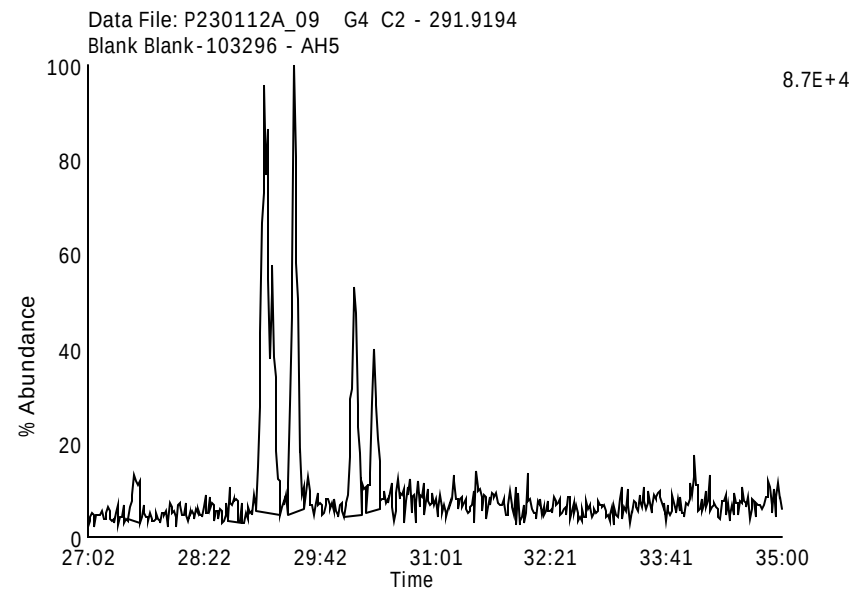
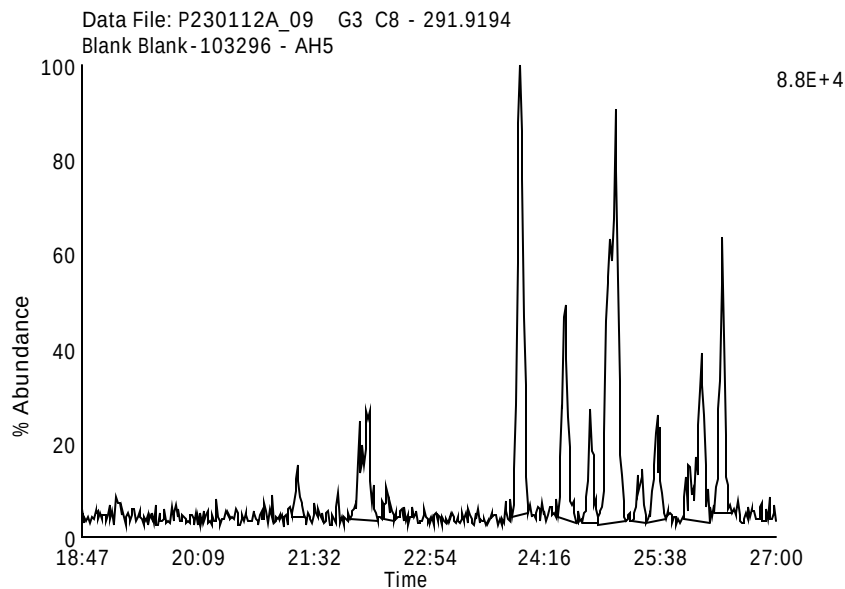
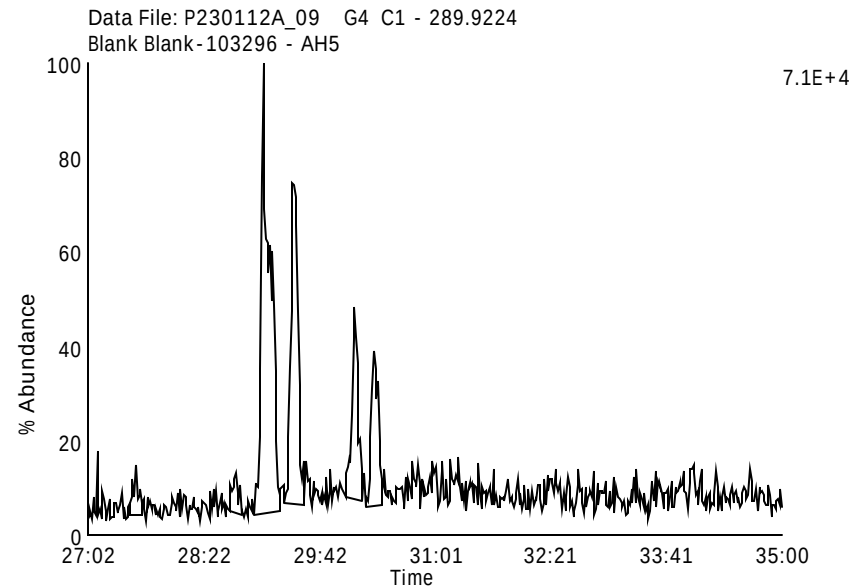
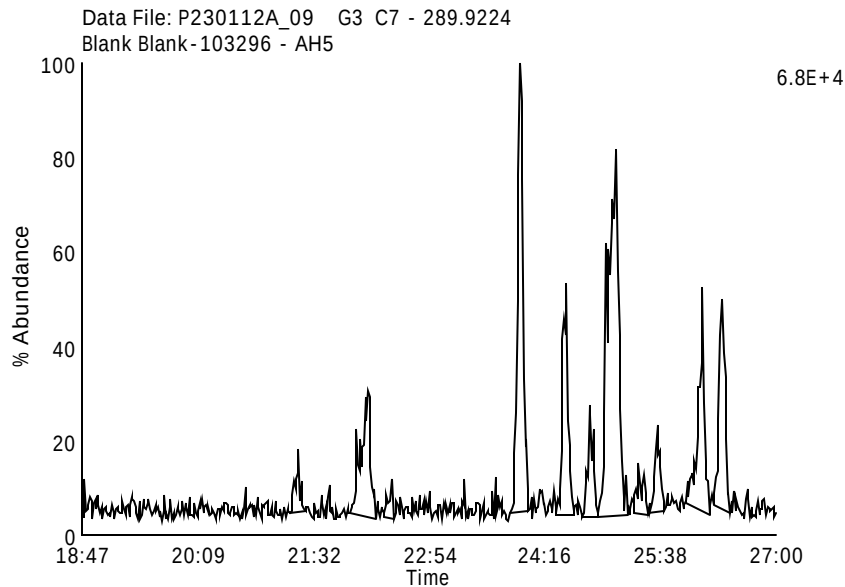
Date Acquired: 1/12/2023

Sample Description: Blank Blank-103296 - AH5

Lab Sample ID: BLANK-103296

Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC



Penta Chlorinated Biphenyls

Data File Name: P230112A_09

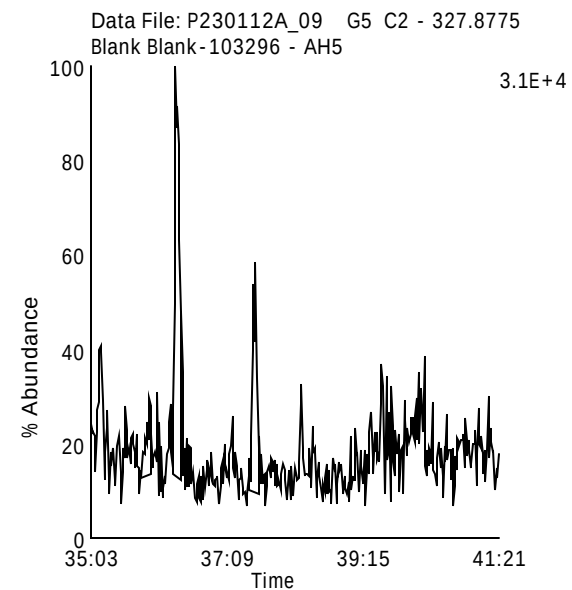
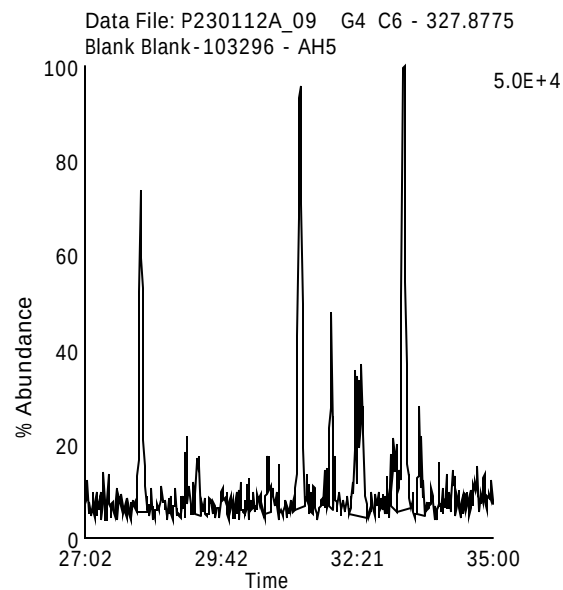
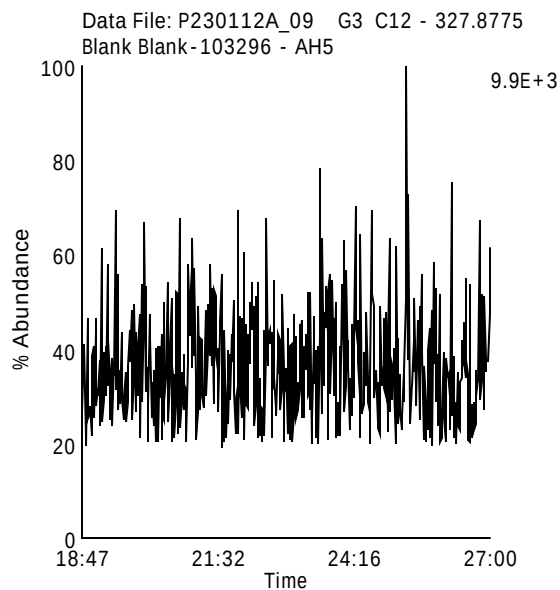
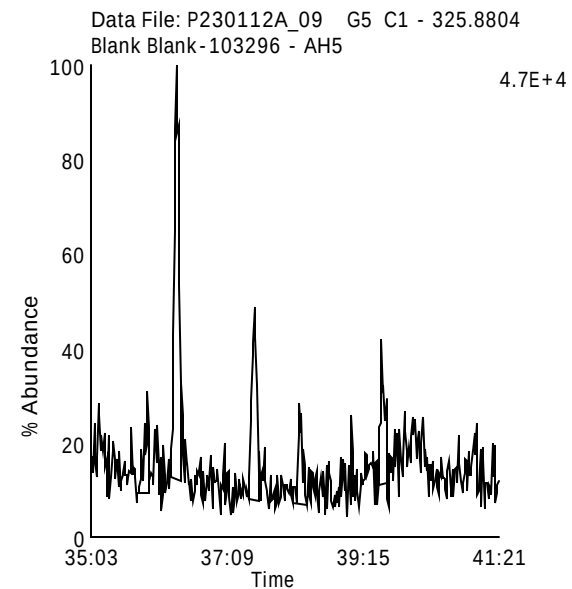
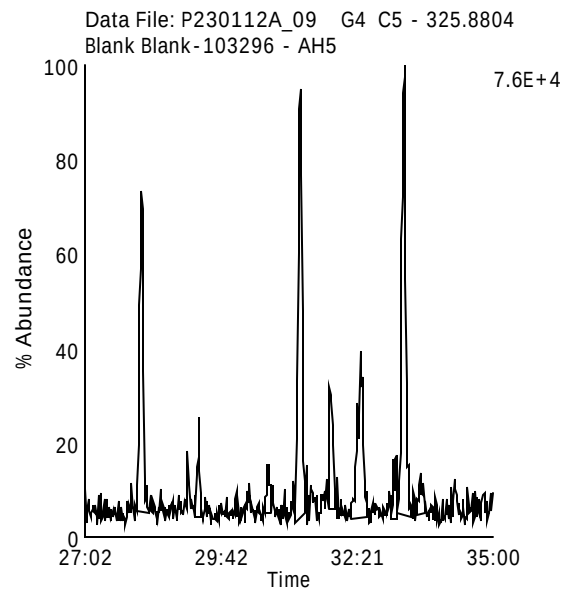
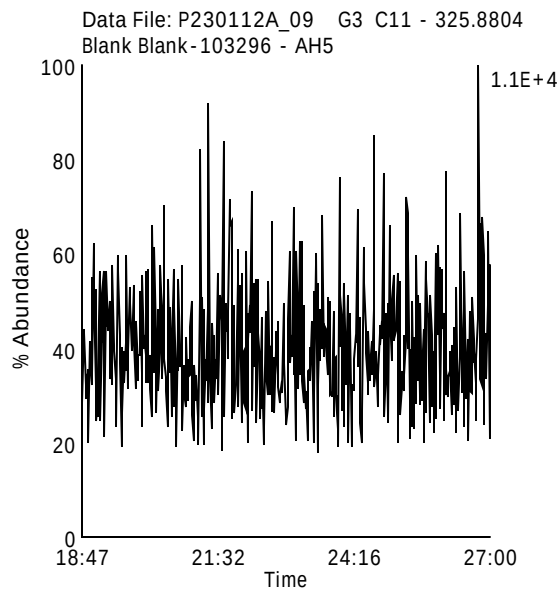
Date Acquired: 1/12/2023

Sample Description: Blank Blank-103296 - AH5

Lab Sample ID: BLANK-103296

Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC



Hexa Chlorinated Biphenyls

Data File Name: P230112A_09

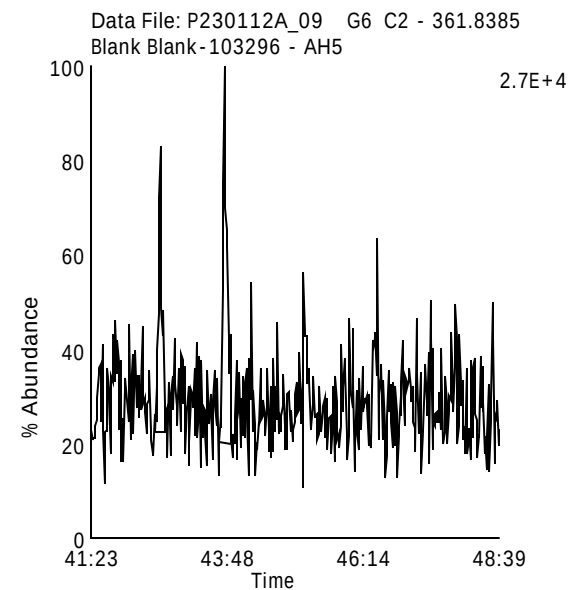
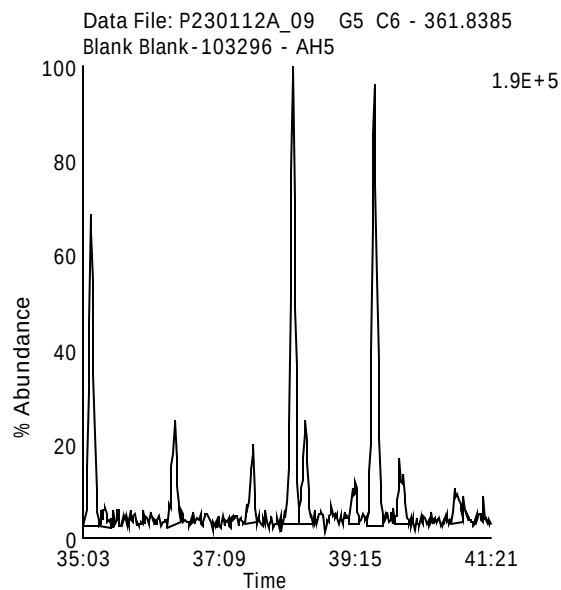
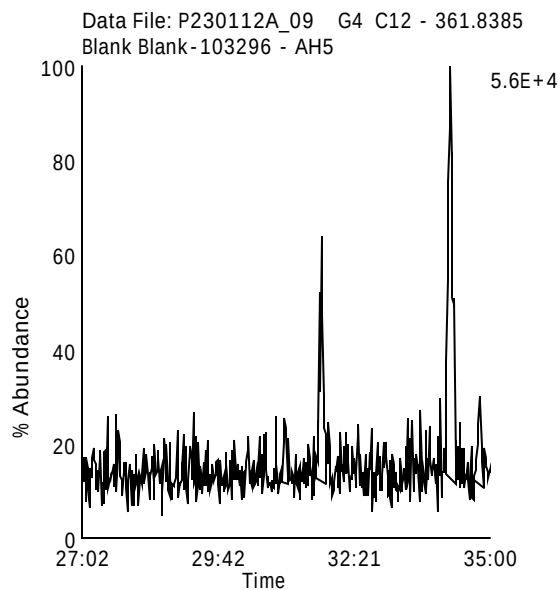
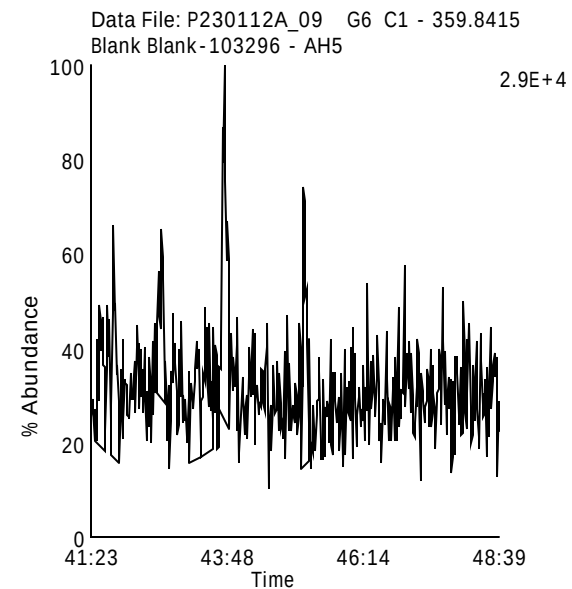
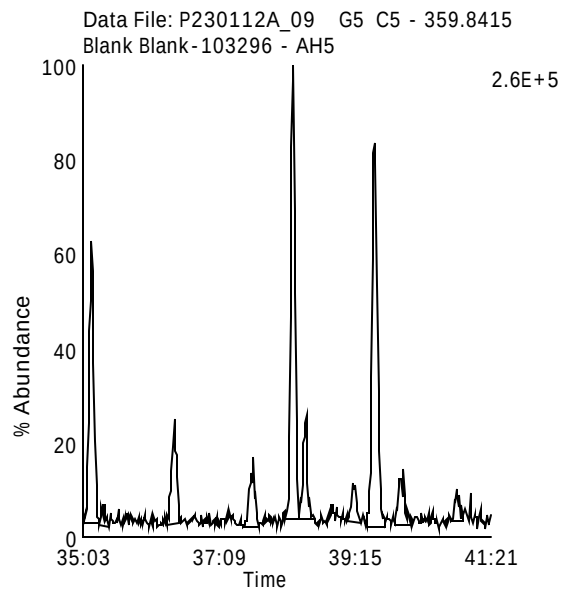
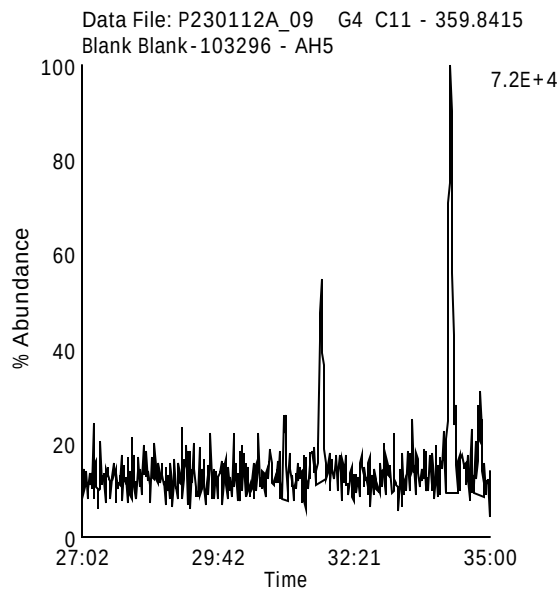
Date Acquired: 1/12/2023

Sample Description: Blank Blank-103296 - AH5

Lab Sample ID: BLANK-103296

Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC



Hepta Chlorinated Biphenyls

Data File Name: P230112A_09

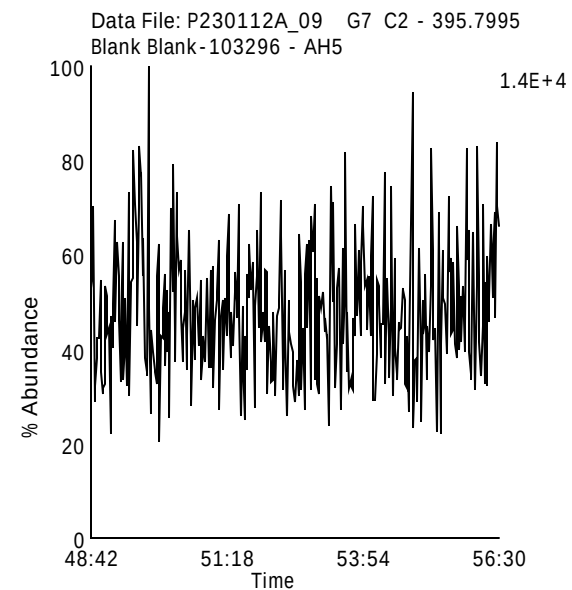
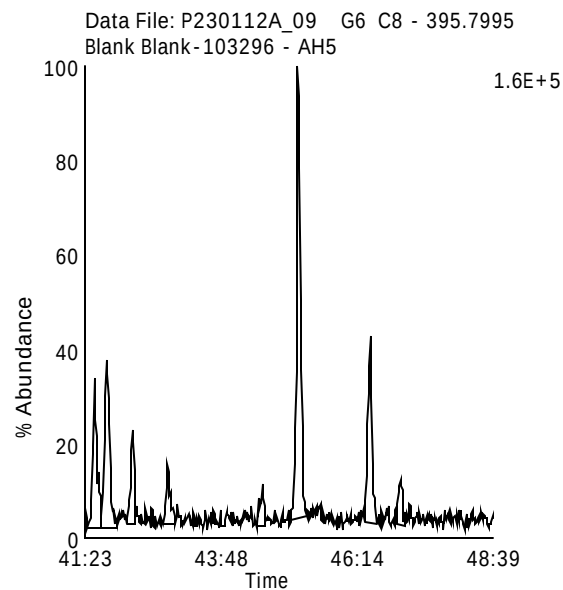
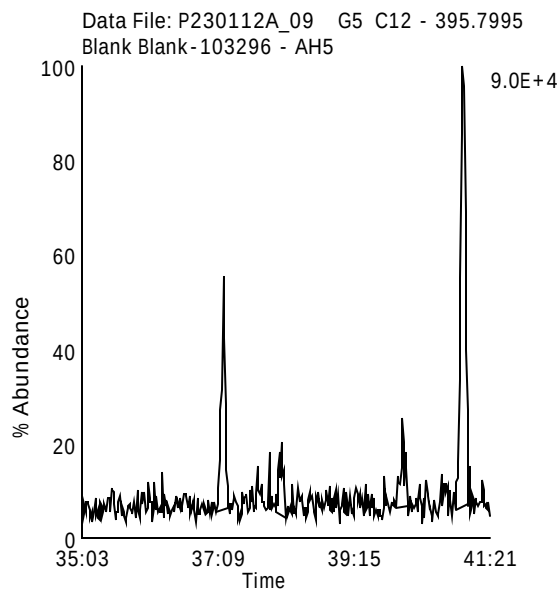
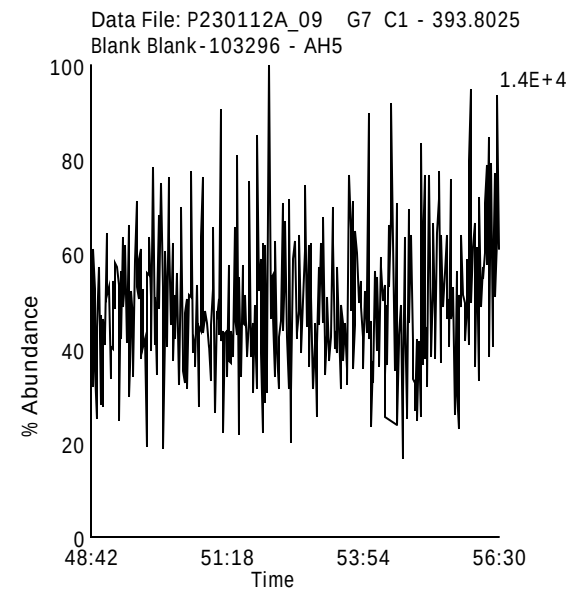
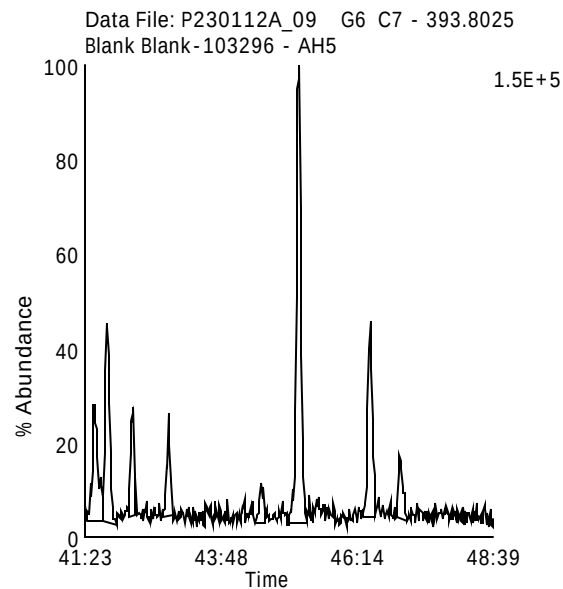
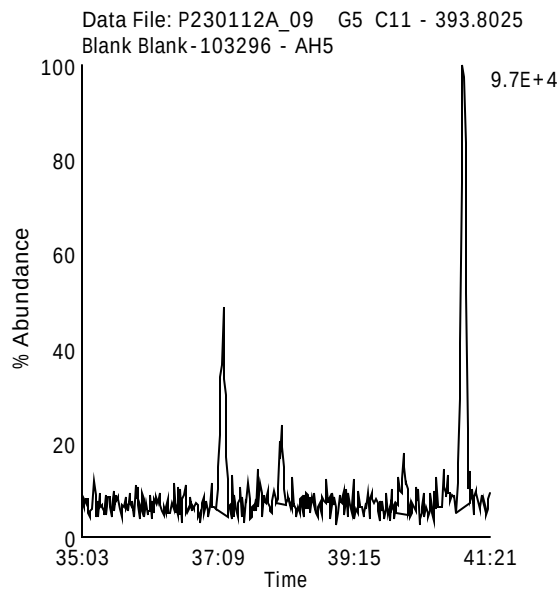
Date Acquired: 1/12/2023

Sample Description: Blank Blank-103296 - AH5

Lab Sample ID: BLANK-103296

Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC



Octa Chlorinated Biphenyls

Data File Name: P230112A_09

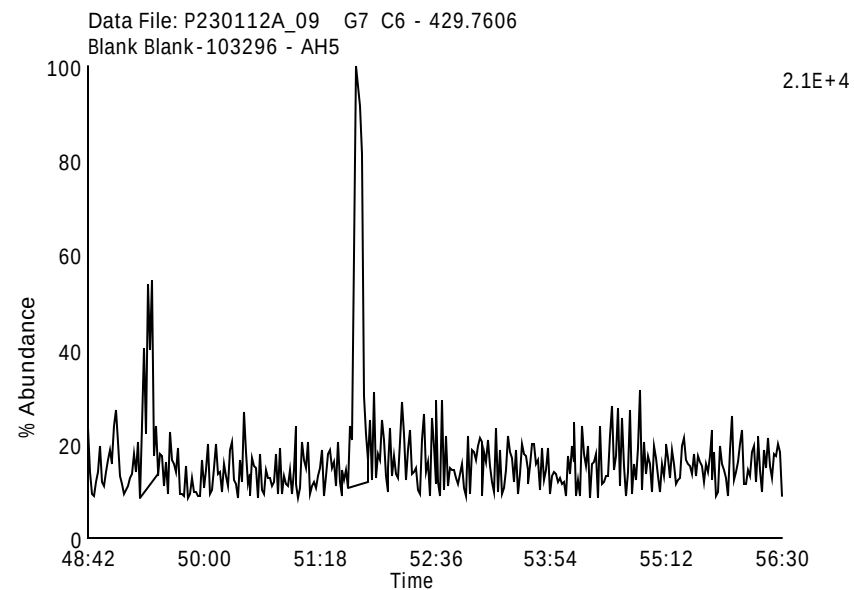
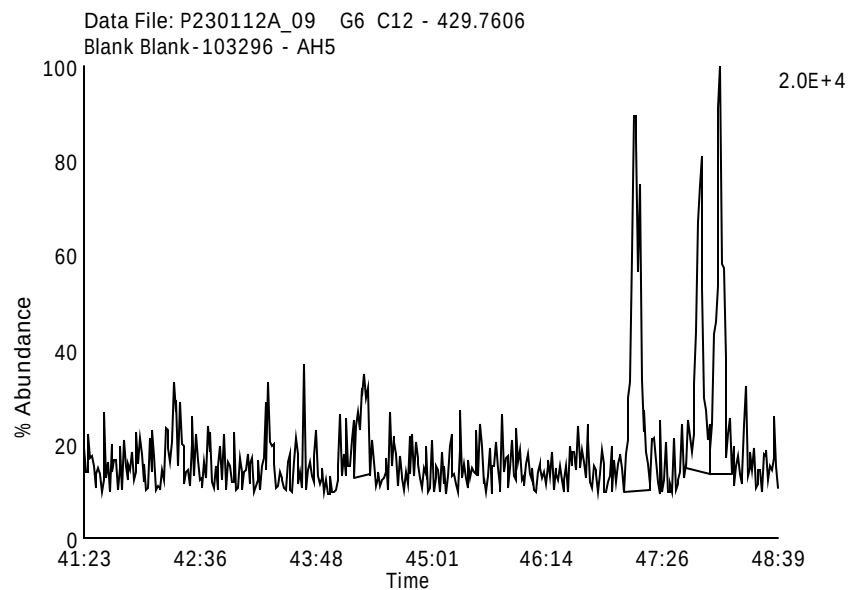
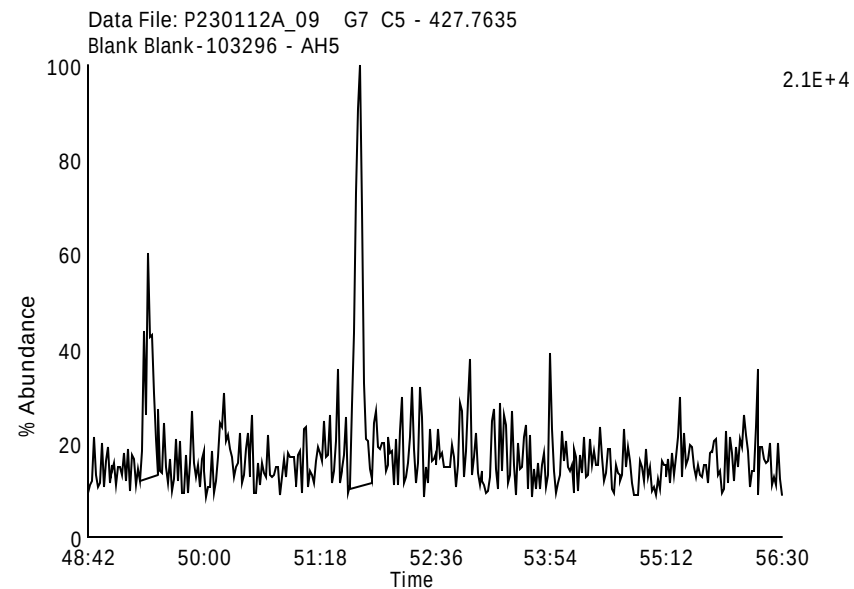
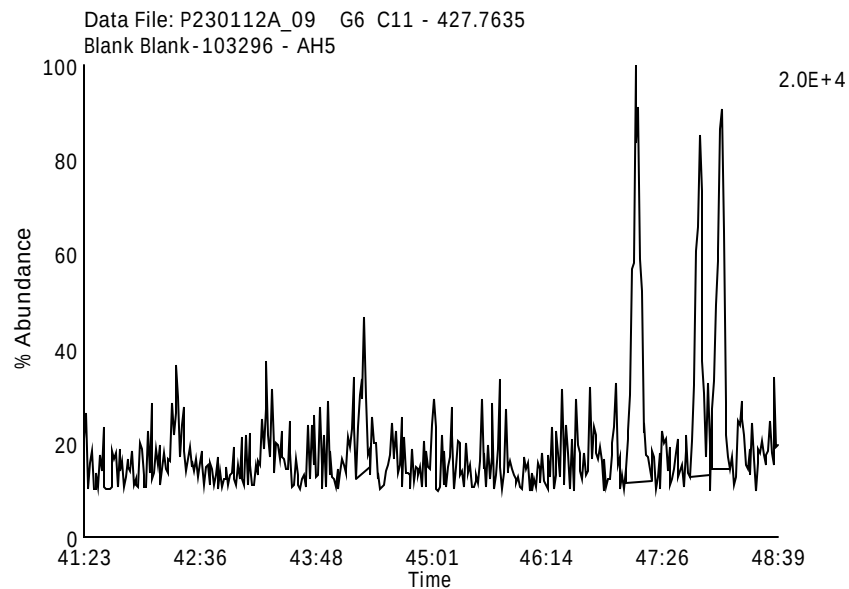
Date Acquired: 1/12/2023

Sample Description: Blank Blank-103296 - AH5

Lab Sample ID: BLANK-103296

Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC



Nona Chlorinated Biphenyls

Data File Name: P230112A_09

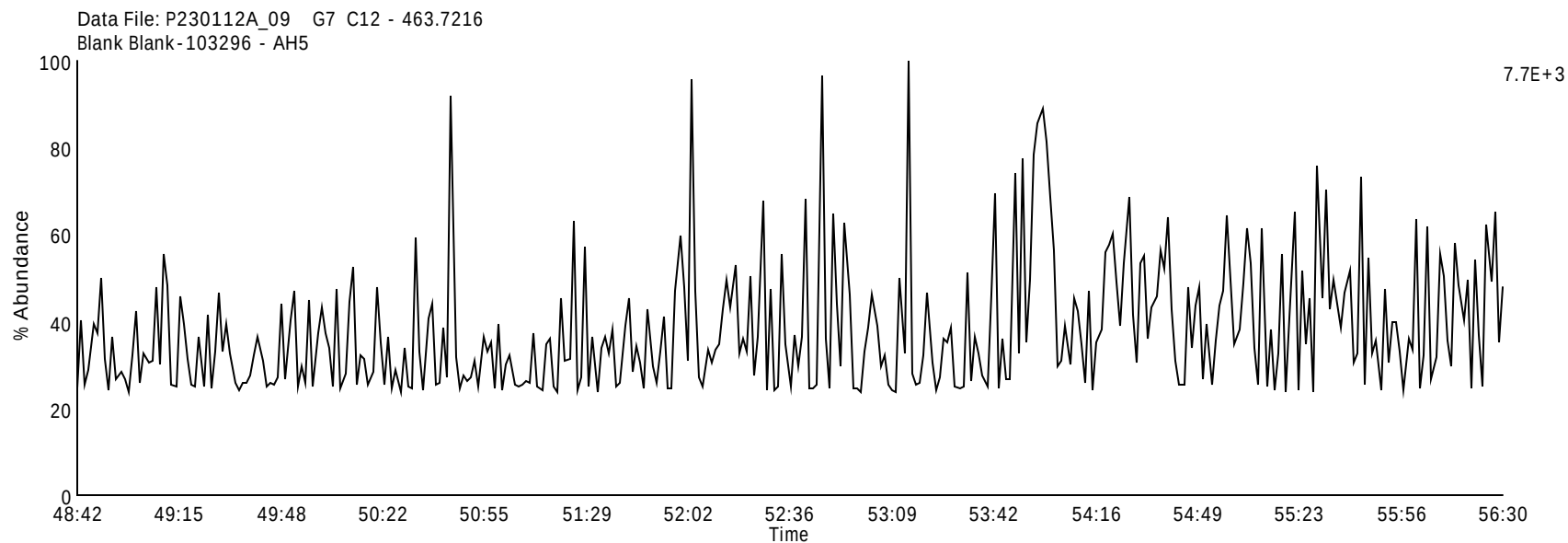
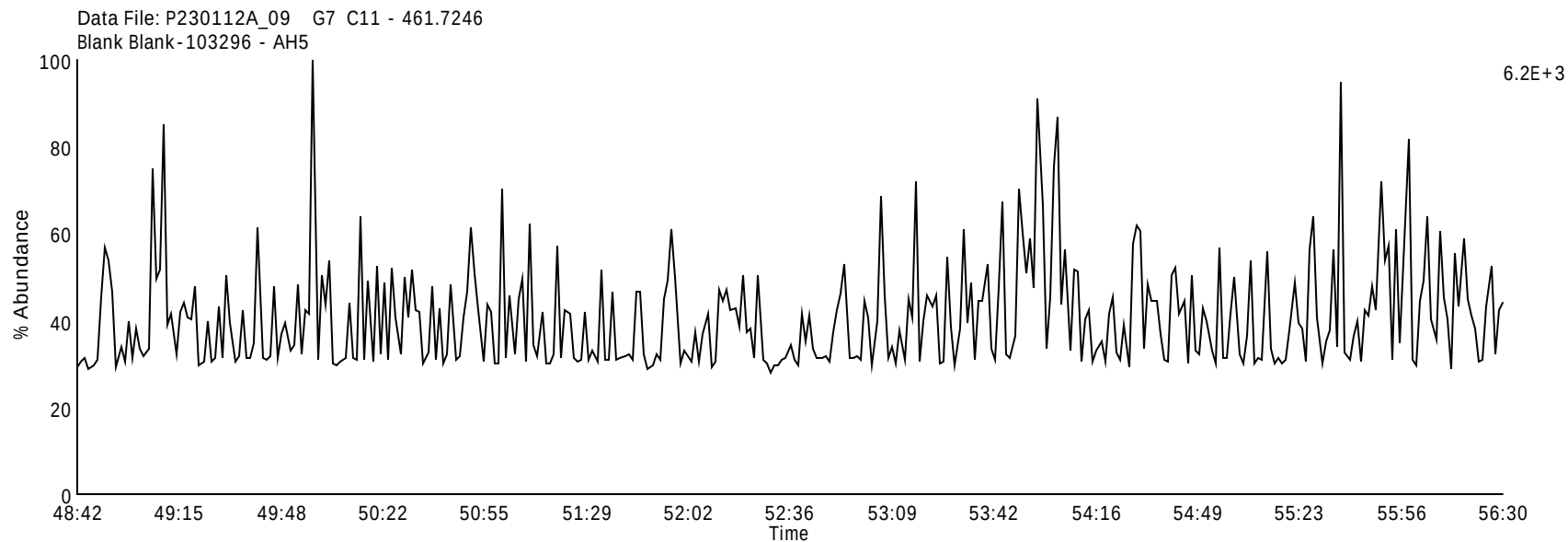
Date Acquired: 1/12/2023

Sample Description: Blank Blank-103296 - AH5

Lab Sample ID: BLANK-103296

Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC



Deca Chlorinated Biphenyl

Data File Name: P230112A_09

Date Acquired: 1/12/2023

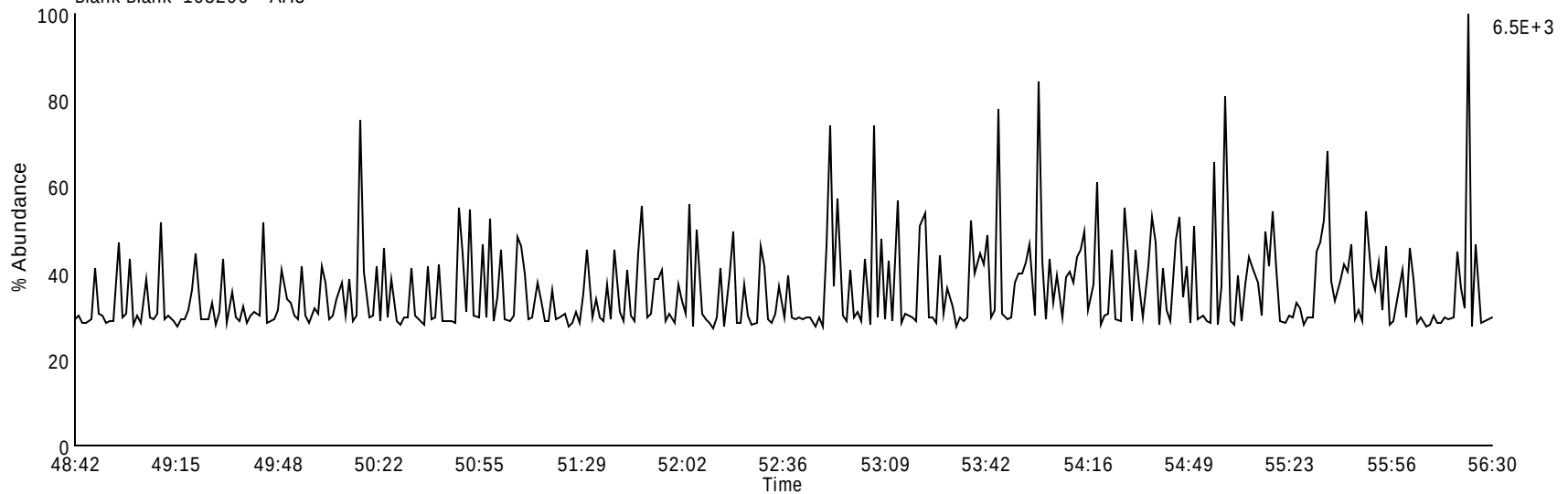
Sample Description: Blank Blank-103296 - AH5

Lab Sample ID: BLANK-103296

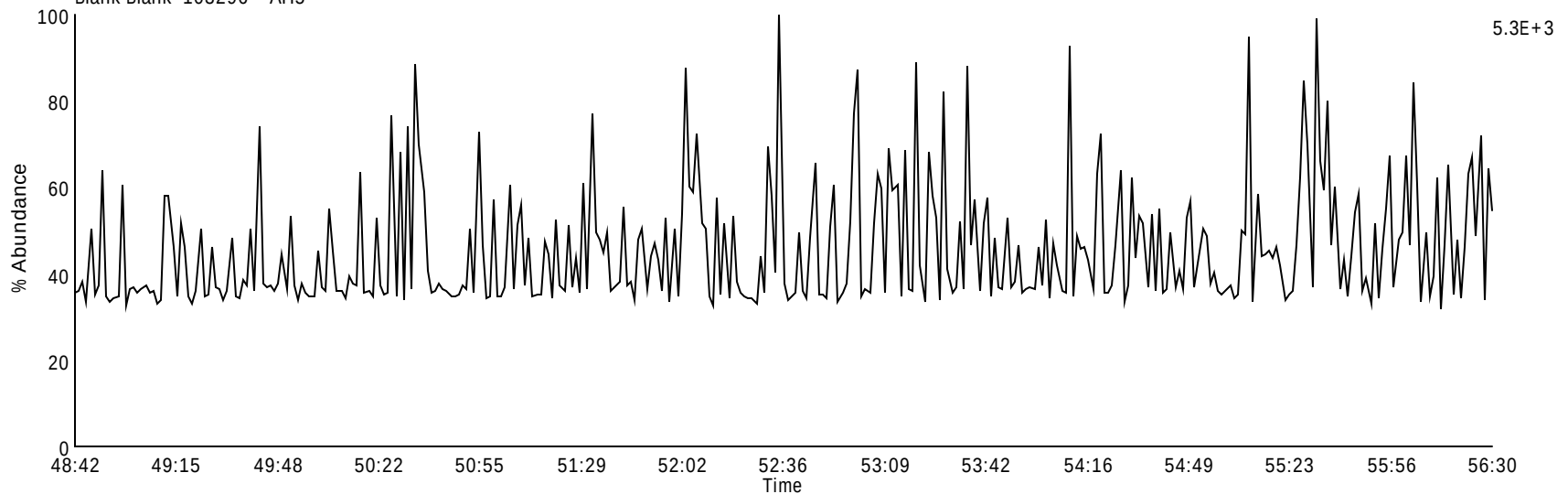
Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC

Data File: P230112A_09 G7 C15 - 495.6856
Blank Blank-103296 - AH5



Data File: P230112A_09 G7 C16 - 497.6826
Blank Blank-103296 - AH5



Group 1 - 4 Lock mass

Data File Name: P230112A_09

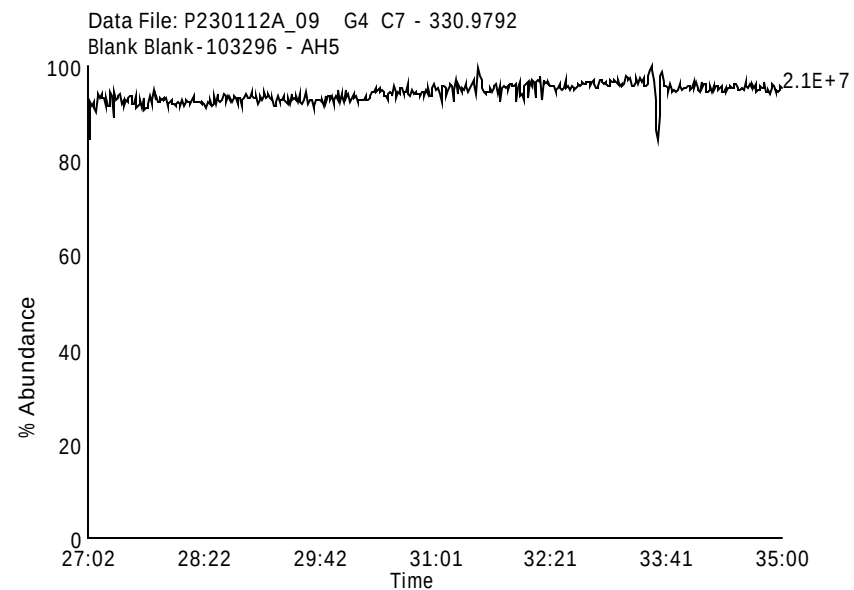
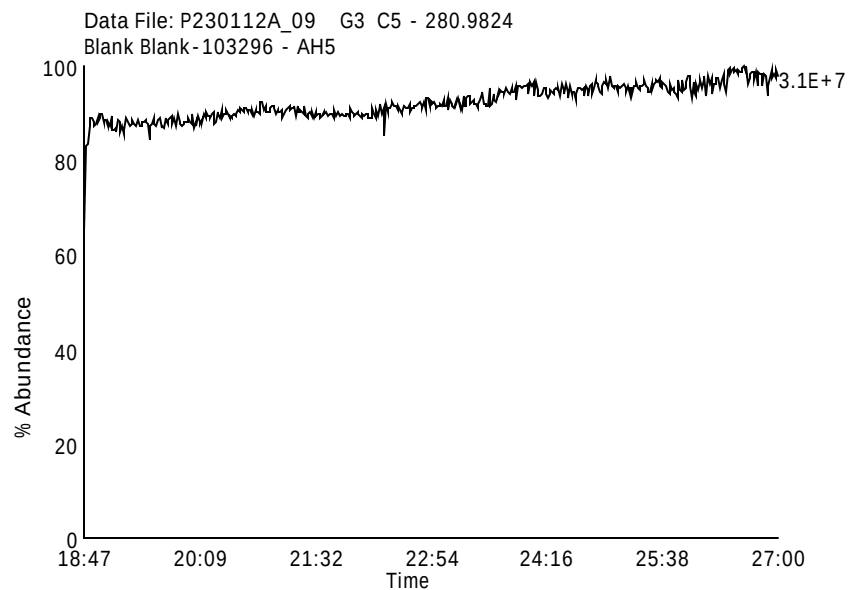
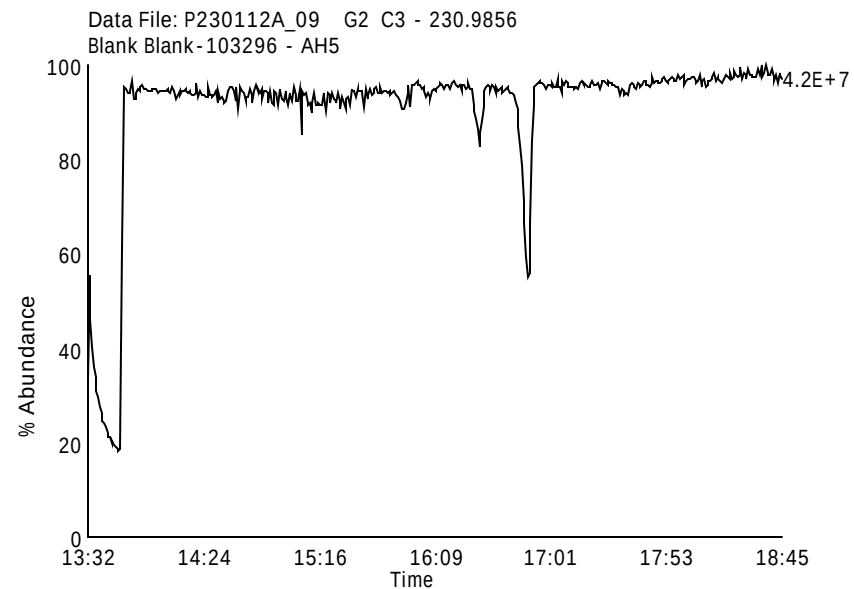
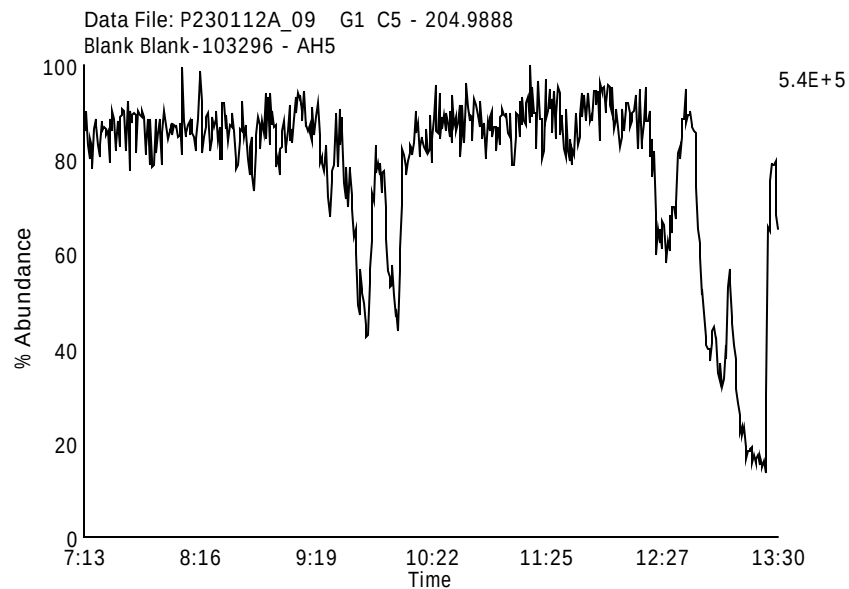
Date Acquired: 1/12/2023

Sample Description: Blank Blank-103296 - AH5

Lab Sample ID: BLANK-103296

Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC



Group 5 - 7 Lock mass

Data File Name: P230112A_09

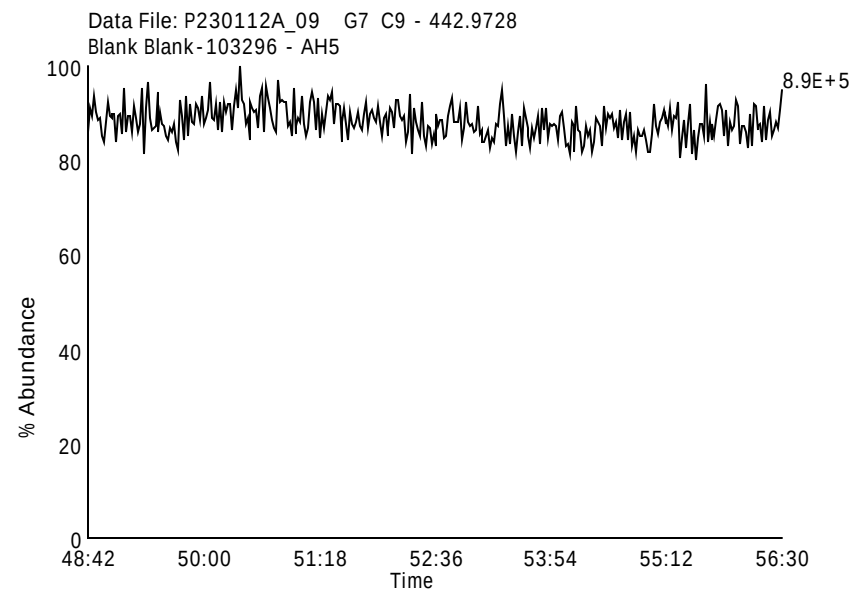
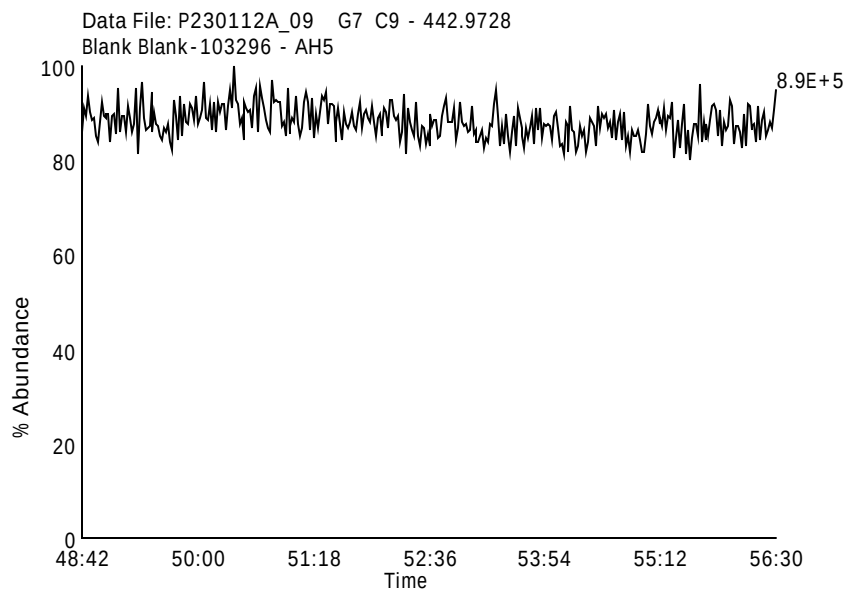
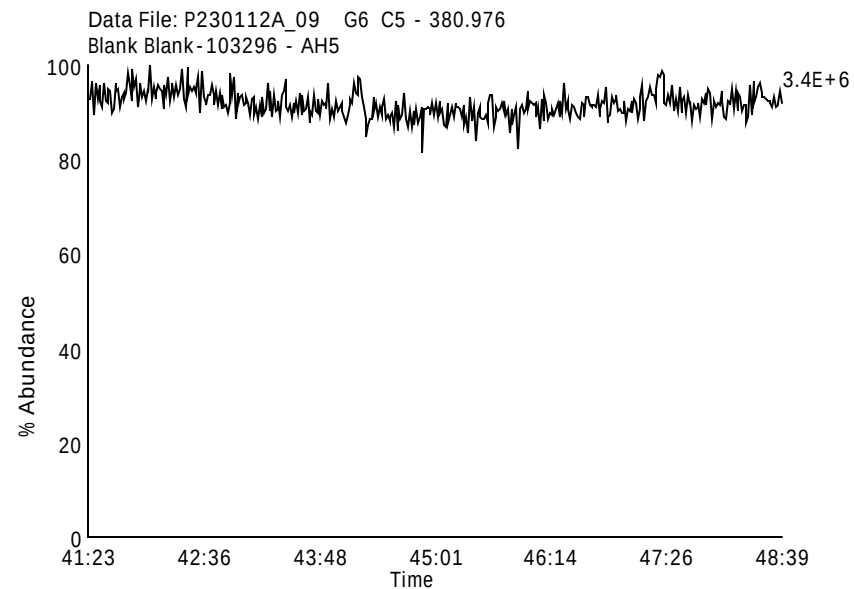
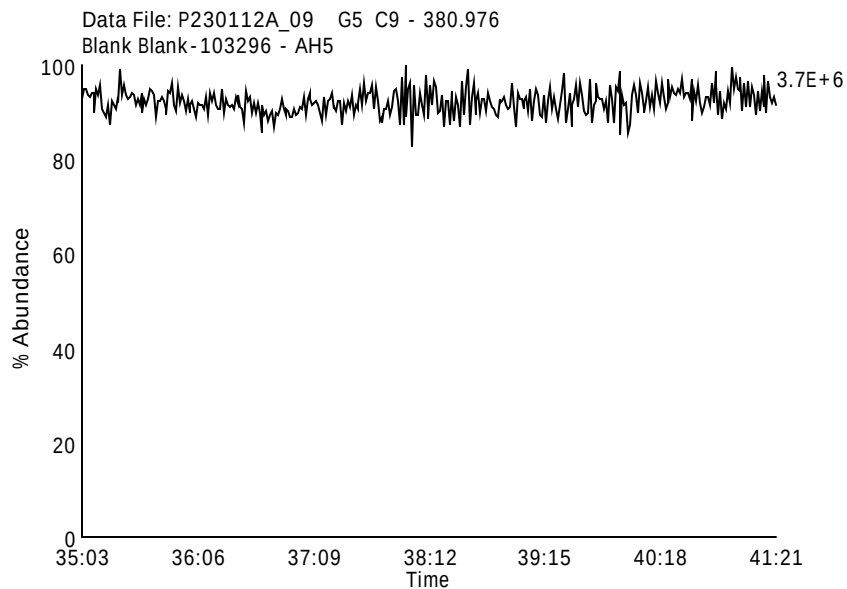
Date Acquired: 1/12/2023

Sample Description: Blank Blank-103296 - AH5

Lab Sample ID: BLANK-103296

Instrument: 10MSHR09 (P)

Client Sample ID: CBLKIC



Labeled Mono Chlorinated Biphenyls

Data File Name: P230112A_05

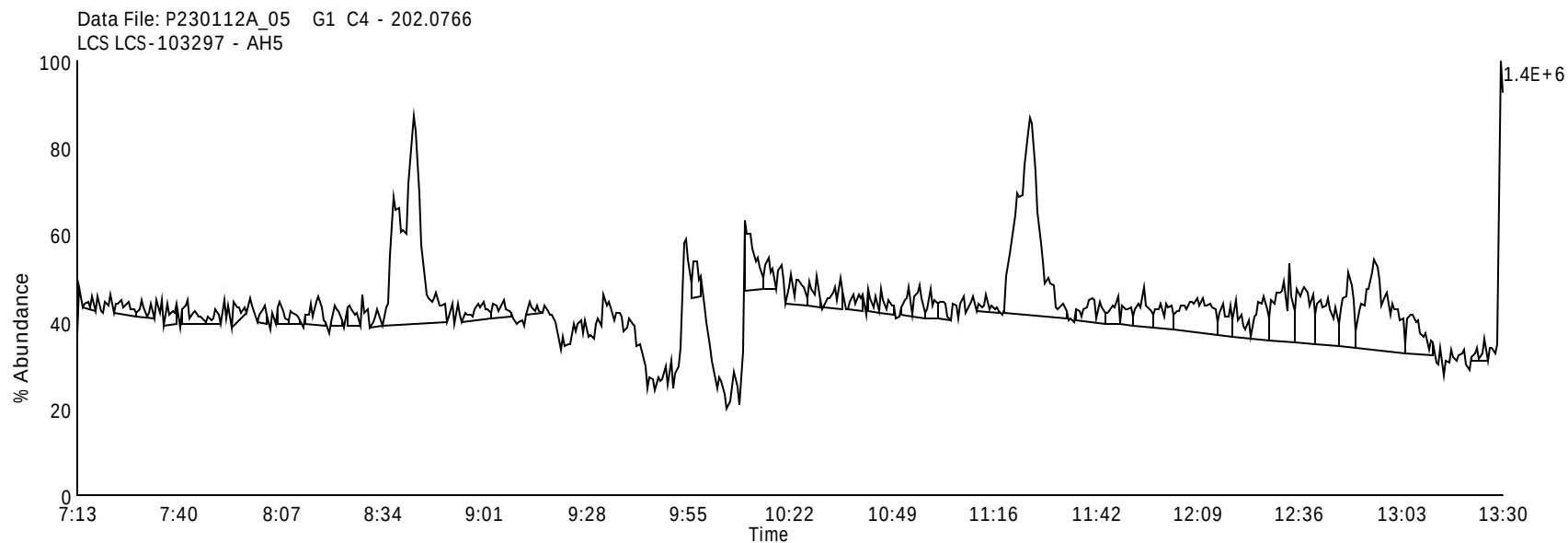
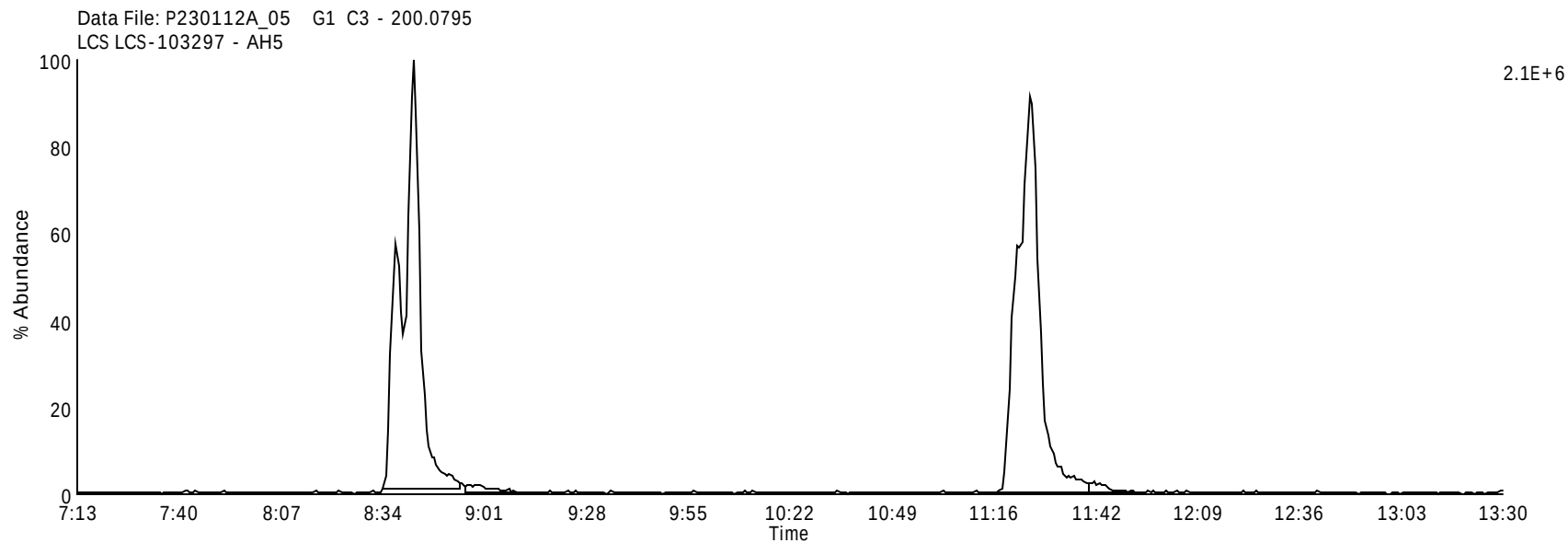
Date Acquired: 1/12/2023

Sample Description: LCS LCS-103297 - AH5

Lab Sample ID: LCS-103297

Instrument: 10MSHR09 (P)

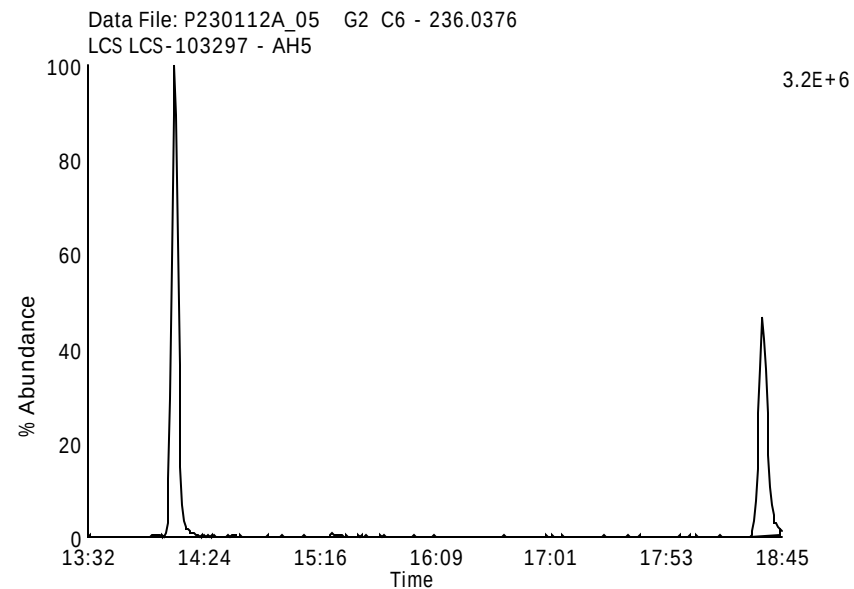
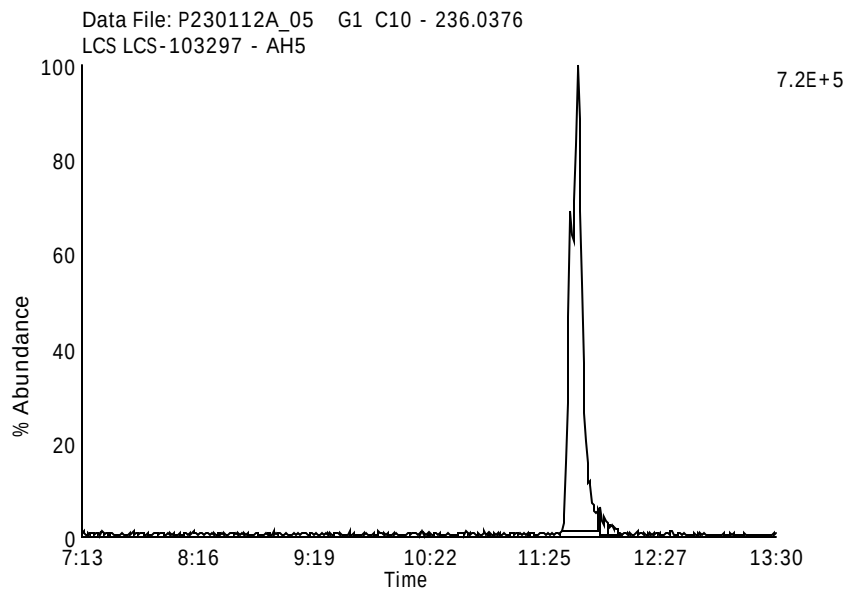
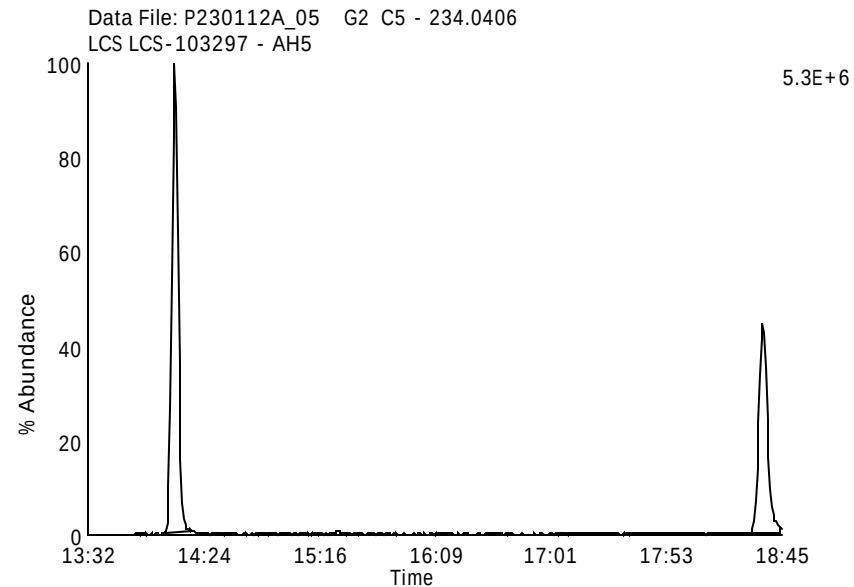
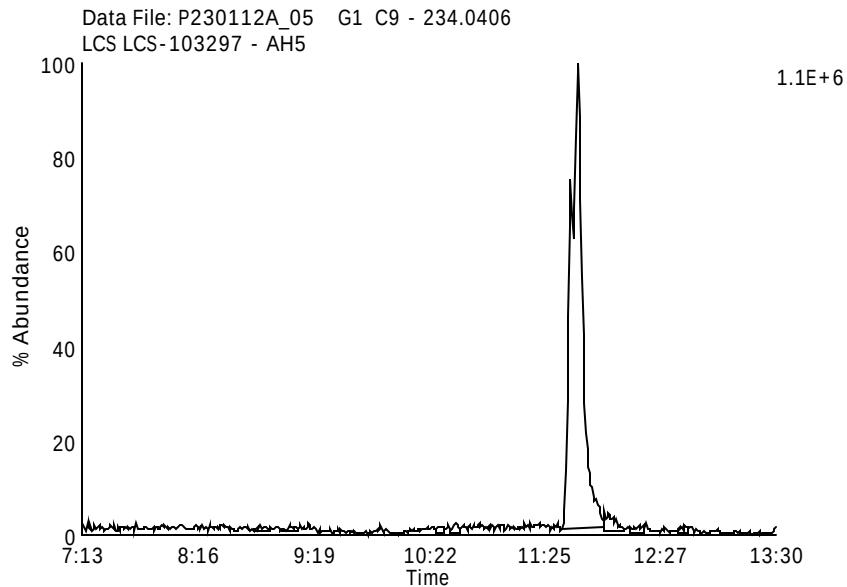
Client Sample ID: CLCSQB



Labeled Di Chlorinated Biphenyls

Data File Name: P230112A_05
Date Acquired: 1/12/2023
Sample Description: LCS LCS-103297 - AH5

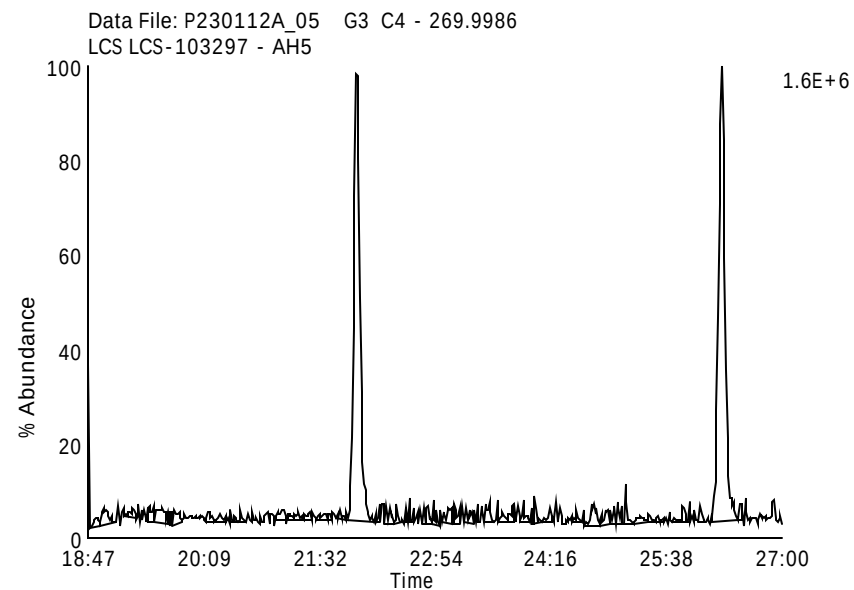
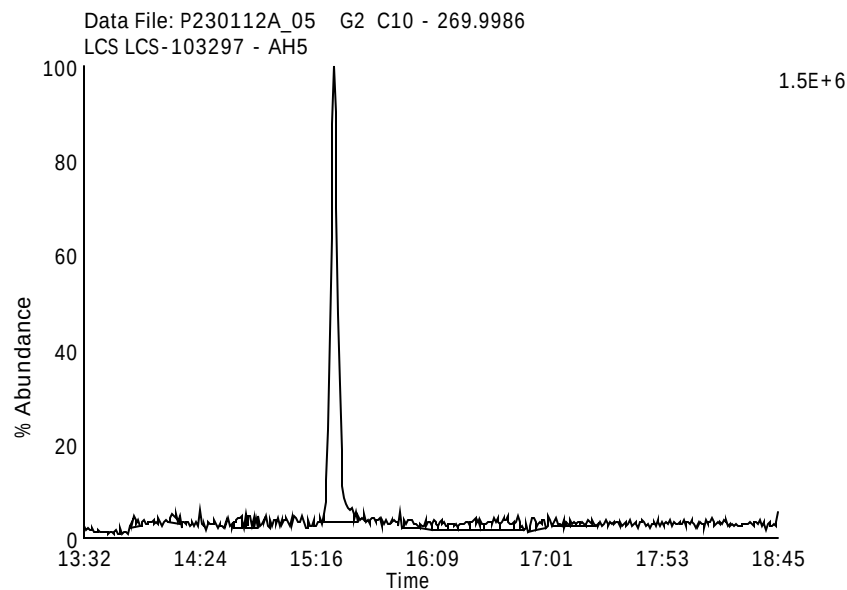
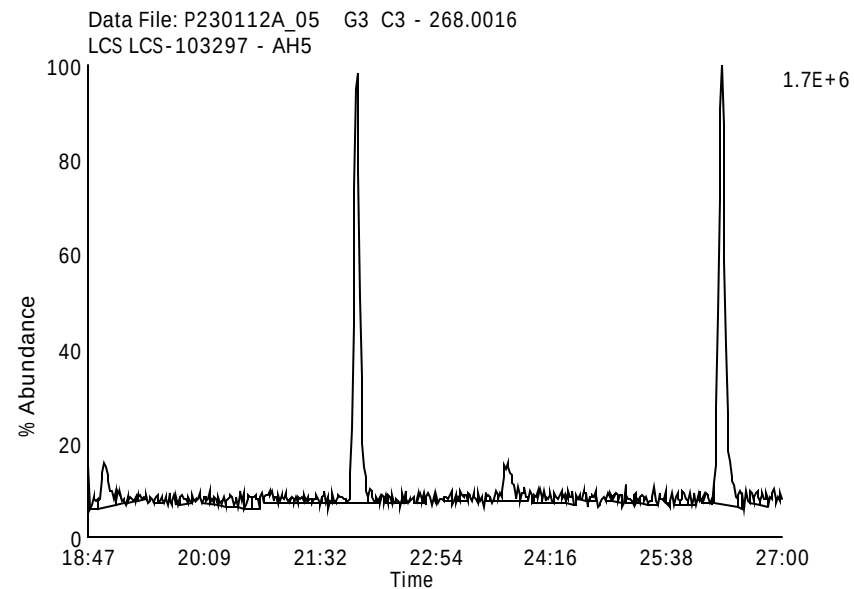
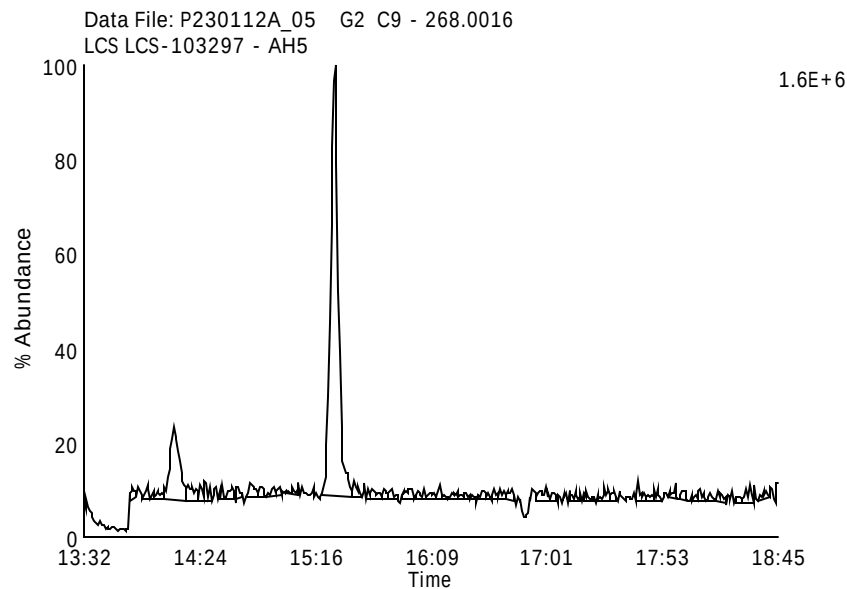
Lab Sample ID: LCS-103297
Instrument: 10MSHR09 (P)
Client Sample ID: CLCSQB



Labeled Tri Chlorinated Biphenyls

Data File Name: P230112A_05
Date Acquired: 1/12/2023
Sample Description: LCS LCS-103297 - AH5

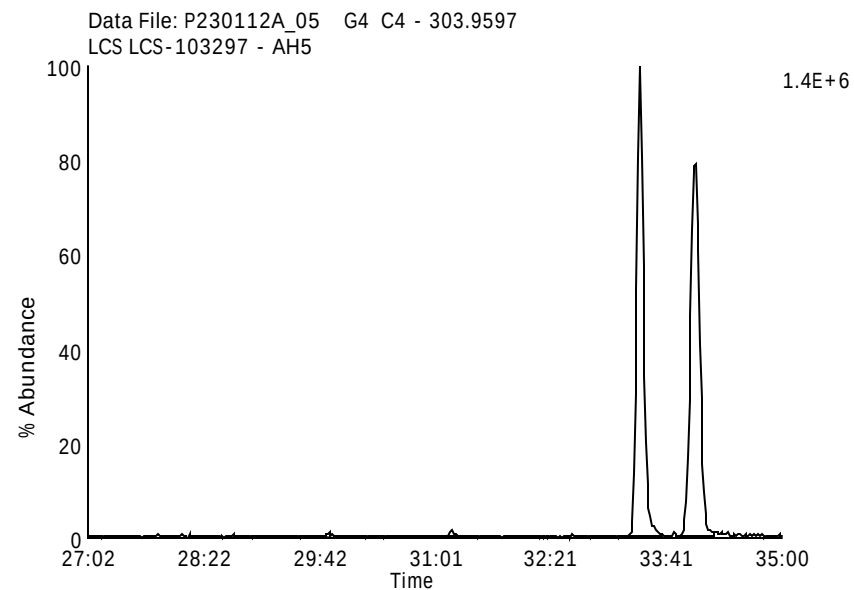
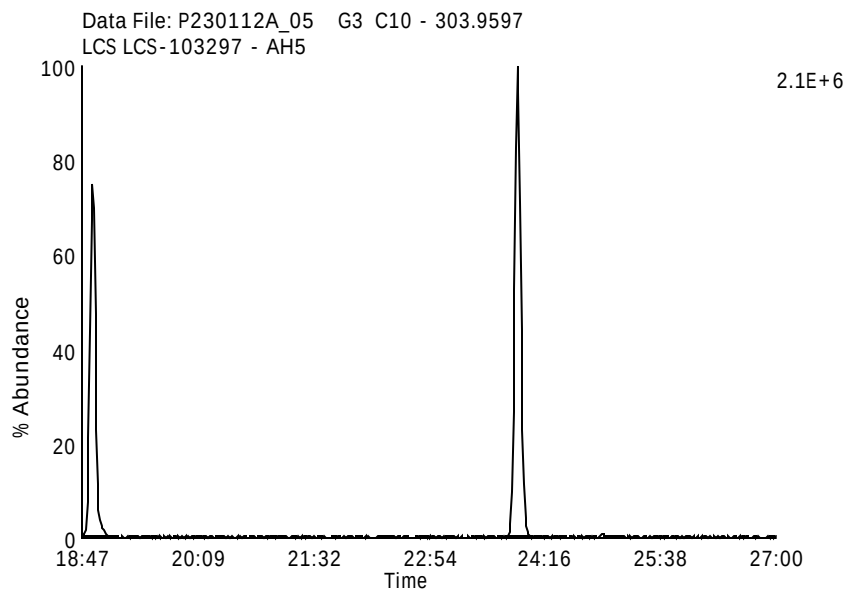
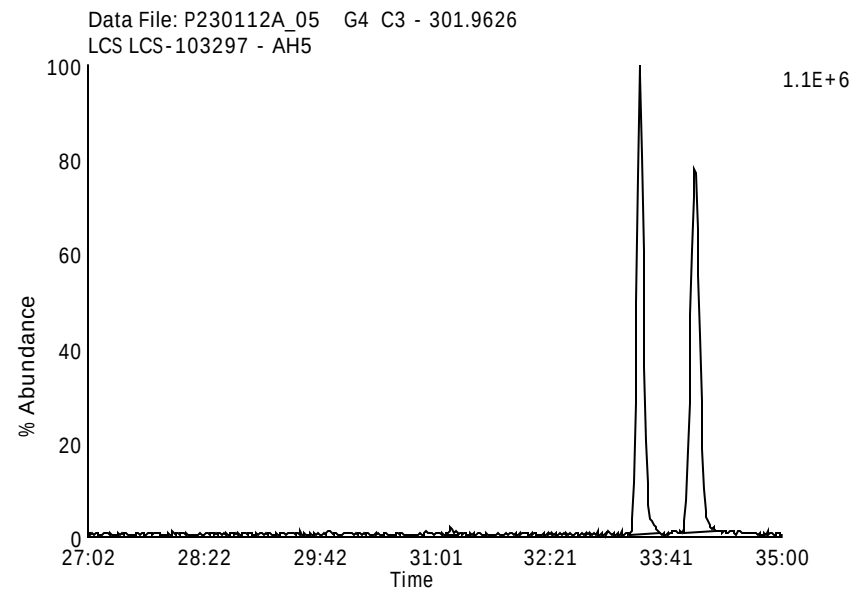
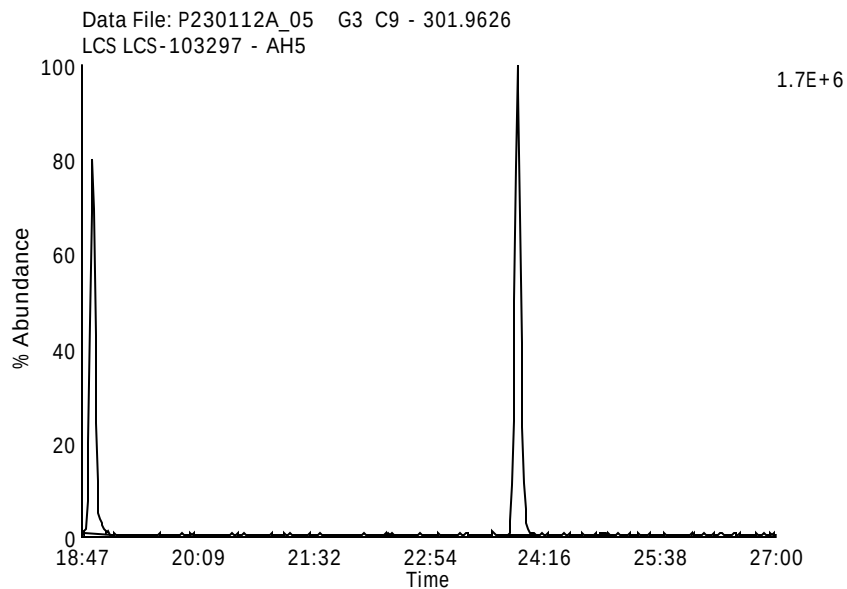
Lab Sample ID: LCS-103297
Instrument: 10MSHR09 (P)
Client Sample ID: CLCSQB



Labeled Tetra Chlorinated Biphenyls

Data File Name: P230112A_05
Date Acquired: 1/12/2023
Sample Description: LCS LCS-103297 - AH5

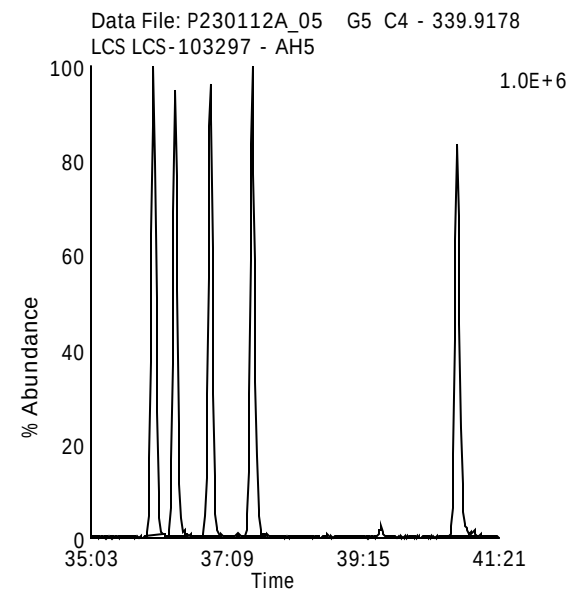
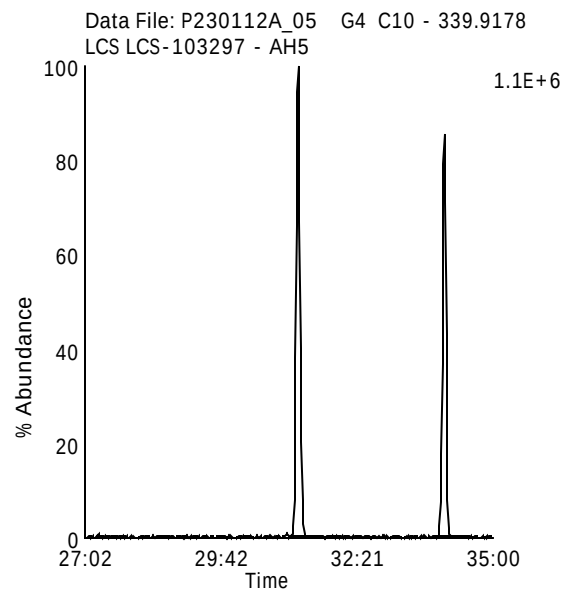
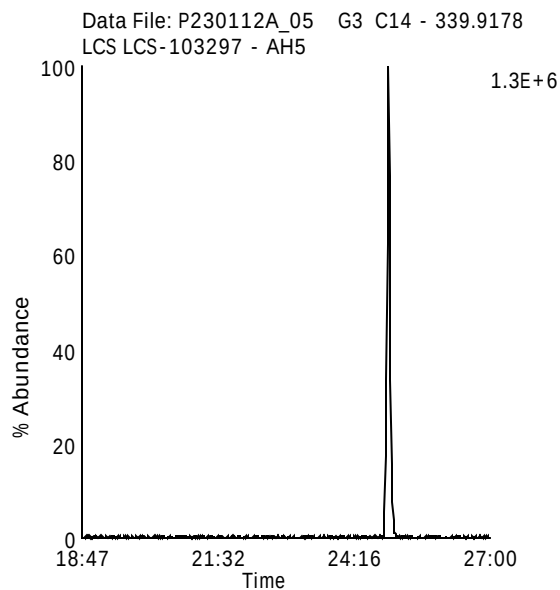
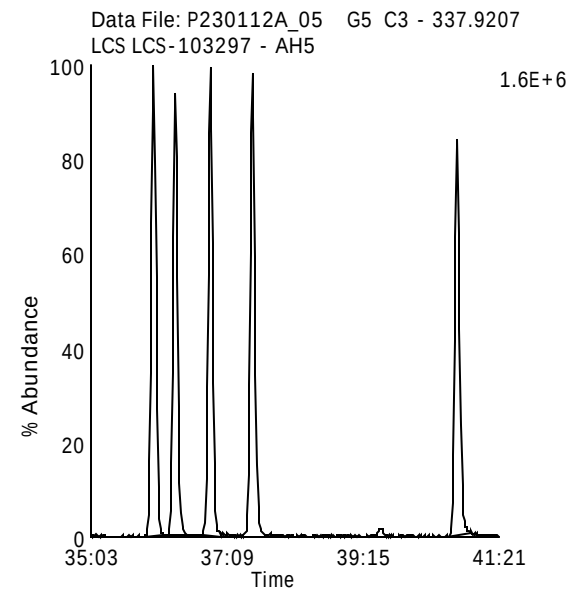
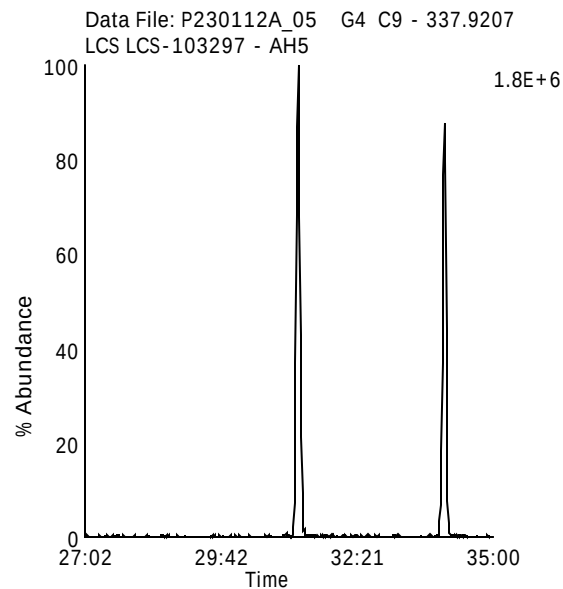
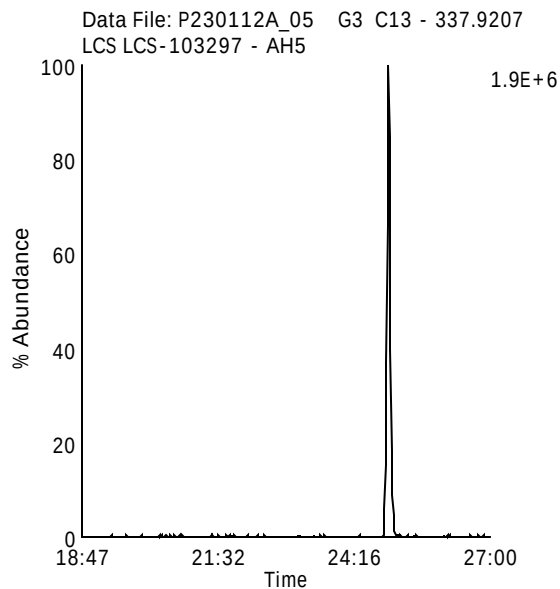
Lab Sample ID: LCS-103297
Instrument: 10MSHR09 (P)
Client Sample ID: CLCSQB



Labeled Penta Chlorinated Biphenyls

Data File Name: P230112A_05
Date Acquired: 1/12/2023
Sample Description: LCS LCS-103297 - AH5

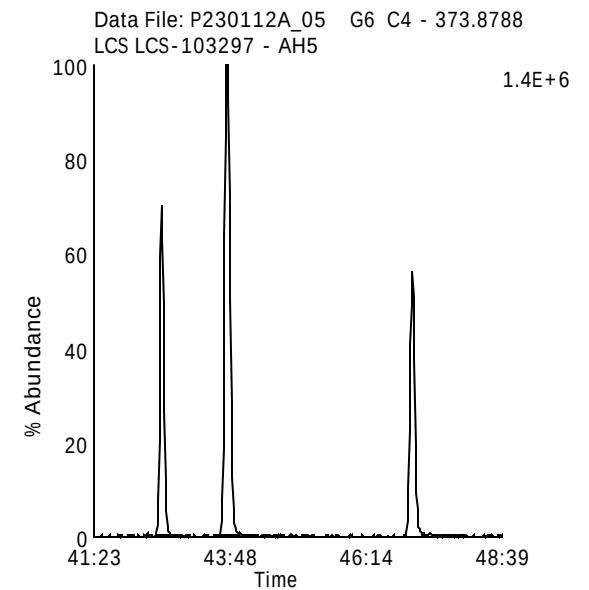
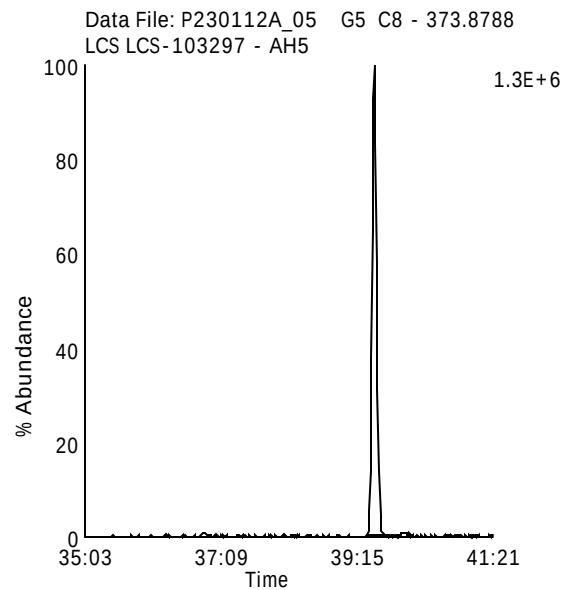
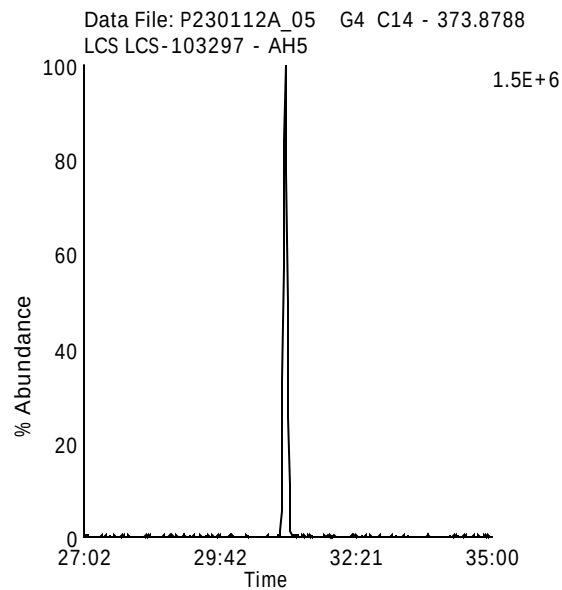
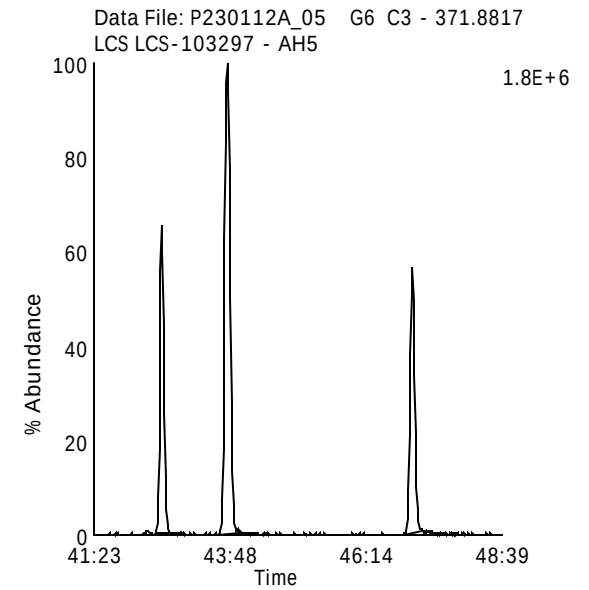
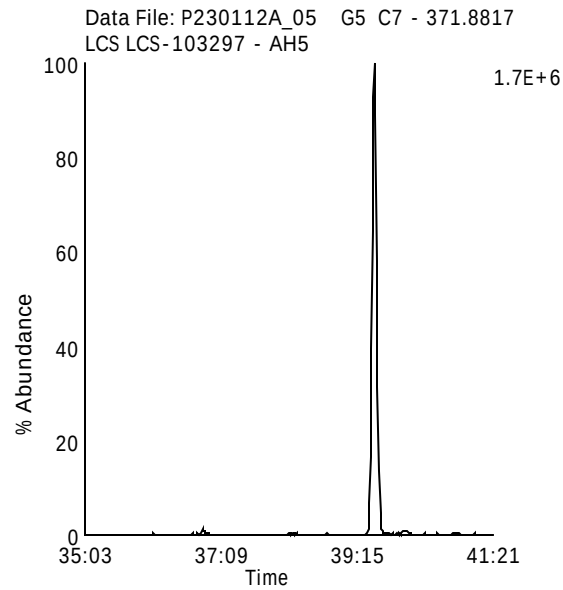
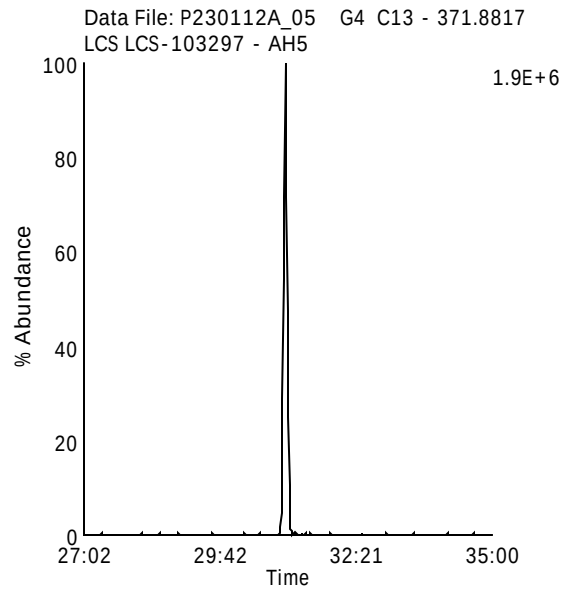
Lab Sample ID: LCS-103297
Instrument: 10MSHR09 (P)
Client Sample ID: CLCSQB



Labeled Hexa Chlorinated Biphenyls

Data File Name: P230112A_05
Date Acquired: 1/12/2023
Sample Description: LCS LCS-103297 - AH5

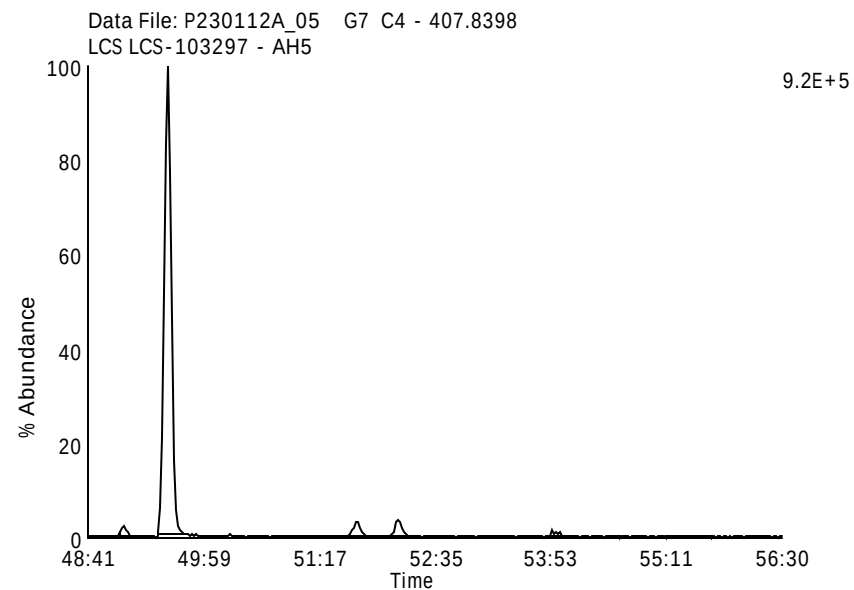
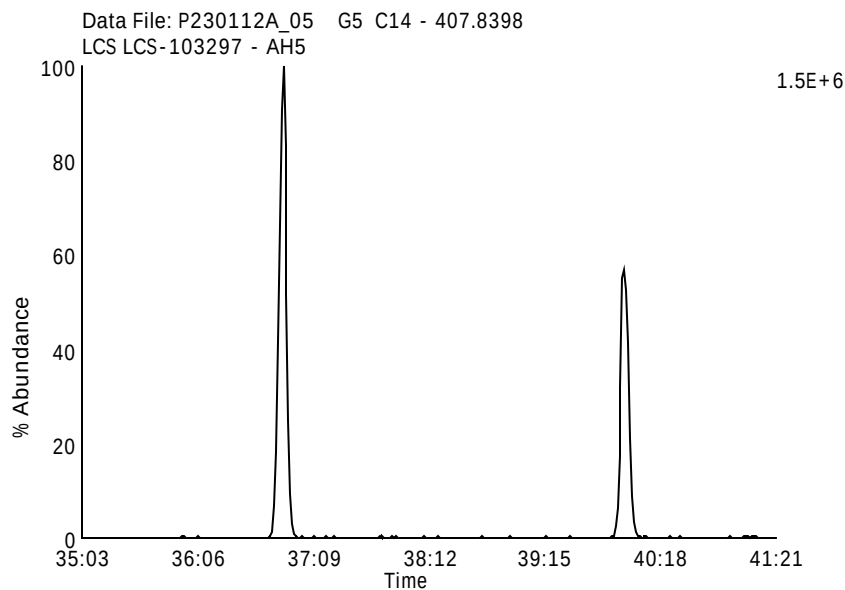
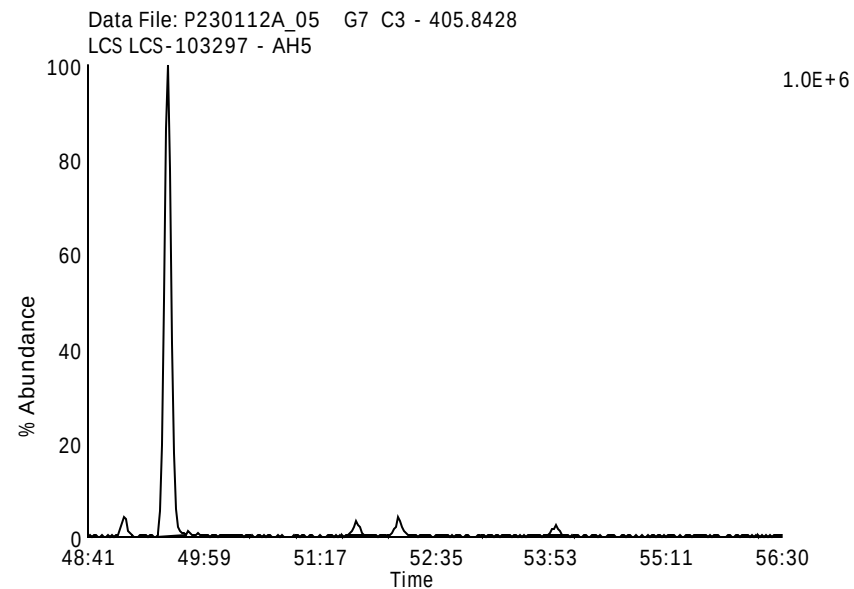
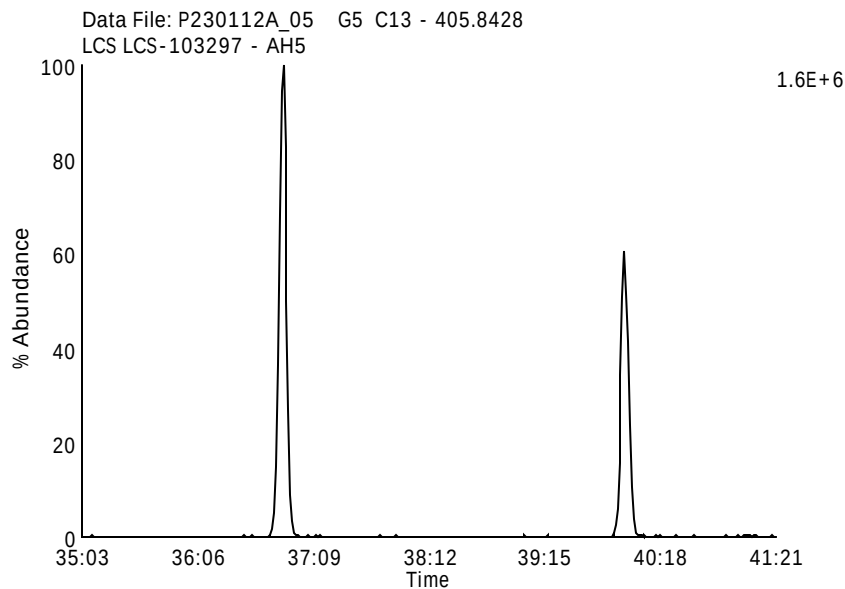
Lab Sample ID: LCS-103297
Instrument: 10MSHR09 (P)
Client Sample ID: CLCSQB



Labeled Hepta Chlorinated Biphenyls

Data File Name: P230112A_05
Date Acquired: 1/12/2023
Sample Description: LCS LCS-103297 - AH5

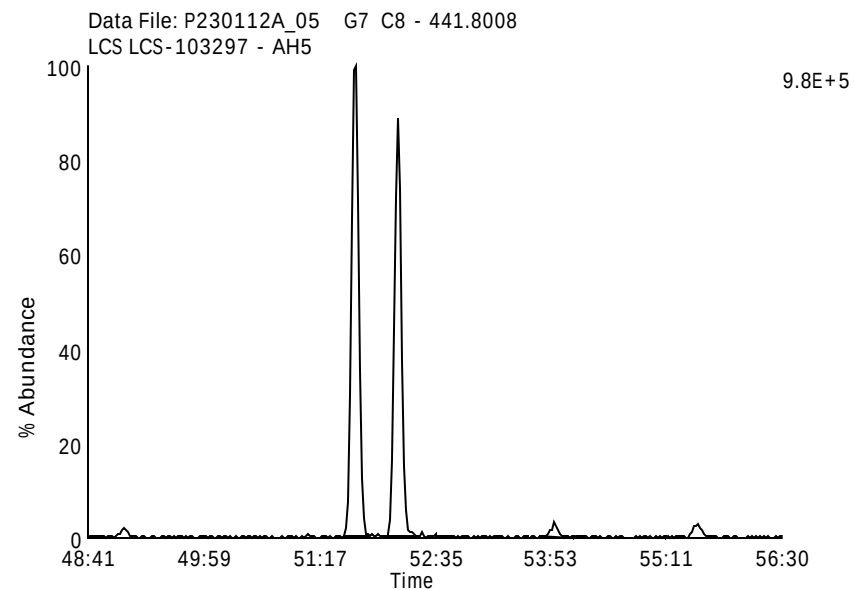
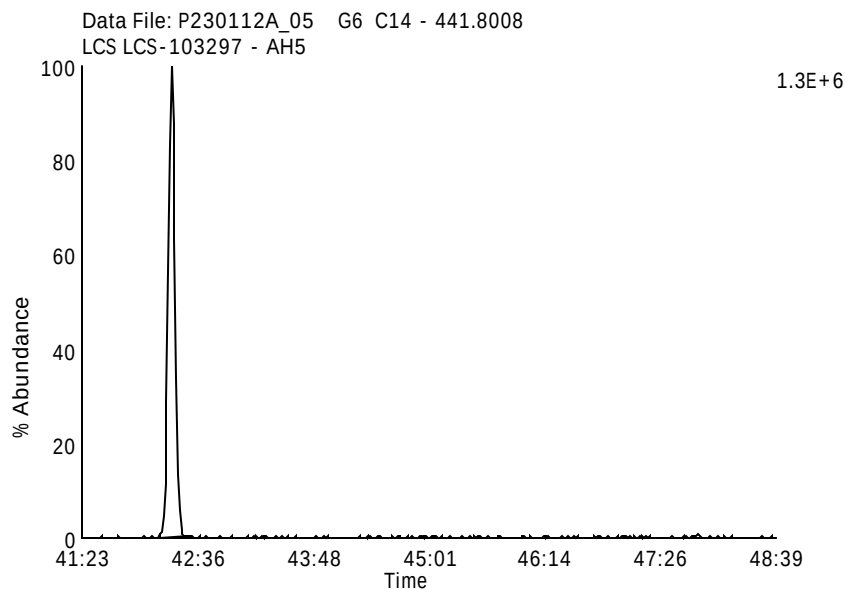
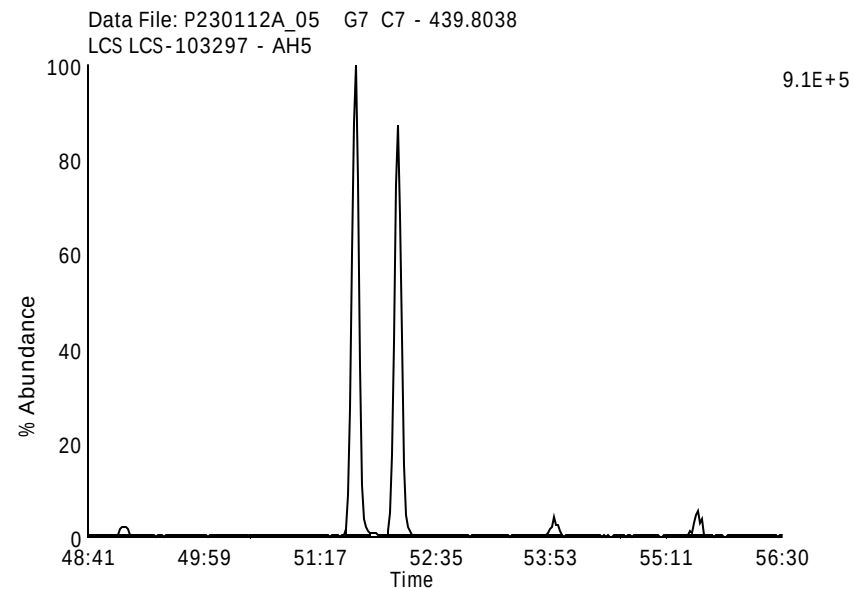
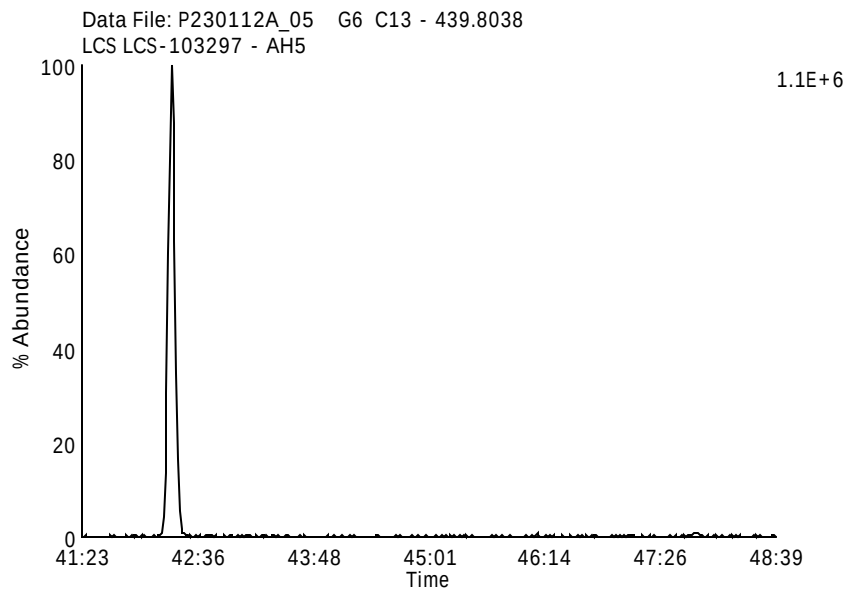
Lab Sample ID: LCS-103297
Instrument: 10MSHR09 (P)
Client Sample ID: CLCSQB



Labeled Octa Chlorinated Biphenyls

Data File Name: P230112A_05
Date Acquired: 1/12/2023
Sample Description: LCS LCS-103297 - AH5

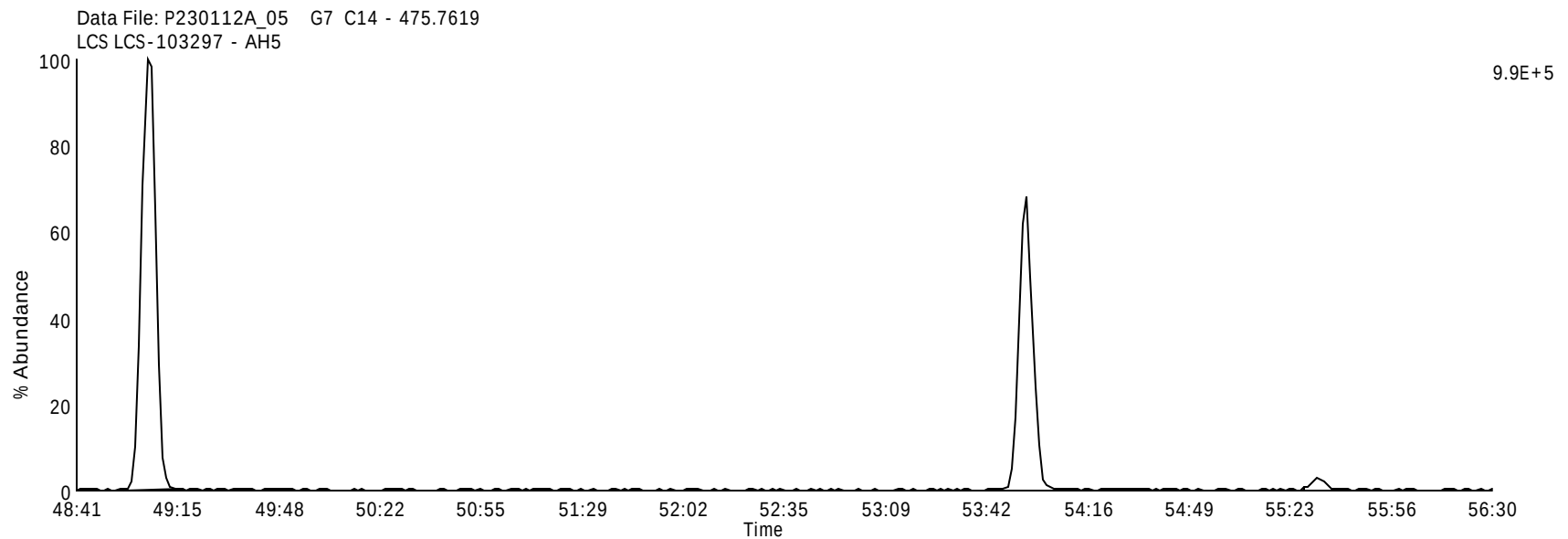
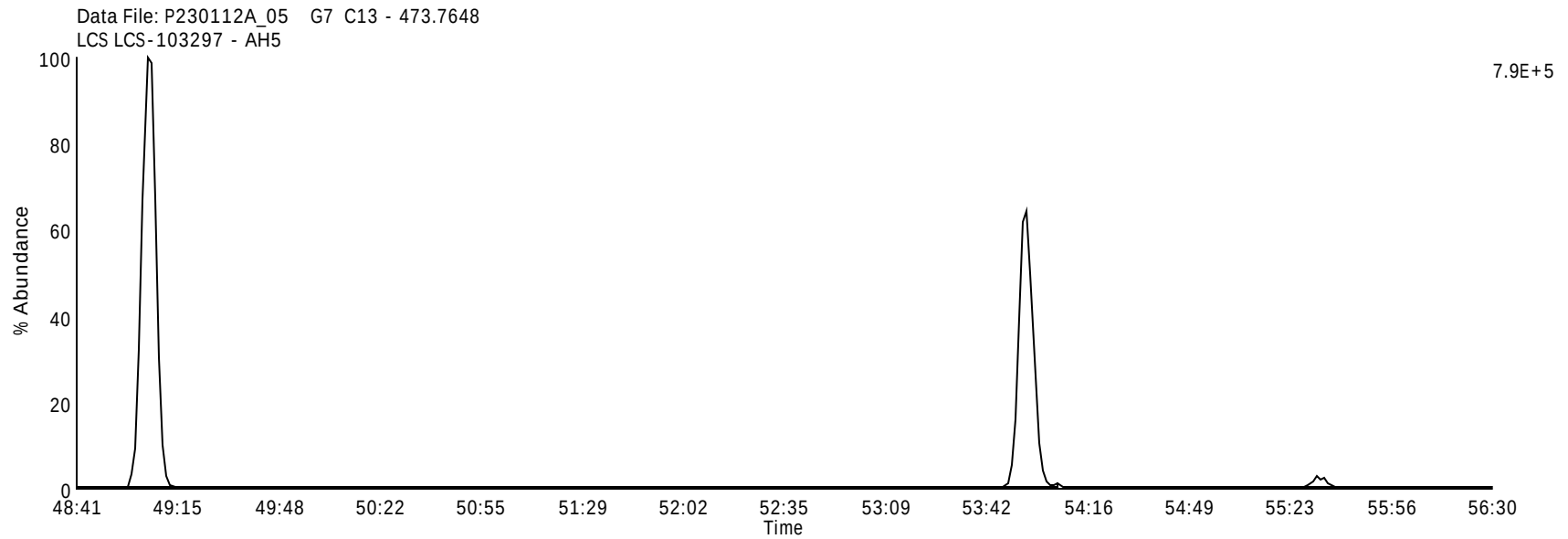
Lab Sample ID: LCS-103297
Instrument: 10MSHR09 (P)
Client Sample ID: CLCSQB



Labeled Nona Chlorinated Biphenyls

Data File Name: P230112A_05
 Date Acquired: 1/12/2023
 Sample Description: LCS LCS-103297 - AH5

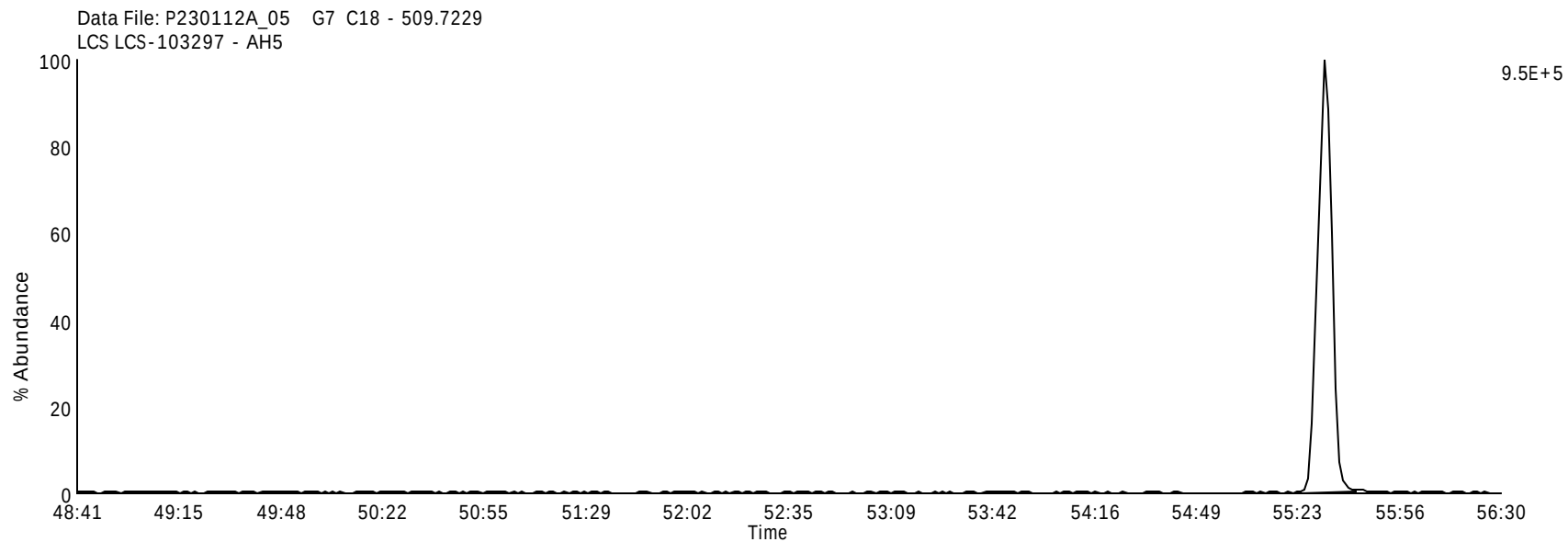
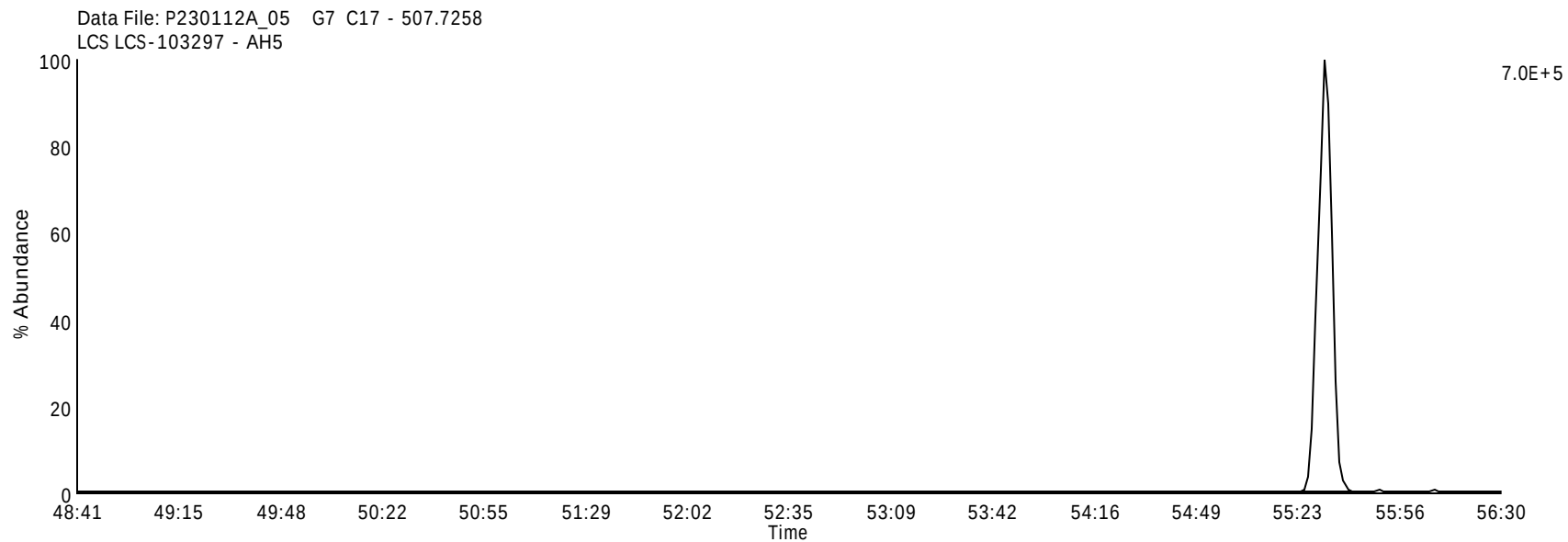
Lab Sample ID: LCS-103297
 Instrument: 10MSHR09 (P)
 Client Sample ID: CLCSQB



Labeled Deca Chlorinated Biphenyl

Data File Name: P230112A_05
Date Acquired: 1/12/2023
Sample Description: LCS LCS-103297 - AH5

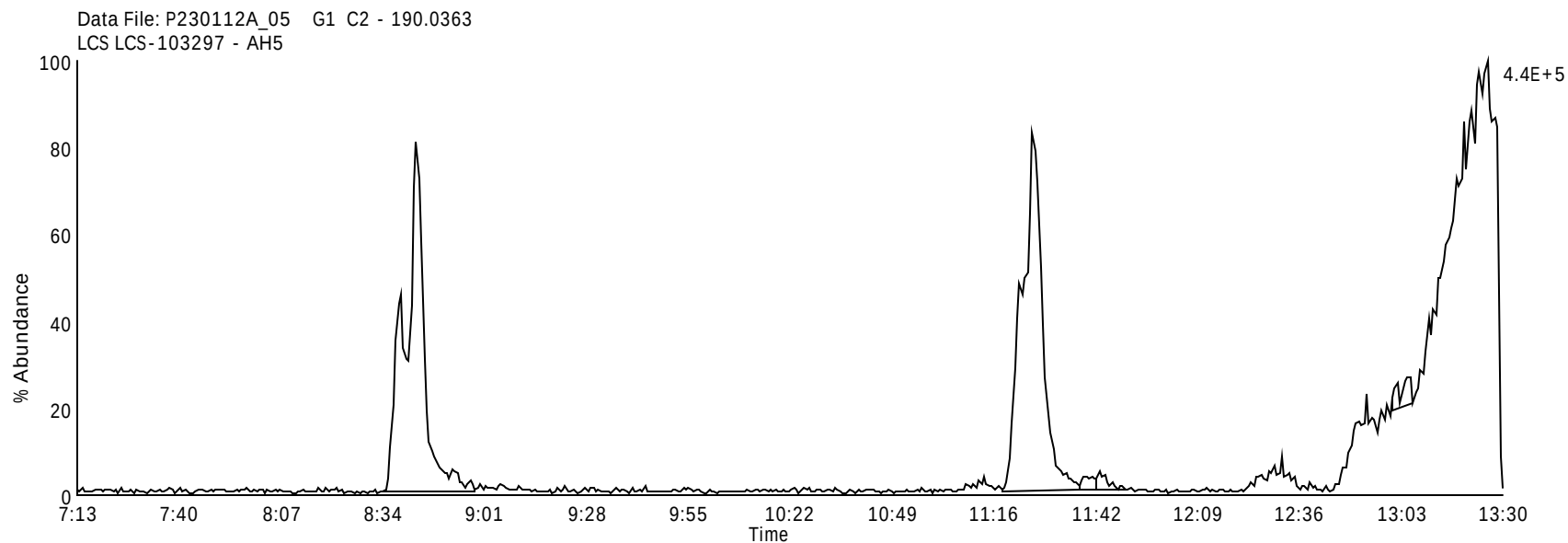
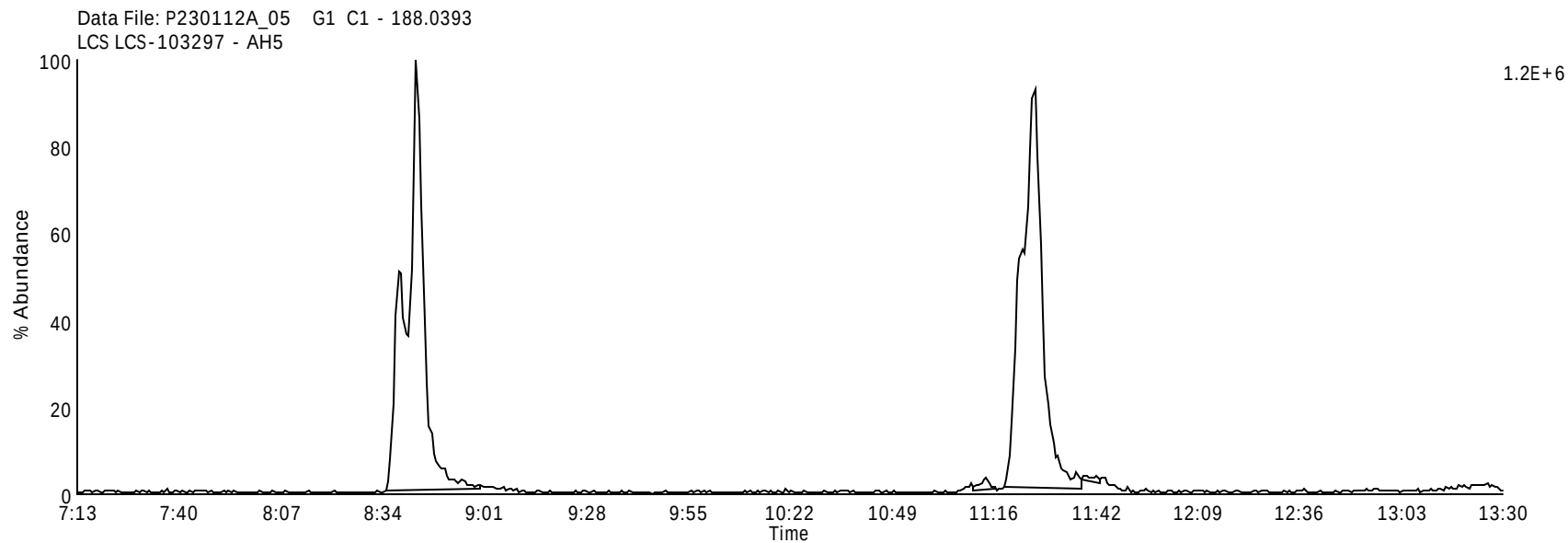
Lab Sample ID: LCS-103297
Instrument: 10MSHR09 (P)
Client Sample ID: CLCSQB



Mono Chlorinated Biphenyls

Data File Name: P230112A_05
 Date Acquired: 1/12/2023
 Sample Description: LCS LCS-103297 - AH5

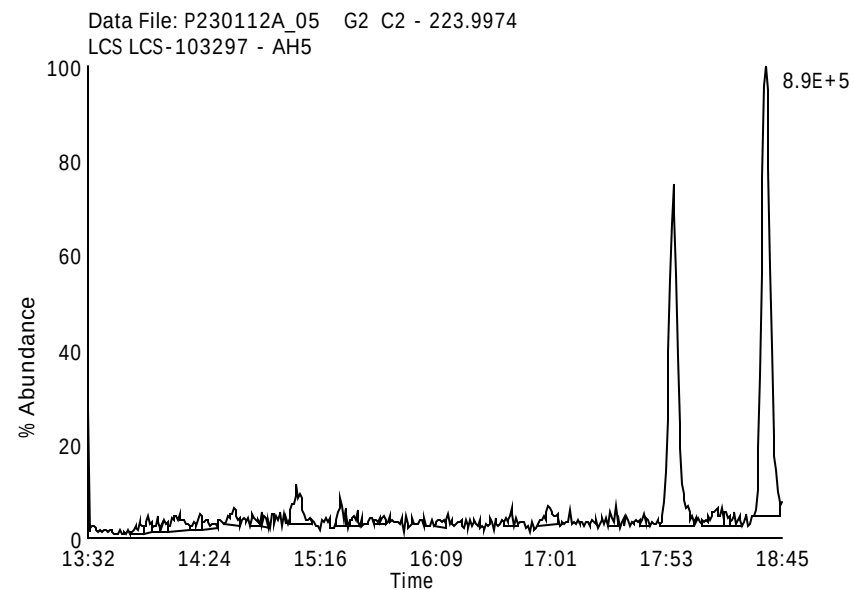
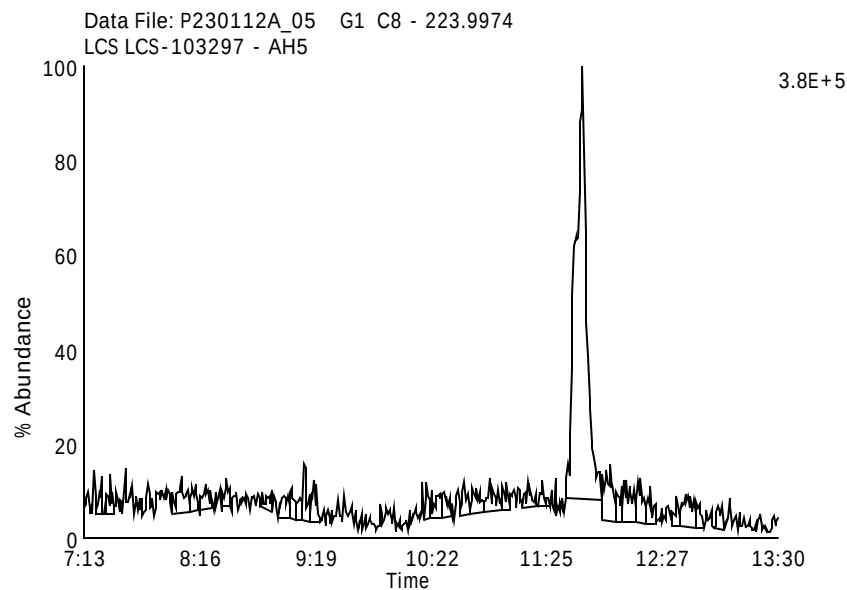
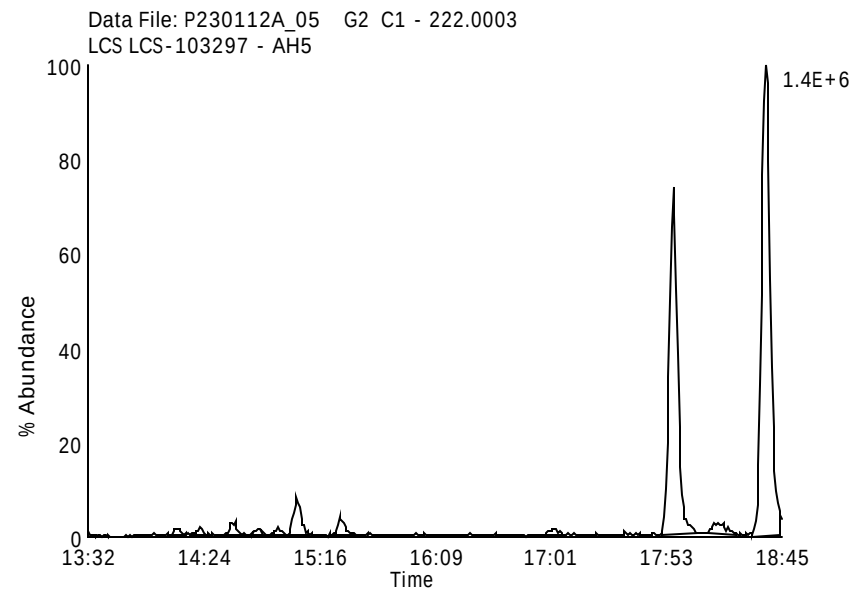
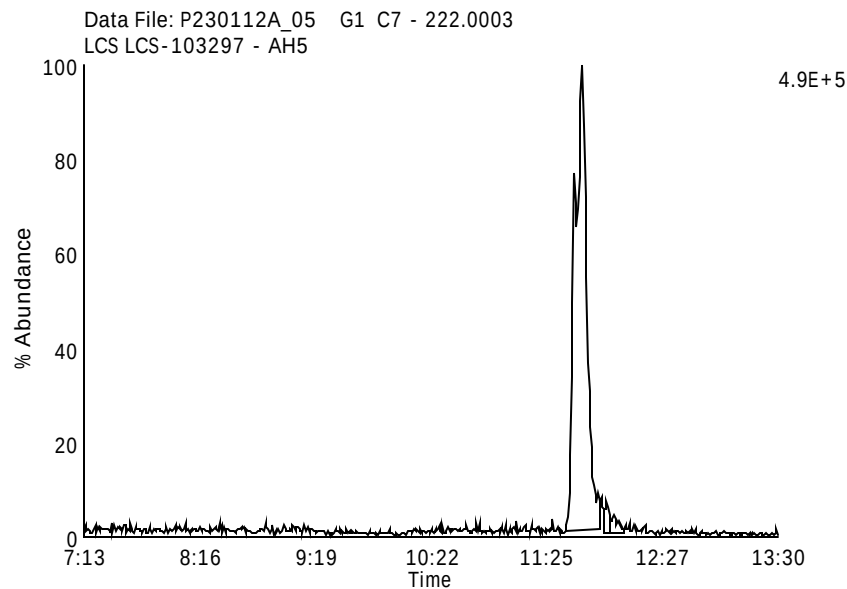
Lab Sample ID: LCS-103297
 Instrument: 10MSHR09 (P)
 Client Sample ID: CLCSQB



Di Chlorinated Biphenyls

Data File Name: P230112A_05
Date Acquired: 1/12/2023
Sample Description: LCS LCS-103297 - AH5

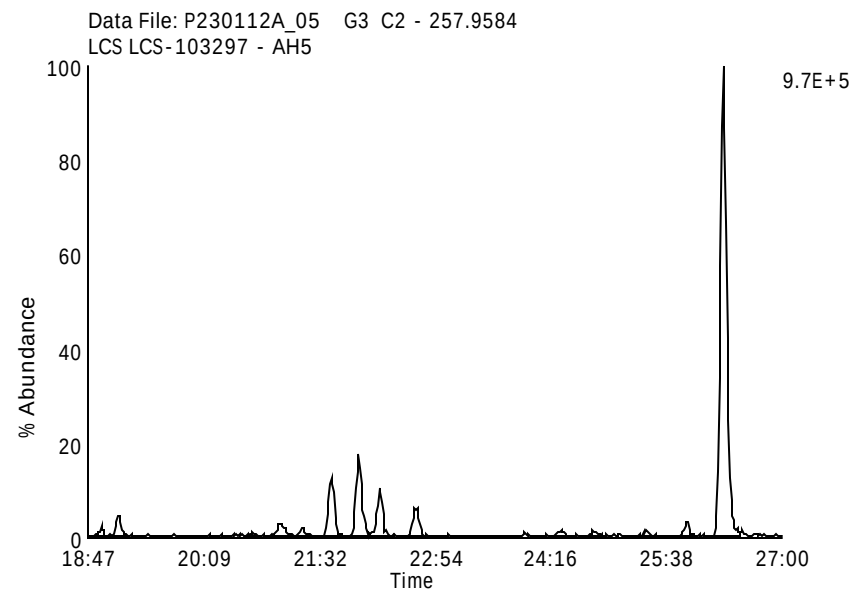
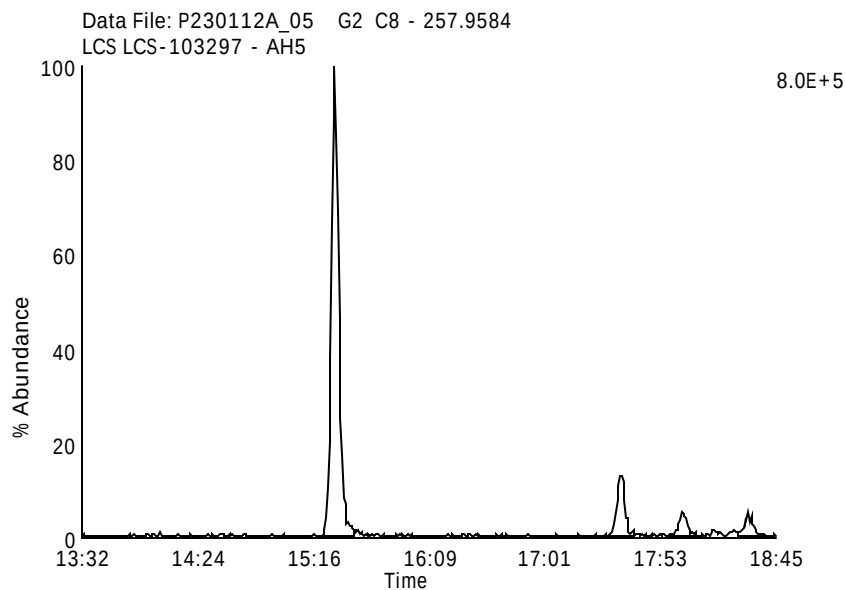
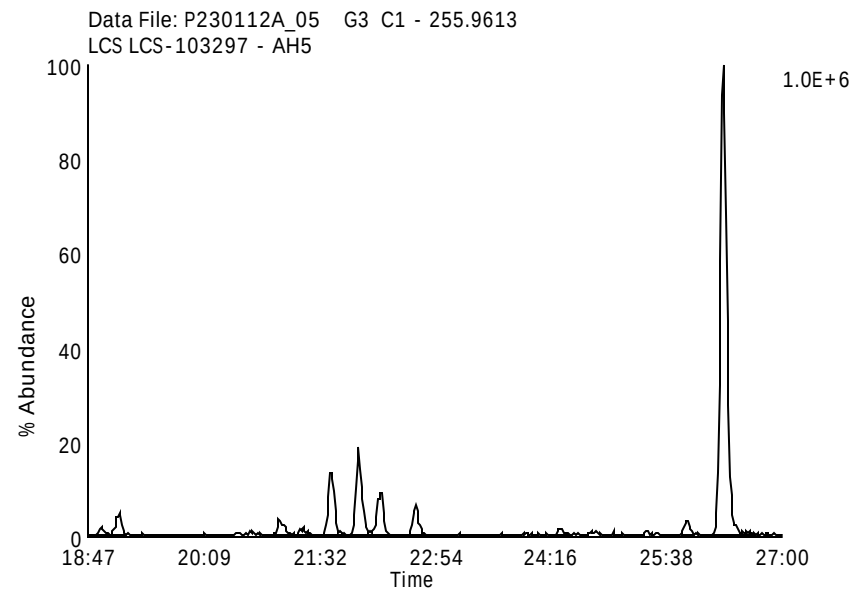
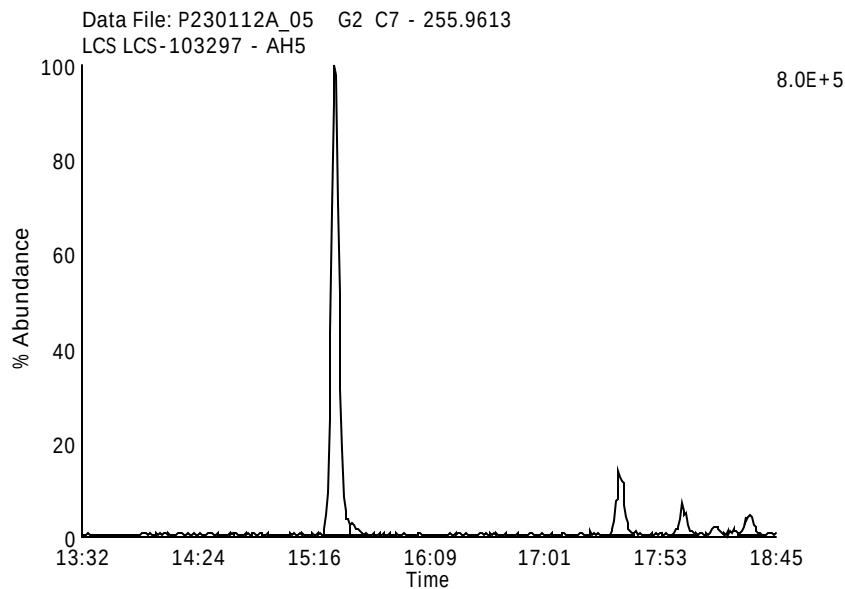
Lab Sample ID: LCS-103297
Instrument: 10MSHR09 (P)
Client Sample ID: CLCSQB



Tri Chlorinated Biphenyls

Data File Name: P230112A_05
Date Acquired: 1/12/2023
Sample Description: LCS LCS-103297 - AH5

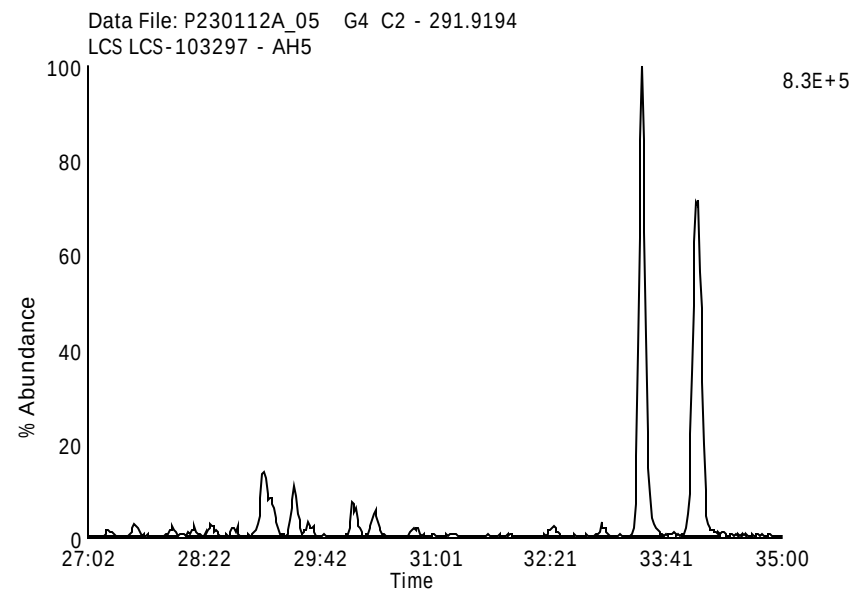
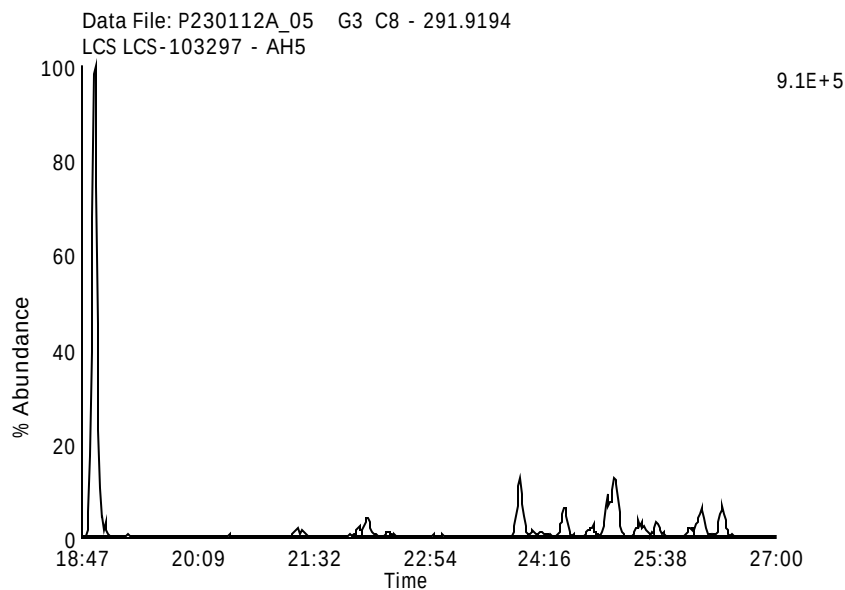
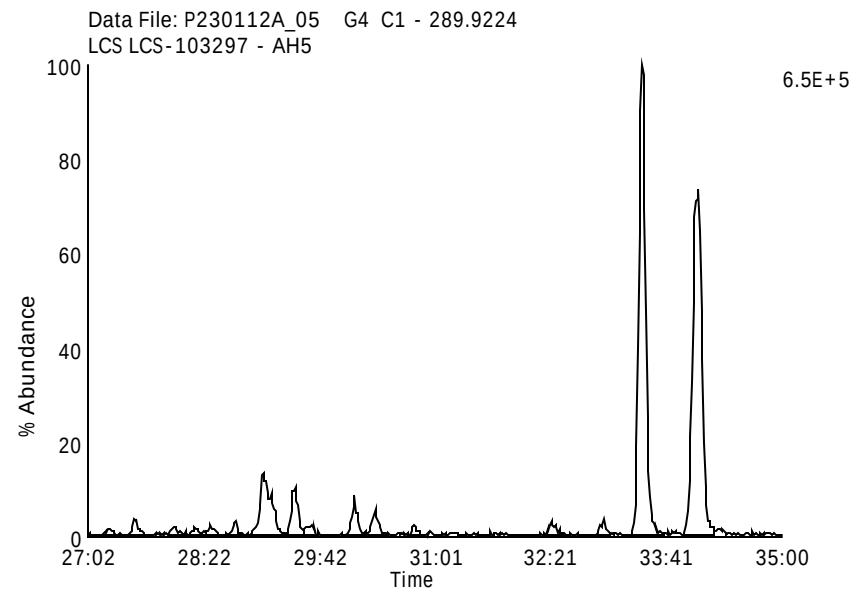
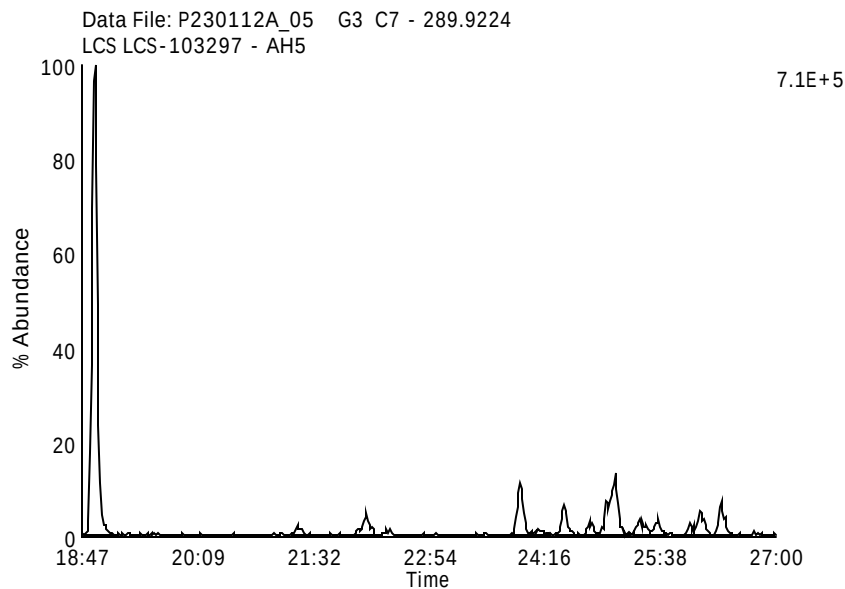
Lab Sample ID: LCS-103297
Instrument: 10MSHR09 (P)
Client Sample ID: CLCSQB



Tetra Chlorinated Biphenyls

Data File Name: P230112A_05
Date Acquired: 1/12/2023
Sample Description: LCS LCS-103297 - AH5

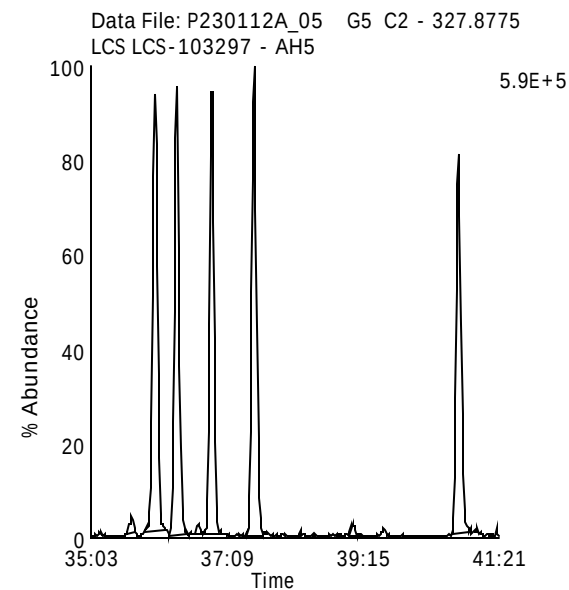
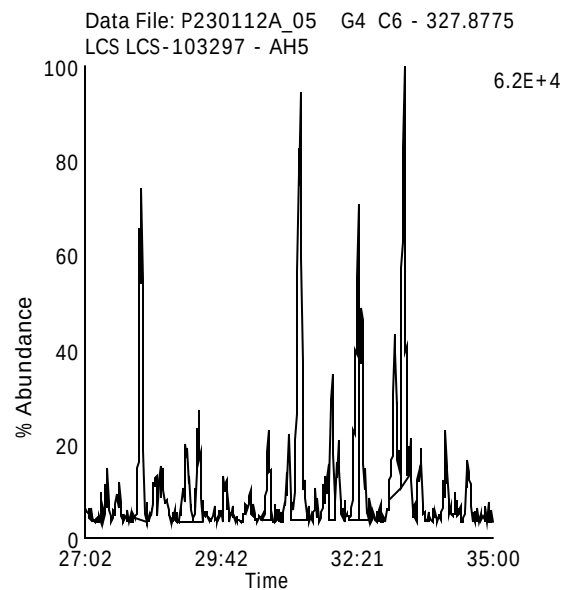
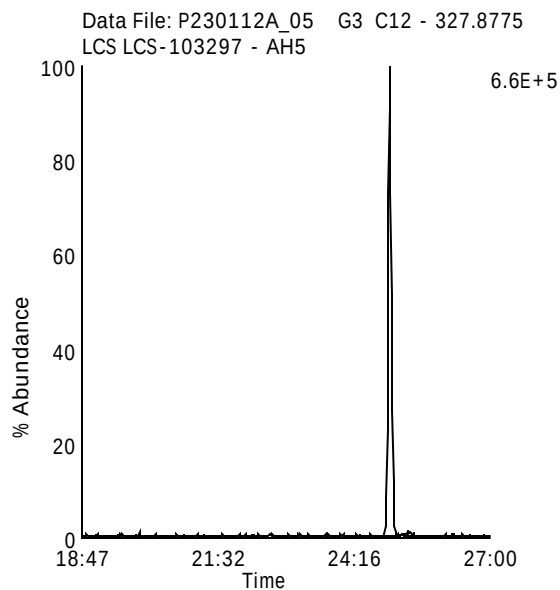
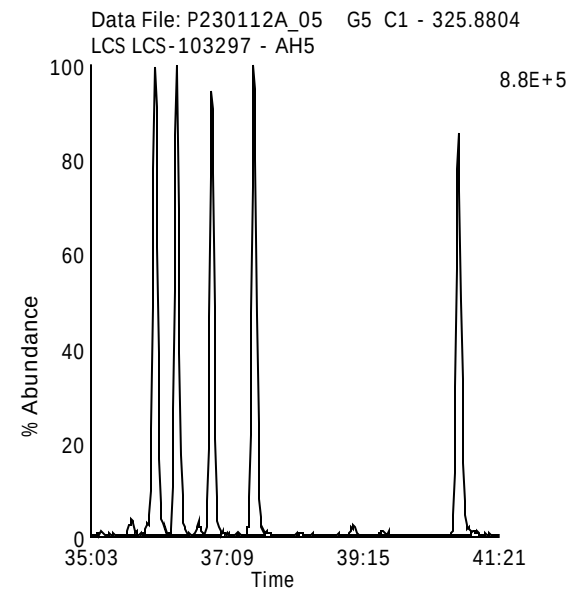
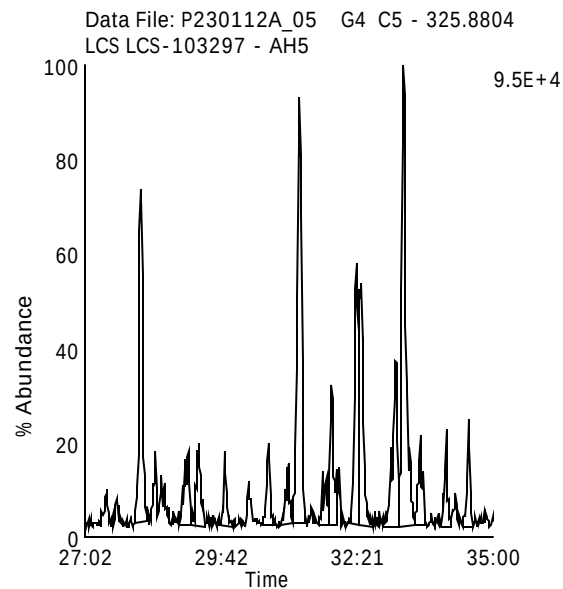
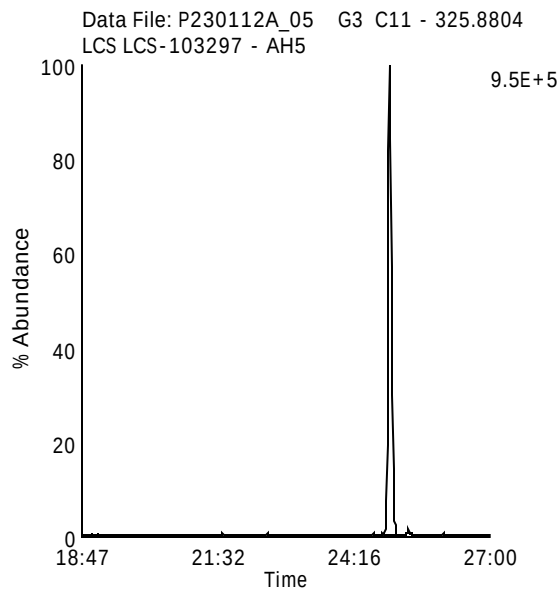
Lab Sample ID: LCS-103297
Instrument: 10MSHR09 (P)
Client Sample ID: CLCSQB



Penta Chlorinated Biphenyls

Data File Name: P230112A_05
Date Acquired: 1/12/2023
Sample Description: LCS LCS-103297 - AH5

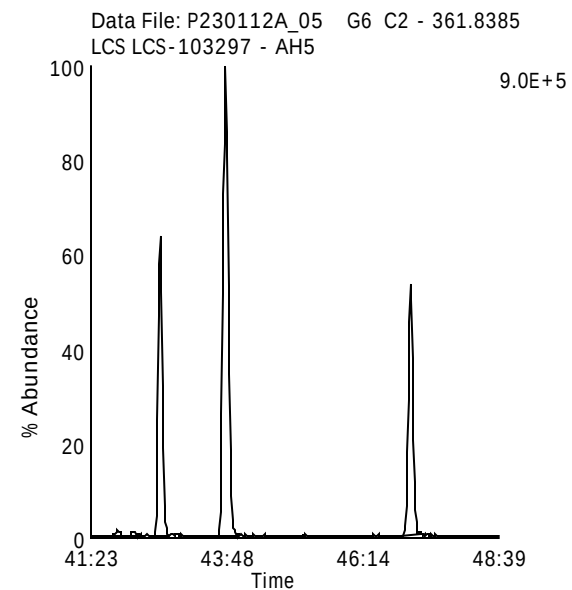
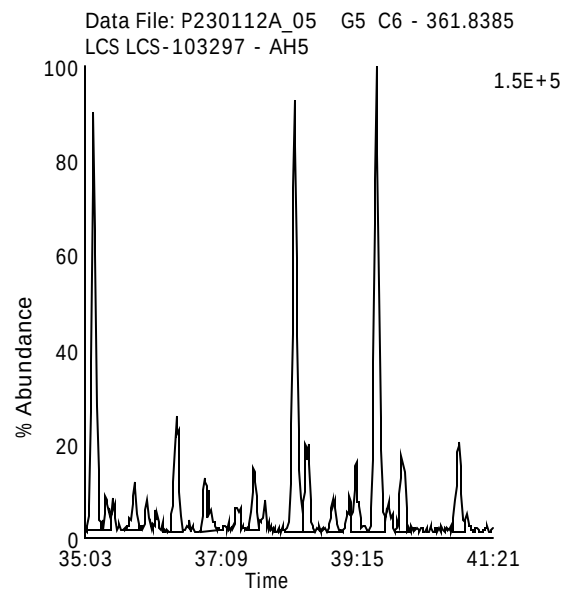
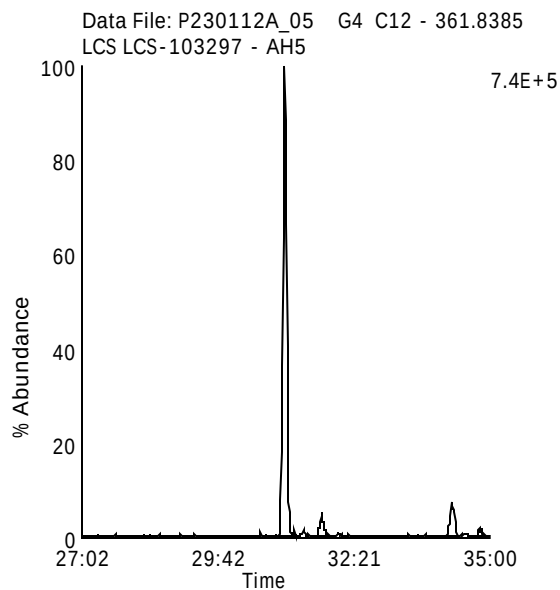
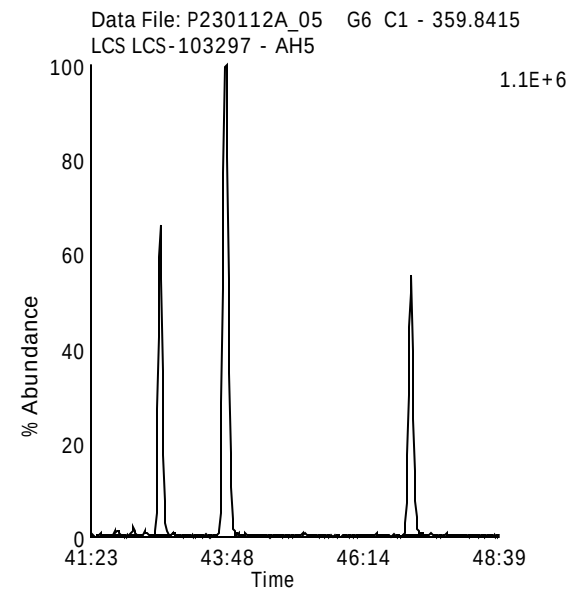
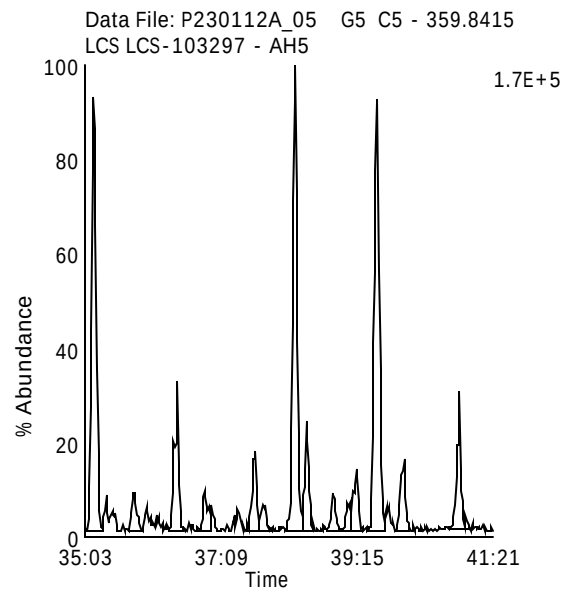
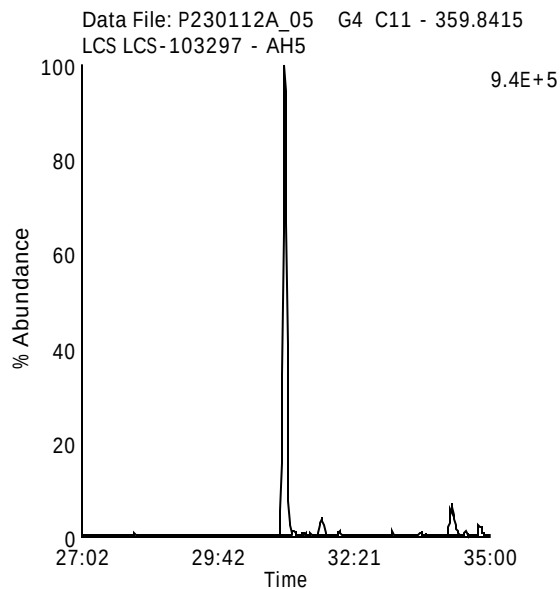
Lab Sample ID: LCS-103297
Instrument: 10MSHR09 (P)
Client Sample ID: CLCSQB



Hexa Chlorinated Biphenyls

Data File Name: P230112A_05
Date Acquired: 1/12/2023
Sample Description: LCS LCS-103297 - AH5

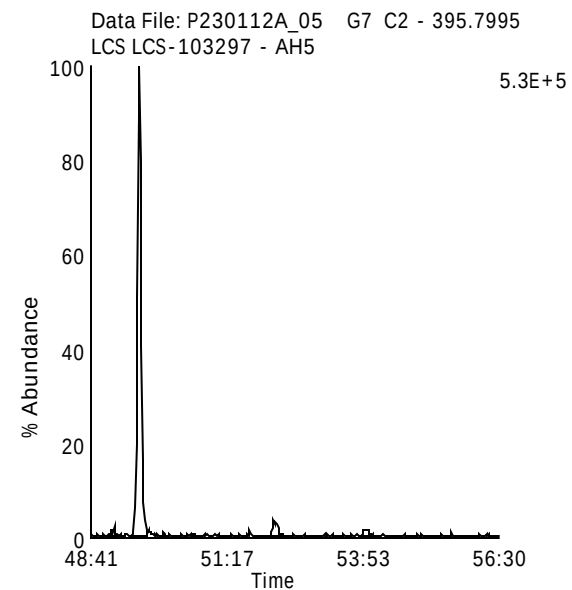
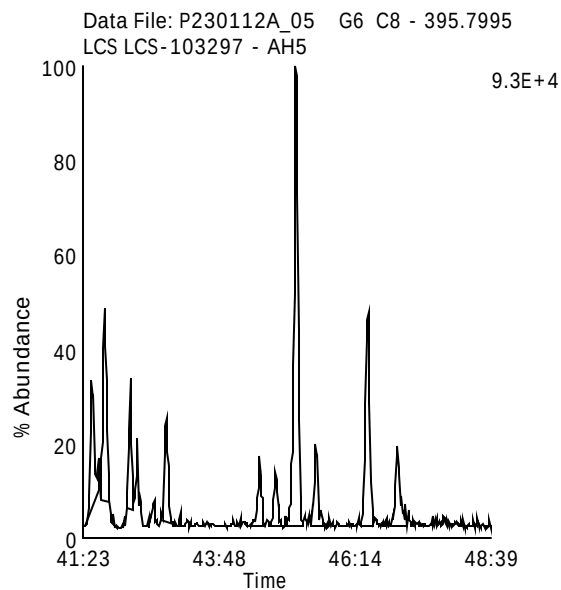
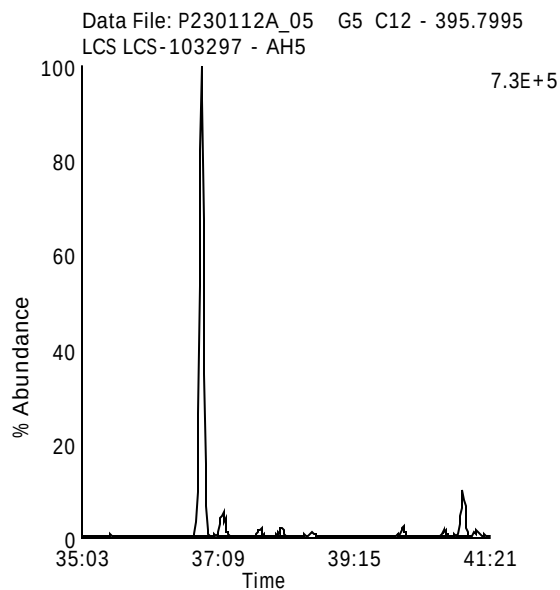
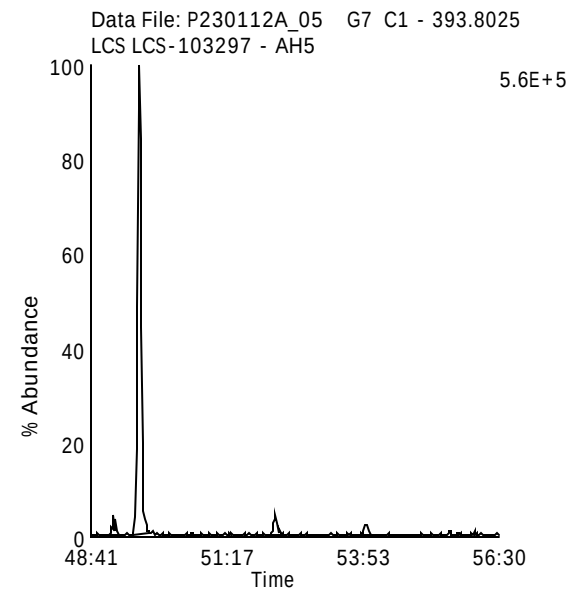
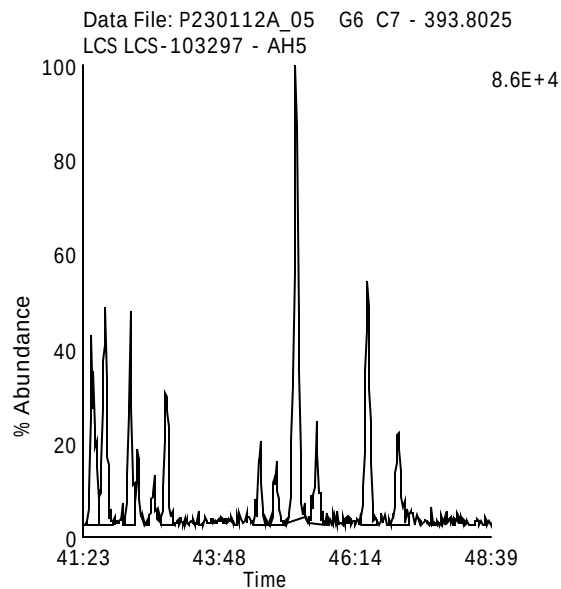
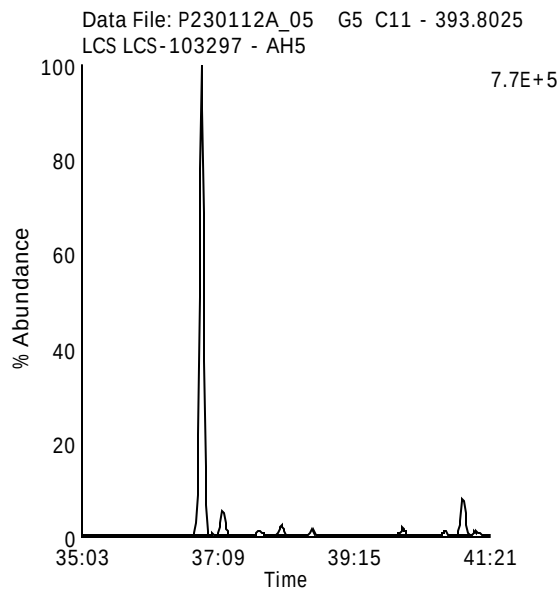
Lab Sample ID: LCS-103297
Instrument: 10MSHR09 (P)
Client Sample ID: CLCSQB



Hepta Chlorinated Biphenyls

Data File Name: P230112A_05
 Date Acquired: 1/12/2023
 Sample Description: LCS LCS-103297 - AH5

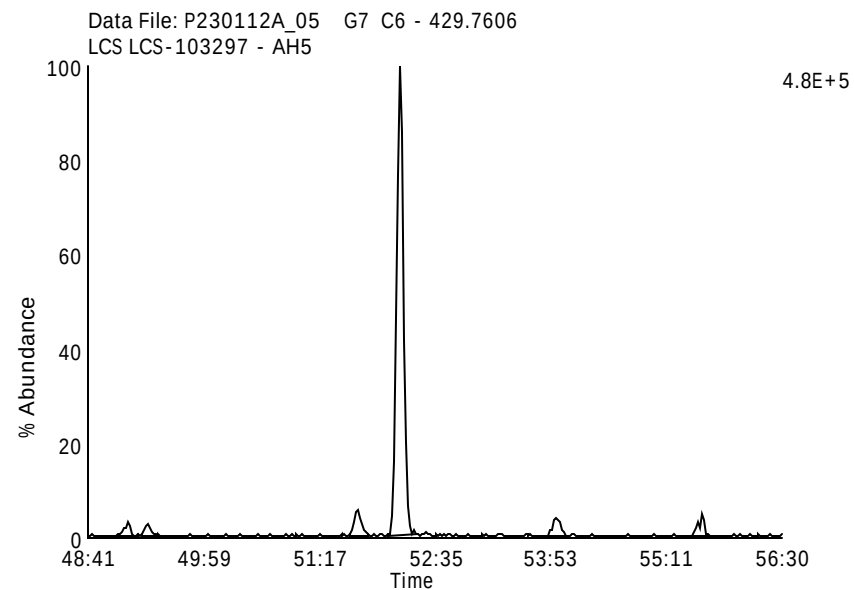
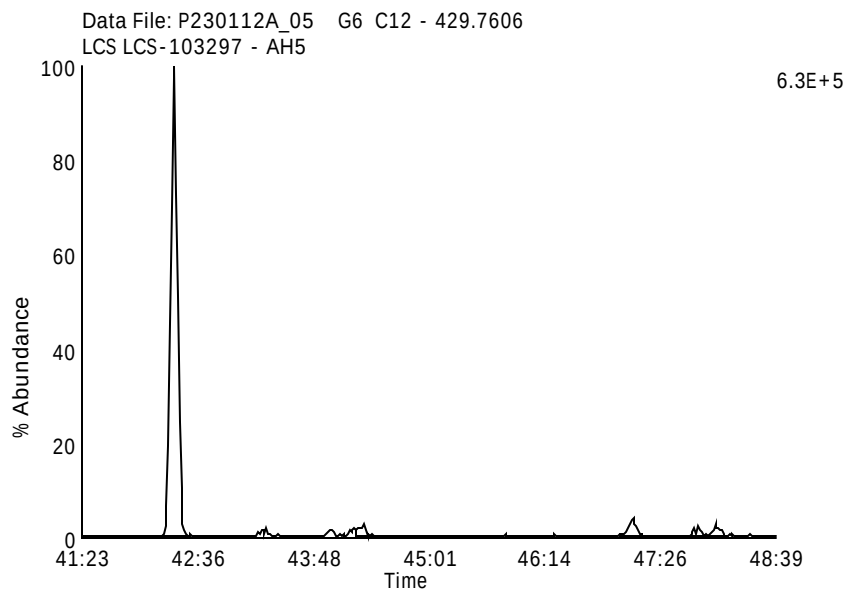
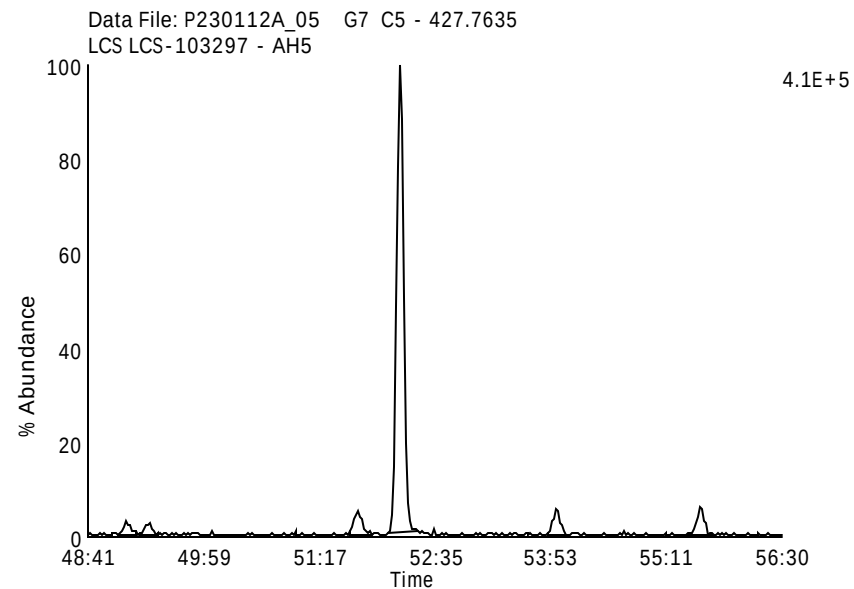
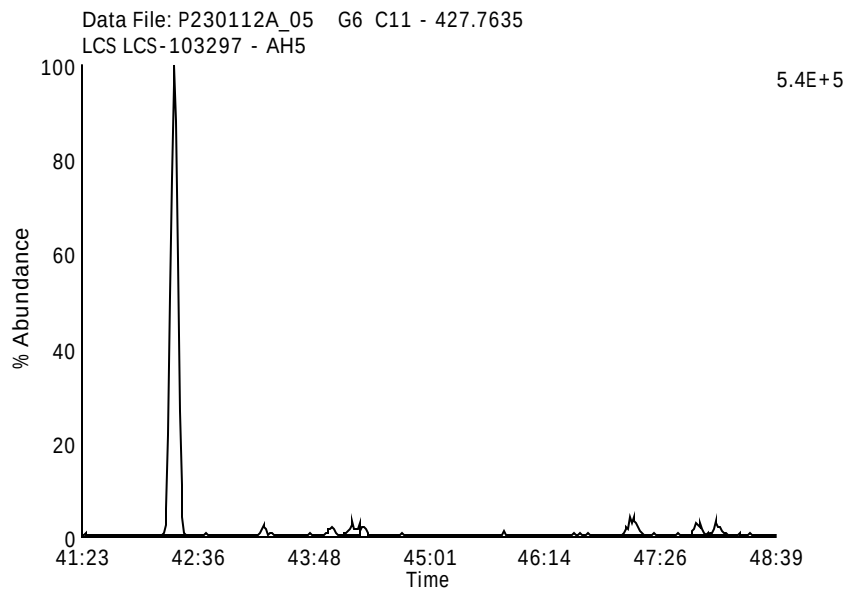
Lab Sample ID: LCS-103297
 Instrument: 10MSHR09 (P)
 Client Sample ID: CLCSQB



Octa Chlorinated Biphenyls

Data File Name: P230112A_05
Date Acquired: 1/12/2023
Sample Description: LCS LCS-103297 - AH5

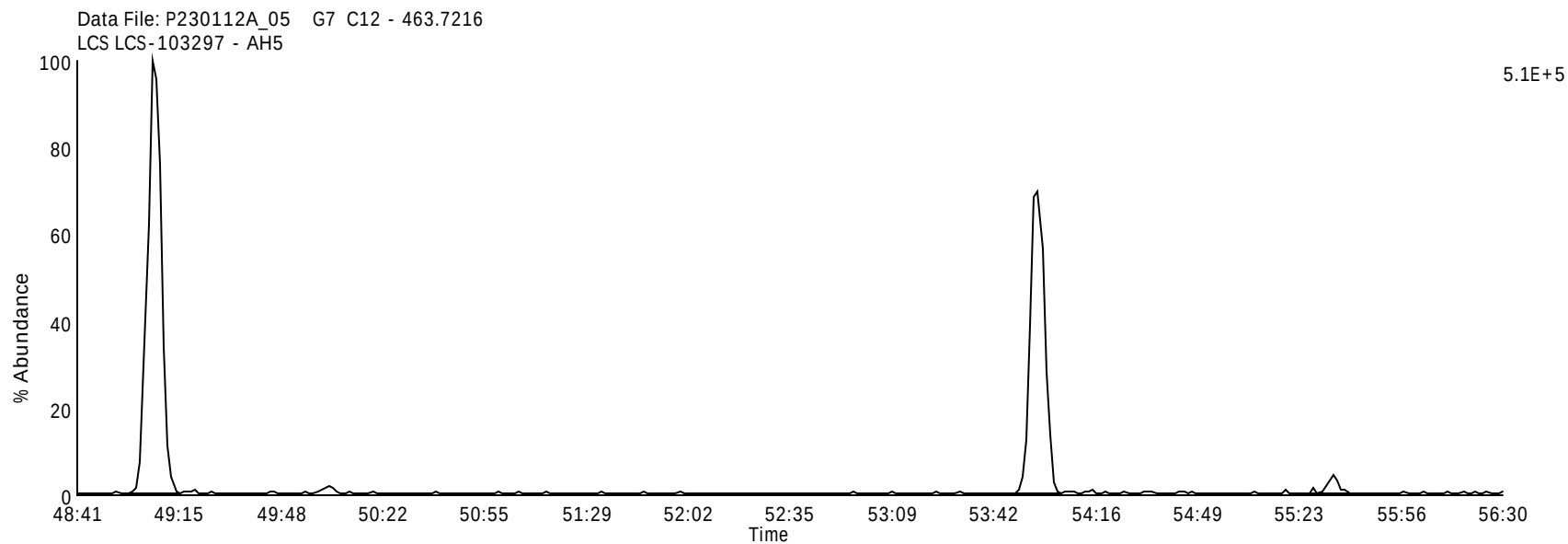
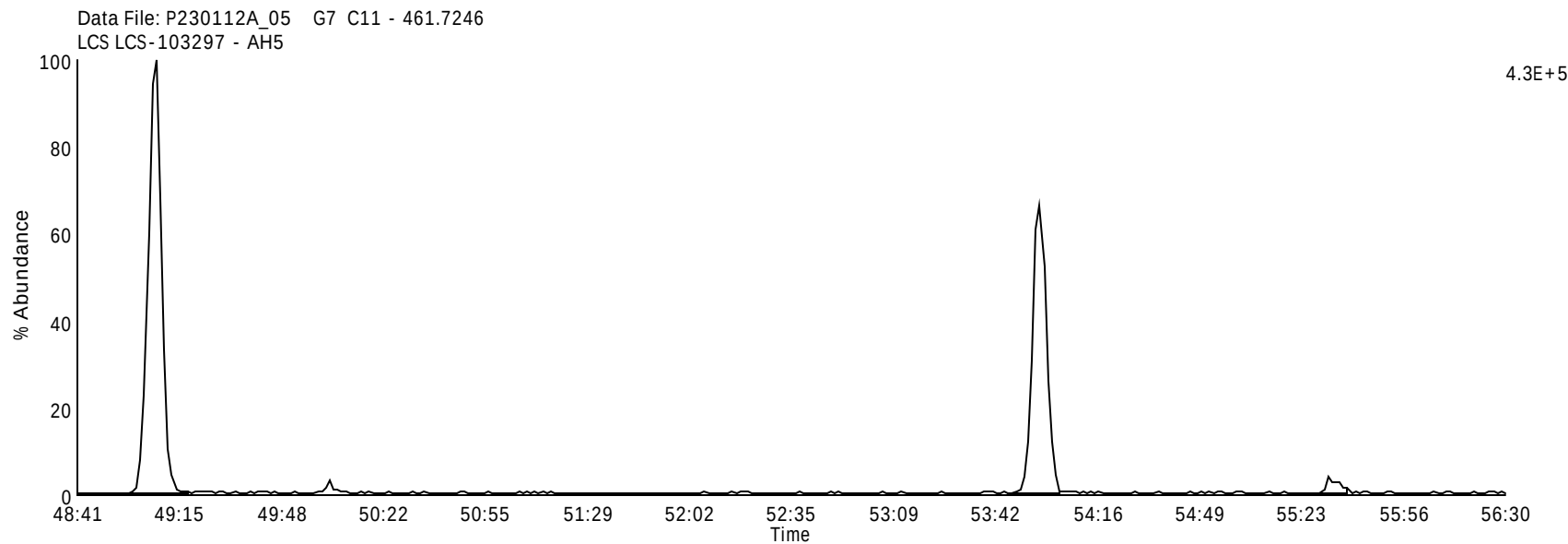
Lab Sample ID: LCS-103297
Instrument: 10MSHR09 (P)
Client Sample ID: CLCSQB



Nona Chlorinated Biphenyls

Data File Name: P230112A_05
Date Acquired: 1/12/2023
Sample Description: LCS LCS-103297 - AH5

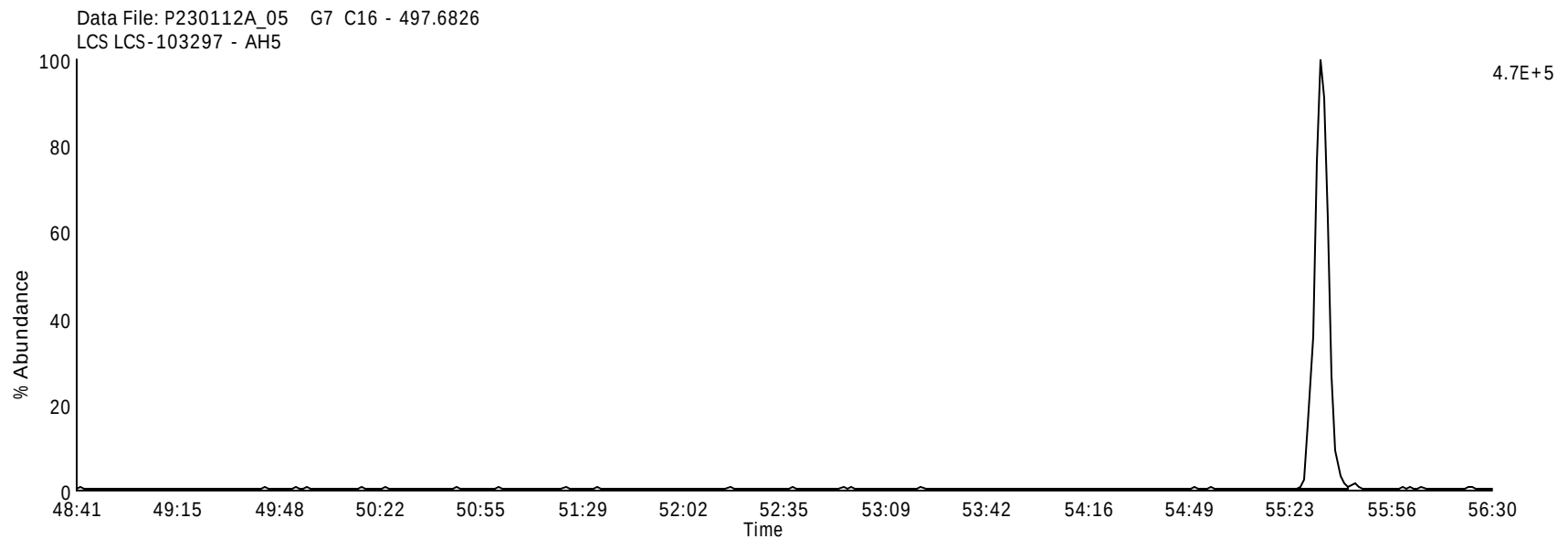
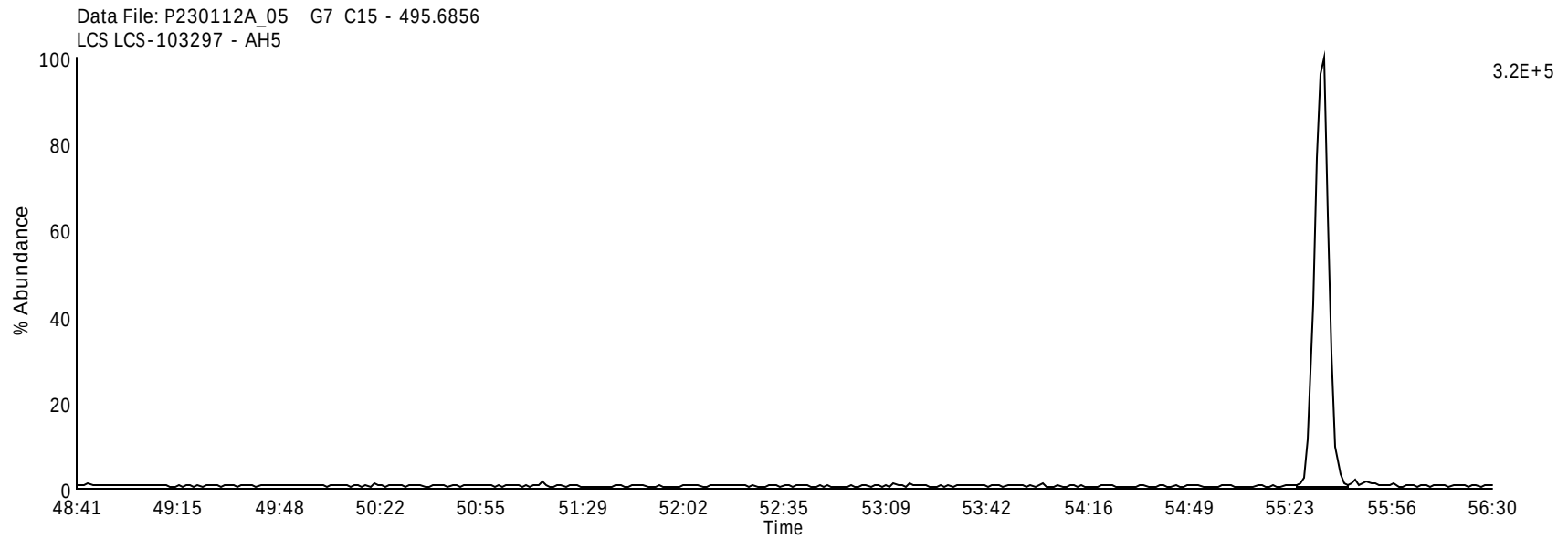
Lab Sample ID: LCS-103297
Instrument: 10MSHR09 (P)
Client Sample ID: CLCSQB



Deca Chlorinated Biphenyl

Data File Name: P230112A_05
Date Acquired: 1/12/2023
Sample Description: LCS LCS-103297 - AH5

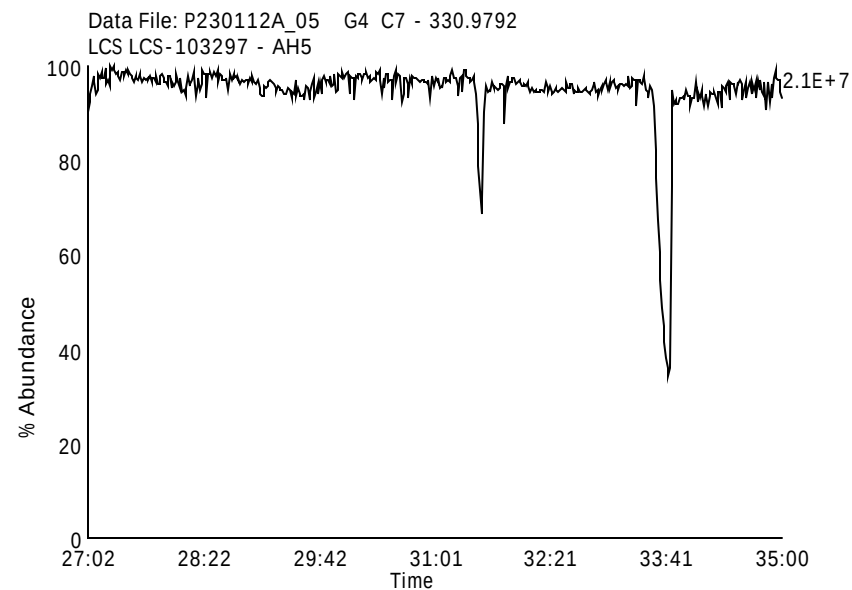
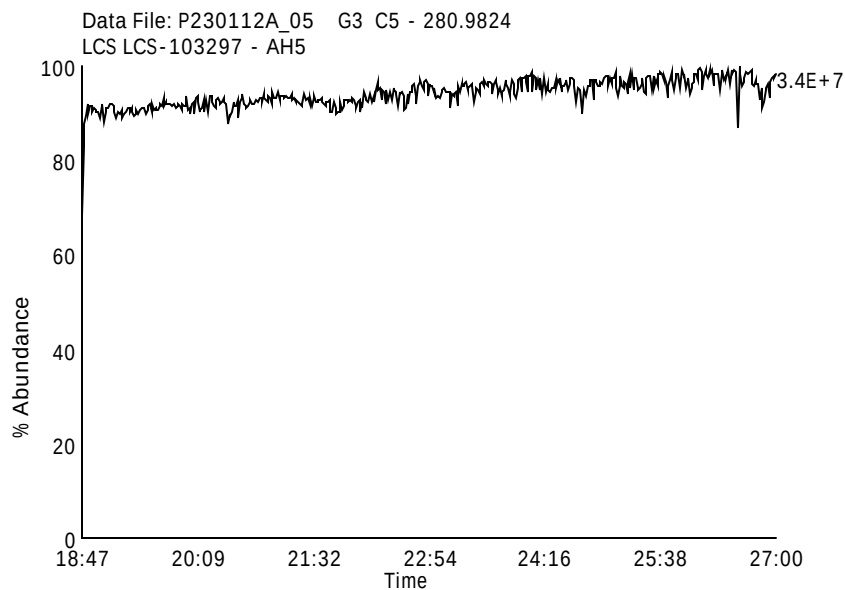
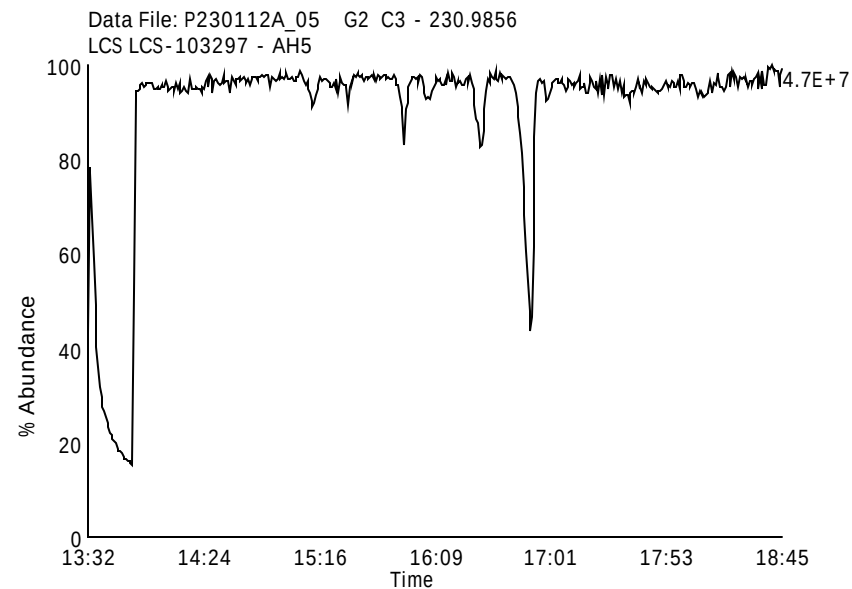
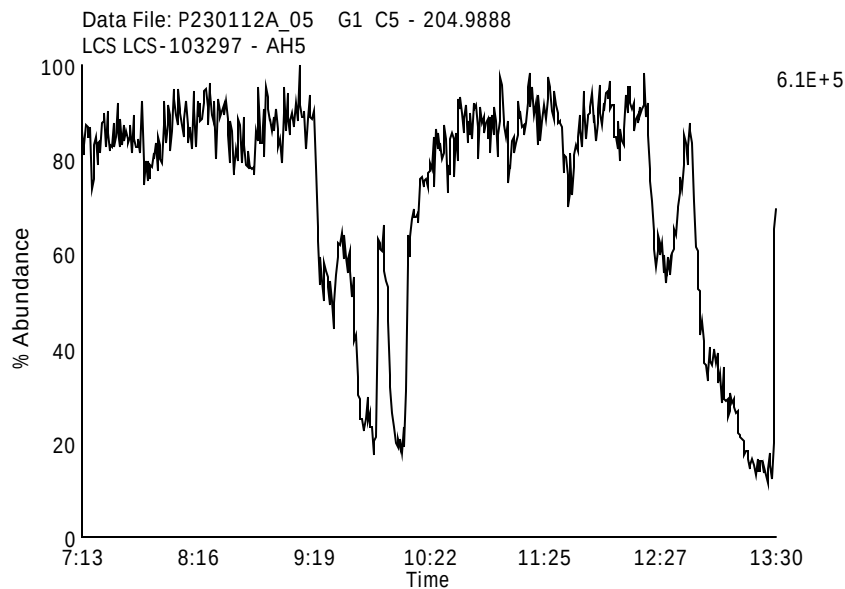
Lab Sample ID: LCS-103297
Instrument: 10MSHR09 (P)
Client Sample ID: CLCSQB



Group 1 - 4 Lock mass

Data File Name: P230112A_05
Date Acquired: 1/12/2023
Sample Description: LCS LCS-103297 - AH5

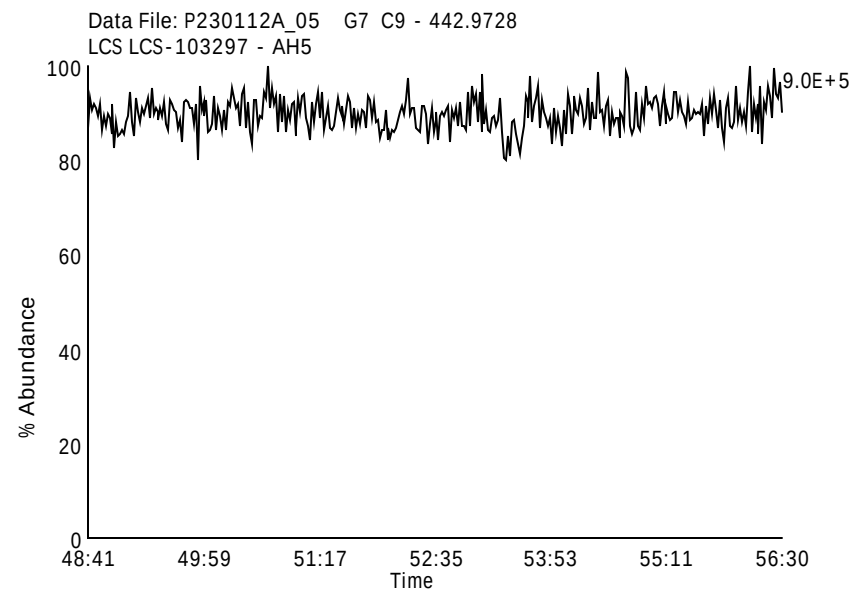
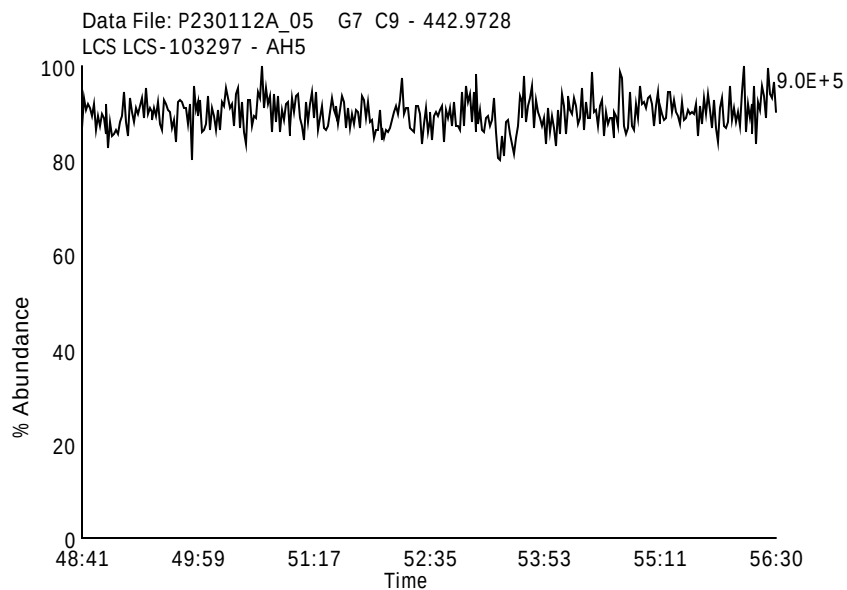
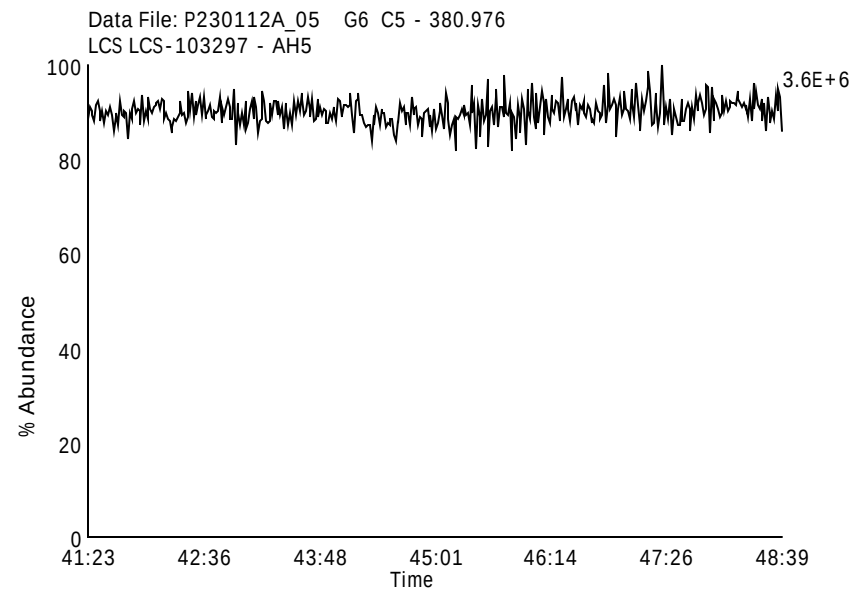
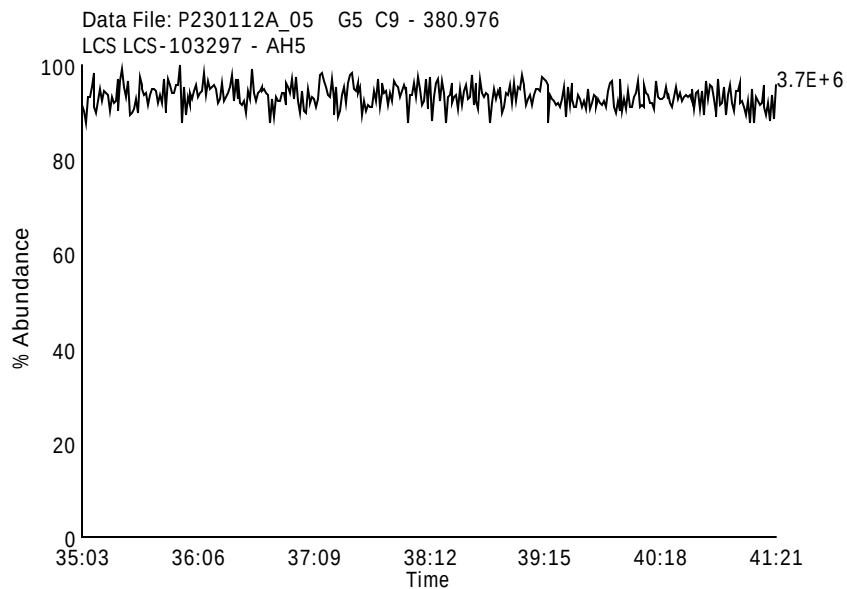
Lab Sample ID: LCS-103297
Instrument: 10MSHR09 (P)
Client Sample ID: CLCSQB



Group 5 - 7 Lock mass

Data File Name: P230112A_05
Date Acquired: 1/12/2023
Sample Description: LCS LCS-103297 - AH5

Lab Sample ID: LCS-103297
Instrument: 10MSHR09 (P)
Client Sample ID: CLCSQB



Labeled Mono Chlorinated Biphenyls

Data File Name: P230112A_06

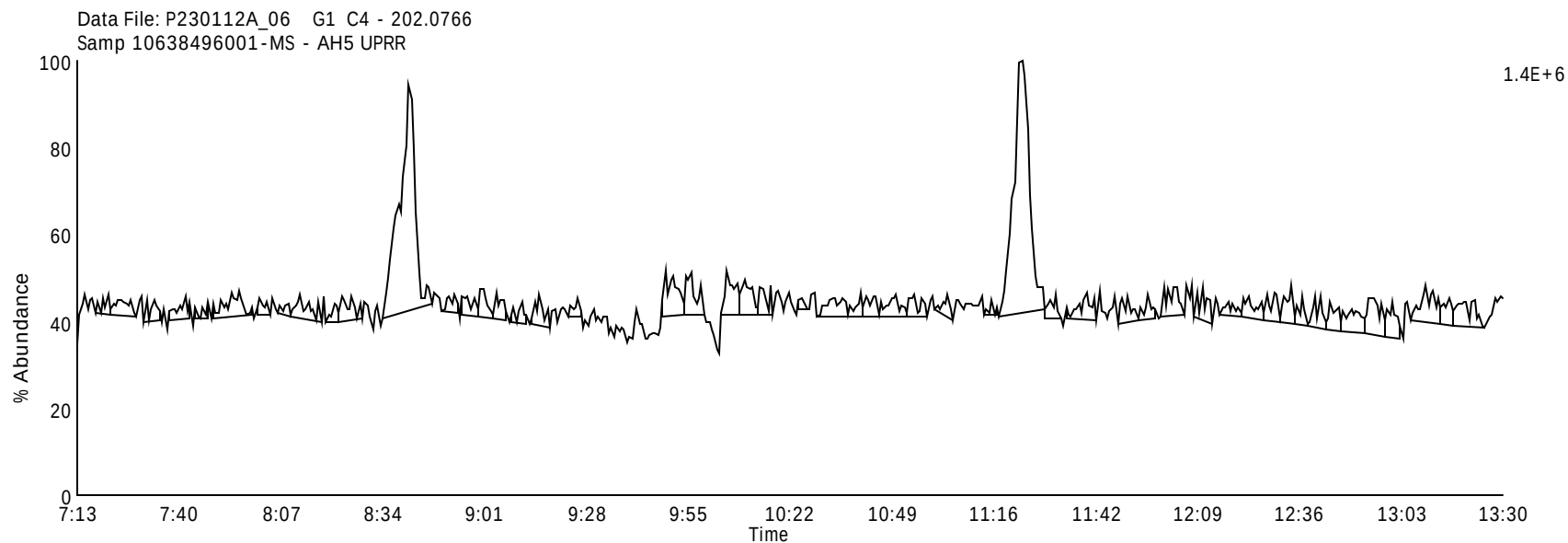
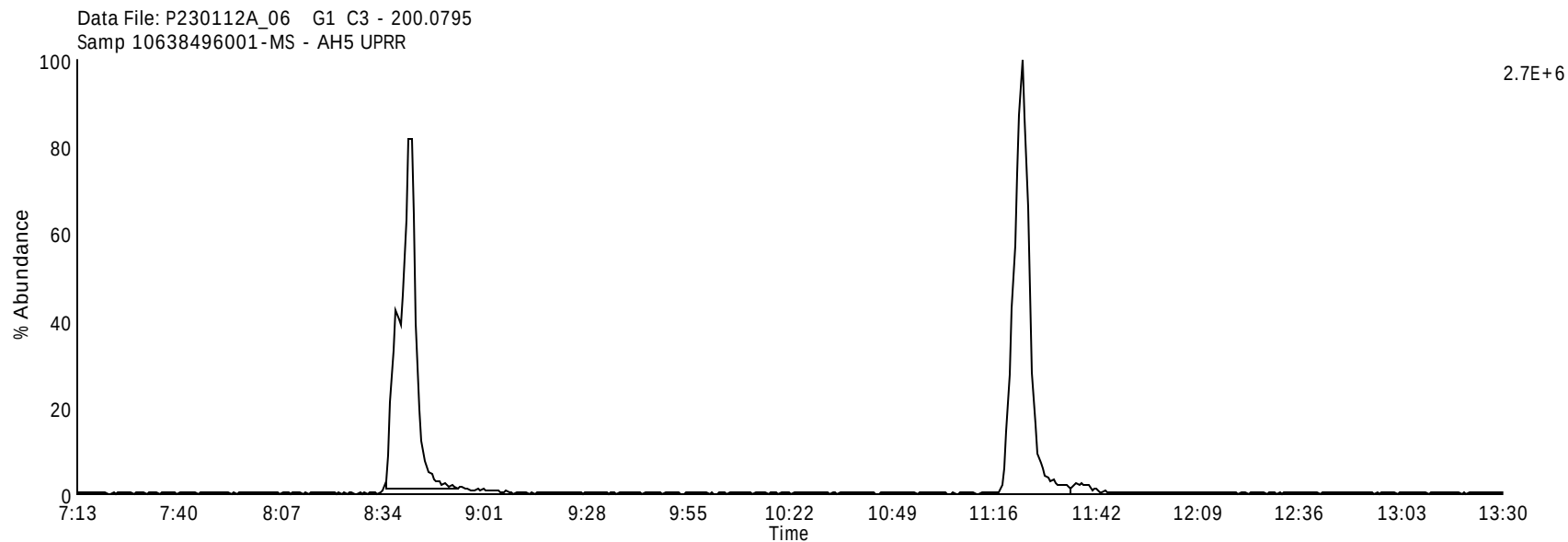
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Labeled Di Chlorinated Biphenyls

Data File Name: P230112A_06

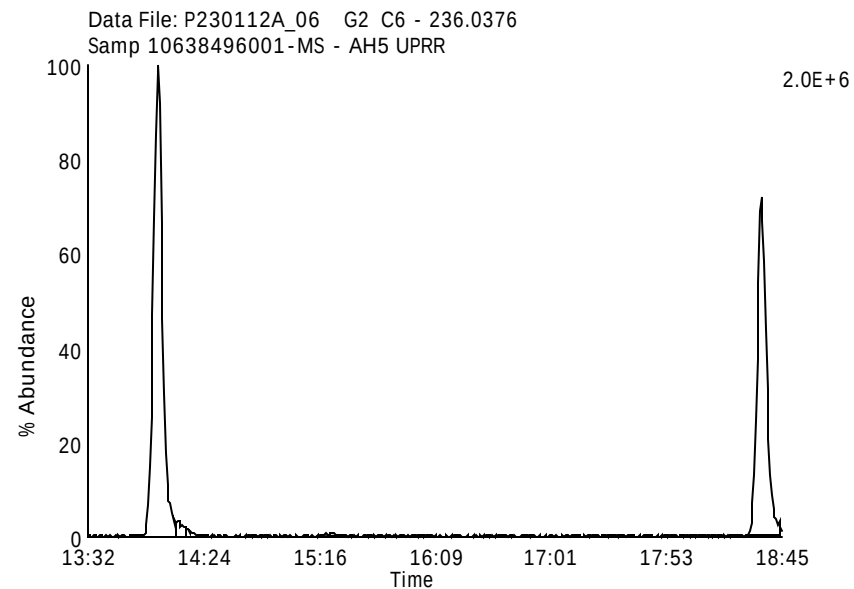
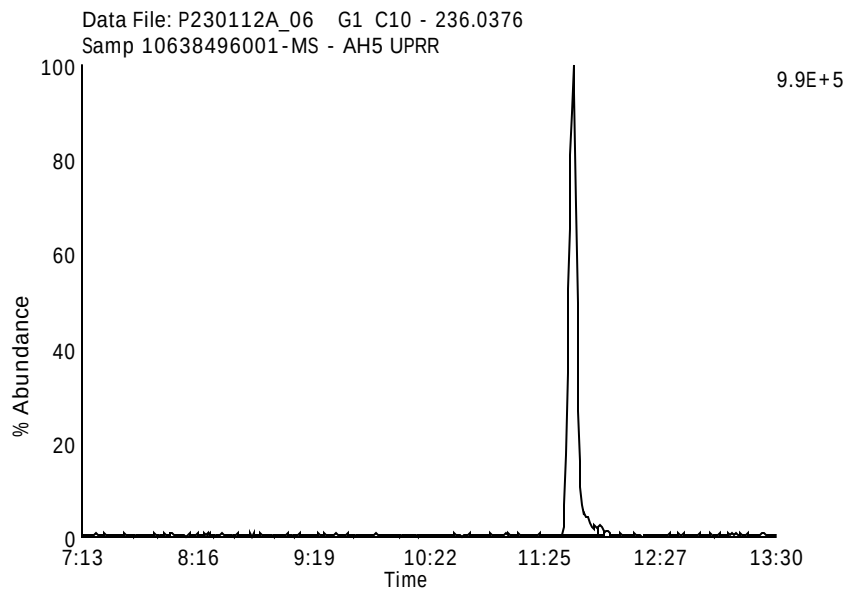
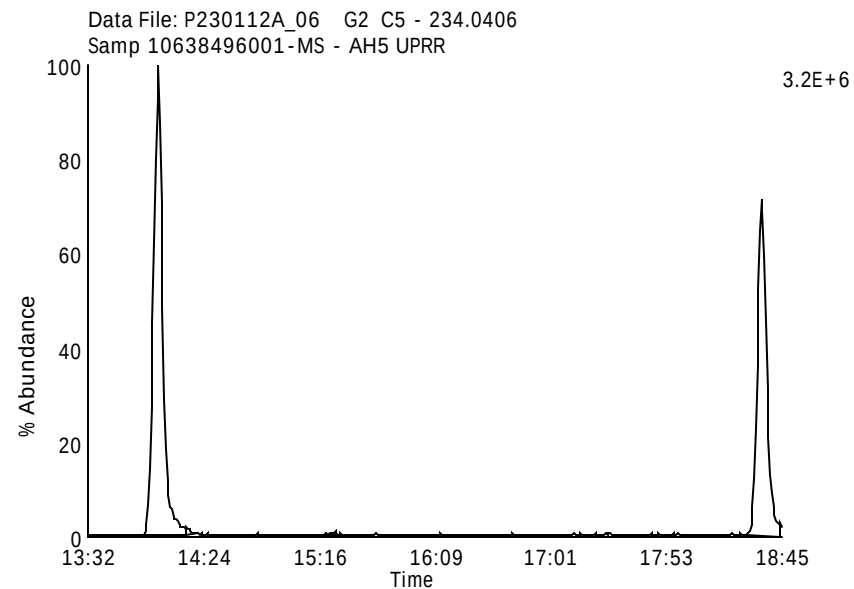
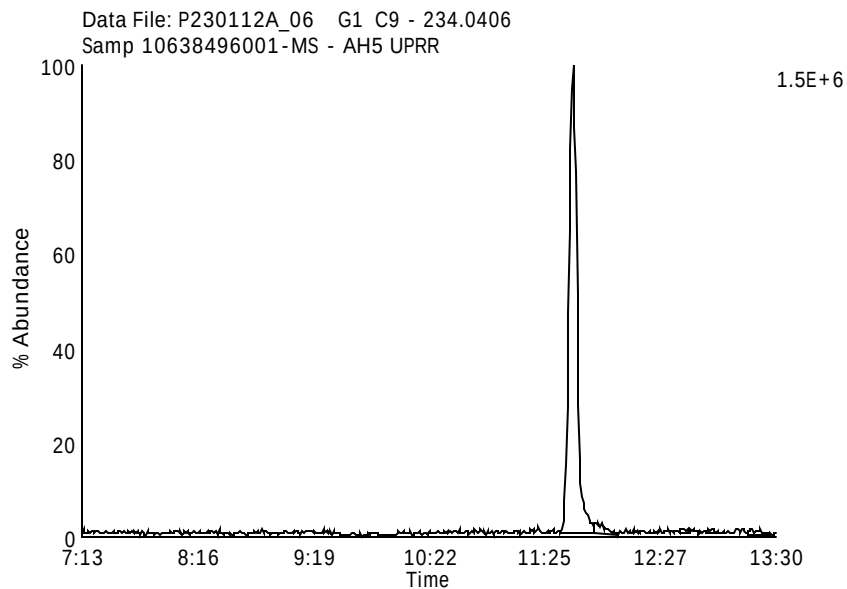
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Labeled Tri Chlorinated Biphenyls

Data File Name: P230112A_06

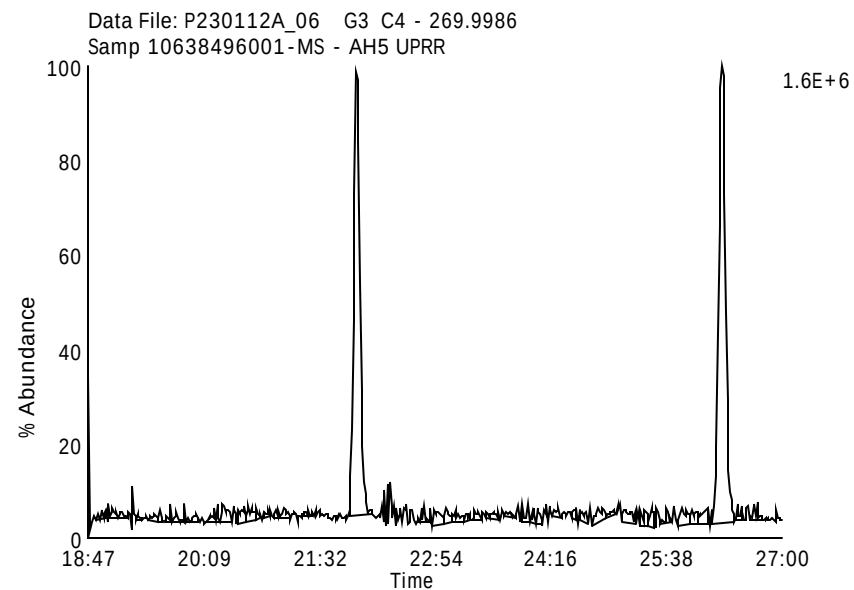
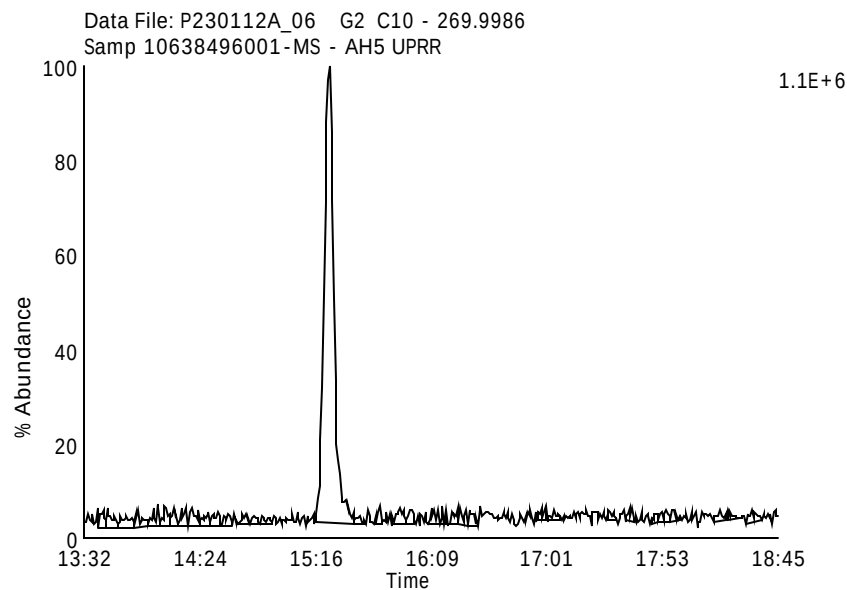
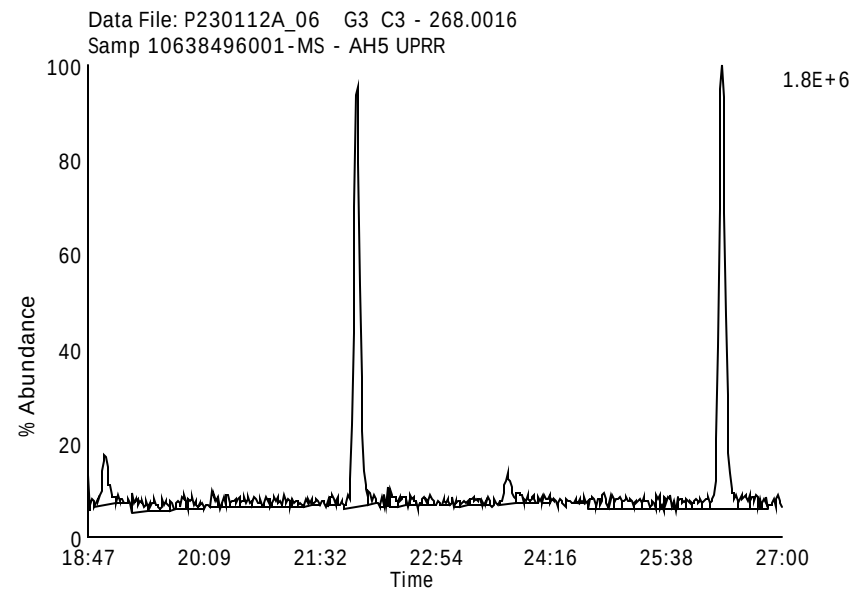
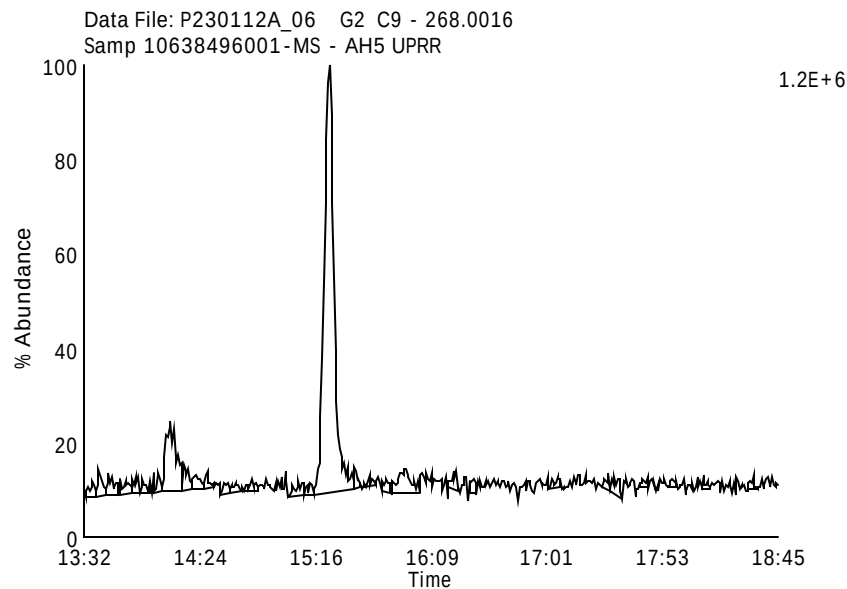
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Labeled Tetra Chlorinated Biphenyls

Data File Name: P230112A_06

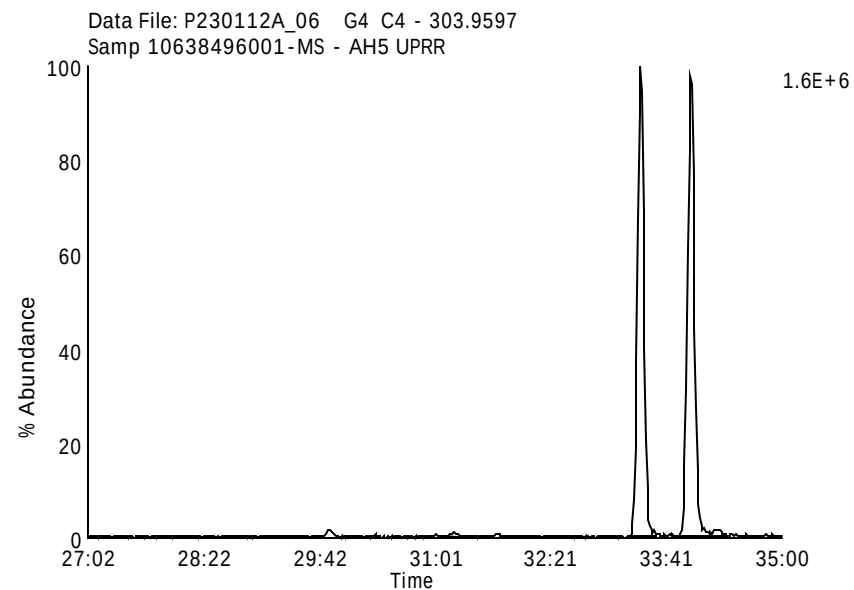
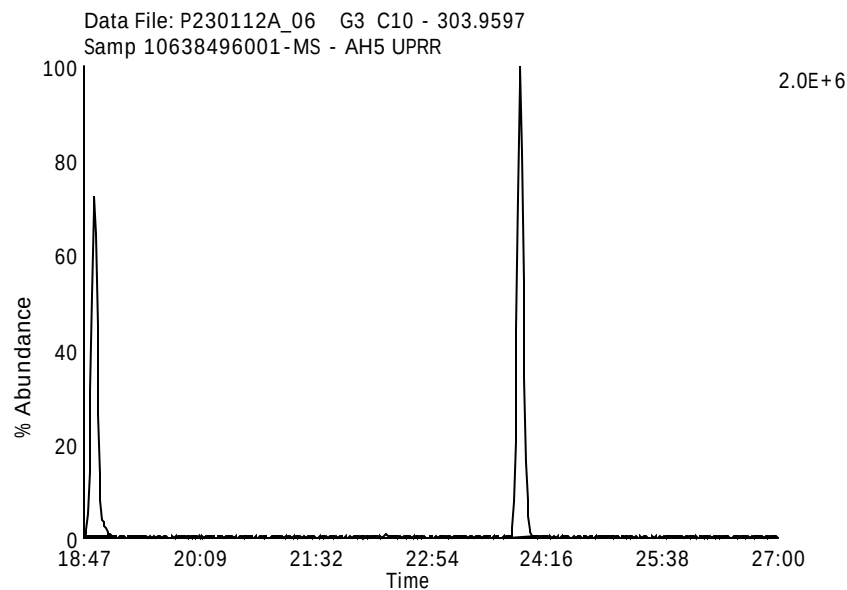
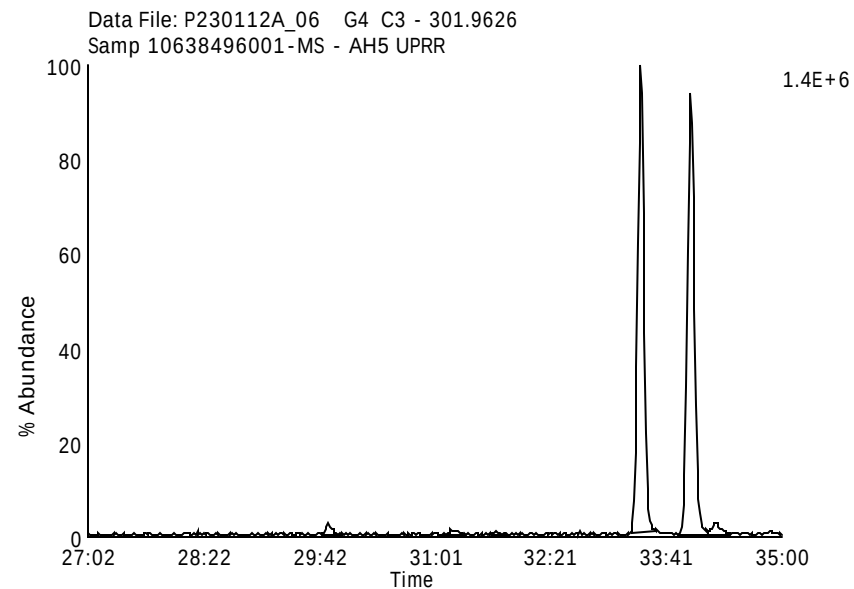
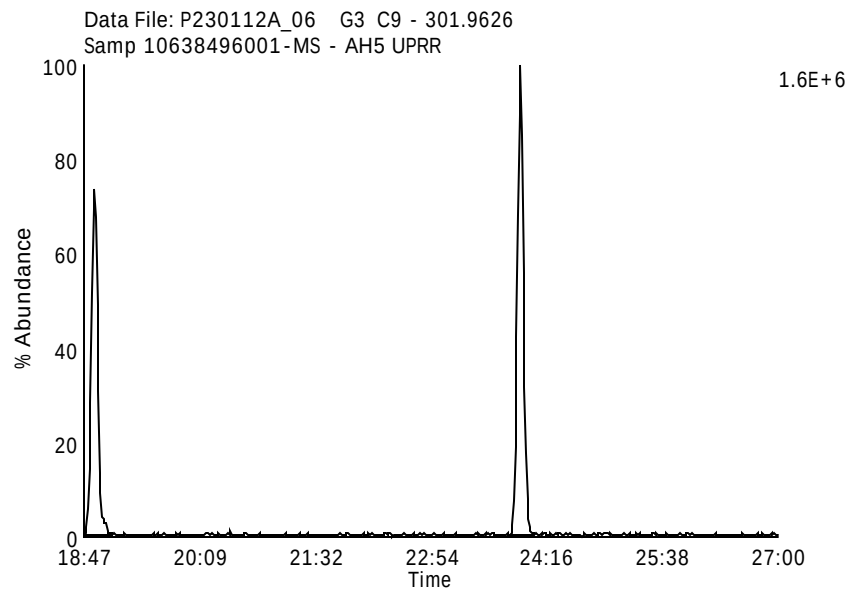
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Labeled Penta Chlorinated Biphenyls

Data File Name: P230112A_06

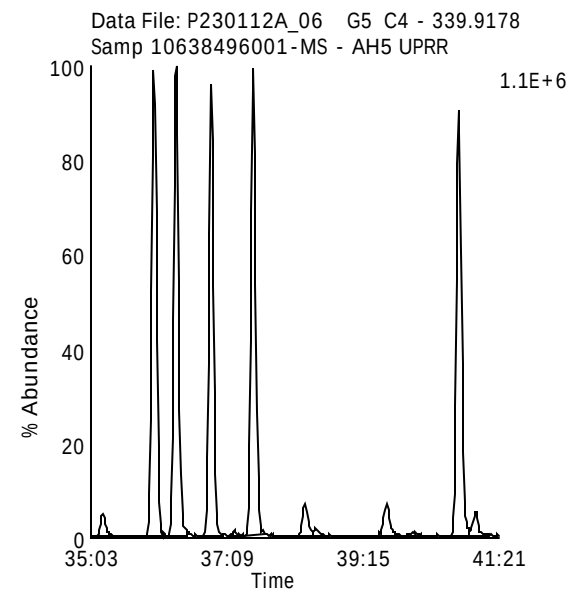
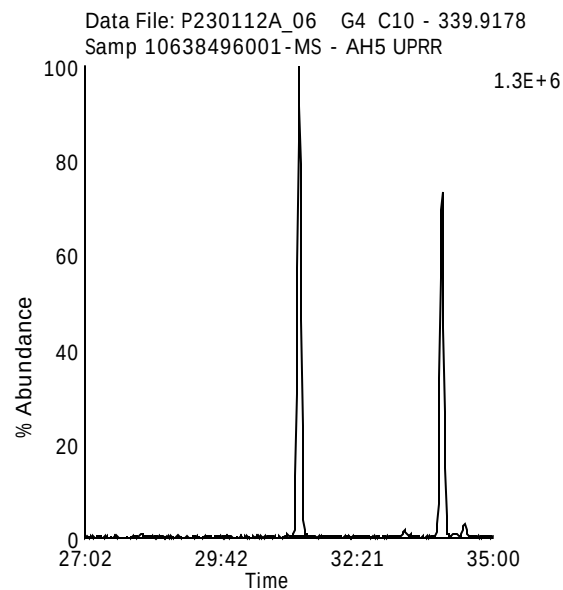
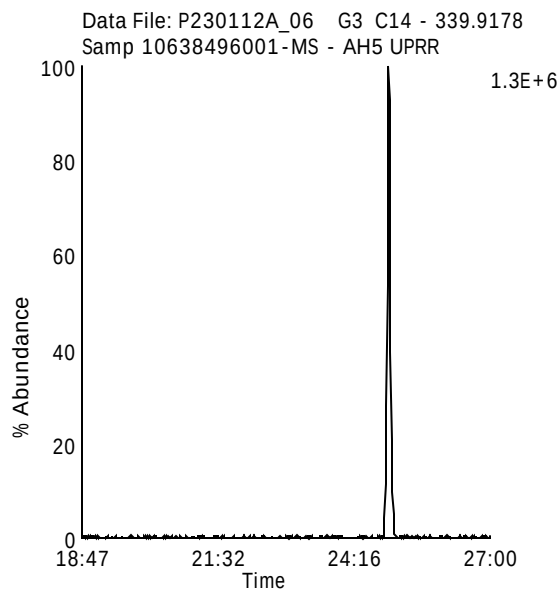
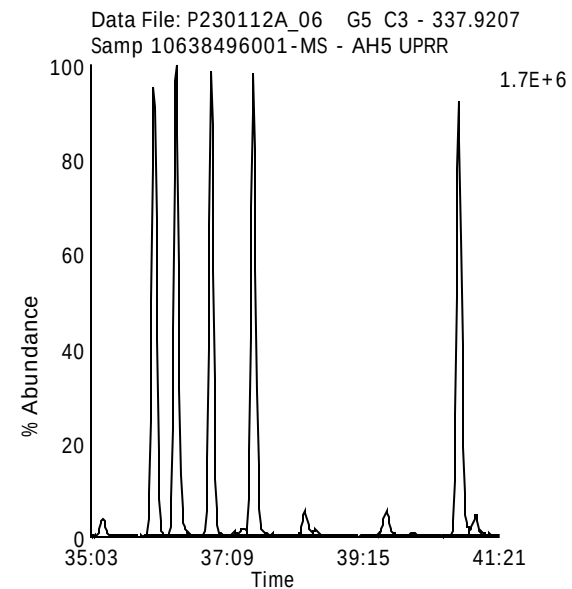
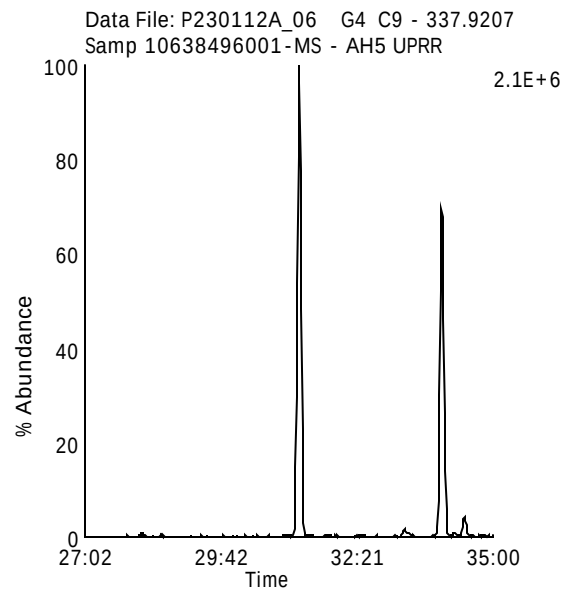
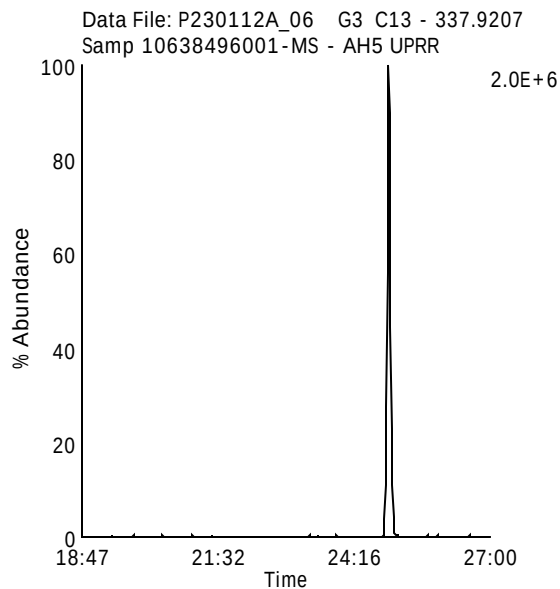
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Labeled Hexa Chlorinated Biphenyls

Data File Name: P230112A_06

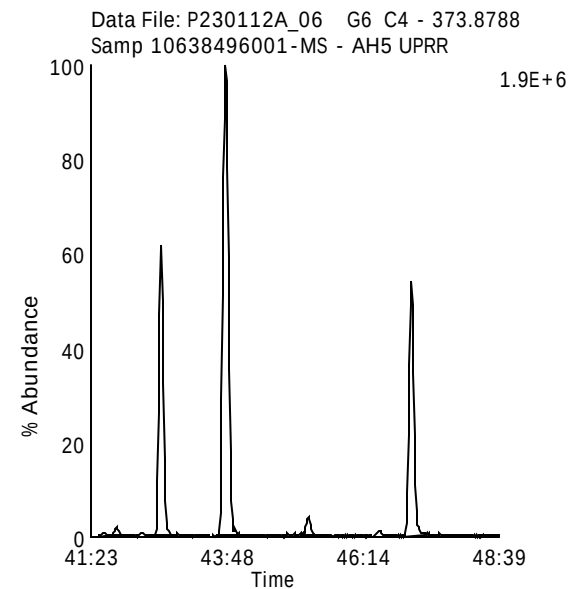
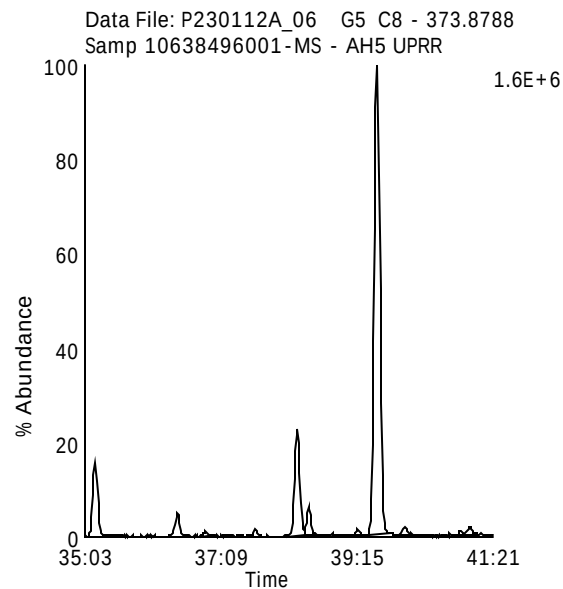
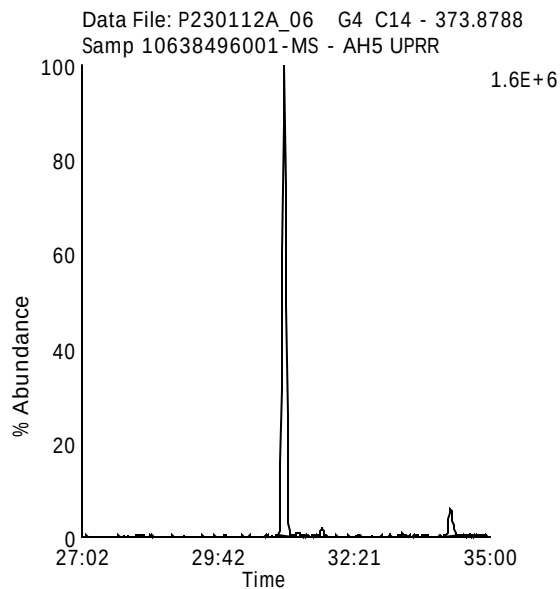
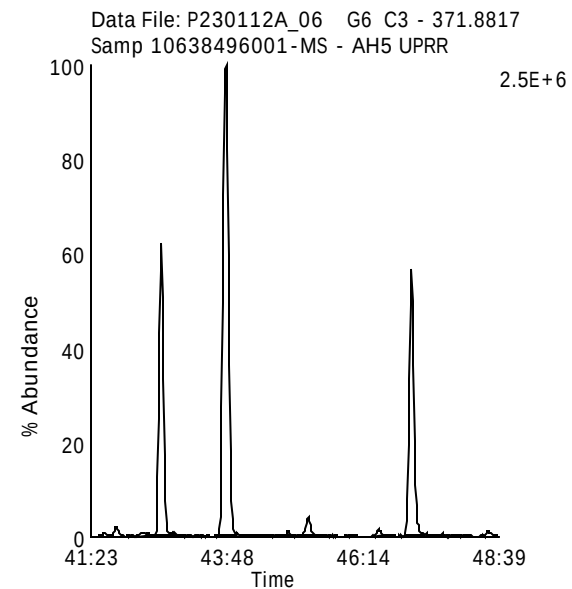
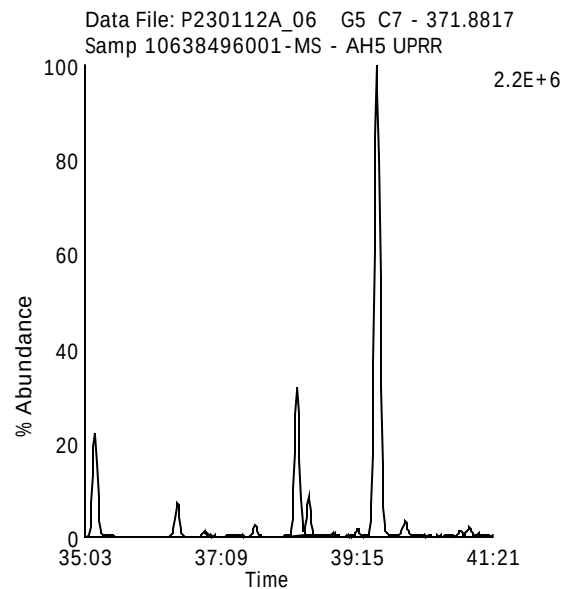
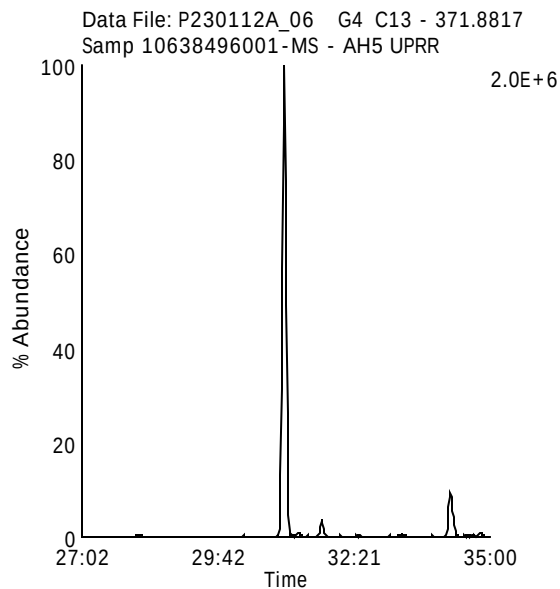
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Labeled Hepta Chlorinated Biphenyls

Data File Name: P230112A_06

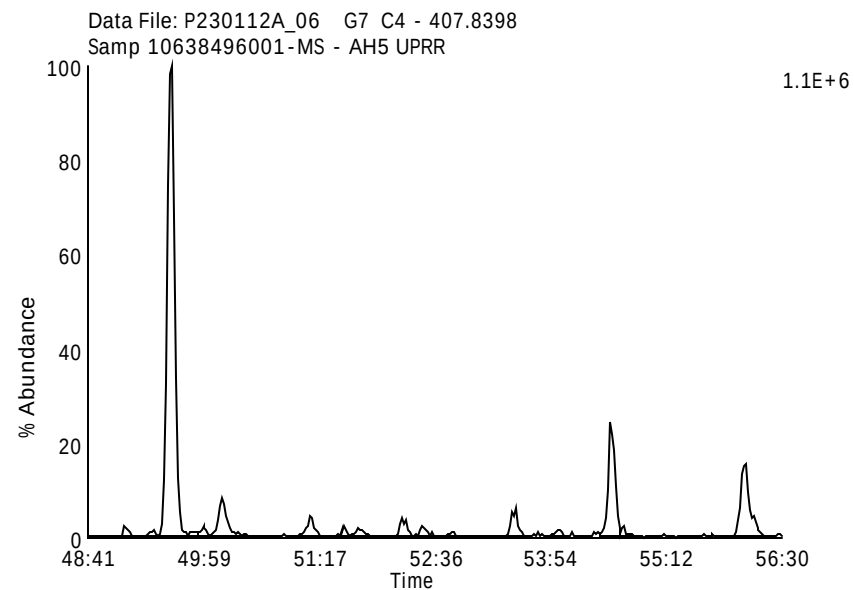
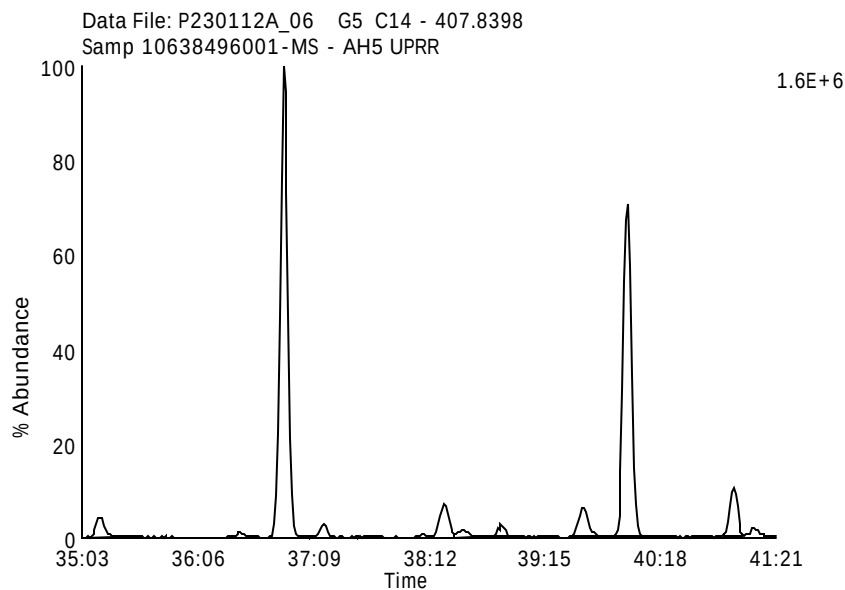
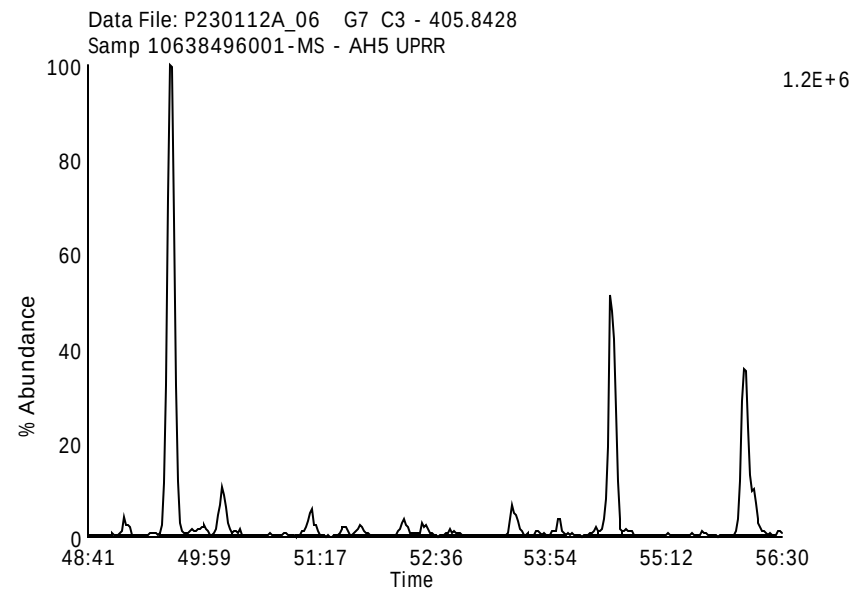
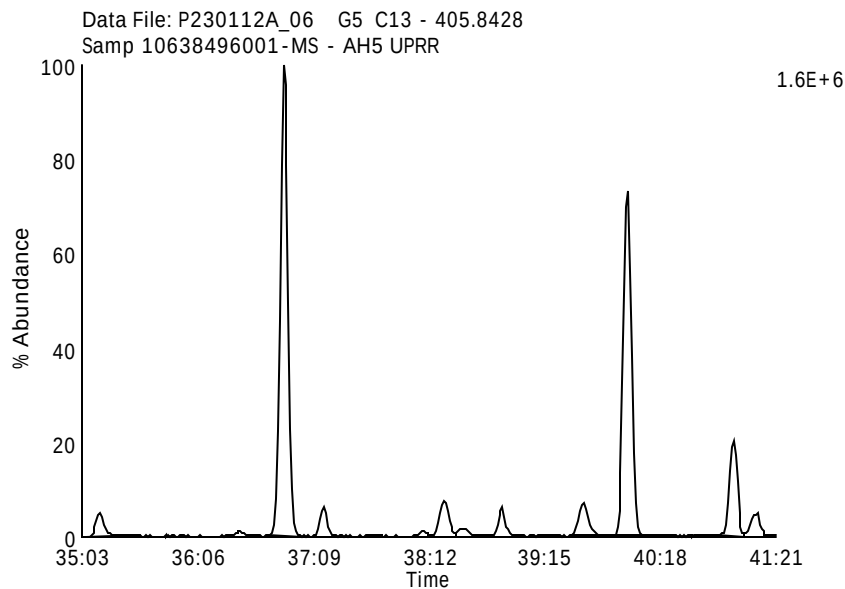
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Labeled Octa Chlorinated Biphenyls

Data File Name: P230112A_06

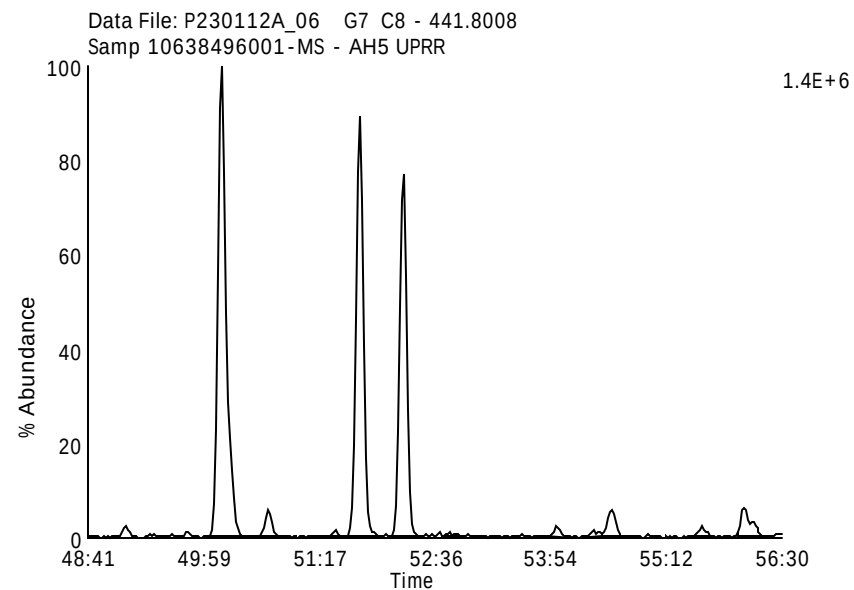
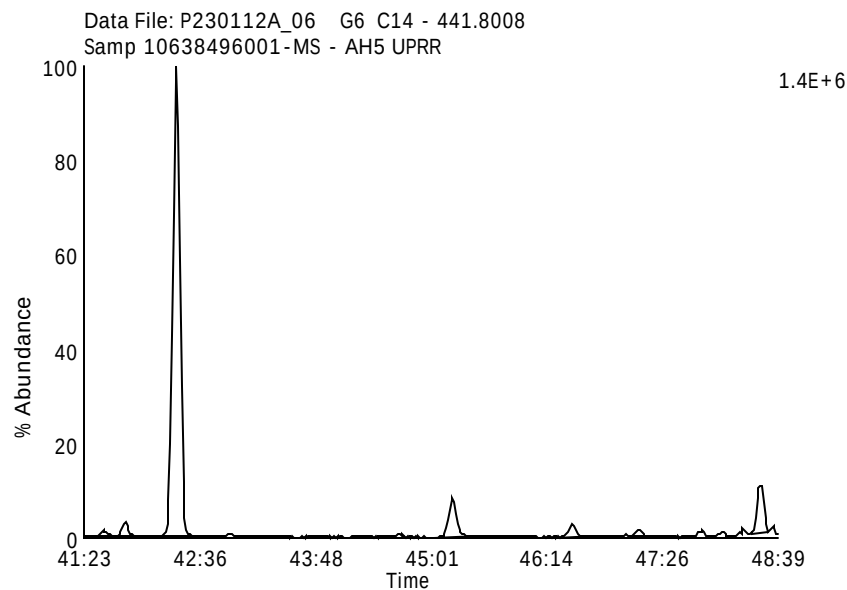
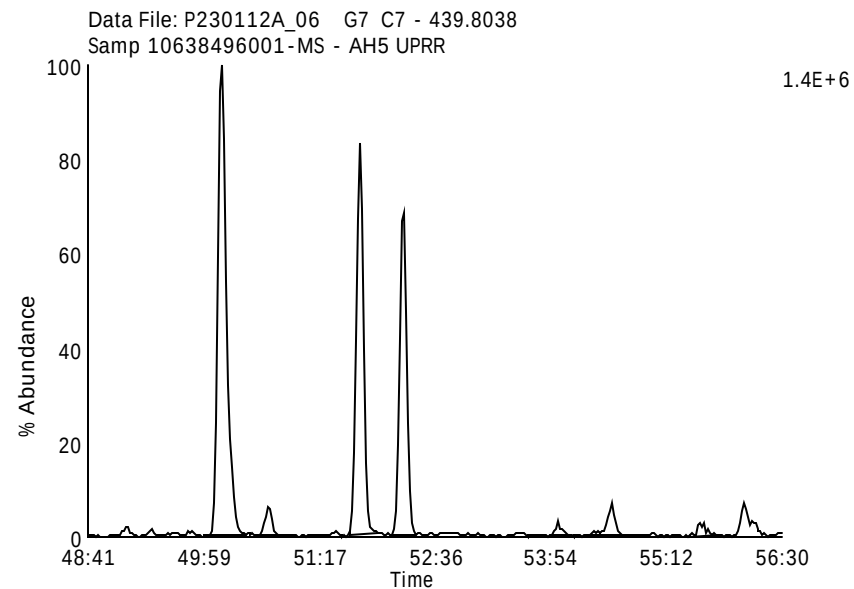
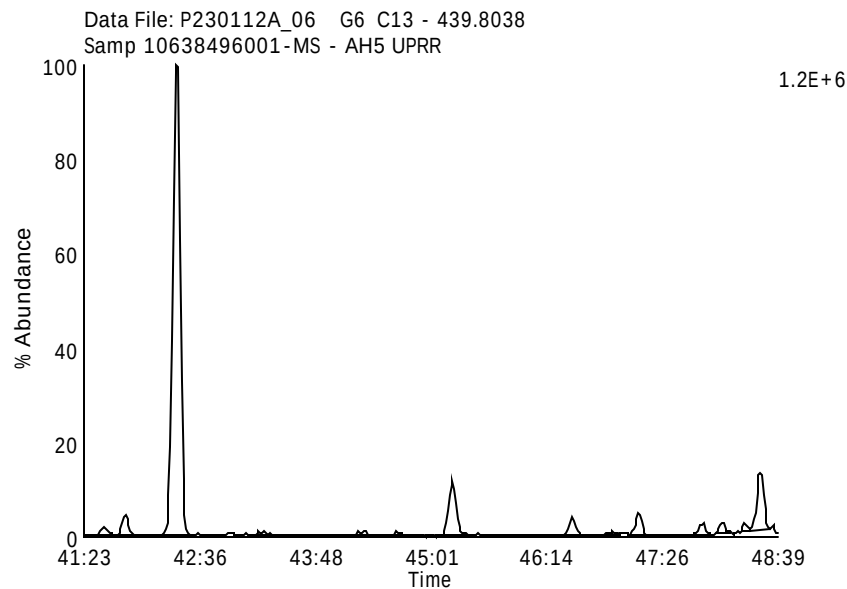
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Labeled Nona Chlorinated Biphenyls

Data File Name: P230112A_06

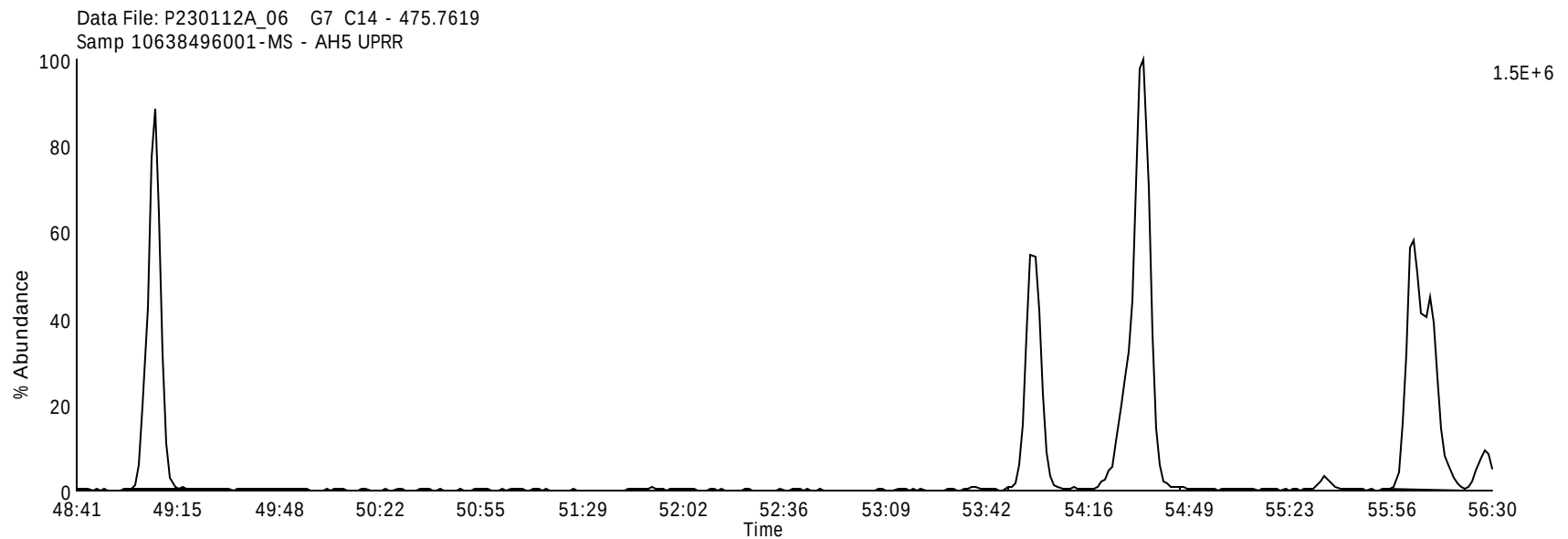
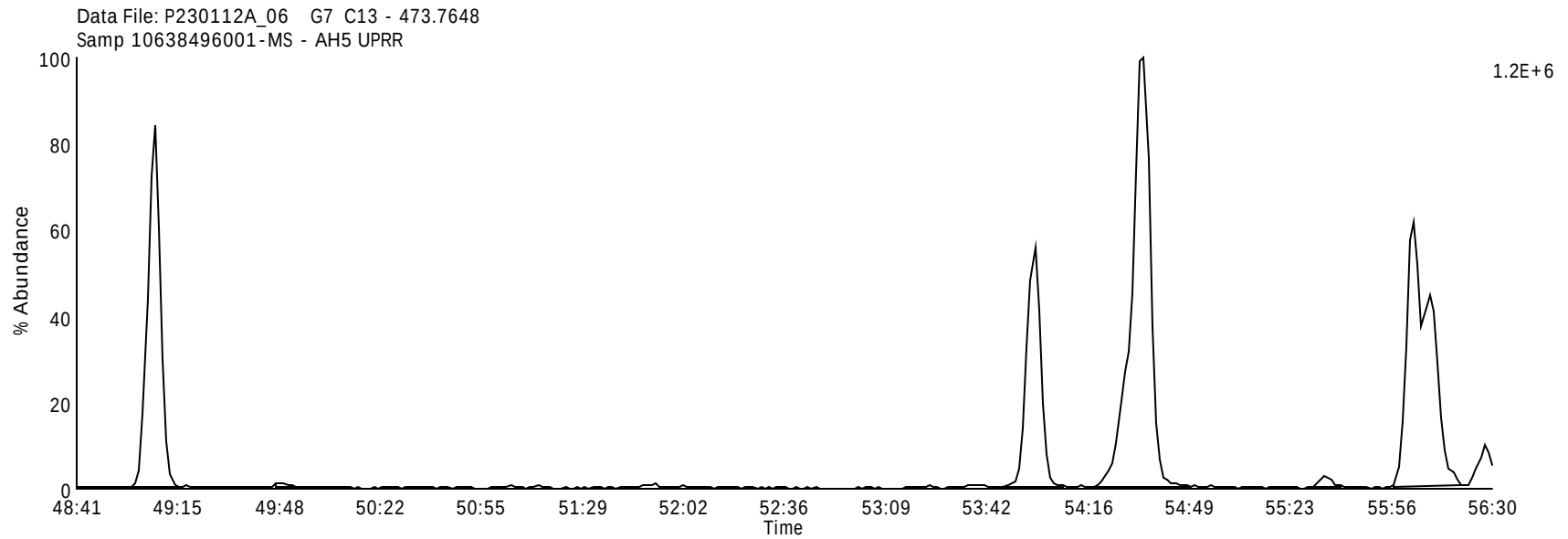
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Labeled Deca Chlorinated Biphenyl

Data File Name: P230112A_06

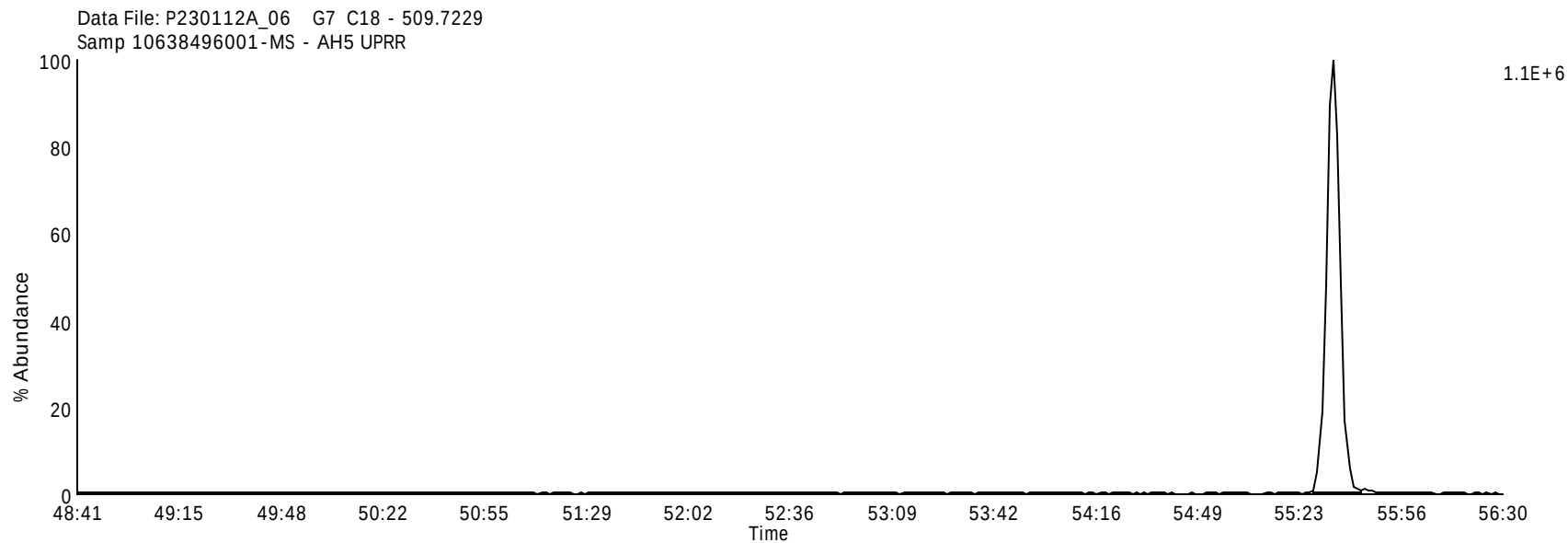
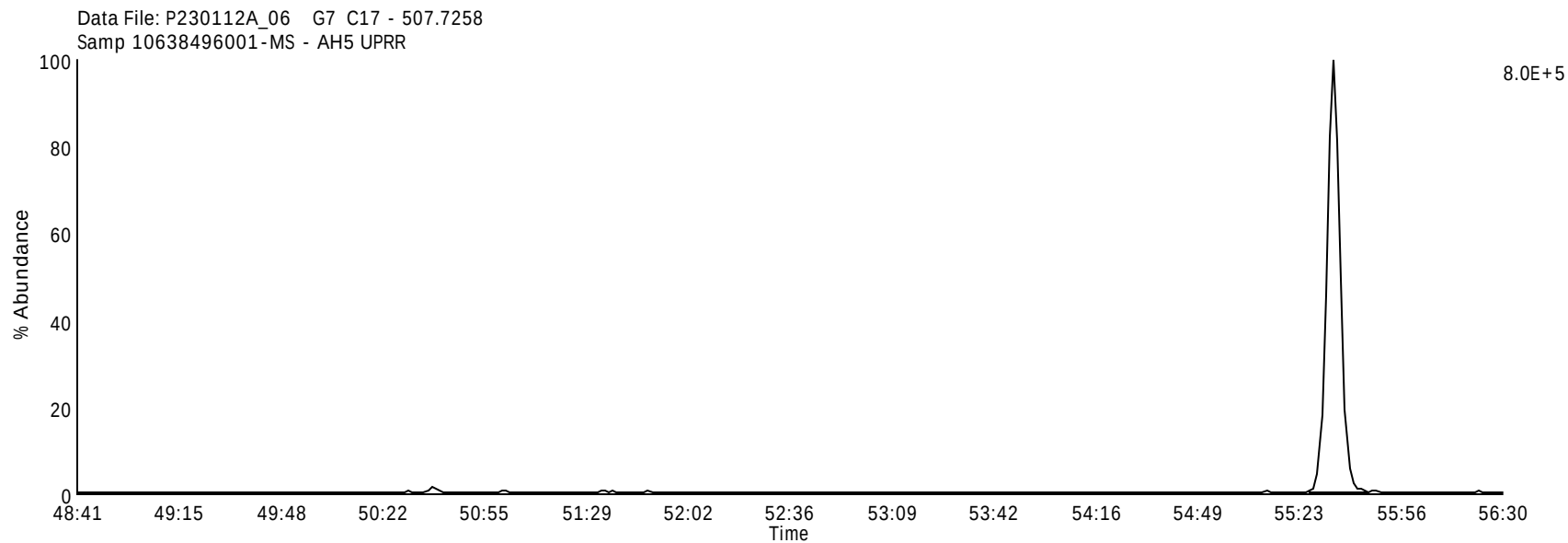
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Mono Chlorinated Biphenyls

Data File Name: P230112A_06

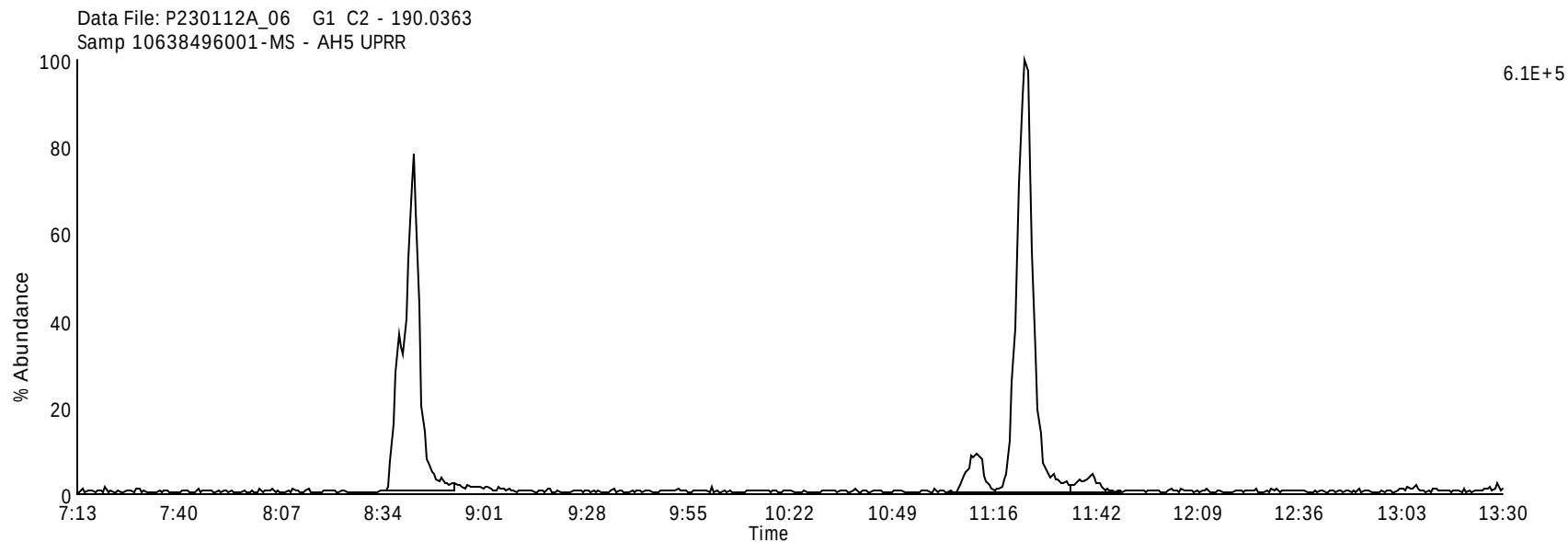
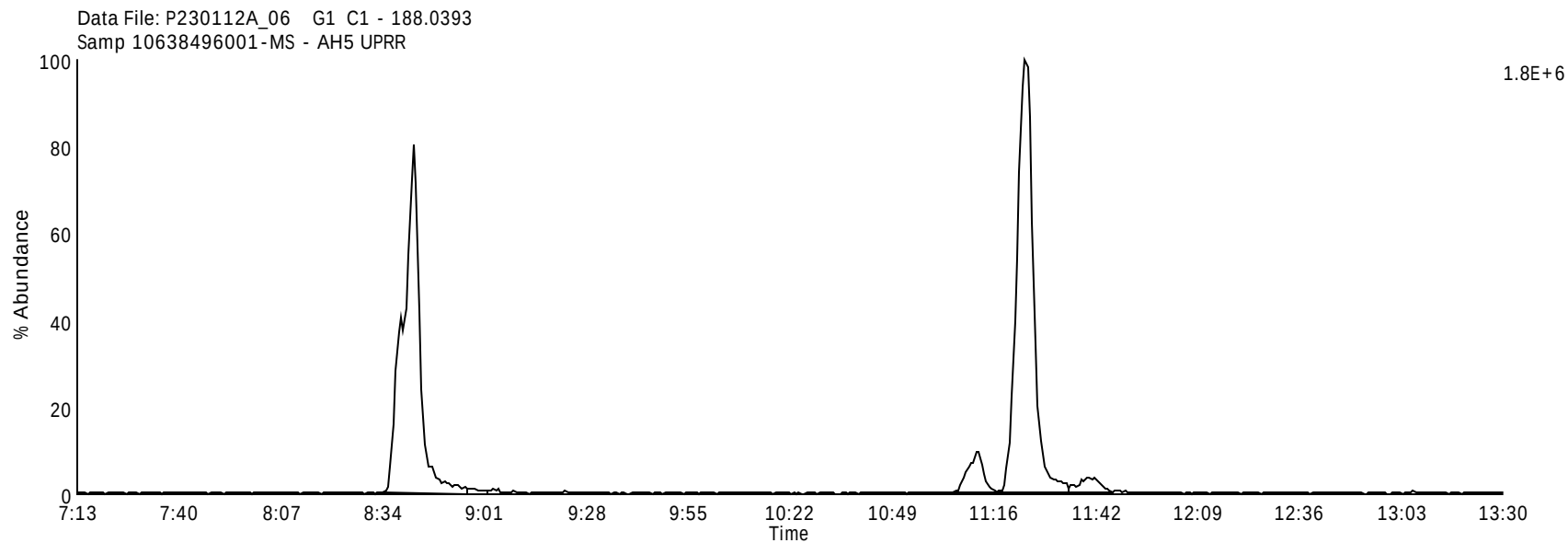
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Di Chlorinated Biphenyls

Data File Name: P230112A_06

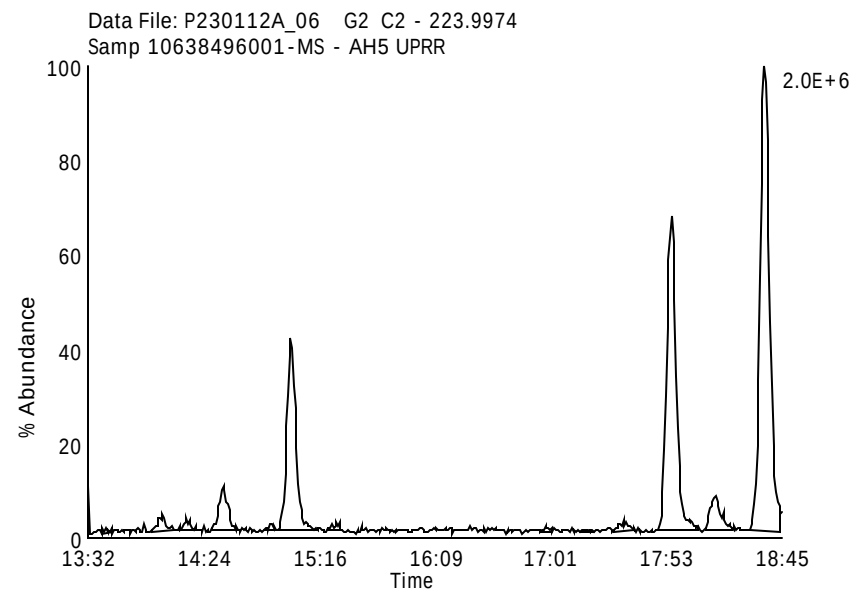
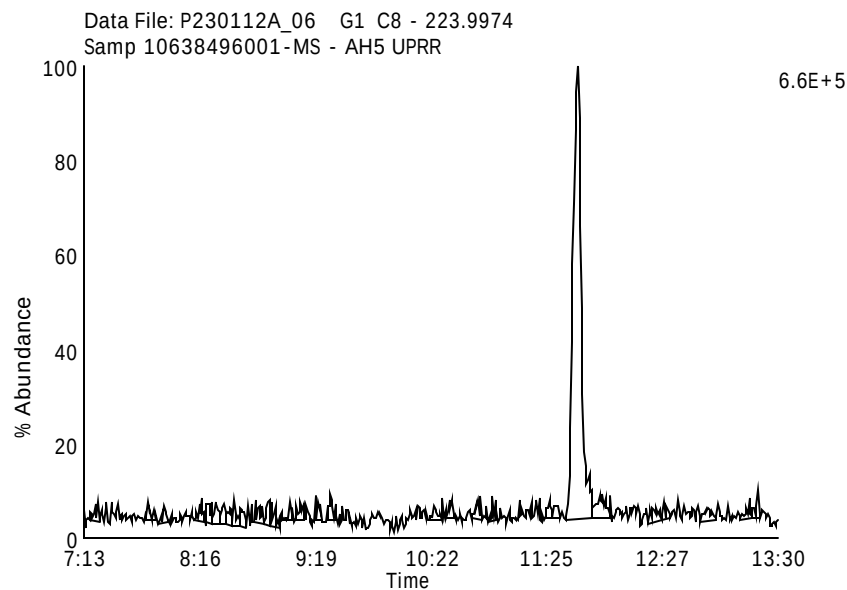
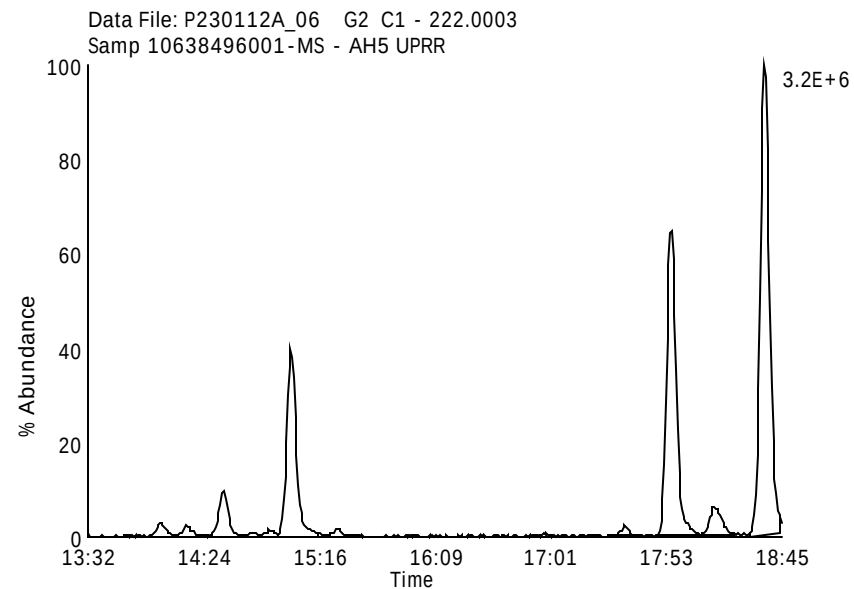
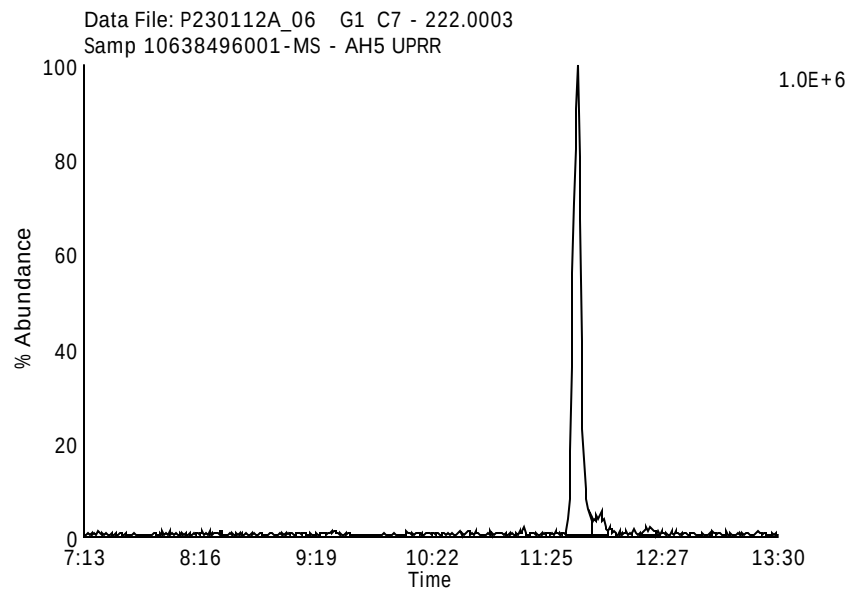
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Tri Chlorinated Biphenyls

Data File Name: P230112A_06

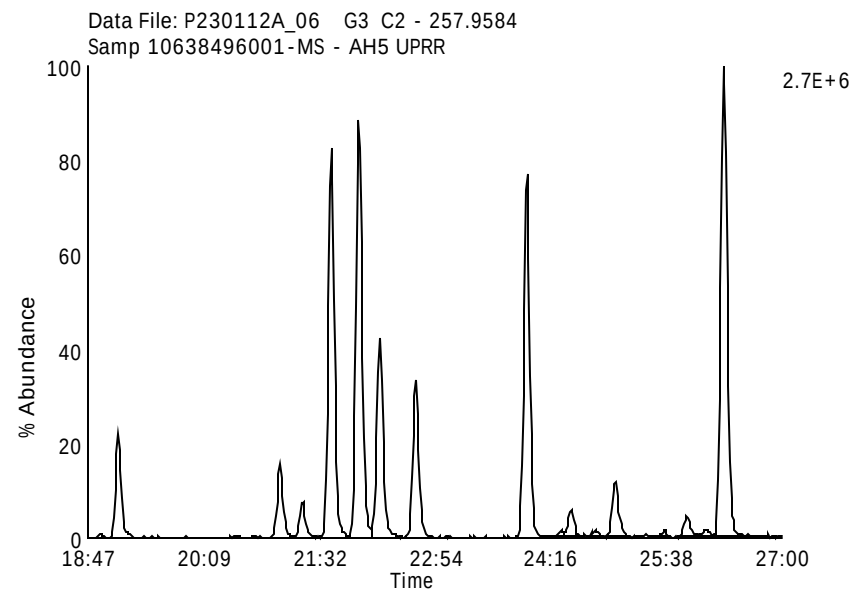
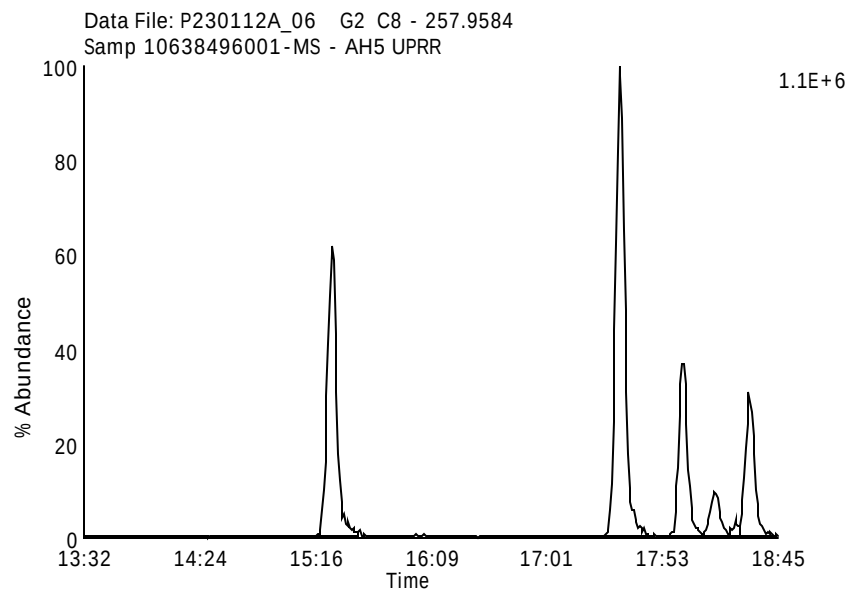
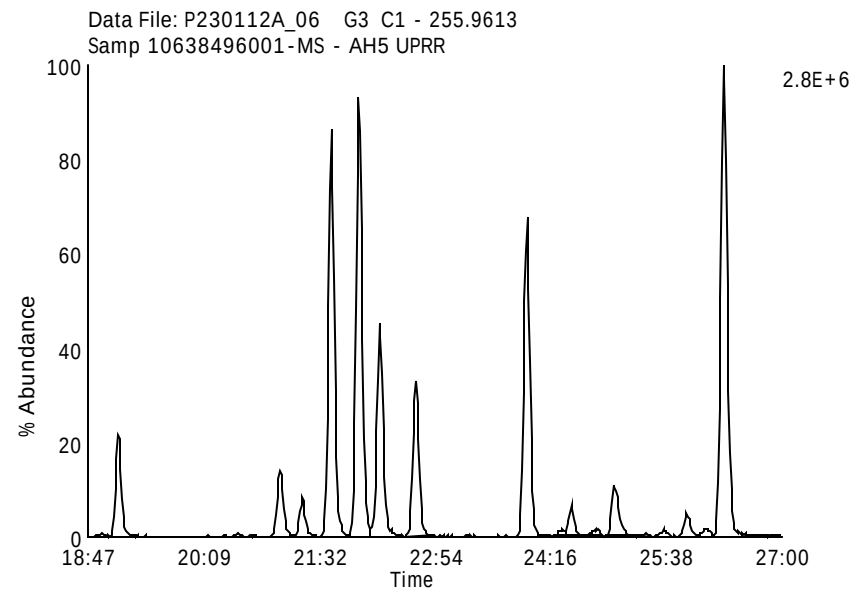
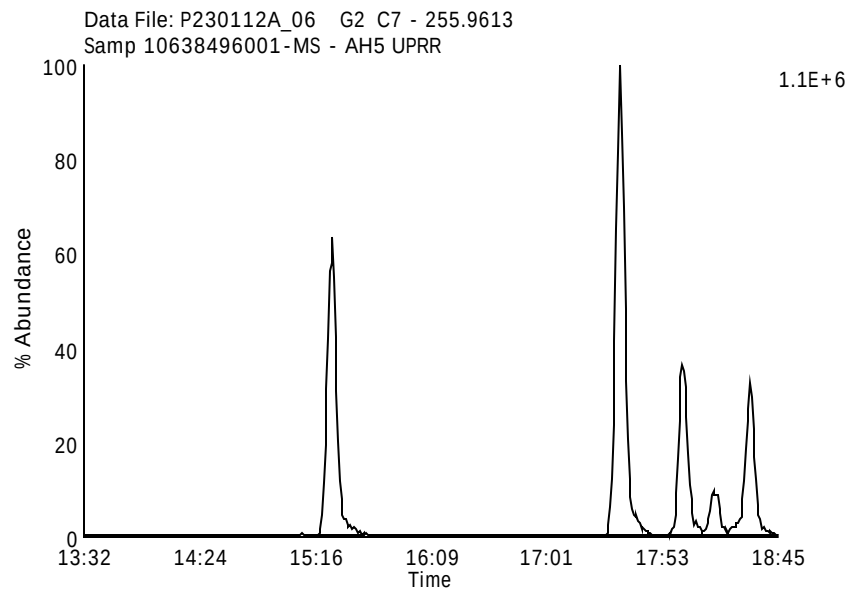
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Tetra Chlorinated Biphenyls

Data File Name: P230112A_06

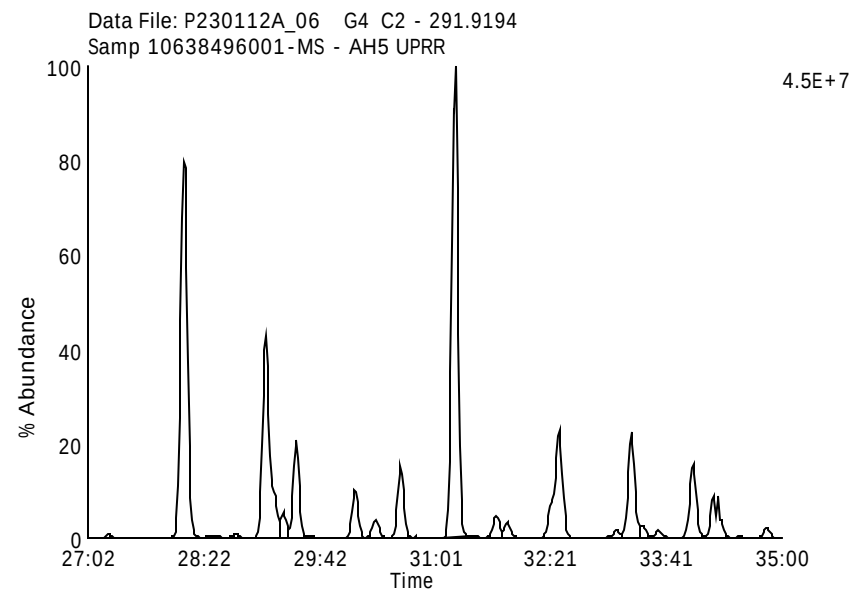
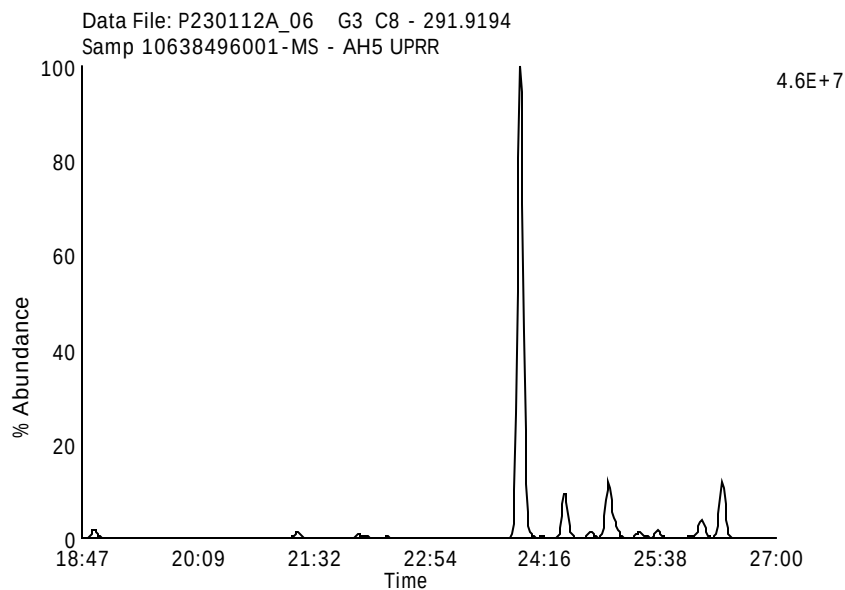
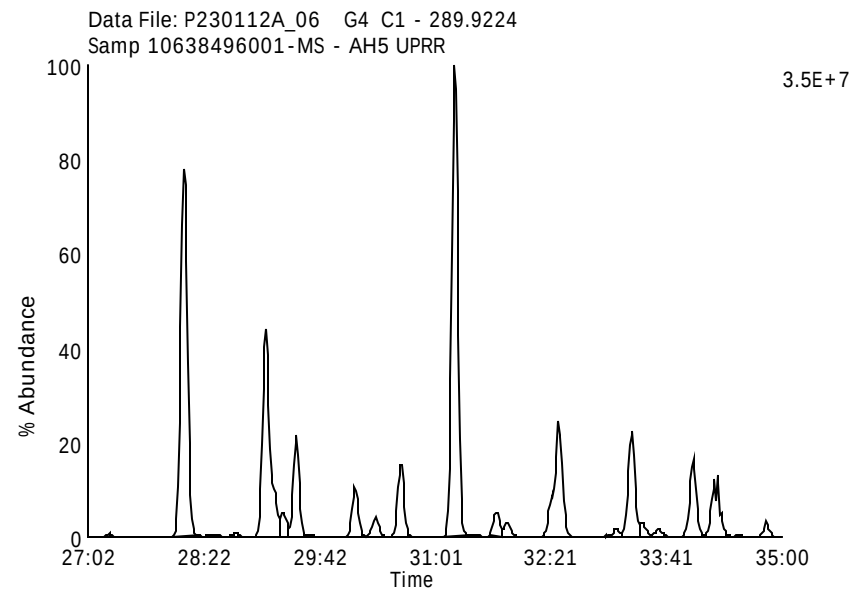
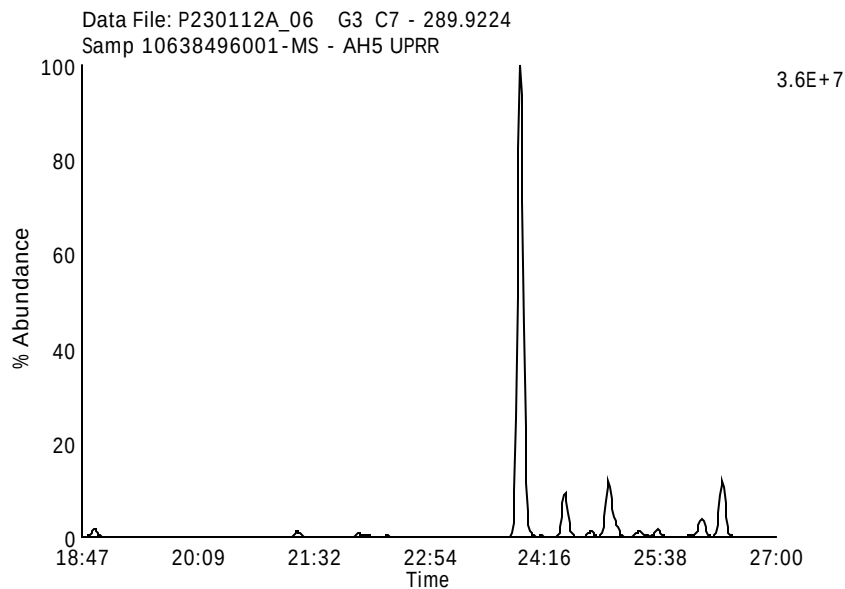
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Penta Chlorinated Biphenyls

Data File Name: P230112A_06

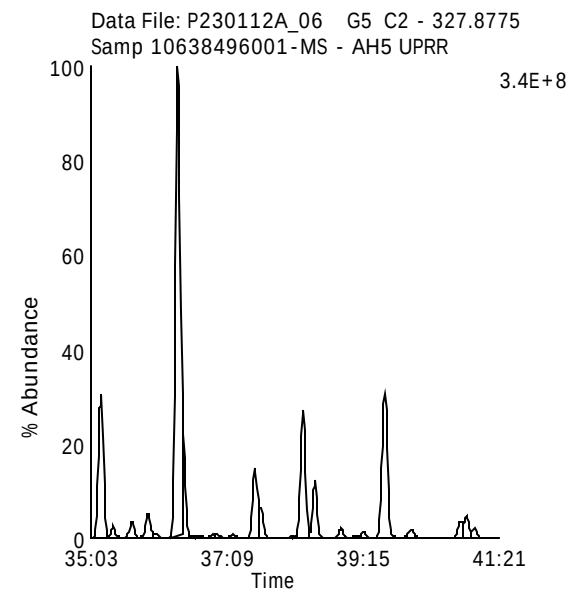
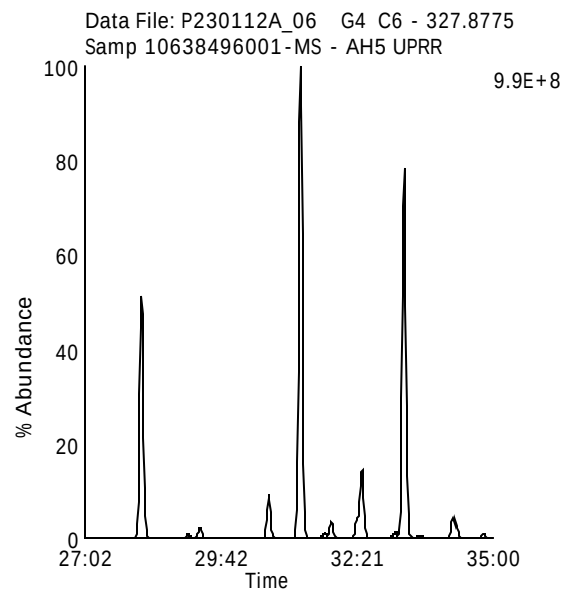
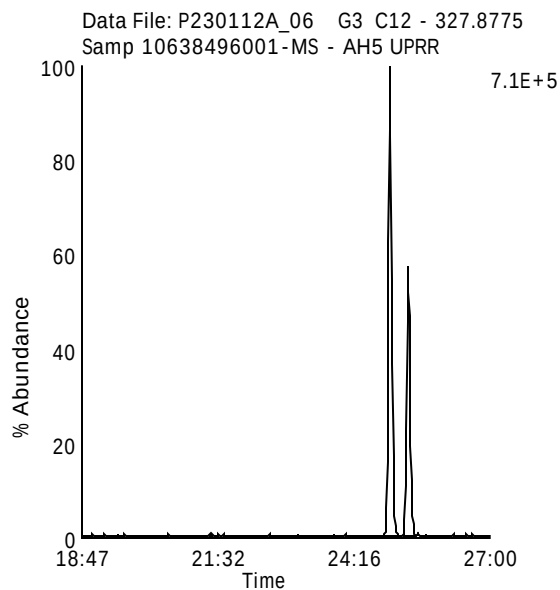
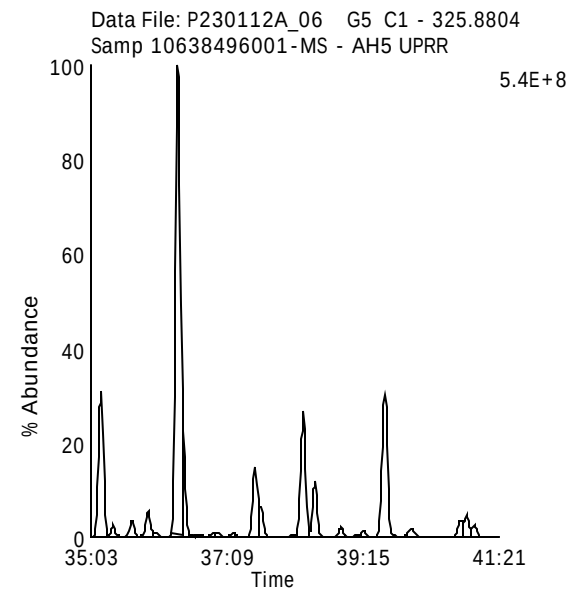
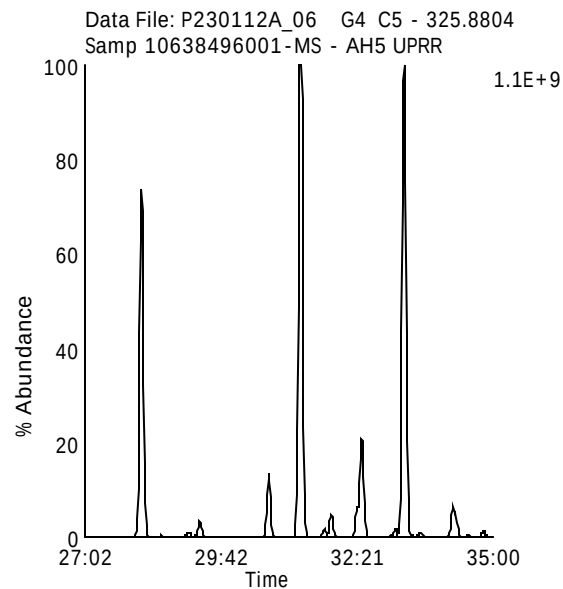
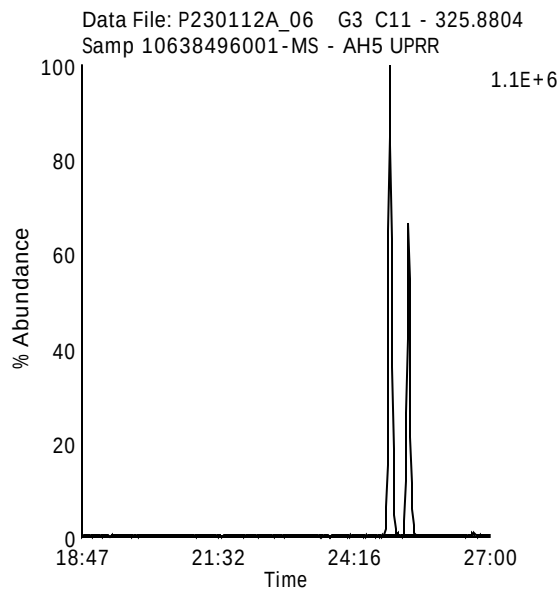
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Hexa Chlorinated Biphenyls

Data File Name: P230112A_06

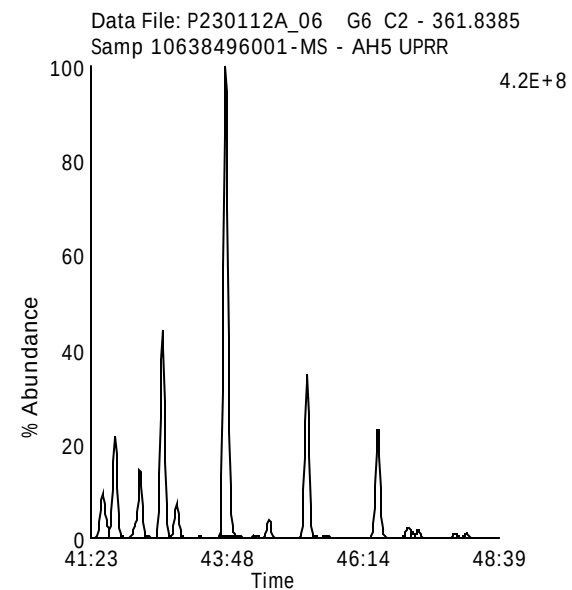
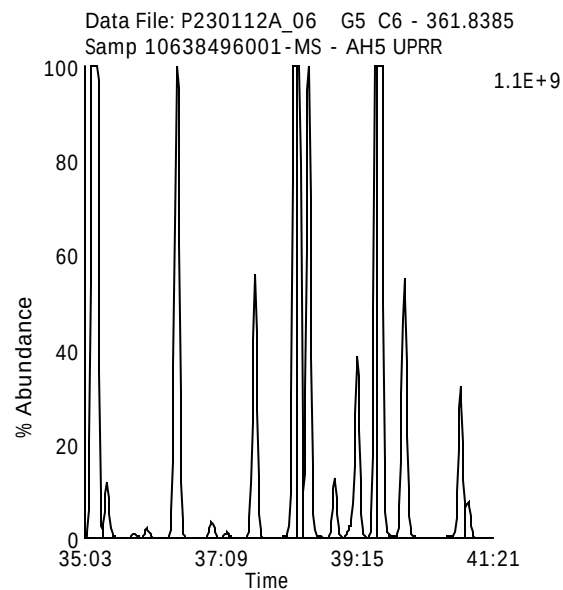
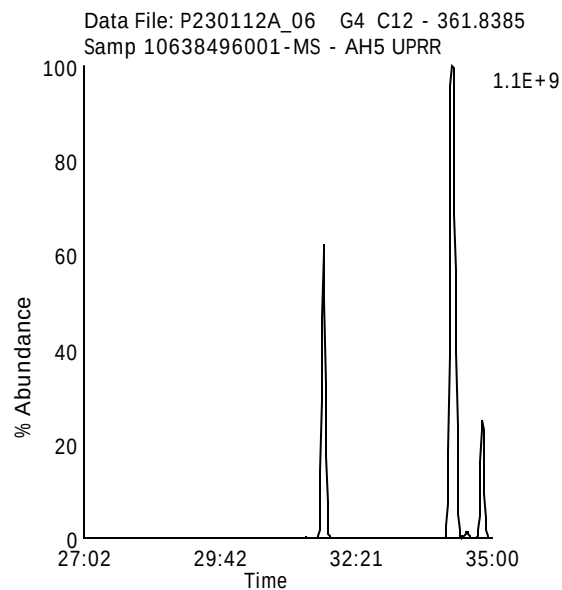
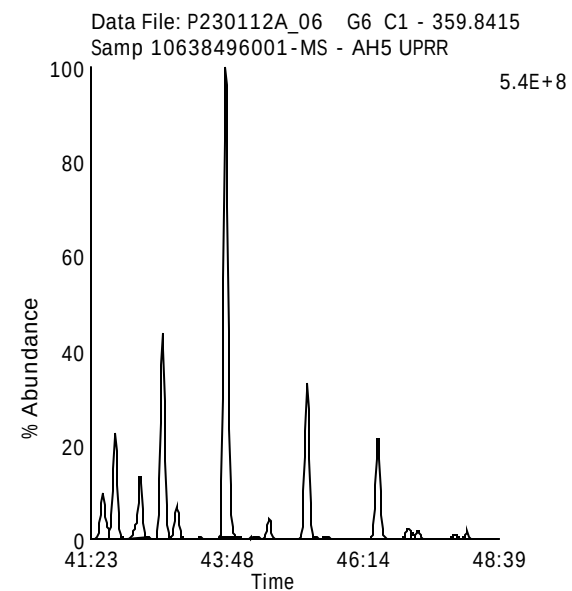
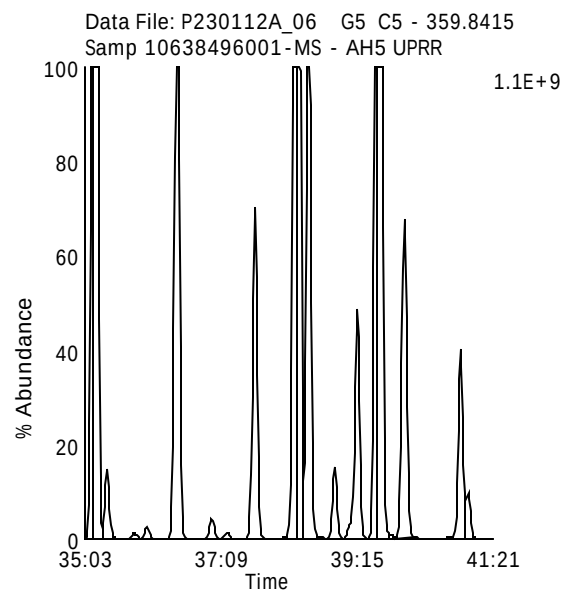
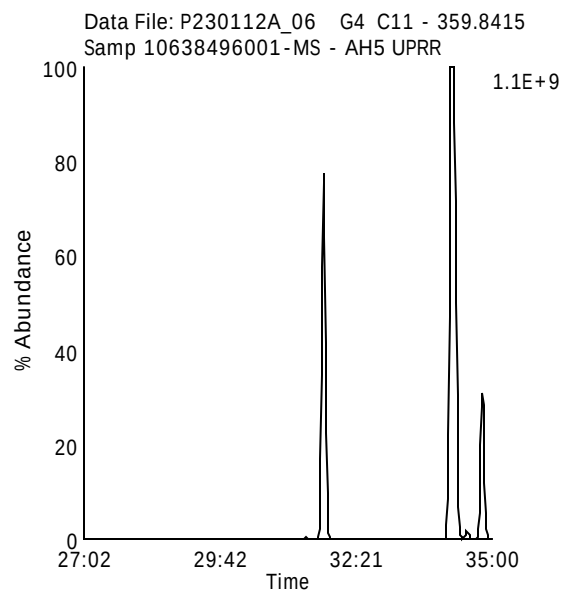
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Hepta Chlorinated Biphenyls

Data File Name: P230112A_06

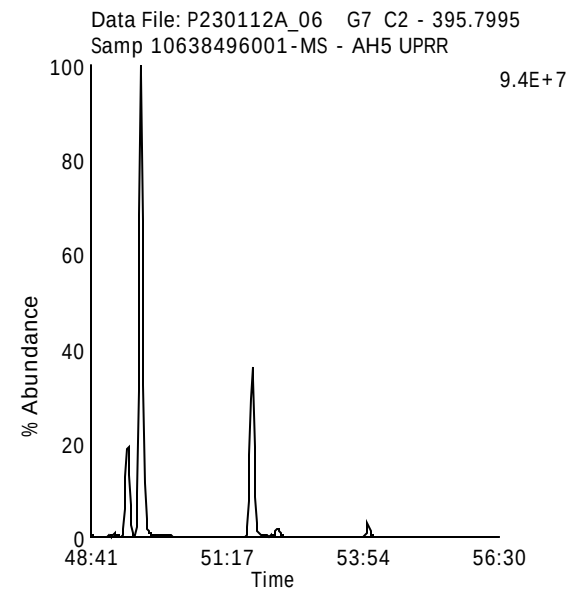
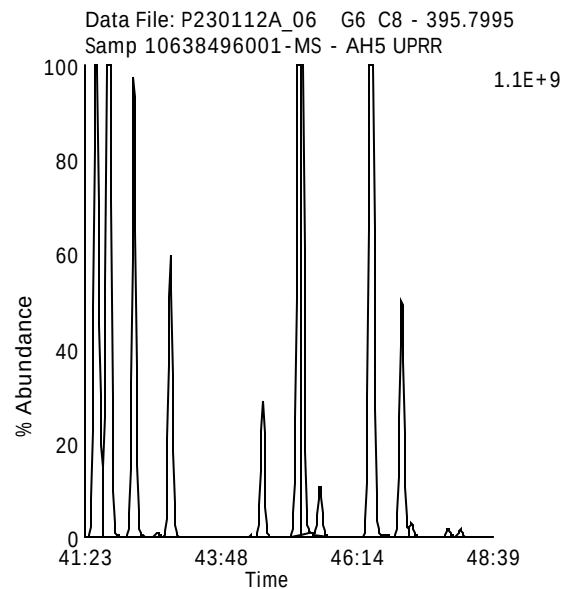
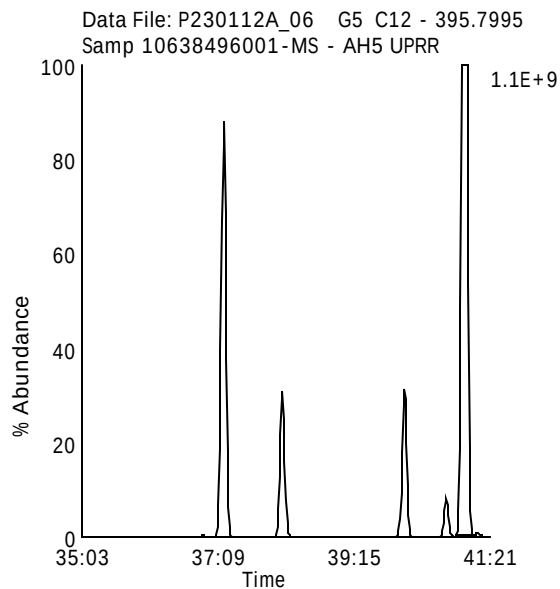
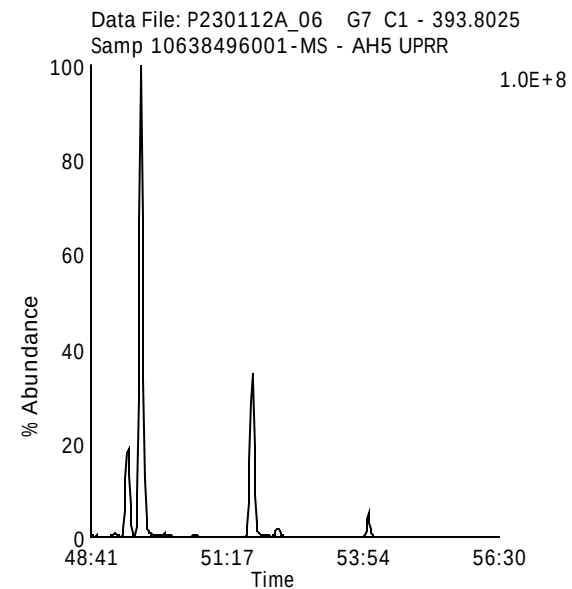
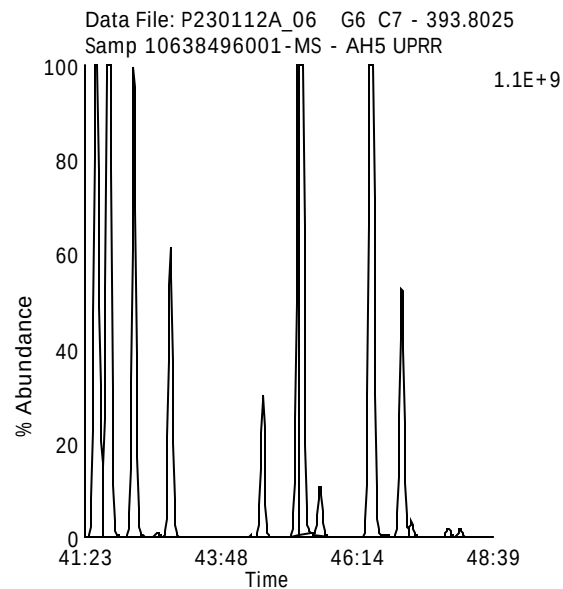
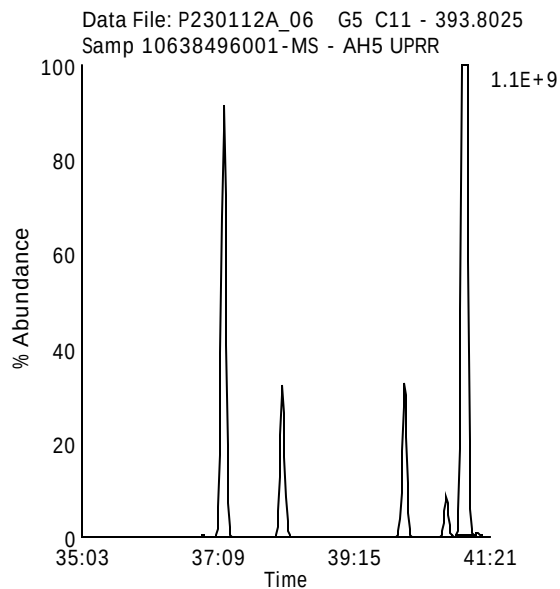
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Octa Chlorinated Biphenyls

Data File Name: P230112A_06

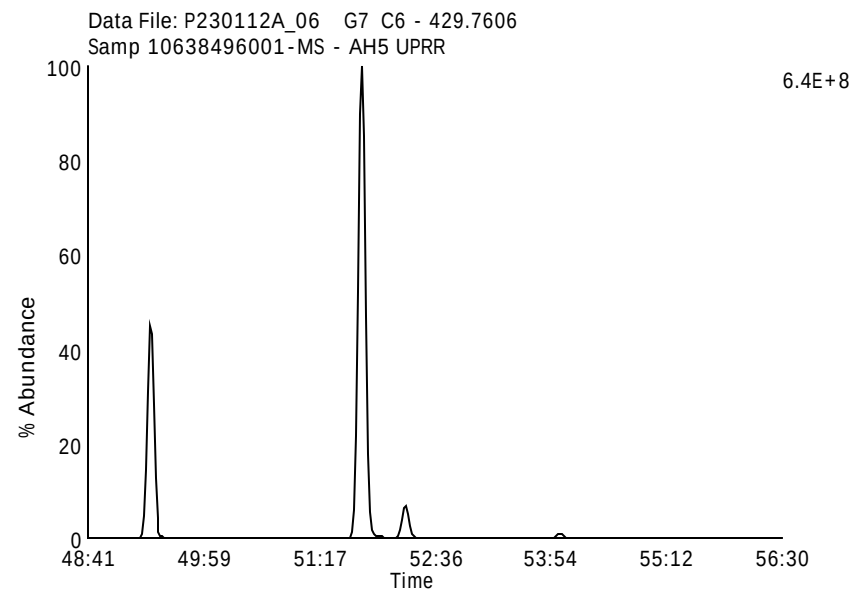
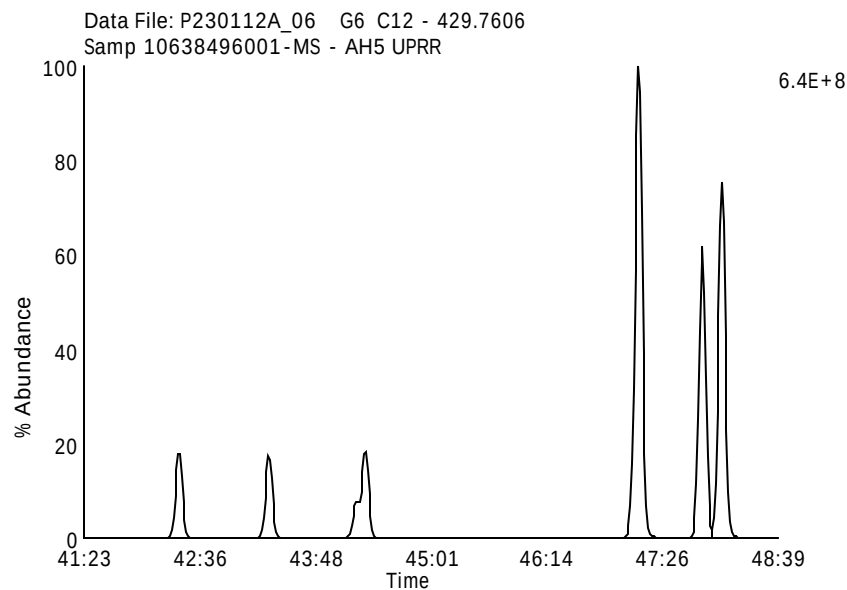
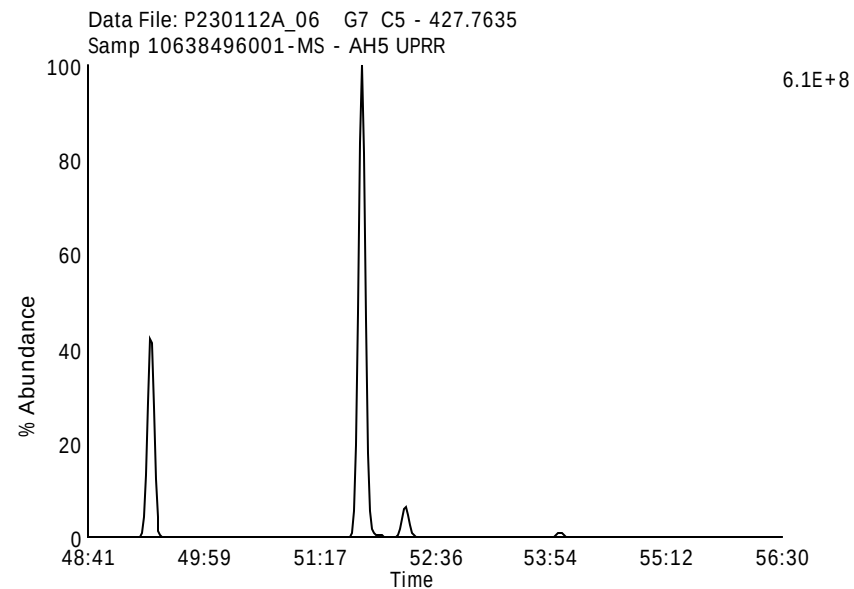
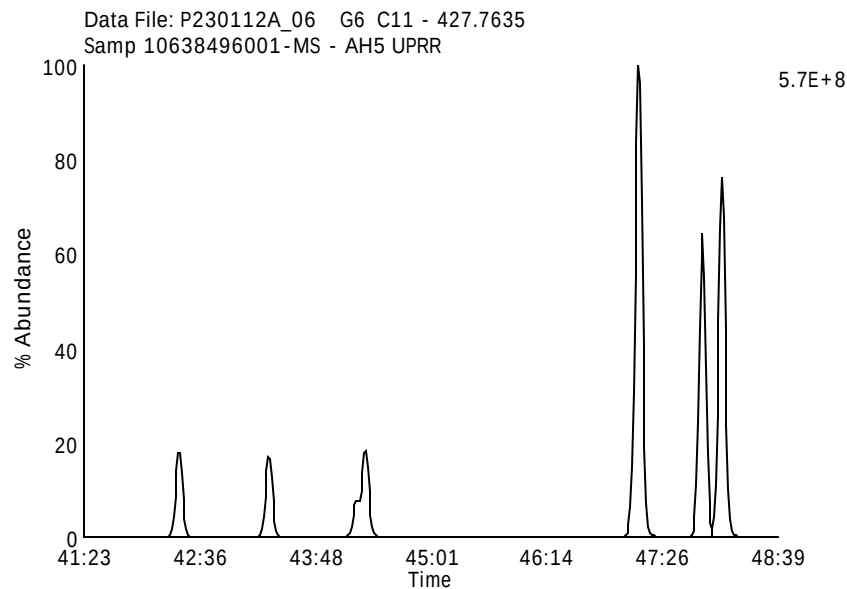
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Nona Chlorinated Biphenyls

Data File Name: P230112A_06

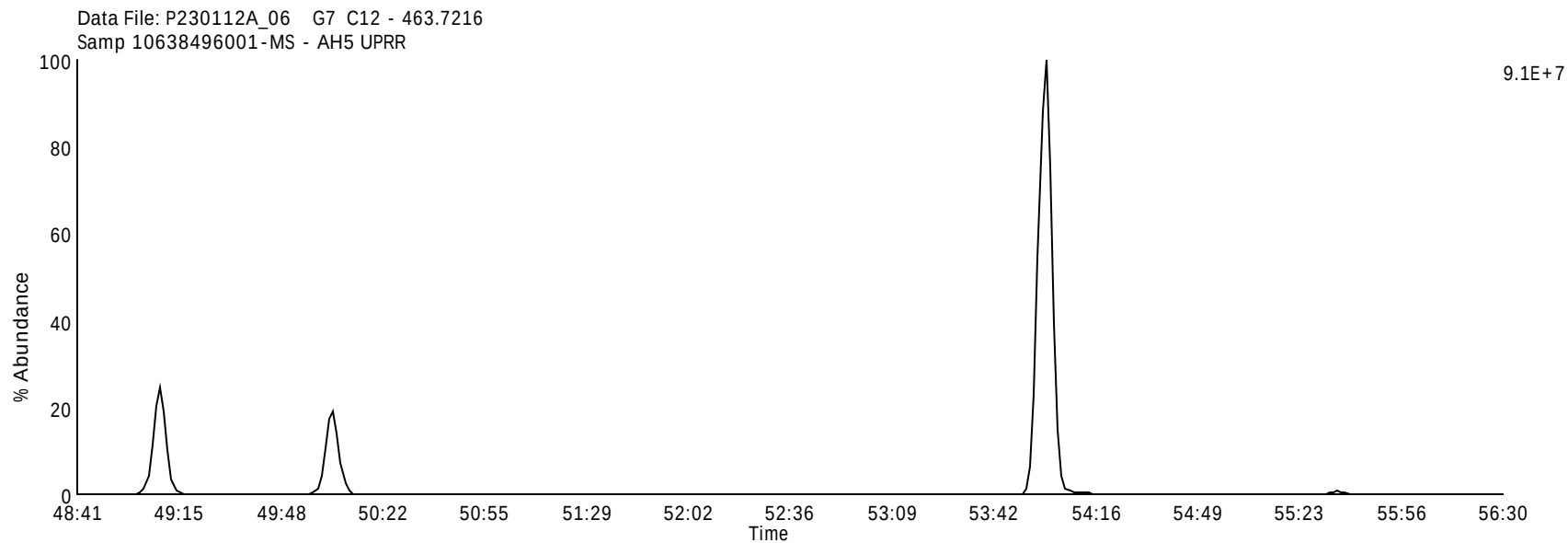
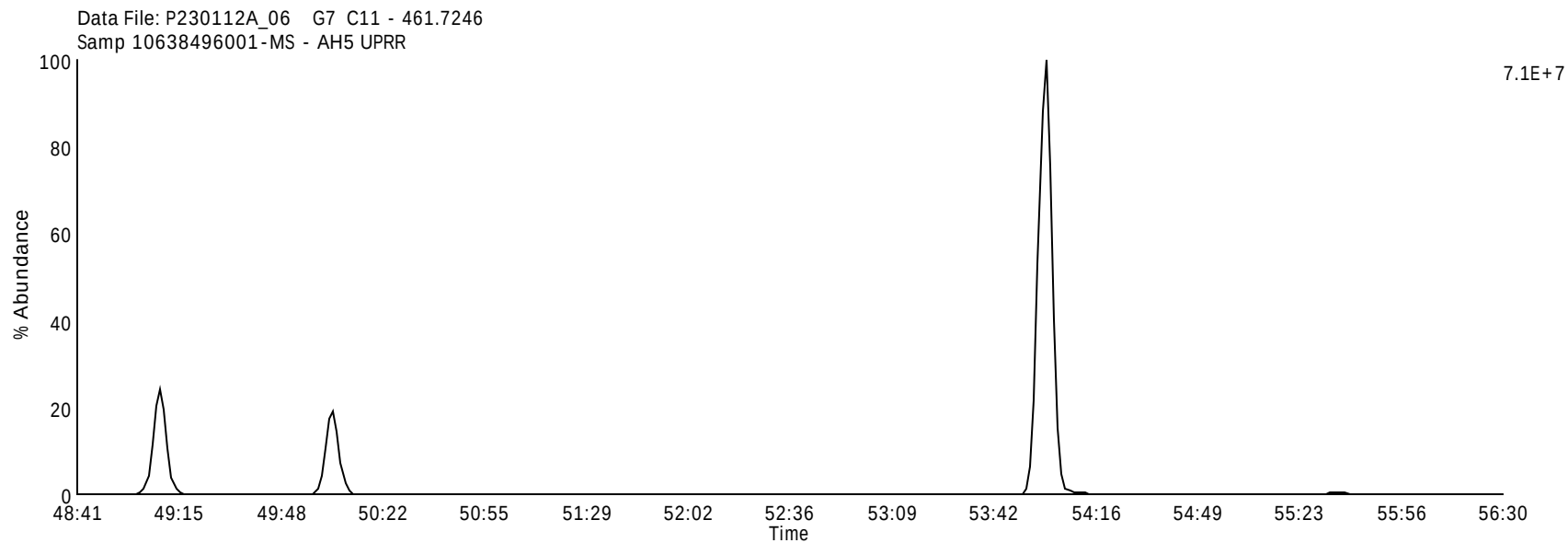
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Deca Chlorinated Biphenyl

Data File Name: P230112A_06

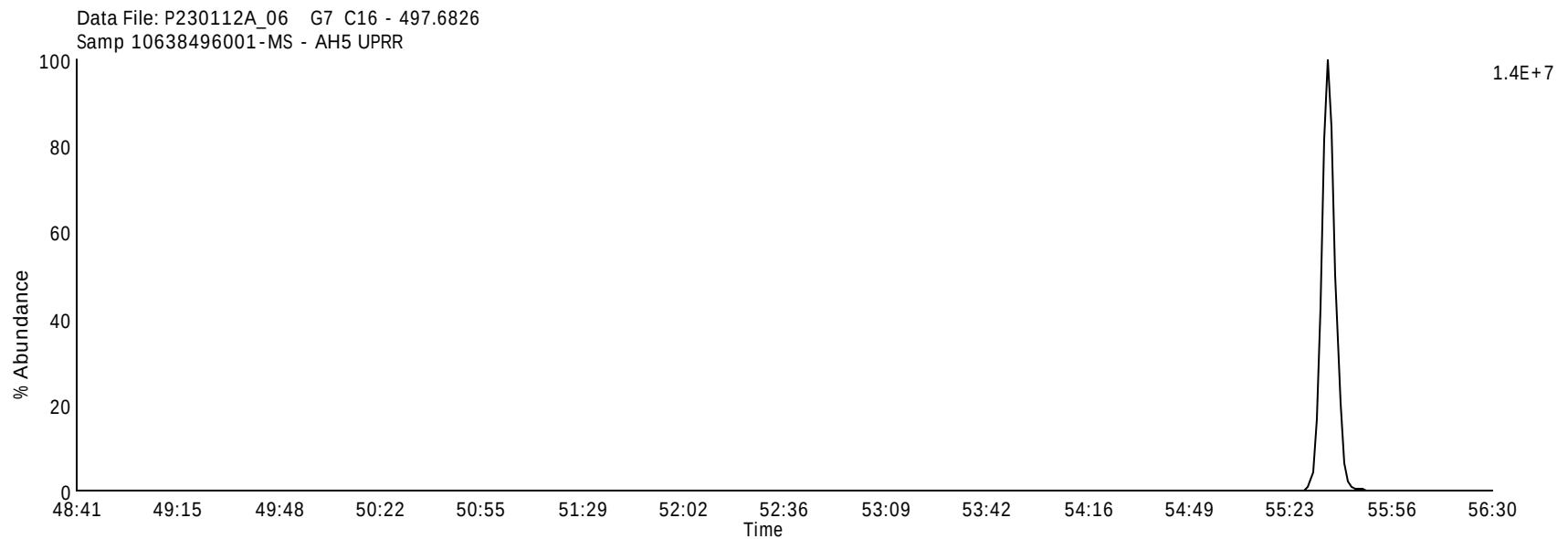
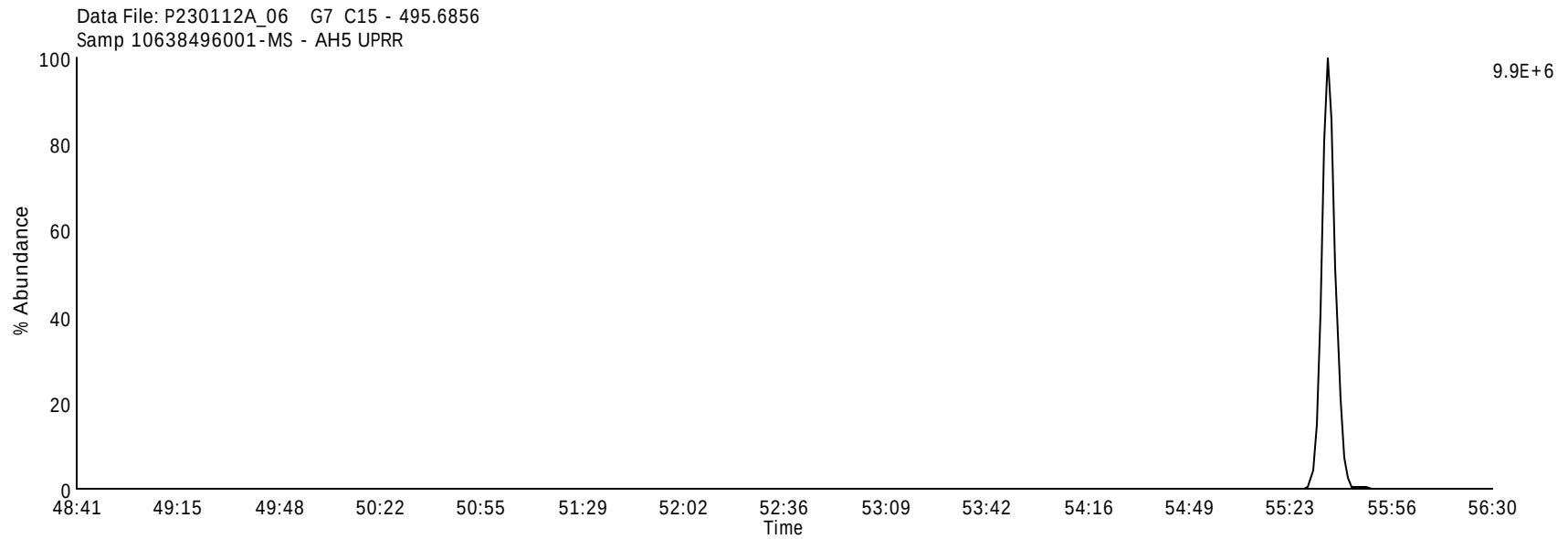
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Group 1 - 4 Lock mass

Data File Name: P230112A_06

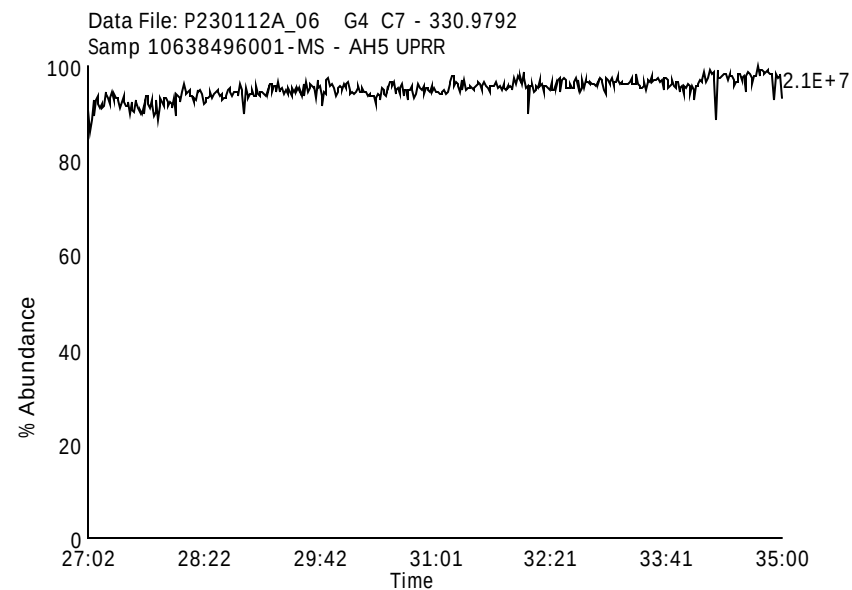
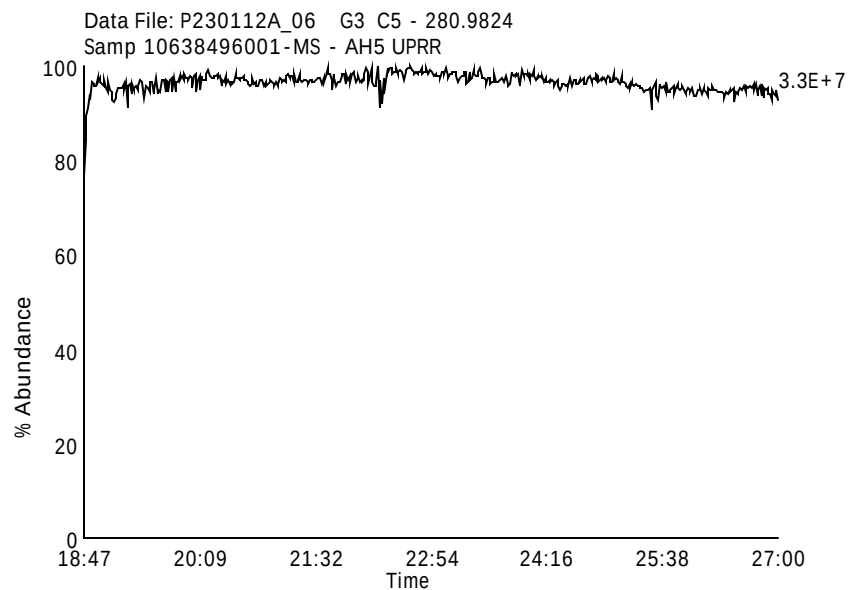
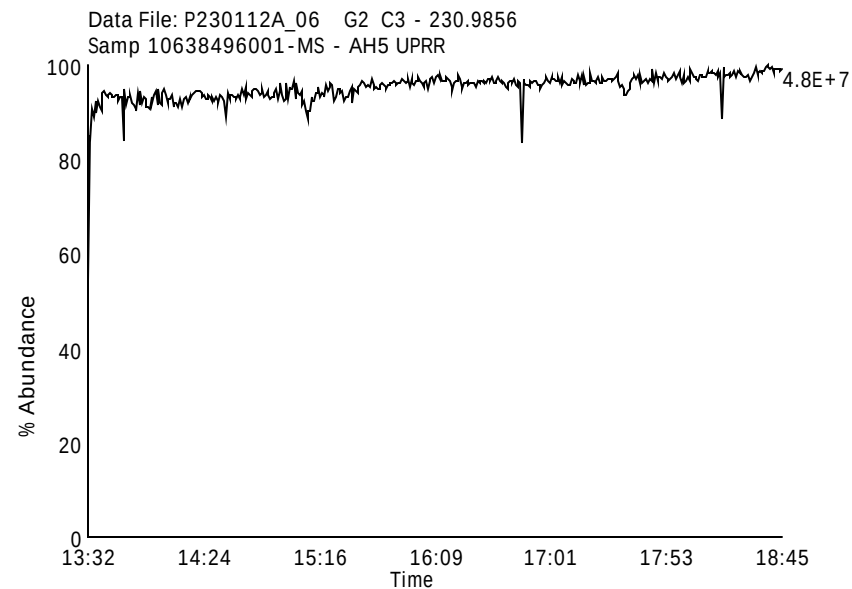
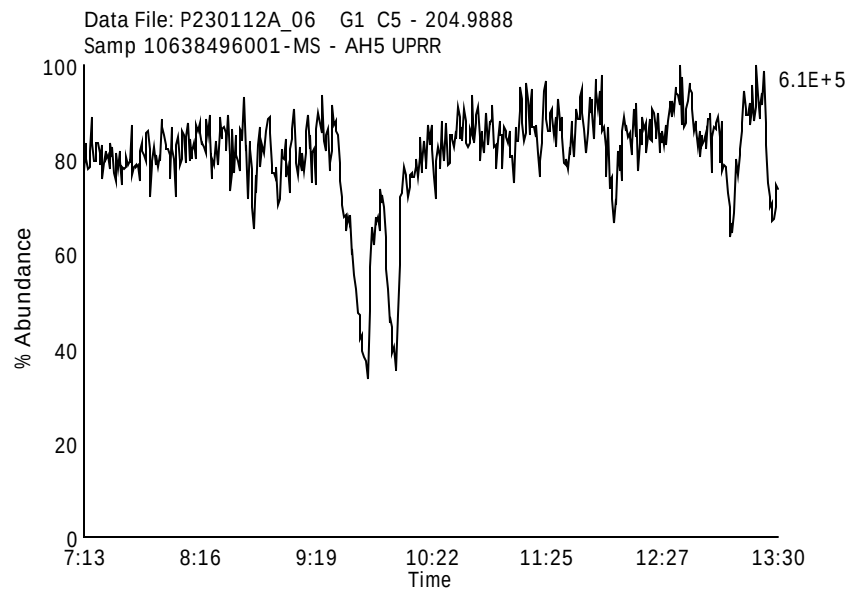
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Group 5 - 7 Lock mass

Data File Name: P230112A_06

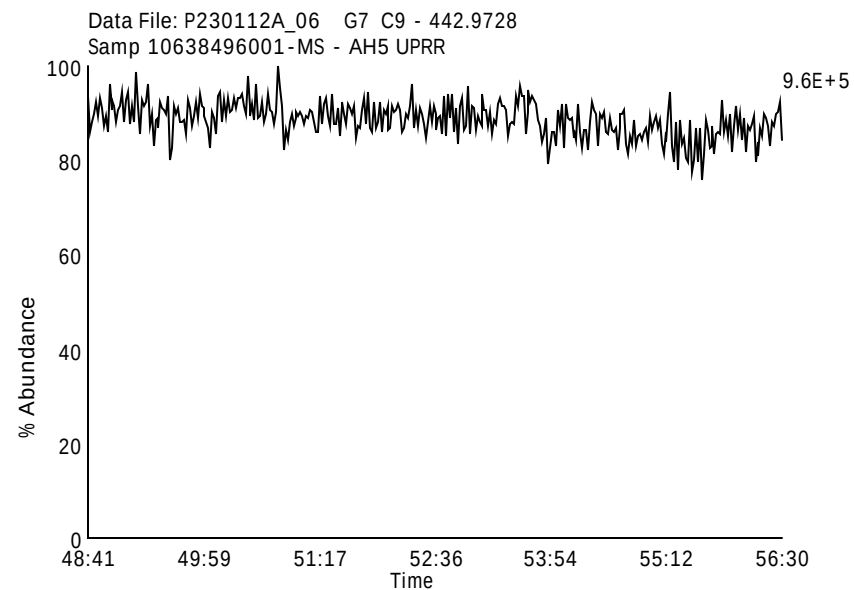
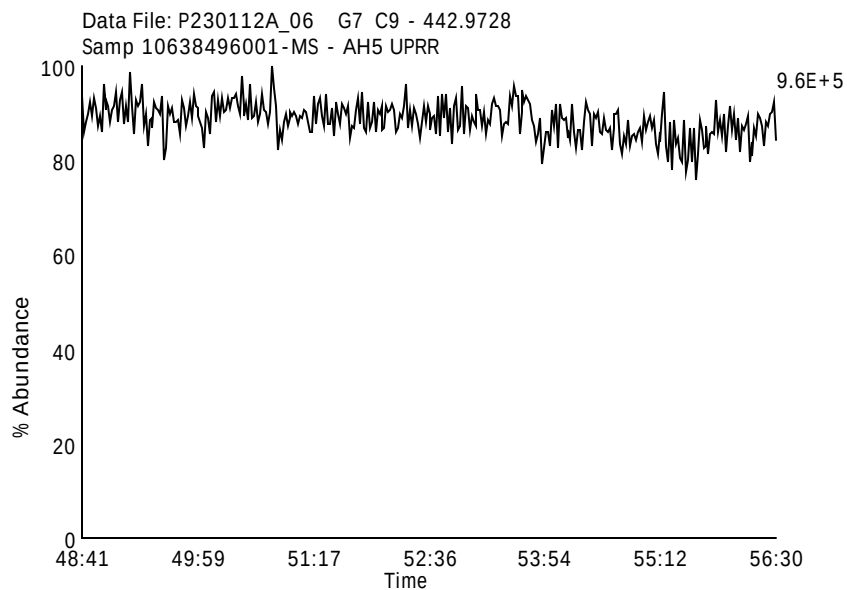
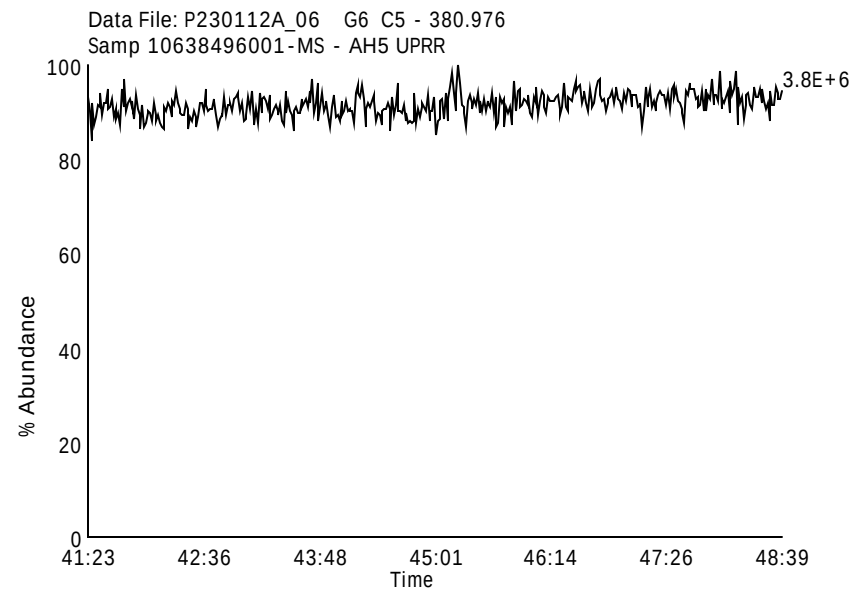
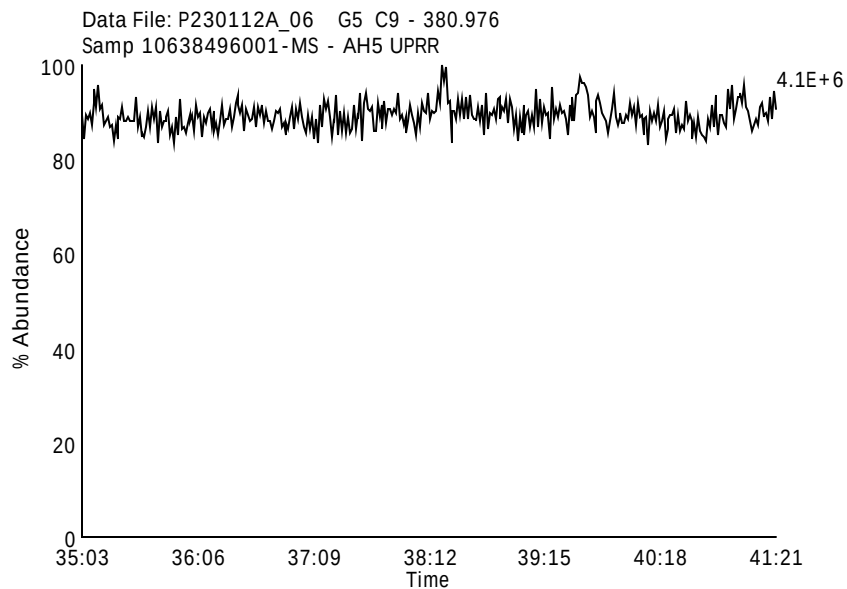
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MS - AH5 UPRR

Lab Sample ID: 10638496001-MS

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MS



Labeled Mono Chlorinated Biphenyls

Data File Name: P230112A_07

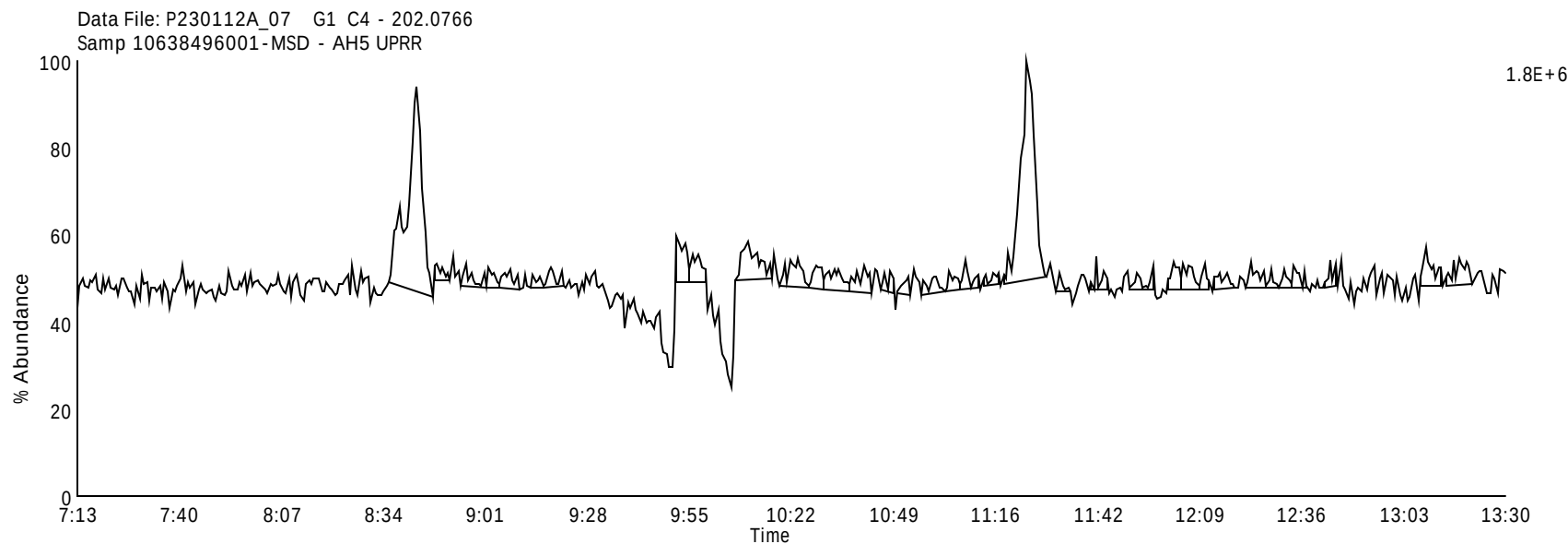
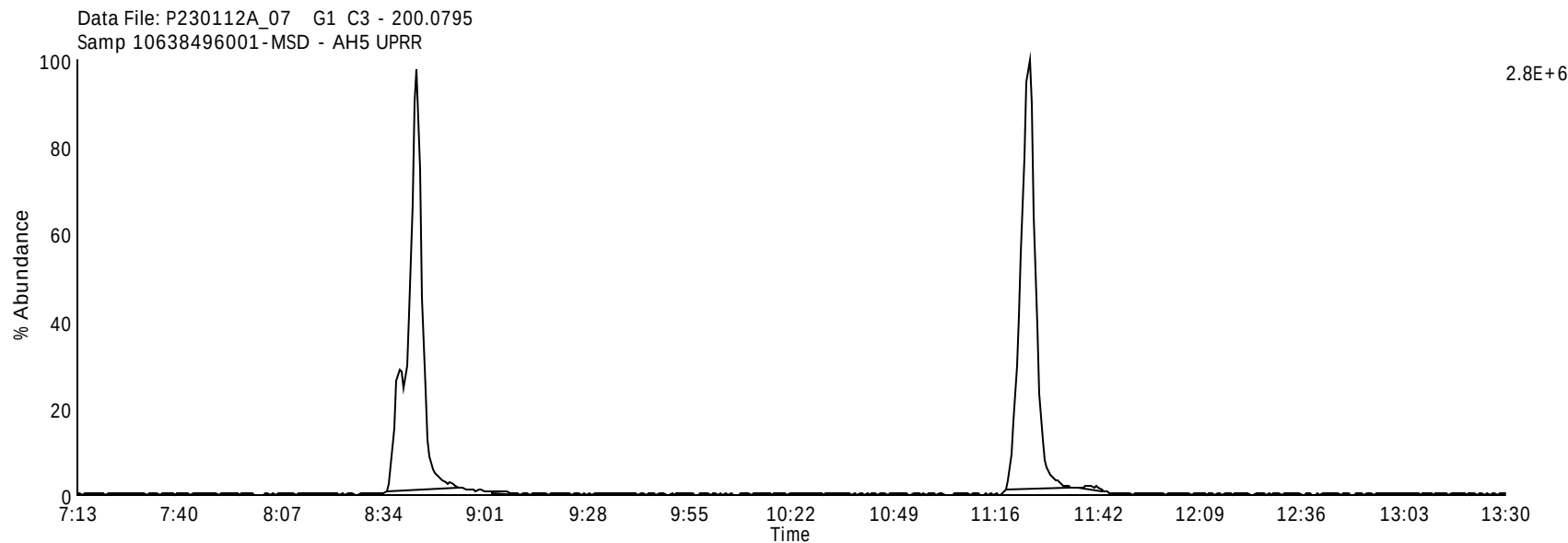
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Labeled Di Chlorinated Biphenyls

Data File Name: P230112A_07

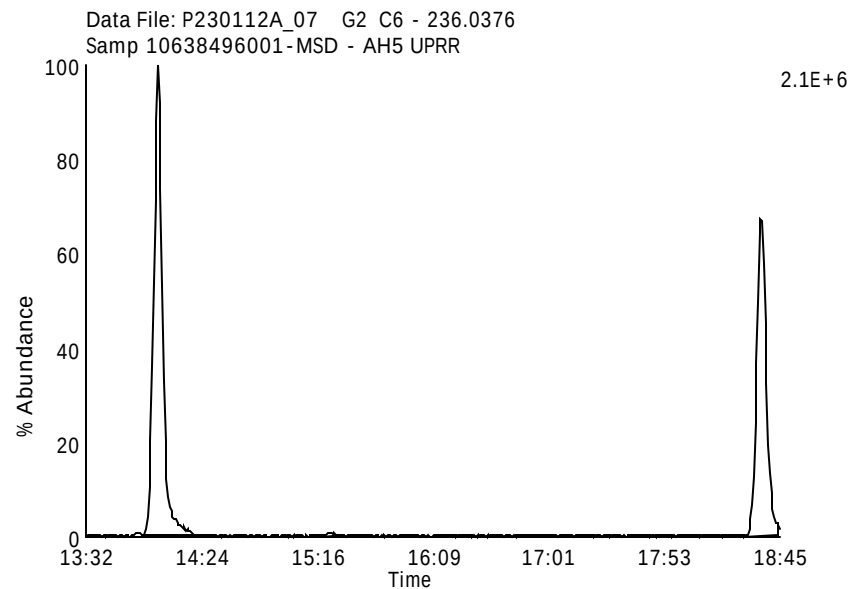
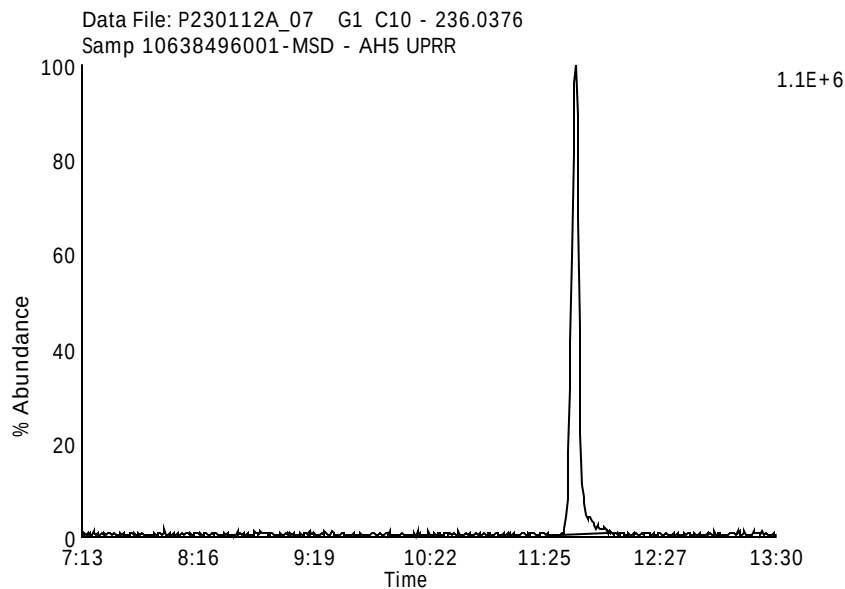
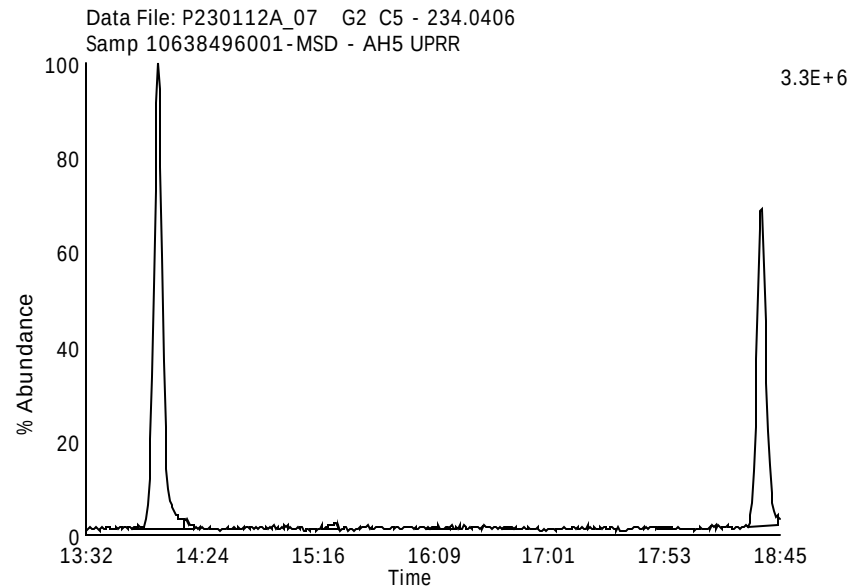
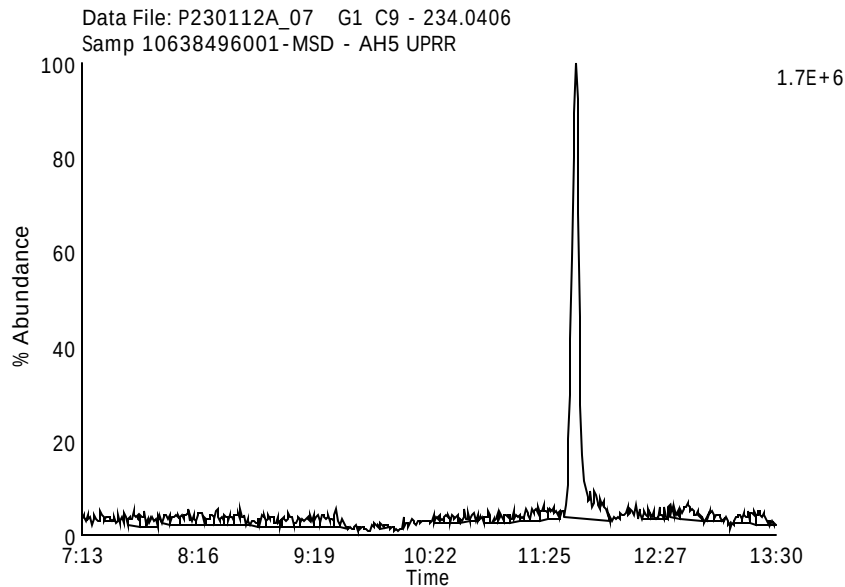
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Labeled Tri Chlorinated Biphenyls

Data File Name: P230112A_07

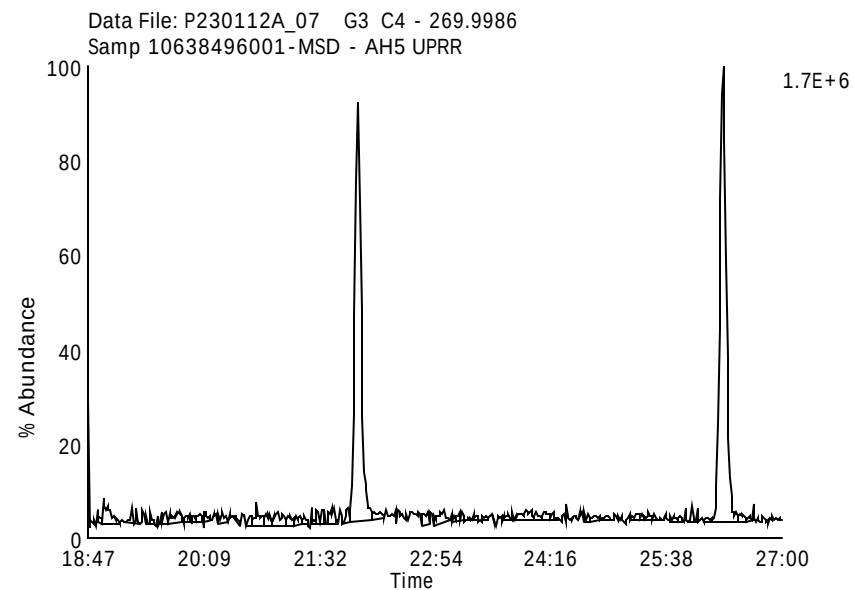
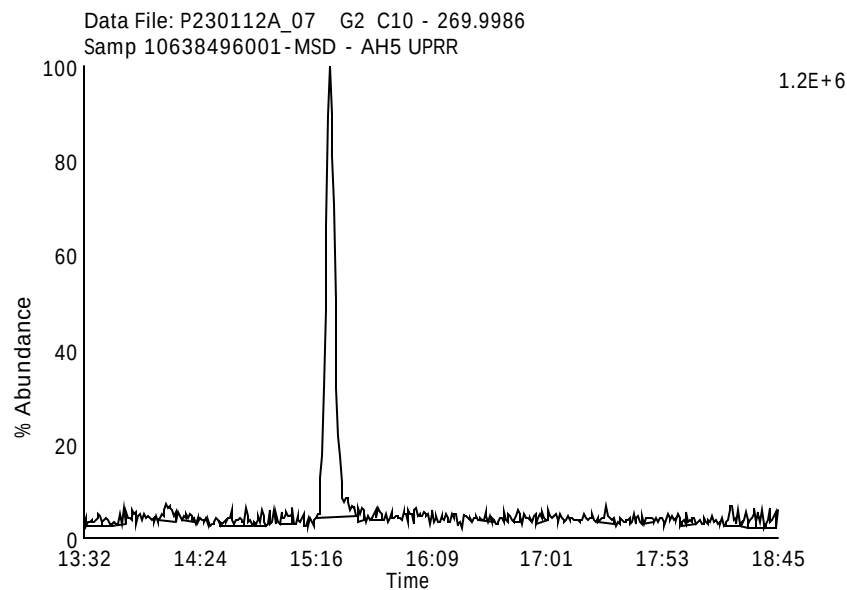
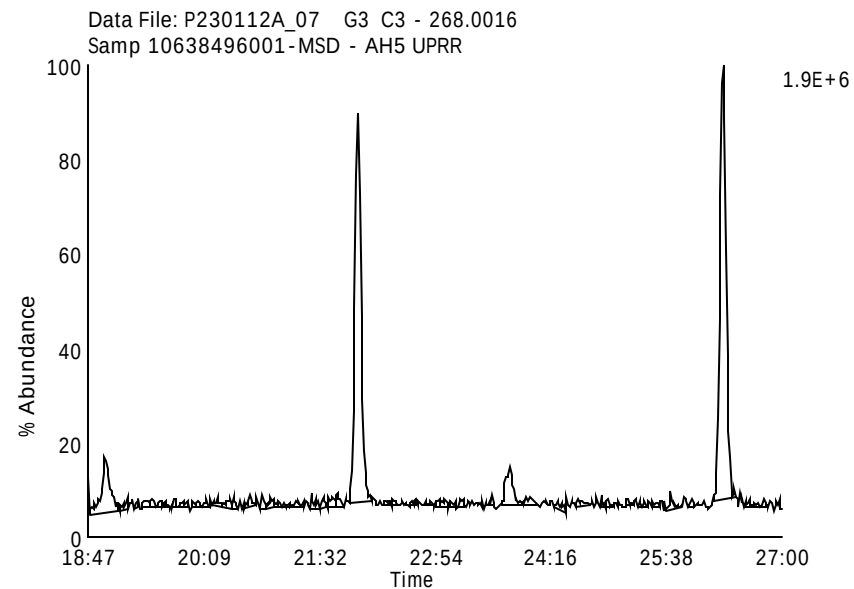
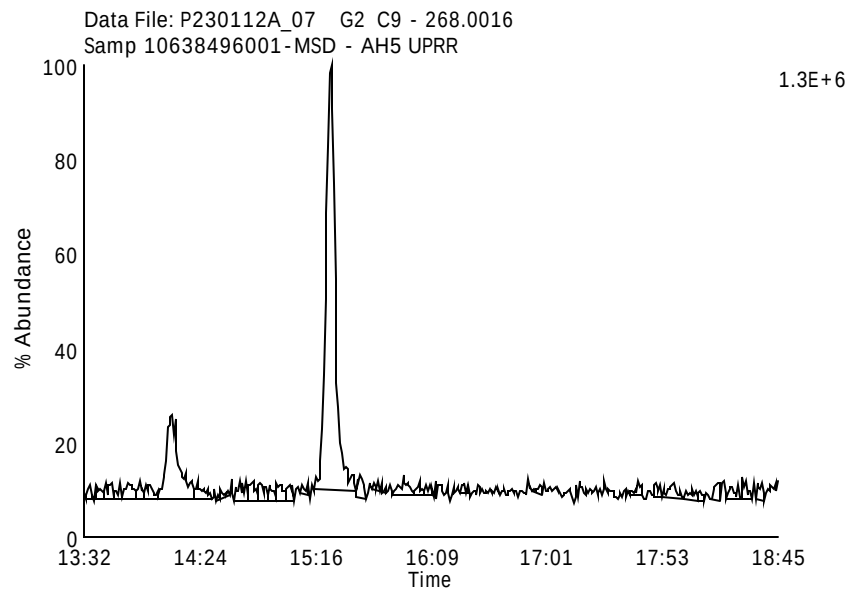
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Labeled Tetra Chlorinated Biphenyls

Data File Name: P230112A_07

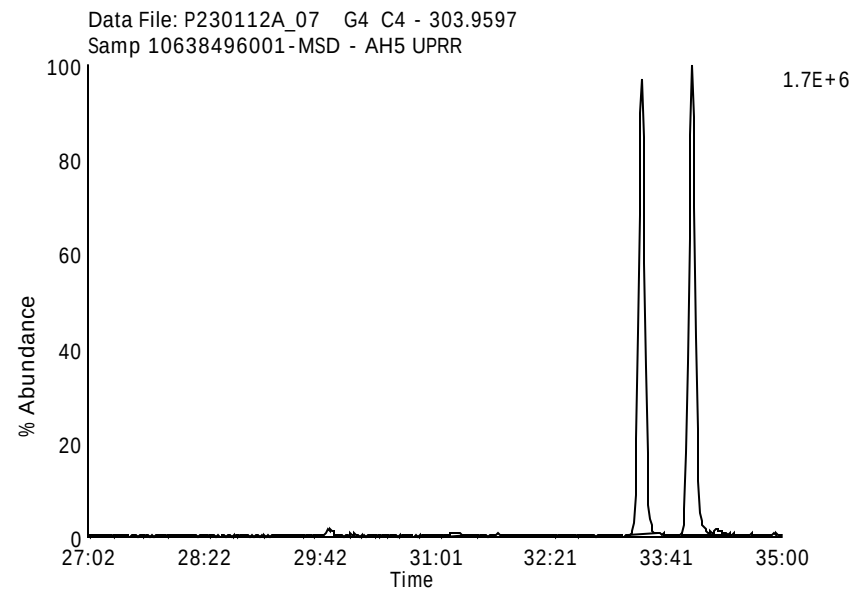
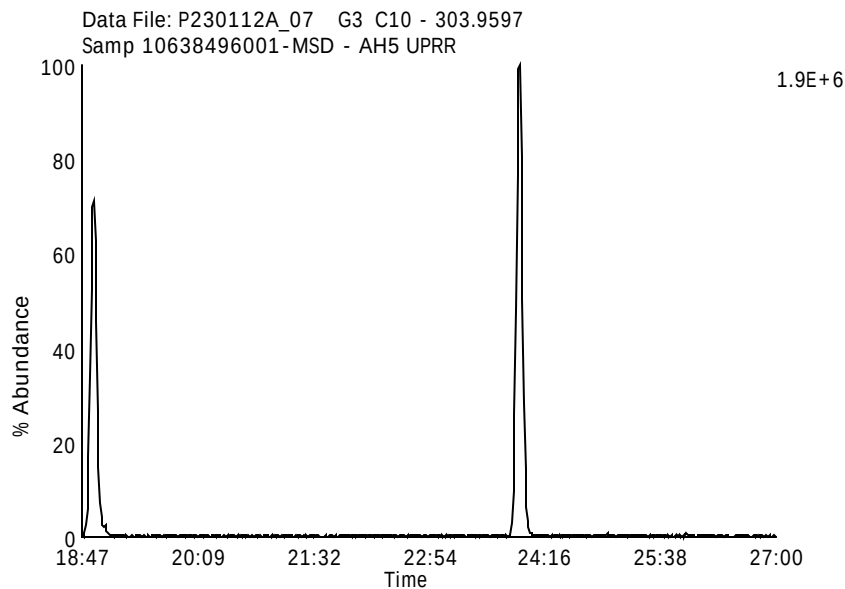
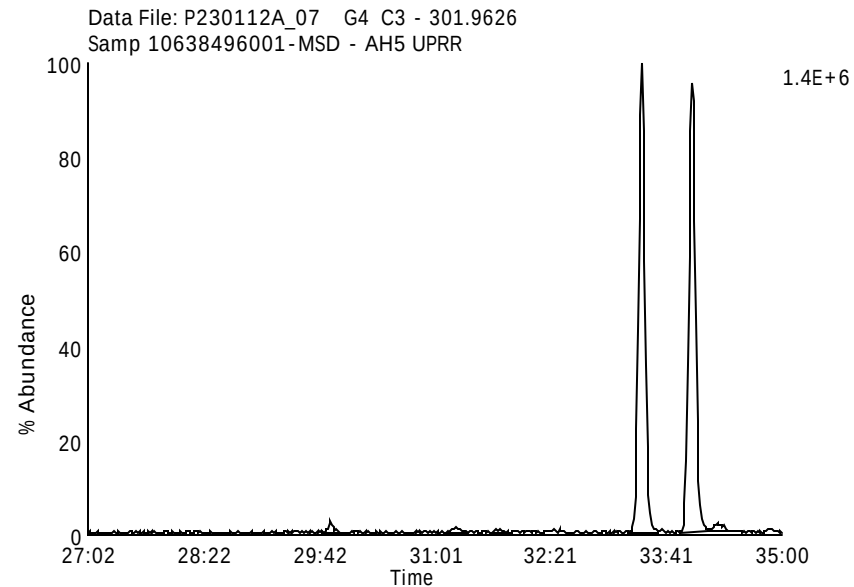
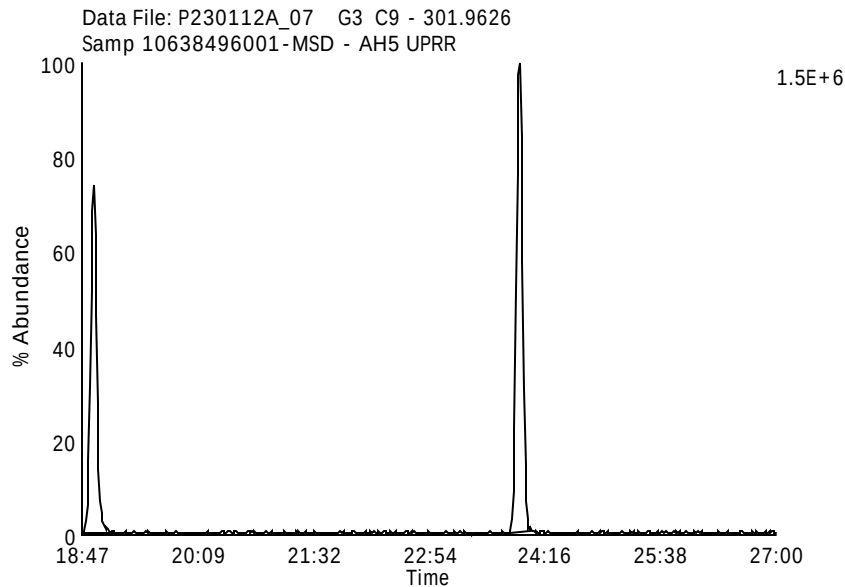
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Labeled Penta Chlorinated Biphenyls

Data File Name: P230112A_07

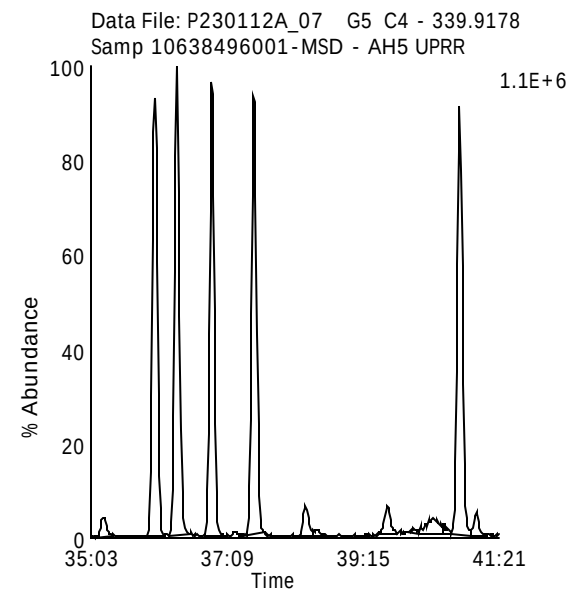
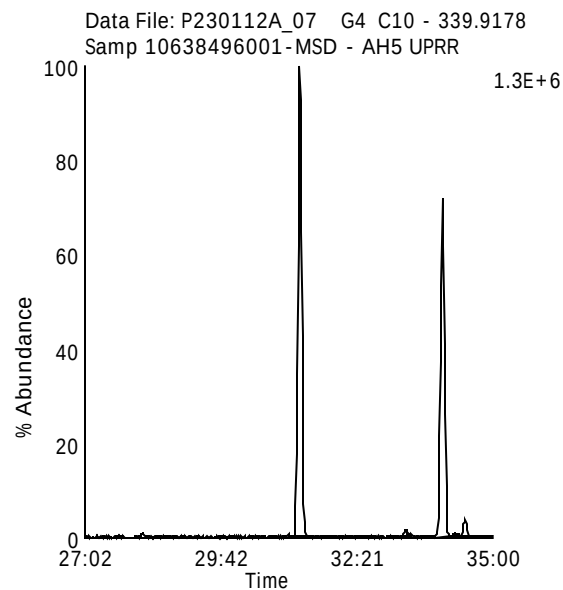
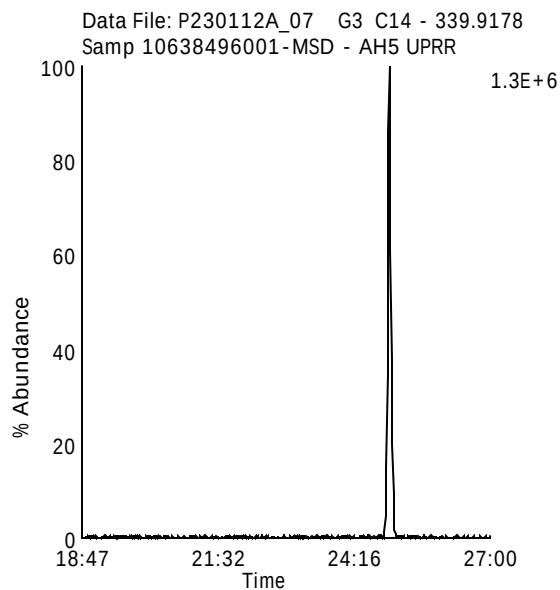
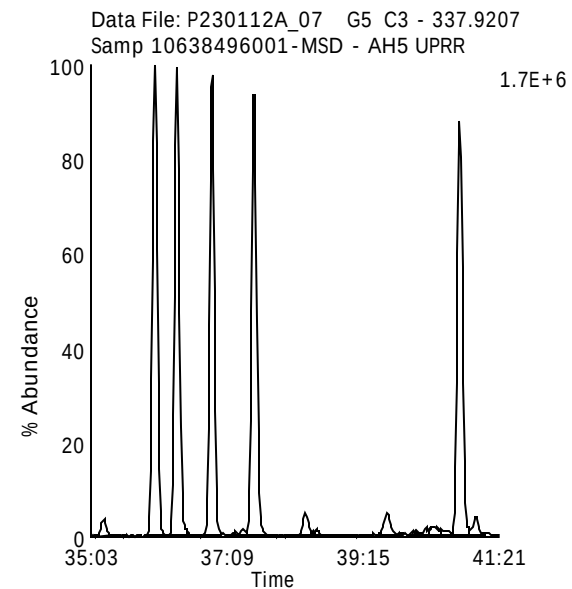
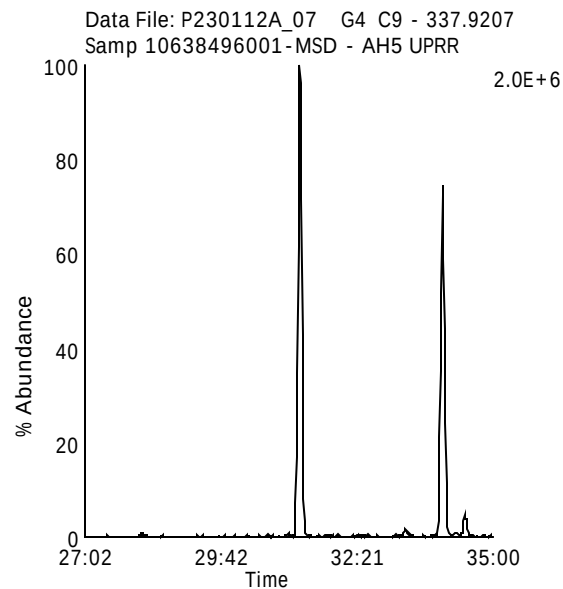
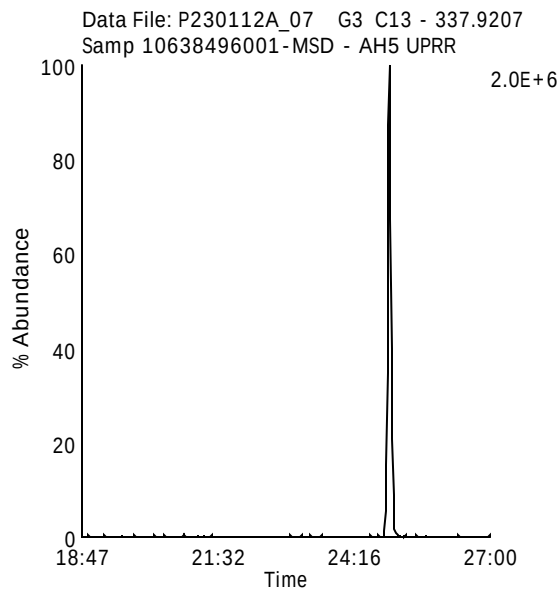
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Labeled Hexa Chlorinated Biphenyls

Data File Name: P230112A_07

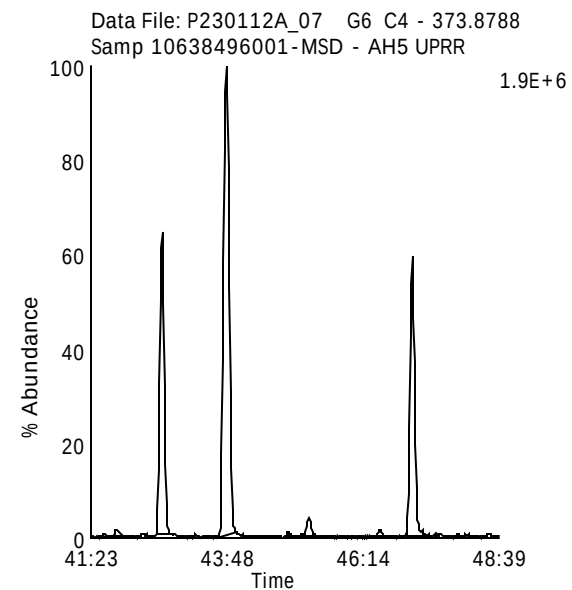
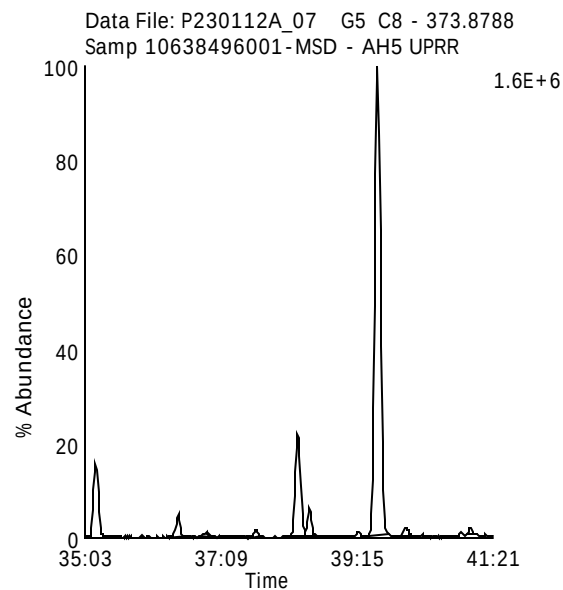
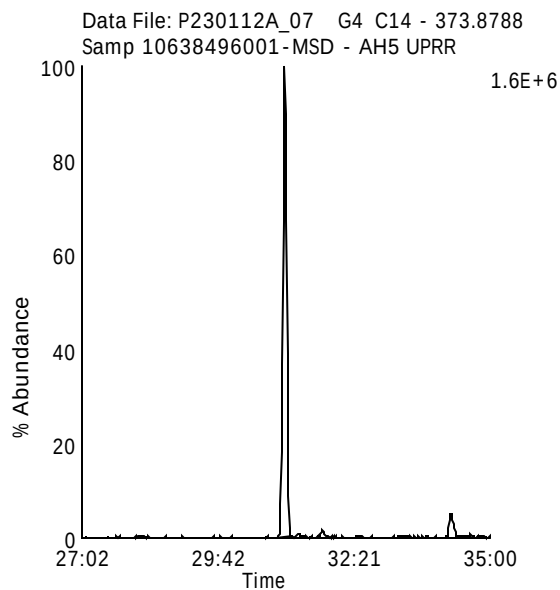
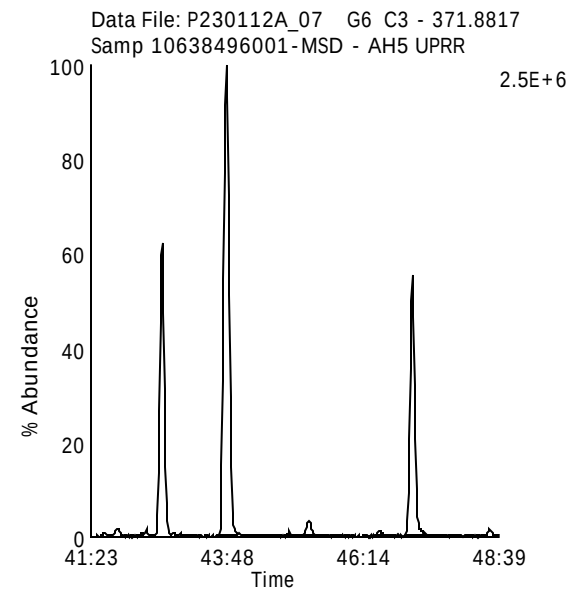
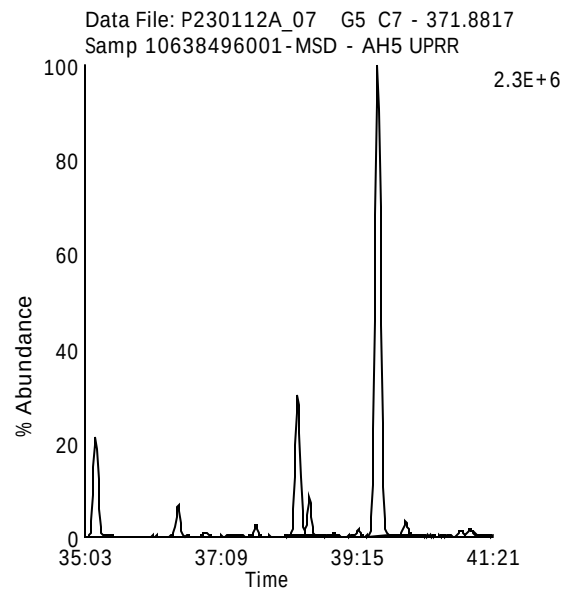
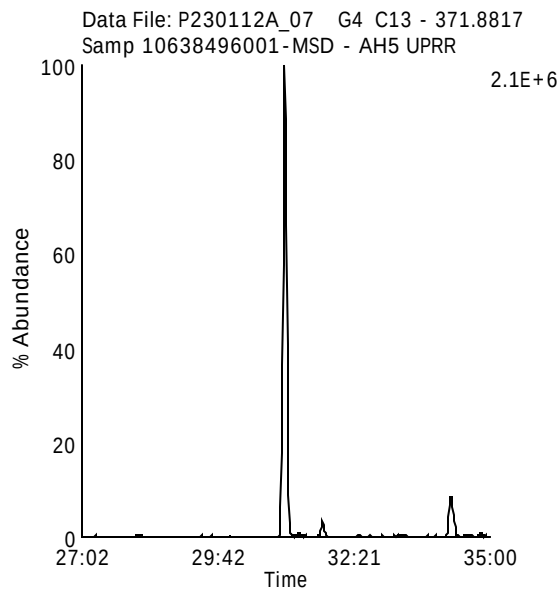
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Labeled Hepta Chlorinated Biphenyls

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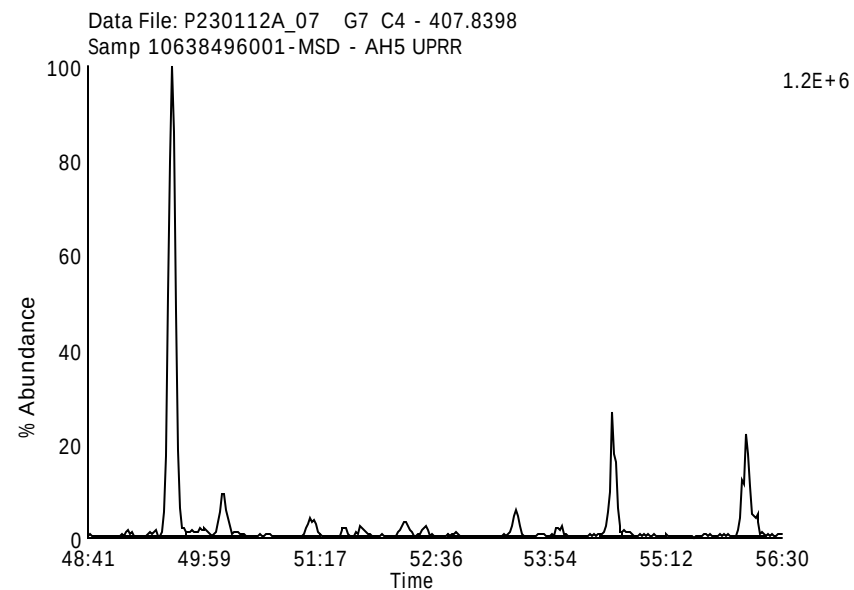
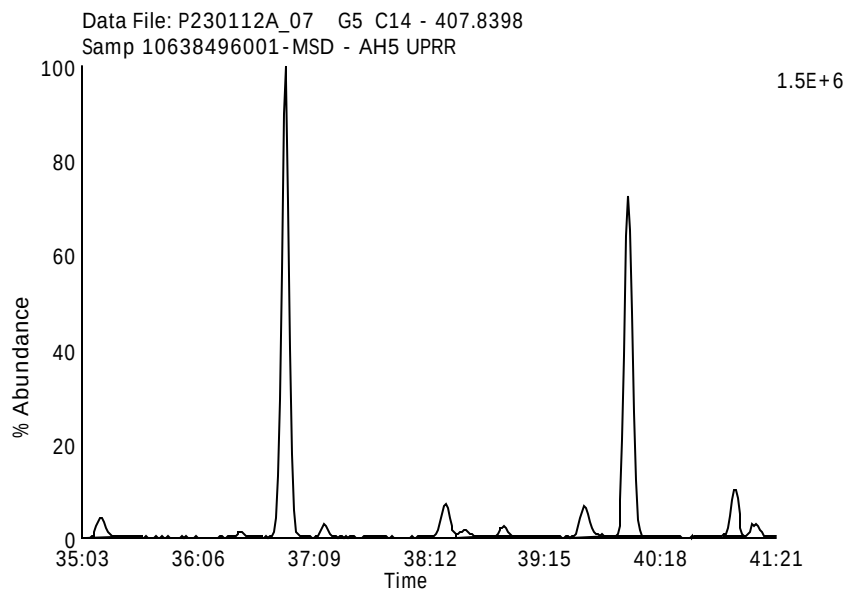
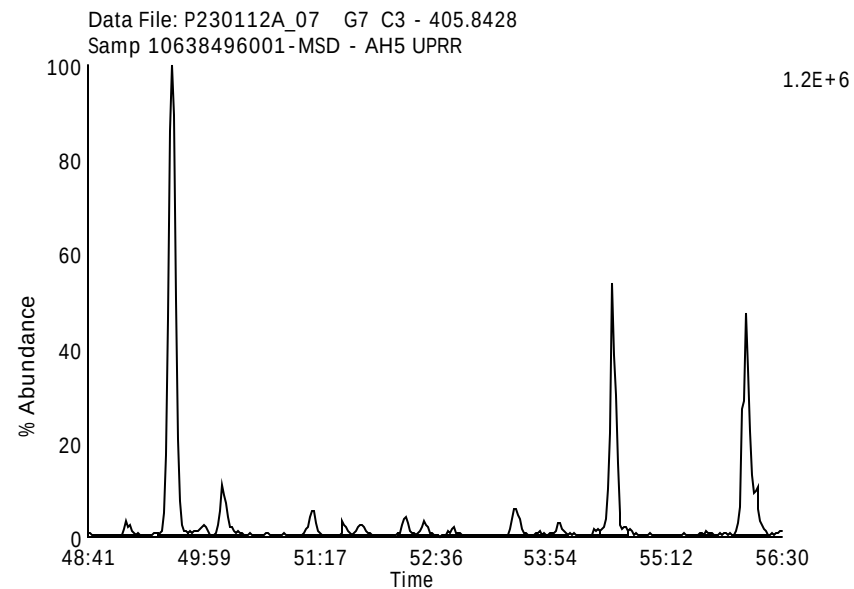
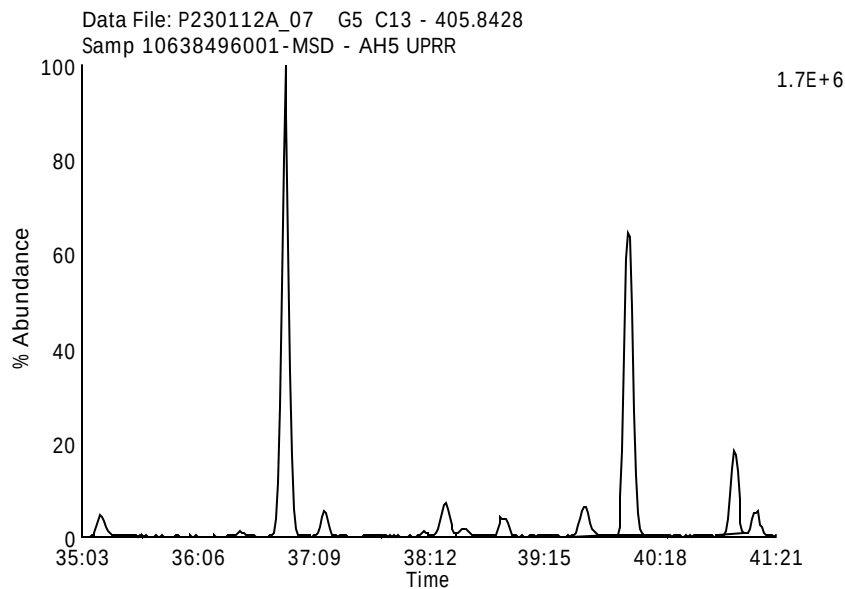
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Labeled Octa Chlorinated Biphenyls

Data File Name: P230112A_07

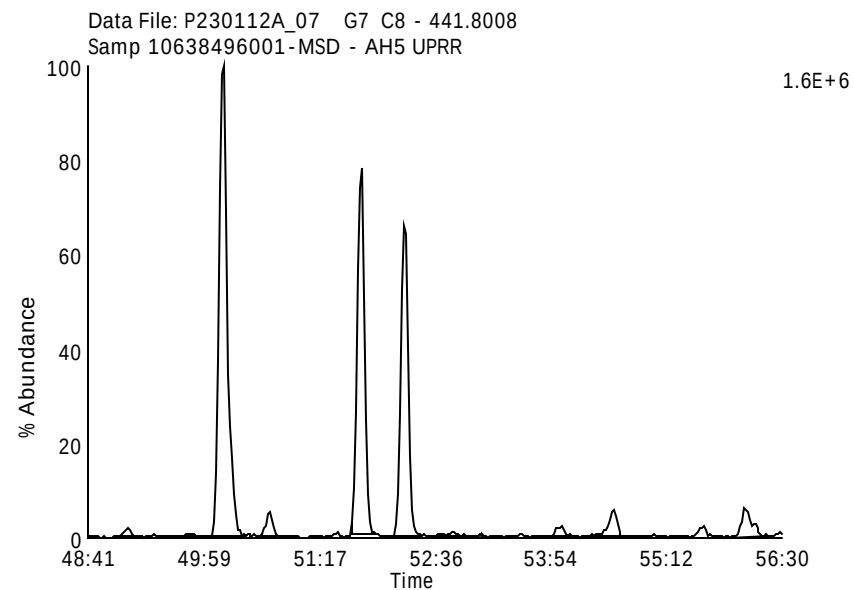
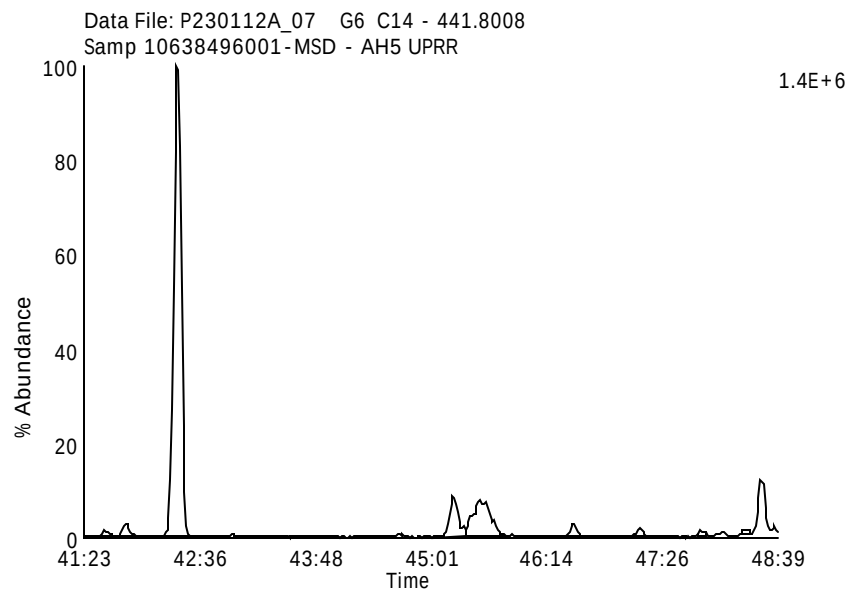
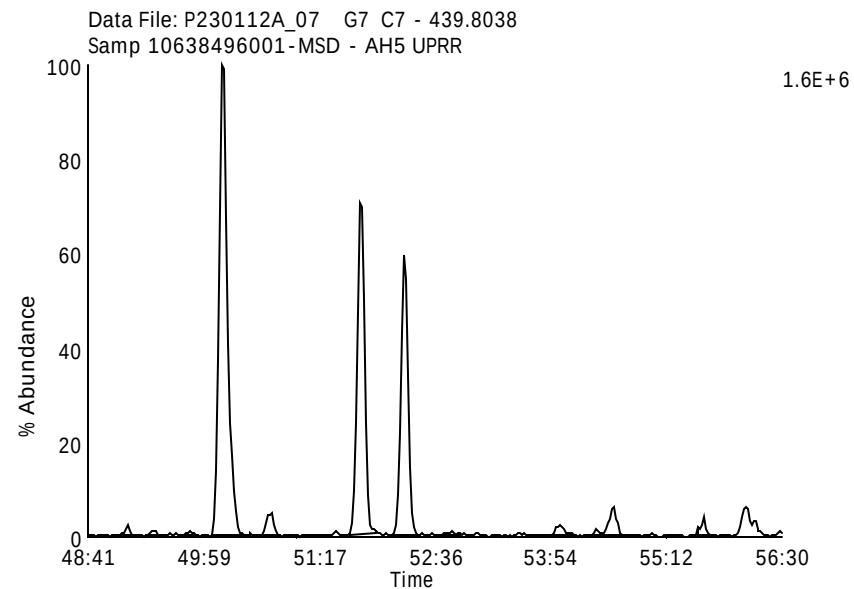
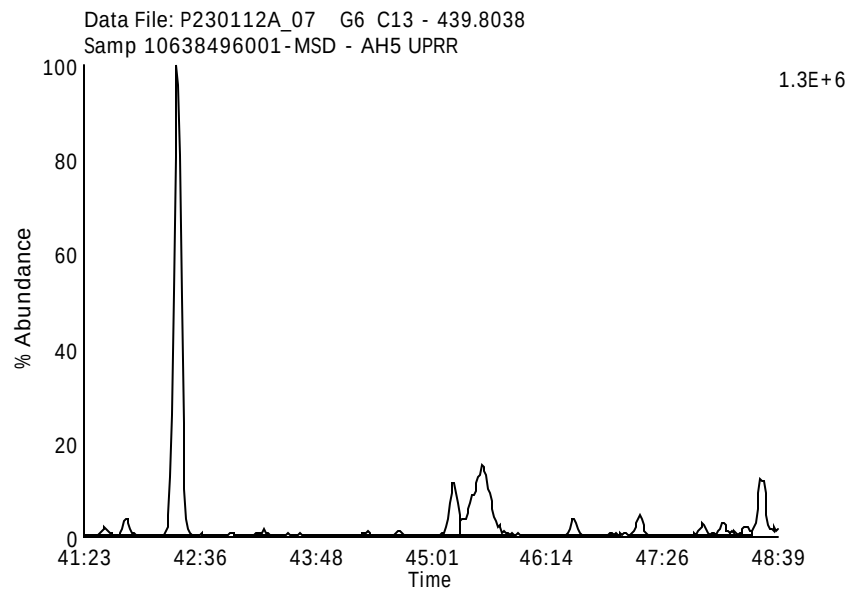
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Labeled Nona Chlorinated Biphenyls

Data File Name: P230112A_07

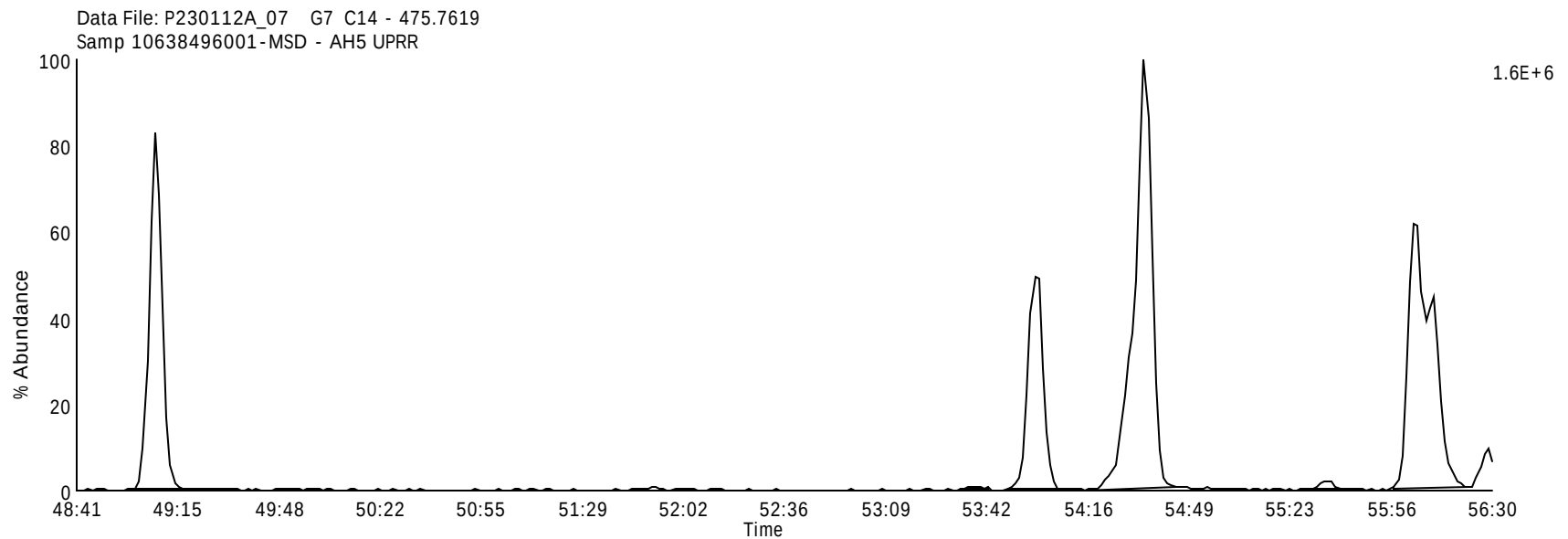
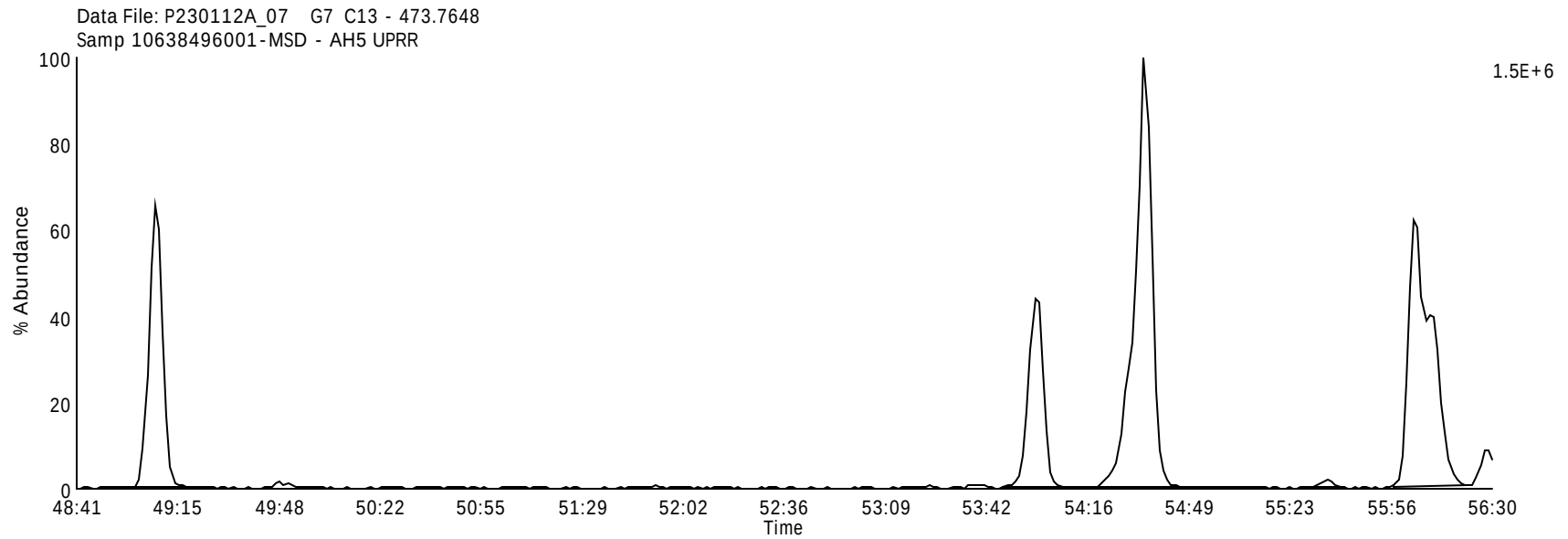
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Labeled Deca Chlorinated Biphenyl

Data File Name: P230112A_07

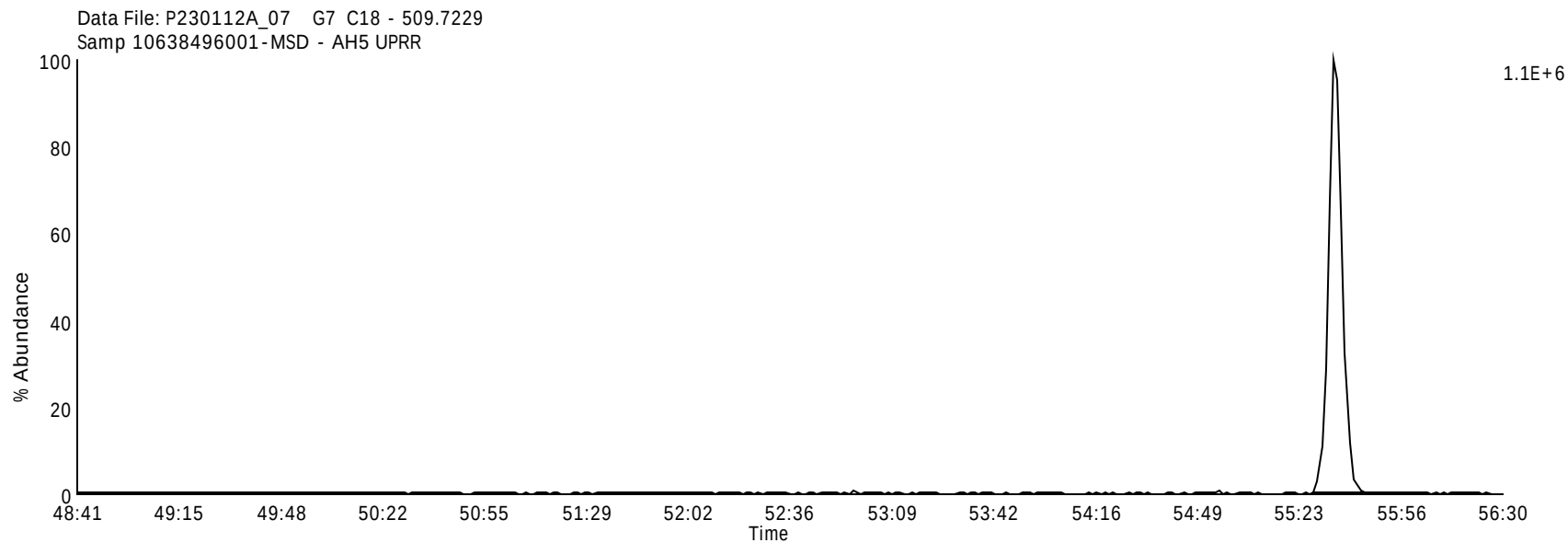
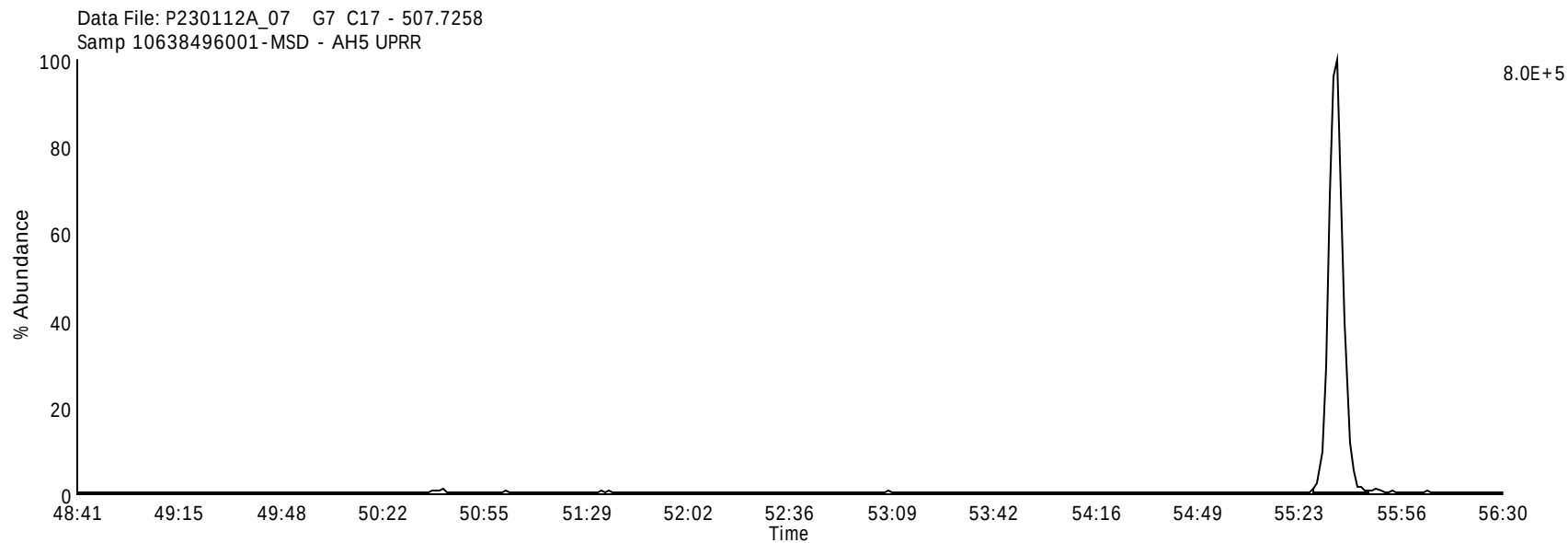
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Mono Chlorinated Biphenyls

Data File Name: P230112A_07

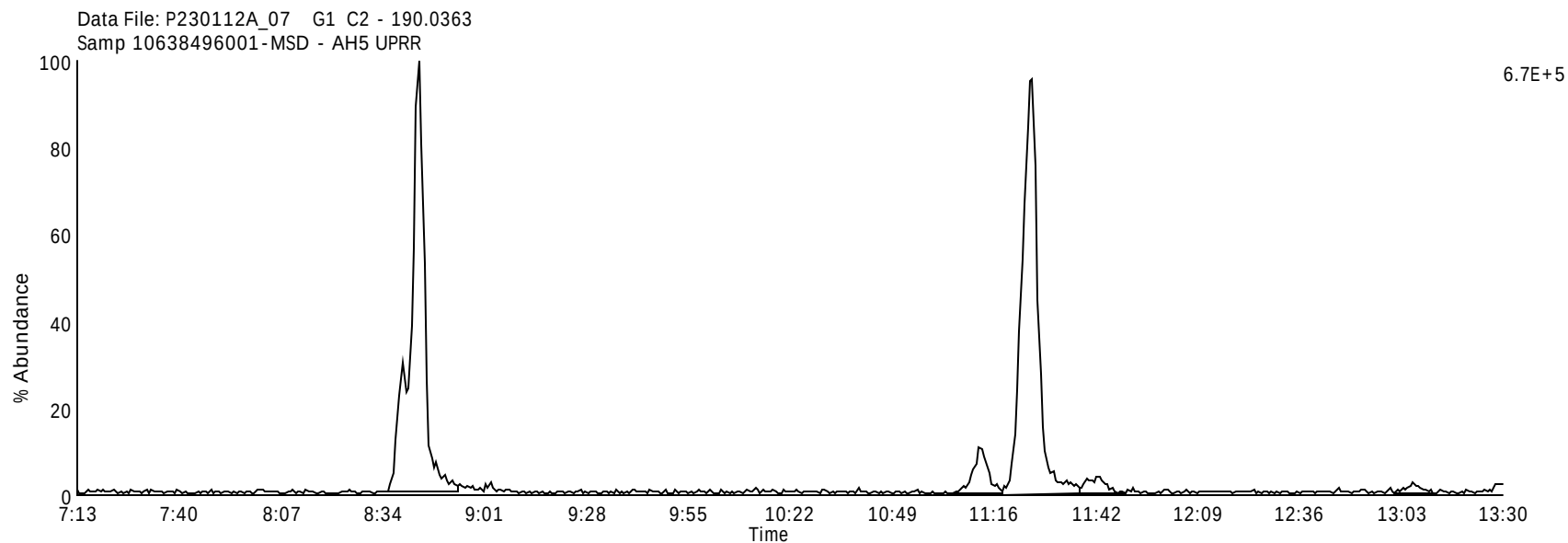
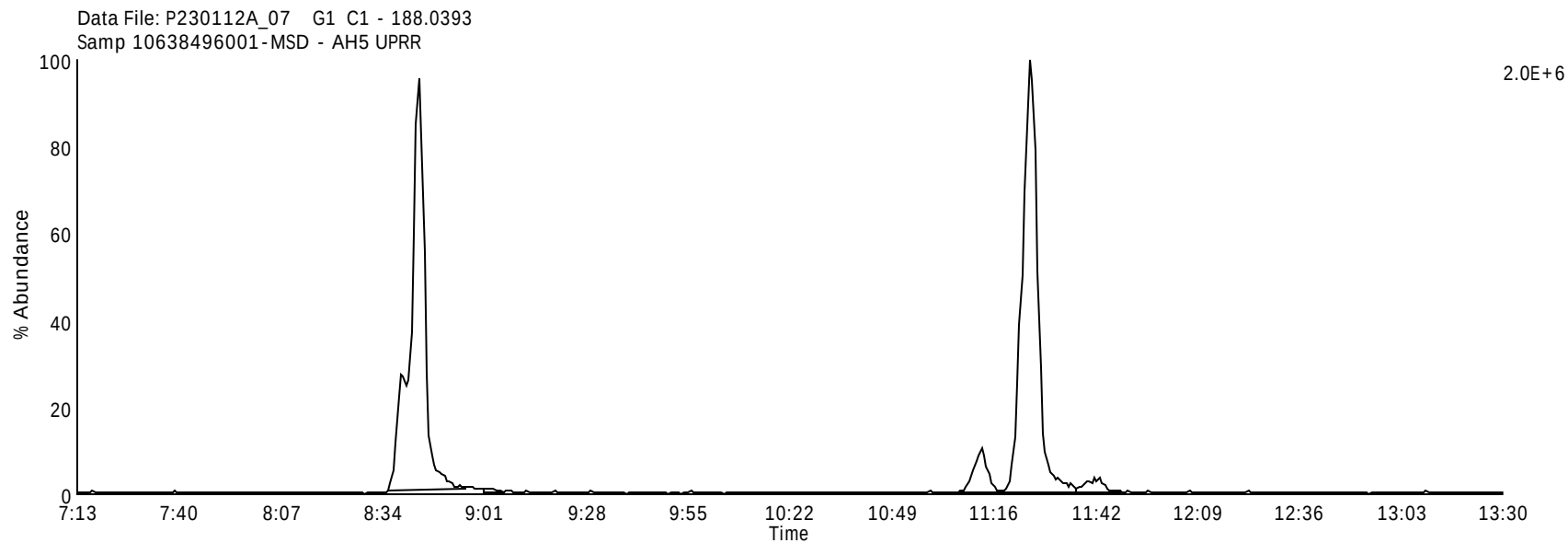
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Di Chlorinated Biphenyls

Data File Name: P230112A_07

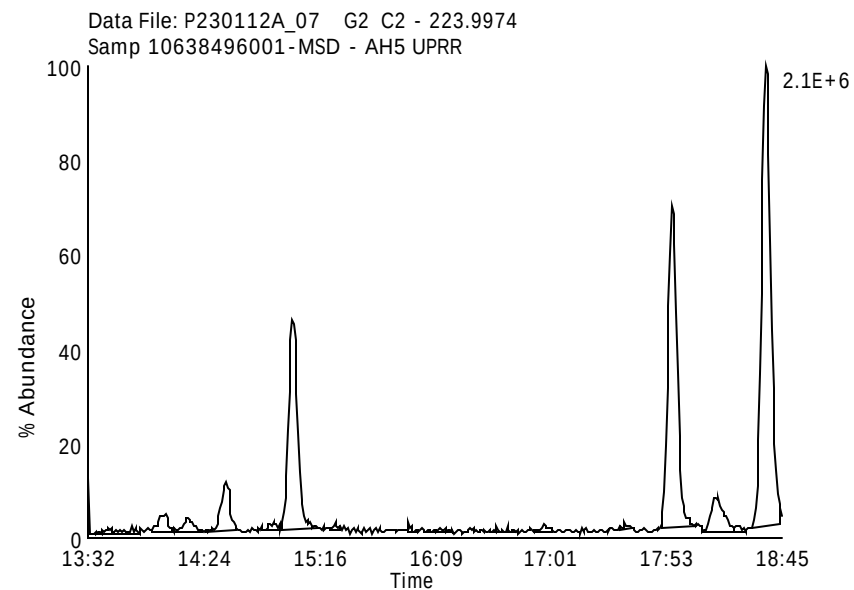
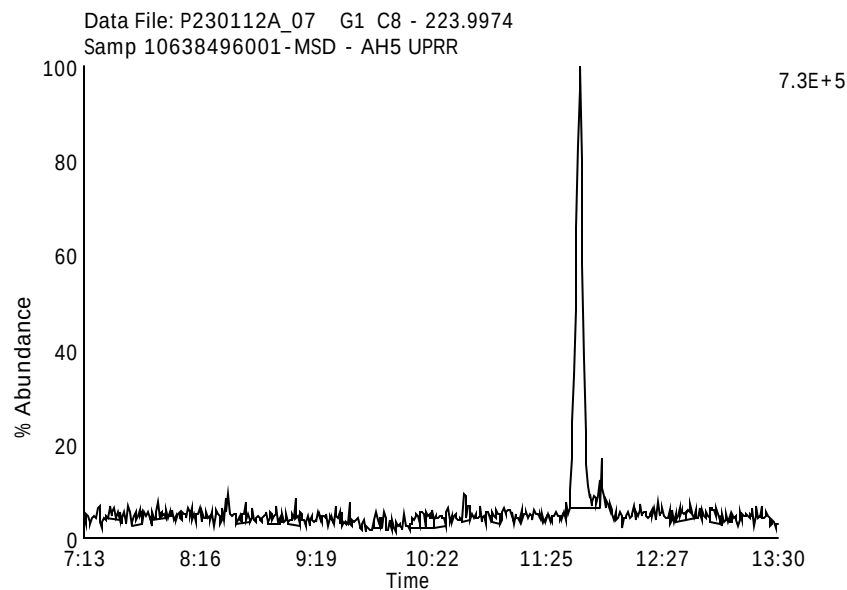
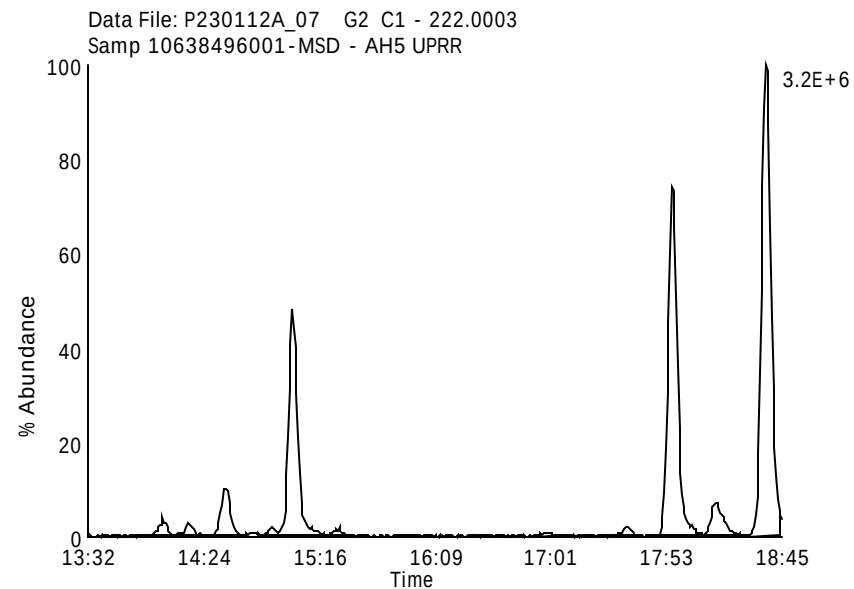
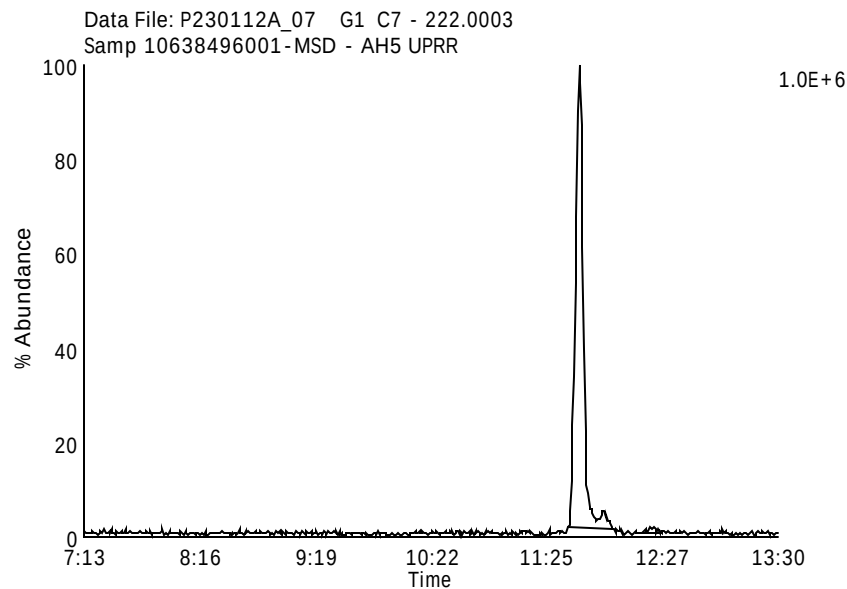
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Tri Chlorinated Biphenyls

Data File Name: P230112A_07

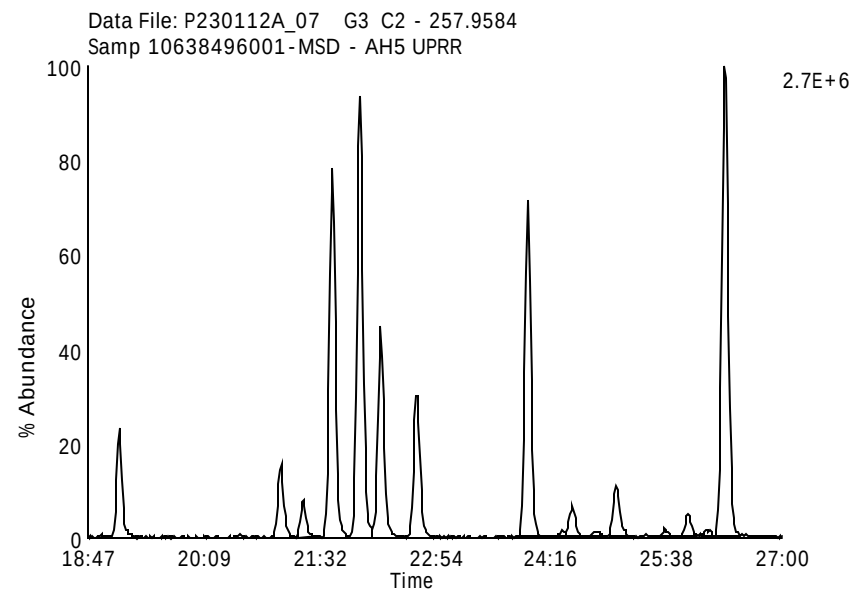
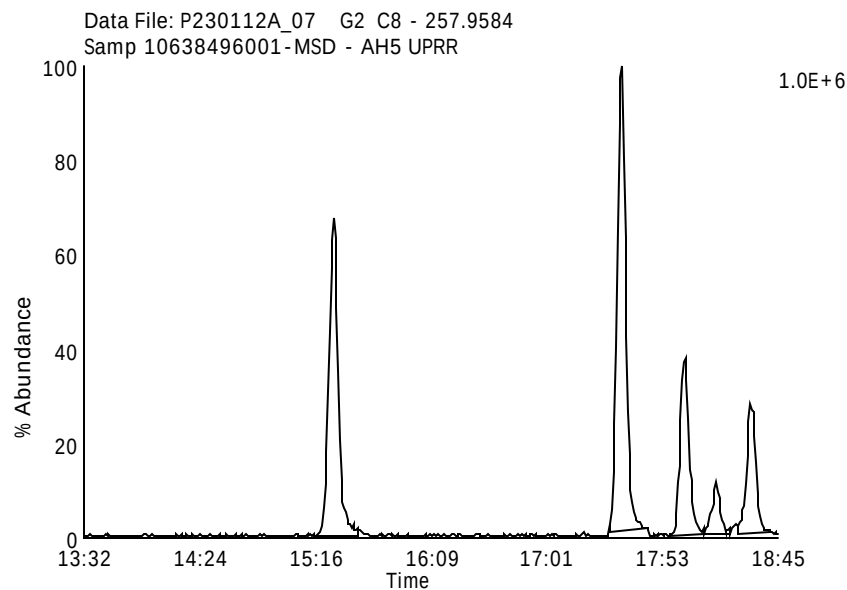
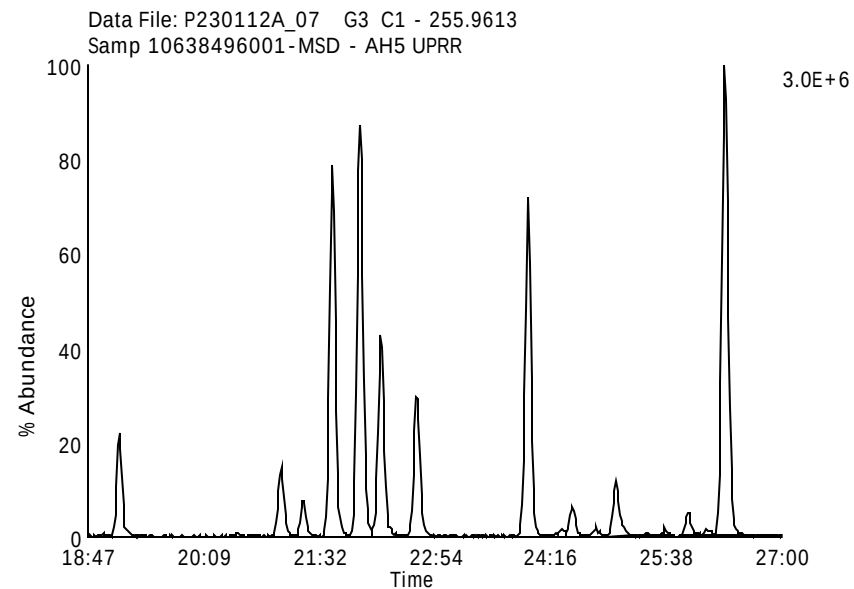
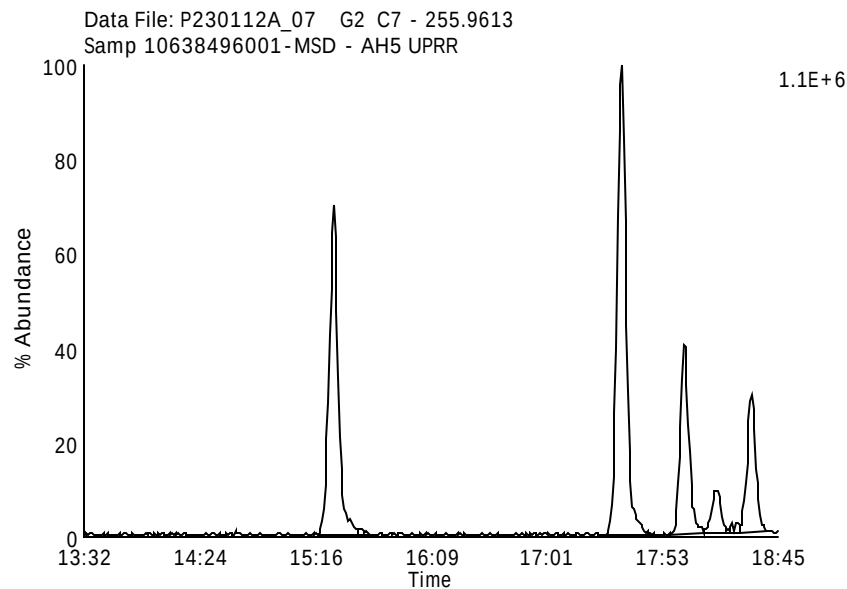
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Tetra Chlorinated Biphenyls

Data File Name: P230112A_07

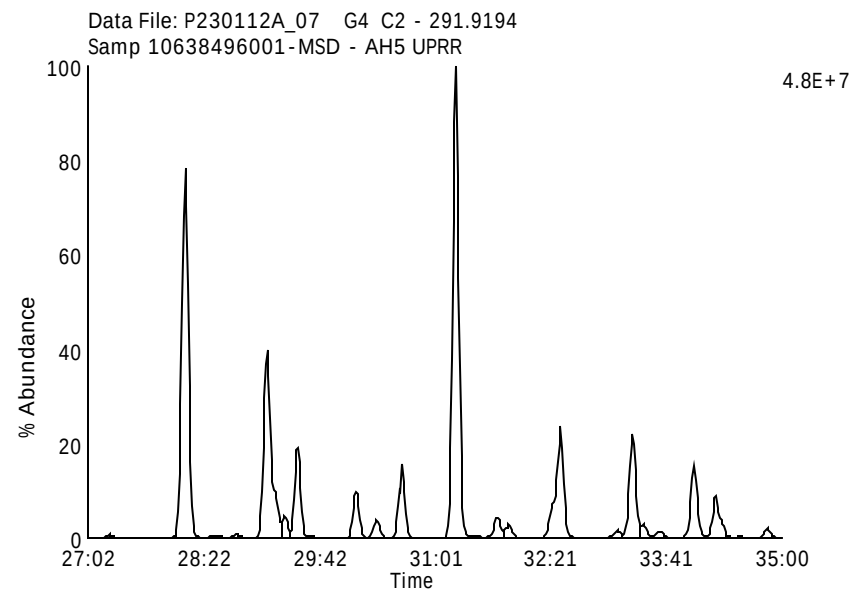
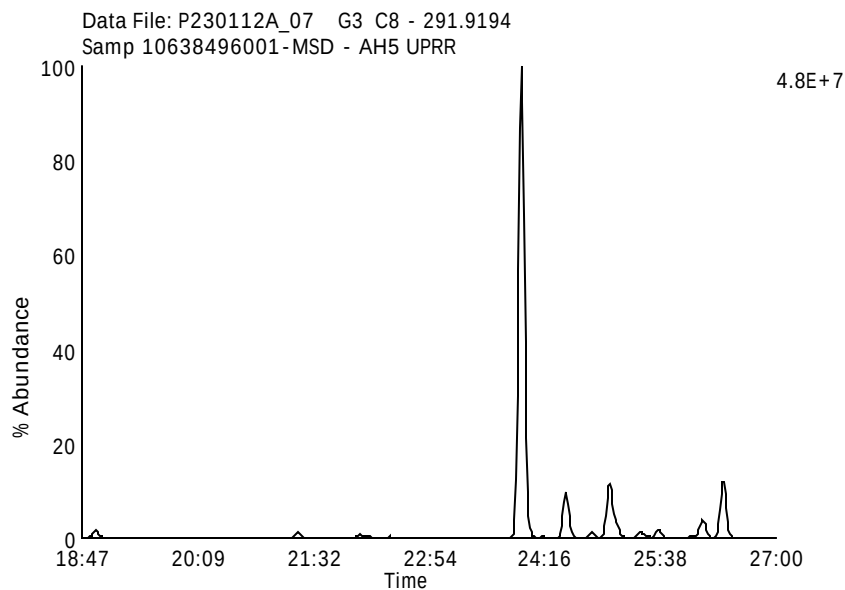
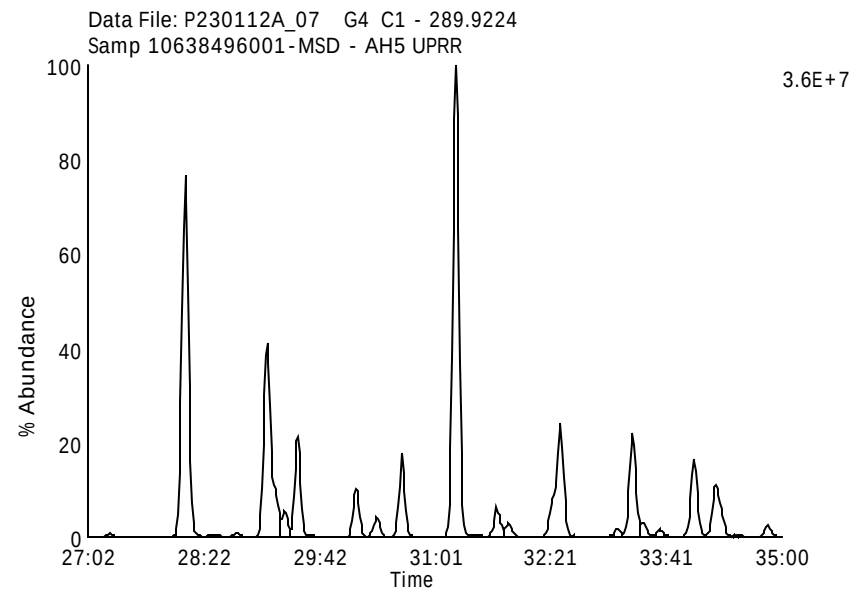
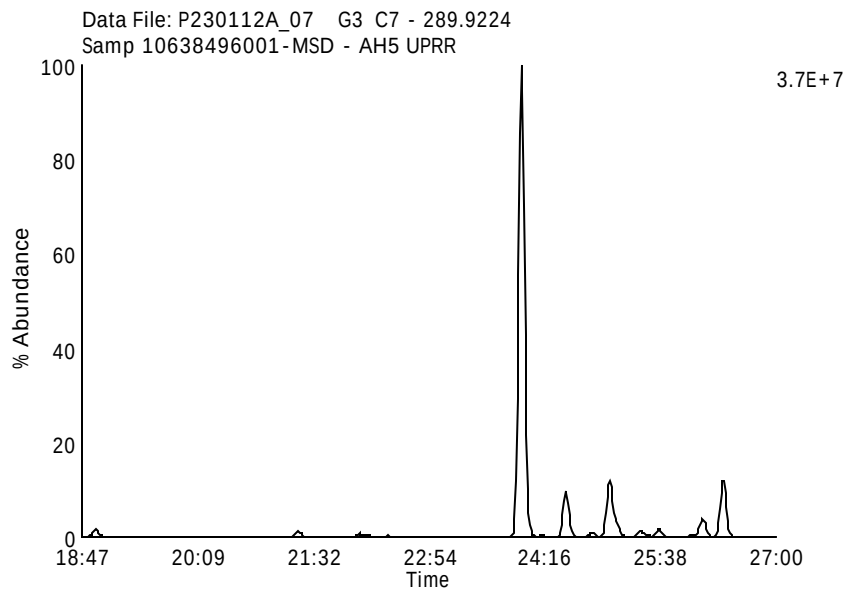
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Penta Chlorinated Biphenyls

Data File Name: P230112A_07

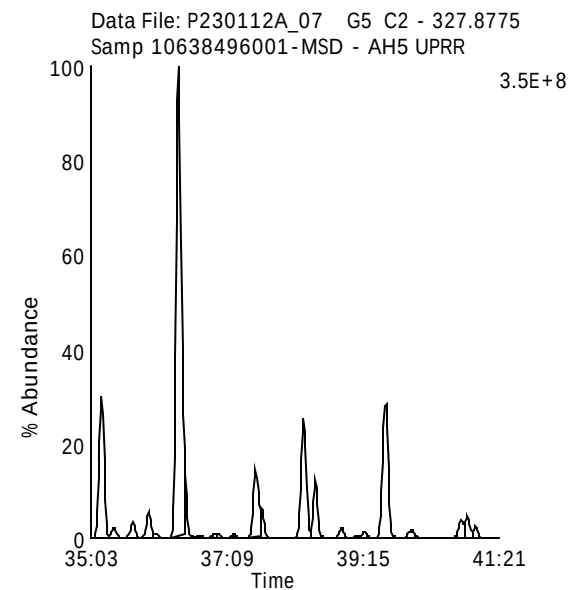
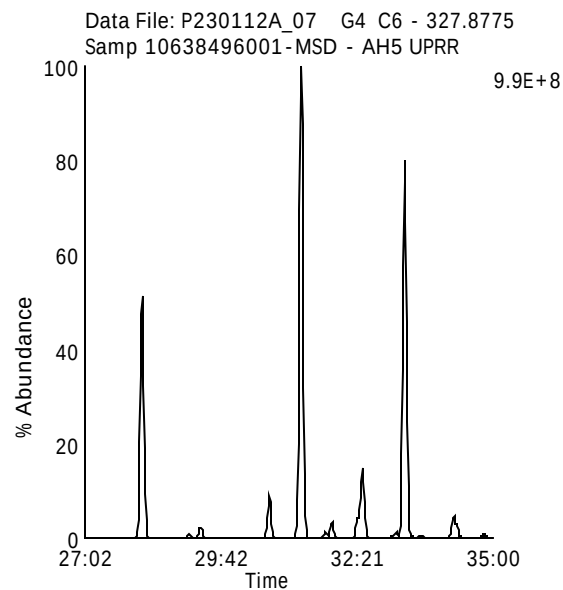
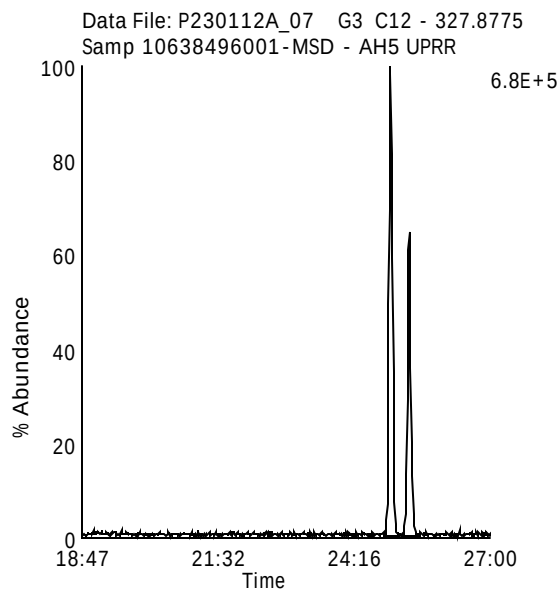
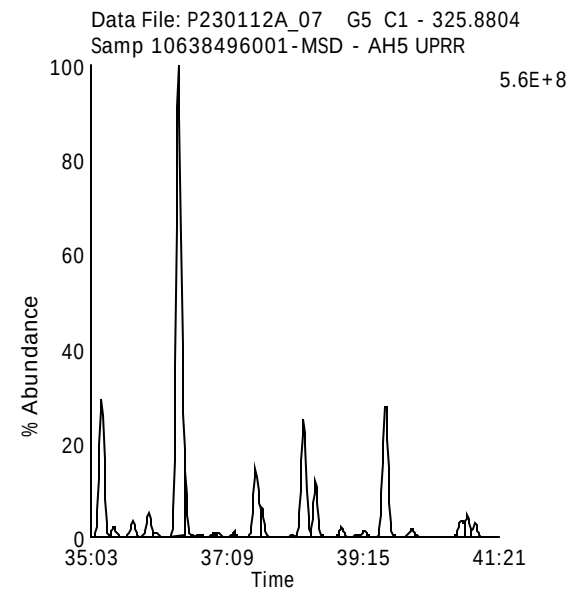
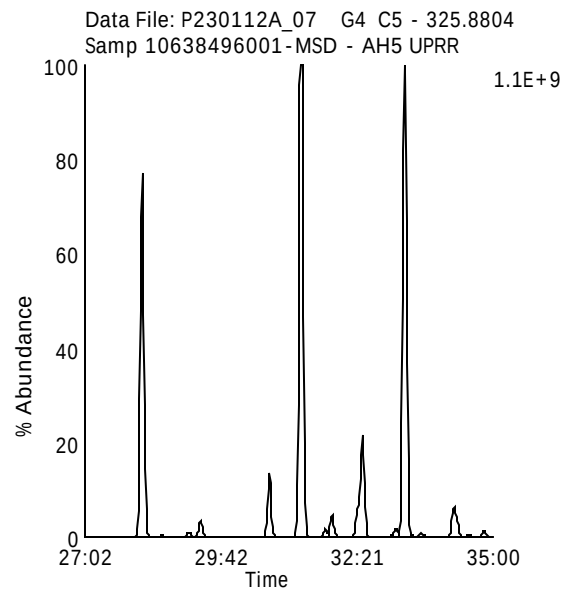
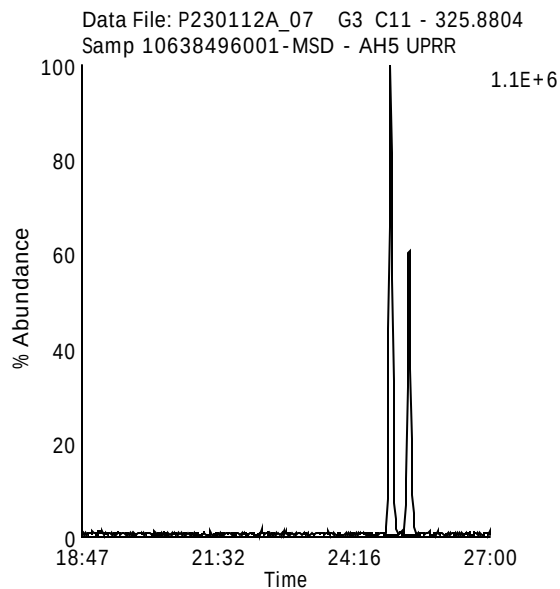
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Hexa Chlorinated Biphenyls

Data File Name: P230112A_07

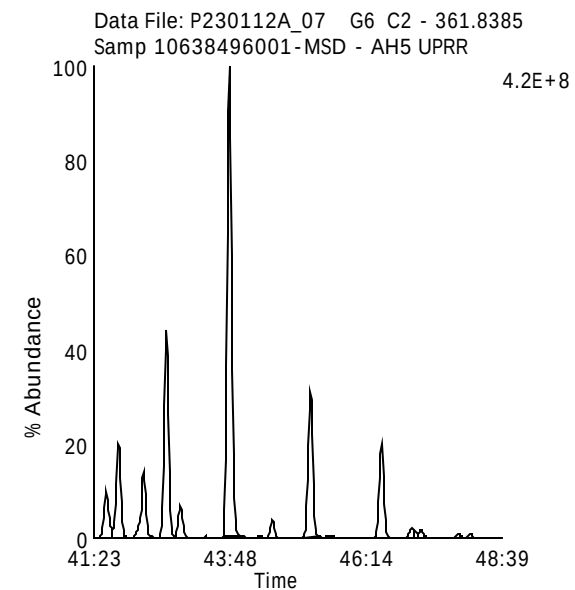
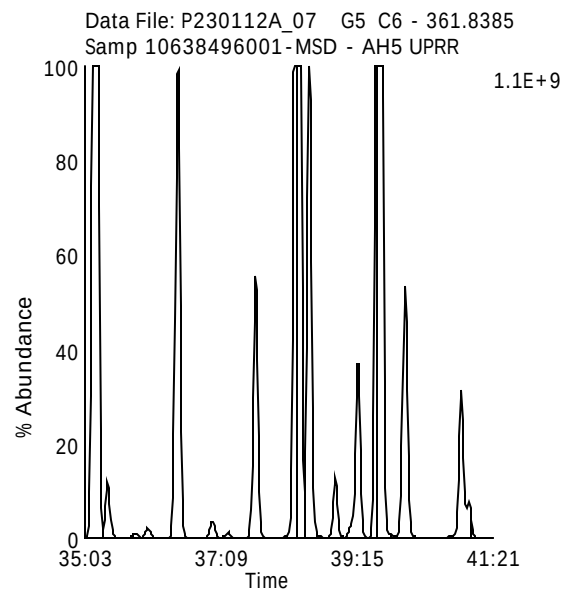
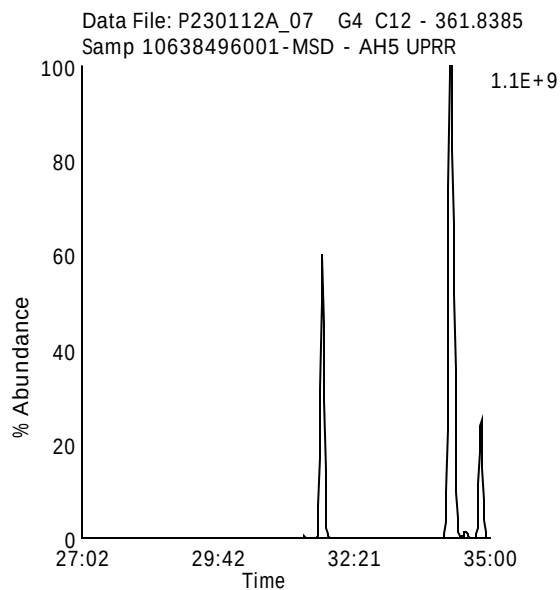
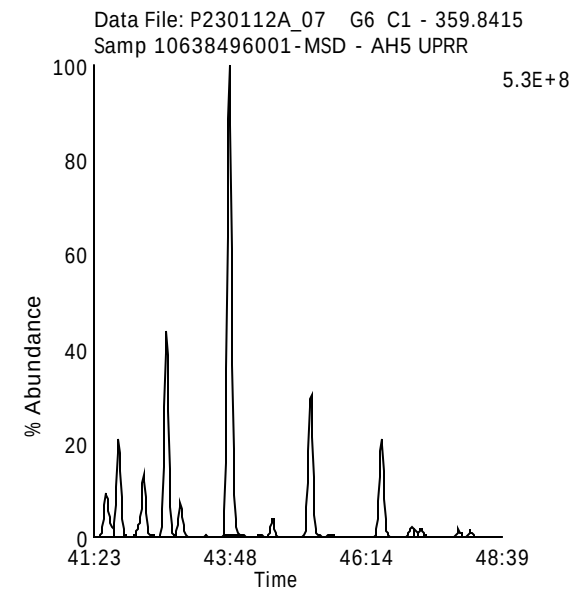
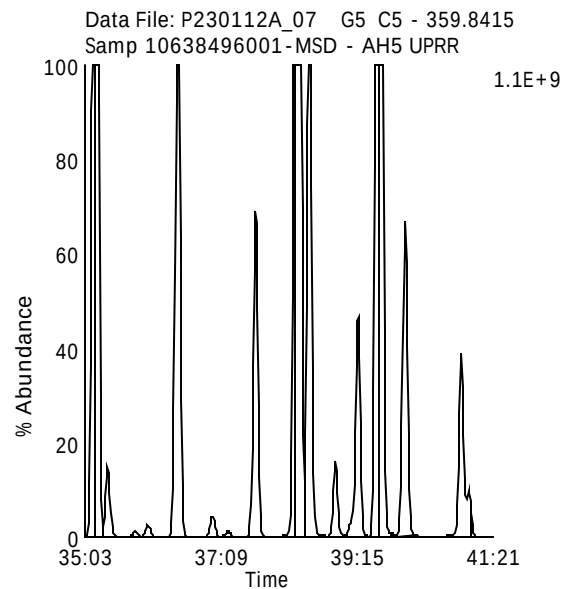
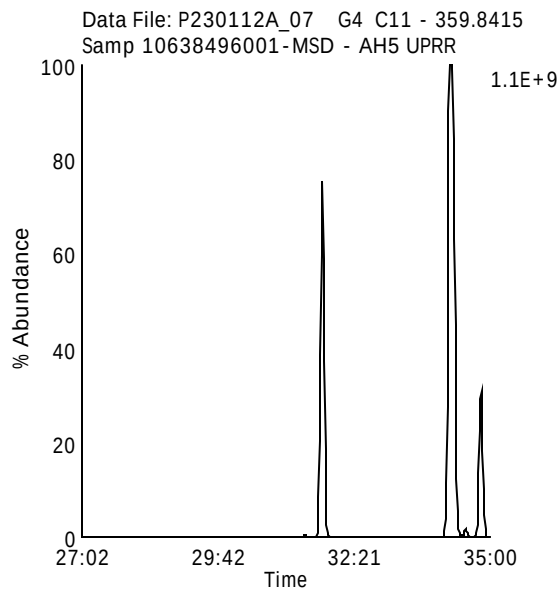
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Hepta Chlorinated Biphenyls

Data File Name: P230112A_07

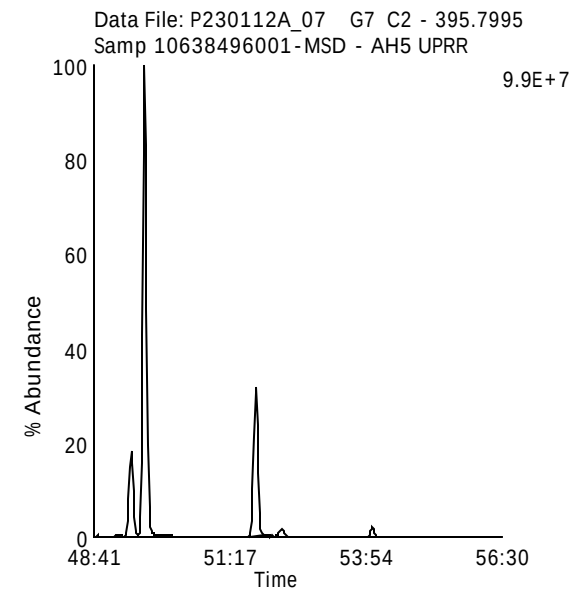
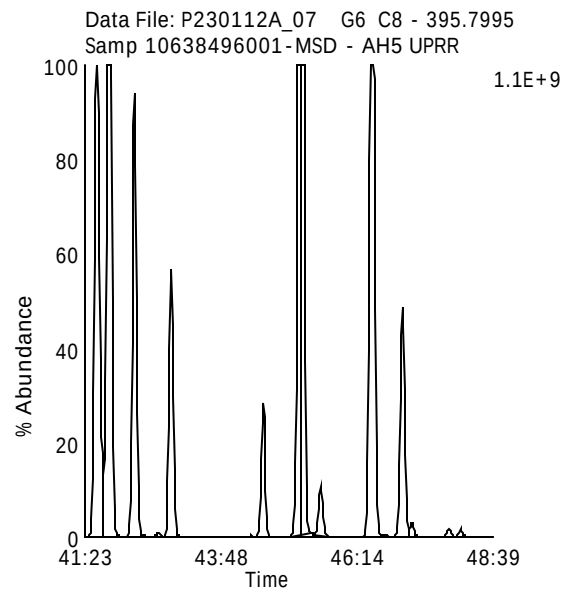
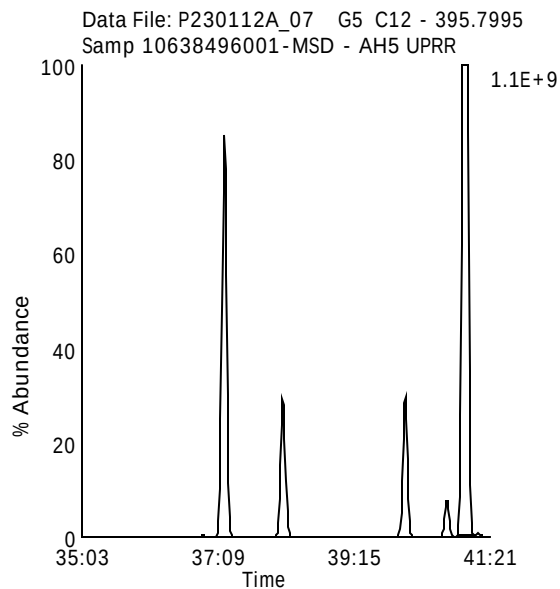
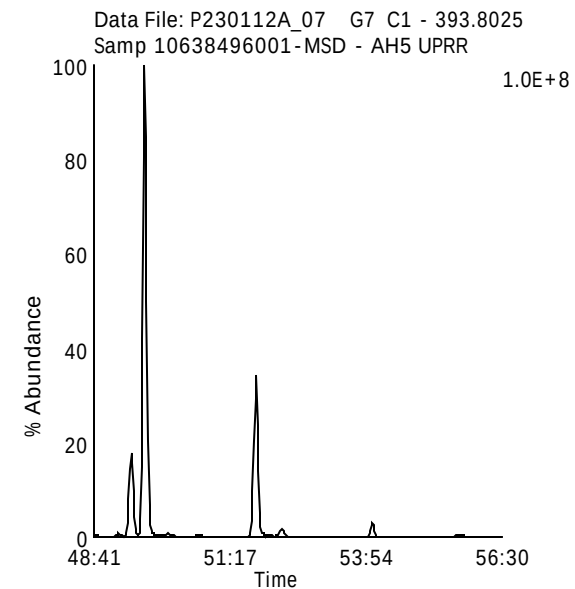
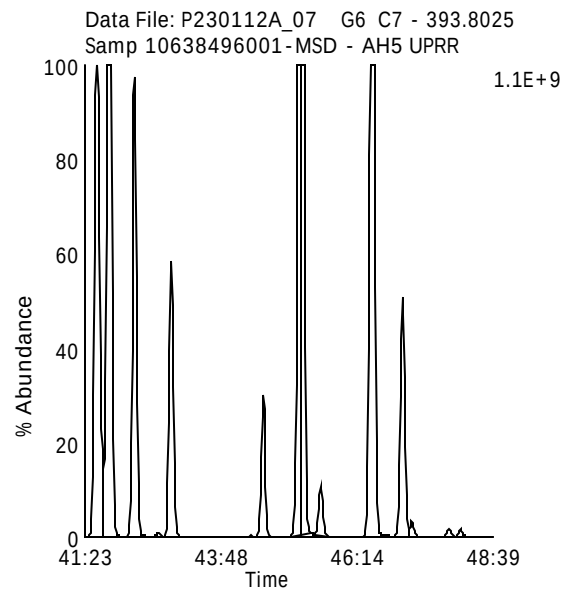
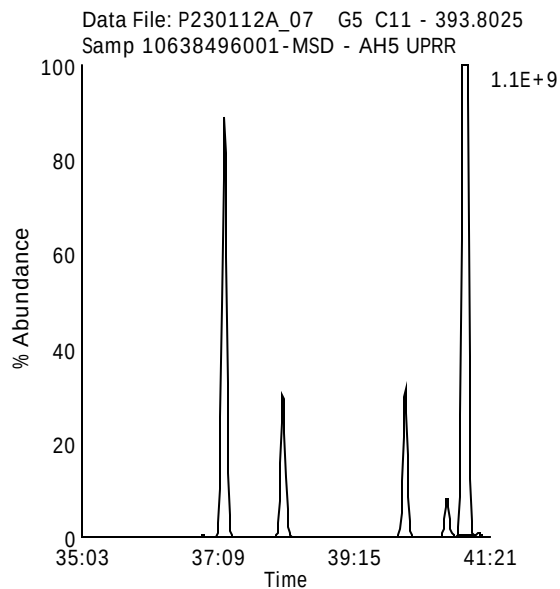
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Octa Chlorinated Biphenyls

Data File Name: P230112A_07

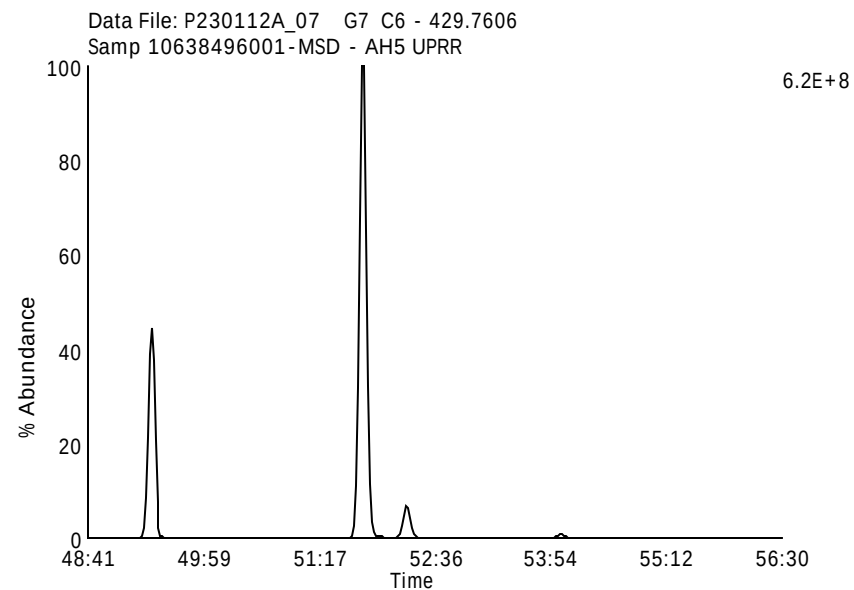
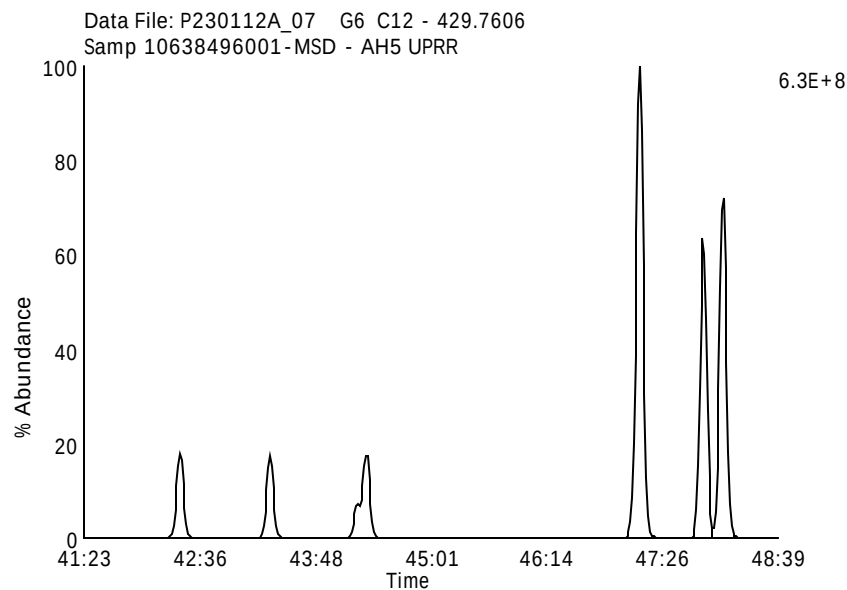
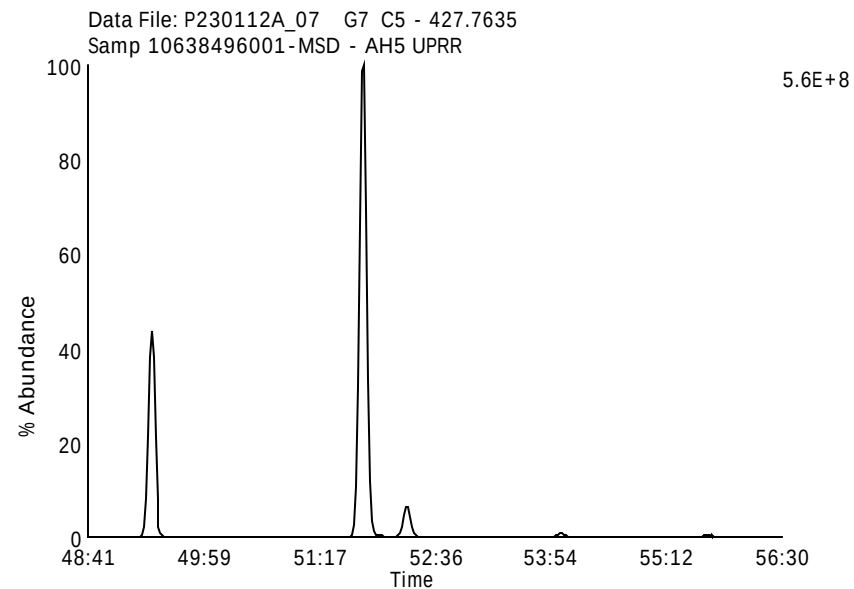
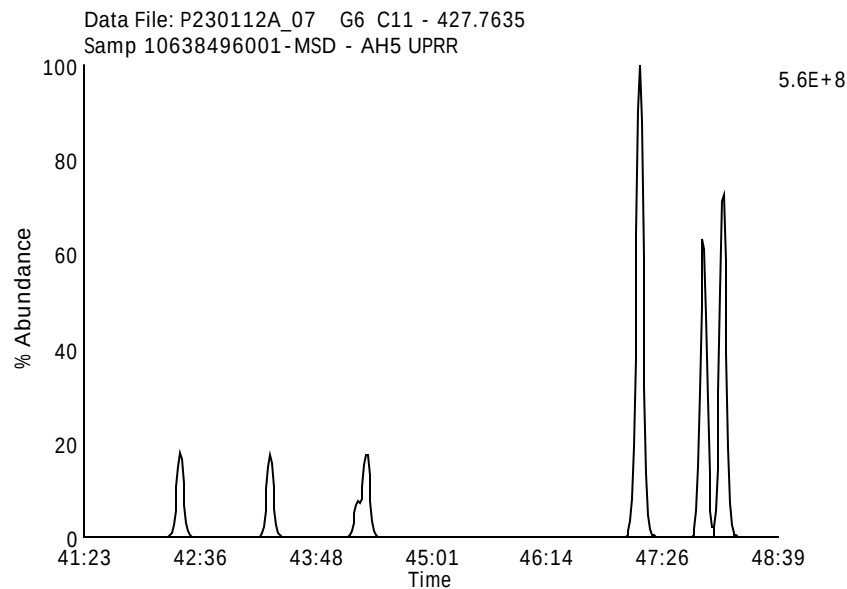
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Nona Chlorinated Biphenyls

Data File Name: P230112A_07

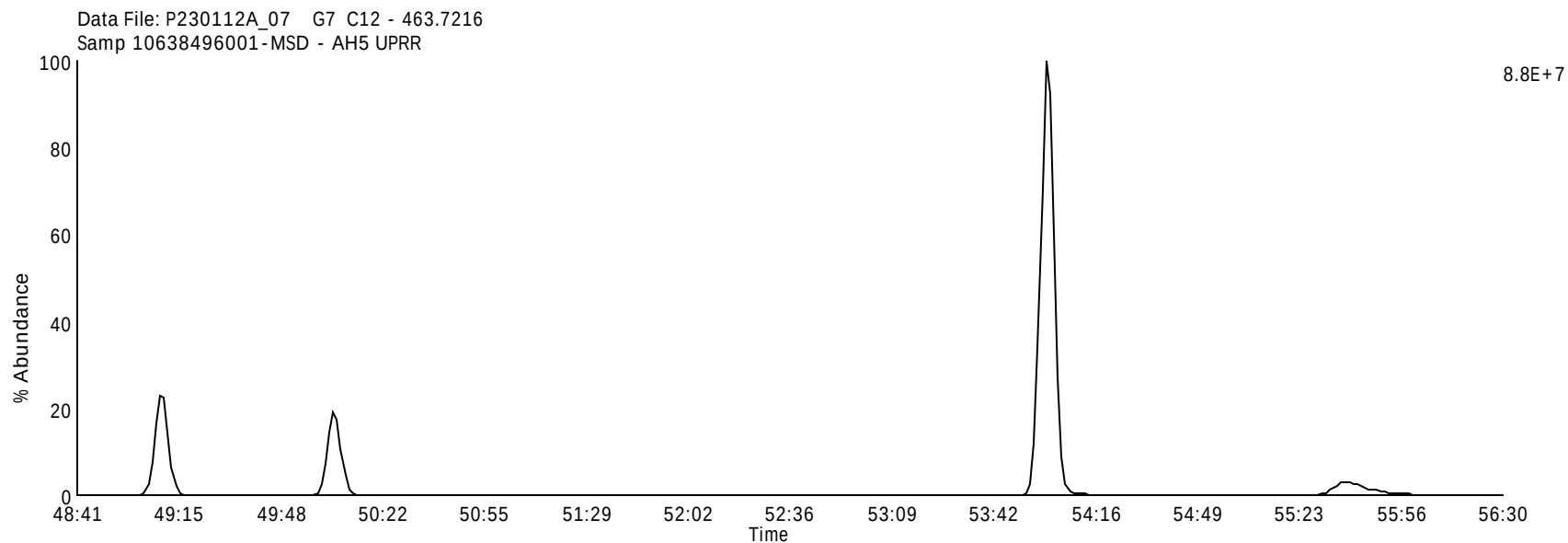
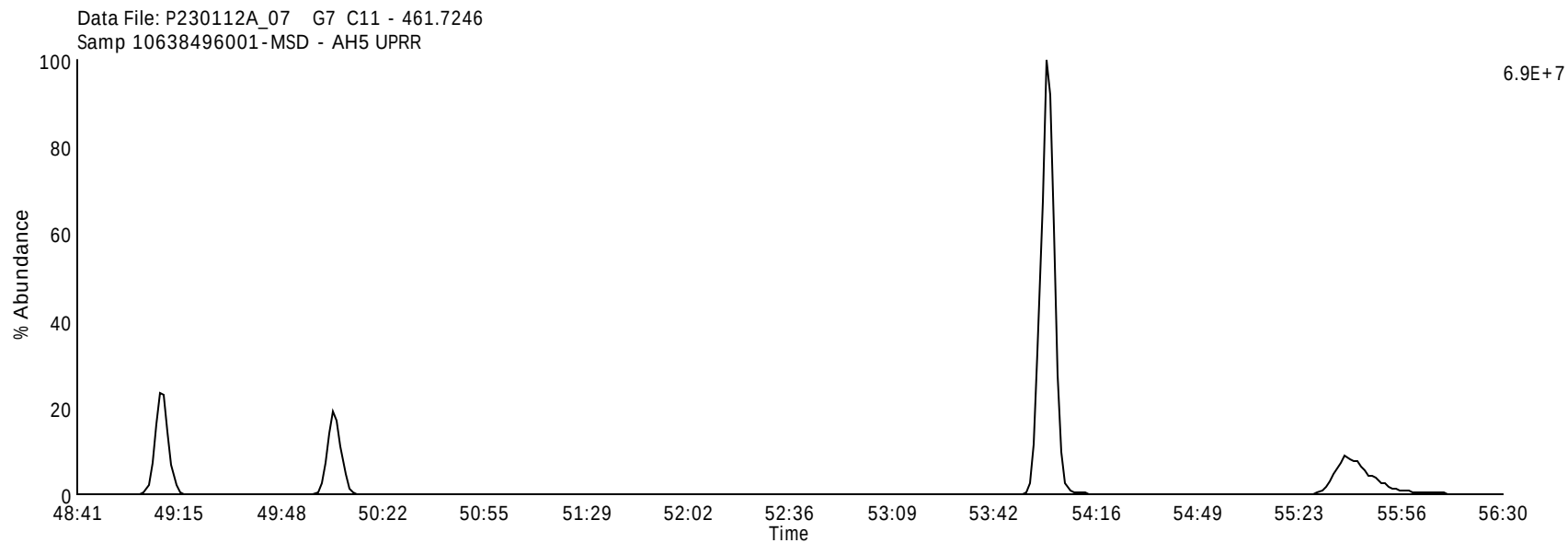
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Deca Chlorinated Biphenyl

Data File Name: P230112A_07

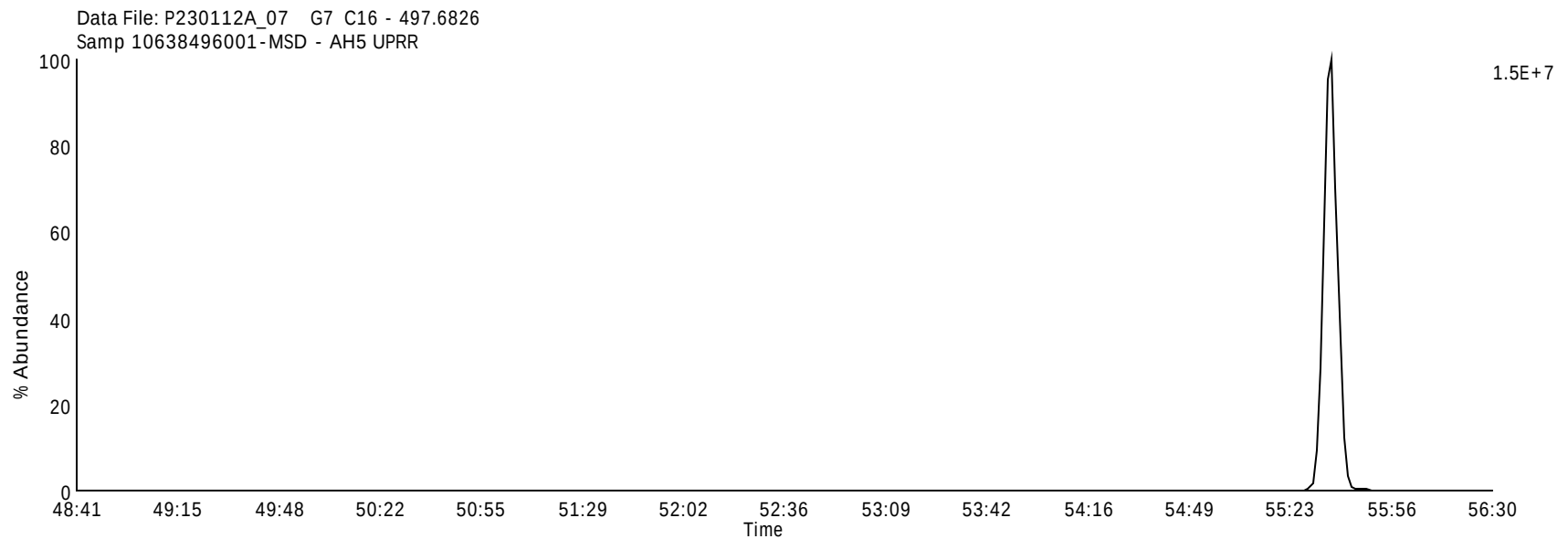
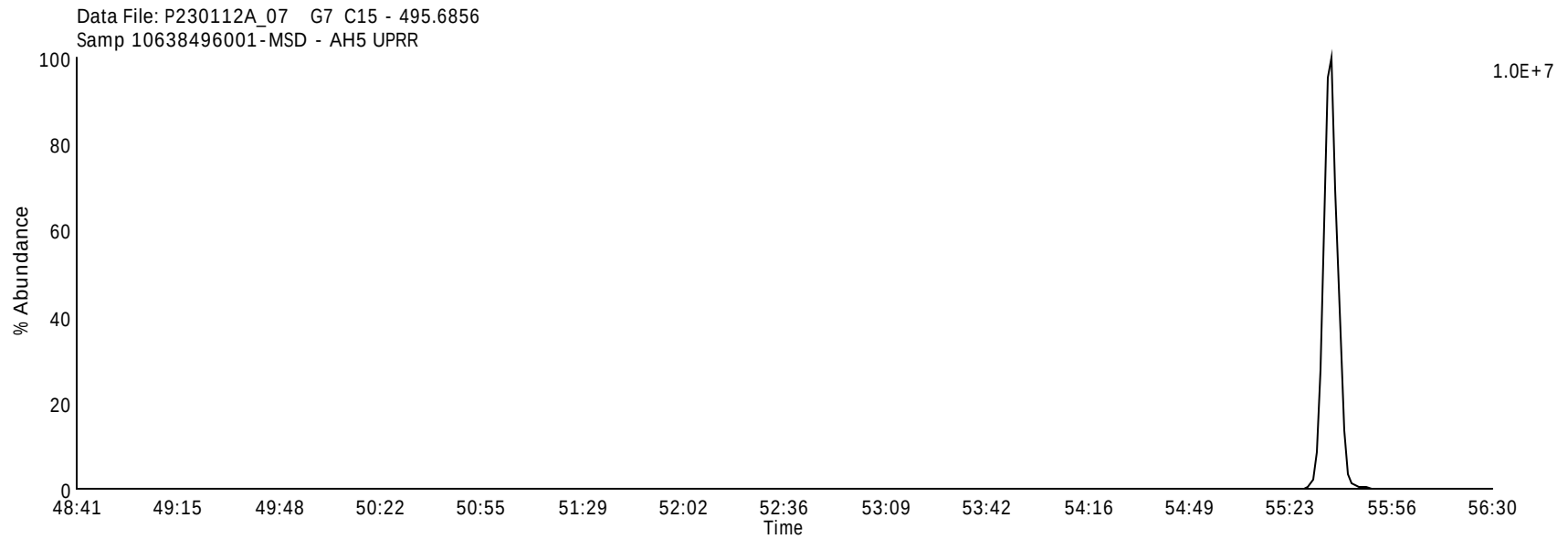
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Group 1 - 4 Lock mass

Data File Name: P230112A_07

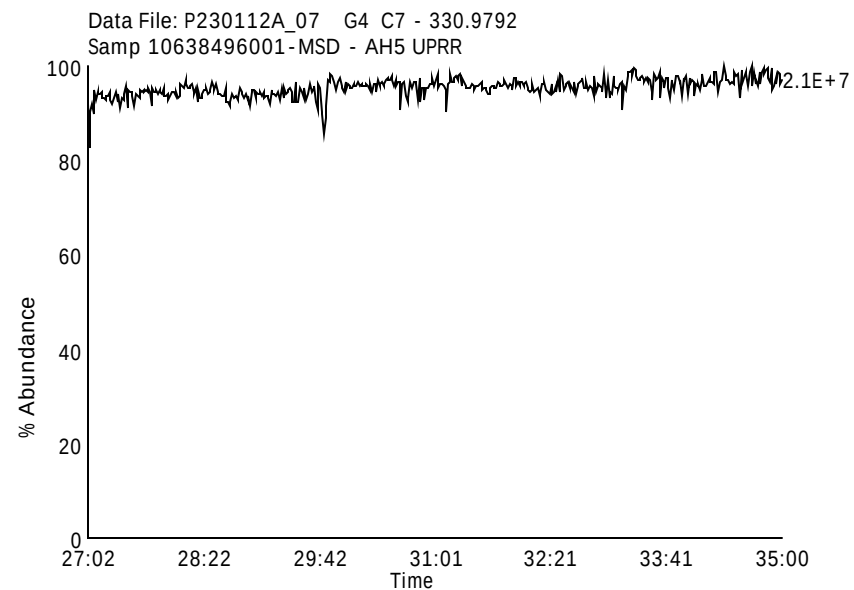
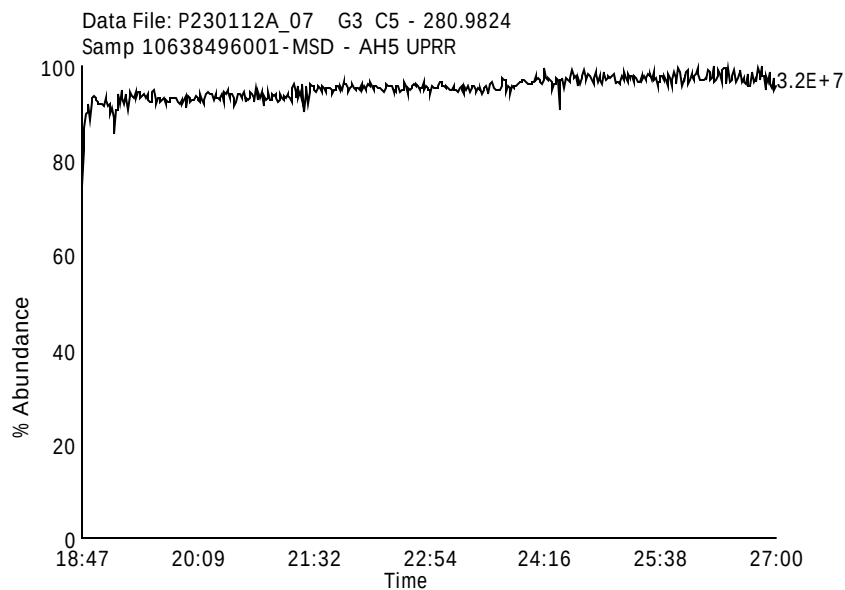
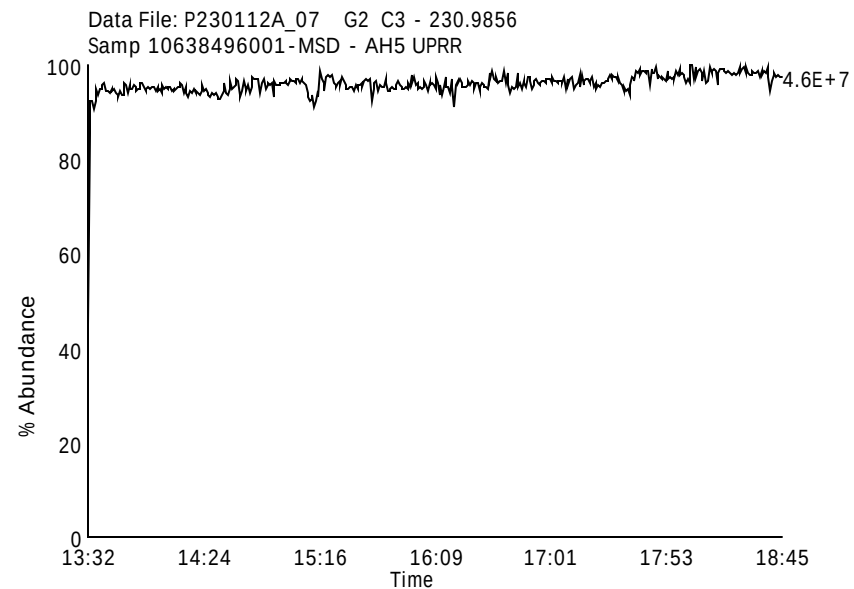
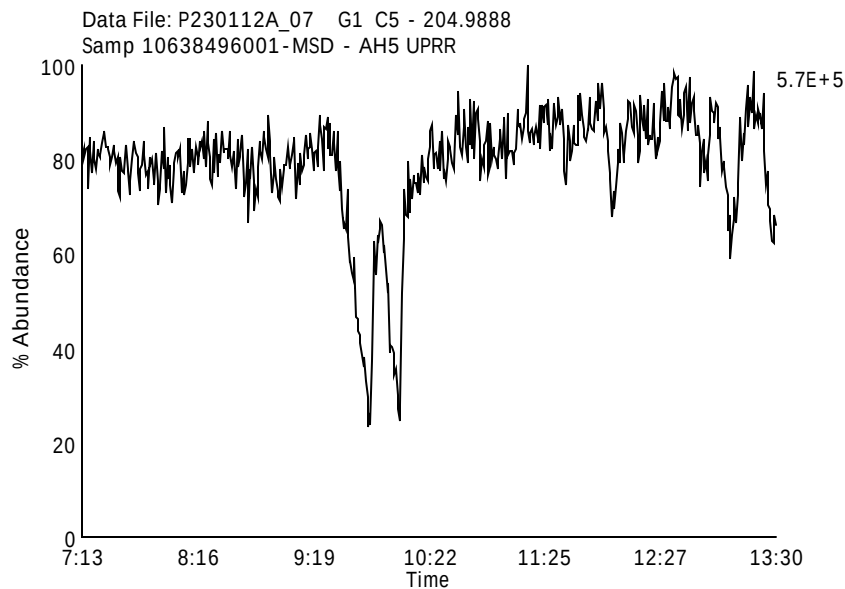
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Group 5 - 7 Lock mass

Data File Name: P230112A_07

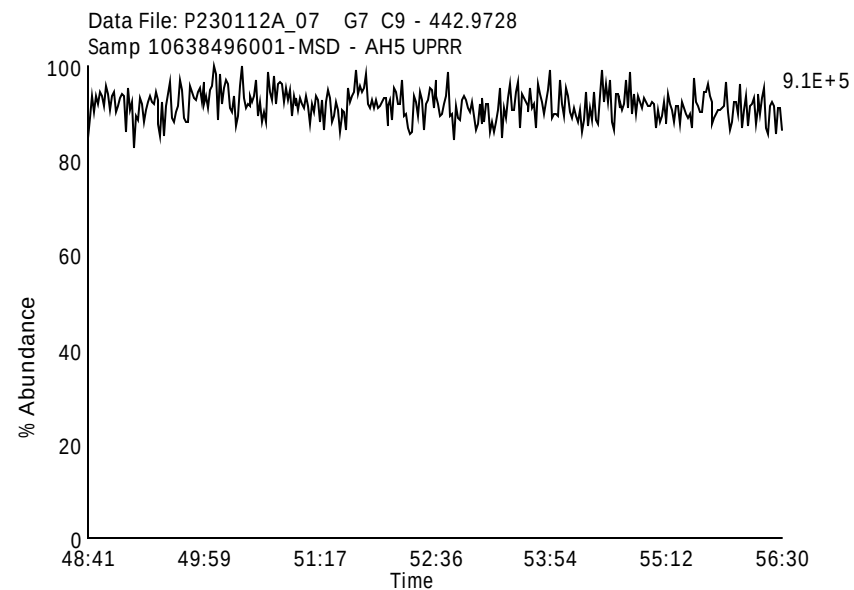
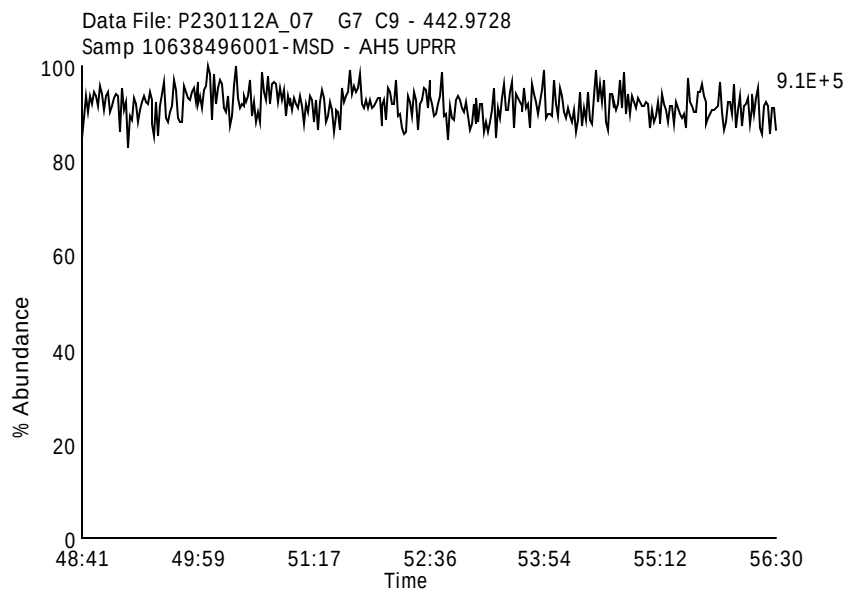
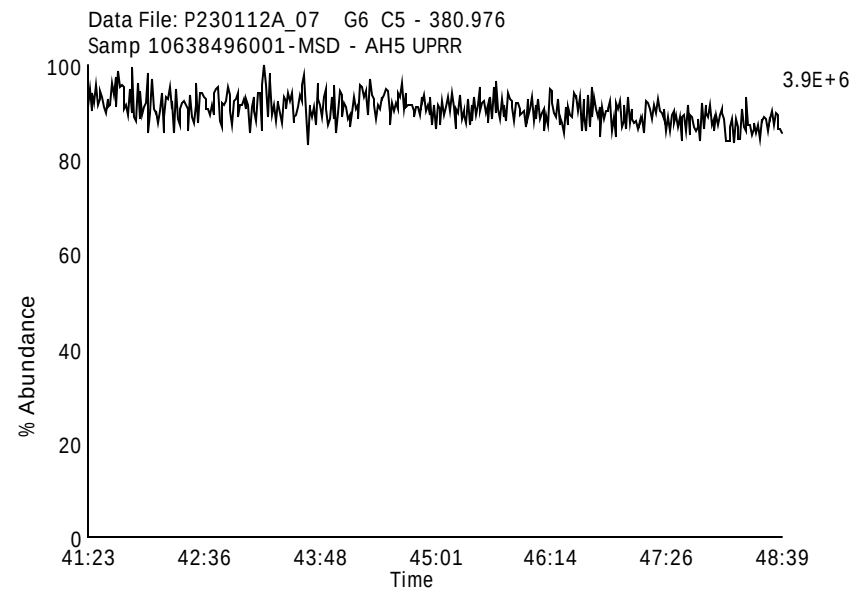
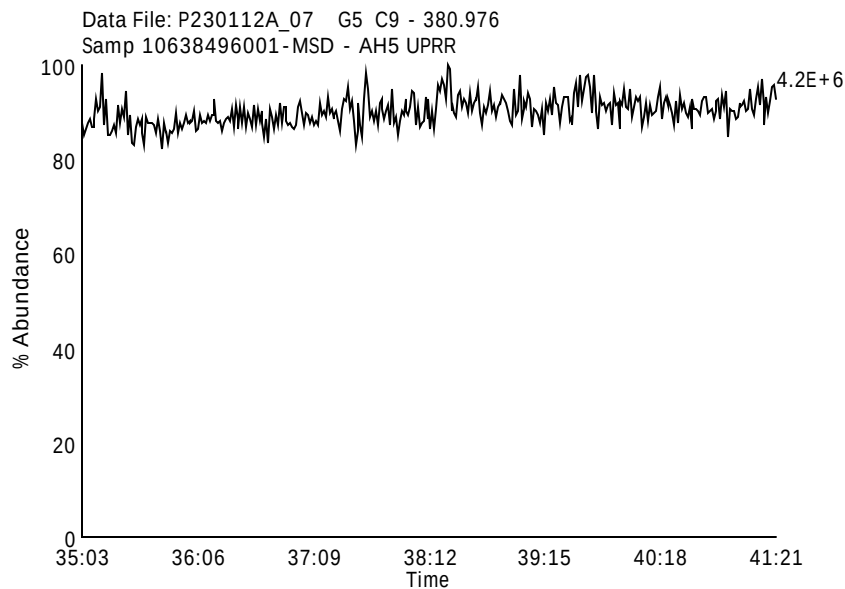
Date Acquired: 1/12/2023

Sample Description: Samp 10638496001-MSD - AH5 UPRR

Lab Sample ID: 10638496001-MSD

Instrument: 10MSHR09 (P)

Client Sample ID: SB06-1.0-1.5-1022-MSD



Report Prepared for:

David Hodson
UPRR_Jacobs
2020 SW 4th Avenue
Portland OR 97201

REPORT OF LABORATORY ANALYSIS FOR PCBs

Report Prepared Date:

January 23, 2023

Report Information:

Pace Project #: 10638496

Sample Receipt Date: 10/18/2022

Client Project #: Portland OR-Peninsula Iron W

Client Sub PO #: 2903-01-Rev1

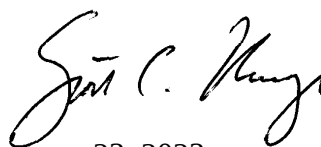
State Cert #: N/A

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCB Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed by:



January 23, 2023

Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com



Report of Laboratory Analysis

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.

DISCUSSION

This report presents the results from the analyses performed on six samples submitted by a representative of Union Pacific Rail Road. The samples were analyzed for the presence or absence of polychlorinated biphenyl (PCB) congeners using USEPA Method 1668C. Reporting limits were set the statistical method detection limits and were not adjusted for the amount of dry sample extracted (per project management). Levels below the calibration range flagged "J" as estimated concentrations.

The dilution level noted on the data tables is being adjusted to allow the correct data flags to populate the electronic deliverables as well as the data tables. Samples and MDL extracts were analyzed at elevated volumes. That volume is being treated as a 1x dilution for calculation purposes, with larger dilutions being factored from that volume.

The recoveries of the isotopically-labeled PCB internal standards in the sample extracts ranged from 21-84%. All of the labeled standard recoveries obtained for this project were within the target ranges specified in Method 1668C. Since the quantification of the native congeners was based on isotope dilution and internal standard methodology, the data were automatically corrected for variation in recovery and accurate values were obtained. Incorrect isotope ratios were obtained for selected PCB congeners. The affected congeners were flagged "I" on the results tables. Selected results were taken from secondary analyses of the extracts at dilution. The affected results were flagged "N2" and "D".

A laboratory method blank was prepared and analyzed with this sample batch as part of our routine quality control procedures. The results show the blank to contain trace levels of selected PCB congeners. The sample extracts contained similar levels of selected congeners, which may have originated in the laboratory. Congeners present at similar level in both the method blank and sample extracts were flagged "B" on the sample results tables.

Laboratory and matrix spike samples were also prepared with this sample batch using reference material that had been fortified with native standards. The results show that the spiked native compounds in the laboratory spike were recovered at 93-106%. Recoveries were more varied in the matrix spikes due to levels present in the sample material used to prepare them. However, relative percent differences ranged from 0.2-16.1%. The LCS recoveries and the matrix spike RPDs were within method limits.

REPORT OF LABORATORY ANALYSIS

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Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
A2LA	2926.01	Missouri	10100
Alabama	40770	Montana	CERT0092
Alaska-DW	MN00064	Nebraska	NE-OS-18-06
Alaska-UST	17-009	Nevada	MN00064
Arizona	AZ0014	New Hampshire	2081
Arkansas - WW	88-0680	New Jersey	MN002
Arkansas-DW	MN00064	New York	11647
California	2929	North Carolina-	27700
Colorado	MN00064	North Carolina-	530
Connecticut	PH-0256	North Dakota	R-036
Florida	E87605	Ohio-DW	41244
Georgia	959	Ohio-VAP (170	CL101
Hawaii	MN00064	Ohio-VAP (180	CL110
Idaho	MN00064	Oklahoma	9507
Illinois	200011	Oregon-Primary	MN300001
Indiana	C-MN-01	Oregon-Second	MN200001
Iowa	368	Pennsylvania	68-00563
Kansas	E-10167	Puerto Rico	MN00064
Kentucky-DW	90062	South Carolina	74003
Kentucky-WW	90062	Tennessee	TN02818
Louisiana-DEQ	AI-84596	Texas	T104704192
Louisiana-DW	MN00064	Utah	MN00064
Maine	MN00064	Vermont	VT-027053137
Maryland	322	Virginia	460163
Michigan	9909	Washington	C486
Minnesota	027-053-137	West Virginia-D	382
Minnesota-Ag	via MN 027-053	West Virginia-D	9952C
Minnesota-Petr	1240	Wisconsin	999407970
Mississippi	MN00064	Wyoming-UST	via A2LA 2926.

REPORT OF LABORATORY ANALYSIS

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Report No.....10638496
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Pace Analytical Services, LLC
1700 Elm Street, Suite 200
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444
www.pacelabs.com

Appendix A

Sample Management

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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From: [Hodson, David](#)
To: [Jennifer Gross](#)
Subject: RE: [EXTERNAL] Portland OR-Peninsula Iron Wor (Pace Project # 10632522)
Date: Friday, December 23, 2022 9:44:07 AM
Attachments: [image001.png](#)

CAUTION: This email originated from outside Pace Analytical. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Jenni,

Can you have the following samples analyzed by EPA Method 1668 (PCB congeners)?

- SB06-1.0-1.5-1022
- SB08-0.5-110322
- SB10-0.0-0.5-1022
- SB12-0.0-0.5-1022
- SB13-0.0-0.5-1022
- SB14-1.0-1.5-1022

David J Hodson, P.E. * | [Jacobs](#) | Senior Project Manager
M: 1 510 316 2323 | david.hodson@jacobs.com
2020 SW 4th Avenue, Suite 300 | Portland, OR 97201

** Registered in CA, OR, and WA*

From: Paceport Email Notification <jennifer.gross@pacelabs.com>
Sent: Wednesday, December 21, 2022 3:06 PM
To: Jennifer Gross <jennifer.gross@pacelabs.com>; uprr-sysdat@ghd.com; Hodson, David <David.Hodson@jacobs.com>
Subject: [EXTERNAL] Portland OR-Peninsula Iron Wor (Pace Project # 10632522)



[Paceport Login](#)

Pace Automated Email Notification

This email contains EDDs and Reports generated by Paceport's automated deliverable service. The attached files have been authorized to be sent to you due to the completion of project 10632522. Your Pace project manager has been CC'ed on this email so that you may request any further assistance.

To access this project's page in paceport click on the following link.

<http://paceport.pacelabs.com/ClientPortal/mvc/projectDetails/modelAndView?projectId=10632522&systemID=lims10>

Pace Analytical is pleased to announce that we are now accepting samples for analysis of waste

Pace

The Chain-of-Custody is a **LEGAL DOCUMENT**. All relevant fields must be completed accurately.

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>.

Section A

Required Client Information:

Company: Jacobs for UPRR	
Address: 2020 SW 4th Avenue, Suite 300 Portland, OR 97201	
Email: david.hodson@jacobs.com	
Phone: (510)316-2323	Fax:
Requested Due Date:	

Section B

Required Project Information:

Report To:	Hodson, David
Copy To:	
Purchase Order #:	2903-01
Project Name:	Portland OR-Peninsula Iron Works
Project #:	

Section C

Invoice Information:

Attention:	John DeJong
Company Name:	UPRR
Address:	4315 E Sprague Ave, Spokane Valley, WA 99212
Pace Qunte:	4700001441 (MA-000166-2022)
Pace Project Manager:	jennifer.gross@pacelabs.com,
Pace Profile #:	45173

OR / Portland - Multnomah County

[illegible]

ADDITIONAL COMMENTS	RELINQUISHED BY/AFFILIATION	DATE	TIME	ACCEPTED BY/AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Include 1262 & 1268	JACOBS	10/17/22	1600				
Methods 8082 & 1668 - Require chromatograms	FEECH	11/18/22	945	MONTGOMERY	10/18/22	945	
Page							

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: <i>Jaclyn Warren</i> SIGNATURE of SAMPLER: <i>[Signature]</i>		DATE Signed: <i>10/17/22</i>	TEMP in C Received on ice (Y/N) Custody Sealed (Y/N) Cooler (Y/N) Samples Intact

Pace

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Effective Date: 8/16/2022

Client Name:

Jacobs/Pave MN

Sample Preservation Receipt Form

Project #

40253331

All containers needing preservation have been checked and noted below:

☐ Yes☐ No☐ N/A

Lab Lot# of pH paper:

Lab Std #/ID of preservation (if pH adjusted):

Initial when
completed:Date/
Time:

Pace Lab #	Glass						Plastic						Vials					Jars				General				VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)	
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN 1	GN 2						
001																									-								2.5 / 5
002																									-								2.5 / 5
003																									-								2.5 / 5
004																									-								2.5 / 5
005																									-								2.5 / 5
006																									-								2.5 / 5
007																									-								2.5 / 5
008																									-								2.5 / 5
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019																									-								2.5 / 5
020																									-								2.5 / 5

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____

Headspace in VOA Vials (>6mm): ☐ Yes ☐ No ☒ N/A

*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of

24
10/19/22
Lp

Sample Condition Upon Receipt Form (SCUR)

Client Name: Pace MNProject # 40253331

Additional Comments/Resolution: _____

① 5B03-2.5^{10/19/22 up} ~~5B03-2.5-3.0-1022~~ 10/17/22 1215① ~~15M02-0.0-0.2-1022~~ 10/17/22 ~~1215~~ 10/19/22 up① Samples not
listed on COL~~did not receive "15M03-0.0-0.2-1022"~~ 10/19/22 up

10/19/22 up

Sample Condition Upon Receipt Form (SCUR)

Client Name: _____

Project # 4025333

Additional Comments/Resolution: _____

Therm 110 No corr.

5923 7141 9678 / 2°

5923 7141 9645 / 0°

5923 7141 9667 / 0°

5923 7141 9656 / 0°

Sediment in cooler 10/18/22 mp

① SB02-0.0-0.5-1022 10/17/22 1345

SB02D-0.0-0.5-1022 10/17/22 1350

SB02-0-1.5-1022 10/17/22 1355

SB02-2.5-3.0-1022 10/17/22 1400

① samples not listed on COC

SB03D-0.0-0.5-1022 + SB02-0.0-0.5-1022

received with holes in bags 10/18/22 mp

both samples have water in bag containing the sample + the outer bag.

Both samples in same cooler.

~~SB03-2.5-3.0-1022, sample not listed on COC~~

~~ISM02-0.0-0.2-1022~~ 10/19/22 mp

10/19/22 mp

Page 3 of 4
10/19/22 mp

Sample Condition Upon Receipt Form (SCUR)

Project #:

Client Name:

Jacobs/Pace MN

Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco

☐ Client

☐ Pace

Other:

WO#: 40253331



40253331

Tracking #:

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other

Thermometer Used SR - 110 Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☐ None ☐ Meltwater Only

Cooler Temperature Uncorr: - /Corr: 5 additional

Temp Blank Present: ☐ yes ☒ no Comments: Biological Tissue is Frozen: ☐ yes ☐ no

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:

Date: 10/18/22 Initials: up

Labeled By Initials: mt

Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☐ Yes ☒ No ☐ N/A	2. project 10/19/22 mp
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC:	☒ Yes ☐ No ☐ N/A	4.
Samples Arrived within Hold Time:	☒ Yes ☐ No	5.
- DI VOA Samples frozen upon receipt	☐ Yes ☐ No	Date/Time:
Short Hold Time Analysis (<72hr):	☐ Yes ☒ No	6.
Rush Turn Around Time Requested:	☐ Yes ☒ No	7.
Sufficient Volume:		8.
For Analysis: ☒ Yes ☐ No MS/MSD: ☐ Yes ☒ No ☐ N/A		
Correct Containers Used:	☒ Yes ☐ No	9.
Correct Type: Pace Green Bay, Pace IR, Non-Pace		
Containers Intact:	☐ Yes ☒ No	10. See additional comments 10/18/22 mp
Filtered volume received for Dissolved tests	☐ Yes ☐ No ☒ N/A	11.
Sample Labels match COC:	☐ Yes ☒ No ☐ N/A	12. 015" 13M02-0.0-0.2-1022 10/17/22 14:25" per client 10/19/22 mp
-Includes date/time/ID/Analysis Matrix: 5		
Trip Blank Present:	☐ Yes ☐ No ☒ N/A	13.
Trip Blank Custody Seals Present	☐ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

If checked, see attached form for additional comments ☒

Person Contacted: David Hodson Date/Time: 10/19/22

Comments/ Resolution: Client notified of additional samples received but not listed on the coc and samples received with holes in the bags and ice melt in the samples. Lab instructed to proceed with prep and analysis on all samples.

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample log in

Page 2 of 2
4.44 10/19/22 mp

Internal Transfer Chain of Custody

☒ Samples Pre-Logged into eCOC.

State Of Origin: OR

Cert. Needed: ☐ Yes ☐ No

Owner Received Date: 10/18/2022 Results Requested By: 10/27/2022

Pace Analytical®
www.pacelabs.com

Workorder: 10630039

Workorder Name: Portland OR-Peninsula Iron Wor

Report To: Subcontract To: Requested Analysis:

Jennifer Gross
Pace Analytical Minnesota
1700 Elm Street
Minneapolis, MN 55414
Phone (612)607-1700Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

WO#: 10630039



10630039

Preserved Containers										MISC / ISM (50 Increments) (PACE-)	MISC / Sieving (<2mm) (PACE-GB)											LAB USE ONLY
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Qty																
1	SB06-0.0-0.5-1022	PS	10/17/2022 15:15	10630039001	Solid	1					X											001
2	SB06-1.0-1.5-1022	PS	10/17/2022 15:20	10630039002	Solid	1					X											002
3	SB06-2.5-3.0-1022	PS	10/17/2022 15:25	10630039003	Solid	1					X											003
4	SB04-0.0-0.5-1022	PS	10/17/2022 14:30	10630039004	Solid	1					X											004
5	SB04D-0.0-0.5-1022	PS	10/17/2022 14:35	10630039005	Solid	1					X											005
6	SB04-1.0-1.5-1022	PS	10/17/2022 14:40	10630039006	Solid	1					X											006
7	SB04-2.5-3.0-1022	PS	10/17/2022 14:45	10630039007	Solid	1					X											007
8	SB01-0.0-0.5-1022	PS	10/17/2022 11:00	10630039008	Solid	1					X											008
9	SB01-1.0-1.5-1022	PS	10/17/2022 11:05	10630039009	Solid	1					X											009
10	SB01-2.5-3.0-1022	PS	10/17/2022 11:10	10630039010	Solid	1					X											010
11	SB03-0.0-0.5-1022	PS	10/17/2022 12:00	10630039011	Solid	1					X											011
12	SB03D-0.0-0.5-1022	PS	10/17/2022 12:05	10630039012	Solid	1					X											012
13	SB03-1.0-1.5-1022	PS	10/17/2022 12:10	10630039013	Solid	1					X											013
14	ISM01-0.0-0.2-1022	PS	10/17/2022 12:15	10630039014	Solid	1				X												014
15	ISM03-0.0-0.2-1022	PS	10/17/2022 12:28	10630039015	Solid	1				X												015
16	SB02-0.0-0.5-1022	PS	10/17/2022 13:45	10630039016	Solid	1					X											016
17	SB02D-0.0-0.5-1022	PS	10/17/2022 13:50	10630039017	Solid	1					X											017
18	SB02-1-1.5-1022	PS	10/17/2022 13:55	10630039018	Solid	1					X											018
19	SB02-2.5-3.0-1022	PS	10/17/2022 14:00	10630039019	Solid	1					X											019

Effective Date: 11/16/2022

Sample Condition
Upon Receipt

Client Name:

Pace Green Bay

Project #:

WO#: 10630039

Courier: ☐ FedEx ☐ UPS ☐ USPS ☐ Client
☐ Pace ☐ SpeedDee ☒ Commercial

PM: JMG

Due Date: 12/16/22

CLIENT: UPRR_Jacobs

Tracking Number:

☐ See Exceptions
 ENV-FRM-MIN4-0142
Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ NoPacking Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Thermometer: ☐ T1 (0461) ☐ T2 (1336) ☐ T3 (0459) ☐ T4 (0254) ☐ T5 (0178)
☐ T6 (0235) ☒ T7 (0042) ☐ T8 (0775) ☐ T9 (0727) ☐ 01339252/1710

Biological Tissue Frozen? ☐ Yes ☐ No ☒ N/ATemp Blank? ☐ Yes ☒ No

Type of Ice: ☐ Wet ☐ Blue ☐ Dry ☒ None
☐ Melted

Did Samples Originate in West Virginia? ☐ Yes ☒ NoWere All Container Temps Taken? ☐ Yes ☐ No ☒ N/A

Temp should be above freezing to 6 °C

Cooler temp Read w/Temp Blank: Amb °C

Average Corrected Temp

(no temp blank only): _____ °C

Correction Factor: add 0.1Cooler Temp Corrected w/temp blank: Amb °C
☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 Container
USDA Regulated Soil: (☐ N/A, water sample/other: _____)Date/Initials of Person Examining Contents: 12/14/22 ADC

Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? ☐ Yes ☒ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

Location (Check one): ☐ Duluth ☒ Minneapolis ☐ Virginia	COMMENTS
Chain of Custody Present and Filled Out? ☒ Yes ☐ No	1.
Chain of Custody Relinquished? ☒ Yes ☐ No	2.
Sampler Name and/or Signature on COC? ☐ Yes ☐ No ☒ N/A	3.
Samples Arrived within Hold Time? ☒ Yes ☐ No	4. If fecal: ☐ <8 hrs ☐ >8 hr, <24 ☐ No
Short Hold Time Analysis (<72 hr)? ☐ Yes ☒ No	5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E.coli ☐ BOD/cBOD ☐ Hex Chrom ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested? ☐ Yes ☒ No	6.
Sufficient Sample Volume? ☒ Yes ☐ No	7.
Correct Containers Used? ☒ Yes ☐ No ☐ N/A	8.
-Pace Containers Used? ☐ Yes ☒ No	9.
Containers Intact? ☒ Yes ☐ No	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Field Filtered Volume Received for Dissolved Tests? ☐ Yes ☐ No ☒ N/A	11. If no, write ID/Date/Time of container below: ☐ See Exceptions ENV-FRM-MIN4-0142
Is sufficient information available to reconcile the samples to the COC? Matrix: ☐ Water ☒ Soil ☐ Oil ☐ Other	12. Sample # ☐ NaOH ☐ HNO3 ☐ H2SO4 ☐ Zinc Acetate
All containers needing acid/base preservation have been checked? ☐ Yes ☐ No ☒ N/A	Positive for Residual Chlorine? ☐ Yes ☐ No ☐ See Exceptions ENV-FRM-MIN4-0142
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH >10 Cyanide)	pH Paper Lot #
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS (*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)	Residual Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Headspace in Methyl Mercury Container? ☐ Yes ☐ No ☒ N/A	13.
Extra labels present on soil VOA or WIDRO containers? ☐ Yes ☐ No ☒ N/A	14. ☐ See Exceptions ENV-FRM-MIN4-0142
Headspace in VOA Vials (greater than 6mm)? ☐ Yes ☐ No ☒ N/A	15.
3-Trip Blanks Present? ☐ Yes ☐ No ☒ N/A	Pace Trip Blank Lot # (if purchased):
Trip Blank Custody Seals Present? ☐ Yes ☐ No ☒ N/A	

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: _____

Date/Time: _____

Field Data Required? ☐ Yes ☐ No

Comments/Resolution: _____

Project Manager Review: _____

Date: 12/14/22

NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (see out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled By: ADCLine: 2

Qualtrax ID: 52742

Report No.: 10638496_1668C_L2_dfr

Pace® Analytical Services, LLC

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Page 1 of 1

40254208

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>.

Section A

Required Client Information:

Company	Jacobs for UPRR	
Address:	2020 SW 4th Avenue, Suite 300	
	Portland, OR 97201	
Email	david.hodson@jacobs.com	
Phone	(510)316-2323	Fax.
Requested Due Date		

Section B

Required Project Information:

Report To.	Hodson, David
Copy To	
Purchase Order #	2903-01
Project Name.	Portland OR-Peninsula Iron Works
Project #.	

Section C

Invoice Information:

Attention	John DeJong
Company Name	UPRR
Address	4315 E Sprague Ave, Spokane Valley, WA 99212
Pace Quote	4700001441 (MA-000166-2022)
Pace Project Manager	jennifer.gross@pacelabs.com,
Pace Profile #:	45173

Page : Of

Regulatory Agency

State / Location

OR / Portland - Multnomah County[illegible]

ADDITIONAL COMMENTS	RELINQUISHED BY/AFFILIATION	DATE	TIME	ACCEPTED BY/AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Include 1262 & 1268	Dad Johnson Fedex	11/3/22	1100	Mary Kellner	11/4/22	0945	0° Y Y Y
Methods 8082 & 1668 - Require chromatograms							
Page							

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: DAVID HODSON SIGNATURE of SAMPLER: <i>[Signature]</i>		TEMP in C Received on Ice (Y/N) Custody Sealed Cooler (Y/N) Samples intact
DATE Signed: 11/3/22		

Effective Date: 8/16/2022

Client Name: Jacobs

Sample Preservation Receipt Form

Project # 40254308All containers needing preservation have been checked and noted below
Lab Lot# of pH paper☐ Yes☐ No☒ N/A

Lab Std #/ID of preservation (if pH adjusted).

Initial when
completed:Date/
Time:

Pace Lab #	Glass						Plastic						Vials					Jars				General				VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC							
001																									-							2.5 / 5
002																									-							2.5 / 5
003																									-							2.5 / 5
004																																2.5 / 5
005																																2.5 / 5
006																																2.5 / 5
007																																2.5 / 5
008																																2.5 / 5
009																																2.5 / 5
010																																2.5 / 5
011																																2.5 / 5
012																																2.5 / 5
013																																2.5 / 5
014																																2.5 / 5
015																																2.5 / 5
016																																2.5 / 5
017																																2.5 / 5
018																																2.5 / 5
019																																2.5 / 5
020																																2.5 / 5

Exceptions to preservation check VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other _____

Headspace in VOA Vials (>6mm) ☐ Yes ☒ No ☒ N/A

*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of 2

Sample Condition Upon Receipt Form (SCUR)

Client Name: Jacobs
Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco
☐ Client ☐ Pace Other: _____

Project #:

WO#: 40254308



Tracking #: 5923 7141 9689

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other

Thermometer Used SR - 110 Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☐ None ☐ Meltwater Only

Cooler Temperature Uncorr: — /Corr: 0°

Temp Blank Present: ☐ yes ☒ no

Biological Tissue is Frozen: ☐ yes ☐ no

Person examining contents:

Date: 11/4/22 Initials: mp

Labeled By Initials: mh

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice

Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☐ Yes ☒ No ☐ N/A	2. <u>proj#, 11/4/22 mp</u>
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC:	☒ Yes ☐ No ☐ N/A	4.
Samples Arrived within Hold Time	☒ Yes ☐ No	5.
- DI VOA Samples frozen upon receipt	☐ Yes ☐ No	Date/Time
Short Hold Time Analysis (<72hr):	☐ Yes ☒ No	6.
Rush Turn Around Time Requested:	☐ Yes ☒ No	7.
Sufficient Volume:		8.
For Analysis: ☒ Yes ☐ No MS/MSD ☐ Yes ☒ No ☐ N/A		
Correct Containers Used:	☒ Yes ☐ No	9.
Correct Type: <u>Pace Green Bay</u> Pace IR, Non-Pace		
Containers Intact:	☒ Yes ☐ No	10.
Filtered volume received for Dissolved tests	☐ Yes ☐ No ☒ N/A	11.
Sample Labels match COC:	☐ Yes ☒ No ☐ N/A	12. <u>No collect date or time 11/4/22 mp</u>
-Includes date/time/ID/Analysis Matrix: <u>5</u>		
Trip Blank Present:	☐ Yes ☐ No ☒ N/A	13.
Trip Blank Custody Seals Present	☐ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time _____

Comments/ Resolution: _____

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample log

Page 2 of 2

Internal Transfer Chain of Custody



☒ Samples Pre-Logged into eCOC.

State Of Origin: OR

Cert. Needed: ☐ Yes ☐ No

Workorder: 10632522 Workorder Name: Portland OR-Peninsula Iron Wor

Owner Received Date: 11/4/2022 Results Requested By: 11/15/2022

Report To Subcontract To

Jennifer Gross
Pace Analytical Minnesota
1700 Elm Street
Minneapolis, MN 55414
Phone (612)607-1700

Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

Requested Analysis

WO#: 10632522



10632522

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers					MISC / Sieving (<2mm) (PACE-GB)	LAB USE ONLY
						1	2	3	4	5		
1	SB08-0.5-110322	PS	11/3/2022 08:45	10632522001	Solid	1					X	001
2	SB08-1-110322	PS	11/3/2022 09:10	10632522002	Solid	1					X	002
3	SB08-2.5-110322	PS	11/3/2022 09:20	10632522003	Solid	1					X	003
4												
5												

Transfers		Released By		Received By		Date/Time		Custody Seal		Received on Ice		Samples Intact		Comments	
1		Fedex		11/4/22 09:45		11/4/22 09:45		Y		Y		Y		Forward prepped volume to Pace Mhpls. methods 8082 & possibly 1668. Hold all additional volume for six months.	
2		Mogel		12/10/22 21:00		12/17/22 10:30		Y		Y		Y			
3															

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

This chain of custody is considered complete as is since this information is available in the owner laboratory.

0.9, 11.3, 8.7

2.6, 2.5, 2.8, 3.7

Effective Date: 11/16/2022

Sample Condition
Upon Receipt

Client Name:

Project #:

WO#: 10632522

PM: JMG

Due Date: 02/12/23

CLIENT: UPRR_Jacobs

Courier: ☐ FedEx ☐ UPS ☐ USPS ☐ Client
☐ Pace ☐ Speedee ☒ Commercial☐ See Exceptions

Tracking Number: ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ NoBiological Tissue Frozen? ☐ Yes ☐ No ☒ N/APacking Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ OtherTemp Blank? ☒ Yes ☐ NoThermometer: ☐ T1 (0461) ☐ T2 (1336) ☐ T3 (0459) ☐ T4 (0254) ☐ T5 (0178)
☐ T6 (0235) ☒ T7 (0042) ☐ T8 (0775) ☐ T9 (0727) ☐ 01339252/1710Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☒ None
☐ MeltedDid Samples Originate in West Virginia? ☐ Yes ☒ No JMG 12/19/22 Were All Container Temps Taken? ☐ Yes ☐ No ☒ N/A JMG 12/19/22

Temp should be above freezing to 6°C

Cooler temp Read w/Temp Blank: 3.24, 3.07, 3.6

Average Corrected Temp
(no temp blank only): °C

Correction Factor: +.1

Cooler Temp Corrected w/temp blank: 3.24, 3.17, 3.7

☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 ContainerUSDA Regulated Soil: ☐ N/A, water sample/other: _____

Date/Initials of Person Examining Contents: 12/19/22 JMG

Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? ☐ Yes ☒ NoDid samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

Location (Check one): ☐ Duluth ☒ Minneapolis ☐ Virginia	COMMENTS
Chain of Custody Present and Filled Out? ☒ Yes ☐ No	1.
Chain of Custody Relinquished? ☒ Yes ☐ No	2.
Sampler Name and/or Signature on COC? ☐ Yes ☒ No ☐ N/A	3.
Samples Arrived within Hold Time? ☒ Yes ☐ No	4. If fecal: ☐ <8 hrs ☐ >8 hr, <24 ☐ No
Short Hold Time Analysis (<72 hr)? ☐ Yes ☒ No	5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E.coli ☐ BOD/cBOD ☐ Hex Chrom ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested? ☒ Yes ☐ No	6. late
Sufficient Sample Volume? ☒ Yes ☐ No	7.
Correct Containers Used? ☒ Yes ☐ No ☐ N/A	8.
-Pace Containers Used? ☒ Yes ☐ No	9.
Containers Intact? ☒ Yes ☐ No	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Field Filtered Volume Received for Dissolved Tests? ☐ Yes ☐ No ☒ N/A	11. If no, write ID/Date/Time of container below: CN Containers added to WAs ☐ See Exceptions ENV-FRM-MIN4-0142
Is sufficient information available to reconcile the samples to the COC? ☒ Yes ☐ No	12. Sample #
Matrix: ☐ Water ☒ Soil ☐ Oil ☐ Other	☐ NaOH ☐ HNO3 ☐ H2SO4 ☐ Zinc Acetate
All containers needing acid/base preservation have been checked? ☐ Yes ☐ No ☒ N/A	Positive for Residual Chlorine? ☐ Yes ☐ No ☐ See Exceptions ENV-FRM-MIN4-0142
All containers needing preservation are found to be in compliance with EPA recommendation? ☐ Yes ☐ No ☒ N/A (HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH >10 Cyanide)	pH Paper Lot #
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS ☐ Yes ☐ No ☒ N/A (*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)	Residual Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Headspace in Methyl Mercury Container? ☐ Yes ☐ No ☒ N/A	13.
Extra labels present on soil VOA or WIDRO containers? ☐ Yes ☐ No ☒ N/A	14. ☐ See Exceptions ENV-FRM-MIN4-0142
Headspace in VOA Vials (greater than 6mm)? ☐ Yes ☐ No ☒ N/A	15.
3 Trip Blanks Present? ☐ Yes ☐ No ☒ N/A	Pace Trip Blank Lot # (if purchased):
Trip Blank Custody Seals Present? ☐ Yes ☐ No ☒ N/A	

CLIENT NOTIFICATION/RESOLUTION

Person Contacted:

Date/Time:

Comments/Resolution:

Field Data Required? ☐ Yes ☐ No

Project Manager Review:

Date: 12/19/22

NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled By: NE

Line: 1

Qualtrax ID: 52742

Pace® Analytical Services, LLC

Page 1 of 1
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Report No.....10638496_1668C_L2_dfr

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DC#_Title: ENV-FRM-MIN4-0142 v02_Sample Condition Upon Receipt
(SCUR) Exception Form

Effective Date: 09/22/2022

Workorder #: _____

No Temp Blank		
Read Temp	Corrected Temp	Average temp

PM Notified of Out of Temp Cooler? ☐ Yes ☐ No

If yes, indicate who was contacted, date and time.

If no, indicate reason why.

Multiple Cooler Project? ☐ Yes ☐ No

If anything is OVER 6.0° C, you **MUST** document containers in this section HERE



Tracking Number	Temperature
3429796-4	8.9
3429796-5	11.3
3429796-2	8.7
3429796-1	11.2

Out of Temp Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples

Sample ID	Type Of Preserve	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance After Addition?		Initials
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	

Comments:

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>.

40253359

Section A

Required Client Information:

Company: Jacobs for UPRR
Address: 2020 SW 4th Avenue, Suite 300
Portland, OR 97201
Email: david.hodson@jacobs.com
Phone: (510)316-2323 Fax:
Requested Due Date:

Section B

Required Project Information:

Report To: Hodson, David
Copy To:
Purchase Order #: 2903-01
Project Name: Portland OR-Peninsula Iron Works
Project #:

Section C

Invoice Information:

Attention: John DeJong
Company Name: UPRR
Address: 4315 E Sprague Ave, Spokane Valley, WA 99212
Pace Quote: 4700001441 (MA-000166-2022)
Pace Project Manager: jennifer.gross@pacelabs.com
Pace Profile #: 45173

Page: 1 of 2

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample IDs must be unique	MATRIX Drinking Water Water Waste Water Product Soil/Solid Oil Wipe Air Other Tissue	CODE DW WT WW P SL OL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										ANALYSIS TEST Y/N	Requested Analysis Filtered (Y/N)														MS/MSD Requested	
						START		END				Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	ISM Prep (Pace Green Bay)	Sieve only (Pace Green Bay)		8082A PCBs*	8015D GRO & DRO/ORO	6010D/7400 Total T22 Metals	8260D VOCs	8270E SVOCs	Moisture/Dry Weight	TCLP 6010D/7471B (HOLD)	TCLP 8260D VOCs (HOLD)	TCLP 8270E SVOCs (HOLD)	HOLD ONLY						
						DATE	TIME	DATE	TIME																													
1	ISM04-0.0-0.2-1022					10/18/22	945				1	X								X	X																*MS/SD	
2	ISM05-0.0-0.2-1022					10/18/22	1205				1	X								X	X																	
3	SB10-0.0-0.5-1022					10/18/22	1115				1	X								X	X	X																
4	SB10-1.0-1.5-1022					"	1120				1	X								X	X	X																
5	SB10-2.5-3.0-1022					"	1125				1	X								X	X	X																
6	SB09-0.0-0.5-1022					"	1030				1	X									X	X																
7	SB09-1.0-1.5-1022					"	1035				1	X									X	X																
8	SB09-2.5-3.0-1022					"	1040				1	X									X	X																
9	SB07-0.0-0.5-1022					"	900				1	X									X	X															*MS/SD	
10	SB07-1.0-1.5-1022					"	905				1	X									X	X																
11	SB07-2.5-3.0-1022					"	910				1	X									X	X																
12	SB05-0.0-0.5-1022					"	830				1	X									X	X																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Include 1262 & 1268	Jaclyn Warren / Jacobs	10/18/22	1400				
Methods 8082 & 1668 - Require chromatograms	Fedex	10/19/22	1000	Sam Space	10/19/22	1000	

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:					
SIGNATURE of SAMPLER:					
Jaclyn Warren					
DATE Signed:					

40253359

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>.

Page : 2 of 2

Section A

Section B

Section C

Required Client Information:

Required Project Information:**Invoice Information:**

Company: Jacobs for UPRR	Report To: Hodson, David	Attention: John DeJong
Address: 2020 SW 4th Avenue, Suite 300 Portland, OR 97201	Copy To:	Company Name: UPRR
Email: david.hodson@jacobs.com	Purchase Order #: 2903-01	Address: 4315 E Sprague Ave, Spokane Valley, WA 99212
Phone: (510)316-2323	Project Name: Portland OR-Peninsula Iron Works	Pace Quote: 4700001441 (MA-000166-2022)
Requested Due Date:	Project #:	Pace Project Manager: jennifer.gross@pacelabs.com,
		Pace Profile #: 45173

OR / Portland - Multnomah County

[illegible]

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Include 1262 & 1268	Jaclyn Warren / Jacobs	11/1/22	1400				
Methods 8082 & 1668 - Require chromatograms	Fedex	6/19/22	1000	Sam Force	6/19/22	1000	
Page							

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: <i>Jaclyn Warren</i> SIGNATURE of SAMPLER: <i>[Signature]</i>		TEMP in C Received on ice (Y/N) Custody Sealed Cooler (Y/N) Samples contact (Y/N)
DATE Signed: <i>10/18/22</i>		

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Effective Date: 8/16/2022

Client Name: Pace MW

Sample Preservation Receipt Form

Project # 10253359

All containers needing preservation have been checked and noted below:

☐ Yes☐ No☒ N/A

Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Initial when
completed:Date/
Time:

Pace Lab #	Glass						Plastic						Vials					Jars				General				VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)	
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JG9U	JG9U	WG9U	WPFU	SP5T	ZPLC								GN 1
001																									-							2.5 / 5	
002																									-							2.5 / 5	
003																									-							2.5 / 5	
004																									-							2.5 / 5	
005																									-							2.5 / 5	
006																									-							2.5 / 5	
007																									-							2.5 / 5	
008																									-							2.5 / 5	
009																									-							2.5 / 5	
010																									-							2.5 / 5	
011																									-							2.5 / 5	
012																									-							2.5 / 5	
013																									-							2.5 / 5	
014																									-							2.5 / 5	
015																									-							2.5 / 5	
016																									-							2.5 / 5	
017																									-							2.5 / 5	
018																									-							2.5 / 5	
019																																	2.5 / 5
020																																	2.5 / 5

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other:

Headspace in VOA Vials (>6mm): ☐ Yes ☐ No ☒ N/A

*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of 3

Sample Condition Upon Receipt Form (SCUR)

Client Name: PALE mn

Project # LH253359

Additional Comments/Resolution: _____

① SB-10-1.0-1.5-1022

SB-10-2.5-3.0-1022

SB12-0.0-0.5-1022

SB12-1.0-1.5-1022

SB12D-0.0-0.5-1022

SB10-0.0-0.5-1022

① Samples have melt water in them

Sample Condition Upon Receipt Form (SCUR)

Project #:

Client Name: Pace MN

Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco
☐ Client ☐ Pace Other: _____

Tracking #: 5923 7141 9830 ①

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other _____

Thermometer Used SR - 9 Type of Ice: Wet Blue Dry None ☐ Meltwater Only

Cooler Temperature Uncorr: 3 / Corr: 3.5 ②

Temp Blank Present: ☒ yes ☐ no

Biological Tissue is Frozen: ☐ yes ☐ no

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:

Date: 10/19/22 Initials: SB

Labeled By Initials: NK

Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☒ Yes ☐ No ☐ N/A	2.
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC:	☐ Yes ☐ No ☒ N/A	4. <u>IRNO</u> <u>10/19/22 SB</u>
Samples Arrived within Hold Time:	☒ Yes ☐ No	5.
- DI VOA Samples frozen upon receipt	☐ Yes ☐ No	Date/Time:
Short Hold Time Analysis (<72hr):	☐ Yes ☒ No	6.
Rush Turn Around Time Requested:	☐ Yes ☒ No	7.
Sufficient Volume:		8.
For Analysis: ☒ Yes ☐ No MS/MSD: ☒ Yes ☐ No ☐ N/A		
Correct Containers Used:	☒ Yes ☐ No	9.
Correct Type: Pace Green Bay, Pace IR, <u>Non-Pace</u>		
Containers Intact:	☐ Yes ☒ No	10. <u>See other SCUR page</u> <u>10/19/22 SB</u>
Filtered volume received for Dissolved tests	☐ Yes ☐ No ☒ N/A	11.
Sample Labels match COC:	☒ Yes ☐ No ☐ N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>S</u>		
Trip Blank Present:	☐ Yes ☐ No ☒ N/A	13.
Trip Blank Custody Seals Present	☐ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted: David Hodson

Date/Time: 10/19/22

Comments/ Resolution: ① other tracking #s 5923 7141 9829, 5923 7141 9807, 5923 7141 9818

② other temps in order according to ①: 2.5 → 3, 0.5 → 2, 1 → 1.5
Client notified of samples received with holes in the bags and ice melt in the samples. Lab instructed to proceed with prep and analysis on all samples. JMG

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logir

Page 2 of 3

Internal Transfer Chain of Custody

☒ Samples Pre-Logged into eCOC.

State Of Origin: OR

Cert. Needed: ☐ Yes ☐ No

Owner Received Date: 10/19/2022 Results Requested By: 10/28/2022

40253359



Workorder: 10630317

Workorder Name: Portland OR-Peninsula Iron Wor

Report To: Subcontract To: Requested Analysis:

Jennifer Gross
Pace Analytical Minnesota
1700 Elm Street
Minneapolis, MN 55414
Phone (612)607-1700

Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

WO#: 10630317



10630317

Preserved Containers										MISC / ISM (50 Increments) (PACE-)	MISC / Sieving (<2mm) (PACE-GB)											LAB USE ONLY
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Unpreserved																
1	ISM04-0.0-0.2-1022	RQS	10/18/2022 09:45	10630317001	Solid	1					X											001
2	ISM05-0.0-0.2-1022	PS	10/18/2022 12:05	10630317002	Solid	1					X											002
3	SB10-0.0-0.5-1022	PS	10/18/2022 11:15	10630317003	Solid	1						X										003
4	SB10-1.0-1.5-1022	PS	10/18/2022 11:20	10630317004	Solid	1						X										004
5	SB10-2.5-3.0-1022	PS	10/18/2022 11:25	10630317005	Solid	1						X										005
6	SB09-0.0-0.5-1022	PS	10/18/2022 10:30	10630317006	Solid	1						X										006
7	SB09-1.0-1.5-1022	PS	10/18/2022 10:35	10630317007	Solid	1						X										007
8	SB09-2.5-3.0-1022	PS	10/18/2022 10:40	10630317008	Solid	1						X										008
9	SB07-0.0-0.5-1022	RQS	10/18/2022 09:00	10630317009	Solid	1						X										009
10	SB07-1.0-1.5-1022	PS	10/18/2022 09:05	10630317010	Solid	1						X										010
11	SB07-2.5-3.0-1022	PS	10/18/2022 09:10	10630317011	Solid	1						X										011
12	SB05-0.0-0.5-1022	PS	10/18/2022 08:30	10630317012	Solid	1						X										012
13	SB05-1.0-1.5-1022	PS	10/18/2022 08:35	10630317013	Solid	1						X										013
14	SB05-2.5-3.0-1022	PS	10/18/2022 08:40	10630317014	Solid	1						X										014
15	SB12-0.0-0.5-1022	RQS	10/18/2022 12:30	10630317015	Solid	1						X										015
16	SB12D-0.0-0.5-1022	PS	10/18/2022 12:35	10630317016	Solid	1						X										016
17	SB12-1.0-1.5-1022	PS	10/18/2022 12:40	10630317017	Solid	1						X										017
18	SB12-2.5-3.0-1022	PS	10/18/2022 12:45	10630317018	Solid	1						X										018

41253359

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	Feder	10/19/22 1000	Sym	10/19/22 1000	Forward prepped volume to Pace Mnpls, methods 8082 & possibly 1668.
2	Timothy Ayre	11/11/22 1700			Hold all additional volume for six months.
3					

Cooler Temperature on Receipt 3.5, 25°C Custody Seal ☒ Y or N Received on Ice ☒ Y or N Samples Intact Y or ☒ N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

0.4, 1.4, 7.2, 10.9

M Pau

15:30

WMM

Forwarding all Volume that was
Sieved.

ISM sample is 403 jms.

Car 11/1/22

DC#_Title: ENV-FRM-MIN4-0150 v10_Sample Condition Upon Receipt (SCUR)

Effective Date:

Sample Condition Upon Receipt	Client Name: <u>Pau Greenberg</u>	Project #: WO# : 10630317
Courier: ☐ FedEx ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ Speedee ☒ Commercial <u>Walter</u>		PM: JMG Due Date: 11/16/22 CLIENT: UPRR_Jacobs
Tracking Number: _____	☐ See Exceptions	

ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No	Seals Intact? ☒ Yes ☐ No	Biological Tissue Frozen? ☐ Yes ☐ No ☒ N/A
Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other	Temp Blank? ☒ Yes ☐ No	Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☐ None
Thermometer: ☐ T1 (0461) ☐ T2 (1336) ☒ T3 (0459) ☐ T4 (0254) ☐ T5 (0178) ☐ T6 (0235) ☐ T7 (0042) ☐ T8 (0775) ☐ 01339252/1710		☐ Melted

Did Samples Originate in West Virginia? ☐ Yes ☐ No	Were All Container Temps Taken? ☐ Yes ☐ No ☐ N/A
Temp should be above freezing to 6 °C	
Correction Factor: <u>1.00</u>	Cooler Temp Read w/Temp Blank: <u>04.14.27°C</u>
	Cooler Temp Corrected w/Temp Blank: <u>04.14.27°C</u>
	Average Corrected Temp (no temp blank only): _____ °C
	☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 Container

USDA Regulated Soil: ☐ N/A, water sample/other: _____Date/Initials of Person Examining Contents: 01/12/22Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? ☐ Yes ☒ NoDid samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

Location (Check one): ☐ Duluth ☒ Minneapolis ☐ Virginia	COMMENTS
Chain of Custody Present and Filled Out? ☒ Yes ☐ No	1.
Chain of Custody Relinquished? ☒ Yes ☐ No	2.
Sampler Name and/or Signature on COC? ☒ Yes ☐ No ☒ N/A	3.
Samples Arrived within Hold Time? ☒ Yes ☐ No	4. If fecal: ☐ <8 hrs ☐ >8 hr, <24 ☐ No
Short Hold Time Analysis (<72 hr)? ☐ Yes ☒ No	5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E.coli ☐ BOD/cBOD ☐ Hex Chrom ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other _____
Rush Turn Around Time Requested? ☒ Yes ☐ No	6. <u>late</u>
Sufficient Sample Volume? ☒ Yes ☐ No	7.
Correct Containers Used? ☒ Yes ☐ No ☐ N/A	8.
-Pace Containers Used? ☐ Yes ☒ No	9.
Containers Intact? ☒ Yes ☐ No	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Field Filtered Volume Received for Dissolved Tests? ☐ Yes ☐ No ☒ N/A	11. If no, write ID/Date/Time of container below: ☐ See Exceptions ENV-FRM-MIN4-0142
Is sufficient information available to reconcile the samples to the COC? Matrix: ☐ Water ☒ Soil ☐ Oil ☐ Other	12. Sample # ☐ NaOH ☐ HNO3 ☐ H2SO4 ☐ Zinc Acetate Positive for Residual Chlorine? ☐ Yes ☐ No ☐ See Exceptions ENV-FRM-MIN4-0142 pH Paper Lot # Residual Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
All containers needing acid/base preservation have been checked? ☐ Yes ☐ No ☒ N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation? ☐ Yes ☐ No ☒ N/A (HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH >10 Cyanide)	14. ☐ See Exceptions ENV-FRM-MIN4-0142
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS (*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)	15. Pace Trip Blank Lot # (if purchased): _____
Headspace in Methyl Mercury Container? ☐ Yes ☐ No ☒ N/A	
Extra labels present on soil VOA or WIDOR containers? ☐ Yes ☐ No ☒ N/A	
Headspace in VOA Vials (greater than 6mm)? ☐ Yes ☐ No ☒ N/A	
3 Trip Blanks Present? ☐ Yes ☐ No ☒ N/A	
Trip Blank Custody Seals Present? ☐ Yes ☐ No ☒ N/A	

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: _____

Date/Time: _____

Comments/Resolution: _____

Field Data Required? ☐ Yes ☐ NoProject Manager Review: Jenni Gross

Date: 11/2/22

NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled By: NF

Page 615 of 680

41253458

Pace

Page : Of 2

OR / Portland - Multnomah County

[illegible]

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Include 1262 & 1268 Methods 8082 & 1668 - Require chromatograms	Burlygn Warrington <i>[Signature]</i>	6/19/22	15:00	1 X			

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: Jackson Warren SIGNATURE of SAMPLER:  DATE Signed: 10/19/22		TEMP in C Received on ice (Y/N) Custody Sealed Cooler (Y/N) Samples intact (Y/N)

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4053455

Pace

Page: 2 Of 2

Section A	Section B	Section C	Page: 1 Of 2
Required Client Information:	Required Project Information:	Invoice Information:	
Company: Jacobs for UPRR	Report To: Hodson, David	Attention: John DeJong	
Address: 2020 SW 4th Avenue, Suite 300	Copy To:	Company Name: UPRR	
Portland, OR 97201		Address: 4315 E Sprague Ave, Spokane Valley, WA 99212	Regulatory Agency: WSP
Email: david.hodson@jacobs.com	Purchase Order #: 2903-01	Pace Quote: 4700001441 (MA-000166-2022)	
Phone: (510)316-2323 Fax:	Project Name: Portland OR-Peninsula Iron Works	Pace Project Manager: jennifer.gross@pacelabs.com,	State / Location: WA
Requested Due Date:	Project #:	Pace Profile #: 45173	OR / Portland - Multnomah County

[illegible]

	ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Include 1262 & 1268		Karlyn Warren / Jacobs	10/9/22	500				
Methods 8082 & 1668 - Require chromatograms								
Fager								

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: <i>Jacklyn Whiten</i> SIGNATURE of SAMPLER: <i>[Signature]</i>		TEMP in C Received on Ice (Y/N) Custody Sealed Cooler (Y/N) Samples Intact
DATE Signed: <i>10/19/22</i>		

Page 617 of 680

Effective Date: 8/16/2022

Client Name: Pace MN

Sample Preservation Receipt Form

Project # 41053455

All containers needing preservation have been checked and noted below:

☐ Yes☐ No☒ N/A

Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Initial when
completed:Date/
Time:

Pace Lab #	Glass						Plastic						Vials					Jars				General				VOA Vials (>6mm) *	H ₂ SO ₄ pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO ₃ pH ≤2	pH after adjusted	Volume (mL)
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN 1	GN 2					
001																																2.5 / 5
002																																2.5 / 5
003																																2.5 / 5
004																																2.5 / 5
005																																2.5 / 5
006																																2.5 / 5
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015																																2.5 / 5
016																																2.5 / 5
017																																2.5 / 5
018																																2.5 / 5
019																																2.5 / 5
020																																2.5 / 5

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____

Headspace in VOA Vials (>6mm) : ☐ Yes ☐ No ☒ N/A

*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H ₂ SO ₄	BP3N	250 mL plastic HNO ₃	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H ₂ SO ₄	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H ₂ SO ₄	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of ____

Client Name:

Page MN

Sample Preservation Receipt Form

Project #:

Receipt Form 41253455

Pace Lab #	AG1U	BG1U	Glass				Plastic						Vials					Jars				General				VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)			
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN 1	GN 2								
021																									1										2.5 / 5
022																																			2.5 / 5
023																																			2.5 / 5
024																																			2.5 / 5
025																																			2.5 / 5
026																																			2.5 / 5
027																																			2.5 / 5
028																																			2.5 / 5
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041																																			2.5 / 5
042																																			2.5 / 5
043																																			2.5 / 5
044																																			2.5 / 5
045																																			2.5 / 5
046																																			2.5 / 5
047																																			2.5 / 5
048																																			2.5 / 5

Page 2 of 2

Sample Condition Upon Receipt Form (SCUR)

Client Name: Pace MN Project # 40253455Additional Comments/Resolution: ① 5923 7141 9760, 5923 7141 9770② ^{SR-9} 3 → 3.5, ^{SR-9} 3.5 → 4, ^{SR-9} 3 → 3.5
5923 7141 9792Page 4 of 4

Internal Transfer Chain of Custody



☒ Samples Pre-Logged into eCOC.

State Of Origin: OR

Cert. Needed: ☐ Yes ☐ No

Owner Received Date: 10/20/2022 Results Requested By: 10/31/2022

L0253455
Pace Analytical®
www.pacelabs.com

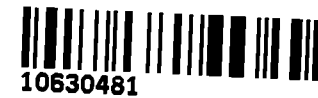
Workorder: 10630481 Workorder Name: Portland OR-Peninsula Iron Wor

Report To: Subcontract To: Requir

Jennifer Gross
Pace Analytical Minnesota
1700 Elm Street
Minneapolis, MN 55414
Phone (612)607-1700

Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

WO#: 10630481



Preserved Containers										MISC / ISM (50 Increments) (PACE-GB)	MISC / Sieving (<2mm) (PACE-GB)											LAB USE ONLY
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	PLU																
1	SB14-0.0-0.5-1022	PS	10/19/2022 08:00	10630481001	Solid	1					X											001
2	SB14-1.0-1.5-1022	PS	10/19/2022 08:05	10630481002	Solid	1					X											002
3	SB14-2.5-3.0-1022	PS	10/19/2022 09:10	10630481003	Solid	1					X											003
4	SB13-0.0-0.5-1022	PS	10/19/2022 10:00	10630481004	Solid	1					X											004
5	SB13-1.0-1.5-1022	PS	10/19/2022 10:05	10630481005	Solid	1					X											005
6	SB13-2.5-3.0-1022	PS	10/19/2022 10:10	10630481006	Solid	1					X											006
7	SB11-0.0-0.5-1022	RQS	10/19/2022 11:00	10630481007	Solid	1					X											007
8	SB11D-0.0-0.5-1022	PS	10/19/2022 11:05	10630481008	Solid	1					X											008
9	SB11-1.0-1.5-1022	PS	10/19/2022 11:10	10630481009	Solid	1					X											009
10	SB11-2.5-3.0-1022	PS	10/19/2022 11:15	10630481010	Solid	1					X											010
11	SB15-0.0-0.5-1022	PS	10/19/2022 12:00	10630481011	Solid	1					X											011
12	SB15-1.0-1.5-1022	PS	10/19/2022 12:05	10630481012	Solid	1					X											012
13	SB15-2.5-3.0-1022	PS	10/19/2022 12:10	10630481013	Solid	1					X											013
14	SB16-0.0-0.5-1022	PS	10/19/2022 13:00	10630481014	Solid	1					X											014
15	SB16-1.0-1.5-1022	PS	10/19/2022 13:05	10630481015	Solid	1					X											015
16	SB16-2.5-3.0-1022	PS	10/19/2022 13:10	10630481016	Solid	1					X											016
17	ISM02-0.0-0.2-1022	PS	10/19/2022 14:00	10630481017	Solid	1					X											017
18	ISM07-0.0-0.2-1022	PS	10/19/2022 11:25	10630481018	Solid	1					X											018
19	ISM07T-0.0-0.2-1022	PS	10/19/2022 11:30	10630481019	Solid	1					X											019

Effective Date: 11/16/2022

Sample Condition Upon Receipt	Client Name: <u>Pan Ocean Bay</u>	Project # WO#: 10630481	PM: JMG Due Date: 02/17/23 CLIENT: UPRR_Jacobs
Courier: ☐ FedEx ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ Speedee ☒ Commercial <u>WALCO</u>		☐ See Exception:	

Tracking Number: _____ ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ No	Biological Tissue Frozen? ☐ Yes ☐ No ☒ N/A
Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other	Temp Blank? ☒ Yes ☐ No
Thermometer: ☐ T1 (0461) ☐ T2 (1336) ☐ T3 (0459) ☐ T4 (0254) ☐ T5 (0178) ☐ T6 (0235) ☒ T7 (0042) ☐ T8 (0775) ☐ T9(0727) ☐ 01339252/1710	Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☒ None ☐ Melted

Did Samples Originate in West Virginia? ☐ Yes ☒ No JMG 12/19/22	Were All Container Temps Taken? ☐ Yes ☐ No ☒ N/A JMG 12/19/22
Temp should be above freezing to 6 °C Cooler temp Read w/Temp Blank: <u>2.524, 2.0713.6</u>	
Correction Factor: <u>+1</u> Cooler Temp Corrected w/temp blank: <u>1.62, 2.928 3.1</u>	
Average Corrected Temp (no temp blank only): _____ °C	
☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 Container	

USDA Regulated Soil: (☐ N/A, water sample/other: _____) **Date/Initials of Person Examining Contents:** 12/19/22 JMG

Did samples originate in a quarantine zone within the United States: AL, AR, AZ CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check maps)? ☐ Yes ☒ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

Location (Check one): ☐ Duluth ☒ Minneapolis ☐ Virginia	COMMENTS
Chain of Custody Present and Filled Out?	☒ Yes ☐ No 1.
Chain of Custody Relinquished?	☒ Yes ☐ No 2.
Sampler Name and/or Signature on COC?	☐ Yes ☒ No ☐ N/A 3.
Samples Arrived within Hold Time?	☒ Yes ☐ No 4. If fecal: ☐ <8 hrs ☐ >8 hr, <24 ☐ No
Short Hold Time Analysis (<72 hr)?	☐ Yes ☒ No 5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E.coli ☐ BOD/cBOD ☐ Hex Chrom ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other
Rush Turn Around Time Requested?	☒ Yes ☐ No 6. <u>late</u>
Sufficient Sample Volume?	☒ Yes ☐ No 7.
Correct Containers Used?	☒ Yes ☐ No ☐ N/A 8.
-Pace Containers Used?	☐ Yes ☒ No
Containers Intact?	☒ Yes ☐ No 9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes ☐ No ☒ N/A 10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	☒ Yes ☐ No 11. If no, write ID/Date/Time of container below: <u>6N containers added to COC/WO</u> ☐ See Exceptions ENV-FRM-MIN4-0142
Matrix: ☐ Water ☒ Soil ☐ Oil ☐ Other	
All containers needing acid/base preservation have been checked?	☐ Yes ☐ No ☒ N/A 12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	☐ Yes ☐ No ☒ N/A ☐ NaOH ☐ HNO3 ☐ H2SO4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxins/PFAS	☐ Yes ☐ No ☒ N/A Positive for Residual Chlorine? ☐ Yes ☐ No ☐ See Exceptions ENV-FRM-MIN4-0142
(*If adding preservative to a container, it must be added to associated field and equipment blanks--verify with PM first.)	pH Paper Lot #
	Residual Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Headspace in Methyl Mercury Container?	☐ Yes ☐ No ☒ N/A 13.
Extra labels present on soil VOA or WIDRO containers?	☐ Yes ☐ No ☒ N/A 14. ☐ See Exceptions ENV-FRM-MIN4-0142
Headspace in VOA Vials (greater than 6mm)?	☐ Yes ☐ No ☒ N/A
3 Trip Blanks Present?	☐ Yes ☐ No ☒ N/A 15.
Trip Blank Custody Seals Present?	☐ Yes ☐ No ☒ N/A Pace Trip Blank Lot # (if purchased): _____

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Jenni Gross Date: 12/19/22

NOTE: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled By: NK Line: 7



DC#_Title: ENV-FRM-MIN4-0142 v02_Sample Condition Upon Receipt
(SCUR) Exception Form

Effective Date: 09/22/2022

Workorder #: _____

No Temp Blank		
Read Temp	Corrected Temp	Average temp

PM Notified of Out of Temp Cooler? ☐ Yes ☐ No

If yes, indicate who was contacted, date and time.

If no, indicate reason why.

Multiple Cooler Project? ☐ Yes ☐ No

If anything is OVER 6.0° C, you MUST document containers in this section HERE



Tracking Number	Temperature
3424796-4	8.9
3424796-5	11.3
3424796-2	8.7
3424796-1	11.2

Out of Temp Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples

Sample ID	Type Of Preserve	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance After Addition?		Initials
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	
								☐ Yes	☐ No	

Comments:

Sample Condition Upon Receipt Form (SCUR)

Project #:

Client Name: Pace MN

Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Walto
☐ Client ☐ Pace Other: _____

Tracking #: 5923 7141 9781 ①

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other _____

Thermometer Used SR - 9 Type of Ice: Wet Blue Dry None ☐ Meltwater Only

Cooler Temperature Uncorr: 5 /Corr: 5.5 ②

Temp Blank Present: ☒ yes ☐ no

Biological Tissue is Frozen: ☐ yes ☐ no

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:

Date: 10/20/22 Initials: SG

Labeled By Initials: UP

Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☒ Yes ☐ No ☐ N/A	2.
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC:	☐ Yes ☐ No ☒ N/A	4. <u>IRWO</u> <u>10/20/22 SG</u>
Samples Arrived within Hold Time:	☒ Yes ☐ No	5.
- DI VOA Samples frozen upon receipt	☐ Yes ☐ No	Date/Time:
Short Hold Time Analysis (<72hr):	☐ Yes ☒ No	6.
Rush Turn Around Time Requested:	☐ Yes ☒ No	7.
Sufficient Volume:		8.
For Analysis: ☒ Yes ☐ No MS/MSD: ☒ Yes ☐ No ☐ N/A		
Correct Containers Used:	☒ Yes ☐ No	9.
Correct Type: Pace Green Bay, Pace IR, <u>(Non-Pace)</u>		
Containers Intact:	☒ Yes ☐ No	10.
Filtered volume received for Dissolved tests	☐ Yes ☐ No ☒ N/A	11.
Sample Labels match COC:	☐ Yes ☒ No ☐ N/A	12. <u>IRWO COC 001 Time "0800", client COC matches sample time "0900"</u> <u>IRWO COC 002 Time "0805", client COC matches sample time "0905"</u> <u>10/20/22 SG</u>
-Includes date/time/ID/Analysis Matrix: <u>S</u>		
Trip Blank Present:	☐ Yes ☐ No ☒ N/A	13.
Trip Blank Custody Seals Present	☐ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logi

Page 2 of 3 10/20/22 SG
304



Pace Analytical Services, LLC
1700 Elm Street, Suite 200
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444
www.pacelabs.com

Reporting Flags

- A = Reporting Limit based on signal to noise (EDL)
- B = Less than 10x higher than method blank level
- C = Result obtained from confirmation analysis
- D = Result obtained from analysis of diluted sample
- E = Exceeds calibration range
- H2 = Extracted outside of holding time
- I = Isotope ratio out of specification
- J = Estimated value
- L = Suppressive interference, analyte may be biased low
- Nn = Value obtained from additional analysis
- P = PCDE Interference
- R = Recovery outside target range
- S = Peak saturated
- U = Analyte not detected
- V = Result verified by confirmation analysis
- X = %D Exceeds limits
- Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



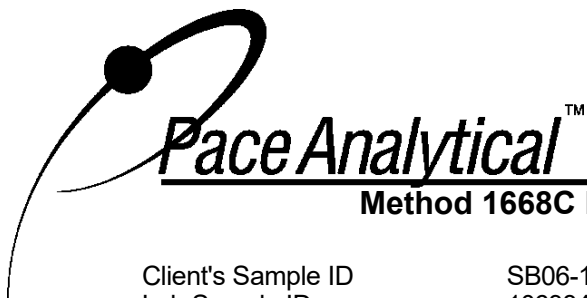
Pace Analytical Services, LLC
1700 Elm Street, Suite 200
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444
www.pacelabs.com

Appendix B

Sample Analysis Summary

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - UPRR_Jacobs

Client's Sample ID	SB06-1.0-1.5-1022		
Lab Sample ID	10638496001		
Filename	P230112A_10		
Injected By	AH5		
Total Amount Extracted	10.4 g	Matrix	Solid
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	10/17/2022 15:20
ICAL ID	P230112A04	Received	10/18/2022 09:45
CCal Filename(s)	P230112A_03	Extracted	01/03/2023 13:30
Method Blank ID	BLANK-103296	Analyzed	01/12/2023 18:26

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	8.635	3.58	2.0	1.12	56
13C-4-MoCB	3	11.360	3.04	2.0	1.17	59
13C-2,2'-DiCB	4	11.643	1.60	2.0	1.17	59
13C-4,4'-DiCB	15	18.593	1.50	2.0	1.22	61
13C-2,2',6-TrCB	19	15.354	0.94	2.0	1.25	62
13C-3,4,4'-TrCB	37	26.283	1.01	2.0	1.30	65
13C-2,2',6,6'-TeCB	54	18.904	0.80	2.0	1.06	53
13C-3,4,4',5-TeCB	81	33.374	0.81	2.0	1.44	72
13C-3,3',4,4'-TeCB	77	33.946	0.80	2.0	1.39	69
13C-2,2',4,6,6'-PeCB	104	24.968	1.52	2.0	1.17	58
13C-2,3,3',4,4'-PeCB	105	37.550	1.62	2.0	1.38	69
13C-2,3,4,4',5-PeCB	114	36.896	1.59	2.0	1.32	66
13C-2,3',4,4',5-PeCB	118	36.360	1.56	2.0	1.30	65
13C-2,3',4,4',5'-PeCB	123	36.008	1.56	2.0	1.31	66
13C-3,3',4,4',5-PeCB	126	40.720	1.61	2.0	1.29	65
13C-2,2',4,4',6,6'-HxCB	155	30.961	1.24	2.0	1.26	63 DN2
13C-HxCB (156/157)	156/157	43.761	1.23	4.0	2.52	63 DN2
13C-2,3',4,4',5,5'-HxCB	167	42.587	1.19	2.0	1.39	69 DN2
13C-3,3',4,4',5,5'-HxCB	169	47.047	1.41	2.0	1.19	60 DN2
13C-2,2',3,4',5,6,6'-HpCB	188	36.864	1.07	2.0	1.41	70 DN2
13C-2,3,3',4,4',5,5'-HpCB	189	49.605	0.99	2.0	1.21	60 DN2
13C-2,2',3,3',5,5',6,6'-OxCB	202	42.351	0.89	2.0	1.37	68
13C-2,3,3',4,4',5,5',6-OxCB	205	52.213	0.91	2.0	1.18	59
13C-2,2',3,3',4,4',5,5',6-NoCB	206	53.937	0.84	2.0	1.14	57
13C-2,2',3,3',4,4',5,5',6-NoCB	208	49.109	0.78	2.0	1.25	62
13C-DeCB	209	55.553	0.68	2.0	1.04	52
CleanupStandards						
13C-2,4,4'-TrCB	28	21.951	1.08	2.0	1.12	56
13C-2,3,3',5,5'-PeCB	111	34.008	1.58	2.0	1.03	52
13C-2,2',3,3',5,5',6-HpCB	178	39.982	1.05	2.0	0.874	44
Recovery Standards						
13C-2,5-DiCB	9	14.039	1.61	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	23.931	0.76	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	31.208	1.55	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	39.546	1.38	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OxCB	194	51.717	0.96	2.0	NA	NA

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Pace AnalyticalTM

Pace Analytical Services, LLC.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID SB06-1.0-1.5-1022
Lab Sample ID 10638496001
Filename P230112A_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
1		8.669	2.98	18.1 BJ	---	4.56
2		11.146	2.67	11.0 J	---	3.37
3		11.372	3.11	28.9 B	---	4.76
4		11.654	1.79	28.3	---	7.48
5		---	---	ND	---	2.67
6		14.536	1.71	16.4 J	---	3.80
7		14.271	1.48	4.81 J	---	2.89
8		15.045	1.53	74.3	---	6.20
9		14.061	1.35	5.73 J	---	3.20
10		---	---	ND	---	3.68
11		17.896	1.68	159	---	106
12	12/13	18.228	1.49	20.3 J	---	6.45
13	12/13	18.228	1.49	(20.3) J	---	6.45
14		---	---	ND	---	3.28
15		18.604	1.55	132	---	5.65
16		18.526	0.97	42.6	---	6.94
17		18.018	1.03	48.4	---	7.13
18	18/30	17.543	1.03	99.8	---	14.3
19		15.387	1.03	15.1 J	---	3.10
20	20/28	21.982	1.04	203	---	22.9
21	21/33	22.230	1.10	109	---	13.7
22		22.663	1.09	78.2	---	10.2
23		---	---	ND	---	2.98
24		---	---	ND	---	3.95
25		21.317	1.21	--- IJ	15.6	3.19
26	26/29	21.054	0.97	34.4 J	---	9.52
27		18.261	0.98	8.59 J	---	4.15
28	20/28	21.982	1.04	(203)	---	22.9
29	26/29	21.054	0.97	(34.4) J	---	9.52
30	18/30	17.543	1.03	(99.8)	---	14.3
31		21.657	1.09	175	---	19.5
32		19.121	1.06	41.4	---	6.63
33	21/33	22.230	1.10	(109)	---	13.7
34		---	---	ND	---	4.17
35		25.880	1.08	12.4 J	---	4.05
36		24.365	0.89	3.15 J	---	2.88
37		26.298	1.05	176	---	7.06
38		---	---	ND	---	2.60
39		24.813	1.16	3.10 J	---	3.08
40	40/41/71	26.128	0.73	238	---	11.1
41	40/41/71	26.128	0.73	(238)	---	11.1
42		25.587	0.85	106	---	5.01
43	43/73	---	---	ND	---	10.4
44	44/47/65	25.014	0.79	626	---	25.0
45	45/51	22.044	0.76	54.1	---	10.4
46		22.369	0.86	12.8 J	---	3.95
47	44/47/65	25.014	0.79	(626)	---	25.0
48		24.798	0.85	55.4	---	3.88

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612-607-6444

Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID SB06-1.0-1.5-1022
Lab Sample ID 10638496001
Filename P230112A_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
49	49/69	24.504	0.79	403	---	9.43
50	50/53	21.333	0.75	57.2	---	20.8
51	45/51	22.044	0.76	(54.1)	---	10.4
52		23.962	0.78	4470	---	18.0
53	50/53	21.333	0.75	(57.2)	---	20.8
54		---	---	ND	---	5.20
55		29.584	0.85	9.21 J	---	8.14
56		30.110	0.77	422	---	5.30
57		---	---	ND	---	2.22
58		---	---	ND	---	2.70
59	59/62/75	25.370	0.83	54.8 J	---	6.94
60		30.326	0.81	167	---	20.9
61	61/70/74/76	29.058	0.81	2080	---	15.6
62	59/62/75	25.370	0.83	(54.8) J	---	6.94
63		28.733	0.82	28.6	---	7.66
64		26.360	0.79	487	---	14.0
65	44/47/65	25.014	0.79	(626)	---	25.0
66		29.414	0.82	760	---	12.2
67		28.470	0.77	20.3	---	2.23
68		---	---	ND	---	8.55
69	49/69	24.504	0.79	(403)	---	9.43
70	61/70/74/76	29.058	0.81	(2080)	---	15.6
71	40/41/71	26.128	0.73	(238)	---	11.1
72		27.279	0.81	24.3	---	2.32
73	43/73	---	---	ND	---	10.4
74	61/70/74/76	29.058	0.81	(2080)	---	15.6
75	59/62/75	25.370	0.83	(54.8) J	---	6.94
76	61/70/74/76	29.058	0.81	(2080)	---	15.6
77		33.977	0.78	599	---	3.39
78		32.925	0.99	---	3.72 IJ	3.33
79		32.337	0.85	230	---	2.62
80		30.791	1.00	---	4.67 IJ	2.46
81		33.389	1.01	---	15.4 IJ	2.30
82		33.575	1.57	1040	---	4.87
83		31.719	1.55	2060	---	3.18
84		29.274	1.57	4290	---	3.21
85	85/116/117	33.095	1.38	1510	---	8.09
86	86/87/97/108/119/125	32.446	1.56	26200	---	15.6
87	86/87/97/108/119/125	32.446	1.56	(26200)	---	15.6
88	88/91	29.058	1.57	1210	---	6.26
89		29.754	1.49	76.1	---	3.75
90	90/101/113	31.239	1.58	137000	---	11.5
91	88/91	29.058	1.57	(1210)	---	6.26
92		30.620	1.59	16000	---	4.31
93	93/98/100/102	28.517	1.54	389	---	11.9
94		27.666	1.56	35.6	---	3.53
95		28.130	1.56	79800	---	14.5
96		25.354	1.55	44.0	---	4.15

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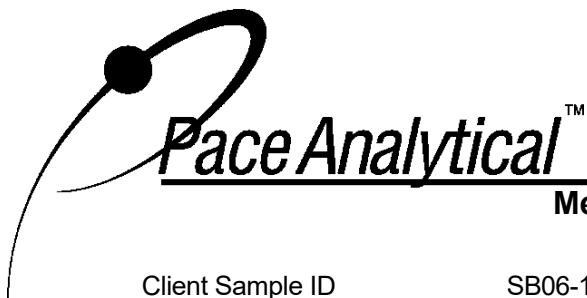
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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID SB06-1.0-1.5-1022
Lab Sample ID 10638496001
Filename P230112A_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
97	86/87/97/108/119/125	32.446	1.56	(26200)	---	15.6
98	93/98/100/102	28.517	1.54	(389)	---	11.9
99		31.842	1.59	4800	---	4.93
100	93/98/100/102	28.517	1.54	(389)	---	11.9
101	90/101/113	31.239	1.58	(137000)	---	11.5
102	93/98/100/102	28.517	1.54	(389)	---	11.9
103		27.449	1.42	89.6	---	2.98
104		---	---	ND	---	3.30
105		37.567	1.58	7480	---	4.43
106		---	---	ND	---	3.09
107	107/124	35.673	1.58	1570	---	4.72
108	86/87/97/108/119/125	32.446	1.56	(26200)	---	15.6
109		35.907	1.60	2360	---	2.64
110	110/115	33.265	1.56	102000	---	14.0
111		34.023	1.39	28.4	---	2.85
112		---	---	ND	---	3.88
113	90/101/113	31.239	1.58	(137000)	---	11.5
114		36.896	1.50	183	---	3.68
115	110/115	33.265	1.56	(102000)	---	14.0
116	85/116/117	33.095	1.38	(1510)	---	8.09
117	85/116/117	33.095	1.38	(1510)	---	8.09
118		36.377	1.59	47400	---	9.92
119	86/87/97/108/119/125	32.446	1.56	(26200)	---	15.6
120		34.503	1.63	244	---	3.34
121		---	---	ND	---	3.51
122		36.712	1.54	218	---	3.46
123		36.025	1.61	328	---	3.28
124	107/124	35.673	1.58	(1570)	---	4.72
125	86/87/97/108/119/125	32.446	1.56	(26200)	---	15.6
126		40.736	1.62	1820	---	2.75
127		39.110	1.51	127	---	3.25
128	128/166	40.821	1.26	44500 DN2	---	32.9
129	129/138/163	39.547	1.26	684000 DN2	---	62.1
130		38.876	1.25	23500 DN2	---	16.2
131		35.992	1.24	3880 DN2	---	21.9
132		36.445	1.24	180000 DN2	---	27.3
133		36.981	1.26	6100 DN2	---	14.8
134	134/143	35.355	1.26	22000 DN2	---	38.7
135	135/151	34.210	1.24	219000 DN2	---	50.6
136		31.704	1.25	64700 DN2	---	22.9
137		39.094	1.15	2370 DN2	---	18.6
138	129/138/163	39.547	1.26	(684000) DN2	---	62.1
139	139/140	35.791	1.18	1560 DN2	---	27.5
140	139/140	35.791	1.18	(1560) DN2	---	27.5
141		38.474	1.25	165000 DN2	---	24.5
142		---	---	ND DN2	---	18.2
143	134/143	35.355	1.26	(22000) DN2	---	38.7
144		34.798	1.24	34300 DN2	---	19.9

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID SB06-1.0-1.5-1022
Lab Sample ID 10638496001
Filename P230112A_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
145		---	---	ND DN2	---	15.8
146		37.652	1.25	81400 DN2	---	19.9
147	147/149	35.171	1.25	487000 DN2	---	58.3
148		33.606	1.32	125 DN2	---	22.4
149	147/149	35.171	1.25	(487000) DN2	---	58.3
150		31.348	1.19	245 DN2	---	17.7
151	135/151	34.210	1.24	(219000) DN2	---	50.6
152		31.162	1.16	41.2 JDN2	---	18.2
153	153/168	38.273	1.25	630000 DN2	---	53.5
154		34.488	1.25	1620 DN2	---	18.8
155		---	---	ND DN2	---	15.5
156	156/157	43.761	1.27	54800 DN2	---	27.1
157	156/157	43.761	1.27	(54800) DN2	---	27.1
158		39.950	1.24	61600 DN2	---	15.6
159		41.799	1.31	5110 DN2	---	16.0
160		---	---	ND DN2	---	13.1
161		---	---	ND DN2	---	14.3
162		42.118	1.19	888 DN2	---	16.5
163	129/138/163	39.547	1.26	(684000) DN2	---	62.1
164		39.229	1.25	46800 DN2	---	18.2
165		37.384	1.26	57.2 JDN2	---	15.7
166	128/166	40.821	1.26	(44500) DN2	---	32.9
167		42.620	1.27	23700 DN2	---	18.6
168	153/168	38.273	1.25	(630000) DN2	---	53.5
169		47.064	1.48	--- IDN2	489	18.7
170		46.444	1.03	328000 DN2	---	23.3
171	171/173	42.872	1.04	105000 DN2	---	37.7
172		44.515	1.04	52300 DN2	---	18.9
173	171/173	42.872	1.04	(105000) DN2	---	37.7
174		41.782	1.03	289000 DN2	---	28.5
175		40.654	0.93	12100 DN2	---	17.2
176		38.122	1.04	36600 DN2	---	20.9
177		42.218	1.03	181000 DN2	---	23.9
178		40.000	1.01	50400 DN2	---	16.0
179		37.216	1.04	104000 DN2	---	23.7
180	180/193	45.186	1.04	680000 DN2	---	51.1
181		42.637	1.05	1200 DN2	---	15.7
182		41.123	1.11	1060 DN2	---	17.1
183	183/185	41.548	1.03	209000 DN2	---	40.1
184		37.770	1.19	127 DN2	---	17.2
185	183/185	41.548	1.03	(209000) DN2	---	40.1
186		---	---	ND DN2	---	19.6
187		40.922	1.02	304000 DN2	---	28.0
188		36.881	1.07	206 DN2	---	15.9
189		49.627	1.07	14400 DN2	---	14.2
190		46.997	1.02	68500 DN2	---	12.5
191		45.538	1.04	13200 DN2	---	14.5
192		---	---	ND DN2	---	14.5

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**Method 1668C Polychlorobiphenyl
Sample Analysis Results**

Client Sample ID SB06-1.0-1.5-1022
Lab Sample ID 10638496001
Filename P230112A_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
193	180/193	45.186	1.04	(680000) DN2	---	51.1
194		51.760	0.89	102000	---	2.70
195		49.368	0.89	49000	---	3.15
196		47.834	0.89	63200	---	1.97
197	197/200	44.313	0.88	18900	---	4.57
198	198/199	47.180	0.89	103000	---	5.35
199	198/199	47.180	0.89	(103000)	---	5.35
200	197/200	44.313	0.88	(18900)	---	4.57
201		43.307	0.89	12800	---	2.71
202		42.368	0.89	14200	---	2.20
203		48.035	0.90	69400	---	3.36
204		43.994	0.91	30.7	---	2.19
205		52.234	0.89	6580	---	2.50
206		53.958	0.79	18100	---	3.42
207		50.079	0.78	2240	---	2.76
208		49.131	0.79	3010	---	2.62
209		55.575	0.68	2250	---	2.95

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID SB06-1.0-1.5-1022
Lab Sample ID 10638496001
Filename P230112A_10

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	58.0
Total Dichloro Biphenyls	441
Total Trichloro Biphenyls	1050
Total Tetrachloro Biphenyls	10900
Total Pentachloro Biphenyls	438000
Total Hexachloro Biphenyls	2840000
Total Heptachloro Biphenyls	2450000
Total Octachloro Biphenyls	439000
Total Nonachloro Biphenyls	23400
Decachloro Biphenyls	2250
Total PCBs	6210000

ND = Not Detected

Results reported on a total weight basis

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - UPRR_Jacobs

Client's Sample ID	SB08-0.5-110322		
Lab Sample ID	10638496002		
Filename	P230112A_11		
Injected By	AH5		
Total Amount Extracted	10.3 g	Matrix	Solid
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	11/03/2022 08:45
ICAL ID	P230112A04	Received	11/04/2022 09:45
CCal Filename(s)	P230112A_03	Extracted	01/03/2023 13:30
Method Blank ID	BLANK-103296	Analyzed	01/12/2023 19:26

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	8.692	3.51	2.0	1.34	67
13C-4-MoCB	3	11.383	3.30	2.0	1.37	69
13C-2,2'-DiCB	4	11.677	1.59	2.0	1.40	70
13C-4,4'-DiCB	15	18.594	1.58	2.0	1.46	73
13C-2,2',6-TrCB	19	15.377	1.06	2.0	1.47	74
13C-3,4,4'-TrCB	37	26.299	1.05	2.0	1.47	73
13C-2,2',6,6'-TeCB	54	18.905	0.80	2.0	1.24	62
13C-3,4,4',5-TeCB	81	33.390	0.80	2.0	1.64	82
13C-3,3',4,4'-TeCB	77	33.963	0.83	2.0	1.58	79
13C-2,2',4,6,6'-PeCB	104	24.938	1.37	2.0	1.43	71 DN2
13C-2,3,3',4,4'-PeCB	105	37.534	1.63	2.0	1.64	82 DN2
13C-2,3,4,4',5-PeCB	114	36.881	1.64	2.0	1.53	77 DN2
13C-2,3',4,4',5-PeCB	118	36.327	1.72	2.0	1.57	78 DN2
13C-2,3',4,4',5'-PeCB	123	35.992	1.68	2.0	1.54	77 DN2
13C-3,3',4,4',5-PeCB	126	40.687	1.39	2.0	1.65	83 DN2
13C-2,2',4,4',6,6'-HxCB	155	30.961	1.25	2.0	1.13	57 DN2
13C-HxCB (156/157)	156/157	43.744	1.23	4.0	2.73	68 DN2
13C-2,3',4,4',5,5'-HxCB	167	42.587	1.33	2.0	1.31	66 DN2
13C-3,3',4,4',5,5'-HxCB	169	47.030	1.35	2.0	1.29	64 DN2
13C-2,2',3,4',5,6,6'-HpCB	188	36.864	1.07	2.0	1.26	63 DN2
13C-2,3,3',4,4',5,5'-HpCB	189	49.584	1.22	2.0	1.19	64 DN2
13C-2,2',3,3',5,5',6,6'-OxCB	202	42.353	0.92	2.0	1.46	73
13C-2,3,3',4,4',5,5',6-OxCB	205	52.214	0.86	2.0	1.29	64
13C-2,2',3,3',4,4',5,5',6-NoCB	206	53.960	0.80	2.0	1.18	59
13C-2,2',3,3',4,4',5,5',6-NoCB	208	49.110	0.80	2.0	1.28	64
13C-DeCB	209	55.555	0.69	2.0	1.14	57
Cleanup Standards						
13C-2,4,4'-TrCB	28	21.968	1.05	2.0	1.29	64
13C-2,3,3',5,5'-PeCB	111	34.009	1.54	2.0	1.08	54
13C-2,2',3,3',5,5',6-HpCB	178	40.000	1.05	2.0	0.833	42
Recovery Standards						
13C-2,5-DiCB	9	14.073	1.61	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	23.948	0.78	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	31.225	1.60	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	39.564	1.50	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OxCB	194	51.740	0.88	2.0	NA	NA

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Pace AnalyticalTM

Pace Analytical Services, LLC.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

**Method 1668C Polychlorobiphenyl
Sample Analysis Results**

Client Sample ID SB08-0.5-110322
Lab Sample ID 10638496002
Filename P230112A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
1		8.715	2.66	13.3 BJ	---	4.60
2		11.191	3.42	4.45 J	---	3.40
3		11.406	3.12	24.0 B	---	4.81
4		11.700	1.34	15.1 J	---	7.55
5		---	---	ND	---	2.69
6		14.559	1.79	11.1 J	---	3.83
7		---	---	ND	---	2.92
8		15.068	1.67	48.6	---	6.26
9		14.062	1.66	3.84 J	---	3.23
10		---	---	ND	---	3.72
11		17.930	1.65	125	---	107
12	12/13	18.262	1.37	18.4 J	---	6.52
13	12/13	18.262	1.37	(18.4) J	---	6.52
14		---	---	ND	---	3.31
15		18.627	1.64	173	---	5.70
16		18.527	1.10	17.7 J	---	7.00
17		18.041	1.12	21.4	---	7.20
18	18/30	17.566	1.10	47.4	---	14.4
19		15.410	0.95	6.18 J	---	3.13
20	20/28	21.999	1.06	127	---	23.2
21	21/33	22.262	1.01	53.9	---	13.8
22		22.664	1.00	40.7	---	10.3
23		---	---	ND	---	3.01
24		---	---	ND	---	3.99
25		21.333	1.02	8.83 J	---	3.22
26	26/29	21.070	1.08	18.5 J	---	9.61
27		18.262	1.11	4.99 J	---	4.19
28	20/28	21.999	1.06	(127)	---	23.2
29	26/29	21.070	1.08	(18.5) J	---	9.61
30	18/30	17.566	1.10	(47.4)	---	14.4
31		21.674	1.03	84.1	---	19.6
32		19.153	1.04	25.2	---	6.69
33	21/33	22.262	1.01	(53.9)	---	13.8
34		---	---	ND	---	4.21
35		25.897	1.03	10.1 J	---	4.09
36		24.381	1.32	---	4.29	2.91
37		26.330	1.08	133	---	7.13
38		---	---	ND	---	2.63
39		---	---	ND	---	3.11
40	40/41/71	26.129	0.82	297	---	11.2
41	40/41/71	26.129	0.82	(297)	---	11.2
42		25.618	0.73	126	---	5.06
43	43/73	24.242	0.81	13.1 J	---	10.5
44	44/47/65	25.031	0.77	582	---	25.2
45	45/51	22.060	0.81	57.1	---	10.5
46		22.416	0.81	12.8 J	---	3.99
47	44/47/65	25.031	0.77	(582)	---	25.2
48		24.799	0.73	49.2	---	3.92

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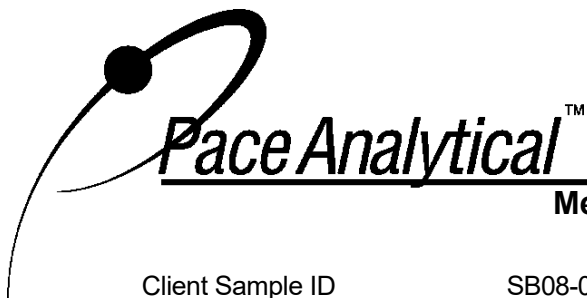
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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID SB08-0.5-110322
Lab Sample ID 10638496002
Filename P230112A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
49	49/69	24.504	0.78	294	---	9.52
50	50/53	21.349	0.77	59.6	---	21.0
51	45/51	22.060	0.81	(57.1)	---	10.5
52		23.979	0.78	6790	---	18.2
53	50/53	21.349	0.77	(59.6)	---	21.0
54		---	---	ND	---	5.25
55		---	---	ND	---	8.22
56		30.111	0.80	324	---	5.35
57		---	---	ND	---	2.24
58		---	---	ND	---	2.72
59	59/62/75	25.386	0.79	61.1	---	7.00
60		30.327	0.83	83.4	---	21.1
61	61/70/74/76	29.074	0.80	1150	---	15.8
62	59/62/75	25.386	0.79	(61.1)	---	7.00
63		28.734	0.82	8.03 J	---	7.73
64		26.361	0.76	423	---	14.1
65	44/47/65	25.031	0.77	(582)	---	25.2
66		29.415	0.81	559	---	12.4
67		28.456	0.77	32.1	---	2.25
68		---	---	ND	---	8.63
69	49/69	24.504	0.78	(294)	---	9.52
70	61/70/74/76	29.074	0.80	(1150)	---	15.8
71	40/41/71	26.129	0.82	(297)	---	11.2
72		27.280	0.79	49.5	---	2.34
73	43/73	24.242	0.81	(13.1) J	---	10.5
74	61/70/74/76	29.074	0.80	(1150)	---	15.8
75	59/62/75	25.386	0.79	(61.1)	---	7.00
76	61/70/74/76	29.074	0.80	(1150)	---	15.8
77		33.978	0.78	988	---	3.42
78		32.957	1.04	--- IJ	4.45	3.37
79		32.339	0.77	324	---	2.65
80		30.792	0.83	8.98 J	---	2.48
81		33.406	0.93	--- IJ	18.8	2.32
82		33.560	1.58	1360 DN2	---	49.2
83		31.704	1.65	4190 DN2	---	32.1
84		29.244	1.58	7720 DN2	---	32.4
85	85/116/117	33.081	1.56	1440 DN2	---	81.7
86	86/87/97/108/119/125	32.431	1.59	42400 DN2	---	158
87	86/87/97/108/119/125	32.431	1.59	(42400) DN2	---	158
88	88/91	29.043	1.65	1490 DN2	---	63.2
89		29.755	1.42	126 JDN2	---	37.8
90	90/101/113	31.224	1.59	290000 DN2	---	116
91	88/91	29.043	1.65	(1490) DN2	---	63.2
92		30.605	1.58	34100 DN2	---	43.5
93	93/98/100/102	28.517	1.56	843 DN2	---	121
94		27.682	2.01	--- IJDN2	61.3	35.6
95		28.115	1.57	168000 DN2	---	147
96		25.355	1.51	85.7 JDN2	---	41.9

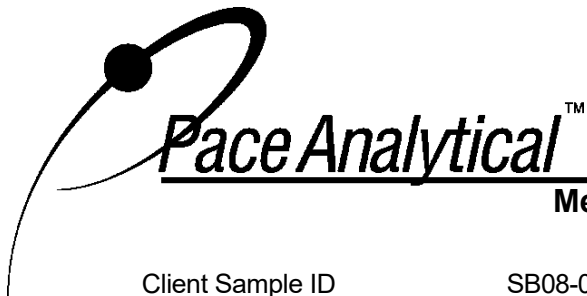
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Method 1668C Polychlorobiphenyl Sample Analysis Results

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Lab Sample ID 10638496002
Filename P230112A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
97	86/87/97/108/119/125	32.431	1.59	(42400) DN2	---	158
98	93/98/100/102	28.517	1.56	(843) DN2	---	121
99		31.827	1.69	5370 DN2	---	49.8
100	93/98/100/102	28.517	1.56	(843) DN2	---	121
101	90/101/113	31.224	1.59	(290000) DN2	---	116
102	93/98/100/102	28.517	1.56	(843) DN2	---	121
103		27.434	1.67	172 JDN2	---	30.1
104		---	---	ND DN2	---	33.4
105		37.551	1.58	6900 DN2	---	44.7
106		---	---	ND DN2	---	31.2
107	107/124	35.656	1.57	2070 DN2	---	47.7
108	86/87/97/108/119/125	32.431	1.59	(42400) DN2	---	158
109		35.908	1.58	3230 DN2	---	26.7
110	110/115	33.251	1.58	199000 DN2	---	141
111		34.008	1.41	49.9 JDN2	---	28.8
112		---	---	ND DN2	---	39.2
113	90/101/113	31.224	1.59	(290000) DN2	---	116
114		36.881	1.69	173 JDN2	---	37.2
115	110/115	33.251	1.58	(199000) DN2	---	141
116	85/116/117	33.081	1.56	(1440) DN2	---	81.7
117	85/116/117	33.081	1.56	(1440) DN2	---	81.7
118		36.361	1.59	79000 DN2	---	100
119	86/87/97/108/119/125	32.431	1.59	(42400) DN2	---	158
120		34.488	1.65	495 DN2	---	33.8
121		---	---	ND DN2	---	35.4
122		36.679	1.35	382 DN2	---	34.9
123		35.992	1.41	414 DN2	---	33.1
124	107/124	35.656	1.57	(2070) DN2	---	47.7
125	86/87/97/108/119/125	32.431	1.59	(42400) DN2	---	158
126		40.703	1.55	2950 DN2	---	27.7
127		39.077	1.46	169 JDN2	---	32.8
128	128/166	40.821	1.25	83800 DN2	---	66.5
129	129/138/163	39.547	1.25	1430000 DN2	---	125
130		38.876	1.24	43100 DN2	---	32.8
131		35.975	1.25	6920 DN2	---	44.3
132		36.444	1.25	368000 DN2	---	55.2
133		36.981	1.21	11400 DN2	---	30.0
134	134/143	35.354	1.25	42500 DN2	---	78.2
135	135/151	34.194	1.24	463000 DN2	---	102
136		31.704	1.24	133000 DN2	---	46.3
137		39.094	1.24	4580 DN2	---	37.5
138	129/138/163	39.547	1.25	(1430000) DN2	---	125
139	139/140	35.791	1.26	2670 DN2	---	55.5
140	139/140	35.791	1.26	(2670) DN2	---	55.5
141		38.457	1.25	353000 DN2	---	49.5
142		---	---	ND DN2	---	36.7
143	134/143	35.354	1.25	(42500) DN2	---	78.2
144		34.798	1.25	68600 DN2	---	40.3

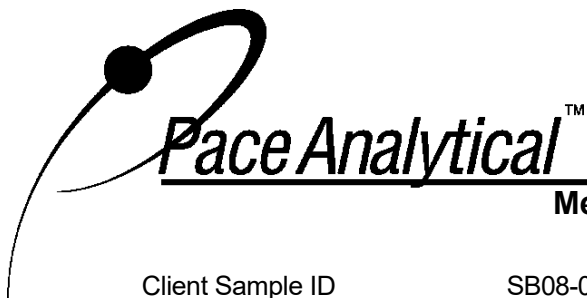
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Method 1668C Polychlorobiphenyl Sample Analysis Results

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Lab Sample ID 10638496002
Filename P230112A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
145		---	---	ND DN2	---	31.9
146		37.635	1.24	165000 DN2	---	40.2
147	147/149	35.170	1.25	1040000 DN2	---	118
148		33.606	1.35	254 DN2	---	45.1
149	147/149	35.170	1.25	(1040000) DN2	---	118
150		31.333	1.30	494 DN2	---	35.8
151	135/151	34.194	1.24	(463000) DN2	---	102
152		31.162	1.05	69.0 JDN2	---	36.7
153	153/168	38.272	1.25	1300000 DN2	---	108
154		34.488	1.24	2990 DN2	---	37.9
155		---	---	ND DN2	---	31.3
156	156/157	43.761	1.29	94900 DN2	---	54.7
157	156/157	43.761	1.29	(94900) DN2	---	54.7
158		39.949	1.25	119000 DN2	---	31.5
159		41.765	1.24	20000 DN2	---	32.3
160		---	---	ND DN2	---	26.4
161		---	---	ND DN2	---	28.9
162		42.117	1.26	1950 DN2	---	33.4
163	129/138/163	39.547	1.25	(1430000) DN2	---	125
164		39.211	1.25	88600 DN2	---	36.8
165		---	---	ND DN2	---	31.7
166	128/166	40.821	1.25	(83800) DN2	---	66.5
167		42.604	1.28	47200 DN2	---	37.5
168	153/168	38.272	1.25	(1300000) DN2	---	108
169		47.047	1.48	--- IDN2	1010	37.7
170		46.444	1.04	714000 DN2	---	47.1
171	171/173	42.855	1.04	216000 DN2	---	76.1
172		44.515	1.04	109000 DN2	---	38.2
173	171/173	42.855	1.04	(216000) DN2	---	76.1
174		41.782	1.05	608000 DN2	---	57.6
175		40.636	1.07	23100 DN2	---	34.7
176		38.121	1.05	71200 DN2	---	42.1
177		42.218	1.04	380000 DN2	---	48.2
178		39.982	1.06	96300 DN2	---	32.4
179		37.199	1.04	203000 DN2	---	47.8
180	180/193	45.186	1.02	1440000 DN2	---	103
181		42.637	0.92	2570 DN2	---	31.6
182		41.123	1.00	2100 DN2	---	34.6
183	183/185	41.547	1.05	446000 DN2	---	80.9
184		37.769	1.01	240 DN2	---	34.8
185	183/185	41.547	1.05	(446000) DN2	---	80.9
186		---	---	ND DN2	---	39.6
187		40.921	1.04	623000 DN2	---	56.6
188		36.881	1.05	442 DN2	---	32.2
189		49.605	1.04	28900 DN2	---	28.6
190		46.980	1.05	142000 DN2	---	25.2
191		45.538	1.02	27700 DN2	---	29.4
192		---	---	ND DN2	---	29.2

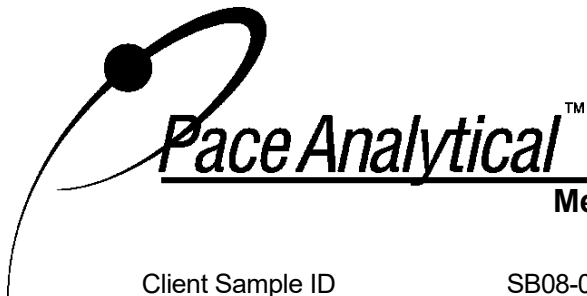
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Method 1668C Polychlorobiphenyl Sample Analysis Results

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Lab Sample ID 10638496002
Filename P230112A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
193	180/193	45.186	1.02	(1440000) DN2	---	103
194		51.761	0.89	200000	---	2.72
195		49.390	0.89	95000	---	3.18
196		47.852	0.89	126000	---	1.99
197	197/200	44.331	0.89	36000	---	4.61
198	198/199	47.182	0.90	199000	---	5.40
199	198/199	47.182	0.90	(199000)	---	5.40
200	197/200	44.331	0.89	(36000)	---	4.61
201		43.308	0.89	23900	---	2.73
202		42.369	0.89	26200	---	2.22
203		48.054	0.90	134000	---	3.39
204		44.013	0.89	60.6	---	2.21
205		52.235	0.89	12900	---	2.52
206		53.981	0.78	31900	---	3.45
207		50.080	0.78	4170	---	2.78
208		49.132	0.78	4490	---	2.65
209		55.576	0.68	534	---	2.98

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID SB08-0.5-110322
Lab Sample ID 10638496002
Filename P230112A_11

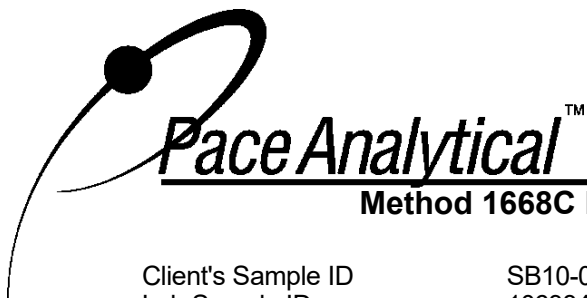
Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	41.7
Total Dichloro Biphenyls	394
Total Trichloro Biphenyls	598
Total Tetrachloro Biphenyls	12300
Total Pentachloro Biphenyls	853000
Total Hexachloro Biphenyls	5890000
Total Heptachloro Biphenyls	5140000
Total Octachloro Biphenyls	853000
Total Nonachloro Biphenyls	40600
Decachloro Biphenyls	534
Total PCBs	12800000

ND = Not Detected

Results reported on a total weight basis

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - UPRR_Jacobs

Client's Sample ID	SB10-0.0-0.5-1022		
Lab Sample ID	10638496003		
Filename	P230113A_13		
Injected By	AH5		
Total Amount Extracted	10.2 g	Matrix	Solid
% Moisture	NA	Dilution	10
Dry Weight Extracted	NA	Collected	10/18/2022 11:15
ICAL ID	P230113A03	Received	10/19/2022 10:00
CCal Filename(s)	P230113A_02	Extracted	01/03/2023 13:30
Method Blank ID	BLANK-103296	Analyzed	01/13/2023 21:42

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery	
Labeled Analytes							
13C-2-MoCB	1	8.703	2.87	2.0	1.26	63	D
13C-4-MoCB	3	11.417	2.78	2.0	1.44	72	D
13C-2,2'-DiCB	4	11.688	1.55	2.0	1.27	64	D
13C-4,4'-DiCB	15	18.604	1.45	2.0	1.50	75	D
13C-2,2',6-TrCB	19	15.377	0.96	2.0	1.36	68	D
13C-3,4,4'-TrCB	37	26.282	1.13	2.0	1.55	77	D
13C-2,2',6,6'-TeCB	54	18.889	0.80	2.0	1.21	61	D
13C-3,4,4',5-TeCB	81	33.389	0.88	2.0	1.64	82	D
13C-3,3',4,4'-TeCB	77	33.961	0.87	2.0	1.41	70	D
13C-2,2',4,6,6'-PeCB	104	24.952	1.61	2.0	1.39	70	D
13C-2,3,3',4,4'-PeCB	105	37.567	1.55	2.0	1.63	81	D
13C-2,3,4,4',5-PeCB	114	36.913	1.58	2.0	1.54	77	D
13C-2,3',4,4',5-PeCB	118	36.376	1.56	2.0	1.55	78	D
13C-2,3',4,4',5'-PeCB	123	36.024	1.50	2.0	1.62	81	D
13C-3,3',4,4',5-PeCB	126	40.719	1.66	2.0	1.60	80	D
13C-2,2',4,4',6,6'-HxCB	155	31.043	1.10	2.0	0.416	21	DN2
13C-HxCB (156/157)	156/157	43.814	1.08	4.0	1.03	26	DN2
13C-2,3',4,4',5,5'-HxCB	167	42.674	1.05	2.0	0.618	31	DN2
13C-3,3',4,4',5,5'-HxCB	169	47.134	1.16	2.0	0.530	27	DN2
13C-2,2',3,4',5,6,6'-HpCB	188	36.935	1.25	2.0	0.978	54	IDN2
13C-2,3,3',4,4',5,5'-HpCB	189	49.674	1.15	2.0	1.35	67	DN2
13C-2,2',3,3',5,5',6,6'-OxCB	202	42.334	0.94	2.0	1.46	73	D
13C-2,3,3',4,4',5,5',6-OxCB	205	52.190	1.05	2.0	1.16	63	ID
13C-2,2',3,3',4,4',5,5',6-NoCB	206	53.937	0.81	2.0	1.20	60	D
13C-2,2',3,3',4,4',5,5',6-NoCB	208	49.109	0.91	2.0	1.09	58	ID
13C-DeCB	209	55.532	0.57	2.0	0.964	54	ID
CleanupStandards							
13C-2,4,4'-TrCB	28	21.951	1.15	2.0	1.29	65	D
13C-2,3,3',5,5'-PeCB	111	34.023	1.78	2.0	1.17	58	D
13C-2,2',3,3',5,5',6-HpCB	178	39.998	1.07	2.0	0.256	13	D
Recovery Standards							
13C-2,5-DiCB	9	14.083	1.70	2.0	NA	NA	D
13C-2,2',5,5'-TeCB	52	23.931	0.87	2.0	NA	NA	D
13C-2,2',4,5,5'-PeCB	101	31.208	1.66	2.0	NA	NA	D
13C-2,2',3,4,4',5'-HxCB	138	39.613	1.91	2.0	NA	NA	ID
13C-2,2',3,3',4,4',5,5'-OxCB	194	51.716	1.07	2.0	NA	NA	ID

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REPORT OF LABORATORY ANALYSIS

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Pace AnalyticalTM

Pace Analytical Services, LLC.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612-607-6444

**Method 1668C Polychlorobiphenyl
Sample Analysis Results**

Client Sample ID SB10-0.0-0.5-1022
Lab Sample ID 10638496003
Filename P230113A_13

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
1		8.715	2.84	71.6 JD	---	46.1
2		---	---	ND D	---	34.1
3		11.439	3.24	144 JD	---	48.2
4		11.711	1.56	85.3 JD	---	75.7
5		---	---	ND D	---	27.0
6		14.559	1.64	60.0 JD	---	38.4
7		---	---	ND D	---	29.3
8		15.067	1.57	239 D	---	62.8
9		---	---	ND D	---	32.4
10		---	---	ND D	---	37.3
11		---	---	ND D	---	1070
12	12/13	18.228	1.34	105 JD	---	65.4
13	12/13	18.228	1.34	(105) JD	---	65.4
14		---	---	ND D	---	33.2
15		18.615	1.59	1240 D	---	57.2
16		18.515	1.05	118 JD	---	70.2
17		18.029	1.03	112 JD	---	72.2
18	18/30	17.565	0.99	237 JD	---	144
19		15.399	1.14	41.7 JD	---	31.4
20	20/28	21.982	1.07	686 D	---	232
21	21/33	22.245	1.07	285 JD	---	139
22		22.663	1.10	207 D	---	103
23		---	---	ND D	---	30.1
24		---	---	ND D	---	40.0
25		21.317	0.93	48.5 JD	---	32.3
26	26/29	21.054	0.99	103 JD	---	96.4
27		---	---	ND D	---	42.0
28	20/28	21.982	1.07	(686) D	---	232
29	26/29	21.054	0.99	(103) JD	---	96.4
30	18/30	17.565	0.99	(237) JD	---	144
31		21.657	1.07	456 D	---	197
32		19.152	1.03	98.9 JD	---	67.1
33	21/33	22.245	1.07	(285) JD	---	139
34		---	---	ND D	---	42.2
35		25.865	1.10	59.9 JD	---	41.0
36		---	---	ND D	---	29.2
37		26.313	1.11	902 D	---	71.5
38		---	---	ND D	---	26.3
39		---	---	ND D	---	31.2
40	40/41/71	26.112	0.76	2260 D	---	112
41	40/41/71	26.112	0.76	(2260) D	---	112
42		25.587	0.74	447 D	---	50.7
43	43/73	---	---	ND D	---	105
44	44/47/65	25.014	0.80	1780 D	---	253
45	45/51	22.060	0.79	247 JD	---	105
46		22.400	0.85	77.6 JD	---	40.0
47	44/47/65	25.014	0.80	(1780) D	---	253
48		24.798	0.74	553 D	---	39.3

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Pace Analytical Services, LLC.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612-607-6444

Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID SB10-0.0-0.5-1022
Lab Sample ID 10638496003
Filename P230113A_13

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
49	49/69	24.488	0.82	1010 D	---	95.5
50	50/53	21.333	0.81	244 JD	---	211
51	45/51	22.060	0.79	(247) JD	---	105
52		23.962	0.79	15000 D	---	182
53	50/53	21.333	0.81	(244) JD	---	211
54		---	---	ND D	---	52.7
55		---	---	ND D	---	82.4
56		30.094	0.81	2760 D	---	53.7
57		---	---	ND D	---	22.4
58		---	---	ND D	---	27.3
59	59/62/75	25.370	0.78	314 JD	---	70.2
60		30.326	0.87	486 D	---	212
61	61/70/74/76	29.058	0.81	7920 D	---	158
62	59/62/75	25.370	0.78	(314) JD	---	70.2
63		28.718	0.77	86.3 JD	---	77.6
64		26.344	0.77	1160 D	---	141
65	44/47/65	25.014	0.80	(1780) D	---	253
66		29.413	0.81	2630 D	---	124
67		28.439	0.82	263 D	---	22.5
68		---	---	ND D	---	86.5
69	49/69	24.488	0.82	(1010) D	---	95.5
70	61/70/74/76	29.058	0.81	(7920) D	---	158
71	40/41/71	26.112	0.76	(2260) D	---	112
72		27.279	0.72	253 D	---	23.5
73	43/73	---	---	ND D	---	105
74	61/70/74/76	29.058	0.81	(7920) D	---	158
75	59/62/75	25.370	0.78	(314) JD	---	70.2
76	61/70/74/76	29.058	0.81	(7920) D	---	158
77		33.977	0.78	15400 D	---	34.3
78		32.940	0.70	37.9 JD	---	33.8
79		32.337	0.80	1300 D	---	26.5
80		---	---	ND D	---	24.9
81		33.404	0.85	246 D	---	23.3
82		33.575	1.45	5030 D	---	49.4
83		31.718	1.61	28000 D	---	32.2
84		29.259	1.59	18800 D	---	32.5
85	85/116/117	33.095	1.56	6150 D	---	82.0
86	86/87/97/108/119/125	32.445	1.56	120000 D	---	158
87	86/87/97/108/119/125	32.445	1.56	(120000) D	---	158
88	88/91	29.042	1.56	8050 D	---	63.4
89		29.769	1.62	633 D	---	38.0
90	90/101/113	31.239	1.58	1130000 D	---	116
91	88/91	29.042	1.56	(8050) D	---	63.4
92		30.620	1.59	198000 D	---	43.6
93	93/98/100/102	28.516	1.54	5500 D	---	121
94		27.666	1.59	838 D	---	35.7
95		28.130	1.57	440000 D	---	147
96		25.354	1.55	718 D	---	42.0

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID SB10-0.0-0.5-1022
Lab Sample ID 10638496003
Filename P230113A_13

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
97	86/87/97/108/119/125	32.445	1.56	(120000) D	---	158
98	93/98/100/102	28.516	1.54	(5500) D	---	121
99		31.842	1.57	25100 D	---	50.0
100	93/98/100/102	28.516	1.54	(5500) D	---	121
101	90/101/113	31.239	1.58	(1130000) D	---	116
102	93/98/100/102	28.516	1.54	(5500) D	---	121
103		27.465	1.61	891 D	---	30.1
104		---	---	ND D	---	33.5
105		37.567	1.58	35700 D	---	44.9
106		---	---	ND D	---	31.3
107	107/124	35.672	1.60	21700 D	---	47.8
108	86/87/97/108/119/125	32.445	1.56	(120000) D	---	158
109		35.924	1.58	32100 D	---	26.7
110	110/115	33.265	1.57	877000 D	---	141
111		34.039	1.48	454 D	---	28.9
112		---	---	ND D	---	39.3
113	90/101/113	31.239	1.58	(1130000) D	---	116
114		36.947	1.53	2180 D	---	37.3
115	110/115	33.265	1.57	(877000) D	---	141
116	85/116/117	33.095	1.56	(6150) D	---	82.0
117	85/116/117	33.095	1.56	(6150) D	---	82.0
118		36.393	1.59	602000 D	---	100
119	86/87/97/108/119/125	32.445	1.56	(120000) D	---	158
120		34.518	1.52	4690 D	---	33.9
121		---	---	ND D	---	35.5
122		36.729	1.59	2840 D	---	35.0
123		36.024	1.54	2520 D	---	33.2
124	107/124	35.672	1.60	(21700) D	---	47.8
125	86/87/97/108/119/125	32.445	1.56	(120000) D	---	158
126		40.753	1.60	46900 D	---	27.8
127		39.126	1.70	1160 D	---	32.9
128	128/166	40.909	1.25	603000 DN2	---	334
129	129/138/163	39.634	1.25	11300000 DN2	---	629
130		38.964	1.27	369000 DN2	---	164
131		36.063	1.22	40200 DN2	---	222
132		36.532	1.25	2820000 DN2	---	277
133		37.069	1.25	98400 DN2	---	150
134	134/143	35.459	1.24	363000 DN2	---	392
135	135/151	34.292	1.26	4060000 DN2	---	512
136		31.786	1.22	1060000 DN2	---	232
137		39.198	1.24	47800 DN2	---	188
138	129/138/163	39.634	1.25	(11300000) DN2	---	629
139	139/140	35.879	1.20	31200 DN2	---	279
140	139/140	35.879	1.20	(31200) DN2	---	279
141		38.561	1.25	3080000 DN2	---	248
142		---	---	ND DN2	---	184
143	134/143	35.459	1.24	(363000) DN2	---	392
144		34.896	1.23	524000 DN2	---	202

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID SB10-0.0-0.5-1022
Lab Sample ID 10638496003
Filename P230113A_13

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
145		---	---	ND DN2	---	160
146		37.739	1.25	1450000 DN2	---	201
147	147/149	35.258	1.25	7880000 DN2	---	590
148		33.689	1.18	3060 DN2	---	226
149	147/149	35.258	1.25	(7880000) DN2	---	590
150		31.430	1.22	5250 DN2	---	180
151	135/151	34.292	1.26	(4060000) DN2	---	512
152		31.260	1.23	782 JDN2	---	184
153	153/168	38.377	1.25	10800000 DN2	---	541
154		34.571	1.22	28500 DN2	---	190
155		---	---	ND DN2	---	157
156	156/157	43.848	1.29	834000 DN2	---	274
157	156/157	43.848	1.29	(834000) DN2	---	274
158		40.037	1.25	1030000 DN2	---	158
159		41.886	1.26	181000 DN2	---	162
160		---	---	ND DN2	---	132
161		---	---	ND DN2	---	145
162		42.205	1.27	22000 DN2	---	167
163	129/138/163	39.634	1.25	(11300000) DN2	---	629
164		39.316	1.26	857000 DN2	---	184
165		---	---	ND DN2	---	159
166	128/166	40.909	1.25	(603000) DN2	---	334
167		42.708	1.28	341000 DN2	---	188
168	153/168	38.377	1.25	(10800000) DN2	---	541
169		47.134	1.47	--- IDN2	8020	189
170		46.531	1.02	6290000 DN2	---	236
171	171/173	42.959	1.04	1870000 DN2	---	381
172		44.603	1.04	922000 DN2	---	192
173	171/173	42.959	1.04	(1870000) DN2	---	381
174		41.869	1.05	5500000 DN2	---	289
175		40.741	1.05	191000 DN2	---	174
176		38.209	1.03	655000 DN2	---	211
177		42.306	1.04	3180000 DN2	---	242
178		40.087	1.05	833000 DN2	---	162
179		37.304	1.04	1790000 DN2	---	240
180	180/193	45.273	1.03	12500000 DN2	---	517
181		42.725	0.97	22600 DN2	---	159
182		41.210	0.98	24200 DN2	---	174
183	183/185	41.635	1.02	4030000 DN2	---	406
184		37.857	0.96	2550 DN2	---	175
185	183/185	41.635	1.02	(4030000) DN2	---	406
186		---	---	ND DN2	---	199
187		41.009	1.06	5560000 DN2	---	284
188		36.968	1.02	4840 DN2	---	161
189		49.695	1.06	206000 DN2	---	143
190		47.084	1.05	1200000 DN2	---	126
191		45.625	1.10	221000 DN2	---	147
192		---	---	ND DN2	---	146

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**Method 1668C Polychlorobiphenyl
Sample Analysis Results**

Client Sample ID SB10-0.0-0.5-1022
Lab Sample ID 10638496003
Filename P230113A_13

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
193	180/193	45.273	1.03	(12500000) DN2	---	517
194		51.738	0.90	1870000 D	---	27.3
195		49.367	0.89	797000 D	---	31.9
196		47.834	0.91	1010000 D	---	20.0
197	197/200	44.330	0.89	280000 D	---	46.2
198	198/199	47.180	0.91	1630000 D	---	54.1
199	198/199	47.180	0.91	(1630000) D	---	54.1
200	197/200	44.330	0.89	(280000) D	---	46.2
201		43.307	0.90	190000 D	---	27.4
202		42.368	0.89	229000 D	---	22.2
203		48.052	0.91	1070000 D	---	34.0
204		43.994	0.90	527 D	---	22.1
205		52.212	0.89	116000 D	---	25.3
206		53.958	0.79	277000 D	---	34.6
207		50.078	0.77	37200 D	---	27.9
208		49.130	0.77	42500 D	---	26.5
209		55.575	0.68	3900 D	---	29.9

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R = Recovery outside of Method 1668C control limits
Nn = Value obtained from additional analyses

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REPORT OF LABORATORY ANALYSIS

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID SB10-0.0-0.5-1022
Lab Sample ID 10638496003
Filename P230113A_13

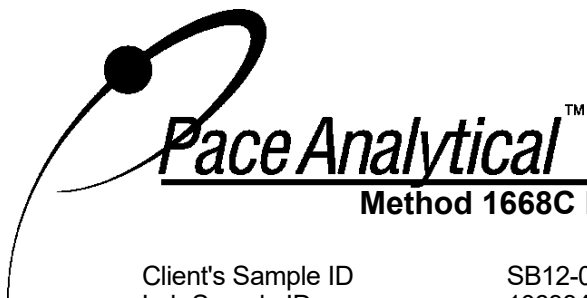
Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	216
Total Dichloro Biphenyls	1730
Total Trichloro Biphenyls	3360
Total Tetrachloro Biphenyls	54400
Total Pentachloro Biphenyls	3620000
Total Hexachloro Biphenyls	47800000
Total Heptachloro Biphenyls	45000000
Total Octachloro Biphenyls	7190000
Total Nonachloro Biphenyls	357000
Decachloro Biphenyls	3900
Total PCBs	104000000

ND = Not Detected

Results reported on a total weight basis

REPORT OF LABORATORY ANALYSIS

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - UPRR_Jacobs

Client's Sample ID	SB12-0.0-0.5-1022		
Lab Sample ID	10638496004		
Filename	P230113A_11		
Injected By	AH5		
Total Amount Extracted	10.4 g	Matrix	Solid
% Moisture	NA	Dilution	10
Dry Weight Extracted	NA	Collected	10/18/2022 12:30
ICAL ID	P230113A03	Received	10/19/2022 10:00
CCal Filename(s)	P230113A_02	Extracted	01/03/2023 13:30
Method Blank ID	BLANK-103296	Analyzed	01/13/2023 19:43

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery	
Labeled Analytes							
13C-2-MoCB	1	8.692	3.46	2.0	1.02	51	D
13C-4-MoCB	3	11.395	3.55	2.0	1.07	54	D
13C-2,2'-DiCB	4	11.666	1.60	2.0	1.12	56	D
13C-4,4'-DiCB	15	18.594	1.74	2.0	1.35	68	D
13C-2,2',6-TrCB	19	15.355	1.15	2.0	1.29	64	D
13C-3,4,4'-TrCB	37	26.268	1.20	2.0	1.55	78	D
13C-2,2',6,6'-TeCB	54	18.905	0.89	2.0	1.27	64	D
13C-3,4,4',5-TeCB	81	33.360	0.80	2.0	1.68	84	D
13C-3,3',4,4'-TeCB	77	33.948	0.88	2.0	1.58	79	D
13C-2,2',4,6,6'-PeCB	104	24.938	1.63	2.0	1.15	58	D
13C-2,3,3',4,4'-PeCB	105	37.537	1.54	2.0	1.50	75	D
13C-2,3,4,4',5-PeCB	114	36.883	1.61	2.0	1.47	73	D
13C-2,3',4,4',5-PeCB	118	36.347	1.71	2.0	1.48	74	D
13C-2,3',4,4',5'-PeCB	123	35.994	1.44	2.0	1.43	72	D
13C-3,3',4,4',5-PeCB	126	40.706	1.47	2.0	1.51	75	D
13C-2,2',4,4',6,6'-HxCB	155	30.962	1.13	2.0	0.838	42	D
13C-HxCB (156/157)	156/157	43.763	1.33	4.0	2.03	51	D
13C-2,3',4,4',5,5'-HxCB	167	42.606	1.18	2.0	1.11	55	D
13C-3,3',4,4',5,5'-HxCB	169	47.033	1.23	2.0	1.16	58	D
13C-2,2',3,4',5,6,6'-HpCB	188	36.850	1.17	2.0	1.33	66	D
13C-2,3,3',4,4',5,5'-HpCB	189	49.608	1.07	2.0	1.51	76	D
13C-2,2',3,3',5,5',6,6'-OxCB	202	42.321	0.92	2.0	1.39	69	D
13C-2,3,3',4,4',5,5',6-OxCB	205	52.194	0.85	2.0	1.46	73	D
13C-2,2',3,3',4,4',5,5',6-NoCB	206	53.918	0.89	2.0	1.34	67	D
13C-2,2',3,3',4,4',5,5',6,6'-NoCB	208	49.069	0.85	2.0	1.29	64	D
13C-DeCB	209	55.535	0.61	2.0	1.17	58	D
CleanupStandards							
13C-2,4,4'-TrCB	28	21.968	0.93	2.0	1.18	59	D
13C-2,3,3',5,5'-PeCB	111	33.994	1.47	2.0	1.08	54	D
13C-2,2',3,3',5,5',6-HpCB	178	39.985	1.05	2.0	0.886	44	D
Recovery Standards							
13C-2,5-DiCB	9	14.051	1.73	2.0	NA	NA	D
13C-2,2',5,5'-TeCB	52	23.948	0.82	2.0	NA	NA	D
13C-2,2',4,5,5'-PeCB	101	31.194	1.48	2.0	NA	NA	D
13C-2,2',3,4,4',5'-HxCB	138	39.549	1.61	2.0	NA	NA	ID
13C-2,2',3,3',4,4',5,5'-OxCB	194	51.677	0.85	2.0	NA	NA	D

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**Method 1668C Polychlorobiphenyl
Sample Analysis Results**

Client Sample ID SB12-0.0-0.5-1022
Lab Sample ID 10638496004
Filename P230113A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
1		8.703	2.97	54.3 JD	---	45.4
2		---	---	ND D	---	33.6
3		11.406	3.09	73.3 BJD	---	47.5
4		---	---	ND D	---	74.5
5		---	---	ND D	---	26.6
6		---	---	ND D	---	37.8
7		---	---	ND D	---	28.8
8		15.057	1.62	112 JD	---	61.9
9		---	---	ND D	---	31.9
10		---	---	ND D	---	36.7
11		---	---	ND D	---	1060
12	12/13	---	---	ND D	---	64.4
13	12/13	---	---	ND D	---	64.4
14		---	---	ND D	---	32.7
15		18.605	1.60	457 D	---	56.3
16		---	---	ND D	---	69.2
17		---	---	ND D	---	71.1
18	18/30	---	---	ND D	---	142
19		---	---	ND D	---	30.9
20	20/28	21.983	1.10	334 JD	---	229
21	21/33	---	---	ND D	---	136
22		22.680	1.05	114 JD	---	102
23		---	---	ND D	---	29.7
24		---	---	ND D	---	39.4
25		---	---	ND D	---	31.8
26	26/29	---	---	ND D	---	94.9
27		---	---	ND D	---	41.4
28	20/28	21.983	1.10	(334) JD	---	229
29	26/29	---	---	ND D	---	94.9
30	18/30	---	---	ND D	---	142
31		21.659	1.09	282 D	---	194
32		---	---	ND D	---	66.1
33	21/33	---	---	ND D	---	136
34		---	---	ND D	---	41.6
35		---	---	ND D	---	40.3
36		---	---	ND D	---	28.7
37		26.299	1.13	464 D	---	70.4
38		---	---	ND D	---	25.9
39		---	---	ND D	---	30.7
40	40/41/71	26.098	0.73	349 JD	---	110
41	40/41/71	26.098	0.73	(349) JD	---	110
42		25.572	0.87	181 JD	---	50.0
43	43/73	---	---	ND D	---	104
44	44/47/65	25.000	0.79	981 D	---	249
45	45/51	---	---	ND D	---	104
46		---	---	ND D	---	39.4
47	44/47/65	25.000	0.79	(981) D	---	249
48		24.799	0.90	--- IJD	87.9	38.7

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Pace AnalyticalTM

Pace Analytical Services, LLC.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID SB12-0.0-0.5-1022
Lab Sample ID 10638496004
Filename P230113A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
49	49/69	24.505	0.78	854 D	---	94.0
50	50/53	---	---	ND D	---	207
51	45/51	---	---	ND D	---	104
52		23.963	0.79	5890 D	---	180
53	50/53	---	---	ND D	---	207
54		---	---	ND D	---	51.9
55		---	---	ND D	---	81.2
56		30.080	0.80	723 D	---	52.8
57		---	---	ND D	---	22.1
58		---	---	ND D	---	26.9
59	59/62/75	25.371	0.77	81.8 JD	---	69.2
60		30.328	0.73	222 D	---	208
61	61/70/74/76	29.044	0.80	3400 D	---	156
62	59/62/75	25.371	0.77	(81.8) JD	---	69.2
63		---	---	ND D	---	76.4
64		26.346	0.82	509 D	---	139
65	44/47/65	25.000	0.79	(981) D	---	249
66		29.399	0.82	1170 D	---	122
67		28.440	0.86	38.8 JD	---	22.2
68		---	---	ND D	---	85.2
69	49/69	24.505	0.78	(854) D	---	94.0
70	61/70/74/76	29.044	0.80	(3400) D	---	156
71	40/41/71	26.098	0.73	(349) JD	---	110
72		27.265	0.80	78.8 JD	---	23.2
73	43/73	---	---	ND D	---	104
74	61/70/74/76	29.044	0.80	(3400) D	---	156
75	59/62/75	25.371	0.77	(81.8) JD	---	69.2
76	61/70/74/76	29.044	0.80	(3400) D	---	156
77		33.963	0.81	3730 D	---	33.8
78		---	---	ND D	---	33.2
79		32.339	0.83	821 D	---	26.1
80		---	---	ND D	---	24.5
81		33.391	0.74	80.6 JD	---	23.0
82		33.576	1.69	2760 D	---	48.6
83		31.705	1.44	5570 D	---	31.7
84		29.260	1.54	9090 D	---	32.0
85	85/116/117	33.066	1.43	3670 D	---	80.7
86	86/87/97/108/119/125	32.432	1.56	71800 D	---	156
87	86/87/97/108/119/125	32.432	1.56	(71800) D	---	156
88	88/91	29.044	1.54	3430 D	---	62.4
89		29.755	1.43	233 D	---	37.4
90	90/101/113	31.225	1.55	400000 D	---	114
91	88/91	29.044	1.54	(3430) D	---	62.4
92		30.606	1.56	44200 D	---	42.9
93	93/98/100/102	28.502	1.54	1330 D	---	119
94		27.652	1.43	126 JD	---	35.2
95		28.115	1.56	192000 D	---	145
96		25.356	1.48	108 JD	---	41.4

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Pace Analytical Services, LLC.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612-607-6444

Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID SB12-0.0-0.5-1022
Lab Sample ID 10638496004
Filename P230113A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
97	86/87/97/108/119/125	32.432	1.56	(71800) D	---	156
98	93/98/100/102	28.502	1.54	(1330) D	---	119
99		31.828	1.52	13600 D	---	49.2
100	93/98/100/102	28.502	1.54	(1330) D	---	119
101	90/101/113	31.225	1.55	(400000) D	---	114
102	93/98/100/102	28.502	1.54	(1330) D	---	119
103		27.451	1.48	416 D	---	29.7
104		---	---	ND D	---	32.9
105		37.554	1.58	23100 D	---	44.2
106		---	---	ND D	---	30.8
107	107/124	35.659	1.62	5720 D	---	47.1
108	86/87/97/108/119/125	32.432	1.56	(71800) D	---	156
109		35.894	1.59	8710 D	---	26.3
110	110/115	33.252	1.56	286000 D	---	139
111		---	---	ND D	---	28.4
112		---	---	ND D	---	38.7
113	90/101/113	31.225	1.55	(400000) D	---	114
114		36.883	1.44	446 D	---	36.7
115	110/115	33.252	1.56	(286000) D	---	139
116	85/116/117	33.066	1.43	(3670) D	---	80.7
117	85/116/117	33.066	1.43	(3670) D	---	80.7
118		36.363	1.58	143000 D	---	98.9
119	86/87/97/108/119/125	32.432	1.56	(71800) D	---	156
120		34.505	1.57	1000 D	---	33.3
121		---	---	ND D	---	35.0
122		36.699	1.68	857 D	---	34.5
123		36.011	1.65	845 D	---	32.7
124	107/124	35.659	1.62	(5720) D	---	47.1
125	86/87/97/108/119/125	32.432	1.56	(71800) D	---	156
126		40.723	1.54	9210 D	---	27.4
127		39.097	1.62	433 D	---	32.4
128	128/166	40.824	1.25	153000 D	---	65.7
129	129/138/163	39.549	1.24	2360000 D	---	124
130		38.879	1.25	78700 D	---	32.4
131		35.978	1.25	10500 D	---	43.7
132		36.447	1.25	560000 D	---	54.5
133		36.984	1.26	19800 D	---	29.6
134	134/143	35.357	1.28	65000 D	---	77.2
135	135/151	34.195	1.24	677000 D	---	101
136		31.705	1.25	176000 D	---	45.7
137		39.113	1.39	11500 D	---	37.1
138	129/138/163	39.549	1.24	(2360000) D	---	124
139	139/140	35.793	1.27	5650 D	---	54.9
140	139/140	35.793	1.27	(5650) D	---	54.9
141		38.476	1.25	548000 D	---	48.9
142		---	---	ND D	---	36.2
143	134/143	35.357	1.28	(65000) D	---	77.2
144		34.799	1.23	92200 D	---	39.8

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID SB12-0.0-0.5-1022
Lab Sample ID 10638496004
Filename P230113A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
145		32.029	1.35	111 JD	---	31.5
146		37.654	1.26	274000 D	---	39.7
147	147/149	35.173	1.25	1550000 D	---	116
148		33.607	1.24	544 D	---	44.6
149	147/149	35.173	1.25	(1550000) D	---	116
150		31.349	1.24	1030 D	---	35.4
151	135/151	34.195	1.24	(677000) D	---	101
152		31.163	1.25	183 JD	---	36.2
153	153/168	38.275	1.23	2130000 D	---	107
154		34.489	1.27	6890 D	---	37.5
155		---	---	ND D	---	30.9
156	156/157	43.763	1.26	186000 D	---	54.0
157	156/157	43.763	1.26	(186000) D	---	54.0
158		39.952	1.25	189000 D	---	31.1
159		41.801	1.28	27600 D	---	31.9
160		---	---	ND D	---	26.0
161		---	---	ND D	---	28.5
162		42.120	1.27	4770 D	---	32.9
163	129/138/163	39.549	1.24	(2360000) D	---	124
164		39.231	1.25	155000 D	---	36.3
165		37.403	1.43	336 D	---	31.3
166	128/166	40.824	1.25	(153000) D	---	65.7
167		42.623	1.28	80400 D	---	37.1
168	153/168	38.275	1.23	(2130000) D	---	107
169		47.066	1.46	--- ID	2070	37.3
170		46.446	1.05	1150000 D	---	46.5
171	171/173	42.874	1.04	329000 D	---	75.1
172		44.518	1.05	180000 D	---	37.8
173	171/173	42.874	1.04	(329000) D	---	75.1
174		41.785	1.05	939000 D	---	56.9
175		40.639	1.05	31300 D	---	34.3
176		38.124	1.04	103000 D	---	41.6
177		42.237	1.05	618000 D	---	47.6
178		40.002	1.03	162000 D	---	32.0
179		37.218	1.04	318000 D	---	47.2
180	180/193	45.188	1.05	2210000 D	---	102
181		42.657	1.04	3750 D	---	31.2
182		41.142	1.05	4350 D	---	34.2
183	183/185	41.550	1.05	639000 D	---	79.9
184		37.772	1.16	466 D	---	34.4
185	183/185	41.550	1.05	(639000) D	---	79.9
186		---	---	ND D	---	39.1
187		40.924	1.02	935000 D	---	55.9
188		36.900	1.05	1010 D	---	31.8
189		49.608	1.06	47000 D	---	28.2
190		46.999	1.05	250000 D	---	24.9
191		45.540	1.03	40600 D	---	29.0
192		---	---	ND D	---	28.8

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**Method 1668C Polychlorobiphenyl
Sample Analysis Results**

Client Sample ID SB12-0.0-0.5-1022
Lab Sample ID 10638496004
Filename P230113A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
193	180/193	45.188	1.05	(2210000) D	---	102
194		51.742	0.89	386000 D	---	26.9
195		49.371	0.89	174000 D	---	31.4
196		47.821	0.89	183000 D	---	19.7
197	197/200	44.299	0.89	53100 D	---	45.5
198	198/199	47.167	0.90	334000 D	---	53.3
199	198/199	47.167	0.90	(334000) D	---	53.3
200	197/200	44.299	0.89	(53100) D	---	45.5
201		43.293	0.88	32900 D	---	27.0
202		42.354	0.89	48600 D	---	21.9
203		48.022	0.90	226000 D	---	33.5
204		43.981	0.96	109 JD	---	21.8
205		52.216	0.89	23000 D	---	24.9
206		53.940	0.79	57700 D	---	34.1
207		50.061	0.80	7050 D	---	27.5
208		49.112	0.79	8960 D	---	26.1
209		55.556	0.67	1610 D	---	29.4

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Nn = Value obtained from additional analyses

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ND = Not Detected
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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID SB12-0.0-0.5-1022
Lab Sample ID 10638496004
Filename P230113A_11

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	128
Total Dichloro Biphenyls	569
Total Trichloro Biphenyls	1190
Total Tetrachloro Biphenyls	19100
Total Pentachloro Biphenyls	1230000
Total Hexachloro Biphenyls	9360000
Total Heptachloro Biphenyls	7960000
Total Octachloro Biphenyls	1460000
Total Nonachloro Biphenyls	73700
Decachloro Biphenyls	1610
Total PCBs	20100000

ND = Not Detected

Results reported on a total weight basis

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Pace AnalyticalTM

Pace Analytical Services, LLC.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612-607-6444

Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - UPRR_Jacobs

Client's Sample ID	SB13-0.0-0.5-1022		
Lab Sample ID	10638496005		
Filename	P230113A_05		
Injected By	AH5		
Total Amount Extracted	10.2 g	Matrix	Solid
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	10/19/2022 10:00
ICAL ID	P230113A03	Received	10/20/2022 10:30
CCal Filename(s)	P230113A_02	Extracted	01/03/2023 13:30
Method Blank ID	BLANK-103296	Analyzed	01/13/2023 13:46

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	8.715	3.43	2.0	0.787	39
13C-4-MoCB	3	11.406	3.07	2.0	1.01	50
13C-2,2'-DiCB	4	11.688	1.60	2.0	0.953	48
13C-4,4'-DiCB	15	18.604	1.58	2.0	1.34	67
13C-2,2',6-TrCB	19	15.388	1.07	2.0	1.05	53
13C-3,4,4'-TrCB	37	26.283	1.09	2.0	1.42	71
13C-2,2',6,6'-TeCB	54	18.920	0.81	2.0	1.04	52
13C-3,4,4',5-TeCB	81	33.390	0.79	2.0	1.47	73
13C-3,3',4,4'-TeCB	77	33.962	0.82	2.0	1.47	73
13C-2,2',4,6,6'-PeCB	104	24.968	1.56	2.0	1.21	61
13C-2,3,3',4,4'-PeCB	105	37.551	1.59	2.0	1.36	68
13C-2,3,4,4',5-PeCB	114	36.897	1.62	2.0	1.35	67
13C-2,3',4,4',5-PeCB	118	36.361	1.59	2.0	1.27	64
13C-2,3',4,4',5'-PeCB	123	36.026	1.53	2.0	1.35	67
13C-3,3',4,4',5-PeCB	126	40.754	1.55	2.0	1.35	67
13C-2,2',4,4',6,6'-HxCB	155	30.992	1.29	2.0	1.16	58
13C-HxCB (156/157)	156/157	43.794	1.28	4.0	2.40	60
13C-2,3',4,4',5,5'-HxCB	167	42.704	1.29	2.0	1.24	62
13C-3,3',4,4',5,5'-HxCB	169	47.114	1.25	2.0	1.10	55
13C-2,2',3,4',5,6,6'-HpCB	188	36.864	1.04	2.0	1.43	72
13C-2,3,3',4,4',5,5'-HpCB	189	49.627	1.07	2.0	1.20	60
13C-2,2',3,3',5,5',6,6'-OxCB	202	42.369	0.92	2.0	1.32	66
13C-2,3,3',4,4',5,5',6-OxCB	205	52.299	0.92	2.0	1.17	58
13C-2,2',3,3',4,4',5,5',6-NoCB	206	53.980	0.80	2.0	1.10	55
13C-2,2',3,3',4,4',5,5',6-NoCB	208	49.109	0.82	2.0	1.24	62
13C-DeCB	209	55.575	0.73	2.0	1.08	54
CleanupStandards						
13C-2,4,4'-TrCB	28	21.967	1.08	2.0	1.18	59
13C-2,3,3',5,5'-PeCB	111	34.024	1.53	2.0	1.07	54
13C-2,2',3,3',5,5',6-HpCB	178	39.999	1.06	2.0	1.07	54
Recovery Standards						
13C-2,5-DiCB	9	14.073	1.49	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	23.947	0.79	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	31.224	1.62	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	39.530	1.31	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OxCB	194	51.760	0.90	2.0	NA	NA

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**Method 1668C Polychlorobiphenyl
Sample Analysis Results**

Client Sample ID SB13-0.0-0.5-1022
Lab Sample ID 10638496005
Filename P230113A_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
1		8.726	2.95	10.8 BJ	---	4.65
2		11.214	3.45	8.12 J	---	3.44
3		11.417	2.91	16.6 BJ	---	4.85
4		11.700	1.51	28.8	---	7.62
5		---	---	ND	---	2.72
6		14.559	1.43	13.3 J	---	3.87
7		---	---	ND	---	2.95
8		15.067	1.53	57.1	---	6.33
9		---	---	ND	---	3.26
10		---	---	ND	---	3.75
11		---	---	ND	---	108
12	12/13	18.239	1.40	12.8 J	---	6.58
13	12/13	18.239	1.40	(12.8) J	---	6.58
14		---	---	ND	---	3.34
15		18.637	1.68	126	---	5.76
16		18.538	1.03	42.8	---	7.07
17		18.052	0.99	34.1	---	7.27
18	18/30	17.565	1.04	72.8	---	14.5
19		15.399	1.01	13.6 J	---	3.16
20	20/28	21.998	1.07	152	---	23.4
21	21/33	22.246	1.08	83.4	---	13.9
22		22.663	1.10	59.4	---	10.4
23		---	---	ND	---	3.04
24		---	---	ND	---	4.03
25		21.333	1.13	11.5 J	---	3.25
26	26/29	21.039	1.09	26.5 J	---	9.71
27		18.284	1.19	6.64 J	---	4.23
28	20/28	21.998	1.07	(152)	---	23.4
29	26/29	21.039	1.09	(26.5) J	---	9.71
30	18/30	17.565	1.04	(72.8)	---	14.5
31		21.658	1.06	134	---	19.8
32		19.167	1.03	22.0	---	6.76
33	21/33	22.246	1.08	(83.4)	---	13.9
34		---	---	ND	---	4.25
35		25.881	1.11	7.78 J	---	4.13
36		---	---	ND	---	2.94
37		26.314	1.11	124	---	7.20
38		---	---	ND	---	2.65
39		---	---	ND	---	3.14
40	40/41/71	26.113	0.81	111	---	11.3
41	40/41/71	26.113	0.81	(111)	---	11.3
42		25.603	0.77	55.8	---	5.11
43	43/73	---	---	ND	---	10.6
44	44/47/65	25.015	0.81	330	---	25.4
45	45/51	22.045	0.77	34.8 J	---	10.6
46		22.400	0.84	11.8 J	---	4.03
47	44/47/65	25.015	0.81	(330)	---	25.4
48		24.798	0.78	33.3	---	3.96

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**Method 1668C Polychlorobiphenyl
Sample Analysis Results**

Client Sample ID SB13-0.0-0.5-1022
Lab Sample ID 10638496005
Filename P230113A_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
49	49/69	24.504	0.78	190	---	9.62
50	50/53	21.333	0.81	29.3 J	---	21.2
51	45/51	22.045	0.77	(34.8) J	---	10.6
52		23.978	0.77	694	---	18.4
53	50/53	21.333	0.81	(29.3) J	---	21.2
54		---	---	ND	---	5.30
55		---	---	ND	---	8.30
56		30.111	0.81	113	---	5.40
57		---	---	ND	---	2.26
58		---	---	ND	---	2.75
59	59/62/75	25.371	0.77	19.9 J	---	7.07
60		30.343	0.82	58.8	---	21.3
61	61/70/74/76	29.136	0.80	795	---	15.9
62	59/62/75	25.371	0.77	(19.9) J	---	7.07
63		28.765	0.77	10.8 J	---	7.81
64		26.361	0.80	131	---	14.2
65	44/47/65	25.015	0.81	(330)	---	25.4
66		29.492	0.81	250	---	12.5
67		28.471	0.68	7.59 J	---	2.27
68		---	---	ND	---	8.71
69	49/69	24.504	0.78	(190)	---	9.62
70	61/70/74/76	29.136	0.80	(795)	---	15.9
71	40/41/71	26.113	0.81	(111)	---	11.3
72		27.280	0.71	2.72 J	---	2.37
73	43/73	---	---	ND	---	10.6
74	61/70/74/76	29.136	0.80	(795)	---	15.9
75	59/62/75	25.371	0.77	(19.9) J	---	7.07
76	61/70/74/76	29.136	0.80	(795)	---	15.9
77		33.993	0.81	135	---	3.46
78		---	---	ND	---	3.40
79		32.338	0.65	28.3	---	2.67
80		---	---	ND	---	2.50
81		33.390	0.89	7.50 J	---	2.35
82		33.591	1.51	333	---	4.97
83		31.719	1.67	201	---	3.24
84		29.337	1.56	673	---	3.27
85	85/116/117	33.111	1.54	660	---	8.25
86	86/87/97/108/119/125	32.446	1.55	2340	---	15.9
87	86/87/97/108/119/125	32.446	1.55	(2340)	---	15.9
88	88/91	29.090	1.56	389	---	6.39
89		29.801	1.40	15.1 J	---	3.82
90	90/101/113	31.255	1.57	4810	---	11.7
91	88/91	29.090	1.56	(389)	---	6.39
92		30.636	1.52	886	---	4.39
93	93/98/100/102	28.533	1.60	72.0 J	---	12.2
94		27.682	1.62	8.55 J	---	3.60
95		28.146	1.55	3250	---	14.8
96		25.340	1.57	8.59 J	---	4.23

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID SB13-0.0-0.5-1022
Lab Sample ID 10638496005
Filename P230113A_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
97	86/87/97/108/119/125	32.446	1.55	(2340)	---	15.9
98	93/98/100/102	28.533	1.60	(72.0) J	---	12.2
99		31.858	1.56	1180	---	5.03
100	93/98/100/102	28.533	1.60	(72.0) J	---	12.2
101	90/101/113	31.255	1.57	(4810)	---	11.7
102	93/98/100/102	28.533	1.60	(72.0) J	---	12.2
103		27.465	1.56	15.5 J	---	3.04
104		---	---	ND	---	3.37
105		37.568	1.59	2250	---	4.52
106		---	---	ND	---	3.15
107	107/124	35.690	1.61	209	---	4.81
108	86/87/97/108/119/125	32.446	1.55	(2340)	---	15.9
109		35.925	1.64	306	---	2.69
110	110/115	33.266	1.57	6460	---	14.2
111		---	---	ND	---	2.91
112		---	---	ND	---	3.96
113	90/101/113	31.255	1.57	(4810)	---	11.7
114		36.931	1.65	88.8	---	3.75
115	110/115	33.266	1.57	(6460)	---	14.2
116	85/116/117	33.111	1.54	(660)	---	8.25
117	85/116/117	33.111	1.54	(660)	---	8.25
118		36.377	1.59	4560	---	10.1
119	86/87/97/108/119/125	32.446	1.55	(2340)	---	15.9
120		34.535	1.76	14.2 J	---	3.41
121		---	---	ND	---	3.58
122		36.713	1.61	52.1	---	3.53
123		36.042	1.61	88.6	---	3.34
124	107/124	35.690	1.61	(209)	---	4.81
125	86/87/97/108/119/125	32.446	1.55	(2340)	---	15.9
126		40.754	1.60	78.3	---	2.80
127		39.127	1.39	15.9 J	---	3.31
128	128/166	40.854	1.24	2280	---	6.72
129	129/138/163	39.563	1.26	22000	---	12.7
130		38.893	1.31	1010	---	3.31
131		36.009	1.26	144	---	4.47
132		36.461	1.25	4890	---	5.57
133		36.998	1.28	231	---	3.03
134	134/143	35.388	1.25	753	---	7.90
135	135/151	34.225	1.25	6450	---	10.3
136		31.735	1.25	1650	---	4.68
137		39.111	1.35	451	---	3.79
138	129/138/163	39.563	1.26	(22000)	---	12.7
139	139/140	35.807	1.25	160	---	5.61
140	139/140	35.807	1.25	(160)	---	5.61
141		38.490	1.26	4310	---	5.00
142		---	---	ND	---	3.70
143	134/143	35.388	1.25	(753)	---	7.90
144		34.828	1.25	789	---	4.07

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID SB13-0.0-0.5-1022
Lab Sample ID 10638496005
Filename P230113A_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
145		---	---	ND	---	3.22
146		37.669	1.25	2590	---	4.06
147	147/149	35.187	1.25	13800	---	11.9
148		33.622	1.12	11.5 J	---	4.56
149	147/149	35.187	1.25	(13800)	---	11.9
150		31.394	1.25	16.3 J	---	3.61
151	135/151	34.225	1.25	(6450)	---	10.3
152		31.193	1.38	6.12 J	---	3.70
153	153/168	38.306	1.25	17400	---	10.9
154		34.519	1.37	103	---	3.83
155		---	---	ND	---	3.16
156	156/157	43.794	1.28	2190	---	5.52
157	156/157	43.794	1.28	(2190)	---	5.52
158		39.982	1.26	1820	---	3.18
159		41.815	1.27	315	---	3.26
160		---	---	ND	---	2.66
161		---	---	ND	---	2.92
162		42.167	1.27	32.0	---	3.37
163	129/138/163	39.563	1.26	(22000)	---	12.7
164		39.245	1.26	1460	---	3.71
165		---	---	ND	---	3.20
166	128/166	40.854	1.24	(2280)	---	6.72
167		42.737	1.29	875	---	3.79
168	153/168	38.306	1.25	(17400)	---	10.9
169		47.097	1.47	---	30.5 I	3.81
170		46.477	1.04	10100	---	4.75
171	171/173	42.972	1.04	2530	---	7.68
172		44.548	1.03	1760	---	3.86
173	171/173	42.972	1.04	(2530)	---	7.68
174		41.815	1.03	9570	---	5.82
175		40.687	1.01	332	---	3.51
176		38.138	1.04	924	---	4.25
177		42.268	1.04	5520	---	4.87
178		40.033	1.05	1960	---	3.27
179		37.216	1.03	3650	---	4.82
180	180/193	45.219	1.04	23600	---	10.4
181		42.737	1.00	46.0	---	3.19
182		41.156	1.14	52.4	---	3.50
183	183/185	41.581	1.04	6050	---	8.17
184		37.769	0.92	6.71 J	---	3.52
185	183/185	41.581	1.04	(6050)	---	8.17
186		---	---	ND	---	4.00
187		40.955	1.04	12100	---	5.72
188		36.897	1.00	12.7 J	---	3.25
189		49.648	1.06	427	---	2.89
190		47.047	1.05	2140	---	2.54
191		45.571	1.04	382	---	2.97
192		---	---	ND	---	2.95

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ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
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REPORT OF LABORATORY ANALYSIS

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Pace AnalyticalTM

Pace Analytical Services, LLC.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612-607-6444

**Method 1668C Polychlorobiphenyl
Sample Analysis Results**

Client Sample ID SB13-0.0-0.5-1022
Lab Sample ID 10638496005
Filename P230113A_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
193	180/193	45.219	1.04	(23600)	---	10.4
194		51.782	0.88	6410	---	2.75
195		49.389	0.87	2330	---	3.21
196		47.852	0.90	2970	---	2.01
197	197/200	44.331	0.89	960	---	4.66
198	198/199	47.197	0.89	7250	---	5.45
199	198/199	47.197	0.89	(7250)	---	5.45
200	197/200	44.331	0.89	(960)	---	4.66
201		43.358	0.93	698	---	2.76
202		42.385	0.89	1190	---	2.24
203		48.053	0.89	4140	---	3.43
204		---	---	ND	---	2.23
205		52.321	0.93	371	---	2.54
206		54.002	0.79	3970	---	3.49
207		50.079	0.75	311	---	2.81
208		49.131	0.78	1070	---	2.67
209		55.597	0.69	2060	---	3.01

Conc = Concentration
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R = Recovery outside of Method 1668C control limits
Nn = Value obtained from additional analyses

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID SB13-0.0-0.5-1022
Lab Sample ID 10638496005
Filename P230113A_05

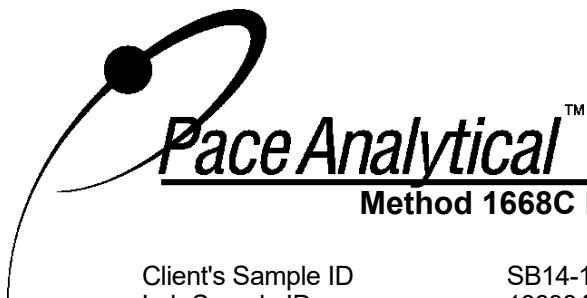
Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	35.5
Total Dichloro Biphenyls	238
Total Trichloro Biphenyls	790
Total Tetrachloro Biphenyls	3050
Total Pentachloro Biphenyls	29000
Total Hexachloro Biphenyls	85700
Total Heptachloro Biphenyls	81000
Total Octachloro Biphenyls	26300
Total Nonachloro Biphenyls	5350
Decachloro Biphenyls	2060
Total PCBs	234000

ND = Not Detected

Results reported on a total weight basis

REPORT OF LABORATORY ANALYSIS

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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client - UPRR_Jacobs

Client's Sample ID	SB14-1.0-1.5-1022		
Lab Sample ID	10638496006		
Filename	P230113A_06		
Injected By	AH5		
Total Amount Extracted	10.8 g	Matrix	Solid
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	10/19/2022 08:05
ICAL ID	P230113A03	Received	10/20/2022 10:30
CCal Filename(s)	P230113A_02	Extracted	01/03/2023 13:30
Method Blank ID	BLANK-103296	Analyzed	01/13/2023 14:45

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	8.703	3.00	2.0	0.757	38
13C-4-MoCB	3	11.406	3.24	2.0	0.893	45
13C-2,2'-DiCB	4	11.677	1.60	2.0	0.826	41
13C-4,4'-DiCB	15	18.593	1.64	2.0	1.11	55
13C-2,2',6-TrCB	19	15.377	1.11	2.0	0.899	45
13C-3,4,4'-TrCB	37	26.283	1.03	2.0	1.11	55
13C-2,2',6,6'-TeCB	54	18.904	0.79	2.0	0.823	41
13C-3,4,4',5-TeCB	81	33.374	0.79	2.0	1.15	58
13C-3,3',4,4'-TeCB	77	33.946	0.82	2.0	1.14	57
13C-2,2',4,6,6'-PeCB	104	24.952	1.62	2.0	1.02	51
13C-2,3,3',4,4'-PeCB	105	37.534	1.56	2.0	1.15	57
13C-2,3,4,4',5-PeCB	114	36.896	1.60	2.0	1.13	57
13C-2,3',4,4',5-PeCB	118	36.343	1.51	2.0	1.08	54
13C-2,3',4,4',5'-PeCB	123	36.008	1.55	2.0	1.18	59
13C-3,3',4,4',5-PeCB	126	40.719	1.58	2.0	1.13	57
13C-2,2',4,4',6,6'-HxCB	155	30.976	1.26	2.0	0.997	50
13C-HxCB (156/157)	156/157	43.776	1.24	4.0	1.97	49
13C-2,3',4,4',5,5'-HxCB	167	42.636	1.32	2.0	1.07	53
13C-3,3',4,4',5,5'-HxCB	169	47.063	1.27	2.0	0.899	45
13C-2,2',3,4',5,6,6'-HpCB	188	36.863	1.06	2.0	1.21	61
13C-2,3,3',4,4',5,5'-HpCB	189	49.604	1.10	2.0	1.06	53
13C-2,2',3,3',5,5',6'-OxCB	202	42.334	0.90	2.0	1.13	56
13C-2,3,3',4,4',5,5',6-OxCB	205	52.234	0.88	2.0	0.992	50
13C-2,2',3,3',4,4',5,5',6-NoCB	206	53.936	0.78	2.0	0.943	47
13C-2,2',3,3',4,4',5,5',6'-NoCB	208	49.087	0.78	2.0	1.06	53
13C-DeCB	209	55.531	0.70	2.0	0.929	46
CleanupStandards						
13C-2,4,4'-TrCB	28	21.967	1.07	2.0	0.931	47
13C-2,3,3',5,5'-PeCB	111	33.993	1.70	2.0	0.878	44
13C-2,2',3,3',5,5',6-HpCB	178	39.981	1.03	2.0	0.899	45
Recovery Standards						
13C-2,5-DiCB	9	14.072	1.61	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	23.947	0.80	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	31.208	1.57	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	39.529	1.25	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OxCB	194	51.738	0.88	2.0	NA	NA

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Pace Analytical Services, LLC.
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**Method 1668C Polychlorobiphenyl
Sample Analysis Results**

Client Sample ID SB14-1.0-1.5-1022
Lab Sample ID 10638496006
Filename P230113A_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
1		8.726	2.83	11.1 BJ	---	4.36
2		11.202	3.57	10.6 J	---	3.23
3		11.417	3.05	23.2 B	---	4.55
4		11.700	1.23	---	12.1	7.15
5		---	---	ND	---	2.55
6		14.570	1.65	6.54 J	---	3.63
7		---	---	ND	---	2.76
8		15.056	1.67	29.6	---	5.94
9		---	---	ND	---	3.06
10		---	---	ND	---	3.52
11		17.919	1.54	115	---	101
12	12/13	18.239	1.34	9.97 J	---	6.18
13	12/13	18.239	1.34	(9.97) J	---	6.18
14		---	---	ND	---	3.13
15		18.626	1.55	75.2	---	5.40
16		18.527	0.98	16.2 J	---	6.64
17		18.018	1.08	16.9 J	---	6.82
18	18/30	17.554	1.10	32.5 J	---	13.6
19		15.388	1.05	4.93 J	---	2.97
20	20/28	21.983	1.08	92.9	---	21.9
21	21/33	22.230	1.07	43.2	---	13.1
22		22.663	1.04	34.6	---	9.77
23		---	---	ND	---	2.85
24		---	---	ND	---	3.78
25		21.317	0.97	6.44 J	---	3.05
26	26/29	21.054	1.06	13.6 J	---	9.11
27		---	---	ND	---	3.97
28	20/28	21.983	1.08	(92.9)	---	21.9
29	26/29	21.054	1.06	(13.6) J	---	9.11
30	18/30	17.554	1.10	(32.5) J	---	13.6
31		21.658	1.09	81.9	---	18.6
32		19.136	1.04	11.0 J	---	6.34
33	21/33	22.230	1.07	(43.2)	---	13.1
34		---	---	ND	---	3.99
35		25.865	0.95	6.42 J	---	3.87
36		---	---	ND	---	2.76
37		26.313	1.05	79.5	---	6.76
38		---	---	ND	---	2.49
39		---	---	ND	---	2.95
40	40/41/71	26.097	0.81	68.9	---	10.6
41	40/41/71	26.097	0.81	(68.9)	---	10.6
42		25.602	0.85	37.8	---	4.79
43	43/73	---	---	ND	---	9.95
44	44/47/65	25.014	0.76	291	---	23.9
45	45/51	22.060	0.79	18.8 J	---	9.95
46		22.400	0.82	5.83 J	---	3.78
47	44/47/65	25.014	0.76	(291)	---	23.9
48		24.798	0.84	19.0	---	3.71

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**Method 1668C Polychlorobiphenyl
Sample Analysis Results**

Client Sample ID SB14-1.0-1.5-1022
Lab Sample ID 10638496006
Filename P230113A_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
49	49/69	24.488	0.77	168	---	9.02
50	50/53	---	---	ND	---	19.9
51	45/51	22.060	0.79	(18.8) J	---	9.95
52		23.962	0.79	723	---	17.2
53	50/53	---	---	ND	---	19.9
54		---	---	ND	---	4.98
55		---	---	ND	---	7.79
56		30.094	0.82	83.3	---	5.07
57		---	---	ND	---	2.12
58		---	---	ND	---	2.58
59	59/62/75	25.370	0.76	10.8 J	---	6.64
60		30.326	0.79	40.1	---	20.0
61	61/70/74/76	29.073	0.81	642	---	14.9
62	59/62/75	25.370	0.76	(10.8) J	---	6.64
63		28.733	0.84	8.78 J	---	7.33
64		26.360	0.80	122	---	13.4
65	44/47/65	25.014	0.76	(291)	---	23.9
66		29.429	0.81	180	---	11.7
67		28.470	0.77	3.30 J	---	2.13
68		---	---	ND	---	8.18
69	49/69	24.488	0.77	(168)	---	9.02
70	61/70/74/76	29.073	0.81	(642)	---	14.9
71	40/41/71	26.097	0.81	(68.9)	---	10.6
72		27.279	0.70	2.95 J	---	2.22
73	43/73	---	---	ND	---	9.95
74	61/70/74/76	29.073	0.81	(642)	---	14.9
75	59/62/75	25.370	0.76	(10.8) J	---	6.64
76	61/70/74/76	29.073	0.81	(642)	---	14.9
77		33.961	0.86	38.4	---	3.24
78		---	---	ND	---	3.19
79		32.337	0.80	12.4 J	---	2.51
80		---	---	ND	---	2.35
81		33.374	0.85	3.45 J	---	2.20
82		33.575	1.61	151	---	4.66
83		31.703	1.54	84.5	---	3.04
84		29.290	1.51	356	---	3.07
85	85/116/117	33.095	1.60	305	---	7.74
86	86/87/97/108/119/125	32.430	1.54	1040	---	14.9
87	86/87/97/108/119/125	32.430	1.54	(1040)	---	14.9
88	88/91	29.058	1.66	187	---	5.99
89		29.754	1.39	9.44 J	---	3.59
90	90/101/113	31.239	1.57	2110	---	11.0
91	88/91	29.058	1.66	(187)	---	5.99
92		30.620	1.58	354	---	4.12
93	93/98/100/102	28.517	1.43	35.4 J	---	11.4
94		27.666	1.77	4.22 J	---	3.37
95		28.130	1.54	1520	---	13.9
96		25.354	1.42	6.12 J	---	3.97

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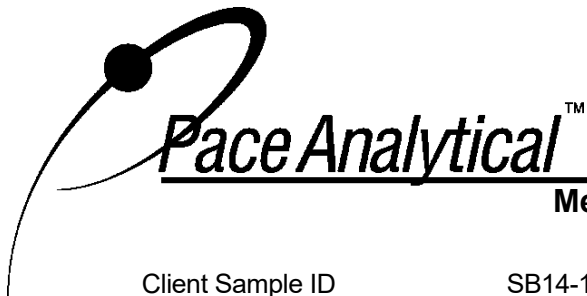
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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID SB14-1.0-1.5-1022
Lab Sample ID 10638496006
Filename P230113A_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
97	86/87/97/108/119/125	32.430	1.54	(1040)	---	14.9
98	93/98/100/102	28.517	1.43	(35.4) J	---	11.4
99		31.842	1.56	654	---	4.72
100	93/98/100/102	28.517	1.43	(35.4) J	---	11.4
101	90/101/113	31.239	1.57	(2110)	---	11.0
102	93/98/100/102	28.517	1.43	(35.4) J	---	11.4
103		27.434	1.45	6.00 J	---	2.85
104		---	---	ND	---	3.16
105		37.567	1.59	676	---	4.24
106		---	---	ND	---	2.96
107	107/124	35.656	1.58	96.4	---	4.52
108	86/87/97/108/119/125	32.430	1.54	(1040)	---	14.9
109		35.907	1.52	115	---	2.53
110	110/115	33.250	1.59	2780	---	13.4
111		---	---	ND	---	2.73
112		---	---	ND	---	3.71
113	90/101/113	31.239	1.57	(2110)	---	11.0
114		36.913	1.54	36.0	---	3.52
115	110/115	33.250	1.59	(2780)	---	13.4
116	85/116/117	33.095	1.60	(305)	---	7.74
117	85/116/117	33.095	1.60	(305)	---	7.74
118		36.376	1.59	1620	---	9.49
119	86/87/97/108/119/125	32.430	1.54	(1040)	---	14.9
120		34.503	1.56	5.80 J	---	3.20
121		---	---	ND	---	3.35
122		36.712	1.50	21.7	---	3.31
123		36.041	1.52	38.7	---	3.13
124	107/124	35.656	1.58	(96.4)	---	4.52
125	86/87/97/108/119/125	32.430	1.54	(1040)	---	14.9
126		40.719	1.55	19.6	---	2.63
127		39.110	1.34	6.04 J	---	3.11
128	128/166	40.820	1.23	792	---	6.30
129	129/138/163	39.546	1.24	9880	---	11.9
130		38.891	1.27	386	---	3.11
131		35.991	1.26	54.3	---	4.19
132		36.444	1.25	1980	---	5.23
133		36.997	1.30	103	---	2.84
134	134/143	35.371	1.25	279	---	7.41
135	135/151	34.209	1.24	2730	---	9.68
136		31.703	1.23	686	---	4.39
137		39.110	1.22	144	---	3.56
138	129/138/163	39.546	1.24	(9880)	---	11.9
139	139/140	35.790	1.28	56.5	---	5.26
140	139/140	35.790	1.28	(56.5)	---	5.26
141		38.472	1.25	1890	---	4.69
142		---	---	ND	---	3.47
143	134/143	35.371	1.25	(279)	---	7.41
144		34.797	1.23	337	---	3.82

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**Method 1668C Polychlorobiphenyl
Sample Analysis Results**

Client Sample ID SB14-1.0-1.5-1022
Lab Sample ID 10638496006
Filename P230113A_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
145		---	---	ND	---	3.02
146		37.651	1.24	1190	---	3.81
147	147/149	35.169	1.26	6220	---	11.2
148		33.606	1.33	5.85 J	---	4.28
149	147/149	35.169	1.26	(6220)	---	11.2
150		31.363	1.40	4.78 J	---	3.39
151	135/151	34.209	1.24	(2730)	---	9.68
152		---	---	ND	---	3.47
153	153/168	38.288	1.25	8200	---	10.2
154		34.503	1.28	30.8	---	3.59
155		---	---	ND	---	2.97
156	156/157	43.759	1.23	763	---	5.18
157	156/157	43.759	1.23	(763)	---	5.18
158		39.965	1.22	764	---	2.99
159		41.798	1.22	142	---	3.06
160		---	---	ND	---	2.50
161		---	---	ND	---	2.74
162		42.133	1.34	22.4	---	3.16
163	129/138/163	39.546	1.24	(9880)	---	11.9
164		39.227	1.24	654	---	3.48
165		---	---	ND	---	3.00
166	128/166	40.820	1.23	(792)	---	6.30
167		42.653	1.29	335	---	3.56
168	153/168	38.288	1.25	(8200)	---	10.2
169		47.063	1.55	---	10.2	3.58
170		46.459	1.04	3950	---	4.46
171	171/173	42.904	1.02	1080	---	7.21
172		44.514	1.04	688	---	3.62
173	171/173	42.904	1.02	(1080)	---	7.21
174		41.781	1.02	3750	---	5.46
175		40.652	1.03	145	---	3.29
176		38.120	1.05	419	---	3.99
177		42.250	1.02	2390	---	4.57
178		39.998	1.02	802	---	3.07
179		37.215	1.03	1510	---	4.53
180	180/193	45.185	1.04	9010	---	9.77
181		42.669	1.01	15.8 J	---	3.00
182		41.139	1.04	18.0 J	---	3.28
183	183/185	41.563	1.02	2420	---	7.67
184		---	---	ND	---	3.30
185	183/185	41.563	1.02	(2420)	---	7.67
186		---	---	ND	---	3.75
187		40.937	1.04	4840	---	5.36
188		36.896	0.96	4.70 J	---	3.05
189		49.626	1.05	170	---	2.71
190		46.995	1.03	826	---	2.39
191		45.554	1.00	145	---	2.78
192		---	---	ND	---	2.76

Conc = Concentration
EML =Method Specified Reporting Limit (1668C)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise
B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668C control limits
Nn = Value obtained from additional analyses

Results reported on a total weight basis

ND = Not Detected
NA = Not Applicable
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* = See Discussion
X = Outside QC Limits
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ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

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Pace AnalyticalTM

Pace Analytical Services, LLC.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612-607-6444

**Method 1668C Polychlorobiphenyl
Sample Analysis Results**

Client Sample ID SB14-1.0-1.5-1022
Lab Sample ID 10638496006
Filename P230113A_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
193	180/193	45.185	1.04	(9010)	---	9.77
194		51.759	0.88	1870	---	2.58
195		49.367	0.90	780	---	3.01
196		47.834	0.89	912	---	1.89
197	197/200	44.313	0.90	312	---	4.37
198	198/199	47.163	0.89	2150	---	5.12
199	198/199	47.163	0.89	(2150)	---	5.12
200	197/200	44.313	0.90	(312)	---	4.37
201		43.307	0.89	208	---	2.59
202		42.368	0.88	368	---	2.10
203		48.035	0.90	1260	---	3.22
204		---	---	ND	---	2.09
205		52.255	0.91	125	---	2.39
206		53.958	0.76	904	---	3.27
207		50.057	0.75	102	---	2.64
208		49.108	0.78	289	---	2.51
209		55.574	0.68	1570	---	2.82

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R = Recovery outside of Method 1668C control limits
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Method 1668C Polychlorobiphenyl Sample Analysis Results

Client Sample ID SB14-1.0-1.5-1022
Lab Sample ID 10638496006
Filename P230113A_06

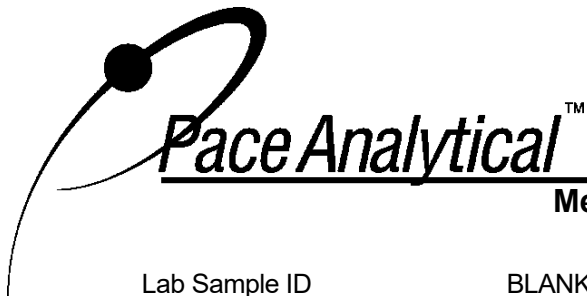
Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	44.9
Total Dichloro Biphenyls	237
Total Trichloro Biphenyls	440
Total Tetrachloro Biphenyls	2480
Total Pentachloro Biphenyls	12200
Total Hexachloro Biphenyls	37700
Total Heptachloro Biphenyls	32200
Total Octachloro Biphenyls	7980
Total Nonachloro Biphenyls	1300
Decachloro Biphenyls	1570
Total PCBs	96100

ND = Not Detected

Results reported on a total weight basis

REPORT OF LABORATORY ANALYSIS

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Method 1668C Polychlorobiphenyl Blank Analysis Results

Lab Sample ID	BLANK-103296		
Filename	P230112A_09		
Injected By	AH5	Matrix	Solid
Total Amount Extracted	10.8 g	Extracted	01/03/2023 13:30
ICAL ID	P230112A04	Analyzed	01/12/2023 17:27
CCal Filename(s)	P230112A_03	Dilution	NA

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery

Labeled Analytes

13C-2-MoCB	1	8.715	3.02	2.0	1.23	62
13C-4-MoCB	3	11.417	3.26	2.0	1.22	61
13C-2,2'-DiCB	4	11.711	1.46	2.0	1.32	66
13C-4,4'-DiCB	15	18.615	1.55	2.0	1.28	64
13C-2,2',6-TrCB	19	15.410	1.11	2.0	1.37	68
13C-3,4,4'-TrCB	37	26.299	1.06	2.0	1.35	67
13C-2,2',6,6'-TeCB	54	18.920	0.81	2.0	1.18	59
13C-3,4,4',5-TeCB	81	33.390	0.82	2.0	1.47	73
13C-3,3',4,4'-TeCB	77	33.962	0.83	2.0	1.44	72
13C-2,2',4,6,6'-PeCB	104	24.969	1.59	2.0	1.43	71
13C-2,3,3',4,4'-PeCB	105	37.551	1.57	2.0	1.56	78
13C-2,3,4,4',5-PeCB	114	36.897	1.53	2.0	1.56	78
13C-2,3',4,4',5-PeCB	118	36.361	1.56	2.0	1.44	72
13C-2,3',4,4',5'-PeCB	123	36.025	1.56	2.0	1.56	78
13C-3,3',4,4',5-PeCB	126	40.720	1.61	2.0	1.52	76
13C-2,2',4,4',6,6'-HxCB	155	30.992	1.28	2.0	1.41	71
13C-HxCB (156/157)	156/157	43.777	1.26	4.0	2.73	68
13C-2,3',4,4',5,5'-HxCB	167	42.620	1.27	2.0	1.40	70
13C-3,3',4,4',5,5'-HxCB	169	47.064	1.35	2.0	1.27	63
13C-2,2',3,4',5,6,6'-HpCB	188	36.881	1.01	2.0	1.68	84
13C-2,3,3',4,4',5,5'-HpCB	189	49.605	1.09	2.0	1.47	73
13C-2,2',3,3',5,5',6-OcCB	202	42.335	0.89	2.0	1.58	79
13C-2,3,3',4,4',5,5',6-OcCB	205	52.192	0.89	2.0	1.48	74
13C-2,2',3,3',4,4',5,5',6-NoCB	206	53.937	0.79	2.0	1.40	70
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	49.110	0.80	2.0	1.53	76
13C-DeCB	209	55.554	0.73	2.0	1.43	72

Cleanup Standards

13C-2,4,4'-TrCB	28	21.983	0.98	2.0	1.16	58
13C-2,3,3',5,5'-PeCB	111	34.024	1.50	2.0	1.22	61
13C-2,2',3,3',5,5',6-HpCB	178	39.983	1.07	2.0	1.31	65

Recovery Standards

13C-2,5-DiCB	9	14.150	1.62	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	23.963	0.82	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	31.209	1.59	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	39.530	1.24	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	51.717	0.94	2.0	NA	NA

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**Method 1668C Polychlorobiphenyl
Blank Analysis Results**

Lab Sample ID
Filename

BLANK-103296
P230112A_09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
1		8.737	2.88	4.47	—	4.40
2		—	—	ND	—	3.26
3		11.429	2.96	9.22	—	4.60
4		—	—	ND	—	7.22
5		—	—	ND	—	2.58
6		—	—	ND	—	3.67
7		—	—	ND	—	2.79
8		—	—	ND	—	5.99
9		—	—	ND	—	3.09
10		—	—	ND	—	3.55
11		—	—	ND	—	102
12	12/13	—	—	ND	—	6.23
13	12/13	—	—	ND	—	6.23
14		—	—	ND	—	3.16
15		—	—	ND	—	5.45
16		—	—	ND	—	6.70
17		—	—	ND	—	6.88
18	18/30	—	—	ND	—	13.8
19		—	—	ND	—	3.00
20	20/28	—	—	ND	—	22.1
21	21/33	—	—	ND	—	13.2
22		—	—	ND	—	9.86
23		—	—	ND	—	2.87
24		—	—	ND	—	3.81
25		—	—	ND	—	3.08
26	26/29	—	—	ND	—	9.19
27		—	—	ND	—	4.01
28	20/28	—	—	ND	—	22.1
29	26/29	—	—	ND	—	9.19
30	18/30	—	—	ND	—	13.8
31		—	—	ND	—	18.8
32		—	—	ND	—	6.40
33	21/33	—	—	ND	—	13.2
34		—	—	ND	—	4.03
35		—	—	ND	—	3.91
36		—	—	ND	—	2.78
37		—	—	ND	—	6.82
38		—	—	ND	—	2.51
39		—	—	ND	—	2.98
40	40/41/71	—	—	ND	—	10.7
41	40/41/71	—	—	ND	—	10.7
42		—	—	ND	—	4.84
43	43/73	—	—	ND	—	10.0
44	44/47/65	—	—	ND	—	24.1
45	45/51	—	—	ND	—	10.0

Conc = Concentration
EML = Method Specified Reporting Limit (1668C)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise
B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668C control limits
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Pace AnalyticalTM

Pace Analytical Services, LLC.
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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612-607-6444

**Method 1668C Polychlorobiphenyl
Blank Analysis Results**

Lab Sample ID
Filename

BLANK-103296
P230112A_09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
46		---	---	ND	---	3.81
47	44/47/65	---	---	ND	---	24.1
48		---	---	ND	---	3.75
49	49/69	---	---	ND	---	9.11
50	50/53	---	---	ND	---	20.1
51	45/51	---	---	ND	---	10.0
52		---	---	ND	---	17.4
53	50/53	---	---	ND	---	20.1
54		---	---	ND	---	5.02
55		---	---	ND	---	7.86
56		---	---	ND	---	5.12
57		---	---	ND	---	2.14
58		---	---	ND	---	2.60
59	59/62/75	---	---	ND	---	6.70
60		---	---	ND	---	20.2
61	61/70/74/76	---	---	ND	---	15.1
62	59/62/75	---	---	ND	---	6.70
63		---	---	ND	---	7.40
64		---	---	ND	---	13.5
65	44/47/65	---	---	ND	---	24.1
66		---	---	ND	---	11.8
67		---	---	ND	---	2.15
68		---	---	ND	---	8.25
69	49/69	---	---	ND	---	9.11
70	61/70/74/76	---	---	ND	---	15.1
71	40/41/71	---	---	ND	---	10.7
72		---	---	ND	---	2.24
73	43/73	---	---	ND	---	10.0
74	61/70/74/76	---	---	ND	---	15.1
75	59/62/75	---	---	ND	---	6.70
76	61/70/74/76	---	---	ND	---	15.1
77		---	---	ND	---	3.27
78		---	---	ND	---	3.22
79		---	---	ND	---	2.53
80		---	---	ND	---	2.37
81		---	---	ND	---	2.22
82		---	---	ND	---	4.71
83		---	---	ND	---	3.07
84		---	---	ND	---	3.10
85	85/116/117	---	---	ND	---	7.81
86	86/87/97/108/119/125	---	---	ND	---	15.1
87	86/87/97/108/119/125	---	---	ND	---	15.1
88	88/91	---	---	ND	---	6.05
89		---	---	ND	---	3.62
90	90/101/113	---	---	ND	---	11.1

Conc = Concentration
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**Method 1668C Polychlorobiphenyl
Blank Analysis Results**

Lab Sample ID BLANK-103296
Filename P230112A_09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
91	88/91	---	---	ND	---	6.05
92		---	---	ND	---	4.16
93	93/98/100/102	---	---	ND	---	11.5
94		---	---	ND	---	3.40
95		---	---	ND	---	14.0
96		---	---	ND	---	4.01
97	86/87/97/108/119/125	---	---	ND	---	15.1
98	93/98/100/102	---	---	ND	---	11.5
99		---	---	ND	---	4.76
100	93/98/100/102	---	---	ND	---	11.5
101	90/101/113	---	---	ND	---	11.1
102	93/98/100/102	---	---	ND	---	11.5
103		---	---	ND	---	2.87
104		---	---	ND	---	3.19
105		---	---	ND	---	4.28
106		---	---	ND	---	2.99
107	107/124	---	---	ND	---	4.56
108	86/87/97/108/119/125	---	---	ND	---	15.1
109		---	---	ND	---	2.55
110	110/115	---	---	ND	---	13.5
111		---	---	ND	---	2.75
112		---	---	ND	---	3.75
113	90/101/113	---	---	ND	---	11.1
114		---	---	ND	---	3.55
115	110/115	---	---	ND	---	13.5
116	85/116/117	---	---	ND	---	7.81
117	85/116/117	---	---	ND	---	7.81
118		---	---	ND	---	9.58
119	86/87/97/108/119/125	---	---	ND	---	15.1
120		---	---	ND	---	3.23
121		---	---	ND	---	3.39
122		---	---	ND	---	3.34
123		---	---	ND	---	3.16
124	107/124	---	---	ND	---	4.56
125	86/87/97/108/119/125	---	---	ND	---	15.1
126		---	---	ND	---	2.65
127		---	---	ND	---	3.13
128	128/166	---	---	ND	---	6.36
129	129/138/163	39.563	1.23	37.7	---	12.0
130		---	---	ND	---	3.13
131		---	---	ND	---	4.23
132		36.461	1.33	10.0	---	5.27
133		---	---	ND	---	2.87
134	134/143	---	---	ND	---	7.48
135	135/151	34.241	1.19	10.9	---	9.77

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1700 Elm Street - Suite 200
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Tel: 612-607-1700
Fax: 612-607-6444

**Method 1668C Polychlorobiphenyl
Blank Analysis Results**

Lab Sample ID
Filename

BLANK-103296
P230112A_09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
136		—	—	ND	—	4.43
137		—	—	ND	—	3.59
138	129/138/163	39.563	1.23	(37.7)	—	12.0
139	139/140	—	—	ND	—	5.31
140	139/140	—	—	ND	—	5.31
141		38.507	1.17	9.25	—	4.73
142		—	—	ND	—	3.51
143	134/143	—	—	ND	—	7.48
144		—	—	ND	—	3.85
145		—	—	ND	—	3.05
146		37.685	1.34	5.62	—	3.84
147	147/149	35.187	1.19	24.1	—	11.3
148		—	—	ND	—	4.32
149	147/149	35.187	1.19	(24.1)	—	11.3
150		—	—	ND	—	3.42
151	135/151	34.241	1.19	(10.9)	—	9.77
152		—	—	ND	—	3.51
153	153/168	38.306	1.23	32.7	—	10.3
154		—	—	ND	—	3.63
155		—	—	ND	—	3.00
156	156/157	—	—	ND	—	5.23
157	156/157	—	—	ND	—	5.23
158		39.999	1.33	4.13	—	3.01
159		—	—	ND	—	3.09
160		—	—	ND	—	2.52
161		—	—	ND	—	2.76
162		—	—	ND	—	3.19
163	129/138/163	39.563	1.23	(37.7)	—	12.0
164		—	—	ND	—	3.52
165		—	—	ND	—	3.03
166	128/166	—	—	ND	—	6.36
167		—	—	ND	—	3.59
168	153/168	38.306	1.23	(32.7)	—	10.3
169		—	—	ND	—	3.61
170		46.477	1.02	14.5	—	4.50
171	171/173	—	—	ND	—	7.27
172		—	—	ND	—	3.66
173	171/173	—	—	ND	—	7.27
174		41.782	0.98	13.6	—	5.51
175		—	—	ND	—	3.32
176		—	—	ND	—	4.03
177		42.235	1.00	7.36	—	4.61
178		—	—	ND	—	3.10
179		37.233	1.23	—	4.78	4.57
180	180/193	45.219	1.07	31.0	—	9.86

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**Method 1668C Polychlorobiphenyl
Blank Analysis Results**

Lab Sample ID BLANK-103296
Filename P230112A_09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
181		—	—	ND	—	3.02
182		—	—	ND	—	3.31
183	183/185	41.564	0.98	10.5	—	7.74
184		—	—	ND	—	3.33
185	183/185	41.564	0.98	(10.5)	—	7.74
186		—	—	ND	—	3.79
187		40.938	1.08	15.7	—	5.41
188		—	—	ND	—	3.08
189		—	—	ND	—	2.73
190		46.997	1.22	—	2.77	2.41
191		—	—	ND	—	2.81
192		—	—	ND	—	2.79
193	180/193	45.219	1.07	(31.0)	—	9.86
194		51.761	0.91	4.43	—	2.60
195		—	—	ND	—	3.04
196		47.835	0.99	2.88	—	1.91
197	197/200	—	—	ND	—	4.41
198	198/199	—	—	ND	—	5.16
199	198/199	—	—	ND	—	5.16
200	197/200	—	—	ND	—	4.41
201		—	—	ND	—	2.61
202		—	—	ND	—	2.12
203		—	—	ND	—	3.25
204		—	—	ND	—	2.11
205		—	—	ND	—	2.41
206		—	—	ND	—	3.30
207		—	—	ND	—	2.66
208		—	—	ND	—	2.53
209		—	—	ND	—	2.85

Conc = Concentration
EML = Method Specified Reporting Limit (1668C)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise
B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668C control limits
ng/L = Nanograms per liter

Results reported on a total weight basis

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference

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**Method 1668C Polychlorobiphenyl
Blank Analysis Results**

Client Sample ID CBLKIC
Lab Sample ID BLANK-103296
Filename P230112A_09

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	13.7
Total Dichloro Biphenyls	ND
Total Trichloro Biphenyls	ND
Total Tetrachloro Biphenyls	ND
Total Pentachloro Biphenyls	ND
Total Hexachloro Biphenyls	134
Total Heptachloro Biphenyls	92.8
Total Octachloro Biphenyls	7.32
Total Nonachloro Biphenyls	ND
Decachloro Biphenyls	ND
Total PCBs	248

ND = Not Detected

Results reported on a total weight basis

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Method 1668C Polychlorobiphenyls Laboratory Control Spike Analysis Results

Lab Sample ID	LCS-103297		
Filename	P230112A_05	Matrix	Solid
Total Amount Extracted	10.3 g	Dilution	NA
ICAL ID	P230112A04	Extracted	01/03/2023 13:30
CCal Filename(s)	P230112A_03	Analyzed	01/12/2023 13:28
Method Blank ID	BLANK-103296	Injected By	AH5

PCB Isomer	Native Analytes			Labeled Analytes		
	Spiked (ng)	Found (ng)	% Recovery	Spiked (ng)	Found (ng)	% Recovery
1	1.0	1.02	102	2.0	1.08	54
3	1.0	0.981	98	2.0	1.17	59
4	1.0	0.972	97	2.0	1.23	61
15	1.0	1.03	103	2.0	1.22	61
19	1.0	1.04	104	2.0	1.35	67
37	1.0	1.00	100	2.0	1.35	68
54	1.0	1.02	102	2.0	1.12	56
81	1.0	1.01	101	2.0	1.38	69
77	1.0	0.997	100	2.0	1.39	69
104	1.0	0.936	94	2.0	1.43	71
105	1.0	1.06	106	2.0	1.53	77
114	1.0	0.991	99	2.0	1.46	73
118	1.0	1.04	104	2.0	1.36	68
123	1.0	0.988	99	2.0	1.49	75
126	1.0	1.01	101	2.0	1.40	70
155	1.0	0.978	98	2.0	1.25	63
156/157	2.0	2.05	103	4.0	2.32	58
167	1.0	1.02	102	2.0	1.19	59
169	1.0	1.04	104	2.0	1.06	53
188	1.0	0.983	98	2.0	1.65	82
189	1.0	1.02	102	2.0	1.37	69
202	1.0	1.06	106	2.0	1.46	73
205	1.0	0.979	98	2.0	1.32	66
206	1.0	1.01	101	2.0	1.25	62
208	1.0	1.02	102	2.0	1.38	69
209	1.0	0.929	93	2.0	1.27	63

R = Recovery outside of method 1668C control limits
 Nn = Result obtained from alternate analysis
 ND = Not Detected
 NA = Not Applicable
 NC = Not Calculated
 * = See Discussion
 ng = Nanograms
 I = Interference

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Method 1668C Polychlorobiphenyls Matrix Spike Analysis Results

Client - UPRR_Jacobs

Lab Sample ID	10638496001-MS	Matrix	Solid
Filename	P230112A_06	Dilution	NA
Total Amount Extracted	10.7 g	Extracted	01/03/2023 13:30
ICAL ID	P230112A04	Analyzed	01/12/2023 14:28
CCal Filename(s)	P230112A_03	Injected By	AH5
Method Blank ID	BLANK-103296		

PCB Isomer	Native Analytes			Labeled Analytes		
	Spiked (ng)	Found (ng)	% Recovery	Spiked (ng)	Found (ng)	% Recovery
1	1.0	1.28	109	2.0	1.07	54
3	1.0	1.32	101	2.0	1.24	62
4	1.0	1.33	102	2.0	1.31	65
15	1.0	2.45	105	2.0	1.40	70
19	1.0	1.17	101	2.0	1.41	71
37	1.0	2.69	81	2.0	1.49	75
54	1.0	1.04	104	2.0	1.18	59
81	1.0	1.27	127	2.0	1.56	78
77	1.0	7.67	128	2.0	1.54	77
104	1.0	0.970	97	2.0	1.32	66
105	1.0	84.9	511	2.0	1.53	77
114	1.0	3.93	198	2.0	1.47	74
118	1.0	551	4557	2.0	1.47	74
123	1.0	5.32	183	2.0	1.47	73
126	1.0	20.0	56	2.0	1.45	73
155	1.0	1.06	106	2.0	0.908	45
156/157	2.0	620	1830	4.0	2.01	50
167	1.0	267	1442	2.0	0.983	49
169	1.0	5.65	565	2.0	0.939	47
188	1.0	3.05	85	2.0	1.44	72
189	1.0	153	0	2.0	1.34	67
202	1.0	158	739	2.0	1.45	72
205	1.0	76.3	613	2.0	1.30	65
206	1.0	197	404	2.0	1.27	64
208	1.0	34.1	199	2.0	1.32	66
209	1.0	24.2	27	2.0	1.16	58

R = Recovery outside of method
1668C control limits
ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
ng = Nanograms

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Method 1668C Polychlorobiphenyls Matrix Spike Analysis Results

Client - UPRR_Jacobs

Lab Sample ID	10638496001-MSD	Matrix	Solid
Filename	P230112A_07	Dilution	NA
Total Amount Extracted	10.7 g	Extracted	01/03/2023 13:30
ICAL ID	P230112A04	Analyzed	01/12/2023 15:28
CCal Filename(s)	P230112A_03	Injected By	AH5
Method Blank ID	BLANK-103296		

PCB Isomer	Native Analytes			Labeled Analytes		
	Spiked (ng)	Found (ng)	% Recovery	Spiked (ng)	Found (ng)	% Recovery
1	1.0	1.38	119	2.0	1.16	58
3	1.0	1.45	115	2.0	1.21	60
4	1.0	1.29	98	2.0	1.35	67
15	1.0	2.49	109	2.0	1.37	69
19	1.0	1.18	102	2.0	1.41	71
37	1.0	2.90	102	2.0	1.41	70
54	1.0	1.05	105	2.0	1.16	58
81	1.0	1.26	126	2.0	1.59	80
77	1.0	7.92	153	2.0	1.57	78
104	1.0	0.972	97	2.0	1.30	65
105	1.0	86.5	680	2.0	1.54	77
114	1.0	3.90	195	2.0	1.51	76
118	1.0	569	6356	2.0	1.48	74
123	1.0	4.66	117	2.0	1.51	75
126	1.0	21.0	156	2.0	1.50	75
155	1.0	1.05	105	2.0	0.933	47
156/157	2.0	607	1178	4.0	2.01	50
167	1.0	264	1151	2.0	1.01	50
169	1.0	4.81	481	2.0	0.965	48
188	1.0	3.19	99	2.0	1.39	70
189	1.0	147	0	2.0	1.35	68
202	1.0	151	0	2.0	1.44	72
205	1.0	74.1	388	2.0	1.28	64
206	1.0	192	0	2.0	1.25	62
208	1.0	32.6	42	2.0	1.31	66
209	1.0	25.1	117	2.0	1.16	58

R = Recovery outside of method
1668C control limits
ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
ng = Nanograms

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Method PCB1668-209 Spike Sample Results

Client - UPRR_Jacobs

Client Sample ID SB06-1.0-1.5-1022
Lab Sample ID 10638496001
MS ID 10638496001-MS
MSD ID 10638496001-MSD

Sample Filename P230112A_10
MS Filename P230112A_06
MSD Filename P230112A_07

Analyte	Quantity Spiked	Unspiked Sample Contribution		Quantity Measured		RPD	Subtracted Recovery	
	(ng)	to MS (ng)	to MSD (ng)	MS (ng)	MSD (ng)		MS (%)	MSD (%)
2-MoCB	1.00	0.193	0.193	1.28	1.38	7.6	109	119
4-MoCB	1.00	0.308	0.308	1.32	1.45	9.6	101	115
2,2'-DiCB	1.00	0.301	0.301	1.33	1.29	3.1	102	98
4,4'-DiCB	1.00	1.40	1.40	2.45	2.49	1.8	105	109
2,2',6-TrCB	1.00	0.161	0.161	1.17	1.18	0.6	101	102
3,4,4'-TrCB	1.00	1.88	1.88	2.69	2.90	7.4	81	102
2,2',6,6'-TeCB	1.00	ND	ND	1.04	1.05	0.6	104	105
3,3',4,4'-TeCB	1.00	6.39	6.39	7.67	7.92	3.2	128	153
3,4,4',5-TeCB	1.00	ND	ND	1.27	1.26	0.6	127	126
2,2',4,6,6'-PeCB	1.00	ND	ND	0.97	0.97	0.2	97	97
2,3,3',4,4'-PeCB	1.00	79.7	79.7	84.86	86.55	2.0	511	680
2,3,4,4',5-PeCB	1.00	1.95	1.95	3.93	3.90	0.7	198	195
2,3',4,4',5-PeCB	1.00	505	505	550.56	568.55	3.2	4557	6356
2,3',4,4',5'-PeCB	1.00	3.50	3.50	5.32	4.66	13.2	183	117
3,3',4,4',5-PeCB	1.00	19.4	19.4	19.99	21.00	4.9	56	156
2,2',4,4',6,6'-HxCB	1.00	ND	ND	1.06	1.05	0.9	106	105
(156/157)	2.00	584	584	620.47	607.43	2.1	1830	1178
2,3',4,4',5,5'-HxCB	1.00	253	253	267.08	264.17	1.1	1442	1151
3,3',4,4',5,5'-HxCB	1.00	ND	ND	5.65	4.81	16.1	565	481
2,2',3,4',5,6,6'-HpCB	1.00	2.20	2.20	3.05	3.19	4.4	85	99
2,3,3',4,4',5,5'-HpCB	1.00	154	154	153.06	147.12	4.0	0	0
2,2',3,3',5,5',6,6'-OcCB	1.00	151	151	158.25	150.86	4.8	739	0
2,3,3',4,4',5,5',6-OcCB	1.00	70.2	70.2	76.32	74.07	3.0	613	388
2,2',3,3',4,4',5,5',6-NoCB	1.00	193	193	197.20	192.37	2.5	404	0
2,2',3,3',4,5,5',6,6'-NoCB	1.00	32.1	32.1	34.12	32.55	4.7	199	42
Decachlorobiphenyl	1.00	23.9	23.9	24.21	25.11	3.7	27	117

Quantity Spiked - the amount of analyte spiked into the spiked samples

Unspiked Sample Contribution - calculated based on the amount found in the sample and the extracted amounts of the spiked and unspiked samples

Quantity Measured - the total amount of analyte measured in the spiked samples

RPD - the Relative Percent Difference of the spiked sample Quantity Measured values

Subtracted Recovery - calculated after subtracting the unspiked sample contribution

Technical Memorandum

February 02, 2023

To	David Hodson	Tel	1 206 914 3141
Copy to	Jesse Orth, Julie Lidstone	Email	Jeffrey.Cloud@ghd.com
From	Jeffrey Cloud/eew/1461	Ref. No.	11183954-95-03-2903
Subject	Analytical Results and Reduced Validation of Reports 10630039, 10630317, 10630481, 10630503, 10630729, 10632522 and 10638496 Surface Soil Sampling Union Pacific Railroad (UPRR) – Peninsula Iron Works Portland, Oregon October – November 2022		

1. Introduction

This document details a reduced validation of analytical results for soil samples collected in support of the Surface Soil Sampling at the Peninsula Iron Works site in Portland, Oregon during October and November 2022. Samples were submitted to Pace Analytical Services, located in Minneapolis, Minnesota. A sample collection and analysis summary is presented in Table 1. A summary of the analytical methodology is presented in Table 2. The validated analytical results are summarized in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The analytical results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes, laboratory control samples, matrix spikes and field QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 2 and applicable guidance from the document entitled "National Functional Guidelines for Organic Superfund Methods Data Review", USEPA 540-R-20-005, November 2020.

2. Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in the methods. The sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All sample containers were properly preserved, delivered on ice and stored by the laboratory at the required temperature (0-6°C).

3. Laboratory Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation with the exception of a few analytes present at low concentrations. The associated sample results with concentrations similar to the blank were qualified as non-detect due to contamination as evidenced by the blank (see Table 4).

4. Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices. Due to necessary sample dilutions, surrogate recoveries were not assessed for some samples.

All samples submitted for PCBs and PCB congeners analysis were spiked with the appropriate number of surrogate compounds prior to sample extraction.

Surrogate recoveries were assessed against the control limits. All surrogate recoveries met the associated criteria.

5. Laboratory Control Sample Analyses

Laboratory control samples (LCS)/laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS or LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS and LCS/LCSD contained all analytes of interest. All LCS and LCS/LCSD recoveries and RPDs were within associated control limits, demonstrating acceptable analytical accuracy and precision (where applicable).

6. Matrix Spike Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as matrix spike (MS)/matrix spike duplicate (MSD) samples. The RPD between the MS and MSD is used to assess analytical precision. MS/MSD analyses were performed as specified in Table 1. If the original sample concentration is significantly greater than the spike concentration, the recovery is not assessed.

The MS/MSD samples were spiked with the analytes of interest. All percent recoveries and RPD values were within the associated control limits, demonstrating acceptable analytical accuracy and precision with the

exception of two high (PCB 114) 2,3,4,4',5-pentachlorobiphenyl recoveries. The associated sample result was qualified as estimated due to the implied high bias (see Table 5).

7. Field QA/QC Samples

The field QA/QC consisted of three equipment blank samples and five field duplicate sample sets.

7.1 Equipment Blank Sample Analysis

To assess field decontamination procedures, ambient conditions at the site, and cleanliness of sample containers, three equipment blanks were submitted for analysis, as identified in Table 1. All results were non-detect for the analytes of interest.

7.2 Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, five field duplicate samples were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPD associated with these duplicate samples must be less than 50 percent. If the reported concentration in both the investigative sample and its duplicate are less than five times the reporting limit (RL), the evaluation criterion is one times the RL value.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision with two exceptions. The associated sample results and their duplicates were qualified as estimated due to variability (see Table 6).

8. Analyte Reporting

Data were reported down to the laboratory's quantitation limit (QL), which is defined as the method detection limit (MDL) with sample-specific adjustments for dilutions, aliquot size, volumes, etc. Positive analyte detections less than the RL but greater than the QL were reported as estimated (J) in Table 3. Non-detect results were presented as non-detect at the QL in Table 3.

All soil results were reported on a wet weight basis.

9. Conclusion

Based on the assessment detailed in the foregoing, the summarized data are acceptable with the specific qualifications noted herein.

Regards



Jeffrey Cloud

Data Management Team – Data Validator

Table 1

Sample Collection and Analysis Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Sample Identification	Location	Matrix	Initial Sample Depth (ft BGS)	Final Sample Depth (ft BGS)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	<u>Analysis/Parameters</u>		Comments
							PCB Congeners	PCBs	
ISM01-0.0-0.2-1022	ISM-01	Soil	0	0.2	10/17/2022	12:15		X	
ISM02-0.0-0.2-1022	ISM-02	Soil	0	0.2	10/19/2022	14:00		X	
ISM03-0.0-0.2-1022	ISM-03	Soil	0	0.2	10/17/2022	12:28		X	
ISM04-0.0-0.2-1022	ISM-04	Soil	0	0.2	10/18/2022	09:45		X	MS/MSD
ISM05-0.0-0.2-1022	ISM-05	Soil	0	0.2	10/18/2022	12:05		X	
ISM06-0.0-0.2-1022	ISM-06	Soil	0	0.2	10/19/2022	09:25		X	
ISM07-0.0-0.2-1022	ISM-07	Soil	0	0.2	10/19/2022	11:25		X	
ISM07T-0.0-0.2-1022	ISM-07	Soil	0	0.2	10/19/2022	11:30		X	
ISM07TT-0.0-0.2-1022	ISM-07	Soil	0	0.2	10/19/2022	11:35		X	
ISM08-0.0-0.2-1022	ISM-08	Soil	0	0.2	10/20/2022	10:00		X	MS/MSD
SB01-1.0-1.5-1022	SB-01	Soil	1	1.5	10/17/2022	11:05		X	
SB01-2.5-3.0-1022	SB-01	Soil	2.5	3	10/17/2022	11:10		X	
SB01-0.0-0.5-1022	SB-01	Soil	0	0.5	10/17/2022	11:00		X	
SB02-1-1.5-1022	SB-02	Soil	1	1.5	10/17/2022	13:55		X	
SB02-2.5-3.0-1022	SB-02	Soil	2.5	3	10/17/2022	14:00		X	

Table 1

Sample Collection and Analysis Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Sample Identification	Location	Matrix	Initial Sample Depth (ft BGS)	Final Sample Depth (ft BGS)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	<u>Analysis/Parameters</u>		Comments
							PCB Congeners	PCBs	
SB02-0.0-0.5-1022	SB-02	Soil	0	0.5	10/17/2022	13:45		X	
SB02D-0.0-0.5-1022	SB-02	Soil	0	0.5	10/17/2022	13:50		X	FD (SB02-2.5-3.0-1022)
SB03-1.0-1.5-1022	SB-03	Soil	1	1.5	10/17/2022	12:10		X	
SB03-2.5-3.0-1022	SB-03	Soil	2.5	3	10/17/2022	12:15		X	
SB03-0.0-0.5-1022	SB-03	Soil	0	0.5	10/17/2022	12:00		X	
SB03D-0.0-0.5-1022	SB-03	Soil	0	0.5	10/17/2022	12:05		X	FD (SB03-0.0-0.5-1022)
SB04-1.0-1.5-1022	SB-04	Soil	1	1.5	10/17/2022	14:40		X	
SB04-2.5-3.0-1022	SB-04	Soil	2.5	3	10/17/2022	14:45		X	
SB04-0.0-0.5-1022	SB-04	Soil	0	0.5	10/17/2022	14:30		X	
SB04D-0.0-0.5-1022	SB-04	Soil	0	0.5	10/17/2022	14:35		X	FD (SB04-0.0-0.5-1022)
SB05-1.0-1.5-1022	SB-05	Soil	1	1.5	10/18/2022	08:35		X	
SB05-2.5-3.0-1022	SB-05	Soil	2.5	3	10/18/2022	08:40		X	
SB05-0.0-0.5-1022	SB-05	Soil	0	0.5	10/18/2022	08:30		X	
SB06-1.0-1.5-1022	SB-06	Soil	1	1.5	10/17/2022	15:20	X	X	MS/MSD
SB06-2.5-3.0-1022	SB-06	Soil	2.5	3	10/17/2022	15:25		X	

Table 1

Sample Collection and Analysis Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Sample Identification	Location	Matrix	Initial Sample Depth (ft BGS)	Final Sample Depth (ft BGS)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	<u>Analysis/Parameters</u>		Comments
							PCB Congeners	PCBs	
SB06-0.0-0.5-1022	SB-06	Soil	0	0.5	10/17/2022	15:15		X	MS/MSD
SB07-1.0-1.5-1022	SB-07	Soil	1	1.5	10/18/2022	09:05		X	
SB07-2.5-3.0-1022	SB-07	Soil	2.5	3	10/18/2022	09:10		X	
SB07-0.0-0.5-1022	SB-07	Soil	0	0.5	10/18/2022	09:00		X	MS/MSD
SB08-1-110322	SB-08	Soil	1	1.5	11/03/2022	09:10		X	
SB08-2.5-110322	SB-08	Soil	2.5	3	11/03/2022	09:20		X	
SB08-0.5-110322	SB-08	Soil	0	0.5	11/03/2022	08:45	X	X	MS/MSD
SB09-1.0-1.5-1022	SB-09	Soil	1	1.5	10/18/2022	10:35		X	
SB09-2.5-3.0-1022	SB-09	Soil	2.5	3	10/18/2022	10:40		X	
SB09-0.0-0.5-1022	SB-09	Soil	0	0.5	10/18/2022	10:30		X	
SB10-1.0-1.5-1022	SB-10	Soil	1	1.5	10/18/2022	11:20		X	
SB10-2.5-3.0-1022	SB-10	Soil	2.5	3	10/18/2022	11:25		X	
SB10-0.0-0.5-1022	SB-10	Soil	0	0.5	10/18/2022	11:15	X	X	
SB11-1.0-1.5-1022	SB-11	Soil	1	1.5	10/19/2022	11:10		X	
SB11-2.5-3.0-1022	SB-11	Soil	2.5	3	10/19/2022	11:15		X	

Table 1

Sample Collection and Analysis Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Sample Identification	Location	Matrix	Initial Sample Depth (ft BGS)	Final Sample Depth (ft BGS)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	<u>Analysis/Parameters</u>		Comments
							PCB Congeners	PCBs	
SB11-0.0-0.5-1022	SB-11	Soil	0	0.5	10/19/2022	11:00		X	MS/MSD
SB11D-0.0-0.5-1022	SB-11	Soil	0	0.5	10/19/2022	11:05		X	FD (SB11-0.0-0.5-1022)
SB12-1.0-1.5-1022	SB-12	Soil	1	1.5	10/18/2022	12:40		X	
SB12-2.5-3.0-1022	SB-12	Soil	2.5	3	10/18/2022	12:45		X	
SB12-0.0-0.5-1022	SB-12	Soil	0	0.5	10/18/2022	12:30	X	X	MS/MSD
SB12D-0.0-0.5-1022	SB-12	Soil	0	0.5	10/18/2022	12:35		X	FD (SB12-0.0-0.5-1022)
SB13-1.0-1.5-1022	SB-13	Soil	1	1.5	10/19/2022	10:05		X	
SB13-2.5-3.0-1022	SB-13	Soil	2.5	3	10/19/2022	10:10		X	
SB13-0.0-0.5-1022	SB-13	Soil	0	0.5	10/19/2022	10:00	X	X	
SB14-1.0-1.5-1022	SB-14	Soil	1	1.5	10/19/2022	08:05	X	X	
SB14-2.5-3.0-1022	SB-14	Soil	2.5	3	10/19/2022	09:10		X	
SB14-0.0-0.5-1022	SB-14	Soil	0	0.5	10/19/2022	08:00		X	
SB15-1.0-1.5-1022	SB-15	Soil	1	1.5	10/19/2022	12:05		X	
SB15-2.5-3.0-1022	SB-15	Soil	2.5	3	10/19/2022	12:10		X	
SB15-0.0-0.5-1022	SB-15	Soil	0	0.5	10/19/2022	12:00		X	

Table 1

Sample Collection and Analysis Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Sample Identification	Location	Matrix	Initial Sample Depth (ft BGS)	Final Sample Depth (ft BGS)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	<u>Analysis/Parameters</u>		Comments
							PCB Congeners	PCBs	
SB16-1.0-1.5-1022	SB-16	Soil	1	1.5	10/19/2022	13:05		X	
SB16-2.5-3.0-1022	SB-16	Soil	2.5	3	10/19/2022	13:10		X	
SB16-0.0-0.5-1022	SB-16	Soil	0	0.5	10/19/2022	13:00		X	
EB01-101922-HADS	--	Water	--	--	10/19/2022	14:20		X	Equipment Blank
EB01-101922-HTISM	--	Water	--	--	10/19/2022	14:30		X	Equipment Blank
EB01-101922-HTDS	--	Water	--	--	10/19/2022	14:40		X	Equipment Blank

Notes:

ft BGS - Feet below ground surface
FD - Field Duplicate sample of sample in parenthesis
MS/MSD - Matrix Spike/Matrix Spike Duplicate
PCBs - Polychlorinated Biphenyls
"--" - Not Applicable

Table 2

Analytical Methods
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Parameter	Method	Matrix
PCBs	SW-846 8082A ⁽¹⁾	Soil Water
PCB Congeners	SW-846 1668C ⁽¹⁾	Soil

Notes:

- PCBs - Polychlorinated Biphenyls
- ⁽¹⁾ - SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	ISM-01	ISM-02	ISM-03	ISM-04	ISM-05	ISM-06
Sample Name:	ISM01-0.0-0.2-1022	ISM02-0.0-0.2-1022	ISM03-0.0-0.2-1022	ISM04-0.0-0.2-1022	ISM05-0.0-0.2-1022	ISM06-0.0-0.2-1022
Sample Date:	10/17/2022	10/19/2022	10/17/2022	10/18/2022	10/18/2022	10/19/2022
Depth:	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS

Parameters	Unit						
PCBs							
(PCB 1) 2-Chlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 10) 2,6-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 103) 2,2',4,5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 104) 2,2',4,6,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 105) 2,3,3',4,4'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 106) 2,3,3',4,5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 107/124) Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 109) 2,3,3',4,6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 11) 3,3'-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 110/115) 2,3,3',4',6-Pentachlorobiphenyl/2,3,4,4',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 111) 2,3,3',5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 112) 2,3,3',5,6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 114) 2,3,4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 118) 2,3',4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 12/13) 3,4-Dichlorobiphenyl/3,4'-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 120) 2,3',4,5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 121) 2,3',4,5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 122) 2,3,3',4',5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 123) 2',3,4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 126) 3,3',4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 127) 3,3',4,5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 128/166) 2,2',3,3',4,4'-Hexachlorobiphenyl/2,3,4,4',5,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 129/138/163) Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 130) 2,2',3,3',4,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 131) 2,2',3,3',4,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 132) 2,2',3,3',4,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 133) 2,2',3,3',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 134/143) 2,2',3,3',5,6-Hexachlorobiphenyl/2,2',3,4,5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	ISM-01	ISM-02	ISM-03	ISM-04	ISM-05	ISM-06
Sample Name:	ISM01-0.0-0.2-1022	ISM02-0.0-0.2-1022	ISM03-0.0-0.2-1022	ISM04-0.0-0.2-1022	ISM05-0.0-0.2-1022	ISM06-0.0-0.2-1022
Sample Date:	10/17/2022	10/19/2022	10/17/2022	10/18/2022	10/18/2022	10/19/2022
Depth:	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS

Parameters	Unit						
PCBs (Continued)							
(PCB 135/151) 2,2',3,3',5,6'-Hexachlorobiphenyl/2,2',3,5,5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 136) 2,2',3,3',6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 137) 2,2',3,4,4',5-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 139/140) 2,2',3,4,4',6-Hexachlorobiphenyl/2,2',3,4,4',6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 14) 3,5-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 141) 2,2',3,4,5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 142) 2,2',3,4,5,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 144) 2,2',3,4,5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 145) 2,2',3,4,6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 146) 2,2',3,4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 147/149) 2,2',3,4',5,6-Hexachlorobiphenyl/2,2',3,4',5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 148) 2,2',3,4',5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 15) 4,4'-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 150) 2,2',3,4',6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 152) 2,2',3,5,6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 153/168) 2,2',4,4',5,5'-Hexachlorobiphenyl/2,3',4,4',5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 154) 2,2',4,4',5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 155) 2,2',4,4',6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 156/157) 2,3,3',4,4',5-Hexachlorobiphenyl/2,3,3',4,4',5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 158) 2,3,3',4,4',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 159) 2,3,3',4,5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 16) 2,2',3-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 160) 2,3,3',4,5,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 161) 2,3,3',4,5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 162) 2,3,3',4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 164) 2,3,3',4',5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 165) 2,3,3',5,5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 167) 2,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	ISM-01	ISM-02	ISM-03	ISM-04	ISM-05	ISM-06
Sample Name:	ISM01-0.0-0.2-1022	ISM02-0.0-0.2-1022	ISM03-0.0-0.2-1022	ISM04-0.0-0.2-1022	ISM05-0.0-0.2-1022	ISM06-0.0-0.2-1022
Sample Date:	10/17/2022	10/19/2022	10/17/2022	10/18/2022	10/18/2022	10/19/2022
Depth:	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS

Parameters	Unit						
PCBs (Continued)							
(PCB 169) 3,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 17) 2,2',4-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 170) 2,2',3,3',4,4',5-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 171/173) 2,2',3,3',4,4',6-Heptachlorobiphenyl/2,2',3,3',4,5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 172) 2,2',3,3',4,5,5'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 174) 2,2',3,3',4,5,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 175) 2,2',3,3',4,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 176) 2,2',3,3',4,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 177) 2,2',3,3',4',5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 178) 2,2',3,3',5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 179) 2,2',3,3',5,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 18/30) 2,2',5-Trichlorobiphenyl/2,4,6-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 180/193) 2,2',3,4,4',5,5'-Heptachlorobiphenyl/2,3,3',4',5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 181) 2,2',3,4,4',5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 182) 2,2',3,4,4',5,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 183/185) 2,2',3,4,4',5',6-Heptachlorobiphenyl/2,2',3,4,5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 184) 2,2',3,4,4',6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 186) 2,2',3,4,5,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 187) 2,2',3,4',5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 188) 2,2',3,4',5,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 189) 2,3,3',4,4',5,5'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 19) 2,2',6-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 190) 2,3,3',4,4',5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 191) 2,3,3',4,4',5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 192) 2,3,3',4,5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 194) 2,2',3,3',4,4',5,5'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	ISM-01	ISM-02	ISM-03	ISM-04	ISM-05	ISM-06
Sample Name:	ISM01-0.0-0.2-1022	ISM02-0.0-0.2-1022	ISM03-0.0-0.2-1022	ISM04-0.0-0.2-1022	ISM05-0.0-0.2-1022	ISM06-0.0-0.2-1022
Sample Date:	10/17/2022	10/19/2022	10/17/2022	10/18/2022	10/18/2022	10/19/2022
Depth:	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS

Parameters	Unit						
PCBs (Continued)							
(PCB 195) 2,2',3,3',4,4',5,6-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 196) 2,2',3,3',4,4',5,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 197/200) 2,2',3,3',4,4',6,6'-Octachlorobiphenyl/2,2',3,3',4,5,6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 198/199) 2,2',3,3',4,5,5',6-Octachlorobiphenyl/2,2',3,3',4,5,5',6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 2) 3-Chlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 20/28) 2,3,3'-Trichlorobiphenyl/2,4,4'-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 201) 2,2',3,3',4,5',6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 202) 2,2',3,3',5,5',6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 203) 2,2',3,4,4',5,5',6-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 204) 2,2',3,4,4',5,6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 205) 2,3,3',4,4',5,5',6-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 206) 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 207) 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 208) 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 209) Decachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 21/33) 2,3,4-Trichlorobiphenyl/2',3,4-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 22) 2,3,4'-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 23) 2,3,5-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 24) 2,3,6-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 25) 2,3',4-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 26/29) 2,3',5-Trichlorobiphenyl/2,4,5-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 27) 2,3',6-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 3) 4-Monochlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 31) 2,4',5-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 32) 2,4',6-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 34) 2,3',5'-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 35) 3,3',4-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	ISM-01	ISM-02	ISM-03	ISM-04	ISM-05	ISM-06
Sample Name:	ISM01-0.0-0.2-1022	ISM02-0.0-0.2-1022	ISM03-0.0-0.2-1022	ISM04-0.0-0.2-1022	ISM05-0.0-0.2-1022	ISM06-0.0-0.2-1022
Sample Date:	10/17/2022	10/19/2022	10/17/2022	10/18/2022	10/18/2022	10/19/2022
Depth:	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS

Parameters	Unit						
PCBs (Continued)							
(PCB 36) 3,3',5-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 37) 3,4,4'-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 38) 3,4,5-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 39) 3,4',5-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 4) 2,2'-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 40/41/71) 2,2',3,3'-TeCB/ 2,2',3,4-TeCB/2,3',4',6-TeCB	ng/kg	--	--	--	--	--	--
(PCB 42) 2,2',3,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 43/73) 2,2',3,5-Tetrachlorobiphenyl/2,3',5',6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 44/47/65) 2,2',3,5'-Tetrachlorobiphenyl/2,2',4,4'-Tetrachlorobiphenyl/2,3,5,6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 45/51) 2,2',3,6-Tetrachlorobiphenyl/2,2',4,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 46) 2,2',3,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 48) 2,2',4,5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 49/69) 2,2',4,5'-Tetrachlorobiphenyl/2,3',4,6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 5) 2,3-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 50/53) 2,2',4,6-Tetrachlorobiphenyl/2,2',5,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 52) 2,2',5,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 54) 2,2',6,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 55) 2,3,3',4-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 56) 2,3,3',4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 57) 2,3,3',5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 58) 2,3,3',5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 59/62/75) 2,3,3',6-Tetrachlorobiphenyl/2,3,4,6-Tetrachlorobiphenyl/ 2,4,4',6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 6) 2,3'-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 60) 2,3,4,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 61/70/74/76) 2,3,4,5-Tetrachlorobiphenyl/2,3',4',5-Tetrachlorobiphenyl/2,4,4',5-Tetrachlorobiphenyl/2,3',4',5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 63) 2,3,4',5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	ISM-01	ISM-02	ISM-03	ISM-04	ISM-05	ISM-06
Sample Name:	ISM01-0.0-0.2-1022	ISM02-0.0-0.2-1022	ISM03-0.0-0.2-1022	ISM04-0.0-0.2-1022	ISM05-0.0-0.2-1022	ISM06-0.0-0.2-1022
Sample Date:	10/17/2022	10/19/2022	10/17/2022	10/18/2022	10/18/2022	10/19/2022
Depth:	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS

Parameters	Unit						
PCBs (Continued)							
(PCB 64) 2,3,4',6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 66) 2,3',4,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 67) 2,3',4,5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 68) 2,3',4,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 7) 2,4-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 72) 2,3',5,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 77) 3,3',4,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 78) 3,3',4,5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 79) 3,3',4,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 8) 2,4'-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 80) 3,3',5,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 81) 3,4,4',5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 82) 2,2',3,3',4-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 83) 2,2',3,3',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 84) 2,2',3,3',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 85/116/117) 2,2',3,4,4'-PeCB/2,3,4,5,6-PeCB/2,3,4',5,6-PeCB	ng/kg	--	--	--	--	--	--
Pentachlorobiphenyl/2,2',3',4,5-Pentachlorobiphenyl/2,3,3',4,5'-							
Pentachlorobiphenyl/2,3',4,4',6-Pentachlorobiphenyl/2',3,4,5,6'-							
Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 88/91) 2,2',3,4,6-Pentachlorobiphenyl/2,2',3,4',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 89) 2,2',3,4,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 9) 2,5-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 90/101/113) 2,2',3,4',5-Pentachlorobiphenyl/2,2',4,5,5'-							
Pentachlorobiphenyl/2,3,3',5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 92) 2,2',3,5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 93/98/100/102) Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 94) 2,2',3,5,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 95) 2,2',3,5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 96) 2,2',3,6,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--

Table 3

**Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022**

Location ID:	ISM-01	ISM-02	ISM-03	ISM-04	ISM-05	ISM-06
Sample Name:	ISM01-0.0-0.2-1022	ISM02-0.0-0.2-1022	ISM03-0.0-0.2-1022	ISM04-0.0-0.2-1022	ISM05-0.0-0.2-1022	ISM06-0.0-0.2-1022
Sample Date:	10/17/2022	10/19/2022	10/17/2022	10/18/2022	10/18/2022	10/19/2022
Depth:	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS

Parameters**Unit****PCBs (Continued)**

(PCB 99) 2,2',4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
Aroclor-1016 (PCB-1016)	µg/kg	<21.0	<20.5	<20.8	<21.0	<21.1	<20.9
Aroclor-1221 (PCB-1221)	µg/kg	<34.2	<33.4	<34.0	<34.3	<34.4	<34.1
Aroclor-1232 (PCB-1232)	µg/kg	<29.3	<28.6	<29.1	<29.4	<29.5	<29.2
Aroclor-1242 (PCB-1242)	µg/kg	<30.6	<29.9	<30.4	<30.7	<30.8	<30.5
Aroclor-1248 (PCB-1248)	µg/kg	<25.3	<24.7	<25.1	<25.4	<25.4	<25.2
Aroclor-1254 (PCB-1254)	µg/kg	<24.7	<24.1	<24.5	<24.8	<24.8	<24.6
Aroclor-1260 (PCB-1260)	µg/kg	5730	267	12600	11100	5880	631
Aroclor-1262 (PCB-1262)	µg/kg	<32.6	<31.8	<32.4	<32.7	<32.8	<32.4
Aroclor-1268 (PCB-1268)	µg/kg	<23.8	<23.3	<23.6	<23.9	<23.9	<23.7

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	ISM-07	ISM-07	ISM-07	ISM-08	SB-01	SB-01
Sample Name:	ISM07-0.0-0.2-1022	ISM07T-0.0-0.2-1022	ISM07TT-0.0-0.2-1022	ISM08-0.0-0.2-1022	SB01-1.0-1.5-1022	SB01-2.5-3.0-1022
Sample Date:	10/19/2022	10/19/2022	10/19/2022	10/20/2022	10/17/2022	10/17/2022
Depth:	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit					
PCBs						
(PCB 1) 2-Chlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 10) 2,6-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 103) 2,2',4,5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 104) 2,2',4,6,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 105) 2,3,3',4,4'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 106) 2,3,3',4,5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 107/124) Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 109) 2,3,3',4,6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 11) 3,3'-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 110/115) 2,3,3',4',6-Pentachlorobiphenyl/2,3,4,4',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 111) 2,3,3',5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 112) 2,3,3',5,6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 114) 2,3,4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 118) 2,3',4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 12/13) 3,4-Dichlorobiphenyl/3,4'-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 120) 2,3',4,5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 121) 2,3',4,5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 122) 2,3,3',4',5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 123) 2',3,4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 126) 3,3',4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 127) 3,3',4,5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 128/166) 2,2',3,3',4,4'-Hexachlorobiphenyl/2,3,4,4',5,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 129/138/163) Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 130) 2,2',3,3',4,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 131) 2,2',3,3',4,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 132) 2,2',3,3',4,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 133) 2,2',3,3',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 134/143) 2,2',3,3',5,6-Hexachlorobiphenyl/2,2',3,4,5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	ISM-07	ISM-07	ISM-07	ISM-08	SB-01	SB-01
Sample Name:	ISM07-0.0-0.2-1022	ISM07T-0.0-0.2-1022	ISM07TT-0.0-0.2-1022	ISM08-0.0-0.2-1022	SB01-1.0-1.5-1022	SB01-2.5-3.0-1022
Sample Date:	10/19/2022	10/19/2022	10/19/2022	10/20/2022	10/17/2022	10/17/2022
Depth:	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit					
PCBs (Continued)						
(PCB 135/151) 2,2',3,3',5,6'-Hexachlorobiphenyl/2,2',3,5,5',6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 136) 2,2',3,3',6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 137) 2,2',3,4,4',5-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 139/140) 2,2',3,4,4',6-Hexachlorobiphenyl/2,2',3,4,4',6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 14) 3,5-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 141) 2,2',3,4,5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 142) 2,2',3,4,5,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 144) 2,2',3,4,5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 145) 2,2',3,4,6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 146) 2,2',3,4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 147/149) 2,2',3,4',5,6-Hexachlorobiphenyl/2,2',3,4',5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 148) 2,2',3,4',5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 15) 4,4'-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 150) 2,2',3,4',6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 152) 2,2',3,5,6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 153/168) 2,2',4,4',5,5'-Hexachlorobiphenyl/2,3',4,4',5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 154) 2,2',4,4',5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 155) 2,2',4,4',6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 156/157) 2,3,3',4,4',5-Hexachlorobiphenyl/2,3,3',4,4',5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 158) 2,3,3',4,4',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 159) 2,3,3',4,5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 16) 2,2',3-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 160) 2,3,3',4,5,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 161) 2,3,3',4,5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 162) 2,3,3',4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 164) 2,3,3',4',5,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 165) 2,3,3',5,5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 167) 2,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--

Table 3

**Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022**

	Location ID:	ISM-07	ISM-07	ISM-07	ISM-08	SB-01	SB-01
	Sample Name:	ISM07-0.0-0.2-1022	ISM07T-0.0-0.2-1022	ISM07TT-0.0-0.2-1022	ISM08-0.0-0.2-1022	SB01-1.0-1.5-1022	SB01-2.5-3.0-1022
	Sample Date:	10/19/2022	10/19/2022	10/19/2022	10/20/2022	10/17/2022	10/17/2022
	Depth:	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS
Parameters	Unit						
PCBs (Continued)							
(PCB 169) 3,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 17) 2,2',4-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 170) 2,2',3,3',4,4',5-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 171/173) 2,2',3,3',4,4',6-Heptachlorobiphenyl/2,2',3,3',4,5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 172) 2,2',3,3',4,5,5'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 174) 2,2',3,3',4,5,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 175) 2,2',3,3',4,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 176) 2,2',3,3',4,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 177) 2,2',3,3',4',5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 178) 2,2',3,3',5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 179) 2,2',3,3',5,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 18/30) 2,2',5-Trichlorobiphenyl/2,4,6-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 180/193) 2,2',3,4,4',5,5'-Heptachlorobiphenyl/2,3,3',4',5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 181) 2,2',3,4,4',5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 182) 2,2',3,4,4',5,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 183/185) 2,2',3,4,4',5',6-Heptachlorobiphenyl/2,2',3,4,5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 184) 2,2',3,4,4',6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 186) 2,2',3,4,5,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 187) 2,2',3,4',5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 188) 2,2',3,4',5,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 189) 2,3,3',4,4',5,5'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 19) 2,2',6-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 190) 2,3,3',4,4',5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 191) 2,3,3',4,4',5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 192) 2,3,3',4,5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 194) 2,2',3,3',4,4',5,5'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	ISM-07	ISM-07	ISM-07	ISM-08	SB-01	SB-01
Sample Name:	ISM07-0.0-0.2-1022	ISM07T-0.0-0.2-1022	ISM07TT-0.0-0.2-1022	ISM08-0.0-0.2-1022	SB01-1.0-1.5-1022	SB01-2.5-3.0-1022
Sample Date:	10/19/2022	10/19/2022	10/19/2022	10/20/2022	10/17/2022	10/17/2022
Depth:	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit					
PCBs (Continued)						
(PCB 195) 2,2',3,3',4,4',5,6-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 196) 2,2',3,3',4,4',5,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 197/200) 2,2',3,3',4,4',6,6'-Octachlorobiphenyl/2,2',3,3',4,5,6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 198/199) 2,2',3,3',4,5,5',6-Octachlorobiphenyl/2,2',3,3',4,5,5',6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 2) 3-Chlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 20/28) 2,3,3'-Trichlorobiphenyl/2,4,4'-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 201) 2,2',3,3',4,5',6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 202) 2,2',3,3',5,5',6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 203) 2,2',3,4,4',5,5',6-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 204) 2,2',3,4,4',5,6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 205) 2,3,3',4,4',5,5',6-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 206) 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 207) 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 208) 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 209) Decachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 21/33) 2,3,4-Trichlorobiphenyl/2',3,4-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 22) 2,3,4'-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 23) 2,3,5-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 24) 2,3,6-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 25) 2,3',4-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 26/29) 2,3',5-Trichlorobiphenyl/2,4,5-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 27) 2,3',6-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 3) 4-Monochlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 31) 2,4',5-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 32) 2,4',6-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 34) 2,3',5'-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 35) 3,3',4-Trichlorobiphenyl	ng/kg	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	ISM-07	ISM-07	ISM-07	ISM-08	SB-01	SB-01
Sample Name:	ISM07-0.0-0.2-1022	ISM07T-0.0-0.2-1022	ISM07TT-0.0-0.2-1022	ISM08-0.0-0.2-1022	SB01-1.0-1.5-1022	SB01-2.5-3.0-1022
Sample Date:	10/19/2022	10/19/2022	10/19/2022	10/20/2022	10/17/2022	10/17/2022
Depth:	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit					
PCBs (Continued)						
(PCB 36) 3,3',5-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 37) 3,4,4'-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 38) 3,4,5-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 39) 3,4',5-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 4) 2,2'-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 40/41/71) 2,2',3,3'-TeCB/ 2,2',3,4-TeCB/2,3',4',6-TeCB	ng/kg	--	--	--	--	--
(PCB 42) 2,2',3,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 43/73) 2,2',3,5-Tetrachlorobiphenyl/2,3',5,6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 44/47/65) 2,2',3,5'-Tetrachlorobiphenyl/2,2',4,4'-Tetrachlorobiphenyl/2,3,5,6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 45/51) 2,2',3,6-Tetrachlorobiphenyl/2,2',4,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 46) 2,2',3,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 48) 2,2',4,5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 49/69) 2,2',4,5'-Tetrachlorobiphenyl/2,3',4,6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 5) 2,3-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 50/53) 2,2',4,6-Tetrachlorobiphenyl/2,2',5,6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 52) 2,2',5,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 54) 2,2',6,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 55) 2,3,3',4-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 56) 2,3,3',4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 57) 2,3,3',5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 58) 2,3,3',5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 59/62/75) 2,3,3',6-Tetrachlorobiphenyl/2,3,4,6-Tetrachlorobiphenyl/ 2,4,4',6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 6) 2,3'-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 60) 2,3,4,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 61/70/74/76) 2,3,4,5-Tetrachlorobiphenyl/2,3',4',5-Tetrachlorobiphenyl/2,4,4',5-Tetrachlorobiphenyl/2,3',4',5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 63) 2,3,4',5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	ISM-07	ISM-07	ISM-07	ISM-08	SB-01	SB-01
Sample Name:	ISM07-0.0-0.2-1022	ISM07T-0.0-0.2-1022	ISM07TT-0.0-0.2-1022	ISM08-0.0-0.2-1022	SB01-1.0-1.5-1022	SB01-2.5-3.0-1022
Sample Date:	10/19/2022	10/19/2022	10/19/2022	10/20/2022	10/17/2022	10/17/2022
Depth:	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit					
PCBs (Continued)						
(PCB 64) 2,3,4',6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 66) 2,3',4,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 67) 2,3',4,5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 68) 2,3',4,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 7) 2,4-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 72) 2,3',5,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 77) 3,3',4,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 78) 3,3',4,5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 79) 3,3',4,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 8) 2,4'-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 80) 3,3',5,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 81) 3,4,4',5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 82) 2,2',3,3',4-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 83) 2,2',3,3',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 84) 2,2',3,3',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 85/116/117) 2,2',3,4,4'-PeCB/2,3,4,5,6-PeCB/2,3,4',5,6-PeCB Pentachlorobiphenyl/2,2',3',4,5-Pentachlorobiphenyl/2,3,3',4,5'- Pentachlorobiphenyl/2,3',4,4',6-Pentachlorobiphenyl/2',3,4,5,6'- Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 88/91) 2,2',3,4,6-Pentachlorobiphenyl/2,2',3,4',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 89) 2,2',3,4,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 9) 2,5-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 90/101/113) 2,2',3,4',5-Pentachlorobiphenyl/2,2',4,5,5'- Pentachlorobiphenyl/2,3,3',5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 92) 2,2',3,5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 93/98/100/102) Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 94) 2,2',3,5,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 95) 2,2',3,5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 96) 2,2',3,6,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	ISM-07	ISM-07	ISM-07	ISM-08	SB-01	SB-01
Sample Name:	ISM07-0.0-0.2-1022	ISM07T-0.0-0.2-1022	ISM07TT-0.0-0.2-1022	ISM08-0.0-0.2-1022	SB01-1.0-1.5-1022	SB01-2.5-3.0-1022
Sample Date:	10/19/2022	10/19/2022	10/19/2022	10/20/2022	10/17/2022	10/17/2022
Depth:	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	0-0.2 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters**Unit****PCBs (Continued)**

(PCB 99) 2,2',4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
Aroclor-1016 (PCB-1016)	µg/kg	<20.6	<21.0	<20.8	<21.1	<21.0	<21.1
Aroclor-1221 (PCB-1221)	µg/kg	<33.6	<34.3	<34.0	<34.4	<34.2	<34.4
Aroclor-1232 (PCB-1232)	µg/kg	<28.7	<29.3	<29.1	<29.5	<29.3	<29.4
Aroclor-1242 (PCB-1242)	µg/kg	<30.1	<30.7	<30.4	<30.8	<30.6	<30.8
Aroclor-1248 (PCB-1248)	µg/kg	<24.8	<25.3	<25.1	<25.4	<25.3	<25.4
Aroclor-1254 (PCB-1254)	µg/kg	<24.2	<24.7	<24.5	<24.9	<24.7	<24.8
Aroclor-1260 (PCB-1260)	µg/kg	189	179	185	122	2440	73.1
Aroclor-1262 (PCB-1262)	µg/kg	<32.0	<32.6	<32.3	<32.8	<32.6	<32.7
Aroclor-1268 (PCB-1268)	µg/kg	<23.3	<23.8	<23.6	<24.0	<23.8	<23.9

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-01	SB-02	SB-02	SB-02	SB-02	SB-03
Sample Name:	SB01-0.0-0.5-1022	SB02-1-1.5-1022	SB02-2.5-3.0-1022	SB02-0.0-0.5-1022	SB02D-0.0-0.5-1022	SB03-1.0-1.5-1022
Sample Date:	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS
					Duplicate	

Parameters	Unit						
PCBs							
(PCB 1) 2-Chlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 10) 2,6-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 103) 2,2',4,5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 104) 2,2',4,6,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 105) 2,3,3',4,4'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 106) 2,3,3',4,5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 107/124) Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 109) 2,3,3',4,6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 11) 3,3'-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 110/115) 2,3,3',4',6-Pentachlorobiphenyl/2,3,4,4',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 111) 2,3,3',5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 112) 2,3,3',5,6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 114) 2,3,4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 118) 2,3',4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 12/13) 3,4-Dichlorobiphenyl/3,4'-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 120) 2,3',4,5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 121) 2,3',4,5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 122) 2,3,3',4',5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 123) 2',3,4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 126) 3,3',4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 127) 3,3',4,5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 128/166) 2,2',3,3',4,4'-Hexachlorobiphenyl/2,3,4,4',5,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 129/138/163) Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 130) 2,2',3,3',4,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 131) 2,2',3,3',4,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 132) 2,2',3,3',4,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 133) 2,2',3,3',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 134/143) 2,2',3,3',5,6-Hexachlorobiphenyl/2,2',3,4,5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-01	SB-02	SB-02	SB-02	SB-02	SB-03
Sample Name:	SB01-0.0-0.5-1022	SB02-1-1.5-1022	SB02-2.5-3.0-1022	SB02-0.0-0.5-1022	SB02D-0.0-0.5-1022	SB03-1.0-1.5-1022
Sample Date:	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS
					Duplicate	

Parameters	Unit					
PCBs (Continued)						
(PCB 135/151) 2,2',3,3',5,6'-Hexachlorobiphenyl/2,2',3,5,5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 136) 2,2',3,3',6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 137) 2,2',3,4,4',5-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 139/140) 2,2',3,4,4',6-Hexachlorobiphenyl/2,2',3,4,4',6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 14) 3,5-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 141) 2,2',3,4,5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 142) 2,2',3,4,5,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 144) 2,2',3,4,5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 145) 2,2',3,4,6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 146) 2,2',3,4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 147/149) 2,2',3,4',5,6-Hexachlorobiphenyl/2,2',3,4',5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 148) 2,2',3,4',5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 15) 4,4'-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 150) 2,2',3,4',6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 152) 2,2',3,5,6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 153/168) 2,2',4,4',5,5'-Hexachlorobiphenyl/2,3',4,4',5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 154) 2,2',4,4',5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 155) 2,2',4,4',6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 156/157) 2,3,3',4,4',5-Hexachlorobiphenyl/2,3,3',4,4',5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 158) 2,3,3',4,4',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 159) 2,3,3',4,5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 16) 2,2',3-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 160) 2,3,3',4,5,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 161) 2,3,3',4,5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 162) 2,3,3',4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 164) 2,3,3',4',5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 165) 2,3,3',5,5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 167) 2,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-01	SB-02	SB-02	SB-02	SB-02	SB-03
Sample Name:	SB01-0.0-0.5-1022	SB02-1-1.5-1022	SB02-2.5-3.0-1022	SB02-0.0-0.5-1022	SB02D-0.0-0.5-1022	SB03-1.0-1.5-1022
Sample Date:	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS
					Duplicate	

Parameters	Unit						
PCBs (Continued)							
(PCB 169) 3,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 17) 2,2',4-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 170) 2,2',3,3',4,4',5-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 171/173) 2,2',3,3',4,4',6-Heptachlorobiphenyl/2,2',3,3',4,5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 172) 2,2',3,3',4,5,5'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 174) 2,2',3,3',4,5,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 175) 2,2',3,3',4,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 176) 2,2',3,3',4,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 177) 2,2',3,3',4',5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 178) 2,2',3,3',5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 179) 2,2',3,3',5,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 18/30) 2,2',5-Trichlorobiphenyl/2,4,6-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 180/193) 2,2',3,4,4',5,5'-Heptachlorobiphenyl/2,3,3',4',5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 181) 2,2',3,4,4',5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 182) 2,2',3,4,4',5,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 183/185) 2,2',3,4,4',5',6-Heptachlorobiphenyl/2,2',3,4,5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 184) 2,2',3,4,4',6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 186) 2,2',3,4,5,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 187) 2,2',3,4',5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 188) 2,2',3,4',5,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 189) 2,3,3',4,4',5,5'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 19) 2,2',6-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 190) 2,3,3',4,4',5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 191) 2,3,3',4,4',5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 192) 2,3,3',4,5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 194) 2,2',3,3',4,4',5,5'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-01	SB-02	SB-02	SB-02	SB-02	SB-03
Sample Name:	SB01-0.0-0.5-1022	SB02-1-1.5-1022	SB02-2.5-3.0-1022	SB02-0.0-0.5-1022	SB02D-0.0-0.5-1022	SB03-1.0-1.5-1022
Sample Date:	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS
					Duplicate	

Parameters	Unit						
PCBs (Continued)							
(PCB 195) 2,2',3,3',4,4',5,6-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 196) 2,2',3,3',4,4',5,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 197/200) 2,2',3,3',4,4',6,6'-Octachlorobiphenyl/2,2',3,3',4,5,6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 198/199) 2,2',3,3',4,5,5',6-Octachlorobiphenyl/2,2',3,3',4,5,5',6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 2) 3-Chlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 20/28) 2,3,3'-Trichlorobiphenyl/2,4,4'-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 201) 2,2',3,3',4,5',6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 202) 2,2',3,3',5,5',6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 203) 2,2',3,4,4',5,5',6-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 204) 2,2',3,4,4',5,6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 205) 2,3,3',4,4',5,5',6-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 206) 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 207) 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 208) 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 209) Decachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 21/33) 2,3,4-Trichlorobiphenyl/2',3,4-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 22) 2,3,4'-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 23) 2,3,5-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 24) 2,3,6-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 25) 2,3',4-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 26/29) 2,3',5-Trichlorobiphenyl/2,4,5-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 27) 2,3',6-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 3) 4-Monochlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 31) 2,4',5-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 32) 2,4',6-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 34) 2,3',5'-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 35) 3,3',4-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-01	SB-02	SB-02	SB-02	SB-02	SB-03
Sample Name:	SB01-0.0-0.5-1022	SB02-1-1.5-1022	SB02-2.5-3.0-1022	SB02-0.0-0.5-1022	SB02D-0.0-0.5-1022	SB03-1.0-1.5-1022
Sample Date:	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS
					Duplicate	

Parameters	Unit					
PCBs (Continued)						
(PCB 36) 3,3',5-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 37) 3,4,4'-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 38) 3,4,5-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 39) 3,4',5-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 4) 2,2'-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 40/41/71) 2,2',3,3'-TeCB/ 2,2',3,4-TeCB/2,3',4',6-TeCB	ng/kg	--	--	--	--	--
(PCB 42) 2,2',3,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 43/73) 2,2',3,5-Tetrachlorobiphenyl/2,3',5',6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 44/47/65) 2,2',3,5'-Tetrachlorobiphenyl/2,2',4,4'-Tetrachlorobiphenyl/2,3,5,6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 45/51) 2,2',3,6-Tetrachlorobiphenyl/2,2',4,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 46) 2,2',3,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 48) 2,2',4,5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 49/69) 2,2',4,5'-Tetrachlorobiphenyl/2,3',4,6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 5) 2,3-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 50/53) 2,2',4,6-Tetrachlorobiphenyl/2,2',5,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 52) 2,2',5,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 54) 2,2',6,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 55) 2,3,3',4-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 56) 2,3,3',4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 57) 2,3,3',5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 58) 2,3,3',5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 59/62/75) 2,3,3',6-Tetrachlorobiphenyl/2,3,4,6-Tetrachlorobiphenyl/ 2,4,4',6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 6) 2,3'-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 60) 2,3,4,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 61/70/74/76) 2,3,4,5-Tetrachlorobiphenyl/2,3',4',5-Tetrachlorobiphenyl/2,4,4',5-Tetrachlorobiphenyl/2,3',4',5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 63) 2,3,4',5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-01	SB-02	SB-02	SB-02	SB-02	SB-03
Sample Name:	SB01-0.0-0.5-1022	SB02-1-1.5-1022	SB02-2.5-3.0-1022	SB02-0.0-0.5-1022	SB02D-0.0-0.5-1022	SB03-1.0-1.5-1022
Sample Date:	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS
					Duplicate	

Parameters	Unit					
PCBs (Continued)						
(PCB 64) 2,3,4',6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 66) 2,3',4,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 67) 2,3',4,5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 68) 2,3',4,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 7) 2,4-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 72) 2,3',5,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 77) 3,3',4,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 78) 3,3',4,5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 79) 3,3',4,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 8) 2,4'-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 80) 3,3',5,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 81) 3,4,4',5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 82) 2,2',3,3',4-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 83) 2,2',3,3',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 84) 2,2',3,3',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 85/116/117) 2,2',3,4,4'-PeCB/2,3,4,5,6-PeCB/2,3,4',5,6-PeCB	ng/kg	--	--	--	--	--
Pentachlorobiphenyl/2,2',3',4,5-Pentachlorobiphenyl/2,3,3',4,5'-						
Pentachlorobiphenyl/2,3',4,4',6-Pentachlorobiphenyl/2',3,4,5,6'-						
Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 88/91) 2,2',3,4,6-Pentachlorobiphenyl/2,2',3,4',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 89) 2,2',3,4,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 9) 2,5-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 90/101/113) 2,2',3,4',5-Pentachlorobiphenyl/2,2',4,5,5'-						
Pentachlorobiphenyl/2,3,3',5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 92) 2,2',3,5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 93/98/100/102) Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 94) 2,2',3,5,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 95) 2,2',3,5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 96) 2,2',3,6,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--

Table 3

**Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022**

Location ID:	SB-01	SB-02	SB-02	SB-02	SB-02	SB-03
Sample Name:	SB01-0.0-0.5-1022	SB02-1-1.5-1022	SB02-2.5-3.0-1022	SB02-0.0-0.5-1022	SB02D-0.0-0.5-1022	SB03-1.0-1.5-1022
Sample Date:	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS
					Duplicate	

Parameters**Unit****PCBs (Continued)**

(PCB 99) 2,2',4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
Aroclor-1016 (PCB-1016)	µg/kg	<20.2	<21.1	<21.0	<21.1	<20.6	<21.0
Aroclor-1221 (PCB-1221)	µg/kg	<33.0	<34.4	<34.2	<34.4	<33.6	<34.3
Aroclor-1232 (PCB-1232)	µg/kg	<28.2	<29.5	<29.3	<29.5	<28.7	<29.3
Aroclor-1242 (PCB-1242)	µg/kg	<29.5	<30.8	<30.7	<30.8	<30.1	<30.7
Aroclor-1248 (PCB-1248)	µg/kg	<24.4	<25.4	<25.3	<25.4	<24.8	<25.3
Aroclor-1254 (PCB-1254)	µg/kg	<23.8	<24.8	<24.7	<24.8	<24.2	<24.7
Aroclor-1260 (PCB-1260)	µg/kg	18900	1120	477	11500 J	6740 J	250
Aroclor-1262 (PCB-1262)	µg/kg	<31.4	<32.8	<32.6	<32.8	<32.0	<32.6
Aroclor-1268 (PCB-1268)	µg/kg	<22.9	<23.9	<23.8	<23.9	<23.3	<23.8

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-03	SB-03	SB-03	SB-04	SB-04	SB-04
Sample Name:	SB03-2.5-3.0-1022	SB03-0.0-0.5-1022	SB03D-0.0-0.5-1022	SB04-1.0-1.5-1022	SB04-2.5-3.0-1022	SB04-0.0-0.5-1022
Sample Date:	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022
Depth:	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS
			Duplicate			

Parameters	Unit						
PCBs							
(PCB 1) 2-Chlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 10) 2,6-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 103) 2,2',4,5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 104) 2,2',4,6,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 105) 2,3,3',4,4'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 106) 2,3,3',4,5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 107/124) Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 109) 2,3,3',4,6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 11) 3,3'-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 110/115) 2,3,3',4',6-Pentachlorobiphenyl/2,3,4,4',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 111) 2,3,3',5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 112) 2,3,3',5,6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 114) 2,3,4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 118) 2,3',4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 12/13) 3,4-Dichlorobiphenyl/3,4'-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 120) 2,3',4,5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 121) 2,3',4,5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 122) 2,3,3',4',5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 123) 2',3,4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 126) 3,3',4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 127) 3,3',4,5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 128/166) 2,2',3,3',4,4'-Hexachlorobiphenyl/2,3,4,4',5,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 129/138/163) Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 130) 2,2',3,3',4,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 131) 2,2',3,3',4,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 132) 2,2',3,3',4,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 133) 2,2',3,3',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 134/143) 2,2',3,3',5,6-Hexachlorobiphenyl/2,2',3,4,5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-03	SB-03	SB-03	SB-04	SB-04	SB-04
Sample Name:	SB03-2.5-3.0-1022	SB03-0.0-0.5-1022	SB03D-0.0-0.5-1022	SB04-1.0-1.5-1022	SB04-2.5-3.0-1022	SB04-0.0-0.5-1022
Sample Date:	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022
Depth:	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS
			Duplicate			

Parameters	Unit					
PCBs (Continued)						
(PCB 135/151) 2,2',3,3',5,6'-Hexachlorobiphenyl/2,2',3,5,5',6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 136) 2,2',3,3',6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 137) 2,2',3,4,4',5-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 139/140) 2,2',3,4,4',6-Hexachlorobiphenyl/2,2',3,4,4',6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 14) 3,5-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 141) 2,2',3,4,5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 142) 2,2',3,4,5,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 144) 2,2',3,4,5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 145) 2,2',3,4,6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 146) 2,2',3,4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 147/149) 2,2',3,4',5,6-Hexachlorobiphenyl/2,2',3,4',5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 148) 2,2',3,4',5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 15) 4,4'-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 150) 2,2',3,4',6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 152) 2,2',3,5,6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 153/168) 2,2',4,4',5,5'-Hexachlorobiphenyl/2,3',4,4',5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 154) 2,2',4,4',5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 155) 2,2',4,4',6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 156/157) 2,3,3',4,4',5-Hexachlorobiphenyl/2,3,3',4,4',5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 158) 2,3,3',4,4',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 159) 2,3,3',4,5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 16) 2,2',3-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 160) 2,3,3',4,5,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 161) 2,3,3',4,5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 162) 2,3,3',4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 164) 2,3,3',4',5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 165) 2,3,3',5,5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 167) 2,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-03	SB-03	SB-03	SB-04	SB-04	SB-04
Sample Name:	SB03-2.5-3.0-1022	SB03-0.0-0.5-1022	SB03D-0.0-0.5-1022	SB04-1.0-1.5-1022	SB04-2.5-3.0-1022	SB04-0.0-0.5-1022
Sample Date:	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022
Depth:	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS
			Duplicate			

Parameters	Unit					
PCBs (Continued)						
(PCB 169) 3,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 17) 2,2',4-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 170) 2,2',3,3',4,4',5-Heptachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 171/173) 2,2',3,3',4,4',6-Heptachlorobiphenyl/2,2',3,3',4,5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 172) 2,2',3,3',4,5,5'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 174) 2,2',3,3',4,5,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 175) 2,2',3,3',4,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 176) 2,2',3,3',4,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 177) 2,2',3,3',4',5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 178) 2,2',3,3',5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 179) 2,2',3,3',5,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 18/30) 2,2',5-Trichlorobiphenyl/2,4,6-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 180/193) 2,2',3,4,4',5,5'-Heptachlorobiphenyl/2,3,3',4',5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 181) 2,2',3,4,4',5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 182) 2,2',3,4,4',5,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 183/185) 2,2',3,4,4',5',6-Heptachlorobiphenyl/2,2',3,4,5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 184) 2,2',3,4,4',6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 186) 2,2',3,4,5,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 187) 2,2',3,4',5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 188) 2,2',3,4',5,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 189) 2,3,3',4,4',5,5'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 19) 2,2',6-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 190) 2,3,3',4,4',5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 191) 2,3,3',4,4',5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 192) 2,3,3',4,5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 194) 2,2',3,3',4,4',5,5'-Octachlorobiphenyl	ng/kg	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-03	SB-03	SB-03	SB-04	SB-04	SB-04
Sample Name:	SB03-2.5-3.0-1022	SB03-0.0-0.5-1022	SB03D-0.0-0.5-1022	SB04-1.0-1.5-1022	SB04-2.5-3.0-1022	SB04-0.0-0.5-1022
Sample Date:	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022
Depth:	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS
			Duplicate			

Parameters	Unit					
PCBs (Continued)						
(PCB 195) 2,2',3,3',4,4',5,6-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 196) 2,2',3,3',4,4',5,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 197/200) 2,2',3,3',4,4',6,6'-Octachlorobiphenyl/2,2',3,3',4,5,6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 198/199) 2,2',3,3',4,5,5',6-Octachlorobiphenyl/2,2',3,3',4,5,5',6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 2) 3-Chlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 20/28) 2,3,3'-Trichlorobiphenyl/2,4,4'-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 201) 2,2',3,3',4,5',6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 202) 2,2',3,3',5,5',6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 203) 2,2',3,4,4',5,5',6-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 204) 2,2',3,4,4',5,6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 205) 2,3,3',4,4',5,5',6-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 206) 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 207) 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 208) 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 209) Decachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 21/33) 2,3,4-Trichlorobiphenyl/2',3,4-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 22) 2,3,4'-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 23) 2,3,5-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 24) 2,3,6-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 25) 2,3',4-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 26/29) 2,3',5-Trichlorobiphenyl/2,4,5-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 27) 2,3',6-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 3) 4-Monochlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 31) 2,4',5-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 32) 2,4',6-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 34) 2,3',5'-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 35) 3,3',4-Trichlorobiphenyl	ng/kg	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-03	SB-03	SB-03	SB-04	SB-04	SB-04
Sample Name:	SB03-2.5-3.0-1022	SB03-0.0-0.5-1022	SB03D-0.0-0.5-1022	SB04-1.0-1.5-1022	SB04-2.5-3.0-1022	SB04-0.0-0.5-1022
Sample Date:	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022
Depth:	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS
			Duplicate			

Parameters	Unit					
PCBs (Continued)						
(PCB 36) 3,3',5-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 37) 3,4,4'-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 38) 3,4,5-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 39) 3,4',5-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 4) 2,2'-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 40/41/71) 2,2',3,3'-TeCB/ 2,2',3,4-TeCB/2,3',4',6-TeCB	ng/kg	--	--	--	--	--
(PCB 42) 2,2',3,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 43/73) 2,2',3,5-Tetrachlorobiphenyl/2,3',5',6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 44/47/65) 2,2',3,5'-Tetrachlorobiphenyl/2,2',4,4'-Tetrachlorobiphenyl/2,3,5,6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 45/51) 2,2',3,6-Tetrachlorobiphenyl/2,2',4,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 46) 2,2',3,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 48) 2,2',4,5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 49/69) 2,2',4,5'-Tetrachlorobiphenyl/2,3',4,6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 5) 2,3-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 50/53) 2,2',4,6-Tetrachlorobiphenyl/2,2',5,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 52) 2,2',5,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 54) 2,2',6,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 55) 2,3,3',4-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 56) 2,3,3',4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 57) 2,3,3',5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 58) 2,3,3',5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 59/62/75) 2,3,3',6-Tetrachlorobiphenyl/2,3,4,6-Tetrachlorobiphenyl/ 2,4,4',6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 6) 2,3'-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 60) 2,3,4,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 61/70/74/76) 2,3,4,5-Tetrachlorobiphenyl/2,3',4',5-Tetrachlorobiphenyl/2,4,4',5-Tetrachlorobiphenyl/2,3',4',5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 63) 2,3,4',5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-03	SB-03	SB-03	SB-04	SB-04	SB-04
Sample Name:	SB03-2.5-3.0-1022	SB03-0.0-0.5-1022	SB03D-0.0-0.5-1022	SB04-1.0-1.5-1022	SB04-2.5-3.0-1022	SB04-0.0-0.5-1022
Sample Date:	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022
Depth:	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS
			Duplicate			

Parameters	Unit					
PCBs (Continued)						
(PCB 64) 2,3,4',6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 66) 2,3',4,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 67) 2,3',4,5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 68) 2,3',4,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 7) 2,4-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 72) 2,3',5,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 77) 3,3',4,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 78) 3,3',4,5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 79) 3,3',4,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 8) 2,4'-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 80) 3,3',5,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 81) 3,4,4',5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 82) 2,2',3,3',4-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 83) 2,2',3,3',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 84) 2,2',3,3',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 85/116/117) 2,2',3,4,4'-PeCB/2,3,4,5,6-PeCB/2,3,4',5,6-PeCB	ng/kg	--	--	--	--	--
Pentachlorobiphenyl/2,2',3',4,5-Pentachlorobiphenyl/2,3,3',4,5'-						
Pentachlorobiphenyl/2,3',4,4',6-Pentachlorobiphenyl/2',3,4,5,6'-						
Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 88/91) 2,2',3,4,6-Pentachlorobiphenyl/2,2',3,4',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 89) 2,2',3,4,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 9) 2,5-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 90/101/113) 2,2',3,4',5-Pentachlorobiphenyl/2,2',4,5,5'-						
Pentachlorobiphenyl/2,3,3',5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 92) 2,2',3,5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 93/98/100/102) Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 94) 2,2',3,5,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 95) 2,2',3,5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 96) 2,2',3,6,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--

Table 3

**Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022**

Location ID:	SB-03	SB-03	SB-03	SB-04	SB-04	SB-04
Sample Name:	SB03-2.5-3.0-1022	SB03-0.0-0.5-1022	SB03D-0.0-0.5-1022	SB04-1.0-1.5-1022	SB04-2.5-3.0-1022	SB04-0.0-0.5-1022
Sample Date:	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022	10/17/2022
Depth:	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS
			Duplicate			

Parameters**Unit****PCBs (Continued)**

(PCB 99) 2,2',4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
Aroclor-1016 (PCB-1016)	µg/kg	<20.8	<21.1	<20.6	<21.1	<20.6	<20.7
Aroclor-1221 (PCB-1221)	µg/kg	<33.9	<34.4	<33.5	<34.4	<33.6	<33.7
Aroclor-1232 (PCB-1232)	µg/kg	<29.0	<29.5	<28.7	<29.5	<28.8	<28.9
Aroclor-1242 (PCB-1242)	µg/kg	<30.4	<30.8	<30.0	<30.8	<30.1	<30.2
Aroclor-1248 (PCB-1248)	µg/kg	<25.0	<25.4	<24.8	<25.4	<24.9	<24.9
Aroclor-1254 (PCB-1254)	µg/kg	<24.5	<24.8	<24.2	<24.9	<24.3	<24.3
Aroclor-1260 (PCB-1260)	µg/kg	<17.5	161	262	2660	434	433 J
Aroclor-1262 (PCB-1262)	µg/kg	<32.3	<32.8	<31.9	<32.8	<32.0	<32.1
Aroclor-1268 (PCB-1268)	µg/kg	<23.6	<23.9	<23.3	<24.0	<23.4	<23.4

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-04	SB-05	SB-05	SB-05	SB-06	SB-06
Sample Name:	SB04D-0.0-0.5-1022	SB05-1.0-1.5-1022	SB05-2.5-3.0-1022	SB05-0.0-0.5-1022	SB06-1.0-1.5-1022	SB06-2.5-3.0-1022
Sample Date:	10/17/2022	10/18/2022	10/18/2022	10/18/2022	10/17/2022	10/17/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS
	Duplicate					

Parameters	Unit						
PCBs							
(PCB 1) 2-Chlorobiphenyl	ng/kg	--	--	--	--	<18.1 J	--
(PCB 10) 2,6-Dichlorobiphenyl	ng/kg	--	--	--	--	<3.68	--
(PCB 103) 2,2',4,5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	89.6	--
(PCB 104) 2,2',4,6,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--	<3.30	--
(PCB 105) 2,3,3',4,4'-Pentachlorobiphenyl	ng/kg	--	--	--	--	7480	--
(PCB 106) 2,3,3',4,5-Pentachlorobiphenyl	ng/kg	--	--	--	--	<3.09	--
(PCB 107/124) Pentachlorobiphenyl	ng/kg	--	--	--	--	1570	--
(PCB 109) 2,3,3',4,6-Pentachlorobiphenyl	ng/kg	--	--	--	--	2360	--
(PCB 11) 3,3'-Dichlorobiphenyl	ng/kg	--	--	--	--	159	--
(PCB 110/115) 2,3,3',4',6-Pentachlorobiphenyl/2,3,4,4',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	102000	--
(PCB 111) 2,3,3',5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	28.4	--
(PCB 112) 2,3,3',5,6-Pentachlorobiphenyl	ng/kg	--	--	--	--	<3.88	--
(PCB 114) 2,3,4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	183 J+	--
(PCB 118) 2,3',4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	47400	--
(PCB 12/13) 3,4-Dichlorobiphenyl/3,4'-Dichlorobiphenyl	ng/kg	--	--	--	--	20.3 J	--
(PCB 120) 2,3',4,5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	244	--
(PCB 121) 2,3',4,5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	<3.51	--
(PCB 122) 2,3,3',4',5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	218	--
(PCB 123) 2',3,4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	328	--
(PCB 126) 3,3',4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	1820	--
(PCB 127) 3,3',4,5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	127	--
(PCB 128/166) 2,2',3,3',4,4'-Hexachlorobiphenyl/2,3,4,4',5,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	44500	--
(PCB 129/138/163) Hexachlorobiphenyl	ng/kg	--	--	--	--	684000	--
(PCB 130) 2,2',3,3',4,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	23500	--
(PCB 131) 2,2',3,3',4,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	3880	--
(PCB 132) 2,2',3,3',4,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	180000	--
(PCB 133) 2,2',3,3',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	6100	--
(PCB 134/143) 2,2',3,3',5,6-Hexachlorobiphenyl/2,2',3,4,5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	22000	--

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-04	SB-05	SB-05	SB-05	SB-06	SB-06
Sample Name:	SB04D-0.0-0.5-1022	SB05-1.0-1.5-1022	SB05-2.5-3.0-1022	SB05-0.0-0.5-1022	SB06-1.0-1.5-1022	SB06-2.5-3.0-1022
Sample Date:	10/17/2022	10/18/2022	10/18/2022	10/18/2022	10/17/2022	10/17/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS
	Duplicate					

Parameters	Unit					
PCBs (Continued)						
(PCB 135/151) 2,2',3,3',5,6'-Hexachlorobiphenyl/2,2',3,5,5',6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	219000
(PCB 136) 2,2',3,3',6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	64700
(PCB 137) 2,2',3,4,4',5-Hexachlorobiphenyl	ng/kg	--	--	--	--	2370
(PCB 139/140) 2,2',3,4,4',6-Hexachlorobiphenyl/2,2',3,4,4',6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	1560
(PCB 14) 3,5-Dichlorobiphenyl	ng/kg	--	--	--	--	<3.28
(PCB 141) 2,2',3,4,5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	165000
(PCB 142) 2,2',3,4,5,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	<18.2
(PCB 144) 2,2',3,4,5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	34300
(PCB 145) 2,2',3,4,6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	<15.8
(PCB 146) 2,2',3,4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	81400
(PCB 147/149) 2,2',3,4',5,6-Hexachlorobiphenyl/2,2',3,4',5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	487000
(PCB 148) 2,2',3,4',5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	125
(PCB 15) 4,4'-Dichlorobiphenyl	ng/kg	--	--	--	--	132
(PCB 150) 2,2',3,4',6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	245
(PCB 152) 2,2',3,5,6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	41.2 J
(PCB 153/168) 2,2',4,4',5,5'-Hexachlorobiphenyl/2,3',4,4',5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	630000
(PCB 154) 2,2',4,4',5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	1620
(PCB 155) 2,2',4,4',6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	<15.5
(PCB 156/157) 2,3,3',4,4',5-Hexachlorobiphenyl/2,3,3',4,4',5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	54800
(PCB 158) 2,3,3',4,4',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	61600
(PCB 159) 2,3,3',4,5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	5110
(PCB 16) 2,2',3-Trichlorobiphenyl	ng/kg	--	--	--	--	42.6
(PCB 160) 2,3,3',4,5,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	<13.1
(PCB 161) 2,3,3',4,5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	<14.3
(PCB 162) 2,3,3',4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	888
(PCB 164) 2,3,3',4',5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	46800
(PCB 165) 2,3,3',5,5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	57.2 J
(PCB 167) 2,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	23700

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-04	SB-05	SB-05	SB-05	SB-06	SB-06
Sample Name:	SB04D-0.0-0.5-1022	SB05-1.0-1.5-1022	SB05-2.5-3.0-1022	SB05-0.0-0.5-1022	SB06-1.0-1.5-1022	SB06-2.5-3.0-1022
Sample Date:	10/17/2022	10/18/2022	10/18/2022	10/18/2022	10/17/2022	10/17/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS
	Duplicate					

Parameters	Unit					
PCBs (Continued)						
(PCB 169) 3,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	489	--
(PCB 17) 2,2',4-Trichlorobiphenyl	ng/kg	--	--	--	48.4	--
(PCB 170) 2,2',3,3',4,4',5-Heptachlorobiphenyl	ng/kg	--	--	--	328000	--
(PCB 171/173) 2,2',3,3',4,4',6-Heptachlorobiphenyl/2,2',3,3',4,5,6-Heptachlorobiphenyl	ng/kg	--	--	--	105000	--
(PCB 172) 2,2',3,3',4,5,5'-Heptachlorobiphenyl	ng/kg	--	--	--	52300	--
(PCB 174) 2,2',3,3',4,5,6'-Heptachlorobiphenyl	ng/kg	--	--	--	289000	--
(PCB 175) 2,2',3,3',4,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	12100	--
(PCB 176) 2,2',3,3',4,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	36600	--
(PCB 177) 2,2',3,3',4',5,6-Heptachlorobiphenyl	ng/kg	--	--	--	181000	--
(PCB 178) 2,2',3,3',5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	50400	--
(PCB 179) 2,2',3,3',5,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	104000	--
(PCB 18/30) 2,2',5-Trichlorobiphenyl/2,4,6-Trichlorobiphenyl	ng/kg	--	--	--	99.8	--
(PCB 180/193) 2,2',3,4,4',5,5'-Heptachlorobiphenyl/2,3,3',4',5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	680000	--
(PCB 181) 2,2',3,4,4',5,6-Heptachlorobiphenyl	ng/kg	--	--	--	1200	--
(PCB 182) 2,2',3,4,4',5,6'-Heptachlorobiphenyl	ng/kg	--	--	--	1060	--
(PCB 183/185) 2,2',3,4,4',5',6-Heptachlorobiphenyl/2,2',3,4,5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	209000	--
(PCB 184) 2,2',3,4,4',6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	127	--
(PCB 186) 2,2',3,4,5,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	<19.6	--
(PCB 187) 2,2',3,4',5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	304000	--
(PCB 188) 2,2',3,4',5,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	206	--
(PCB 189) 2,3,3',4,4',5,5'-Heptachlorobiphenyl	ng/kg	--	--	--	14400	--
(PCB 19) 2,2',6-Trichlorobiphenyl	ng/kg	--	--	--	15.1 J	--
(PCB 190) 2,3,3',4,4',5,6-Heptachlorobiphenyl	ng/kg	--	--	--	68500	--
(PCB 191) 2,3,3',4,4',5',6-Heptachlorobiphenyl	ng/kg	--	--	--	13200	--
(PCB 192) 2,3,3',4,5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	<14.5	--
(PCB 194) 2,2',3,3',4,4',5,5'-Octachlorobiphenyl	ng/kg	--	--	--	102000	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-04	SB-05	SB-05	SB-05	SB-06	SB-06
Sample Name:	SB04D-0.0-0.5-1022	SB05-1.0-1.5-1022	SB05-2.5-3.0-1022	SB05-0.0-0.5-1022	SB06-1.0-1.5-1022	SB06-2.5-3.0-1022
Sample Date:	10/17/2022	10/18/2022	10/18/2022	10/18/2022	10/17/2022	10/17/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS
	Duplicate					

Parameters	Unit					
PCBs (Continued)						
(PCB 195) 2,2',3,3',4,4',5,6-Octachlorobiphenyl	ng/kg	--	--	--	--	49000
(PCB 196) 2,2',3,3',4,4',5,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	63200
(PCB 197/200) 2,2',3,3',4,4',6,6'-Octachlorobiphenyl/2,2',3,3',4,5,6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	18900
(PCB 198/199) 2,2',3,3',4,5,5',6-Octachlorobiphenyl/2,2',3,3',4,5,5',6'-Octachlorobiphenyl	ng/kg	--	--	--	--	103000
(PCB 2) 3-Chlorobiphenyl	ng/kg	--	--	--	--	11.0 J
(PCB 20/28) 2,3,3'-Trichlorobiphenyl/2,4,4'-Trichlorobiphenyl	ng/kg	--	--	--	--	203
(PCB 201) 2,2',3,3',4,5',6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	12800
(PCB 202) 2,2',3,3',5,5',6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	14200
(PCB 203) 2,2',3,4,4',5,5',6-Octachlorobiphenyl	ng/kg	--	--	--	--	69400
(PCB 204) 2,2',3,4,4',5,6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	30.7
(PCB 205) 2,3,3',4,4',5,5',6-Octachlorobiphenyl	ng/kg	--	--	--	--	6580
(PCB 206) 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	ng/kg	--	--	--	--	18100
(PCB 207) 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	ng/kg	--	--	--	--	2240
(PCB 208) 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	ng/kg	--	--	--	--	3010
(PCB 209) Decachlorobiphenyl	ng/kg	--	--	--	--	2250
(PCB 21/33) 2,3,4-Trichlorobiphenyl/2',3,4-Trichlorobiphenyl	ng/kg	--	--	--	--	109
(PCB 22) 2,3,4'-Trichlorobiphenyl	ng/kg	--	--	--	--	78.2
(PCB 23) 2,3,5-Trichlorobiphenyl	ng/kg	--	--	--	--	<2.98
(PCB 24) 2,3,6-Trichlorobiphenyl	ng/kg	--	--	--	--	<3.95
(PCB 25) 2,3',4-Trichlorobiphenyl	ng/kg	--	--	--	--	15.6
(PCB 26/29) 2,3',5-Trichlorobiphenyl/2,4,5-Trichlorobiphenyl	ng/kg	--	--	--	--	34.4 J
(PCB 27) 2,3',6-Trichlorobiphenyl	ng/kg	--	--	--	--	8.59 J
(PCB 3) 4-Monochlorobiphenyl	ng/kg	--	--	--	--	28.9
(PCB 31) 2,4',5-Trichlorobiphenyl	ng/kg	--	--	--	--	175
(PCB 32) 2,4',6-Trichlorobiphenyl	ng/kg	--	--	--	--	41.4
(PCB 34) 2,3',5'-Trichlorobiphenyl	ng/kg	--	--	--	--	<4.17
(PCB 35) 3,3',4-Trichlorobiphenyl	ng/kg	--	--	--	--	12.4 J

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-04	SB-05	SB-05	SB-05	SB-06	SB-06
Sample Name:	SB04D-0.0-0.5-1022	SB05-1.0-1.5-1022	SB05-2.5-3.0-1022	SB05-0.0-0.5-1022	SB06-1.0-1.5-1022	SB06-2.5-3.0-1022
Sample Date:	10/17/2022	10/18/2022	10/18/2022	10/18/2022	10/17/2022	10/17/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS
	Duplicate					

Parameters	Unit					
PCBs (Continued)						
(PCB 36) 3,3',5-Trichlorobiphenyl	ng/kg	--	--	--	3.15 J	--
(PCB 37) 3,4,4'-Trichlorobiphenyl	ng/kg	--	--	--	176	--
(PCB 38) 3,4,5-Trichlorobiphenyl	ng/kg	--	--	--	<2.60	--
(PCB 39) 3,4',5-Trichlorobiphenyl	ng/kg	--	--	--	3.10 J	--
(PCB 4) 2,2'-Dichlorobiphenyl	ng/kg	--	--	--	28.3	--
(PCB 40/41/71) 2,2',3,3'-TeCB/ 2,2',3,4-TeCB/2,3',4',6-TeCB	ng/kg	--	--	--	238	--
(PCB 42) 2,2',3,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	106	--
(PCB 43/73) 2,2',3,5-Tetrachlorobiphenyl/2,3',5',6-Tetrachlorobiphenyl	ng/kg	--	--	--	<10.4	--
(PCB 44/47/65) 2,2',3,5'-Tetrachlorobiphenyl/2,2',4,4'-Tetrachlorobiphenyl/2,3,5,6-Tetrachlorobiphenyl	ng/kg	--	--	--	626	--
(PCB 45/51) 2,2',3,6-Tetrachlorobiphenyl/2,2',4,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	54.1	--
(PCB 46) 2,2',3,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	12.8 J	--
(PCB 48) 2,2',4,5-Tetrachlorobiphenyl	ng/kg	--	--	--	55.4	--
(PCB 49/69) 2,2',4,5'-Tetrachlorobiphenyl/2,3',4,6-Tetrachlorobiphenyl	ng/kg	--	--	--	403	--
(PCB 5) 2,3-Dichlorobiphenyl	ng/kg	--	--	--	<2.67	--
(PCB 50/53) 2,2',4,6-Tetrachlorobiphenyl/2,2',5,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	57.2	--
(PCB 52) 2,2',5,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	4470	--
(PCB 54) 2,2',6,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	<5.20	--
(PCB 55) 2,3,3',4-Tetrachlorobiphenyl	ng/kg	--	--	--	9.21 J	--
(PCB 56) 2,3,3',4'-Tetrachlorobiphenyl	ng/kg	--	--	--	422	--
(PCB 57) 2,3,3',5-Tetrachlorobiphenyl	ng/kg	--	--	--	<2.22	--
(PCB 58) 2,3,3',5'-Tetrachlorobiphenyl	ng/kg	--	--	--	<2.70	--
(PCB 59/62/75) 2,3,3',6-Tetrachlorobiphenyl/2,3,4,6-Tetrachlorobiphenyl/ 2,4,4',6-Tetrachlorobiphenyl	ng/kg	--	--	--	54.8 J	--
(PCB 6) 2,3'-Dichlorobiphenyl	ng/kg	--	--	--	16.4 J	--
(PCB 60) 2,3,4,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	167	--
(PCB 61/70/74/76) 2,3,4,5-Tetrachlorobiphenyl/2,3',4',5-Tetrachlorobiphenyl/2,4,4',5-Tetrachlorobiphenyl/2,3',4',5'-Tetrachlorobiphenyl	ng/kg	--	--	--	2080	--
(PCB 63) 2,3,4',5-Tetrachlorobiphenyl	ng/kg	--	--	--	28.6	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-04	SB-05	SB-05	SB-05	SB-06	SB-06
Sample Name:	SB04D-0.0-0.5-1022	SB05-1.0-1.5-1022	SB05-2.5-3.0-1022	SB05-0.0-0.5-1022	SB06-1.0-1.5-1022	SB06-2.5-3.0-1022
Sample Date:	10/17/2022	10/18/2022	10/18/2022	10/18/2022	10/17/2022	10/17/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS
	Duplicate					

Parameters	Unit					
PCBs (Continued)						
(PCB 64) 2,3,4',6-Tetrachlorobiphenyl	ng/kg	--	--	--	487	--
(PCB 66) 2,3',4,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	760	--
(PCB 67) 2,3',4,5-Tetrachlorobiphenyl	ng/kg	--	--	--	20.3	--
(PCB 68) 2,3',4,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	<8.55	--
(PCB 7) 2,4-Dichlorobiphenyl	ng/kg	--	--	--	4.81 J	--
(PCB 72) 2,3',5,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	24.3	--
(PCB 77) 3,3',4,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	599	--
(PCB 78) 3,3',4,5-Tetrachlorobiphenyl	ng/kg	--	--	--	3.72	--
(PCB 79) 3,3',4,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	230	--
(PCB 8) 2,4'-Dichlorobiphenyl	ng/kg	--	--	--	74.3	--
(PCB 80) 3,3',5,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	4.67	--
(PCB 81) 3,4,4',5-Tetrachlorobiphenyl	ng/kg	--	--	--	15.4	--
(PCB 82) 2,2',3,3',4-Pentachlorobiphenyl	ng/kg	--	--	--	1040	--
(PCB 83) 2,2',3,3',5-Pentachlorobiphenyl	ng/kg	--	--	--	2060	--
(PCB 84) 2,2',3,3',6-Pentachlorobiphenyl	ng/kg	--	--	--	4290	--
(PCB 85/116/117) 2,2',3,4,4'-PeCB/2,3,4,5,6-PeCB/2,3,4',5,6-PeCB	ng/kg	--	--	--	1510	--
Pentachlorobiphenyl/2,2',3',4,5-Pentachlorobiphenyl/2,3,3',4,5'-						
Pentachlorobiphenyl/2,3',4,4',6-Pentachlorobiphenyl/2',3,4,5,6'-						
Pentachlorobiphenyl	ng/kg	--	--	--	26200	--
(PCB 88/91) 2,2',3,4,6-Pentachlorobiphenyl/2,2',3,4',6-Pentachlorobiphenyl	ng/kg	--	--	--	1210	--
(PCB 89) 2,2',3,4,6'-Pentachlorobiphenyl	ng/kg	--	--	--	76.1	--
(PCB 9) 2,5-Dichlorobiphenyl	ng/kg	--	--	--	5.73 J	--
(PCB 90/101/113) 2,2',3,4',5-Pentachlorobiphenyl/2,2',4,5,5'-						
Pentachlorobiphenyl/2,3,3',5',6-Pentachlorobiphenyl	ng/kg	--	--	--	137000	--
(PCB 92) 2,2',3,5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	16000	--
(PCB 93/98/100/102) Pentachlorobiphenyl	ng/kg	--	--	--	389	--
(PCB 94) 2,2',3,5,6'-Pentachlorobiphenyl	ng/kg	--	--	--	35.6	--
(PCB 95) 2,2',3,5',6-Pentachlorobiphenyl	ng/kg	--	--	--	79800	--
(PCB 96) 2,2',3,6,6'-Pentachlorobiphenyl	ng/kg	--	--	--	44.0	--

Table 3

**Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022**

Location ID:	SB-04	SB-05	SB-05	SB-05	SB-06	SB-06
Sample Name:	SB04D-0.0-0.5-1022	SB05-1.0-1.5-1022	SB05-2.5-3.0-1022	SB05-0.0-0.5-1022	SB06-1.0-1.5-1022	SB06-2.5-3.0-1022
Sample Date:	10/17/2022	10/18/2022	10/18/2022	10/18/2022	10/17/2022	10/17/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS
	Duplicate					

Parameters**Unit****PCBs (Continued)**

(PCB 99) 2,2',4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	4800	--
Aroclor-1016 (PCB-1016)	µg/kg	<21.0	<21.1	<21.0	<21.1	<20.6	<21.1
Aroclor-1221 (PCB-1221)	µg/kg	<34.2	<34.4	<34.2	<34.4	<33.7	<34.4
Aroclor-1232 (PCB-1232)	µg/kg	<29.3	<29.4	<29.3	<29.4	<28.8	<29.4
Aroclor-1242 (PCB-1242)	µg/kg	<30.7	<30.8	<30.6	<30.8	<30.1	<30.8
Aroclor-1248 (PCB-1248)	µg/kg	<25.3	<25.4	<25.3	<25.4	<24.9	<25.4
Aroclor-1254 (PCB-1254)	µg/kg	<24.7	<24.8	<24.7	<24.8	<24.3	<24.8
Aroclor-1260 (PCB-1260)	µg/kg	244 J	335	<17.7	920	10500	199
Aroclor-1262 (PCB-1262)	µg/kg	<32.6	<32.7	<32.6	<32.7	<32.0	<32.7
Aroclor-1268 (PCB-1268)	µg/kg	<23.8	<23.9	<23.8	<23.9	<23.4	<23.9

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-06	SB-07	SB-07	SB-07	SB-08	SB-08
Sample Name:	SB06-0.0-0.5-1022	SB07-1.0-1.5-1022	SB07-2.5-3.0-1022	SB07-0.0-0.5-1022	SB08-1-110322	SB08-2.5-110322
Sample Date:	10/17/2022	10/18/2022	10/18/2022	10/18/2022	11/03/2022	11/03/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit						
PCBs							
(PCB 1) 2-Chlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 10) 2,6-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 103) 2,2',4,5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 104) 2,2',4,6,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 105) 2,3,3',4,4'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 106) 2,3,3',4,5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 107/124) Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 109) 2,3,3',4,6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 11) 3,3'-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 110/115) 2,3,3',4',6-Pentachlorobiphenyl/2,3,4,4',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 111) 2,3,3',5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 112) 2,3,3',5,6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 114) 2,3,4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 118) 2,3',4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 12/13) 3,4-Dichlorobiphenyl/3,4'-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 120) 2,3',4,5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 121) 2,3',4,5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 122) 2,3,3',4',5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 123) 2',3,4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 126) 3,3',4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 127) 3,3',4,5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 128/166) 2,2',3,3',4,4'-Hexachlorobiphenyl/2,3,4,4',5,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 129/138/163) Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 130) 2,2',3,3',4,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 131) 2,2',3,3',4,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 132) 2,2',3,3',4,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 133) 2,2',3,3',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 134/143) 2,2',3,3',5,6-Hexachlorobiphenyl/2,2',3,4,5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-06	SB-07	SB-07	SB-07	SB-08	SB-08
Sample Name:	SB06-0.0-0.5-1022	SB07-1.0-1.5-1022	SB07-2.5-3.0-1022	SB07-0.0-0.5-1022	SB08-1-110322	SB08-2.5-110322
Sample Date:	10/17/2022	10/18/2022	10/18/2022	10/18/2022	11/03/2022	11/03/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit					
PCBs (Continued)						
(PCB 135/151) 2,2',3,3',5,6'-Hexachlorobiphenyl/2,2',3,5,5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 136) 2,2',3,3',6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 137) 2,2',3,4,4',5-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 139/140) 2,2',3,4,4',6-Hexachlorobiphenyl/2,2',3,4,4',6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 14) 3,5-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 141) 2,2',3,4,5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 142) 2,2',3,4,5,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 144) 2,2',3,4,5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 145) 2,2',3,4,6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 146) 2,2',3,4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 147/149) 2,2',3,4',5,6-Hexachlorobiphenyl/2,2',3,4',5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 148) 2,2',3,4',5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 15) 4,4'-Dichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 150) 2,2',3,4',6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 152) 2,2',3,5,6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 153/168) 2,2',4,4',5,5'-Hexachlorobiphenyl/2,3',4,4',5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 154) 2,2',4,4',5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 155) 2,2',4,4',6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 156/157) 2,3,3',4,4',5-Hexachlorobiphenyl/2,3,3',4,4',5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 158) 2,3,3',4,4',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 159) 2,3,3',4,5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 16) 2,2',3-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 160) 2,3,3',4,5,6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 161) 2,3,3',4,5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 162) 2,3,3',4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 164) 2,3,3',4',5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 165) 2,3,3',5,5',6-Hexachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 167) 2,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-06	SB-07	SB-07	SB-07	SB-08	SB-08
Sample Name:	SB06-0.0-0.5-1022	SB07-1.0-1.5-1022	SB07-2.5-3.0-1022	SB07-0.0-0.5-1022	SB08-1-110322	SB08-2.5-110322
Sample Date:	10/17/2022	10/18/2022	10/18/2022	10/18/2022	11/03/2022	11/03/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit						
PCBs (Continued)							
(PCB 169) 3,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 17) 2,2',4-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 170) 2,2',3,3',4,4',5-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 171/173) 2,2',3,3',4,4',6-Heptachlorobiphenyl/2,2',3,3',4,5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 172) 2,2',3,3',4,5,5'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 174) 2,2',3,3',4,5,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 175) 2,2',3,3',4,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 176) 2,2',3,3',4,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 177) 2,2',3,3',4',5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 178) 2,2',3,3',5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 179) 2,2',3,3',5,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 18/30) 2,2',5-Trichlorobiphenyl/2,4,6-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 180/193) 2,2',3,4,4',5,5'-Heptachlorobiphenyl/2,3,3',4',5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 181) 2,2',3,4,4',5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 182) 2,2',3,4,4',5,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 183/185) 2,2',3,4,4',5',6-Heptachlorobiphenyl/2,2',3,4,5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 184) 2,2',3,4,4',6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 186) 2,2',3,4,5,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 187) 2,2',3,4',5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 188) 2,2',3,4',5,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 189) 2,3,3',4,4',5,5'-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 19) 2,2',6-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 190) 2,3,3',4,4',5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 191) 2,3,3',4,4',5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 192) 2,3,3',4,5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 194) 2,2',3,3',4,4',5,5'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-06	SB-07	SB-07	SB-07	SB-08	SB-08
Sample Name:	SB06-0.0-0.5-1022	SB07-1.0-1.5-1022	SB07-2.5-3.0-1022	SB07-0.0-0.5-1022	SB08-1-110322	SB08-2.5-110322
Sample Date:	10/17/2022	10/18/2022	10/18/2022	10/18/2022	11/03/2022	11/03/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit						
PCBs (Continued)							
(PCB 195) 2,2',3,3',4,4',5,6-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 196) 2,2',3,3',4,4',5,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 197/200) 2,2',3,3',4,4',6,6'-Octachlorobiphenyl/2,2',3,3',4,5,6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 198/199) 2,2',3,3',4,5,5',6-Octachlorobiphenyl/2,2',3,3',4,5,5',6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 2) 3-Chlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 20/28) 2,3,3'-Trichlorobiphenyl/2,4,4'-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 201) 2,2',3,3',4,5',6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 202) 2,2',3,3',5,5',6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 203) 2,2',3,4,4',5,5',6-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 204) 2,2',3,4,4',5,6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 205) 2,3,3',4,4',5,5',6-Octachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 206) 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 207) 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 208) 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 209) Decachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 21/33) 2,3,4-Trichlorobiphenyl/2',3,4-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 22) 2,3,4'-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 23) 2,3,5-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 24) 2,3,6-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 25) 2,3',4-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 26/29) 2,3',5-Trichlorobiphenyl/2,4,5-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 27) 2,3',6-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 3) 4-Monochlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 31) 2,4',5-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 32) 2,4',6-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 34) 2,3',5'-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 35) 3,3',4-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-06	SB-07	SB-07	SB-07	SB-08	SB-08
Sample Name:	SB06-0.0-0.5-1022	SB07-1.0-1.5-1022	SB07-2.5-3.0-1022	SB07-0.0-0.5-1022	SB08-1-110322	SB08-2.5-110322
Sample Date:	10/17/2022	10/18/2022	10/18/2022	10/18/2022	11/03/2022	11/03/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit						
PCBs (Continued)							
(PCB 36) 3,3',5-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 37) 3,4,4'-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 38) 3,4,5-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 39) 3,4',5-Trichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 4) 2,2'-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 40/41/71) 2,2',3,3'-TeCB/ 2,2',3,4-TeCB/2,3',4',6-TeCB	ng/kg	--	--	--	--	--	--
(PCB 42) 2,2',3,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 43/73) 2,2',3,5-Tetrachlorobiphenyl/2,3',5',6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 44/47/65) 2,2',3,5'-Tetrachlorobiphenyl/2,2',4,4'-Tetrachlorobiphenyl/2,3,5,6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 45/51) 2,2',3,6-Tetrachlorobiphenyl/2,2',4,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 46) 2,2',3,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 48) 2,2',4,5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 49/69) 2,2',4,5'-Tetrachlorobiphenyl/2,3',4,6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 5) 2,3-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 50/53) 2,2',4,6-Tetrachlorobiphenyl/2,2',5,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 52) 2,2',5,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 54) 2,2',6,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 55) 2,3,3',4-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 56) 2,3,3',4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 57) 2,3,3',5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 58) 2,3,3',5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 59/62/75) 2,3,3',6-Tetrachlorobiphenyl/2,3,4,6-Tetrachlorobiphenyl/ 2,4,4',6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 6) 2,3'-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 60) 2,3,4,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 61/70/74/76) 2,3,4,5-Tetrachlorobiphenyl/2,3',4',5-Tetrachlorobiphenyl/2,4,4',5-Tetrachlorobiphenyl/2,3',4',5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 63) 2,3,4',5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-06	SB-07	SB-07	SB-07	SB-08	SB-08
Sample Name:	SB06-0.0-0.5-1022	SB07-1.0-1.5-1022	SB07-2.5-3.0-1022	SB07-0.0-0.5-1022	SB08-1-110322	SB08-2.5-110322
Sample Date:	10/17/2022	10/18/2022	10/18/2022	10/18/2022	11/03/2022	11/03/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit						
PCBs (Continued)							
(PCB 64) 2,3,4',6-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 66) 2,3',4,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 67) 2,3',4,5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 68) 2,3',4,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 7) 2,4-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 72) 2,3',5,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 77) 3,3',4,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 78) 3,3',4,5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 79) 3,3',4,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 8) 2,4'-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 80) 3,3',5,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 81) 3,4,4',5-Tetrachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 82) 2,2',3,3',4-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 83) 2,2',3,3',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 84) 2,2',3,3',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 85/116/117) 2,2',3,4,4'-PeCB/2,3,4,5,6-PeCB/2,3,4',5,6-PeCB	ng/kg	--	--	--	--	--	--
Pentachlorobiphenyl/2,2',3',4,5-Pentachlorobiphenyl/2,3,3',4,5'-							
Pentachlorobiphenyl/2,3',4,4',6-Pentachlorobiphenyl/2',3,4,5,6'-							
Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 88/91) 2,2',3,4,6-Pentachlorobiphenyl/2,2',3,4',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 89) 2,2',3,4,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 9) 2,5-Dichlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 90/101/113) 2,2',3,4',5-Pentachlorobiphenyl/2,2',4,5,5'-							
Pentachlorobiphenyl/2,3,3',5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 92) 2,2',3,5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 93/98/100/102) Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 94) 2,2',3,5,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 95) 2,2',3,5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
(PCB 96) 2,2',3,6,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-06	SB-07	SB-07	SB-07	SB-08	SB-08
Sample Name:	SB06-0.0-0.5-1022	SB07-1.0-1.5-1022	SB07-2.5-3.0-1022	SB07-0.0-0.5-1022	SB08-1-110322	SB08-2.5-110322
Sample Date:	10/17/2022	10/18/2022	10/18/2022	10/18/2022	11/03/2022	11/03/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters**Unit****PCBs (Continued)**

(PCB 99) 2,2',4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--	--	--
Aroclor-1016 (PCB-1016)	µg/kg	<21.2	<20.4	<21.0	<21.0	<21.2	<21.0
Aroclor-1221 (PCB-1221)	µg/kg	<34.5	<33.3	<34.3	<34.2	<34.5	<34.3
Aroclor-1232 (PCB-1232)	µg/kg	<29.6	<28.5	<29.4	<29.3	<29.6	<29.4
Aroclor-1242 (PCB-1242)	µg/kg	<30.9	<29.8	<30.7	<30.7	<30.9	<30.7
Aroclor-1248 (PCB-1248)	µg/kg	<25.5	<24.6	<25.3	<25.3	<25.5	<25.3
Aroclor-1254 (PCB-1254)	µg/kg	<24.9	<24.0	<24.8	<24.7	<24.9	<24.8
Aroclor-1260 (PCB-1260)	µg/kg	4670	178	34.1 J	1850	4550	290
Aroclor-1262 (PCB-1262)	µg/kg	<32.8	<31.7	<32.7	<32.6	<32.8	<32.7
Aroclor-1268 (PCB-1268)	µg/kg	<24.0	<23.1	<23.9	<23.8	<24.0	<23.9

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-08	SB-09	SB-09	SB-09	SB-10	SB-10
Sample Name:	SB08-0.5-110322	SB09-1.0-1.5-1022	SB09-2.5-3.0-1022	SB09-0.0-0.5-1022	SB10-1.0-1.5-1022	SB10-2.5-3.0-1022
Sample Date:	11/03/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit						
PCBs							
(PCB 1) 2-Chlorobiphenyl	ng/kg	<13.3 J	--	--	--	--	--
(PCB 10) 2,6-Dichlorobiphenyl	ng/kg	<3.72	--	--	--	--	--
(PCB 103) 2,2',4,5',6-Pentachlorobiphenyl	ng/kg	172 J	--	--	--	--	--
(PCB 104) 2,2',4,6,6'-Pentachlorobiphenyl	ng/kg	<33.4	--	--	--	--	--
(PCB 105) 2,3,3',4,4'-Pentachlorobiphenyl	ng/kg	6900	--	--	--	--	--
(PCB 106) 2,3,3',4,5-Pentachlorobiphenyl	ng/kg	<31.2	--	--	--	--	--
(PCB 107/124) Pentachlorobiphenyl	ng/kg	2070	--	--	--	--	--
(PCB 109) 2,3,3',4,6-Pentachlorobiphenyl	ng/kg	3230	--	--	--	--	--
(PCB 11) 3,3'-Dichlorobiphenyl	ng/kg	125	--	--	--	--	--
(PCB 110/115) 2,3,3',4',6-Pentachlorobiphenyl/2,3,4,4',6-Pentachlorobiphenyl	ng/kg	199000	--	--	--	--	--
(PCB 111) 2,3,3',5,5'-Pentachlorobiphenyl	ng/kg	49.9 J	--	--	--	--	--
(PCB 112) 2,3,3',5,6-Pentachlorobiphenyl	ng/kg	<39.2	--	--	--	--	--
(PCB 114) 2,3,4,4',5-Pentachlorobiphenyl	ng/kg	173 J	--	--	--	--	--
(PCB 118) 2,3',4,4',5-Pentachlorobiphenyl	ng/kg	79000	--	--	--	--	--
(PCB 12/13) 3,4-Dichlorobiphenyl/3,4'-Dichlorobiphenyl	ng/kg	18.4 J	--	--	--	--	--
(PCB 120) 2,3',4,5,5'-Pentachlorobiphenyl	ng/kg	495	--	--	--	--	--
(PCB 121) 2,3',4,5',6-Pentachlorobiphenyl	ng/kg	<35.4	--	--	--	--	--
(PCB 122) 2,3,3',4',5'-Pentachlorobiphenyl	ng/kg	382	--	--	--	--	--
(PCB 123) 2',3,4,4',5-Pentachlorobiphenyl	ng/kg	414	--	--	--	--	--
(PCB 126) 3,3',4,4',5-Pentachlorobiphenyl	ng/kg	2950	--	--	--	--	--
(PCB 127) 3,3',4,5,5'-Pentachlorobiphenyl	ng/kg	169 J	--	--	--	--	--
(PCB 128/166) 2,2',3,3',4,4'-Hexachlorobiphenyl/2,3,4,4',5,6-Hexachlorobiphenyl	ng/kg	83800	--	--	--	--	--
(PCB 129/138/163) Hexachlorobiphenyl	ng/kg	1430000	--	--	--	--	--
(PCB 130) 2,2',3,3',4,5'-Hexachlorobiphenyl	ng/kg	43100	--	--	--	--	--
(PCB 131) 2,2',3,3',4,6-Hexachlorobiphenyl	ng/kg	6920	--	--	--	--	--
(PCB 132) 2,2',3,3',4,6'-Hexachlorobiphenyl	ng/kg	368000	--	--	--	--	--
(PCB 133) 2,2',3,3',5,5'-Hexachlorobiphenyl	ng/kg	11400	--	--	--	--	--
(PCB 134/143) 2,2',3,3',5,6-Hexachlorobiphenyl/2,2',3,4,5,6'-Hexachlorobiphenyl	ng/kg	42500	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-08	SB-09	SB-09	SB-09	SB-10	SB-10
Sample Name:	SB08-0.5-110322	SB09-1.0-1.5-1022	SB09-2.5-3.0-1022	SB09-0.0-0.5-1022	SB10-1.0-1.5-1022	SB10-2.5-3.0-1022
Sample Date:	11/03/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit					
PCBs (Continued)						
(PCB 135/151) 2,2',3,3',5,6'-Hexachlorobiphenyl/2,2',3,5,5',6-Hexachlorobiphenyl	ng/kg	463000	--	--	--	--
(PCB 136) 2,2',3,3',6,6'-Hexachlorobiphenyl	ng/kg	133000	--	--	--	--
(PCB 137) 2,2',3,4,4',5-Hexachlorobiphenyl	ng/kg	4580	--	--	--	--
(PCB 139/140) 2,2',3,4,4',6-Hexachlorobiphenyl/2,2',3,4,4',6'-Hexachlorobiphenyl	ng/kg	2670	--	--	--	--
(PCB 14) 3,5-Dichlorobiphenyl	ng/kg	<3.31	--	--	--	--
(PCB 141) 2,2',3,4,5,5'-Hexachlorobiphenyl	ng/kg	353000	--	--	--	--
(PCB 142) 2,2',3,4,5,6-Hexachlorobiphenyl	ng/kg	<36.7	--	--	--	--
(PCB 144) 2,2',3,4,5',6-Hexachlorobiphenyl	ng/kg	68600	--	--	--	--
(PCB 145) 2,2',3,4,6,6'-Hexachlorobiphenyl	ng/kg	<31.9	--	--	--	--
(PCB 146) 2,2',3,4',5,5'-Hexachlorobiphenyl	ng/kg	165000	--	--	--	--
(PCB 147/149) 2,2',3,4',5,6-Hexachlorobiphenyl/2,2',3,4',5',6-Hexachlorobiphenyl	ng/kg	1040000	--	--	--	--
(PCB 148) 2,2',3,4',5,6'-Hexachlorobiphenyl	ng/kg	254	--	--	--	--
(PCB 15) 4,4'-Dichlorobiphenyl	ng/kg	173	--	--	--	--
(PCB 150) 2,2',3,4',6,6'-Hexachlorobiphenyl	ng/kg	494	--	--	--	--
(PCB 152) 2,2',3,5,6,6'-Hexachlorobiphenyl	ng/kg	69.0 J	--	--	--	--
(PCB 153/168) 2,2',4,4',5,5'-Hexachlorobiphenyl/2,3',4,4',5',6-Hexachlorobiphenyl	ng/kg	1300000	--	--	--	--
(PCB 154) 2,2',4,4',5,6'-Hexachlorobiphenyl	ng/kg	2990	--	--	--	--
(PCB 155) 2,2',4,4',6,6'-Hexachlorobiphenyl	ng/kg	<31.3	--	--	--	--
(PCB 156/157) 2,3,3',4,4',5-Hexachlorobiphenyl/2,3,3',4,4',5'-Hexachlorobiphenyl	ng/kg	94900	--	--	--	--
(PCB 158) 2,3,3',4,4',6-Hexachlorobiphenyl	ng/kg	119000	--	--	--	--
(PCB 159) 2,3,3',4,5,5'-Hexachlorobiphenyl	ng/kg	20000	--	--	--	--
(PCB 16) 2,2',3-Trichlorobiphenyl	ng/kg	17.7 J	--	--	--	--
(PCB 160) 2,3,3',4,5,6-Hexachlorobiphenyl	ng/kg	<26.4	--	--	--	--
(PCB 161) 2,3,3',4,5',6-Hexachlorobiphenyl	ng/kg	<28.9	--	--	--	--
(PCB 162) 2,3,3',4',5,5'-Hexachlorobiphenyl	ng/kg	1950	--	--	--	--
(PCB 164) 2,3,3',4',5',6-Hexachlorobiphenyl	ng/kg	88600	--	--	--	--
(PCB 165) 2,3,3',5,5',6-Hexachlorobiphenyl	ng/kg	<31.7	--	--	--	--
(PCB 167) 2,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	47200	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-08	SB-09	SB-09	SB-09	SB-10	SB-10
Sample Name:	SB08-0.5-110322	SB09-1.0-1.5-1022	SB09-2.5-3.0-1022	SB09-0.0-0.5-1022	SB10-1.0-1.5-1022	SB10-2.5-3.0-1022
Sample Date:	11/03/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit						
PCBs (Continued)							
(PCB 169) 3,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	1010	--	--	--	--	--
(PCB 17) 2,2',4-Trichlorobiphenyl	ng/kg	21.4	--	--	--	--	--
(PCB 170) 2,2',3,3',4,4',5-Heptachlorobiphenyl	ng/kg	714000	--	--	--	--	--
(PCB 171/173) 2,2',3,3',4,4',6-Heptachlorobiphenyl/2,2',3,3',4,5,6-Heptachlorobiphenyl	ng/kg	216000	--	--	--	--	--
(PCB 172) 2,2',3,3',4,5,5'-Heptachlorobiphenyl	ng/kg	109000	--	--	--	--	--
(PCB 174) 2,2',3,3',4,5,6'-Heptachlorobiphenyl	ng/kg	608000	--	--	--	--	--
(PCB 175) 2,2',3,3',4,5',6-Heptachlorobiphenyl	ng/kg	23100	--	--	--	--	--
(PCB 176) 2,2',3,3',4,6,6'-Heptachlorobiphenyl	ng/kg	71200	--	--	--	--	--
(PCB 177) 2,2',3,3',4',5,6-Heptachlorobiphenyl	ng/kg	380000	--	--	--	--	--
(PCB 178) 2,2',3,3',5,5',6-Heptachlorobiphenyl	ng/kg	96300	--	--	--	--	--
(PCB 179) 2,2',3,3',5,6,6'-Heptachlorobiphenyl	ng/kg	203000	--	--	--	--	--
(PCB 18/30) 2,2',5-Trichlorobiphenyl/2,4,6-Trichlorobiphenyl	ng/kg	47.4	--	--	--	--	--
(PCB 180/193) 2,2',3,4,4',5,5'-Heptachlorobiphenyl/2,3,3',4',5,5',6-Heptachlorobiphenyl	ng/kg	1440000	--	--	--	--	--
(PCB 181) 2,2',3,4,4',5,6-Heptachlorobiphenyl	ng/kg	2570	--	--	--	--	--
(PCB 182) 2,2',3,4,4',5,6'-Heptachlorobiphenyl	ng/kg	2100	--	--	--	--	--
(PCB 183/185) 2,2',3,4,4',5',6-Heptachlorobiphenyl/2,2',3,4,5,5',6-Heptachlorobiphenyl	ng/kg	446000	--	--	--	--	--
(PCB 184) 2,2',3,4,4',6,6'-Heptachlorobiphenyl	ng/kg	240	--	--	--	--	--
(PCB 186) 2,2',3,4,5,6,6'-Heptachlorobiphenyl	ng/kg	<39.6	--	--	--	--	--
(PCB 187) 2,2',3,4',5,5',6-Heptachlorobiphenyl	ng/kg	623000	--	--	--	--	--
(PCB 188) 2,2',3,4',5,6,6'-Heptachlorobiphenyl	ng/kg	442	--	--	--	--	--
(PCB 189) 2,3,3',4,4',5,5'-Heptachlorobiphenyl	ng/kg	28900	--	--	--	--	--
(PCB 19) 2,2',6-Trichlorobiphenyl	ng/kg	6.18 J	--	--	--	--	--
(PCB 190) 2,3,3',4,4',5,6-Heptachlorobiphenyl	ng/kg	142000	--	--	--	--	--
(PCB 191) 2,3,3',4,4',5',6-Heptachlorobiphenyl	ng/kg	27700	--	--	--	--	--
(PCB 192) 2,3,3',4,5,5',6-Heptachlorobiphenyl	ng/kg	<29.2	--	--	--	--	--
(PCB 194) 2,2',3,3',4,4',5,5'-Octachlorobiphenyl	ng/kg	200000	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-08	SB-09	SB-09	SB-09	SB-10	SB-10
Sample Name:	SB08-0.5-110322	SB09-1.0-1.5-1022	SB09-2.5-3.0-1022	SB09-0.0-0.5-1022	SB10-1.0-1.5-1022	SB10-2.5-3.0-1022
Sample Date:	11/03/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit					
PCBs (Continued)						
(PCB 195) 2,2',3,3',4,4',5,6-Octachlorobiphenyl	ng/kg	95000	--	--	--	--
(PCB 196) 2,2',3,3',4,4',5,6'-Octachlorobiphenyl	ng/kg	126000	--	--	--	--
(PCB 197/200) 2,2',3,3',4,4',6,6'-Octachlorobiphenyl/2,2',3,3',4,5,6,6'-Octachlorobiphenyl	ng/kg	36000	--	--	--	--
(PCB 198/199) 2,2',3,3',4,5,5',6-Octachlorobiphenyl/2,2',3,3',4,5,5',6'-Octachlorobiphenyl	ng/kg	199000	--	--	--	--
(PCB 2) 3-Chlorobiphenyl	ng/kg	4.45 J	--	--	--	--
(PCB 20/28) 2,3,3'-Trichlorobiphenyl/2,4,4'-Trichlorobiphenyl	ng/kg	127	--	--	--	--
(PCB 201) 2,2',3,3',4,5',6,6'-Octachlorobiphenyl	ng/kg	23900	--	--	--	--
(PCB 202) 2,2',3,3',5,5',6,6'-Octachlorobiphenyl	ng/kg	26200	--	--	--	--
(PCB 203) 2,2',3,4,4',5,5',6-Octachlorobiphenyl	ng/kg	134000	--	--	--	--
(PCB 204) 2,2',3,4,4',5,6,6'-Octachlorobiphenyl	ng/kg	60.6	--	--	--	--
(PCB 205) 2,3,3',4,4',5,5',6-Octachlorobiphenyl	ng/kg	12900	--	--	--	--
(PCB 206) 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	ng/kg	31900	--	--	--	--
(PCB 207) 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	ng/kg	4170	--	--	--	--
(PCB 208) 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	ng/kg	4490	--	--	--	--
(PCB 209) Decachlorobiphenyl	ng/kg	534	--	--	--	--
(PCB 21/33) 2,3,4-Trichlorobiphenyl/2',3,4-Trichlorobiphenyl	ng/kg	53.9	--	--	--	--
(PCB 22) 2,3,4'-Trichlorobiphenyl	ng/kg	40.7	--	--	--	--
(PCB 23) 2,3,5-Trichlorobiphenyl	ng/kg	<3.01	--	--	--	--
(PCB 24) 2,3,6-Trichlorobiphenyl	ng/kg	<3.99	--	--	--	--
(PCB 25) 2,3',4-Trichlorobiphenyl	ng/kg	8.83 J	--	--	--	--
(PCB 26/29) 2,3',5-Trichlorobiphenyl/2,4,5-Trichlorobiphenyl	ng/kg	18.5 J	--	--	--	--
(PCB 27) 2,3',6-Trichlorobiphenyl	ng/kg	4.99 J	--	--	--	--
(PCB 3) 4-Monochlorobiphenyl	ng/kg	24.0	--	--	--	--
(PCB 31) 2,4',5-Trichlorobiphenyl	ng/kg	84.1	--	--	--	--
(PCB 32) 2,4',6-Trichlorobiphenyl	ng/kg	25.2	--	--	--	--
(PCB 34) 2,3',5'-Trichlorobiphenyl	ng/kg	<4.21	--	--	--	--
(PCB 35) 3,3',4-Trichlorobiphenyl	ng/kg	10.1 J	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-08	SB-09	SB-09	SB-09	SB-10	SB-10
Sample Name:	SB08-0.5-110322	SB09-1.0-1.5-1022	SB09-2.5-3.0-1022	SB09-0.0-0.5-1022	SB10-1.0-1.5-1022	SB10-2.5-3.0-1022
Sample Date:	11/03/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit						
PCBs (Continued)							
(PCB 36) 3,3',5-Trichlorobiphenyl	ng/kg	4.29	--	--	--	--	--
(PCB 37) 3,4,4'-Trichlorobiphenyl	ng/kg	133	--	--	--	--	--
(PCB 38) 3,4,5-Trichlorobiphenyl	ng/kg	<2.63	--	--	--	--	--
(PCB 39) 3,4',5-Trichlorobiphenyl	ng/kg	<3.11	--	--	--	--	--
(PCB 4) 2,2'-Dichlorobiphenyl	ng/kg	15.1 J	--	--	--	--	--
(PCB 40/41/71) 2,2',3,3'-TeCB/ 2,2',3,4-TeCB/2,3',4',6-TeCB	ng/kg	297	--	--	--	--	--
(PCB 42) 2,2',3,4'-Tetrachlorobiphenyl	ng/kg	126	--	--	--	--	--
(PCB 43/73) 2,2',3,5-Tetrachlorobiphenyl/2,3',5',6-Tetrachlorobiphenyl	ng/kg	13.1 J	--	--	--	--	--
(PCB 44/47/65) 2,2',3,5'-Tetrachlorobiphenyl/2,2',4,4'-Tetrachlorobiphenyl/2,3,5,6-Tetrachlorobiphenyl	ng/kg	582	--	--	--	--	--
(PCB 45/51) 2,2',3,6-Tetrachlorobiphenyl/2,2',4,6'-Tetrachlorobiphenyl	ng/kg	57.1	--	--	--	--	--
(PCB 46) 2,2',3,6'-Tetrachlorobiphenyl	ng/kg	12.8 J	--	--	--	--	--
(PCB 48) 2,2',4,5-Tetrachlorobiphenyl	ng/kg	49.2	--	--	--	--	--
(PCB 49/69) 2,2',4,5'-Tetrachlorobiphenyl/2,3',4,6-Tetrachlorobiphenyl	ng/kg	294	--	--	--	--	--
(PCB 5) 2,3-Dichlorobiphenyl	ng/kg	<2.69	--	--	--	--	--
(PCB 50/53) 2,2',4,6-Tetrachlorobiphenyl/2,2',5,6'-Tetrachlorobiphenyl	ng/kg	59.6	--	--	--	--	--
(PCB 52) 2,2',5,5'-Tetrachlorobiphenyl	ng/kg	6790	--	--	--	--	--
(PCB 54) 2,2',6,6'-Tetrachlorobiphenyl	ng/kg	<5.25	--	--	--	--	--
(PCB 55) 2,3,3',4-Tetrachlorobiphenyl	ng/kg	<8.22	--	--	--	--	--
(PCB 56) 2,3,3',4'-Tetrachlorobiphenyl	ng/kg	324	--	--	--	--	--
(PCB 57) 2,3,3',5-Tetrachlorobiphenyl	ng/kg	<2.24	--	--	--	--	--
(PCB 58) 2,3,3',5'-Tetrachlorobiphenyl	ng/kg	<2.72	--	--	--	--	--
(PCB 59/62/75) 2,3,3',6-Tetrachlorobiphenyl/2,3,4,6-Tetrachlorobiphenyl/ 2,4,4',6-Tetrachlorobiphenyl	ng/kg	61.1	--	--	--	--	--
(PCB 6) 2,3'-Dichlorobiphenyl	ng/kg	11.1 J	--	--	--	--	--
(PCB 60) 2,3,4,4'-Tetrachlorobiphenyl	ng/kg	83.4	--	--	--	--	--
(PCB 61/70/74/76) 2,3,4,5-Tetrachlorobiphenyl/2,3',4',5-Tetrachlorobiphenyl/2,4,4',5-Tetrachlorobiphenyl/2,3',4',5'-Tetrachlorobiphenyl	ng/kg	1150	--	--	--	--	--
(PCB 63) 2,3,4',5-Tetrachlorobiphenyl	ng/kg	8.03 J	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-08	SB-09	SB-09	SB-09	SB-10	SB-10
Sample Name:	SB08-0.5-110322	SB09-1.0-1.5-1022	SB09-2.5-3.0-1022	SB09-0.0-0.5-1022	SB10-1.0-1.5-1022	SB10-2.5-3.0-1022
Sample Date:	11/03/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit					
PCBs (Continued)						
(PCB 64) 2,3,4',6-Tetrachlorobiphenyl	ng/kg	423	--	--	--	--
(PCB 66) 2,3',4,4'-Tetrachlorobiphenyl	ng/kg	559	--	--	--	--
(PCB 67) 2,3',4,5-Tetrachlorobiphenyl	ng/kg	32.1	--	--	--	--
(PCB 68) 2,3',4,5'-Tetrachlorobiphenyl	ng/kg	<8.63	--	--	--	--
(PCB 7) 2,4-Dichlorobiphenyl	ng/kg	<2.92	--	--	--	--
(PCB 72) 2,3',5,5'-Tetrachlorobiphenyl	ng/kg	49.5	--	--	--	--
(PCB 77) 3,3',4,4'-Tetrachlorobiphenyl	ng/kg	988	--	--	--	--
(PCB 78) 3,3',4,5-Tetrachlorobiphenyl	ng/kg	4.45	--	--	--	--
(PCB 79) 3,3',4,5'-Tetrachlorobiphenyl	ng/kg	324	--	--	--	--
(PCB 8) 2,4'-Dichlorobiphenyl	ng/kg	48.6	--	--	--	--
(PCB 80) 3,3',5,5'-Tetrachlorobiphenyl	ng/kg	8.98 J	--	--	--	--
(PCB 81) 3,4,4',5-Tetrachlorobiphenyl	ng/kg	18.8	--	--	--	--
(PCB 82) 2,2',3,3',4-Pentachlorobiphenyl	ng/kg	1360	--	--	--	--
(PCB 83) 2,2',3,3',5-Pentachlorobiphenyl	ng/kg	4190	--	--	--	--
(PCB 84) 2,2',3,3',6-Pentachlorobiphenyl	ng/kg	7720	--	--	--	--
(PCB 85/116/117) 2,2',3,4,4'-PeCB/2,3,4,5,6-PeCB/2,3,4',5,6-PeCB	ng/kg	1440	--	--	--	--
Pentachlorobiphenyl/2,2',3',4,5-Pentachlorobiphenyl/2,3,3',4,5'-						
Pentachlorobiphenyl/2,3',4,4',6-Pentachlorobiphenyl/2',3,4,5,6'-						
Pentachlorobiphenyl	ng/kg	42400	--	--	--	--
(PCB 88/91) 2,2',3,4,6-Pentachlorobiphenyl/2,2',3,4',6-Pentachlorobiphenyl	ng/kg	1490	--	--	--	--
(PCB 89) 2,2',3,4,6'-Pentachlorobiphenyl	ng/kg	126 J	--	--	--	--
(PCB 9) 2,5-Dichlorobiphenyl	ng/kg	3.84 J	--	--	--	--
(PCB 90/101/113) 2,2',3,4',5-Pentachlorobiphenyl/2,2',4,5,5'-						
Pentachlorobiphenyl/2,3,3',5',6-Pentachlorobiphenyl	ng/kg	290000	--	--	--	--
(PCB 92) 2,2',3,5,5'-Pentachlorobiphenyl	ng/kg	34100	--	--	--	--
(PCB 93/98/100/102) Pentachlorobiphenyl	ng/kg	843	--	--	--	--
(PCB 94) 2,2',3,5,6'-Pentachlorobiphenyl	ng/kg	61.3	--	--	--	--
(PCB 95) 2,2',3,5',6-Pentachlorobiphenyl	ng/kg	168000	--	--	--	--
(PCB 96) 2,2',3,6,6'-Pentachlorobiphenyl	ng/kg	85.7 J	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-08	SB-09	SB-09	SB-09	SB-10	SB-10
Sample Name:	SB08-0.5-110322	SB09-1.0-1.5-1022	SB09-2.5-3.0-1022	SB09-0.0-0.5-1022	SB10-1.0-1.5-1022	SB10-2.5-3.0-1022
Sample Date:	11/03/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022	10/18/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters**Unit****PCBs (Continued)**

(PCB 99) 2,2',4,4',5-Pentachlorobiphenyl	ng/kg	5370	--	--	--	--	--
Aroclor-1016 (PCB-1016)	µg/kg	<20.7	<21.1	<21.0	<21.0	<21.1	<20.7
Aroclor-1221 (PCB-1221)	µg/kg	<33.8	<34.4	<34.2	<34.3	<34.4	<33.8
Aroclor-1232 (PCB-1232)	µg/kg	<28.9	<29.5	<29.3	<29.4	<29.5	<28.9
Aroclor-1242 (PCB-1242)	µg/kg	<30.2	<30.8	<30.7	<30.7	<30.8	<30.3
Aroclor-1248 (PCB-1248)	µg/kg	<25.0	<25.4	<25.3	<25.3	<25.4	<25.0
Aroclor-1254 (PCB-1254)	µg/kg	<24.4	<24.8	<24.7	<24.8	<24.8	<24.4
Aroclor-1260 (PCB-1260)	µg/kg	15200	893	226	9440	35100	305
Aroclor-1262 (PCB-1262)	µg/kg	<32.1	<32.8	<32.6	<32.7	<32.8	<32.2
Aroclor-1268 (PCB-1268)	µg/kg	<23.5	<23.9	<23.8	<23.9	<23.9	<23.5

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-10	SB-11	SB-11	SB-11	SB-11	SB-12
Sample Name:	SB10-0.0-0.5-1022	SB11-1.0-1.5-1022	SB11-2.5-3.0-1022	SB11-0.0-0.5-1022	SB11D-0.0-0.5-1022	SB12-1.0-1.5-1022
Sample Date:	10/18/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/18/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS
					Duplicate	

Parameters	Unit					
PCBs						
(PCB 1) 2-Chlorobiphenyl	ng/kg	<71.6 J	--	--	--	--
(PCB 10) 2,6-Dichlorobiphenyl	ng/kg	<37.3	--	--	--	--
(PCB 103) 2,2',4,5',6-Pentachlorobiphenyl	ng/kg	891	--	--	--	--
(PCB 104) 2,2',4,6,6'-Pentachlorobiphenyl	ng/kg	<33.5	--	--	--	--
(PCB 105) 2,3,3',4,4'-Pentachlorobiphenyl	ng/kg	35700	--	--	--	--
(PCB 106) 2,3,3',4,5-Pentachlorobiphenyl	ng/kg	<31.3	--	--	--	--
(PCB 107/124) Pentachlorobiphenyl	ng/kg	21700	--	--	--	--
(PCB 109) 2,3,3',4,6-Pentachlorobiphenyl	ng/kg	32100	--	--	--	--
(PCB 11) 3,3'-Dichlorobiphenyl	ng/kg	<1070	--	--	--	--
(PCB 110/115) 2,3,3',4',6-Pentachlorobiphenyl/2,3,4,4',6-Pentachlorobiphenyl	ng/kg	877000	--	--	--	--
(PCB 111) 2,3,3',5,5'-Pentachlorobiphenyl	ng/kg	454	--	--	--	--
(PCB 112) 2,3,3',5,6-Pentachlorobiphenyl	ng/kg	<39.3	--	--	--	--
(PCB 114) 2,3,4,4',5-Pentachlorobiphenyl	ng/kg	2180	--	--	--	--
(PCB 118) 2,3',4,4',5-Pentachlorobiphenyl	ng/kg	602000	--	--	--	--
(PCB 12/13) 3,4-Dichlorobiphenyl/3,4'-Dichlorobiphenyl	ng/kg	105 J	--	--	--	--
(PCB 120) 2,3',4,5,5'-Pentachlorobiphenyl	ng/kg	4690	--	--	--	--
(PCB 121) 2,3',4,5',6-Pentachlorobiphenyl	ng/kg	<35.5	--	--	--	--
(PCB 122) 2,3,3',4',5'-Pentachlorobiphenyl	ng/kg	2840	--	--	--	--
(PCB 123) 2',3,4,4',5-Pentachlorobiphenyl	ng/kg	2520	--	--	--	--
(PCB 126) 3,3',4,4',5-Pentachlorobiphenyl	ng/kg	46900	--	--	--	--
(PCB 127) 3,3',4,5,5'-Pentachlorobiphenyl	ng/kg	1160	--	--	--	--
(PCB 128/166) 2,2',3,3',4,4'-Hexachlorobiphenyl/2,3,4,4',5,6-Hexachlorobiphenyl	ng/kg	603000	--	--	--	--
(PCB 129/138/163) Hexachlorobiphenyl	ng/kg	11300000	--	--	--	--
(PCB 130) 2,2',3,3',4,5'-Hexachlorobiphenyl	ng/kg	369000	--	--	--	--
(PCB 131) 2,2',3,3',4,6-Hexachlorobiphenyl	ng/kg	40200	--	--	--	--
(PCB 132) 2,2',3,3',4,6'-Hexachlorobiphenyl	ng/kg	2820000	--	--	--	--
(PCB 133) 2,2',3,3',5,5'-Hexachlorobiphenyl	ng/kg	98400	--	--	--	--
(PCB 134/143) 2,2',3,3',5,6-Hexachlorobiphenyl/2,2',3,4,5,6'-Hexachlorobiphenyl	ng/kg	363000	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-10	SB-11	SB-11	SB-11	SB-11	SB-12
Sample Name:	SB10-0.0-0.5-1022	SB11-1.0-1.5-1022	SB11-2.5-3.0-1022	SB11-0.0-0.5-1022	SB11D-0.0-0.5-1022	SB12-1.0-1.5-1022
Sample Date:	10/18/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/18/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS
					Duplicate	

Parameters	Unit					
PCBs (Continued)						
(PCB 135/151) 2,2',3,3',5,6'-Hexachlorobiphenyl/2,2',3,5,5',6-Hexachlorobiphenyl	ng/kg	4060000	--	--	--	--
(PCB 136) 2,2',3,3',6,6'-Hexachlorobiphenyl	ng/kg	1060000	--	--	--	--
(PCB 137) 2,2',3,4,4',5-Hexachlorobiphenyl	ng/kg	47800	--	--	--	--
(PCB 139/140) 2,2',3,4,4',6-Hexachlorobiphenyl/2,2',3,4,4',6'-Hexachlorobiphenyl	ng/kg	31200	--	--	--	--
(PCB 14) 3,5-Dichlorobiphenyl	ng/kg	<33.2	--	--	--	--
(PCB 141) 2,2',3,4,5,5'-Hexachlorobiphenyl	ng/kg	3080000	--	--	--	--
(PCB 142) 2,2',3,4,5,6-Hexachlorobiphenyl	ng/kg	<184	--	--	--	--
(PCB 144) 2,2',3,4,5',6-Hexachlorobiphenyl	ng/kg	524000	--	--	--	--
(PCB 145) 2,2',3,4,6,6'-Hexachlorobiphenyl	ng/kg	<160	--	--	--	--
(PCB 146) 2,2',3,4',5,5'-Hexachlorobiphenyl	ng/kg	1450000	--	--	--	--
(PCB 147/149) 2,2',3,4',5,6-Hexachlorobiphenyl/2,2',3,4',5',6-Hexachlorobiphenyl	ng/kg	7880000	--	--	--	--
(PCB 148) 2,2',3,4',5,6'-Hexachlorobiphenyl	ng/kg	3060	--	--	--	--
(PCB 15) 4,4'-Dichlorobiphenyl	ng/kg	1240	--	--	--	--
(PCB 150) 2,2',3,4',6,6'-Hexachlorobiphenyl	ng/kg	5250	--	--	--	--
(PCB 152) 2,2',3,5,6,6'-Hexachlorobiphenyl	ng/kg	782 J	--	--	--	--
(PCB 153/168) 2,2',4,4',5,5'-Hexachlorobiphenyl/2,3',4,4',5',6-Hexachlorobiphenyl	ng/kg	10800000	--	--	--	--
(PCB 154) 2,2',4,4',5,6'-Hexachlorobiphenyl	ng/kg	28500	--	--	--	--
(PCB 155) 2,2',4,4',6,6'-Hexachlorobiphenyl	ng/kg	<157	--	--	--	--
(PCB 156/157) 2,3,3',4,4',5-Hexachlorobiphenyl/2,3,3',4,4',5'-Hexachlorobiphenyl	ng/kg	834000	--	--	--	--
(PCB 158) 2,3,3',4,4',6-Hexachlorobiphenyl	ng/kg	1030000	--	--	--	--
(PCB 159) 2,3,3',4,5,5'-Hexachlorobiphenyl	ng/kg	181000	--	--	--	--
(PCB 16) 2,2',3-Trichlorobiphenyl	ng/kg	118 J	--	--	--	--
(PCB 160) 2,3,3',4,5,6-Hexachlorobiphenyl	ng/kg	<132	--	--	--	--
(PCB 161) 2,3,3',4,5',6-Hexachlorobiphenyl	ng/kg	<145	--	--	--	--
(PCB 162) 2,3,3',4',5,5'-Hexachlorobiphenyl	ng/kg	22000	--	--	--	--
(PCB 164) 2,3,3',4',5',6-Hexachlorobiphenyl	ng/kg	857000	--	--	--	--
(PCB 165) 2,3,3',5,5',6-Hexachlorobiphenyl	ng/kg	<159	--	--	--	--
(PCB 167) 2,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	341000	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-10	SB-11	SB-11	SB-11	SB-11	SB-12
Sample Name:	SB10-0.0-0.5-1022	SB11-1.0-1.5-1022	SB11-2.5-3.0-1022	SB11-0.0-0.5-1022	SB11D-0.0-0.5-1022	SB12-1.0-1.5-1022
Sample Date:	10/18/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/18/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS
					Duplicate	

Parameters	Unit					
PCBs (Continued)						
(PCB 169) 3,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	8020	--	--	--	--
(PCB 17) 2,2',4-Trichlorobiphenyl	ng/kg	112 J	--	--	--	--
(PCB 170) 2,2',3,3',4,4',5-Heptachlorobiphenyl	ng/kg	6290000	--	--	--	--
(PCB 171/173) 2,2',3,3',4,4',6-Heptachlorobiphenyl/2,2',3,3',4,5,6-Heptachlorobiphenyl	ng/kg	1870000	--	--	--	--
(PCB 172) 2,2',3,3',4,5,5'-Heptachlorobiphenyl	ng/kg	922000	--	--	--	--
(PCB 174) 2,2',3,3',4,5,6'-Heptachlorobiphenyl	ng/kg	5500000	--	--	--	--
(PCB 175) 2,2',3,3',4,5',6-Heptachlorobiphenyl	ng/kg	191000	--	--	--	--
(PCB 176) 2,2',3,3',4,6,6'-Heptachlorobiphenyl	ng/kg	655000	--	--	--	--
(PCB 177) 2,2',3,3',4',5,6-Heptachlorobiphenyl	ng/kg	3180000	--	--	--	--
(PCB 178) 2,2',3,3',5,5',6-Heptachlorobiphenyl	ng/kg	833000	--	--	--	--
(PCB 179) 2,2',3,3',5,6,6'-Heptachlorobiphenyl	ng/kg	1790000	--	--	--	--
(PCB 18/30) 2,2',5-Trichlorobiphenyl/2,4,6-Trichlorobiphenyl	ng/kg	237 J	--	--	--	--
(PCB 180/193) 2,2',3,4,4',5,5'-Heptachlorobiphenyl/2,3,3',4',5,5',6-Heptachlorobiphenyl	ng/kg	12500000	--	--	--	--
(PCB 181) 2,2',3,4,4',5,6-Heptachlorobiphenyl	ng/kg	22600	--	--	--	--
(PCB 182) 2,2',3,4,4',5,6'-Heptachlorobiphenyl	ng/kg	24200	--	--	--	--
(PCB 183/185) 2,2',3,4,4',5',6-Heptachlorobiphenyl/2,2',3,4,5,5',6-Heptachlorobiphenyl	ng/kg	4030000	--	--	--	--
(PCB 184) 2,2',3,4,4',6,6'-Heptachlorobiphenyl	ng/kg	2550	--	--	--	--
(PCB 186) 2,2',3,4,5,6,6'-Heptachlorobiphenyl	ng/kg	<199	--	--	--	--
(PCB 187) 2,2',3,4',5,5',6-Heptachlorobiphenyl	ng/kg	5560000	--	--	--	--
(PCB 188) 2,2',3,4',5,6,6'-Heptachlorobiphenyl	ng/kg	4840	--	--	--	--
(PCB 189) 2,3,3',4,4',5,5'-Heptachlorobiphenyl	ng/kg	206000	--	--	--	--
(PCB 19) 2,2',6-Trichlorobiphenyl	ng/kg	41.7 J	--	--	--	--
(PCB 190) 2,3,3',4,4',5,6-Heptachlorobiphenyl	ng/kg	1200000	--	--	--	--
(PCB 191) 2,3,3',4,4',5',6-Heptachlorobiphenyl	ng/kg	221000	--	--	--	--
(PCB 192) 2,3,3',4,5,5',6-Heptachlorobiphenyl	ng/kg	<146	--	--	--	--
(PCB 194) 2,2',3,3',4,4',5,5'-Octachlorobiphenyl	ng/kg	1870000	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-10	SB-11	SB-11	SB-11	SB-11	SB-12
Sample Name:	SB10-0.0-0.5-1022	SB11-1.0-1.5-1022	SB11-2.5-3.0-1022	SB11-0.0-0.5-1022	SB11D-0.0-0.5-1022	SB12-1.0-1.5-1022
Sample Date:	10/18/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/18/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS
					Duplicate	

Parameters	Unit					
PCBs (Continued)						
(PCB 195) 2,2',3,3',4,4',5,6-Octachlorobiphenyl	ng/kg	797000	--	--	--	--
(PCB 196) 2,2',3,3',4,4',5,6'-Octachlorobiphenyl	ng/kg	1010000	--	--	--	--
(PCB 197/200) 2,2',3,3',4,4',6,6'-Octachlorobiphenyl/2,2',3,3',4,5,6,6'-Octachlorobiphenyl	ng/kg	280000	--	--	--	--
(PCB 198/199) 2,2',3,3',4,5,5',6-Octachlorobiphenyl/2,2',3,3',4,5,5',6'-Octachlorobiphenyl	ng/kg	1630000	--	--	--	--
(PCB 2) 3-Chlorobiphenyl	ng/kg	<34.1	--	--	--	--
(PCB 20/28) 2,3,3'-Trichlorobiphenyl/2,4,4'-Trichlorobiphenyl	ng/kg	686	--	--	--	--
(PCB 201) 2,2',3,3',4,5',6,6'-Octachlorobiphenyl	ng/kg	190000	--	--	--	--
(PCB 202) 2,2',3,3',5,5',6,6'-Octachlorobiphenyl	ng/kg	229000	--	--	--	--
(PCB 203) 2,2',3,4,4',5,5',6-Octachlorobiphenyl	ng/kg	1070000	--	--	--	--
(PCB 204) 2,2',3,4,4',5,6,6'-Octachlorobiphenyl	ng/kg	527	--	--	--	--
(PCB 205) 2,3,3',4,4',5,5',6-Octachlorobiphenyl	ng/kg	116000	--	--	--	--
(PCB 206) 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	ng/kg	277000	--	--	--	--
(PCB 207) 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	ng/kg	37200	--	--	--	--
(PCB 208) 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	ng/kg	42500	--	--	--	--
(PCB 209) Decachlorobiphenyl	ng/kg	3900	--	--	--	--
(PCB 21/33) 2,3,4-Trichlorobiphenyl/2',3,4-Trichlorobiphenyl	ng/kg	285 J	--	--	--	--
(PCB 22) 2,3,4'-Trichlorobiphenyl	ng/kg	207	--	--	--	--
(PCB 23) 2,3,5-Trichlorobiphenyl	ng/kg	<30.1	--	--	--	--
(PCB 24) 2,3,6-Trichlorobiphenyl	ng/kg	<40.0	--	--	--	--
(PCB 25) 2,3',4-Trichlorobiphenyl	ng/kg	48.5 J	--	--	--	--
(PCB 26/29) 2,3',5-Trichlorobiphenyl/2,4,5-Trichlorobiphenyl	ng/kg	103 J	--	--	--	--
(PCB 27) 2,3',6-Trichlorobiphenyl	ng/kg	<42.0	--	--	--	--
(PCB 3) 4-Monochlorobiphenyl	ng/kg	<144 J	--	--	--	--
(PCB 31) 2,4',5-Trichlorobiphenyl	ng/kg	456	--	--	--	--
(PCB 32) 2,4',6-Trichlorobiphenyl	ng/kg	98.9 J	--	--	--	--
(PCB 34) 2,3',5'-Trichlorobiphenyl	ng/kg	<42.2	--	--	--	--
(PCB 35) 3,3',4-Trichlorobiphenyl	ng/kg	59.9 J	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-10	SB-11	SB-11	SB-11	SB-11	SB-12
Sample Name:	SB10-0.0-0.5-1022	SB11-1.0-1.5-1022	SB11-2.5-3.0-1022	SB11-0.0-0.5-1022	SB11D-0.0-0.5-1022	SB12-1.0-1.5-1022
Sample Date:	10/18/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/18/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS
					Duplicate	

Parameters	Unit					
PCBs (Continued)						
(PCB 36) 3,3',5-Trichlorobiphenyl	ng/kg	<29.2	--	--	--	--
(PCB 37) 3,4,4'-Trichlorobiphenyl	ng/kg	902	--	--	--	--
(PCB 38) 3,4,5-Trichlorobiphenyl	ng/kg	<26.3	--	--	--	--
(PCB 39) 3,4',5-Trichlorobiphenyl	ng/kg	<31.2	--	--	--	--
(PCB 4) 2,2'-Dichlorobiphenyl	ng/kg	85.3 J	--	--	--	--
(PCB 40/41/71) 2,2',3,3'-TeCB/ 2,2',3,4-TeCB/2,3',4',6-TeCB	ng/kg	2260	--	--	--	--
(PCB 42) 2,2',3,4'-Tetrachlorobiphenyl	ng/kg	447	--	--	--	--
(PCB 43/73) 2,2',3,5-Tetrachlorobiphenyl/2,3',5',6-Tetrachlorobiphenyl	ng/kg	<105	--	--	--	--
(PCB 44/47/65) 2,2',3,5'-Tetrachlorobiphenyl/2,2',4,4'-Tetrachlorobiphenyl/2,3,5,6-Tetrachlorobiphenyl	ng/kg	1780	--	--	--	--
(PCB 45/51) 2,2',3,6-Tetrachlorobiphenyl/2,2',4,6'-Tetrachlorobiphenyl	ng/kg	247 J	--	--	--	--
(PCB 46) 2,2',3,6'-Tetrachlorobiphenyl	ng/kg	77.6 J	--	--	--	--
(PCB 48) 2,2',4,5-Tetrachlorobiphenyl	ng/kg	553	--	--	--	--
(PCB 49/69) 2,2',4,5'-Tetrachlorobiphenyl/2,3',4,6-Tetrachlorobiphenyl	ng/kg	1010	--	--	--	--
(PCB 5) 2,3-Dichlorobiphenyl	ng/kg	<27.0	--	--	--	--
(PCB 50/53) 2,2',4,6-Tetrachlorobiphenyl/2,2',5,6'-Tetrachlorobiphenyl	ng/kg	244 J	--	--	--	--
(PCB 52) 2,2',5,5'-Tetrachlorobiphenyl	ng/kg	15000	--	--	--	--
(PCB 54) 2,2',6,6'-Tetrachlorobiphenyl	ng/kg	<52.7	--	--	--	--
(PCB 55) 2,3,3',4-Tetrachlorobiphenyl	ng/kg	<82.4	--	--	--	--
(PCB 56) 2,3,3',4'-Tetrachlorobiphenyl	ng/kg	2760	--	--	--	--
(PCB 57) 2,3,3',5-Tetrachlorobiphenyl	ng/kg	<22.4	--	--	--	--
(PCB 58) 2,3,3',5'-Tetrachlorobiphenyl	ng/kg	<27.3	--	--	--	--
(PCB 59/62/75) 2,3,3',6-Tetrachlorobiphenyl/2,3,4,6-Tetrachlorobiphenyl/ 2,4,4',6-Tetrachlorobiphenyl	ng/kg	314 J	--	--	--	--
(PCB 6) 2,3'-Dichlorobiphenyl	ng/kg	60.0 J	--	--	--	--
(PCB 60) 2,3,4,4'-Tetrachlorobiphenyl	ng/kg	486	--	--	--	--
(PCB 61/70/74/76) 2,3,4,5-Tetrachlorobiphenyl/2,3',4',5-Tetrachlorobiphenyl/2,4,4',5-Tetrachlorobiphenyl/2,3',4',5'-Tetrachlorobiphenyl	ng/kg	7920	--	--	--	--
(PCB 63) 2,3,4',5-Tetrachlorobiphenyl	ng/kg	86.3 J	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-10	SB-11	SB-11	SB-11	SB-11	SB-12
Sample Name:	SB10-0.0-0.5-1022	SB11-1.0-1.5-1022	SB11-2.5-3.0-1022	SB11-0.0-0.5-1022	SB11D-0.0-0.5-1022	SB12-1.0-1.5-1022
Sample Date:	10/18/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/18/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS
					Duplicate	

Parameters	Unit					
PCBs (Continued)						
(PCB 64) 2,3,4',6-Tetrachlorobiphenyl	ng/kg	1160	--	--	--	--
(PCB 66) 2,3',4,4'-Tetrachlorobiphenyl	ng/kg	2630	--	--	--	--
(PCB 67) 2,3',4,5-Tetrachlorobiphenyl	ng/kg	263	--	--	--	--
(PCB 68) 2,3',4,5'-Tetrachlorobiphenyl	ng/kg	<86.5	--	--	--	--
(PCB 7) 2,4-Dichlorobiphenyl	ng/kg	<29.3	--	--	--	--
(PCB 72) 2,3',5,5'-Tetrachlorobiphenyl	ng/kg	253	--	--	--	--
(PCB 77) 3,3',4,4'-Tetrachlorobiphenyl	ng/kg	15400	--	--	--	--
(PCB 78) 3,3',4,5-Tetrachlorobiphenyl	ng/kg	37.9 J	--	--	--	--
(PCB 79) 3,3',4,5'-Tetrachlorobiphenyl	ng/kg	1300	--	--	--	--
(PCB 8) 2,4'-Dichlorobiphenyl	ng/kg	239	--	--	--	--
(PCB 80) 3,3',5,5'-Tetrachlorobiphenyl	ng/kg	<24.9	--	--	--	--
(PCB 81) 3,4,4',5-Tetrachlorobiphenyl	ng/kg	246	--	--	--	--
(PCB 82) 2,2',3,3',4-Pentachlorobiphenyl	ng/kg	5030	--	--	--	--
(PCB 83) 2,2',3,3',5-Pentachlorobiphenyl	ng/kg	28000	--	--	--	--
(PCB 84) 2,2',3,3',6-Pentachlorobiphenyl	ng/kg	18800	--	--	--	--
(PCB 85/116/117) 2,2',3,4,4'-PeCB/2,3,4,5,6-PeCB/2,3,4',5,6-PeCB	ng/kg	6150	--	--	--	--
Pentachlorobiphenyl/2,2',3',4,5-Pentachlorobiphenyl/2,3,3',4,5'-						
Pentachlorobiphenyl/2,3',4,4',6-Pentachlorobiphenyl/2',3,4,5,6'-						
Pentachlorobiphenyl	ng/kg	120000	--	--	--	--
(PCB 88/91) 2,2',3,4,6-Pentachlorobiphenyl/2,2',3,4',6-Pentachlorobiphenyl	ng/kg	8050	--	--	--	--
(PCB 89) 2,2',3,4,6'-Pentachlorobiphenyl	ng/kg	633	--	--	--	--
(PCB 9) 2,5-Dichlorobiphenyl	ng/kg	<32.4	--	--	--	--
(PCB 90/101/113) 2,2',3,4',5-Pentachlorobiphenyl/2,2',4,5,5'-						
Pentachlorobiphenyl/2,3,3',5',6-Pentachlorobiphenyl	ng/kg	1130000	--	--	--	--
(PCB 92) 2,2',3,5,5'-Pentachlorobiphenyl	ng/kg	198000	--	--	--	--
(PCB 93/98/100/102) Pentachlorobiphenyl	ng/kg	5500	--	--	--	--
(PCB 94) 2,2',3,5,6'-Pentachlorobiphenyl	ng/kg	838	--	--	--	--
(PCB 95) 2,2',3,5',6-Pentachlorobiphenyl	ng/kg	440000	--	--	--	--
(PCB 96) 2,2',3,6,6'-Pentachlorobiphenyl	ng/kg	718	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-10	SB-11	SB-11	SB-11	SB-11	SB-12
Sample Name:	SB10-0.0-0.5-1022	SB11-1.0-1.5-1022	SB11-2.5-3.0-1022	SB11-0.0-0.5-1022	SB11D-0.0-0.5-1022	SB12-1.0-1.5-1022
Sample Date:	10/18/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/18/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS
					Duplicate	

Parameters**Unit****PCBs (Continued)**

(PCB 99) 2,2',4,4',5-Pentachlorobiphenyl	ng/kg	25100	--	--	--	--	--
Aroclor-1016 (PCB-1016)	µg/kg	<20.4	<20.5	<20.7	<20.8	<20.9	<20.7
Aroclor-1221 (PCB-1221)	µg/kg	<33.2	<33.5	<33.8	<34.0	<34.2	<33.8
Aroclor-1232 (PCB-1232)	µg/kg	<28.4	<28.7	<29.0	<29.1	<29.3	<28.9
Aroclor-1242 (PCB-1242)	µg/kg	<29.7	<30.0	<30.3	<30.4	<30.6	<30.3
Aroclor-1248 (PCB-1248)	µg/kg	<24.5	<24.7	<25.0	<25.1	<25.2	<25.0
Aroclor-1254 (PCB-1254)	µg/kg	<24.0	<24.2	<24.4	<24.5	<24.7	<24.4
Aroclor-1260 (PCB-1260)	µg/kg	124000	482	103	4110	3210	2810
Aroclor-1262 (PCB-1262)	µg/kg	<31.6	<31.9	<32.2	<32.3	<32.5	<32.2
Aroclor-1268 (PCB-1268)	µg/kg	<23.1	<23.3	<23.5	<23.6	<23.8	<23.5

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-12	SB-12	SB-12	SB-13	SB-13	SB-13
Sample Name:	SB12-2.5-3.0-1022	SB12-0.0-0.5-1022	SB12D-0.0-0.5-1022	SB13-1.0-1.5-1022	SB13-2.5-3.0-1022	SB13-0.0-0.5-1022
Sample Date:	10/18/2022	10/18/2022	10/18/2022	10/19/2022	10/19/2022	10/19/2022
Depth:	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS
			Duplicate			

Parameters	Unit					
PCBs						
(PCB 1) 2-Chlorobiphenyl	ng/kg	--	<54.3 J	--	--	<10.8 J
(PCB 10) 2,6-Dichlorobiphenyl	ng/kg	--	<36.7	--	--	<3.75
(PCB 103) 2,2',4,5',6-Pentachlorobiphenyl	ng/kg	--	416	--	--	15.5 J
(PCB 104) 2,2',4,6,6'-Pentachlorobiphenyl	ng/kg	--	<32.9	--	--	<3.37
(PCB 105) 2,3,3',4,4'-Pentachlorobiphenyl	ng/kg	--	23100	--	--	2250
(PCB 106) 2,3,3',4,5-Pentachlorobiphenyl	ng/kg	--	<30.8	--	--	<3.15
(PCB 107/124) Pentachlorobiphenyl	ng/kg	--	5720	--	--	209
(PCB 109) 2,3,3',4,6-Pentachlorobiphenyl	ng/kg	--	8710	--	--	306
(PCB 11) 3,3'-Dichlorobiphenyl	ng/kg	--	<1060	--	--	<108
(PCB 110/115) 2,3,3',4',6-Pentachlorobiphenyl/2,3,4,4',6-Pentachlorobiphenyl	ng/kg	--	286000	--	--	6460
(PCB 111) 2,3,3',5,5'-Pentachlorobiphenyl	ng/kg	--	<28.4	--	--	<2.91
(PCB 112) 2,3,3',5,6-Pentachlorobiphenyl	ng/kg	--	<38.7	--	--	<3.96
(PCB 114) 2,3,4,4',5-Pentachlorobiphenyl	ng/kg	--	446	--	--	88.8
(PCB 118) 2,3',4,4',5-Pentachlorobiphenyl	ng/kg	--	143000	--	--	4560
(PCB 12/13) 3,4-Dichlorobiphenyl/3,4'-Dichlorobiphenyl	ng/kg	--	<64.4	--	--	12.8 J
(PCB 120) 2,3',4,5,5'-Pentachlorobiphenyl	ng/kg	--	1000	--	--	14.2 J
(PCB 121) 2,3',4,5',6-Pentachlorobiphenyl	ng/kg	--	<35.0	--	--	<3.58
(PCB 122) 2,3,3',4',5'-Pentachlorobiphenyl	ng/kg	--	857	--	--	52.1
(PCB 123) 2',3,4,4',5-Pentachlorobiphenyl	ng/kg	--	845	--	--	88.6
(PCB 126) 3,3',4,4',5-Pentachlorobiphenyl	ng/kg	--	9210	--	--	78.3
(PCB 127) 3,3',4,5,5'-Pentachlorobiphenyl	ng/kg	--	433	--	--	15.9 J
(PCB 128/166) 2,2',3,3',4,4'-Hexachlorobiphenyl/2,3,4,4',5,6-Hexachlorobiphenyl	ng/kg	--	153000	--	--	2280
(PCB 129/138/163) Hexachlorobiphenyl	ng/kg	--	2360000	--	--	22000
(PCB 130) 2,2',3,3',4,5'-Hexachlorobiphenyl	ng/kg	--	78700	--	--	1010
(PCB 131) 2,2',3,3',4,6-Hexachlorobiphenyl	ng/kg	--	10500	--	--	144
(PCB 132) 2,2',3,3',4,6'-Hexachlorobiphenyl	ng/kg	--	560000	--	--	4890
(PCB 133) 2,2',3,3',5,5'-Hexachlorobiphenyl	ng/kg	--	19800	--	--	231
(PCB 134/143) 2,2',3,3',5,6-Hexachlorobiphenyl/2,2',3,4,5,6'-Hexachlorobiphenyl	ng/kg	--	65000	--	--	753

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-12	SB-12	SB-12	SB-13	SB-13	SB-13
Sample Name:	SB12-2.5-3.0-1022	SB12-0.0-0.5-1022	SB12D-0.0-0.5-1022	SB13-1.0-1.5-1022	SB13-2.5-3.0-1022	SB13-0.0-0.5-1022
Sample Date:	10/18/2022	10/18/2022	10/18/2022	10/19/2022	10/19/2022	10/19/2022
Depth:	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS
			Duplicate			

Parameters	Unit					
PCBs (Continued)						
(PCB 135/151) 2,2',3,3',5,6'-Hexachlorobiphenyl/2,2',3,5,5',6-Hexachlorobiphenyl	ng/kg	--	677000	--	--	6450
(PCB 136) 2,2',3,3',6,6'-Hexachlorobiphenyl	ng/kg	--	176000	--	--	1650
(PCB 137) 2,2',3,4,4',5-Hexachlorobiphenyl	ng/kg	--	11500	--	--	451
(PCB 139/140) 2,2',3,4,4',6-Hexachlorobiphenyl/2,2',3,4,4',6'-Hexachlorobiphenyl	ng/kg	--	5650	--	--	160
(PCB 14) 3,5-Dichlorobiphenyl	ng/kg	--	<32.7	--	--	<3.34
(PCB 141) 2,2',3,4,5,5'-Hexachlorobiphenyl	ng/kg	--	548000	--	--	4310
(PCB 142) 2,2',3,4,5,6-Hexachlorobiphenyl	ng/kg	--	<36.2	--	--	<3.70
(PCB 144) 2,2',3,4,5',6-Hexachlorobiphenyl	ng/kg	--	92200	--	--	789
(PCB 145) 2,2',3,4,6,6'-Hexachlorobiphenyl	ng/kg	--	111 J	--	--	<3.22
(PCB 146) 2,2',3,4',5,5'-Hexachlorobiphenyl	ng/kg	--	274000	--	--	2590
(PCB 147/149) 2,2',3,4',5,6-Hexachlorobiphenyl/2,2',3,4',5',6-Hexachlorobiphenyl	ng/kg	--	1550000	--	--	13800
(PCB 148) 2,2',3,4',5,6'-Hexachlorobiphenyl	ng/kg	--	544	--	--	11.5 J
(PCB 15) 4,4'-Dichlorobiphenyl	ng/kg	--	457	--	--	126
(PCB 150) 2,2',3,4',6,6'-Hexachlorobiphenyl	ng/kg	--	1030	--	--	16.3 J
(PCB 152) 2,2',3,5,6,6'-Hexachlorobiphenyl	ng/kg	--	183 J	--	--	6.12 J
(PCB 153/168) 2,2',4,4',5,5'-Hexachlorobiphenyl/2,3',4,4',5',6-Hexachlorobiphenyl	ng/kg	--	2130000	--	--	17400
(PCB 154) 2,2',4,4',5,6'-Hexachlorobiphenyl	ng/kg	--	6890	--	--	103
(PCB 155) 2,2',4,4',6,6'-Hexachlorobiphenyl	ng/kg	--	<30.9	--	--	<3.16
(PCB 156/157) 2,3,3',4,4',5-Hexachlorobiphenyl/2,3,3',4,4',5'-Hexachlorobiphenyl	ng/kg	--	186000	--	--	2190
(PCB 158) 2,3,3',4,4',6-Hexachlorobiphenyl	ng/kg	--	189000	--	--	1820
(PCB 159) 2,3,3',4,5,5'-Hexachlorobiphenyl	ng/kg	--	27600	--	--	315
(PCB 16) 2,2',3-Trichlorobiphenyl	ng/kg	--	<69.2	--	--	42.8
(PCB 160) 2,3,3',4,5,6-Hexachlorobiphenyl	ng/kg	--	<26.0	--	--	<2.66
(PCB 161) 2,3,3',4,5',6-Hexachlorobiphenyl	ng/kg	--	<28.5	--	--	<2.92
(PCB 162) 2,3,3',4',5,5'-Hexachlorobiphenyl	ng/kg	--	4770	--	--	32.0
(PCB 164) 2,3,3',4',5',6-Hexachlorobiphenyl	ng/kg	--	155000	--	--	1460
(PCB 165) 2,3,3',5,5',6-Hexachlorobiphenyl	ng/kg	--	336	--	--	<3.20
(PCB 167) 2,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	--	80400	--	--	875

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-12	SB-12	SB-12	SB-13	SB-13	SB-13
Sample Name:	SB12-2.5-3.0-1022	SB12-0.0-0.5-1022	SB12D-0.0-0.5-1022	SB13-1.0-1.5-1022	SB13-2.5-3.0-1022	SB13-0.0-0.5-1022
Sample Date:	10/18/2022	10/18/2022	10/18/2022	10/19/2022	10/19/2022	10/19/2022
Depth:	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS
			Duplicate			

Parameters	Unit					
PCBs (Continued)						
(PCB 169) 3,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	--	2070	--	--	30.5
(PCB 17) 2,2',4-Trichlorobiphenyl	ng/kg	--	<71.1	--	--	34.1
(PCB 170) 2,2',3,3',4,4',5-Heptachlorobiphenyl	ng/kg	--	1150000	--	--	10100
(PCB 171/173) 2,2',3,3',4,4',6-Heptachlorobiphenyl/2,2',3,3',4,5,6-Heptachlorobiphenyl	ng/kg	--	329000	--	--	2530
(PCB 172) 2,2',3,3',4,5,5'-Heptachlorobiphenyl	ng/kg	--	180000	--	--	1760
(PCB 174) 2,2',3,3',4,5,6'-Heptachlorobiphenyl	ng/kg	--	939000	--	--	9570
(PCB 175) 2,2',3,3',4,5',6-Heptachlorobiphenyl	ng/kg	--	31300	--	--	332
(PCB 176) 2,2',3,3',4,6,6'-Heptachlorobiphenyl	ng/kg	--	103000	--	--	924
(PCB 177) 2,2',3,3',4',5,6-Heptachlorobiphenyl	ng/kg	--	618000	--	--	5520
(PCB 178) 2,2',3,3',5,5',6-Heptachlorobiphenyl	ng/kg	--	162000	--	--	1960
(PCB 179) 2,2',3,3',5,6,6'-Heptachlorobiphenyl	ng/kg	--	318000	--	--	3650
(PCB 18/30) 2,2',5-Trichlorobiphenyl/2,4,6-Trichlorobiphenyl	ng/kg	--	<142	--	--	72.8
(PCB 180/193) 2,2',3,4,4',5,5'-Heptachlorobiphenyl/2,3,3',4',5,5',6-Heptachlorobiphenyl	ng/kg	--	2210000	--	--	23600
(PCB 181) 2,2',3,4,4',5,6-Heptachlorobiphenyl	ng/kg	--	3750	--	--	46.0
(PCB 182) 2,2',3,4,4',5,6'-Heptachlorobiphenyl	ng/kg	--	4350	--	--	52.4
(PCB 183/185) 2,2',3,4,4',5',6-Heptachlorobiphenyl/2,2',3,4,5,5',6-Heptachlorobiphenyl	ng/kg	--	639000	--	--	6050
(PCB 184) 2,2',3,4,4',6,6'-Heptachlorobiphenyl	ng/kg	--	466	--	--	6.71 J
(PCB 186) 2,2',3,4,5,6,6'-Heptachlorobiphenyl	ng/kg	--	<39.1	--	--	<4.00
(PCB 187) 2,2',3,4',5,5',6-Heptachlorobiphenyl	ng/kg	--	935000	--	--	12100
(PCB 188) 2,2',3,4',5,6,6'-Heptachlorobiphenyl	ng/kg	--	1010	--	--	12.7 J
(PCB 189) 2,3,3',4,4',5,5'-Heptachlorobiphenyl	ng/kg	--	47000	--	--	427
(PCB 19) 2,2',6-Trichlorobiphenyl	ng/kg	--	<30.9	--	--	13.6 J
(PCB 190) 2,3,3',4,4',5,6-Heptachlorobiphenyl	ng/kg	--	250000	--	--	2140
(PCB 191) 2,3,3',4,4',5',6-Heptachlorobiphenyl	ng/kg	--	40600	--	--	382
(PCB 192) 2,3,3',4,5,5',6-Heptachlorobiphenyl	ng/kg	--	<28.8	--	--	<2.95
(PCB 194) 2,2',3,3',4,4',5,5'-Octachlorobiphenyl	ng/kg	--	386000	--	--	6410

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-12	SB-12	SB-12	SB-13	SB-13	SB-13
Sample Name:	SB12-2.5-3.0-1022	SB12-0.0-0.5-1022	SB12D-0.0-0.5-1022	SB13-1.0-1.5-1022	SB13-2.5-3.0-1022	SB13-0.0-0.5-1022
Sample Date:	10/18/2022	10/18/2022	10/18/2022	10/19/2022	10/19/2022	10/19/2022
Depth:	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS
			Duplicate			

Parameters	Unit					
PCBs (Continued)						
(PCB 195) 2,2',3,3',4,4',5,6-Octachlorobiphenyl	ng/kg	--	174000	--	--	2330
(PCB 196) 2,2',3,3',4,4',5,6'-Octachlorobiphenyl	ng/kg	--	183000	--	--	2970
(PCB 197/200) 2,2',3,3',4,4',6,6'-Octachlorobiphenyl/2,2',3,3',4,5,6,6'-Octachlorobiphenyl	ng/kg	--	53100	--	--	960
(PCB 198/199) 2,2',3,3',4,5,5',6-Octachlorobiphenyl/2,2',3,3',4,5,5',6'-Octachlorobiphenyl	ng/kg	--	334000	--	--	7250
(PCB 2) 3-Chlorobiphenyl	ng/kg	--	<33.6	--	--	8.12 J
(PCB 20/28) 2,3,3'-Trichlorobiphenyl/2,4,4'-Trichlorobiphenyl	ng/kg	--	334 J	--	--	152
(PCB 201) 2,2',3,3',4,5',6,6'-Octachlorobiphenyl	ng/kg	--	32900	--	--	698
(PCB 202) 2,2',3,3',5,5',6,6'-Octachlorobiphenyl	ng/kg	--	48600	--	--	1190
(PCB 203) 2,2',3,4,4',5,5',6-Octachlorobiphenyl	ng/kg	--	226000	--	--	4140
(PCB 204) 2,2',3,4,4',5,6,6'-Octachlorobiphenyl	ng/kg	--	109 J	--	--	<2.23
(PCB 205) 2,3,3',4,4',5,5',6-Octachlorobiphenyl	ng/kg	--	23000	--	--	371
(PCB 206) 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	ng/kg	--	57700	--	--	3970
(PCB 207) 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	ng/kg	--	7050	--	--	311
(PCB 208) 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	ng/kg	--	8960	--	--	1070
(PCB 209) Decachlorobiphenyl	ng/kg	--	1610	--	--	2060
(PCB 21/33) 2,3,4-Trichlorobiphenyl/2',3,4-Trichlorobiphenyl	ng/kg	--	<136	--	--	83.4
(PCB 22) 2,3,4'-Trichlorobiphenyl	ng/kg	--	114 J	--	--	59.4
(PCB 23) 2,3,5-Trichlorobiphenyl	ng/kg	--	<29.7	--	--	<3.04
(PCB 24) 2,3,6-Trichlorobiphenyl	ng/kg	--	<39.4	--	--	<4.03
(PCB 25) 2,3',4-Trichlorobiphenyl	ng/kg	--	<31.8	--	--	11.5 J
(PCB 26/29) 2,3',5-Trichlorobiphenyl/2,4,5-Trichlorobiphenyl	ng/kg	--	<94.9	--	--	26.5 J
(PCB 27) 2,3',6-Trichlorobiphenyl	ng/kg	--	<41.4	--	--	6.64 J
(PCB 3) 4-Monochlorobiphenyl	ng/kg	--	<73.3 J	--	--	<16.6 J
(PCB 31) 2,4',5-Trichlorobiphenyl	ng/kg	--	282	--	--	134
(PCB 32) 2,4',6-Trichlorobiphenyl	ng/kg	--	<66.1	--	--	22.0
(PCB 34) 2,3',5'-Trichlorobiphenyl	ng/kg	--	<41.6	--	--	<4.25
(PCB 35) 3,3',4-Trichlorobiphenyl	ng/kg	--	<40.3	--	--	7.78 J

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-12	SB-12	SB-12	SB-13	SB-13	SB-13
Sample Name:	SB12-2.5-3.0-1022	SB12-0.0-0.5-1022	SB12D-0.0-0.5-1022	SB13-1.0-1.5-1022	SB13-2.5-3.0-1022	SB13-0.0-0.5-1022
Sample Date:	10/18/2022	10/18/2022	10/18/2022	10/19/2022	10/19/2022	10/19/2022
Depth:	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS
			Duplicate			

Parameters	Unit					
PCBs (Continued)						
(PCB 36) 3,3',5-Trichlorobiphenyl	ng/kg	--	<28.7	--	--	<2.94
(PCB 37) 3,4,4'-Trichlorobiphenyl	ng/kg	--	464	--	--	124
(PCB 38) 3,4,5-Trichlorobiphenyl	ng/kg	--	<25.9	--	--	<2.65
(PCB 39) 3,4',5-Trichlorobiphenyl	ng/kg	--	<30.7	--	--	<3.14
(PCB 4) 2,2'-Dichlorobiphenyl	ng/kg	--	<74.5	--	--	28.8
(PCB 40/41/71) 2,2',3,3'-TeCB/ 2,2',3,4-TeCB/2,3',4',6-TeCB	ng/kg	--	349 J	--	--	111
(PCB 42) 2,2',3,4'-Tetrachlorobiphenyl	ng/kg	--	181 J	--	--	55.8
(PCB 43/73) 2,2',3,5-Tetrachlorobiphenyl/2,3',5',6-Tetrachlorobiphenyl	ng/kg	--	<104	--	--	<10.6
(PCB 44/47/65) 2,2',3,5'-Tetrachlorobiphenyl/2,2',4,4'-Tetrachlorobiphenyl/2,3,5,6-Tetrachlorobiphenyl	ng/kg	--	981	--	--	330
(PCB 45/51) 2,2',3,6-Tetrachlorobiphenyl/2,2',4,6'-Tetrachlorobiphenyl	ng/kg	--	<104	--	--	34.8 J
(PCB 46) 2,2',3,6'-Tetrachlorobiphenyl	ng/kg	--	<39.4	--	--	11.8 J
(PCB 48) 2,2',4,5-Tetrachlorobiphenyl	ng/kg	--	87.9	--	--	33.3
(PCB 49/69) 2,2',4,5'-Tetrachlorobiphenyl/2,3',4,6-Tetrachlorobiphenyl	ng/kg	--	854	--	--	190
(PCB 5) 2,3-Dichlorobiphenyl	ng/kg	--	<26.6	--	--	<2.72
(PCB 50/53) 2,2',4,6-Tetrachlorobiphenyl/2,2',5,6'-Tetrachlorobiphenyl	ng/kg	--	<207	--	--	29.3 J
(PCB 52) 2,2',5,5'-Tetrachlorobiphenyl	ng/kg	--	5890	--	--	694
(PCB 54) 2,2',6,6'-Tetrachlorobiphenyl	ng/kg	--	<51.9	--	--	<5.30
(PCB 55) 2,3,3',4-Tetrachlorobiphenyl	ng/kg	--	<81.2	--	--	<8.30
(PCB 56) 2,3,3',4'-Tetrachlorobiphenyl	ng/kg	--	723	--	--	113
(PCB 57) 2,3,3',5-Tetrachlorobiphenyl	ng/kg	--	<22.1	--	--	<2.26
(PCB 58) 2,3,3',5'-Tetrachlorobiphenyl	ng/kg	--	<26.9	--	--	<2.75
(PCB 59/62/75) 2,3,3',6-Tetrachlorobiphenyl/2,3,4,6-Tetrachlorobiphenyl/ 2,4,4',6-Tetrachlorobiphenyl	ng/kg	--	81.8 J	--	--	19.9 J
(PCB 6) 2,3'-Dichlorobiphenyl	ng/kg	--	<37.8	--	--	13.3 J
(PCB 60) 2,3,4,4'-Tetrachlorobiphenyl	ng/kg	--	222	--	--	58.8
(PCB 61/70/74/76) 2,3,4,5-Tetrachlorobiphenyl/2,3',4',5-Tetrachlorobiphenyl/2,4,4',5-Tetrachlorobiphenyl/2,3',4',5'-Tetrachlorobiphenyl	ng/kg	--	3400	--	--	795
(PCB 63) 2,3,4',5-Tetrachlorobiphenyl	ng/kg	--	<76.4	--	--	10.8 J

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-12	SB-12	SB-12	SB-13	SB-13	SB-13
Sample Name:	SB12-2.5-3.0-1022	SB12-0.0-0.5-1022	SB12D-0.0-0.5-1022	SB13-1.0-1.5-1022	SB13-2.5-3.0-1022	SB13-0.0-0.5-1022
Sample Date:	10/18/2022	10/18/2022	10/18/2022	10/19/2022	10/19/2022	10/19/2022
Depth:	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS
			Duplicate			

Parameters	Unit					
PCBs (Continued)						
(PCB 64) 2,3,4',6-Tetrachlorobiphenyl	ng/kg	--	509	--	--	131
(PCB 66) 2,3',4,4'-Tetrachlorobiphenyl	ng/kg	--	1170	--	--	250
(PCB 67) 2,3',4,5-Tetrachlorobiphenyl	ng/kg	--	38.8 J	--	--	7.59 J
(PCB 68) 2,3',4,5'-Tetrachlorobiphenyl	ng/kg	--	<85.2	--	--	<8.71
(PCB 7) 2,4-Dichlorobiphenyl	ng/kg	--	<28.8	--	--	<2.95
(PCB 72) 2,3',5,5'-Tetrachlorobiphenyl	ng/kg	--	78.8 J	--	--	2.72 J
(PCB 77) 3,3',4,4'-Tetrachlorobiphenyl	ng/kg	--	3730	--	--	135
(PCB 78) 3,3',4,5-Tetrachlorobiphenyl	ng/kg	--	<33.2	--	--	<3.40
(PCB 79) 3,3',4,5'-Tetrachlorobiphenyl	ng/kg	--	821	--	--	28.3
(PCB 8) 2,4'-Dichlorobiphenyl	ng/kg	--	112 J	--	--	57.1
(PCB 80) 3,3',5,5'-Tetrachlorobiphenyl	ng/kg	--	<24.5	--	--	<2.50
(PCB 81) 3,4,4',5-Tetrachlorobiphenyl	ng/kg	--	80.6 J	--	--	7.50 J
(PCB 82) 2,2',3,3',4-Pentachlorobiphenyl	ng/kg	--	2760	--	--	333
(PCB 83) 2,2',3,3',5-Pentachlorobiphenyl	ng/kg	--	5570	--	--	201
(PCB 84) 2,2',3,3',6-Pentachlorobiphenyl	ng/kg	--	9090	--	--	673
(PCB 85/116/117) 2,2',3,4,4'-PeCB/2,3,4,5,6-PeCB/2,3,4',5,6-PeCB	ng/kg	--	3670	--	--	660
Pentachlorobiphenyl/2,2',3',4,5-Pentachlorobiphenyl/2,3,3',4,5'-Pentachlorobiphenyl/2,3',4,4',6-Pentachlorobiphenyl/2',3,4,5,6'-Pentachlorobiphenyl	ng/kg	--	71800	--	--	2340
(PCB 88/91) 2,2',3,4,6-Pentachlorobiphenyl/2,2',3,4',6-Pentachlorobiphenyl	ng/kg	--	3430	--	--	389
(PCB 89) 2,2',3,4,6'-Pentachlorobiphenyl	ng/kg	--	233	--	--	15.1 J
(PCB 9) 2,5-Dichlorobiphenyl	ng/kg	--	<31.9	--	--	<3.26
(PCB 90/101/113) 2,2',3,4',5-Pentachlorobiphenyl/2,2',4,5,5'-Pentachlorobiphenyl/2,3,3',5',6-Pentachlorobiphenyl	ng/kg	--	400000	--	--	4810
(PCB 92) 2,2',3,5,5'-Pentachlorobiphenyl	ng/kg	--	44200	--	--	886
(PCB 93/98/100/102) Pentachlorobiphenyl	ng/kg	--	1330	--	--	72.0 J
(PCB 94) 2,2',3,5,6'-Pentachlorobiphenyl	ng/kg	--	126 J	--	--	8.55 J
(PCB 95) 2,2',3,5',6-Pentachlorobiphenyl	ng/kg	--	192000	--	--	3250
(PCB 96) 2,2',3,6,6'-Pentachlorobiphenyl	ng/kg	--	108 J	--	--	8.59 J

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-12	SB-12	SB-12	SB-13	SB-13	SB-13
Sample Name:	SB12-2.5-3.0-1022	SB12-0.0-0.5-1022	SB12D-0.0-0.5-1022	SB13-1.0-1.5-1022	SB13-2.5-3.0-1022	SB13-0.0-0.5-1022
Sample Date:	10/18/2022	10/18/2022	10/18/2022	10/19/2022	10/19/2022	10/19/2022
Depth:	2.5-3 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS
			Duplicate			

Parameters**Unit****PCBs (Continued)**

(PCB 99) 2,2',4,4',5-Pentachlorobiphenyl	ng/kg	--	13600	--	--	--	1180
Aroclor-1016 (PCB-1016)	µg/kg	<21.0	<21.1	<20.8	<20.8	<21.0	<21.1
Aroclor-1221 (PCB-1221)	µg/kg	<34.3	<34.5	<33.9	<34.0	<34.3	<34.4
Aroclor-1232 (PCB-1232)	µg/kg	<29.4	<29.5	<29.0	<29.1	<29.4	<29.5
Aroclor-1242 (PCB-1242)	µg/kg	<30.7	<30.9	<30.3	<30.4	<30.7	<30.8
Aroclor-1248 (PCB-1248)	µg/kg	<25.4	<25.5	<25.0	<25.1	<25.4	<25.4
Aroclor-1254 (PCB-1254)	µg/kg	<24.8	<24.9	<24.4	<24.5	<24.8	<24.9
Aroclor-1260 (PCB-1260)	µg/kg	162	30800	38600	52.6	19.3 J	224
Aroclor-1262 (PCB-1262)	µg/kg	<32.7	<32.8	<32.2	<32.3	<32.7	<32.8
Aroclor-1268 (PCB-1268)	µg/kg	<23.9	<24.0	<23.6	<23.6	<23.9	<24.0

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-14	SB-14	SB-14	SB-15	SB-15
Sample Name:	SB14-1.0-1.5-1022	SB14-2.5-3.0-1022	SB14-0.0-0.5-1022	SB15-1.0-1.5-1022	SB15-2.5-3.0-1022
Sample Date:	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022
Depth:	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit					
PCBs						
(PCB 1) 2-Chlorobiphenyl	ng/kg	<11.1 J	--	--	--	--
(PCB 10) 2,6-Dichlorobiphenyl	ng/kg	<3.52	--	--	--	--
(PCB 103) 2,2',4,5',6-Pentachlorobiphenyl	ng/kg	6.00 J	--	--	--	--
(PCB 104) 2,2',4,6,6'-Pentachlorobiphenyl	ng/kg	<3.16	--	--	--	--
(PCB 105) 2,3,3',4,4'-Pentachlorobiphenyl	ng/kg	676	--	--	--	--
(PCB 106) 2,3,3',4,5-Pentachlorobiphenyl	ng/kg	<2.96	--	--	--	--
(PCB 107/124) Pentachlorobiphenyl	ng/kg	96.4	--	--	--	--
(PCB 109) 2,3,3',4,6-Pentachlorobiphenyl	ng/kg	115	--	--	--	--
(PCB 11) 3,3'-Dichlorobiphenyl	ng/kg	115	--	--	--	--
(PCB 110/115) 2,3,3',4',6-Pentachlorobiphenyl/2,3,4,4',6-Pentachlorobiphenyl	ng/kg	2780	--	--	--	--
(PCB 111) 2,3,3',5,5'-Pentachlorobiphenyl	ng/kg	<2.73	--	--	--	--
(PCB 112) 2,3,3',5,6-Pentachlorobiphenyl	ng/kg	<3.71	--	--	--	--
(PCB 114) 2,3,4,4',5-Pentachlorobiphenyl	ng/kg	36.0	--	--	--	--
(PCB 118) 2,3',4,4',5-Pentachlorobiphenyl	ng/kg	1620	--	--	--	--
(PCB 12/13) 3,4-Dichlorobiphenyl/3,4'-Dichlorobiphenyl	ng/kg	9.97 J	--	--	--	--
(PCB 120) 2,3',4,5,5'-Pentachlorobiphenyl	ng/kg	5.80 J	--	--	--	--
(PCB 121) 2,3',4,5',6-Pentachlorobiphenyl	ng/kg	<3.35	--	--	--	--
(PCB 122) 2,3,3',4',5'-Pentachlorobiphenyl	ng/kg	21.7	--	--	--	--
(PCB 123) 2',3,4,4',5-Pentachlorobiphenyl	ng/kg	38.7	--	--	--	--
(PCB 126) 3,3',4,4',5-Pentachlorobiphenyl	ng/kg	19.6	--	--	--	--
(PCB 127) 3,3',4,5,5'-Pentachlorobiphenyl	ng/kg	6.04 J	--	--	--	--
(PCB 128/166) 2,2',3,3',4,4'-Hexachlorobiphenyl/2,3,4,4',5,6-Hexachlorobiphenyl	ng/kg	792	--	--	--	--
(PCB 129/138/163) Hexachlorobiphenyl	ng/kg	9880	--	--	--	--
(PCB 130) 2,2',3,3',4,5'-Hexachlorobiphenyl	ng/kg	386	--	--	--	--
(PCB 131) 2,2',3,3',4,6-Hexachlorobiphenyl	ng/kg	54.3	--	--	--	--
(PCB 132) 2,2',3,3',4,6'-Hexachlorobiphenyl	ng/kg	1980	--	--	--	--
(PCB 133) 2,2',3,3',5,5'-Hexachlorobiphenyl	ng/kg	103	--	--	--	--
(PCB 134/143) 2,2',3,3',5,6-Hexachlorobiphenyl/2,2',3,4,5,6'-Hexachlorobiphenyl	ng/kg	279	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-14	SB-14	SB-14	SB-15	SB-15
Sample Name:	SB14-1.0-1.5-1022	SB14-2.5-3.0-1022	SB14-0.0-0.5-1022	SB15-1.0-1.5-1022	SB15-2.5-3.0-1022
Sample Date:	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022
Depth:	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit					
PCBs (Continued)						
(PCB 135/151) 2,2',3,3',5,6'-Hexachlorobiphenyl/2,2',3,5,5',6'-Hexachlorobiphenyl	ng/kg	2730	--	--	--	--
(PCB 136) 2,2',3,3',6,6'-Hexachlorobiphenyl	ng/kg	686	--	--	--	--
(PCB 137) 2,2',3,4,4',5-Hexachlorobiphenyl	ng/kg	144	--	--	--	--
(PCB 139/140) 2,2',3,4,4',6-Hexachlorobiphenyl/2,2',3,4,4',6'-Hexachlorobiphenyl	ng/kg	56.5	--	--	--	--
(PCB 14) 3,5-Dichlorobiphenyl	ng/kg	<3.13	--	--	--	--
(PCB 141) 2,2',3,4,5,5'-Hexachlorobiphenyl	ng/kg	1890	--	--	--	--
(PCB 142) 2,2',3,4,5,6-Hexachlorobiphenyl	ng/kg	<3.47	--	--	--	--
(PCB 144) 2,2',3,4,5',6-Hexachlorobiphenyl	ng/kg	337	--	--	--	--
(PCB 145) 2,2',3,4,6,6'-Hexachlorobiphenyl	ng/kg	<3.02	--	--	--	--
(PCB 146) 2,2',3,4',5,5'-Hexachlorobiphenyl	ng/kg	1190	--	--	--	--
(PCB 147/149) 2,2',3,4',5,6-Hexachlorobiphenyl/2,2',3,4',5',6-Hexachlorobiphenyl	ng/kg	6220	--	--	--	--
(PCB 148) 2,2',3,4',5,6'-Hexachlorobiphenyl	ng/kg	5.85 J	--	--	--	--
(PCB 15) 4,4'-Dichlorobiphenyl	ng/kg	75.2	--	--	--	--
(PCB 150) 2,2',3,4',6,6'-Hexachlorobiphenyl	ng/kg	4.78 J	--	--	--	--
(PCB 152) 2,2',3,5,6,6'-Hexachlorobiphenyl	ng/kg	<3.47	--	--	--	--
(PCB 153/168) 2,2',4,4',5,5'-Hexachlorobiphenyl/2,3',4,4',5',6-Hexachlorobiphenyl	ng/kg	8200	--	--	--	--
(PCB 154) 2,2',4,4',5,6'-Hexachlorobiphenyl	ng/kg	30.8	--	--	--	--
(PCB 155) 2,2',4,4',6,6'-Hexachlorobiphenyl	ng/kg	<2.97	--	--	--	--
(PCB 156/157) 2,3,3',4,4',5-Hexachlorobiphenyl/2,3,3',4,4',5'-Hexachlorobiphenyl	ng/kg	763	--	--	--	--
(PCB 158) 2,3,3',4,4',6-Hexachlorobiphenyl	ng/kg	764	--	--	--	--
(PCB 159) 2,3,3',4,5,5'-Hexachlorobiphenyl	ng/kg	142	--	--	--	--
(PCB 16) 2,2',3-Trichlorobiphenyl	ng/kg	16.2 J	--	--	--	--
(PCB 160) 2,3,3',4,5,6-Hexachlorobiphenyl	ng/kg	<2.50	--	--	--	--
(PCB 161) 2,3,3',4,5',6-Hexachlorobiphenyl	ng/kg	<2.74	--	--	--	--
(PCB 162) 2,3,3',4',5,5'-Hexachlorobiphenyl	ng/kg	22.4	--	--	--	--
(PCB 164) 2,3,3',4',5',6-Hexachlorobiphenyl	ng/kg	654	--	--	--	--
(PCB 165) 2,3,3',5,5',6-Hexachlorobiphenyl	ng/kg	<3.00	--	--	--	--
(PCB 167) 2,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	335	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-14	SB-14	SB-14	SB-15	SB-15
Sample Name:	SB14-1.0-1.5-1022	SB14-2.5-3.0-1022	SB14-0.0-0.5-1022	SB15-1.0-1.5-1022	SB15-2.5-3.0-1022
Sample Date:	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022
Depth:	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit					
PCBs (Continued)						
(PCB 169) 3,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	10.2	--	--	--	--
(PCB 17) 2,2',4-Trichlorobiphenyl	ng/kg	16.9 J	--	--	--	--
(PCB 170) 2,2',3,3',4,4',5-Heptachlorobiphenyl	ng/kg	3950	--	--	--	--
(PCB 171/173) 2,2',3,3',4,4',6-Heptachlorobiphenyl/2,2',3,3',4,5,6-Heptachlorobiphenyl	ng/kg	1080	--	--	--	--
(PCB 172) 2,2',3,3',4,5,5'-Heptachlorobiphenyl	ng/kg	688	--	--	--	--
(PCB 174) 2,2',3,3',4,5,6'-Heptachlorobiphenyl	ng/kg	3750	--	--	--	--
(PCB 175) 2,2',3,3',4,5',6-Heptachlorobiphenyl	ng/kg	145	--	--	--	--
(PCB 176) 2,2',3,3',4,6,6'-Heptachlorobiphenyl	ng/kg	419	--	--	--	--
(PCB 177) 2,2',3,3',4',5,6-Heptachlorobiphenyl	ng/kg	2390	--	--	--	--
(PCB 178) 2,2',3,3',5,5',6-Heptachlorobiphenyl	ng/kg	802	--	--	--	--
(PCB 179) 2,2',3,3',5,6,6'-Heptachlorobiphenyl	ng/kg	1510	--	--	--	--
(PCB 18/30) 2,2',5-Trichlorobiphenyl/2,4,6-Trichlorobiphenyl	ng/kg	32.5 J	--	--	--	--
(PCB 180/193) 2,2',3,4,4',5,5'-Heptachlorobiphenyl/2,3,3',4',5,5',6-Heptachlorobiphenyl	ng/kg	9010	--	--	--	--
(PCB 181) 2,2',3,4,4',5,6-Heptachlorobiphenyl	ng/kg	15.8 J	--	--	--	--
(PCB 182) 2,2',3,4,4',5,6'-Heptachlorobiphenyl	ng/kg	18.0 J	--	--	--	--
(PCB 183/185) 2,2',3,4,4',5',6-Heptachlorobiphenyl/2,2',3,4,5,5',6-Heptachlorobiphenyl	ng/kg	2420	--	--	--	--
(PCB 184) 2,2',3,4,4',6,6'-Heptachlorobiphenyl	ng/kg	<3.30	--	--	--	--
(PCB 186) 2,2',3,4,5,6,6'-Heptachlorobiphenyl	ng/kg	<3.75	--	--	--	--
(PCB 187) 2,2',3,4',5,5',6-Heptachlorobiphenyl	ng/kg	4840	--	--	--	--
(PCB 188) 2,2',3,4',5,6,6'-Heptachlorobiphenyl	ng/kg	4.70 J	--	--	--	--
(PCB 189) 2,3,3',4,4',5,5'-Heptachlorobiphenyl	ng/kg	170	--	--	--	--
(PCB 19) 2,2',6-Trichlorobiphenyl	ng/kg	4.93 J	--	--	--	--
(PCB 190) 2,3,3',4,4',5,6-Heptachlorobiphenyl	ng/kg	826	--	--	--	--
(PCB 191) 2,3,3',4,4',5',6-Heptachlorobiphenyl	ng/kg	145	--	--	--	--
(PCB 192) 2,3,3',4,5,5',6-Heptachlorobiphenyl	ng/kg	<2.76	--	--	--	--
(PCB 194) 2,2',3,3',4,4',5,5'-Octachlorobiphenyl	ng/kg	1870	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-14	SB-14	SB-14	SB-15	SB-15
Sample Name:	SB14-1.0-1.5-1022	SB14-2.5-3.0-1022	SB14-0.0-0.5-1022	SB15-1.0-1.5-1022	SB15-2.5-3.0-1022
Sample Date:	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022
Depth:	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit					
PCBs (Continued)						
(PCB 195) 2,2',3,3',4,4',5,6-Octachlorobiphenyl	ng/kg	780	--	--	--	--
(PCB 196) 2,2',3,3',4,4',5,6'-Octachlorobiphenyl	ng/kg	912	--	--	--	--
(PCB 197/200) 2,2',3,3',4,4',6,6'-Octachlorobiphenyl/2,2',3,3',4,5,6,6'-Octachlorobiphenyl	ng/kg	312	--	--	--	--
(PCB 198/199) 2,2',3,3',4,5,5',6-Octachlorobiphenyl/2,2',3,3',4,5,5',6'-Octachlorobiphenyl	ng/kg	2150	--	--	--	--
(PCB 2) 3-Chlorobiphenyl	ng/kg	10.6 J	--	--	--	--
(PCB 20/28) 2,3,3'-Trichlorobiphenyl/2,4,4'-Trichlorobiphenyl	ng/kg	92.9	--	--	--	--
(PCB 201) 2,2',3,3',4,5',6,6'-Octachlorobiphenyl	ng/kg	208	--	--	--	--
(PCB 202) 2,2',3,3',5,5',6,6'-Octachlorobiphenyl	ng/kg	368	--	--	--	--
(PCB 203) 2,2',3,4,4',5,5',6-Octachlorobiphenyl	ng/kg	1260	--	--	--	--
(PCB 204) 2,2',3,4,4',5,6,6'-Octachlorobiphenyl	ng/kg	<2.09	--	--	--	--
(PCB 205) 2,3,3',4,4',5,5',6-Octachlorobiphenyl	ng/kg	125	--	--	--	--
(PCB 206) 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	ng/kg	904	--	--	--	--
(PCB 207) 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	ng/kg	102	--	--	--	--
(PCB 208) 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	ng/kg	289	--	--	--	--
(PCB 209) Decachlorobiphenyl	ng/kg	1570	--	--	--	--
(PCB 21/33) 2,3,4-Trichlorobiphenyl/2',3,4-Trichlorobiphenyl	ng/kg	43.2	--	--	--	--
(PCB 22) 2,3,4'-Trichlorobiphenyl	ng/kg	34.6	--	--	--	--
(PCB 23) 2,3,5-Trichlorobiphenyl	ng/kg	<2.85	--	--	--	--
(PCB 24) 2,3,6-Trichlorobiphenyl	ng/kg	<3.78	--	--	--	--
(PCB 25) 2,3',4-Trichlorobiphenyl	ng/kg	6.44 J	--	--	--	--
(PCB 26/29) 2,3',5-Trichlorobiphenyl/2,4,5-Trichlorobiphenyl	ng/kg	13.6 J	--	--	--	--
(PCB 27) 2,3',6-Trichlorobiphenyl	ng/kg	<3.97	--	--	--	--
(PCB 3) 4-Monochlorobiphenyl	ng/kg	23.2	--	--	--	--
(PCB 31) 2,4',5-Trichlorobiphenyl	ng/kg	81.9	--	--	--	--
(PCB 32) 2,4',6-Trichlorobiphenyl	ng/kg	11.0 J	--	--	--	--
(PCB 34) 2,3',5'-Trichlorobiphenyl	ng/kg	<3.99	--	--	--	--
(PCB 35) 3,3',4-Trichlorobiphenyl	ng/kg	6.42 J	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-14	SB-14	SB-14	SB-15	SB-15
Sample Name:	SB14-1.0-1.5-1022	SB14-2.5-3.0-1022	SB14-0.0-0.5-1022	SB15-1.0-1.5-1022	SB15-2.5-3.0-1022
Sample Date:	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022
Depth:	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit					
PCBs (Continued)						
(PCB 36) 3,3',5-Trichlorobiphenyl	ng/kg	<2.76	--	--	--	--
(PCB 37) 3,4,4'-Trichlorobiphenyl	ng/kg	79.5	--	--	--	--
(PCB 38) 3,4,5-Trichlorobiphenyl	ng/kg	<2.49	--	--	--	--
(PCB 39) 3,4',5-Trichlorobiphenyl	ng/kg	<2.95	--	--	--	--
(PCB 4) 2,2'-Dichlorobiphenyl	ng/kg	12.1	--	--	--	--
(PCB 40/41/71) 2,2',3,3'-TeCB/ 2,2',3,4-TeCB/2,3',4',6-TeCB	ng/kg	68.9	--	--	--	--
(PCB 42) 2,2',3,4'-Tetrachlorobiphenyl	ng/kg	37.8	--	--	--	--
(PCB 43/73) 2,2',3,5-Tetrachlorobiphenyl/2,3',5',6-Tetrachlorobiphenyl	ng/kg	<9.95	--	--	--	--
(PCB 44/47/65) 2,2',3,5'-Tetrachlorobiphenyl/2,2',4,4'-Tetrachlorobiphenyl/2,3,5,6-Tetrachlorobiphenyl	ng/kg	291	--	--	--	--
(PCB 45/51) 2,2',3,6-Tetrachlorobiphenyl/2,2',4,6'-Tetrachlorobiphenyl	ng/kg	18.8 J	--	--	--	--
(PCB 46) 2,2',3,6'-Tetrachlorobiphenyl	ng/kg	5.83 J	--	--	--	--
(PCB 48) 2,2',4,5-Tetrachlorobiphenyl	ng/kg	19.0	--	--	--	--
(PCB 49/69) 2,2',4,5'-Tetrachlorobiphenyl/2,3',4,6-Tetrachlorobiphenyl	ng/kg	168	--	--	--	--
(PCB 5) 2,3-Dichlorobiphenyl	ng/kg	<2.55	--	--	--	--
(PCB 50/53) 2,2',4,6-Tetrachlorobiphenyl/2,2',5,6'-Tetrachlorobiphenyl	ng/kg	<19.9	--	--	--	--
(PCB 52) 2,2',5,5'-Tetrachlorobiphenyl	ng/kg	723	--	--	--	--
(PCB 54) 2,2',6,6'-Tetrachlorobiphenyl	ng/kg	<4.98	--	--	--	--
(PCB 55) 2,3,3',4-Tetrachlorobiphenyl	ng/kg	<7.79	--	--	--	--
(PCB 56) 2,3,3',4'-Tetrachlorobiphenyl	ng/kg	83.3	--	--	--	--
(PCB 57) 2,3,3',5-Tetrachlorobiphenyl	ng/kg	<2.12	--	--	--	--
(PCB 58) 2,3,3',5'-Tetrachlorobiphenyl	ng/kg	<2.58	--	--	--	--
(PCB 59/62/75) 2,3,3',6-Tetrachlorobiphenyl/2,3,4,6-Tetrachlorobiphenyl/ 2,4,4',6-Tetrachlorobiphenyl	ng/kg	10.8 J	--	--	--	--
(PCB 6) 2,3'-Dichlorobiphenyl	ng/kg	6.54 J	--	--	--	--
(PCB 60) 2,3,4,4'-Tetrachlorobiphenyl	ng/kg	40.1	--	--	--	--
(PCB 61/70/74/76) 2,3,4,5-Tetrachlorobiphenyl/2,3',4',5-Tetrachlorobiphenyl/2,4,4',5-Tetrachlorobiphenyl/2,3',4',5'-Tetrachlorobiphenyl	ng/kg	642	--	--	--	--
(PCB 63) 2,3,4',5-Tetrachlorobiphenyl	ng/kg	8.78 J	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-14	SB-14	SB-14	SB-15	SB-15
Sample Name:	SB14-1.0-1.5-1022	SB14-2.5-3.0-1022	SB14-0.0-0.5-1022	SB15-1.0-1.5-1022	SB15-2.5-3.0-1022
Sample Date:	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022
Depth:	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters	Unit					
PCBs (Continued)						
(PCB 64) 2,3,4',6-Tetrachlorobiphenyl	ng/kg	122	--	--	--	--
(PCB 66) 2,3',4,4'-Tetrachlorobiphenyl	ng/kg	180	--	--	--	--
(PCB 67) 2,3',4,5-Tetrachlorobiphenyl	ng/kg	3.30 J	--	--	--	--
(PCB 68) 2,3',4,5'-Tetrachlorobiphenyl	ng/kg	<8.18	--	--	--	--
(PCB 7) 2,4-Dichlorobiphenyl	ng/kg	<2.76	--	--	--	--
(PCB 72) 2,3',5,5'-Tetrachlorobiphenyl	ng/kg	2.95 J	--	--	--	--
(PCB 77) 3,3',4,4'-Tetrachlorobiphenyl	ng/kg	38.4	--	--	--	--
(PCB 78) 3,3',4,5-Tetrachlorobiphenyl	ng/kg	<3.19	--	--	--	--
(PCB 79) 3,3',4,5'-Tetrachlorobiphenyl	ng/kg	12.4 J	--	--	--	--
(PCB 8) 2,4'-Dichlorobiphenyl	ng/kg	29.6	--	--	--	--
(PCB 80) 3,3',5,5'-Tetrachlorobiphenyl	ng/kg	<2.35	--	--	--	--
(PCB 81) 3,4,4',5-Tetrachlorobiphenyl	ng/kg	3.45 J	--	--	--	--
(PCB 82) 2,2',3,3',4-Pentachlorobiphenyl	ng/kg	151	--	--	--	--
(PCB 83) 2,2',3,3',5-Pentachlorobiphenyl	ng/kg	84.5	--	--	--	--
(PCB 84) 2,2',3,3',6-Pentachlorobiphenyl	ng/kg	356	--	--	--	--
(PCB 85/116/117) 2,2',3,4,4'-PeCB/2,3,4,5,6-PeCB/2,3,4',5,6-PeCB	ng/kg	305	--	--	--	--
Pentachlorobiphenyl/2,2',3',4,5-Pentachlorobiphenyl/2,3,3',4,5'-						
Pentachlorobiphenyl/2,3',4,4',6-Pentachlorobiphenyl/2',3,4,5,6'-						
Pentachlorobiphenyl	ng/kg	1040	--	--	--	--
(PCB 88/91) 2,2',3,4,6-Pentachlorobiphenyl/2,2',3,4',6-Pentachlorobiphenyl	ng/kg	187	--	--	--	--
(PCB 89) 2,2',3,4,6'-Pentachlorobiphenyl	ng/kg	9.44 J	--	--	--	--
(PCB 9) 2,5-Dichlorobiphenyl	ng/kg	<3.06	--	--	--	--
(PCB 90/101/113) 2,2',3,4',5-Pentachlorobiphenyl/2,2',4,5,5'-						
Pentachlorobiphenyl/2,3,3',5',6-Pentachlorobiphenyl	ng/kg	2110	--	--	--	--
(PCB 92) 2,2',3,5,5'-Pentachlorobiphenyl	ng/kg	354	--	--	--	--
(PCB 93/98/100/102) Pentachlorobiphenyl	ng/kg	35.4 J	--	--	--	--
(PCB 94) 2,2',3,5,6'-Pentachlorobiphenyl	ng/kg	4.22 J	--	--	--	--
(PCB 95) 2,2',3,5',6-Pentachlorobiphenyl	ng/kg	1520	--	--	--	--
(PCB 96) 2,2',3,6,6'-Pentachlorobiphenyl	ng/kg	6.12 J	--	--	--	--

Table 3

**Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022**

Location ID:	SB-14	SB-14	SB-14	SB-15	SB-15
Sample Name:	SB14-1.0-1.5-1022	SB14-2.5-3.0-1022	SB14-0.0-0.5-1022	SB15-1.0-1.5-1022	SB15-2.5-3.0-1022
Sample Date:	10/19/2022	10/19/2022	10/19/2022	10/19/2022	10/19/2022
Depth:	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS

Parameters**Unit****PCBs (Continued)**

(PCB 99) 2,2',4,4',5-Pentachlorobiphenyl	ng/kg	654	--	--	--	--
Aroclor-1016 (PCB-1016)	µg/kg	<21.1	<20.8	<20.6	<20.4	<21.0
Aroclor-1221 (PCB-1221)	µg/kg	<34.4	<33.9	<33.6	<33.3	<34.2
Aroclor-1232 (PCB-1232)	µg/kg	<29.4	<29.0	<28.8	<28.5	<29.3
Aroclor-1242 (PCB-1242)	µg/kg	<30.8	<30.3	<30.1	<29.8	<30.7
Aroclor-1248 (PCB-1248)	µg/kg	<25.4	<25.0	<24.8	<24.6	<25.3
Aroclor-1254 (PCB-1254)	µg/kg	<24.8	<24.4	<24.2	<24.0	<24.7
Aroclor-1260 (PCB-1260)	µg/kg	124	163	296	65.2	175
Aroclor-1262 (PCB-1262)	µg/kg	<32.7	<32.2	<32.0	<31.7	<32.6
Aroclor-1268 (PCB-1268)	µg/kg	<23.9	<23.6	<23.4	<23.1	<23.8

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Parameters	Location ID:	SB-15	SB-16	SB-16	SB-16
	Sample Name:	SB15-0.0-0.5-1022	SB16-1.0-1.5-1022	SB16-2.5-3.0-1022	SB16-0.0-0.5-1022
	Sample Date:	10/19/2022	10/19/2022	10/19/2022	10/19/2022
	Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS
Unit					
PCBs					
(PCB 1) 2-Chlorobiphenyl	ng/kg	--	--	--	--
(PCB 10) 2,6-Dichlorobiphenyl	ng/kg	--	--	--	--
(PCB 103) 2,2',4,5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 104) 2,2',4,6,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 105) 2,3,3',4,4'-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 106) 2,3,3',4,5-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 107/124) Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 109) 2,3,3',4,6-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 11) 3,3'-Dichlorobiphenyl	ng/kg	--	--	--	--
(PCB 110/115) 2,3,3',4',6-Pentachlorobiphenyl/2,3,4,4',6-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 111) 2,3,3',5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 112) 2,3,3',5,6-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 114) 2,3,4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 118) 2,3',4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 12/13) 3,4-Dichlorobiphenyl/3,4'-Dichlorobiphenyl	ng/kg	--	--	--	--
(PCB 120) 2,3',4,5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 121) 2,3',4,5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 122) 2,3,3',4',5'-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 123) 2',3,4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 126) 3,3',4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 127) 3,3',4,5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 128/166) 2,2',3,3',4,4'-Hexachlorobiphenyl/2,3,4,4',5,6-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 129/138/163) Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 130) 2,2',3,3',4,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 131) 2,2',3,3',4,6-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 132) 2,2',3,3',4,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 133) 2,2',3,3',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 134/143) 2,2',3,3',5,6-Hexachlorobiphenyl/2,2',3,4,5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-15	SB-16	SB-16	SB-16
Sample Name:	SB15-0.0-0.5-1022	SB16-1.0-1.5-1022	SB16-2.5-3.0-1022	SB16-0.0-0.5-1022
Sample Date:	10/19/2022	10/19/2022	10/19/2022	10/19/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS

Parameters	Unit				
PCBs (Continued)					
(PCB 135/151) 2,2',3,3',5,6'-Hexachlorobiphenyl/2,2',3,5,5',6'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 136) 2,2',3,3',6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 137) 2,2',3,4,4',5'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 139/140) 2,2',3,4,4',6'-Hexachlorobiphenyl/2,2',3,4,4',6'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 14) 3,5-Dichlorobiphenyl	ng/kg	--	--	--	--
(PCB 141) 2,2',3,4,5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 142) 2,2',3,4,5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 144) 2,2',3,4,5',6'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 145) 2,2',3,4,6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 146) 2,2',3,4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 147/149) 2,2',3,4',5,6'-Hexachlorobiphenyl/2,2',3,4',5',6'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 148) 2,2',3,4',5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 15) 4,4'-Dichlorobiphenyl	ng/kg	--	--	--	--
(PCB 150) 2,2',3,4',6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 152) 2,2',3,5,6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 153/168) 2,2',4,4',5,5'-Hexachlorobiphenyl/2,3',4,4',5',6'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 154) 2,2',4,4',5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 155) 2,2',4,4',6,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 156/157) 2,3,3',4,4',5'-Hexachlorobiphenyl/2,3,3',4,4',5'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 158) 2,3,3',4,4',6'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 159) 2,3,3',4,5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 16) 2,2',3-Trichlorobiphenyl	ng/kg	--	--	--	--
(PCB 160) 2,3,3',4,5,6'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 161) 2,3,3',4,5',6'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 162) 2,3,3',4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 164) 2,3,3',4',5',6'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 165) 2,3,3',5,5',6'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 167) 2,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:		SB-15	SB-16	SB-16	SB-16
Sample Name:		SB15-0.0-0.5-1022	SB16-1.0-1.5-1022	SB16-2.5-3.0-1022	SB16-0.0-0.5-1022
Sample Date:		10/19/2022	10/19/2022	10/19/2022	10/19/2022
Depth:		0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS
Parameters	Unit				
PCBs (Continued)					
(PCB 169) 3,3',4,4',5,5'-Hexachlorobiphenyl	ng/kg	--	--	--	--
(PCB 17) 2,2',4-Trichlorobiphenyl	ng/kg	--	--	--	--
(PCB 170) 2,2',3,3',4,4',5-Heptachlorobiphenyl	ng/kg	--	--	--	--
(PCB 171/173) 2,2',3,3',4,4',6-Heptachlorobiphenyl/2,2',3,3',4,5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--
(PCB 172) 2,2',3,3',4,5,5'-Heptachlorobiphenyl	ng/kg	--	--	--	--
(PCB 174) 2,2',3,3',4,5,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--
(PCB 175) 2,2',3,3',4,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--
(PCB 176) 2,2',3,3',4,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--
(PCB 177) 2,2',3,3',4',5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--
(PCB 178) 2,2',3,3',5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--
(PCB 179) 2,2',3,3',5,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--
(PCB 18/30) 2,2',5-Trichlorobiphenyl/2,4,6-Trichlorobiphenyl	ng/kg	--	--	--	--
(PCB 180/193) 2,2',3,4,4',5,5'-Heptachlorobiphenyl/2,3,3',4',5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--
(PCB 181) 2,2',3,4,4',5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--
(PCB 182) 2,2',3,4,4',5,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--
(PCB 183/185) 2,2',3,4,4',5',6-Heptachlorobiphenyl/2,2',3,4,5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--
(PCB 184) 2,2',3,4,4',6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--
(PCB 186) 2,2',3,4,5,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--
(PCB 187) 2,2',3,4',5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--
(PCB 188) 2,2',3,4',5,6,6'-Heptachlorobiphenyl	ng/kg	--	--	--	--
(PCB 189) 2,3,3',4,4',5,5'-Heptachlorobiphenyl	ng/kg	--	--	--	--
(PCB 19) 2,2',6-Trichlorobiphenyl	ng/kg	--	--	--	--
(PCB 190) 2,3,3',4,4',5,6-Heptachlorobiphenyl	ng/kg	--	--	--	--
(PCB 191) 2,3,3',4,4',5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--
(PCB 192) 2,3,3',4,5,5',6-Heptachlorobiphenyl	ng/kg	--	--	--	--
(PCB 194) 2,2',3,3',4,4',5,5'-Octachlorobiphenyl	ng/kg	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

		Location ID:	SB-15	SB-16	SB-16	SB-16
		Sample Name:	SB15-0.0-0.5-1022	SB16-1.0-1.5-1022	SB16-2.5-3.0-1022	SB16-0.0-0.5-1022
		Sample Date:	10/19/2022	10/19/2022	10/19/2022	10/19/2022
		Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS
Parameters	Unit					
PCBs (Continued)						
(PCB 195) 2,2',3,3',4,4',5,6-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 196) 2,2',3,3',4,4',5,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 197/200) 2,2',3,3',4,4',6,6'-Octachlorobiphenyl/2,2',3,3',4,5,6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 198/199) 2,2',3,3',4,5,5',6-Octachlorobiphenyl/2,2',3,3',4,5,5',6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 2) 3-Chlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 20/28) 2,3,3'-Trichlorobiphenyl/2,4,4'-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 201) 2,2',3,3',4,5',6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 202) 2,2',3,3',5,5',6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 203) 2,2',3,4,4',5,5',6-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 204) 2,2',3,4,4',5,6,6'-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 205) 2,3,3',4,4',5,5',6-Octachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 206) 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 207) 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 208) 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 209) Decachlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 21/33) 2,3,4-Trichlorobiphenyl/2',3,4-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 22) 2,3,4'-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 23) 2,3,5-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 24) 2,3,6-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 25) 2,3',4-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 26/29) 2,3',5-Trichlorobiphenyl/2,4,5-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 27) 2,3',6-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 3) 4-Monochlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 31) 2,4',5-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 32) 2,4',6-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 34) 2,3',5'-Trichlorobiphenyl	ng/kg	--	--	--	--	--
(PCB 35) 3,3',4-Trichlorobiphenyl	ng/kg	--	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:		SB-15	SB-16	SB-16	SB-16
Sample Name:		SB15-0.0-0.5-1022	SB16-1.0-1.5-1022	SB16-2.5-3.0-1022	SB16-0.0-0.5-1022
Sample Date:		10/19/2022	10/19/2022	10/19/2022	10/19/2022
Depth:		0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS
Parameters	Unit				
PCBs (Continued)					
(PCB 36) 3,3',5-Trichlorobiphenyl	ng/kg	--	--	--	--
(PCB 37) 3,4,4'-Trichlorobiphenyl	ng/kg	--	--	--	--
(PCB 38) 3,4,5-Trichlorobiphenyl	ng/kg	--	--	--	--
(PCB 39) 3,4',5-Trichlorobiphenyl	ng/kg	--	--	--	--
(PCB 4) 2,2'-Dichlorobiphenyl	ng/kg	--	--	--	--
(PCB 40/41/71) 2,2',3,3'-TeCB/ 2,2',3,4-TeCB/2,3',4',6-TeCB	ng/kg	--	--	--	--
(PCB 42) 2,2',3,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 43/73) 2,2',3,5-Tetrachlorobiphenyl/2,3',5',6-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 44/47/65) 2,2',3,5'-Tetrachlorobiphenyl/2,2',4,4'-Tetrachlorobiphenyl/2,3,5,6-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 45/51) 2,2',3,6-Tetrachlorobiphenyl/2,2',4,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 46) 2,2',3,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 48) 2,2',4,5-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 49/69) 2,2',4,5'-Tetrachlorobiphenyl/2,3',4,6-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 5) 2,3-Dichlorobiphenyl	ng/kg	--	--	--	--
(PCB 50/53) 2,2',4,6-Tetrachlorobiphenyl/2,2',5,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 52) 2,2',5,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 54) 2,2',6,6'-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 55) 2,3,3',4-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 56) 2,3,3',4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 57) 2,3,3',5-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 58) 2,3,3',5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 59/62/75) 2,3,3',6-Tetrachlorobiphenyl/2,3,4,6-Tetrachlorobiphenyl/ 2,4,4',6-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 6) 2,3'-Dichlorobiphenyl	ng/kg	--	--	--	--
(PCB 60) 2,3,4,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 61/70/74/76) 2,3,4,5-Tetrachlorobiphenyl/2,3',4',5-Tetrachlorobiphenyl/2,4,4',5-Tetrachlorobiphenyl/2,3',4',5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 63) 2,3,4',5-Tetrachlorobiphenyl	ng/kg	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:		SB-15	SB-16	SB-16	SB-16
Sample Name:		SB15-0.0-0.5-1022	SB16-1.0-1.5-1022	SB16-2.5-3.0-1022	SB16-0.0-0.5-1022
Sample Date:		10/19/2022	10/19/2022	10/19/2022	10/19/2022
Depth:		0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS
Parameters	Unit				
PCBs (Continued)					
(PCB 64) 2,3,4',6-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 66) 2,3',4,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 67) 2,3',4,5-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 68) 2,3',4,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 7) 2,4-Dichlorobiphenyl	ng/kg	--	--	--	--
(PCB 72) 2,3',5,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 77) 3,3',4,4'-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 78) 3,3',4,5-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 79) 3,3',4,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 8) 2,4'-Dichlorobiphenyl	ng/kg	--	--	--	--
(PCB 80) 3,3',5,5'-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 81) 3,4,4',5-Tetrachlorobiphenyl	ng/kg	--	--	--	--
(PCB 82) 2,2',3,3',4-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 83) 2,2',3,3',5-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 84) 2,2',3,3',6-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 85/116/117) 2,2',3,4,4'-PeCB/2,3,4,5,6-PeCB/2,3,4',5,6-PeCB	ng/kg	--	--	--	--
Pentachlorobiphenyl/2,2',3',4,5-Pentachlorobiphenyl/2,3,3',4,5'-					
Pentachlorobiphenyl/2,3',4,4',6-Pentachlorobiphenyl/2',3,4,5,6'-					
Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 88/91) 2,2',3,4,6-Pentachlorobiphenyl/2,2',3,4',6-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 89) 2,2',3,4,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 9) 2,5-Dichlorobiphenyl	ng/kg	--	--	--	--
(PCB 90/101/113) 2,2',3,4',5-Pentachlorobiphenyl/2,2',4,5,5'-					
Pentachlorobiphenyl/2,3,3',5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 92) 2,2',3,5,5'-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 93/98/100/102) Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 94) 2,2',3,5,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 95) 2,2',3,5',6-Pentachlorobiphenyl	ng/kg	--	--	--	--
(PCB 96) 2,2',3,6,6'-Pentachlorobiphenyl	ng/kg	--	--	--	--

Table 3

Analytical Results Summary
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Location ID:	SB-15	SB-16	SB-16	SB-16
Sample Name:	SB15-0.0-0.5-1022	SB16-1.0-1.5-1022	SB16-2.5-3.0-1022	SB16-0.0-0.5-1022
Sample Date:	10/19/2022	10/19/2022	10/19/2022	10/19/2022
Depth:	0-0.5 ft BGS	1-1.5 ft BGS	2.5-3 ft BGS	0-0.5 ft BGS

Parameters**Unit****PCBs (Continued)**

(PCB 99) 2,2',4,4',5-Pentachlorobiphenyl	ng/kg	--	--	--	--
Aroclor-1016 (PCB-1016)	µg/kg	<20.9	<20.8	<20.9	<20.1
Aroclor-1221 (PCB-1221)	µg/kg	<34.2	<33.9	<34.1	<32.9
Aroclor-1232 (PCB-1232)	µg/kg	<29.3	<29.0	<29.2	<28.1
Aroclor-1242 (PCB-1242)	µg/kg	<30.6	<30.4	<30.5	<29.4
Aroclor-1248 (PCB-1248)	µg/kg	<25.2	<25.0	<25.2	<24.3
Aroclor-1254 (PCB-1254)	µg/kg	<24.7	<24.5	<24.6	<23.7
Aroclor-1260 (PCB-1260)	µg/kg	339	104	389	260
Aroclor-1262 (PCB-1262)	µg/kg	<32.5	<32.3	<32.4	<31.3
Aroclor-1268 (PCB-1268)	µg/kg	<23.8	<23.6	<23.7	<22.9

Notes:

ft BGS - Feet Below Ground Surface

< - Not detected at the associated reporting limit

J - Estimated concentration

J+ - Estimated concentration; implied high bias

<() J - Not detected; associated reporting limit is estimated

"--" - Not analyzed

PCBs - Polychlorinated Biphenyls

Table 4

Qualified Sample Results Due to Analyte Concentrations in the Method Blanks
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Parameter	Analysis Date (mm/dd/yyyy)	Analyte	Blank Result *	Sample ID	Original Result	Qualified Result	Units
PCBs	01/12/2023	(PCB 1) 2-Chlorobiphenyl	44.7 J	SB10-0.0-0.5-1022	71.6 J	<71.6 J	ng/kg
				SB12-0.0-0.5-1022	54.3 J	<54.3 J	ng/kg
			4.47 J	SB06-1.0-1.5-1022	18.1 J	<18.1 J	ng/kg
				SB08-0.5-110322	13.3 J	<13.3 J	ng/kg
				SB13-0.0-0.5-1022	10.8 J	<10.8 J	ng/kg
				SB14-1.0-1.5-1022	11.1 J	<11.1 J	ng/kg
	01/13/2023	(PCB 3) 4-Monochlorobiphenyl	92.2 J	SB10-0.0-0.5-1022	144 J	<144 J	ng/kg
				SB12-0.0-0.5-1022	73.3 J	<73.3 J	ng/kg
			9.22 J	SB13-0.0-0.5-1022	16.6 J	<16.6 J	ng/kg

Notes:

* - Blank result adjusted for sample factors where applicable

J - Estimated concentration

<() J - Not detected; associated concentration is estimated

PCBs - Polychlorinated Biphenyls

Table 5

Qualified Sample Results Due to Outlying MS/MSD Results
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Parameter	Sample ID	Analyte	MS	MSD	RPD (percent)	Control Limits		Qualified Result	Units
			% Recovery	% Recovery		% Recovery	RPD		
PCBs	SB06-1.0-1.5-1022	(PCB 114) 2,3,4,4',5-Pentachlorobiphenyl	198	195	1	60.0-135.0	20	183 J+	ng/kg

Notes:

MS - Matrix Spike

MSD - Matrix Spike Duplicate

RPD - Relative Percent Difference

J+ - Estimated concentration; implied high bias

PCBs - Polychlorinated Biphenyls

Table 6

Qualified Sample Data Due to Variability in Field Duplicate Results
Surface Soil Sampling
Union Pacific Railroad (UPRR) - Peninsula Iron Works
Portland, Oregon
October - November 2022

Parameter	Analyte	RPD	Sample ID	Qualified Result	Field Duplicate Sample ID	Qualified Result	Units
PCBs	Aroclor-1260 (PCB-1260)	173.6	SB02-0.0-0.5-1022	11500 J	SB02D-0.0-0.5-1022	6740 J	µg/kg
		55.8	SB04-0.0-0.5-1022	433 J	SB04D-0.0-0.5-1022	244 J	µg/kg

Notes:

RPD - Relative Percent Difference (i.e., >50% for waters/air or >100% for soils)

J - Estimated concentration

PCBs - Polychlorinated Biphenyls