Port of Seattle
Lora Lake Apartments Site

2020 Annual Compliance Monitoring Report

Prepared for

Port of Seattle
Aviation Environmental Programs
Seattle-Tacoma International Airport
17900 International Boulevard, Suite 402
SeaTac, Washington 98188-4238

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FLOYD | SNIDER
strategy ▪ science ▪ engineering
Two Union Square • 601 Union Street • Suite 600
Seattle, Washington 98101 • tel: 206.292.2078

LIMITATIONS

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2020 Annual Compliance Monitoring Report

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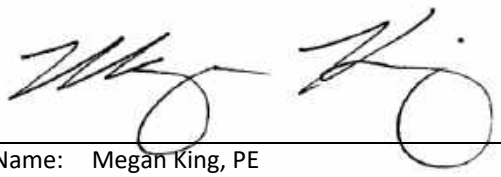
The Port of Seattle
under the supervision of:



Name: Megan King, PE
Date: March 19, 2021

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List of Acronyms and Abbreviations

Acronym/ Abbreviation	Definition
ARI	Analytical Resources, Inc.
bgs	Below ground surface
CD	Consent Decree
CMP	Compliance Monitoring Plan
DMCA	1982 Dredged Material Containment Area
Ecology	Washington State Department of Ecology
µg/L	Micrograms per liter
pg/g	Picograms per gram
pg/L	Picograms per liter
Port	Port of Seattle

Acronym/ Abbreviation	Definition
Site	Lora Lake Apartments Site
TEQ	Toxic equivalent
USEPA	U.S. Environmental Protection Agency

1.0 Introduction

This Annual Compliance Monitoring Report was prepared by Floyd|Snider on behalf of the Port of Seattle (Port) to document the compliance monitoring events conducted in 2020 at the Lora Lake Apartments Site (Site) in Burien, Washington. Compliance monitoring activities were conducted in accordance with the 2015 Compliance Monitoring Plan (CMP), revised and finalized in 2020 and included as Appendix R to the Construction As-Built Report for the Site (Floyd|Snider 2020a, 2021).

The objective of this report is to describe the compliance monitoring program activities performed from January through December 2020. This report includes the results from compliance monitoring activities including groundwater compliance monitoring, sediment remedy compliance monitoring, and wildlife barrier and cap performance inspections at the Site. The cumulative data from these events will be used to confirm the effectiveness of the remedial action and identify when site-wide compliance with groundwater cleanup standards for the Site have been achieved.

1.1 BACKGROUND

1.1.1 Site Description

The Site is located at 15001 Des Moines Memorial Drive South in Burien, Washington, and is composed of three separate parcels: the Lora Lake Apartments Parcel, the Lora Lake Parcel, and the 1982 Dredged Material Containment Area (DMCA). The Lora Lake Apartments Parcel is northwest of Des Moines Memorial Drive South at the location of the former Lora Lake Apartments complex. The Lora Lake Parcel is located southeast of the Lora Lake Apartments Parcel, on the east side of Des Moines Memorial Drive South, within the Seattle-Tacoma International Airport property. The DMCA is adjacent to the Lora Lake Parcel to the northeast, also located within the airport property. All parcels are identified in Figure 1.1. Historical operations at the Lora Lake Apartments Parcel included barrel-washing and auto-wrecking operations, which along with site regrading led to soil and groundwater contamination throughout the Site.

The Port and the Washington State Department of Ecology (Ecology) entered a Consent Decree (CD) in September 2015 under the mutual objective of providing remedial action at the Site. The CD required the Port to perform a final cleanup action and associated compliance monitoring at the Site as described in the Cleanup Action Plan (CAP; State of Washington 2015).

1.1.2 Remedial Actions Implemented

As described in the CAP, the remedial actions at the Site were determined for each parcel. The Lora Lake Apartments Parcel remedial actions taken include excavation of soils with a dioxin/furan toxic equivalent (TEQ) greater than 100 picograms per gram (pg/g), construction of a temporary clean soil cap, and future implementation of a constructed engineered surface to contain remaining soils with concentrations greater than the dioxin/furan TEQ cleanup level of

13 pg/g at the time of future site redevelopment. The excavation and temporary cap were completed in 2018. The Lora Lake Parcel remedial actions taken include construction of a sand cap, followed by site restoration into an intermittent scrub/shrub wetland. The sand cap was completed in 2019, and the wetland restoration was completed in early 2020. DMCA remedial actions completed include construction of a wildlife barrier. Restrictive Covenants limiting future site uses are also implemented for all parcels, for protection from contact with contamination remaining in place. Compliance monitoring of the remedial actions is being conducted under the CMP (Floyd|Snider 2020a).

1.1.3 Compliance Monitoring Requirements

In accordance with Washington Administrative Code 173-340-410, compliance monitoring of site groundwater is required to confirm that human health and the environment are adequately protected, the remedial action has achieved the cleanup standards, and the cleanup action remains protective after cleanup standards have been met.

The Ecology-approved CMP includes requirements for each of the three parcels of the Site. Requirements for the Lora Lake Apartments Parcel include analysis of groundwater for arsenic, pentachlorophenol, and dioxins/furans and four consecutive events with concentrations less than the established cleanup levels throughout the monitoring network prior to termination of sampling. The CMP also includes annual inspections of the soil cap to identify and document general condition, as well as any areas of exposed underlying soil, loss of barrier material, or substantial plant growth that may impact the functionality of the cap.

The Lora Lake Parcel requirements include annual analysis of groundwater for arsenic and dioxin/furans. Groundwater data will be subject to a 5-year periodic review to assess appropriate monitoring frequency for the next 5 years, and subsequent 5-year reviews will set the frequency for the following 5-year period. Additionally, as described in the CMP, sediment remedy compliance will also be evaluated every 5 years, through a statistical comparison of Lora Lake Parcel groundwater quality to site vicinity groundwater quality, for assessment of the sediment cap performance to contain contamination in the now-contained subsurface sediment beneath the restored wetland.

Compliance monitoring requirements at the DMCA include annual wildlife barrier physical inspections to identify and document general condition, as well as any areas of exposed underlying soil, loss of barrier material, or substantial plant growth that may impact the functionality of the wildlife barrier.

2.0 Lora Lake Apartments Parcel

2.1 COMPLIANCE MONITORING PLAN ACTIVITIES COMPLETED

Compliance monitoring at the Lora Lake Apartments Parcel began in December 2018. Four consecutive quarters of groundwater samples with pentachlorophenol and dioxin/furan concentrations less than cleanup levels were collected at MW-C1, MW-C2, and MW-C3 during the December 2018, March 2019, June 2019, and September 2019 monitoring events. With Ecology's approval, sampling for pentachlorophenol and dioxin/furan analysis was terminated after the September 2019 event. Sampling for dissolved arsenic will continue as discussed below.

Groundwater samples, as described in this report, were collected from the full monitoring network (MW-C1, MW-C2, MW-C3, and MW-C4) on March 30, 2020, and June 20, 2020. In August 2020, Floyd|Snider submitted the *Evaluation of Arsenic in Groundwater at the Lora Lake Apartments Site* memorandum (hereafter referred to as the Arsenic Evaluation Memorandum; Floyd|Snider 2020b) to Ecology on behalf of the Port to describe outlier arsenic data trends observed at MW-C2 and propose a change in the monitoring approach.

As described in the Arsenic Evaluation Memorandum, seasonal exceedances of arsenic concentrations correlated with elevated pH and high groundwater table elevation may be associated with the crushed concrete fill placed after the demolition of the Lora Lake Apartments buildings and excavation of underlying impacted soil. This recycled concrete was placed above the historical high water table elevation but may be impacting pH and arsenic in groundwater during the wet season. Because the pattern observed at MW-C2 is unique to the location and not observed within the rest of the monitoring network, the Port requested quarterly sampling of the full monitoring network to be terminated. The Port proposed annual sampling of MW-C2 and downgradient location MW-C3 during the wet season to continue to confirm that elevated arsenic concentrations are not migrating off site.

On September 21, 2020, Ecology approved the proposed approach of terminating quarterly sampling at the Lora Lake Apartments Parcel and coordinating annual sampling of MW-C2 and the downgradient location, MW-C3, concurrent with Lora Lake annual monitoring each spring (refer to Appendix A). Annual monitoring of MW-C2 and MW-C3 will help determine whether conditions are improving or worsening, as well as if arsenic-impacted waters are migrating off property. The first round of annual monitoring of MW-C2 and MW-C3 occurred on October 27, 2020, due to sampling schedule impacts related to the COVID-19 pandemic. Future annual monitoring will occur annually in the spring.

2.2 GROUNDWATER COMPLIANCE MONITORING SUMMARIES

This section presents a summary of the actions taken during each Lora Lake Apartments Parcel groundwater monitoring event between January and December 2020. The groundwater monitoring network is presented on Figure 2.1. Groundwater sample collection forms for each event are included in Appendix B.

2.2.1 First Event: March 30, 2020

The first compliance monitoring event of 2020 took place on March 30, 2020. Groundwater samples were collected from MW-C1, MW-C2, MW-C3, and MW-C4 using standard low-flow sampling methods with a duplicate sample collected at MW-C1 for laboratory quality control. The collected samples were generally clear with no apparent odor, with the exception of the sample collected at MW-C2, which had a slight yellow tint. Purge water was collected and placed in an on-site, labeled, 55-gallon drum for future disposal by the Port. All samples were submitted to Analytical Resources, Inc. (ARI) under chain-of-custody procedures for analysis of arsenic.

2.2.2 Second Event: June 20, 2020

The second compliance monitoring event of 2020 took place on June 20, 2020. Groundwater samples were collected from MW-C1, MW-C2, MW-C3, and MW-C4 using standard low-flow sampling methods with a duplicate sample collected at MW-C1 for laboratory quality control. The collected samples were generally clear with no apparent odor, with the exception of the sample collected at MW-C2, which had a slight yellow tint. Purge water was collected and placed in an on-site, labeled, 55-gallon drum for future disposal by the Port. All samples were submitted to ARI under chain-of-custody procedures for analysis of arsenic.

2.2.3 MW-C2 and MW-C3 Annual Monitoring: October 27, 2020

MW-C2 and MW-C3 were sampled in coordination with the Lora Lake Parcel annual groundwater monitoring event on October 27, 2020. Groundwater samples were collected using standard low-flow sampling methods. The collected samples were generally clear, with no apparent odor. Purge water was collected and placed in an on-site, labeled, 55-gallon drum for future disposal by the Port. All samples were submitted to ARI under chain-of-custody procedures for analysis of arsenic.

2.3 GROUNDWATER ANALYTICAL SUMMARY

This section summarizes the analytical results for arsenic. Analytical results are presented in Figure 2.1 and Table 2.1, and laboratory reports and data validation summaries are included in Appendix C.

2.3.1 Arsenic

Arsenic concentrations in all samples collected from wells MW-C1, MW-C3, and MW-C4 were less than the Site cleanup level of 5 micrograms per liter (µg/L), at concentrations less than 0.5 µg/L. Arsenic concentrations at MW-C2 were greater than the other wells within the monitoring well network with concentrations typically ranging between 3.1 and 27.1 µg/L. Concentrations at MW-C2 were less than the Site cleanup level of 5 µg/L during one of the three monitoring events.

The elevated arsenic concentration on March 30, 2020, is consistent with the trend observed in 2019. The likely cause of elevated arsenic at MW-C2 was evaluated and described in the

Arsenic Evaluation Memorandum (Floyd|Snider 2020b). Arsenic concentrations in MW-C2 and field parameters collected during sample collection are shown in Table 2.2.

2.3.2 Data Validation

A Compliance Screening (Stages 1 and 2A) data quality review was performed on metals data resulting from laboratory analysis by U.S. Environmental Protection Agency (USEPA) Methods 200.8. The analytical data were validated by Floyd|Snider in accordance with the USEPA *National Functional Guidelines for Organic Superfund Methods Data Review* (USEPA 2017a) and USEPA *National Functional Guidelines for Inorganic Superfund Methods Data Review* (USEPA 2017b).

For all analyses, the analytical holding times were met, and the method blanks had no detections. The surrogate, matrix spike, matrix spike duplicate, and laboratory control sample recoveries and sample/sample duplicate relative percent differences all met USEPA requirements. No qualifiers were added to the analytical results for volatile organic compounds or metals based on the data quality review. Metals data are determined to be of acceptable quality for use as reported by the laboratory.

2.4 TEMPORARY SOIL CAP INSPECTION

On October 27, 2020, a cap inspection was conducted to document the integrity of the temporary soil cap that was installed at the Lora Lake Apartments Parcel in October 2017. The cap inspection was conducted in accordance with the CMP. During the cap inspection, areas in need of repair were documented along the southern property fence due to animal burrowing and exposed geofabric material placed on slopes. Site-wide plant overgrowth requiring general maintenance and landscaping was also noted. The temporary soil cap inspection log and photographs are included in Appendix D. Instruction for required maintenance of the temporary soil cap was provided to the remediation contractor, as part of required landscape operations and maintenance. Maintenance activities will be conducted in spring 2021 prior to completion of the contractor's maintenance contract period.

3.0 Lora Lake Parcel

3.1 COMPLIANCE MONITORING PLAN ACTIVITIES COMPLETED

In preparation for annual groundwater monitoring, a full site reconnaissance was conducted on June 20, 2020, to locate wells and confirm that all well locations were in good condition. Well location HC00-B311 was found in very poor condition. The well had severely cracked and damaged polyvinyl chloride (PVC) casing, which required replacement before sampling could be conducted. On April 24, 2020, HC00-B311 was decommissioned by Cascade Drilling by overdrilling, and MW-VB3 was installed as a replacement well. MW-VB3 is located 4 feet west of the HC00-B311 location. Similar to HC00-B311, MW-VB3 was completed above ground surface and has a total depth of 18 feet below ground surface (bgs) with a single 10-slot PVC screen placed at an interval of 8 to 18 feet bgs. At the time of drilling, the depth to water was 10 feet bgs. The well decommissioning log for HC00-B311 and the well log for MW-VB3 are included in Appendix E.

Annual monitoring of the Lora Lake Parcel was set to take place in spring 2020; however, the initial monitoring event was delayed because of the COVID-19 pandemic. With Ecology approval, the annual groundwater monitoring event was rescheduled for the fall wet season and was conducted on October 27, 2020. Future annual monitoring events will be scheduled each spring, as described in the CMP.

In accordance with the CMP, on-site and vicinity well locations were sampled for arsenic and dioxins/furans. The full monitoring network includes on-site well locations MW-CP1, MW-CP2, MW-CP3, MW-CP4, MW-CP5, MW-CP6, and MW-CP-7, as well as vicinity well locations MW-VB1, MW-VB2, MW-VB3, and HC00-B312 (Figure 3.1). During the 2020 monitoring event, location MW-VB2 was unable to be sampled because it was dry with noted potential buildup at the bottom of the well. Contingency actions for MW-VB2 are described in Section 5.2.

3.2 GROUNDWATER COMPLIANCE MONITORING SUMMARY

This section summarizes the compliance monitoring events at the Lora Lake Parcel in 2020. The monitoring network is presented in Figure 3.1, and the groundwater sample collection forms are in Appendix B.

On October 27, 2020, groundwater samples were collected from the monitoring network, with the exception of location MW-VB2, using standard low-flow groundwater sampling methods. A duplicate sample was collected at MW-CP2 for laboratory quality control. Samples were generally clear with no visible turbidity and no apparent odor. Purge water was collected and placed in an on-site, labeled, 55-gallon drum for future disposal by the Port. All samples were submitted to ARI under chain-of-custody procedures for analysis of arsenic and dioxins/furans.

3.3 GROUNDWATER ANALYTICAL SUMMARY

This section summarizes the analytical results for arsenic and dioxins/furans. Analytical results are presented in Figure 3.1 and Table 3.1, and laboratory reports and data validation summaries are included in Appendix C.

3.3.1 Arsenic

Arsenic concentrations in all samples collected from all on-site wells and all vicinity wells were less than the Site cleanup level of 5 µg/L. Arsenic concentrations within the monitoring well network were typically less than 0.5 µg/L, with exception of MW-CP4 and MW-CP5 located south and southeast of the former Lora Lake footprint (Figure 3.1). MW-CP4 and MW-CP5 had the greatest arsenic concentrations with results of 3.2 and 1.1 µg/L, respectively.

3.3.2 Dioxins/Furans

Dioxin/furan concentrations from all on-site wells and vicinity wells were less than the Site cleanup level of 6.7 picograms per liter (pg/L). Dioxin/furan concentrations within the monitoring network ranged between 1.14 and 1.78 pg/L.

3.3.3 Data Validation

A Compliance Screening (Stages 1 and 2A) data quality review was performed on metals data resulting from laboratory analysis by USEPA Method 200.8. The analytical data were validated by Floyd|Snider in accordance with the USEPA *National Functional Guidelines for Inorganic Superfund Methods Data Review* (USEPA 2017b). A Full Validation (Level IV, Tier III Data Quality Review) was performed on dioxin/furan data resulting from laboratory analysis by USEPA Method 1613B. The dioxin/furan data were validated by EcoChem. EcoChem data validation reports are included in Appendix C.

For all analyses, the analytical holding times were met, and the method blanks had no detections. The surrogate, matrix spike, matrix spike duplicate, and laboratory control sample recoveries and sample/sample duplicate relative percent differences all met USEPA requirements. No qualifiers were added to the analytical results for metals based on the data quality review. Metals data are determined to be of acceptable quality for use as reported by the laboratory. Data validation qualifiers were added to the analytical results for dioxins/furans, as needed. Dioxin/furan data, as qualified, were also determined to be acceptable for use.

3.3.4 Sediment Remedy Confirmation Monitoring

As detailed in the CMP, the sediment cap is designed to achieve compliance with surface water quality criteria at the cap surface. The surface water quality criterion of 0.005 pg/L dioxin/furan TEQ is significantly less than current laboratory practical quantitation limits. As described in the CMP, statistical comparison of groundwater confirmation samples collected within and downgradient of the former Lora Lake cleanup area will be conducted for confirmation of the sediment remedy performance. This statistical comparison method for confirmation monitoring

samples provides a measurable method to determine if groundwater samples collected immediately above the sediment cap are different than samples collected from site vicinity background locations. This statistical analysis will be conducted after 5 years of annual monitoring, to provide vicinity background and site data sets with a minimum of 20 results each. Statistical comparison will be conducted in accordance with the procedures described in the CMP.

4.0 1982 Dredged Material Containment Area

4.1 WILDLIFE BARRIER INSPECTION

The DMCA wildlife barrier was inspected on October 27, 2020. Excessive dust and organic debris requiring removal was documented along the eastern and southern borders and the southwest corner of the DMCA area. This debris and dust was associated with a large deciduous tree at the corner of the DMCA and planting maintenance activities conducted in the planting swale installed on the eastern side of the parcel. However, the general integrity and condition of the pervious pavement was in good condition, with no deficiencies observed. The wildlife barrier inspection log is included in Appendix D. The Port removed organic debris and dust from the DMCA wildlife barrier in early January 2021. Photographs of the cleaned barrier surface are included in Appendix D.

5.0 Upcoming Events and Next Steps

5.1 LORA LAKE APARTMENTS PARCEL TEMPORARY CAP MAINTENANCE

The Port has provided notice to the remediation contractor that temporary soil cap repairs and maintenance are required at the Lora Lake Apartments Parcel. Before May 28, 2021, the contractor will remove weeds and small volunteer trees from the Gravel Access Road, mow site-wide and replant in bare dirt areas, and complete maintenance and reseeding of the temporary soil cap.

5.2 2021 COMPLIANCE MONITORING

Annual groundwater and sediment remedy compliance monitoring at the Lora Lake Parcel will continue in spring 2021 to return to the original schedule as set in the CMP. Annual groundwater sampling of Lora Lake Apartments Parcel well locations MW-C2 and MW-C3 will be coordinated with the Lora Lake Parcel sampling schedule.

Additionally, redevelopment of well location MW-VB2 will take place prior to the annual monitoring event to address the noted buildup prior to sample collection. If redevelopment does not address the issue, the Port will coordinate with Ecology about contingency measures for this site vicinity background monitoring location.

The temporary soil cap at the Lora Lake Apartments Parcel and the wildlife barrier at the DMCA will be inspected concurrent with the annual groundwater and sediment remedy compliance monitoring event.

6.0 References

Floyd|Snider. 2020a. *Port of Seattle Lora Lake Apartments Site Compliance Monitoring Plan*. Originally published September 2015, figures revised May 2020.

_____. 2020b. *Evaluation of Arsenic in Groundwater at the Lora Lake Apartments Site.* Memorandum from Adia Jumper, Mark Jusayan, and Megan King, Floyd|Snider, to Sunny Becker, Washington State Department of Ecology. 17 August.

_____. 2021. *Port of Seattle Lora Lake Apartments Site Construction As-Built Report.* 22 January.

State of Washington. 2015. *Consent Decree re: Lora Lake Apartments Site, Burien, Washington*. 9 September.

U.S. Environmental Protection Agency (USEPA). 2017a. *National Functional Guidelines for Organic Superfund Methods Data Review*. EPA-540-R-2017-002. January.

_____. 2017b. *National Functional Guidelines for Inorganic Superfund Methods Data Review*. EPA-540-R-2017-001. January.

Lora Lake Apartments Site

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Tables

Table 2.1
Lora Lake Apartments Parcel Groundwater Analytical Data

		Location	Site Cleanup Level	MW-C1									
		Sample ID		MW-C1-121218	MW-C1-121218-D	MW-C1-031519	MW-C1-031519-D	MW-C1-062119	MW-C1-062119-D	MW-C1-092019	MW-C1-092019-D	MW-C1-121819	MW-C1-121819-D
		Sample Date		12/12/18	12/12/18	3/15/19	3/15/19	6/21/19	6/21/19	9/20/19	9/20/19	12/18/19	12/18/19
Analyte	**CAS No.**	**Units**											
Dissolved Metals by USEPA 200.8													
Arsenic	7440-38-2	µg/L	5	0.11 JQ	0.11 JQ	0.11 JQ	0.096 JQ	0.15	0.12	0.16 JQ	0.15 JQ	0.10 JQ	0.091 JQ
Phenols by USEPA 8041A													
Pentachlorophenol	87-86-5	µg/L	1	0.025 U	0.025 U	0.025 U	0.025 U	0.025	0.025	0.025 U	0.025 U		
Dioxins/Furans by USEPA 1613B													
2,3,7,8-TCDD (Dioxin)	1746-01-6	pg/L	--	0.520 U	0.290 U	2.68 U	1.65 U	1.01 U	0.860 U	2.11 U	1.53 U		
1,2,3,7,8-PeCDD	40321-76-4	pg/L	--	0.490 U	0.350 U	3.25 U	1.64 U	1.02 U	0.990 U	1.17 U	1.48 U		
1,2,3,4,7,8-HxCDD	39227-28-6	pg/L	--	0.470 U	0.330 U	3.02 U	1.71 U	0.850 U	0.920 U	1.28 U	1.83 U		
1,2,3,6,7,8-HxCDD	57653-85-7	pg/L	--	0.430 U	0.320 U	2.95 U	1.72 U	0.790 U	0.860 U	1.11 U	1.68 U		
1,2,3,7,8,9-HxCDD	19408-74-3	pg/L	--	0.470 U	0.340 U	3.11 U	1.79 U	0.850 U	0.920 U	1.22 U	1.80 U		
1,2,3,4,6,7,8-HpCDD	35822-46-9	pg/L	--	1.48 U	0.980 U	11.0 U	2.11 UJ	1.54 UJ	1.24 UJ	2.04 U	1.60 U		
OCDD	3268-87-9	pg/L	--	3.37 J	5.71 J	148 J	9.90 J	4.65 UJ	5.59 UJ	7.48 UJ	15.5 U		
2,3,7,8-TCDF	51207-31-9	pg/L	--	0.380 U	0.340 U	2.64 U	1.67 U	1.32 U	1.10 U	1.95 U	1.45 U		
1,2,3,7,8-PeCDF	57117-41-6	pg/L	--	0.450 U	0.310 U	3.47 U	1.71 U	1.89 UJ	1.50 U	1.16 U	1.42 U		
2,3,4,7,8-PeCDF	57117-31-4	pg/L	--	0.410 U	0.280 U	3.14 U	1.53 U	1.43 U	1.24 U	0.930 U	1.15 U		
1,2,3,4,7,8-HxCDF	70648-26-9	pg/L	--	0.260 U	0.240 U	1.80 U	1.01 U	0.470 UJ	0.430 U	0.980 U	1.34 U		
1,2,3,6,7,8-HxCDF	57117-44-9	pg/L	--	0.260 U	0.250 U	1.86 U	1.01 U	0.500 UJ	0.450 UJ	0.960 U	1.42 U		
1,2,3,7,8,9-HxCDF	72918-21-9	pg/L	--	0.280 U	0.650 U	2.10 U	1.11 U	0.530 UJ	0.460 U	1.04 U	1.45 U		
2,3,4,6,7,8-HxCDF	60851-34-5	pg/L	--	0.260 U	0.240 U	1.66 U	0.960 U	0.450 UJ	0.410 UJ	0.980 U	1.34 U		
1,2,3,4,6,7,8-HpCDF	67562-39-4	pg/L	--	0.270 U	0.290 U	1.74 U	1.20 U	0.420 UJ	0.580 UJ	1.02 U	0.720 U		
1,2,3,4,7,8,9-HpCDF	55673-89-7	pg/L	--	0.370 U	0.250 U	2.36 U	1.70 UJ	0.600 UJ	0.860 UJ	1.69 U	1.06 U		
OCDF	39001-02-0	pg/L	--	1.22 UJ	0.860 UJ	11.2 UJ	4.23 UJ	1.53 UJ	1.99 UJ	2.65 UJ	2.15 U		
Dioxin/furan TEQ	--	pg/L	6.7	0.726 J	0.512 J	4.57 J	2.48 J	1.56 UJ	1.43 UJ	2.30 UJ	2.30 U		

Notes:

Blank cells are intentional.

Results for dioxins/furans are rounded to three significant figures. All other results are rounded to two significant figures.

-- Not available.

BOLD/RED Analyte detected at a concentration greater than the site cleanup level.

Abbreviations:

CAS Chemical Abstracts Service
HpCDD Heptachlorodibenzo-p-dioxin
HpCDF Heptachlorodibenzofuran
HxCDD Hexachlorodibenzo-p-dioxin
HxCDF Hexachlorodibenzofuran
µg/L Micrograms per liter
OCDD Octachlorodibenzodioxin
OCDF Octachlorodibenzofuran
PeCDD Pentachlorodibenzo-p-dioxin
PeCDF Pentachlorodibenzofuran
pg/L Picograms per liter
TCDD Tetrachlorodibenzo-p-dioxin
TCDF Tetrachlorodibenzofuran
TEQ Toxic equivalent

Qualifiers:

J Analyte was detected; concentration is considered to be an estimate.
JQ Analyte was detected between the method detection limit and reporting limit; concentration is considered to be an estimate.
U Analyte was not detected at the given reporting limit.
UJ Analyte was not detected; concentration given is the reporting limit, which is considered to be an estimate.

Table 2.1
Lora Lake Apartments Parcel Groundwater Analytical Data

		Location	Site	MW-C1 (cont.)				MW-C2							
		Sample ID		MW-C1-033020	MW-C1-033020-D	MW-C1-061720	MW-C1-061720-D	MW-C2-121218	MW-C2-031519	MW-C2-062119	MW-C2-092019	MW-C2-121819	MW-C2-033020	MW-C2-061720	MW-C2-102820
		Sample Date	Cleanup	3/30/20	3/30/20	6/17/20	6/17/20	12/12/18	3/15/19	6/21/19	9/20/19	12/18/19	3/30/20	6/17/20	10/28/20
Analyte	CAS No.	Units	Level												
Dissolved Metals by USEPA 200.8															
Arsenic	7440-38-2	µg/L	5	0.12 JQ	0.13 JQ	0.14 JQ	0.14 JQ	2.6	**14**	3.7	2.1	1.9	**27**	**11**	3.1
Phenols by USEPA 8041A															
Pentachlorophenol	87-86-5	µg/L	1					0.062	0.69	0.051	0.031				
Dioxin/Furans by USEPA 1613B															
2,3,7,8-TCDD (Dioxin)	1746-01-6	pg/L	--					0.370 U	2.41 U	1.94 U	1.94 U				
1,2,3,7,8-PeCDD	40321-76-4	pg/L	--					0.440 U	3.25 U	1.82 U	1.17 U				
1,2,3,4,7,8-HxCDD	39227-28-6	pg/L	--					0.530 U	3.69 U	1.20 U	1.50 U				
1,2,3,6,7,8-HxCDD	57653-85-7	pg/L	--					0.900 U	4.96 J	1.11 U	1.29 U				
1,2,3,7,8,9-HxCDD	19408-74-3	pg/L	--					0.550 U	3.65 U	1.19 U	1.42 U				
1,2,3,4,6,7,8-HpCDD	35822-46-9	pg/L	--					22.5	86.5	47.8	14.8				
OCDD	3268-87-9	pg/L	--					232 J	553	515 J	126 J				
2,3,7,8-TCDF	51207-31-9	pg/L	--					0.450 U	3.49 U	1.87 U	1.69 U				
1,2,3,7,8-PeCDF	57117-41-6	pg/L	--					0.670 U	2.62 U	1.67 U	1.42 U				
2,3,4,7,8-PeCDF	57117-31-4	pg/L	--					0.400 U	2.35 U	1.42 U	1.10 U				
1,2,3,4,7,8-HxCDF	70648-26-9	pg/L	--					0.550 J	1.87 U	1.26 U	1.11 U				
1,2,3,6,7,8-HxCDF	57117-44-9	pg/L	--					0.450 U	1.89 U	1.27 U	1.12 U				
1,2,3,7,8,9-HxCDF	72918-21-9	pg/L	--					0.330 U	2.08 U	1.31 U	1.25 U				
2,3,4,6,7,8-HxCDF	60851-34-5	pg/L	--					0.530 J	1.70 U	1.15 U	1.10 U				
1,2,3,4,6,7,8-HpCDF	67562-39-4	pg/L	--					4.71 J	13.8	12.0 U	3.60 U				
1,2,3,4,7,8,9-HpCDF	55673-89-7	pg/L	--					0.580 U	2.03 U	1.84 U	0.740 U				
OCDF	39001-02-0	pg/L	--					21.2 J	40.5	45.2 J	13.8 J				
Dioxin/furan TEQ	--	pg/L	6.7					1.09 J	5.83 J	3.35 J	2.48 J				

Notes:

Blank cells are intentional.

Results for dioxins/furans are rounded to three significant figures. All other results are rounded to two significant figures.

-- Not available.

BOLD/RED Analyte detected at a concentration greater than the site cleanup level.

Abbreviations:

CAS Chemical Abstracts Service
HpCDD Heptachlorodibenzo-p-dioxin
HpCDF Heptachlorodibenzofuran
HxCDD Hexachlorodibenzo-p-dioxin
HxCDF Hexachlorodibenzofuran
µg/L Micrograms per liter
OCDD Octachlorodibenzodioxin
OCDF Octachlorodibenzofuran
PeCDD Pentachlorodibenzo-p-dioxin
PeCDF Pentachlorodibenzofuran
pg/L Picograms per liter
TCDD Tetrachlorodibenzo-p-dioxin
TCDF Tetrachlorodibenzofuran
TEQ Toxic equivalent

Qualifiers:

J Analyte was detected; concentration is considered to be an estimate.
JQ Analyte was detected between the method detection limit and reporting limit; concentration is considered to be an estimate.
U Analyte was not detected at the given reporting limit.
UJ Analyte was not detected; concentration given is the reporting limit, which is considered to be an estimate.

Table 2.1
Lora Lake Apartments Parcel Groundwater Analytical Data

		Location	Site Cleanup Level	MW-C3								MW-C4			
		Sample ID		MW-C3-121218	MW-C3-031519	MW-C3-062119	MW-C3-092019	MW-C3-121819	MW-C3-033020	MW-C3-061720	MW-C3-102820	MW-10-092019	MW-10-121819	MW-C4-033020	MW-C4-061720
		Sample Date		12/12/18	3/15/19	6/21/19	9/20/19	12/18/19	3/30/20	6/17/20	10/28/20	9/20/19	12/18/19	3/30/20	6/17/20
Analyte	**CAS No.**	**Units**													
Dissolved Metals by USEPA 200.8															
Arsenic	7440-38-2	µg/L	5	0.24	0.26	0.20	0.22	0.22	0.25	0.22	0.22	0.47	0.42	0.37	0.49
Phenols by USEPA 8041A															
Pentachlorophenol	87-86-5	µg/L	1	0.025 U	0.025 U	0.025	0.025 U					0.025 U			
Dioxin/Furans by USEPA 1613B															
2,3,7,8-TCDD (Dioxin)	1746-01-6	pg/L	--	0.350 U	0.650 U	2.01 U	1.71 U					1.73 U			
1,2,3,7,8-PeCDD	40321-76-4	pg/L	--	0.330 U	0.670 U	1.14 U	1.34 U					0.980 U			
1,2,3,4,7,8-HxCDD	39227-28-6	pg/L	--	0.390 U	0.770 U	1.02 U	1.55 UJ					0.960 U			
1,2,3,6,7,8-HxCDD	57653-85-7	pg/L	--	0.380 U	0.730 U	0.940 U	1.39 U					0.870 U			
1,2,3,7,8,9-HxCDD	19408-74-3	pg/L	--	0.400 U	0.780 U	1.01 U	1.50 U					0.930 U			
1,2,3,4,6,7,8-HpCDD	35822-46-9	pg/L	--	0.520 U	1.03 U	1.45 U	1.60 U					1.45 U			
OCDD	3268-87-9	pg/L	--	3.23 J	9.11 J	4.34 J	4.98 UJ					10.7 U			
2,3,7,8-TCDF	51207-31-9	pg/L	--	0.310 U	0.710 U	1.49 U	1.92 U					1.82 U			
1,2,3,7,8-PeCDF	57117-41-6	pg/L	--	0.310 U	0.820 U	1.23 U	1.19 U					1.03 U			
2,3,4,7,8-PeCDF	57117-31-4	pg/L	--	0.290 U	0.750 U	1.00 U	0.960 U					0.850 U			
1,2,3,4,7,8-HxCDF	70648-26-9	pg/L	--	0.180 U	0.540 U	0.800 U	0.750 U					0.720 U			
1,2,3,6,7,8-HxCDF	57117-44-9	pg/L	--	0.180 U	0.510 U	0.830 U	0.720 U					0.700 U			
1,2,3,7,8,9-HxCDF	72918-21-9	pg/L	--	0.520 U	0.540 U	0.870 U	0.830 U					0.750 U			
2,3,4,6,7,8-HxCDF	60851-34-5	pg/L	--	0.180 U	0.500 U	0.760 U	0.740 U					0.700 U			
1,2,3,4,6,7,8-HpCDF	67562-39-4	pg/L	--	0.140 U	0.330 U	0.580 U	0.550 U					0.590 U			
1,2,3,4,7,8,9-HpCDF	55673-89-7	pg/L	--	0.180 U	0.440 U	0.750 UJ	0.810 U					0.860 U			
OCDF	39001-02-0	pg/L	--	0.690 UJ	1.02 U	2.82 UJ	2.76 UJ					2.80 U			
Dioxin/furan TEQ	--	pg/L	6.7	0.520 J	1.05 J	2.15 J	2.17 UJ					1.89 U			

Notes:

Blank cells are intentional.

Results for dioxins/furans are rounded to three significant figures. All other results are rounded to two significant figures.

-- Not available.

BOLD/RED Analyte detected at a concentration greater than the site cleanup level.

Abbreviations:

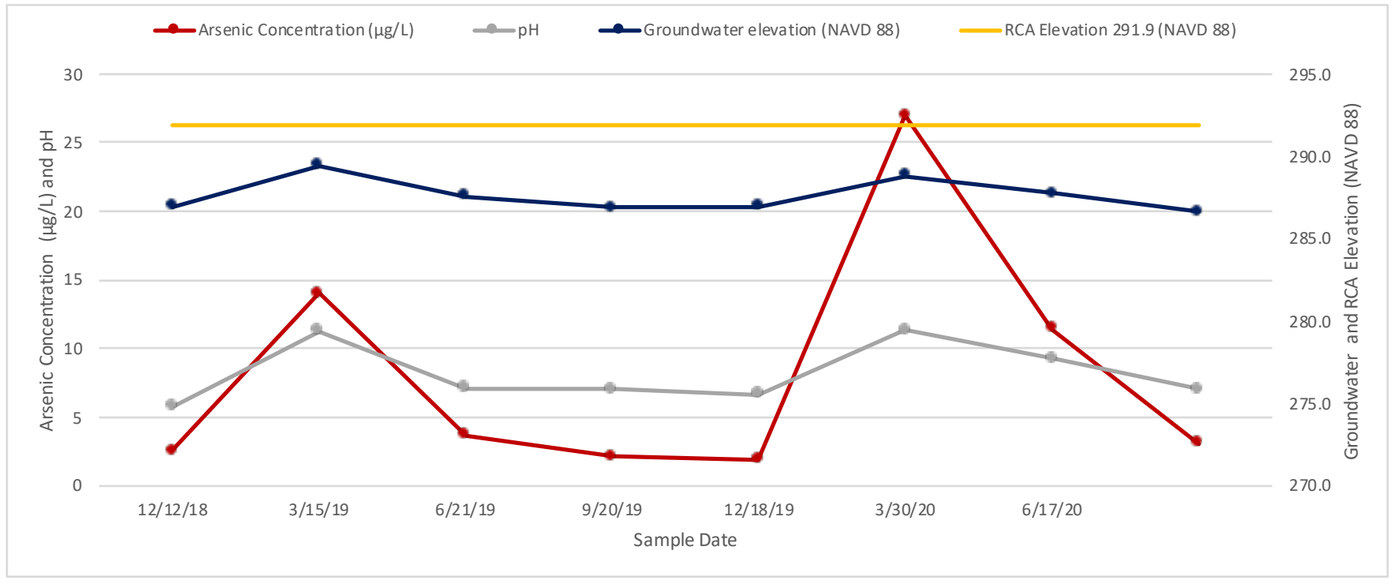
CAS Chemical Abstracts Service
HpCDD Heptachlorodibenzo-p-dioxin
HpCDF Heptachlorodibenzofuran
HxCDD Hexachlorodibenzo-p-dioxin
HxCDF Hexachlorodibenzofuran
µg/L Micrograms per liter
OCDD Octachlorodibenzodioxin
OCDF Octachlorodibenzofuran
PeCDD Pentachlorodibenzo-p-dioxin
PeCDF Pentachlorodibenzofuran
pg/L Picograms per liter
TCDD Tetrachlorodibenzo-p-dioxin
TCDF Tetrachlorodibenzofuran
TEQ Toxic equivalent

Qualifiers:

J Analyte was detected; concentration is considered to be an estimate.
JQ Analyte was detected between the method detection limit and reporting limit; concentration is considered to be an estimate.
U Analyte was not detected at the given reporting limit.
UJ Analyte was not detected; concentration given is the reporting limit, which is considered to be an estimate.

Table 2.2
MW-C2 Field Parameters and Arsenic Results

Date	12/12/18	3/15/19	6/21/19	9/20/19	12/18/19	3/30/20	6/17/20	10/28/20
Parameter								
Arsenic (µg/L)	2.6	**14**	3.7	2.1	1.9	**27**	**11**	3.1
Depth to water (feet BTOC)	17.4	14.9	16.7	17.4	17.4	15.5	16.6	17.7
Groundwater elevation (NAVD 88)	287.0	289.4	287.6	286.9	287.0	288.8	287.7	286.7
Distance from groundwater to RCA (feet)	4.9	2.5	4.3	5.0	4.9	3.1	4.2	5.2
Distance from max capillary fringe to RCA (feet) [(1)]	3.9	1.4	3.2	4.0	3.9	2.0	3.1	4.2
pH	5.8	11.3	7.1	7.1	6.7	11.4	9.3	7.1
Dissolved oxygen (mg/L)	0.00	0.57	0.24	0.32	1.76	0.37	0.35	0.40
Conductivity (mS/cm)	0.63	0.60	0.39	0.39	0.41	0.69	0.47	0.44
Turbidity (NTU)	0.0	14.2	3.0	5.3	1.8	2.3	3.1	1.1
ORP (mV)	41	26	-74	-96	21	-243	-105	-39



Notes:

Arsenic results are rounded to two significant figures; field parameter results are presented to equipment precision.

RED/BOLD Indicates exceedance of the site cleanup level of 5 µg/L.

1 The capillary fringe is the zone directly above the water table where groundwater seeps up into pore spaces through capillary action. Capillary fringe range for sand (feet): 0.56–1.05 (Shen, R., K. G. Pennell, and E. M. Suuberg. 2013. "Influence of Soil Moisture on Soil Gas Vapor Concentration for Vapor Intrusion." *Environmental Engineering Science* 30(10): 628–637).

Abbreviations:

BTOC	Below top of casing
µg/L	Micrograms per liter
mg/L	Milligrams per liter
mS/cm	Millisiemens per centimeter
mV	Millivolts
NAVD 88	North American Vertical Datum of 1988
NTU	Nephelometric turbidity units
ORP	Oxidation-reduction potential
RCA	Recycled concrete aggregate

Table 3.1
Lora Lake Parcel Groundwater Analytical Data

Location Group				On-Site Wells							
Location Name				MW-CP1	MW-CP2		MW-CP3	MW-CP4	MW-CP5	MW-CP6	MW-CP7
Sample ID			Site	MW-CP1-102720	MW-CP2-102720	MW-CP2-102720-D	MW-CP3-102720	MW-CP4-102720	MW-CP5-102720	MW-CP6-102720	MW-CP7-102720
Sample Date			Cleanup	10/27/20	10/27/20	10/27/20	10/27/20	10/27/20	10/27/20	10/27/20	10/27/20
Analyte	**CAS No.**	**Unit**	**Level**								
Arsenic by USEPA 200.8 UCT-KED											
Arsenic	7440-38-2	µg/L	5	0.46	0.21	0.24	0.41	0.098 JQ	3.2	1.1	0.42
Dioxins/Furans by USEPA 1613B											
2,3,7,8-TCDD (Dioxin)	1746-01-6	pg/L	--	1.05 U	0.960 U	0.800 U	1.03 U	1.05 U	0.780 U	0.930 U	0.670 U
1,2,3,7,8-PeCDD	40321-76-4	pg/L	--	0.870 U	0.950 U	0.620 U	0.840 U	0.940 U	0.670 U	0.920 UJ	0.660 U
1,2,3,4,7,8-HxCDD	39227-28-6	pg/L	--	1.37 U	1.06 U	0.780 U	1.36 U	1.41 U	0.670 U	1.40 U	0.810 U
1,2,3,6,7,8-HxCDD	57653-85-7	pg/L	--	1.20 U	0.900 U	0.650 U	1.18 U	1.21 U	0.630 UJ	1.20 U	0.680 U
1,2,3,7,8,9-HxCDD	19408-74-3	pg/L	--	1.43 U	1.09 U	0.790 U	1.41 U	1.46 U	0.720 U	1.44 U	0.830 U
1,2,3,4,6,7,8-HpCDD	35822-46-9	pg/L	--	9.24 U	1.68 U	1.26 U	2.03 U	2.57 U	2.18 J	1.32 U	3.02 J
OCDD	3268-87-9	pg/L	--	165 J	27.0 UJ	21.3 UJ	33.0 UJ	54.1 UJ	23.8 UJ	28.6 UJ	36.1 UJ
2,3,7,8-TCDF	51207-31-9	pg/L	--	1.16 U	1.15 U	0.800 U	1.39 U	1.23 U	0.780 U	0.990 U	0.740 U
1,2,3,7,8-PeCDF	57117-41-6	pg/L	--	1.64 U	1.39 U	1.11 U	1.29 U	1.83 U	1.32 U	1.53 UJ	1.14 U
2,3,4,7,8-PeCDF	57117-31-4	pg/L	--	1.51 U	1.26 U	0.990 U	1.17 U	1.65 U	1.18 U	1.42 UJ	1.01 U
1,2,3,4,7,8-HxCDF	70648-26-9	pg/L	--	0.850 U	0.610 U	0.440 U	0.790 U	0.720 U	0.590 U	0.700 U	0.540 U
1,2,3,6,7,8-HxCDF	57117-44-9	pg/L	--	0.880 U	0.570 U	0.430 U	0.740 U	0.650 U	0.570 U	0.690 U	0.500 U
1,2,3,7,8,9-HxCDF	72918-21-9	pg/L	--	1.25 U	0.900 U	0.630 U	1.20 U	1.05 U	0.760 U	1.09 U	0.790 U
2,3,4,6,7,8-HxCDF	60851-34-5	pg/L	--	0.900 U	0.600 U	0.460 U	0.820 U	0.770 U	0.560 U	0.720 U	0.570 U
1,2,3,4,6,7,8-HpCDF	67562-39-4	pg/L	--	2.35 U	0.560 U	0.550 U	0.880 U	0.600 U	0.680 U	0.660 U	0.510 U
1,2,3,4,7,8,9-HpCDF	55673-89-7	pg/L	--	1.23 U	0.840 U	0.790 U	1.14 U	0.960 U	0.760 U	1.06 U	0.730 U
OCDF	39001-02-0	pg/L	--	20.2 UJ	3.08 UJ	2.88 UJ	2.84 UJ	5.93 J	4.01 UJ	3.20 UJ	5.16 UJ
Dioxin/Furans (MTCA TEQ-HalfND)		pg/L	6.7	1.78 J	0.480 UJ	0.400 UJ	0.515 UJ	1.73 J	1.22 J	0.465 UJ	1.15 J

Notes:

Arsenic results are rounded to two significant figures; dioxin/furan results are rounded to three significant figures.

-- Not available.

1 On October 28, 202 MW-VB2 was dry and samples were unable to be collected.

Abbreviations:

CAS	Chemical Abstracts Service	OCDF	Octachlorodibenzofuran
HpCDD	Heptachlorodibenzo-p-dioxin	PeCDD	Pentachlorodibenzo-p-dioxin
HpCDF	Heptachlorodibenzofuran	PeCDF	Pentachlorodibenzofuran
HxCDD	Hexachlorodibenzo-p-dioxin	pg/L	Picograms per liter
HxCDF	Hexachlorodibenzofuran	TCDD	Tetrachlorodibenzo-p-dioxin
µg/L	Micrograms per liter	TCDF	Tetrachlorodibenzofuran
NS	Not sampled	TEQ	Toxic equivalent
OCDD	Octachlorodibenzodioxin		

Qualifiers:

J Analyte was detected; concentration is considered to be an estimate.

JQ Analyte was detected between the method detection limit and reporting limit; concentration is considered to be an estimate.

U Analyte was not detected at the given reporting limit.

UJ Analyte was not detected; concentration given is the reporting limit, which is considered to be an estimate.

Table 3.1
Lora Lake Parcel Groundwater Analytical Data

Location Group				Vicinity Wells				
Location Name				HCOO-B312	MW-C1/VB1		MW-VB2	MW-VB3
Sample ID			Site	HCOO-B312-102820	MW-C1/VB1-102820	MW-C101-102820	--	MW-VB3-102720
Sample Date			Cleanup	10/28/20	10/28/20	10/28/20	10/28/2020 (1)	10/27/20
Analyte	CAS No.	Unit	Level					
Arsenic by USEPA 200.8 UCT-KED								
Arsenic	7440-38-2	µg/L	5	0.17 JQ	0.16 JQ	0.16 JQ	NS	0.45
Dioxins/Furans by USEPA 1613B								
2,3,7,8-TCDD (Dioxin)	1746-01-6	pg/L	--	0.870 U	0.750 U	0.860 U	NS	1.10 U
1,2,3,7,8-PeCDD	40321-76-4	pg/L	--	0.910 U	0.900 U	0.820 UJ	NS	0.910 U
1,2,3,4,7,8-HxCDD	39227-28-6	pg/L	--	1.08 U	1.03 U	0.990 U	NS	1.07 U
1,2,3,6,7,8-HxCDD	57653-85-7	pg/L	--	1.00 U	0.920 U	0.840 U	NS	0.960 U
1,2,3,7,8,9-HxCDD	19408-74-3	pg/L	--	1.16 U	1.08 U	1.02 U	NS	1.13 U
1,2,3,4,6,7,8-HpCDD	35822-46-9	pg/L	--	1.10 U	1.76 U	1.42 U	NS	1.74 U
OCDD	3268-87-9	pg/L	--	10.2 UJ	49.1 UJ	66.5 UJ	NS	35.3 UJ
2,3,7,8-TCDF	51207-31-9	pg/L	--	0.870 U	1.11 U	0.810 U	NS	1.29 U
1,2,3,7,8-PeCDF	57117-41-6	pg/L	--	1.19 U	1.41 U	1.29 U	NS	1.63 U
2,3,4,7,8-PeCDF	57117-31-4	pg/L	--	1.07 U	1.36 U	1.18 UJ	NS	1.47 U
1,2,3,4,7,8-HxCDF	70648-26-9	pg/L	--	0.600 U	0.710 U	0.650 U	NS	0.780 U
1,2,3,6,7,8-HxCDF	57117-44-9	pg/L	--	0.570 U	0.730 U	0.590 U	NS	0.690 U
1,2,3,7,8,9-HxCDF	72918-21-9	pg/L	--	0.850 U	1.11 U	0.940 U	NS	1.15 U
2,3,4,6,7,8-HxCDF	60851-34-5	pg/L	--	0.640 U	0.750 U	0.690 U	NS	0.820 U
1,2,3,4,6,7,8-HpCDF	67562-39-4	pg/L	--	0.590 U	0.660 U	0.770 U	NS	1.35 U
1,2,3,4,7,8,9-HpCDF	55673-89-7	pg/L	--	0.820 U	0.940 U	1.25 U	NS	1.30 U
OCDF	39001-02-0	pg/L	--	2.09 UJ	5.84 UJ	10.2 J	NS	5.29 J
Dioxin/Furans (MTCA TEQ-HalfND)		pg/L	6.7	0.455 UJ	0.450 UJ	1.39 J	NS	1.67 J

Notes:

Arsenic results are rounded to two significant figures; dioxin/furan results are rounded to three significant figures.

-- Not available.

1 On October 28, 202 MW-VB2 was dry and samples were unable to be collected.

Abbreviations:

CAS	Chemical Abstracts Service	OCDF	Octachlorodibenzofuran
HpCDD	Heptachlorodibenzo-p-dioxin	PeCDD	Pentachlorodibenzo-p-dioxin
HpCDF	Heptachlorodibenzofuran	PeCDF	Pentachlorodibenzofuran
HxCDD	Hexachlorodibenzo-p-dioxin	pg/L	Picograms per liter
HxCDF	Hexachlorodibenzofuran	TCDD	Tetrachlorodibenzo-p-dioxin
µg/L	Micrograms per liter	TCDF	Tetrachlorodibenzofuran
NS	Not sampled	TEQ	Toxic equivalent
OCDD	Octachlorodibenzodioxin		

Qualifiers:

J Analyte was detected; concentration is considered to be an estimate.

JQ Analyte was detected between the method detection limit and reporting limit; concentration is considered to be an estimate.

U Analyte was not detected at the given reporting limit.

UJ Analyte was not detected; concentration given is the reporting limit, which is considered to be an estimate.

Lora Lake Apartments Site

2020 Annual Compliance Monitoring Report

Figures

Legend

- Combined Groundwater Confirmation and Sediment Cap Performance Site Vicinity Monitoring Location
- Groundwater Confirmation Monitoring Location
- Sediment Cap Performance Monitoring Location
- Sediment Cap Performance Site Vicinity Monitoring Location
- City Boundary
- Approximate Fence Locations
- Tax Parcel Boundary

SR 518

CITY OF BURIEN
CITY OF SEATAC

MW-C1/VB1

LORA LAKE APARTMENTS PARCEL

MW-C2

MW-VB2

SOUTH 150TH STREET

MW-C3

FORMER SEATTLE CITY LIGHT SUNNYDALE SUBSTATION

MW-C4

DES MOINES MEMORIAL DRIVE SOUTH

HCOO-B312

1982 DREDGED MATERIAL CONTAINMENT AREA

MW-CP1

MW-VB3

PORT OF SEATTLE PROPERTY

MW-CP2

Former Lora Lake

PORT OF SEATTLE PROPERTY

MW-CP3

SEATTLE-TACOMA INTERNATIONAL AIRPORT 3RD RUNWAY APPROACH LIGHTING SYSTEM

MW-CP4

MW-CP7

8TH AVE SOUTH

MW-CP5

LORA LAKE PARCEL

MW-CP6

Notes:
- Tax parcel boundaries based on King County tax parcel data.
- City boundary data provided by King County.
- Othoimagery obtained from Nearmap, 2020.

0 150 300
Scale in Feet

N

FLOYD | SNIDER
strategy • science • engineering

2020 Annual Compliance Monitoring Report
Lora Lake Apartments Site
Burien, Washington

Figure 1.1
Site Map

I:\GIS\Projects\POS_LLA\MXD\Task8140\Annual Compliance Monitoring Report\2021\Figure 1.1 Site Map.mxd
3/18/2021

Legend

- Combined Groundwater Confirmation and Sediment Cap Performance Site Vicinity Monitoring Location
- Groundwater Confirmation Monitoring Location
- Sediment Cap Performance Monitoring Location
- Sediment Cap Performance Site Vicinity Monitoring Location
- City Boundary
- Approximate Fence Locations
- Tax Parcel Boundary

Label Key

MW-C1/VB1 (Location Name)
3/30/20 (Sample Date)
0.12 JQ
6/17/20 (Sample Date)
0.14 JQ
(Arsenic Result (µg/L))

Notes:
- Results shown in **RED BOLD** exceed the site cleanup level for arsenic of 5 µg/L.
- Analytical results for duplicate samples are not presented.
- Tax parcel boundaries based on King County tax parcel data.
- City boundary data provided by King County.
- Othoimagery obtained from Nearmap, 2020.

Abbreviation:
µg/L = Micrograms per liter

Qualifier:
JQ = Analyte was detected between the method detection limit and reporting limit; concentration is considered to be an estimate.

0 100 200
Scale in Feet

N

SR 518
CITY OF BURIEN
CITY OF SEATAC
DES MOINES MEMORIAL DRIVE SOUTH
LORA LAKE APARTMENTS PARCEL
FORMER SEATTLE CITY LIGHT SUNNYDALE SUBSTATION
PORT OF SEATTLE PROPERTY
Former Lora Lake

MW-C1/VB1
3/30/20
0.12 JQ
6/17/20
0.14 JQ

MW-C2
3/30/20:
27
6/17/20:
11
10/28/20:
3.1

MW-C3
3/30/20:
0.25
6/17/20:
0.22
10/28/20:
0.22

MW-C4
3/30/20:
0.37
6/17/20:
0.49

MW-VB2
MW-CP1
MW-CP2
MW-CP3

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2020 Annual Compliance Monitoring Report
Lora Lake Apartments Site
Burien, Washington

Figure 2.1
Lora Lake Apartments Parcel Groundwater Analytical Results

I:\GIS\Projects\POS_LLA\MXD\Task8140\Annual Compliance Monitoring Report\2021\Figure 2.1 Lora Lake Apartments Parcel Groundwater Analytical Results.mxd
3/18/2021

Legend

- Combined Groundwater Confirmation and Sediment Cap Performance Site Vicinity Monitoring Location
- Groundwater Confirmation Monitoring Location
- Sediment Cap Performance Monitoring Location
- Sediment Cap Performance Site Vicinity Monitoring Location
- City Boundary
- Approximate Fence Locations
- Tax Parcel Boundary

Label Key

MW-C1/VB1
As:
0.16 JQ
D/F:
0.450 UJ

- Location Name
- Arsenic Result (µg/L)
- Dioxin/Furan Result (pg/L)

Notes:
- Cleanup levels for arsenic and dioxins/furans are 5 µg/L and of 6.7 pg/L, respectively.
- All results are from samples collected on 10/27/20 or 10/28/20.
- Analytical results for duplicate samples are not presented.
- Tax parcel boundaries based on King County tax parcel data.
- City boundary data provided by King County.
- Othoimagery obtained from Nearmap, 2020.

Abbreviation:
As = Arsenic
D/F = Dioxin/furans
µg/L = Micrograms per liter
NS = Not sampled
pg/L = Picograms per liter

Qualifiers:
J = Analyte was detected; concentration is considered to be an estimate.
JQ = Analyte was detected between the method detection limit and reporting limit; concentration is considered to be an estimate.
UJ = Analyte was not detected; concentration given is the reporting limit, which is considered to be an estimate.

0 150 300
Scale in Feet
N

SR 518
CITY OF BURIEN
CITY OF SEATAC
MW-C1/VB1 *As:* 0.16 JQ *D/F:* 0.450 UJ
LORA LAKE APARTMENTS PARCEL
MW-C2
MW-VB2 *As:* NS *D/F:* NS
FORMER SEATTLE CITY LIGHT SUNNYDALE SUBSTATION
MW-C3
MW-C4
HCOO-B312 *As:* 0.17 JQ *D/F:* 0.455 UJ
1982 DREDGED MATERIAL CONTAINMENT AREA
PORT OF SEATTLE PROPERTY
MW-CP1 *As:* 0.46 *D/F:* 1.78 J
MW-VB3 *As:* 0.45 *D/F:* 1.67 J
MW-CP2 *As:* 0.21 *D/F:* 0.480 UJ
Former Lora Lake
MW-CP3 *As:* 0.41 *D/F:* 0.515 UJ
MW-CP4 *As:* 0.098 JQ *D/F:* 1.73 J
MW-CP7 *As:* 0.42 *D/F:* 1.15 J
SEATTLE-TACOMA INTERNATIONAL AIRPORT 3RD RUNWAY APPROACH LIGHTING SYSTEM
MW-CP5 *As:* 3.2 *D/F:* 1.22 J
MW-CP6 *As:* 1.1 *D/F:* 0.465 UJ
PORT OF SEATTLE PROPERTY
8TH AVE SOUTH
DES MOINES MEMORIAL DRIVE SOUTH
LORA LAKE PARCEL

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Burien, Washington

Figure 3.1
Lora Lake Parcel Groundwater Analytical Results

I:\GIS\Projects\POS_LLA\MXD\Task8140\Annual Compliance Monitoring Report\2021\Figure 3.1 Lora Lake Parcel Groundwater Analytical Results.mxd
3/18/2021

Lora Lake Apartments Site

2020 Annual Compliance Monitoring Report

Appendix A
Ecology Approval of Sampling Program Revision for Arsenic

From: Becker, Sunny (ECY) <HLIN461@ECY.WA.GOV>
Sent: Monday, September 21, 2020 4:08 PM
To: Megan King
Cc: Don Robbins - Port of Seattle (robbins.d@portseattle.org)
Subject: RE: Lora Lake Apartments Site - Arsenic in Groundwater Evaluation

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Megan,

Thanks for submitting the memo "Evaluation of Arsenic in Groundwater at the Lora Lake Apartments Site". The Port may transition from quarterly to annually groundwater sampling at MWC-2 and MWC3, and submit the results in the Annual Compliance Monitoring Report.

Sunny

From: Megan King <Megan.King@floydsnider.com>
Sent: Wednesday, September 9, 2020 3:40 PM
To: Becker, Sunny (ECY) <HLIN461@ECY.WA.GOV>
Cc: Adia Jumper <Adia.Jumper@floydsnider.com>; Mark Jusayan <Mark.Jusayan@floydsnider.com>; Don Robbins - Port of Seattle (robbins.d@portseattle.org) <robbins.d@portseattle.org>
Subject: RE: Lora Lake Apartments Site - Arsenic in Groundwater Evaluation
Importance: High

Hi Sunny –
I know you have quite a bit you are catching up on this week, but I wanted to ping you about this technical memo for Lora Lake.

If you are not expecting to review this memo in the next couple weeks (which is fine!) would it be possible to schedule a short call with you to discuss sampling in the interim?

The memo describes our proposal for ongoing monitoring, which if you agree, would not include sampling at the Apartments Parcel again until next spring quarter. If you have concerns with our proposed plan, we would continue the current monitoring program, which would include sampling this month (September), so we would just want to make sure we've got time to schedule and implement that if needed.

Let me know what you're thinking, and we can plan accordingly!

Thanks Sunny!
Megan

NOTE: I am currently working remotely, and am available by cell (206) 291-7713 or through my direct F|S line (206) 805-2173.

Megan King, P.E.
Associate Principal
FLOYD | SNIDER
601 Union Street, Suite 600 | Seattle, WA 98101
tel: 206.292.2078 | fax: 206.682.7867
Megan.King@floydsnider.com | www.floydsnider.com

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From: Megan King
Sent: Tuesday, August 25, 2020 6:51 PM
To: 'hlin461@ecy.wa.gov' <hlin461@ecy.wa.gov>
Cc: Adia Jumper <Adia.Jumper@floydsnider.com>; Mark Jusayan <Mark.Jusayan@floydsnider.com>; Don Robbins - Port of Seattle (robbins.d@portseattle.org) <robbins.d@portseattle.org>
Subject: Lora Lake Apartments Site - Arsenic in Groundwater Evaluation
Importance: High

Hi Sunny,
As we have briefly discussed, we have prepared a technical memo discussing the observed arsenic conditions at the Lora Lake Apartments Parcel during high groundwater table sampling quarters over the last couple years. Please take a look at the attached, and let me know if you would like to discuss. Our proposed path forward is described at the end of the memo, and we look forward to coordinating next steps with you!

Thanks so much,
Megan

NOTE: I am currently working remotely, and am available by cell (206) 291-7713 or through my direct F|S line (206) 805-2173.

Megan King, P.E.
Associate Principal
FLOYD | SNIDER
601 Union Street, Suite 600 | Seattle, WA 98101
tel: 206.292.2078 | fax: 206.682.7867
Megan.King@floydsnider.com | www.floydsnider.com

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Lora Lake Apartments Site

2020 Annual Compliance Monitoring Report

Appendix B
Groundwater Sample Collection Forms

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project Name: P65-LLA Date of Collection: 3/30/20

Project Number: 8140 Field Personnel: AJ + TS

Purge Data

Well ID: MW-C2 Secure: ☑ Yes ☐ No Well Condition/Damage Description: good

Depth Sounder decontaminated Prior to Placement in Well: ☑ Yes ☐ No One Casing Volume (gal):

Depth of water (from top of well casing): 15.40' Well Casing Type/Diameter/Screened Interval:

After 5 minutes of purging (from top of casing): 15.47'

Begin purge (time): 10:54

End purge (time): 11:32

Volume purged: 4.5 L

Purge water disposal method: on-site drum

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water	Vol. L Purged	pH	DO mg/L	Conductivity mS/cm	Turbidity NTU	Temp °C	ORP mV	Comments
11:05	15.50'	.75	11.23	1.06	673	3.15	10.2	-204.5	
11:10	15.50'	1.50	11.33	0.58	687	2.59	9.4	-235.5	
11:15	15.51'	2.25	11.37	0.43	695	2.41	9.1	-240.3	
11:20	15.51	3.00	11.38	0.41	689	2.33	9.1	-244.4	
11:25	15.51	3.75	11.37	0.40	690	2.17	9.1	-243.8	

Sampling Data

Sample No: MW-C2-033020 Location and Depth:

Date Collected (mo/dy/yr): 3/30/20 Time Collected: 11:28 Weather: SU and rainy

Type: ☑ Ground Water ☐ Surface Water Other: Sample: ☐ Filtered ☑ Unfiltered Other:

Sample Collected with: ☐ Bailer ☑ Pump Other: Peristaltic Type:

Water Quality Instrument Data Collected with: Type: ☐ Horiba U-50 Other: YSI

Sample Decon Procedure: Sample collected with (circle one): decontaminated all tubing; disposable and/or dedicated silicon and poly tubing Other:

Sample Description (Color, Turbidity, Odor, Other): Yellowish tint, slight sulfurish odor.

Sample Analyses Arsenic

TPH-D	(HCl) ☐	Chlor / Fluor	(unpres) ☐	COD / TOC	(H2SO4) ☐	Orthophos	(FILTER) ☐	Diss. Metals	(HNO3) ☒	unpreserved
TPH-G	(HCl) ☐	BTEX	(HCl) ☐	Total Metals	(HNO3) ☐	TKN/Phos	(N2SO4) ☐	VOCs	(HCl) ☐	

Additional Information

Types of Sample Containers:	Quantity:	Duplicate Sample Numbers:	Comments:
500mL HDPE	1	N/A	

Signature: Date: 3/30/20

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project Name: POS - LLA Date of Collection: 03/30/2020

Project Number: 8140 Field Personnel: TS + AJ

Purge Data

Well ID: MW-C3 Secure: ☒ Yes ☐ No Well Condition/Damage Description: Good

Ecology # BKA 342

Depth Sounder decontaminated Prior to Placement in Well: ☒ Yes ☐ No One Casing Volume (gal):

Depth of water (from top of well casing): 17.35 Well Casing Type/Diameter/Screened Interval:

After 5 minutes of purging (from top of casing):

Begin purge (time): 10:50

End purge (time): 11:15

Volume purged: 3 L

Purge water disposal method: Drum on-site

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water	Vol. Purged L	pH	DO mg/L	Conductivity µS/cm	Turbidity NTU	Temp °C	ORP mV	Comments
10:55	17.37	.5	6.3	7.8	140.7	1.99	10.6	243.2	
11:00	17.37	1.25	6.3	7.73	142.4	1.82	10.6	244.0	
11:05	17.37	2.	6.3	7.70	145.4	1.89	10.6	243.6	
11:10	17.32	2.25	6.3	7.68	150.3	1.71	10.4	244.1	

Sampling Data

Sample No: MW-C3-033020 Location and Depth:

Date Collected (mo/dy/yr): 03/30/20 Time Collected: 11:11 Weather: Overcast/Cold

Type: ☒ Ground Water ☐ Surface Water Other: Sample: ☐ Filtered ☒ Unfiltered Other:

Sample Collected with: ☐ Bailer ☒ Pump Other: Type: Peri

Water Quality Instrument Data Collected with. Type: ☐ Horiba U-50 Other: YSI Pro DSS

Sample Decon Procedure: Sample collected with (circle one): decontaminated all tubing; disposable and/or dedicated silicon and poly tubing Other:

Sample Description (Color, Turbidity, Odor, Other): Clear, no odor

Sample Analyses

Arsenic

TPH-D	(HCl) ☐	Chlor / Fluor	(unpres) ☐	COD / TOC	(H2SO4) ☐	Orthophos	(FILTER) ☐	Diss. Metals	(HNO3) ☒ unpreserved
TPH-G	(HCl) ☐	BTEX	(HCl) ☐	Total Metals	(HNO3) ☐	TKN/Phos	(N2SO4) ☐	VOCs	(HCl) ☐

Additional Information

Types of Sample Containers:	Quantity:	Duplicate Sample Numbers:	Comments:
500 mL HDPE	1	N/A	

Signature: Date: 3/30/20

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project Name: PDS - LLA Date of Collection: 3/30/20

Project Number: 8140 Field Personnel: AS + TS

Purge Data

Well ID: MW-C4 Secure: ☐ Yes ☑ No Bag Well Condition/Damage Description: good, flooded monument

Depth Sounder decontaminated Prior to Placement in Well: ☑ Yes ☐ No One Casing Volume (gal):

Depth of water (from top of well casing): 12.90 Well Casing Type/Diameter/Screened Interval:

After 5 minutes of purging (from top of casing): 12.91

Begin purge (time): 9:49

End purge (time): 10:15

Volume purged: 5.5L

Purge water disposal method: on-site drum

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water	Vol. Purged L	pH	DO mg/L	Conductivity uS/cm	Turbidity NTU	Temp °C	ORP mV	Comments
10:00	12.91	1.5	6.83	4.05	385.7	2.14	10.8	190.2	
10:05	12.91	2.5	6.81	3.92	389.1	1.91	11.0	184.6	
10:10	12.91	3.5	6.80	3.96	389.5	1.66	11.0	179.9	

Sampling Data

Sample No: MW-C4-033020 Location and Depth:

Date Collected (mo/dy/yr): 3/30/20 Time Collected: 10:13 Weather: 50 and partly cloudy

Type: ☑ Ground Water ☐ Surface Water Other: Sample: ☐ Filtered ☑ Unfiltered Other:

Sample Collected with: ☐ Bailer ☑ Pump Other: Type: peristaltic

Water Quality Instrument Data Collected with: Type: ☐ Horiba U-50 Other: YSI

Sample Decon Procedure: Sample collected with (circle one): decontaminated all tubing; disposable and/or dedicated silicon and poly tubing Other:

Sample Description (Color, Turbidity, Odor, Other): Clear, no apparent odor, no sheen

Sample Analyses Arsenic

TPH-D	(HCl) ☐	Chlor / Fluor	(unpres) ☐	COD / TOC	(H2SO4) ☐	Orthophos	(FILTER) ☐	Diss. Metals	(HNO3) ☑ unpreserved
TPH-G	(HCl) ☐	BTEX	(HCl) ☐	Total Metals	(HNO3) ☐	TKN/Phos	(N2SO4) ☐	VOCs	(HCl) ☐

Additional Information

Types of Sample Containers:	Quantity:	Duplicate Sample Numbers:	Comments:
500 mL HDPE	1	N/A	

Signature: Date: 3/30/20

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project Name: PDS-LLA
Date of Collection: 03/30/2020
Project Number: 8140
Field Personnel: TS + AJ

Purge Data

Well ID: MW-CLVB1 Secure: ☑ Yes ☐ No Well Condition/Damage Description: Good
Ecology # BKA 343
Depth Sounder decontaminated Prior to Placement in Well: ☑ Yes ☐ No One Casing Volume (gal)
Depth of water (from top of well casing): 8.64'
After 5 minutes of purging (from top of casing): 8.76'
Well Casing Type/Diameter/Screened Interval: 2" PVC
Begin purge (time): 11:42
End purge (time): 12:10
Volume purged: 3.5 L
Purge water disposal method: Drum on site

Volume of Schedule 40 PVC Pipe				
Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water	Vol. Purged L	pH	DO mg/L	Conductivity µS/cm	Turbidity NTU	Temp °C	ORP mV	Comments
11:47	8.76'	.5	6.05	460	305.3	1.36	10.1	245.4	
11:52	8.76'	1.5	6.06	4.52	305.6	1.42	10.0	243.4	
11:57	8.76'	2.25	6.06	4.55	303.7	1.43	10.2	241.2	
12:02	8.76	3	6.06	4.56	302.6	1.42	10.2	240.1	

Sampling Data

Sample No: MW-CLVB1-033020 Location and Depth:
Date Collected (mo/dy/yr): 03/30/20 Time Collected 12:03 Weather: Sun/overcast-rain/cool
Type: ☑ Ground Water ☐ Surface Water Other: Sample: ☐ Filtered ☑ Unfiltered Other:
Sample Collected with: ☐ Bailer ☑ Pump Other: Type: Peri
Water Quality Instrument Data Collected with: Type: ☐ Horiba U-50 Other YSI Pro DSS
Sample Decon Procedure: Sample collected with (circle one): decontaminated all tubing, disposable and/or dedicated silicon and poly tubing Other:
Sample Description (Color, Turbidity, Odor, Other): Clear, no odor

Sample Analyses Arsenic

TPH-D	(HCl) ☐	Chlor / Fluor	(unpres) ☐	COD / TOC	(H2SO4) ☐	Orthophos	(FILTER) ☐	Diss. Metals	(HNO3) ☑	unpreserved
TPH-G	(HCl) ☐	BTEX	(HCl) ☐	Total Metals	(HNO3) ☐	TKN/Phos	(N2SO4) ☐	VOCs	(HCl) ☐	

Additional Information

Types of Sample Containers:	Quantity:	Duplicate Sample Numbers:	Comments:
500 mL HDPE	2	In comments	Field duplicate @ this location MW-CLVB1-033020-D @ 12:07

Signature: Date: 03/30/2020

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project Name: Lora Lake Date of Collection: _____

Project Number: _____ Field Personnel: L.W

Purge Data

Well ID: MW C1 Secure: ☒ Yes ☐ No Well Condition/Damage Description: good

Depth Sounder decontaminated Prior to Placement in Well: ☒ Yes ☐ No One Casing Volume (gal): _____

Depth of water (from top of well casing): 9.32 Well Casing Type/Diameter/Screened Interval: 2"

After 5 minutes of purging (from top of casing): 9.40

Begin purge (time): 10:32

End purge (time): _____

Volume purged: 5 L

Purge water disposal method: Drum

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ½"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water ft	Vol. Purged L	pH	DO mg/L	Conductivity ms/cm	Turbidity NTU	Temp °C	ORP mV	Comments
10:45	9.42	1.5	6.42	4.79	0.354	0.72	13.8	134.2	
10:50	9.42	2	6.11	4.10	0.354	0.68	13.8	138.3	
10:55	9.42	2.5	6.02	3.92	0.355	0.64	13.7	141.4	
11:00	9.42	3	5.99	4.21	0.351	0.60	13.6	144.8	
11:05	9.42	3.5	5.97	4.77	0.343	0.62	13.4	146.3	
11:10	9.42	4	5.93	4.99	0.49	0.60	13.3	147.9	

Sampling Data

Sample No: MWC1-061720 Location and Depth: _____

Date Collected (mo/dy/yr): 6/17/20 Time Collected: 1113 Weather: _____

Type: ☑ Ground Water ☐ Surface Water Other: _____ Sample: ☐ Filtered ☑ Unfiltered Other: _____

Sample Collected with: ☐ Bailer ☑ Pump Other: _____ Type: Peristaltic

Water Quality Instrument Data Collected with: Type: ☐ Horiba U-50 Other: 451

Sample Decon Procedure: Sample collected with (circle one): decontaminated all tubing; disposable and/or dedicated silicon and poly tubing Other: _____

Sample Description (Color, Turbidity, Odor, Other): _____

Sample Analyses

TPH-D	(HCl) ☐	Chlor / Fluor	(unpres) ☐	COD / TOC	(H2SO4) ☐	Orthophos	(FILTER) ☐	Diss. Metals	(HNO3) ☑
TPH-G	(HCl) ☐	BTEX	(HCl) ☐	Total Metals	(HNO3) ☐	TKN/Phos	(N2SO4) ☐	VOCs	(HCl) ☐

Additional Information

Types of Sample Containers:	Quantity:	Duplicate Sample Numbers:	Comments:
500 mL poly	2	MWC1-061720D @ 1118	

Signature: _____ Date: 6/17/20

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project Name: Lora Lake Date of Collection: 6/17/20

Project Number: _____ Field Personnel: L. Wachter + A. Jumper

Purge Data

Well ID: MWC2 Secure: ☒ Yes ☐ No Well Condition/Damage Description: _____

Depth Sounder decontaminated Prior to Placement in Well: ☒ Yes ☐ No One Casing Volume (gal): _____

Depth of water (from top of well casing): 16.50 Well Casing Type/Diameter/Screened Interval: _____

After 5 minutes of purging (from top of casing): 16.56

Begin purge (time): 11:25

End purge (time): _____

Volume purged: _____

Purge water disposal method: _____

Volume of Schedule 40 PVC Pipe				
Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water	Vol. Purged L	pH	DO mg/L	Conductivity mS/cm	Turbidity NTU	Temp °C	ORP mV	Comments
11:35	16.55	1.5	8.23	1.43	0.429	2.86	14.2	-56.5	
11:40	16.57	2	8.73	0.87	0.431	4.02	14.2	-77.2	
11:45	16.56	2.5	8.99	0.74	0.442	5.66	14.2	-91.0	
11:50	16.57	3	9.15	0.70	0.454	3.10	14.3	-99.4	
11:55	16.57	3.5	9.24	0.41	0.458	4.00	14.1	-101.8	
12:00	16.57	4.0	9.28	0.35	0.467	2.59	13.7	-105.4	
1205	16.57	5	9.33	0.31	0.474	2.57	13.9	-107.2	

Sampling Data

Sample No: MWC2-061720 Location and Depth: MWC2

Date Collected (mo/dy/yr): 6/17/20 Time Collected: 1210 Weather: Sunny

Type: ☒ Ground Water ☐ Surface Water Other: _____ Sample: ☐ Filtered ☒ Unfiltered Other: _____

Sample Collected with: ☐ Bailer ☒ Pump Other: _____ Type: Peri

Water Quality Instrument Data Collected with: Type: ☐ Horiba U-50 Other: YSI

Sample Decon Procedure: Sample collected with (circle one): decontaminated all tubing; disposable and/or dedicated silicon and poly tubing Other: _____

Sample Description (Color, Turbidity, Odor, Other): light yellow, no odor

Sample Analyses

TPH-D	(HCl) ☐	Chlor / Fluor	(unpres) ☐	COD / TOC	(H2SO4) ☐	Orthophos	(FILTER) ☐	Diss Metals	(HNO3) ☑
TPH-G	(HCl) ☐	BTEX	(HCl) ☐	Total Metals	(HNO3) ☐	TKN/Phos	(N2SO4) ☐	VOCs	(HCl) ☐

Additional Information

Types of Sample Containers:	Quantity:	Duplicate Sample Numbers.	Comments:
500 mL poly	1	NA	Water level & pH higher than June avg.

Signature: _____ **Date:** _____

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project Name: Lora Lake
Date of Collection: 6/17/20
Project Number:
Field Personnel: L. Wachter & A. Jumper

Purge Data

Well ID: MWC3 Secure: ☒ Yes ☐ No Well Condition/Damage Description: good

Depth Sounder decontaminated Prior to Placement in Well: ☒ Yes ☐ No One Casing Volume (gal):

Depth of water (from top of well casing): 18.32 Well Casing Type/Diameter/Screened Interval: 2" PVC

After 5 minutes of purging (from top of casing): 18.34

Begin purge (time): 12:10

End purge (time): 12.40

Volume purged: 3L

Purge water disposal method: Drum

Volume of Schedule 40 PVC Pipe				
Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water	Vol. Purged L	pH	DO mg/L	Conductivity ms/cm	Turbidity NTU	Temp °C	ORP mV	Comments
12:20	18.34	1	8.07	6.99	0.157	1.60	16.7	39.2	
12:25	18.34	1.5	7.34	6.63	0.163	0.99	15.0	88.3	
12:30	18.34	2.0	6.88	6.51	0.170	0.79	15.0	104.3	
12:35	18.34	2.5	6.71	6.37	0.171	0.83	15.0	109.8	

Sampling Data

Sample No: MWC3- 061720 Location and Depth: MWC3

Date Collected (mo/dy/yr): 06/17/20 Time Collected: 12:40 Weather Sunny

Type: ☒ Ground Water ☐ Surface Water Other: Sample: ☐ Filtered ☐ Unfiltered Other:

Sample Collected with: ☐ Bailer ☒ Pump Other: Type: peri

Water Quality Instrument Data Collected with: Type: ☐ Horiba U-50 Other: YSI

Sample Decon Procedure: Sample collected with (circle one): decontaminated all tubing; disposable and/or dedicated silicon and poly tubing Other:

Sample Description (Color, Turbidity, Odor, Other): Clear, no odor

Sample Analyses

TPH-D	(HCl) ☐	Chlor / Fluor	(unpres) ☐	COD / TOC	(H2SO4) ☐	Orthophos	(FILTER) ☐	Diss. Metals	~~(HNO3)~~ ☒
TPH-G	(HCl) ☐	BTEX	(HCl) ☐	Total Metals	(HNO3) ☐	TKN/Phos	(N2SO4) ☐	VOCs	(HCl) ☐

Additional Information

Types of Sample Containers:	Quantity:	Duplicate Sample Numbers:	Comments:
500 mL Poly	1	–	Arsenic, diss

Signature: Laura Wachter Date: 6/17/20

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project Name: L.L. Date of Collection: 6/17/20

Project Number: Field Personnel: L. Wachter & A. Jumper

Purge Data

Well ID: MWTO MWC4 Secure: ☒ Yes ☐ No Well Condition/Damage Description: good 2" PVC

Depth Sounder decontaminated Prior to Placement in Well: ☐ Yes ☐ No One Casing Volume (gal):

Depth of water (from top of well casing): 13.27 Well Casing Type/Diameter/Screened Interval: 2"

After 5 minutes of purging (from top of casing): 13.28

Begin purge (time): 9:20

End purge (time): 10:03

Volume purged: 2.5 L

Purge water disposal method: Drum

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water	Vol. Purged L	pH	DO mg/L	Conductivity mS/cm	Turbidity NTU	Temp °C	ORP mV	Comments
9:45	13.27	1.5	7.09	5.27	0.462	0.70	14.2	108.6	
9:50	13.26	1.75	6.70	4.44	0.387	0.53	13.5	123.4	
9:53	13.26	2	6.58	4.26	0.346	0.50	13.6	124.0	
10:00	13.28	2.25	6.55	4.24	0.318	0.50	13.6	123.3	

Sampling Data

Sample No: ~~LL-MW20~~ MWC4 - 06/17/20 Location and Depth: MWC4

Date Collected (mo/dy/yr): 06/17/20 Time Collected: 10:05 Weather: Overcast

Type: ☒ Ground Water ☐ Surface Water Other: Sample: ☐ Filtered ☒ Unfiltered Other:

Sample Collected with: ☐ Bailer ☒ Pump Other: Type: Pegasus

Water Quality Instrument Data Collected with: Type: ☐ Horiba U-50 Other YSI

Sample Decon Procedure: Sample collected with (circle one): decontaminated all tubing; ~~disposable~~ and/or dedicated silicon and poly tubing Other:

Sample Description (Color, Turbidity, Odor, Other): Clear, no odor

Sample Analyses

TPH-D	(HCl) ☐	Chlor / Fluor	(unpres) ☐	COD / TOC	(H2SO4) ☐	Orthophos	(FILTER) ☐	Diss. Metals	(HNO3) ☐
TPH-G	(HCl) ☐	BTEX	(HCl) ☐	Total Metals	~~(HNO3)~~ ☒	TKN/Phos	(N2SO4) ☐	VOCs	(HCl) ☐

Additional Information

Types of Sample Containers:	Quantity:	Duplicate Sample Numbers:	Comments:
500 mL Poly	1	0	Diss - Arsenic, unpreserved

Signature: Date: 06/17/20

July 27th

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: POS-LLA Date of Collection: 10/27/20

Task Number: ______ Field Personnel: AT + TS

Purge Data

Well ID: MWCP-1 Secure: ☑ Yes ☐ No Ecology Tag #: ______ Casing Type/Diameter/Screened Interval ______

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: ______

Depth Sounder decontaminated Prior to Placement in Well: ☐ Yes ☐ No One Casing Volume (gal): ______

Depth of water (from top of well casing): 3.33 Total Depth (from log or field measurement): 7.77

After 5 minutes of purging (from top of casing): 3.33

Begin purge (time): 10:53

End purge (time): 10:37

Volume purged: 5.5 L

Purge water disposal method: on site drum

Volume of Schedule 40 PVC Pipe				
Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (ms/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
11:05	3.33	2	7.04	1.61	0.299	1.22	13.3	37.8	
11:10	3.33	2.5	6.83	0.98	0.299	0.69	13.3	29.7	
11:15	3.33	3	6.84	0.91	0.299	0.55	13.3	24.8	
11:20	3.33	3.5	6.85	0.84	0.300	0.60	13.4	20.4	

Sampling Data

Sample No: MW-CP1-102720 Location and Depth: ______

Date Collected (mo/dy/yr): 10/27/20 Time Collected: 1125 Weather: 50 and partly cloudy

Type: ☑ Ground Water ☐ Surface Water Other: ______ Sample: ☐ Filtered ☑ Unfiltered Other: ______

Sample Collected with: ☐ Bailer ☑ Pump Other: ______ Type: ☑ Peristaltic ☐ Bladder ☐ Submersible Other: ______

Water Quality Instrument Data Collected with: Type: ☑ YSI ProDSS Other: ______

Sample Decon Procedure: Sample collected with (circle one): decontaminated all tubing; disposable and/or dedicated silicon and poly tubing; new tubing

Sample Description (Color, Turbidity, Odor, Other): ______

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative
		500 mL poly	1	None
		1/2 L amber	2	

QC samples

Duplicate Sample No: NA Duplicate Time: NA MS/MSD: ☐ Yes ☑ No Other QC Sample: NA

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: POS-LL Date of Collection: 10/27/2020
Task Number: ______ Field Personnel: KH

Purge Data

Well ID: MW-CP2 Secure: ☒ Yes ☐ No Ecology Tag #: — Casing Type/Diameter/Screened Interval: 2"

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: ______

Depth Sounder decontaminated Prior to Placement in Well: ☒ Yes ☐ No One Casing Volume (gal): ______

Depth of water (from top of well casing): 3.89 Total Depth (from log or field measurement): 9.71

After 5 minutes of purging (from top of casing): 3.90

Begin purge (time): 1505

End purge (time): 1556

Volume purged: 10.5 liters

Purge water disposal method: drum

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ½"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (ms/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
1520	3.90	4.25	6.24	0.39	299.5	2.07	14.9	216.0	
1525	3.90	6	6.22	0.35	300.0	1.65	14.9	213.6	
1530	3.90	7.75	6.21	0.33	299.8	1.39	14.9	210.8	
1535	3.90	9.25	6.21	0.32	299.2	1.34	14.9	207.7	

Sampling Data

Sample No: MW-CP2-102720 Location and Depth: ______

Date Collected (mo/dy/yr): 10/27/20 Time Collected: 1540 Weather: Sun/cool ≈ 60°F

Type: ☒ Ground Water ☐ Surface Water Other: ______ Sample: ☐ Filtered ☒ Unfiltered Other: ______

Sample Collected with: ☐ Bailer ☒ Pump Other: ______ Type: ☒ Peristaltic ☐ Bladder ☐ Submersible Other: ______

Water Quality Instrument Data Collected with: Type: ☒ YSI ProDSS Other: Hach 2100Q - Turbidity

Sample Decon Procedure. Sample collected with (circle one): decontaminated all tubing; disposable and/or dedicated silicon and poly tubing; new tubing ≈ 15'

Sample Description (Color, Turbidity, Odor, Other): Clear; no odor

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative
Metals		500mL Poly	2	—
Dioxin		1L Amber	4	—

QC samples

Duplicate Sample No: MW-CP2-102720-D Duplicate Time: 1545 MS/MSD: ☐ Yes ☒ No Other QC Sample: —

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GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: POSLLK　　Date of Collection: 10/27/20

Task Number: ______　　Field Personnel: ASK TS

Purge Data

Well ID: MW-CP3　Secure: ☑ Yes ☐ No　Ecology Tag #: ______　Casing Type/Diameter/Screened Interval ______

Replacement Required. ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____　Other Damage: ______

Depth Sounder decontaminated Prior to Placement in Well: ☑ Yes ☐ No　One Casing Volume (gal): ______

Depth of water (from top of well casing): 3.29　Total Depth (from log or field measurement): 6.39

After 5 minutes of purging (from top of casing): 3.29

Begin purge (time): 12:12

End purge (time): ______

Volume purged: ______

Purge water disposal method: ______

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (ms/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
12:25	3.29	1.5	7.18	1.06	0.323	2.50	11.9	18.2	
12:30	3.29	2	7.11	0.91	0.325	0.83	12.0	12.2	
12:35	3.29	2.5	7.07	0.85	0.323	0.74	12.0	9.8	

Sampling Data

Sample No. MW-CP3-102720　Location and Depth: ______

Date Collected (mo/dy/yr): 102720　Time Collected: 1242　Weather: 50 and partly cloudy

Type: ☑ Ground Water ☐ Surface Water Other: ______　Sample: ☐ Filtered ☑ Unfiltered Other: ______

Sample Collected with: ☐ Bailer ☑ Pump Other: ______　Type: ☑ Peristaltic ☐ Bladder ☐ Submersible Other: ______

Water Quality Instrument Data Collected with: Type. ☑ YSI ProDSS Other: NA

Sample Decon Procedure: Sample collected with (circle one): decontaminated all tubing; disposable and/or dedicated silicon and poly tubing; new tubing

Sample Description (Color, Turbidity, Odor, Other): ______

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative
		500 mL poly	1	None
		1/2 L amber	2	

QC samples

Duplicate Sample No: NA　Duplicate Time: NA　MS/MSD: ☐ Yes ☑ No　Other QC Sample: NA

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: POS-LL　　Date of Collection: 10/27/2020

Task Number: ______　　Field Personnel: KS

Purge Data

Well ID: MW-CPH　Secure: ☒ Yes ☐ No　Ecology Tag #: —　Casing Type/Diameter/Screened Interval: 2"

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____　Other Damage: New

Depth Sounder decontaminated Prior to Placement in Well: ☒ Yes ☐ No　One Casing Volume (gal): ______

Depth of water (from top of well casing): 2.26　Total Depth (from log or field measurement): 6.35'

After 5 minutes of purging (from top of casing): 2.26

Begin purge (time): 1343

End purge (time): 1435

Volume purged: 7.5 liters

Purge water disposal method: drum

Volume of Schedule 40 PVC Pipe				
Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ½"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (ms/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
1400	2.26	4	6.53	0.38	257.2	1.27	14.2	94.3	
1405	2.26	5	6.54	0.37	257.3	1.16	14.2	94.3	
1410	2.26	6	6.55	0.35	257.7	1.26	14.3	93.8	
1415	2.26	7	6.55	0.33	257.6	0.95	14.3	93.4	

Sampling Data

Sample No: MW-CPH-102720　Location and Depth: ______

Date Collected (mo/dy/yr): 10/27/20　Time Collected: 1420　Weather: Overcast ≈50°F

Type: ☒ Ground Water ☐ Surface Water Other: ______　Sample: ☐ Filtered ☒ Unfiltered Other: ______

Sample Collected with: ☐ Bailer ☒ Pump Other: ______　Type: ☒ Peristaltic ☐ Bladder ☐ Submersible Other: ______

Water Quality Instrument Data Collected with: Type: ☒ YSI ProDSS Other: ______

Sample Decon Procedure: Sample collected with (circle one): decontaminated all tubing; disposable and/or dedicated silicon and poly tubing; new tubing ≈8'

Sample Description (Color, Turbidity, Odor, Other): clear, no odor

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative
Metals		500mL Poly	1	—
Dioxin		1L Amber	2	—

QC samples

Duplicate Sample No: —　Duplicate Time: —　MS/MSD: ☐ Yes ☒ No　Other QC Sample: —

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: PDS-LLA Date of Collection: 102720

Task Number: ______ Field Personnel: AJ + TJ

Purge Data

Well ID: MW-CPS Secure: ☐ Yes ☐ No Ecology Tag #: BLK 316 Casing Type/Diameter/Screened Interval ______

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: ______

Depth Sounder decontaminated Prior to Placement in Well. ☐ Yes ☐ No One Casing Volume (gal): ______

Depth of water (from top of well casing): 3.61 Total Depth (from log or field measurement): 17.97

After 5 minutes of purging (from top of casing): 3.89

Begin purge (time): 1346

End purge (time): 1447

Volume purged: 5 L

Purge water disposal method: on site drum

Volume of Schedule 40 PVC Pipe				
Diameter	O.D	I.D	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (ms/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
1400	4.05	1.5	6.88	0.92	0.530	13.6	13.3	-66.2	
1405	4.05	2	6.89	0.82	0.516	25.4	13.3	-59.0	
1410	4.09	2.5	6.90	0.78	0.516	21.0	13.3	-53.3	
1415	4.07	3	6.90	0.77	0.522	18.3	13.3	-60.4	
1420	4.1	3.5	6.91	0.75	0.528	16.0	13.3	-66.1	
1425	4.11	4	6.91	0.74	0.536	17.1	13.3	-72.7	

Sampling Data

Sample No. MW-CPS-102720 Location and Depth. ______

Date Collected (mo/dy/yr): 10/27/20 Time Collected: 1428 Weather. ______

Type: ☑ Ground Water ☐ Surface Water Other: ______ Sample: ☐ Filtered ☑ Unfiltered Other: ______

Sample Collected with: ☐ Bailer ☑ Pump Other ______ Type: ☑ Peristaltic ☐ Bladder ☐ Submersible Other: ______

Water Quality Instrument Data Collected with: Type: ☑ YSI ProDSS Other: ______

Sample Decon Procedure: Sample collected with (circle one): decontaminated all tubing; disposable and/or (dedicated silicon) and poly tubing; (new tubing)

Sample Description (Color, Turbidity, Odor, Other): ______

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative
		500 mL poly	1	None
		1/2 L amber	2	

QC samples

Duplicate Sample No: NA Duplicate Time: NA MS/MSD: ☐ Yes ☑ No Other QC Sample: NA

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: POS-LL Date of Collection: 10/27/2020

Task Number: _____ Field Personnel: TS

Purge Data

Well ID: MW-CP6 Secure: ☒ Yes ☐ No Ecology Tag #: BLK314 Casing Type/Diameter/Screened Interval 2"

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: New

Depth Sounder decontaminated Prior to Placement in Well: ☒ Yes ☐ No One Casing Volume (gal): _____

Depth of water (from top of well casing): 3.55' Total Depth (from log or field measurement): 18.15'

After 5 minutes of purging (from top of casing): 3.66'

Begin purge (time): 12:32

End purge (time): 1328

Volume purged: 11.5 liters

Purge water disposal method drum

Volume of Schedule 40 PVC Pipe				
Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.46
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (ms/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
12:45	3.70	3	6.08	0.59	266.3	3.66	12.5	106.3	
1250	3.69	4	6.08	0.44	266.2	2.22	12.5	86.9	
1255	3.69	5	6.09	0.38	266.2	1.70	12.5	72.7	
1300	3.69	6.25	6.10	0.35	265.5	1.18	12.5	62.3	
1305	3.69	8	6.11	0.33	265.0	0.91	12.5	53.7	
1310	3.69	9	6.12	0.32	264.4	0.73	12.5	47.7	
1315	3.69	10.25	6.13	0.31	264.4	1.15	12.5	42.3	

Sampling Data

Sample No: MW-CP6-102720 Location and Depth: ≈13' below TOC

Date Collected (mo/dy/yr): 10/27/20 Time Collected: 1320 Weather: Overcast ≈50°F

Type: ☒ Ground Water ☐ Surface Water Other: _____ Sample: ☐ Filtered ☒ Unfiltered Other: _____

Sample Collected with: ☐ Bailer ☒ Pump Other: _____ Type: ☒ Peristaltic ☐ Bladder ☐ Submersible Other: _____

Water Quality Instrument Data Collected with: Type: ☒ YSI ProDSS Other: Hach 2100Q Turbidity

Sample Decon Procedure: Sample collected with (circle one): decontaminated all tubing; disposable and/or dedicated silicon and poly tubing; new tubing ≈20'

Sample Description (Color, Turbidity, Odor, Other): clear; no odor

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative
Metals		500 mL Poly	1	—
Dioxin		1L Amber	2	—

QC samples

Duplicate Sample No: — Duplicate Time: — MS/MSD: ☐ Yes ☒ No Other QC Sample: —

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: POS-LL — Date of Collection: 10/27/2020

Task Number: — Field Personnel: TS

Purge Data

Well ID: MW-CP7 Secure: ☒ Yes ☐ No Ecology Tag #: BLK316 Casing Type/Diameter/Screened Interval 2"

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: New

Depth Sounder decontaminated Prior to Placement in Well: ☒ Yes ☐ No

One Casing Volume (gal): ____

Depth of water (from top of well casing): 4.78'

Total Depth (from log or field measurement): 23.05'

After 5 minutes of purging (from top of casing): 4.83'

Begin purge (time): 1102

End purge (time): 1209

Volume purged: 18 liters

Purge water disposal method: drum

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (ms/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
1110	4.84	2	6.22	1.42	235.1	11.5	15.2	287.8	
1115	4.84	3	6.10	1.24	234.8	11.3	15.3	285.7	
1120	4.84	5	6.06	1.14	234.6	7.08	15.3	283.6	
1125	4.84	6.5	6.04	1.08	234.6	5.78	15.3	282.8	
1130	4.84	8	6.03	1.07	234.4	4.41	15.2	281.1	
1135	4.84	10	6.03	1.04	234.2	3.52	15.3	279.3	
1140	4.84	11.5	6.03	1.03	234.0	2.91	15.3	276.8	cont. on back

Sampling Data

Sample No: MW-CP7-102720 Location and Depth: ≈20' below TOC

Date Collected (mo/dy/yr): 10/27/20 Time Collected: ~~1445~~ 1200 Weather: Overcast ≈55°F

Type: ☒ Ground Water ☐ Surface Water Other: ____ Sample: ☐ Filtered ☒ Unfiltered Other: ____

Sample Collected with: ☐ Bailer ☒ Pump Other: ____ Type: ☒ Peristaltic ☐ Bladder ☐ Submersible Other: ____

Water Quality Instrument Data Collected with: Type: ☒ YSI ProDSS Other: Hach 2100Q Turbidity

Sample Decon Procedure: Sample collected with (circle one): decontaminated all tubing; disposable and/or dedicated silicon and poly tubing; new tubing ≈ 25'

Sample Description (Color, Turbidity, Odor, Other): Clear no odor

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative
Metals		500 mL Poly	1	—
Dioxin		1L Amber	2	—

QC samples

Duplicate Sample No: — Duplicate Time: — MS/MSD: ☐ Yes ☒ No Other QC Sample: —

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: POS-LL Date of Collection: 10/27/2020

Task Number: ____ Field Personnel: TS

Purge Data

Well ID: MW-VB3 Secure: ☒ Yes ☐ No Ecology Tag #: BLK 794 Casing Type/Diameter/Screened Interval: 2"

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: New

Depth Sounder decontaminated Prior to Placement in Well: ☒ Yes ☐ No One Casing Volume (gal): ____

Depth of water (from top of well casing): 11.30' Total Depth (from log or field measurement): 20.85'

After 5 minutes of purging (from top of casing): 11.40'

Begin purge (time): 0909

End purge (time): 0959

Volume purged: 10.75 liters

Purge water disposal method: drum

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ½"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (ms/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
0920	11.40	2.5	5.62	0.60	276.0	5.56	13.0	268.6	
0925	11.40	4	5.64	0.47	275.6	4.98	13.2	267.9	
0930	11.40	5.25	5.65	0.43	275.8	5.22	13.2	267.4	
0935	11.40	7	5.65	0.41	274.9	5.40	13.2	266.5	pump slowed
0940	11.40	8.25	5.66	0.41	274.8	4.38	13.1	265.5	
0945	11.40	9.25	5.66	0.41	274.6	4.79	13.1	264.5	

Sampling Data

Sample No: MW-VB3-102720 Location and Depth: 15' below TOC

Date Collected (mo/dy/yr): 10/27/20 Time Collected: ~~0945~~ 0950 Weather: Overcast / ≈46°F

Type: ☒ Ground Water ☐ Surface Water Other: ____ Sample: ☐ Filtered ☒ Unfiltered Other: ____

Sample Collected with: ☐ Bailer ☒ Pump Other: ____ Type: ☒ Peristaltic ☐ Bladder ☐ Submersible Other ____

Water Quality Instrument Data Collected with: Type: ☒ YSI ProDSS Other: Hach 2100Q - Turbidity

Sample Decon Procedure: Sample collected with (circle one): decontaminated all tubing; disposable and/or dedicated silicon and poly tubing; new tubing ≈ 20'

Sample Description (Color, Turbidity, Odor, Other): Clear; no odor

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative
Metals		250mL Poly	1	—
Dioxin		1 L Amber	2	—

QC samples

Duplicate Sample No: — Duplicate Time: — MS/MSD: ☐ Yes ☒ No Other QC Sample: —

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: POS-LL Date of Collection: 10/28/2020

Task Number: Field Personnel: TS

Purge Data

Well ID: HC00-B312 Secure: ☐ Yes ☑ No Ecology Tag #: — Casing Type/Diameter/Screened Interval: 2" PVC

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: Well cap replaced / Trans # 2332754

Depth Sounder decontaminated Prior to Placement in Well: ☑ Yes ☐ No One Casing Volume (gal):

Depth of water (from top of well casing): 13.39 Total Depth (from log or field measurement): 25.49'

After 5 minutes of purging (from top of casing): 13.40

Begin purge (time): 1225

End purge (time): 1308

Volume purged: 11 liters

Purge water disposal method: drum

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (ms/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
1240	13.40	4.75	6.35	1.00	0.354	0.97	13.4	55.4	
1245	13.40	6.5	6.24	0.97	0.351	1.11	13.4	67.4	
1250	13.40	7.75	6.21	0.94	0.350	0.62	13.4	72.9	
1255	13.40	9.5	6.20	0.95	0.348	0.73	13.4	76.8	

Sampling Data

Sample No: HC00-B312-102820 Location and Depth: ≈ 20' below TOC

Date Collected (mo/dy/yr): 10/28/20 Time Collected: 1300 Weather: Overcast ≈55°F

Type: ☑ Ground Water ☐ Surface Water Other: Sample: ☐ Filtered ☑ Unfiltered Other:

Sample Collected with: ☐ Bailer ☑ Pump Other: Type: ☑ Peristaltic ☐ Bladder ☐ Submersible Other:

Water Quality Instrument Data Collected with: Type: ☑ YSI ProDSS Other: LaMotte Turbidimeter

Sample Decon Procedure: Sample collected with (circle one): decontaminated all tubing; disposable and/or dedicated silicon and poly tubing; new tubing ≈ 30'

Sample Description (Color, Turbidity, Odor, Other): Clear, no odor

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative
Metals		500mL Poly	1	—
Dioxin		1L Amber	2	—

QC samples

Duplicate Sample No: — Duplicate Time: — MS/MSD: ☐ Yes ☑ No Other QC Sample: —

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: PDS-LLA Date of Collection: 10/28/20

Task Number: 1840 Field Personnel: P.D.

Purge Data

Well ID: MW-C1/VB1 Secure: ☑ Yes ☐ No Ecology Tag #: BKA 343 Casing Type/Diameter/Screened Interval: 2" PVC

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: None

Depth Sounder decontaminated Prior to Placement in Well: ☒ Yes ☐ No One Casing Volume (gal): 1.13 gals

Depth of water (from top of well casing): 10.50 Total Depth (from log or field measurement): 17.14'

After 5 minutes of purging (from top of casing): 10.58 @ 09:05

Begin purge (time): 08:55

End purge (time): 10:12

Volume purged: 8L

Purge water disposal method: drum on site

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.600"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (µS/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
09:05	10.58	1	6.88	8.80	131.5	2.16	14.3	261.9	
09:10	10.59	2	6.54	8.62	133.8	1.20	14.3	257.8	
09:15	10.59	3	6.40	8.41	137.7	1.01	14.3	256.4	
09:20	10.59	4	6.30	8.25	143.5	0.84	14.2	256.9	
09:25	10.59	5	6.24	8.12	148.6	0.666	14.2	258.1	
09:30	10.60	6	6.17	7.95	157.3	0.49	14.2	260.4	
09:35	10.60	7	6.14	7.82	162.2	0.36	14.2	262.5	

Sampling Data

Sample No: MW-C1/VB1-102820 Location and Depth: ~11 Ft bTOC

Date Collected (mo/dy/yr): 10/28/20 Time Collected: 09:37 Weather: overcast, 55°F

Type: ☒ Ground Water ☐ Surface Water Other: ____ Sample: ☐ Filtered ☒ Unfiltered Other: ____

Sample Collected with: ☐ Bailer ☒ Pump Other: ____ Type: ☒ Peristaltic ☐ Bladder ☐ Submersible Other: ____

Water Quality Instrument Data Collected with: Type: ☒ YSI ProDSS Other: Hach 2100Q for turbidity

Sample Decon Procedure: Sample collected with (circle one): decontaminated all tubing; disposable and/or dedicated silicon and poly tubing; new tubing

Sample Description (Color, Turbidity, Odor, Other): clear, no odor

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative
Dioxins/Furans		1L Amber	4	—
Diss. Arsenic		½L poly	2	— (lab filter)

QC samples

Duplicate Sample No: MW-C101-102820 Duplicate Time: 09:47 MS/MSD: ☐ Yes ☐ No Other QC Sample: ____

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: POS - LLA Date of Collection: 10/28/20

Task Number: 1840 Field Personnel: P.D.

Purge Data

Well ID: MW-VB2 Secure: ☑ Yes ☐ No Ecology Tag #: BKA 340 Casing Type/Diameter/Screened Interval: 2" PVC

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: No lock, otherwise good

Depth Sounder decontaminated Prior to Placement in Well: ☑ Yes ☐ No One Casing Volume (gal): ____

Depth of water (from top of well casing): Dry Total Depth (from log or field measurement): 11.28

After 5 minutes of purging (from top of casing): ____

Begin purge (time): ____

End purge (time): ____

Volume purged: ____

Purge water disposal method: ____

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (____)	pH (s.u.)	DO (mg/L)	Specific Conductivity (ms/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments

Sampling Data

Sample No: ____ Location and Depth: ____

Date Collected (mo/dy/yr): ____ Time Collected: ____ Weather: ____

Type: ☐ Ground Water ☐ Surface Water Other: ____ Sample: ☐ Filtered ☐ Unfiltered Other: ____

Sample Collected with: ☐ Bailer ☐ Pump Other: ____ Type: ☐ Peristaltic ☐ Bladder ☐ Submersible Other: ____

Water Quality Instrument Data Collected with: Type: ☐ YSI ProDSS Other: ____

Sample Decon Procedure: Sample collected with (circle one): decontaminated all tubing; disposable and/or dedicated silicon and poly tubing; new tubing

Sample Description (Color, Turbidity, Odor, Other): ____

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	~~Preservative~~ Notes
				Water level covered in grassy debris when pulled out of well. Soft bottom. No water present in casing.

QC samples

Duplicate Sample No: ____ Duplicate Time: ____ MS/MSD: ☐ Yes ☐ No Other QC Sample: ____

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: POS - LLA Date of Collection: 10/28/20

Task Number: 1840 Field Personnel: RD.

Purge Data

Well ID: MW-C2 Secure: ☑ Yes ☐ No Ecology Tag #: BKA 341 Casing Type/Diameter/Screened Interval: 2" PVC

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: ~~None~~ Hinge rusty (hard to close)

Depth Sounder decontaminated Prior to Placement in Well: ☑ Yes ☐ No One Casing Volume (gal):

Depth of water (from top of well casing): 17.65 Total Depth (from log or (field measurement)): 23.68'

After 5 minutes of purging (from top of casing): 17.75

Begin purge (time): 10:25

End purge (time): 11:07

Volume purged: 7.5 L

Purge water disposal method: drum on site

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (µs/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
10:30	17.75	1	6.78	1.49	453.5	5.18	14.6	163.1	
10:35	17.75	2.25	7.01	0.66	451.3	1.32	14.5	32.0	
10:40	17.75	3.25	7.03	0.55	447.9	1.38	14.4	-2.4	
10:45	17.75	4	7.04	0.48	446.6	2.39	14.4	-21.2	
10:50	17.75	5	7.07	0.42	445.6	1.82	14.5	-33.9	
10:55	17.75	6	7.06	0.39	445.3	1.10	14.4	-39.7	
11:00	17.76	7	7.06	0.38	444.0	0.80	14.4	-42.5	

Sampling Data

Sample No: MW-C2-102820 Location and Depth:

Date Collected (mo/dy/yr): 10/28/20 Time Collected: 11:01 Weather: Overcast, 55° F

Type: ☒ Ground Water ☐ Surface Water Other: ____ Sample: ☐ Filtered ☒ Unfiltered Other: ____

Sample Collected with: ☐ Bailer ☒ Pump Other: ____ Type: ☒ Peristaltic ☐ Bladder ☐ Submersible Other: ____

Water Quality Instrument Data Collected with: Type: ☒ YSI ProDSS Other: Hach 2100Q for turbidity

Sample Decon Procedure: Sample collected with (circle one): decontaminated all tubing; disposable and/or (dedicated) silicon and poly tubing; new tubing

Sample Description (Color, Turbidity, Odor, Other): Clear, no black Flocculant, no odor

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative
Diss. Arsenic		1/2 L poly	1	None - lab filter

Notes: purge water clear w/ v. slight yellow/brown coloring and minor Black flocculant, likely stirred up from collecting T.D. measurement.

QC samples

Duplicate Sample No: ____ Duplicate Time: ____ MS/MSD: ☐ Yes ☐ No Other QC Sample: ____

Z:\sharedcloud\octopus\data\tmp\Tenlekel-1-407524898158362230.octo\008cca62-83c1-4540-be50-502725a8b758.doc

GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: POS-LLA Date of Collection: 10/28/20

Task Number: ______ Field Personnel: TS

Purge Data

Well ID: MW-C3 Secure: ☒ Yes ☐ No Ecology Tag #: BKA 342 Casing Type/Diameter/Screened Interval: 2"

Replacement Required: ☐ Monument ☐ Lid ☐ Lock ☐ Bolts: Missing (#) ____ Stripped (#) ____ Other Damage: —

Depth Sounder decontaminated Prior to Placement in Well: ☒ Yes ☐ No One Casing Volume (gal): ______

Depth of water (from top of well casing): 19.30' Total Depth (from log or field measurement): 25.20'

After 5 minutes of purging (from top of casing): 19.32'

Begin purge (time): 0928

End purge (time): 1008

Volume purged: 9 liters

Purge water disposal method: drum

Volume of Schedule 40 PVC Pipe

Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 ¼"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (L)	pH (s.u.)	DO (mg/L)	Specific Conductivity (ms/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
0940	19.31	3	7.36	5.28	0.213	4.65	13.0	61.9	
0945	19.31	4	7.08	5.13	0.220	3.51	13.0	70.6	
0950	19.32	5.2	6.93	5.06	0.222	3.01	13.0	75.7	
0955	19.32	6.2	6.87	5.01	0.224	3.33	13.0	78.3	
1000	19.32	7.2	6.76	4.96	0.226	2.37	13.0	80.0	
1005	19.32	8.2	6.73	4.96	0.226	1.93	13.0	81.5	

Sampling Data

Sample No: MW-C3-102820 Location and Depth: ______

Date Collected (mo/dy/yr): 10/28/20 Time Collected: 1006 Weather: Overcast ~55°F

Type: ☒ Ground Water ☐ Surface Water Other: ______ Sample: ☐ Filtered ☒ Unfiltered Other: ______

Sample Collected with: ☐ Bailer ☒ Pump Other: ______ Type: ☒ Peristaltic ☐ Bladder ☐ Submersible Other: ______

Water Quality Instrument Data Collected with: Type: ☒ YSI ProDSS Other: LaMotte Turbidimeter

Sample Decon Procedure: Sample collected with (circle one): decontaminated all tubing; disposable and/or dedicated silicon and poly tubing; new tubing ≈ 30'

Sample Description (Color, Turbidity, Odor, Other): clear; no odor

Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative
~~Total~~ Arsenic Dissolved		500mL Poly	1	—

QC samples

Duplicate Sample No: — Duplicate Time: — MS/MSD: ☐ Yes ☒ No Other QC Sample: —

Lora Lake Apartments Site

2020 Annual Compliance Monitoring Report

Appendix C
Laboratory Reports and Data Validation Summaries

Analytical Resources, Incorporated
Analytical Chemists and Consultants

07 April 2020

Megan King
Floyd - Snider
601 Union Street Two Union Square, Suite 600
Seattle, WA 98101-2341

RE: Lora Lake Apartments

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
20C0354	N/A

Amanda Volgardsen

Digitally signed by Amanda Volgardsen
DN: c=US, st=Washington, l=Tukwila, o=Analytical Resources, Inc., ou=Client Services, cn=Amanda Volgardsen, email=amanda.volgardsen@arilabs.com
Date: 2020.04.07 13:25:23 -07'00'

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in it" entirety.

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006

PJLA Testing
Accreditation # 66169

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 20C0354	Turn-around Requested: Standard	Page: 1 of 1	
ARI Client Company: Floyd|Snider	Phone: 206-292-2078	Date: 3/30/20	Ice Present? Yes
Client Contact: Megan King (Megan.King@floydsnider.com)		No. of Coolers: 1	Cooler Temps: 5.2°C
Client Project Name: POS-LLA			
Client Project #: 8140	Samplers: Adria Jumper & Tyler Scott		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Dissolved Arsenic	Notes/Comments
MW-C1-033020	3/30/20	12:03	gw	1	X	Diss. Arsenic to be lab filtered & lab preserved
MW-C1-033020-D		12:07		1	X	
MW-C2-033020		11:28		1	X	
MW-C3-033020		11:15		1	X	
MW-C4-033020		10:13		1	X	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Tyler Scott	Printed Name: Jacob Haltc	Printed Name:	Printed Name:
	Company: Floyd Snider	Company: ARI	Company:	Company:
	Date & Time: 03/30/2020 13:40	Date & Time: 03/30/2020 1340	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Floyd - Snider	Project: Lora Lake Apartments	
601 Union Street Two Union Square, Suite 600	Project Number: 8140	**Reported:**
Seattle WA, 98101-2341	Project Manager: Megan King	07-Apr-2020 13:22

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-C1-033020	20C0354-01	Water	30-Mar-2020 12:03	30-Mar-2020 13:40
MW-C1-033020-D	20C0354-02	Water	30-Mar-2020 12:07	30-Mar-2020 13:40
MW-C2-033020	20C0354-03	Water	30-Mar-2020 11:28	30-Mar-2020 13:40
MW-C3-033020	20C0354-04	Water	30-Mar-2020 11:15	30-Mar-2020 13:40
MW-C4-033020	20C0354-05	Water	30-Mar-2020 10:13	30-Mar-2020 13:40

Floyd - Snider	Project: Lora Lake Apartments	
601 Union Street Two Union Square, Suite 600	Project Number: 8140	**Reported:**
Seattle WA, 98101-2341	Project Manager: Megan King	07-Apr-2020 13:22

Work Order Case Narrative

Sample receipt

Samples as listed on the preceding page were received March 30, 2020 under ARI work order 20C0354. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Dissolved Copper - EPA Method 200.8

The samples were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank was clean at the reporting limits.

The LCS percent recoveries were within control limits.

A matrix spike, matrix spike duplicate and duplicate were prepared in conjunction with sample MW-C1-033020. The matrix spike, matrix spike duplicate and duplicate percent recoveries and/or RPD were within QC limits.

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

WORK ORDER

20C0354

Client: Floyd - Snider | **Project Manager:** Amanda Volgardsen

Project: Lora Lake Apartments | **Project Number:** POS-LL

Preservation Confirmation

Container ID	Container Type	pH	
20C0354-01 A	HDPE NM, 500 mL	>2	Fail
20C0354-02 A	HDPE NM, 500 mL	>2	Fail
20C0354-03 A	HDPE NM, 500 mL	>2	Fail
20C0354-04 A	HDPE NM, 500 mL	>2	Fail
20C0354-05 A	HDPE NM, 500 mL	>2	Fail

JB

Preservation Confirmed By

03/30/2020

Date

Reviewed By

Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Floyd Snide

Project Name: POS-LLA

COC No(s): NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 20C0354

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 1340 5.0C

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: DOO 5206

Cooler Accepted by: JBm Date: 03/30/2020 Time: 1340

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used?	Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:		
Was sufficient ice used (if appropriate)?	NA	YES	NO
How were bottles sealed in plastic bags?	Individually	Grouped	Not
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA		

Were the sample(s) split by ARI? NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JBm Date: 03/30/2020 Time: 1612 Labels checked by: JBm

** ***Notify Project Manager of discrepancies or concerns*** **

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
MW-CIURI-033020		MW-CI-033020	
MW-CIURI-033020-D		MW-CI-033020-D	
		JBm 03/30/2020	

Additional Notes, Discrepancies, & Resolutions:

By: Date:

WORK ORDER

20C0354

Client: Floyd - Snider	Project Manager: Amanda Volgardsen
Project: Lora Lake Apartments	Project Number: POS-LL

Preservation Confirmation

Container ID	Container Type	pH		
20C0354-01 A	HDPE NM, 500 mL	>2	Fail	(1)
20C0354-02 A	HDPE NM, 500 mL	>2	Fail	(1)
20C0354-03 A	HDPE NM, 500 mL	>2	Fail	(1)
20C0354-04 A	HDPE NM, 500 mL	>2	Fail	(1)
20C0354-05 A	HDPE NM, 500 mL	>2	Fail	(1)

JBW
Preservation Confirmed By

03/30/2020
Date

(1) Filtered with 0.45 µm and preserved to pH < 2.0 with 0.75 ml of Conc. HNO_3 (I719) 3/31/2020 JC

Reviewed By

Date

Floyd - Snider	Project: Lora Lake Apartments	
601 Union Street Two Union Square, Suite 600	Project Number: 8140	**Reported:**
Seattle WA, 98101-2341	Project Manager: Megan King	07-Apr-2020 13:22

MW-C1-033020

20C0354-01 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 03/30/2020 12:03

Instrument: ICPMS2 Analyst: TCH — Analyzed: 04/01/2020 14:58

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20C0354-01 A 02

Preparation Batch: BIC0674 — Sample Size: 25 mL — Filtration Batch: BIC0655

Prepared: 03/31/2020 — Final Volume: 25 mL — Filtration Date: 03/31/2020 10:14

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0220	0.200	**0.115**	ug/L	J

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Floyd - Snider	Project: Lora Lake Apartments	
601 Union Street Two Union Square, Suite 600	Project Number: 8140	**Reported:**
Seattle WA, 98101-2341	Project Manager: Megan King	07-Apr-2020 13:22

MW-C1-033020-D

20C0354-02 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 03/30/2020 12:07

Instrument: ICPMS2 Analyst: TCH — Analyzed: 04/01/2020 17:39

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20C0354-02 A 02

Preparation Batch: BIC0674 — Sample Size: 25 mL — Filtration Batch: BIC0655

Prepared: 03/31/2020 — Final Volume: 25 mL — Filtration Date: 03/31/2020 10:14

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0220	0.200	**0.127**	ug/L	J

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Floyd - Snider	Project: Lora Lake Apartments	
601 Union Street Two Union Square, Suite 600	Project Number: 8140	**Reported:**
Seattle WA, 98101-2341	Project Manager: Megan King	07-Apr-2020 13:22

MW-C2-033020

20C0354-03 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 03/30/2020 11:28

Instrument: ICPMS2 Analyst: TCH — Analyzed: 04/01/2020 17:44

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20C0354-03 A 02

Preparation Batch: BIC0674 — Sample Size: 25 mL — Filtration Batch: BIC0655

Prepared: 03/31/2020 — Final Volume: 25 mL — Filtration Date: 03/31/2020 10:14

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0220	0.200	**27.1**	ug/L	

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Floyd - Snider	Project: Lora Lake Apartments	
601 Union Street Two Union Square, Suite 600	Project Number: 8140	**Reported:**
Seattle WA, 98101-2341	Project Manager: Megan King	07-Apr-2020 13:22

MW-C3-033020

20C0354-04 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 03/30/2020 11:15

Instrument: ICPMS2 Analyst: TCH — Analyzed: 04/01/2020 17:48

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20C0354-04 A 02

Preparation Batch: BIC0674 — Sample Size: 25 mL — Filtration Batch: BIC0655

Prepared: 03/31/2020 — Final Volume: 25 mL — Filtration Date: 03/31/2020 10:14

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0220	0.200	**0.249**	ug/L	

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Floyd - Snider	Project: Lora Lake Apartments	
601 Union Street Two Union Square, Suite 600	Project Number: 8140	**Reported:**
Seattle WA, 98101-2341	Project Manager: Megan King	07-Apr-2020 13:22

MW-C4-033020

20C0354-05 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 03/30/2020 10:13
Instrument: ICPMS2 Analyst: TCH — Analyzed: 04/01/2020 17:52

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20C0354-05 A 02
Preparation Batch: BIC0674 — Sample Size: 25 mL — Filtration Batch: BIC0655
Prepared: 03/31/2020 — Final Volume: 25 mL — Filtration Date: 03/31/2020 10:14

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0220	0.200	**0.369**	ug/L	

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Floyd - Snider	Project: Lora Lake Apartments	
601 Union Street Two Union Square, Suite 600	Project Number: 8140	**Reported:**
Seattle WA, 98101-2341	Project Manager: Megan King	07-Apr-2020 13:22

Metals and Metallic Compounds (dissolved) - Quality Control

Batch BIC0674 - REN EPA 600/4-79-020 4.1.4 HNO3 matrix

Instrument: ICPMS2 Analyst: TCH

QC Sample/Analyte	Isotope	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BIC0674-BLK1)						Prepared: 31-Mar-2020 Analyzed: 01-Apr-2020 14:32						
Arsenic, Dissolved	75a	ND	0.0220	0.200	ug/L							U
LCS (BIC0674-BS1)						Prepared: 31-Mar-2020 Analyzed: 01-Apr-2020 15:11						
Arsenic, Dissolved	75a	24.4	0.0220	0.200	ug/L	25.0		97.5	80-120			
Duplicate (BIC0674-DUP1)			**Source: 20C0354-01**			Prepared: 31-Mar-2020 Analyzed: 01-Apr-2020 14:54						
Arsenic, Dissolved	75a	0.122	0.0220	0.200	ug/L		0.115			5.91	20	J
Matrix Spike (BIC0674-MS1)			**Source: 20C0354-01**			Prepared: 31-Mar-2020 Analyzed: 01-Apr-2020 15:03						
Arsenic, Dissolved	75a	25.0	0.0220	0.200	ug/L	25.0	0.115	99.3	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Matrix Spike Dup (BIC0674-MSD1)			**Source: 20C0354-01**			Prepared: 31-Mar-2020 Analyzed: 01-Apr-2020 15:07						
Arsenic, Dissolved	75a	25.3	0.0220	0.200	ug/L	25.0	0.115	101	75-125	1.25	20	

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Floyd - Snider	Project: Lora Lake Apartments	
601 Union Street Two Union Square, Suite 600	Project Number: 8140	**Reported:**
Seattle WA, 98101-2341	Project Manager: Megan King	07-Apr-2020 13:22

Certified Analyses included in this Report

Analyte	Certifications
EPA 200.8 UCT-KED in Water	
Arsenic-75a	NELAP,WADOE,WA-DW,DoD-ELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	01/31/2021
CALAP	California Department of Public Health CAELAP	2748	06/30/2019
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	01/01/2021
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2020
WADOE	WA Dept of Ecology	C558	06/30/2019
WA-DW	Ecology - Drinking Water	C558	06/30/2019

Floyd - Snider	Project: Lora Lake Apartments	
601 Union Street Two Union Square, Suite 600	Project Number: 8140	**Reported:**
Seattle WA, 98101-2341	Project Manager: Megan King	07-Apr-2020 13:22

Notes and Definitions

D	The reported value is from a dilution
J	Estimated concentration value detected below the reporting limit.
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

01 July 2020

Megan King
Floyd - Snider
601 Union Street Two Union Square, Suite 600
Seattle, WA 98101-2341

RE: Lora Lake Apartments

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
20F0296	N/A

Amanda Volgardsen

Digitally signed by Amanda Volgardsen
DN: c=US, st=Washington, l=Tukwila, o=Analytical Resources, Inc., ou=Client Services, cn=Amanda Volgardsen, email=amanda.volgardsen@arilabs.com
Date: 2020.07.13 16:12:06 -07'00'

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amanda Volgardsen Johnson, Project Manager

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

PJLA Testing
Accreditation # 66169

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 20F0296	Turn-around Requested: Standard	Page: 1 of 1	
ARI Client Company: Floyd|Snider	Phone: 206-292-2078	Date: 6/17/20	Ice Present? Yes
Client Contact: Megan King		No. of Coolers: 1	Cooler Temps: 4.4°C
Client Project Name: POS-LCA ~~Site~~ (Lora Lake)			
Client Project #: 8140	Samplers: A JUMPER & L WACHTER		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Dissolved Arsenic	Notes/Comments
MW-C1-061720	6/17/20	1113	gw	1	X	Lab preserve & lab filter
MWC1-061720D		1118		1	X	
MWC2-061720		1210		1	X	
MWC3-061720		1240		1	X	
MWC4-061720		1005		1	X	

Comments/Special Instructions	Relinquished by: (Signature)	Printed Name:	Company:	Date & Time:	Received by: (Signature)	Printed Name:	Company:	Date & Time:	Relinquished by: (Signature)	Printed Name:	Company:	Date & Time:	Received by: (Signature)	Printed Name:	Company:	Date & Time:
		Adra Jumper	Floyd|Snider	6/17/20 13:23		Jacobsgate	ARI	06/17/2020 1323								

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

WORK ORDER

20F0296

Client: Floyd - Snider	**Project Manager:** Amanda Volgardsen Johnson
Project: Lora Lake Apartments	**Project Number:** POS-LL

Preservation Confirmation

Container ID	Container Type	pH	
20F0296-01 A	HDPE NM, 500 mL	>2	Fail
20F0296-02 A	HDPE NM, 500 mL	>2	Fail
20F0296-03 A	HDPE NM, 500 mL	>2	Fail
20F0296-04 A	HDPE NM, 500 mL	>2	Fail
20F0296-05 A	HDPE NM, 500 mL	>2	Fail

JA
Preservation Confirmed By

06/17/2020
Date

Reviewed By

Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Floyd-Snide Project Name: POS-LLA

COC No(s): NA Delivered by: Fed-Ex UPS Courier Hand Delivered Other:

Assigned ARI Job No: 20F0296 Tracking No: NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 4.4°C

Time 1323

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: D00 52006

Cooler Accepted by: JGm Date: 06/17/2000 Time: 1323

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used?	Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:		
Was sufficient ice used (if appropriate)?	NA	YES	NO
How were bottles sealed in plastic bags?	Individually	Grouped	Not
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA		

Were the sample(s) split by ARI? NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JGm Date: 06/17/2000 Time: 1327 Labels checked by: JGm

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 06/17/2020 13:31:18

WORK ORDER

20F0296

Client: Floyd - Snider
Project Manager: Amanda Volgardsen Johnson
Project: Lora Lake Apartments
Project Number: POS-LL

Preservation Confirmation

Container ID	Container Type	pH		
20F0296-01 A	HDPE NM, 500 mL	72	Fail	(1)
20F0296-02 A	HDPE NM, 500 mL	>2	Fail	(1)
20F0296-03 A	HDPE NM, 500 mL	>2	Fail	(1)
20F0296-04 A	HDPE NM, 500 mL	>2	Fail	(1)
20F0296-05 A	HDPE NM, 500 mL	>2	Fail	(1)

IGm
Preservation Confirmed By

06/17/2020
Date

(1) Filtered with 0.45µm and preserved to pH < 2.0 with 0.75ml of conc. HNO_3 (I3163)
06/19/20 BC

Reviewed By

Date

Floyd - Snider	Project:	Lora Lake Apartments	
601 Union Street Two Union Square, Suite 600	Project Number:	8140	**Reported:**
Seattle, WA 98101-2341	Project Manager:	Megan King	07/01/2020 16:05

ANALYTICAL REPORT FOR SAMPLES

Laboratory ID	Sample ID	Matrix	Date Sampled	Date Received
20F0296-01	MW-C1-061720	Water	06/17/20 11:13	06/17/20 13:23
20F0296-02	MWC1-061720D	Water	06/17/20 11:18	06/17/20 13:23
20F0296-03	MWC2-061720	Water	06/17/20 12:10	06/17/20 13:23
20F0296-04	MWC3-061720	Water	06/17/20 12:40	06/17/20 13:23
20F0296-05	MWC4-061720	Water	06/17/20 10:05	06/17/20 13:23

Analytical Report

Floyd - Snider	Project: Lora Lake Apartments	
601 Union Street Two Union Square, Suite 600	Project Number: 8140	**Reported:**
Seattle WA, 98101-2341	Project Manager: Megan King	01-Jul-2020 16:05

Case Narrative

Sample receipt

Samples as listed on the preceding page were received 17-Jun-2020 13:23 under ARI work order 20F0296. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Dissolved Arsenic - EPA Method 200.8

The samples were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank was clean at the reporting limits.

The LCS percent recoveries were within control limits.

A matrix spike, matrix spike duplicate and duplicate were prepared in conjunction with sample MC-C1-061720. The matrix spike, matrix spike duplicate and duplicate percent recoveries and/or RPD were within QC limits.

Analytical Report

Floyd - Snider	Project: Lora Lake Apartments	
601 Union Street Two Union Square, Suite 600	Project Number: 8140	**Reported:**
Seattle WA, 98101-2341	Project Manager: Megan King	01-Jul-2020 16:05

Case Narrative

QUALIFIERS AND NOTES

Qualifier	Definition
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
J	Estimated concentration value detected below the reporting limit.
D	The reported value is from a dilution
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 200.8 UCT-KED

Dissolved Metals

MW-C1-061720

Laboratory:	Analytical Resources, Inc.				
Client:	Floyd - Snider				
Project:	Lora Lake Apartments				
Matrix:	Ground Water	Laboratory ID:	20F0296-01 A 01	SDG:	20F0296
Sampled:	06/17/20 11:13	Prepared:	06/25/20 08:03	File ID:	XDT_m1200630-082
% Solids:	0.00	Preparation:	REN_EPA 600/4-79-020 4.1.4 HNO3 matrix	Analyzed:	06/30/20 20:14
Batch:	BIF0741	Sequence:	SIF0466	Initial/Final:	25 mL / 25 mL
Instrument:	ICPMS1			Calibration:	DG00003

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic-75a, Dissolved	0.141	1	0.0220	0.200	J

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 200.8 UCT1KED

MWC-106-720D

Dissolved Metals

Laboratory:	Analytical Resources, Inc.				
Client:	Floyd - Snider				
Project:	Lora Lake Apartments				
Matrix:	Ground Water	Laboratory ID:	20F0296-02 A 01	SDG:	20F0296
Sampled:	06/18/20 11:1/	Prepared:	06/25/20 0/ :03	File ID:	XDT_m1200630-08/
% Solids:	0.00	Preparation:	R4E_4NA 600/P-89-020 P.1.P HEO3 matrix	Analyzed:	06/30/20 19:53
Batch:	BIF08P1	Sequence:	SIF0P66	Initial/Final:	25 mL/25 mL
Instrument:	ICPMS1			Calibration:	DG00003

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
8PP0-3/-2	Arsenic-85a, Dissolved	0.136	1	0.0220	0.200	J

Form I
INORGANIC ANALYSIS DATA SHEET
EPA - 00.8 UCT1KED

Dissolved Metals

MWC- 10672- 0

Laboratory:	Analytical Resources, Inc.				
Client:	Floyd - Snider				
Project:	Lora Lake Apartments				
Matrix:	Ground Water	Laboratory ID:	20F0296-03 A 01	SDG:	20F0296
Sampled:	06/17/20 12:10	Prepared:	06/25/20 08:03	File ID:	XDT_m1200630-079
% Solids:	0.00	Preparation:	REN_EPA 600/4-79-020 4.1.4 HNO3 matrix	Analyzed:	06/30/20 20:00
Batch:	BIF0741	Sequence:	SIF0466	Initial/Final:	25 mL / 25 mL
Instrument:	ICPMS1			Calibration:	DG00003

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic-75a, Dissolved	11.4	1	0.0220	0.200	

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 200.8 UCT-KED

Dissolved Metals

MWC3-061720

Laboratory5	Analytical Resources, Inc.				
Client5	Floyd - Snider				
4roject5	Lora Lake Apartments				
Matrix5	Ground Water	Laboratory ID5	20F0296-08 A 01	SDG5	20F0296
Sampled5	06/1: /20 12580	4repared5	06/2E/20 07503	File ID5	XDT_m1200630-070
% Solids5	0.00	4reparation5	RNP_N4A 600/8-: 9-020 8.1.8 HP O3 matrix	Analyzed5	06/30/20 2050E
Batch5	BIF0: 81	Sequence5	SIF0866	Initial/Final5	2E mL / 2E mL
Instrument5	IC4MS1			Calibration5	DG00003

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
: 880-37-2	Arsenic-: Ea, Dissolved	0.228	1	0.0220	0.200	

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 200.8 UCT-KED

Dissolved Metals

MWC4-061720

Laboratory5	Analytical Resources, Inc.				
Client5	Floyd - Snider				
Project5	Lora Lake Apartments				
Matrix5	Ground Water	Laboratory ID5	20F0296-08 A 01	SDG5	20F0296
Sampled5	06/1: /20 10508	Prepared5	06/28/20 07503	File ID5	XDT_m1200630-071
% Solids5	0.00	Preparation5	REN_EPA 600/4-: 9-020 4.1.4 HNO3 matrix	Analyzed5	06/30/20 20509
Batch5	BIF0: 41	Sequence5	SIF0466	Initial/Final5	28 mL / 28 mL
Instrument5	ICPMS1			Calibration5	DG00003

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
: 440-37-2	Arsenic-: 8a, Dissolved	0.479	1	0.0220	0.200	

PREPARATION BATCH SUMMARY

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc. SDG: 20F0296

Client: Floyd - Snider Project: Lora Lake Apartments

Batch: BIF0741 Batch Matrix: Water Preparation: REN EPA 600/4-79-020 4.1.4 HNO3 matrix

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
MW-C1-061720	20F0296-01	XDT_m1200630-082	06/25/20 08:03	
MWC1-061720D	20F0296-02	XDT_m1200630-078	06/25/20 08:03	
MWC2-061720	20F0296-03	XDT_m1200630-079	06/25/20 08:03	
MWC3-061720	20F0296-04	XDT_m1200630-080	06/25/20 08:03	
MWC4-061720	20F0296-05	XDT_m1200630-081	06/25/20 08:03	
Blank	BIF0741-BLK1	XDT_m1200630-076	06/25/20 08:03	
LCS	BIF0741-BS1	XDT_m1200630-077	06/25/20 08:03	
MW-C1-061720	BIF0741-DUP1	XDT_m1200630-083	06/25/20 08:03	
MW-C1-061720	BIF0741-MS1	XDT_m1200630-084	06/25/20 08:03	
MW-C1-061720	BIF0741-MSD1	XDT_m1200630-085	06/25/20 08:03	

Form I

METHOD BLANK DATA SHEET

EPA 200.8 UCT-KED

Dissolved Metals

Blank

Laboratory: Analytical Resources, Inc.
SDG: 20F0296
Client: Floyd - Snider
Project: Lora Lake Apartments
Batch: BIF0741
Laboratory ID: BIF0741-BLK1
Prepared: 06/25/20 08:03
Matrix: Water
Preparation: REN_EPA 600/4-79-020 4
Analyzed: 06/30/20 19:44
Sequence: SIF0466
Calibration: DG00003
Instrument: ICPMS1

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic-75a	ND	1	0.0220	0.200	U

LCS / LCS DUPLICATE RECOVERY

EPA 200.8 UCT-KED

Dissolved Metals

Laboratory:	Analytical Resources, Inc.	SDG:	20F0296
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Matrix:	Water	Analyzed:	06/30/20 19:48
Batch:	BIF0741	Laboratory ID:	BIF0741-BS1
Preparation:	REN EPA 600/4-79-020 4.1.4 HNO3 matrix	Sequence Name:	LCS
Initial/Final:	25 mL / 25 mL		

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	Q	LCS % REC. #	QC LIMITS REC.
Arsenic-75a (dissolved)	25.0	24.5		97.9	80 - 120

* Indicates values outside of QC limits

MW-C1-061720

DUPLICATES

EPA 200.8 UCT-KED

Dissolved Metals

Laboratory: Analytical Resources, Inc.
SDG: 20F0296
Client: Floyd - Snider
Project: Lora Lake Apartments
Matrix: Water
Laboratory ID: BIF0741-DUP1
Batch: BIF0741
Lab Source ID: 20F0296-01
Preparation: REN EPA 600/4-79-020 4.1.4 HNO3 matrix
Initial/Final: 25 mL / 25 mL
Source Sample Name: MW-C1-061720
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/L)	C	DUPLICATE CONCENTRATION (ug/L)	C	RPD %	Q
Arsenic-75a (dissolved)	20	0.141	J	0.116	J	19.5	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

MW-C1-061720

MS / MS DUPLICATE RECOVERY

EPA 200.8 UCT-KED

Dissolved Metals

Laboratory:	Analytical Resources, Inc.	SDG:	20F0296
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Matrix:	Water	Analyzed:	06/30/20 20:23
Batch:	BIF0741	Laboratory ID:	BIF0741-MS1
Preparation:	REN EPA 600/4-79-020 4.1.4 HNO3 matrix	Sequence Name:	Matrix Spike
Initial/Final:	25 mL / 25 mL	Source Sample:	MW-C1-061720

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	Q	MS CONCENTRATION (ug/L)	Q	MS % REC. #	QC LIMITS REC.
Arsenic-75a (dissolved)	25.0	0.141	J	25.1		99.8	75 - 125

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY

EPA 200.8 UCT-KED

Dissolved Metals

Laboratory:	Analytical Resources, Inc.	SDG:	20F0296
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Matrix:	Water	Analyzed:	06/30/20 20:28
Batch:	BIF0741	Laboratory ID:	BIF0741-MSD1
Preparation:	REN EPA 600/4-79-020 4.1.4 HNO3 matrix	Sequence Name:	Matrix Spike Dup
Initial/Final:	25 mL / 25 mL	Source Sample:	MW-C1-061720

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Arsenic-75a (dissolved)	25.0	25.4		101	1.38	20	75 - 125

* Values outside of QC limits

INITIAL CALIBRATION DATA

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20F0296
Client: Floyd - Snider
Project: Lora Lake Apartments
Calibration: DG00003
Instrument: ICPMS1
Calibration Date: 06/30/2020 13:14

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Arsenic-75a, Dissolved	0	0	0.2	275	10	331.9	20	332.4	50	329.58	100	328.57

INITIAL CALIBRATION DATA

EPA 200.8 UCT-KED

Laboratory:	Analytical Resources, Inc.	SDG:	20F0296
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Calibration:	DG00003	Instrument:	ICPMS1
Calibration Date:	06/30/2020 13:14		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Arsenic-75a, Dissolved	266.2417	49.7	1.0000		0.998	

Analytical Resources, Incorporated
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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 6/30/20 Analyst: MB Sequence: SIFΦ466 Cal: OGΦΦΦΦ3

All corrections made by analyst unless otherwise noted. MS 6/30/20 / MB 7/1/20

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ - CAL1	IS818		
		-CAL2	IS763		
		-CAL3	IS64Φ		
		-CAL4	~~I46~~IS641		
		-CAL5	IS817		
		-CAL6	IS644		
		-IBL1	—		
		-ICV1	I4785		
		-ICB1	IS818		
		-CCV1	~~IS641~~	I5817	
		-CCB1	IS818		
		-CRL1	IS763		
		-IFA1	I5391		C↑53 ↓
		-IFB1	I5392		
		-HCV1	I5393		Ag↓ - Ag<100
		-HCV2	I5394		
		-IBL2,3,4	—		
		-CCV2			
		-CCB2			
	✓	BIFΦ835-BLK1	REN		MB seed tube
		-BS1			
		-BLK			
		BIFΦ837-BLK2			As, Mn, Zn only
		-BS2			↓

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 6/30/20 **Analyst:** MB **Sequence:** ——— **Cal:** ———

All corrections made by analyst unless otherwise noted. MB 6/30/20

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		20F0284-01	REN	10	Zn only
		BIF0640-DUP2	↓	↓	↓
		↓ -MS2	↓	↓	↓
		-MSD2	↓	↓	↓
		↓ -MSD3	↓		Cd only
		SEQ-CCV3			
		↓ -CCB3			
		20F0266-02	REN	2	Mn only
		-05	↓	10	↓
		-07	↓	↓	↓
		-11	↓	↓	↓
		↓ -09	↓	50	↓
206 → 260		20F026~~06~~60 -06	↓	20	↓
		BIF0664-DUP3	↓	↓	↓
		-MS3	↓	↓	Mn STL
		↓ -MSD3	↓	↓	↓
		SEQ-IBL5			
		-CCV4			
		↓ -CCB4			
		20F0314-08	REN		Zn only
		-09	↓		↓
		-10	↓		↓
		-11	↓		↓
		↓ -12	↓		↓

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 6/30/20 **Analyst:** MS **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		20F0314-13	REN		Mn↑ Mn NR
		BIF0837-DUP2	↓	↓	↓ ↓
		↓ -MS2	↓	↓	↓ ↓
		↓ -MSD2	↓	↓	↓ ↓
		SEQ-IBL6			
		↓ -CCV5			
		↓ -CCB5			
		BIF0879-BLK1	REN		
		↓ -BS1	↓	↓	
		20F0439-01	↓	↓	Cd noisy Cd NR
		↓ -01RE1	↓	2	Cd only
		20F0444-01	↓	↓	
		20F0445-01	↓	↓	
		20F0482-01	↓	↓	
		20F0483-01	↓	↓	
		20F0287-05	↓	5	As+Mn only
		↓ -06	↓	↓	Mn↑ Mn NR/As only
		SEQ-CCV6			
		↓ -CCB6			
		BIF0741-BLK1	REN		
		↓ -BS1	↓	↓	
		20F0296-02	↓	↓	
		↓ -03	↓	↓	
		↓ -04	↓	↓	

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 6/30/20 **Analyst:** MB **Sequence:** ——— **Cal:** ———

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		20F0296-05	REN		
		↓ -01	↓		
		BIF0741-DUP1			
		↓ -MS1			
		↓ -MSD1	↓		
		SEQ-CCV7			
		↓ -CCB7			
		20F0287-06RE1	REN	10	Mn only
		↓ -07		20	As NR/Fe+Mn only
		20F0315-04			As+Mn only
		↓ -08			↓
		↓ -10			↓
		↓ -06		10	As NR / Mn only
		↓ -02		50	↓ ↓
		20F0316-02		↓	As+Fe NR/↓
	✓	↓ -04	↓	20	Mn↑
		↓ -04	↓	50	As+Fe NR / Mn only
		SEQ-CCV8			
		↓ -CCB8			
		20F0287-07RE1	REN	2	Mn↑ As only
		20F0316-02RE1		↓	↓ As+Fe only
		↓ -04RE1			↓
		20F0315-06RE1			↓ As only
		↓ -02RE1	↓		↓

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 6/30/20 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted. MB 6/30/20

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-IBL8			
		20F0314-13RE1	REN	5	Mn only
		BIF0837-DUP3	↓	↓	↓
		↓ -MS3			
		↓ -MSD3	↓	↓	
		SEQ-CCV9			
		↓ -CCB9			
	✓	-CAL1			
		-CCVA			
		↓ -CCBA			
		BIF0880-BLK1	REN		
		↓ -BS1	↓		
		BIF0881-BLK1			
		↓ -BS1			
		20F0447-01			
		↓ -03			Sc↑ - Not Needed
		↓ -07			
		BIF0880-DUP1			
		↓ -MS1	↓		
		SEQ-IBL9			
		↓ -CCV8			
		↓ -CCB8			
	✓	20F0447-05	REN	5	Rerun @ 1x
		SEQ-IBLA			

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 6/30/20 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		20FQ447-Q6	REN		
		↓ -Q2	↓		
		↓ -Q4	↓		Sc↑ - Not Needed
		20FQ434-Q1	↓		
		20FQ338-Q2	↓		Sc↑/Zn↑ No Cr+Zn
		BIFQ835-DUP1	↓		↓ ↓ /Ag%R↓ ↓
		↓ -MS1	↓		
		SEQ-IBLB			
		↓ -CCVC			
		↓ -CCBC			
		20FQ338-Q3	REN		
		↓ -Q4	↓		Sc↑ - Not Needed
		↓ -Q5	↓		↓ ↓
		↓ -Q6	↓		
		↓ -Q7	↓		
		↓ -Q8	↓		
		↓ -Q9	↓		
		↓ -1Q	↓		
		↓ -Q1	↓	2	Sc↑ - Not Needed
		SEQ-IBLC			
		↓ -CCVD			Mn↑/Ag↓
		↓ -CCBD			
	✓	20FQ250-24	REN	50	Mn only
	✓	20FQ292-12	↓	20	↓

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 6/30/20 **Analyst:** MS **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
	✓	BIF0639-DUP6	REN	20	Mn only
		-MS6			
		-MSD6			
		20F0282-13			
		BIF0637-DUP3			
		-MS3			
		-MSD3			
		SEQ-IBLD			
		-CCVE			Mn↑/Ag↓
		-CCBE			
	✓	20F0250-01	REN		Mn only
		BIF0483-DUP4			
		-MS4			
		-MSD4			
		20F0330-07			
		20F0414-40			Mn↑
		BIF0879-DUP1			
		-MS1			
		-MSD1			As Error - End of Run
					MS 6/30/20

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Tuesday, June 30, 2020 11:59:39
Sample Description:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Default\STD Performance Check.8459
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	8447.8	8447.764	91.626	1.1	Standard
	In	114.9	83122.0	83121.958	1917.828	2.3	Standard
	U	238.1	108385.4	108385.357	2814.432	2.6	Standard
⌈	CeO	155.9	2377.7	0.020	0.000	1.6	Standard
| >	Ce	139.9	121389.8	121389.816	3413.266	2.8	Standard
⌊	Ce++	70.0	1003.3	0.008	0.000	3.5	Standard
	Bkgd	220.0	0.3	0.333	0.264	79.1	Standard

Current Conditions File Data

Current Value	Description
0.95	Nebulizer Gas Flow STD/KED [NEB]
1.25	Auxiliary Gas Flow
17.50	Plasma Gas Flow
-10.75	Deflector Voltage
1600.00	ICP RF Power
-1675.00	Analog Stage Voltage
1100.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-17.00	Cell Rod Offset STD [CRO]
14.00	Discriminator Threshold
-3.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.95	DRC Mode NEB
-7.50	DRC Mode QRO
-2.00	DRC Mode CRO
-5.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
200.00	Axial Field Voltage
-11.00	KED Mode CRO
-12.00	KED Mode QRO
-11.00	KED Mode Cell Entrance Voltage
-33.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
125.00	KED Mode Axial Field Voltage

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Tuesday, June 30, 2020 12:08:32
Sample Description:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Default\STD Performance Check.8465
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	7754.8	7754.771	57.307	0.7	Standard
	In	114.9	76366.4	76366.447	618.781	0.8	Standard
	U	238.1	114766.6	114766.631	604.458	0.5	Standard
⌈	CeO	155.9	2343.4	0.019	0.000	0.4	Standard
| >	Ce	139.9	122715.0	122715.014	400.849	0.3	Standard
⌊	Ce++	70.0	1019.3	0.008	0.000	3.8	Standard
	Bkgd	220.0	0.6	0.633	0.321	50.6	Standard

Current Conditions File Data

Current Value	Description
0.95	Nebulizer Gas Flow STD/KED [NEB]
1.25	Auxiliary Gas Flow
17.50	Plasma Gas Flow
-10.75	Deflector Voltage
1600.00	ICP RF Power
-1675.00	Analog Stage Voltage
1100.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-17.00	Cell Rod Offset STD [CRO]
14.00	Discriminator Threshold
-3.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.95	DRC Mode NEB
-7.50	DRC Mode QRO
-2.00	DRC Mode CRO
-5.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
200.00	Axial Field Voltage
-11.00	KED Mode CRO
-12.00	KED Mode QRO
-11.00	KED Mode Cell Entrance Voltage
-33.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
125.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Start Time: 6/30/2020 11:59:36 AM
End Time: 6/30/2020 12:10:36 PM

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 8447.76
Obtained Intensity (In 115): 83121.96
Obtained Intensity (U 238): 108385.36
Obtained Intensity (Bkgd 220): 0.33
Obtained Formula (Ce++ 70 / Ce 140): 0.008 (=1003.30 / 121389.82)
Obtained Formula (CeO 156 / Ce 140): 0.020 (=2377.73 / 121389.82)
Obtained RSD (Be 9): 0.0108
Obtained RSD (In 115): 0.0231
Obtained RSD (U 238): 0.0260

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
-0.74 mm	0.32 mm	87697.36

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 0.95
Obtained Intensity (In 115): 85336.12
Obtained Formula (CeO 156 / Ce 140): 0.0200 (=2392.20 / 119697.37)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.695)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.702)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.694)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.711)

QID STD/DRC - Optimum value(s): Correlation Coefficient = 1.000; Intercept = -13.46

KED Mode QID - Optimum value(s): Correlation Coefficient = 1.000; Intercept = -14.84

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 7754.77
Obtained Intensity (In 115): 76366.45
Obtained Intensity (U 238): 114766.63
Obtained Intensity (Bkgd 220): 0.63
Obtained Formula (Ce++ 70 / Ce 140): 0.008 (=1019.30 / 122715.01)
Obtained Formula (CeO 156 / Ce 140): 0.019 (=2343.39 / 122715.01)
Obtained RSD (Be 9): 0.0074
Obtained RSD (In 115): 0.0081
Obtained RSD (U 238): 0.0053

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Optimization Status

Start Time: 6/30/2020 11:59:36 AM

STD Performance Check
	Optimization Settings:
		Method: STD Performance Check.mth.
		Intensity Criterion: Be 9 > 2000
		Intensity Criterion: In 115 > 40000
		Intensity Criterion: U 238 > 30000
		Intensity Criterion: Bkgd 220 <= 5
		Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
		Formula Criterion: CeO 156 / Ce 140 <= 0.025
		RSD Criterion: Be 9.0122 < 5
		RSD Criterion: In 114.904 < 5
		RSD Criterion: U 238.05 < 5

	Optimization Results:
	Initial Try
		Obtained Intensity (Be 9): 8447.76
		Obtained Intensity (In 115): 83121.96
		Obtained Intensity (U 238): 108385.36
		Obtained Intensity (Bkgd 220): 0.33
		Obtained Formula (Ce++ 70 / Ce 140): 0.008 (=1003.30 / 121389.82)
		Obtained Formula (CeO 156 / Ce 140): 0.020 (=2377.73 / 121389.82)
		Obtained RSD (Be 9): 0.0108
		Obtained RSD (In 115): 0.0231
		Obtained RSD (U 238): 0.0260

[Passed] Optimum value(s): N/A

Torch Alignment
	Optimization Settings:
		Method: Torch Alignment.mth.
		Intensity Criterion: In 115 Maximum

	Optimization Results:
		Vertical	Horizontal	Intensity
[Passed]	-0.74 mm	0.32 mm	87697.36

Nebulizer Gas Flow STD/KED [NEB]
	Optimization Settings:
		Method: Optimize.mth.
			Initial Try - Start/End/Step: 0.9/1/0.01.
		Intensity Criterion: In 115 Maximum
		Formula Criterion: CeO 156 / Ce 140 <= 0.02

	Optimization Results:
	Initial Try

		Obtained Intensity (In 115): 85336.12
		Obtained Formula (CeO 156 / Ce 140): 0.0200 (=2392.20 / 119697.37)
[Passed] Optimum value(s): 0.95

Mass Calibration and Resolution
Optimization Settings:
Method: Tuning.mth.
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Iterations: 6
Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution
Peak height (%) for Res. Opt.: 10

Optimization Results:
Initial Try
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.695)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.702)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.694)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.711)
[Passed] Optimum value(s): N/A

QID STD/DRC
Optimization Settings:
Method: QID Calibration.mth.
Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:
Initial Try

Optimum value(s): Correlation Coefficient = 1.000; Intercept = -13.46

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-13.5	33976.4
Mg	24	41	-13.5	46222.7
In	115	41	-11.5	93617.7
Ce	140	41	-11	128725
Pb	208	41	-10	66964.6
U	238	41	-10	115332

KED Mode QID
Optimization Settings:
Method: QID Calibration.mth.
Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:
Initial Try

Optimum value(s): Correlation Coefficient = 1.000; Intercept = -14.84

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-14	17630.9
Mg	24	41	-12.5	43482.1
In	115	41	-10.5	90485.7
Ce	140	41	-10.5	74952.1
Pb	208	41	-9.5	33912.2
U	238	41	-9	73673.5

STD Performance Check
Optimization Settings:
Method: STD Performance Check.mth.
Intensity Criterion: Be 9 > 2000
Intensity Criterion: In 115 > 40000

```
            Intensity Criterion: U 238 > 30000
            Intensity Criterion: Bkgd 220 <= 5
            Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
            Formula Criterion: CeO 156 / Ce 140 <= 0.025
            RSD Criterion: Be 9.0122 < 5
            RSD Criterion: In 114.904 < 5
            RSD Criterion: U 238.05 < 5

       Optimization Results:
       Initial Try
            Obtained Intensity (Be 9): 7754.77
            Obtained Intensity (In 115): 76366.45
            Obtained Intensity (U 238): 114766.63
            Obtained Intensity (Bkgd 220): 0.63
            Obtained Formula (Ce++ 70 / Ce 140): 0.008 (=1019.30 / 122715.01)
            Obtained Formula (CeO 156 / Ce 140): 0.019 (=2343.39 / 122715.01)
            Obtained RSD (Be 9): 0.0074
            Obtained RSD (In 115): 0.0081
            Obtained RSD (U 238): 0.0053

[Passed]  Optimum value(s): N/A

End Time: 6/30/2020 12:10:36 PM
```

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDual.swz

Start Time: 6/30/2020 12:12:33 PM
End Time: 6/30/2020 12:25:45 PM

Detector Voltages - [Passed]
	Pulse Stage Voltage - [Passed] Optimum value(s): 1200
	Analog Stage Voltage - [Passed] Optimum value(s): -1675
	Pulse Stage Voltage (Fine-tune) - [Passed] Optimum value(s): 1200

Dual Detector Calibration
	Points Collected: 401
	Calibration unsuccessful for some masses due to insufficient pulse/analog crossover points

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDual.swz

Optimization Status

Start Time: 6/30/2020 12:12:33 PM

Detector Voltages
	Pulse Stage Voltage Optimization Settings:
		Method: Pulse Stage Optimization.mth.
			Initial Try - Start/End/Step: 600/1300/50.
			Retry 1 - Start/End/Step: 600/1800/50.
		Optimization Criterion (Pulse 76): 0.1

	Analog Stage Voltage Optimization Settings:
		Method: Analog Stage Optimization.mth.
		Initial Try - Start/End: -1300/-1900.
		Retry 1 - Start/End: -1300/-2400.
		Optimization Criterion (Analog 80): Target Gain 10000

	Pulse Stage Voltage Results:
	Initial Try

		Intensity Obtained For Criterion (Pulse 76): 60368.28
[Passed] Optimum value(s): 1200
	Analog Stage Voltage Results:
	Initial Try
		Interim Gain Values: 6721.88 (-1600V), 12908.5 (-1750V), 9450.67 (-1675V)
		Analyte: Analog 80
		ACEM(volts): -1675
		Achieved Gain: 9450.67
		Achieved NMax: 1.32473e+009
		Conversion Factor: 0.0966233
		Passes: 3
		Points Collected: 31
		Points Used: 5
		Coefficient: 0.999998
[Passed] Optimum value(s): -1675
	Pulse Stage Voltage (Fine-tune) Results:
	Initial Try

		Intensity Obtained For Criterion (Pulse 76): 62083.61
[Passed] Optimum value(s): 1200

Dual Detector Calibration
	Optimization Settings:
		Method: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\DualDetectorNew.mth.
			Initial Try - Start/End/Step: -20/0/0.05.

	Optimization Results:
	Initial Try
	Points Collected: 401
	Calibration unsuccessful for some masses due to insufficient pulse/analog crossover points

End Time: 6/30/2020 12:25:45 PM

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDual.swz

Start Time: 6/30/2020 12:25:57 PM
End Time: 6/30/2020 12:34:26 PM

Dual Detector Calibration
Points Collected: 401
Calibration unsuccessful for some masses due to insufficient pulse/analog crossover points

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDual.swz

Optimization Status

Start Time: 6/30/2020 12:25:57 PM

Dual Detector Calibration
Optimization Settings:
Method: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\DualDetectorNew.mth.
Initial Try - Start/End/Step: -20/0/0.05.

Optimization Results:
Initial Try
Points Collected: 401
Calibration unsuccessful for some masses due to insufficient pulse/analog crossover points

End Time: 6/30/2020 12:34:26 PM

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Tuesday, June 30, 2020 12:39:55
Sample Description:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Default\STD Performance Check.8475
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	8128.6	8128.646	184.600	2.3	Standard
	In	114.9	91759.9	91759.940	1394.230	1.5	Standard
	U	238.1	136376.5	136376.483	968.982	0.7	Standard
⌈	CeO	155.9	2639.3	0.019	0.000	0.6	Standard
| >	Ce	139.9	139454.5	139454.507	737.694	0.5	Standard
⌊	Ce++	70.0	1137.4	0.008	0.000	2.1	Standard
	Bkgd	220.0	1.7	1.667	1.208	72.5	Standard

Current Conditions File Data

Current Value	Description
0.95	Nebulizer Gas Flow STD/KED [NEB]
1.25	Auxiliary Gas Flow
17.50	Plasma Gas Flow
-10.75	Deflector Voltage
1600.00	ICP RF Power
-1675.00	Analog Stage Voltage
1200.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-17.00	Cell Rod Offset STD [CRO]
14.00	Discriminator Threshold
-3.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.95	DRC Mode NEB
-7.50	DRC Mode QRO
-2.00	DRC Mode CRO
-5.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
200.00	Axial Field Voltage
-11.00	KED Mode CRO
-12.00	KED Mode QRO
-11.00	KED Mode Cell Entrance Voltage
-33.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
125.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDual.swz

Start Time: 6/30/2020 12:39:54 PM
End Time: 6/30/2020 12:42:00 PM

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 8128.65
Obtained Intensity (In 115): 91759.94
Obtained Intensity (U 238): 136376.48
Obtained Intensity (Bkgd 220): 1.67
Obtained Formula (Ce++ 70 / Ce 140): 0.008 (=1137.45 / 139454.51)
Obtained Formula (CeO 156 / Ce 140): 0.019 (=2639.31 / 139454.51)

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDual.swz

Optimization Status

Start Time: 6/30/2020 12:39:54 PM

STD Performance Check
	Optimization Settings:
		Method: STD Performance Check.mth.
		Intensity Criterion: Be 9 > 2000
		Intensity Criterion: In 115 > 40000
		Intensity Criterion: U 238 > 30000
		Intensity Criterion: Bkgd 220 <= 10
		Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
		Formula Criterion: CeO 156 / Ce 140 <= 0.025

	Optimization Results:
	Initial Try
		Obtained Intensity (Be 9): 8128.65
		Obtained Intensity (In 115): 91759.94
		Obtained Intensity (U 238): 136376.48
		Obtained Intensity (Bkgd 220): 1.67
		Obtained Formula (Ce++ 70 / Ce 140): 0.008 (=1137.45 / 139454.51)
		Obtained Formula (CeO 156 / Ce 140): 0.019 (=2639.31 / 139454.51)

[Passed] Optimum value(s): N/A

End Time: 6/30/2020 12:42:00 PM

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 13:14:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				18966	0	Standard
	Cl	**37**		ug/L				10158397	0	Standard
⌈>	**Sc**	**45**		ug/L				1402147	0	Standard
|	**Cr**	**52**		ug/L				17695	1	Standard
|	**Cr**	**53**		ug/L				206	4	Standard
|	**Fe**	**54**		ug/L				81858	5	Standard
|	**Fe**	**57**		ug/L				18705	1	Standard
⌊	**Mn**	**55**		ug/L				771	6	Standard
⌈>	**Ge**	**72**		ug/L				88171	2	KED
|	**Ni**	**60**		ug/L				23	33	KED
|	**Ni**	**62**		ug/L				5	21	KED
|	**Cu**	**63**		ug/L				74	13	KED
|	**Cu**	**65**		ug/L				29	7	KED
|	**Zn**	**66**		ug/L				57	32	KED
|	**Zn**	**67**		ug/L				11	16	KED
|	**As**	**75**		ug/L				4	29	KED
⌊	**Se**	**78**		ug/L				18	34	KED
	Y	**89**		ug/L				630514	2	Standard
	Kr	**83**		ug/L				67	29	Standard
⌈>	**In-1**	**115**		ug/L				28156	1	KED
|	**Mo**	**98**		ug/L				11	18	KED
|	**Cd**	**111**		ug/L				6	34	KED
⌊	**Cd**	**114**		ug/L				5	64	KED
⌈>	**In**	**115**		ug/L				1083745	2	Standard
|	**Ag**	**107**		ug/L				149	13	Standard
|	**Sb**	**121**		ug/L				365	10	Standard
⌊	**Sb**	**123**		ug/L				298	7	Standard
⌈>	**Tb**	**159**		ug/L				2478750	0	Standard
⌊	**Pb**	**208**		ug/L				570	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 13:18:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	27020	1	Standard
	Cl	**37**		ug/L			10158397	10143258	0	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1387813	0	Standard
|	**Cr**	**52**	**0.500**	ug/L	0.028	5	17695	29896	1	Standard
|	**Cr**	**53**	**0.500**	ug/L	0.008	1	206	1545	1	Standard
|	**Fe**	**54**	**20.000**	ug/L	0.617	3	81858	133884	0	Standard
|	**Fe**	**57**	**20.000**	ug/L	0.716	3	18705	37422	0	Standard
⌊	**Mn**	**55**	**0.500**	ug/L	0.003	0	771	17285	0	Standard
⌈>	**Ge**	**72**		ug/L			88171	90697	2	KED
|	**Ni**	**60**	**0.500**	ug/L	0.054	10	23	669	9	KED
|	**Ni**	**62**	**0.500**	ug/L	0.026	5	5	109	7	KED
|	**Cu**	**63**	**0.500**	ug/L	0.028	5	74	1878	3	KED
|	**Cu**	**65**	**0.500**	ug/L	0.013	2	29	980	1	KED
|	**Zn**	**66**	**4.000**	ug/L	0.062	1	57	2402	1	KED
|	**Zn**	**67**	**4.000**	ug/L	0.040	0	11	372	1	KED
|	**As**	**75**	**0.200**	ug/L	0.022	10	4	55	12	KED
⌊	**Se**	**78**	**0.500**	ug/L	0.129	25	18	36	10	KED
	Y	**89**		ug/L			630514	623913	0	Standard
	Kr	**83**		ug/L			67	48	11	Standard
⌈>	**In-1**	**115**		ug/L			28156	27969	0	KED
|	**Mo**	**98**	**0.200**	ug/L	0.025	12	11	318	11	KED
|	**Cd**	**111**	**0.100**	ug/L	0.032	32	6	44	27	KED
⌊	**Cd**	**114**	**0.100**	ug/L	0.002	2	5	107	1	KED
⌈>	**In**	**115**		ug/L			1083745	1081790	3	Standard
|	**Ag**	**107**	**0.200**	ug/L	0.017	8	149	2544	4	Standard
|	**Sb**	**121**	**0.200**	ug/L	0.012	5	365	3160	3	Standard
⌊	**Sb**	**123**	**0.200**	ug/L	0.020	10	298	2374	4	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2450561	2	Standard
⌊	**Pb**	**208**	**0.100**	ug/L	0.001	1	570	11136	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 13:23:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	31930	0	Standard
	Cl	**37**		ug/L			10158397	10194670	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1404180	1	Standard
|	**Cr**	**52**	**10.000**	ug/L	0.261	2	17695	273228	1	Standard
|	**Cr**	**53**	**10.001**	ug/L	0.049	0	206	28605	1	Standard
|	**Fe**	**54**	**999.998**	ug/L	14.340	1	81858	2746362	0	Standard
|	**Fe**	**57**	**1000.004**	ug/L	18.926	1	18705	984905	0	Standard
⌊	**Mn**	**55**	**10.001**	ug/L	0.337	3	771	352469	2	Standard
⌈>	**Ge**	**72**		ug/L			88171	91040	0	KED
|	**Ni**	**60**	**10.001**	ug/L	0.121	1	23	13541	0	KED
|	**Ni**	**62**	**10.001**	ug/L	0.114	1	5	2237	0	KED
|	**Cu**	**63**	**10.002**	ug/L	0.055	0	74	38771	0	KED
|	**Cu**	**65**	**10.001**	ug/L	0.039	0	29	19778	0	KED
|	**Zn**	**66**	**10.074**	ug/L	0.275	2	57	6273	2	KED
|	**Zn**	**67**	**10.174**	ug/L	0.196	1	11	1045	2	KED
|	**As**	**75**	**10.001**	ug/L	0.164	1	4	3319	1	KED
⌊	**Se**	**78**	**10.004**	ug/L	0.427	4	18	432	3	KED
	Y	**89**		ug/L			630514	644490	1	Standard
	Kr	**83**		ug/L			67	55	28	Standard
⌈>	**In-1**	**115**		ug/L			28156	28131	0	KED
|	**Mo**	**98**	**10.000**	ug/L	0.239	2	11	16258	2	KED
|	**Cd**	**111**	**10.000**	ug/L	0.262	2	6	4291	2	KED
⌊	**Cd**	**114**	**10.000**	ug/L	0.105	1	5	11084	1	KED
⌈>	**In**	**115**		ug/L			1083745	1076506	1	Standard
|	**Ag**	**107**	**10.000**	ug/L	0.139	1	149	128439	2	Standard
|	**Sb**	**121**	**10.000**	ug/L	0.066	0	365	154000	1	Standard
⌊	**Sb**	**123**	**10.001**	ug/L	0.204	2	298	119033	3	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2482217	1	Standard
⌊	**Pb**	**208**	**10.000**	ug/L	0.289	2	570	1077022	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 13:28:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	30012	1	Standard
	Cl	**37**		ug/L			10158397	10272503	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1407347	0	Standard
|	**Cr**	**52**	**19.949**	ug/L	0.419	2	17695	523578	2	Standard
|	**Cr**	**53**	**20.020**	ug/L	0.574	2	206	57405	2	Standard
|	**Fe**	**54**	**1993.812**	ug/L	44.033	2	81858	5341663	1	Standard
|	**Fe**	**57**	**1994.495**	ug/L	14.795	0	18705	1929390	0	Standard
⌊	**Mn**	**55**	**19.971**	ug/L	0.234	1	771	700909	1	Standard
⌈>	**Ge**	**72**		ug/L			88171	89979	1	KED
|	**Ni**	**60**	**20.096**	ug/L	0.411	2	23	27386	0	KED
|	**Ni**	**62**	**20.068**	ug/L	0.384	1	5	4492	1	KED
|	**Cu**	**63**	**20.015**	ug/L	0.368	1	74	76829	0	KED
|	**Cu**	**65**	**20.071**	ug/L	0.479	2	29	39757	1	KED
|	**Zn**	**66**	**20.081**	ug/L	0.129	0	57	12474	1	KED
|	**Zn**	**67**	**19.852**	ug/L	0.357	1	11	1955	1	KED
|	**As**	**75**	**20.057**	ug/L	0.505	2	4	6648	1	KED
⌊	**Se**	**78**	**19.981**	ug/L	0.107	0	18	831	1	KED
	Y	**89**		ug/L			630514	630331	0	Standard
	Kr	**83**		ug/L			67	62	26	Standard
⌈>	**In-1**	**115**		ug/L			28156	28307	2	KED
|	**Mo**	**98**	**20.015**	ug/L	0.720	3	11	32818	2	KED
|	**Cd**	**111**	**20.009**	ug/L	0.505	2	6	8646	1	KED
⌊	**Cd**	**114**	**19.970**	ug/L	0.692	3	5	22126	1	KED
⌈>	**In**	**115**		ug/L			1083745	1084120	0	Standard
|	**Ag**	**107**	**19.967**	ug/L	0.349	1	149	256394	0	Standard
|	**Sb**	**121**	**19.933**	ug/L	0.377	1	365	304691	1	Standard
⌊	**Sb**	**123**	**19.889**	ug/L	0.247	1	298	232925	2	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2467485	0	Standard
⌊	**Pb**	**208**	**19.953**	ug/L	0.141	0	570	2116598	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL5
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 13:33:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	19607	1	Standard
	Cl	**37**		ug/L			10158397	10264132	0	Standard
>	**Sc**	**45**		ug/L			1402147	1382116	0	Standard
	Cr	**52**	**50.122**	ug/L	0.379	0	17695	1280803	0	Standard
	Cr	**53**	**50.157**	ug/L	0.380	0	206	143183	0	Standard
	Fe	**54**	**5012.739**	ug/L	51.011	1	81858	13234583	0	Standard
	Fe	**57**	**5016.249**	ug/L	18.064	0	18705	4815620	0	Standard
	Mn	**55**	**50.134**	ug/L	1.675	3	771	1750075	2	Standard
>	**Ge**	**72**		ug/L			88171	89094	0	KED
	Ni	**60**	**49.982**	ug/L	0.370	0	23	67301	1	KED
	Ni	**62**	**49.896**	ug/L	0.814	1	5	10940	2	KED
	Cu	**63**	**50.000**	ug/L	0.433	0	74	189956	1	KED
	Cu	**65**	**49.867**	ug/L	0.548	1	29	96507	1	KED
	Zn	**66**	**49.859**	ug/L	0.611	1	57	30168	0	KED
	Zn	**67**	**50.051**	ug/L	0.646	1	11	4889	1	KED
	As	**75**	**50.036**	ug/L	0.050	0	4	16479	0	KED
	Se	**78**	**49.984**	ug/L	0.961	1	18	2027	2	KED
	Y	**89**		ug/L			630514	632665	2	Standard
	Kr	**83**		ug/L			67	48	18	Standard
>	**In-1**	**115**		ug/L			28156	28113	0	KED
	Mo	**98**	**50.017**	ug/L	0.325	0	11	81616	1	KED
	Cd	**111**	**49.881**	ug/L	0.477	0	6	21152	0	KED
	Cd	**114**	**49.852**	ug/L	0.445	0	5	54076	0	KED
>	**In**	**115**		ug/L			1083745	1040683	3	Standard
	Ag	**107**	**50.225**	ug/L	0.272	0	149	633144	3	Standard
	Sb	**121**	**50.143**	ug/L	2.604	5	365	744949	1	Standard
	Sb	**123**	**50.158**	ug/L	0.897	1	298	572226	2	Standard
>	**Tb**	**159**		ug/L			2478750	2466258	1	Standard
	Pb	**208**	**50.019**	ug/L	0.537	1	570	5312161	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL6
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 13:39:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	26780	0	Standard
	Cl	**37**		ug/L			10158397	10229394	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1357467	1	Standard
|	**Cr**	**52**	**100.177**	ug/L	1.286	1	17695	2511747	1	Standard
|	**Cr**	**53**	**99.703**	ug/L	1.701	1	206	276575	0	Standard
|	**Fe**	**54**	**10025.090**	ug/L	84.296	0	81858	26133497	0	Standard
|	**Fe**	**57**	**9993.987**	ug/L	73.556	0	18705	9386005	1	Standard
⌊	**Mn**	**55**	**99.752**	ug/L	2.841	2	771	3390646	1	Standard
⌈>	**Ge**	**72**		ug/L			88171	88857	1	KED
|	**Ni**	**60**	**99.738**	ug/L	1.063	1	23	132743	0	KED
|	**Ni**	**62**	**99.274**	ug/L	1.079	1	5	21188	1	KED
|	**Cu**	**63**	**99.592**	ug/L	0.954	0	74	372181	0	KED
|	**Cu**	**65**	**99.396**	ug/L	0.951	0	29	188040	2	KED
|	**Zn**	**66**	**99.800**	ug/L	1.503	1	57	59769	1	KED
|	**Zn**	**67**	**99.858**	ug/L	1.625	1	11	9671	2	KED
|	**As**	**75**	**100.010**	ug/L	0.408	0	4	32857	1	KED
⌊	**Se**	**78**	**99.266**	ug/L	1.354	1	18	3902	2	KED
	Y	**89**		ug/L			630514	613164	0	Standard
	Kr	**83**		ug/L			67	50	15	Standard
⌈>	**In-1**	**115**		ug/L			28156	27638	2	KED
|	**Mo**	**98**	**100.616**	ug/L	2.906	2	11	164710	0	KED
|	**Cd**	**111**	**100.144**	ug/L	2.919	2	6	41928	1	KED
⌊	**Cd**	**114**	**100.159**	ug/L	1.440	1	5	107357	0	KED
⌈>	**In**	**115**		ug/L			1083745	995200	0	Standard
|	**Ag**	**107**	**100.462**	ug/L	0.763	0	149	1229991	1	Standard
|	**Sb**	**121**	**100.629**	ug/L	1.173	1	365	1461714	0	Standard
⌊	**Sb**	**123**	**100.429**	ug/L	1.815	1	298	1111585	1	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2493888	0	Standard
⌊	**Pb**	**208**	**98.996**	ug/L	1.086	1	570	10286895	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 13:46:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	19252	1	Standard
	Cl	**37**		ug/L			10158397	9856759	0	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1353694	0	Standard
|	**Cr**	**52**	**0.083**	ug/L	0.022	26	17695	19149	2	Standard
|	**Cr**	**53**	**0.008**	ug/L	0.020	265	206	220	25	Standard
|	**Fe**	**54**	**0.728**	ug/L	1.489	204	81858	80911	4	Standard
|	**Fe**	**57**	**1.413**	ug/L	1.667	117	18705	19378	8	Standard
⌊	**Mn**	**55**	**0.021**	ug/L	0.022	108	771	1446	52	Standard
⌈>	**Ge**	**72**		ug/L			88171	89711	0	KED
|	**Ni**	**60**	**-0.009**	ug/L	0.001	8	23	12	9	KED
|	**Ni**	**62**	**-0.000**	ug/L	0.005	1274	5	5	21	KED
|	**Cu**	**63**	**-0.003**	ug/L	0.003	88	74	64	15	KED
|	**Cu**	**65**	**0.004**	ug/L	0.009	233	29	36	45	KED
|	**Zn**	**66**	**0.003**	ug/L	0.017	679	57	59	17	KED
|	**Zn**	**67**	**-0.015**	ug/L	0.029	190	11	10	28	KED
|	**As**	**75**	**0.005**	ug/L	0.003	76	4	5	20	KED
⌊	**Se**	**78**	**-0.016**	ug/L	0.117	711	18	18	25	KED
	Y	**89**		ug/L			630514	617399	1	Standard
	Kr	**83**		ug/L			67	62	26	Standard
⌈>	**In-1**	**115**		ug/L			28156	28118	0	KED
|	**Mo**	**98**	**0.016**	ug/L	0.005	27	11	38	19	KED
|	**Cd**	**111**	**0.000**	ug/L	0.007	20249	6	6	45	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.004	628	5	6	76	KED
⌈>	**In**	**115**		ug/L			1083745	1044419	1	Standard
|	**Ag**	**107**	**0.014**	ug/L	0.023	160	149	330	90	Standard
|	**Sb**	**121**	**0.180**	ug/L	0.029	16	365	3100	14	Standard
⌊	**Sb**	**123**	**0.178**	ug/L	0.037	20	298	2349	18	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2410622	2	Standard
⌊	**Pb**	**208**	**0.010**	ug/L	0.017	171	570	1576	111	Standard

Sample Information

Sample Date/Time: Tuesday, June 30, 2020 13:39:33
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.m
Mass Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

Calibration

Analyte	Mass	**r Corr Coef**	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
C	13							
Cl	37							
Sc	45							
Cr	52	**1.0000**	0.018	0.50	10	20	50	100
Cr	53	**1.0000**	0.002	0.50	10	20	50	100
Fe	54	**1.0000**	0.002	20.00	1000	2000	5000	10000
Fe	57	**1.0000**	0.001	20.00	1000	2000	5000	10000
Mn	55	**1.0000**	0.025	0.50	10	20	50	100
Ge	72							
Ni	60	**1.0000**	0.015	0.50	10	20	50	100
Ni	62	**0.9999**	0.002	0.50	10	20	50	100
Cu	63	**1.0000**	0.042	0.50	10	20	50	100
Cu	65	**0.9999**	0.021	0.50	10	20	50	100
Zn	66	**1.0000**	0.007	4.00	10	20	50	100
Zn	67	**1.0000**	0.001	4.00	10	20	50	100
As	75	**1.0000**	0.004	0.20	10	20	50	100
Se	78	**0.9999**	0.000	0.50	10	20	50	100
Y	89							
Kr	83							
In-1	115							
Mo	98	**0.9999**	0.059	0.20	10	20	50	100
Cd	111	**1.0000**	0.015	0.10	10	20	50	100
Cd	114	**1.0000**	0.039	0.10	10	20	50	100
In	115							
Ag	107	**1.0000**	0.012	0.20	10	20	50	100
Sb	121	**0.9999**	0.015	0.20	10	20	50	100
Sb	123	**1.0000**	0.011	0.20	10	20	50	100
Tb	159							
Pb	208	**0.9998**	0.042	0.10	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICV1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 13:52:39
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	26238	1	Standard
	Cl	**37**		ug/L			10158397	10148438	0	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1394677	1	Standard
|	**Cr**	**52**	**50.350**	ug/L	1.091	2	17695	1305576	0	Standard
|	**Cr**	**53**	**50.966**	ug/L	1.456	2	206	145337	1	Standard
|	**Fe**	**54**	**4971.548**	ug/L	119.878	2	81858	13353851	1	Standard
|	**Fe**	**57**	**4969.814**	ug/L	151.414	3	18705	4803464	1	Standard
⌊	**Mn**	**55**	**51.623**	ug/L	1.599	3	771	1803032	1	Standard
⌈>	**Ge**	**72**		ug/L			88171	89488	0	KED
|	**Ni**	**60**	**52.630**	ug/L	0.433	0	23	70562	1	KED
|	**Ni**	**62**	**52.746**	ug/L	1.028	1	5	11341	2	KED
|	**Cu**	**63**	**52.096**	ug/L	0.404	0	74	196126	1	KED
|	**Cu**	**65**	**52.336**	ug/L	0.426	0	29	99720	0	KED
|	**Zn**	**66**	**51.425**	ug/L	2.037	3	57	31050	4	KED
|	**Zn**	**67**	**51.256**	ug/L	1.534	2	11	5005	3	KED
|	**As**	**75**	**51.977**	ug/L	0.232	0	4	17199	0	KED
⌊	**Se**	**78**	**82.003**	ug/L	1.297	1	18	3250	2	KED
	Y	**89**		ug/L			630514	642895	0	Standard
	Kr	**83**		ug/L			67	55	8	Standard
⌈>	**In-1**	**115**		ug/L			28156	27906	1	KED
|	**Mo**	**98**	**50.495**	ug/L	0.357	0	11	83501	0	KED
|	**Cd**	**111**	**50.312**	ug/L	0.503	1	6	21279	0	KED
⌊	**Cd**	**114**	**50.414**	ug/L	0.834	1	5	54568	0	KED
⌈>	**In**	**115**		ug/L			1083745	1031249	0	Standard
|	**Ag**	**107**	**51.058**	ug/L	0.370	0	149	647811	0	Standard
|	**Sb**	**121**	**49.582**	ug/L	0.843	1	365	746528	1	Standard
⌊	**Sb**	**123**	**49.475**	ug/L	1.446	2	298	567548	2	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2443012	1	Standard
⌊	**Pb**	**208**	**52.203**	ug/L	0.929	1	570	5313549	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICB1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 13:59:52
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	19239	2	Standard
	Cl	**37**		ug/L			10158397	9715753	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1341563	2	Standard
|	**Cr**	**52**	**0.085**	ug/L	0.005	5	17695	19016	2	Standard
|	**Cr**	**53**	**-0.003**	ug/L	0.007	200	206	188	7	Standard
|	**Fe**	**54**	**0.594**	ug/L	1.217	204	81858	79815	2	Standard
|	**Fe**	**57**	**1.779**	ug/L	0.482	27	18705	19539	1	Standard
⌊	**Mn**	**55**	**0.003**	ug/L	0.001	24	771	832	3	Standard
⌈>	**Ge**	**72**		ug/L			88171	90665	1	KED
|	**Ni**	**60**	**-0.010**	ug/L	0.002	21	23	10	28	KED
|	**Ni**	**62**	**-0.004**	ug/L	0.010	282	5	4	49	KED
|	**Cu**	**63**	**-0.003**	ug/L	0.004	144	74	65	27	KED
|	**Cu**	**65**	**0.001**	ug/L	0.004	734	29	31	25	KED
|	**Zn**	**66**	**0.005**	ug/L	0.030	565	57	62	31	KED
|	**Zn**	**67**	**-0.016**	ug/L	0.028	170	11	10	28	KED
|	**As**	**75**	**0.000**	ug/L	0.003	2215	4	4	22	KED
⌊	**Se**	**78**	**-0.036**	ug/L	0.081	227	18	17	18	KED
	Y	**89**		ug/L			630514	619019	3	Standard
	Kr	**83**		ug/L			67	58	16	Standard
⌈>	**In-1**	**115**		ug/L			28156	28042	0	KED
|	**Mo**	**98**	**0.010**	ug/L	0.004	38	11	27	23	KED
|	**Cd**	**111**	**0.002**	ug/L	0.004	226	6	6	20	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.006	156	5	9	69	KED
⌈>	**In**	**115**		ug/L			1083745	1034645	3	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.002	99	149	121	20	Standard
|	**Sb**	**121**	**0.024**	ug/L	0.002	8	365	708	1	Standard
⌊	**Sb**	**123**	**0.020**	ug/L	0.008	37	298	519	17	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2400729	3	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.000	100	570	512	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 14:06:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	19896	1	Standard
	Cl	**37**		ug/L			10158397	10204122	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1395533	0	Standard
|	**Cr**	**52**	**49.255**	ug/L	0.647	1	17695	1278560	0	Standard
|	**Cr**	**53**	**49.761**	ug/L	0.856	1	206	142022	1	Standard
|	**Fe**	**54**	**4891.209**	ug/L	39.526	0	81858	13150138	0	Standard
|	**Fe**	**57**	**4899.025**	ug/L	57.030	1	18705	4739812	1	Standard
⌊	**Mn**	**55**	**50.341**	ug/L	0.493	0	771	1759875	0	Standard
⌈>	**Ge**	**72**		ug/L			88171	89757	0	KED
|	**Ni**	**60**	**51.132**	ug/L	0.230	0	23	68760	0	KED
|	**Ni**	**62**	**51.629**	ug/L	0.725	1	5	11134	1	KED
|	**Cu**	**63**	**51.106**	ug/L	0.517	1	74	192976	1	KED
|	**Cu**	**65**	**50.945**	ug/L	0.534	1	29	97363	1	KED
|	**Zn**	**66**	**50.420**	ug/L	0.147	0	57	30534	0	KED
|	**Zn**	**67**	**51.183**	ug/L	1.233	2	11	5013	2	KED
|	**As**	**75**	**50.248**	ug/L	0.409	0	4	16678	1	KED
⌊	**Se**	**78**	**51.473**	ug/L	1.060	2	18	2053	2	KED
	Y	**89**		ug/L			630514	630852	1	Standard
	Kr	**83**		ug/L			67	59	8	Standard
⌈>	**In-1**	**115**		ug/L			28156	28571	0	KED
|	**Mo**	**98**	**48.732**	ug/L	0.405	0	11	82504	0	KED
|	**Cd**	**111**	**49.753**	ug/L	0.325	0	6	21545	1	KED
⌊	**Cd**	**114**	**49.379**	ug/L	0.493	0	5	54724	0	KED
⌈>	**In**	**115**		ug/L			1083745	1058820	3	Standard
|	**Ag**	**107**	**48.980**	ug/L	1.307	2	149	637745	0	Standard
|	**Sb**	**121**	**48.247**	ug/L	1.698	3	365	745343	0	Standard
⌊	**Sb**	**123**	**47.458**	ug/L	1.985	4	298	558774	3	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2460574	0	Standard
⌊	**Pb**	**208**	**50.488**	ug/L	0.237	0	570	5176742	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 14:13:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	19193	1	Standard
	Cl	**37**		ug/L			10158397	9662338	0	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1370509	0	Standard
|	**Cr**	**52**	**0.093**	ug/L	0.008	9	17695	19633	0	Standard
|	**Cr**	**53**	**-0.008**	ug/L	0.006	70	206	179	9	Standard
|	**Fe**	**54**	**-0.496**	ug/L	0.319	64	81858	78711	1	Standard
|	**Fe**	**57**	**1.634**	ug/L	0.301	18	18705	19830	1	Standard
⌊	**Mn**	**55**	**0.002**	ug/L	0.001	34	771	823	2	Standard
⌈>	**Ge**	**72**		ug/L			88171	90598	2	KED
|	**Ni**	**60**	**-0.010**	ug/L	0.005	55	23	10	71	KED
|	**Ni**	**62**	**0.005**	ug/L	0.021	441	5	6	75	KED
|	**Cu**	**63**	**-0.003**	ug/L	0.004	129	74	63	24	KED
|	**Cu**	**65**	**0.003**	ug/L	0.003	89	29	35	11	KED
|	**Zn**	**66**	**-0.005**	ug/L	0.009	203	57	55	10	KED
|	**Zn**	**67**	**0.016**	ug/L	0.021	126	11	13	14	KED
|	**As**	**75**	**0.006**	ug/L	0.006	103	4	6	33	KED
⌊	**Se**	**78**	**-0.053**	ug/L	0.076	143	18	16	15	KED
	Y	**89**		ug/L			630514	629721	1	Standard
	Kr	**83**		ug/L			67	62	16	Standard
⌈>	**In-1**	**115**		ug/L			28156	28818	0	KED
|	**Mo**	**98**	**0.013**	ug/L	0.006	41	11	34	27	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.006	518	6	6	39	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.004	408	5	6	71	KED
⌈>	**In**	**115**		ug/L			1083745	1051634	3	Standard
|	**Ag**	**107**	**-0.003**	ug/L	0.000	15	149	103	3	Standard
|	**Sb**	**121**	**0.109**	ug/L	0.004	3	365	2029	2	Standard
⌊	**Sb**	**123**	**0.103**	ug/L	0.006	5	298	1500	7	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2424924	0	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.000	78	570	520	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CRL1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 14:18:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	25538	1	Standard
	Cl	**37**		ug/L			10158397	9648094	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1382551	0	Standard
|	**Cr**	**52**	**0.597**	ug/L	0.006	0	17695	32583	0	Standard
|	**Cr**	**53**	**0.507**	ug/L	0.019	3	206	1634	2	Standard
|	**Fe**	**54**	**20.742**	ug/L	0.959	4	81858	135617	1	Standard
|	**Fe**	**57**	**22.251**	ug/L	1.003	4	18705	39684	1	Standard
⌊	**Mn**	**55**	**0.511**	ug/L	0.009	1	771	18445	1	Standard
⌈>	**Ge**	**72**		ug/L			88171	93112	0	KED
|	**Ni**	**60**	**0.496**	ug/L	0.037	7	23	716	7	KED
|	**Ni**	**62**	**0.533**	ug/L	0.055	10	5	124	9	KED
|	**Cu**	**63**	**0.501**	ug/L	0.017	3	74	2040	3	KED
|	**Cu**	**65**	**0.482**	ug/L	0.012	2	29	985	2	KED
|	**Zn**	**66**	**4.035**	ug/L	0.123	3	57	2590	3	KED
|	**Zn**	**67**	**4.128**	ug/L	0.167	4	11	430	3	KED
|	**As**	**75**	**0.198**	ug/L	0.012	6	4	72	5	KED
⌊	**Se**	**78**	**0.535**	ug/L	0.112	20	18	41	11	KED
	Y	**89**		ug/L			630514	634857	1	Standard
	Kr	**83**		ug/L			67	50	5	Standard
⌈>	**In-1**	**115**		ug/L			28156	28919	1	KED
|	**Mo**	**98**	**0.186**	ug/L	0.021	11	11	329	9	KED
|	**Cd**	**111**	**0.090**	ug/L	0.025	28	6	46	25	KED
⌊	**Cd**	**114**	**0.103**	ug/L	0.017	16	5	120	15	KED
⌈>	**In**	**115**		ug/L			1083745	1032969	2	Standard
|	**Ag**	**107**	**0.200**	ug/L	0.000	0	149	2690	2	Standard
|	**Sb**	**121**	**0.225**	ug/L	0.006	2	365	3740	4	Standard
⌊	**Sb**	**123**	**0.216**	ug/L	0.005	2	298	2766	2	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2402196	0	Standard
⌊	**Pb**	**208**	**0.104**	ug/L	0.002	1	570	10913	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFA1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 14:23:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	137948	1	Standard
	Cl	**37**		ug/L			10158397	17262730	0	Standard
>	**Sc**	**45**		ug/L			1402147	1415477	1	Standard
	Cr	**52**	**0.464**	ug/L	0.025	5	17695	29918	0	Standard
	Cr	**53**	**9.549**	ug/L	0.158	1	206	27809	0	Standard
	Fe	**54**	**20620.074**	ug/L	102.764	0	81858	55966913	1	Standard
	Fe	**57**	**21159.818**	ug/L	265.872	1	18705	20699386	0	Standard
	Mn	**55**	**0.173**	ug/L	0.004	2	771	6923	0	Standard
>	**Ge**	**72**		ug/L			88171	88766	1	KED
	Ni	**60**	**0.067**	ug/L	0.005	7	23	112	6	KED
	Ni	**62**	**0.166**	ug/L	0.048	28	5	40	25	KED
	Cu	**63**	**0.070**	ug/L	0.003	4	74	337	2	KED
	Cu	**65**	**0.076**	ug/L	0.004	5	29	173	3	KED
	Zn	**66**	**0.245**	ug/L	0.059	23	57	203	15	KED
	Zn	**67**	**0.176**	ug/L	0.103	58	11	28	35	KED
	As	**75**	**0.028**	ug/L	0.020	73	4	13	49	KED
	Se	**78**	**0.019**	ug/L	0.068	354	18	19	14	KED
	Y	**89**		ug/L			630514	617607	0	Standard
	Kr	**83**		ug/L			67	87	4	Standard
>	**In-1**	**115**		ug/L			28156	28100	1	KED
	Mo	**98**	**405.189**	ug/L	6.419	1	11	674504	0	KED
	Cd	**111**	**0.091**	ug/L	0.038	42	6	44	35	KED
	Cd	**114**	**0.087**	ug/L	0.012	13	5	100	13	KED
>	**In**	**115**		ug/L			1083745	1107302	0	Standard
	Ag	**107**	**-0.000**	ug/L	0.001	1285	149	151	10	Standard
	Sb	**121**	**0.049**	ug/L	0.002	4	365	1163	3	Standard
	Sb	**123**	**0.045**	ug/L	0.001	2	298	859	2	Standard
>	**Tb**	**159**		ug/L			2478750	2645122	0	Standard
	Pb	**208**	**0.022**	ug/L	0.000	1	570	2998	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFB1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 14:27:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	143887	1	Standard
	Cl	37		ug/L			10158397	17346356	1	Standard
>	Sc	45		ug/L			1402147	1430446	1	Standard
	Cr	52	19.812	ug/L	0.361	1	17695	537883	1	Standard
	Cr	53	29.717	ug/L	0.409	1	206	87014	0	Standard
	Fe	54	21038.397	ug/L	630.323	2	81858	57686423	1	Standard
	Fe	57	21728.349	ug/L	601.843	2	18705	21475286	1	Standard
	Mn	55	20.086	ug/L	0.526	2	771	720064	1	Standard
>	Ge	72		ug/L			88171	85787	1	KED
	Ni	60	20.153	ug/L	0.067	0	23	25916	1	KED
	Ni	62	19.871	ug/L	0.233	1	5	4099	1	KED
	Cu	63	19.786	ug/L	0.110	0	74	71452	1	KED
	Cu	65	20.003	ug/L	0.625	3	29	36546	2	KED
	Zn	66	19.035	ug/L	0.658	3	57	11049	2	KED
	Zn	67	17.946	ug/L	0.844	4	11	1687	5	KED
	As	75	19.876	ug/L	0.336	1	4	6306	0	KED
	Se	78	-0.038	ug/L	0.030	79	18	16	6	KED
	Y	89		ug/L			630514	603237	1	Standard
	Kr	83		ug/L			67	83	11	Standard
>	In-1	115		ug/L			28156	28132	0	KED
	Mo	98	399.560	ug/L	3.925	0	11	666008	0	KED
	Cd	111	19.521	ug/L	0.299	1	6	8327	0	KED
	Cd	114	19.574	ug/L	0.202	1	5	21365	1	KED
>	In	115		ug/L			1083745	1151268	1	Standard
	Ag	107	16.403	ug/L	0.398	2	149	232387	0	Standard
	Sb	121	0.042	ug/L	0.002	5	365	1089	2	Standard
	Sb	123	0.044	ug/L	0.009	20	298	874	11	Standard
>	Tb	159		ug/L			2478750	2650838	1	Standard
	Pb	208	0.029	ug/L	0.000	1	570	3844	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 14:32:20
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	29854	1	Standard
	Cl	37		ug/L			10158397	10186006	1	Standard
>	Sc	45		ug/L			1402147	1370920	1	Standard
	Cr	52	200.103	ug/L	2.741	1	17695	5049637	1	Standard
	Cr	53	200.744	ug/L	4.338	2	206	562145	0	Standard
	Fe	54	20002.892	ug/L	348.924	1	81858	52577471	1	Standard
	Fe	57	20297.796	ug/L	460.691	2	18705	19231855	2	Standard
	Mn	55	202.539	ug/L	1.179	0	771	6953394	0	Standard
>	Ge	72		ug/L			88171	83694	1	KED
	Ni	60	196.885	ug/L	3.858	1	23	246781	1	KED
	Ni	62	197.859	ug/L	2.153	1	5	39771	1	KED
	Cu	63	195.216	ug/L	2.644	1	74	687048	0	KED
	Cu	65	196.060	ug/L	2.018	1	29	349286	1	KED
	Zn	66	192.809	ug/L	0.913	0	57	108725	1	KED
	Zn	67	194.947	ug/L	2.433	1	11	17774	1	KED
	As	75	199.004	ug/L	0.879	0	4	61577	1	KED
	Se	78	199.487	ug/L	0.147	0	18	7369	1	KED
	Y	89		ug/L			630514	599119	0	Standard
	Kr	83		ug/L			67	99	5	Standard
>	In-1	115		ug/L			28156	26992	0	KED
	Mo	98	199.745	ug/L	3.255	1	11	319453	1	KED
	Cd	111	198.133	ug/L	1.262	0	6	81041	0	KED
	Cd	114	196.936	ug/L	2.645	1	5	206187	1	KED
>	In	115		ug/L			1083745	1059888	1	Standard
	Ag	107	179.687	ug/L	3.118	1	149	2342579	0	Standard
	Sb	121	204.863	ug/L	3.583	1	365	3169364	2	Standard
	Sb	123	196.650	ug/L	1.634	0	298	2317861	0	Standard
>	Tb	159		ug/L			2478750	2566448	1	Standard
	Pb	208	191.790	ug/L	1.752	0	570	20508490	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 14:36:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	29940	0	Standard
	Cl	**37**		ug/L			10158397	10089963	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1326238	0	Standard
|	**Cr**	**52**	**299.424**	ug/L	4.051	1	17695	7301772	1	Standard
|	**Cr**	**53**	**299.619**	ug/L	2.703	0	206	811726	0	Standard
|	**Fe**	**54**	**29897.306**	ug/L	622.801	2	81858	75991943	1	Standard
|	**Fe**	**57**	**30473.375**	ug/L	77.749	0	18705	27926390	0	Standard
⌊	**Mn**	**55**	**306.253**	ug/L	5.863	1	771	10171854	2	Standard
⌈>	**Ge**	**72**		ug/L			88171	83908	0	KED
|	**Ni**	**60**	**296.358**	ug/L	2.704	0	23	372438	0	KED
|	**Ni**	**62**	**295.065**	ug/L	4.653	1	5	59465	1	KED
|	**Cu**	**63**	**288.231**	ug/L	3.271	1	74	1017063	0	KED
|	**Cu**	**65**	**289.717**	ug/L	1.410	0	29	517480	0	KED
|	**Zn**	**66**	**280.074**	ug/L	5.474	1	57	158310	1	KED
|	**Zn**	**67**	**278.434**	ug/L	3.572	1	11	25446	1	KED
|	**As**	**75**	**297.908**	ug/L	4.567	1	4	92415	1	KED
⌊	**Se**	**78**	**292.373**	ug/L	2.711	0	18	10819	0	KED
	Y	**89**		ug/L			630514	580613	1	Standard
	Kr	**83**		ug/L			67	128	5	Standard
⌈>	**In-1**	**115**		ug/L			28156	26772	1	KED
|	**Mo**	**98**	**302.509**	ug/L	4.573	1	11	479798	0	KED
|	**Cd**	**111**	**286.748**	ug/L	5.685	1	6	116303	0	KED
⌊	**Cd**	**114**	**286.926**	ug/L	5.797	2	5	297895	0	KED
⌈>	**In**	**115**		ug/L			1083745	980286	1	Standard
|	**Ag**	**107**	**278.865**	ug/L	3.760	1	149	3362320	0	Standard
|	**Sb**	**121**	**303.775**	ug/L	8.588	2	365	4344675	1	Standard
⌊	**Sb**	**123**	**293.426**	ug/L	8.638	2	298	3197776	1	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2462336	1	Standard
⌊	**Pb**	**208**	**286.419**	ug/L	3.602	1	570	29385039	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 14:45:01
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	23365	1	Standard
	Cl	**37**		ug/L			10158397	9730625	0	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1411350	0	Standard
|	**Cr**	**52**	**0.063**	ug/L	0.011	17	17695	19446	1	Standard
|	**Cr**	**53**	**0.113**	ug/L	0.005	4	206	534	2	Standard
|	**Fe**	**54**	**-1.491**	ug/L	0.158	10	81858	78368	1	Standard
|	**Fe**	**57**	**0.209**	ug/L	0.336	161	18705	19031	1	Standard
⌊	**Mn**	**55**	**0.010**	ug/L	0.002	22	771	1144	6	Standard
⌈>	**Ge**	**72**		ug/L			88171	91556	1	KED
|	**Ni**	**60**	**0.002**	ug/L	0.003	128	23	27	14	KED
|	**Ni**	**62**	**0.011**	ug/L	0.015	140	5	7	43	KED
|	**Cu**	**63**	**0.017**	ug/L	0.009	52	74	142	23	KED
|	**Cu**	**65**	**0.018**	ug/L	0.002	8	29	64	2	KED
|	**Zn**	**66**	**0.085**	ug/L	0.023	27	57	111	12	KED
|	**Zn**	**67**	**0.047**	ug/L	0.073	155	11	16	43	KED
|	**As**	**75**	**0.008**	ug/L	0.004	43	4	7	16	KED
⌊	**Se**	**78**	**-0.039**	ug/L	0.093	240	18	17	21	KED
	Y	**89**		ug/L			630514	635285	0	Standard
	Kr	**83**		ug/L			67	50	19	Standard
⌈>	**In-1**	**115**		ug/L			28156	28753	0	KED
|	**Mo**	**98**	**0.050**	ug/L	0.003	5	11	96	4	KED
|	**Cd**	**111**	**0.003**	ug/L	0.005	164	6	7	30	KED
⌊	**Cd**	**114**	**0.007**	ug/L	0.003	49	5	13	29	KED
⌈>	**In**	**115**		ug/L			1083745	1068479	0	Standard
|	**Ag**	**107**	**0.003**	ug/L	0.001	39	149	189	8	Standard
|	**Sb**	**121**	**0.382**	ug/L	0.010	2	365	6318	2	Standard
⌊	**Sb**	**123**	**0.384**	ug/L	0.023	5	298	4856	6	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2487670	0	Standard
⌊	**Pb**	**208**	**0.003**	ug/L	0.000	13	570	843	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 14:51:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	23514	1	Standard
	Cl	**37**		ug/L			10158397	9568579	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1406787	2	Standard
|	**Cr**	**52**	**0.082**	ug/L	0.010	12	17695	19877	0	Standard
|	**Cr**	**53**	**0.077**	ug/L	0.006	7	206	428	2	Standard
|	**Fe**	**54**	**-0.968**	ug/L	0.621	64	81858	79507	1	Standard
|	**Fe**	**57**	**1.534**	ug/L	0.333	21	18705	20253	0	Standard
⌊	**Mn**	**55**	**0.008**	ug/L	0.001	13	771	1041	1	Standard
⌈>	**Ge**	**72**		ug/L			88171	92143	2	KED
|	**Ni**	**60**	**-0.006**	ug/L	0.005	88	23	16	40	KED
|	**Ni**	**62**	**-0.004**	ug/L	0.018	475	5	4	89	KED
|	**Cu**	**63**	**0.009**	ug/L	0.005	57	74	112	19	KED
|	**Cu**	**65**	**0.015**	ug/L	0.003	19	29	59	10	KED
|	**Zn**	**66**	**0.060**	ug/L	0.028	46	57	97	19	KED
|	**Zn**	**67**	**0.084**	ug/L	0.045	53	11	20	21	KED
|	**As**	**75**	**0.001**	ug/L	0.006	514	4	4	44	KED
⌊	**Se**	**78**	**0.024**	ug/L	0.009	37	18	20	3	KED
	Y	**89**		ug/L			630514	633613	1	Standard
	Kr	**83**		ug/L			67	44	15	Standard
⌈>	**In-1**	**115**		ug/L			28156	29432	0	KED
|	**Mo**	**98**	**0.007**	ug/L	0.002	31	11	24	15	KED
|	**Cd**	**111**	**0.002**	ug/L	0.004	197	6	7	25	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.004	209	5	7	59	KED
⌈>	**In**	**115**		ug/L			1083745	1070267	1	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.000	17	149	120	4	Standard
|	**Sb**	**121**	**0.108**	ug/L	0.005	4	365	2051	3	Standard
⌊	**Sb**	**123**	**0.109**	ug/L	0.007	6	298	1595	6	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2437743	0	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	4	570	749	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 14:59:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	22546	0	Standard
	Cl	**37**		ug/L			10158397	9456116	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1398674	0	Standard
|	**Cr**	**52**	**0.100**	ug/L	0.012	11	17695	20218	1	Standard
|	**Cr**	**53**	**0.053**	ug/L	0.004	7	206	356	3	Standard
|	**Fe**	**54**	**-0.852**	ug/L	0.611	71	81858	79370	1	Standard
|	**Fe**	**57**	**3.686**	ug/L	0.257	6	18705	22220	1	Standard
⌊	**Mn**	**55**	**0.003**	ug/L	0.000	14	771	867	1	Standard
⌈>	**Ge**	**72**		ug/L			88171	91513	1	KED
|	**Ni**	**60**	**-0.009**	ug/L	0.005	59	23	12	59	KED
|	**Ni**	**62**	**-0.001**	ug/L	0.010	1317	5	5	43	KED
|	**Cu**	**63**	**-0.002**	ug/L	0.005	222	74	69	27	KED
|	**Cu**	**65**	**0.003**	ug/L	0.000	13	29	36	2	KED
|	**Zn**	**66**	**0.009**	ug/L	0.025	282	57	64	23	KED
|	**Zn**	**67**	**0.105**	ug/L	0.089	84	11	22	38	KED
|	**As**	**75**	**0.007**	ug/L	0.002	20	4	6	7	KED
⌊	**Se**	**78**	**-0.016**	ug/L	0.106	671	18	18	23	KED
	Y	**89**		ug/L			630514	623276	1	Standard
	Kr	**83**		ug/L			67	54	14	Standard
⌈>	**In-1**	**115**		ug/L			28156	29069	0	KED
|	**Mo**	**98**	**0.007**	ug/L	0.005	80	11	22	40	KED
|	**Cd**	**111**	**-0.000**	ug/L	0.003	692	6	6	22	KED
⌊	**Cd**	**114**	**0.005**	ug/L	0.003	67	5	11	33	KED
⌈>	**In**	**115**		ug/L			1083745	1086121	1	Standard
|	**Ag**	**107**	**-0.001**	ug/L	0.001	58	149	132	9	Standard
|	**Sb**	**121**	**0.064**	ug/L	0.002	2	365	1382	1	Standard
⌊	**Sb**	**123**	**0.057**	ug/L	0.003	5	298	989	2	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2437240	0	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	36	570	468	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 15:04:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	20201	0	Standard
	Cl	**37**		ug/L			10158397	10081619	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1388628	0	Standard
|	**Cr**	**52**	**50.503**	ug/L	0.738	1	17695	1304073	1	Standard
|	**Cr**	**53**	**51.029**	ug/L	0.538	1	206	144922	0	Standard
|	**Fe**	**54**	**4961.944**	ug/L	53.614	1	81858	13273446	1	Standard
|	**Fe**	**57**	**4979.190**	ug/L	47.106	0	18705	4793153	1	Standard
⌊	**Mn**	**55**	**51.348**	ug/L	0.840	1	771	1786139	1	Standard
⌈>	**Ge**	**72**		ug/L			88171	91360	1	KED
|	**Ni**	**60**	**49.630**	ug/L	0.612	1	23	67926	0	KED
|	**Ni**	**62**	**50.887**	ug/L	0.833	1	5	11170	1	KED
|	**Cu**	**63**	**49.748**	ug/L	0.468	0	74	191190	0	KED
|	**Cu**	**65**	**49.900**	ug/L	1.136	2	29	97047	0	KED
|	**Zn**	**66**	**49.507**	ug/L	0.651	1	57	30514	0	KED
|	**Zn**	**67**	**50.637**	ug/L	1.315	2	11	5047	1	KED
|	**As**	**75**	**49.657**	ug/L	0.416	0	4	16775	1	KED
⌊	**Se**	**78**	**51.888**	ug/L	0.537	1	18	2106	1	KED
	Y	**89**		ug/L			630514	622598	1	Standard
	Kr	**83**		ug/L			67	60	18	Standard
⌈>	**In-1**	**115**		ug/L			28156	28052	0	KED
|	**Mo**	**98**	**50.018**	ug/L	1.006	2	11	83147	2	KED
|	**Cd**	**111**	**51.315**	ug/L	0.071	0	6	21818	0	KED
⌊	**Cd**	**114**	**50.194**	ug/L	0.775	1	5	54620	1	KED
⌈>	**In**	**115**		ug/L			1083745	1049599	1	Standard
|	**Ag**	**107**	**48.714**	ug/L	0.637	1	149	629044	0	Standard
|	**Sb**	**121**	**50.366**	ug/L	0.754	1	365	771748	0	Standard
⌊	**Sb**	**123**	**50.121**	ug/L	1.138	2	298	585171	1	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2447492	0	Standard
⌊	**Pb**	**208**	**50.355**	ug/L	0.522	1	570	5135425	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 15:12:18
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	19510	0	Standard
	Cl	**37**		ug/L			10158397	9607922	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1415945	0	Standard
|	**Cr**	**52**	**0.070**	ug/L	0.013	19	17695	19691	1	Standard
|	**Cr**	**53**	**0.029**	ug/L	0.007	23	206	292	6	Standard
|	**Fe**	**54**	**-1.114**	ug/L	0.860	77	81858	79636	2	Standard
|	**Fe**	**57**	**1.957**	ug/L	0.995	50	18705	20799	4	Standard
⌊	**Mn**	**55**	**0.005**	ug/L	0.005	97	771	951	17	Standard
⌈>	**Ge**	**72**		ug/L			88171	91907	0	KED
|	**Ni**	**60**	**-0.012**	ug/L	0.002	18	23	8	35	KED
|	**Ni**	**62**	**0.005**	ug/L	0.020	418	5	6	69	KED
|	**Cu**	**63**	**-0.004**	ug/L	0.003	63	74	62	15	KED
|	**Cu**	**65**	**0.004**	ug/L	0.009	243	29	37	45	KED
|	**Zn**	**66**	**0.003**	ug/L	0.010	307	57	61	9	KED
|	**Zn**	**67**	**-0.011**	ug/L	0.011	94	11	10	10	KED
|	**As**	**75**	**0.002**	ug/L	0.003	125	4	5	18	KED
⌊	**Se**	**78**	**-0.074**	ug/L	0.052	69	18	16	13	KED
	Y	**89**		ug/L			630514	621493	1	Standard
	Kr	**83**		ug/L			67	41	7	Standard
⌈>	**In-1**	**115**		ug/L			28156	29199	1	KED
|	**Mo**	**98**	**0.011**	ug/L	0.003	23	11	31	15	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.004	340	6	6	32	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.002	435	5	6	36	KED
⌈>	**In**	**115**		ug/L			1083745	1084875	0	Standard
|	**Ag**	**107**	**-0.001**	ug/L	0.004	427	149	138	34	Standard
|	**Sb**	**121**	**0.120**	ug/L	0.004	2	365	2259	1	Standard
⌊	**Sb**	**123**	**0.121**	ug/L	0.003	2	298	1755	1	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2431971	1	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.003	195	570	735	46	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0835-BLK1

DEL

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, June 30, 2020 15:17:41

MISSED TUBE

Number of Replicates: 3

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth

Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	19055	4	Standard
	Cl	**37**		ug/L			10158397	5404633	0	Standard
⌈>	**Sc**	**45**		ug/L			1402147	2044499	0	Standard
|	**Cr**	**52**	**-0.492**	ug/L	0.005	1	17695	7366	1	Standard
|	**Cr**	**53**	**-0.027**	ug/L	0.005	18	206	191	10	Standard
|	**Fe**	**54**	**24.966**	ug/L	3.736	14	81858	217119	7	Standard
|	**Fe**	**57**	**-9.926**	ug/L	0.239	2	18705	13259	2	Standard
⌊	**Mn**	**55**	**-0.003**	ug/L	0.001	41	771	947	7	Standard
⌈>	**Ge**	**72**		ug/L			88171	203467	20	KED
|	**Ni**	**60**	**-0.012**	ug/L	0.003	25	23	20	67	KED
|	**Ni**	**62**	**-0.007**	ug/L	0.009	126	5	8	48	KED
|	**Cu**	**63**	**-0.007**	ug/L	0.003	38	74	116	40	KED
|	**Cu**	**65**	**-0.005**	ug/L	0.003	70	29	46	37	KED
|	**Zn**	**66**	**-0.048**	ug/L	0.012	23	57	67	45	KED
|	**Zn**	**67**	**-0.090**	ug/L	0.001	1	11	6	17	KED
|	**As**	**75**	**-0.003**	ug/L	0.004	130	4	7	46	KED
⌊	**Se**	**78**	**-0.226**	ug/L	0.052	23	18	21	2	KED
	Y	**89**		ug/L			630514	973338	2	Standard
	Kr	**83**		ug/L			67	295	9	Standard
⌈>	**In-1**	**115**		ug/L			28156	52663	1	KED
|	**Mo**	**98**	**-0.003**	ug/L	0.002	87	11	12	62	KED
|	**Cd**	**111**	**-0.005**	ug/L	0.003	59	6	7	33	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.001	30	5	13	8	KED
⌈>	**In**	**115**		ug/L			1083745	1383825	1	Standard
|	**Ag**	**107**	**-0.010**	ug/L	0.000	2	149	26	12	Standard
|	**Sb**	**121**	**-0.017**	ug/L	0.001	3	365	126	10	Standard
⌊	**Sb**	**123**	**-0.018**	ug/L	0.000	1	298	99	4	Standard
⌈>	**Tb**	**159**		ug/L			2478750	4490613	0	Standard
⌊	**Pb**	**208**	**-0.004**	ug/L	0.000	2	570	269	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0835-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 15:22:10
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	37885	0	Standard
	Cl	37		ug/L			10158397	9640083	0	Standard
>	Sc	45		ug/L			1402147	1393872	2	Standard
	Cr	52	25.469	ug/L	0.648	2	17695	668664	0	Standard
	Cr	53	25.715	ug/L	0.654	2	206	73385	0	Standard
	Fe	54	1.071	ug/L	0.492	45	81858	84214	0	Standard
	Fe	57	5.331	ug/L	0.643	12	18705	23718	0	Standard
	Mn	55	25.746	ug/L	0.589	2	771	899173	1	Standard
>	Ge	72		ug/L			88171	92952	0	KED
	Ni	60	25.609	ug/L	0.655	2	23	35669	1	KED
	Ni	62	25.061	ug/L	0.322	1	5	5599	1	KED
	Cu	63	26.076	ug/L	0.216	0	74	102001	0	KED
	Cu	65	26.578	ug/L	0.137	0	29	52614	0	KED
	Zn	66	82.607	ug/L	1.526	1	57	51764	1	KED
	Zn	67	79.395	ug/L	0.965	1	11	8046	0	KED
	As	75	24.776	ug/L	0.091	0	4	8518	0	KED
	Se	78	83.668	ug/L	0.812	0	18	3443	0	KED
	Y	89		ug/L			630514	622914	0	Standard
	Kr	83		ug/L			67	55	8	Standard
>	In-1	115		ug/L			28156	28956	1	KED
	Mo	98	24.622	ug/L	0.172	0	11	42253	1	KED
	Cd	111	25.432	ug/L	0.360	1	6	11164	1	KED
	Cd	114	25.168	ug/L	0.506	2	5	28270	1	KED
>	In	115		ug/L			1083745	1049174	0	Standard
	Ag	107	24.171	ug/L	0.237	0	149	312104	1	Standard
	Sb	121	25.383	ug/L	0.401	1	365	389005	1	Standard
	Sb	123	25.017	ug/L	0.649	2	298	292140	2	Standard
>	Tb	159		ug/L			2478750	2417199	1	Standard
	Pb	208	25.727	ug/L	0.326	1	570	2591421	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0835-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 15:27:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	48033	1	Standard
	Cl	37		ug/L			10158397	9472763	1	Standard
⌈>	Sc	45		ug/L			1402147	1401708	1	Standard
|	Cr	52	0.169	ug/L	0.013	7	17695	22037	2	Standard
|	Cr	53	0.096	ug/L	0.003	3	206	480	2	Standard
|	Fe	54	0.934	ug/L	0.449	48	81858	84332	0	Standard
|	Fe	57	6.067	ug/L	0.482	7	18705	24571	1	Standard
⌊	Mn	55	0.027	ug/L	0.001	4	771	1735	3	Standard
⌈>	Ge	72		ug/L			88171	91100	0	KED
|	Ni	60	-0.004	ug/L	0.004	97	23	18	31	KED
|	Ni	62	0.008	ug/L	0.010	124	5	6	31	KED
|	Cu	63	0.023	ug/L	0.005	20	74	166	10	KED
|	Cu	65	0.018	ug/L	0.006	35	29	65	19	KED
|	Zn	66	1.094	ug/L	0.087	7	57	730	7	KED
|	Zn	67	1.206	ug/L	0.163	13	11	131	12	KED
|	As	75	0.002	ug/L	0.005	209	4	5	32	KED
⌊	Se	78	0.091	ug/L	0.075	83	18	22	13	KED
	Y	89		ug/L			630514	623537	1	Standard
	Kr	83		ug/L			67	53	14	Standard
⌈>	In-1	115		ug/L			28156	28652	0	KED
|	Mo	98	0.007	ug/L	0.002	23	11	23	12	KED
|	Cd	111	-0.007	ug/L	0.001	19	6	3	15	KED
⌊	Cd	114	-0.001	ug/L	0.004	297	5	3	123	KED
⌈>	In	115		ug/L			1083745	1056781	1	Standard
|	Ag	107	0.000	ug/L	0.001	138	149	152	6	Standard
|	Sb	121	0.007	ug/L	0.002	28	365	467	7	Standard
⌊	Sb	123	0.007	ug/L	0.003	40	298	377	7	Standard
⌈>	Tb	159		ug/L			2478750	2429803	1	Standard
⌊	Pb	208	0.002	ug/L	0.000	22	570	760	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0837-BLK2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 15:31:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	33370	1	Standard
	Cl	37		ug/L			10158397	9467904	0	Standard
>	Sc	45		ug/L			1402147	1390398	1	Standard
	Cr	52	0.157	ug/L	0.010	6	17695	21555	1	Standard
	Cr	53	0.094	ug/L	0.006	6	206	470	3	Standard
	Fe	54	1.144	ug/L	0.437	38	81858	84206	1	Standard
	Fe	57	6.836	ug/L	0.363	5	18705	25108	1	Standard
	Mn	55	0.042	ug/L	0.002	5	771	2217	2	Standard
>	Ge	72		ug/L			88171	91816	2	KED
	Ni	60	-0.006	ug/L	0.002	33	23	15	18	KED
	Ni	62	-0.007	ug/L	0.015	227	5	3	86	KED
	Cu	63	0.014	ug/L	0.001	9	74	133	4	KED
	Cu	65	0.014	ug/L	0.006	46	29	57	20	KED
	Zn	66	0.802	ug/L	0.014	1	57	555	1	KED
	Zn	67	0.677	ug/L	0.181	26	11	79	20	KED
	As	75	0.007	ug/L	0.004	61	4	6	21	KED
	Se	78	0.004	ug/L	0.103	2653	18	19	21	KED
	Y	89		ug/L			630514	611786	1	Standard
	Kr	83		ug/L			67	43	26	Standard
>	In-1	115		ug/L			28156	28961	1	KED
	Mo	98	0.001	ug/L	0.008	825	11	13	107	KED
	Cd	111	0.150	ug/L	0.259	172	6	71	157	KED
	Cd	114	0.057	ug/L	0.101	179	5	68	164	KED
>	In	115		ug/L			1083745	1080264	0	Standard
	Ag	107	-0.006	ug/L	0.001	11	149	64	16	Standard
	Sb	121	-0.002	ug/L	0.002	120	365	335	9	Standard
	Sb	123	-0.004	ug/L	0.001	19	298	243	4	Standard
>	Tb	159		ug/L			2478750	2409570	1	Standard
	Pb	208	0.001	ug/L	0.000	40	570	643	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0837-BS2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 15:36:16
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	39295	2	Standard
	Cl	37		ug/L			10158397	10048951	1	Standard
>	Sc	45		ug/L			1402147	1406595	0	Standard
	Cr	52	24.939	ug/L	0.551	2	17695	661255	1	Standard
	Cr	53	25.830	ug/L	0.393	1	206	74405	1	Standard
	Fe	54	4847.411	ug/L	40.283	0	81858	13136738	0	Standard
	Fe	57	4846.215	ug/L	44.332	0	18705	4726014	1	Standard
	Mn	55	25.819	ug/L	0.455	1	771	910093	1	Standard
>	Ge	72		ug/L			88171	91977	2	KED
	Ni	60	25.534	ug/L	0.775	3	23	35182	0	KED
	Ni	62	25.928	ug/L	0.466	1	5	5732	2	KED
	Cu	63	25.055	ug/L	0.190	0	74	96974	1	KED
	Cu	65	25.114	ug/L	0.046	0	29	49196	2	KED
	Zn	66	81.464	ug/L	1.367	1	57	50505	0	KED
	Zn	67	79.776	ug/L	1.198	1	11	7999	1	KED
	As	75	25.010	ug/L	0.109	0	4	8508	1	KED
	Se	78	83.222	ug/L	0.963	1	18	3390	3	KED
	Y	89		ug/L			630514	623197	1	Standard
	Kr	83		ug/L			67	57	23	Standard
>	In-1	115		ug/L			28156	28941	0	KED
	Mo	98	0.007	ug/L	0.002	26	11	22	12	KED
	Cd	111	24.834	ug/L	0.335	1	6	10896	1	KED
	Cd	114	24.786	ug/L	0.633	2	5	27829	2	KED
>	In	115		ug/L			1083745	1050150	3	Standard
	Ag	107	24.374	ug/L	0.452	1	149	314893	1	Standard
	Sb	121	0.024	ug/L	0.005	21	365	721	7	Standard
	Sb	123	0.021	ug/L	0.004	20	298	535	6	Standard
>	Tb	159		ug/L			2478750	2496894	0	Standard
	Pb	208	24.783	ug/L	0.054	0	570	2578930	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0284-01
Sample Dil Factor: 10
Comments:
Sample Date/Time: Tuesday, June 30, 2020 15:40:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	45768	2	Standard
	Cl	37		ug/L			10158397	9778313	0	Standard
⌈>	Sc	45		ug/L			1402147	1396164	0	Standard
|	Cr	52	1.024	ug/L	0.013	1	17695	43845	1	Standard
|	Cr	53	1.140	ug/L	0.034	3	206	3456	3	Standard
|	Fe	54	10.502	ug/L	0.522	4	81858	109574	0	Standard
|	Fe	57	8.477	ug/L	0.384	4	18705	26796	0	Standard
⌊	Mn	55	5.169	ug/L	0.073	1	771	181483	0	Standard
⌈>	Ge	72		ug/L			88171	92702	0	KED
|	Ni	60	1.616	ug/L	0.029	1	23	2268	1	KED
|	Ni	62	1.736	ug/L	0.143	8	5	391	7	KED
|	Cu	63	1.658	ug/L	0.051	3	74	6541	2	KED
|	Cu	65	1.649	ug/L	0.045	2	29	3284	2	KED
|	Zn	66	118.608	ug/L	0.990	0	57	74103	0	KED
|	Zn	67	110.368	ug/L	1.224	1	11	11151	1	KED
|	As	75	0.098	ug/L	0.016	16	4	38	14	KED
⌊	Se	78	0.051	ug/L	0.040	79	18	21	7	KED
	Y	89		ug/L			630514	624620	0	Standard
	Kr	83		ug/L			67	51	29	Standard
⌈>	In-1	115		ug/L			28156	29101	1	KED
|	Mo	98	3.279	ug/L	0.048	1	11	5666	2	KED
|	Cd	111	0.072	ug/L	0.010	13	6	38	10	KED
⌊	Cd	114	0.077	ug/L	0.008	10	5	92	8	KED
⌈>	In	115		ug/L			1083745	1068438	0	Standard
|	Ag	107	-0.002	ug/L	0.001	53	149	124	9	Standard
|	Sb	121	0.036	ug/L	0.003	9	365	921	5	Standard
⌊	Sb	123	0.041	ug/L	0.003	8	298	778	4	Standard
⌈>	Tb	159		ug/L			2478750	2449637	0	Standard
⌊	Pb	208	0.296	ug/L	0.004	1	570	30782	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0640-DUP2
Sample Dil Factor: 10
Comments:
Sample Date/Time: Tuesday, June 30, 2020 15:45:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	46198	0	Standard
	Cl	37		ug/L			10158397	9688065	1	Standard
>	Sc	45		ug/L			1402147	1376008	1	Standard
	Cr	52	0.954	ug/L	0.041	4	17695	41432	1	Standard
	Cr	53	1.080	ug/L	0.011	1	206	3237	1	Standard
	Fe	54	10.853	ug/L	0.208	1	81858	108925	1	Standard
	Fe	57	8.671	ug/L	0.075	0	18705	26596	1	Standard
	Mn	55	5.230	ug/L	0.047	0	771	180951	0	Standard
>	Ge	72		ug/L			88171	91623	1	KED
	Ni	60	1.677	ug/L	0.038	2	23	2326	3	KED
	Ni	62	1.639	ug/L	0.125	7	5	365	6	KED
	Cu	63	1.701	ug/L	0.016	0	74	6632	1	KED
	Cu	65	1.677	ug/L	0.042	2	29	3301	3	KED
	Zn	66	117.465	ug/L	2.268	1	57	72529	1	KED
	Zn	67	114.927	ug/L	0.466	0	11	11476	1	KED
	As	75	0.100	ug/L	0.010	9	4	38	9	KED
	Se	78	0.061	ug/L	0.076	124	18	21	13	KED
	Y	89		ug/L			630514	615288	0	Standard
	Kr	83		ug/L			67	53	14	Standard
>	In-1	115		ug/L			28156	28391	1	KED
	Mo	98	3.248	ug/L	0.048	1	11	5475	2	KED
	Cd	111	0.063	ug/L	0.013	20	6	33	15	KED
	Cd	114	0.070	ug/L	0.010	13	5	82	11	KED
>	In	115		ug/L			1083745	1072707	1	Standard
	Ag	107	-0.004	ug/L	0.002	34	149	89	21	Standard
	Sb	121	0.038	ug/L	0.002	5	365	958	4	Standard
	Sb	123	0.035	ug/L	0.006	16	298	713	9	Standard
>	Tb	159		ug/L			2478750	2394216	1	Standard
	Pb	208	0.304	ug/L	0.002	0	570	30859	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0640-MS2
Sample Dil Factor: 10
Comments:
Sample Date/Time: Tuesday, June 30, 2020 15:50:10
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	34242	1	Standard
	Cl	37		ug/L			10158397	9690000	0	Standard
>	Sc	45		ug/L			1402147	1388063	0	Standard
	Cr	52	3.378	ug/L	0.066	1	17695	103543	1	Standard
	Cr	53	3.691	ug/L	0.099	2	206	10669	2	Standard
	Fe	54	9.451	ug/L	0.261	2	81858	106150	0	Standard
	Fe	57	7.647	ug/L	0.369	4	18705	25847	1	Standard
	Mn	55	7.739	ug/L	0.179	2	771	269746	1	Standard
>	Ge	72		ug/L			88171	91620	1	KED
	Ni	60	4.127	ug/L	0.115	2	23	5687	3	KED
	Ni	62	4.551	ug/L	0.190	4	5	1006	2	KED
	Cu	63	4.298	ug/L	0.045	1	74	16634	0	KED
	Cu	65	4.247	ug/L	0.025	0	29	8313	1	KED
	Zn	66	125.190	ug/L	2.439	1	57	77290	1	KED
	Zn	67	119.704	ug/L	0.921	0	11	11952	1	KED
	As	75	2.627	ug/L	0.035	1	4	894	1	KED
	Se	78	8.593	ug/L	0.258	3	18	366	3	KED
	Y	89		ug/L			630514	620278	0	Standard
	Kr	83		ug/L			67	49	13	Standard
>	In-1	115		ug/L			28156	28702	1	KED
	Mo	98	3.326	ug/L	0.144	4	11	5667	4	KED
	Cd	111	2.594	ug/L	0.120	4	6	1134	6	KED
	Cd	114	2.609	ug/L	0.077	2	5	2909	1	KED
>	In	115		ug/L			1083745	1060556	1	Standard
	Ag	107	1.266	ug/L	0.105	8	149	16680	9	Standard
	Sb	121	0.034	ug/L	0.001	1	365	885	1	Standard
	Sb	123	0.035	ug/L	0.004	12	298	703	6	Standard
>	Tb	159		ug/L			2478750	2432457	0	Standard
	Pb	208	2.828	ug/L	0.023	0	570	287188	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0640-MSD2
Sample Dil Factor: 10
Comments:
Sample Date/Time: Tuesday, June 30, 2020 15:54:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	43294	0	Standard
	Cl	37		ug/L			10158397	9596748	1	Standard
>	Sc	45		ug/L			1402147	1386729	0	Standard
	Cr	52	3.454	ug/L	0.111	3	17695	105358	1	Standard
	Cr	53	3.684	ug/L	0.071	1	206	10638	1	Standard
	Fe	54	9.644	ug/L	0.527	5	81858	106559	0	Standard
	Fe	57	7.581	ug/L	0.109	1	18705	25759	0	Standard
	Mn	55	7.655	ug/L	0.110	1	771	266581	1	Standard
>	Ge	72		ug/L			88171	92258	0	KED
	Ni	60	4.215	ug/L	0.120	2	23	5848	2	KED
	Ni	62	4.294	ug/L	0.177	4	5	956	4	KED
	Cu	63	4.218	ug/L	0.112	2	74	16442	2	KED
	Cu	65	4.298	ug/L	0.056	1	29	8471	1	KED
	Zn	66	125.900	ug/L	2.010	1	57	78273	0	KED
	Zn	67	120.200	ug/L	1.084	0	11	12084	0	KED
	As	75	2.679	ug/L	0.063	2	4	918	2	KED
	Se	78	8.486	ug/L	0.320	3	18	364	4	KED
	Y	89		ug/L			630514	618682	2	Standard
	Kr	83		ug/L			67	57	14	Standard
>	In-1	115		ug/L			28156	28763	1	KED
	Mo	98	3.324	ug/L	0.027	0	11	5675	0	KED
	Cd	111	2.584	ug/L	0.135	5	6	1132	4	KED
	Cd	114	2.594	ug/L	0.155	5	5	2898	4	KED
>	In	115		ug/L			1083745	1040493	1	Standard
	Ag	107	1.364	ug/L	0.001	0	149	17606	1	Standard
	Sb	121	0.034	ug/L	0.004	12	365	865	8	Standard
	Sb	123	0.033	ug/L	0.002	6	298	672	4	Standard
>	Tb	159		ug/L			2478750	2407736	1	Standard
	Pb	208	2.894	ug/L	0.026	0	570	290817	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0640-MSD3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 15:59:30
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	61270	1	Standard
	Cl	37		ug/L			10158397	10575515	0	Standard
>	Sc	45		ug/L			1402147	1394634	2	Standard
	Cr	52	31.541	ug/L	0.745	2	17695	824259	0	Standard
	Cr	53	34.464	ug/L	0.514	1	206	98366	2	Standard
	Fe	54	95.530	ug/L	2.034	2	81858	336424	1	Standard
	Fe	57	92.159	ug/L	3.808	4	18705	107293	0	Standard
	Mn	55	76.228	ug/L	2.195	2	771	2661807	1	Standard
>	Ge	72		ug/L			88171	91603	1	KED
	Ni	60	40.824	ug/L	0.416	1	23	56027	0	KED
	Ni	62	41.171	ug/L	0.098	0	5	9062	1	KED
	Cu	63	41.733	ug/L	0.541	1	74	160821	0	KED
	Cu	65	41.830	ug/L	0.407	0	29	81588	1	KED
	Zn	66	1190.885	ug/L	7.607	0	57	734668	1	KED
	Zn	67	1138.303	ug/L	9.200	0	11	113525	0	KED
	As	75	25.790	ug/L	0.105	0	4	8737	0	KED
	Se	78	79.588	ug/L	0.062	0	18	3229	1	KED
	Y	89		ug/L			630514	617144	1	Standard
	Kr	83		ug/L			67	59	25	Standard
>	In-1	115		ug/L			28156	29053	0	KED
	Mo	98	32.614	ug/L	0.582	1	11	56155	2	KED
	Cd	111	25.149	ug/L	0.165	0	6	11077	0	KED
	Cd	114	24.773	ug/L	0.043	0	5	27922	0	KED
>	In	115		ug/L			1083745	1037323	2	Standard
	Ag	107	19.864	ug/L	0.355	1	149	253572	2	Standard
	Sb	121	0.458	ug/L	0.004	0	365	7283	2	Standard
	Sb	123	0.454	ug/L	0.022	4	298	5524	3	Standard
>	Tb	159		ug/L			2478750	2454866	0	Standard
	Pb	208	27.772	ug/L	0.243	0	570	2841061	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 16:08:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	20737	2	Standard
	Cl	**37**		ug/L			10158397	10158904	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1362348	1	Standard
|	**Cr**	**52**	**50.404**	ug/L	0.081	0	17695	1276965	1	Standard
|	**Cr**	**53**	**52.334**	ug/L	0.369	0	206	145809	0	Standard
|	**Fe**	**54**	**5025.401**	ug/L	7.610	0	81858	13187985	1	Standard
|	**Fe**	**57**	**5016.167**	ug/L	15.196	0	18705	4737258	1	Standard
⌊	**Mn**	**55**	**52.294**	ug/L	0.218	0	771	1784711	0	Standard
⌈>	**Ge**	**72**		ug/L			88171	90211	3	KED
|	**Ni**	**60**	**50.878**	ug/L	1.644	3	23	68715	0	KED
|	**Ni**	**62**	**50.885**	ug/L	1.231	2	5	11023	1	KED
|	**Cu**	**63**	**50.179**	ug/L	1.370	2	74	190322	0	KED
|	**Cu**	**65**	**50.463**	ug/L	1.312	2	29	96873	0	KED
|	**Zn**	**66**	**50.432**	ug/L	1.784	3	57	30680	2	KED
|	**Zn**	**67**	**50.604**	ug/L	1.430	2	11	4978	0	KED
|	**As**	**75**	**50.353**	ug/L	1.516	3	4	16786	0	KED
⌊	**Se**	**78**	**51.595**	ug/L	1.372	2	18	2067	2	KED
	Y	**89**		ug/L			630514	610370	0	Standard
	Kr	**83**		ug/L			67	50	12	Standard
⌈>	**In-1**	**115**		ug/L			28156	28844	1	KED
|	**Mo**	**98**	**48.695**	ug/L	0.756	1	11	83219	0	KED
|	**Cd**	**111**	**49.640**	ug/L	0.466	0	6	21701	1	KED
⌊	**Cd**	**114**	**49.241**	ug/L	1.287	2	5	55080	1	KED
⌈>	**In**	**115**		ug/L			1083745	1029187	3	Standard
|	**Ag**	**107**	**48.215**	ug/L	1.165	2	149	610270	1	Standard
|	**Sb**	**121**	**50.126**	ug/L	1.021	2	365	752964	1	Standard
⌊	**Sb**	**123**	**50.800**	ug/L	1.141	2	298	581529	2	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2429771	2	Standard
⌊	**Pb**	**208**	**50.646**	ug/L	1.171	2	570	5126297	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 16:15:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	20180	0	Standard
	Cl	**37**		ug/L			10158397	9735605	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1377346	1	Standard
|	**Cr**	**52**	**0.072**	ug/L	0.008	11	17695	19206	0	Standard
|	**Cr**	**53**	**0.027**	ug/L	0.002	8	206	278	3	Standard
|	**Fe**	**54**	**-1.097**	ug/L	0.711	64	81858	77500	0	Standard
|	**Fe**	**57**	**1.152**	ug/L	0.265	23	18705	19468	1	Standard
⌊	**Mn**	**55**	**0.001**	ug/L	0.001	182	771	783	6	Standard
⌈>	**Ge**	**72**		ug/L			88171	90593	1	KED
|	**Ni**	**60**	**-0.006**	ug/L	0.005	89	23	15	45	KED
|	**Ni**	**62**	**-0.000**	ug/L	0.019	3855	5	5	78	KED
|	**Cu**	**63**	**-0.005**	ug/L	0.001	30	74	59	8	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.003	281	29	27	20	KED
|	**Zn**	**66**	**0.007**	ug/L	0.016	242	57	62	16	KED
|	**Zn**	**67**	**-0.023**	ug/L	0.019	82	11	9	20	KED
|	**As**	**75**	**0.003**	ug/L	0.007	240	4	5	44	KED
⌊	**Se**	**78**	**-0.027**	ug/L	0.040	148	18	18	8	KED
	Y	**89**		ug/L			630514	614151	3	Standard
	Kr	**83**		ug/L			67	42	33	Standard
⌈>	**In-1**	**115**		ug/L			28156	28437	1	KED
|	**Mo**	**98**	**0.015**	ug/L	0.002	15	11	36	11	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.006	182	6	5	47	KED
⌊	**Cd**	**114**	**0.007**	ug/L	0.008	108	5	13	62	KED
⌈>	**In**	**115**		ug/L			1083745	1038231	0	Standard
|	**Ag**	**107**	**-0.004**	ug/L	0.002	49	149	97	22	Standard
|	**Sb**	**121**	**0.106**	ug/L	0.003	2	365	1959	2	Standard
⌊	**Sb**	**123**	**0.102**	ug/L	0.009	9	298	1460	7	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2422612	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	142	570	589	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0266-02
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 30, 2020 16:20:10
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	52956	2	Standard
	Cl	37		ug/L			10158397	16854837	2	Standard
>	Sc	45		ug/L			1402147	1541775	0	Standard
	Cr	52	0.240	ug/L	0.007	3	17695	26240	0	Standard
	Cr	53	6.364	ug/L	0.206	3	206	20263	2	Standard
	Fe	54	115.085	ug/L	2.854	2	81858	429696	1	Standard
	Fe	57	361.077	ug/L	7.441	2	18705	404957	1	Standard
	Mn	55	150.992	ug/L	4.766	3	771	5829356	2	Standard
>	Ge	72		ug/L			88171	87534	0	KED
	Ni	60	20.449	ug/L	0.242	1	23	26832	1	KED
	Ni	62	20.265	ug/L	0.801	3	5	4265	4	KED
	Cu	63	1.094	ug/L	0.024	2	74	4101	2	KED
	Cu	65	1.147	ug/L	0.050	4	29	2166	4	KED
	Zn	66	1.591	ug/L	0.049	3	57	994	3	KED
	Zn	67	5.183	ug/L	0.634	12	11	505	12	KED
	As	75	2.499	ug/L	0.081	3	4	812	2	KED
	Se	78	0.178	ug/L	0.133	74	18	25	20	KED
	Y	89		ug/L			630514	607798	0	Standard
	Kr	83		ug/L			67	66	7	Standard
>	In-1	115		ug/L			28156	27209	1	KED
	Mo	98	6.781	ug/L	0.078	1	11	10942	2	KED
	Cd	111	0.018	ug/L	0.008	47	6	13	24	KED
	Cd	114	0.019	ug/L	0.004	21	5	25	18	KED
>	In	115		ug/L			1083745	930153	1	Standard
	Ag	107	-0.003	ug/L	0.001	27	149	93	10	Standard
	Sb	121	0.386	ug/L	0.014	3	365	5544	1	Standard
	Sb	123	0.368	ug/L	0.015	3	298	4057	3	Standard
>	Tb	159		ug/L			2478750	2390382	0	Standard
	Pb	208	0.005	ug/L	0.001	14	570	1052	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0266-05
Sample Dil Factor: 10
Comments:
Sample Date/Time: Tuesday, June 30, 2020 16:26:22
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	29299	2	Standard
	Cl	37		ug/L			10158397	10906110	0	Standard
>	Sc	45		ug/L			1402147	1393795	0	Standard
	Cr	52	0.192	ug/L	0.006	3	17695	22494	1	Standard
	Cr	53	1.956	ug/L	0.048	2	206	5772	3	Standard
	Fe	54	56.047	ug/L	0.848	1	81858	230934	0	Standard
	Fe	57	95.403	ug/L	0.897	0	18705	110415	0	Standard
	Mn	55	171.846	ug/L	0.917	0	771	5998629	1	Standard
>	Ge	72		ug/L			88171	91728	0	KED
	Ni	60	5.554	ug/L	0.164	2	23	7654	2	KED
	Ni	62	5.631	ug/L	0.227	4	5	1245	3	KED
	Cu	63	0.043	ug/L	0.003	6	74	243	4	KED
	Cu	65	0.042	ug/L	0.004	10	29	113	7	KED
	Zn	66	0.339	ug/L	0.018	5	57	268	4	KED
	Zn	67	1.305	ug/L	0.214	16	11	142	14	KED
	As	75	0.404	ug/L	0.041	10	4	141	9	KED
	Se	78	0.050	ug/L	0.088	177	18	21	16	KED
	Y	89		ug/L			630514	607653	2	Standard
	Kr	83		ug/L			67	90	9	Standard
>	In-1	115		ug/L			28156	28077	1	KED
	Mo	98	4.310	ug/L	0.069	1	11	7181	2	KED
	Cd	111	0.002	ug/L	0.007	299	6	7	39	KED
	Cd	114	0.005	ug/L	0.001	32	5	10	16	KED
>	In	115		ug/L			1083745	996259	1	Standard
	Ag	107	-0.006	ug/L	0.000	5	149	60	6	Standard
	Sb	121	0.082	ug/L	0.004	4	365	1532	4	Standard
	Sb	123	0.082	ug/L	0.004	4	298	1184	4	Standard
>	Tb	159		ug/L			2478750	2369440	0	Standard
	Pb	208	0.003	ug/L	0.001	24	570	881	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0266-07
Sample Dil Factor: 10
Comments:
Sample Date/Time: Tuesday, June 30, 2020 16:31:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	30783	1	Standard
	Cl	**37**		ug/L			10158397	11237319	0	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1426539	2	Standard
|	**Cr**	**52**	**0.153**	ug/L	0.015	9	17695	21994	0	Standard
|	**Cr**	**53**	**2.296**	ug/L	0.043	1	206	6899	1	Standard
|	**Fe**	**54**	**1.349**	ug/L	0.221	16	81858	86962	1	Standard
|	**Fe**	**57**	**40.442**	ug/L	0.750	1	18705	58867	2	Standard
⌊	**Mn**	**55**	**269.455**	ug/L	6.218	2	771	9623382	0	Standard
⌈>	**Ge**	**72**		ug/L			88171	90221	1	KED
|	**Ni**	**60**	**3.979**	ug/L	0.071	1	23	5399	0	KED
|	**Ni**	**62**	**3.936**	ug/L	0.157	3	5	857	3	KED
|	**Cu**	**63**	**0.200**	ug/L	0.009	4	74	833	3	KED
|	**Cu**	**65**	**0.222**	ug/L	0.027	12	29	455	11	KED
|	**Zn**	**66**	**0.569**	ug/L	0.070	12	57	404	11	KED
|	**Zn**	**67**	**1.639**	ug/L	0.016	0	11	172	2	KED
|	**As**	**75**	**0.316**	ug/L	0.016	5	4	109	3	KED
⌊	**Se**	**78**	**0.009**	ug/L	0.040	427	18	19	6	KED
	Y	**89**		ug/L			630514	625669	1	Standard
	Kr	**83**		ug/L			67	74	12	Standard
⌈>	**In-1**	**115**		ug/L			28156	27914	0	KED
|	**Mo**	**98**	**0.437**	ug/L	0.022	4	11	734	4	KED
|	**Cd**	**111**	**-0.004**	ug/L	0.006	163	6	4	52	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.003	332	5	6	50	KED
⌈>	**In**	**115**		ug/L			1083745	1011571	1	Standard
|	**Ag**	**107**	**-0.008**	ug/L	0.001	16	149	44	34	Standard
|	**Sb**	**121**	**0.019**	ug/L	0.004	21	365	615	8	Standard
⌊	**Sb**	**123**	**0.016**	ug/L	0.002	14	298	458	4	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2398967	1	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	65	570	480	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0266-11
Sample Dil Factor: 10
Comments:
Sample Date/Time: Tuesday, June 30, 2020 16:36:06
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	32599	0	Standard
	Cl	**37**		ug/L			10158397	11831943	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1445191	1	Standard
|	**Cr**	**52**	**0.186**	ug/L	0.019	10	17695	23162	1	Standard
|	**Cr**	**53**	**3.932**	ug/L	0.044	1	206	11818	1	Standard
|	**Fe**	**54**	**58.124**	ug/L	1.582	2	81858	245175	1	Standard
|	**Fe**	**57**	**142.913**	ug/L	3.728	2	18705	161897	2	Standard
⌊	**Mn**	**55**	**148.274**	ug/L	4.220	2	771	5365674	2	Standard
⌈>	**Ge**	**72**		ug/L			88171	91269	0	KED
|	**Ni**	**60**	**5.720**	ug/L	0.102	1	23	7843	2	KED
|	**Ni**	**62**	**5.657**	ug/L	0.334	5	5	1245	5	KED
|	**Cu**	**63**	**0.083**	ug/L	0.003	3	74	394	2	KED
|	**Cu**	**65**	**0.092**	ug/L	0.012	13	29	208	11	KED
|	**Zn**	**66**	**0.515**	ug/L	0.024	4	57	375	4	KED
|	**Zn**	**67**	**1.248**	ug/L	0.107	8	11	135	8	KED
|	**As**	**75**	**0.575**	ug/L	0.039	6	4	198	6	KED
⌊	**Se**	**78**	**-0.010**	ug/L	0.123	1268	18	18	26	KED
	Y	**89**		ug/L			630514	620072	0	Standard
	Kr	**83**		ug/L			67	55	24	Standard
⌈>	**In-1**	**115**		ug/L			28156	28685	2	KED
|	**Mo**	**98**	**0.865**	ug/L	0.014	1	11	1481	2	KED
|	**Cd**	**111**	**-0.000**	ug/L	0.007	2144	6	6	48	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.001	9	5	11	2	KED
⌈>	**In**	**115**		ug/L			1083745	1028145	1	Standard
|	**Ag**	**107**	**-0.007**	ug/L	0.000	4	149	48	8	Standard
|	**Sb**	**121**	**0.016**	ug/L	0.003	18	365	587	7	Standard
⌊	**Sb**	**123**	**0.013**	ug/L	0.004	35	298	426	11	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2430982	0	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	374	570	563	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0266-09
Sample Dil Factor: 50
Comments:
Sample Date/Time: Tuesday, June 30, 2020 16:41:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	26616	1	Standard
	Cl	37		ug/L			10158397	10728924	1	Standard
>	Sc	45		ug/L			1402147	1406546	0	Standard
	Cr	52	**0.113**	ug/L	0.009	7	17695	20655	0	Standard
	Cr	53	**1.789**	ug/L	0.071	3	206	5344	2	Standard
	Fe	54	**483.391**	ug/L	2.590	0	81858	1383885	0	Standard
	Fe	57	**491.495**	ug/L	5.422	1	18705	496154	1	Standard
	Mn	55	**133.061**	ug/L	4.363	3	771	4686541	2	Standard
>	Ge	72		ug/L			88171	92183	1	KED
	Ni	60	**0.915**	ug/L	0.049	5	23	1288	6	KED
	Ni	62	**0.898**	ug/L	0.090	10	5	203	7	KED
	Cu	63	**0.012**	ug/L	0.005	39	74	123	16	KED
	Cu	65	**0.018**	ug/L	0.001	6	29	66	1	KED
	Zn	66	**0.089**	ug/L	0.008	8	57	114	2	KED
	Zn	67	**0.305**	ug/L	0.026	8	11	42	6	KED
	As	75	**0.084**	ug/L	0.005	5	4	33	6	KED
	Se	78	**0.014**	ug/L	0.013	93	18	20	4	KED
	Y	89		ug/L			630514	628432	1	Standard
	Kr	83		ug/L			67	47	43	Standard
>	In-1	115		ug/L			28156	28502	2	KED
	Mo	98	**0.053**	ug/L	0.007	12	11	101	12	KED
	Cd	111	**-0.008**	ug/L	0.001	15	6	3	17	KED
	Cd	114	**-0.003**	ug/L	0.003	81	5	1	166	KED
>	In	115		ug/L			1083745	1043596	1	Standard
	Ag	107	**-0.008**	ug/L	0.001	8	149	47	17	Standard
	Sb	121	**-0.008**	ug/L	0.001	16	365	224	8	Standard
	Sb	123	**-0.007**	ug/L	0.001	11	298	201	5	Standard
>	Tb	159		ug/L			2478750	2457752	1	Standard
	Pb	208	**-0.000**	ug/L	0.000	95	570	545	4	Standard

20F0260 **ICP-MS Quantitative Analysis - Summary Report**

Sample ID: 20F0206-06
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, June 30, 2020 16:46:16

MB 6/30/20

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	25894	1	Standard
	Cl	37		ug/L			10158397	10350669	1	Standard
>	Sc	45		ug/L			1402147	1392828	0	Standard
	Cr	52	0.089	ug/L	0.006	6	17695	19857	0	Standard
	Cr	53	0.597	ug/L	0.021	3	206	1903	2	Standard
	Fe	54	56.719	ug/L	0.958	1	81858	232570	0	Standard
	Fe	57	56.405	ug/L	1.199	2	18705	72831	1	Standard
	Mn	55	127.582	ug/L	0.978	0	771	4450598	0	Standard
>	Ge	72		ug/L			88171	92665	1	KED
	Ni	60	0.156	ug/L	0.013	8	23	241	9	KED
	Ni	62	0.173	ug/L	0.008	4	5	43	4	KED
	Cu	63	0.092	ug/L	0.009	9	74	435	6	KED
	Cu	65	0.090	ug/L	0.018	20	29	208	16	KED
	Zn	66	0.256	ug/L	0.035	13	57	219	9	KED
	Zn	67	0.271	ug/L	0.070	25	11	39	18	KED
	As	75	0.416	ug/L	0.020	4	4	146	3	KED
	Se	78	-0.067	ug/L	0.111	166	18	16	27	KED
	Y	89		ug/L			630514	627640	1	Standard
	Kr	83		ug/L			67	36	18	Standard
>	In-1	115		ug/L			28156	28677	0	KED
	Mo	98	0.008	ug/L	0.007	89	11	25	49	KED
	Cd	111	-0.005	ug/L	0.001	24	6	4	13	KED
	Cd	114	0.001	ug/L	0.002	171	5	6	31	KED
>	In	115		ug/L			1083745	1069954	0	Standard
	Ag	107	-0.004	ug/L	0.001	28	149	90	17	Standard
	Sb	121	-0.011	ug/L	0.001	9	365	193	8	Standard
	Sb	123	-0.014	ug/L	0.002	11	298	132	14	Standard
>	Tb	159		ug/L			2478750	2457704	0	Standard
	Pb	208	-0.000	ug/L	0.000	97	570	524	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0664-DUP3
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, June 30, 2020 16:51:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	27143	1	Standard
	Cl	37		ug/L			10158397	10363725	1	Standard
>	Sc	45		ug/L			1402147	1397500	1	Standard
	Cr	52	0.073	ug/L	0.013	17	17695	19508	0	Standard
	Cr	53	0.437	ug/L	0.006	1	206	1453	0	Standard
	Fe	54	57.521	ug/L	1.849	3	81858	235451	0	Standard
	Fe	57	55.254	ug/L	1.766	3	18705	71951	1	Standard
	Mn	55	128.625	ug/L	1.212	0	771	4502307	2	Standard
>	Ge	72		ug/L			88171	92761	0	KED
	Ni	60	0.139	ug/L	0.009	6	23	217	6	KED
	Ni	62	0.147	ug/L	0.014	9	5	38	8	KED
	Cu	63	0.083	ug/L	0.006	7	74	400	5	KED
	Cu	65	0.071	ug/L	0.005	6	29	171	6	KED
	Zn	66	0.236	ug/L	0.021	9	57	207	6	KED
	Zn	67	0.202	ug/L	0.205	101	11	32	63	KED
	As	75	0.396	ug/L	0.009	2	4	140	2	KED
	Se	78	0.014	ug/L	0.054	373	18	20	10	KED
	Y	89		ug/L			630514	627561	0	Standard
	Kr	83		ug/L			67	46	20	Standard
>	In-1	115		ug/L			28156	29029	1	KED
	Mo	98	0.013	ug/L	0.004	26	11	34	17	KED
	Cd	111	-0.003	ug/L	0.001	38	6	5	10	KED
	Cd	114	0.004	ug/L	0.001	26	5	9	11	KED
>	In	115		ug/L			1083745	1063927	0	Standard
	Ag	107	-0.005	ug/L	0.001	22	149	88	15	Standard
	Sb	121	-0.013	ug/L	0.001	10	365	154	13	Standard
	Sb	123	-0.012	ug/L	0.001	11	298	146	11	Standard
>	Tb	159		ug/L			2478750	2450713	0	Standard
	Pb	208	-0.001	ug/L	0.000	9	570	474	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0664-MS3
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, June 30, 2020 16:56:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte		Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C		13		ug/L			18966	27141	1	Standard
	Cl		37		ug/L			10158397	10327706	1	Standard
⌈>	Sc		45		ug/L			1402147	1405827	1	Standard
|	Cr		52	1.415	ug/L	0.045	3	17695	54220	1	Standard
|	Cr		53	1.777	ug/L	0.061	3	206	5308	2	Standard
|	Fe		54	320.402	ug/L	2.259	0	81858	944446	0	Standard
|	Fe		57	310.621	ug/L	0.855	0	18705	320297	1	Standard
⌊	Mn	STL	55	132.487	ug/L	1.857	1	771	4664234	0	Standard
⌈>	Ge		72		ug/L			88171	93824	1	KED
|	Ni		60	1.373	ug/L	0.055	3	23	1954	3	KED
|	Ni		62	1.410	ug/L	0.067	4	5	323	5	KED
|	Cu		63	1.416	ug/L	0.013	0	74	5666	0	KED
|	Cu		65	1.391	ug/L	0.108	7	29	2807	6	KED
|	Zn		66	4.532	ug/L	0.233	5	57	2923	4	KED
|	Zn		67	4.333	ug/L	0.220	5	11	454	3	KED
|	As		75	1.663	ug/L	0.019	1	4	581	2	KED
⌊	Se		78	4.153	ug/L	0.258	6	18	191	4	KED
	Y		89		ug/L			630514	625086	0	Standard
	Kr		83		ug/L			67	45	19	Standard
⌈>	In-1		115		ug/L			28156	29365	1	KED
|	Mo		98	0.011	ug/L	0.003	30	11	31	19	KED
|	Cd		111	1.275	ug/L	0.054	4	6	573	3	KED
⌊	Cd		114	1.294	ug/L	0.052	3	5	1479	4	KED
⌈>	In		115		ug/L			1083745	1084765	4	Standard
|	Ag		107	1.277	ug/L	0.047	3	149	17169	0	Standard
|	Sb		121	-0.012	ug/L	0.001	6	365	170	11	Standard
⌊	Sb		123	-0.013	ug/L	0.002	19	298	142	21	Standard
⌈>	Tb		159		ug/L			2478750	2461188	1	Standard
⌊	Pb		208	1.343	ug/L	0.017	1	570	138280	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0664-MSD3
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, June 30, 2020 17:01:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte		Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C		13		ug/L			18966	27462	2	Standard
	Cl		37		ug/L			10158397	10301793	1	Standard
>	Sc		45		ug/L			1402147	1425353	0	Standard
	Cr		52	1.344	ug/L	0.016	1	17695	53125	0	Standard
	Cr		53	1.662	ug/L	0.020	1	206	5049	1	Standard
	Fe		54	311.427	ug/L	4.132	1	81858	933162	1	Standard
	Fe		57	301.871	ug/L	2.212	0	18705	316134	0	Standard
	Mn	STL	55	123.987	ug/L	3.183	2	771	4425764	2	Standard
>	Ge		72		ug/L			88171	92499	0	KED
	Ni		60	1.434	ug/L	0.019	1	23	2011	1	KED
	Ni		62	1.531	ug/L	0.033	2	5	345	2	KED
	Cu		63	1.409	ug/L	0.035	2	74	5557	2	KED
	Cu		65	1.412	ug/L	0.049	3	29	2809	3	KED
	Zn		66	4.532	ug/L	0.135	2	57	2883	3	KED
	Zn		67	4.257	ug/L	0.210	4	11	440	4	KED
	As		75	1.673	ug/L	0.023	1	4	576	1	KED
	Se		78	4.251	ug/L	0.241	5	18	192	5	KED
	Y		89		ug/L			630514	633862	1	Standard
	Kr		83		ug/L			67	48	2	Standard
>	In-1		115		ug/L			28156	29104	0	KED
	Mo		98	0.009	ug/L	0.004	42	11	27	25	KED
	Cd		111	1.317	ug/L	0.094	7	6	586	6	KED
	Cd		114	1.321	ug/L	0.063	4	5	1496	5	KED
>	In		115		ug/L			1083745	1092241	1	Standard
	Ag		107	1.233	ug/L	0.023	1	149	16716	2	Standard
	Sb		121	-0.014	ug/L	0.002	15	365	153	21	Standard
	Sb		123	-0.015	ug/L	0.001	5	298	115	10	Standard
>	Tb		159		ug/L			2478750	2476645	0	Standard
	Pb		208	1.310	ug/L	0.020	1	570	135743	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL5
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 17:07:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	22376	0	Standard
	Cl	**37**		ug/L			10158397	10394271	0	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1391201	1	Standard
|	**Cr**	**52**	**0.019**	ug/L	0.015	78	17695	18040	1	Standard
|	**Cr**	**53**	**0.200**	ug/L	0.012	5	206	774	2	Standard
|	**Fe**	**54**	**-1.999**	ug/L	0.440	21	81858	75884	1	Standard
|	**Fe**	**57**	**-3.977**	ug/L	0.504	12	18705	14732	1	Standard
⌊	**Mn**	**55**	**0.012**	ug/L	0.002	15	771	1169	5	Standard
⌈>	**Ge**	**72**		ug/L			88171	91843	0	KED
|	**Ni**	**60**	**-0.006**	ug/L	0.002	35	23	15	18	KED
|	**Ni**	**62**	**-0.007**	ug/L	0.015	224	5	3	86	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.003	476	74	75	14	KED
|	**Cu**	**65**	**-0.002**	ug/L	0.003	136	29	26	18	KED
|	**Zn**	**66**	**0.025**	ug/L	0.014	55	57	74	11	KED
|	**Zn**	**67**	**-0.011**	ug/L	0.061	528	11	10	56	KED
|	**As**	**75**	**-0.001**	ug/L	0.004	355	4	4	29	KED
⌊	**Se**	**78**	**-0.036**	ug/L	0.069	192	18	17	14	KED
	Y	**89**		ug/L			630514	607944	1	Standard
	Kr	**83**		ug/L			67	50	13	Standard
⌈>	**In-1**	**115**		ug/L			28156	28632	2	KED
|	**Mo**	**98**	**-0.005**	ug/L	0.002	42	11	3	97	KED
|	**Cd**	**111**	**-0.006**	ug/L	0.004	68	6	3	50	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.008	437	5	7	112	KED
⌈>	**In**	**115**		ug/L			1083745	1059105	1	Standard
|	**Ag**	**107**	**-0.004**	ug/L	0.001	19	149	92	10	Standard
|	**Sb**	**121**	**-0.015**	ug/L	0.002	13	365	123	25	Standard
⌊	**Sb**	**123**	**-0.016**	ug/L	0.001	5	298	99	10	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2415397	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	310	570	566	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 17:12:58
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	20991	2	Standard
	Cl	**37**		ug/L			10158397	10570990	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1369103	0	Standard
|	**Cr**	**52**	**50.824**	ug/L	0.520	1	17695	1293872	1	Standard
|	**Cr**	**53**	**52.634**	ug/L	0.418	0	206	147381	1	Standard
|	**Fe**	**54**	**4989.122**	ug/L	85.313	1	81858	13158250	1	Standard
|	**Fe**	**57**	**5000.131**	ug/L	58.141	1	18705	4745353	0	Standard
⌊	**Mn**	**55**	**52.750**	ug/L	0.234	0	771	1809268	1	Standard
⌈>	**Ge**	**72**		ug/L			88171	91795	0	KED
|	**Ni**	**60**	**49.791**	ug/L	0.144	0	23	68477	0	KED
|	**Ni**	**62**	**50.498**	ug/L	0.325	0	5	11137	0	KED
|	**Cu**	**63**	**49.043**	ug/L	0.650	1	74	189389	1	KED
|	**Cu**	**65**	**49.842**	ug/L	0.106	0	29	97418	0	KED
|	**Zn**	**66**	**49.444**	ug/L	0.883	1	57	30624	1	KED
|	**Zn**	**67**	**49.761**	ug/L	2.348	4	11	4984	4	KED
|	**As**	**75**	**49.986**	ug/L	0.522	1	4	16967	1	KED
⌊	**Se**	**78**	**51.926**	ug/L	1.334	2	18	2118	2	KED
	Y	**89**		ug/L			630514	617427	0	Standard
	Kr	**83**		ug/L			67	51	16	Standard
⌈>	**In-1**	**115**		ug/L			28156	28625	0	KED
|	**Mo**	**98**	**48.937**	ug/L	0.789	1	11	83006	0	KED
|	**Cd**	**111**	**49.969**	ug/L	1.294	2	6	21677	1	KED
⌊	**Cd**	**114**	**49.834**	ug/L	0.889	1	5	55331	0	KED
⌈>	**In**	**115**		ug/L			1083745	1064526	1	Standard
|	**Ag**	**107**	**47.587**	ug/L	0.637	1	149	623278	1	Standard
|	**Sb**	**121**	**49.292**	ug/L	1.124	2	365	766056	2	Standard
⌊	**Sb**	**123**	**48.057**	ug/L	0.308	0	298	569145	1	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2485398	0	Standard
⌊	**Pb**	**208**	**49.643**	ug/L	0.358	0	570	5141426	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 17:20:11
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	20737	0	Standard
	Cl	**37**		ug/L			10158397	10243118	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1335750	3	Standard
|	**Cr**	**52**	**0.066**	ug/L	0.026	40	17695	18452	2	Standard
|	**Cr**	**53**	**0.099**	ug/L	0.009	9	206	465	2	Standard
|	**Fe**	**54**	**0.024**	ug/L	2.128	9030	81858	77903	3	Standard
|	**Fe**	**57**	**-0.222**	ug/L	0.884	399	18705	17597	2	Standard
⌊	**Mn**	**55**	**0.006**	ug/L	0.004	62	771	922	9	Standard
⌈>	**Ge**	**72**		ug/L			88171	91289	2	KED
|	**Ni**	**60**	**-0.007**	ug/L	0.006	94	23	15	54	KED
|	**Ni**	**62**	**0.008**	ug/L	0.013	170	5	6	41	KED
|	**Cu**	**63**	**-0.000**	ug/L	0.003	815	74	76	11	KED
|	**Cu**	**65**	**0.001**	ug/L	0.007	606	29	32	40	KED
|	**Zn**	**66**	**0.041**	ug/L	0.009	21	57	84	4	KED
|	**Zn**	**67**	**0.022**	ug/L	0.061	272	11	13	41	KED
|	**As**	**75**	**0.010**	ug/L	0.003	31	4	7	12	KED
⌊	**Se**	**78**	**-0.021**	ug/L	0.039	184	18	18	8	KED
	Y	**89**		ug/L			630514	601327	4	Standard
	Kr	**83**		ug/L			67	47	8	Standard
⌈>	**In-1**	**115**		ug/L			28156	28935	2	KED
|	**Mo**	**98**	**0.006**	ug/L	0.003	47	11	21	24	KED
|	**Cd**	**111**	**0.000**	ug/L	0.004	1133	6	6	24	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.004	152	5	8	54	KED
⌈>	**In**	**115**		ug/L			1083745	1055488	4	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.003	141	149	120	23	Standard
|	**Sb**	**121**	**0.105**	ug/L	0.014	13	365	1974	7	Standard
⌊	**Sb**	**123**	**0.107**	ug/L	0.010	9	298	1542	2	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2358981	3	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.001	36	570	903	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0314-08
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 17:25:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	36459	2	Standard
	Cl	37		ug/L			10158397	9427546	0	Standard
>	Sc	45		ug/L			1402147	1586483	0	Standard
	Cr	52	1.922	ug/L	0.013	0	17695	75956	1	Standard
	Cr	53	2.597	ug/L	0.013	0	206	8648	1	Standard
	Fe	54	4.699	ug/L	0.516	10	81858	106882	0	Standard
	Fe	57	23.262	ug/L	0.592	2	18705	46644	0	Standard
	Mn	55	0.773	ug/L	0.006	0	771	31574	0	Standard
>	Ge	72		ug/L			88171	91478	1	KED
	Ni	60	1.541	ug/L	0.079	5	23	2134	3	KED
	Ni	62	1.563	ug/L	0.195	12	5	349	13	KED
	Cu	63	0.102	ug/L	0.010	9	74	471	8	KED
	Cu	65	0.105	ug/L	0.006	6	29	234	4	KED
	Zn	66	1.542	ug/L	0.031	2	57	1008	1	KED
	Zn	67	1.642	ug/L	0.140	8	11	175	6	KED
	As	75	0.114	ug/L	0.010	8	4	43	6	KED
	Se	78	-0.042	ug/L	0.073	174	18	17	16	KED
	Y	89		ug/L			630514	620300	0	Standard
	Kr	83		ug/L			67	47	10	Standard
>	In-1	115		ug/L			28156	28416	1	KED
	Mo	98	0.035	ug/L	0.008	22	11	69	17	KED
	Cd	111	-0.002	ug/L	0.006	356	6	5	44	KED
	Cd	114	0.002	ug/L	0.003	137	5	7	39	KED
>	In	115		ug/L			1083745	1089241	3	Standard
	Ag	107	-0.007	ug/L	0.000	5	149	61	9	Standard
	Sb	121	0.048	ug/L	0.002	3	365	1127	4	Standard
	Sb	123	0.048	ug/L	0.003	6	298	886	1	Standard
>	Tb	159		ug/L			2478750	2461682	1	Standard
	Pb	208	0.008	ug/L	0.001	11	570	1339	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0314-09
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 17:32:44
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	42036	1	Standard
	Cl	37		ug/L			10158397	10649783	1	Standard
>	Sc	45		ug/L			1402147	1500337	4	Standard
	Cr	52	0.216	ug/L	0.041	19	17695	24839	0	Standard
	Cr	53	0.469	ug/L	0.022	4	206	1656	3	Standard
	Fe	54	4.872	ug/L	2.697	55	81858	101371	3	Standard
	Fe	57	146.227	ug/L	8.347	5	18705	171285	1	Standard
	Mn	55	8263.054	ug/L	353.095	4	771	310099322	1	Standard
>	Ge	72		ug/L			88171	85133	0	KED
	Ni	60	6.978	ug/L	0.088	1	23	8918	0	KED
	Ni	62	6.993	ug/L	0.624	8	5	1434	8	KED
	Cu	63	1.097	ug/L	0.033	3	74	3997	2	KED
	Cu	65	1.071	ug/L	0.026	2	29	1968	1	KED
	Zn	66	1.730	ug/L	0.057	3	57	1047	3	KED
	Zn	67	2.175	ug/L	0.396	18	11	212	17	KED
	As	75	0.125	ug/L	0.021	16	4	43	15	KED
	Se	78	0.033	ug/L	0.062	190	18	19	11	KED
	Y	89		ug/L			630514	619466	4	Standard
	Kr	83		ug/L			67	78	24	Standard
>	In-1	115		ug/L			28156	27908	0	KED
	Mo	98	0.130	ug/L	0.011	8	11	225	7	KED
	Cd	111	0.097	ug/L	0.018	18	6	47	16	KED
	Cd	114	0.099	ug/L	0.004	4	5	112	3	KED
>	In	115		ug/L			1083745	1026772	5	Standard
	Ag	107	-0.007	ug/L	0.001	20	149	58	27	Standard
	Sb	121	0.070	ug/L	0.001	1	365	1393	4	Standard
	Sb	123	0.068	ug/L	0.005	7	298	1059	2	Standard
>	Tb	159		ug/L			2478750	2494143	3	Standard
	Pb	208	0.015	ug/L	0.001	5	570	2173	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0314-10
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 17:37:13
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	44031	0	Standard
	Cl	37		ug/L			10158397	10280499	1	Standard
>	Sc	45		ug/L			1402147	1752211	0	Standard
	Cr	52	0.181	ug/L	0.016	9	17695	27937	1	Standard
	Cr	53	0.979	ug/L	0.036	3	206	3761	3	Standard
	Fe	54	14.323	ug/L	0.002	0	81858	150346	0	Standard
	Fe	57	112.750	ug/L	1.187	1	18705	159796	0	Standard
	Mn	55	4310.663	ug/L	72.508	1	771	189136496	1	Standard
>	Ge	72		ug/L			88171	87506	0	KED
	Ni	60	18.503	ug/L	0.273	1	23	24273	1	KED
	Ni	62	18.602	ug/L	0.760	4	5	3914	4	KED
	Cu	63	1.105	ug/L	0.025	2	74	4139	2	KED
	Cu	65	1.166	ug/L	0.026	2	29	2200	2	KED
	Zn	66	1.338	ug/L	0.019	1	57	845	1	KED
	Zn	67	2.080	ug/L	0.104	4	11	209	4	KED
	As	75	2.681	ug/L	0.102	3	4	871	3	KED
	Se	78	0.034	ug/L	0.063	184	18	19	12	KED
	Y	89		ug/L			630514	619522	1	Standard
	Kr	83		ug/L			67	76	17	Standard
>	In-1	115		ug/L			28156	28164	1	KED
	Mo	98	0.623	ug/L	0.017	2	11	1051	2	KED
	Cd	111	0.058	ug/L	0.005	9	6	31	6	KED
	Cd	114	0.065	ug/L	0.001	1	5	76	3	KED
>	In	115		ug/L			1083745	1091490	0	Standard
	Ag	107	-0.007	ug/L	0.003	41	149	61	58	Standard
	Sb	121	0.075	ug/L	0.010	13	365	1567	9	Standard
	Sb	123	0.079	ug/L	0.002	2	298	1260	2	Standard
>	Tb	159		ug/L			2478750	2564599	0	Standard
	Pb	208	0.006	ug/L	0.003	42	570	1221	21	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0314-11
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 17:41:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	43161	0	Standard
	Cl	37		ug/L			10158397	9753828	1	Standard
>	Sc	45		ug/L			1402147	1624724	0	Standard
	Cr	52	0.326	ug/L	0.020	6	17695	30224	1	Standard
	Cr	53	0.583	ug/L	0.005	0	206	2173	0	Standard
	Fe	54	195.609	ug/L	3.918	2	81858	703385	2	Standard
	Fe	57	262.964	ug/L	0.979	0	18705	316704	0	Standard
	Mn	55	486.853	ug/L	11.509	2	771	19807522	2	Standard
>	Ge	72		ug/L			88171	88875	1	KED
	Ni	60	15.664	ug/L	0.122	0	23	20871	0	KED
	Ni	62	15.721	ug/L	0.203	1	5	3361	2	KED
	Cu	63	0.650	ug/L	0.014	2	74	2503	2	KED
	Cu	65	0.689	ug/L	0.033	4	29	1332	4	KED
	Zn	66	1.144	ug/L	0.073	6	57	742	6	KED
	Zn	67	1.522	ug/L	0.312	20	11	158	18	KED
	As	75	0.494	ug/L	0.037	7	4	166	7	KED
	Se	78	0.015	ug/L	0.049	338	18	19	9	KED
	Y	89		ug/L			630514	611531	0	Standard
	Kr	83		ug/L			67	65	21	Standard
>	In-1	115		ug/L			28156	28203	1	KED
	Mo	98	0.418	ug/L	0.023	5	11	710	4	KED
	Cd	111	0.022	ug/L	0.011	47	6	15	28	KED
	Cd	114	0.023	ug/L	0.001	3	5	30	3	KED
>	In	115		ug/L			1083745	1081867	1	Standard
	Ag	107	-0.008	ug/L	0.001	6	149	44	16	Standard
	Sb	121	0.131	ug/L	0.004	2	365	2438	1	Standard
	Sb	123	0.127	ug/L	0.005	3	298	1825	2	Standard
>	Tb	159		ug/L			2478750	2492477	1	Standard
	Pb	208	0.003	ug/L	0.000	8	570	854	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0314-12
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 17:46:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	42111	0	Standard
	Cl	**37**		ug/L			10158397	9938744	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1639677	0	Standard
|	**Cr**	**52**	**0.282**	ug/L	0.004	1	17695	29179	0	Standard
|	**Cr**	**53**	**0.733**	ug/L	0.018	2	206	2697	3	Standard
|	**Fe**	**54**	**355.608**	ug/L	3.208	0	81858	1212085	0	Standard
|	**Fe**	**57**	**387.578**	ug/L	4.964	1	18705	460692	0	Standard
⌊	**Mn**	**55**	**2013.214**	ug/L	42.815	2	771	82655679	1	Standard
⌈>	**Ge**	**72**		ug/L			88171	90302	0	KED
|	**Ni**	**60**	**2.241**	ug/L	0.044	1	23	3054	1	KED
|	**Ni**	**62**	**2.303**	ug/L	0.121	5	5	504	5	KED
|	**Cu**	**63**	**0.168**	ug/L	0.005	2	74	714	1	KED
|	**Cu**	**65**	**0.172**	ug/L	0.010	5	29	360	4	KED
|	**Zn**	**66**	**0.912**	ug/L	0.039	4	57	612	3	KED
|	**Zn**	**67**	**0.992**	ug/L	0.183	18	11	109	15	KED
|	**As**	**75**	**1.060**	ug/L	0.014	1	4	358	0	KED
⌊	**Se**	**78**	**-0.031**	ug/L	0.114	366	18	17	24	KED
	Y	**89**		ug/L			630514	621456	2	Standard
	Kr	**83**		ug/L			67	67	19	Standard
⌈>	**In-1**	**115**		ug/L			28156	29010	0	KED
|	**Mo**	**98**	**0.124**	ug/L	0.025	20	11	224	19	KED
|	**Cd**	**111**	**0.000**	ug/L	0.006	2036	6	6	37	KED
⌊	**Cd**	**114**	**0.008**	ug/L	0.010	129	5	14	79	KED
⌈>	**In**	**115**		ug/L			1083745	1133108	0	Standard
|	**Ag**	**107**	**-0.009**	ug/L	0.001	6	149	37	21	Standard
|	**Sb**	**121**	**0.012**	ug/L	0.001	11	365	573	3	Standard
⌊	**Sb**	**123**	**0.012**	ug/L	0.004	29	298	464	9	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2570952	1	Standard
⌊	**Pb**	**208**	**0.022**	ug/L	0.000	2	570	2915	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0314-13
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 17:50:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	45453	2	Standard
	Cl	37		ug/L			10158397	9831714	1	Standard
>	Sc	45		ug/L			1402147	1655068	1	Standard
	Cr	52	0.195	ug/L	0.018	9	17695	26808	2	Standard
	Cr	53	0.416	ug/L	0.014	3	206	1649	3	Standard
	Fe	54	195.755	ug/L	2.002	1	81858	716917	0	Standard
	Fe	57	262.177	ug/L	3.252	1	18705	321700	0	Standard
	Mn	55	489.908	ug/L	6.388	1	771	20303231	0	Standard
>	Ge	72		ug/L			88171	88748	0	KED
	Ni	60	15.934	ug/L	0.048	0	23	21202	0	KED
	Ni	62	15.923	ug/L	0.546	3	5	3399	3	KED
	Cu	63	0.629	ug/L	0.019	2	74	2423	3	KED
	Cu	65	0.653	ug/L	0.021	3	29	1263	3	KED
	Zn	66	1.588	ug/L	0.046	2	57	1006	2	KED
	Zn	67	2.030	ug/L	0.103	5	11	207	4	KED
	As	75	0.484	ug/L	0.041	8	4	163	7	KED
	Se	78	0.040	ug/L	0.046	116	18	20	8	KED
	Y	89		ug/L			630514	607709	0	Standard
	Kr	83		ug/L			67	80	11	Standard
>	In-1	115		ug/L			28156	28040	3	KED
	Mo	98	0.424	ug/L	0.029	6	11	714	5	KED
	Cd	111	0.024	ug/L	0.008	34	6	16	23	KED
	Cd	114	0.024	ug/L	0.014	58	5	30	45	KED
>	In	115		ug/L			1083745	1100151	1	Standard
	Ag	107	-0.008	ug/L	0.001	6	149	42	14	Standard
	Sb	121	0.144	ug/L	0.005	3	365	2685	1	Standard
	Sb	123	0.148	ug/L	0.010	6	298	2118	3	Standard
>	Tb	159		ug/L			2478750	2479953	0	Standard
	Pb	208	0.037	ug/L	0.001	3	570	4414	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0837-DUP2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 17:55:05
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	43711	1	Standard
	Cl	37		ug/L			10158397	9762840	1	Standard
>	Sc	45		ug/L			1402147	1633652	1	Standard
	Cr	52	0.199	ug/L	0.011	5	17695	26580	0	Standard
	Cr	53	0.446	ug/L	0.024	5	206	1729	3	Standard
	Fe	54	193.021	ug/L	3.860	1	81858	699052	1	Standard
	Fe	57	260.948	ug/L	4.243	1	18705	316136	0	Standard
	Mn	55	483.487	ug/L	6.436	1	771	19777573	0	Standard
>	Ge	72		ug/L			88171	88378	1	KED
	Ni	60	15.559	ug/L	0.194	1	23	20616	0	KED
	Ni	62	16.081	ug/L	0.675	4	5	3416	2	KED
	Cu	63	0.634	ug/L	0.008	1	74	2431	2	KED
	Cu	65	0.642	ug/L	0.020	3	29	1236	1	KED
	Zn	66	1.075	ug/L	0.034	3	57	697	3	KED
	Zn	67	1.545	ug/L	0.159	10	11	160	8	KED
	As	75	0.494	ug/L	0.014	2	4	165	2	KED
	Se	78	0.091	ug/L	0.094	103	18	22	16	KED
	Y	89		ug/L			630514	615855	0	Standard
	Kr	83		ug/L			67	71	20	Standard
>	In-1	115		ug/L			28156	28256	1	KED
	Mo	98	0.431	ug/L	0.037	8	11	731	7	KED
	Cd	111	0.027	ug/L	0.010	36	6	18	22	KED
	Cd	114	0.035	ug/L	0.005	13	5	44	13	KED
>	In	115		ug/L			1083745	1093037	0	Standard
	Ag	107	-0.007	ug/L	0.000	6	149	52	12	Standard
	Sb	121	0.138	ug/L	0.004	2	365	2574	1	Standard
	Sb	123	0.138	ug/L	0.008	5	298	1975	5	Standard
>	Tb	159		ug/L			2478750	2517764	0	Standard
	Pb	208	0.030	ug/L	0.002	5	570	3774	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0837-MS2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 17:59:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	41810	1	Standard
	Cl	37		ug/L			10158397	9918104	1	Standard
>	Sc	45		ug/L			1402147	1621561	0	Standard
	Cr	52	22.330	ug/L	0.334	1	17695	684747	1	Standard
	Cr	53	23.293	ug/L	0.184	0	206	77379	0	Standard
	Fe	54	4568.530	ug/L	89.063	1	81858	14278502	1	Standard
	Fe	57	4681.697	ug/L	69.850	1	18705	5264011	1	Standard
	Mn	55	510.795	ug/L	2.537	0	771	20741988	0	Standard
>	Ge	72		ug/L			88171	86570	0	KED
	Ni	60	41.303	ug/L	0.424	1	23	53573	0	KED
	Ni	62	42.264	ug/L	0.620	1	5	8791	1	KED
	Cu	63	25.981	ug/L	0.052	0	74	94656	0	KED
	Cu	65	25.794	ug/L	0.367	1	29	47559	1	KED
	Zn	66	80.031	ug/L	0.345	0	57	46712	0	KED
	Zn	67	79.134	ug/L	1.747	2	11	7469	2	KED
	As	75	26.123	ug/L	0.264	1	4	8364	1	KED
	Se	78	81.871	ug/L	1.071	1	18	3139	1	KED
	Y	89		ug/L			630514	601844	1	Standard
	Kr	83		ug/L			67	78	28	Standard
>	In-1	115		ug/L			28156	28039	0	KED
	Mo	98	0.417	ug/L	0.041	9	11	704	8	KED
	Cd	111	25.025	ug/L	0.080	0	6	10638	0	KED
	Cd	114	24.717	ug/L	0.369	1	5	26886	1	KED
>	In	115		ug/L			1083745	1081448	0	Standard
	Ag	107	21.366	ug/L	0.033	0	149	284378	1	Standard
	Sb	121	0.165	ug/L	0.006	3	365	2969	2	Standard
	Sb	123	0.172	ug/L	0.005	3	298	2361	2	Standard
>	Tb	159		ug/L			2478750	2498305	0	Standard
	Pb	208	24.977	ug/L	0.369	1	570	2600473	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0837-MSD2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 18:05:50
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	42472	0	Standard
	Cl	37		ug/L			10158397	9916115	1	Standard
>	Sc	45		ug/L			1402147	1644645	0	Standard
	Cr	52	22.019	ug/L	0.299	1	17695	685106	1	Standard
	Cr	53	22.705	ug/L	0.252	1	206	76508	1	Standard
	Fe	54	4424.275	ug/L	78.972	1	81858	14027773	1	Standard
	Fe	57	4602.985	ug/L	18.807	0	18705	5249596	0	Standard
	Mn	55	508.017	ug/L	9.219	1	771	20922903	1	Standard
>	Ge	72		ug/L			88171	87797	0	KED
	Ni	60	40.831	ug/L	0.358	0	23	53712	0	KED
	Ni	62	41.240	ug/L	1.060	2	5	8700	2	KED
	Cu	63	24.925	ug/L	0.127	0	74	92098	0	KED
	Cu	65	25.296	ug/L	0.139	0	29	47302	0	KED
	Zn	66	76.835	ug/L	0.649	0	57	45483	0	KED
	Zn	67	75.471	ug/L	1.171	1	11	7224	0	KED
	As	75	25.564	ug/L	0.372	1	4	8302	2	KED
	Se	78	80.750	ug/L	0.735	0	18	3140	1	KED
	Y	89		ug/L			630514	613629	1	Standard
	Kr	83		ug/L			67	74	13	Standard
>	In-1	115		ug/L			28156	28388	2	KED
	Mo	98	0.405	ug/L	0.018	4	11	691	3	KED
	Cd	111	24.427	ug/L	0.834	3	6	10508	1	KED
	Cd	114	24.024	ug/L	0.333	1	5	26453	0	KED
>	In	115		ug/L			1083745	1080441	1	Standard
	Ag	107	22.319	ug/L	0.406	1	149	296747	0	Standard
	Sb	121	0.167	ug/L	0.004	2	365	2992	1	Standard
	Sb	123	0.170	ug/L	0.010	5	298	2343	5	Standard
>	Tb	159		ug/L			2478750	2531619	1	Standard
	Pb	208	24.300	ug/L	0.358	1	570	2563386	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL6
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 18:13:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	22231	2	Standard
	Cl	**37**		ug/L			10158397	9675742	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1411469	1	Standard
|	**Cr**	**52**	**0.085**	ug/L	0.021	25	17695	20000	1	Standard
|	**Cr**	**53**	**0.060**	ug/L	0.011	18	206	381	7	Standard
|	**Fe**	**54**	**-1.328**	ug/L	0.456	34	81858	78799	0	Standard
|	**Fe**	**57**	**-2.718**	ug/L	0.620	22	18705	16176	3	Standard
⌊	**Mn**	**55**	**0.063**	ug/L	0.078	123	771	2996	90	Standard
⌈>	**Ge**	**72**		ug/L			88171	92983	0	KED
|	**Ni**	**60**	**-0.010**	ug/L	0.003	33	23	10	44	KED
|	**Ni**	**62**	**-0.001**	ug/L	0.005	412	5	5	21	KED
|	**Cu**	**63**	**-0.003**	ug/L	0.003	106	74	68	16	KED
|	**Cu**	**65**	**0.003**	ug/L	0.002	75	29	36	13	KED
|	**Zn**	**66**	**0.022**	ug/L	0.013	58	57	74	11	KED
|	**Zn**	**67**	**-0.025**	ug/L	0.020	78	11	9	20	KED
|	**As**	**75**	**0.001**	ug/L	0.002	189	4	4	14	KED
⌊	**Se**	**78**	**-0.004**	ug/L	0.040	1103	18	19	8	KED
	Y	**89**		ug/L			630514	619675	1	Standard
	Kr	**83**		ug/L			67	44	21	Standard
⌈>	**In-1**	**115**		ug/L			28156	29182	3	KED
|	**Mo**	**98**	**-0.000**	ug/L	0.003	2417	11	11	49	KED
|	**Cd**	**111**	**0.000**	ug/L	0.002	1047	6	6	14	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.002	103	5	3	50	KED
⌈>	**In**	**115**		ug/L			1083745	1096908	0	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.001	26	149	120	6	Standard
|	**Sb**	**121**	**-0.014**	ug/L	0.001	6	365	142	10	Standard
⌊	**Sb**	**123**	**-0.017**	ug/L	0.000	2	298	96	5	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2438707	0	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.002	5935	570	563	34	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 18:19:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	19979	1	Standard
	Cl	**37**		ug/L			10158397	10223987	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1400610	1	Standard
|	**Cr**	**52**	**49.970**	ug/L	1.013	2	17695	1301363	0	Standard
|	**Cr**	**53**	**51.024**	ug/L	0.723	1	206	146153	1	Standard
|	**Fe**	**54**	**4898.261**	ug/L	30.995	0	81858	13216446	1	Standard
|	**Fe**	**57**	**4939.202**	ug/L	132.540	2	18705	4794725	1	Standard
⌊	**Mn**	**55**	**51.714**	ug/L	0.460	0	771	1814368	1	Standard
⌈>	**Ge**	**72**		ug/L			88171	92057	1	KED
|	**Ni**	**60**	**50.109**	ug/L	0.662	1	23	69100	0	KED
|	**Ni**	**62**	**49.913**	ug/L	1.578	3	5	11038	2	KED
|	**Cu**	**63**	**49.771**	ug/L	0.600	1	74	192732	1	KED
|	**Cu**	**65**	**50.151**	ug/L	0.728	1	29	98282	0	KED
|	**Zn**	**66**	**49.873**	ug/L	0.877	1	57	30970	0	KED
|	**Zn**	**67**	**49.125**	ug/L	1.509	3	11	4933	1	KED
|	**As**	**75**	**49.836**	ug/L	0.450	0	4	16963	1	KED
⌊	**Se**	**78**	**51.609**	ug/L	0.640	1	18	2111	1	KED
	Y	**89**		ug/L			630514	616869	1	Standard
	Kr	**83**		ug/L			67	39	26	Standard
⌈>	**In-1**	**115**		ug/L			28156	29371	1	KED
|	**Mo**	**98**	**47.864**	ug/L	0.461	0	11	83295	1	KED
|	**Cd**	**111**	**50.384**	ug/L	0.989	1	6	22424	1	KED
⌊	**Cd**	**114**	**49.258**	ug/L	1.331	2	5	56111	2	KED
⌈>	**In**	**115**		ug/L			1083745	1065863	2	Standard
|	**Ag**	**107**	**47.128**	ug/L	0.552	1	149	617966	2	Standard
|	**Sb**	**121**	**48.978**	ug/L	1.851	3	365	761692	1	Standard
⌊	**Sb**	**123**	**48.867**	ug/L	1.478	3	298	579202	1	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2465022	0	Standard
⌊	**Pb**	**208**	**49.931**	ug/L	0.372	0	570	5128714	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 18:26:49
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	18141	0	Standard
	Cl	**37**		ug/L			10158397	9893847	0	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1370021	0	Standard
|	**Cr**	**52**	**0.058**	ug/L	0.007	11	17695	18741	0	Standard
|	**Cr**	**53**	**0.032**	ug/L	0.004	14	206	290	4	Standard
|	**Fe**	**54**	**0.132**	ug/L	0.554	418	81858	80331	2	Standard
|	**Fe**	**57**	**0.963**	ug/L	0.465	48	18705	19187	2	Standard
⌊	**Mn**	**55**	**0.009**	ug/L	0.000	4	771	1068	1	Standard
⌈>	**Ge**	**72**		ug/L			88171	92703	2	KED
|	**Ni**	**60**	**-0.007**	ug/L	0.003	40	23	14	30	KED
|	**Ni**	**62**	**0.004**	ug/L	0.013	289	5	6	45	KED
|	**Cu**	**63**	**0.003**	ug/L	0.001	42	74	92	6	KED
|	**Cu**	**65**	**0.007**	ug/L	0.003	40	29	43	13	KED
|	**Zn**	**66**	**0.004**	ug/L	0.019	458	57	62	21	KED
|	**Zn**	**67**	**-0.044**	ug/L	0.037	83	11	7	50	KED
|	**As**	**75**	**0.005**	ug/L	0.010	196	4	6	53	KED
⌊	**Se**	**78**	**-0.070**	ug/L	0.067	94	18	16	14	KED
	Y	**89**		ug/L			630514	612687	2	Standard
	Kr	**83**		ug/L			67	53	26	Standard
⌈>	**In-1**	**115**		ug/L			28156	29274	2	KED
|	**Mo**	**98**	**0.010**	ug/L	0.004	39	11	29	25	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.005	180	6	5	36	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.000	10	5	3	2	KED
⌈>	**In**	**115**		ug/L			1083745	1053744	0	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.001	78	149	121	15	Standard
|	**Sb**	**121**	**0.094**	ug/L	0.002	2	365	1795	2	Standard
⌊	**Sb**	**123**	**0.099**	ug/L	0.008	8	298	1445	7	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2402778	0	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	21	570	464	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0879-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 18:32:35
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	31351	0	Standard
	Cl	37		ug/L			10158397	9639670	0	Standard
>	Sc	45		ug/L			1402147	1370802	0	Standard
	Cr	52	0.148	ug/L	0.007	4	17695	21016	1	Standard
	Cr	53	0.111	ug/L	0.012	10	206	512	6	Standard
	Fe	54	1.270	ug/L	0.456	35	81858	83359	1	Standard
	Fe	57	2.107	ug/L	0.283	13	18705	20280	0	Standard
	Mn	55	0.032	ug/L	0.001	1	771	1840	1	Standard
>	Ge	72		ug/L			88171	91711	2	KED
	Ni	60	-0.004	ug/L	0.003	89	23	19	24	KED
	Ni	62	0.013	ug/L	0.021	157	5	8	58	KED
	Cu	63	0.407	ug/L	0.025	6	74	1647	3	KED
	Cu	65	0.398	ug/L	0.005	1	29	807	2	KED
	Zn	66	0.820	ug/L	0.045	5	57	565	4	KED
	Zn	67	0.669	ug/L	0.042	6	11	78	7	KED
	As	75	-0.003	ug/L	0.005	155	4	3	51	KED
	Se	78	0.015	ug/L	0.115	755	18	19	23	KED
	Y	89		ug/L			630514	612255	0	Standard
	Kr	83		ug/L			67	46	8	Standard
>	In-1	115		ug/L			28156	29299	1	KED
	Mo	98	0.004	ug/L	0.003	69	11	18	27	KED
	Cd	111	-0.001	ug/L	0.002	362	6	6	17	KED
	Cd	114	0.000	ug/L	0.005	1370	5	6	99	KED
>	In	115		ug/L			1083745	1048701	1	Standard
	Ag	107	-0.005	ug/L	0.001	18	149	74	17	Standard
	Sb	121	0.020	ug/L	0.004	20	365	655	9	Standard
	Sb	123	0.019	ug/L	0.004	21	298	511	9	Standard
>	Tb	159		ug/L			2478750	2412241	1	Standard
	Pb	208	-0.002	ug/L	0.000	18	570	347	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0879-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 18:37:03
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	38147	2	Standard
	Cl	37		ug/L			10158397	10147463	1	Standard
>	Sc	45		ug/L			1402147	1380066	0	Standard
	Cr	52	24.988	ug/L	0.360	1	17695	650044	1	Standard
	Cr	53	26.109	ug/L	0.740	2	206	73782	2	Standard
	Fe	54	4873.744	ug/L	104.470	2	81858	12957274	1	Standard
	Fe	57	4860.678	ug/L	78.458	1	18705	4650302	1	Standard
	Mn	55	26.916	ug/L	0.135	0	771	930891	0	Standard
>	Ge	72		ug/L			88171	93253	0	KED
	Ni	60	24.635	ug/L	0.140	0	23	34431	0	KED
	Ni	62	24.878	ug/L	0.367	1	5	5576	1	KED
	Cu	63	24.335	ug/L	0.440	1	74	95504	1	KED
	Cu	65	24.815	ug/L	0.523	2	29	49287	2	KED
	Zn	66	80.987	ug/L	0.345	0	57	50918	0	KED
	Zn	67	78.610	ug/L	1.468	1	11	7993	2	KED
	As	75	24.486	ug/L	0.190	0	4	8445	0	KED
	Se	78	81.143	ug/L	1.048	1	18	3351	1	KED
	Y	89		ug/L			630514	611966	1	Standard
	Kr	83		ug/L			67	48	12	Standard
>	In-1	115		ug/L			28156	28611	0	KED
	Mo	98	24.309	ug/L	0.119	0	11	41219	0	KED
	Cd	111	24.921	ug/L	0.231	0	6	10809	0	KED
	Cd	114	24.688	ug/L	0.637	2	5	27402	2	KED
>	In	115		ug/L			1083745	1055559	0	Standard
	Ag	107	23.876	ug/L	0.227	0	149	310167	1	Standard
	Sb	121	24.812	ug/L	0.521	2	365	382588	2	Standard
	Sb	123	24.806	ug/L	0.536	2	298	291478	2	Standard
>	Tb	159		ug/L			2478750	2473552	0	Standard
	Pb	208	24.544	ug/L	0.180	0	570	2530238	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0439-01
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 18:42:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	67396	0	Standard
	Cl	37		ug/L			10158397	22562630	2	Standard
>	Sc	45		ug/L			1402147	1415006	1	Standard
	Cr	52	30.193	ug/L	0.712	2	17695	801497	1	Standard
	Cr	53	61.874	ug/L	0.790	1	206	179010	1	Standard
	Fe	54	342.408	ug/L	5.123	1	81858	1010162	0	Standard
	Fe	57	335.149	ug/L	2.335	0	18705	346342	0	Standard
	Mn	55	9.877	ug/L	0.274	2	771	350664	1	Standard
>	Ge	72		ug/L			88171	91162	0	KED
	Ni	60	12.198	ug/L	0.037	0	23	16678	0	KED
	Ni	62	13.088	ug/L	0.300	2	5	2870	2	KED
	Cu	63	24.441	ug/L	0.364	1	74	93779	2	KED
	Cu	65	24.098	ug/L	0.279	1	29	46791	1	KED
	Zn	66	27.074	ug/L	0.132	0	57	16680	1	KED
	Zn	67	24.326	ug/L	0.168	0	11	2426	1	KED
	As	75	0.389	ug/L	0.010	2	4	135	2	KED
	Se	78	0.044	ug/L	0.038	85	18	20	7	KED
	Y	89		ug/L			630514	603033	1	Standard
	Kr	83		ug/L			67	404	6	Standard
>	In-1	115		ug/L			28156	27881	0	KED
	Mo	98	0.727	ug/L	0.046	6	11	1211	6	KED
	Cd	111	0.776	ug/L	0.102	13	6	333	12	KED
	Cd	114	0.768	ug/L	0.034	4	5	836	4	KED
>	In	115		ug/L			1083745	892666	1	Standard
	Ag	107	0.027	ug/L	0.003	11	149	420	7	Standard
	Sb	121	2.161	ug/L	0.058	2	365	28449	1	Standard
	Sb	123	2.123	ug/L	0.041	1	298	21321	1	Standard
>	Tb	159		ug/L			2478750	2374175	0	Standard
	Pb	208	0.355	ug/L	0.002	0	570	35698	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0439-01RE1
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 30, 2020 18:49:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	36664	0	Standard
	Cl	**37**		ug/L			10158397	15989334	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1399019	0	Standard
|	**Cr**	**52**	**15.644**	ug/L	0.127	0	17695	419182	1	Standard
|	**Cr**	**53**	**36.350**	ug/L	0.338	0	206	104063	0	Standard
|	**Fe**	**54**	**170.458**	ug/L	2.722	1	81858	538240	0	Standard
|	**Fe**	**57**	**166.087**	ug/L	1.339	0	18705	179122	1	Standard
⌊	**Mn**	**55**	**5.153**	ug/L	0.057	1	771	181310	1	Standard
⌈>	**Ge**	**72**		ug/L			88171	93365	1	KED
|	**Ni**	**60**	**5.948**	ug/L	0.097	1	23	8342	2	KED
|	**Ni**	**62**	**6.237**	ug/L	0.296	4	5	1403	3	KED
|	**Cu**	**63**	**12.055**	ug/L	0.111	0	74	47404	0	KED
|	**Cu**	**65**	**11.959**	ug/L	0.086	0	29	23796	1	KED
|	**Zn**	**66**	**14.521**	ug/L	0.221	1	57	9189	1	KED
|	**Zn**	**67**	**13.737**	ug/L	0.155	1	11	1408	1	KED
|	**As**	**75**	**0.177**	ug/L	0.016	9	4	65	7	KED
⌊	**Se**	**78**	**0.110**	ug/L	0.062	56	18	24	10	KED
	Y	**89**		ug/L			630514	624490	1	Standard
	Kr	**83**		ug/L			67	101	7	Standard
⌈>	**In-1**	**115**		ug/L			28156	28801	1	KED
|	**Mo**	**98**	**0.345**	ug/L	0.010	2	11	599	2	KED
|	**Cd**	**111**	**0.400**	ug/L	0.006	1	6	180	0	KED
⌊	**Cd**	**114**	**0.399**	ug/L	0.005	1	5	451	2	KED
⌈>	**In**	**115**		ug/L			1083745	902248	1	Standard
|	**Ag**	**107**	**0.009**	ug/L	0.002	19	149	220	7	Standard
|	**Sb**	**121**	**1.131**	ug/L	0.028	2	365	15189	1	Standard
⌊	**Sb**	**123**	**1.090**	ug/L	0.016	1	298	11179	1	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2370046	0	Standard
⌊	**Pb**	**208**	**0.181**	ug/L	0.006	3	570	18440	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0444-01
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 30, 2020 18:55:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	80909	1	Standard
	Cl	37		ug/L			10158397	10635966	1	Standard
>	Sc	45		ug/L			1402147	1526168	0	Standard
	Cr	52	4.451	ug/L	0.024	0	17695	143889	0	Standard
	Cr	53	5.092	ug/L	0.054	1	206	16096	1	Standard
	Fe	54	6192.394	ug/L	126.562	2	81858	18182886	1	Standard
	Fe	57	6329.327	ug/L	92.227	1	18705	6690620	1	Standard
	Mn	55	463.442	ug/L	6.334	1	771	17712912	1	Standard
>	Ge	72		ug/L			88171	93393	0	KED
	Ni	60	4.680	ug/L	0.097	2	23	6570	1	KED
	Ni	62	4.596	ug/L	0.213	4	5	1036	4	KED
	Cu	63	11.355	ug/L	0.189	1	74	44675	1	KED
	Cu	65	11.413	ug/L	0.058	0	29	22719	0	KED
	Zn	66	106.989	ug/L	0.768	0	57	67350	0	KED
	Zn	67	105.467	ug/L	1.393	1	11	10736	1	KED
	As	75	5.605	ug/L	0.103	1	4	1939	2	KED
	Se	78	0.217	ug/L	0.067	31	18	28	9	KED
	Y	89		ug/L			630514	659215	2	Standard
	Kr	83		ug/L			67	76	13	Standard
>	In-1	115		ug/L			28156	29025	0	KED
	Mo	98	1.738	ug/L	0.094	5	11	3000	4	KED
	Cd	111	0.649	ug/L	0.009	1	6	292	1	KED
	Cd	114	0.667	ug/L	0.046	6	5	756	6	KED
>	In	115		ug/L			1083745	966206	1	Standard
	Ag	107	0.016	ug/L	0.001	6	149	321	3	Standard
	Sb	121	1.459	ug/L	0.013	0	365	20897	0	Standard
	Sb	123	1.449	ug/L	0.018	1	298	15832	1	Standard
>	Tb	159		ug/L			2478750	2431772	0	Standard
	Pb	208	6.572	ug/L	0.066	0	570	666426	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0445-01
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 19:01:16
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	97248	1	Standard
	Cl	37		ug/L			10158397	9700360	1	Standard
>	Sc	45		ug/L			1402147	1422248	1	Standard
	Cr	52	2.896	ug/L	0.098	3	17695	93505	1	Standard
	Cr	53	3.389	ug/L	0.067	1	206	10053	1	Standard
	Fe	54	16266.300	ug/L	194.729	1	81858	44376552	1	Standard
	Fe	57	17169.560	ug/L	363.154	2	18705	16879692	1	Standard
	Mn	55	874.574	ug/L	27.302	3	771	31144420	2	Standard
>	Ge	72		ug/L			88171	80439	0	KED
	Ni	60	17.195	ug/L	0.225	1	23	20735	0	KED
	Ni	62	17.543	ug/L	0.274	1	5	3393	0	KED
	Cu	63	0.602	ug/L	0.011	1	74	2104	0	KED
	Cu	65	0.613	ug/L	0.025	4	29	1075	4	KED
	Zn	66	4.931	ug/L	0.245	4	57	2722	4	KED
	Zn	67	5.949	ug/L	0.374	6	11	531	6	KED
	As	75	0.467	ug/L	0.023	4	4	142	4	KED
	Se	78	0.120	ug/L	0.074	61	18	21	12	KED
	Y	89		ug/L			630514	542478	0	Standard
	Kr	83		ug/L			67	78	12	Standard
>	In-1	115		ug/L			28156	27023	2	KED
	Mo	98	3.568	ug/L	0.104	2	11	5722	2	KED
	Cd	111	0.014	ug/L	0.006	46	6	11	20	KED
	Cd	114	0.021	ug/L	0.005	25	5	26	21	KED
>	In	115		ug/L			1083745	1132428	2	Standard
	Ag	107	-0.005	ug/L	0.001	20	149	93	15	Standard
	Sb	121	0.229	ug/L	0.012	5	365	4166	4	Standard
	Sb	123	0.221	ug/L	0.003	1	298	3091	3	Standard
>	Tb	159		ug/L			2478750	2518298	1	Standard
	Pb	208	0.034	ug/L	0.001	2	570	4163	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0482-01
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 19:07:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	749184	0	Standard
	Cl	37		ug/L			10158397	9968141	0	Standard
>	Sc	45		ug/L			1402147	1335830	0	Standard
	Cr	52	5.719	ug/L	0.033	0	17695	157022	0	Standard
	Cr	53	4.753	ug/L	0.094	1	206	13163	2	Standard
	Fe	54	326.498	ug/L	0.456	0	81858	913065	0	Standard
	Fe	57	999.529	ug/L	19.248	1	18705	939870	2	Standard
	Mn	55	6.523	ug/L	0.104	1	771	218944	1	Standard
>	Ge	72		ug/L			88171	71159	1	KED
	Ni	60	9.624	ug/L	0.214	2	23	10274	1	KED
	Ni	62	9.342	ug/L	0.178	1	5	1600	2	KED
	Cu	63	0.331	ug/L	0.011	3	74	1051	4	KED
	Cu	65	0.325	ug/L	0.008	2	29	515	2	KED
	Zn	66	2.318	ug/L	0.107	4	57	1156	3	KED
	Zn	67	3.793	ug/L	0.362	9	11	302	8	KED
	As	75	0.734	ug/L	0.043	5	4	196	5	KED
	Se	78	0.030	ug/L	0.083	279	18	15	15	KED
	Y	89		ug/L			630514	513642	1	Standard
	Kr	83		ug/L			67	63	25	Standard
>	In-1	115		ug/L			28156	25815	0	KED
	Mo	98	4.706	ug/L	0.090	1	11	7208	1	KED
	Cd	111	0.010	ug/L	0.005	50	6	9	20	KED
	Cd	114	0.016	ug/L	0.005	29	5	21	23	KED
>	In	115		ug/L			1083745	1170998	1	Standard
	Ag	107	-0.007	ug/L	0.001	8	149	53	15	Standard
	Sb	121	0.627	ug/L	0.004	0	365	11102	1	Standard
	Sb	123	0.640	ug/L	0.024	3	298	8659	2	Standard
>	Tb	159		ug/L			2478750	2505439	0	Standard
	Pb	208	0.009	ug/L	0.000	0	570	1542	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0483-01
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 19:13:01
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	46658	1	Standard
	Cl	37		ug/L			10158397	9832822	1	Standard
>	Sc	45		ug/L			1402147	1373801	1	Standard
	Cr	52	0.537	ug/L	0.011	2	17695	30876	1	Standard
	Cr	53	1.289	ug/L	0.011	0	206	3820	2	Standard
	Fe	54	17.537	ug/L	0.777	4	81858	126317	1	Standard
	Fe	57	43.144	ug/L	0.957	2	18705	59245	0	Standard
	Mn	55	1.223	ug/L	0.013	1	771	42830	0	Standard
>	Ge	72		ug/L			88171	78717	2	KED
	Ni	60	1.128	ug/L	0.041	3	23	1351	5	KED
	Ni	62	1.391	ug/L	0.056	4	5	267	2	KED
	Cu	63	105.352	ug/L	1.117	1	74	348749	1	KED
	Cu	65	106.505	ug/L	1.360	1	29	178447	0	KED
	Zn	66	46.854	ug/L	0.830	1	57	24882	0	KED
	Zn	67	45.477	ug/L	0.553	1	11	3907	2	KED
	As	75	0.535	ug/L	0.027	5	4	159	5	KED
	Se	78	0.134	ug/L	0.070	52	18	21	11	KED
	Y	89		ug/L			630514	550918	0	Standard
	Kr	83		ug/L			67	40	37	Standard
>	In-1	115		ug/L			28156	26761	1	KED
	Mo	98	1.330	ug/L	0.044	3	11	2119	2	KED
	Cd	111	0.001	ug/L	0.008	1055	6	6	52	KED
	Cd	114	-0.001	ug/L	0.007	469	5	3	201	KED
>	In	115		ug/L			1083745	1127668	2	Standard
	Ag	107	0.424	ug/L	0.007	1	149	6033	4	Standard
	Sb	121	0.233	ug/L	0.004	1	365	4220	1	Standard
	Sb	123	0.233	ug/L	0.008	3	298	3234	2	Standard
>	Tb	159		ug/L			2478750	2424262	1	Standard
	Pb	208	0.995	ug/L	0.010	0	570	101015	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0287-05
Sample Dil Factor: 5
Comments:
Sample Date/Time: Tuesday, June 30, 2020 19:18:53
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	31079	1	Standard
	Cl	**37**		ug/L			10158397	10585622	0	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1377674	0	Standard
|	**Cr**	**52**	**0.111**	ug/L	0.005	4	17695	20185	0	Standard
|	**Cr**	**53**	**2.784**	ug/L	0.061	2	206	8035	1	Standard
|	**Fe**	**54**	**101.615**	ug/L	0.908	0	81858	348474	1	Standard
|	**Fe**	**57**	**158.738**	ug/L	1.514	0	18705	169393	0	Standard
⌊	**Mn**	**55**	**197.866**	ug/L	5.071	2	771	6826928	2	Standard
⌈>	**Ge**	**72**		ug/L			88171	82776	0	KED
|	**Ni**	**60**	**3.074**	ug/L	0.059	1	23	3832	2	KED
|	**Ni**	**62**	**3.173**	ug/L	0.053	1	5	635	1	KED
|	**Cu**	**63**	**0.279**	ug/L	0.014	5	74	1040	4	KED
|	**Cu**	**65**	**0.260**	ug/L	0.014	5	29	486	5	KED
|	**Zn**	**66**	**0.720**	ug/L	0.030	4	57	455	4	KED
|	**Zn**	**67**	**1.642**	ug/L	0.038	2	11	158	2	KED
|	**As**	**75**	**1.995**	ug/L	0.054	2	4	614	2	KED
⌊	**Se**	**78**	**0.068**	ug/L	0.052	76	18	19	9	KED
	Y	**89**		ug/L			630514	566778	1	Standard
	Kr	**83**		ug/L			67	64	11	Standard
⌈>	**In-1**	**115**		ug/L			28156	27327	0	KED
|	**Mo**	**98**	**2.202**	ug/L	0.036	1	11	3575	0	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.008	774	6	5	57	KED
⌊	**Cd**	**114**	**0.005**	ug/L	0.002	37	5	10	19	KED
⌈>	**In**	**115**		ug/L			1083745	1080461	1	Standard
|	**Ag**	**107**	**-0.008**	ug/L	0.001	12	149	46	26	Standard
|	**Sb**	**121**	**0.036**	ug/L	0.006	17	365	923	8	Standard
⌊	**Sb**	**123**	**0.035**	ug/L	0.001	2	298	715	1	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2397660	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	48	570	660	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0287-06
Sample Dil Factor: 5
Comments:
Sample Date/Time: Tuesday, June 30, 2020 19:24:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	44082	0	Standard
	Cl	37		ug/L			10158397	13501430	1	Standard
>	Sc	45		ug/L			1402147	1392947	0	Standard
	Cr	52	0.224	ug/L	0.006	2	17695	23313	0	Standard
	Cr	53	7.277	ug/L	0.109	1	206	20906	0	Standard
	Fe	54	92.163	ug/L	3.156	3	81858	327076	1	Standard
	Fe	57	227.172	ug/L	4.111	1	18705	237077	1	Standard
	Mn	55	353.013	ug/L	8.330	2	771	12312420	1	Standard
>	Ge	72		ug/L			88171	83076	0	KED
	Ni	60	15.494	ug/L	0.215	1	23	19299	1	KED
	Ni	62	15.610	ug/L	0.522	3	5	3119	3	KED
	Cu	63	0.306	ug/L	0.013	4	74	1139	4	KED
	Cu	65	0.305	ug/L	0.015	5	29	566	4	KED
	Zn	66	0.730	ug/L	0.017	2	57	462	1	KED
	Zn	67	2.738	ug/L	0.009	0	11	258	0	KED
	As	75	2.348	ug/L	0.075	3	4	725	2	KED
	Se	78	-0.016	ug/L	0.058	358	18	16	12	KED
	Y	89		ug/L			630514	573744	0	Standard
	Kr	83		ug/L			67	73	13	Standard
>	In-1	115		ug/L			28156	27062	0	KED
	Mo	98	5.559	ug/L	0.091	1	11	8923	1	KED
	Cd	111	0.002	ug/L	0.005	222	6	6	28	KED
	Cd	114	0.002	ug/L	0.004	239	5	6	55	KED
>	In	115		ug/L			1083745	974304	1	Standard
	Ag	107	-0.007	ug/L	0.001	13	149	50	22	Standard
	Sb	121	0.282	ug/L	0.006	2	365	4337	2	Standard
	Sb	123	0.279	ug/L	0.006	2	298	3294	1	Standard
>	Tb	159		ug/L			2478750	2369480	0	Standard
	Pb	208	0.012	ug/L	0.001	10	570	1776	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 19:31:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	20487	1	Standard
	Cl	**37**		ug/L			10158397	10121443	2	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1314880	0	Standard
|	**Cr**	**52**	**51.184**	ug/L	0.488	0	17695	1251210	0	Standard
|	**Cr**	**53**	**52.639**	ug/L	1.020	1	206	141542	1	Standard
|	**Fe**	**54**	**5040.647**	ug/L	86.352	1	81858	12767592	2	Standard
|	**Fe**	**57**	**5127.643**	ug/L	69.153	1	18705	4673477	1	Standard
⌊	**Mn**	**55**	**53.543**	ug/L	0.775	1	771	1763542	0	Standard
⌈>	**Ge**	**72**		ug/L			88171	86926	1	KED
|	**Ni**	**60**	**49.238**	ug/L	0.427	0	23	64125	1	KED
|	**Ni**	**62**	**49.891**	ug/L	1.100	2	5	10419	1	KED
|	**Cu**	**63**	**49.607**	ug/L	0.568	1	74	181411	1	KED
|	**Cu**	**65**	**50.034**	ug/L	0.437	0	29	92600	0	KED
|	**Zn**	**66**	**50.318**	ug/L	0.782	1	57	29513	2	KED
|	**Zn**	**67**	**50.697**	ug/L	1.459	2	11	4809	3	KED
|	**As**	**75**	**50.128**	ug/L	0.116	0	4	16113	1	KED
⌊	**Se**	**78**	**51.492**	ug/L	0.408	0	18	1989	0	KED
	Y	**89**		ug/L			630514	580762	1	Standard
	Kr	**83**		ug/L			67	47	18	Standard
⌈>	**In-1**	**115**		ug/L			28156	28085	1	KED
|	**Mo**	**98**	**48.096**	ug/L	0.741	1	11	80033	0	KED
|	**Cd**	**111**	**49.557**	ug/L	0.341	0	6	21094	1	KED
⌊	**Cd**	**114**	**49.610**	ug/L	0.419	0	5	54043	0	KED
⌈>	**In**	**115**		ug/L			1083745	1033856	1	Standard
|	**Ag**	**107**	**45.931**	ug/L	1.094	2	149	584203	2	Standard
|	**Sb**	**121**	**49.359**	ug/L	0.738	1	365	744950	0	Standard
⌊	**Sb**	**123**	**49.063**	ug/L	0.356	0	298	564360	2	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2425067	0	Standard
⌊	**Pb**	**208**	**49.636**	ug/L	0.148	0	570	5015988	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 19:38:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	18620	1	Standard
	Cl	**37**		ug/L			10158397	9982880	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1314731	1	Standard
|	**Cr**	**52**	**0.025**	ug/L	0.007	28	17695	17203	0	Standard
|	**Cr**	**53**	**0.159**	ug/L	0.011	6	206	620	3	Standard
|	**Fe**	**54**	**0.079**	ug/L	0.802	1010	81858	76938	1	Standard
|	**Fe**	**57**	**1.394**	ug/L	0.407	29	18705	18802	1	Standard
⌊	**Mn**	**55**	**0.002**	ug/L	0.001	53	771	794	3	Standard
⌈>	**Ge**	**72**		ug/L			88171	88026	0	KED
|	**Ni**	**60**	**-0.011**	ug/L	0.006	58	23	8	96	KED
|	**Ni**	**62**	**0.003**	ug/L	0.024	762	5	5	88	KED
|	**Cu**	**63**	**0.004**	ug/L	0.003	72	74	88	11	KED
|	**Cu**	**65**	**0.009**	ug/L	0.002	22	29	46	8	KED
|	**Zn**	**66**	**0.016**	ug/L	0.023	139	57	66	20	KED
|	**Zn**	**67**	**-0.006**	ug/L	0.012	180	11	10	10	KED
|	**As**	**75**	**-0.003**	ug/L	0.002	52	4	3	14	KED
⌊	**Se**	**78**	**-0.009**	ug/L	0.037	388	18	18	8	KED
	Y	**89**		ug/L			630514	589328	0	Standard
	Kr	**83**		ug/L			67	41	21	Standard
⌈>	**In-1**	**115**		ug/L			28156	28054	1	KED
|	**Mo**	**98**	**0.006**	ug/L	0.003	46	11	20	20	KED
|	**Cd**	**111**	**-0.009**	ug/L	0.005	59	6	2	86	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.004	397	5	4	106	KED
⌈>	**In**	**115**		ug/L			1083745	1028983	1	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.001	27	149	112	6	Standard
|	**Sb**	**121**	**0.092**	ug/L	0.004	4	365	1732	4	Standard
⌊	**Sb**	**123**	**0.092**	ug/L	0.005	5	298	1339	5	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2373609	0	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	269	570	558	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0741-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 19:44:30
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	32945	0	Standard
	Cl	37		ug/L			10158397	9920307	0	Standard
>	Sc	45		ug/L			1402147	1330260	1	Standard
	Cr	52	0.190	ug/L	0.019	10	17695	21412	1	Standard
	Cr	53	0.285	ug/L	0.008	2	206	970	2	Standard
	Fe	54	6.812	ug/L	0.688	10	81858	94999	0	Standard
	Fe	57	1.973	ug/L	0.235	11	18705	19557	1	Standard
	Mn	55	0.026	ug/L	0.002	6	771	1582	3	Standard
>	Ge	72		ug/L			88171	88920	1	KED
	Ni	60	-0.007	ug/L	0.002	23	23	13	15	KED
	Ni	62	0.006	ug/L	0.005	94	5	6	17	KED
	Cu	63	0.022	ug/L	0.002	8	74	156	4	KED
	Cu	65	0.024	ug/L	0.010	39	29	75	24	KED
	Zn	66	0.896	ug/L	0.099	10	57	594	9	KED
	Zn	67	0.820	ug/L	0.193	23	11	90	19	KED
	As	75	0.005	ug/L	0.005	115	4	5	30	KED
	Se	78	-0.061	ug/L	0.031	50	18	16	6	KED
	Y	89		ug/L			630514	585728	1	Standard
	Kr	83		ug/L			67	42	11	Standard
>	In-1	115		ug/L			28156	28377	0	KED
	Mo	98	0.027	ug/L	0.031	115	11	56	92	KED
	Cd	111	0.020	ug/L	0.024	121	6	14	70	KED
	Cd	114	0.018	ug/L	0.033	182	5	25	143	KED
>	In	115		ug/L			1083745	1062640	2	Standard
	Ag	107	-0.006	ug/L	0.000	3	149	72	5	Standard
	Sb	121	0.013	ug/L	0.002	15	365	558	7	Standard
	Sb	123	0.009	ug/L	0.005	51	298	401	12	Standard
>	Tb	159		ug/L			2478750	2377133	1	Standard
	Pb	208	-0.002	ug/L	0.000	5	570	381	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0741-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 19:48:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	34115	1	Standard
	Cl	**37**		ug/L			10158397	10067561	0	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1328625	1	Standard
|	**Cr**	**52**	**25.607**	ug/L	0.551	2	17695	640773	0	Standard
|	**Cr**	**53**	**26.548**	ug/L	0.236	0	206	72228	0	Standard
|	**Fe**	**54**	**6.877**	ug/L	0.198	2	81858	95060	1	Standard
|	**Fe**	**57**	**2.225**	ug/L	0.411	18	18705	19762	0	Standard
⌊	**Mn**	**55**	**27.022**	ug/L	0.147	0	771	899719	1	Standard
⌈>	**Ge**	**72**		ug/L			88171	89427	1	KED
|	**Ni**	**60**	**24.894**	ug/L	0.564	2	23	33364	2	KED
|	**Ni**	**62**	**25.126**	ug/L	0.340	1	5	5401	2	KED
|	**Cu**	**63**	**25.816**	ug/L	0.224	0	74	97163	1	KED
|	**Cu**	**65**	**25.888**	ug/L	0.287	1	29	49309	1	KED
|	**Zn**	**66**	**81.904**	ug/L	0.292	0	57	49381	0	KED
|	**Zn**	**67**	**79.778**	ug/L	1.074	1	11	7779	2	KED
|	**As**	**75**	**24.486**	ug/L	0.181	0	4	8099	0	KED
⌊	**Se**	**78**	**80.497**	ug/L	0.667	0	18	3188	0	KED
	Y	**89**		ug/L			630514	593803	1	Standard
	Kr	**83**		ug/L			67	46	22	Standard
⌈>	**In-1**	**115**		ug/L			28156	28191	2	KED
|	**Mo**	**98**	**0.012**	ug/L	0.007	57	11	31	36	KED
|	**Cd**	**111**	**25.108**	ug/L	0.531	2	6	10729	1	KED
⌊	**Cd**	**114**	**24.443**	ug/L	0.610	2	5	26727	2	KED
⌈>	**In**	**115**		ug/L			1083745	1080041	1	Standard
|	**Ag**	**107**	**23.149**	ug/L	0.494	2	149	307663	1	Standard
|	**Sb**	**121**	**-0.003**	ug/L	0.001	31	365	310	6	Standard
⌊	**Sb**	**123**	**-0.007**	ug/L	0.001	19	298	213	6	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2397389	2	Standard
⌊	**Pb**	**208**	**25.569**	ug/L	0.325	1	570	2554246	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0296-02
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 19:53:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	35695	1	Standard
	Cl	**37**		ug/L			10158397	10332072	0	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1481771	1	Standard
|	**Cr**	**52**	**1.879**	ug/L	0.048	2	17695	69764	0	Standard
|	**Cr**	**53**	**4.503**	ug/L	0.109	2	206	13841	0	Standard
|	**Fe**	**54**	**1.920**	ug/L	1.224	63	81858	91912	2	Standard
|	**Fe**	**57**	**63.353**	ug/L	0.775	1	18705	84588	1	Standard
⌊	**Mn**	**55**	**2.756**	ug/L	0.087	3	771	103032	1	Standard
⌈>	**Ge**	**72**		ug/L			88171	86073	0	KED
|	**Ni**	**60**	**2.643**	ug/L	0.085	3	23	3430	3	KED
|	**Ni**	**62**	**2.716**	ug/L	0.055	2	5	566	2	KED
|	**Cu**	**63**	**0.892**	ug/L	0.008	0	74	3301	1	KED
|	**Cu**	**65**	**0.927**	ug/L	0.020	2	29	1726	2	KED
|	**Zn**	**66**	**1.625**	ug/L	0.075	4	57	997	4	KED
|	**Zn**	**67**	**2.361**	ug/L	0.166	7	11	232	6	KED
|	**As**	**75**	**0.136**	ug/L	0.010	7	4	47	7	KED
⌊	**Se**	**78**	**0.144**	ug/L	0.061	41	18	23	9	KED
	Y	**89**		ug/L			630514	578956	1	Standard
	Kr	**83**		ug/L			67	38	5	Standard
⌈>	**In-1**	**115**		ug/L			28156	27741	0	KED
|	**Mo**	**98**	**0.031**	ug/L	0.005	16	11	61	13	KED
|	**Cd**	**111**	**0.011**	ug/L	0.001	11	6	10	5	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.005	85	5	12	48	KED
⌈>	**In**	**115**		ug/L			1083745	1017816	2	Standard
|	**Ag**	**107**	**-0.005**	ug/L	0.002	42	149	78	33	Standard
|	**Sb**	**121**	**0.009**	ug/L	0.002	21	365	472	4	Standard
⌊	**Sb**	**123**	**0.006**	ug/L	0.001	14	298	352	4	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2358965	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	34	570	673	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0296-03
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 20:00:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	76239	1	Standard
	Cl	**37**		ug/L			10158397	10220369	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1415967	1	Standard
|	**Cr**	**52**	**1.953**	ug/L	0.013	0	17695	68594	1	Standard
|	**Cr**	**53**	**4.317**	ug/L	0.114	2	206	12691	1	Standard
|	**Fe**	**54**	**309.310**	ug/L	7.985	2	81858	920979	0	Standard
|	**Fe**	**57**	**337.655**	ug/L	5.883	1	18705	348996	1	Standard
⌊	**Mn**	**55**	**24.251**	ug/L	0.628	2	771	860516	2	Standard
⌈>	**Ge**	**72**		ug/L			88171	82499	1	KED
|	**Ni**	**60**	**11.522**	ug/L	0.342	2	23	14254	1	KED
|	**Ni**	**62**	**11.767**	ug/L	0.261	2	5	2336	3	KED
|	**Cu**	**63**	**19.510**	ug/L	0.128	0	74	67750	1	KED
|	**Cu**	**65**	**19.602**	ug/L	0.164	0	29	34451	2	KED
|	**Zn**	**66**	**1.709**	ug/L	0.059	3	57	1002	2	KED
|	**Zn**	**67**	**2.036**	ug/L	0.247	12	11	193	12	KED
|	**As**	**75**	**11.376**	ug/L	0.141	1	4	3473	0	KED
⌊	**Se**	**78**	**0.464**	ug/L	0.165	35	18	34	18	KED
	Y	**89**		ug/L			630514	587775	1	Standard
	Kr	**83**		ug/L			67	48	19	Standard
⌈>	**In-1**	**115**		ug/L			28156	26377	1	KED
|	**Mo**	**98**	**29.082**	ug/L	0.575	1	11	45454	1	KED
|	**Cd**	**111**	**0.022**	ug/L	0.009	43	6	14	24	KED
⌊	**Cd**	**114**	**0.021**	ug/L	0.007	35	5	27	29	KED
⌈>	**In**	**115**		ug/L			1083745	959909	0	Standard
|	**Ag**	**107**	**0.016**	ug/L	0.001	4	149	325	2	Standard
|	**Sb**	**121**	**0.310**	ug/L	0.013	4	365	4665	3	Standard
⌊	**Sb**	**123**	**0.292**	ug/L	0.018	6	298	3380	5	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2285058	1	Standard
⌊	**Pb**	**208**	**1.017**	ug/L	0.020	1	570	97376	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0296-04
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 20:05:06
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	35763	0	Standard
	Cl	**37**		ug/L			10158397	9459800	0	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1473232	0	Standard
|	**Cr**	**52**	**1.477**	ug/L	0.032	2	17695	58512	1	Standard
|	**Cr**	**53**	**2.298**	ug/L	0.046	1	206	7132	1	Standard
|	**Fe**	**54**	**2.838**	ug/L	0.419	14	81858	94012	1	Standard
|	**Fe**	**57**	**24.557**	ug/L	0.394	1	18705	44636	0	Standard
⌊	**Mn**	**55**	**0.292**	ug/L	0.007	2	771	11567	1	Standard
⌈>	**Ge**	**72**		ug/L			88171	87141	0	KED
|	**Ni**	**60**	**2.185**	ug/L	0.017	0	23	2875	0	KED
|	**Ni**	**62**	**2.139**	ug/L	0.065	3	5	452	3	KED
|	**Cu**	**63**	**0.369**	ug/L	0.010	2	74	1427	3	KED
|	**Cu**	**65**	**0.363**	ug/L	0.011	3	29	702	2	KED
|	**Zn**	**66**	**1.893**	ug/L	0.051	2	57	1167	2	KED
|	**Zn**	**67**	**1.909**	ug/L	0.111	5	11	192	5	KED
|	**As**	**75**	**0.224**	ug/L	0.009	3	4	76	4	KED
⌊	**Se**	**78**	**-0.008**	ug/L	0.116	1518	18	18	24	KED
	Y	**89**		ug/L			630514	580407	1	Standard
	Kr	**83**		ug/L			67	43	17	Standard
⌈>	**In-1**	**115**		ug/L			28156	27393	1	KED
|	**Mo**	**98**	**0.089**	ug/L	0.042	46	11	154	43	KED
|	**Cd**	**111**	**0.005**	ug/L	0.009	184	6	8	46	KED
⌊	**Cd**	**114**	**0.008**	ug/L	0.007	82	5	14	51	KED
⌈>	**In**	**115**		ug/L			1083745	1023382	0	Standard
|	**Ag**	**107**	**-0.007**	ug/L	0.001	6	149	48	12	Standard
|	**Sb**	**121**	**0.007**	ug/L	0.000	4	365	450	1	Standard
⌊	**Sb**	**123**	**0.005**	ug/L	0.001	20	298	334	3	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2384443	1	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	11	570	789	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0296-05
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 20:09:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	35464	1	Standard
	Cl	37		ug/L			10158397	9695741	0	Standard
>	Sc	45		ug/L			1402147	1509268	1	Standard
	Cr	52	0.947	ug/L	0.034	3	17695	45268	1	Standard
	Cr	53	2.467	ug/L	0.080	3	206	7825	1	Standard
	Fe	54	2.045	ug/L	0.782	38	81858	94001	1	Standard
	Fe	57	35.718	ug/L	1.846	5	18705	57340	1	Standard
	Mn	55	0.202	ug/L	0.001	0	771	8472	1	Standard
>	Ge	72		ug/L			88171	86330	1	KED
	Ni	60	2.450	ug/L	0.024	0	23	3191	1	KED
	Ni	62	2.389	ug/L	0.096	4	5	500	4	KED
	Cu	63	0.218	ug/L	0.021	9	74	864	7	KED
	Cu	65	0.241	ug/L	0.016	6	29	471	7	KED
	Zn	66	1.364	ug/L	0.039	2	57	848	2	KED
	Zn	67	1.730	ug/L	0.258	14	11	173	14	KED
	As	75	0.489	ug/L	0.013	2	4	160	1	KED
	Se	78	0.143	ug/L	0.086	59	18	23	12	KED
	Y	89		ug/L			630514	593962	0	Standard
	Kr	83		ug/L			67	49	13	Standard
>	In-1	115		ug/L			28156	27584	0	KED
	Mo	98	0.287	ug/L	0.018	6	11	480	5	KED
	Cd	111	0.001	ug/L	0.004	367	6	6	24	KED
	Cd	114	0.002	ug/L	0.001	48	5	7	14	KED
>	In	115		ug/L			1083745	1036547	1	Standard
	Ag	107	-0.007	ug/L	0.000	6	149	49	13	Standard
	Sb	121	0.048	ug/L	0.004	8	365	1073	4	Standard
	Sb	123	0.050	ug/L	0.006	11	298	859	7	Standard
>	Tb	159		ug/L			2478750	2388612	1	Standard
	Pb	208	0.003	ug/L	0.000	7	570	801	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0296-01
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 20:14:03
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	38009	1	Standard
	Cl	37		ug/L			10158397	10401400	1	Standard
>	Sc	45		ug/L			1402147	1504735	0	Standard
	Cr	52	2.020	ug/L	0.019	0	17695	74758	0	Standard
	Cr	53	4.609	ug/L	0.049	1	206	14386	0	Standard
	Fe	54	2.828	ug/L	0.591	20	81858	95992	1	Standard
	Fe	57	67.342	ug/L	2.553	3	18705	90058	3	Standard
	Mn	55	2.923	ug/L	0.034	1	771	110979	1	Standard
>	Ge	72		ug/L			88171	86579	0	KED
	Ni	60	2.714	ug/L	0.104	3	23	3542	3	KED
	Ni	62	2.826	ug/L	0.261	9	5	592	8	KED
	Cu	63	0.277	ug/L	0.015	5	74	1082	4	KED
	Cu	65	0.302	ug/L	0.026	8	29	584	8	KED
	Zn	66	1.690	ug/L	0.074	4	57	1041	4	KED
	Zn	67	2.158	ug/L	0.076	3	11	214	3	KED
	As	75	0.141	ug/L	0.003	2	4	49	2	KED
	Se	78	0.123	ug/L	0.096	78	18	22	14	KED
	Y	89		ug/L			630514	590479	0	Standard
	Kr	83		ug/L			67	57	12	Standard
>	In-1	115		ug/L			28156	27895	0	KED
	Mo	98	0.035	ug/L	0.001	4	11	68	2	KED
	Cd	111	0.005	ug/L	0.004	81	6	8	22	KED
	Cd	114	0.016	ug/L	0.015	90	5	22	69	KED
>	In	115		ug/L			1083745	1049190	3	Standard
	Ag	107	-0.009	ug/L	0.001	9	149	34	30	Standard
	Sb	121	0.001	ug/L	0.001	59	365	373	0	Standard
	Sb	123	0.001	ug/L	0.000	26	298	305	2	Standard
>	Tb	159		ug/L			2478750	2404715	0	Standard
	Pb	208	0.008	ug/L	0.000	5	570	1389	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0741-DUP1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 20:18:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	36909	0	Standard
	Cl	37		ug/L			10158397	10377343	1	Standard
>	Sc	45		ug/L			1402147	1499188	1	Standard
	Cr	52	2.038	ug/L	0.046	2	17695	74965	2	Standard
	Cr	53	4.563	ug/L	0.045	0	206	14190	1	Standard
	Fe	54	6.126	ug/L	0.585	9	81858	105092	0	Standard
	Fe	57	70.729	ug/L	3.202	4	18705	93192	2	Standard
	Mn	55	2.932	ug/L	0.081	2	771	110873	1	Standard
>	Ge	72		ug/L			88171	84054	1	KED
	Ni	60	2.677	ug/L	0.110	4	23	3392	4	KED
	Ni	62	2.736	ug/L	0.189	6	5	557	8	KED
	Cu	63	0.251	ug/L	0.016	6	74	957	5	KED
	Cu	65	0.243	ug/L	0.030	12	29	461	11	KED
	Zn	66	1.567	ug/L	0.072	4	57	941	5	KED
	Zn	67	2.047	ug/L	0.117	5	11	198	4	KED
	As	75	0.116	ug/L	0.016	13	4	40	11	KED
	Se	78	0.035	ug/L	0.084	239	18	18	15	KED
	Y	89		ug/L			630514	587057	1	Standard
	Kr	83		ug/L			67	53	16	Standard
>	In-1	115		ug/L			28156	27203	1	KED
	Mo	98	0.046	ug/L	0.006	13	11	85	12	KED
	Cd	111	0.024	ug/L	0.016	66	6	15	39	KED
	Cd	114	0.012	ug/L	0.006	46	5	17	33	KED
>	In	115		ug/L			1083745	1054430	3	Standard
	Ag	107	-0.008	ug/L	0.001	7	149	38	22	Standard
	Sb	121	0.002	ug/L	0.003	159	365	382	10	Standard
	Sb	123	0.001	ug/L	0.004	328	298	304	13	Standard
>	Tb	159		ug/L			2478750	2438109	0	Standard
	Pb	208	0.002	ug/L	0.000	8	570	725	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0741-MS1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 20:23:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	40942	1	Standard
	Cl	37		ug/L			10158397	10657206	1	Standard
⌈>	Sc	45		ug/L			1402147	1548565	1	Standard
|	Cr	52	24.090	ug/L	0.129	0	17695	703938	1	Standard
|	Cr	53	26.661	ug/L	0.535	2	206	84560	2	Standard
|	Fe	54	2.191	ug/L	0.382	17	81858	96903	1	Standard
|	Fe	57	68.124	ug/L	1.178	1	18705	93505	1	Standard
⌊	Mn	55	25.549	ug/L	0.272	1	771	991634	2	Standard
⌈>	Ge	72		ug/L			88171	85242	0	KED
|	Ni	60	27.701	ug/L	0.305	1	23	35387	1	KED
|	Ni	62	27.857	ug/L	0.307	1	5	5707	1	KED
|	Cu	63	24.977	ug/L	0.186	0	74	89603	0	KED
|	Cu	65	25.131	ug/L	0.221	0	29	45628	1	KED
|	Zn	66	79.313	ug/L	0.671	0	57	45582	0	KED
|	Zn	67	77.200	ug/L	1.921	2	11	7175	2	KED
|	As	75	25.094	ug/L	0.187	0	4	7911	0	KED
⌊	Se	78	79.219	ug/L	1.426	1	18	2991	2	KED
	Y	89		ug/L			630514	599895	1	Standard
	Kr	83		ug/L			67	52	13	Standard
⌈>	In-1	115		ug/L			28156	27861	0	KED
|	Mo	98	0.032	ug/L	0.006	17	11	64	14	KED
|	Cd	111	24.499	ug/L	0.299	1	6	10348	1	KED
⌊	Cd	114	24.162	ug/L	0.349	1	5	26115	1	KED
⌈>	In	115		ug/L			1083745	1084314	1	Standard
|	Ag	107	21.810	ug/L	0.171	0	149	291032	0	Standard
|	Sb	121	0.002	ug/L	0.001	58	365	399	4	Standard
⌊	Sb	123	0.001	ug/L	0.003	426	298	308	13	Standard
⌈>	Tb	159		ug/L			2478750	2437256	0	Standard
⌊	Pb	208	24.773	ug/L	0.151	0	570	2516283	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0741-MSD1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 20:28:20
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	38855	1	Standard
	Cl	37		ug/L			10158397	10573780	0	Standard
>	Sc	45		ug/L			1402147	1528103	1	Standard
	Cr	52	24.387	ug/L	0.559	2	17695	702756	0	Standard
	Cr	53	27.722	ug/L	0.318	1	206	86736	1	Standard
	Fe	54	2.951	ug/L	0.610	20	81858	97825	1	Standard
	Fe	57	69.699	ug/L	0.688	0	18705	93942	2	Standard
	Mn	55	26.414	ug/L	0.456	1	771	1011363	1	Standard
>	Ge	72		ug/L			88171	85129	1	KED
	Ni	60	27.516	ug/L	0.405	1	23	35100	0	KED
	Ni	62	26.966	ug/L	0.508	1	5	5517	0	KED
	Cu	63	25.218	ug/L	0.340	1	74	90340	0	KED
	Cu	65	25.224	ug/L	0.411	1	29	45729	0	KED
	Zn	66	79.328	ug/L	1.839	2	57	45523	1	KED
	Zn	67	76.588	ug/L	2.015	2	11	7109	3	KED
	As	75	25.443	ug/L	0.537	2	4	8010	0	KED
	Se	78	81.162	ug/L	1.668	2	18	3059	0	KED
	Y	89		ug/L			630514	589628	0	Standard
	Kr	83		ug/L			67	53	20	Standard
>	In-1	115		ug/L			28156	27749	1	KED
	Mo	98	0.034	ug/L	0.014	39	11	67	34	KED
	Cd	111	24.322	ug/L	0.449	1	6	10231	1	KED
	Cd	114	24.496	ug/L	0.346	1	5	26369	0	KED
>	In	115		ug/L			1083745	1097540	1	Standard
	Ag	107	21.659	ug/L	0.328	1	149	292544	0	Standard
	Sb	121	0.000	ug/L	0.002	503	365	377	8	Standard
	Sb	123	-0.003	ug/L	0.002	71	298	268	9	Standard
>	Tb	159		ug/L			2478750	2425139	0	Standard
	Pb	208	25.172	ug/L	0.273	1	570	2543986	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 20:35:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	20471	1	Standard
	Cl	**37**		ug/L			10158397	10564942	0	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1367897	0	Standard
|	**Cr**	**52**	**50.740**	ug/L	0.168	0	17695	1290568	0	Standard
|	**Cr**	**53**	**51.845**	ug/L	0.564	1	206	145036	0	Standard
|	**Fe**	**54**	**4932.930**	ug/L	73.325	1	81858	12999240	1	Standard
|	**Fe**	**57**	**5073.981**	ug/L	89.522	1	18705	4810803	1	Standard
⌊	**Mn**	**55**	**52.949**	ug/L	0.638	1	771	1814430	1	Standard
⌈>	**Ge**	**72**		ug/L			88171	87973	0	KED
|	**Ni**	**60**	**49.210**	ug/L	0.752	1	23	64860	1	KED
|	**Ni**	**62**	**49.813**	ug/L	0.694	1	5	10528	0	KED
|	**Cu**	**63**	**49.414**	ug/L	0.845	1	74	182869	1	KED
|	**Cu**	**65**	**49.740**	ug/L	0.287	0	29	93170	0	KED
|	**Zn**	**66**	**50.607**	ug/L	0.770	1	57	30037	1	KED
|	**Zn**	**67**	**52.304**	ug/L	0.949	1	11	5021	2	KED
|	**As**	**75**	**49.808**	ug/L	0.503	1	4	16203	1	KED
⌊	**Se**	**78**	**51.815**	ug/L	1.443	2	18	2025	3	KED
	Y	**89**		ug/L			630514	599119	0	Standard
	Kr	**83**		ug/L			67	49	10	Standard
⌈>	**In-1**	**115**		ug/L			28156	28867	1	KED
|	**Mo**	**98**	**48.186**	ug/L	1.212	2	11	82408	1	KED
|	**Cd**	**111**	**49.766**	ug/L	0.914	1	6	21770	0	KED
⌊	**Cd**	**114**	**48.908**	ug/L	0.449	0	5	54762	0	KED
⌈>	**In**	**115**		ug/L			1083745	1061069	2	Standard
|	**Ag**	**107**	**46.571**	ug/L	0.454	0	149	607889	1	Standard
|	**Sb**	**121**	**50.890**	ug/L	2.453	4	365	787677	2	Standard
⌊	**Sb**	**123**	**50.743**	ug/L	1.717	3	298	598649	1	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2444487	0	Standard
⌊	**Pb**	**208**	**50.924**	ug/L	0.119	0	570	5187426	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 20:42:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	18033	1	Standard
	Cl	**37**		ug/L			10158397	10173937	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1368127	0	Standard
|	**Cr**	**52**	**0.025**	ug/L	0.004	14	17695	17901	0	Standard
|	**Cr**	**53**	**0.113**	ug/L	0.007	6	206	518	3	Standard
|	**Fe**	**54**	**-0.615**	ug/L	0.464	75	81858	78260	1	Standard
|	**Fe**	**57**	**2.309**	ug/L	0.293	12	18705	20433	1	Standard
⌊	**Mn**	**55**	**0.000**	ug/L	0.001	3163	771	753	2	Standard
⌈>	**Ge**	**72**		ug/L			88171	88697	4	KED
|	**Ni**	**60**	**0.006**	ug/L	0.024	382	23	32	102	KED
|	**Ni**	**62**	**0.026**	ug/L	0.035	135	5	10	71	KED
|	**Cu**	**63**	**0.015**	ug/L	0.018	120	74	130	53	KED
|	**Cu**	**65**	**0.024**	ug/L	0.016	67	29	74	42	KED
|	**Zn**	**66**	**0.046**	ug/L	0.031	67	57	85	22	KED
|	**Zn**	**67**	**-0.035**	ug/L	0.058	164	11	8	70	KED
|	**As**	**75**	**0.019**	ug/L	0.016	82	4	10	50	KED
⌊	**Se**	**78**	**0.086**	ug/L	0.082	95	18	22	18	KED
	Y	**89**		ug/L			630514	613592	2	Standard
	Kr	**83**		ug/L			67	46	16	Standard
⌈>	**In-1**	**115**		ug/L			28156	28851	1	KED
|	**Mo**	**98**	**0.021**	ug/L	0.030	142	11	47	108	KED
|	**Cd**	**111**	**0.015**	ug/L	0.041	267	6	13	136	KED
⌊	**Cd**	**114**	**0.008**	ug/L	0.015	173	5	15	109	KED
⌈>	**In**	**115**		ug/L			1083745	1070274	1	Standard
|	**Ag**	**107**	**-0.003**	ug/L	0.001	29	149	107	9	Standard
|	**Sb**	**121**	**0.099**	ug/L	0.002	2	365	1904	2	Standard
⌊	**Sb**	**123**	**0.091**	ug/L	0.004	4	298	1381	2	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2422915	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	274	570	570	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0287-06RE1
Sample Dil Factor: 10
Comments:
Sample Date/Time: Tuesday, June 30, 2020 20:49:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	34011	0	Standard
	Cl	**37**		ug/L			10158397	12079685	2	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1394692	1	Standard
|	**Cr**	**52**	**0.138**	ug/L	0.007	5	17695	21126	0	Standard
|	**Cr**	**53**	**3.460**	ug/L	0.054	1	206	10061	0	Standard
|	**Fe**	**54**	**45.789**	ug/L	0.997	2	81858	203672	0	Standard
|	**Fe**	**57**	**115.303**	ug/L	0.919	0	18705	129656	1	Standard
⌊	**Mn**	**55**	**187.143**	ug/L	2.037	1	771	6536098	0	Standard
⌈>	**Ge**	**72**		ug/L			88171	88837	0	KED
|	**Ni**	**60**	**7.649**	ug/L	0.078	1	23	10200	1	KED
|	**Ni**	**62**	**7.400**	ug/L	0.381	5	5	1584	5	KED
|	**Cu**	**63**	**0.150**	ug/L	0.001	0	74	634	0	KED
|	**Cu**	**65**	**0.173**	ug/L	0.015	8	29	356	7	KED
|	**Zn**	**66**	**0.340**	ug/L	0.008	2	57	260	1	KED
|	**Zn**	**67**	**1.174**	ug/L	0.233	19	11	125	18	KED
|	**As**	**75**	**1.118**	ug/L	0.052	4	4	371	4	KED
⌊	**Se**	**78**	**-0.001**	ug/L	0.089	12079	18	18	19	KED
	Y	**89**		ug/L			630514	596865	0	Standard
	Kr	**83**		ug/L			67	83	19	Standard
⌈>	**In-1**	**115**		ug/L			28156	28259	1	KED
|	**Mo**	**98**	**2.661**	ug/L	0.059	2	11	4466	1	KED
|	**Cd**	**111**	**0.003**	ug/L	0.004	132	6	7	21	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.001	42	5	8	13	KED
⌈>	**In**	**115**		ug/L			1083745	1027477	1	Standard
|	**Ag**	**107**	**-0.006**	ug/L	0.001	15	149	61	21	Standard
|	**Sb**	**121**	**0.156**	ug/L	0.005	3	365	2690	2	Standard
⌊	**Sb**	**123**	**0.150**	ug/L	0.008	5	298	2000	3	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2423218	1	Standard
⌊	**Pb**	**208**	**0.007**	ug/L	0.000	2	570	1215	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0287-07
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, June 30, 2020 20:54:05
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	28485	1	Standard
	Cl	37		ug/L			10158397	10824980	0	Standard
>	Sc	45		ug/L			1402147	1383450	1	Standard
	Cr	52	0.106	ug/L	0.008	7	17695	20138	1	Standard
	Cr	53	0.923	ug/L	0.044	4	206	2810	3	Standard
	Fe	54	1143.073	ug/L	2.121	0	81858	3108578	1	Standard
	Fe	57	1138.033	ug/L	20.342	1	18705	1105564	1	Standard
	Mn	55	256.772	ug/L	3.787	1	771	8895234	1	Standard
>	Ge	72		ug/L			88171	90983	0	KED
	Ni	60	0.847	ug/L	0.046	5	23	1177	5	KED
	Ni	62	0.763	ug/L	0.112	14	5	172	14	KED
	Cu	63	0.022	ug/L	0.002	10	74	160	5	KED
	Cu	65	0.027	ug/L	0.003	12	29	83	8	KED
	Zn	66	0.147	ug/L	0.034	23	57	149	13	KED
	Zn	67	0.381	ug/L	0.188	49	11	49	37	KED
	As	75	0.373	ug/L	0.016	4	4	130	4	KED
	Se	78	0.013	ug/L	0.089	674	18	19	18	KED
	Y	89		ug/L			630514	591293	1	Standard
	Kr	83		ug/L			67	81	15	Standard
>	In-1	115		ug/L			28156	28830	0	KED
	Mo	98	0.031	ug/L	0.008	26	11	63	21	KED
	Cd	111	-0.001	ug/L	0.005	422	6	6	32	KED
	Cd	114	0.003	ug/L	0.005	182	5	8	61	KED
>	In	115		ug/L			1083745	1042895	2	Standard
	Ag	107	-0.007	ug/L	0.001	7	149	55	11	Standard
	Sb	121	0.001	ug/L	0.002	157	365	368	9	Standard
	Sb	123	0.002	ug/L	0.001	78	298	305	2	Standard
>	Tb	159		ug/L			2478750	2408310	1	Standard
	Pb	208	0.001	ug/L	0.001	46	570	665	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0315-04
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 20:58:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	37102	0	Standard
	Cl	**37**		ug/L			10158397	9818577	0	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1592885	2	Standard
|	**Cr**	**52**	**0.124**	ug/L	0.036	28	17695	23714	2	Standard
|	**Cr**	**53**	**0.987**	ug/L	0.021	2	206	3447	2	Standard
|	**Fe**	**54**	**5.394**	ug/L	1.161	21	81858	109392	1	Standard
|	**Fe**	**57**	**61.124**	ug/L	2.700	4	18705	88447	1	Standard
⌊	**Mn**	**55**	**97.779**	ug/L	3.418	3	771	3899038	1	Standard
⌈>	**Ge**	**72**		ug/L			88171	85224	0	KED
|	**Ni**	**60**	**0.817**	ug/L	0.006	0	23	1065	0	KED
|	**Ni**	**62**	**0.832**	ug/L	0.012	1	5	175	1	KED
|	**Cu**	**63**	**0.187**	ug/L	0.006	3	74	743	3	KED
|	**Cu**	**65**	**0.197**	ug/L	0.017	8	29	384	7	KED
|	**Zn**	**66**	**1.174**	ug/L	0.068	5	57	728	4	KED
|	**Zn**	**67**	**3.077**	ug/L	0.457	14	11	296	13	KED
|	**As**	**75**	**3.388**	ug/L	0.018	0	4	1071	1	KED
⌊	**Se**	**78**	**0.654**	ug/L	0.121	18	18	42	11	KED
	Y	**89**		ug/L			630514	590049	1	Standard
	Kr	**83**		ug/L			67	36	10	Standard
⌈>	**In-1**	**115**		ug/L			28156	27914	0	KED
|	**Mo**	**98**	**7.418**	ug/L	0.097	1	11	12279	1	KED
|	**Cd**	**111**	**0.002**	ug/L	0.003	106	6	7	15	KED
⌊	**Cd**	**114**	**0.007**	ug/L	0.003	43	5	12	25	KED
⌈>	**In**	**115**		ug/L			1083745	1067508	0	Standard
|	**Ag**	**107**	**-0.009**	ug/L	0.001	6	149	28	29	Standard
|	**Sb**	**121**	**0.167**	ug/L	0.007	4	365	2967	3	Standard
⌊	**Sb**	**123**	**0.170**	ug/L	0.005	2	298	2316	2	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2420555	1	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	11	570	772	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0315-08
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 21:03:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	38938	3	Standard
	Cl	**37**		ug/L			10158397	11265822	0	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1577461	1	Standard
|	**Cr**	**52**	**0.126**	ug/L	0.018	14	17695	23561	1	Standard
|	**Cr**	**53**	**3.629**	ug/L	0.057	1	206	11922	0	Standard
|	**Fe**	**54**	**6.391**	ug/L	0.581	9	81858	111380	0	Standard
|	**Fe**	**57**	**128.045**	ug/L	2.133	1	18705	160504	0	Standard
⌊	**Mn**	**55**	**86.812**	ug/L	0.990	1	771	3429800	0	Standard
⌈>	**Ge**	**72**		ug/L			88171	82545	0	KED
|	**Ni**	**60**	**2.526**	ug/L	0.069	2	23	3144	3	KED
|	**Ni**	**62**	**2.606**	ug/L	0.235	9	5	521	8	KED
|	**Cu**	**63**	**2.487**	ug/L	0.029	1	74	8704	1	KED
|	**Cu**	**65**	**2.509**	ug/L	0.073	2	29	4434	2	KED
|	**Zn**	**66**	**2.540**	ug/L	0.093	3	57	1465	3	KED
|	**Zn**	**67**	**5.660**	ug/L	0.128	2	11	519	2	KED
|	**As**	**75**	**1.340**	ug/L	0.043	3	4	413	3	KED
⌊	**Se**	**78**	**0.682**	ug/L	0.133	19	18	42	11	KED
	Y	**89**		ug/L			630514	563883	1	Standard
	Kr	**83**		ug/L			67	45	19	Standard
⌈>	**In-1**	**115**		ug/L			28156	27013	0	KED
|	**Mo**	**98**	**9.522**	ug/L	0.061	0	11	15250	0	KED
|	**Cd**	**111**	**0.005**	ug/L	0.014	302	6	7	70	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.003	49	5	11	28	KED
⌈>	**In**	**115**		ug/L			1083745	1091132	0	Standard
|	**Ag**	**107**	**-0.008**	ug/L	0.001	9	149	40	25	Standard
|	**Sb**	**121**	**0.335**	ug/L	0.008	2	365	5707	2	Standard
⌊	**Sb**	**123**	**0.321**	ug/L	0.004	1	298	4192	1	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2425131	0	Standard
⌊	**Pb**	**208**	**0.005**	ug/L	0.001	11	570	1046	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0315-10
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 21:08:18
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	46932	1	Standard
	Cl	37		ug/L			10158397	13762149	2	Standard
>	Sc	45		ug/L			1402147	1598547	0	Standard
	Cr	52	0.176	ug/L	0.009	5	17695	25325	1	Standard
	Cr	53	5.873	ug/L	0.027	0	206	19410	1	Standard
	Fe	54	23.985	ug/L	0.417	1	81858	166730	0	Standard
	Fe	57	310.408	ug/L	2.846	0	18705	363981	1	Standard
	Mn	55	16.377	ug/L	0.126	0	771	656476	1	Standard
>	Ge	72		ug/L			88171	76626	0	KED
	Ni	60	5.634	ug/L	0.109	1	23	6485	1	KED
	Ni	62	5.621	ug/L	0.188	3	5	1038	2	KED
	Cu	63	1.751	ug/L	0.047	2	74	5705	1	KED
	Cu	65	1.714	ug/L	0.052	3	29	2821	3	KED
	Zn	66	2.894	ug/L	0.016	0	57	1542	0	KED
	Zn	67	6.276	ug/L	0.440	7	11	533	6	KED
	As	75	1.757	ug/L	0.064	3	4	501	3	KED
	Se	78	0.235	ug/L	0.141	59	18	24	18	KED
	Y	89		ug/L			630514	521057	0	Standard
	Kr	83		ug/L			67	56	14	Standard
>	In-1	115		ug/L			28156	25515	1	KED
	Mo	98	1.064	ug/L	0.042	3	11	1618	2	KED
	Cd	111	0.003	ug/L	0.002	52	6	6	7	KED
	Cd	114	0.007	ug/L	0.004	58	5	12	35	KED
>	In	115		ug/L			1083745	1055020	1	Standard
	Ag	107	-0.009	ug/L	0.001	6	149	33	24	Standard
	Sb	121	0.039	ug/L	0.004	11	365	952	6	Standard
	Sb	123	0.042	ug/L	0.003	7	298	778	5	Standard
>	Tb	159		ug/L			2478750	2388461	0	Standard
	Pb	208	0.006	ug/L	0.001	10	570	1169	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0315-06
Sample Dil Factor: 10
Comments:
Sample Date/Time: Tuesday, June 30, 2020 21:14:11
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	29869	0	Standard
	Cl	37		ug/L			10158397	10552539	0	Standard
>	Sc	45		ug/L			1402147	1332290	1	Standard
	Cr	52	0.143	ug/L	0.020	14	17695	20300	2	Standard
	Cr	53	1.785	ug/L	0.041	2	206	5055	2	Standard
	Fe	54	25.910	ug/L	0.567	2	81858	143864	0	Standard
	Fe	57	78.266	ug/L	1.302	1	18705	89782	1	Standard
	Mn	55	101.509	ug/L	0.539	0	771	3387377	1	Standard
>	Ge	72		ug/L			88171	82695	0	KED
	Ni	60	1.019	ug/L	0.057	5	23	1283	5	KED
	Ni	62	1.031	ug/L	0.092	8	5	209	8	KED
	Cu	63	0.151	ug/L	0.008	5	74	593	4	KED
	Cu	65	0.174	ug/L	0.008	4	29	333	4	KED
	Zn	66	0.772	ug/L	0.047	6	57	483	5	KED
	Zn	67	1.341	ug/L	0.097	7	11	131	6	KED
	As	75	0.226	ug/L	0.029	12	4	73	12	KED
	Se	78	0.121	ug/L	0.081	66	18	21	13	KED
	Y	89		ug/L			630514	560709	2	Standard
	Kr	83		ug/L			67	36	32	Standard
>	In-1	115		ug/L			28156	26933	2	KED
	Mo	98	0.150	ug/L	0.013	8	11	249	7	KED
	Cd	111	-0.001	ug/L	0.002	265	6	5	16	KED
	Cd	114	0.000	ug/L	0.002	937	5	5	34	KED
>	In	115		ug/L			1083745	1066574	1	Standard
	Ag	107	-0.008	ug/L	0.001	7	149	40	20	Standard
	Sb	121	-0.002	ug/L	0.003	134	365	330	12	Standard
	Sb	123	-0.005	ug/L	0.002	40	298	234	9	Standard
>	Tb	159		ug/L			2478750	2348817	1	Standard
	Pb	208	-0.001	ug/L	0.000	15	570	431	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0315-02
Sample Dil Factor: 50
Comments:
Sample Date/Time: Tuesday, June 30, 2020 21:18:39
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	28326	1	Standard
	Cl	37		ug/L			10158397	10694400	1	Standard
>	Sc	45		ug/L			1402147	1317460	1	Standard
	Cr	52	0.159	ug/L	0.019	12	17695	20460	1	Standard
	Cr	53	1.272	ug/L	0.048	3	206	3614	1	Standard
	Fe	54	73.053	ug/L	1.289	1	81858	261153	0	Standard
	Fe	57	98.099	ug/L	1.903	1	18705	106804	0	Standard
	Mn	55	179.618	ug/L	2.124	1	771	5925628	0	Standard
>	Ge	72		ug/L			88171	83259	0	KED
	Ni	60	0.631	ug/L	0.027	4	23	809	3	KED
	Ni	62	0.605	ug/L	0.021	3	5	125	3	KED
	Cu	63	0.010	ug/L	0.007	70	74	104	22	KED
	Cu	65	0.018	ug/L	0.010	53	29	60	29	KED
	Zn	66	0.270	ug/L	0.046	17	57	205	12	KED
	Zn	67	0.652	ug/L	0.268	41	11	69	34	KED
	As	75	0.051	ug/L	0.006	11	4	19	9	KED
	Se	78	-0.011	ug/L	0.046	398	18	17	9	KED
	Y	89		ug/L			630514	570861	1	Standard
	Kr	83		ug/L			67	65	17	Standard
>	In-1	115		ug/L			28156	27348	0	KED
	Mo	98	0.078	ug/L	0.021	27	11	137	24	KED
	Cd	111	-0.003	ug/L	0.006	180	6	4	52	KED
	Cd	114	0.000	ug/L	0.006	71996	5	5	128	KED
>	In	115		ug/L			1083745	1083410	1	Standard
	Ag	107	-0.008	ug/L	0.000	2	149	37	5	Standard
	Sb	121	-0.015	ug/L	0.001	7	365	124	13	Standard
	Sb	123	-0.016	ug/L	0.001	8	298	105	16	Standard
>	Tb	159		ug/L			2478750	2381916	0	Standard
	Pb	208	-0.000	ug/L	0.000	278	570	538	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0316-02
Sample Dil Factor: 50
Comments:
Sample Date/Time: Tuesday, June 30, 2020 21:23:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	32869	1	Standard
	Cl	37		ug/L			10158397	11098115	0	Standard
>	Sc	45		ug/L			1402147	1331699	1	Standard
	Cr	52	0.189	ug/L	0.023	11	17695	21423	1	Standard
	Cr	53	1.631	ug/L	0.009	0	206	4634	1	Standard
	Fe	54	5.781	ug/L	0.268	4	81858	92479	0	Standard
	Fe	57	29.750	ug/L	0.613	2	18705	45119	0	Standard
	Mn	55	200.184	ug/L	4.709	2	771	6674821	0	Standard
>	Ge	72		ug/L			88171	83679	1	KED
	Ni	60	2.530	ug/L	0.046	1	23	3192	0	KED
	Ni	62	2.503	ug/L	0.053	2	5	507	2	KED
	Cu	63	0.041	ug/L	0.011	26	74	213	16	KED
	Cu	65	0.054	ug/L	0.012	21	29	123	15	KED
	Zn	66	0.145	ug/L	0.044	30	57	135	18	KED
	Zn	67	0.869	ug/L	0.290	33	11	90	30	KED
	As	75	0.247	ug/L	0.025	10	4	80	10	KED
	Se	78	0.030	ug/L	0.077	258	18	18	15	KED
	Y	89		ug/L			630514	567208	0	Standard
	Kr	83		ug/L			67	69	4	Standard
>	In-1	115		ug/L			28156	27144	0	KED
	Mo	98	0.097	ug/L	0.022	22	11	166	20	KED
	Cd	111	0.002	ug/L	0.005	250	6	6	31	KED
	Cd	114	-0.002	ug/L	0.001	75	5	3	34	KED
>	In	115		ug/L			1083745	1059101	0	Standard
	Ag	107	-0.009	ug/L	0.001	11	149	33	38	Standard
	Sb	121	-0.007	ug/L	0.002	22	365	244	10	Standard
	Sb	123	-0.008	ug/L	0.002	20	298	193	10	Standard
>	Tb	159		ug/L			2478750	2381286	0	Standard
	Pb	208	-0.000	ug/L	0.000	36	570	523	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0316-04
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, June 30, 2020 21:27:36

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	29568	0	Standard
	Cl	**37**		ug/L			10158397	10770671	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1358271	0	Standard
|	**Cr**	**52**	**0.136**	ug/L	0.007	5	17695	20535	0	Standard
|	**Cr**	**53**	**1.154**	ug/L	0.030	2	206	3401	2	Standard
|	**Fe**	**54**	**1160.352**	ug/L	3.942	0	81858	3096977	0	Standard
|	**Fe**	**57**	**1171.247**	ug/L	8.841	0	18705	1116718	1	Standard
⌊	**Mn**	**55**	**301.499**	ug/L	3.291	1	771	10255790	1	Standard
⌈>	**Ge**	**72**		ug/L			88171	85045	1	KED
|	**Ni**	**60**	**0.775**	ug/L	0.009	1	23	1010	0	KED
|	**Ni**	**62**	**0.781**	ug/L	0.032	4	5	164	5	KED
|	**Cu**	**63**	**0.011**	ug/L	0.001	10	74	109	3	KED
|	**Cu**	**65**	**0.022**	ug/L	0.007	30	29	67	18	KED
|	**Zn**	**66**	**0.121**	ug/L	0.041	33	57	124	17	KED
|	**Zn**	**67**	**0.404**	ug/L	0.146	36	11	48	26	KED
|	**As**	**75**	**0.574**	ug/L	0.015	2	4	184	3	KED
⌊	**Se**	**78**	**0.016**	ug/L	0.108	667	18	18	23	KED
	Y	**89**		ug/L			630514	574931	1	Standard
	Kr	**83**		ug/L			67	67	19	Standard
⌈>	**In-1**	**115**		ug/L			28156	27145	1	KED
|	**Mo**	**98**	**0.048**	ug/L	0.005	9	11	88	7	KED
|	**Cd**	**111**	**-0.009**	ug/L	0.003	29	6	2	43	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.005	584	5	6	79	KED
⌈>	**In**	**115**		ug/L			1083745	1061282	3	Standard
|	**Ag**	**107**	**-0.008**	ug/L	0.001	16	149	42	38	Standard
|	**Sb**	**121**	**-0.010**	ug/L	0.001	9	365	205	3	Standard
⌊	**Sb**	**123**	**-0.010**	ug/L	0.000	3	298	174	5	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2391171	1	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	24	570	490	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0316-04
Sample Dil Factor: 50
Comments:
Sample Date/Time: Tuesday, June 30, 2020 21:35:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	21381	2	Standard
	Cl	**37**		ug/L			10158397	10660998	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1354089	1	Standard
|	**Cr**	**52**	**0.083**	ug/L	0.006	7	17695	19160	2	Standard
|	**Cr**	**53**	**0.603**	ug/L	0.018	2	206	1868	2	Standard
|	**Fe**	**54**	**458.175**	ug/L	5.463	1	81858	1266798	0	Standard
|	**Fe**	**57**	**454.662**	ug/L	9.224	2	18705	443125	0	Standard
⌊	**Mn**	**55**	**119.530**	ug/L	1.496	1	771	4053917	2	Standard
⌈>	**Ge**	**72**		ug/L			88171	86414	0	KED
|	**Ni**	**60**	**0.285**	ug/L	0.017	5	23	391	5	KED
|	**Ni**	**62**	**0.246**	ug/L	0.082	33	5	55	29	KED
|	**Cu**	**63**	**0.006**	ug/L	0.001	12	74	96	2	KED
|	**Cu**	**65**	**0.018**	ug/L	0.005	30	29	60	16	KED
|	**Zn**	**66**	**0.041**	ug/L	0.012	29	57	80	8	KED
|	**Zn**	**67**	**0.185**	ug/L	0.040	21	11	28	13	KED
|	**As**	**75**	**0.220**	ug/L	0.008	3	4	74	3	KED
⌊	**Se**	**78**	**-0.017**	ug/L	0.017	101	18	17	3	KED
	Y	**89**		ug/L			630514	591308	1	Standard
	Kr	**83**		ug/L			67	42	30	Standard
⌈>	**In-1**	**115**		ug/L			28156	28197	0	KED
|	**Mo**	**98**	**0.012**	ug/L	0.002	18	11	31	13	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.006	402	6	5	44	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.007	641	5	6	117	KED
⌈>	**In**	**115**		ug/L			1083745	1091255	4	Standard
|	**Ag**	**107**	**-0.008**	ug/L	0.000	1	149	40	9	Standard
|	**Sb**	**121**	**-0.012**	ug/L	0.001	9	365	179	5	Standard
⌊	**Sb**	**123**	**-0.014**	ug/L	0.000	2	298	133	2	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2377563	0	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	20	570	467	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV8
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 21:40:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	20565	1	Standard
	Cl	**37**		ug/L			10158397	10549068	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1325058	1	Standard
|	**Cr**	**52**	**51.150**	ug/L	0.939	1	17695	1259984	0	Standard
|	**Cr**	**53**	**52.048**	ug/L	1.147	2	206	141028	1	Standard
|	**Fe**	**54**	**5065.059**	ug/L	174.763	3	81858	12924675	2	Standard
|	**Fe**	**57**	**5059.243**	ug/L	157.596	3	18705	4646010	2	Standard
⌊	**Mn**	**55**	**53.815**	ug/L	1.123	2	771	1786209	1	Standard
⌈>	**Ge**	**72**		ug/L			88171	85610	0	KED
|	**Ni**	**60**	**50.066**	ug/L	0.900	1	23	64211	1	KED
|	**Ni**	**62**	**50.376**	ug/L	1.379	2	5	10361	2	KED
|	**Cu**	**63**	**50.164**	ug/L	0.120	0	74	180665	0	KED
|	**Cu**	**65**	**50.113**	ug/L	1.053	2	29	91351	2	KED
|	**Zn**	**66**	**50.684**	ug/L	0.916	1	57	29275	1	KED
|	**Zn**	**67**	**51.415**	ug/L	0.921	1	11	4803	2	KED
|	**As**	**75**	**50.442**	ug/L	0.375	0	4	15969	1	KED
⌊	**Se**	**78**	**52.379**	ug/L	0.844	1	18	1992	2	KED
	Y	**89**		ug/L			630514	581987	1	Standard
	Kr	**83**		ug/L			67	48	33	Standard
⌈>	**In-1**	**115**		ug/L			28156	27771	1	KED
|	**Mo**	**98**	**48.418**	ug/L	0.883	1	11	79664	0	KED
|	**Cd**	**111**	**50.310**	ug/L	1.113	2	6	21171	0	KED
⌊	**Cd**	**114**	**49.669**	ug/L	0.793	1	5	53499	0	KED
⌈>	**In**	**115**		ug/L			1083745	1034130	1	Standard
|	**Ag**	**107**	**46.826**	ug/L	0.109	0	149	595806	1	Standard
|	**Sb**	**121**	**52.180**	ug/L	0.942	1	365	787742	1	Standard
⌊	**Sb**	**123**	**51.303**	ug/L	0.736	1	298	590242	1	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2429834	0	Standard
⌊	**Pb**	**208**	**50.638**	ug/L	0.366	0	570	5127357	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB8
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 21:48:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	19216	2	Standard
	Cl	**37**		ug/L			10158397	10277509	0	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1341366	1	Standard
|	**Cr**	**52**	**0.004**	ug/L	0.013	304	17695	17033	2	Standard
|	**Cr**	**53**	**0.194**	ug/L	0.009	4	206	728	1	Standard
|	**Fe**	**54**	**-0.962**	ug/L	0.750	77	81858	75816	0	Standard
|	**Fe**	**57**	**0.838**	ug/L	0.337	40	18705	18667	0	Standard
⌊	**Mn**	**55**	**0.002**	ug/L	0.001	91	771	788	5	Standard
⌈>	**Ge**	**72**		ug/L			88171	88505	1	KED
|	**Ni**	**60**	**0.005**	ug/L	0.022	391	23	31	93	KED
|	**Ni**	**62**	**-0.003**	ug/L	0.022	670	5	4	107	KED
|	**Cu**	**63**	**0.018**	ug/L	0.025	133	74	144	65	KED
|	**Cu**	**65**	**0.017**	ug/L	0.019	109	29	61	58	KED
|	**Zn**	**66**	**0.014**	ug/L	0.019	129	57	66	18	KED
|	**Zn**	**67**	**-0.001**	ug/L	0.070	10749	11	11	60	KED
|	**As**	**75**	**0.024**	ug/L	0.045	189	4	12	122	KED
⌊	**Se**	**78**	**-0.005**	ug/L	0.112	2451	18	18	25	KED
	Y	**89**		ug/L			630514	591269	1	Standard
	Kr	**83**		ug/L			67	43	5	Standard
⌈>	**In-1**	**115**		ug/L			28156	28626	1	KED
|	**Mo**	**98**	**0.010**	ug/L	0.008	87	11	27	51	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.008	824	6	6	55	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.001	50	5	8	14	KED
⌈>	**In**	**115**		ug/L			1083745	1076885	2	Standard
|	**Ag**	**107**	**-0.004**	ug/L	0.001	19	149	93	9	Standard
|	**Sb**	**121**	**0.094**	ug/L	0.004	4	365	1841	3	Standard
⌊	**Sb**	**123**	**0.091**	ug/L	0.002	1	298	1383	2	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2388620	2	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	17	570	612	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0287-07RE1
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 30, 2020 21:54:05
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	54522	0	Standard
	Cl	37		ug/L			10158397	12828586	0	Standard
>	Sc	45		ug/L			1402147	1643905	0	Standard
	Cr	52	0.319	ug/L	0.032	10	17695	30358	3	Standard
	Cr	53	2.446	ug/L	0.025	1	206	8456	1	Standard
	Fe	54	8754.380	ug/L	114.351	1	81858	27650285	1	Standard
	Fe	57	9144.249	ug/L	176.842	1	18705	10402419	1	Standard
	Mn	55	1935.833	ug/L	22.287	1	771	79689380	1	Standard
>	Ge	72		ug/L			88171	80579	0	KED
	Ni	60	7.890	ug/L	0.188	2	23	9541	1	KED
	Ni	62	7.763	ug/L	0.283	3	5	1506	3	KED
	Cu	63	0.194	ug/L	0.006	3	74	724	3	KED
	Cu	65	0.201	ug/L	0.005	2	29	371	3	KED
	Zn	66	0.874	ug/L	0.014	1	57	526	0	KED
	Zn	67	3.239	ug/L	0.122	3	11	294	4	KED
	As	75	3.356	ug/L	0.095	2	4	1003	2	KED
	Se	78	0.105	ug/L	0.084	79	18	20	15	KED
	Y	89		ug/L			630514	570859	1	Standard
	Kr	83		ug/L			67	98	4	Standard
>	In-1	115		ug/L			28156	25897	1	KED
	Mo	98	0.365	ug/L	0.026	7	11	569	5	KED
	Cd	111	0.005	ug/L	0.010	212	6	7	50	KED
	Cd	114	0.000	ug/L	0.007	11906	5	4	148	KED
>	In	115		ug/L			1083745	956450	1	Standard
	Ag	107	-0.004	ug/L	0.001	15	149	85	8	Standard
	Sb	121	0.091	ug/L	0.001	0	365	1598	1	Standard
	Sb	123	0.091	ug/L	0.005	5	298	1233	4	Standard
>	Tb	159		ug/L			2478750	2368906	1	Standard
	Pb	208	0.015	ug/L	0.002	13	570	2039	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0316-02RE1
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 30, 2020 21:59:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	150037	1	Standard
	Cl	37		ug/L			10158397	20748839	1	Standard
>	Sc	45		ug/L			1402147	1568897	0	Standard
	Cr	52	1.054	ug/L	0.026	2	17695	50119	0	Standard
	Cr	53	8.079	ug/L	0.109	1	206	26116	1	Standard
	Fe	54	104.841	ug/L	1.407	1	81858	406531	1	Standard
	Fe	57	489.902	ug/L	12.094	2	18705	551671	2	Standard
	Mn	55	3888.933	ug/L	74.025	1	771	152778104	1	Standard
>	Ge	72		ug/L			88171	81094	1	KED
	Ni	60	64.000	ug/L	1.008	1	23	77753	2	KED
	Ni	62	63.570	ug/L	1.048	1	5	12386	2	KED
	Cu	63	1.131	ug/L	0.030	2	74	3926	1	KED
	Cu	65	1.136	ug/L	0.044	3	29	1986	2	KED
	Zn	66	2.340	ug/L	0.151	6	57	1330	5	KED
	Zn	67	18.973	ug/L	1.241	6	11	1684	5	KED
	As	75	6.327	ug/L	0.376	5	4	1899	4	KED
	Se	78	2.166	ug/L	3.261	150	18	93	122	KED
	Y	89		ug/L			630514	574384	3	Standard
	Kr	83		ug/L			67	188	5	Standard
>	In-1	115		ug/L			28156	25747	1	KED
	Mo	98	2.815	ug/L	0.047	1	11	4304	0	KED
	Cd	111	0.008	ug/L	0.010	127	6	8	43	KED
	Cd	114	-0.009	ug/L	0.003	28	5	-4	61	KED
>	In	115		ug/L			1083745	878323	2	Standard
	Ag	107	0.003	ug/L	0.000	2	149	156	2	Standard
	Sb	121	0.246	ug/L	0.008	3	365	3449	1	Standard
	Sb	123	0.255	ug/L	0.008	2	298	2734	4	Standard
>	Tb	159		ug/L			2478750	2361356	0	Standard
	Pb	208	0.031	ug/L	0.000	0	570	3554	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0316-04RE1
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 30, 2020 22:05:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	62377	1	Standard
	Cl	37		ug/L			10158397	12663216	2	Standard
>	Sc	45		ug/L			1402147	1642253	1	Standard
	Cr	52	**0.651**	ug/L	0.032	4	17695	40325	1	Standard
	Cr	53	**2.222**	ug/L	0.020	0	206	7695	1	Standard
	Fe	54	**8892.413**	ug/L	324.383	3	81858	28050529	2	Standard
	Fe	57	**9190.270**	ug/L	332.561	3	18705	10441802	2	Standard
	Mn	55	**2269.926**	ug/L	64.369	2	771	93328518	1	Standard
>	Ge	72		ug/L			88171	86472	0	KED
	Ni	60	**7.085**	ug/L	0.009	0	23	9199	0	KED
	Ni	62	**7.304**	ug/L	0.197	2	5	1521	3	KED
	Cu	63	**0.140**	ug/L	0.011	7	74	584	7	KED
	Cu	65	**0.157**	ug/L	0.014	8	29	316	7	KED
	Zn	66	**0.885**	ug/L	0.082	9	57	571	8	KED
	Zn	67	**3.402**	ug/L	0.314	9	11	331	8	KED
	As	75	**5.539**	ug/L	0.035	0	4	1774	0	KED
	Se	78	**0.088**	ug/L	0.137	156	18	21	23	KED
	Y	89		ug/L			630514	571548	0	Standard
	Kr	83		ug/L			67	105	21	Standard
>	In-1	115		ug/L			28156	26279	0	KED
	Mo	98	**0.453**	ug/L	0.007	1	11	716	1	KED
	Cd	111	**0.003**	ug/L	0.004	136	6	6	20	KED
	Cd	114	**0.001**	ug/L	0.004	588	5	5	75	KED
>	In	115		ug/L			1083745	869853	2	Standard
	Ag	107	**-0.002**	ug/L	0.002	98	149	99	22	Standard
	Sb	121	**0.079**	ug/L	0.007	8	365	1291	4	Standard
	Sb	123	**0.081**	ug/L	0.004	5	298	1019	1	Standard
>	Tb	159		ug/L			2478750	2307770	2	Standard
	Pb	208	**0.010**	ug/L	0.001	8	570	1483	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0315-06RE1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 22:12:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	53898	1	Standard
	Cl	37		ug/L			10158397	13708801	1	Standard
>	Sc	45		ug/L			1402147	1616946	1	Standard
	Cr	52	0.176	ug/L	0.020	11	17695	25611	0	Standard
	Cr	53	6.333	ug/L	0.062	0	206	21149	0	Standard
	Fe	54	195.933	ug/L	0.295	0	81858	700989	1	Standard
	Fe	57	514.167	ug/L	4.856	0	18705	595631	0	Standard
	Mn	55	789.233	ug/L	15.807	2	771	31953945	1	Standard
>	Ge	72		ug/L			88171	79605	0	KED
	Ni	60	9.960	ug/L	0.099	0	23	11895	0	KED
	Ni	62	9.835	ug/L	0.425	4	5	1884	3	KED
	Cu	63	1.496	ug/L	0.027	1	74	5075	0	KED
	Cu	65	1.531	ug/L	0.018	1	29	2621	0	KED
	Zn	66	7.077	ug/L	0.205	2	57	3846	3	KED
	Zn	67	12.114	ug/L	0.270	2	11	1060	2	KED
	As	75	2.129	ug/L	0.023	1	4	630	1	KED
	Se	78	0.109	ug/L	0.024	22	18	20	4	KED
	Y	89		ug/L			630514	548390	1	Standard
	Kr	83		ug/L			67	88	13	Standard
>	In-1	115		ug/L			28156	26074	0	KED
	Mo	98	1.472	ug/L	0.072	4	11	2284	4	KED
	Cd	111	0.006	ug/L	0.006	101	6	8	29	KED
	Cd	114	0.003	ug/L	0.004	120	5	8	46	KED
>	In	115		ug/L			1083745	1017465	0	Standard
	Ag	107	-0.008	ug/L	0.000	4	149	44	9	Standard
	Sb	121	0.103	ug/L	0.003	2	365	1865	1	Standard
	Sb	123	0.103	ug/L	0.006	5	298	1449	3	Standard
>	Tb	159		ug/L			2478750	2393642	1	Standard
	Pb	208	0.004	ug/L	0.000	9	570	966	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0315-02RE1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 22:19:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	79113	1	Standard
	Cl	37		ug/L			10158397	21319459	1	Standard
>	Sc	45		ug/L			1402147	1780179	1	Standard
	Cr	52	1.365	ug/L	0.029	2	17695	67059	3	Standard
	Cr	53	10.992	ug/L	0.201	1	206	40219	0	Standard
	Fe	54	2739.398	ug/L	7.919	0	81858	9441315	1	Standard
	Fe	57	3625.507	ug/L	52.060	1	18705	4481143	2	Standard
	Mn	55	6513.643	ug/L	71.652	1	771	290384467	2	Standard
>	Ge	72		ug/L			88171	72699	0	KED
	Ni	60	30.984	ug/L	0.262	0	23	33754	1	KED
	Ni	62	31.475	ug/L	0.047	0	5	5499	0	KED
	Cu	63	0.446	ug/L	0.010	2	74	1424	2	KED
	Cu	65	0.479	ug/L	0.031	6	29	765	6	KED
	Zn	66	8.265	ug/L	0.029	0	57	4093	0	KED
	Zn	67	15.515	ug/L	0.937	6	11	1237	6	KED
	As	75	2.233	ug/L	0.108	4	4	603	4	KED
	Se	78	0.248	ug/L	0.048	19	18	23	6	KED
	Y	89		ug/L			630514	540420	0	Standard
	Kr	83		ug/L			67	213	9	Standard
>	In-1	115		ug/L			28156	25140	2	KED
	Mo	98	4.021	ug/L	0.171	4	11	5996	2	KED
	Cd	111	0.010	ug/L	0.005	53	6	9	20	KED
	Cd	114	-0.001	ug/L	0.001	69	5	3	29	KED
>	In	115		ug/L			1083745	1025208	2	Standard
	Ag	107	-0.005	ug/L	0.001	15	149	81	12	Standard
	Sb	121	0.082	ug/L	0.004	4	365	1574	4	Standard
	Sb	123	0.082	ug/L	0.006	7	298	1216	5	Standard
>	Tb	159		ug/L			2478750	2522691	1	Standard
	Pb	208	0.059	ug/L	0.002	3	570	6749	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL8
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 22:26:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	22085	1	Standard
	Cl	**37**		ug/L			10158397	10625339	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1365887	0	Standard
|	**Cr**	**52**	**0.061**	ug/L	0.004	5	17695	18770	0	Standard
|	**Cr**	**53**	**0.694**	ug/L	0.015	2	206	2139	2	Standard
|	**Fe**	**54**	**-1.714**	ug/L	0.673	39	81858	75249	1	Standard
|	**Fe**	**57**	**1.179**	ug/L	0.313	26	18705	19332	0	Standard
⌊	**Mn**	**55**	**0.443**	ug/L	0.505	114	771	15869	108	Standard
⌈>	**Ge**	**72**		ug/L			88171	85143	0	KED
|	**Ni**	**60**	**-0.005**	ug/L	0.009	176	23	16	65	KED
|	**Ni**	**62**	**0.007**	ug/L	0.014	201	5	6	45	KED
|	**Cu**	**63**	**-0.004**	ug/L	0.003	76	74	58	17	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.004	438	29	26	24	KED
|	**Zn**	**66**	**0.023**	ug/L	0.009	37	57	68	7	KED
|	**Zn**	**67**	**-0.016**	ug/L	0.036	221	11	9	34	KED
|	**As**	**75**	**0.000**	ug/L	0.009	2052	4	4	69	KED
⌊	**Se**	**78**	**-0.017**	ug/L	0.059	348	18	17	12	KED
	Y	**89**		ug/L			630514	584702	2	Standard
	Kr	**83**		ug/L			67	45	17	Standard
⌈>	**In-1**	**115**		ug/L			28156	28062	1	KED
|	**Mo**	**98**	**-0.002**	ug/L	0.002	159	11	8	46	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.008	368	6	5	61	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.000	375	5	5	1	KED
⌈>	**In**	**115**		ug/L			1083745	1094124	2	Standard
|	**Ag**	**107**	**-0.008**	ug/L	0.001	8	149	49	21	Standard
|	**Sb**	**121**	**-0.016**	ug/L	0.000	2	365	118	6	Standard
⌊	**Sb**	**123**	**-0.017**	ug/L	0.000	2	298	97	4	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2383972	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	51	570	600	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0314-13RE1
Sample Dil Factor: 5
Comments:
Sample Date/Time: Tuesday, June 30, 2020 22:32:39
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	31397	0	Standard
	Cl	**37**		ug/L			10158397	10188516	0	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1434608	1	Standard
|	**Cr**	**52**	**0.101**	ug/L	0.021	20	17695	20752	1	Standard
|	**Cr**	**53**	**0.612**	ug/L	0.026	4	206	2004	3	Standard
|	**Fe**	**54**	**44.346**	ug/L	1.457	3	81858	205531	0	Standard
|	**Fe**	**57**	**60.875**	ug/L	2.150	3	18705	79429	1	Standard
⌊	**Mn**	**55**	**114.351**	ug/L	1.384	1	771	4109120	2	Standard
⌈>	**Ge**	**72**		ug/L			88171	86711	1	KED
|	**Ni**	**60**	**3.275**	ug/L	0.086	2	23	4276	3	KED
|	**Ni**	**62**	**3.352**	ug/L	0.408	12	5	702	10	KED
|	**Cu**	**63**	**0.139**	ug/L	0.008	5	74	579	3	KED
|	**Cu**	**65**	**0.140**	ug/L	0.003	2	29	286	0	KED
|	**Zn**	**66**	**0.364**	ug/L	0.037	10	57	268	7	KED
|	**Zn**	**67**	**0.572**	ug/L	0.195	34	11	65	29	KED
|	**As**	**75**	**0.090**	ug/L	0.005	5	4	33	5	KED
⌊	**Se**	**78**	**-0.077**	ug/L	0.078	100	18	15	19	KED
	Y	**89**		ug/L			630514	603353	0	Standard
	Kr	**83**		ug/L			67	42	2	Standard
⌈>	**In-1**	**115**		ug/L			28156	27739	1	KED
|	**Mo**	**98**	**0.092**	ug/L	0.011	12	11	161	11	KED
|	**Cd**	**111**	**0.001**	ug/L	0.004	464	6	6	28	KED
⌊	**Cd**	**114**	**0.008**	ug/L	0.006	86	5	13	52	KED
⌈>	**In**	**115**		ug/L			1083745	1104441	1	Standard
|	**Ag**	**107**	**-0.008**	ug/L	0.000	1	149	40	5	Standard
|	**Sb**	**121**	**0.014**	ug/L	0.002	15	365	590	4	Standard
⌊	**Sb**	**123**	**0.013**	ug/L	0.001	10	298	464	2	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2440844	0	Standard
⌊	**Pb**	**208**	**0.006**	ug/L	0.001	8	570	1201	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0837-DUP3
Sample Dil Factor: 5
Comments:
Sample Date/Time: Tuesday, June 30, 2020 22:37:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	31595	0	Standard
	Cl	37		ug/L			10158397	10199596	1	Standard
>	Sc	45		ug/L			1402147	1404535	0	Standard
	Cr	52	**0.108**	ug/L	0.018	16	17695	20516	2	Standard
	Cr	53	**0.519**	ug/L	0.012	2	206	1696	2	Standard
	Fe	54	**43.730**	ug/L	0.212	0	81858	199596	0	Standard
	Fe	57	**60.880**	ug/L	1.327	2	18705	77785	1	Standard
	Mn	55	**112.307**	ug/L	3.081	2	771	3950772	2	Standard
>	Ge	72		ug/L			88171	86577	1	KED
	Ni	60	**3.095**	ug/L	0.152	4	23	4035	3	KED
	Ni	62	**3.288**	ug/L	0.230	7	5	688	5	KED
	Cu	63	**0.132**	ug/L	0.014	10	74	554	9	KED
	Cu	65	**0.135**	ug/L	0.019	14	29	276	11	KED
	Zn	66	**0.269**	ug/L	0.090	33	57	212	23	KED
	Zn	67	**0.467**	ug/L	0.140	29	11	55	24	KED
	As	75	**0.106**	ug/L	0.016	15	4	38	13	KED
	Se	78	**0.037**	ug/L	0.131	358	18	19	25	KED
	Y	89		ug/L			630514	595085	1	Standard
	Kr	83		ug/L			67	50	17	Standard
>	In-1	115		ug/L			28156	27312	1	KED
	Mo	98	**0.089**	ug/L	0.018	19	11	154	17	KED
	Cd	111	**0.004**	ug/L	0.006	136	6	7	30	KED
	Cd	114	**0.004**	ug/L	0.008	218	5	9	93	KED
>	In	115		ug/L			1083745	1097621	2	Standard
	Ag	107	**-0.009**	ug/L	0.001	12	149	24	61	Standard
	Sb	121	**0.015**	ug/L	0.003	19	365	613	7	Standard
	Sb	123	**0.011**	ug/L	0.003	26	298	442	6	Standard
>	Tb	159		ug/L			2478750	2411443	1	Standard
	Pb	208	**0.007**	ug/L	0.001	12	570	1286	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0837-MS3
Sample Dil Factor: 5
Comments:
Sample Date/Time: Tuesday, June 30, 2020 22:41:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	30548	1	Standard
	Cl	37		ug/L			10158397	10135581	1	Standard
>	Sc	45		ug/L			1402147	1443708	1	Standard
	Cr	52	5.211	ug/L	0.050	0	17695	156233	1	Standard
	Cr	53	5.732	ug/L	0.067	1	206	17114	2	Standard
	Fe	54	1029.903	ug/L	6.986	0	81858	2931026	0	Standard
	Fe	57	1022.410	ug/L	6.615	0	18705	1038511	0	Standard
	Mn	55	120.552	ug/L	0.910	0	771	4359182	1	Standard
>	Ge	72		ug/L			88171	87502	0	KED
	Ni	60	8.418	ug/L	0.257	3	23	11054	2	KED
	Ni	62	8.394	ug/L	0.178	2	5	1768	2	KED
	Cu	63	5.380	ug/L	0.056	1	74	19872	1	KED
	Cu	65	5.470	ug/L	0.097	1	29	10217	2	KED
	Zn	66	17.597	ug/L	0.260	1	57	10426	2	KED
	Zn	67	16.778	ug/L	0.446	2	11	1609	2	KED
	As	75	5.307	ug/L	0.072	1	4	1720	1	KED
	Se	78	17.693	ug/L	0.115	0	18	700	0	KED
	Y	89		ug/L			630514	611653	1	Standard
	Kr	83		ug/L			67	45	10	Standard
>	In-1	115		ug/L			28156	28413	0	KED
	Mo	98	0.079	ug/L	0.015	18	11	143	17	KED
	Cd	111	5.177	ug/L	0.068	1	6	2235	0	KED
	Cd	114	5.296	ug/L	0.083	1	5	5841	1	KED
>	In	115		ug/L			1083745	1110837	0	Standard
	Ag	107	4.433	ug/L	0.030	0	149	60730	0	Standard
	Sb	121	0.019	ug/L	0.004	21	365	683	9	Standard
	Sb	123	0.020	ug/L	0.001	4	298	548	2	Standard
>	Tb	159		ug/L			2478750	2458095	0	Standard
	Pb	208	5.277	ug/L	0.095	1	570	541060	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0837-MSD3
Sample Dil Factor: 5
Comments:
Sample Date/Time: Tuesday, June 30, 2020 22:47:28
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18966	30149	1	Standard
	Cl	37		ug/L			10158397	10043104	0	Standard
>	Sc	45		ug/L			1402147	1410535	0	Standard
	Cr	52	5.104	ug/L	0.109	2	17695	149875	1	Standard
	Cr	53	5.634	ug/L	0.093	1	206	16439	1	Standard
	Fe	54	1012.279	ug/L	6.089	0	81858	2816225	0	Standard
	Fe	57	1009.293	ug/L	5.653	0	18705	1001918	0	Standard
	Mn	55	119.091	ug/L	1.439	1	771	4207278	1	Standard
>	Ge	72		ug/L			88171	87636	1	KED
	Ni	60	8.474	ug/L	0.137	1	23	11145	1	KED
	Ni	62	8.699	ug/L	0.416	4	5	1835	4	KED
	Cu	63	5.216	ug/L	0.114	2	74	19296	1	KED
	Cu	65	5.296	ug/L	0.051	0	29	9906	0	KED
	Zn	66	17.019	ug/L	0.338	1	57	10099	1	KED
	Zn	67	16.543	ug/L	0.643	3	11	1589	2	KED
	As	75	5.264	ug/L	0.051	0	4	1709	0	KED
	Se	78	17.055	ug/L	0.348	2	18	676	3	KED
	Y	89		ug/L			630514	609828	2	Standard
	Kr	83		ug/L			67	51	27	Standard
>	In-1	115		ug/L			28156	28179	0	KED
	Mo	98	0.079	ug/L	0.008	10	11	142	9	KED
	Cd	111	5.141	ug/L	0.103	1	6	2201	1	KED
	Cd	114	5.078	ug/L	0.111	2	5	5555	2	KED
>	In	115		ug/L			1083745	1099841	2	Standard
	Ag	107	4.225	ug/L	0.018	0	149	57315	3	Standard
	Sb	121	0.019	ug/L	0.002	9	365	673	2	Standard
	Sb	123	0.019	ug/L	0.004	20	298	536	7	Standard
>	Tb	159		ug/L			2478750	2401678	0	Standard
	Pb	208	5.204	ug/L	0.015	0	570	521339	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV9
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 22:54:42
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	20255	1	Standard
	Cl	**37**		ug/L			10158397	10516240	1	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1341484	1	Standard
|	**Cr**	**52**	**50.653**	ug/L	0.304	0	17695	1263444	1	Standard
|	**Cr**	**53**	**52.693**	ug/L	1.184	2	206	144565	2	Standard
|	**Fe**	**54**	**4958.446**	ug/L	74.604	1	81858	12811690	0	Standard
|	**Fe**	**57**	**4990.422**	ug/L	78.706	1	18705	4640383	1	Standard
⌊	**Mn**	**55**	**53.822**	ug/L	0.435	0	771	1808548	1	Standard
⌈>	**Ge**	**72**		ug/L			88171	87727	1	KED
|	**Ni**	**60**	**49.925**	ug/L	1.324	2	23	65604	2	KED
|	**Ni**	**62**	**50.303**	ug/L	1.015	2	5	10600	1	KED
|	**Cu**	**63**	**49.974**	ug/L	0.684	1	74	184415	1	KED
|	**Cu**	**65**	**50.811**	ug/L	0.998	1	29	94887	0	KED
|	**Zn**	**66**	**50.647**	ug/L	1.151	2	57	29973	2	KED
|	**Zn**	**67**	**49.881**	ug/L	0.893	1	11	4775	2	KED
|	**As**	**75**	**50.152**	ug/L	0.689	1	4	16267	1	KED
⌊	**Se**	**78**	**51.811**	ug/L	2.068	3	18	2019	4	KED
	Y	**89**		ug/L			630514	605187	0	Standard
	Kr	**83**		ug/L			67	53	9	Standard
⌈>	**In-1**	**115**		ug/L			28156	27831	2	KED
|	**Mo**	**98**	**48.657**	ug/L	1.211	2	11	80220	1	KED
|	**Cd**	**111**	**50.991**	ug/L	1.188	2	6	21503	1	KED
⌊	**Cd**	**114**	**50.113**	ug/L	1.158	2	5	54089	1	KED
⌈>	**In**	**115**		ug/L			1083745	1057492	0	Standard
|	**Ag**	**107**	**47.139**	ug/L	0.950	2	149	613316	1	Standard
|	**Sb**	**121**	**50.943**	ug/L	1.765	3	365	786492	3	Standard
⌊	**Sb**	**123**	**50.225**	ug/L	2.292	4	298	590848	4	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2420452	2	Standard
⌊	**Pb**	**208**	**50.529**	ug/L	0.744	1	570	5095604	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB9
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 23:01:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18966	18176	2	Standard
	Cl	**37**		ug/L			10158397	10153858	0	Standard
⌈>	**Sc**	**45**		ug/L			1402147	1342984	1	Standard
|	**Cr**	**52**	**0.040**	ug/L	0.006	14	17695	17929	1	Standard
|	**Cr**	**53**	**0.163**	ug/L	0.007	4	206	645	3	Standard
|	**Fe**	**54**	**-0.573**	ug/L	0.335	58	81858	76927	0	Standard
|	**Fe**	**57**	**-0.155**	ug/L	0.119	76	18705	17772	1	Standard
⌊	**Mn**	**55**	**0.025**	ug/L	0.004	13	771	1593	7	Standard
⌈>	**Ge**	**72**		ug/L			88171	89561	1	KED
|	**Ni**	**60**	**-0.004**	ug/L	0.002	57	23	18	15	KED
|	**Ni**	**62**	**-0.006**	ug/L	0.015	253	5	3	86	KED
|	**Cu**	**63**	**0.004**	ug/L	0.005	131	74	90	19	KED
|	**Cu**	**65**	**0.003**	ug/L	0.005	153	29	36	27	KED
|	**Zn**	**66**	**0.051**	ug/L	0.014	27	57	88	10	KED
|	**Zn**	**67**	**0.038**	ug/L	0.074	193	11	15	45	KED
|	**As**	**75**	**0.003**	ug/L	0.010	370	4	5	62	KED
⌊	**Se**	**78**	**-0.000**	ug/L	0.030	12081	18	18	6	KED
	Y	**89**		ug/L			630514	601644	1	Standard
	Kr	**83**		ug/L			67	46	11	Standard
⌈>	**In-1**	**115**		ug/L			28156	28391	0	KED
|	**Mo**	**98**	**0.010**	ug/L	0.011	107	11	27	64	KED
|	**Cd**	**111**	**-0.000**	ug/L	0.003	2884	6	6	22	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.003	113	5	8	36	KED
⌈>	**In**	**115**		ug/L			1083745	1057122	1	Standard
|	**Ag**	**107**	**-0.003**	ug/L	0.001	29	149	100	12	Standard
|	**Sb**	**121**	**0.087**	ug/L	0.005	6	365	1701	3	Standard
⌊	**Sb**	**123**	**0.091**	ug/L	0.004	4	298	1360	2	Standard
⌈>	**Tb**	**159**		ug/L			2478750	2365821	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.002	170	570	660	29	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 23:06:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				18872	0	Standard
	Cl	**37**		ug/L				10118226	1	Standard
⌈>	**Sc**	**45**		ug/L				1333928	0	Standard
|	**Cr**	**52**		ug/L				18153	0	Standard
|	**Cr**	**53**		ug/L				567	2	Standard
|	**Fe**	**54**		ug/L				77631	2	Standard
|	**Fe**	**57**		ug/L				17962	1	Standard
⌊	**Mn**	**55**		ug/L				1594	1	Standard
⌈>	**Ge**	**72**		ug/L				91164	0	KED
|	**Ni**	**60**		ug/L				24	32	KED
|	**Ni**	**62**		ug/L				4	65	KED
|	**Cu**	**63**		ug/L				99	24	KED
|	**Cu**	**65**		ug/L				46	11	KED
|	**Zn**	**66**		ug/L				95	6	KED
|	**Zn**	**67**		ug/L				17	22	KED
|	**As**	**75**		ug/L				4	35	KED
⌊	**Se**	**78**		ug/L				19	21	KED
	Y	**89**		ug/L				611804	0	Standard
	Kr	**83**		ug/L				36	10	Standard
⌈>	**In-1**	**115**		ug/L				28986	0	KED
|	**Mo**	**98**		ug/L				13	37	KED
|	**Cd**	**111**		ug/L				6	57	KED
⌊	**Cd**	**114**		ug/L				10	46	KED
⌈>	**In**	**115**		ug/L				1059327	2	Standard
|	**Ag**	**107**		ug/L				57	11	Standard
|	**Sb**	**121**		ug/L				543	6	Standard
⌊	**Sb**	**123**		ug/L				381	10	Standard
⌈>	**Tb**	**159**		ug/L				2368674	0	Standard
⌊	**Pb**	**208**		ug/L				568	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVA
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 23:10:52
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	20273	1	Standard
	Cl	**37**		ug/L			10118226	10447072	0	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1321317	1	Standard
|	**Cr**	**52**	**51.829**	ug/L	0.611	1	18153	1274185	1	Standard
|	**Cr**	**53**	**52.375**	ug/L	1.777	3	567	141842	1	Standard
|	**Fe**	**54**	**4922.342**	ug/L	136.807	2	77631	12525708	0	Standard
|	**Fe**	**57**	**5073.157**	ug/L	90.051	1	17962	4645726	0	Standard
⌊	**Mn**	**55**	**52.995**	ug/L	1.056	1	1594	1754655	1	Standard
⌈>	**Ge**	**72**		ug/L			91164	88545	0	KED
|	**Ni**	**60**	**49.955**	ug/L	0.323	0	24	66269	0	KED
|	**Ni**	**62**	**50.961**	ug/L	0.615	1	4	10840	1	KED
|	**Cu**	**63**	**49.938**	ug/L	0.623	1	99	186049	1	KED
|	**Cu**	**65**	**49.978**	ug/L	0.822	1	46	94234	0	KED
|	**Zn**	**66**	**51.141**	ug/L	0.144	0	95	30587	0	KED
|	**Zn**	**67**	**49.900**	ug/L	0.339	0	17	4826	0	KED
|	**As**	**75**	**50.409**	ug/L	0.175	0	4	16505	0	KED
⌊	**Se**	**78**	**51.349**	ug/L	0.608	1	19	2021	1	KED
	Y	**89**		ug/L			611804	604111	0	Standard
	Kr	**83**		ug/L			36	52	14	Standard
⌈>	**In-1**	**115**		ug/L			28986	27701	0	KED
|	**Mo**	**98**	**49.297**	ug/L	0.286	0	13	80924	0	KED
|	**Cd**	**111**	**50.406**	ug/L	0.463	0	6	21164	1	KED
⌊	**Cd**	**114**	**49.713**	ug/L	0.331	0	10	53425	0	KED
⌈>	**In**	**115**		ug/L			1059327	1011710	0	Standard
|	**Ag**	**107**	**48.985**	ug/L	0.595	1	57	609652	0	Standard
|	**Sb**	**121**	**50.521**	ug/L	0.620	1	543	746436	1	Standard
⌊	**Sb**	**123**	**49.958**	ug/L	1.827	3	381	562303	3	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2362951	1	Standard
⌊	**Pb**	**208**	**51.331**	ug/L	0.354	0	568	5054361	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBA
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 23:18:05
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	18173	1	Standard
	Cl	**37**		ug/L			10118226	10065092	0	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1326151	1	Standard
|	**Cr**	**52**	**-0.011**	ug/L	0.023	201	18153	17769	3	Standard
|	**Cr**	**53**	**-0.023**	ug/L	0.018	77	567	503	9	Standard
|	**Fe**	**54**	**0.960**	ug/L	1.633	169	77631	79602	4	Standard
|	**Fe**	**57**	**1.868**	ug/L	1.451	77	17962	19567	6	Standard
⌊	**Mn**	**55**	**-0.005**	ug/L	0.014	275	1594	1420	31	Standard
⌈>	**Ge**	**72**		ug/L			91164	90291	1	KED
|	**Ni**	**60**	**-0.002**	ug/L	0.005	289	24	21	33	KED
|	**Ni**	**62**	**0.000**	ug/L	0.014	4177	4	4	65	KED
|	**Cu**	**63**	**-0.005**	ug/L	0.003	51	99	78	12	KED
|	**Cu**	**65**	**-0.003**	ug/L	0.006	188	46	40	25	KED
|	**Zn**	**66**	**-0.001**	ug/L	0.009	1393	95	94	7	KED
|	**Zn**	**67**	**-0.012**	ug/L	0.057	479	17	15	36	KED
|	**As**	**75**	**0.005**	ug/L	0.004	82	4	5	24	KED
⌊	**Se**	**78**	**-0.013**	ug/L	0.090	671	19	19	17	KED
	Y	**89**		ug/L			611804	608730	0	Standard
	Kr	**83**		ug/L			36	52	23	Standard
⌈>	**In-1**	**115**		ug/L			28986	28799	0	KED
|	**Mo**	**98**	**0.006**	ug/L	0.002	34	13	23	15	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.005	369	6	6	36	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.002	64	10	7	26	KED
⌈>	**In**	**115**		ug/L			1059327	1089474	1	Standard
|	**Ag**	**107**	**0.009**	ug/L	0.010	105	57	184	72	Standard
|	**Sb**	**121**	**0.092**	ug/L	0.016	16	543	2028	12	Standard
⌊	**Sb**	**123**	**0.101**	ug/L	0.011	11	381	1618	9	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2380712	0	Standard
⌊	**Pb**	**208**	**0.009**	ug/L	0.014	160	568	1441	97	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0880-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 23:22:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18872	35946	0	Standard
	Cl	37		ug/L			10118226	10129187	1	Standard
>	Sc	45		ug/L			1333928	1361245	0	Standard
	Cr	52	0.103	ug/L	0.010	9	18153	21100	1	Standard
	Cr	53	0.052	ug/L	0.011	20	567	725	3	Standard
	Fe	54	6.328	ug/L	0.720	11	77631	95714	1	Standard
	Fe	57	3.011	ug/L	0.324	10	17962	21160	1	Standard
	Mn	55	0.029	ug/L	0.006	21	1594	2605	8	Standard
>	Ge	72		ug/L			91164	92468	0	KED
	Ni	60	-0.004	ug/L	0.003	68	24	19	20	KED
	Ni	62	-0.006	ug/L	0.010	164	4	3	69	KED
	Cu	63	0.038	ug/L	0.007	17	99	248	9	KED
	Cu	65	0.044	ug/L	0.003	6	46	133	5	KED
	Zn	66	0.696	ug/L	0.027	3	95	530	2	KED
	Zn	67	0.778	ug/L	0.204	26	17	95	22	KED
	As	75	0.003	ug/L	0.007	263	4	5	46	KED
	Se	78	-0.013	ug/L	0.120	892	19	19	24	KED
	Y	89		ug/L			611804	612051	1	Standard
	Kr	83		ug/L			36	43	5	Standard
>	In-1	115		ug/L			28986	28829	1	KED
	Mo	98	0.010	ug/L	0.001	8	13	29	3	KED
	Cd	111	0.001	ug/L	0.003	321	6	6	15	KED
	Cd	114	-0.001	ug/L	0.002	343	10	9	22	KED
>	In	115		ug/L			1059327	1076107	2	Standard
	Ag	107	0.004	ug/L	0.007	187	57	104	82	Standard
	Sb	121	0.012	ug/L	0.007	52	543	745	11	Standard
	Sb	123	0.017	ug/L	0.008	50	381	585	15	Standard
>	Tb	159		ug/L			2368674	2398912	0	Standard
	Pb	208	0.004	ug/L	0.005	151	568	926	57	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0880-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 23:27:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18872	37716	0	Standard
	Cl	37		ug/L			10118226	10187875	1	Standard
>	Sc	45		ug/L			1333928	1365155	1	Standard
	Cr	52	25.611	ug/L	0.227	0	18153	659949	0	Standard
	Cr	53	26.504	ug/L	0.363	1	567	74467	0	Standard
	Fe	54	5.349	ug/L	0.566	10	77631	93416	0	Standard
	Fe	57	1.786	ug/L	0.191	10	17962	20066	1	Standard
	Mn	55	27.381	ug/L	0.338	1	1594	937560	0	Standard
>	Ge	72		ug/L			91164	92412	0	KED
	Ni	60	24.948	ug/L	0.183	0	24	34552	0	KED
	Ni	62	25.505	ug/L	0.862	3	4	5665	3	KED
	Cu	63	25.837	ug/L	0.304	1	99	100510	1	KED
	Cu	65	26.031	ug/L	0.156	0	46	51253	1	KED
	Zn	66	81.062	ug/L	0.372	0	95	50542	0	KED
	Zn	67	79.780	ug/L	1.720	2	17	8044	2	KED
	As	75	24.507	ug/L	0.409	1	4	8376	1	KED
	Se	78	79.543	ug/L	0.334	0	19	3256	0	KED
	Y	89		ug/L			611804	624272	1	Standard
	Kr	83		ug/L			36	42	9	Standard
>	In-1	115		ug/L			28986	28943	3	KED
	Mo	98	24.142	ug/L	0.579	2	13	41394	0	KED
	Cd	111	24.735	ug/L	1.103	4	6	10845	1	KED
	Cd	114	24.624	ug/L	0.250	1	10	27651	2	KED
>	In	115		ug/L			1059327	1089943	1	Standard
	Ag	107	23.900	ug/L	0.531	2	57	320432	1	Standard
	Sb	121	24.099	ug/L	1.033	4	543	383734	2	Standard
	Sb	123	24.276	ug/L	0.476	1	381	294574	1	Standard
>	Tb	159		ug/L			2368674	2427491	1	Standard
	Pb	208	25.575	ug/L	0.192	0	568	2587172	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0881-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 23:31:31
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	30728	2	Standard
	Cl	**37**		ug/L			10118226	10116090	0	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1314246	0	Standard
|	**Cr**	**52**	**0.095**	ug/L	0.012	13	18153	20180	2	Standard
|	**Cr**	**53**	**0.049**	ug/L	0.006	13	567	690	2	Standard
|	**Fe**	**54**	**0.493**	ug/L	0.174	35	77631	77725	0	Standard
|	**Fe**	**57**	**1.948**	ug/L	0.360	18	17962	19464	1	Standard
⌊	**Mn**	**55**	**0.021**	ug/L	0.002	7	1594	2270	2	Standard
⌈>	**Ge**	**72**		ug/L			91164	91407	1	KED
|	**Ni**	**60**	**-0.001**	ug/L	0.003	336	24	22	22	KED
|	**Ni**	**62**	**-0.006**	ug/L	0.010	173	4	3	69	KED
|	**Cu**	**63**	**0.009**	ug/L	0.004	42	99	133	10	KED
|	**Cu**	**65**	**0.007**	ug/L	0.004	56	46	59	10	KED
|	**Zn**	**66**	**0.916**	ug/L	0.030	3	95	659	2	KED
|	**Zn**	**67**	**0.810**	ug/L	0.103	12	17	97	11	KED
|	**As**	**75**	**0.005**	ug/L	0.008	162	4	5	46	KED
⌊	**Se**	**78**	**-0.015**	ug/L	0.117	759	19	19	23	KED
	Y	**89**		ug/L			611804	608024	1	Standard
	Kr	**83**		ug/L			36	50	10	Standard
⌈>	**In-1**	**115**		ug/L			28986	28018	1	KED
|	**Mo**	**98**	**0.001**	ug/L	0.000	51	13	14	5	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.011	1038	6	6	81	KED
⌊	**Cd**	**114**	**-0.005**	ug/L	0.002	36	10	5	36	KED
⌈>	**In**	**115**		ug/L			1059327	1009011	2	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	37	57	80	12	Standard
|	**Sb**	**121**	**-0.014**	ug/L	0.002	13	543	306	11	Standard
⌊	**Sb**	**123**	**-0.012**	ug/L	0.001	11	381	231	8	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2355274	1	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	33	568	450	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0881-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 23:35:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	38373	1	Standard
	Cl	**37**		ug/L			10118226	10236150	1	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1348542	1	Standard
|	**Cr**	**52**	**25.625**	ug/L	0.418	1	18153	652217	0	Standard
|	**Cr**	**53**	**25.968**	ug/L	0.290	1	567	72088	1	Standard
|	**Fe**	**54**	**0.158**	ug/L	0.574	363	77631	78878	1	Standard
|	**Fe**	**57**	**1.799**	ug/L	0.137	7	17962	19835	2	Standard
⌊	**Mn**	**55**	**27.293**	ug/L	0.301	1	1594	923160	0	Standard
⌈>	**Ge**	**72**		ug/L			91164	90972	1	KED
|	**Ni**	**60**	**24.773**	ug/L	0.306	1	24	33779	2	KED
|	**Ni**	**62**	**25.109**	ug/L	0.594	2	4	5489	1	KED
|	**Cu**	**63**	**25.444**	ug/L	0.374	1	99	97426	0	KED
|	**Cu**	**65**	**25.581**	ug/L	0.209	0	46	49581	1	KED
|	**Zn**	**66**	**82.321**	ug/L	0.646	0	95	50526	0	KED
|	**Zn**	**67**	**81.102**	ug/L	2.407	2	17	8047	1	KED
|	**As**	**75**	**24.667**	ug/L	0.050	0	4	8299	0	KED
⌊	**Se**	**78**	**83.365**	ug/L	1.202	1	19	3358	0	KED
	Y	**89**		ug/L			611804	610324	0	Standard
	Kr	**83**		ug/L			36	58	29	Standard
⌈>	**In-1**	**115**		ug/L			28986	28458	1	KED
|	**Mo**	**98**	**24.177**	ug/L	0.277	1	13	40776	0	KED
|	**Cd**	**111**	**25.056**	ug/L	0.189	0	6	10811	1	KED
⌊	**Cd**	**114**	**24.895**	ug/L	0.638	2	10	27484	1	KED
⌈>	**In**	**115**		ug/L			1059327	1076273	0	Standard
|	**Ag**	**107**	**22.384**	ug/L	0.299	1	57	296413	1	Standard
|	**Sb**	**121**	**23.510**	ug/L	0.376	1	543	369812	1	Standard
⌊	**Sb**	**123**	**23.643**	ug/L	0.483	2	381	283378	2	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2392191	1	Standard
⌊	**Pb**	**208**	**25.455**	ug/L	0.380	1	568	2537321	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0447-01
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 23:40:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18872	52920	0	Standard
	Cl	37		ug/L			10118226	10478565	1	Standard
⌈>	Sc	45		ug/L			1333928	1517172	3	Standard
|	Cr	52	1.484	ug/L	0.113	7	18153	61870	2	Standard
|	Cr	53	2.159	ug/L	0.081	3	567	7331	2	Standard
|	Fe	54	93.673	ug/L	4.835	5	77631	360042	0	Standard
|	Fe	57	404.310	ug/L	22.796	5	17962	443396	1	Standard
⌊	Mn	55	5.794	ug/L	0.157	2	1594	221919	4	Standard
⌈>	Ge	72		ug/L			91164	78649	0	KED
|	Ni	60	2.202	ug/L	0.163	7	24	2614	7	KED
|	Ni	62	2.148	ug/L	0.147	6	4	409	6	KED
|	Cu	63	1.080	ug/L	0.022	2	99	3656	2	KED
|	Cu	65	1.089	ug/L	0.040	3	46	1863	3	KED
|	Zn	66	17.654	ug/L	0.107	0	95	9432	0	KED
|	Zn	67	18.134	ug/L	0.508	2	17	1567	3	KED
|	As	75	0.302	ug/L	0.028	9	4	91	9	KED
⌊	Se	78	0.275	ug/L	0.138	50	19	26	18	KED
	Y	89		ug/L			611804	573260	3	Standard
	Kr	83		ug/L			36	46	9	Standard
⌈>	In-1	115		ug/L			28986	25360	0	KED
|	Mo	98	1.470	ug/L	0.033	2	13	2220	1	KED
|	Cd	111	0.082	ug/L	0.013	16	6	37	12	KED
⌊	Cd	114	0.060	ug/L	0.008	13	10	67	12	KED
⌈>	In	115		ug/L			1059327	987296	3	Standard
|	Ag	107	0.022	ug/L	0.017	76	57	328	67	Standard
|	Sb	121	0.457	ug/L	0.003	0	543	7093	3	Standard
⌊	Sb	123	0.469	ug/L	0.015	3	381	5507	5	Standard
⌈>	Tb	159		ug/L			2368674	2301049	2	Standard
⌊	Pb	208	1.969	ug/L	0.055	2	568	189202	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0447-03
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 23:44:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18872	79847	0	Standard
Cl	37		ug/L			10118226	35802915	2	Standard
> Sc	45		ug/L			1333928	1719723	2	Standard
Cr	52	2.749	ug/L	0.117	4	18153	110085	1	Standard
Cr	53	31.293	ug/L	0.344	1	567	110623	1	Standard
Fe	54	2017.586	ug/L	12.080	0	77631	6742820	1	Standard
Fe	57	2369.435	ug/L	0.570	0	17962	2836990	2	Standard
Mn	55	158.211	ug/L	2.645	1	1594	6816044	3	Standard
> Ge	72		ug/L			91164	90954	0	KED
Ni	60	4.846	ug/L	0.020	0	24	6625	1	KED
Ni	62	5.042	ug/L	0.268	5	4	1106	6	KED
Cu	63	3.764	ug/L	0.043	1	99	14495	2	KED
Cu	65	3.778	ug/L	0.018	0	46	7361	1	KED
Zn	66	7.686	ug/L	0.111	1	95	4803	2	KED
Zn	67	11.438	ug/L	0.944	8	17	1149	7	KED
As	75	6.373	ug/L	0.118	1	4	2146	0	KED
Se	78	1.062	ug/L	0.048	4	19	62	3	KED
Y	89		ug/L			611804	719921	1	Standard
Kr	83		ug/L			36	139	3	Standard
> In-1	115		ug/L			28986	28419	0	KED
Mo	98	4.735	ug/L	0.105	2	13	7985	1	KED
Cd	111	0.069	ug/L	0.004	6	6	36	4	KED
Cd	114	0.050	ug/L	0.010	19	10	65	17	KED
> In	115		ug/L			1059327	908756	2	Standard
Ag	107	0.015	ug/L	0.001	7	57	220	7	Standard
Sb	121	0.089	ug/L	0.005	6	543	1640	4	Standard
Sb	123	0.103	ug/L	0.007	6	381	1363	3	Standard
> Tb	159		ug/L			2368674	2591767	0	Standard
Pb	208	0.954	ug/L	0.010	1	568	103659	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0447-07
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 23:49:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18872	44614	2	Standard
	Cl	37		ug/L			10118226	12923908	1	Standard
>	Sc	45		ug/L			1333928	1493118	1	Standard
	Cr	52	0.341	ug/L	0.001	0	18153	29670	2	Standard
	Cr	53	5.664	ug/L	0.085	1	567	17905	0	Standard
	Fe	54	3.539	ug/L	0.459	12	77631	96997	0	Standard
	Fe	57	185.489	ug/L	1.720	0	17962	211346	1	Standard
	Mn	55	0.889	ug/L	0.001	0	1594	35034	2	Standard
>	Ge	72		ug/L			91164	84538	1	KED
	Ni	60	0.674	ug/L	0.033	4	24	876	5	KED
	Ni	62	0.689	ug/L	0.063	9	4	144	9	KED
	Cu	63	3.019	ug/L	0.036	1	99	10825	0	KED
	Cu	65	3.047	ug/L	0.086	2	46	5525	1	KED
	Zn	66	2.000	ug/L	0.090	4	95	1227	4	KED
	Zn	67	4.009	ug/L	0.268	6	17	384	6	KED
	As	75	1.214	ug/L	0.042	3	4	383	3	KED
	Se	78	1.510	ug/L	0.070	4	19	74	4	KED
	Y	89		ug/L			611804	608047	1	Standard
	Kr	83		ug/L			36	59	17	Standard
>	In-1	115		ug/L			28986	26687	0	KED
	Mo	98	3.241	ug/L	0.145	4	13	5136	4	KED
	Cd	111	0.012	ug/L	0.005	43	6	11	19	KED
	Cd	114	0.005	ug/L	0.001	23	10	14	8	KED
>	In	115		ug/L			1059327	985325	3	Standard
	Ag	107	-0.000	ug/L	0.000	13	57	48	2	Standard
	Sb	121	0.137	ug/L	0.004	3	543	2475	5	Standard
	Sb	123	0.142	ug/L	0.009	6	381	1909	4	Standard
>	Tb	159		ug/L			2368674	2370946	0	Standard
	Pb	208	0.119	ug/L	0.001	0	568	12323	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0880-DUP1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 30, 2020 23:54:17
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18872	43499	1	Standard
	Cl	37		ug/L			10118226	12968511	1	Standard
>	Sc	45		ug/L			1333928	1539126	0	Standard
	Cr	52	0.389	ug/L	0.013	3	18153	31943	1	Standard
	Cr	53	5.391	ug/L	0.043	0	567	17601	0	Standard
	Fe	54	3.422	ug/L	0.581	16	77631	99657	1	Standard
	Fe	57	187.844	ug/L	4.803	2	17962	220371	2	Standard
	Mn	55	0.897	ug/L	0.081	9	1594	36405	8	Standard
>	Ge	72		ug/L			91164	80596	1	KED
	Ni	60	0.650	ug/L	0.012	1	24	806	2	KED
	Ni	62	0.593	ug/L	0.079	13	4	118	13	KED
	Cu	63	3.273	ug/L	0.015	0	99	11180	0	KED
	Cu	65	3.275	ug/L	0.077	2	46	5660	1	KED
	Zn	66	1.289	ug/L	0.094	7	95	784	6	KED
	Zn	67	3.127	ug/L	0.284	9	17	289	8	KED
	As	75	1.221	ug/L	0.058	4	4	367	5	KED
	Se	78	1.206	ug/L	0.215	17	19	60	13	KED
	Y	89		ug/L			611804	601162	1	Standard
	Kr	83		ug/L			36	50	29	Standard
>	In-1	115		ug/L			28986	26620	1	KED
	Mo	98	3.222	ug/L	0.048	1	13	5093	0	KED
	Cd	111	0.004	ug/L	0.012	337	6	7	66	KED
	Cd	114	0.017	ug/L	0.004	23	10	27	14	KED
>	In	115		ug/L			1059327	1021126	0	Standard
	Ag	107	0.004	ug/L	0.007	167	57	109	82	Standard
	Sb	121	0.148	ug/L	0.006	3	543	2731	2	Standard
	Sb	123	0.152	ug/L	0.008	5	381	2093	4	Standard
>	Tb	159		ug/L			2368674	2416450	1	Standard
	Pb	208	0.015	ug/L	0.008	55	568	2062	40	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0880-MS1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 00:00:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18872	43529	2	Standard
	Cl	37		ug/L			10118226	13047959	1	Standard
>	Sc	45		ug/L			1333928	1542396	1	Standard
	Cr	52	22.342	ug/L	0.681	3	18153	653101	2	Standard
	Cr	53	27.602	ug/L	0.342	1	567	87601	1	Standard
	Fe	54	3.022	ug/L	0.536	17	77631	98678	1	Standard
	Fe	57	188.617	ug/L	4.257	2	17962	221645	1	Standard
	Mn	55	23.485	ug/L	0.335	1	1594	908845	0	Standard
>	Ge	72		ug/L			91164	81179	1	KED
	Ni	60	24.995	ug/L	0.282	1	24	30408	1	KED
	Ni	62	25.143	ug/L	0.592	2	4	4904	1	KED
	Cu	63	26.829	ug/L	0.117	0	99	91681	1	KED
	Cu	65	27.002	ug/L	0.208	0	46	46700	1	KED
	Zn	66	73.323	ug/L	0.407	0	95	40170	1	KED
	Zn	67	73.488	ug/L	0.627	0	17	6510	2	KED
	As	75	25.815	ug/L	0.415	1	4	7750	1	KED
	Se	78	79.742	ug/L	2.000	2	19	2867	2	KED
	Y	89		ug/L			611804	609668	0	Standard
	Kr	83		ug/L			36	51	20	Standard
>	In-1	115		ug/L			28986	26565	1	KED
	Mo	98	28.756	ug/L	0.317	1	13	45273	1	KED
	Cd	111	23.441	ug/L	0.565	2	6	9440	1	KED
	Cd	114	23.520	ug/L	0.192	0	10	24243	1	KED
>	In	115		ug/L			1059327	1046996	1	Standard
	Ag	107	17.954	ug/L	0.271	1	57	231249	0	Standard
	Sb	121	24.782	ug/L	0.713	2	543	379066	1	Standard
	Sb	123	25.052	ug/L	0.518	2	381	292013	2	Standard
>	Tb	159		ug/L			2368674	2405480	0	Standard
	Pb	208	23.464	ug/L	0.125	0	568	2352223	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL9
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 00:08:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	21947	1	Standard
	Cl	**37**		ug/L			10118226	10872641	0	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1414800	0	Standard
|	**Cr**	**52**	**0.103**	ug/L	0.007	7	18153	21923	0	Standard
|	**Cr**	**53**	**0.163**	ug/L	0.022	13	567	1073	6	Standard
|	**Fe**	**54**	**-1.407**	ug/L	0.354	25	77631	78527	1	Standard
|	**Fe**	**57**	**13.330**	ug/L	0.343	2	17962	32074	0	Standard
⌊	**Mn**	**55**	**-0.026**	ug/L	0.001	4	1594	786	4	Standard
⌈>	**Ge**	**72**		ug/L			91164	91995	1	KED
|	**Ni**	**60**	**-0.006**	ug/L	0.004	74	24	16	35	KED
|	**Ni**	**62**	**0.003**	ug/L	0.005	178	4	5	21	KED
|	**Cu**	**63**	**-0.005**	ug/L	0.006	135	99	81	30	KED
|	**Cu**	**65**	**-0.004**	ug/L	0.003	77	46	40	12	KED
|	**Zn**	**66**	**-0.057**	ug/L	0.005	9	95	61	3	KED
|	**Zn**	**67**	**-0.065**	ug/L	0.055	85	17	10	50	KED
|	**As**	**75**	**-0.002**	ug/L	0.005	191	4	3	49	KED
⌊	**Se**	**78**	**-0.108**	ug/L	0.051	47	19	15	12	KED
	Y	**89**		ug/L			611804	638012	1	Standard
	Kr	**83**		ug/L			36	50	9	Standard
⌈>	**In-1**	**115**		ug/L			28986	29501	1	KED
|	**Mo**	**98**	**-0.003**	ug/L	0.004	141	13	8	83	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.006	199	6	5	53	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.007	12765	10	10	73	KED
⌈>	**In**	**115**		ug/L			1059327	1118912	1	Standard
|	**Ag**	**107**	**0.003**	ug/L	0.001	27	57	102	10	Standard
|	**Sb**	**121**	**-0.023**	ug/L	0.000	2	543	194	4	Standard
⌊	**Sb**	**123**	**-0.021**	ug/L	0.002	9	381	143	17	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2464137	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	18	568	659	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVB
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 00:13:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	20648	1	Standard
	Cl	**37**		ug/L			10118226	10532754	2	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1383143	1	Standard
|	**Cr**	**52**	**51.359**	ug/L	0.769	1	18153	1321969	1	Standard
|	**Cr**	**53**	**53.809**	ug/L	0.718	1	567	152576	0	Standard
|	**Fe**	**54**	**4925.404**	ug/L	15.353	0	77631	13124234	1	Standard
|	**Fe**	**57**	**4956.425**	ug/L	48.803	0	17962	4752526	1	Standard
⌊	**Mn**	**55**	**54.440**	ug/L	0.351	0	1594	1887142	0	Standard
⌈>	**Ge**	**72**		ug/L			91164	92527	0	KED
|	**Ni**	**60**	**49.196**	ug/L	0.508	1	24	68197	0	KED
|	**Ni**	**62**	**50.182**	ug/L	0.641	1	4	11156	1	KED
|	**Cu**	**63**	**49.643**	ug/L	0.622	1	99	193252	0	KED
|	**Cu**	**65**	**49.828**	ug/L	0.639	1	46	98187	1	KED
|	**Zn**	**66**	**49.969**	ug/L	0.629	1	95	31232	1	KED
|	**Zn**	**67**	**49.516**	ug/L	1.638	3	17	5004	2	KED
|	**As**	**75**	**49.629**	ug/L	0.381	0	4	16980	0	KED
⌊	**Se**	**78**	**51.563**	ug/L	1.369	2	19	2120	2	KED
	Y	**89**		ug/L			611804	632131	1	Standard
	Kr	**83**		ug/L			36	34	12	Standard
⌈>	**In-1**	**115**		ug/L			28986	29384	0	KED
|	**Mo**	**98**	**48.460**	ug/L	0.185	0	13	84382	0	KED
|	**Cd**	**111**	**49.696**	ug/L	0.531	1	6	22134	1	KED
⌊	**Cd**	**114**	**49.682**	ug/L	0.577	1	10	56633	0	KED
⌈>	**In**	**115**		ug/L			1059327	1105564	1	Standard
|	**Ag**	**107**	**47.080**	ug/L	0.786	1	57	640276	1	Standard
|	**Sb**	**121**	**49.347**	ug/L	1.037	2	543	796568	1	Standard
⌊	**Sb**	**123**	**48.747**	ug/L	1.800	3	381	599486	2	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2508230	0	Standard
⌊	**Pb**	**208**	**50.595**	ug/L	0.136	0	568	5288351	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBB
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 00:21:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	19092	2	Standard
	Cl	**37**		ug/L			10118226	9992946	1	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1377975	0	Standard
|	**Cr**	**52**	**-0.036**	ug/L	0.016	45	18153	17840	1	Standard
|	**Cr**	**53**	**0.166**	ug/L	0.015	9	567	1054	3	Standard
|	**Fe**	**54**	**-0.789**	ug/L	0.190	24	77631	78113	0	Standard
|	**Fe**	**57**	**2.267**	ug/L	0.418	18	17962	20711	1	Standard
⌊	**Mn**	**55**	**-0.023**	ug/L	0.001	2	1594	862	1	Standard
⌈>	**Ge**	**72**		ug/L			91164	93549	1	KED
|	**Ni**	**60**	**-0.002**	ug/L	0.008	456	24	22	51	KED
|	**Ni**	**62**	**-0.001**	ug/L	0.013	1890	4	4	65	KED
|	**Cu**	**63**	**-0.004**	ug/L	0.001	28	99	86	3	KED
|	**Cu**	**65**	**0.002**	ug/L	0.008	383	46	52	27	KED
|	**Zn**	**66**	**-0.001**	ug/L	0.017	1897	95	97	11	KED
|	**Zn**	**67**	**-0.054**	ug/L	0.031	57	17	12	24	KED
|	**As**	**75**	**0.005**	ug/L	0.004	79	4	5	20	KED
⌊	**Se**	**78**	**-0.078**	ug/L	0.072	92	19	17	19	KED
	Y	**89**		ug/L			611804	629781	1	Standard
	Kr	**83**		ug/L			36	41	16	Standard
⌈>	**In-1**	**115**		ug/L			28986	29138	1	KED
|	**Mo**	**98**	**0.007**	ug/L	0.002	33	13	24	15	KED
|	**Cd**	**111**	**0.001**	ug/L	0.008	1302	6	6	51	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.001	48	10	8	12	KED
⌈>	**In**	**115**		ug/L			1059327	1089406	0	Standard
|	**Ag**	**107**	**0.003**	ug/L	0.001	45	57	102	18	Standard
|	**Sb**	**121**	**0.081**	ug/L	0.004	4	543	1852	4	Standard
⌊	**Sb**	**123**	**0.084**	ug/L	0.006	6	381	1412	5	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2423154	0	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	106	568	627	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0447-05
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, July 01, 2020 00:25:37

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	43399	1	Standard
	Cl	**37**		ug/L			10118226	10207099	1	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1612294	0	Standard
|	**Cr**	**52**	**5.186**	ug/L	0.097	1	18153	175335	1	Standard
|	**Cr**	**53**	**6.809**	ug/L	0.088	1	567	23106	0	Standard
|	**Fe**	**54**	**3239.001**	ug/L	15.196	0	77631	10092442	0	Standard
|	**Fe**	**57**	**3341.737**	ug/L	41.388	1	17962	3742372	1	Standard
⌊	**Mn**	**55**	**78.763**	ug/L	0.995	1	1594	3181753	1	Standard
⌈>	**Ge**	**72**		ug/L			91164	87958	0	KED
|	**Ni**	**60**	**6.614**	ug/L	0.036	0	24	8736	0	KED
|	**Ni**	**62**	**6.765**	ug/L	0.517	7	4	1433	7	KED
|	**Cu**	**63**	**5.318**	ug/L	0.022	0	99	19764	0	KED
|	**Cu**	**65**	**5.357**	ug/L	0.091	1	46	10074	1	KED
|	**Zn**	**66**	**9.351**	ug/L	0.066	0	95	5631	0	KED
|	**Zn**	**67**	**10.425**	ug/L	0.750	7	17	1014	6	KED
|	**As**	**75**	**2.129**	ug/L	0.053	2	4	696	2	KED
⌊	**Se**	**78**	**0.363**	ug/L	0.124	33	19	33	14	KED
	Y	**89**		ug/L			611804	700074	0	Standard
	Kr	**83**		ug/L			36	55	7	Standard
⌈>	**In-1**	**115**		ug/L			28986	28561	0	KED
|	**Mo**	**98**	**2.873**	ug/L	0.043	1	13	4874	1	KED
|	**Cd**	**111**	**0.036**	ug/L	0.018	51	6	21	35	KED
⌊	**Cd**	**114**	**0.023**	ug/L	0.010	42	10	35	30	KED
⌈>	**In**	**115**		ug/L			1059327	1124160	2	Standard
|	**Ag**	**107**	**0.015**	ug/L	0.003	17	57	264	14	Standard
|	**Sb**	**121**	**0.160**	ug/L	0.002	1	543	3209	1	Standard
⌊	**Sb**	**123**	**0.163**	ug/L	0.014	8	381	2438	5	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2536713	1	Standard
⌊	**Pb**	**208**	**1.425**	ug/L	0.012	0	568	151224	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLA
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 00:32:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	20653	0	Standard
	Cl	**37**		ug/L			10118226	10256869	1	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1406629	1	Standard
|	**Cr**	**52**	**0.032**	ug/L	0.020	62	18153	19962	1	Standard
|	**Cr**	**53**	**0.082**	ug/L	0.010	12	567	835	1	Standard
|	**Fe**	**54**	**-1.605**	ug/L	0.617	38	77631	77519	1	Standard
|	**Fe**	**57**	**2.060**	ug/L	0.898	43	17962	20931	2	Standard
⌊	**Mn**	**55**	**-0.025**	ug/L	0.001	3	1594	806	1	Standard
⌈>	**Ge**	**72**		ug/L			91164	91685	2	KED
|	**Ni**	**60**	**-0.010**	ug/L	0.007	71	24	10	88	KED
|	**Ni**	**62**	**0.011**	ug/L	0.020	175	4	6	62	KED
|	**Cu**	**63**	**-0.008**	ug/L	0.002	19	99	67	10	KED
|	**Cu**	**65**	**-0.003**	ug/L	0.003	94	46	40	14	KED
|	**Zn**	**66**	**-0.035**	ug/L	0.016	45	95	74	14	KED
|	**Zn**	**67**	**-0.058**	ug/L	0.040	68	17	11	33	KED
|	**As**	**75**	**0.003**	ug/L	0.002	67	4	5	15	KED
⌊	**Se**	**78**	**-0.124**	ug/L	0.054	43	19	14	17	KED
	Y	**89**		ug/L			611804	638662	0	Standard
	Kr	**83**		ug/L			36	39	33	Standard
⌈>	**In-1**	**115**		ug/L			28986	29259	0	KED
|	**Mo**	**98**	**-0.003**	ug/L	0.002	74	13	7	53	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.005	184	6	5	44	KED
⌊	**Cd**	**114**	**-0.005**	ug/L	0.003	51	10	4	61	KED
⌈>	**In**	**115**		ug/L			1059327	1113344	1	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.001	58	57	79	12	Standard
|	**Sb**	**121**	**-0.010**	ug/L	0.004	42	543	407	14	Standard
⌊	**Sb**	**123**	**-0.007**	ug/L	0.000	7	381	315	2	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2466130	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.001	1804	568	596	15	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0447-06
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 00:38:44
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	58596	0	Standard
	Cl	**37**		ug/L			10118226	13061203	0	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1568055	1	Standard
|	**Cr**	**52**	**1.687**	ug/L	0.047	2	18153	69861	1	Standard
|	**Cr**	**53**	**7.209**	ug/L	0.055	0	567	23755	1	Standard
|	**Fe**	**54**	**1213.253**	ug/L	14.804	1	77631	3733406	0	Standard
|	**Fe**	**57**	**1375.570**	ug/L	17.833	1	17962	1510551	1	Standard
⌊	**Mn**	**55**	**34.338**	ug/L	0.527	1	1594	1350065	1	Standard
⌈>	**Ge**	**72**		ug/L			91164	81534	0	KED
|	**Ni**	**60**	**2.907**	ug/L	0.069	2	24	3571	2	KED
|	**Ni**	**62**	**2.918**	ug/L	0.270	9	4	575	8	KED
|	**Cu**	**63**	**2.498**	ug/L	0.045	1	99	8654	1	KED
|	**Cu**	**65**	**2.497**	ug/L	0.097	3	46	4375	3	KED
|	**Zn**	**66**	**5.444**	ug/L	0.088	1	95	3074	1	KED
|	**Zn**	**67**	**7.588**	ug/L	0.215	2	17	688	2	KED
|	**As**	**75**	**1.625**	ug/L	0.071	4	4	493	4	KED
⌊	**Se**	**78**	**1.417**	ug/L	0.121	8	19	68	5	KED
	Y	**89**		ug/L			611804	662597	0	Standard
	Kr	**83**		ug/L			36	56	20	Standard
⌈>	**In-1**	**115**		ug/L			28986	26607	1	KED
|	**Mo**	**98**	**3.425**	ug/L	0.046	1	13	5411	0	KED
|	**Cd**	**111**	**0.031**	ug/L	0.007	21	6	18	13	KED
⌊	**Cd**	**114**	**0.022**	ug/L	0.003	14	10	32	9	KED
⌈>	**In**	**115**		ug/L			1059327	1029988	1	Standard
|	**Ag**	**107**	**0.011**	ug/L	0.002	20	57	198	12	Standard
|	**Sb**	**121**	**0.146**	ug/L	0.012	7	543	2714	4	Standard
⌊	**Sb**	**123**	**0.148**	ug/L	0.013	8	381	2067	5	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2424988	1	Standard
⌊	**Pb**	**208**	**0.966**	ug/L	0.008	0	568	98136	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0447-02
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 00:43:13
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	48568	1	Standard
	Cl	**37**		ug/L			10118226	10624685	1	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1569690	0	Standard
|	**Cr**	**52**	**0.422**	ug/L	0.017	3	18153	33504	0	Standard
|	**Cr**	**53**	**1.314**	ug/L	0.066	5	567	4878	3	Standard
|	**Fe**	**54**	**12.447**	ug/L	0.718	5	77631	128754	1	Standard
|	**Fe**	**57**	**338.375**	ug/L	6.389	1	17962	387894	1	Standard
⌊	**Mn**	**55**	**6.166**	ug/L	0.024	0	1594	244250	0	Standard
⌈>	**Ge**	**72**		ug/L			91164	79704	0	KED
|	**Ni**	**60**	**2.379**	ug/L	0.107	4	24	2861	4	KED
|	**Ni**	**62**	**2.540**	ug/L	0.109	4	4	490	4	KED
|	**Cu**	**63**	**1.342**	ug/L	0.030	2	99	4585	1	KED
|	**Cu**	**65**	**1.394**	ug/L	0.016	1	46	2405	0	KED
|	**Zn**	**66**	**4.131**	ug/L	0.076	1	95	2301	1	KED
|	**Zn**	**67**	**5.117**	ug/L	0.495	9	17	459	9	KED
|	**As**	**75**	**0.213**	ug/L	0.029	13	4	66	12	KED
⌊	**Se**	**78**	**0.175**	ug/L	0.125	71	19	23	18	KED
	Y	**89**		ug/L			611804	598022	0	Standard
	Kr	**83**		ug/L			36	60	28	Standard
⌈>	**In-1**	**115**		ug/L			28986	25995	0	KED
|	**Mo**	**98**	**1.266**	ug/L	0.056	4	13	1960	3	KED
|	**Cd**	**111**	**0.024**	ug/L	0.012	49	6	15	31	KED
⌊	**Cd**	**114**	**0.024**	ug/L	0.009	39	10	33	27	KED
⌈>	**In**	**115**		ug/L			1059327	1061186	0	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.000	34	57	68	5	Standard
|	**Sb**	**121**	**0.246**	ug/L	0.001	0	543	4350	0	Standard
⌊	**Sb**	**123**	**0.246**	ug/L	0.005	1	381	3284	1	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2379939	1	Standard
⌊	**Pb**	**208**	**0.096**	ug/L	0.003	3	568	10093	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0447-04
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 00:47:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18872	59922	0	Standard
Cl	37		ug/L			10118226	37111529	0	Standard
> Sc	45		ug/L			1333928	1723522	0	Standard
Cr	52	0.522	ug/L	0.022	4	18153	39949	1	Standard
Cr	53	26.602	ug/L	0.323	1	567	94373	1	Standard
Fe	54	14.860	ug/L	0.835	5	77631	149335	1	Standard
Fe	57	329.734	ug/L	6.542	1	17962	415630	1	Standard
Mn	55	140.403	ug/L	2.324	1	1594	6061494	1	Standard
> Ge	72		ug/L			91164	92733	2	KED
Ni	60	1.646	ug/L	0.070	4	24	2309	1	KED
Ni	62	1.667	ug/L	0.043	2	4	375	4	KED
Cu	63	0.746	ug/L	0.010	1	99	3010	2	KED
Cu	65	0.774	ug/L	0.018	2	46	1575	1	KED
Zn	66	1.501	ug/L	0.056	3	95	1034	3	KED
Zn	67	4.881	ug/L	0.277	5	17	510	7	KED
As	75	4.637	ug/L	0.063	1	4	1593	2	KED
Se	78	0.836	ug/L	0.041	4	19	54	5	KED
Y	89		ug/L			611804	679700	1	Standard
Kr	83		ug/L			36	93	7	Standard
> In-1	115		ug/L			28986	29500	1	KED
Mo	98	5.055	ug/L	0.100	1	13	8846	0	KED
Cd	111	0.017	ug/L	0.004	25	6	14	11	KED
Cd	114	0.012	ug/L	0.012	98	10	24	54	KED
> In	115		ug/L			1059327	988862	0	Standard
Ag	107	0.002	ug/L	0.001	40	57	81	13	Standard
Sb	121	0.076	ug/L	0.001	1	543	1608	0	Standard
Sb	123	0.088	ug/L	0.004	5	381	1327	3	Standard
> Tb	159		ug/L			2368674	2667220	0	Standard
Pb	208	0.015	ug/L	0.000	1	568	2284	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0434-01
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 00:53:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18872	595086	2	Standard
	Cl	37		ug/L			10118226	10256803	1	Standard
>	Sc	45		ug/L			1333928	1377657	1	Standard
	Cr	52	2.169	ug/L	0.041	1	18153	73553	0	Standard
	Cr	53	1.851	ug/L	0.032	1	567	5795	2	Standard
	Fe	54	277.683	ug/L	1.814	0	77631	812635	1	Standard
	Fe	57	1156.745	ug/L	29.933	2	17962	1119193	3	Standard
	Mn	55	37.260	ug/L	0.300	0	1594	1286944	0	Standard
>	Ge	72		ug/L			91164	72827	1	KED
	Ni	60	5.786	ug/L	0.132	2	24	6329	1	KED
	Ni	62	5.933	ug/L	0.126	2	4	1041	2	KED
	Cu	63	4.585	ug/L	0.084	1	99	14120	1	KED
	Cu	65	4.626	ug/L	0.023	0	46	7208	1	KED
	Zn	66	4.334	ug/L	0.142	3	95	2202	3	KED
	Zn	67	5.202	ug/L	0.695	13	17	426	12	KED
	As	75	0.141	ug/L	0.018	12	4	41	12	KED
	Se	78	0.076	ug/L	0.136	178	19	18	23	KED
	Y	89		ug/L			611804	544351	1	Standard
	Kr	83		ug/L			36	68	9	Standard
>	In-1	115		ug/L			28986	25489	1	KED
	Mo	98	1.252	ug/L	0.009	0	13	1902	1	KED
	Cd	111	0.018	ug/L	0.006	31	6	12	17	KED
	Cd	114	0.008	ug/L	0.004	49	10	16	21	KED
>	In	115		ug/L			1059327	1234729	2	Standard
	Ag	107	-0.002	ug/L	0.001	39	57	43	25	Standard
	Sb	121	0.137	ug/L	0.011	8	543	3103	4	Standard
	Sb	123	0.144	ug/L	0.006	3	381	2426	2	Standard
>	Tb	159		ug/L			2368674	2556013	1	Standard
	Pb	208	0.016	ug/L	0.001	4	568	2357	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0338-02
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 00:59:06
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18872	45677	0	Standard
Cl	37		ug/L			10118226	10507015	1	Standard
> Sc	45		ug/L			1333928	1713237	1	Standard
Cr	52	4.469	ug/L	0.050	1	18153	163781	0	Standard
Cr	53	6.405	ug/L	0.139	2	567	23138	1	Standard
Fe	54	19.082	ug/L	0.783	4	77631	162292	1	Standard
Fe	57	214.672	ug/L	4.453	2	17962	277013	1	Standard
Mn	55	11.804	ug/L	0.262	2	1594	508356	0	Standard
> Ge	72		ug/L			91164	74639	1	KED
Ni	60	20.510	ug/L	0.495	2	24	22944	1	KED
Ni	62	20.944	ug/L	0.110	0	4	3757	1	KED
Cu	63	0.373	ug/L	0.013	3	99	1252	3	KED
Cu	65	0.383	ug/L	0.019	5	46	646	4	KED
Zn	66	1842.763	ug/L	7.185	0	95	926325	1	KED
Zn	67	1768.916	ug/L	7.165	0	17	143758	1	KED
As	75	2.507	ug/L	0.095	3	4	695	4	KED
Se	78	31.527	ug/L	0.519	1	19	1052	1	KED
Y	89		ug/L			611804	575918	3	Standard
Kr	83		ug/L			36	65	10	Standard
> In-1	115		ug/L			28986	26529	0	KED
Mo	98	2.122	ug/L	0.020	0	13	3347	1	KED
Cd	111	0.058	ug/L	0.008	13	6	29	9	KED
Cd	114	0.067	ug/L	0.004	6	10	79	5	KED
> In	115		ug/L			1059327	1230642	2	Standard
Ag	107	0.000	ug/L	0.000	1753	57	67	4	Standard
Sb	121	0.144	ug/L	0.005	3	543	3225	2	Standard
Sb	123	0.145	ug/L	0.008	5	381	2421	2	Standard
> Tb	159		ug/L			2368674	2522196	1	Standard
Pb	208	0.078	ug/L	0.001	1	568	8763	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0835-DUP1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 01:03:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18872	54569	1	Standard
Cl	37		ug/L			10118226	10623270	1	Standard
> Sc	45		ug/L			1333928	1738625	0	Standard
Cr	52	4.430	ug/L	0.032	0	18153	164950	0	Standard
Cr	53	6.143	ug/L	0.101	1	567	22552	1	Standard
Fe	54	15.582	ug/L	0.396	2	77631	153057	1	Standard
Fe	57	209.483	ug/L	2.853	1	17962	274912	0	Standard
Mn	55	2.553	ug/L	0.045	1	1594	113253	2	Standard
> Ge	72		ug/L			91164	75567	1	KED
Ni	60	20.017	ug/L	0.439	2	24	22670	0	KED
Ni	62	19.891	ug/L	0.269	1	4	3613	0	KED
Cu	63	0.280	ug/L	0.011	3	99	972	3	KED
Cu	65	0.303	ug/L	0.005	1	46	526	2	KED
Zn	66	1835.660	ug/L	6.860	0	95	934209	1	KED
Zn	67	1740.236	ug/L	25.683	1	17	143174	1	KED
As	75	2.547	ug/L	0.096	3	4	715	4	KED
Se	78	31.105	ug/L	0.814	2	19	1051	3	KED
Y	89		ug/L			611804	583587	1	Standard
Kr	83		ug/L			36	55	18	Standard
> In-1	115		ug/L			28986	26062	1	KED
Mo	98	2.112	ug/L	0.131	6	13	3272	5	KED
Cd	111	0.069	ug/L	0.028	40	6	33	31	KED
Cd	114	0.071	ug/L	0.010	13	10	81	12	KED
> In	115		ug/L			1059327	1224427	2	Standard
Ag	107	0.000	ug/L	0.001	2484	57	67	16	Standard
Sb	121	0.138	ug/L	0.008	5	543	3087	2	Standard
Sb	123	0.143	ug/L	0.007	4	381	2391	1	Standard
> Tb	159		ug/L			2368674	2482919	0	Standard
Pb	208	0.064	ug/L	0.001	0	568	7224	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0835-MS1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 01:08:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18872	57091	1	Standard
Cl	37		ug/L			10118226	10672799	0	Standard
> Sc	45		ug/L			1333928	1722016	1	Standard
Cr	52	24.284	ug/L	0.489	2	18153	790466	0	Standard
Cr	53	26.443	ug/L	0.192	0	567	93725	0	Standard
Fe	54	15.180	ug/L	0.760	5	77631	150293	3	Standard
Fe	57	211.393	ug/L	1.958	0	17962	274553	1	Standard
Mn	55	24.132	ug/L	0.238	0	1594	1042544	0	Standard
> Ge	72		ug/L			91164	77221	1	KED
Ni	60	44.902	ug/L	0.993	2	24	51947	2	KED
Ni	62	45.297	ug/L	1.328	2	4	8402	1	KED
Cu	63	24.172	ug/L	0.224	0	99	78571	0	KED
Cu	65	24.410	ug/L	0.250	1	46	40161	1	KED
Zn	66	1906.997	ug/L	11.335	0	95	991746	1	KED
Zn	67	1814.914	ug/L	29.834	1	17	152590	1	KED
As	75	27.400	ug/L	0.104	0	4	7825	1	KED
Se	78	110.280	ug/L	1.476	1	19	3766	2	KED
Y	89		ug/L			611804	577034	0	Standard
Kr	83		ug/L			36	62	6	Standard
> In-1	115		ug/L			28986	26868	2	KED
Mo	98	26.122	ug/L	0.335	1	13	41591	1	KED
Cd	111	23.803	ug/L	0.427	1	6	9694	0	KED
Cd	114	23.830	ug/L	0.467	1	10	24837	0	KED
> In	115		ug/L			1059327	1166548	1	Standard
Ag	107	17.937	ug/L	0.245	1	57	257428	0	Standard
Sb	121	25.269	ug/L	0.802	3	543	430735	2	Standard
Sb	123	25.833	ug/L	0.361	1	381	335490	0	Standard
> Tb	159		ug/L			2368674	2488738	1	Standard
Pb	208	24.404	ug/L	0.423	1	568	2530884	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLB
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 01:16:20
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	21419	3	Standard
	Cl	**37**		ug/L			10118226	10984263	0	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1399165	1	Standard
|	**Cr**	**52**	**0.010**	ug/L	0.008	73	18153	19306	0	Standard
|	**Cr**	**53**	**0.144**	ug/L	0.012	8	567	1008	3	Standard
|	**Fe**	**54**	**-2.395**	ug/L	0.374	15	77631	75005	0	Standard
|	**Fe**	**57**	**6.649**	ug/L	0.338	5	17962	25263	1	Standard
⌊	**Mn**	**55**	**-0.026**	ug/L	0.001	2	1594	760	3	Standard
⌈>	**Ge**	**72**		ug/L			91164	84468	1	KED
|	**Ni**	**60**	**0.000**	ug/L	0.001	374	24	22	8	KED
|	**Ni**	**62**	**0.017**	ug/L	0.016	92	4	7	43	KED
|	**Cu**	**63**	**-0.005**	ug/L	0.001	23	99	72	6	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.002	257	46	41	12	KED
|	**Zn**	**66**	**0.074**	ug/L	0.054	72	95	130	21	KED
|	**Zn**	**67**	**0.131**	ug/L	0.076	58	17	27	25	KED
|	**As**	**75**	**0.005**	ug/L	0.002	37	4	5	10	KED
⌊	**Se**	**78**	**-0.087**	ug/L	0.039	45	19	15	11	KED
	Y	**89**		ug/L			611804	609521	1	Standard
	Kr	**83**		ug/L			36	46	16	Standard
⌈>	**In-1**	**115**		ug/L			28986	28030	1	KED
|	**Mo**	**98**	**-0.005**	ug/L	0.002	33	13	3	74	KED
|	**Cd**	**111**	**0.001**	ug/L	0.006	1131	6	6	37	KED
⌊	**Cd**	**114**	**-0.005**	ug/L	0.003	54	10	4	56	KED
⌈>	**In**	**115**		ug/L			1059327	1174146	0	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	40	57	98	14	Standard
|	**Sb**	**121**	**-0.027**	ug/L	0.000	1	543	146	5	Standard
⌊	**Sb**	**123**	**-0.025**	ug/L	0.000	0	381	102	2	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2438356	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	86	568	633	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVC
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 01:22:13
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	20928	3	Standard
	Cl	**37**		ug/L			10118226	10834218	1	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1411258	1	Standard
|	**Cr**	**52**	**51.636**	ug/L	1.193	2	18153	1355854	1	Standard
|	**Cr**	**53**	**54.242**	ug/L	0.961	1	567	156916	0	Standard
|	**Fe**	**54**	**4873.592**	ug/L	149.513	3	77631	13247499	1	Standard
|	**Fe**	**57**	**4990.598**	ug/L	135.759	2	17962	4881745	1	Standard
⌊	**Mn**	**55**	**55.214**	ug/L	0.936	1	1594	1952690	1	Standard
⌈>	**Ge**	**72**		ug/L			91164	88230	1	KED
|	**Ni**	**60**	**49.712**	ug/L	0.882	1	24	65698	0	KED
|	**Ni**	**62**	**50.675**	ug/L	0.395	0	4	10743	2	KED
|	**Cu**	**63**	**50.153**	ug/L	1.516	3	99	186103	1	KED
|	**Cu**	**65**	**49.557**	ug/L	0.912	1	46	93097	1	KED
|	**Zn**	**66**	**50.165**	ug/L	0.488	0	95	29895	0	KED
|	**Zn**	**67**	**51.310**	ug/L	0.952	1	17	4944	1	KED
|	**As**	**75**	**49.456**	ug/L	1.076	2	4	16131	0	KED
⌊	**Se**	**78**	**51.558**	ug/L	2.205	4	19	2021	3	KED
	Y	**89**		ug/L			611804	629907	1	Standard
	Kr	**83**		ug/L			36	44	21	Standard
⌈>	**In-1**	**115**		ug/L			28986	28909	0	KED
|	**Mo**	**98**	**47.691**	ug/L	0.147	0	13	81701	0	KED
|	**Cd**	**111**	**49.989**	ug/L	0.713	1	6	21902	0	KED
⌊	**Cd**	**114**	**49.733**	ug/L	1.100	2	10	55769	1	KED
⌈>	**In**	**115**		ug/L			1059327	1186366	2	Standard
|	**Ag**	**107**	**45.116**	ug/L	1.350	2	57	658198	1	Standard
|	**Sb**	**121**	**51.591**	ug/L	1.601	3	543	893409	1	Standard
⌊	**Sb**	**123**	**51.258**	ug/L	1.504	2	381	676342	1	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2527474	0	Standard
⌊	**Pb**	**208**	**52.121**	ug/L	0.500	0	568	5489328	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBC
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 01:29:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	19209	3	Standard
	Cl	**37**		ug/L			10118226	10605954	1	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1402518	0	Standard
|	**Cr**	**52**	**-0.049**	ug/L	0.007	14	18153	17828	1	Standard
|	**Cr**	**53**	**0.125**	ug/L	0.010	8	567	955	2	Standard
|	**Fe**	**54**	**-1.257**	ug/L	0.696	55	77631	78255	2	Standard
|	**Fe**	**57**	**1.169**	ug/L	0.239	20	17962	20019	1	Standard
⌊	**Mn**	**55**	**-0.023**	ug/L	0.001	4	1594	870	4	Standard
⌈>	**Ge**	**72**		ug/L			91164	89658	1	KED
|	**Ni**	**60**	**-0.003**	ug/L	0.002	62	24	19	14	KED
|	**Ni**	**62**	**-0.011**	ug/L	0.009	78	4	1	100	KED
|	**Cu**	**63**	**-0.006**	ug/L	0.001	23	99	74	6	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.002	376	46	45	8	KED
|	**Zn**	**66**	**-0.023**	ug/L	0.016	70	95	80	13	KED
|	**Zn**	**67**	**-0.024**	ug/L	0.047	198	17	14	32	KED
|	**As**	**75**	**0.003**	ug/L	0.006	179	4	5	35	KED
⌊	**Se**	**78**	**-0.086**	ug/L	0.058	68	19	16	13	KED
	Y	**89**		ug/L			611804	623124	1	Standard
	Kr	**83**		ug/L			36	47	16	Standard
⌈>	**In-1**	**115**		ug/L			28986	29437	1	KED
|	**Mo**	**98**	**0.010**	ug/L	0.002	21	13	31	11	KED
|	**Cd**	**111**	**-0.008**	ug/L	0.003	41	6	3	45	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.001	26	10	6	16	KED
⌈>	**In**	**115**		ug/L			1059327	1210894	1	Standard
|	**Ag**	**107**	**0.004**	ug/L	0.002	35	57	131	16	Standard
|	**Sb**	**121**	**0.088**	ug/L	0.009	10	543	2176	5	Standard
⌊	**Sb**	**123**	**0.090**	ug/L	0.004	4	381	1652	1	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2493027	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	12	568	683	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0338-03
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 01:33:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18872	55773	1	Standard
	Cl	37		ug/L			10118226	10547012	1	Standard
>	Sc	45		ug/L			1333928	1400456	1	Standard
	Cr	52	2.028	ug/L	0.032	1	18153	71158	1	Standard
	Cr	53	3.787	ug/L	0.089	2	567	11426	1	Standard
	Fe	54	688.905	ug/L	7.577	1	77631	1928503	0	Standard
	Fe	57	1042.670	ug/L	30.988	2	17962	1026861	1	Standard
	Mn	55	99.929	ug/L	1.745	1	1594	3505401	0	Standard
>	Ge	72		ug/L			91164	76477	0	KED
	Ni	60	5.447	ug/L	0.115	2	24	6258	1	KED
	Ni	62	5.731	ug/L	0.366	6	4	1056	6	KED
	Cu	63	0.425	ug/L	0.015	3	99	1451	3	KED
	Cu	65	0.418	ug/L	0.028	6	46	720	5	KED
	Zn	66	4692.590	ug/L	50.715	1	95	2416803	1	KED
	Zn	67	4315.892	ug/L	51.496	1	17	359345	0	KED
	As	75	0.224	ug/L	0.006	2	4	66	2	KED
	Se	78	4.545	ug/L	0.057	1	19	169	0	KED
	Y	89		ug/L			611804	577324	0	Standard
	Kr	83		ug/L			36	90	9	Standard
>	In-1	115		ug/L			28986	25180	1	KED
	Mo	98	1.292	ug/L	0.040	3	13	1937	1	KED
	Cd	111	0.113	ug/L	0.029	25	6	48	21	KED
	Cd	114	0.121	ug/L	0.011	8	10	127	8	KED
>	In	115		ug/L			1059327	1107226	2	Standard
	Ag	107	0.003	ug/L	0.001	54	57	96	18	Standard
	Sb	121	0.040	ug/L	0.003	7	543	1222	5	Standard
	Sb	123	0.040	ug/L	0.004	10	381	886	3	Standard
>	Tb	159		ug/L			2368674	2418754	0	Standard
	Pb	208	0.044	ug/L	0.001	2	568	5062	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0338-04
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 01:38:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18872	49933	0	Standard
Cl	37		ug/L			10118226	10541058	0	Standard
> Sc	45		ug/L			1333928	1780610	0	Standard
Cr	52	4.076	ug/L	0.042	1	18153	157384	0	Standard
Cr	53	5.318	ug/L	0.063	1	567	20097	1	Standard
Fe	54	5.275	ug/L	1.122	21	77631	121592	2	Standard
Fe	57	216.961	ug/L	3.571	1	17962	290730	0	Standard
Mn	55	1.264	ug/L	0.024	1	1594	58487	1	Standard
> Ge	72		ug/L			91164	80334	1	KED
Ni	60	0.349	ug/L	0.025	7	24	441	8	KED
Ni	62	0.388	ug/L	0.061	15	4	78	13	KED
Cu	63	0.123	ug/L	0.010	7	99	504	8	KED
Cu	65	0.145	ug/L	0.013	8	46	288	6	KED
Zn	66	1.403	ug/L	0.059	4	95	843	2	KED
Zn	67	9.692	ug/L	0.635	6	17	862	5	KED
As	75	2.690	ug/L	0.047	1	4	802	1	KED
Se	78	18.405	ug/L	0.467	2	19	668	3	KED
Y	89		ug/L			611804	590556	2	Standard
Kr	83		ug/L			36	40	15	Standard
> In-1	115		ug/L			28986	26966	0	KED
Mo	98	1.717	ug/L	0.067	3	13	2755	3	KED
Cd	111	-0.003	ug/L	0.005	177	6	5	39	KED
Cd	114	0.005	ug/L	0.003	51	10	15	19	KED
> In	115		ug/L			1059327	1177546	2	Standard
Ag	107	-0.001	ug/L	0.001	202	57	55	29	Standard
Sb	121	0.129	ug/L	0.005	4	543	2814	4	Standard
Sb	123	0.124	ug/L	0.005	4	381	2054	4	Standard
> Tb	159		ug/L			2368674	2484394	0	Standard
Pb	208	0.013	ug/L	0.000	2	568	1923	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0338-05
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 01:42:52
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18872	49957	0	Standard
Cl	37		ug/L			10118226	10443520	1	Standard
> Sc	45		ug/L			1333928	1777501	0	Standard
Cr	52	3.664	ug/L	0.071	1	18153	143656	1	Standard
Cr	53	4.809	ug/L	0.043	0	567	18213	1	Standard
Fe	54	4.600	ug/L	0.078	1	77631	119099	0	Standard
Fe	57	289.281	ug/L	2.054	0	17962	379021	1	Standard
Mn	55	4.612	ug/L	0.070	1	1594	207393	1	Standard
> Ge	72		ug/L			91164	78035	0	KED
Ni	60	0.428	ug/L	0.021	5	24	520	4	KED
Ni	62	0.382	ug/L	0.110	28	4	75	27	KED
Cu	63	0.167	ug/L	0.002	1	99	631	1	KED
Cu	65	0.203	ug/L	0.011	5	46	376	4	KED
Zn	66	1.184	ug/L	0.029	2	95	704	2	KED
Zn	67	10.124	ug/L	0.371	3	17	874	4	KED
As	75	2.598	ug/L	0.079	3	4	752	2	KED
Se	78	11.694	ug/L	0.483	4	19	418	3	KED
Y	89		ug/L			611804	583267	1	Standard
Kr	83		ug/L			36	55	1	Standard
> In-1	115		ug/L			28986	26165	0	KED
Mo	98	0.487	ug/L	0.007	1	13	767	1	KED
Cd	111	0.001	ug/L	0.003	331	6	6	17	KED
Cd	114	-0.001	ug/L	0.002	245	10	8	26	KED
> In	115		ug/L			1059327	1137463	1	Standard
Ag	107	-0.001	ug/L	0.001	58	57	46	19	Standard
Sb	121	0.074	ug/L	0.004	5	543	1814	3	Standard
Sb	123	0.081	ug/L	0.008	9	381	1430	6	Standard
> Tb	159		ug/L			2368674	2455041	0	Standard
Pb	208	0.020	ug/L	0.001	6	568	2655	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0338-06
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 01:47:20
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18872	53923	0	Standard
Cl	37		ug/L			10118226	10464307	1	Standard
> Sc	45		ug/L			1333928	1799308	0	Standard
Cr	52	5.721	ug/L	0.087	1	18153	213323	1	Standard
Cr	53	7.057	ug/L	0.202	2	567	26700	2	Standard
Fe	54	251.638	ug/L	3.274	1	77631	971632	1	Standard
Fe	57	451.696	ug/L	6.161	1	17962	585461	1	Standard
Mn	55	19.494	ug/L	0.207	1	1594	880482	1	Standard
> Ge	72		ug/L			91164	79548	1	KED
Ni	60	1.274	ug/L	0.074	5	24	1539	6	KED
Ni	62	1.379	ug/L	0.016	1	4	267	2	KED
Cu	63	0.778	ug/L	0.002	0	99	2689	1	KED
Cu	65	0.800	ug/L	0.044	5	46	1396	6	KED
Zn	66	6.012	ug/L	0.153	2	95	3304	3	KED
Zn	67	12.927	ug/L	0.563	4	17	1134	4	KED
As	75	2.364	ug/L	0.094	3	4	698	4	KED
Se	78	25.499	ug/L	0.327	1	19	910	2	KED
Y	89		ug/L			611804	608320	1	Standard
Kr	83		ug/L			36	44	9	Standard
> In-1	115		ug/L			28986	26412	0	KED
Mo	98	1.081	ug/L	0.039	3	13	1703	2	KED
Cd	111	0.006	ug/L	0.004	66	6	8	19	KED
Cd	114	0.018	ug/L	0.012	66	10	27	43	KED
> In	115		ug/L			1059327	1168821	3	Standard
Ag	107	0.019	ug/L	0.002	9	57	330	10	Standard
Sb	121	0.079	ug/L	0.004	5	543	1948	3	Standard
Sb	123	0.086	ug/L	0.010	12	381	1537	5	Standard
> Tb	159		ug/L			2368674	2482281	0	Standard
Pb	208	0.351	ug/L	0.006	1	568	36859	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0338-07
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 01:51:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18872	57614	0	Standard
	Cl	37		ug/L			10118226	11535459	0	Standard
⌈>	Sc	45		ug/L			1333928	1755359	0	Standard
|	Cr	52	3.292	ug/L	0.062	1	18153	129890	1	Standard
|	Cr	53	5.046	ug/L	0.134	2	567	18837	2	Standard
|	Fe	54	473.605	ug/L	5.072	1	77631	1693860	0	Standard
|	Fe	57	867.527	ug/L	22.679	2	17962	1075143	2	Standard
⌊	Mn	55	14.544	ug/L	0.163	1	1594	641371	0	Standard
⌈>	Ge	72		ug/L			91164	75730	0	KED
|	Ni	60	1.057	ug/L	0.038	3	24	1218	3	KED
|	Ni	62	1.100	ug/L	0.081	7	4	203	7	KED
|	Cu	63	1.606	ug/L	0.039	2	99	5195	2	KED
|	Cu	65	1.653	ug/L	0.107	6	46	2702	5	KED
|	Zn	66	7.877	ug/L	0.197	2	95	4097	3	KED
|	Zn	67	31.539	ug/L	0.909	2	17	2614	2	KED
|	As	75	3.708	ug/L	0.015	0	4	1041	0	KED
⌊	Se	78	16.274	ug/L	0.506	3	19	559	3	KED
	Y	89		ug/L			611804	605961	0	Standard
	Kr	83		ug/L			36	60	8	Standard
⌈>	In-1	115		ug/L			28986	25482	1	KED
|	Mo	98	1.516	ug/L	0.071	4	13	2299	3	KED
|	Cd	111	0.016	ug/L	0.006	34	6	12	16	KED
⌊	Cd	114	0.012	ug/L	0.014	117	10	20	65	KED
⌈>	In	115		ug/L			1059327	1103604	0	Standard
|	Ag	107	0.010	ug/L	0.001	8	57	201	6	Standard
|	Sb	121	0.902	ug/L	0.016	1	543	15093	1	Standard
⌊	Sb	123	0.906	ug/L	0.020	2	381	11517	2	Standard
⌈>	Tb	159		ug/L			2368674	2389561	0	Standard
⌊	Pb	208	0.635	ug/L	0.006	0	568	63823	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0338-08
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 01:56:17
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	48751	0	Standard
	Cl	**37**		ug/L			10118226	10360361	0	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1660676	0	Standard
|	**Cr**	**52**	**3.143**	ug/L	0.015	0	18153	118357	0	Standard
|	**Cr**	**53**	**4.534**	ug/L	0.084	1	567	16082	1	Standard
|	**Fe**	**54**	**1.819**	ug/L	0.172	9	77631	102431	1	Standard
|	**Fe**	**57**	**299.290**	ug/L	7.926	2	17962	365538	1	Standard
⌊	**Mn**	**55**	**0.664**	ug/L	0.012	1	1594	29576	1	Standard
⌈>	**Ge**	**72**		ug/L			91164	76706	0	KED
|	**Ni**	**60**	**2.452**	ug/L	0.045	1	24	2837	2	KED
|	**Ni**	**62**	**2.510**	ug/L	0.243	9	4	466	9	KED
|	**Cu**	**63**	**0.459**	ug/L	0.008	1	99	1565	1	KED
|	**Cu**	**65**	**0.485**	ug/L	0.031	6	46	831	5	KED
|	**Zn**	**66**	**453.090**	ug/L	4.889	1	95	234119	0	KED
|	**Zn**	**67**	**436.499**	ug/L	4.150	0	17	36465	0	KED
|	**As**	**75**	**2.901**	ug/L	0.076	2	4	826	2	KED
⌊	**Se**	**78**	**14.619**	ug/L	0.535	3	19	510	3	KED
	Y	**89**		ug/L			611804	566665	1	Standard
	Kr	**83**		ug/L			36	51	23	Standard
⌈>	**In-1**	**115**		ug/L			28986	25664	0	KED
|	**Mo**	**98**	**0.792**	ug/L	0.059	7	13	1215	6	KED
|	**Cd**	**111**	**0.182**	ug/L	0.034	18	6	76	17	KED
⌊	**Cd**	**114**	**0.196**	ug/L	0.028	14	10	204	13	KED
⌈>	**In**	**115**		ug/L			1059327	1124456	1	Standard
|	**Ag**	**107**	**0.204**	ug/L	0.023	11	57	2889	11	Standard
|	**Sb**	**121**	**0.059**	ug/L	0.003	4	543	1539	3	Standard
⌊	**Sb**	**123**	**0.061**	ug/L	0.002	3	381	1170	3	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2354668	0	Standard
⌊	**Pb**	**208**	**0.030**	ug/L	0.000	1	568	3537	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0338-09
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 02:00:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	51894	0	Standard
	Cl	**37**		ug/L			10118226	10239834	1	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1624669	1	Standard
|	**Cr**	**52**	**2.865**	ug/L	0.029	1	18153	107494	1	Standard
|	**Cr**	**53**	**4.174**	ug/L	0.043	1	567	14541	0	Standard
|	**Fe**	**54**	**-0.991**	ug/L	0.319	32	77631	91467	1	Standard
|	**Fe**	**57**	**294.105**	ug/L	3.239	1	17962	351814	0	Standard
⌊	**Mn**	**55**	**1.179**	ug/L	0.018	1	1594	49907	2	Standard
⌈>	**Ge**	**72**		ug/L			91164	74613	0	KED
|	**Ni**	**60**	**2.333**	ug/L	0.035	1	24	2626	1	KED
|	**Ni**	**62**	**2.304**	ug/L	0.045	1	4	416	1	KED
|	**Cu**	**63**	**0.378**	ug/L	0.019	5	99	1266	5	KED
|	**Cu**	**65**	**0.378**	ug/L	0.037	9	46	639	9	KED
|	**Zn**	**66**	**462.784**	ug/L	2.778	0	95	232604	0	KED
|	**Zn**	**67**	**455.473**	ug/L	4.472	0	17	37011	0	KED
|	**As**	**75**	**3.079**	ug/L	0.188	6	4	852	5	KED
⌊	**Se**	**78**	**16.308**	ug/L	0.783	4	19	551	4	KED
	Y	**89**		ug/L			611804	560324	0	Standard
	Kr	**83**		ug/L			36	41	43	Standard
⌈>	**In-1**	**115**		ug/L			28986	24828	1	KED
|	**Mo**	**98**	**0.773**	ug/L	0.039	5	13	1148	5	KED
|	**Cd**	**111**	**0.210**	ug/L	0.032	15	6	84	14	KED
⌊	**Cd**	**114**	**0.194**	ug/L	0.015	7	10	195	6	KED
⌈>	**In**	**115**		ug/L			1059327	1079117	1	Standard
|	**Ag**	**107**	**0.009**	ug/L	0.001	10	57	172	5	Standard
|	**Sb**	**121**	**0.063**	ug/L	0.002	3	543	1542	3	Standard
⌊	**Sb**	**123**	**0.065**	ug/L	0.001	1	381	1173	1	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2312146	0	Standard
⌊	**Pb**	**208**	**0.020**	ug/L	0.001	4	568	2455	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0338-10
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 02:05:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18872	46924	2	Standard
	Cl	37		ug/L			10118226	10053263	1	Standard
⌈>	Sc	45		ug/L			1333928	1572580	1	Standard
|	Cr	52	3.093	ug/L	0.097	3	18153	110609	0	Standard
|	Cr	53	4.119	ug/L	0.086	2	567	13897	1	Standard
|	Fe	54	2.519	ug/L	0.442	17	77631	99093	1	Standard
|	Fe	57	278.213	ug/L	2.549	0	17962	323270	0	Standard
⌊	Mn	55	0.367	ug/L	0.007	1	1594	16314	0	Standard
⌈>	Ge	72		ug/L			91164	72675	1	KED
|	Ni	60	2.652	ug/L	0.094	3	24	2905	3	KED
|	Ni	62	2.642	ug/L	0.098	3	4	464	4	KED
|	Cu	63	0.367	ug/L	0.005	1	99	1201	1	KED
|	Cu	65	0.400	ug/L	0.041	10	46	655	9	KED
|	Zn	66	469.485	ug/L	5.508	1	95	229855	2	KED
|	Zn	67	448.806	ug/L	3.226	0	17	35526	2	KED
|	As	75	3.084	ug/L	0.090	2	4	831	2	KED
⌊	Se	78	17.077	ug/L	0.691	4	19	562	3	KED
	Y	89		ug/L			611804	550269	1	Standard
	Kr	83		ug/L			36	55	24	Standard
⌈>	In-1	115		ug/L			28986	24375	1	KED
|	Mo	98	0.860	ug/L	0.048	5	13	1251	3	KED
|	Cd	111	0.208	ug/L	0.016	7	6	82	8	KED
⌊	Cd	114	0.180	ug/L	0.047	26	10	179	26	KED
⌈>	In	115		ug/L			1059327	1082533	0	Standard
|	Ag	107	0.006	ug/L	0.000	6	57	142	4	Standard
|	Sb	121	0.062	ug/L	0.007	10	543	1542	6	Standard
⌊	Sb	123	0.067	ug/L	0.007	10	381	1194	7	Standard
⌈>	Tb	159		ug/L			2368674	2283623	1	Standard
⌊	Pb	208	0.026	ug/L	0.001	2	568	3057	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0338-01
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, July 01, 2020 02:10:31
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			18872	44687	2	Standard
Cl	37		ug/L			10118226	9669080	1	Standard
> Sc	45		ug/L			1333928	2279023	1	Standard
Cr	52	7.118	ug/L	0.059	0	18153	328608	1	Standard
Cr	53	8.481	ug/L	0.248	2	567	40434	1	Standard
Fe	54	6706.298	ug/L	17.319	0	77631	29395799	1	Standard
Fe	57	7145.573	ug/L	63.229	0	17962	11276107	1	Standard
Mn	55	210.640	ug/L	2.581	1	1594	12022769	0	Standard
> Ge	72		ug/L			91164	76870	1	KED
Ni	60	12.187	ug/L	0.164	1	24	14048	0	KED
Ni	62	12.509	ug/L	0.524	4	4	2313	4	KED
Cu	63	8.822	ug/L	0.090	1	99	28600	2	KED
Cu	65	8.962	ug/L	0.058	0	46	14704	1	KED
Zn	66	34.246	ug/L	0.519	1	95	17807	1	KED
Zn	67	49.697	ug/L	0.426	0	17	4173	1	KED
As	75	3.263	ug/L	0.019	0	4	930	1	KED
Se	78	1.143	ug/L	0.053	4	19	55	2	KED
Y	89		ug/L			611804	1162073	0	Standard
Kr	83		ug/L			36	163	11	Standard
> In-1	115		ug/L			28986	25432	0	KED
Mo	98	0.084	ug/L	0.006	7	13	138	6	KED
Cd	111	0.182	ug/L	0.036	19	6	76	18	KED
Cd	114	0.170	ug/L	0.007	4	10	176	4	KED
> In	115		ug/L			1059327	1145691	3	Standard
Ag	107	0.019	ug/L	0.002	9	57	336	6	Standard
Sb	121	0.030	ug/L	0.000	0	543	1083	3	Standard
Sb	123	0.032	ug/L	0.002	5	381	826	2	Standard
> Tb	159		ug/L			2368674	2458613	1	Standard
Pb	208	11.584	ug/L	0.170	1	568	1187076	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLC
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 02:18:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	20635	2	Standard
	Cl	**37**		ug/L			10118226	9665409	0	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1319967	1	Standard
|	**Cr**	**52**	**0.012**	ug/L	0.016	134	18153	18249	1	Standard
|	**Cr**	**53**	**0.238**	ug/L	0.012	4	567	1205	3	Standard
|	**Fe**	**54**	**-1.919**	ug/L	0.514	26	77631	71963	1	Standard
|	**Fe**	**57**	**-2.350**	ug/L	0.412	17	17962	15634	3	Standard
⌊	**Mn**	**55**	**-0.014**	ug/L	0.006	40	1594	1132	16	Standard
⌈>	**Ge**	**72**		ug/L			91164	84116	1	KED
|	**Ni**	**60**	**-0.006**	ug/L	0.002	40	24	14	19	KED
|	**Ni**	**62**	**-0.011**	ug/L	0.009	87	4	1	100	KED
|	**Cu**	**63**	**-0.010**	ug/L	0.001	8	99	55	5	KED
|	**Cu**	**65**	**-0.006**	ug/L	0.005	77	46	33	26	KED
|	**Zn**	**66**	**-0.016**	ug/L	0.002	11	95	79	2	KED
|	**Zn**	**67**	**-0.090**	ug/L	0.054	60	17	7	66	KED
|	**As**	**75**	**-0.000**	ug/L	0.005	1043	4	3	39	KED
⌊	**Se**	**78**	**-0.104**	ug/L	0.065	62	19	14	18	KED
	Y	**89**		ug/L			611804	602633	0	Standard
	Kr	**83**		ug/L			36	59	30	Standard
⌈>	**In-1**	**115**		ug/L			28986	27262	1	KED
|	**Mo**	**98**	**-0.003**	ug/L	0.005	186	13	8	90	KED
|	**Cd**	**111**	**0.001**	ug/L	0.002	238	6	6	14	KED
⌊	**Cd**	**114**	**-0.004**	ug/L	0.003	77	10	5	60	KED
⌈>	**In**	**115**		ug/L			1059327	1119016	2	Standard
|	**Ag**	**107**	**-0.000**	ug/L	0.001	371	57	59	11	Standard
|	**Sb**	**121**	**-0.028**	ug/L	0.001	2	543	115	9	Standard
⌊	**Sb**	**123**	**-0.024**	ug/L	0.001	2	381	102	9	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2334124	0	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.001	132	568	606	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVD
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 02:24:18
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18872	20691	1	Standard
	Cl	37		ug/L			10118226	10396514	0	Standard
>	Sc	45		ug/L			1333928	1303598	0	Standard
	Cr	52	52.033	ug/L	0.327	0	18153	1262128	0	Standard
	Cr	53	53.562	ug/L	1.746	3	567	143141	2	Standard
	Fe	54	4848.226	ug/L	110.645	2	77631	12176154	1	Standard
	Fe	57	4963.569	ug/L	37.851	0	17962	4485681	0	Standard
	Mn	55	55.868	ug/L	0.358	0	1594	1825286	0	Standard
>	Ge	72		ug/L			91164	82926	0	KED
	Ni	60	49.749	ug/L	0.520	1	24	61810	1	KED
	Ni	62	49.637	ug/L	1.735	3	4	9890	3	KED
	Cu	63	50.064	ug/L	1.044	2	99	174687	2	KED
	Cu	65	50.284	ug/L	0.881	1	46	88802	2	KED
	Zn	66	51.160	ug/L	0.131	0	95	28657	0	KED
	Zn	67	50.953	ug/L	0.943	1	17	4615	1	KED
	As	75	49.358	ug/L	0.292	0	4	15135	0	KED
	Se	78	52.183	ug/L	0.817	1	19	1923	2	KED
	Y	89		ug/L			611804	595738	0	Standard
	Kr	83		ug/L			36	52	18	Standard
>	In-1	115		ug/L			28986	26836	0	KED
	Mo	98	48.576	ug/L	0.663	1	13	77246	0	KED
	Cd	111	50.230	ug/L	0.409	0	6	20430	0	KED
	Cd	114	49.345	ug/L	0.399	0	10	51372	0	KED
>	In	115		ug/L			1059327	1122479	3	Standard
	Ag	107	44.965	ug/L	0.947	2	57	620568	1	Standard
	Sb	121	49.684	ug/L	1.624	3	543	813750	0	Standard
	Sb	123	50.724	ug/L	2.145	4	381	632852	1	Standard
>	Tb	159		ug/L			2368674	2376232	1	Standard
	Pb	208	52.050	ug/L	0.884	1	568	5153324	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBD
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 02:31:31
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	19397	1	Standard
	Cl	**37**		ug/L			10118226	9984042	0	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1330178	1	Standard
|	**Cr**	**52**	**-0.032**	ug/L	0.005	14	18153	17330	0	Standard
|	**Cr**	**53**	**0.123**	ug/L	0.011	9	567	901	4	Standard
|	**Fe**	**54**	**-1.298**	ug/L	0.463	35	77631	74114	2	Standard
|	**Fe**	**57**	**1.858**	ug/L	0.523	28	17962	19620	3	Standard
⌊	**Mn**	**55**	**-0.018**	ug/L	0.005	27	1594	981	17	Standard
⌈>	**Ge**	**72**		ug/L			91164	83805	1	KED
|	**Ni**	**60**	**-0.008**	ug/L	0.005	65	24	12	48	KED
|	**Ni**	**62**	**-0.004**	ug/L	0.011	255	4	3	69	KED
|	**Cu**	**63**	**-0.004**	ug/L	0.002	42	99	76	8	KED
|	**Cu**	**65**	**-0.003**	ug/L	0.003	99	46	38	15	KED
|	**Zn**	**66**	**-0.022**	ug/L	0.006	28	95	75	3	KED
|	**Zn**	**67**	**0.030**	ug/L	0.083	277	17	18	39	KED
|	**As**	**75**	**0.002**	ug/L	0.003	155	4	4	22	KED
⌊	**Se**	**78**	**-0.080**	ug/L	0.055	69	19	15	14	KED
	Y	**89**		ug/L			611804	606032	2	Standard
	Kr	**83**		ug/L			36	43	26	Standard
⌈>	**In-1**	**115**		ug/L			28986	27250	0	KED
|	**Mo**	**98**	**0.007**	ug/L	0.005	70	13	23	33	KED
|	**Cd**	**111**	**0.003**	ug/L	0.013	501	6	7	71	KED
⌊	**Cd**	**114**	**-0.004**	ug/L	0.003	78	10	5	62	KED
⌈>	**In**	**115**		ug/L			1059327	1090092	1	Standard
|	**Ag**	**107**	**0.005**	ug/L	0.004	73	57	129	41	Standard
|	**Sb**	**121**	**0.090**	ug/L	0.007	7	543	1996	5	Standard
⌊	**Sb**	**123**	**0.092**	ug/L	0.002	2	381	1511	1	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2312864	0	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.005	109	568	956	46	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0250-24
Sample Dil Factor: 50
DEL
Comments:
Sample Date/Time: Wednesday, July 01, 2020 02:36:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	26018	2	Standard
	Cl	**37**		ug/L			10118226	10143458	1	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1285910	0	Standard
|	**Cr**	**52**	**0.052**	ug/L	0.015	28	18153	18733	1	Standard
|	**Cr**	**53**	**0.069**	ug/L	0.012	18	567	727	4	Standard
|	**Fe**	**54**	**465.369**	ug/L	6.727	1	77631	1220638	1	Standard
|	**Fe**	**57**	**507.858**	ug/L	4.688	0	17962	468287	0	Standard
⌊	**Mn**	**55**	**40.216**	ug/L	0.565	1	1594	1296497	1	Standard
⌈>	**Ge**	**72**		ug/L			91164	84111	1	KED
|	**Ni**	**60**	**0.010**	ug/L	0.003	27	24	34	11	KED
|	**Ni**	**62**	**0.005**	ug/L	0.014	296	4	5	57	KED
|	**Cu**	**63**	**0.001**	ug/L	0.004	370	99	94	11	KED
|	**Cu**	**65**	**-0.000**	ug/L	0.001	215	46	42	2	KED
|	**Zn**	**66**	**0.775**	ug/L	0.029	3	95	527	2	KED
|	**Zn**	**67**	**0.750**	ug/L	0.093	12	17	84	8	KED
|	**As**	**75**	**0.001**	ug/L	0.005	927	4	3	38	KED
⌊	**Se**	**78**	**-0.124**	ug/L	0.032	25	19	13	10	KED
	Y	**89**		ug/L			611804	583212	1	Standard
	Kr	**83**		ug/L			36	54	5	Standard
⌈>	**In-1**	**115**		ug/L			28986	27071	1	KED
|	**Mo**	**98**	**0.007**	ug/L	0.002	25	13	23	10	KED
|	**Cd**	**111**	**0.002**	ug/L	0.001	59	6	6	7	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.004	911	10	10	38	KED
⌈>	**In**	**115**		ug/L			1059327	1113628	1	Standard
|	**Ag**	**107**	**-0.000**	ug/L	0.001	209	57	57	12	Standard
|	**Sb**	**121**	**0.001**	ug/L	0.004	290	543	591	9	Standard
⌊	**Sb**	**123**	**0.004**	ug/L	0.004	104	381	454	11	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2357857	1	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	32	568	463	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0282-12
Sample Dil Factor: 20
DEL
Comments:
Sample Date/Time: Wednesday, July 01, 2020 02:40:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	25338	0	Standard
	Cl	**37**		ug/L			10118226	10033104	1	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1307755	1	Standard
|	**Cr**	**52**	**0.626**	ug/L	0.028	4	18153	32812	1	Standard
|	**Cr**	**53**	**0.721**	ug/L	0.030	4	567	2481	3	Standard
|	**Fe**	**54**	**5887.696**	ug/L	41.059	0	77631	14818345	1	Standard
|	**Fe**	**57**	**6106.501**	ug/L	117.648	1	17962	5531253	1	Standard
⌊	**Mn**	**55**	**122.366**	ug/L	3.032	2	1594	4008218	2	Standard
⌈>	**Ge**	**72**		ug/L			91164	81635	1	KED
|	**Ni**	**60**	**0.568**	ug/L	0.047	8	24	715	7	KED
|	**Ni**	**62**	**0.528**	ug/L	0.115	21	4	107	19	KED
|	**Cu**	**63**	**0.346**	ug/L	0.010	3	99	1274	1	KED
|	**Cu**	**65**	**0.370**	ug/L	0.018	4	46	685	4	KED
|	**Zn**	**66**	**11.553**	ug/L	0.283	2	95	6435	0	KED
|	**Zn**	**67**	**10.698**	ug/L	0.263	2	17	966	3	KED
|	**As**	**75**	**0.010**	ug/L	0.001	8	4	6	4	KED
⌊	**Se**	**78**	**0.014**	ug/L	0.118	826	19	18	23	KED
	Y	**89**		ug/L			611804	581628	1	Standard
	Kr	**83**		ug/L			36	49	23	Standard
⌈>	**In-1**	**115**		ug/L			28986	27000	1	KED
|	**Mo**	**98**	**0.119**	ug/L	0.020	17	13	203	17	KED
|	**Cd**	**111**	**0.051**	ug/L	0.016	31	6	27	26	KED
⌊	**Cd**	**114**	**0.048**	ug/L	0.035	73	10	60	63	KED
⌈>	**In**	**115**		ug/L			1059327	1120070	3	Standard
|	**Ag**	**107**	**0.003**	ug/L	0.001	25	57	102	8	Standard
|	**Sb**	**121**	**-0.006**	ug/L	0.002	30	543	482	7	Standard
⌊	**Sb**	**123**	**-0.002**	ug/L	0.001	60	381	381	5	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2380871	0	Standard
⌊	**Pb**	**208**	**0.020**	ug/L	0.001	2	568	2515	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0639-DUP6
Sample Dil Factor: 20
DEL
Comments:
Sample Date/Time: Wednesday, July 01, 2020 02:44:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	26147	2	Standard
	Cl	**37**		ug/L			10118226	9893633	1	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1286191	1	Standard
|	**Cr**	**52**	**0.631**	ug/L	0.023	3	18153	32393	0	Standard
|	**Cr**	**53**	**0.742**	ug/L	0.020	2	567	2497	3	Standard
|	**Fe**	**54**	**6076.901**	ug/L	77.387	1	77631	15038441	0	Standard
|	**Fe**	**57**	**6303.839**	ug/L	43.064	0	17962	5615956	0	Standard
⌊	**Mn**	**55**	**125.883**	ug/L	1.916	1	1594	4055478	0	Standard
⌈>	**Ge**	**72**		ug/L			91164	81200	0	KED
|	**Ni**	**60**	**0.570**	ug/L	0.021	3	24	714	3	KED
|	**Ni**	**62**	**0.550**	ug/L	0.063	11	4	111	11	KED
|	**Cu**	**63**	**0.365**	ug/L	0.015	4	99	1333	3	KED
|	**Cu**	**65**	**0.370**	ug/L	0.014	3	46	680	3	KED
|	**Zn**	**66**	**11.600**	ug/L	0.273	2	95	6428	2	KED
|	**Zn**	**67**	**10.988**	ug/L	0.436	3	17	986	4	KED
|	**As**	**75**	**0.004**	ug/L	0.007	173	4	4	43	KED
⌊	**Se**	**78**	**-0.084**	ug/L	0.036	42	19	14	8	KED
	Y	**89**		ug/L			611804	573609	1	Standard
	Kr	**83**		ug/L			36	52	19	Standard
⌈>	**In-1**	**115**		ug/L			28986	26349	2	KED
|	**Mo**	**98**	**0.119**	ug/L	0.008	7	13	197	6	KED
|	**Cd**	**111**	**0.035**	ug/L	0.008	21	6	20	16	KED
⌊	**Cd**	**114**	**0.034**	ug/L	0.009	26	10	43	18	KED
⌈>	**In**	**115**		ug/L			1059327	1100287	1	Standard
|	**Ag**	**107**	**0.004**	ug/L	0.001	33	57	109	16	Standard
|	**Sb**	**121**	**-0.013**	ug/L	0.002	17	543	361	8	Standard
⌊	**Sb**	**123**	**-0.008**	ug/L	0.003	40	381	302	11	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2368180	1	Standard
⌊	**Pb**	**208**	**0.020**	ug/L	0.001	4	568	2575	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0639-MS6
Sample Dil Factor: 20
DEL
Comments:
Sample Date/Time: Wednesday, July 01, 2020 02:49:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	27456	2	Standard
	Cl	**37**		ug/L			10118226	9843142	1	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1302860	0	Standard
|	**Cr**	**52**	**1.923**	ug/L	0.021	1	18153	63685	0	Standard
|	**Cr**	**53**	**2.045**	ug/L	0.020	0	567	5996	0	Standard
|	**Fe**	**54**	**6273.576**	ug/L	68.596	1	77631	15725431	0	Standard
|	**Fe**	**57**	**6434.215**	ug/L	40.578	0	17962	5806349	0	Standard
⌊	**Mn**	**55**	**125.859**	ug/L	1.590	1	1594	4107737	1	Standard
⌈>	**Ge**	**72**		ug/L			91164	79302	1	KED
|	**Ni**	**60**	**1.818**	ug/L	0.070	3	24	2180	5	KED
|	**Ni**	**62**	**1.909**	ug/L	0.246	12	4	366	10	KED
|	**Cu**	**63**	**1.658**	ug/L	0.044	2	99	5613	2	KED
|	**Cu**	**65**	**1.630**	ug/L	0.054	3	46	2792	2	KED
|	**Zn**	**66**	**16.236**	ug/L	0.378	2	95	8751	1	KED
|	**Zn**	**67**	**15.165**	ug/L	0.343	2	17	1323	0	KED
|	**As**	**75**	**1.247**	ug/L	0.028	2	4	369	0	KED
⌊	**Se**	**78**	**4.281**	ug/L	0.051	1	19	166	1	KED
	Y	**89**		ug/L			611804	572134	1	Standard
	Kr	**83**		ug/L			36	48	13	Standard
⌈>	**In-1**	**115**		ug/L			28986	25749	0	KED
|	**Mo**	**98**	**0.119**	ug/L	0.010	8	13	193	8	KED
|	**Cd**	**111**	**1.326**	ug/L	0.051	3	6	523	3	KED
⌊	**Cd**	**114**	**1.403**	ug/L	0.027	1	10	1410	1	KED
⌈>	**In**	**115**		ug/L			1059327	1137871	3	Standard
|	**Ag**	**107**	**1.087**	ug/L	0.020	1	57	15273	2	Standard
|	**Sb**	**121**	**-0.014**	ug/L	0.001	4	543	356	5	Standard
⌊	**Sb**	**123**	**-0.011**	ug/L	0.001	8	381	276	3	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2413851	1	Standard
⌊	**Pb**	**208**	**1.317**	ug/L	0.008	0	568	133013	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0639-MSD6
Sample Dil Factor: 20
Comments:

DEL

Sample Date/Time: Wednesday, July 01, 2020 02:54:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	26287	1	Standard
	Cl	**37**		ug/L			10118226	9796216	0	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1306169	2	Standard
|	**Cr**	**52**	**1.837**	ug/L	0.020	1	18153	61784	2	Standard
|	**Cr**	**53**	**2.018**	ug/L	0.026	1	567	5938	2	Standard
|	**Fe**	**54**	**6075.105**	ug/L	52.514	0	77631	15267435	1	Standard
|	**Fe**	**57**	**6202.942**	ug/L	144.150	2	17962	5610677	0	Standard
⌊	**Mn**	**55**	**123.153**	ug/L	1.938	1	1594	4028873	1	Standard
⌈>	**Ge**	**72**		ug/L			91164	80096	1	KED
|	**Ni**	**60**	**1.766**	ug/L	0.008	0	24	2139	1	KED
|	**Ni**	**62**	**1.745**	ug/L	0.099	5	4	339	6	KED
|	**Cu**	**63**	**1.586**	ug/L	0.032	1	99	5427	1	KED
|	**Cu**	**65**	**1.622**	ug/L	0.038	2	46	2807	2	KED
|	**Zn**	**66**	**15.380**	ug/L	0.522	3	95	8378	2	KED
|	**Zn**	**67**	**14.405**	ug/L	0.134	0	17	1271	1	KED
|	**As**	**75**	**1.248**	ug/L	0.047	3	4	373	3	KED
⌊	**Se**	**78**	**4.291**	ug/L	0.065	1	19	168	0	KED
	Y	**89**		ug/L			611804	578120	0	Standard
	Kr	**83**		ug/L			36	48	16	Standard
⌈>	**In-1**	**115**		ug/L			28986	26329	0	KED
|	**Mo**	**98**	**0.108**	ug/L	0.008	7	13	180	7	KED
|	**Cd**	**111**	**1.275**	ug/L	0.039	3	6	514	2	KED
⌊	**Cd**	**114**	**1.297**	ug/L	0.011	0	10	1334	0	KED
⌈>	**In**	**115**		ug/L			1059327	1131878	1	Standard
|	**Ag**	**107**	**1.018**	ug/L	0.026	2	57	14237	0	Standard
|	**Sb**	**121**	**-0.016**	ug/L	0.002	13	543	320	10	Standard
⌊	**Sb**	**123**	**-0.014**	ug/L	0.002	15	381	233	9	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2375482	0	Standard
⌊	**Pb**	**208**	**1.285**	ug/L	0.006	0	568	127787	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0282-13
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, July 01, 2020 02:58:26

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	28261	2	Standard
	Cl	**37**		ug/L			10118226	9882299	0	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1315144	1	Standard
|	**Cr**	**52**	**-0.004**	ug/L	0.003	79	18153	17796	1	Standard
|	**Cr**	**53**	**0.071**	ug/L	0.016	22	567	749	4	Standard
|	**Fe**	**54**	**6075.384**	ug/L	83.001	1	77631	15373494	0	Standard
|	**Fe**	**57**	**6312.832**	ug/L	68.318	1	17962	5750615	1	Standard
⌊	**Mn**	**55**	**126.867**	ug/L	2.374	1	1594	4179043	0	Standard
⌈>	**Ge**	**72**		ug/L			91164	80401	1	KED
|	**Ni**	**60**	**0.543**	ug/L	0.022	4	24	675	4	KED
|	**Ni**	**62**	**0.579**	ug/L	0.104	17	4	115	16	KED
|	**Cu**	**63**	**0.029**	ug/L	0.004	12	99	184	7	KED
|	**Cu**	**65**	**0.021**	ug/L	0.002	9	46	77	5	KED
|	**Zn**	**66**	**11.975**	ug/L	0.161	1	95	6568	1	KED
|	**Zn**	**67**	**11.978**	ug/L	0.379	3	17	1063	3	KED
|	**As**	**75**	**0.010**	ug/L	0.002	21	4	6	8	KED
⌊	**Se**	**78**	**-0.060**	ug/L	0.034	57	19	15	8	KED
	Y	**89**		ug/L			611804	578924	1	Standard
	Kr	**83**		ug/L			36	44	21	Standard
⌈>	**In-1**	**115**		ug/L			28986	26634	0	KED
|	**Mo**	**98**	**0.078**	ug/L	0.006	7	13	135	5	KED
|	**Cd**	**111**	**0.020**	ug/L	0.006	31	6	14	17	KED
⌊	**Cd**	**114**	**0.028**	ug/L	0.002	8	10	38	7	KED
⌈>	**In**	**115**		ug/L			1059327	1160876	0	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	38	57	85	10	Standard
|	**Sb**	**121**	**-0.023**	ug/L	0.001	6	543	211	11	Standard
⌊	**Sb**	**123**	**-0.021**	ug/L	0.002	9	381	149	17	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2416529	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	39	568	638	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0637-DUP3
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, July 01, 2020 03:02:55

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	27765	1	Standard
	Cl	**37**		ug/L			10118226	9920481	1	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1311819	0	Standard
|	**Cr**	**52**	**0.008**	ug/L	0.004	49	18153	18036	1	Standard
|	**Cr**	**53**	**0.059**	ug/L	0.013	22	567	716	4	Standard
|	**Fe**	**54**	**6129.081**	ug/L	16.465	0	77631	15470741	0	Standard
|	**Fe**	**57**	**6502.236**	ug/L	88.303	1	17962	5908138	1	Standard
⌊	**Mn**	**55**	**129.616**	ug/L	2.011	1	1594	4259397	1	Standard
⌈>	**Ge**	**72**		ug/L			91164	79653	1	KED
|	**Ni**	**60**	**0.569**	ug/L	0.044	7	24	699	7	KED
|	**Ni**	**62**	**0.599**	ug/L	0.174	29	4	118	26	KED
|	**Cu**	**63**	**0.024**	ug/L	0.008	32	99	168	14	KED
|	**Cu**	**65**	**0.027**	ug/L	0.004	16	46	86	9	KED
|	**Zn**	**66**	**12.509**	ug/L	0.051	0	95	6793	1	KED
|	**Zn**	**67**	**12.001**	ug/L	0.577	4	17	1055	5	KED
|	**As**	**75**	**0.004**	ug/L	0.010	252	4	4	60	KED
⌊	**Se**	**78**	**-0.025**	ug/L	0.113	446	19	16	23	KED
	Y	**89**		ug/L			611804	578309	2	Standard
	Kr	**83**		ug/L			36	45	22	Standard
⌈>	**In-1**	**115**		ug/L			28986	26457	0	KED
|	**Mo**	**98**	**0.103**	ug/L	0.014	13	13	173	12	KED
|	**Cd**	**111**	**0.035**	ug/L	0.002	6	6	20	4	KED
⌊	**Cd**	**114**	**0.032**	ug/L	0.004	13	10	42	10	KED
⌈>	**In**	**115**		ug/L			1059327	1167600	3	Standard
|	**Ag**	**107**	**-0.001**	ug/L	0.001	121	57	54	16	Standard
|	**Sb**	**121**	**-0.024**	ug/L	0.002	7	543	189	18	Standard
⌊	**Sb**	**123**	**-0.023**	ug/L	0.001	5	381	126	15	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2399039	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	29	568	651	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0637-MS3
Sample Dil Factor: 20
Comments:

DEL

Sample Date/Time: Wednesday, July 01, 2020 03:07:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	27963	3	Standard
	Cl	**37**		ug/L			10118226	9887305	1	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1343638	0	Standard
|	**Cr**	**52**	**1.374**	ug/L	0.005	0	18153	52161	0	Standard
|	**Cr**	**53**	**1.449**	ug/L	0.004	0	567	4547	0	Standard
|	**Fe**	**54**	**6342.461**	ug/L	85.238	1	77631	16395710	1	Standard
|	**Fe**	**57**	**6618.571**	ug/L	72.663	1	17962	6159350	1	Standard
⌊	**Mn**	**55**	**131.026**	ug/L	0.638	0	1594	4410177	0	Standard
⌈>	**Ge**	**72**		ug/L			91164	81114	1	KED
|	**Ni**	**60**	**1.858**	ug/L	0.049	2	24	2277	1	KED
|	**Ni**	**62**	**1.770**	ug/L	0.066	3	4	348	2	KED
|	**Cu**	**63**	**1.327**	ug/L	0.014	1	99	4615	1	KED
|	**Cu**	**65**	**1.298**	ug/L	0.100	7	46	2280	6	KED
|	**Zn**	**66**	**16.477**	ug/L	0.305	1	95	9084	0	KED
|	**Zn**	**67**	**15.710**	ug/L	0.667	4	17	1401	2	KED
|	**As**	**75**	**1.296**	ug/L	0.008	0	4	392	1	KED
⌊	**Se**	**78**	**4.535**	ug/L	0.318	7	19	179	4	KED
	Y	**89**		ug/L			611804	571603	0	Standard
	Kr	**83**		ug/L			36	45	4	Standard
⌈>	**In-1**	**115**		ug/L			28986	27243	1	KED
|	**Mo**	**98**	**0.094**	ug/L	0.011	12	13	163	11	KED
|	**Cd**	**111**	**1.290**	ug/L	0.018	1	6	538	1	KED
⌊	**Cd**	**114**	**1.322**	ug/L	0.046	3	10	1406	2	KED
⌈>	**In**	**115**		ug/L			1059327	1201137	0	Standard
|	**Ag**	**107**	**1.070**	ug/L	0.004	0	57	15881	0	Standard
|	**Sb**	**121**	**-0.025**	ug/L	0.002	9	543	180	23	Standard
⌊	**Sb**	**123**	**-0.020**	ug/L	0.002	10	381	160	17	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2460119	0	Standard
⌊	**Pb**	**208**	**1.334**	ug/L	0.014	1	568	137319	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0637-MSD3
Sample Dil Factor: 20
Comments:

DEL

Sample Date/Time: Wednesday, July 01, 2020 03:12:16
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	27178	2	Standard
	Cl	**37**		ug/L			10118226	9874929	1	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1370317	0	Standard
|	**Cr**	**52**	**1.289**	ug/L	0.030	2	18153	51048	1	Standard
|	**Cr**	**53**	**1.381**	ug/L	0.025	1	567	4449	1	Standard
|	**Fe**	**54**	**6401.673**	ug/L	95.871	1	77631	16876322	1	Standard
|	**Fe**	**57**	**6592.772**	ug/L	76.933	1	17962	6257181	1	Standard
⌊	**Mn**	**55**	**132.095**	ug/L	1.571	1	1594	4534478	1	Standard
⌈>	**Ge**	**72**		ug/L			91164	81257	1	KED
|	**Ni**	**60**	**1.723**	ug/L	0.016	0	24	2118	2	KED
|	**Ni**	**62**	**1.760**	ug/L	0.115	6	4	347	5	KED
|	**Cu**	**63**	**1.250**	ug/L	0.029	2	99	4358	1	KED
|	**Cu**	**65**	**1.291**	ug/L	0.054	4	46	2273	2	KED
|	**Zn**	**66**	**16.438**	ug/L	0.525	3	95	9079	2	KED
|	**Zn**	**67**	**15.557**	ug/L	0.577	3	17	1391	2	KED
|	**As**	**75**	**1.303**	ug/L	0.093	7	4	394	5	KED
⌊	**Se**	**78**	**4.003**	ug/L	0.180	4	19	160	2	KED
	Y	**89**		ug/L			611804	597125	0	Standard
	Kr	**83**		ug/L			36	47	18	Standard
⌈>	**In-1**	**115**		ug/L			28986	27328	2	KED
|	**Mo**	**98**	**0.078**	ug/L	0.005	6	13	139	7	KED
|	**Cd**	**111**	**1.293**	ug/L	0.113	8	6	540	6	KED
⌊	**Cd**	**114**	**1.312**	ug/L	0.100	7	10	1399	6	KED
⌈>	**In**	**115**		ug/L			1059327	1241458	1	Standard
|	**Ag**	**107**	**1.104**	ug/L	0.012	1	57	16918	0	Standard
|	**Sb**	**121**	**-0.024**	ug/L	0.000	0	543	209	3	Standard
⌊	**Sb**	**123**	**-0.019**	ug/L	0.001	3	381	181	5	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2484856	0	Standard
⌊	**Pb**	**208**	**1.313**	ug/L	0.001	0	568	136509	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLD
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 03:18:10
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	20516	4	Standard
	Cl	**37**		ug/L			10118226	10094035	0	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1305575	1	Standard
|	**Cr**	**52**	**-0.100**	ug/L	0.008	8	18153	15366	1	Standard
|	**Cr**	**53**	**-0.076**	ug/L	0.011	14	567	354	7	Standard
|	**Fe**	**54**	**-2.299**	ug/L	1.209	52	77631	70258	5	Standard
|	**Fe**	**57**	**0.967**	ug/L	0.962	99	17962	18457	5	Standard
⌊	**Mn**	**55**	**-0.014**	ug/L	0.016	108	1594	1093	48	Standard
⌈>	**Ge**	**72**		ug/L			91164	82690	0	KED
|	**Ni**	**60**	**-0.005**	ug/L	0.003	59	24	15	25	KED
|	**Ni**	**62**	**0.015**	ug/L	0.011	72	4	6	31	KED
|	**Cu**	**63**	**-0.008**	ug/L	0.003	45	99	62	18	KED
|	**Cu**	**65**	**-0.008**	ug/L	0.004	58	46	29	26	KED
|	**Zn**	**66**	**-0.046**	ug/L	0.022	48	95	61	20	KED
|	**Zn**	**67**	**-0.032**	ug/L	0.079	244	17	12	56	KED
|	**As**	**75**	**-0.003**	ug/L	0.002	55	4	2	20	KED
⌊	**Se**	**78**	**-0.062**	ug/L	0.106	171	19	15	25	KED
	Y	**89**		ug/L			611804	574074	1	Standard
	Kr	**83**		ug/L			36	40	11	Standard
⌈>	**In-1**	**115**		ug/L			28986	26661	1	KED
|	**Mo**	**98**	**-0.006**	ug/L	0.001	22	13	3	63	KED
|	**Cd**	**111**	**-0.006**	ug/L	0.008	130	6	3	95	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.004	158	10	6	62	KED
⌈>	**In**	**115**		ug/L			1059327	1147928	2	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.001	101	57	71	13	Standard
|	**Sb**	**121**	**-0.029**	ug/L	0.000	1	543	107	5	Standard
⌊	**Sb**	**123**	**-0.026**	ug/L	0.001	2	381	85	10	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2375602	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.001	316	568	586	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVE
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 03:24:03
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18872	20096	2	Standard
	Cl	37		ug/L			10118226	10032463	1	Standard
>	Sc	45		ug/L			1333928	1287612	1	Standard
	Cr	52	52.364	ug/L	0.830	1	18153	1254323	0	Standard
	Cr	53	54.281	ug/L	0.185	0	567	143289	0	Standard
	Fe	54	4962.749	ug/L	20.770	0	77631	12310228	1	Standard
	Fe	57	5089.561	ug/L	37.611	0	17962	4542617	1	Standard
	Mn	55	56.995	ug/L	1.208	2	1594	1838933	0	Standard
>	Ge	72		ug/L			91164	81044	1	KED
	Ni	60	49.224	ug/L	1.118	2	24	59757	1	KED
	Ni	62	49.290	ug/L	1.623	3	4	9594	2	KED
	Cu	63	49.770	ug/L	0.610	1	99	169689	0	KED
	Cu	65	49.799	ug/L	0.431	0	46	85951	1	KED
	Zn	66	50.248	ug/L	0.378	0	95	27507	0	KED
	Zn	67	50.955	ug/L	0.143	0	17	4511	1	KED
	As	75	49.740	ug/L	0.251	0	4	14906	1	KED
	Se	78	51.692	ug/L	0.257	0	19	1862	1	KED
	Y	89		ug/L			611804	578720	2	Standard
	Kr	83		ug/L			36	41	11	Standard
>	In-1	115		ug/L			28986	26713	0	KED
	Mo	98	47.889	ug/L	0.585	1	13	75805	0	KED
	Cd	111	50.539	ug/L	0.463	0	6	20462	0	KED
	Cd	114	49.950	ug/L	0.423	0	10	51763	0	KED
>	In	115		ug/L			1059327	1120104	0	Standard
	Ag	107	44.285	ug/L	0.245	0	57	610234	0	Standard
	Sb	121	51.856	ug/L	0.755	1	543	848245	1	Standard
	Sb	123	51.241	ug/L	1.003	1	381	638642	2	Standard
>	Tb	159		ug/L			2368674	2408071	0	Standard
	Pb	208	51.515	ug/L	0.318	0	568	5169387	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBE
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, July 01, 2020 03:31:16
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	18875	2	Standard
	Cl	**37**		ug/L			10118226	9917931	0	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1293379	0	Standard
|	**Cr**	**52**	**-0.085**	ug/L	0.003	3	18153	15581	0	Standard
|	**Cr**	**53**	**-0.057**	ug/L	0.012	20	567	400	7	Standard
|	**Fe**	**54**	**-1.282**	ug/L	0.535	41	77631	72091	1	Standard
|	**Fe**	**57**	**-0.316**	ug/L	0.277	87	17962	17132	0	Standard
⌊	**Mn**	**55**	**-0.026**	ug/L	0.000	1	1594	690	2	Standard
⌈>	**Ge**	**72**		ug/L			91164	81906	2	KED
|	**Ni**	**60**	**-0.008**	ug/L	0.004	49	24	11	44	KED
|	**Ni**	**62**	**0.002**	ug/L	0.005	226	4	4	24	KED
|	**Cu**	**63**	**-0.012**	ug/L	0.005	41	99	48	31	KED
|	**Cu**	**65**	**-0.010**	ug/L	0.002	21	46	24	16	KED
|	**Zn**	**66**	**-0.087**	ug/L	0.010	11	95	38	13	KED
|	**Zn**	**67**	**-0.102**	ug/L	0.069	67	17	6	96	KED
|	**As**	**75**	**0.002**	ug/L	0.005	200	4	4	32	KED
⌊	**Se**	**78**	**-0.011**	ug/L	0.039	342	19	17	5	KED
	Y	**89**		ug/L			611804	575796	0	Standard
	Kr	**83**		ug/L			36	38	32	Standard
⌈>	**In-1**	**115**		ug/L			28986	26911	0	KED
|	**Mo**	**98**	**0.027**	ug/L	0.026	97	13	55	76	KED
|	**Cd**	**111**	**0.013**	ug/L	0.038	301	6	11	137	KED
⌊	**Cd**	**114**	**0.010**	ug/L	0.023	232	10	20	120	KED
⌈>	**In**	**115**		ug/L			1059327	1122976	2	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.001	95	57	72	14	Standard
|	**Sb**	**121**	**0.097**	ug/L	0.005	5	543	2161	3	Standard
⌊	**Sb**	**123**	**0.099**	ug/L	0.008	7	381	1641	4	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2363756	0	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	16	568	434	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0250-01
Sample Dil Factor: 10
Comments:
Sample Date/Time: Wednesday, July 01, 2020 03:35:45

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	24640	1	Standard
	Cl	**37**		ug/L			10118226	10035601	0	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1370062	1	Standard
|	**Cr**	**52**	**-0.084**	ug/L	0.010	11	18153	16532	1	Standard
|	**Cr**	**53**	**-0.019**	ug/L	0.041	217	567	529	20	Standard
|	**Fe**	**54**	**3937.039**	ug/L	32.856	0	77631	10407216	1	Standard
|	**Fe**	**57**	**4096.652**	ug/L	11.380	0	17962	3894359	1	Standard
⌊	**Mn**	**55**	**78.139**	ug/L	1.086	1	1594	2682136	0	Standard
⌈>	**Ge**	**72**		ug/L			91164	81199	1	KED
|	**Ni**	**60**	**0.156**	ug/L	0.013	8	24	211	8	KED
|	**Ni**	**62**	**0.165**	ug/L	0.014	8	4	36	9	KED
|	**Cu**	**63**	**0.073**	ug/L	0.001	1	99	339	1	KED
|	**Cu**	**65**	**0.084**	ug/L	0.012	14	46	186	9	KED
|	**Zn**	**66**	**5.903**	ug/L	0.194	3	95	3312	1	KED
|	**Zn**	**67**	**5.615**	ug/L	0.226	4	17	511	4	KED
|	**As**	**75**	**0.743**	ug/L	0.029	3	4	226	5	KED
⌊	**Se**	**78**	**-0.004**	ug/L	0.088	2134	19	17	16	KED
	Y	**89**		ug/L			611804	609101	1	Standard
	Kr	**83**		ug/L			36	49	19	Standard
⌈>	**In-1**	**115**		ug/L			28986	26849	1	KED
|	**Mo**	**98**	**0.201**	ug/L	0.016	7	13	332	6	KED
|	**Cd**	**111**	**0.007**	ug/L	0.008	102	6	9	33	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.006	193	10	13	50	KED
⌈>	**In**	**115**		ug/L			1059327	1189433	3	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.001	305	57	70	23	Standard
|	**Sb**	**121**	**0.003**	ug/L	0.004	135	543	657	12	Standard
⌊	**Sb**	**123**	**0.007**	ug/L	0.001	17	381	519	6	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2464887	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.001	501	568	608	15	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0483-DUP4
Sample Dil Factor: 10
Comments:
Sample Date/Time: Wednesday, July 01, 2020 03:40:14

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	27714	1	Standard
	Cl	**37**		ug/L			10118226	10054839	0	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1373805	1	Standard
|	**Cr**	**52**	**-0.096**	ug/L	0.010	10	18153	16263	0	Standard
|	**Cr**	**53**	**-0.062**	ug/L	0.009	14	567	410	6	Standard
|	**Fe**	**54**	**4053.721**	ug/L	56.960	1	77631	10741647	0	Standard
|	**Fe**	**57**	**4239.094**	ug/L	68.963	1	17962	4039720	1	Standard
⌊	**Mn**	**55**	**80.752**	ug/L	0.564	0	1594	2779524	0	Standard
⌈>	**Ge**	**72**		ug/L			91164	83556	1	KED
|	**Ni**	**60**	**0.129**	ug/L	0.009	7	24	183	5	KED
|	**Ni**	**62**	**0.135**	ug/L	0.020	14	4	31	14	KED
|	**Cu**	**63**	**0.082**	ug/L	0.003	3	99	377	4	KED
|	**Cu**	**65**	**0.091**	ug/L	0.003	3	46	204	3	KED
|	**Zn**	**66**	**6.107**	ug/L	0.104	1	95	3524	2	KED
|	**Zn**	**67**	**5.761**	ug/L	0.325	5	17	539	5	KED
|	**As**	**75**	**0.766**	ug/L	0.023	3	4	240	2	KED
⌊	**Se**	**78**	**-0.104**	ug/L	0.066	63	19	14	16	KED
	Y	**89**		ug/L			611804	601057	2	Standard
	Kr	**83**		ug/L			36	50	21	Standard
⌈>	**In-1**	**115**		ug/L			28986	27339	1	KED
|	**Mo**	**98**	**0.213**	ug/L	0.008	3	13	357	4	KED
|	**Cd**	**111**	**0.003**	ug/L	0.002	63	6	7	12	KED
⌊	**Cd**	**114**	**0.011**	ug/L	0.004	37	10	21	21	KED
⌈>	**In**	**115**		ug/L			1059327	1230070	1	Standard
|	**Ag**	**107**	**-0.000**	ug/L	0.001	540	57	63	32	Standard
|	**Sb**	**121**	**-0.012**	ug/L	0.001	8	543	420	5	Standard
⌊	**Sb**	**123**	**-0.009**	ug/L	0.002	25	381	316	9	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2507265	1	Standard
⌊	**Pb**	**208**	**-0.002**	ug/L	0.000	10	568	430	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0483-MS4
Sample Dil Factor: 10
DEL
Comments:
Sample Date/Time: Wednesday, July 01, 2020 03:44:42
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	25425	1	Standard
	Cl	**37**		ug/L			10118226	9904300	0	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1382873	0	Standard
|	**Cr**	**52**	**2.489**	ug/L	0.022	0	18153	81956	1	Standard
|	**Cr**	**53**	**2.608**	ug/L	0.051	1	567	7954	1	Standard
|	**Fe**	**54**	**4435.939**	ug/L	90.425	2	77631	11826056	2	Standard
|	**Fe**	**57**	**4626.978**	ug/L	24.498	0	17962	4437174	0	Standard
⌊	**Mn**	**55**	**81.699**	ug/L	0.584	0	1594	2830773	0	Standard
⌈>	**Ge**	**72**		ug/L			91164	83793	0	KED
|	**Ni**	**60**	**2.491**	ug/L	0.046	1	24	3147	0	KED
|	**Ni**	**62**	**2.485**	ug/L	0.155	6	4	504	5	KED
|	**Cu**	**63**	**2.561**	ug/L	0.040	1	99	9114	0	KED
|	**Cu**	**65**	**2.512**	ug/L	0.070	2	46	4523	3	KED
|	**Zn**	**66**	**14.000**	ug/L	0.368	2	95	7987	2	KED
|	**Zn**	**67**	**14.056**	ug/L	0.464	3	17	1297	2	KED
|	**As**	**75**	**3.208**	ug/L	0.119	3	4	997	3	KED
⌊	**Se**	**78**	**8.362**	ug/L	0.415	4	19	326	4	KED
	Y	**89**		ug/L			611804	604327	0	Standard
	Kr	**83**		ug/L			36	44	25	Standard
⌈>	**In-1**	**115**		ug/L			28986	27825	0	KED
|	**Mo**	**98**	**0.201**	ug/L	0.023	11	13	344	11	KED
|	**Cd**	**111**	**2.489**	ug/L	0.024	0	6	1055	0	KED
⌊	**Cd**	**114**	**2.424**	ug/L	0.073	3	10	2625	2	KED
⌈>	**In**	**115**		ug/L			1059327	1224234	0	Standard
|	**Ag**	**107**	**2.156**	ug/L	0.021	0	57	32530	1	Standard
|	**Sb**	**121**	**-0.017**	ug/L	0.001	5	543	323	5	Standard
⌊	**Sb**	**123**	**-0.012**	ug/L	0.001	7	381	278	4	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2526700	0	Standard
⌊	**Pb**	**208**	**2.510**	ug/L	0.015	0	568	264809	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0483-MSD4
Sample Dil Factor: 10
DEL
Comments:
Sample Date/Time: Wednesday, July 01, 2020 03:49:35
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	24754	2	Standard
	Cl	**37**		ug/L			10118226	9832715	1	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1368363	1	Standard
|	**Cr**	**52**	**2.422**	ug/L	0.073	2	18153	79415	0	Standard
|	**Cr**	**53**	**2.598**	ug/L	0.037	1	567	7841	0	Standard
|	**Fe**	**54**	**4389.803**	ug/L	65.097	1	77631	11578776	0	Standard
|	**Fe**	**57**	**4563.032**	ug/L	77.941	1	17962	4329311	0	Standard
⌊	**Mn**	**55**	**80.218**	ug/L	2.577	3	1594	2749650	2	Standard
⌈>	**Ge**	**72**		ug/L			91164	83899	1	KED
|	**Ni**	**60**	**2.606**	ug/L	0.036	1	24	3296	0	KED
|	**Ni**	**62**	**2.562**	ug/L	0.136	5	4	520	7	KED
|	**Cu**	**63**	**2.574**	ug/L	0.037	1	99	9171	1	KED
|	**Cu**	**65**	**2.599**	ug/L	0.015	0	46	4685	1	KED
|	**Zn**	**66**	**14.014**	ug/L	0.422	3	95	8004	2	KED
|	**Zn**	**67**	**13.962**	ug/L	0.260	1	17	1290	0	KED
|	**As**	**75**	**3.192**	ug/L	0.041	1	4	993	0	KED
⌊	**Se**	**78**	**8.341**	ug/L	0.158	1	19	326	2	KED
	Y	**89**		ug/L			611804	610209	0	Standard
	Kr	**83**		ug/L			36	51	9	Standard
⌈>	**In-1**	**115**		ug/L			28986	28113	1	KED
|	**Mo**	**98**	**0.195**	ug/L	0.033	17	13	338	15	KED
|	**Cd**	**111**	**2.447**	ug/L	0.123	5	6	1048	4	KED
⌊	**Cd**	**114**	**2.503**	ug/L	0.040	1	10	2739	2	KED
⌈>	**In**	**115**		ug/L			1059327	1220895	0	Standard
|	**Ag**	**107**	**2.124**	ug/L	0.043	2	57	31965	2	Standard
|	**Sb**	**121**	**-0.017**	ug/L	0.005	27	543	320	26	Standard
⌊	**Sb**	**123**	**-0.014**	ug/L	0.005	36	381	250	27	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2515125	0	Standard
⌊	**Pb**	**208**	**2.544**	ug/L	0.043	1	568	267193	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0330-07
Sample Dil Factor: 50
Comments:

DEL

Sample Date/Time: Wednesday, July 01, 2020 03:55:28
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	29648	2	Standard
	Cl	**37**		ug/L			10118226	12329564	0	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1330513	1	Standard
|	**Cr**	**52**	**0.161**	ug/L	0.014	8	18153	22034	0	Standard
|	**Cr**	**53**	**2.943**	ug/L	0.162	5	567	8563	5	Standard
|	**Fe**	**54**	**19.506**	ug/L	0.494	2	77631	127119	0	Standard
|	**Fe**	**57**	**81.672**	ug/L	2.039	2	17962	92943	1	Standard
⌊	**Mn**	**55**	**187.002**	ug/L	3.390	1	1594	6231249	0	Standard
⌈>	**Ge**	**72**		ug/L			91164	79784	1	KED
|	**Ni**	**60**	**1.834**	ug/L	0.073	3	24	2213	5	KED
|	**Ni**	**62**	**1.890**	ug/L	0.167	8	4	365	7	KED
|	**Cu**	**63**	**0.050**	ug/L	0.006	12	99	253	8	KED
|	**Cu**	**65**	**0.053**	ug/L	0.015	28	46	130	20	KED
|	**Zn**	**66**	**0.081**	ug/L	0.012	15	95	127	6	KED
|	**Zn**	**67**	**0.156**	ug/L	0.076	49	17	28	24	KED
|	**As**	**75**	**0.083**	ug/L	0.013	15	4	28	15	KED
⌊	**Se**	**78**	**0.009**	ug/L	0.138	1621	19	17	28	KED
	Y	**89**		ug/L			611804	579577	0	Standard
	Kr	**83**		ug/L			36	69	20	Standard
⌈>	**In-1**	**115**		ug/L			28986	25867	1	KED
|	**Mo**	**98**	**0.602**	ug/L	0.034	5	13	934	5	KED
|	**Cd**	**111**	**0.001**	ug/L	0.009	793	6	6	52	KED
⌊	**Cd**	**114**	**-0.006**	ug/L	0.003	53	10	3	93	KED
⌈>	**In**	**115**		ug/L			1059327	1114838	1	Standard
|	**Ag**	**107**	**-0.001**	ug/L	0.002	165	57	46	46	Standard
|	**Sb**	**121**	**-0.020**	ug/L	0.001	7	543	244	10	Standard
⌊	**Sb**	**123**	**-0.017**	ug/L	0.003	15	381	187	18	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2349949	1	Standard
⌊	**Pb**	**208**	**-0.002**	ug/L	0.000	12	568	379	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20F0414-40
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Wednesday, July 01, 2020 03:59:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	81602	0	Standard
	Cl	**37**		ug/L			10118226	17089349	1	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1474372	2	Standard
|	**Cr**	**52**	**0.889**	ug/L	0.043	4	18153	44102	0	Standard
|	**Cr**	**53**	**11.094**	ug/L	0.232	2	567	34023	0	Standard
|	**Fe**	**54**	**1141.261**	ug/L	7.159	0	77631	3307326	1	Standard
|	**Fe**	**57**	**1471.986**	ug/L	29.517	2	17962	1518179	1	Standard
⌊	**Mn**	**55**	**1910.448**	ug/L	14.088	0	1594	70529245	1	Standard
⌈>	**Ge**	**72**		ug/L			91164	69269	0	KED
|	**Ni**	**60**	**1.866**	ug/L	0.025	1	24	1954	1	KED
|	**Ni**	**62**	**1.808**	ug/L	0.193	10	4	304	10	KED
|	**Cu**	**63**	**0.902**	ug/L	0.017	1	99	2703	1	KED
|	**Cu**	**65**	**0.927**	ug/L	0.063	6	46	1402	7	KED
|	**Zn**	**66**	**3.379**	ug/L	0.108	3	95	1648	3	KED
|	**Zn**	**67**	**4.375**	ug/L	0.454	10	17	342	9	KED
|	**As**	**75**	**1.803**	ug/L	0.081	4	4	464	4	KED
⌊	**Se**	**78**	**1.762**	ug/L	0.107	6	19	68	4	KED
	Y	**89**		ug/L			611804	541827	1	Standard
	Kr	**83**		ug/L			36	109	13	Standard
⌈>	**In-1**	**115**		ug/L			28986	23845	1	KED
|	**Mo**	**98**	**0.380**	ug/L	0.016	4	13	547	3	KED
|	**Cd**	**111**	**0.006**	ug/L	0.008	134	6	7	37	KED
⌊	**Cd**	**114**	**0.010**	ug/L	0.006	58	10	17	29	KED
⌈>	**In**	**115**		ug/L			1059327	1069470	2	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.001	74	57	72	15	Standard
|	**Sb**	**121**	**31.643**	ug/L	1.199	3	543	494145	2	Standard
⌊	**Sb**	**123**	**31.868**	ug/L	0.719	2	381	379232	1	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2369017	0	Standard
⌊	**Pb**	**208**	**0.178**	ug/L	0.002	0	568	18186	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0879-DUP1
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Wednesday, July 01, 2020 04:04:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18872	82644	1	Standard
	Cl	37		ug/L			10118226	17150040	2	Standard
>	Sc	45		ug/L			1333928	1490554	1	Standard
	Cr	52	0.819	ug/L	0.033	4	18153	42686	1	Standard
	Cr	53	11.030	ug/L	0.125	1	567	34211	0	Standard
	Fe	54	1145.787	ug/L	10.526	0	77631	3356786	1	Standard
	Fe	57	1463.119	ug/L	25.917	1	17962	1526131	2	Standard
	Mn	55	1916.637	ug/L	45.727	2	1594	71550044	3	Standard
>	Ge	72		ug/L			91164	67557	1	KED
	Ni	60	1.895	ug/L	0.178	9	24	1934	8	KED
	Ni	62	1.706	ug/L	0.077	4	4	280	4	KED
	Cu	63	0.968	ug/L	0.011	1	99	2822	2	KED
	Cu	65	0.960	ug/L	0.031	3	46	1415	4	KED
	Zn	66	3.074	ug/L	0.227	7	95	1468	5	KED
	Zn	67	3.852	ug/L	0.470	12	17	295	10	KED
	As	75	1.750	ug/L	0.040	2	4	440	2	KED
	Se	78	1.737	ug/L	0.281	16	19	66	12	KED
	Y	89		ug/L			611804	538258	1	Standard
	Kr	83		ug/L			36	120	3	Standard
>	In-1	115		ug/L			28986	23683	1	KED
	Mo	98	0.378	ug/L	0.009	2	13	541	3	KED
	Cd	111	0.019	ug/L	0.011	61	6	12	32	KED
	Cd	114	0.003	ug/L	0.006	186	10	11	50	KED
>	In	115		ug/L			1059327	1114448	1	Standard
	Ag	107	0.004	ug/L	0.001	19	57	109	9	Standard
	Sb	121	31.151	ug/L	0.504	1	543	507282	3	Standard
	Sb	123	31.450	ug/L	0.505	1	381	390174	2	Standard
>	Tb	159		ug/L			2368674	2407609	1	Standard
	Pb	208	0.168	ug/L	0.001	0	568	17461	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0879-MS1
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Wednesday, July 01, 2020 04:08:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	69251	0	Standard
	Cl	**37**		ug/L			10118226	16578925	0	Standard
>	**Sc**	**45**		ug/L			1333928	1441003	1	Standard
	Cr	**52**	**21.819**	ug/L	0.420	1	18153	596326	0	Standard
	Cr	**53**	**31.488**	ug/L	0.674	2	567	93265	0	Standard
	Fe	**54**	**5249.755**	ug/L	87.853	1	77631	14565980	0	Standard
	Fe	**57**	**6049.630**	ug/L	133.509	2	17962	6038275	1	Standard
	Mn	**55**	**1914.879**	ug/L	29.956	1	1594	69088670	0	Standard
>	**Ge**	**72**		ug/L			91164	66205	1	KED
	Ni	**60**	**25.706**	ug/L	0.302	1	24	25503	0	KED
	Ni	**62**	**26.362**	ug/L	0.178	0	4	4194	2	KED
	Cu	**63**	**23.963**	ug/L	0.408	1	99	66776	0	KED
	Cu	**65**	**24.030**	ug/L	0.060	0	46	33897	1	KED
	Zn	**66**	**71.623**	ug/L	1.264	1	95	31996	0	KED
	Zn	**67**	**69.781**	ug/L	2.059	2	17	5041	2	KED
	As	**75**	**26.553**	ug/L	0.336	1	4	6501	1	KED
	Se	**78**	**80.235**	ug/L	0.500	0	19	2353	1	KED
	Y	**89**		ug/L			611804	523137	0	Standard
	Kr	**83**		ug/L			36	186	7	Standard
>	**In-1**	**115**		ug/L			28986	22891	1	KED
	Mo	**98**	**25.347**	ug/L	0.277	1	13	34385	1	KED
	Cd	**111**	**23.331**	ug/L	0.569	2	6	8095	0	KED
	Cd	**114**	**23.061**	ug/L	0.343	1	10	20481	1	KED
>	**In**	**115**		ug/L			1059327	1086249	1	Standard
	Ag	**107**	**18.333**	ug/L	0.335	1	57	244987	0	Standard
	Sb	**121**	**56.281**	ug/L	1.066	1	543	892597	1	Standard
	Sb	**123**	**57.004**	ug/L	0.864	1	381	688846	0	Standard
>	**Tb**	**159**		ug/L			2368674	2366482	0	Standard
	Pb	**208**	**23.306**	ug/L	0.293	1	568	2298803	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIF0879-MSD1
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Wednesday, July 01, 2020 04:13:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\063020.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18872	69112	0	Standard
	Cl	**37**		ug/L			10118226	16441951	0	Standard
⌈>	**Sc**	**45**		ug/L			1333928	1428281	0	Standard
|	**Cr**	**52**	**22.260**	ug/L	0.380	1	18153	602682	1	Standard
|	**Cr**	**53**	**31.480**	ug/L	0.188	0	567	92438	1	Standard
|	**Fe**	**54**	**5365.678**	ug/L	79.973	1	77631	14755484	0	Standard
|	**Fe**	**57**	**6131.385**	ug/L	93.692	1	17962	6066445	1	Standard
⌊	**Mn**	**55**	**1988.185**	ug/L	29.670	1	1594	71108931	1	Standard
⌈>	**Ge**	**72**		ug/L			91164	66522	1	KED
|	**Ni**	**60**	**25.786**	ug/L	0.824	3	24	25701	2	KED
|	**Ni**	**62**	**25.398**	ug/L	0.456	1	4	4060	1	KED
|	**Cu**	**63**	**23.920**	ug/L	0.205	0	99	66983	0	KED
|	**Cu**	**65**	**23.979**	ug/L	0.280	1	46	33983	0	KED
|	**Zn**	**66**	**71.824**	ug/L	1.618	2	95	32238	1	KED
|	**Zn**	**67**	**68.864**	ug/L	0.361	0	17	4999	0	KED
|	**As**	**75**	**26.415**	ug/L	0.093	0	4	6498	1	KED
⌊	**Se**	**78**	**79.995**	ug/L	1.365	1	19	2357	2	KED
	Y	**89**		ug/L			611804	522632	0	Standard
	Kr	**83**		ug/L			36	187	7	Standard
⌈>	**In-1**	**115**		ug/L			28986	23356	0	KED
|	**Mo**	**98**	**25.099**	ug/L	0.319	1	13	34742	1	KED
|	**Cd**	**111**	**22.530**	ug/L	0.146	0	6	7978	0	KED
⌊	**Cd**	**114**	**22.351**	ug/L	0.466	2	10	20256	1	KED
⌈>	**In**	**115**		ug/L			1059327	1088092	2	Standard
|	**Ag**	**107**	**18.289**	ug/L	0.429	2	57	244775	0	Standard
|	**Sb**	**121**	**57.319**	ug/L	0.192	0	543	910707	1	Standard
⌊	**Sb**	**123**	**58.578**	ug/L	1.525	2	381	708896	0	Standard
⌈>	**Tb**	**159**		ug/L			2368674	2348195	1	Standard
⌊	**Pb**	**208**	**23.509**	ug/L	0.381	1	568	2300432	0	Standard

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20F0296
Client: Floyd - Snider
Project: Lora Lake Apartments
Instrument ID: ICPMS1
Calibration: DG00003
Control Limt: +/- 10.00%
Sequence: SIF0466

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SIF0466-ICV1	Arsenic-75a (dissolved)	50.000	52.0	104	ug/L	EPA 200.8 UCT-KEI
SIF0466-CCV1	Arsenic-75a (dissolved)	50.000	50.2	100	ug/L	EPA 200.8 UCT-KEI
SIF0466-CCV2	Arsenic-75a (dissolved)	50.000	49.7	99.3	ug/L	EPA 200.8 UCT-KEI
SIF0466-CCV3	Arsenic-75a (dissolved)	50.000	50.4	101	ug/L	EPA 200.8 UCT-KEI
SIF0466-CCV4	Arsenic-75a (dissolved)	50.000	50.0	100	ug/L	EPA 200.8 UCT-KEI
SIF0466-CCV5	Arsenic-75a (dissolved)	50.000	49.8	99.7	ug/L	EPA 200.8 UCT-KEI
SIF0466-CCV6	Arsenic-75a (dissolved)	50.000	50.1	100	ug/L	EPA 200.8 UCT-KEI
SIF0466-CCV7	Arsenic-75a (dissolved)	50.000	49.8	99.6	ug/L	EPA 200.8 UCT-KEI
SIF0466-CCV8	Arsenic-75a (dissolved)	50.000	50.4	101	ug/L	EPA 200.8 UCT-KEI
SIF0466-CCV9	Arsenic-75a (dissolved)	50.000	50.2	100	ug/L	EPA 200.8 UCT-KEI
SIF0466-CCVA	Arsenic-75a (dissolved)	50.000	50.4	101	ug/L	EPA 200.8 UCT-KEI
SIF0466-CCVB	Arsenic-75a (dissolved)	50.000	49.6	99.3	ug/L	EPA 200.8 UCT-KEI
SIF0466-CCVC	Arsenic-75a (dissolved)	50.000	49.5	98.9	ug/L	EPA 200.8 UCT-KEI
SIF0466-CCVD	Arsenic-75a (dissolved)	50.000	49.4	98.7	ug/L	EPA 200.8 UCT-KEI
SIF0466-CCVE	Arsenic-75a (dissolved)	50.000	49.7	99.5	ug/L	EPA 200.8 UCT-KEI

* Values outside of QC limits

INSTRUMENT BLANKS
EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
Client: Floyd - Snider
Instrument ID: ICPMS1
Sequence: SIF0466

SDG: 20F0296
Project: Lora Lake Apartments
Calibration: DG00003
Date Analyzed: 06/30/20 13:46

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SIF0466-IBL1	Arsenic-75a (dissolved)	0.00500	0.022	0.200	ug/L	
SIF0466-ICB1	Arsenic-75a (dissolved)	0.00	0.022	0.200	ug/L	
SIF0466-CCB1	Arsenic-75a (dissolved)	0.00600	0.022	0.200	ug/L	
SIF0466-IBL2	Arsenic-75a (dissolved)	0.00800	0.022	0.200	ug/L	
SIF0466-IBL3	Arsenic-75a (dissolved)	0.00100	0.022	0.200	ug/L	
SIF0466-IBL4	Arsenic-75a (dissolved)	0.00700	0.022	0.200	ug/L	
SIF0466-CCB2	Arsenic-75a (dissolved)	0.00200	0.022	0.200	ug/L	
SIF0466-CCB3	Arsenic-75a (dissolved)	0.00300	0.022	0.200	ug/L	
SIF0466-IBL5	Arsenic-75a (dissolved)	-0.00100	0.022	0.200	ug/L	
SIF0466-CCB4	Arsenic-75a (dissolved)	0.0100	0.022	0.200	ug/L	
SIF0466-IBL6	Arsenic-75a (dissolved)	0.00100	0.022	0.200	ug/L	
SIF0466-CCB5	Arsenic-75a (dissolved)	0.00500	0.022	0.200	ug/L	
SIF0466-CCB6	Arsenic-75a (dissolved)	-0.00300	0.022	0.200	ug/L	
SIF0466-CCB7	Arsenic-75a (dissolved)	0.0190	0.022	0.200	ug/L	
SIF0466-CCB8	Arsenic-75a (dissolved)	0.0240	0.022	0.200	ug/L	
SIF0466-IBL8	Arsenic-75a (dissolved)	0.00	0.022	0.200	ug/L	
SIF0466-CCB9	Arsenic-75a (dissolved)	0.00300	0.022	0.200	ug/L	
SIF0466-CCBA	Arsenic-75a (dissolved)	0.00500	0.022	0.200	ug/L	
SIF0466-IBL9	Arsenic-75a (dissolved)	-0.00200	0.022	0.200	ug/L	
SIF0466-CCBB	Arsenic-75a (dissolved)	0.00500	0.022	0.200	ug/L	
SIF0466-IBLA	Arsenic-75a (dissolved)	0.00300	0.022	0.200	ug/L	
SIF0466-IBLB	Arsenic-75a (dissolved)	0.00500	0.022	0.200	ug/L	
SIF0466-CCBC	Arsenic-75a (dissolved)	0.00300	0.022	0.200	ug/L	
SIF0466-IBLC	Arsenic-75a (dissolved)	0.00	0.022	0.200	ug/L	
SIF0466-CCBD	Arsenic-75a (dissolved)	0.00200	0.022	0.200	ug/L	
SIF0466-IBLD	Arsenic-75a (dissolved)	-0.00300	0.022	0.200	ug/L	
SIF0466-CCBE	Arsenic-75a (dissolved)	0.00200	0.022	0.200	ug/L	

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20F0296
Client: Floyd - Snider
Project: Lora Lake Apartments
Sequence: SIF0466
Instrument: ICPMS1
Calibration: DG00003

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SIF0466-CAL1	XDT_m1200630-006	NA	06/30/20 13:14
CAL 1 - LOW CHECK	SIF0466-CAL2	XDT_m1200630-007	NA	06/30/20 13:18
CAL 2	SIF0466-CAL3	XDT_m1200630-008	NA	06/30/20 13:23
CAL 3	SIF0466-CAL4	XDT_m1200630-009	NA	06/30/20 13:28
CAL 4	SIF0466-CAL5	XDT_m1200630-010	NA	06/30/20 13:33
CAL 5	SIF0466-CAL6	XDT_m1200630-011	NA	06/30/20 13:39
RINSE	SIF0466-IBL1	XDT_m1200630-012	NA	06/30/20 13:46
Initial Cal Check	SIF0466-ICV1	XDT_m1200630-014	NA	06/30/20 13:52
Initial Cal Blank	SIF0466-ICB1	XDT_m1200630-015	NA	06/30/20 13:59
Calibration Check	SIF0466-CCV1	XDT_m1200630-016	NA	06/30/20 14:06
Calibration Blank	SIF0466-CCB1	XDT_m1200630-017	NA	06/30/20 14:13
Instrument RL Check	SIF0466-CRL1	XDT_m1200630-018	NA	06/30/20 14:18
Interference Check A	SIF0466-IFA1	XDT_m1200630-019	NA	06/30/20 14:23
Interference Check B	SIF0466-IFB1	XDT_m1200630-020	NA	06/30/20 14:27
LR200	SIF0466-HCV1	XDT_m1200630-021	NA	06/30/20 14:32
LR300	SIF0466-HCV2	XDT_m1200630-022	NA	06/30/20 14:36
Instrument Blank	SIF0466-IBL2	XDT_m1200630-023	NA	06/30/20 14:45
Instrument Blank	SIF0466-IBL3	XDT_m1200630-024	NA	06/30/20 14:51
Instrument Blank	SIF0466-IBL4	XDT_m1200630-025	NA	06/30/20 14:59
Calibration Check	SIF0466-CCV2	XDT_m1200630-026	NA	06/30/20 15:04
Calibration Blank	SIF0466-CCB2	XDT_m1200630-027	NA	06/30/20 15:12
ZZZZZ	BIF0837-BLK2	XDT_m1200630-031	Water	06/30/20 15:31
ZZZZZ	BIF0837-BS2	XDT_m1200630-032	Water	06/30/20 15:36
ZZZZZ	20F0284-01	XDT_m1200630_PRE-033	Water	06/30/20 15:40
Calibration Check	SIF0466-CCV3	XDT_m1200630-038	NA	06/30/20 16:08
Calibration Blank	SIF0466-CCB3	XDT_m1200630-039	NA	06/30/20 16:15
Instrument Blank	SIF0466-IBL5	XDT_m1200630-049	NA	06/30/20 17:07
Calibration Check	SIF0466-CCV4	XDT_m1200630-050	NA	06/30/20 17:12
Calibration Blank	SIF0466-CCB4	XDT_m1200630-051	NA	06/30/20 17:20
ZZZZZ	20F0314-08	XDT_m1200630-052	Water	06/30/20 17:25

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20F0296
Client: Floyd - Snider
Project: Lora Lake Apartments
Sequence: SIF0466
Instrument: ICPMS1
Calibration: DG00003

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20F0314-09	XDT_m1200630-053	Water	06/30/20 17:32
ZZZZZ	20F0314-10	XDT_m1200630-054	Water	06/30/20 17:37
ZZZZZ	20F0314-11	XDT_m1200630-055	Water	06/30/20 17:41
ZZZZZ	20F0314-12	XDT_m1200630-056	Water	06/30/20 17:46
ZZZZZ	20F0314-13	XDT_m1200630-057	Water	06/30/20 17:50
Instrument Blank	SIF0466-IBL6	XDT_m1200630-061	NA	06/30/20 18:13
Calibration Check	SIF0466-CCV5	XDT_m1200630-062	NA	06/30/20 18:19
Calibration Blank	SIF0466-CCB5	XDT_m1200630-063	NA	06/30/20 18:26
ZZZZZ	20F0439-01	XDT_m1200630-066	Water	06/30/20 18:42
ZZZZZ	20F0439-01	XDT_m1200630-066	Water	06/30/20 18:42
ZZZZZ	20F0439-01	XDT_m1200630-066	Water	06/30/20 18:42
ZZZZZ	20F0439-01	XDT_m1200630-066	Water	06/30/20 18:42
ZZZZZ	20F0439-01RE1	XDT_m1200630-067	Water	06/30/20 18:49
ZZZZZ	20F0444-01	XDT_m1200630-068	Water	06/30/20 18:55
ZZZZZ	20F0444-01	XDT_m1200630-068	Water	06/30/20 18:55
ZZZZZ	20F0445-01	XDT_m1200630-069	Water	06/30/20 19:01
ZZZZZ	20F0445-01	XDT_m1200630-069	Water	06/30/20 19:01
ZZZZZ	20F0445-01	XDT_m1200630-069	Water	06/30/20 19:01
ZZZZZ	20F0445-01	XDT_m1200630-069	Water	06/30/20 19:01
ZZZZZ	20F0482-01	XDT_m1200630-070	Water	06/30/20 19:07
ZZZZZ	20F0482-01	XDT_m1200630-070	Water	06/30/20 19:07
ZZZZZ	20F0482-01	XDT_m1200630-070	Water	06/30/20 19:07
ZZZZZ	20F0482-01	XDT_m1200630-070	Water	06/30/20 19:07
ZZZZZ	20F0483-01	XDT_m1200630-071	Water	06/30/20 19:13
ZZZZZ	20F0483-01	XDT_m1200630-071	Water	06/30/20 19:13
ZZZZZ	20F0483-01	XDT_m1200630-071	Water	06/30/20 19:13
ZZZZZ	20F0483-01	XDT_m1200630-071	Water	06/30/20 19:13
ZZZZZ	20F0483-01	XDT_m1200630-071	Water	06/30/20 19:13
ZZZZZ	20F0287-05	XDT_m1200630-072	Water	06/30/20 19:18
ZZZZZ	20F0287-06	XDT_m1200630-073	Water	06/30/20 19:24

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20F0296
Client: Floyd - Snider
Project: Lora Lake Apartments
Sequence: SIF0466
Instrument: ICPMS1
Calibration: DG00003

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Check	SIF0466-CCV6	XDT_m1200630-074	NA	06/30/20 19:31
Calibration Blank	SIF0466-CCB6	XDT_m1200630-075	NA	06/30/20 19:38
Blank	BIF0741-BLK1	XDT_m1200630-076	Water	06/30/20 19:44
LCS	BIF0741-BS1	XDT_m1200630-077	Water	06/30/20 19:48
MWC1-061720D	20F0296-02	XDT_m1200630-078	Water	06/30/20 19:53
MWC2-061720	20F0296-03	XDT_m1200630-079	Water	06/30/20 20:00
MWC3-061720	20F0296-04	XDT_m1200630-080	Water	06/30/20 20:05
MWC4-061720	20F0296-05	XDT_m1200630-081	Water	06/30/20 20:09
MW-C1-061720	20F0296-01	XDT_m1200630-082	Water	06/30/20 20:14
MW-C1-061720	BIF0741-DUP1	XDT_m1200630-083	Water	06/30/20 20:18
MW-C1-061720	BIF0741-MS1	XDT_m1200630-084	Water	06/30/20 20:23
MW-C1-061720	BIF0741-MSD1	XDT_m1200630-085	Water	06/30/20 20:28
Calibration Check	SIF0466-CCV7	XDT_m1200630-086	NA	06/30/20 20:35
Calibration Blank	SIF0466-CCB7	XDT_m1200630-087	NA	06/30/20 20:42
ZZZZZ	20F0287-07	XDT_m1200630-089	Water	06/30/20 20:54
ZZZZZ	20F0315-04	XDT_m1200630-090	Water	06/30/20 20:58
ZZZZZ	20F0315-08	XDT_m1200630-091	Water	06/30/20 21:03
ZZZZZ	20F0315-10	XDT_m1200630-092	Water	06/30/20 21:08
ZZZZZ	20F0315-06	XDT_m1200630-093	Water	06/30/20 21:14
ZZZZZ	20F0315-02	XDT_m1200630-094	Water	06/30/20 21:18
ZZZZZ	20F0316-02	XDT_m1200630-095	Water	06/30/20 21:23
ZZZZZ	20F0316-04	XDT_m1200630-097	Water	06/30/20 21:35
Calibration Check	SIF0466-CCV8	XDT_m1200630-098	NA	06/30/20 21:40
Calibration Blank	SIF0466-CCB8	XDT_m1200630-099	NA	06/30/20 21:48
ZZZZZ	20F0287-07RE1	XDT_m1200630-100	Water	06/30/20 21:54
ZZZZZ	20F0316-02RE1	XDT_m1200630-101	Water	06/30/20 21:59
ZZZZZ	20F0316-04RE1	XDT_m1200630-102	Water	06/30/20 22:05
ZZZZZ	20F0315-06RE1	XDT_m1200630-103	Water	06/30/20 22:12
ZZZZZ	20F0315-02RE1	XDT_m1200630-104	Water	06/30/20 22:19
Instrument Blank	SIF0466-IBL8	XDT_m1200630-105	NA	06/30/20 22:26

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20F0296
Client: Floyd - Snider
Project: Lora Lake Apartments
Sequence: SIF0466
Instrument: ICPMS1
Calibration: DG00003

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Check	SIF0466-CCV9	XDT_m1200630-110	NA	06/30/20 22:54
Calibration Blank	SIF0466-CCB9	XDT_m1200630-111	NA	06/30/20 23:01
Calibration Check	SIF0466-CCVA	XDT_m1200630-113	NA	06/30/20 23:10
Calibration Blank	SIF0466-CCBA	XDT_m1200630-114	NA	06/30/20 23:18
ZZZZZ	20F0447-07	XDT_m1200630-121	Water	06/30/20 23:49
Instrument Blank	SIF0466-IBL9	XDT_m1200630-124	NA	07/01/20 00:08
Calibration Check	SIF0466-CCVB	XDT_m1200630-125	NA	07/01/20 00:13
Calibration Blank	SIF0466-CCBB	XDT_m1200630-126	NA	07/01/20 00:21
Instrument Blank	SIF0466-IBLA	XDT_m1200630-128	NA	07/01/20 00:32
ZZZZZ	20F0447-02	XDT_m1200630-130	Water	07/01/20 00:43
ZZZZZ	20F0447-04	XDT_m1200630-131	Water	07/01/20 00:47
ZZZZZ	20F0434-01	XDT_m1200630-132	Water	07/01/20 00:53
ZZZZZ	20F0434-01	XDT_m1200630-132	Water	07/01/20 00:53
ZZZZZ	20F0434-01	XDT_m1200630-132	Water	07/01/20 00:53
ZZZZZ	20F0434-01	XDT_m1200630-132	Water	07/01/20 00:53
ZZZZZ	20F0434-01	XDT_m1200630-132	Water	07/01/20 00:53
ZZZZZ	20F0434-01	XDT_m1200630-132	Water	07/01/20 00:53
ZZZZZ	20F0338-02	XDT_m1200630-133	Water	07/01/20 00:59
ZZZZZ	20F0338-02	XDT_m1200630-133	Water	07/01/20 00:59
ZZZZZ	20F0338-02	XDT_m1200630-133	Water	07/01/20 00:59
ZZZZZ	20F0338-02	XDT_m1200630-133	Water	07/01/20 00:59
ZZZZZ	20F0338-02	XDT_m1200630-133	Water	07/01/20 00:59
Instrument Blank	SIF0466-IBLB	XDT_m1200630-136	NA	07/01/20 01:16
Calibration Check	SIF0466-CCVC	XDT_m1200630-137	NA	07/01/20 01:22
Calibration Blank	SIF0466-CCBC	XDT_m1200630-138	NA	07/01/20 01:29
Instrument Blank	SIF0466-IBLC	XDT_m1200630-148	NA	07/01/20 02:18
Calibration Check	SIF0466-CCVD	XDT_m1200630-149	NA	07/01/20 02:24
Calibration Blank	SIF0466-CCBD	XDT_m1200630-150	NA	07/01/20 02:31
Instrument Blank	SIF0466-IBLD	XDT_m1200630-160	NA	07/01/20 03:18
Calibration Check	SIF0466-CCVE	XDT_m1200630-161	NA	07/01/20 03:24

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 200.8 UCT-KED

Laboratory:	Analytical Resources, Inc.	SDG:	20F0296
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIF0466	Instrument:	ICPMS1
		Calibration:	DG00003

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SIF0466-CCBE	XDT_m1200630-162	NA	07/01/20 03:31

ICP INTERFERENCE CHECK SAMPLE

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20F0296
Client: Floyd - Snider
Project: Lora Lake Apartments
Instrument ID: ICPMS1
Calibration: DG00003
Sequence: SIF0466
Standard ID: I005391

Lab Sample ID	Analyte	True	Found	%R	Units
SIF0466-IFA1	Arsenic-75a (dissolved)	0	0.0280		ug/L

* Indicates %R outside of QC limits
NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

ICP INTERFERENCE CHECK SAMPLE

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20F0296
Client: Floyd - Snider
Project: Lora Lake Apartments
Instrument ID: ICPMS1
Calibration: DG00003
Sequence: SIF0466
Standard ID: I005391

Lab Sample ID	Analyte	True	Found	%R	Units
SIF0466-IFB1	Arsenic-75a (dissolved)	20.000	19.876	99.4	ug/L

* Indicates %R outside of QC limits
NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

DETECTION LEVEL STANDARD
EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20F0296
Client: Floyd - Snider
Project: Lora Lake Apartments
Instrument ID: ICPMS1
Calibration: DG00003
Sequence: SIF0466
Lab Sample ID: SIF0466-CRL1

Analyte	True	Found	%R	Units	QC Limts
Arsenic-75a (dissolved)	0.20000	0.198	99.0	ug/L	50 - 150

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20F0296
Client: Floyd - Snider
Project: Lora Lake Apartments
Calibration: DG00003
Laboratory ID: SIF0466-HCV1
Sequence: SIF0466
Standard ID: I005393

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a (dissolved)	200.00	199	-0.5	10.00

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20F0296
Client: Floyd - Snider
Project: Lora Lake Apartments
Calibration: DG00003
Laboratory ID: SIF0466-HCV2
Sequence: SIF0466
Standard ID: I005394

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a (dissolved)	300.00	298	-0.7	10.00

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc. SDG: 20F0296

Client: Floyd - Snider Project: Lora Lake Apartments

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MW-C1-061720 20F0296-01	06/17/20 11:13	06/17/20 13:23	06/25/20 08:03	7	180	06/30/20 20:14	13	180	
MWC1-061720D 20F0296-02	06/17/20 11:18	06/17/20 13:23	06/25/20 08:03	7	180	06/30/20 19:53	13	180	
MWC2-061720 20F0296-03	06/17/20 12:10	06/17/20 13:23	06/25/20 08:03	7	180	06/30/20 20:00	13	180	
MWC3-061720 20F0296-04	06/17/20 12:40	06/17/20 13:23	06/25/20 08:03	7	180	06/30/20 20:05	13	180	
MWC4-061720 20F0296-05	06/17/20 10:05	06/17/20 13:23	06/25/20 08:03	7	180	06/30/20 20:09	13	180	
Duplicate BIF0741-DUP1	06/17/20 11:13	06/17/20 13:23	06/25/20 08:03	7	180	06/30/20 20:18	13	180	
Matrix Spike BIF0741-MS1	06/17/20 11:13	06/17/20 13:23	06/25/20 08:03	7	180	06/30/20 20:23	13	180	
Matrix Spike Dup BIF0741-MSD1	06/17/20 11:13	06/17/20 13:23	06/25/20 08:03	7	180	06/30/20 20:28	13	180	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20F0296
Client: Floyd - Snider
Project: Lora Lake Apartments
Matrix: Water
Instrument: ICPMS1

Analyte	MDL	RL	Units
Arsenic-75a (dissolved)	0.0220	0.200	ug/L

Analytical Resources, Incorporated
Analytical Chemists and Consultants

17 December 2020

Megan King
Floyd - Snider
601 Union Street Two Union Square, Suite 600
Seattle, WA 98101-2341

RE: Lora Lake Apartments

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
20J0389	N/A

Susan Dunnihoo

Digitally signed by Susan Dunnihoo
Date: 2020.12.17 14:24:18 -08'00'

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Susan Dunnihoo For Amanda Volgardsen Johnson, Project Manager

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 20J0389	Turn-around Requested: Standard	Page: 1 of 2	
ARI Client Company: Floyd|Snider	Phone: 206-292-2078	Date: 10/27/20	Ice Present?
Client Contact: Megan King		No. of Coolers: 2	Cooler Temps: 4.3, 1.7
Client Project Name: POS-LLA			
Client Project #:	Samplers: P.O., Adia Jumper + Tyler Scott		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Dissolved As	Analysis Requested: Dioxin/Furans	Notes/Comments
MW-VB3-102720	10/27/20	950	gw	3	X	X	As samples to be lab filtered & lab preserved
MW-CP1-102720		1125		3	X	X	
MW-CP2-102720		1540		3	X	X	
MW-CP3-102720		1242		3	X	X	
MW-CP4-102720		1420		3	X	X	
MW-CP5-102720		1428		3	X	X	
MW-CP6-102720		1320		3	X	X	
MW-CP7-102720		1200		3	X	X	
MW-CP2-102720D		1545		3	X	X	
MW-C1|VB-102820	10/28/20	0937		3	X	X	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Tyler Scott	Printed Name: Kenny Dang	Printed Name:	Printed Name:
	Company: FS	Company: ARI	Company:	Company:
	Date & Time: 10/28/20 1348	Date & Time: 10/28/20 1348	Date & Time:	Date & Time:

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 20J0389	Turn-around Requested: Standard	Page: 2 of 2	
ARI Client Company: Floyd Snider	Phone:	Date: 10/28/20	Ice Present?
Client Contact: Megan King		No. of Coolers: 2	Cooler Temps: 4.8, 1.7
Client Project Name: POS - LLA			
Client Project #:	Samplers: P.O., T.S		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Dissolved Arsenic	Analysis Requested: Dioxins/Furans	Notes/Comments
MW-C101-102820	10/28/20	0947	GW	3	X	X	As sampler to be lab filtered and lab preserved.
MW-C2-102820	↓	1101	↓	1	X		
MW-C3-102820	↓	1006	↓	1	X		
HC00-B312-102820	↓	1300	↓	3	X	X	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Tyler Scott	Printed Name: Kenny Dang	Printed Name:	Printed Name:
	Company: F/S	Company: ARI	Company:	Company:
	Date & Time: 10/28/20 13:48	Date & Time: 10/28/20 1348	Date & Time:	Date & Time:

WORK ORDER

20J0389

Client: Floyd - Snider	**Project Manager:** Amanda Volgardsen Johnson
Project: Lora Lake Apartments	**Project Number:** POS-LL

Preservation Confirmation

Container ID	Container Type	pH	
20J0389-01 A	Glass NM, Amber, 1000 mL		
20J0389-01 B	Glass NM, Amber, 1000 mL		
20J0389-01 C	HDPE NM, 500 mL	>2	Fail
20J0389-02 A	Glass NM, Amber, 1000 mL		
20J0389-02 B	Glass NM, Amber, 1000 mL		
20J0389-02 C	HDPE NM, 500 mL	>2	Fail
20J0389-03 A	Glass NM, Amber, 1000 mL		
20J0389-03 B	Glass NM, Amber, 1000 mL		
20J0389-03 C	HDPE NM, 500 mL	>2	Fail
20J0389-04 A	Glass NM, Amber, 1000 mL		
20J0389-04 B	Glass NM, Amber, 1000 mL		
20J0389-04 C	HDPE NM, 500 mL	>2	Fail
20J0389-05 A	Glass NM, Amber, 1000 mL		
20J0389-05 B	Glass NM, Amber, 1000 mL		
20J0389-05 C	HDPE NM, 500 mL	>2	Fail
20J0389-06 A	Glass NM, Amber, 1000 mL		
20J0389-06 B	Glass NM, Amber, 1000 mL		
20J0389-06 C	HDPE NM, 500 mL	>2	Fail
20J0389-07 A	Glass NM, Amber, 1000 mL		
20J0389-07 B	Glass NM, Amber, 1000 mL		
20J0389-07 C	HDPE NM, 500 mL	>2	Fail
20J0389-08 A	Glass NM, Amber, 1000 mL		
20J0389-08 B	Glass NM, Amber, 1000 mL		
20J0389-08 C	HDPE NM, 500 mL	>2	Fail
20J0389-09 A	Glass NM, Amber, 1000 mL		
20J0389-09 B	Glass NM, Amber, 1000 mL		
20J0389-09 C	HDPE NM, 500 mL	>2	Fail
20J0389-10 A	Glass NM, Amber, 1000 mL		
20J0389-10 B	Glass NM, Amber, 1000 mL		
20J0389-10 C	HDPE NM, 500 mL	>2	Fail
20J0389-11 A	Glass NM, Amber, 1000 mL		
20J0389-11 B	Glass NM, Amber, 1000 mL		
20J0389-11 C	HDPE NM, 500 mL	>2	Fail
20J0389-12 A	HDPE NM, 500 mL	>2	Fail
20J0389-13 A	HDPE NM, 500 mL	>2	Fail

Reviewed By

Date

WORK ORDER

20J0389

Client: Floyd - Snider	**Project Manager: Amanda Volgardsen Johnson**
Project: Lora Lake Apartments	**Project Number: POS-LL**

20J0389-14 A	Glass NM, Amber, 1000 mL		
20J0389-14 B	Glass NM, Amber, 1000 mL		
20J0389-14 C	HDPE NM, 500 mL	>2	Fail

KO
Preservation Confirmed By

10/28/20
Date

Reviewed By

Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Floyd Snider
Project Name: POS - LLA
COC No(s): NA
Delivered by: Fed-Ex UPS Courier Hand Delivered Other:
Assigned ARI Job No: 20J0389
Tracking No: NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 1348 — 4.3 1.7 ____ ____ ____ ____

If cooler temperature is out of compliance fill out form 00070F — Temp Gun ID#: D00520C

Cooler Accepted by: KD Date: 10/28/20 Time: 1348

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used?	Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:		
Was sufficient ice used (if appropriate)?	NA	YES	NO
How were bottles sealed in plastic bags?	Individually	Grouped	Not
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA		

Were the sample(s) split by ARI? NA YES Date/Time: ____ Equipment: ____ Split by: ____

Samples Logged by: KD Date: 10/28/20 Time: 1509 Labels checked by: KD

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

WORK ORDER

20J0389

Client: Floyd - Snider
Project Manager: Amanda Volgardsen Johnson
Project: Lora Lake Apartments
Project Number: POS-LL

Preservation Confirmation

Container ID	Container Type	pH		
20J0389-01 A	Glass NM, Amber, 1000 mL			
20J0389-01 B	Glass NM, Amber, 1000 mL			
20J0389-01 C	HDPE NM, 500 mL	>2	Fail	(1)
20J0389-02 A	Glass NM, Amber, 1000 mL			
20J0389-02 B	Glass NM, Amber, 1000 mL			
20J0389-02 C	HDPE NM, 500 mL	>2	Fail	(1)
20J0389-03 A	Glass NM, Amber, 1000 mL			
20J0389-03 B	Glass NM, Amber, 1000 mL			
20J0389-03 C	HDPE NM, 500 mL	>2	Fail	(1)
20J0389-04 A	Glass NM, Amber, 1000 mL			
20J0389-04 B	Glass NM, Amber, 1000 mL			
20J0389-04 C	HDPE NM, 500 mL	>2	Fail	(1)
20J0389-05 A	Glass NM, Amber, 1000 mL			
20J0389-05 B	Glass NM, Amber, 1000 mL			
20J0389-05 C	HDPE NM, 500 mL	>2	Fail	(1)
20J0389-06 A	Glass NM, Amber, 1000 mL			
20J0389-06 B	Glass NM, Amber, 1000 mL			
20J0389-06 C	HDPE NM, 500 mL	>2	Fail	(1)
20J0389-07 A	Glass NM, Amber, 1000 mL			
20J0389-07 B	Glass NM, Amber, 1000 mL			
20J0389-07 C	HDPE NM, 500 mL	>2	Fail	(1)
20J0389-08 A	Glass NM, Amber, 1000 mL			
20J0389-08 B	Glass NM, Amber, 1000 mL			
20J0389-08 C	HDPE NM, 500 mL	>2	Fail	(1)
20J0389-09 A	Glass NM, Amber, 1000 mL			
20J0389-09 B	Glass NM, Amber, 1000 mL			
20J0389-09 C	HDPE NM, 500 mL	>2	Fail	(1)
20J0389-10 A	Glass NM, Amber, 1000 mL			
20J0389-10 B	Glass NM, Amber, 1000 mL			
20J0389-10 C	HDPE NM, 500 mL	>2	Fail	(1)
20J0389-11 A	Glass NM, Amber, 1000 mL			
20J0389-11 B	Glass NM, Amber, 1000 mL			
20J0389-11 C	HDPE NM, 500 mL	>2	Fail	(1)
20J0389-12 A	HDPE NM, 500 mL	>2	Fail	(1)
20J0389-13 A	HDPE NM, 500 mL	>2	Fail	(1)

Reviewed By

Date

WORK ORDER

20J0389

Client: Floyd - Snider	**Project Manager: Amanda Volgardsen Johnson**
Project: Lora Lake Apartments	**Project Number: POS-LL**

20J0389-14 A	Glass NM, Amber, 1000 mL			
20J0389-14 B	Glass NM, Amber, 1000 mL			
20J0389-14 C	HDPE NM, 500 mL	>2	Fail	(1)

KO
Preservation Confirmed By

10/28/20
Date

(1) Filtered with 0.45µm and preserved to pH<2.0 with 0.75mL of conc. HNO_3 (I6426) BC ~~10/30/20~~ 10/29/20
BC 10/29/20

Reviewed By

Date

Floyd - Snider	Project: Lora Lake Apartments	
601 Union Street Two Union Square, Suite 600	Project Number: POS-LL	**Reported:**
Seattle, WA 98101-2341	Project Manager: Megan King	12/17/2020 14:07

ANALYTICAL REPORT FOR SAMPLES

Laboratory ID	Sample ID	Matrix	Date Sampled	Date Received
20J0389-01	MW-VB3-102720	Water	10/27/20 09:50	10/28/20 13:48
20J0389-02	MW-CP1-102720	Water	10/27/20 11:25	10/28/20 13:48
20J0389-03	MW-CP2-102720	Water	10/27/20 15:40	10/28/20 13:48
20J0389-04	MW-CP3-102720	Water	10/27/20 12:42	10/28/20 13:48
20J0389-05	MW-CP4-102720	Water	10/27/20 14:20	10/28/20 13:48
20J0389-06	MW-CP5-102720	Water	10/27/20 14:28	10/28/20 13:48
20J0389-07	MW-CP6-102720	Water	10/27/20 13:20	10/28/20 13:48
20J0389-08	MW-CP7-102720	Water	10/27/20 12:00	10/28/20 13:48
20J0389-09	MW-CP2-102720-D	Water	10/27/20 15:45	10/28/20 13:48
20J0389-10	MW-C1/VB1-102820	Water	10/28/20 09:37	10/28/20 13:48
20J0389-11	MW-C101-102820	Water	10/28/20 09:47	10/28/20 13:48
20J0389-12	MW-C2-102820	Water	10/28/20 11:01	10/28/20 13:48
20J0389-13	MW-C3-102820	Water	10/28/20 10:06	10/28/20 13:48
20J0389-14	HCOO-B312-102820	Water	10/28/20 13:00	10/28/20 13:48

Analytical Report

Floyd - Snider	Project: Lora Lake Apartments	
601 Union Street Two Union Square, Suite 600	Project Number: POS-LL	**Reported:**
Seattle WA, 98101-2341	Project Manager: Megan King	17-Dec-2020 14:07

Case Narrative

Sample receipt

Samples as listed on the preceding page were received 28-Oct-2020 13:48 under ARI work order 20J0389. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Dioxin/Furans - EPA Method 1613

The samples were extracted and analyzed within the recommended holding times. Analysis was performed using an application specific column developed by Restek. The RTX-DIoxin2 column has unique isomer separation for the 2378-TCDF, eliminating the need for confirmation analysis.

The initial calibration check SIK0272-ICV1 had recovery of 1,2,3,7,8,9-HxCDF high of limits at 14.2%.The initial calibration check SIK0339-ICV1 had recovery of 1,2,3,4,7,8-HxCDF high of limits at 13.1%. The continuing calibration SIK0272-CCV1 had recoveries of the PCDFs, HxCDFs and 1,2,3,4,6,7,8-HpCDF high of limits. All other initial and continuing calibrations were within method requirements.

Labeled internal standard areas were within limits.

The cleanup surrogate percent recoveries were within control limits.

The method blank has reportable responses for several compounds below the reporting limits. Associated detected results and QC have been flagged with "B" qualifiers. No further corrective action was taken.

The OPR (Ongoing Precision and Recovery) standard percent recoveries were within control limits.

Dissolved Aresnic - EPA Method 200.8

The samples were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank was clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits.

INTERNAL CHAIN OF CUSTODY

Work Order: 20J0389

Client:	Floyd - Snider	Received:	28-Oct-2020 13:48
Project:	Lora Lake Apartments	Received By:	Kenny Dang
Number:	POS-LL	Temp (°C):	4.30

20J0389-01 (MW-VB3-102720) Sampled 10/27/2020 09:50

Current Status	*Out*	*Location*	*In*
20J0389-01 A [Glass NM, Amber, 1000 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDF [1.349161pg/L];1,2,3,4,6,7,8-HpCDD [1.736194*	
Sample Receiving	10/28/2020 15:15 by KCD	***START***	10/28/2020 15:15 by KCD
	10/28/2020 15:32 by KCD	R-05 Dioxin 9	11/17/2020 10:13 by NPL
Extractions	11/17/2020 10:13 by NPL	Dioxin Lab	11/17/2020 12:05 by NPL
	11/19/2020 06:19 by NPL	Dioxin Lab	11/19/2020 08:34 by NPL
	11/19/2020 08:34 by NPL	Consumed	by
20J0389-01 C [HDPE NM, 500 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDF [1.349161pg/L];1,2,3,4,6,7,8-HpCDD [1.736194*	
Sample Receiving	10/28/2020 15:15 by KCD	***START***	10/28/2020 15:15 by KCD
	10/28/2020 15:38 by KCD		10/28/2020 15:38 by KCD
Metals	10/29/2020 11:26 by BLC	Metals Prep Lab	10/29/2020 11:31 by BLC
	10/29/2020 11:31 by BLC	R02 D-24	by
20J0389-01 C 01 [HDPE NM, 500 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDF [1.349161pg/L];1,2,3,4,6,7,8-HpCDD [1.736194*	
Metals	10/29/2020 11:33 by BLC	Metals Prep Lab	11/25/2020 13:34 by BLC
	11/25/2020 13:34 by BLC	DA-25	by

20J0389-02 (MW-CP1-102720) Sampled 10/27/2020 11:25

Current Status	*Out*	*Location*	*In*
20J0389-02 A [Glass NM, Amber, 1000 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDF [2.3451pg/L];1,2,3,4,6,7,8-HpCDD [9.238464pg*	
Sample Receiving	10/28/2020 15:15 by KCD	***START***	10/28/2020 15:15 by KCD
	10/28/2020 15:33 by KCD	R-05 Dioxin 7	11/17/2020 10:13 by NPL
Extractions	11/17/2020 10:13 by NPL	Dioxin Lab	11/17/2020 12:05 by NPL
	11/19/2020 06:19 by NPL	Dioxin Lab	11/19/2020 08:34 by NPL
	11/19/2020 08:34 by NPL	Consumed	by
20J0389-02 C [HDPE NM, 500 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDF [2.3451pg/L];1,2,3,4,6,7,8-HpCDD [9.238464pg*	
Sample Receiving	10/28/2020 15:15 by KCD	***START***	10/28/2020 15:15 by KCD
	10/28/2020 15:38 by KCD		10/28/2020 15:38 by KCD
Metals	10/29/2020 11:26 by BLC	Metals Prep Lab	10/29/2020 11:31 by BLC
	10/29/2020 11:31 by BLC	R02 D-24	by
20J0389-02 C 01 [HDPE NM, 500 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDF [2.3451pg/L];1,2,3,4,6,7,8-HpCDD [9.238464pg*	
Metals	10/29/2020 11:33 by BLC	Metals Prep Lab	11/25/2020 13:32 by BLC
	11/25/2020 13:32 by BLC	DA-30	by

20J0389-03 (MW-CP2-102720) Sampled 10/27/2020 15:40

Current Status	*Out*	*Location*	*In*
20J0389-03 A [Glass NM, Amber, 1000 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [1.676538pg/L];OCDD [26.99791pg/L]*	
Sample Receiving	10/28/2020 15:15 by KCD	***START***	10/28/2020 15:15 by KCD
	10/28/2020 15:33 by KCD	R-05 Dioxin 7	11/17/2020 10:13 by NPL
Extractions	11/17/2020 10:13 by NPL	Dioxin Lab	11/17/2020 12:05 by NPL
	11/19/2020 06:19 by NPL	Dioxin Lab	11/19/2020 08:34 by NPL
	11/19/2020 08:34 by NPL	Consumed	by
20J0389-03 C [HDPE NM, 500 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [1.676538pg/L];OCDD [26.99791pg/L]*	
Sample Receiving	10/28/2020 15:15 by KCD	***START***	10/28/2020 15:15 by KCD

INTERNAL CHAIN OF CUSTODY

Work Order: 20J0389

Client:	Floyd - Snider	Received:	28-Oct-2020 13:48
Project:	Lora Lake Apartments	Received By:	Kenny Dang
Number:	POS-LL	Temp (°C):	4.30

20J0389-03 (MW-CP2-102720) Sampled 10/27/2020 15:40

Current Status	*Out*	*Location*	*In*
20J0389-03 C [HDPE NM, 500 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [1.676538pg/L];OCDD [26.99791pg/L]*	
Sample Receiving	10/28/2020 15:38 by KCD		10/28/2020 15:38 by KCD
Metals	10/29/2020 11:26 by BLC	Metals Prep Lab	10/29/2020 11:31 by BLC
	10/29/2020 11:31 by BLC	R02 D-24	by
20J0389-03 C 01 [HDPE NM, 500 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [1.676538pg/L];OCDD [26.99791pg/L]*	
Metals	10/29/2020 11:33 by BLC	Metals Prep Lab	11/25/2020 13:32 by BLC
	11/25/2020 13:32 by BLC	DA-30	by

20J0389-04 (MW-CP3-102720) Sampled 10/27/2020 12:42

Current Status	*Out*	*Location*	*In*
20J0389-04 A [Glass NM, Amber, 1000 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [2.026681pg/L];OCDD [32.97784pg/L]*	
Sample Receiving	10/28/2020 15:15 by KCD	***START***	10/28/2020 15:15 by KCD
	10/28/2020 15:33 by KCD	R-05 Dioxin 7	11/17/2020 10:13 by NPL
Extractions	11/17/2020 10:13 by NPL	Dioxin Lab	11/17/2020 12:05 by NPL
	11/19/2020 06:19 by NPL	Dioxin Lab	11/19/2020 08:34 by NPL
	11/19/2020 08:34 by NPL	Consumed	by
20J0389-04 C [HDPE NM, 500 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [2.026681pg/L];OCDD [32.97784pg/L]*	
Sample Receiving	10/28/2020 15:15 by KCD	***START***	10/28/2020 15:15 by KCD
	10/28/2020 15:38 by KCD		10/28/2020 15:38 by KCD
Metals	10/29/2020 11:26 by BLC	Metals Prep Lab	10/29/2020 11:31 by BLC
	10/29/2020 11:31 by BLC	R02 D-24	by
20J0389-04 C 01 [HDPE NM, 500 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [2.026681pg/L];OCDD [32.97784pg/L]*	
Metals	10/29/2020 11:33 by BLC	Metals Prep Lab	11/25/2020 13:34 by BLC
	11/25/2020 13:34 by BLC	DA-25	by

20J0389-05 (MW-CP4-102720) Sampled 10/27/2020 14:20

Current Status	*Out*	*Location*	*In*
20J0389-05 A [Glass NM, Amber, 1000 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [2.56913pg/L];OCDF [5.925481pg/L];OCDD [*	
Sample Receiving	10/28/2020 15:16 by KCD	***START***	10/28/2020 15:16 by KCD
	10/28/2020 15:33 by KCD	R-05 Dioxin 7	11/17/2020 10:13 by NPL
Extractions	11/17/2020 10:13 by NPL	Dioxin Lab	11/17/2020 12:05 by NPL
	11/19/2020 06:19 by NPL	Dioxin Lab	11/19/2020 08:34 by NPL
	11/19/2020 08:34 by NPL	Consumed	by
20J0389-05 C [HDPE NM, 500 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [2.56913pg/L];OCDF [5.925481pg/L];OCDD [*	
Sample Receiving	10/28/2020 15:16 by KCD	***START***	10/28/2020 15:16 by KCD
	10/28/2020 15:38 by KCD		10/28/2020 15:38 by KCD
Metals	10/29/2020 11:26 by BLC	Metals Prep Lab	10/29/2020 11:31 by BLC
	10/29/2020 11:31 by BLC	R02 D-24	by
20J0389-05 C 01 [HDPE NM, 500 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [2.56913pg/L];OCDF [5.925481pg/L];OCDD [*	
Metals	10/29/2020 11:33 by BLC	Metals Prep Lab	11/25/2020 13:34 by BLC
	11/25/2020 13:34 by BLC	DA-25	by

INTERNAL CHAIN OF CUSTODY

Work Order: 20J0389

Client:	Floyd - Snider	Received:	28-Oct-2020 13:48
Project:	Lora Lake Apartments	Received By:	Kenny Dang
Number:	POS-LL	Temp (°C):	4.30

20J0389-06 (MW-CP5-102720) Sampled 10/27/2020 14:28

Current Status	*Out*	*Location*	*In*
20J0389-06 A [Glass NM, Amber, 1000 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [2.180085pg/L];OCDF [4.012027pg/L];OCDD*	
Sample Receiving	10/28/2020 15:16 by KCD	***START***	10/28/2020 15:16 by KCD
	10/28/2020 15:33 by KCD	R-05 Dioxin 7	11/11/2020 06:17 by NPL
Extractions	11/11/2020 06:17 by NPL	Dioxin Lab	11/11/2020 13:22 by NPL
	11/11/2020 13:22 by NPL	Consumed	by
20J0389-06 C [HDPE NM, 500 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [2.180085pg/L];OCDF [4.012027pg/L];OCDD*	
Sample Receiving	10/28/2020 15:16 by KCD	***START***	10/28/2020 15:16 by KCD
	10/28/2020 15:38 by KCD		10/28/2020 15:38 by KCD
Metals	10/29/2020 11:26 by BLC	Metals Prep Lab	10/29/2020 11:31 by BLC
	10/29/2020 11:31 by BLC	R02 D-24	by
20J0389-06 C 01 [HDPE NM, 500 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [2.180085pg/L];OCDF [4.012027pg/L];OCDD*	
Metals	10/29/2020 11:33 by BLC	Metals Prep Lab	11/25/2020 13:32 by BLC
	11/25/2020 13:32 by BLC	DA-30	by

20J0389-07 (MW-CP6-102720) Sampled 10/27/2020 13:20

Current Status	*Out*	*Location*	*In*
20J0389-07 A [Glass NM, Amber, 1000 mL]			*Hazard Info:OCDD [28.59507pg/L]*
Sample Receiving	10/28/2020 15:16 by KCD	***START***	10/28/2020 15:16 by KCD
	10/28/2020 15:33 by KCD	R-05 Dioxin 7	11/17/2020 10:13 by NPL
Extractions	11/17/2020 10:13 by NPL	Dioxin Lab	11/17/2020 12:05 by NPL
	11/19/2020 06:19 by NPL	Dioxin Lab	11/19/2020 08:34 by NPL
	11/19/2020 08:34 by NPL	Consumed	by
20J0389-07 C [HDPE NM, 500 mL]			*Hazard Info:OCDD [28.59507pg/L]*
Sample Receiving	10/28/2020 15:16 by KCD	***START***	10/28/2020 15:16 by KCD
	10/28/2020 15:38 by KCD		10/28/2020 15:38 by KCD
Metals	10/29/2020 11:26 by BLC	Metals Prep Lab	10/29/2020 11:31 by BLC
	10/29/2020 11:31 by BLC	R02 D-24	by
20J0389-07 C 01 [HDPE NM, 500 mL]			*Hazard Info:OCDD [28.59507pg/L]*
Metals	10/29/2020 11:33 by BLC	Metals Prep Lab	11/25/2020 13:32 by BLC
	11/25/2020 13:32 by BLC	DA-30	by

20J0389-08 (MW-CP7-102720) Sampled 10/27/2020 12:00

Current Status	*Out*	*Location*	*In*
20J0389-08 A [Glass NM, Amber, 1000 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [3.022222pg/L];OCDF [5.159763pg/L];OCDD*	
Sample Receiving	10/28/2020 15:16 by KCD	***START***	10/28/2020 15:16 by KCD
	10/28/2020 15:32 by KCD	R-05 Dioxin 9	11/17/2020 10:13 by NPL
Extractions	11/17/2020 10:13 by NPL	Dioxin Lab	11/17/2020 12:05 by NPL
	11/19/2020 06:19 by NPL	Dioxin Lab	11/19/2020 08:34 by NPL
	11/19/2020 08:34 by NPL	Consumed	by
20J0389-08 C [HDPE NM, 500 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [3.022222pg/L];OCDF [5.159763pg/L];OCDD*	
Sample Receiving	10/28/2020 15:16 by KCD	***START***	10/28/2020 15:16 by KCD
	10/28/2020 15:38 by KCD		10/28/2020 15:38 by KCD

INTERNAL CHAIN OF CUSTODY

Work Order: 20J0389

Client:	Floyd - Snider	Received:	28-Oct-2020 13:48
Project:	Lora Lake Apartments	Received By:	Kenny Dang
Number:	POS-LL	Temp (°C):	4.30

20J0389-08 (MW-CP7-102720) Sampled 10/27/2020 12:00

Current Status	*Out*	*Location*	*In*
20J0389-08 C [HDPE NM, 500 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [3.022222pg/L];OCDF [5.159763pg/L];OCDD*	
Metals	10/29/2020 11:26 by BLC	Metals Prep Lab	10/29/2020 11:31 by BLC
	10/29/2020 11:31 by BLC	R02 D-24	by
20J0389-08 C 01 [HDPE NM, 500 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [3.022222pg/L];OCDF [5.159763pg/L];OCDD*	
Metals	10/29/2020 11:33 by BLC	Metals Prep Lab	11/25/2020 13:32 by BLC
	11/25/2020 13:32 by BLC	DA-30	by

20J0389-09 (MW-CP2-102720-D) Sampled 10/27/2020 15:45

Current Status	*Out*	*Location*	*In*
20J0389-09 A [Glass NM, Amber, 1000 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [1.259694pg/L];OCDF [2.877416pg/L];OCDD*	
Sample Receiving	10/28/2020 15:17 by KCD	***START***	10/28/2020 15:17 by KCD
	10/28/2020 15:32 by KCD	R-05 Dioxin 9	11/17/2020 10:13 by NPL
Extractions	11/17/2020 10:13 by NPL	Dioxin Lab	11/17/2020 12:05 by NPL
	11/19/2020 06:19 by NPL	Dioxin Lab	11/19/2020 08:34 by NPL
	11/19/2020 08:34 by NPL	Consumed	by
20J0389-09 C [HDPE NM, 500 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [1.259694pg/L];OCDF [2.877416pg/L];OCDD*	
Sample Receiving	10/28/2020 15:17 by KCD	***START***	10/28/2020 15:17 by KCD
	10/28/2020 15:38 by KCD		10/28/2020 15:38 by KCD
Metals	10/29/2020 11:26 by BLC	Metals Prep Lab	10/29/2020 11:31 by BLC
	10/29/2020 11:31 by BLC	R02 D-24	by
20J0389-09 C 01 [HDPE NM, 500 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [1.259694pg/L];OCDF [2.877416pg/L];OCDD*	
Metals	10/29/2020 11:33 by BLC	Metals Prep Lab	11/25/2020 13:32 by BLC
	11/25/2020 13:32 by BLC	DA-30	by

20J0389-10 (MW-C1/VB1-102820) Sampled 10/28/2020 09:37

Current Status	*Out*	*Location*	*In*
20J0389-10 A [Glass NM, Amber, 1000 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [1.755626pg/L];OCDF [5.835604pg/L];OCDD*	
Sample Receiving	10/28/2020 15:18 by KCD	***START***	10/28/2020 15:18 by KCD
	10/28/2020 15:32 by KCD	R-05 Dioxin 9	11/17/2020 10:13 by NPL
Extractions	11/17/2020 10:13 by NPL	Dioxin Lab	11/17/2020 12:05 by NPL
	11/19/2020 06:19 by NPL	Dioxin Lab	11/19/2020 08:34 by NPL
	11/19/2020 08:34 by NPL	Consumed	by
20J0389-10 C [HDPE NM, 500 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [1.755626pg/L];OCDF [5.835604pg/L];OCDD*	
Sample Receiving	10/28/2020 15:18 by KCD	***START***	10/28/2020 15:18 by KCD
	10/28/2020 15:38 by KCD		10/28/2020 15:38 by KCD
Metals	10/29/2020 11:26 by BLC	Metals Prep Lab	10/29/2020 11:31 by BLC
	10/29/2020 11:31 by BLC	R02 D-24	by
20J0389-10 C 01 [HDPE NM, 500 mL]		*Hazard Info:1,2,3,4,6,7,8-HpCDD [1.755626pg/L];OCDF [5.835604pg/L];OCDD*	
Metals	10/29/2020 11:33 by BLC	Metals Prep Lab	11/25/2020 13:34 by BLC
	11/25/2020 13:34 by BLC	DA-25	by

20J0389-11 (MW-C101-102820) Sampled 10/28/2020 09:47

Current Status	*Out*	*Location*	*In*

INTERNAL CHAIN OF CUSTODY

Work Order: 20J0389

Client:	Floyd - Snider	Received:	28-Oct-2020 13:48
Project:	Lora Lake Apartments	Received By:	Kenny Dang
Number:	POS-LL	Temp (°C):	4.30

20J0389-11 (MW-C101-102820) Sampled 10/28/2020 09:47

Current Status	*Out*	*Location*	*In*
20J0389-11 A [Glass NM, Amber, 1000 mL]			*Hazard Info:OCDF [10.24727pg/L];OCDD [66.50705pg/L]*
Sample Receiving	10/28/2020 15:18 by KCD	***START***	10/28/2020 15:18 by KCD
	10/28/2020 15:39 by KCD		10/28/2020 15:39 by KCD
Extractions	11/17/2020 10:13 by NPL	Dioxin Lab	11/17/2020 12:05 by NPL
	11/19/2020 06:19 by NPL	Dioxin Lab	11/19/2020 08:34 by NPL
	11/19/2020 08:34 by NPL	Consumed	by
20J0389-11 C [HDPE NM, 500 mL]			*Hazard Info:OCDF [10.24727pg/L];OCDD [66.50705pg/L]*
Sample Receiving	10/28/2020 15:18 by KCD	***START***	10/28/2020 15:18 by KCD
	10/28/2020 15:32 by KCD	R-05 Dioxin 9	10/29/2020 11:26 by BLC
	10/28/2020 15:39 by KCD	R-05 Dioxin 9	10/28/2020 15:39 by KCD
Metals	10/29/2020 11:26 by BLC	Metals Prep Lab	10/29/2020 11:31 by BLC
	10/29/2020 11:31 by BLC	R02 D-24	by
20J0389-11 C 01 [HDPE NM, 500 mL]			*Hazard Info:OCDF [10.24727pg/L];OCDD [66.50705pg/L]*
Metals	10/29/2020 11:33 by BLC	Metals Prep Lab	11/25/2020 13:34 by BLC
	11/25/2020 13:34 by BLC	DA-25	by

20J0389-12 (MW-C2-102820) Sampled 10/28/2020 11:01

Current Status	*Out*	*Location*	*In*
20J0389-12 A [HDPE NM, 500 mL]			*Hazard Info:*
Sample Receiving	10/28/2020 15:19 by KCD	***START***	10/28/2020 15:19 by KCD
	10/28/2020 15:38 by KCD		10/28/2020 15:38 by KCD
Metals	10/29/2020 11:26 by BLC	Metals Prep Lab	10/29/2020 11:31 by BLC
	10/29/2020 11:31 by BLC	R02 D-24	by
20J0389-12 A 01 [HDPE NM, 500 mL]			*Hazard Info:*
Metals	10/29/2020 11:33 by BLC	Metals Prep Lab	11/25/2020 13:34 by BLC
	11/25/2020 13:34 by BLC	DA-25	by

20J0389-13 (MW-C3-102820) Sampled 10/28/2020 10:06

Current Status	*Out*	*Location*	*In*
20J0389-13 A [HDPE NM, 500 mL]			*Hazard Info:*
Sample Receiving	10/28/2020 15:19 by KCD	***START***	10/28/2020 15:19 by KCD
	10/28/2020 15:38 by KCD		10/28/2020 15:38 by KCD
Metals	10/29/2020 11:26 by BLC	Metals Prep Lab	10/29/2020 11:31 by BLC
	10/29/2020 11:31 by BLC	R02 D-24	by
20J0389-13 A 01 [HDPE NM, 500 mL]			*Hazard Info:*
Metals	10/29/2020 11:33 by BLC	Metals Prep Lab	11/25/2020 13:34 by BLC
	11/25/2020 13:34 by BLC	DA-25	by

20J0389-14 (HCOO-B312-102820) Sampled 10/28/2020 13:00

Current Status	*Out*	*Location*	*In*
20J0389-14 A [Glass NM, Amber, 1000 mL]			*Hazard Info:OCDD [10.23537pg/L]*
Sample Receiving	10/28/2020 15:20 by KCD	***START***	10/28/2020 15:20 by KCD
	10/28/2020 15:32 by KCD	R-05 Dioxin 9	11/17/2020 10:13 by NPL

INTERNAL CHAIN OF CUSTODY

Work Order: 20J0389

Client:	Floyd - Snider	Received:	28-Oct-2020 13:48
Project:	Lora Lake Apartments	Received By:	Kenny Dang
Number:	POS-LL	Temp (°C):	4.30

20J0389-14 (HCOO-B312-102820) Sampled 10/28/2020 13:00

Current Status	*Out*	*Location*	*In*
20J0389-14 A [Glass NM, Amber, 1000 mL]			*Hazard Info:OCDD [10.23537pg/L]*
Extractions	11/17/2020 10:13 by NPL	Dioxin Lab	11/17/2020 12:05 by NPL
	11/19/2020 06:19 by NPL	Dioxin Lab	11/19/2020 08:34 by NPL
	11/19/2020 08:34 by NPL	Consumed	by
20J0389-14 C [HDPE NM, 500 mL]			*Hazard Info:OCDD [10.23537pg/L]*
Sample Receiving	10/28/2020 15:20 by KCD	***START***	10/28/2020 15:20 by KCD
	10/28/2020 15:38 by KCD		10/28/2020 15:38 by KCD
Metals	10/29/2020 11:26 by BLC	Metals Prep Lab	10/29/2020 11:31 by BLC
	10/29/2020 11:31 by BLC	R02 D-24	by
20J0389-14 C 01 [HDPE NM, 500 mL]			*Hazard Info:OCDD [10.23537pg/L]*
Metals	10/29/2020 11:33 by BLC	Metals Prep Lab	11/25/2020 13:34 by BLC
	11/25/2020 13:34 by BLC	DA-25	by

QUALIFIERS AND NOTES

Qualifier	Definition
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
J	Estimated concentration value detected below the reporting limit.
EMPC	Estimated Maximum Possible Concentration qualifier for HRGCMS Dioxin
B	This analyte was detected in the method blank.
*	Flagged value is not within established control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

MW-VB3-102720

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider				
Project:	Lora Lake Apartments				
Matrix:	Ground Water	Laboratory ID:	20J0389-01 A	File ID:	20112307
Sampled:	10/27/20 09:50	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 14:39
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1067 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	1.29	9.37	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	1.10	9.37	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.63	9.37	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	1.47	9.37	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	0.91	9.37	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.78	9.37	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.69	9.37	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.82	9.37	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	1.15	9.37	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	1.07	9.37	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	0.96	9.37	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	1.13	9.37	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	0.826	0.893-1.208	0.86	9.37	1.35	pg/L	EMPC, J
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	1.30	9.37	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.219	0.893-1.208	1.10	9.37	1.74	pg/L	EMPC, J
39001-02-0	OCDF	1	0.777	0.757-1.024	2.91	18.7	5.29	pg/L	J
3268-87-9	OCDD	1	0.918	0.757-1.024	2.62	46.9	35.3	pg/L	J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.37	ND	pg/L	
41903-57-5	Total TCDD	1	0.000			9.37	ND	pg/L	
30402-15-4	Total PeCDF	1	0.000			9.37	ND	pg/L	
36088-22-9	Total PeCDD	1	0.000			9.37	ND	pg/L	
55684-94-1	Total HxCDF	1	0.000			9.37	ND	pg/L	
34465-46-8	Total HxCDD	1	0.000			9.37	ND	pg/L	
38998-75-3	Total HpCDF	1	0.000			9.37	ND	pg/L	
37871-00-4	Total HpCDD	1	0.000			9.37	1.49	pg/L	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.043
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.69

MW-VB3-102720

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider			Project:	Lora Lake Apartments
Matrix:	Ground Water	Laboratory ID:	20J0389-01	File ID:	20112307
Sampled:	10/27/20 09:50	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 14:39
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1067 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.783	0.655-0.886	2.06	83.2	24 - 169 %	
13C12-2,3,7,8-TCDD		0.803	0.655-0.886	1.67	82.7	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.509	1.318-1.783	2.28	76.8	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.513	1.318-1.783	2.38	73.7	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.624	1.318-1.783	1.49	75.8	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.490	0.434-0.587	4.13	92.4	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.465	0.434-0.587	3.52	102	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.494	0.434-0.587	3.95	87.8	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.501	0.434-0.587	4.60	87.3	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.280	1.054-1.426	4.08	84.6	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.317	1.054-1.426	3.37	86.1	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.417	0.374-0.506	4.40	85.5	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.429	0.374-0.506	5.53	81.5	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.083	0.893-1.208	5.10	97.9	23 - 140 %	
13C12-OCDD		0.782	0.757-1.024	7.50	60.2	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		1.16	98.2	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:00:48 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-01, Name: 20112307, Date: 23-Nov-2020, Time: 14:39:27, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF					0.729		0.770	1207	2461								
12378-PeCDF					0.779		1.550	1097	2259								
23478-PeCDF					0.880		1.550	1097	2259								
123478-HxCDF					0.880		1.240	686	524								
234678-HxCDF					0.863		1.240	686	524								
123678-HxCDF					0.853		1.240	686	524								
123789-HxCDF					0.780		1.240	686	524								
1234678-HpCDF	38.846	1.000	1.820e2	2.202e2	1.001	0.826	1.050	783	512	3.46e3	4.53e3	4.4	8.9	YES	bb	bb	0.072
1234789-HpCDF					0.994		1.050	783	512								
OCDF	45.348	1.005	4.188e2	5.390e2	1.158	0.777	0.890	676	1258	6.96e3	5.94e3	10.3	4.7	NO	MM	MM	0.282
2378-TCDD					1.238		0.770	1733	1119								
12378-PeCDD					0.988		1.550	957	436								
123478-HxCDD					0.842		1.240	812	687								
123678-HxCDD					0.907		1.240	812	687								
123789-HxCDD					0.784		1.240	812	687								
1234678-HpCDD	40.360	1.001	2.409e2	1.976e2	1.044	1.219	1.050	432	704	5.09e3	4.97e3	11.8	7.1	YES	MM	MM	0.093
OCDD	45.119	1.000	2.546e3	2.772e3	0.963	0.918	0.890	836	608	2.75e4	3.68e4	32.9	60.6	NO	bd	bd	1.884
13C-2378-TCDF	25.848	1.007	6.747e5	8.621e5	2.203	0.783	0.770	7066	3257	9.60e6	1.23e7	1359.3	3790.9	NO	bb	bb	83.182
13C-12378-PeCDF	30.019	1.169	6.747e5	4.472e5	1.741	1.509	1.550	4824	4208	8.92e6	5.80e6	1849.4	1379.1	NO	bd	bb	76.833
13C-23478-PeCDF	31.355	1.221	6.215e5	4.108e5	1.669	1.513	1.550	4824	4208	8.76e6	5.86e6	1815.3	1391.8	NO	bb	bb	73.733
13C-123478-HxCDF	34.972	0.956	2.231e5	4.553e5	1.022	0.490	0.510	2778	4403	3.26e6	6.58e6	1174.7	1495.5	NO	bd	bd	92.411
13C-123678-HxCDF	35.106	0.960	2.780e5	5.985e5	1.200	0.465	0.510	2778	4403	3.67e6	7.43e6	1321.0	1687.1	NO	db	db	101.691
13C-234678-HxCDF	35.963	0.983	2.231e5	4.519e5	1.071	0.494	0.510	2778	4403	3.18e6	6.43e6	1144.1	1459.4	NO	bb	bb	87.754
13C-123789-HxCDF	36.998	1.011	1.923e5	3.838e5	0.919	0.501	0.510	2778	4403	2.52e6	5.11e6	908.5	1160.3	NO	bb	bb	87.326
13C-1234678-HpCDF	38.835	1.061	1.644e5	3.938e5	0.909	0.417	0.440	2976	3823	2.49e6	5.82e6	837.0	1521.9	NO	bb	bb	85.547
13C-1234789-HpCDF	41.083	1.123	1.270e5	2.962e5	0.724	0.429	0.440	2976	3823	1.69e6	3.85e6	566.9	1006.5	NO	bb	bb	81.452
13C-1234-TCDD	25.682	0.000	3.770e5	4.616e5	1.000	0.817	0.770	2847	1648	5.75e6	7.07e6	2019.7	4289.6	NO	bb	bb	100.000
13C-2378-TCDD	26.498	1.032	3.652e5	4.547e5	1.181	0.803	0.770	2847	1648	5.25e6	6.53e6	1843.3	3963.7	NO	bb	bb	82.743
13C-12378-PeCDD	31.611	1.231	3.846e5	2.369e5	0.978	1.624	1.550	1938	1369	5.40e6	3.34e6	2785.8	2439.4	NO	bb	bb	75.784
13C-123478-HxCDD	36.085	0.986	3.289e5	2.571e5	0.965	1.280	1.240	2813	3871	5.24e6	4.07e6	1862.1	1052.3	NO	bd	bd	84.554
13C-123678-HxCDD	36.197	0.989	4.105e5	3.116e5	1.168	1.317	1.240	2813	3871	5.50e6	4.34e6	1955.9	1120.3	NO	db	db	86.074
13C-1234678-HpCDD	40.337	1.102	2.358e5	2.177e5	0.645	1.083	1.050	2664	2928	2.89e6	2.66e6	1083.1	907.2	NO	bb	bd	97.861
13C-OCDD	45.101	1.233	2.573e5	3.290e5	0.678	0.782	0.890	3250	5397	2.83e6	3.21e6	870.6	594.0	NO	bb	bd	120.356
13C-123789-HxCDD	36.586	0.000	4.109e5	3.073e5	1.000	1.337	1.240	2813	3871	5.47e6	4.29e6	1942.9	1108.9	NO	bb	bb	100.000
37CL-2378-TCDD	26.513	1.032	4.166e5		1.264			3324		6.05e6		1821.3			bb		39.282

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:00:48 Pacific Standard Time

ID: 20J0389-01, Name: 20112307, Date: 23-Nov-2020, Time: 14:39:27, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	1207	2461								
1289-TCDF					0.688		0.770	1207	2461								
13468-PECDF					1.181		1.550	591	1538								
12389-PECDF					0.766		1.550	1097	2259								
123468-HXCDF					1.003		1.240	686	524								
1368-TCDD					1.179		0.770	1733	1119								
1289-TCDD					1.042		0.770	1733	1119								
12479-PECDD					1.810		1.550	957	436								
12389-PECDD					1.165		1.550	957	436								
124679-HXCDD					1.056		1.240	812	687								
1234679-HPCDD	39.302	0.974	2.321e2	2.327e2	1.285	0.998	1.050	432	704	3.75e3	5.03e3	8.7	7.1	NO	bb	bb	0.080
Total-tetrafurans			0.000e0		0.754			1207		0.00e0							
Total-penta1			0.000e0					591		0.00e0							
Total-pentafurans			0.000e0		0.809			1097		0.00e0							
Total-hexafurans			0.000e0		0.876			686		0.00e0							
Total-heptafurans			0.000e0		0.997			783		0.00e0							
Total-Furans			4.188e2		0.893			1207		6.96e3							0.282
Total-tetradioxins			0.000e0		1.153			1733		0.00e0							
Total-pentadioxins			0.000e0		1.321			957		0.00e0							
Total-hexadioxins			0.000e0		0.897			812		0.00e0							
Total-heptadioxins			2.321e2		1.165			432		3.75e3							0.080
Total-Dioxins			2.778e3		1.100			1733		3.13e4							1.964
Total-TEQ			3.197e3					1733		3.83e4							2.246
FUNCTION1 PFK			2.255e7					907446		2.28e8							
FUNCTION2 PFK			9.020e5					611516		2.30e7							0.000
FUNCTION3 PFK			1.235e6					609503		2.47e7							0.000
FUNCTION4 PFK			2.514e6					520287		4.64e7							
FUNCTION5 PFK			7.257e4					471507		1.25e6							
FUNCTION1 HXCD...			3.783e2					438		7.61e3							0.000
FUNCTION1 HPCD...			3.302e3					1780		6.54e4							0.000
FUNCTION2 HPCD...			7.433e2					1506		1.68e4							0.000
FUNCTION3 OCDPE			7.081e1					336		2.66e3							0.000
FUNCTION4 NCDPE			0.000e0					578		0.00e0							
FUNCTION5 DCDPE			0.000e0					366		0.00e0							

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-01, Name: 20112307, Date: 23-Nov-2020, Time: 14:39:27, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	OCDF	45.35	4.188e2	5.390e2	1.158	0.78	0.89	10.3	YES	NO	MM	MM	0.282

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ID: 20J0389-01, Name: 20112307, Date: 23-Nov-2020, Time: 14:39:27, Conditions: AUTOSPEC01, User: pk

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234679-HPCDD	39.30	2.321e2	2.327e2	1.285	1.00	1.05	8.7	YES	NO	bb	bb	0.080

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	OCDD	45.12	2.546e3	2.772e3	0.963	0.92	0.89	32.9	YES	NO	bd	bd	1.884
2	1234679-HPCDD	39.30	2.321e2	2.327e2	1.285	1.00	1.05	8.7	YES	NO	bb	bb	0.080

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	OCDF	45.35	4.188e2	5.390e2	1.158	0.78	0.89	10.3	YES	NO	MM	MM	0.282
2	OCDD	45.12	2.546e3	2.772e3	0.963	0.92	0.89	32.9	YES	NO	bd	bd	1.884
3	1234679-HPCDD	39.30	2.321e2	2.327e2	1.285	1.00	1.05	8.7	YES	NO	bb	bb	0.080

ID: 20J0389-01, Name: 20112307, Date: 23-Nov-2020, Time: 14:39:27, Conditions: AUTOSPEC01, User: pk

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.48	2.412e6					20.7	YES		dd		
2	FUNCTION1 PFK	21.38	2.468e6					23.7	YES		dd		
3	FUNCTION1 PFK	21.29	1.280e6					23.6	YES		dd		
4	FUNCTION1 PFK	21.18	2.364e6					25.6	YES		dd		
5	FUNCTION1 PFK	21.12	2.154e6					27.6	YES		bd		
6	FUNCTION1 PFK	23.66	1.285e5					1.8	NO		dd		
7	FUNCTION1 PFK	23.54	7.842e4					1.6	NO		dd		
8	FUNCTION1 PFK	23.43	1.889e5					2.4	NO		dd		
9	FUNCTION1 PFK	23.31	1.906e5					2.7	NO		dd		
10	FUNCTION1 PFK	23.20	1.304e5					2.3	NO		bd		
11	FUNCTION1 PFK	23.10	4.788e4					1.2	NO		db		
12	FUNCTION1 PFK	22.98	7.986e4					1.8	NO		bd		
13	FUNCTION1 PFK	22.87	8.625e4					1.6	NO		bb		
14	FUNCTION1 PFK	22.74	1.003e5					1.7	NO		bb		
15	FUNCTION1 PFK	22.51	4.915e4					1.5	NO		db		
16	FUNCTION1 PFK	22.39	3.174e5					4.3	YES		dd		
17	FUNCTION1 PFK	22.27	6.819e5					7.1	YES		dd		
18	FUNCTION1 PFK	22.18	5.061e5					8.1	YES		dd		
19	FUNCTION1 PFK	21.95	2.502e6					12.9	YES		dd		
20	FUNCTION1 PFK	21.72	3.106e6					16.9	YES		dd		
21	FUNCTION1 PFK	21.60	1.473e6					18.8	YES		dd		
22	FUNCTION1 PFK	26.04	1.151e5					1.7	NO		db		
23	FUNCTION1 PFK	25.91	1.479e5					2.2	NO		bd		
24	FUNCTION1 PFK	25.59	1.684e4					0.7	NO		bb		
25	FUNCTION1 PFK	25.36	3.294e4					1.0	NO		bb		
26	FUNCTION1 PFK	25.21	4.462e4					1.0	NO		db		
27	FUNCTION1 PFK	25.12	7.846e4					1.5	NO		bd		
28	FUNCTION1 PFK	24.90	1.433e5					1.1	NO		db		
29	FUNCTION1 PFK	24.81	5.569e4					1.3	NO		bd		
30	FUNCTION1 PFK	24.56	9.697e4					2.0	NO		db		
31	FUNCTION1 PFK	24.46	8.763e4					1.6	NO		bd		
32	FUNCTION1 PFK	24.32	7.555e4					1.4	NO		bb		
33	FUNCTION1 PFK	24.22	8.227e4					1.7	NO		db		
34	FUNCTION1 PFK	24.11	1.117e5					2.0	NO		bd		
35	FUNCTION1 PFK	24.05	9.416e3					0.4	NO		bb		
36	FUNCTION1 PFK	23.79	2.324e4					0.9	NO		db		
37	FUNCTION1 PFK	23.75	5.715e4					1.1	NO		dd		

ID: 20J0389-01, Name: 20112307, Date: 23-Nov-2020, Time: 14:39:27, Conditions: AUTOSPEC01, User: pk

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	28.16	4.743e4					1.2	NO		bb		
39	FUNCTION1 PFK	28.04	5.738e4					1.2	NO		bb		
40	FUNCTION1 PFK	27.81	1.361e5					2.0	NO		db		
41	FUNCTION1 PFK	27.72	9.789e4					1.7	NO		bd		
42	FUNCTION1 PFK	27.60	1.297e5					2.6	NO		bb		
43	FUNCTION1 PFK	27.36	9.080e4					1.7	NO		db		
44	FUNCTION1 PFK	27.27	6.956e4					1.4	NO		bd		
45	FUNCTION1 PFK	27.15	6.189e4					1.2	NO		bb		
46	FUNCTION1 PFK	26.92	3.203e4					0.8	NO		bb		
47	FUNCTION1 PFK	26.81	9.823e4					2.1	NO		bb		
48	FUNCTION1 PFK	26.71	9.759e4					2.2	NO		db		
49	FUNCTION1 PFK	26.59	3.039e4					0.9	NO		bd		
50	FUNCTION1 PFK	26.36	7.220e4					1.8	NO		bb		
51	FUNCTION1 PFK	26.26	6.127e3					0.4	NO		bb		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.28	5.198e4					2.2	NO		bb		0.000
2	FUNCTION2 PFK	32.62	1.961e4					1.2	NO		bd		0.000
3	FUNCTION2 PFK	32.55	3.898e4					1.8	NO		bb		0.000
4	FUNCTION2 PFK	32.20	5.443e4					1.9	NO		bb		0.000
5	FUNCTION2 PFK	32.11	7.053e4					2.5	NO		db		0.000
6	FUNCTION2 PFK	32.00	6.774e4					2.6	NO		dd		0.000
7	FUNCTION2 PFK	31.97	5.378e4					2.9	NO		bd		0.000
8	FUNCTION2 PFK	31.64	4.945e4					1.9	NO		bb		0.000
9	FUNCTION2 PFK	31.21	4.154e4					1.8	NO		bb		0.000
10	FUNCTION2 PFK	30.20	2.891e4					1.6	NO		db		0.000
11	FUNCTION2 PFK	30.15	3.623e4					1.7	NO		bd		0.000
12	FUNCTION2 PFK	30.08	5.106e4					2.7	NO		bb		0.000
13	FUNCTION2 PFK	29.85	3.537e4					1.8	NO		bb		0.000
14	FUNCTION2 PFK	29.64	6.814e4					2.2	NO		bb		0.000
15	FUNCTION2 PFK	29.41	6.148e4					2.0	NO		bb		0.000
16	FUNCTION2 PFK	29.07	6.511e4					2.1	NO		bb		0.000
17	FUNCTION2 PFK	28.74	6.747e4					2.1	NO		bb		0.000
18	FUNCTION2 PFK	32.77	2.859e4					1.8	NO		bb		0.000
19	FUNCTION2 PFK	32.66	1.162e4					1.0	NO		db		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.99	1.001e5					2.6	NO		db		0.000
2	FUNCTION3 PFK	34.86	7.302e4					1.5	NO		bd		0.000
3	FUNCTION3 PFK	34.78	5.990e4					2.0	NO		bb		0.000
4	FUNCTION3 PFK	34.10	6.720e4					1.8	NO		bb		0.000
5	FUNCTION3 PFK	33.96	1.378e4					0.9	NO		bb		0.000
6	FUNCTION3 PFK	33.90	3.764e4					1.1	NO		bb		0.000
7	FUNCTION3 PFK	33.77	6.182e4					2.1	NO		db		0.000
8	FUNCTION3 PFK	33.66	5.297e4					1.8	NO		bd		0.000
9	FUNCTION3 PFK	33.38	8.877e3					0.7	NO		db		0.000
10	FUNCTION3 PFK	33.31	5.932e4					2.3	NO		dd		0.000
11	FUNCTION3 PFK	33.21	1.025e5					2.7	NO		bd		0.000
12	FUNCTION3 PFK	33.09	2.879e4					1.1	NO		bb		0.000
13	FUNCTION3 PFK	33.05	2.964e4					1.5	NO		bb		0.000
14	FUNCTION3 PFK	37.80	4.575e4					1.8	NO		bb		0.000
15	FUNCTION3 PFK	37.59	2.782e4					1.5	NO		bb		0.000
16	FUNCTION3 PFK	37.34	5.067e4					1.7	NO		bb		0.000
17	FUNCTION3 PFK	37.14	5.412e4					1.2	NO		bb		0.000
18	FUNCTION3 PFK	37.01	4.444e4					1.2	NO		bb		0.000
19	FUNCTION3 PFK	36.59	3.650e4					0.9	NO		bb		0.000
20	FUNCTION3 PFK	36.46	1.063e4					0.8	NO		bb		0.000
21	FUNCTION3 PFK	36.35	4.859e4					1.5	NO		bb		0.000
22	FUNCTION3 PFK	36.21	6.314e4					2.0	NO		bb		0.000
23	FUNCTION3 PFK	35.91	1.411e4					0.7	NO		bb		0.000
24	FUNCTION3 PFK	35.66	3.334e4					1.4	NO		bb		0.000
25	FUNCTION3 PFK	35.34	5.376e4					2.0	NO		bb		0.000
26	FUNCTION3 PFK	35.12	5.703e4					1.8	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.14	5.586e4					3.0	YES		db		
2	FUNCTION4 PFK	38.11	4.029e4					2.6	NO		bd		
3	FUNCTION4 PFK	39.70	2.043e4					1.1	NO		db		
4	FUNCTION4 PFK	39.67	1.578e4					1.1	NO		dd		
5	FUNCTION4 PFK	39.60	1.575e4					1.0	NO		dd		
6	FUNCTION4 PFK	39.57	2.143e4					1.4	NO		bd		
7	FUNCTION4 PFK	39.48	5.735e4					1.8	NO		bb		
8	FUNCTION4 PFK	39.36	2.046e3					0.4	NO		bb		
9	FUNCTION4 PFK	39.31	1.654e3					0.3	NO		bb		
10	FUNCTION4 PFK	39.26	4.278e4					1.4	NO		bb		
11	FUNCTION4 PFK	39.02	8.019e4					2.4	NO		db		
12	FUNCTION4 PFK	38.92	6.044e4					2.4	NO		dd		
13	FUNCTION4 PFK	38.87	6.674e3					0.6	NO		dd		
14	FUNCTION4 PFK	38.80	5.154e4					1.8	NO		dd		
15	FUNCTION4 PFK	38.69	6.372e4					2.2	NO		dd		
16	FUNCTION4 PFK	38.58	6.483e4					2.0	NO		bd		
17	FUNCTION4 PFK	38.35	9.339e4					2.3	NO		db		
18	FUNCTION4 PFK	38.23	6.830e4					2.4	NO		bd		
19	FUNCTION4 PFK	41.41	3.045e4					1.7	NO		db		
20	FUNCTION4 PFK	41.36	2.499e4					1.2	NO		dd		
21	FUNCTION4 PFK	41.28	4.050e4					1.7	NO		dd		
22	FUNCTION4 PFK	41.17	7.398e4					2.2	NO		bd		
23	FUNCTION4 PFK	41.06	9.636e3					0.8	NO		db		
24	FUNCTION4 PFK	41.02	2.500e4					1.2	NO		dd		
25	FUNCTION4 PFK	40.94	5.929e4					1.9	NO		bd		
26	FUNCTION4 PFK	40.73	1.967e4					1.2	NO		db		
27	FUNCTION4 PFK	40.69	1.298e4					0.9	NO		bd		
28	FUNCTION4 PFK	40.60	6.815e4					2.3	NO		db		
29	FUNCTION4 PFK	40.49	8.347e4					2.2	NO		dd		
30	FUNCTION4 PFK	40.38	8.485e4					2.5	NO		dd		
31	FUNCTION4 PFK	40.26	1.002e5					2.1	NO		dd		
32	FUNCTION4 PFK	40.16	9.299e4					2.4	NO		dd		
33	FUNCTION4 PFK	40.05	8.806e4					2.1	NO		bd		
34	FUNCTION4 PFK	39.90	6.191e4					2.1	NO		bb		
35	FUNCTION4 PFK	43.20	6.087e4					2.2	NO		bb		
36	FUNCTION4 PFK	43.08	3.373e4					1.4	NO		db		
37	FUNCTION4 PFK	43.04	1.585e4					1.3	NO		dd		

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION4 PFK	42.95	9.038e4					2.2	NO		dd		
39	FUNCTION4 PFK	42.86	9.014e4					3.2	YES		bd		
40	FUNCTION4 PFK	42.72	5.856e4					1.4	NO		bb		
41	FUNCTION4 PFK	42.41	4.014e4					1.8	NO		bb		
42	FUNCTION4 PFK	42.27	1.048e5					1.8	NO		db		
43	FUNCTION4 PFK	42.15	4.799e4					1.8	NO		dd		
44	FUNCTION4 PFK	42.06	6.664e4					2.8	NO		dd		
45	FUNCTION4 PFK	41.96	2.865e4					1.5	NO		dd		
46	FUNCTION4 PFK	41.93	4.741e4					1.6	NO		dd		
47	FUNCTION4 PFK	41.84	8.674e4					2.2	NO		dd		
48	FUNCTION4 PFK	41.74	4.466e4					2.5	NO		dd		
49	FUNCTION4 PFK	41.70	2.946e4					1.5	NO		bd		
50	FUNCTION4 PFK	41.62	2.916e4					1.4	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	46.33	7.257e4					2.7	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	26.29	1.121e2					3.2	YES		bb		0.000
2	FUNCTION1 HXCD...	25.89	1.092e2					4.9	YES		bb		0.000
3	FUNCTION1 HXCD...	23.90	1.570e2					9.3	YES		bb		0.000

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	22.99	7.754e1					1.4	NO		bb		0.000
2	FUNCTION1 HPCD...	22.89	1.366e2					1.2	NO		db		0.000
3	FUNCTION1 HPCD...	22.75	1.545e2					1.9	NO		dd		0.000
4	FUNCTION1 HPCD...	22.69	7.639e1					1.1	NO		bd		0.000
5	FUNCTION1 HPCD...	22.49	9.896e1					1.0	NO		bb		0.000
6	FUNCTION1 HPCD...	22.18	1.112e2					1.7	NO		db		0.000
7	FUNCTION1 HPCD...	22.13	1.791e2					2.3	NO		bd		0.000
8	FUNCTION1 HPCD...	21.81	9.527e1					1.4	NO		bb		0.000
9	FUNCTION1 HPCD...	21.16	9.406e1					1.5	NO		bb		0.000
10	FUNCTION1 HPCD...	27.57	1.807e2					2.4	NO		bb		0.000
11	FUNCTION1 HPCD...	27.33	9.594e1					1.3	NO		bb		0.000
12	FUNCTION1 HPCD...	27.07	1.447e2					1.3	NO		bb		0.000
13	FUNCTION1 HPCD...	26.65	7.261e1					1.3	NO		bb		0.000
14	FUNCTION1 HPCD...	26.53	1.842e2					1.7	NO		db		0.000
15	FUNCTION1 HPCD...	26.33	9.818e1					1.1	NO		bd		0.000
16	FUNCTION1 HPCD...	25.21	1.234e2					1.2	NO		bb		0.000
17	FUNCTION1 HPCD...	24.99	1.541e2					1.7	NO		db		0.000
18	FUNCTION1 HPCD...	24.88	9.122e1					1.2	NO		dd		0.000
19	FUNCTION1 HPCD...	24.76	1.317e2					1.1	NO		bd		0.000
20	FUNCTION1 HPCD...	24.19	2.201e2					1.5	NO		db		0.000
21	FUNCTION1 HPCD...	24.10	2.081e2					1.2	NO		bd		0.000
22	FUNCTION1 HPCD...	23.93	1.300e2					2.4	NO		bb		0.000
23	FUNCTION1 HPCD...	23.51	1.454e2					1.4	NO		bb		0.000
24	FUNCTION1 HPCD...	23.42	2.982e2					2.2	NO		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.81	8.450e1					1.9	NO		bb		0.000
2	FUNCTION2 HPCD...	32.74	8.197e1					1.5	NO		bb		0.000
3	FUNCTION2 HPCD...	31.18	2.080e2					2.0	NO		bb		0.000
4	FUNCTION2 HPCD...	30.00	1.009e2					1.5	NO		bb		0.000
5	FUNCTION2 HPCD...	28.65	1.821e2					2.9	NO		bb		0.000
6	FUNCTION2 HPCD...	28.44	8.594e1					1.5	NO		bb		0.000

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ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.56	7.081e1					7.9	YES		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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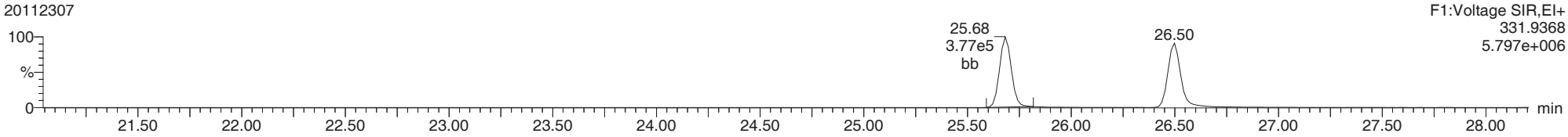

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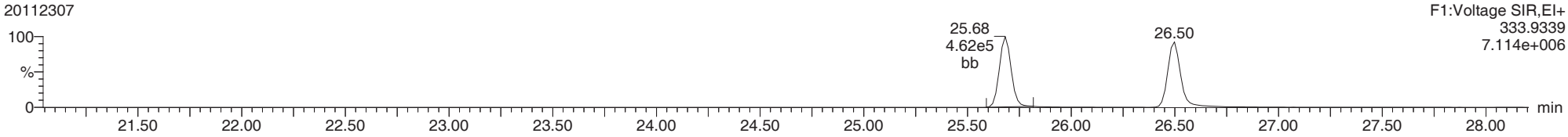

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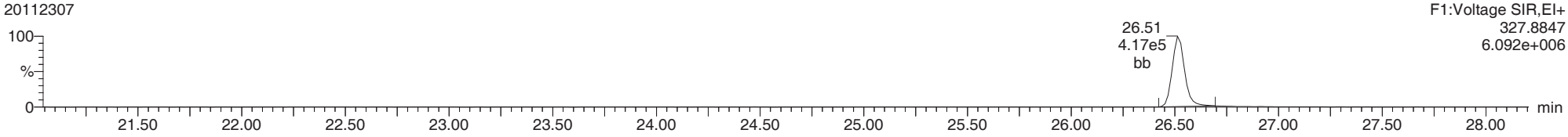

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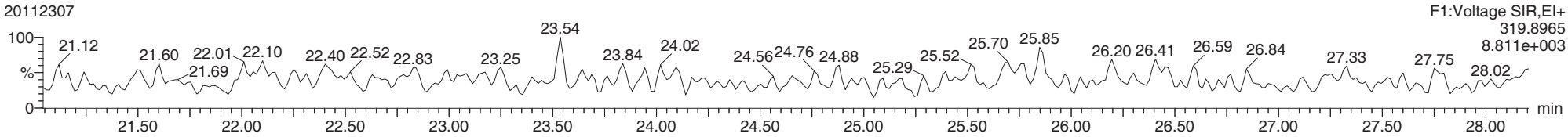

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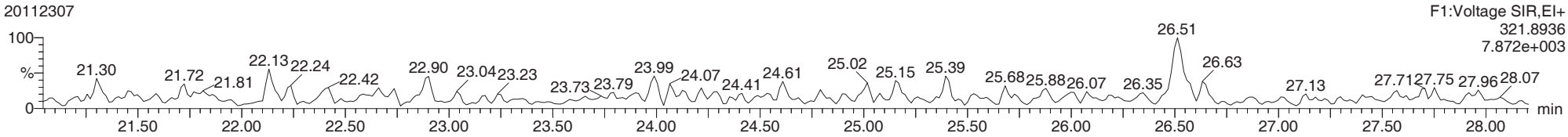

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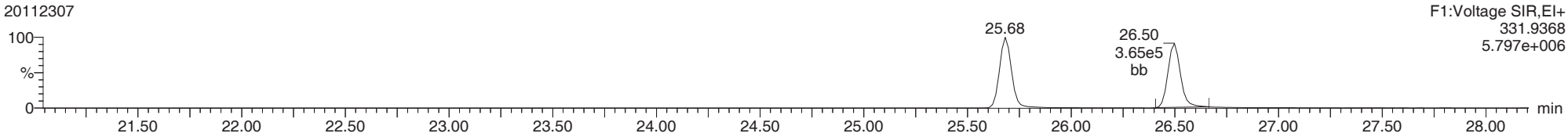

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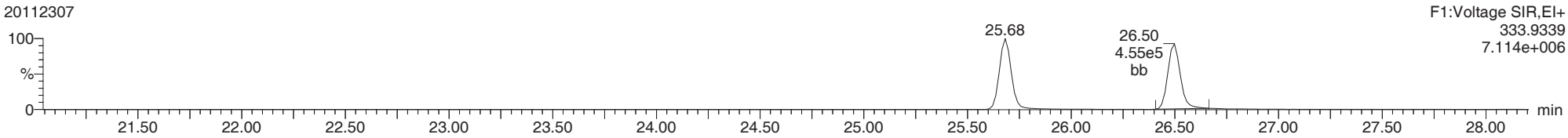

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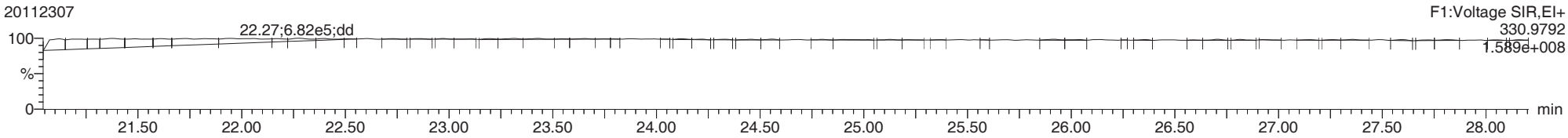

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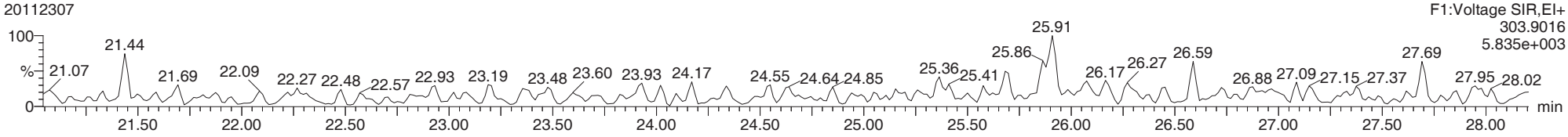

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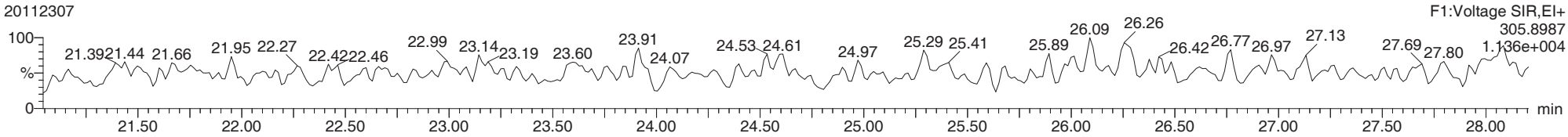

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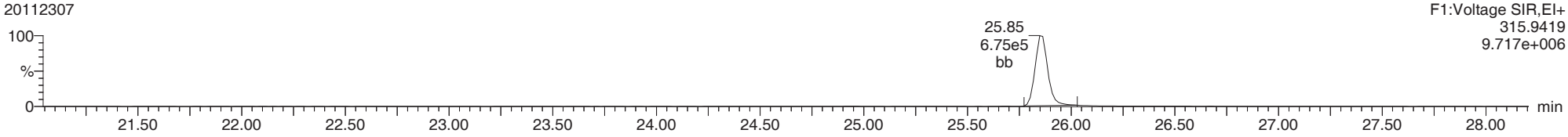

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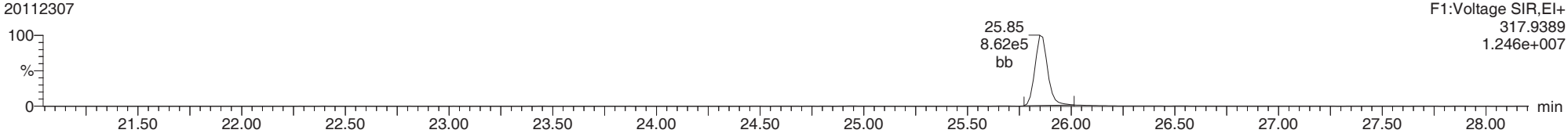

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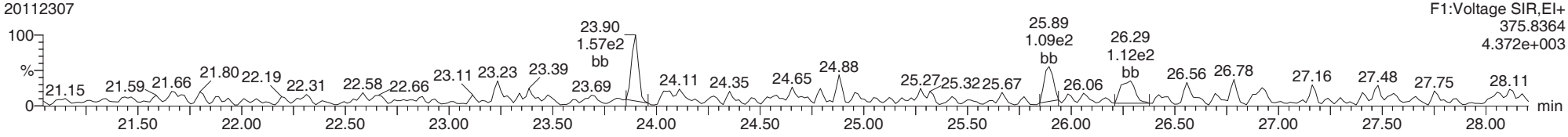

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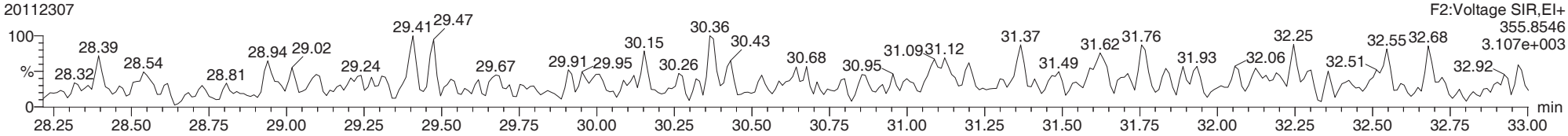

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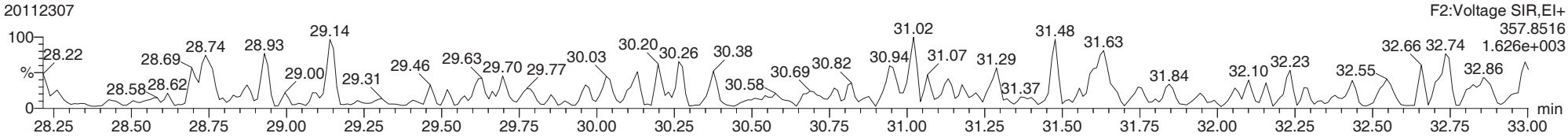

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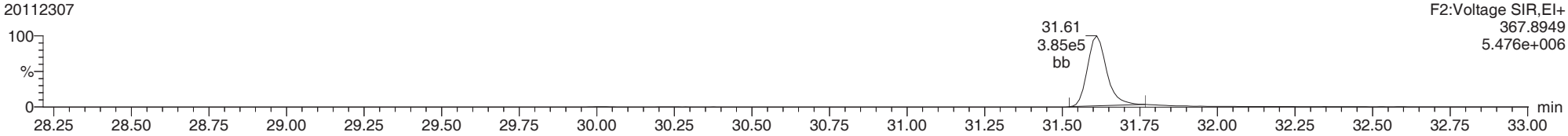

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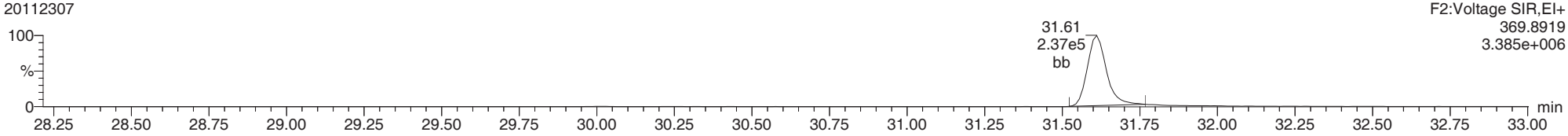
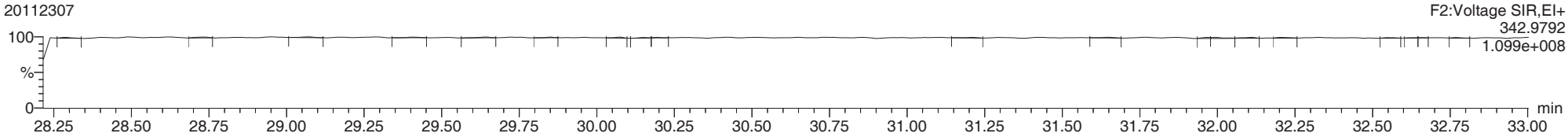


FUNCTION2 PFK



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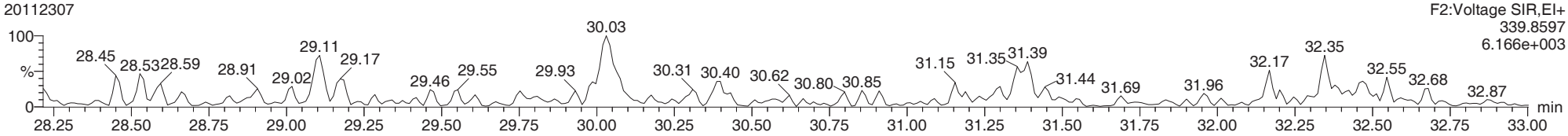
12378-PeCDF



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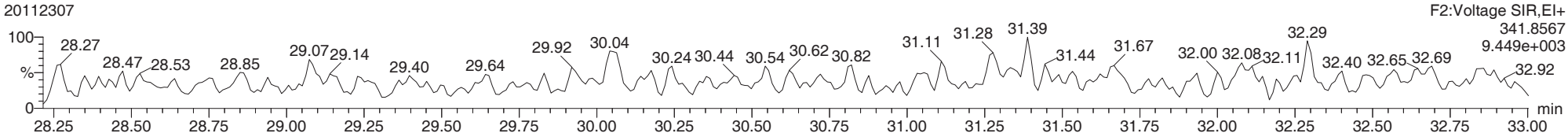

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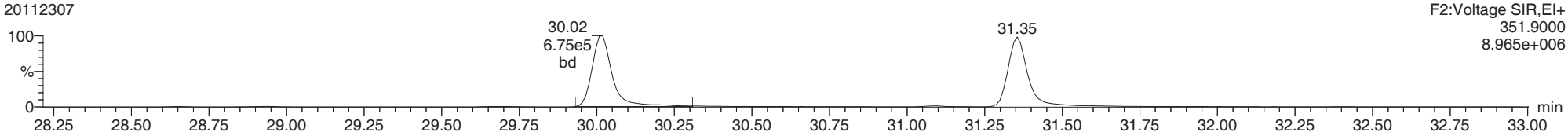

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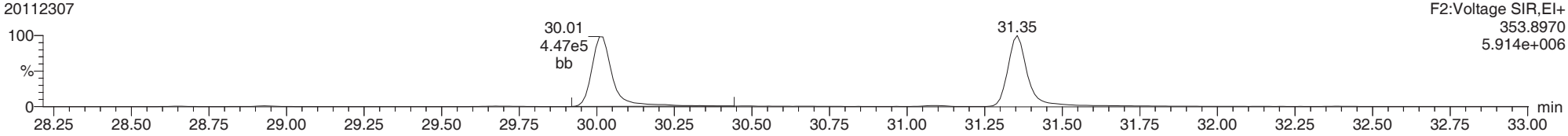
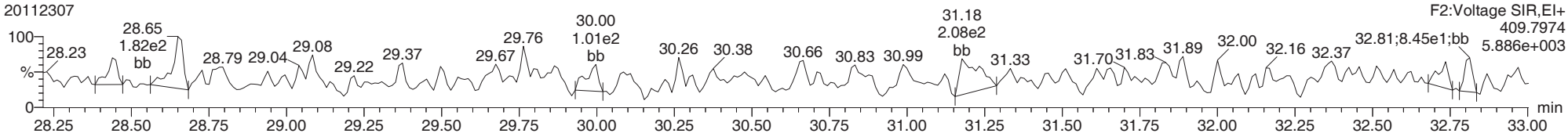


FUNCTION2 HPCDPE



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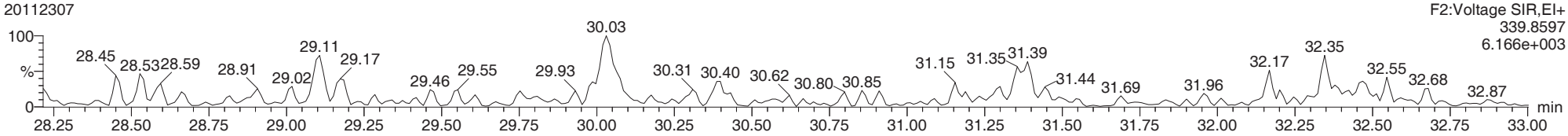
23478-PeCDF



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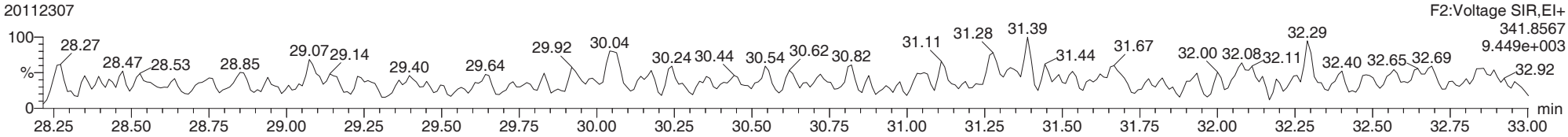

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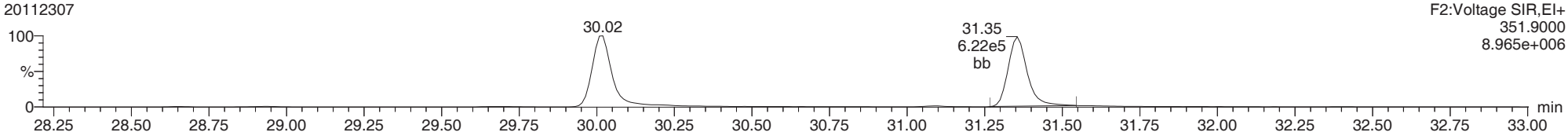

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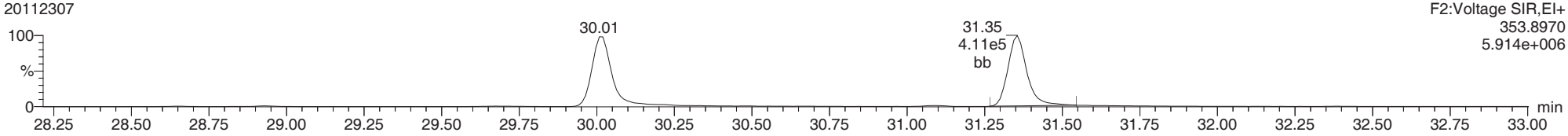

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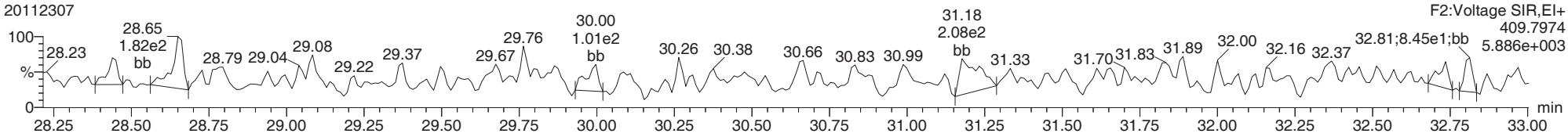

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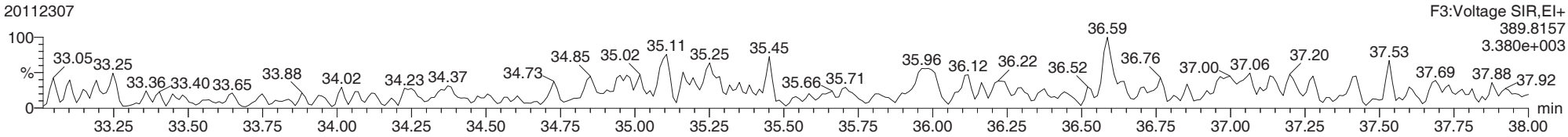
123478-HxCDD



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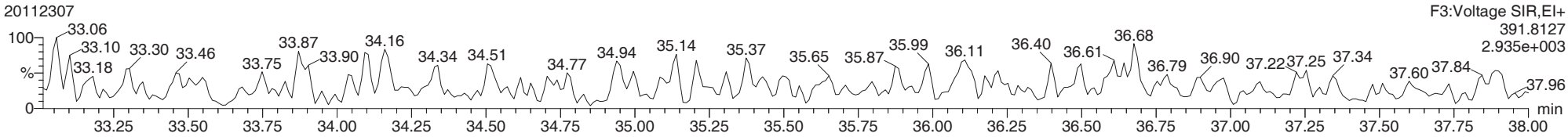

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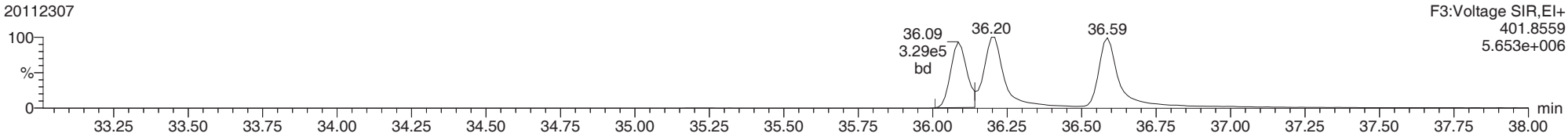

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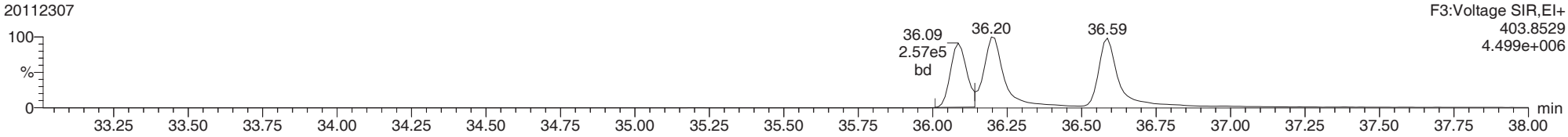

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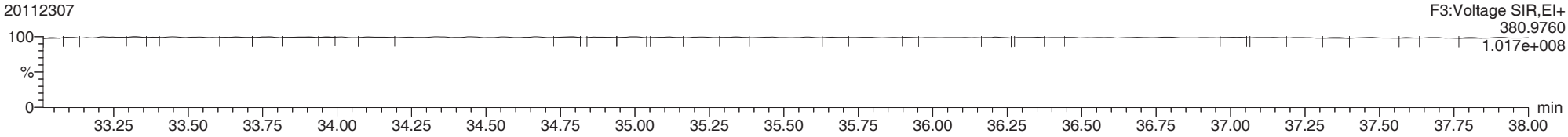

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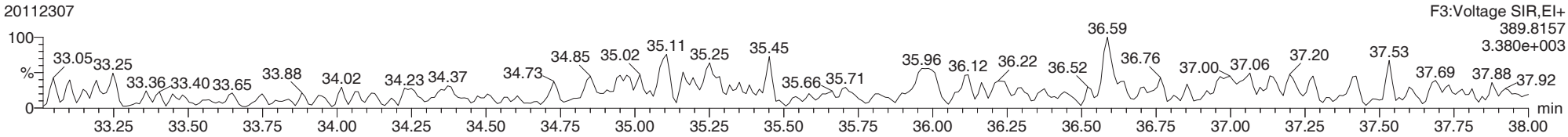

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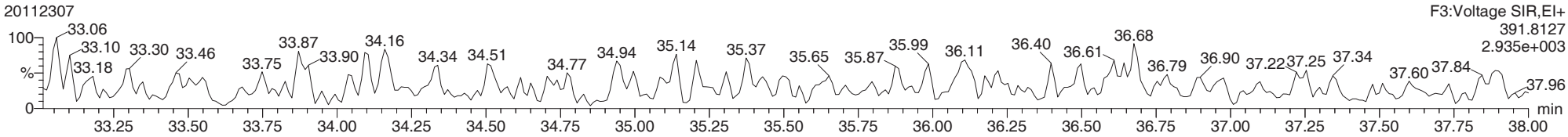

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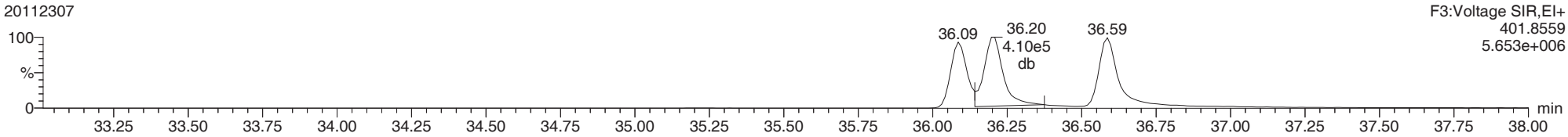

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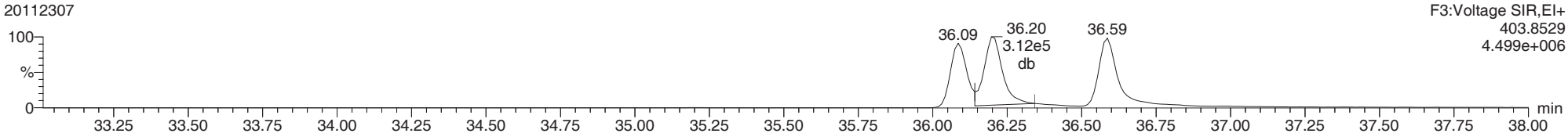

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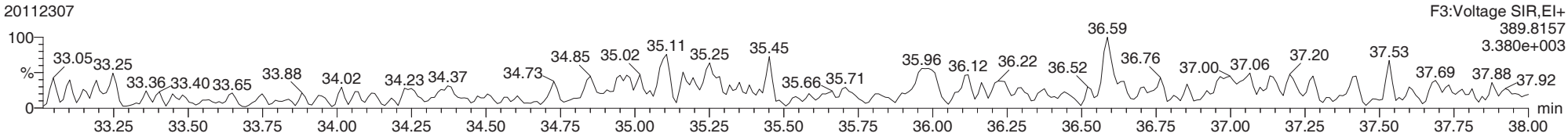

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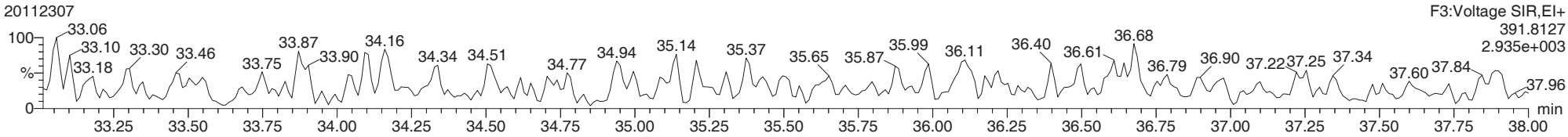

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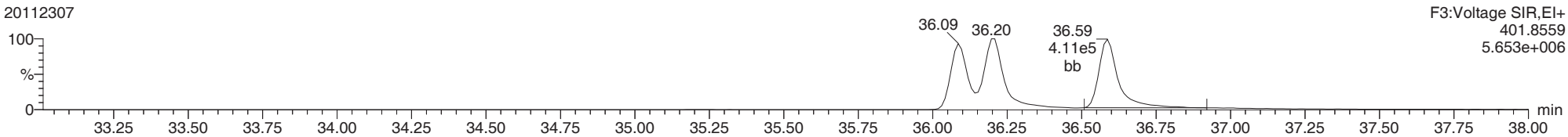

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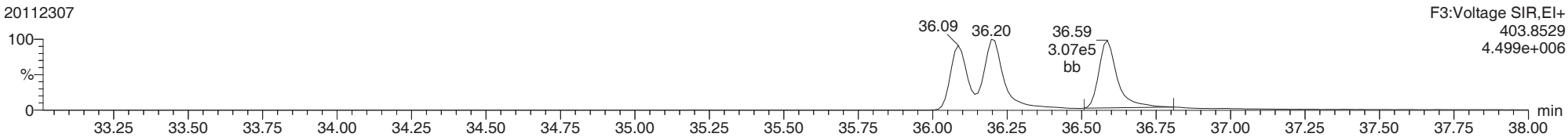

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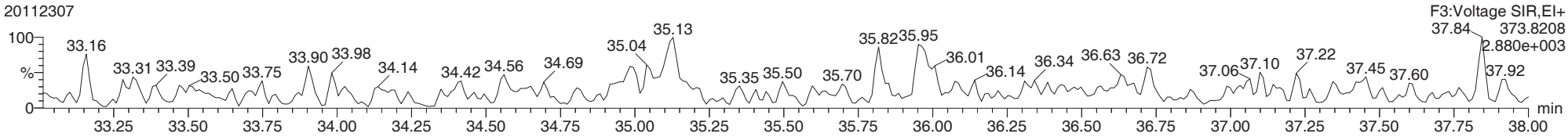

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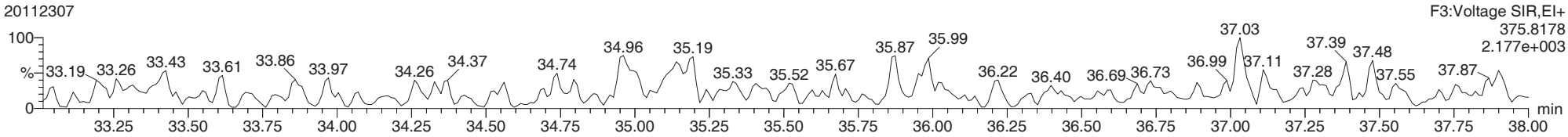

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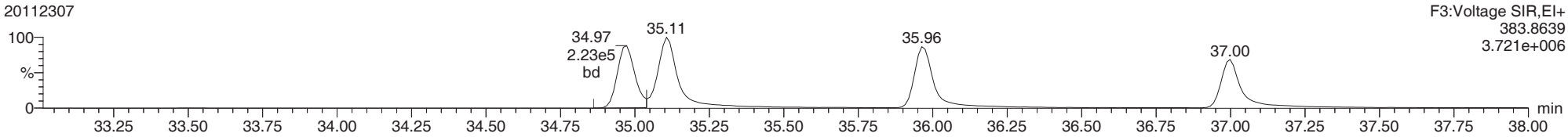

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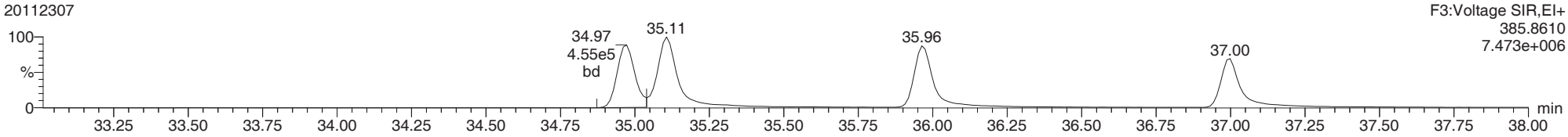

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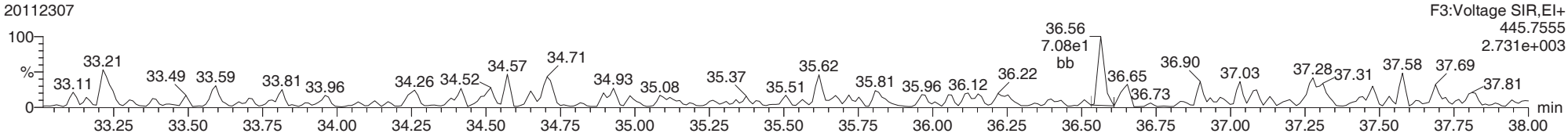

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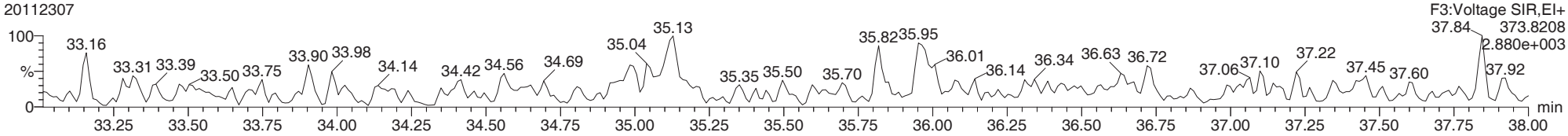
234678-HxCDF



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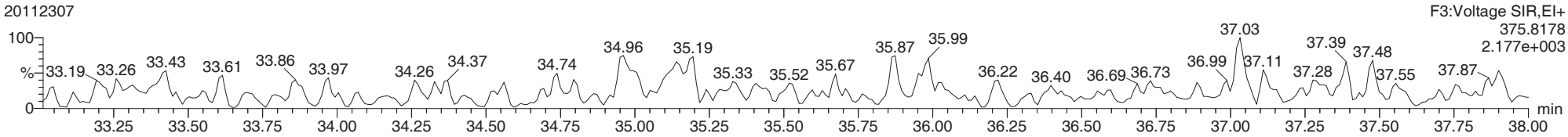

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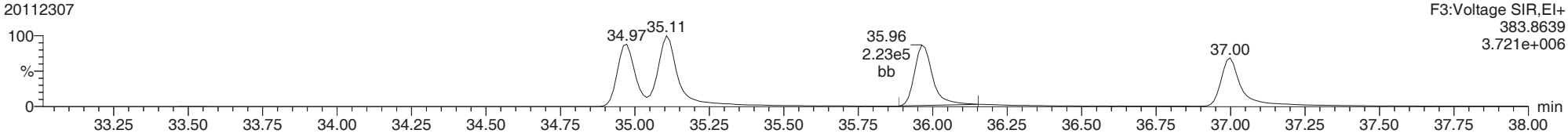

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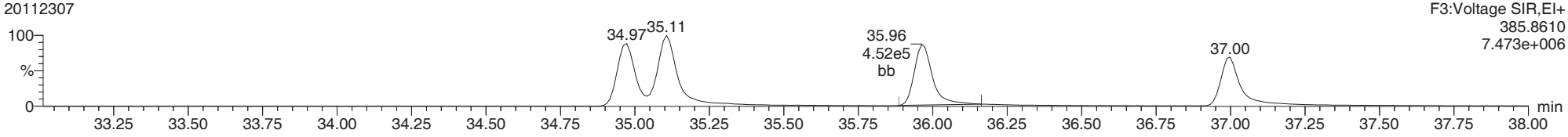

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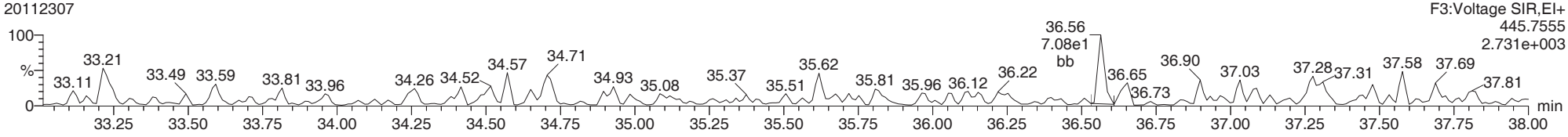

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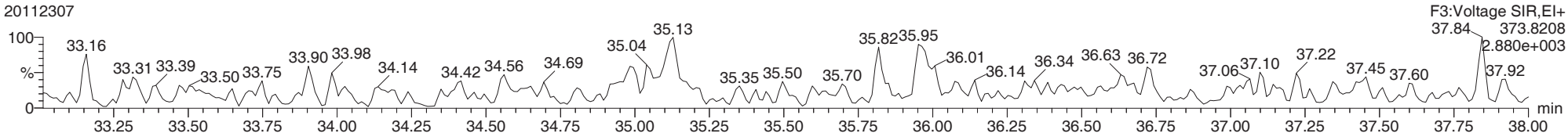
123678-HxCDF



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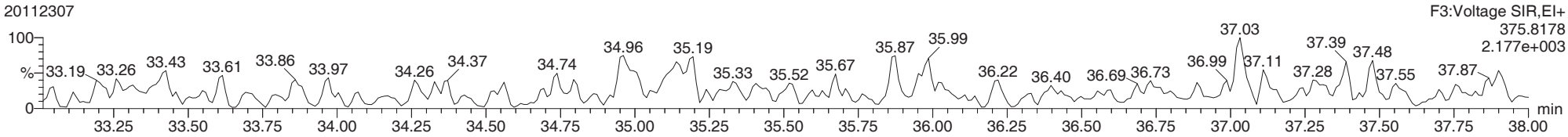

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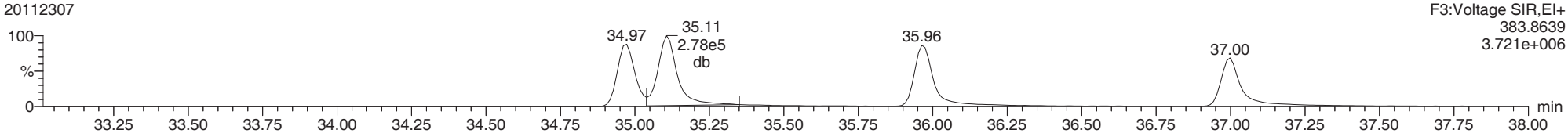

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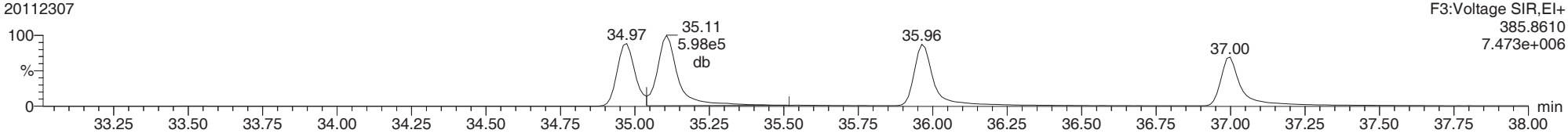

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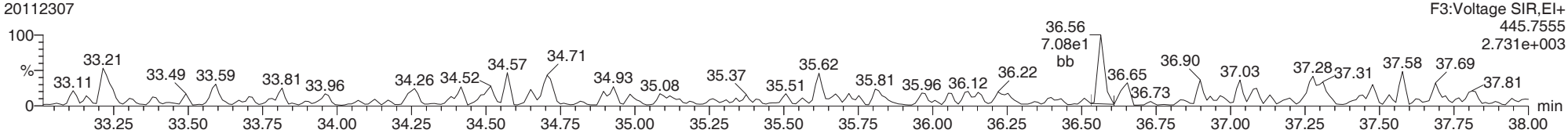

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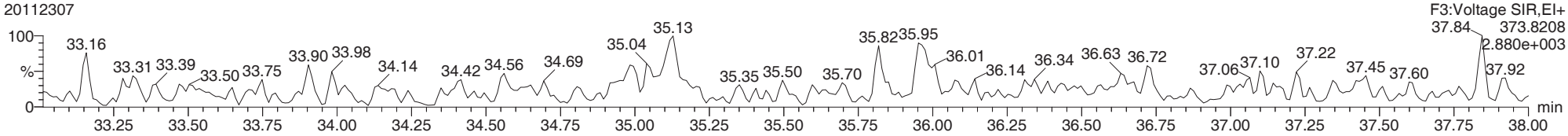

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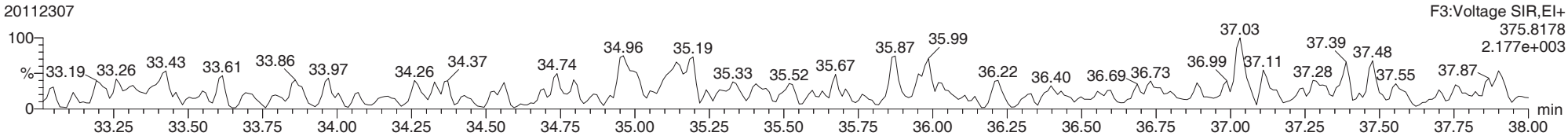

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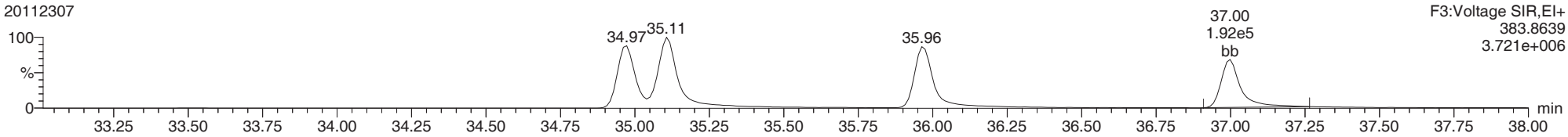

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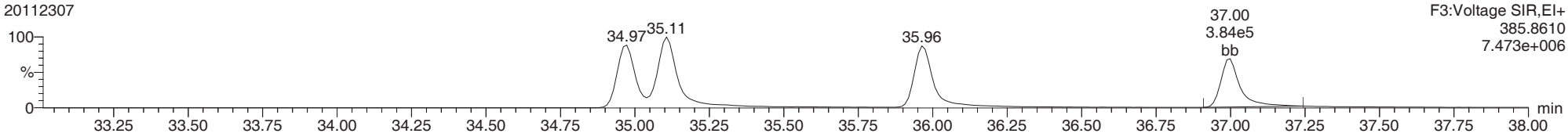
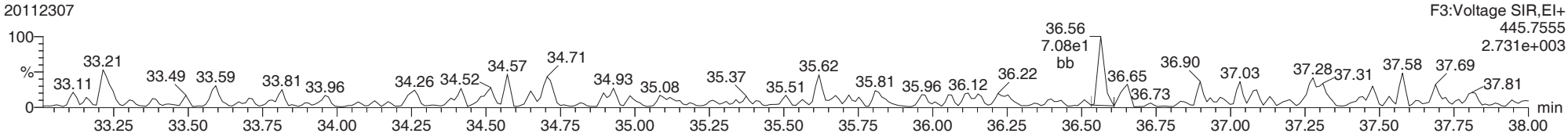


FUNCTION3 OCDPE



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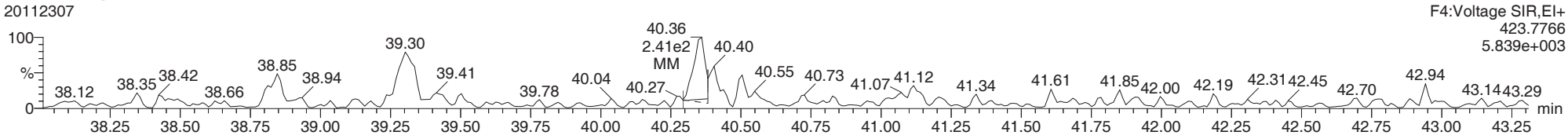
1234678-HpCDD



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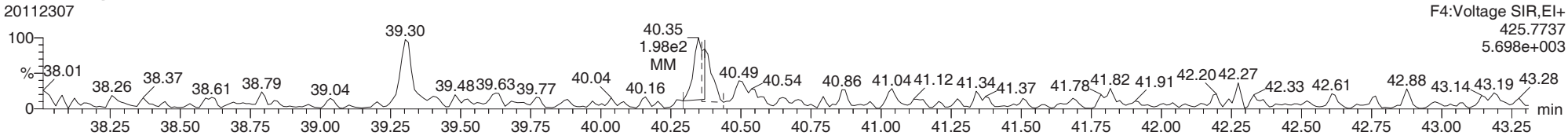

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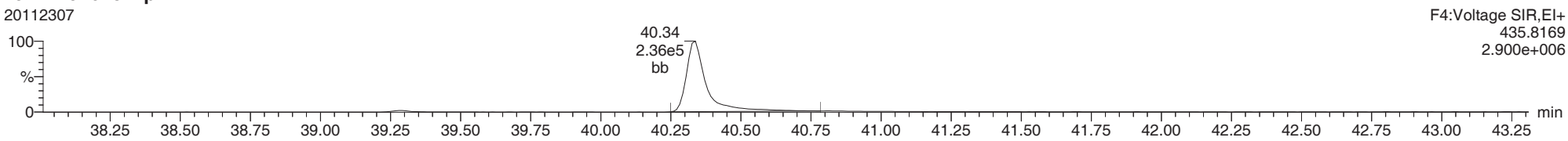

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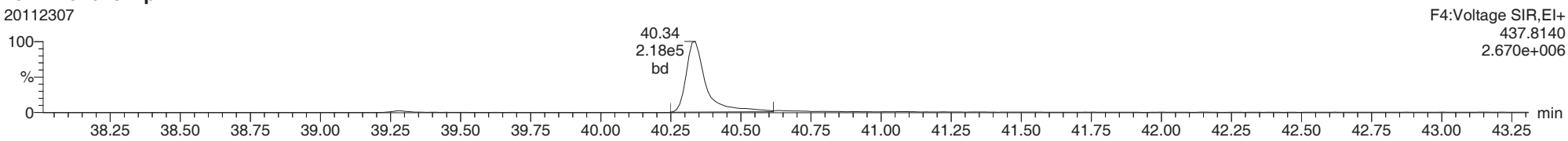
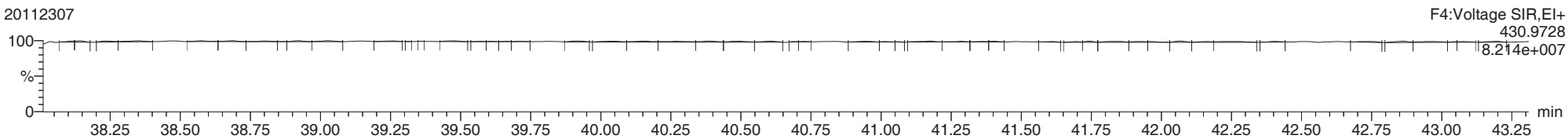


FUNCTION4 PFK



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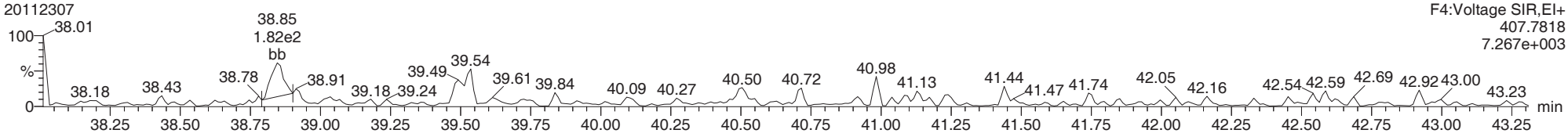

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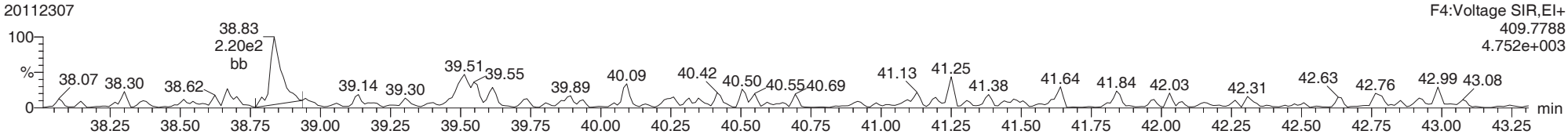

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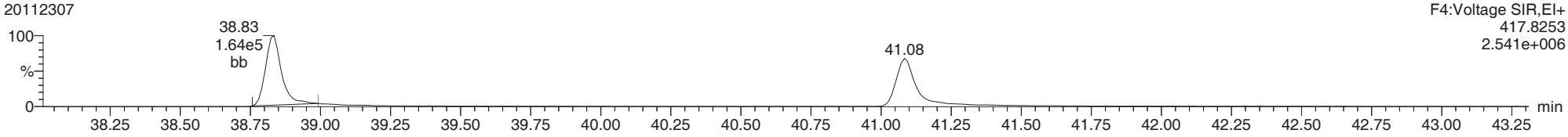

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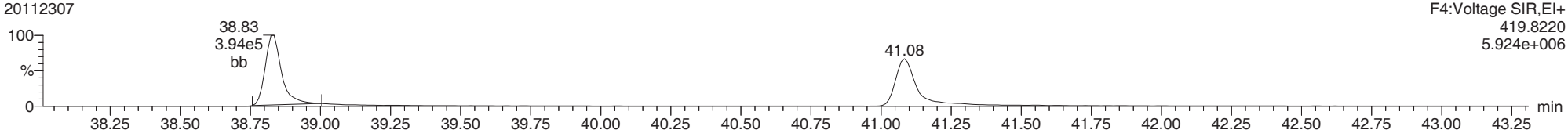
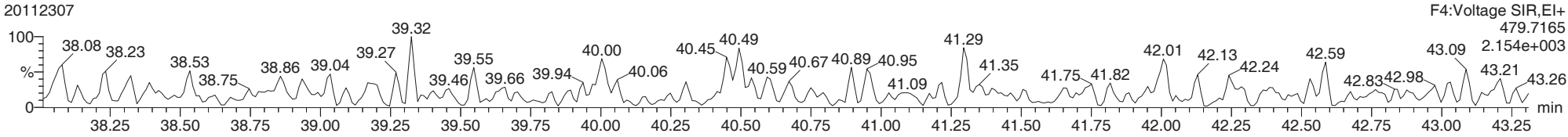


FUNCTION4 NCDPE



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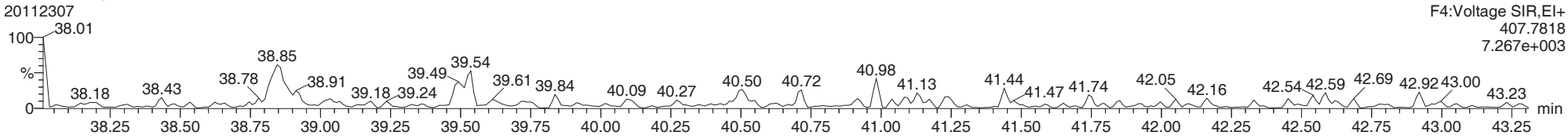
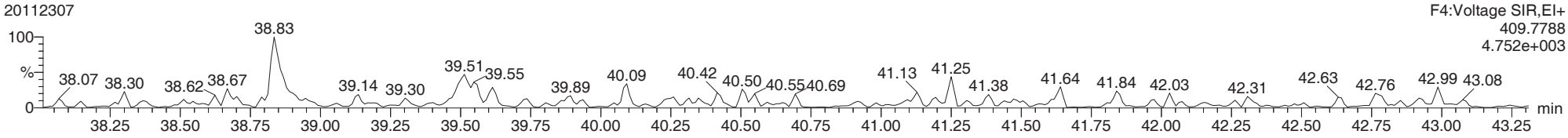
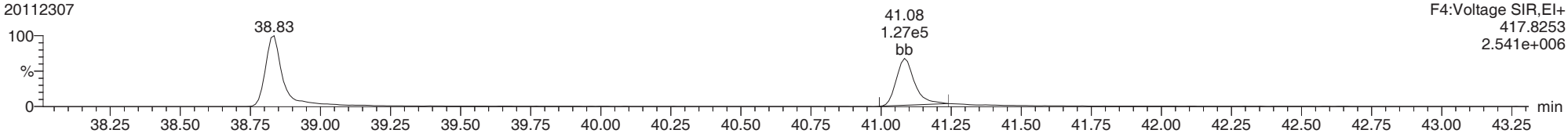
1234789-HpCDF



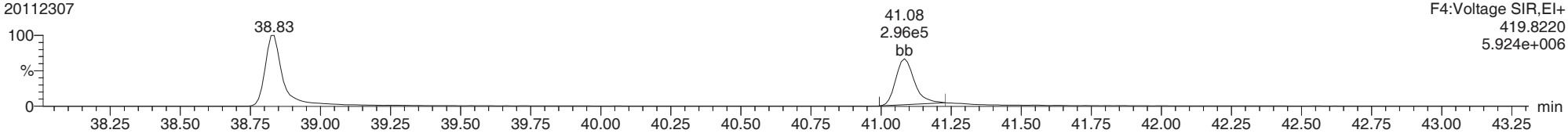
1234789-HpCDF



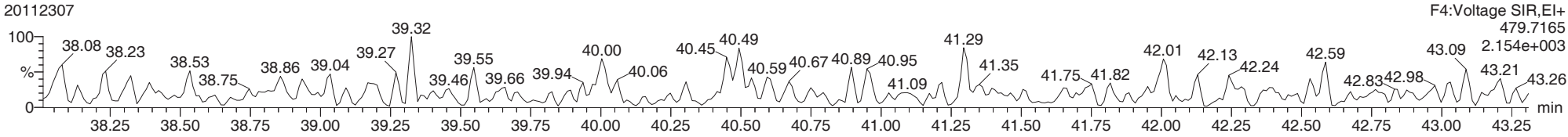
13C-1234789-HpCDF



13C-1234789-HpCDF

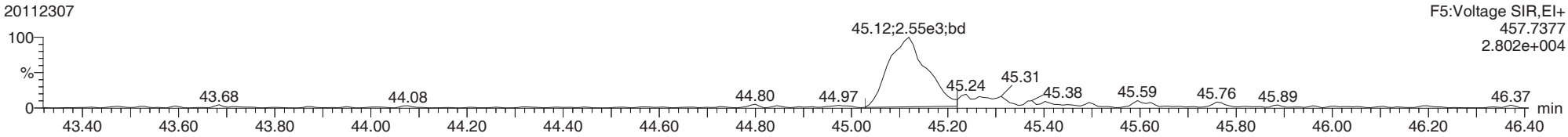


FUNCTION4 NCDPE



ID: 20J0389-01, Name: 20112307, Date: 23-Nov-2020, Time: 14:39:27, Conditions: AUTOSPEC01, User: pk

OCDD



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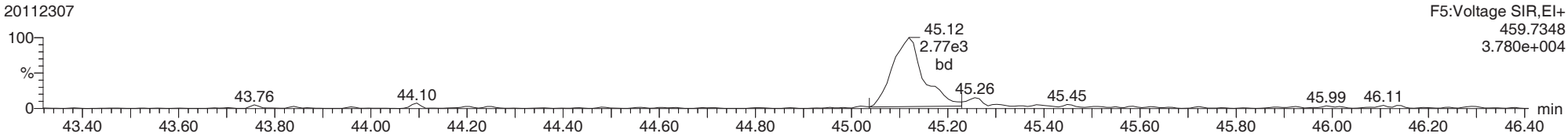

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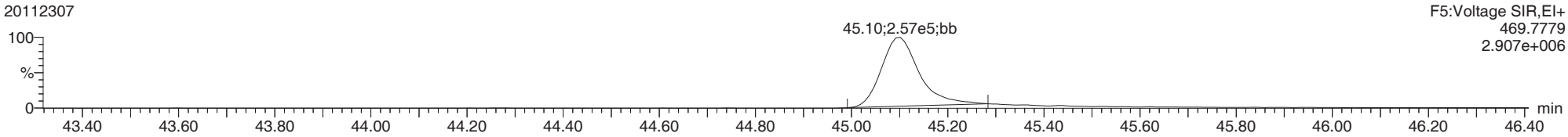

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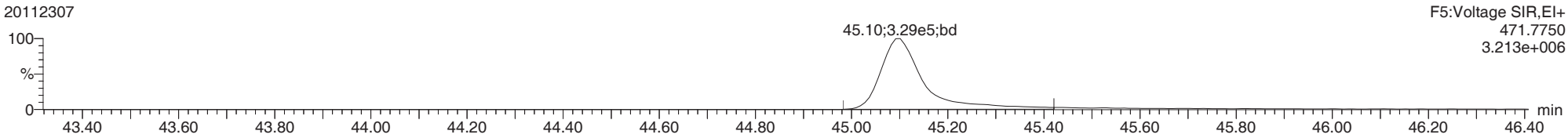
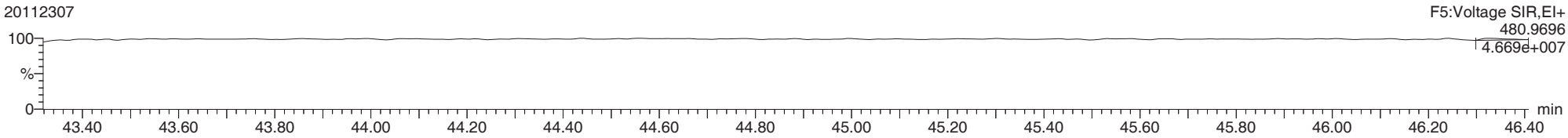
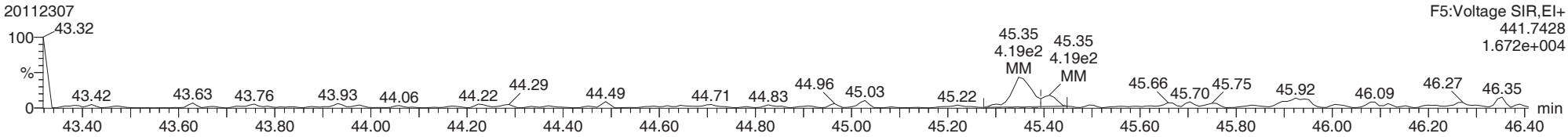


FUNCTION5 PFK

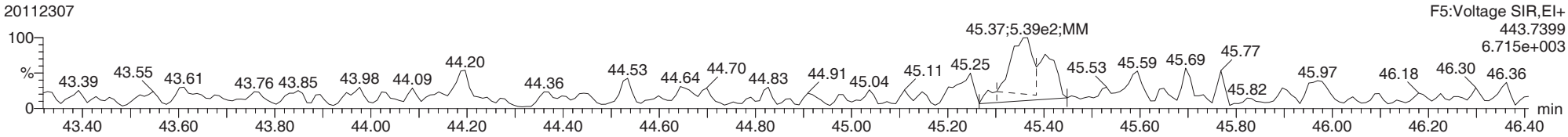


ID: 20J0389-01, Name: 20112307, Date: 23-Nov-2020, Time: 14:39:27, Conditions: AUTOSPEC01, User: pk

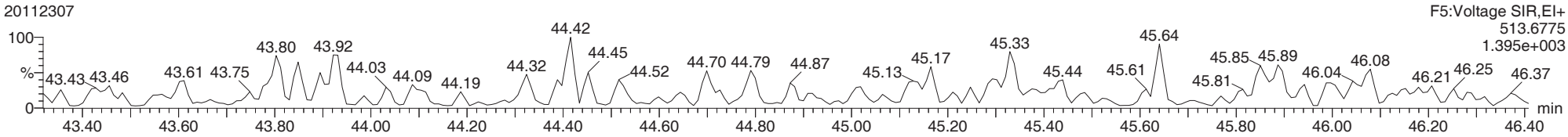
OCDF



OCDF

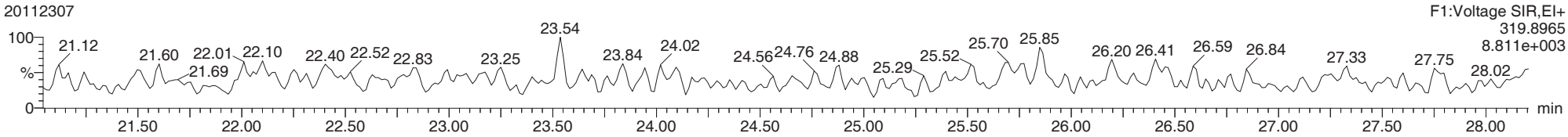


FUNCTION5 DCDPE

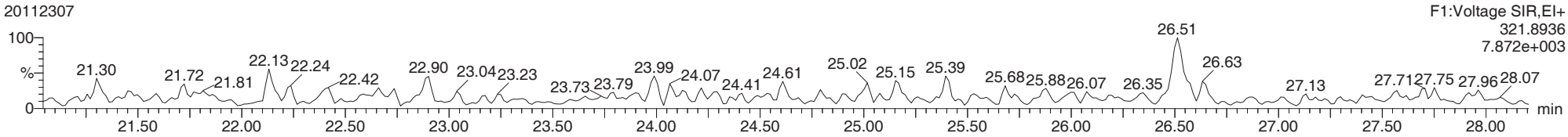


ID: 20J0389-01, Name: 20112307, Date: 23-Nov-2020, Time: 14:39:27, Conditions: AUTOSPEC01, User: pk

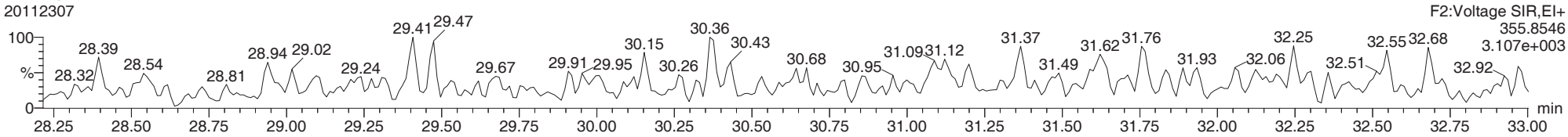
Total-tetradioxins



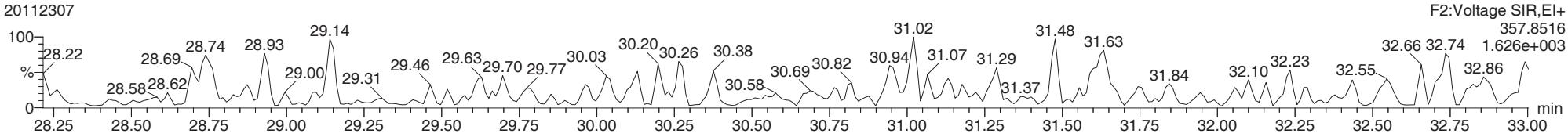
Total-tetradioxins



Total-pentadioxins

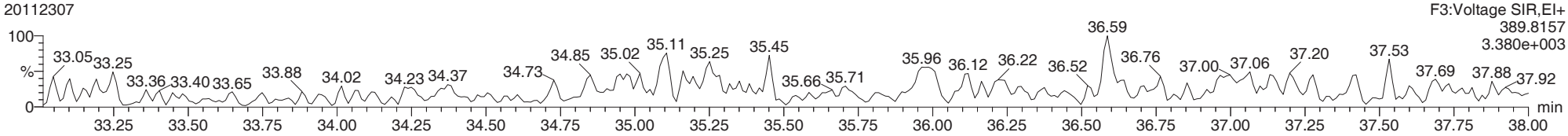


Total-pentadioxins



ID: 20J0389-01, Name: 20112307, Date: 23-Nov-2020, Time: 14:39:27, Conditions: AUTOSPEC01, User: pk

Total-hexadioxins



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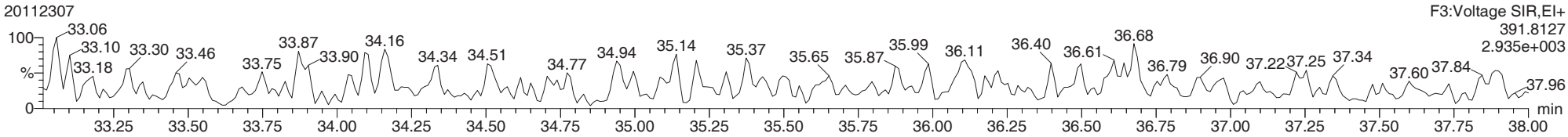

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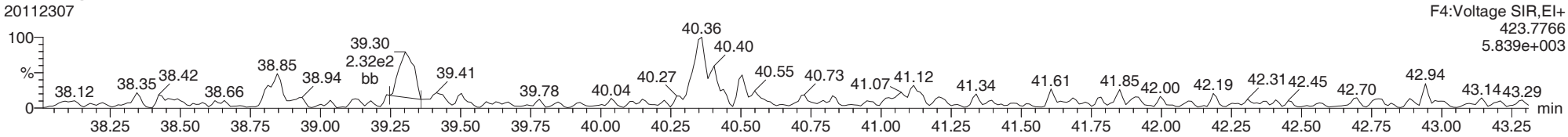
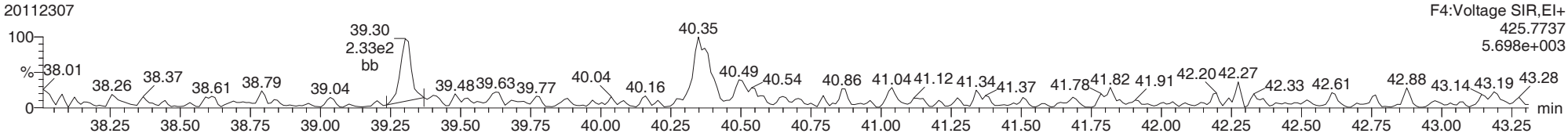
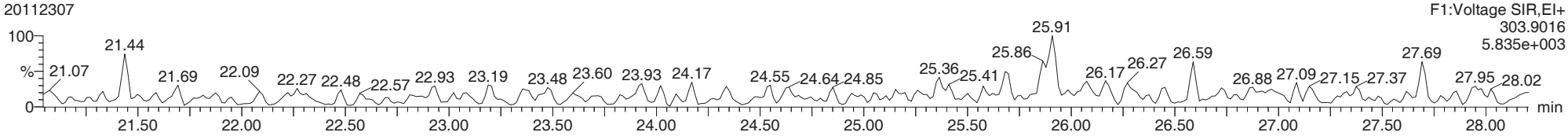


Total-heptadioxins

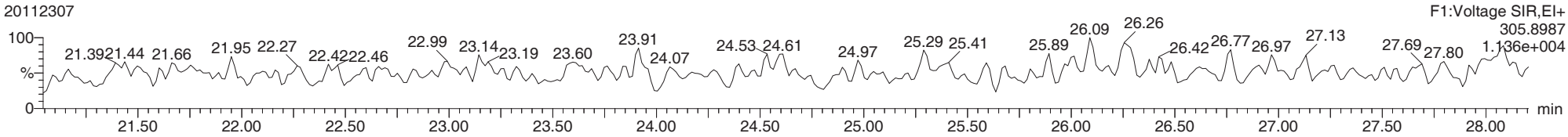


ID: 20J0389-01, Name: 20112307, Date: 23-Nov-2020, Time: 14:39:27, Conditions: AUTOSPEC01, User: pk

Total-tetrafurans



Total-tetrafurans



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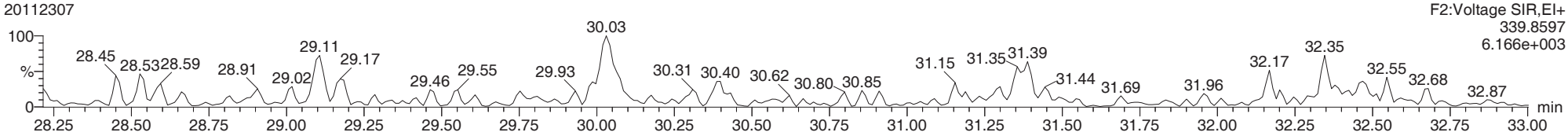

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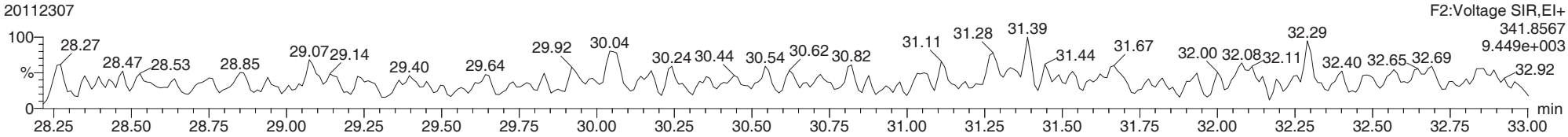

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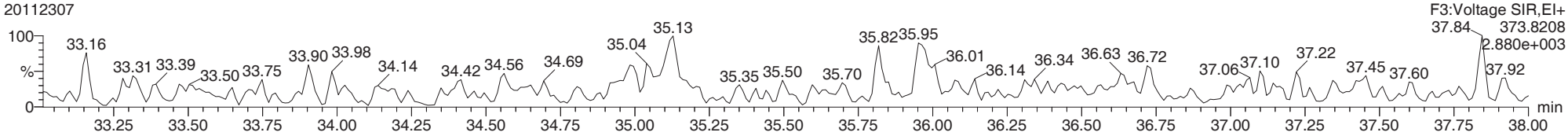
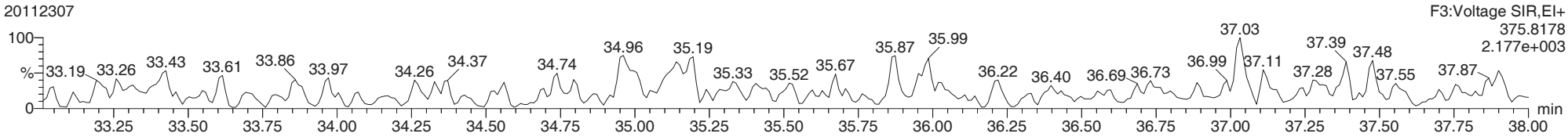
Printed: Tuesday, November 24, 2020 10:00:48 Pacific Standard Time

ID: 20J0389-01, Name: 20112307, Date: 23-Nov-2020, Time: 14:39:27, Conditions: AUTOSPEC01, User: pk

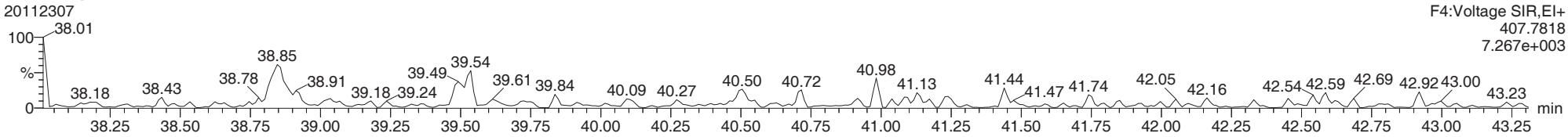
Total-hexafurans



Total-hexafurans



Total-heptafurans



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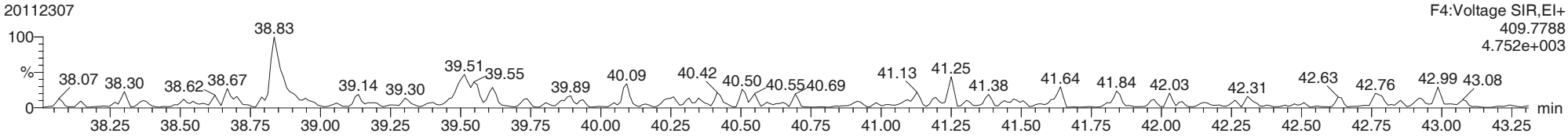

MW-CP1-102720

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider				
Project:	Lora Lake Apartments				
Matrix:	Ground Water	Laboratory ID:	20J0389-02 A	File ID:	20112308
Sampled:	10/27/20 11:25	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 15:28
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1022 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	1.16	9.78	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	1.05	9.78	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.64	9.78	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	1.51	9.78	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	0.87	9.78	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.85	9.78	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.88	9.78	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.90	9.78	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	1.25	9.78	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	1.37	9.78	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	1.20	9.78	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	1.43	9.78	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	2.300	0.893-1.208	0.79	9.78	2.35	pg/L	EMPC, J
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	1.23	9.78	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	0.862	0.893-1.208	1.34	9.78	9.24	pg/L	EMPC, J
39001-02-0	OCDF	1	1.183	0.757-1.024	4.73	19.6	20.2	pg/L	EMPC
3268-87-9	OCDD	1	0.773	0.757-1.024	4.06	48.9	165	pg/L	B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.78	ND	pg/L
41903-57-5	Total TCDD	1	0.000			9.78	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			9.78	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			9.78	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			9.78	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			9.78	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			9.78	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			9.78	ND	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.171
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.84

MW-CP1-102720

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider			Project:	Lora Lake Apartments
Matrix:	Ground Water	Laboratory ID:	20J0389-02	File ID:	20112308
Sampled:	10/27/20 11:25	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 15:28
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1022 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.773	0.655-0.886	2.06	86.9	24 - 169 %	
13C12-2,3,7,8-TCDD		0.826	0.655-0.886	1.77	87.3	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.528	1.318-1.783	1.87	81.3	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.538	1.318-1.783	1.95	77.5	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.664	1.318-1.783	1.71	79.6	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.480	0.434-0.587	3.95	97.6	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.533	0.434-0.587	3.37	99.5	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.480	0.434-0.587	3.77	97.3	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.473	0.434-0.587	4.40	95.0	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.273	1.054-1.426	4.34	93.0	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.293	1.054-1.426	3.58	88.5	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.432	0.374-0.506	5.79	96.5	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.440	0.374-0.506	7.27	89.5	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.130	0.893-1.208	4.57	106	23 - 140 %	
13C12-OCDD		0.869	0.757-1.024	5.56	64.5	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		1.16	102	35 - 197 %	

* Values outside of QC limits

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Printed: Tuesday, November 24, 2020 10:00:55 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-02, Name: 20112308, Date: 23-Nov-2020, Time: 15:28:51, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF					0.729		0.770	898	2418								
12378-PeCDF					0.779		1.550	763	2526								
23478-PeCDF					0.880		1.550	763	2526								
123478-HxCDF					0.880		1.240	648	669								
234678-HxCDF					0.863		1.240	648	669								
123678-HxCDF					0.853		1.240	648	669								
123789-HxCDF					0.780		1.240	648	669								
1234678-HpCDF	38.845	1.001	4.994e2	2.171e2	1.001	2.300	1.050	732	444	7.63e3	3.83e3	10.4	8.6	YES	bb	bb	0.120
1234789-HpCDF					0.994		1.050	732	444								
OCDF	45.338	1.005	1.933e3	1.635e3	1.158	1.183	0.890	980	1927	2.18e4	1.98e4	22.2	10.3	YES	MM	MM	1.034
2378-TCDD					1.238		0.770	1787	828								
12378-PeCDD					0.988		1.550	819	481								
123478-HxCDD					0.842		1.240	753	1057								
123678-HxCDD					0.907		1.240	753	1057								
123789-HxCDD					0.784		1.240	753	1057								
1234678-HpCDD	40.337	1.000	1.059e3	1.230e3	1.044	0.862	1.050	626	735	1.70e4	1.48e4	27.2	20.1	YES	MM	bb	0.472
OCDD	45.109	1.000	1.057e4	1.368e4	0.963	0.773	0.890	765	1309	1.22e5	1.50e5	159.5	114.6	NO	bd	bd	8.453
13C-2378-TCDF	25.848	1.007	6.743e5	8.726e5	2.203	0.773	0.770	5551	3807	1.00e7	1.28e7	1803.3	3353.7	NO	bb	bb	86.881
13C-12378-PeCDF	30.008	1.168	6.917e5	4.528e5	1.741	1.528	1.550	3551	3187	9.14e6	6.11e6	2574.8	1918.4	NO	bb	bd	81.326
13C-23478-PeCDF	31.344	1.220	6.340e5	4.121e5	1.669	1.538	1.550	3551	3187	8.80e6	5.76e6	2479.1	1807.9	NO	bb	bb	77.526
13C-123478-HxCDF	34.961	0.956	2.206e5	4.593e5	1.022	0.480	0.510	2466	3944	3.35e6	6.73e6	1357.2	1705.3	NO	bd	bd	97.648
13C-123678-HxCDF	35.095	0.960	2.829e5	5.305e5	1.200	0.533	0.510	2466	3944	3.60e6	7.25e6	1458.3	1837.2	NO	db	db	99.505
13C-234678-HxCDF	35.963	0.983	2.303e5	4.795e5	1.071	0.480	0.510	2466	3944	3.24e6	6.52e6	1313.1	1653.7	NO	bb	MM	97.285
13C-123789-HxCDF	36.987	1.011	1.910e5	4.034e5	0.919	0.473	0.510	2466	3944	2.54e6	5.19e6	1030.3	1315.9	NO	bb	bd	94.989
13C-1234678-HpCDF	38.823	1.061	1.802e5	4.171e5	0.909	0.432	0.440	3603	4742	2.63e6	6.15e6	729.9	1296.9	NO	bb	bb	96.523
13C-1234789-HpCDF	41.071	1.123	1.347e5	3.066e5	0.724	0.440	0.440	3603	4742	1.72e6	4.08e6	477.0	860.0	NO	bb	bb	89.543
13C-1234-TCDD	25.682	0.000	3.668e5	4.414e5	1.000	0.831	0.770	2777	1554	5.51e6	6.52e6	1982.6	4194.2	NO	bb	bb	100.000
13C-2378-TCDD	26.482	1.031	3.772e5	4.568e5	1.181	0.826	0.770	2777	1554	5.36e6	6.57e6	1929.4	4228.0	NO	bb	bb	87.336
13C-12378-PeCDD	31.600	1.230	3.931e5	2.362e5	0.978	1.664	1.550	1995	1469	5.54e6	3.29e6	2775.5	2241.8	NO	bb	bb	79.626
13C-123478-HxCDD	36.085	0.987	3.422e5	2.688e5	0.965	1.273	1.240	3384	3253	5.15e6	4.05e6	1521.2	1245.0	NO	bd	bd	92.964
13C-123678-HxCDD	36.196	0.990	3.972e5	3.071e5	1.168	1.293	1.240	3384	3253	5.51e6	4.40e6	1629.2	1351.2	NO	db	db	88.523
13C-1234678-HpCDD	40.326	1.103	2.464e5	2.181e5	0.645	1.130	1.050	2193	2490	3.02e6	2.75e6	1377.9	1103.0	NO	bb	bd	105.674
13C-OCDD	45.091	1.233	2.770e5	3.189e5	0.678	0.869	0.890	2889	3094	2.90e6	3.14e6	1002.9	1015.2	NO	bb	bd	128.960
13C-123789-HxCDD	36.575	0.000	3.839e5	2.972e5	1.000	1.292	1.240	3384	3253	5.25e6	4.12e6	1551.3	1265.5	NO	bb	bb	100.000
37CL-2378-TCDD	26.513	1.032	4.157e5		1.264			3031		5.95e6		1963.6			bb		40.671

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Printed: Tuesday, November 24, 2020 10:00:55 Pacific Standard Time

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Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	898	2418								
1289-TCDF					0.688		0.770	898	2418								
13468-PECDF					1.181		1.550	398	1415								
12389-PECDF					0.766		1.550	763	2526								
123468-HXCDF					1.003		1.240	648	669								
1368-TCDD					1.179		0.770	1787	828								
1289-TCDD					1.042		0.770	1787	828								
12479-PECDD					1.810		1.550	819	481								
12389-PECDD					1.165		1.550	819	481								
124679-HXCDD					1.056		1.240	753	1057								
1234679-HPCDD	39.302	0.975	8.083e2	1.107e3	1.285	0.730	1.050	626	735	1.22e4	1.32e4	19.5	17.9	YES	bb	bb	0.321
Total-tetrafurans			0.000e0		0.754			898		0.00e0							
Total-penta1			0.000e0					398		0.00e0							
Total-pentafurans			0.000e0		0.809			763		0.00e0							
Total-hexafurans			0.000e0		0.876			648		0.00e0							
Total-heptafurans			0.000e0		0.997			732		0.00e0							
Total-Furans			0.000e0		0.893			898		0.00e0							
Total-tetradioxins			0.000e0		1.153			1787		0.00e0							
Total-pentadioxins			0.000e0		1.321			819		0.00e0							
Total-hexadioxins			0.000e0		0.897			753		0.00e0							
Total-heptadioxins			0.000e0		1.165			626		0.00e0							
Total-Dioxins			1.057e4		1.100			1787		1.22e5							8.453
Total-TEQ			1.057e4					1787		1.22e5							8.453
FUNCTION1 PFK			0.000e0					1036710		0.00e0							
FUNCTION2 PFK			3.282e6					649597		6.03e7							0.000
FUNCTION3 PFK			2.026e6					537845		3.76e7							0.000
FUNCTION4 PFK			1.424e6					457396		2.90e7							
FUNCTION5 PFK			8.938e5					386272		2.39e7							
FUNCTION1 HXCD...			7.652e1					451		1.82e3							0.000
FUNCTION1 HPCD...			1.559e3					1053		3.41e4							0.000
FUNCTION2 HPCD...			8.200e2					1543		2.06e4							0.000
FUNCTION3 OCDPE			0.000e0					360		0.00e0							
FUNCTION4 NCDPE			1.768e2					589		4.96e3							0.000
FUNCTION5 DCDPE			0.000e0					371		0.00e0							

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	OCDD	45.11	1.057e4	1.368e4	0.963	0.77	0.89	159.5	YES	NO	bd	bd	8.453

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.65	1.060e5					2.1	NO		dd		0.000
2	FUNCTION2 PFK	28.56	1.250e5					2.7	NO		dd		0.000
3	FUNCTION2 PFK	28.43	1.172e5					3.4	YES		dd		0.000
4	FUNCTION2 PFK	28.37	5.522e4					2.2	NO		dd		0.000
5	FUNCTION2 PFK	28.32	8.820e4					2.5	NO		bd		0.000
6	FUNCTION2 PFK	30.24	3.142e4					1.0	NO		db		0.000
7	FUNCTION2 PFK	30.10	6.903e4					1.3	NO		bd		0.000
8	FUNCTION2 PFK	30.00	9.861e4					2.7	NO		db		0.000
9	FUNCTION2 PFK	29.90	7.921e4					2.1	NO		dd		0.000
10	FUNCTION2 PFK	29.84	7.903e4					2.4	NO		dd		0.000
11	FUNCTION2 PFK	29.77	5.704e4					2.4	NO		bd		0.000
12	FUNCTION2 PFK	29.73	1.615e4					1.0	NO		db		0.000
13	FUNCTION2 PFK	29.68	5.881e4					2.1	NO		bd		0.000
14	FUNCTION2 PFK	29.56	8.028e4					2.6	NO		bb		0.000
15	FUNCTION2 PFK	29.46	1.310e5					2.9	NO		db		0.000
16	FUNCTION2 PFK	29.34	9.379e4					2.3	NO		dd		0.000
17	FUNCTION2 PFK	29.24	2.442e4					1.5	NO		dd		0.000
18	FUNCTION2 PFK	29.22	2.553e4					1.6	NO		bd		0.000
19	FUNCTION2 PFK	29.12	8.916e4					2.3	NO		bb		0.000
20	FUNCTION2 PFK	28.89	3.446e4					1.1	NO		db		0.000
21	FUNCTION2 PFK	28.77	6.647e4					1.9	NO		dd		0.000
22	FUNCTION2 PFK	31.89	5.118e4					1.3	NO		bb		0.000
23	FUNCTION2 PFK	31.80	9.483e4					2.7	NO		bb		0.000
24	FUNCTION2 PFK	31.45	5.549e4					1.8	NO		db		0.000
25	FUNCTION2 PFK	31.42	2.399e4					1.5	NO		dd		0.000
26	FUNCTION2 PFK	31.34	1.348e5					2.3	NO		dd		0.000
27	FUNCTION2 PFK	31.23	6.537e4					1.9	NO		dd		0.000
28	FUNCTION2 PFK	31.12	1.012e5					2.4	NO		dd		0.000
29	FUNCTION2 PFK	31.02	1.005e5					2.6	NO		bd		0.000
30	FUNCTION2 PFK	30.91	1.941e4					1.3	NO		db		0.000
31	FUNCTION2 PFK	30.86	7.604e4					2.2	NO		dd		0.000
32	FUNCTION2 PFK	30.81	3.808e4					1.8	NO		dd		0.000
33	FUNCTION2 PFK	30.76	4.457e4					1.9	NO		dd		0.000
34	FUNCTION2 PFK	30.66	5.938e4					1.6	NO		dd		0.000
35	FUNCTION2 PFK	30.63	1.731e4					1.1	NO		dd		0.000
36	FUNCTION2 PFK	30.56	3.150e4					1.1	NO		dd		0.000
37	FUNCTION2 PFK	30.43	1.026e5					1.9	NO		bd		0.000

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION2 PFK	32.92	5.705e4					1.8	NO		db		0.000
39	FUNCTION2 PFK	32.81	7.297e4					1.7	NO		dd		0.000
40	FUNCTION2 PFK	32.69	6.769e4					1.4	NO		dd		0.000
41	FUNCTION2 PFK	32.60	3.826e4					1.6	NO		dd		0.000
42	FUNCTION2 PFK	32.56	2.602e4					1.2	NO		bd		0.000
43	FUNCTION2 PFK	32.47	1.581e5					3.5	YES		db		0.000
44	FUNCTION2 PFK	32.36	1.175e5					3.0	NO		dd		0.000
45	FUNCTION2 PFK	32.26	1.448e5					3.1	YES		bd		0.000
46	FUNCTION2 PFK	32.15	5.782e4					2.4	NO		bb		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.66	6.902e4					1.6	NO		db		0.000
2	FUNCTION3 PFK	33.58	4.488e4					2.0	NO		bd		0.000
3	FUNCTION3 PFK	33.48	8.380e4					3.8	YES		db		0.000
4	FUNCTION3 PFK	33.37	1.499e5					3.5	YES		dd		0.000
5	FUNCTION3 PFK	33.25	1.647e5					3.7	YES		dd		0.000
6	FUNCTION3 PFK	33.15	8.645e4					2.6	NO		bd		0.000
7	FUNCTION3 PFK	35.51	2.981e4					1.2	NO		bb		0.000
8	FUNCTION3 PFK	35.40	5.475e4					1.8	NO		bb		0.000
9	FUNCTION3 PFK	35.15	7.344e4					2.4	NO		bb		0.000
10	FUNCTION3 PFK	35.04	9.063e4					2.6	NO		bb		0.000
11	FUNCTION3 PFK	34.94	3.695e4					1.4	NO		bb		0.000
12	FUNCTION3 PFK	34.84	8.759e3					0.7	NO		bb		0.000
13	FUNCTION3 PFK	34.69	2.742e4					1.3	NO		bb		0.000
14	FUNCTION3 PFK	34.60	2.426e4					1.2	NO		db		0.000
15	FUNCTION3 PFK	34.56	2.114e4					1.1	NO		dd		0.000
16	FUNCTION3 PFK	34.49	1.260e4					0.8	NO		bd		0.000
17	FUNCTION3 PFK	34.36	5.971e4					1.9	NO		db		0.000
18	FUNCTION3 PFK	34.27	5.435e4					1.4	NO		dd		0.000
19	FUNCTION3 PFK	34.15	3.905e4					1.6	NO		bd		0.000
20	FUNCTION3 PFK	34.05	7.643e4					2.1	NO		db		0.000
21	FUNCTION3 PFK	33.93	5.438e4					1.6	NO		dd		0.000
22	FUNCTION3 PFK	33.81	4.674e4					1.9	NO		bd		0.000
23	FUNCTION3 PFK	37.89	5.438e4					2.2	NO		bb		0.000
24	FUNCTION3 PFK	37.78	4.171e4					1.7	NO		bb		0.000
25	FUNCTION3 PFK	37.65	4.818e4					1.9	NO		bb		0.000
26	FUNCTION3 PFK	37.23	1.095e4					1.0	NO		db		0.000
27	FUNCTION3 PFK	37.20	3.933e4					1.5	NO		bd		0.000
28	FUNCTION3 PFK	37.10	3.667e4					1.6	NO		bb		0.000
29	FUNCTION3 PFK	36.96	5.090e4					1.6	NO		bb		0.000
30	FUNCTION3 PFK	36.76	6.345e4					2.1	NO		bb		0.000
31	FUNCTION3 PFK	36.65	6.156e4					1.9	NO		bb		0.000
32	FUNCTION3 PFK	36.42	5.232e4					2.4	NO		bb		0.000
33	FUNCTION3 PFK	36.29	6.711e4					1.9	NO		bb		0.000
34	FUNCTION3 PFK	36.11	2.272e3					0.4	NO		bb		0.000
35	FUNCTION3 PFK	35.87	7.379e4					1.7	NO		db		0.000
36	FUNCTION3 PFK	35.76	2.345e4					1.4	NO		dd		0.000
37	FUNCTION3 PFK	35.72	3.789e4					1.7	NO		bd		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION3 PFK	35.62	5.254e4					2.6	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	40.36	4.040e4					1.7	NO		bb		
2	FUNCTION4 PFK	40.15	3.816e4					1.7	NO		bb		
3	FUNCTION4 PFK	40.01	7.351e4					2.8	NO		bb		
4	FUNCTION4 PFK	39.89	4.886e4					2.3	NO		db		
5	FUNCTION4 PFK	39.85	1.401e4					1.3	NO		dd		
6	FUNCTION4 PFK	39.79	6.488e4					2.5	NO		bd		
7	FUNCTION4 PFK	39.58	4.928e4					2.0	NO		bb		
8	FUNCTION4 PFK	39.46	5.691e4					2.1	NO		bb		
9	FUNCTION4 PFK	39.24	1.976e4					1.5	NO		bb		
10	FUNCTION4 PFK	39.03	9.041e3					0.9	NO		bb		
11	FUNCTION4 PFK	38.78	5.911e4					2.1	NO		db		
12	FUNCTION4 PFK	38.66	5.365e4					1.9	NO		bd		
13	FUNCTION4 PFK	38.44	3.146e4					1.9	NO		bb		
14	FUNCTION4 PFK	38.33	4.139e4					2.1	NO		bb		
15	FUNCTION4 PFK	38.11	5.102e4					2.4	NO		bb		
16	FUNCTION4 PFK	42.82	5.241e4					2.2	NO		bd		
17	FUNCTION4 PFK	42.60	8.518e4					3.0	NO		db		
18	FUNCTION4 PFK	42.48	8.043e4					2.2	NO		dd		
19	FUNCTION4 PFK	42.37	6.594e4					2.8	NO		bd		
20	FUNCTION4 PFK	42.24	6.757e4					1.8	NO		bb		
21	FUNCTION4 PFK	42.15	2.397e4					1.7	NO		bb		
22	FUNCTION4 PFK	41.94	1.537e4					1.4	NO		bb		
23	FUNCTION4 PFK	41.88	1.898e4					1.4	NO		db		
24	FUNCTION4 PFK	41.83	1.598e4					1.5	NO		dd		
25	FUNCTION4 PFK	41.79	2.377e4					1.6	NO		bd		
26	FUNCTION4 PFK	41.48	2.210e4					1.7	NO		bb		
27	FUNCTION4 PFK	41.38	5.748e4					1.7	NO		db		
28	FUNCTION4 PFK	41.27	2.776e4					1.4	NO		bd		
29	FUNCTION4 PFK	41.02	5.979e4					2.8	NO		bb		
30	FUNCTION4 PFK	40.82	3.973e4					2.1	NO		db		
31	FUNCTION4 PFK	40.74	7.643e3					0.8	NO		bd		
32	FUNCTION4 PFK	43.04	5.109e4					2.3	NO		bb		
33	FUNCTION4 PFK	42.92	5.765e4					2.1	NO		db		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.16	2.968e4					1.9	NO		dd		
2	FUNCTION5 PFK	44.11	2.138e4					1.3	NO		dd		
3	FUNCTION5 PFK	44.04	2.451e4					2.4	NO		dd		
4	FUNCTION5 PFK	44.01	2.349e4					2.3	NO		bd		
5	FUNCTION5 PFK	43.97	1.033e3					0.3	NO		bb		
6	FUNCTION5 PFK	43.91	2.248e4					1.9	NO		bb		
7	FUNCTION5 PFK	43.87	8.863e3					1.1	NO		db		
8	FUNCTION5 PFK	43.83	7.864e3					0.9	NO		bd		
9	FUNCTION5 PFK	43.70	4.129e4					2.2	NO		bb		
10	FUNCTION5 PFK	43.49	5.554e4					3.2	YES		db		
11	FUNCTION5 PFK	43.45	1.764e4					2.5	NO		bd		
12	FUNCTION5 PFK	43.42	1.695e3					0.4	NO		db		
13	FUNCTION5 PFK	43.38	1.612e4					1.3	NO		bd		
14	FUNCTION5 PFK	45.21	1.114e4					1.0	NO		dd		
15	FUNCTION5 PFK	45.14	3.277e4					1.9	NO		dd		
16	FUNCTION5 PFK	45.11	1.036e4					1.5	NO		bd		
17	FUNCTION5 PFK	45.04	1.943e4					1.2	NO		db		
18	FUNCTION5 PFK	44.99	4.946e3					0.7	NO		bd		
19	FUNCTION5 PFK	44.85	6.854e3					1.1	NO		bb		
20	FUNCTION5 PFK	44.81	5.985e4					2.5	NO		db		
21	FUNCTION5 PFK	44.72	1.477e4					1.3	NO		dd		
22	FUNCTION5 PFK	44.67	9.561e3					0.9	NO		bd		
23	FUNCTION5 PFK	44.61	6.271e3					0.7	NO		db		
24	FUNCTION5 PFK	44.58	1.098e4					1.0	NO		bd		
25	FUNCTION5 PFK	44.54	2.899e3					0.5	NO		bb		
26	FUNCTION5 PFK	44.37	1.026e4					0.9	NO		bb		
27	FUNCTION5 PFK	44.30	7.397e3					1.2	NO		db		
28	FUNCTION5 PFK	44.26	3.944e4					2.4	NO		bd		
29	FUNCTION5 PFK	44.20	6.796e3					0.8	NO		db		
30	FUNCTION5 PFK	46.36	4.583e3					0.6	NO		bb		
31	FUNCTION5 PFK	46.28	2.827e4					1.8	NO		db		
32	FUNCTION5 PFK	46.22	2.362e4					1.3	NO		dd		
33	FUNCTION5 PFK	46.15	3.471e4					2.0	NO		dd		
34	FUNCTION5 PFK	46.11	1.348e4					1.2	NO		bd		
35	FUNCTION5 PFK	46.04	3.208e4					1.7	NO		db		
36	FUNCTION5 PFK	45.94	4.644e4					1.6	NO		bd		
37	FUNCTION5 PFK	45.83	5.245e4					1.8	NO		db		

ID: 20J0389-02, Name: 20112308, Date: 23-Nov-2020, Time: 15:28:51, Conditions: AUTOSPEC01, User: pk

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION5 PFK	45.76	6.738e3					0.8	NO		bd		
39	FUNCTION5 PFK	45.69	1.099e4					0.7	NO		bb		
40	FUNCTION5 PFK	45.60	2.539e4					1.7	NO		bb		
41	FUNCTION5 PFK	45.54	2.182e4					1.5	NO		db		
42	FUNCTION5 PFK	45.48	1.152e4					1.2	NO		bd		
43	FUNCTION5 PFK	45.36	2.617e4					1.4	NO		bb		
44	FUNCTION5 PFK	45.26	3.024e4					1.2	NO		db		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	25.26	7.652e1					4.0	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	27.22	7.644e1					1.8	NO		db		0.000
2	FUNCTION1 HPCD...	27.15	1.284e2					2.2	NO		dd		0.000
3	FUNCTION1 HPCD...	27.06	9.392e1					2.1	NO		bd		0.000
4	FUNCTION1 HPCD...	25.85	9.161e1					2.4	NO		bb		0.000
5	FUNCTION1 HPCD...	25.71	1.023e2					2.9	NO		bb		0.000
6	FUNCTION1 HPCD...	25.35	1.297e2					2.8	NO		bb		0.000
7	FUNCTION1 HPCD...	25.11	1.986e2					3.5	YES		bb		0.000
8	FUNCTION1 HPCD...	25.00	8.187e1					1.9	NO		bb		0.000
9	FUNCTION1 HPCD...	24.85	1.032e2					2.2	NO		bb		0.000
10	FUNCTION1 HPCD...	23.67	1.486e2					3.7	YES		bb		0.000
11	FUNCTION1 HPCD...	23.42	2.350e2					3.4	YES		bb		0.000
12	FUNCTION1 HPCD...	22.83	8.765e1					1.8	NO		bb		0.000
13	FUNCTION1 HPCD...	21.72	8.161e1					1.7	NO		bb		0.000

ID: 20J0389-02, Name: 20112308, Date: 23-Nov-2020, Time: 15:28:51, Conditions: AUTOSPEC01, User: pk

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.70	9.473e1					1.5	NO		bb		0.000
2	FUNCTION2 HPCD...	32.50	1.646e2					1.7	NO		bb		0.000
3	FUNCTION2 HPCD...	31.48	1.179e2					2.1	NO		bb		0.000
4	FUNCTION2 HPCD...	31.15	8.580e1					1.9	NO		bb		0.000
5	FUNCTION2 HPCD...	31.03	1.075e2					2.1	NO		bb		0.000
6	FUNCTION2 HPCD...	29.03	8.881e1					1.5	NO		bb		0.000
7	FUNCTION2 HPCD...	28.85	7.017e1					1.1	NO		bb		0.000
8	FUNCTION2 HPCD...	28.33	9.046e1					1.6	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	40.77	7.668e1					3.4	YES		bb		0.000
2	FUNCTION4 NCDPE	40.34	1.001e2					5.0	YES		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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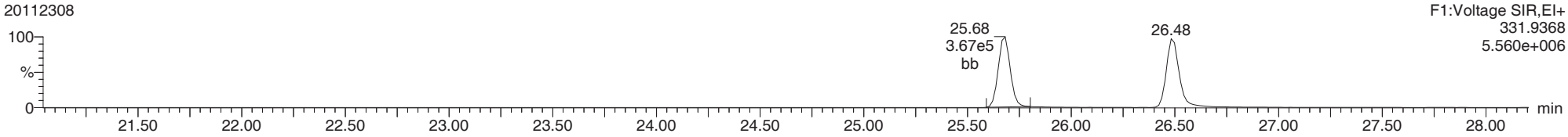
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-02, Name: 20112308, Date: 23-Nov-2020, Time: 15:28:51, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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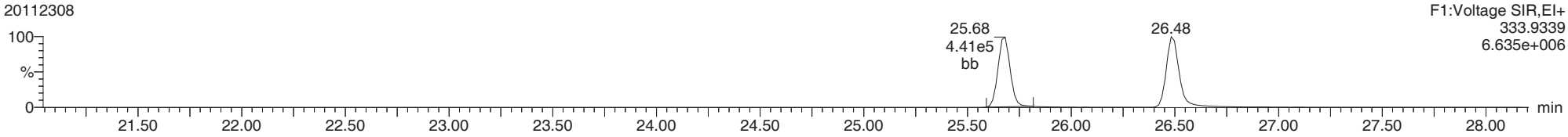
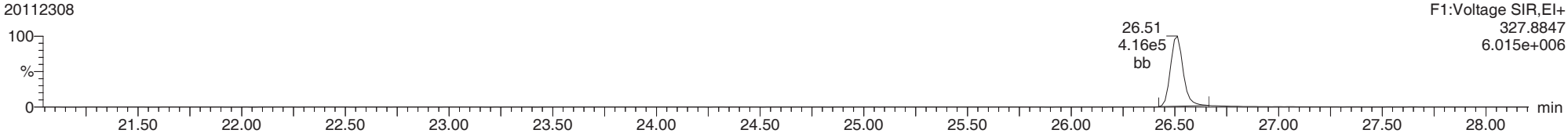


37CL-2378-TCDD



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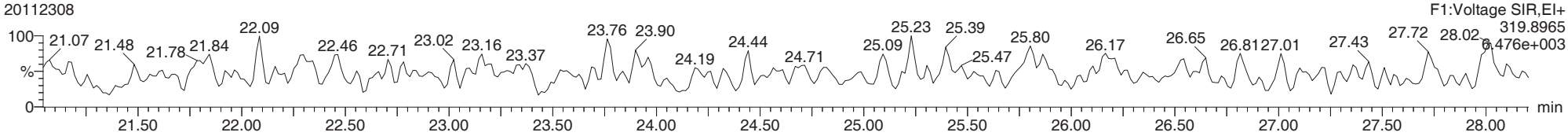
2378-TCDD



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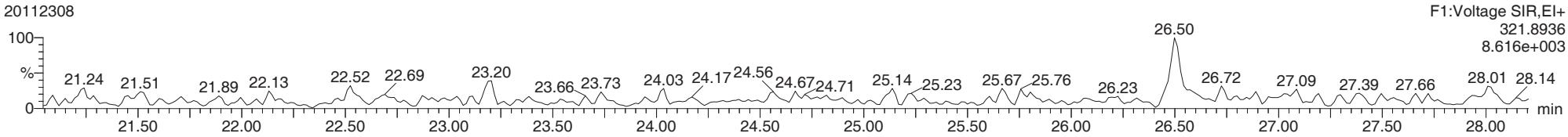

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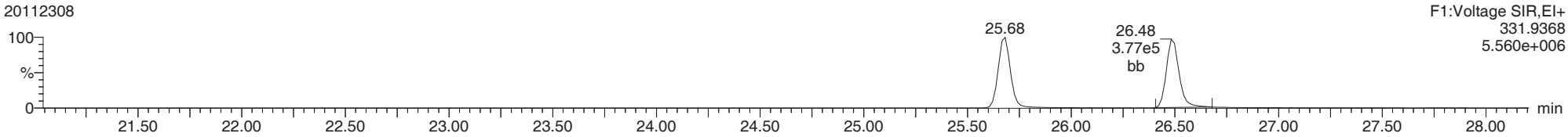

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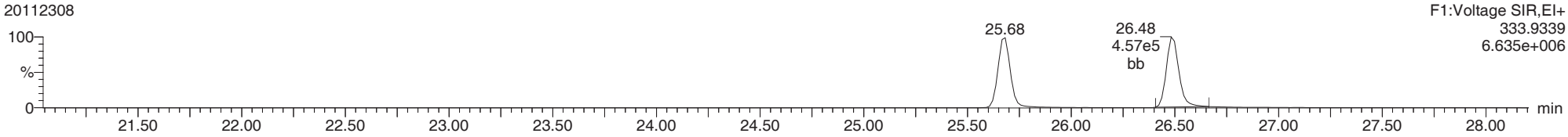

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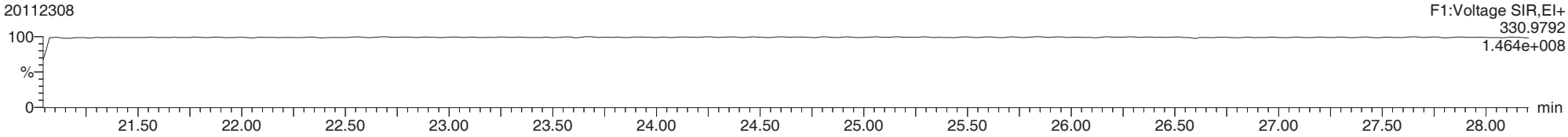

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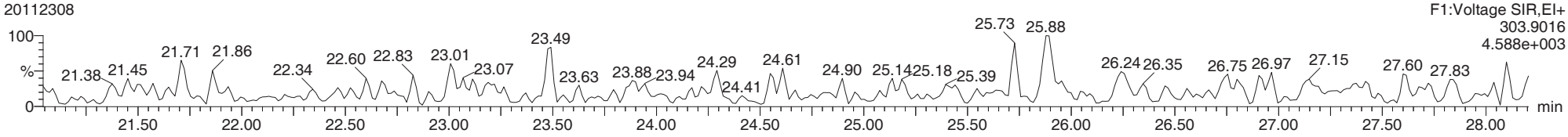
2378-TCDF



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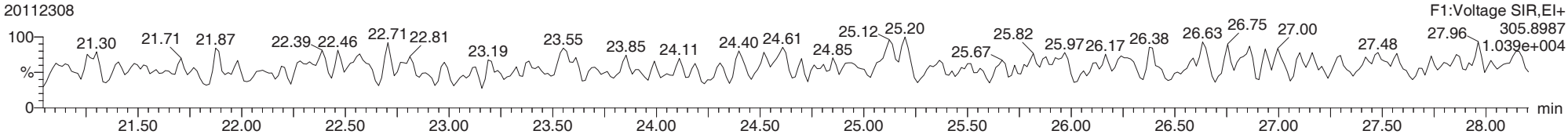

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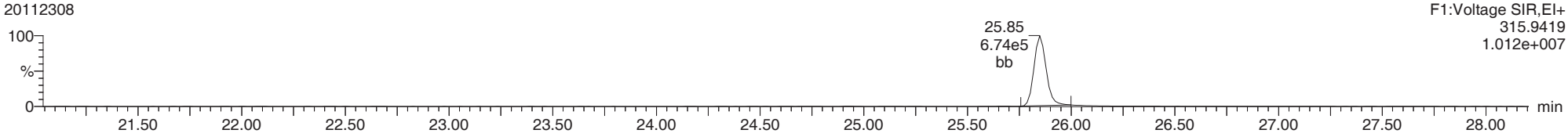

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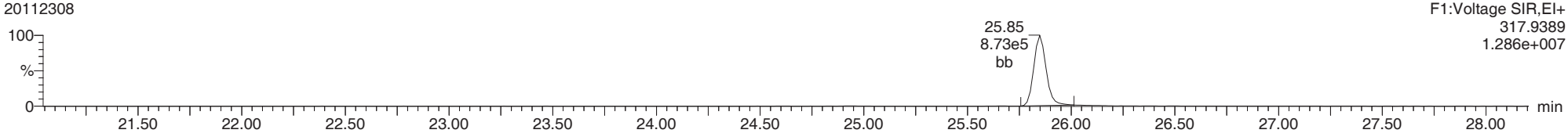
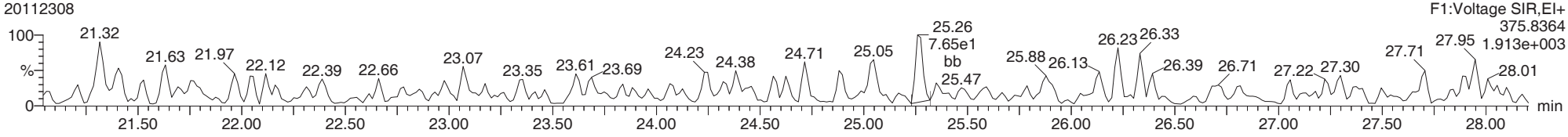


FUNCTION1 HXCDPE



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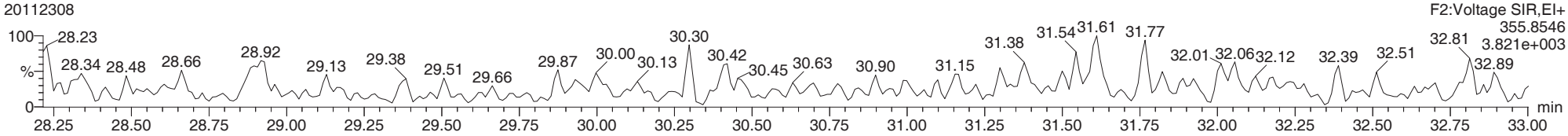
ID: 20J0389-02, Name: 20112308, Date: 23-Nov-2020, Time: 15:28:51, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



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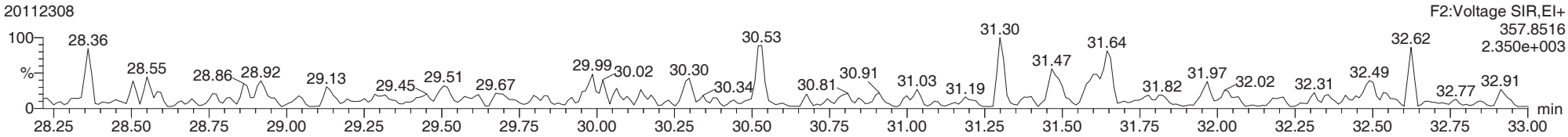

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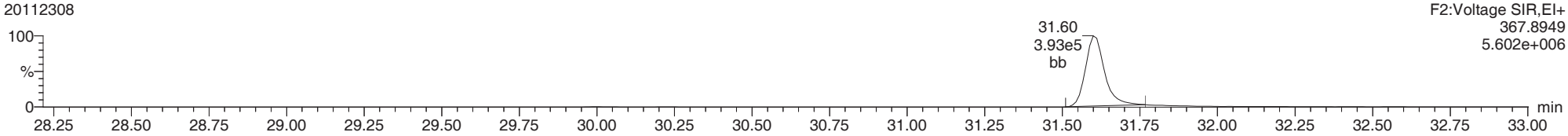

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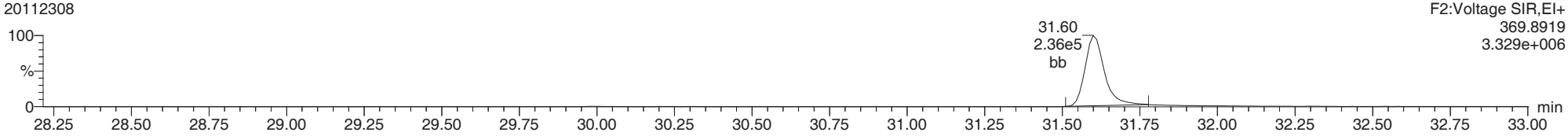
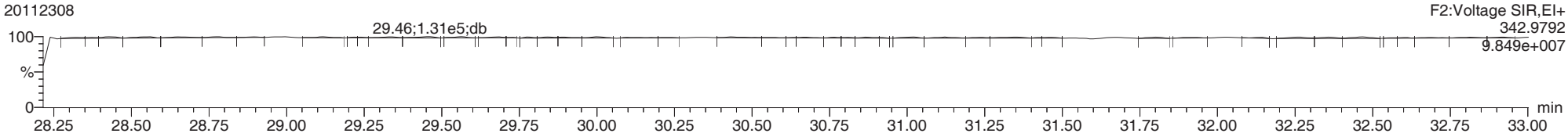


FUNCTION2 PFK



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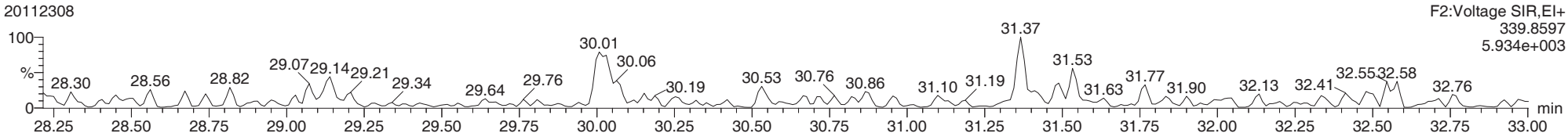

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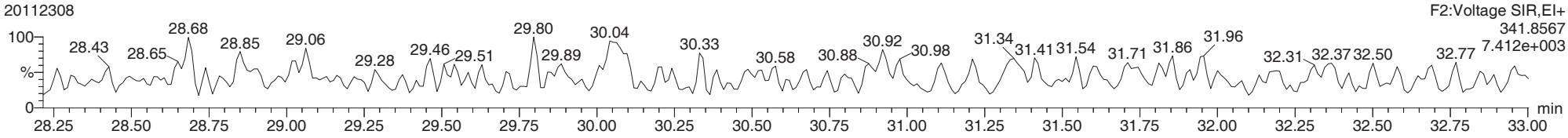

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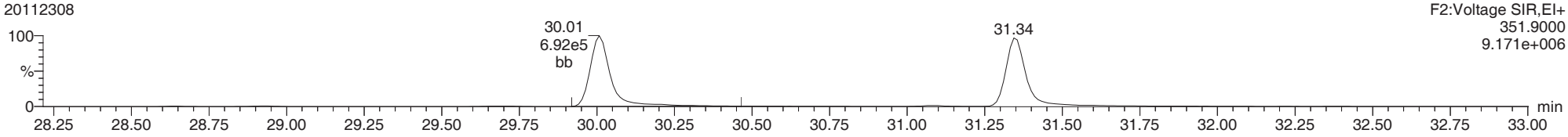

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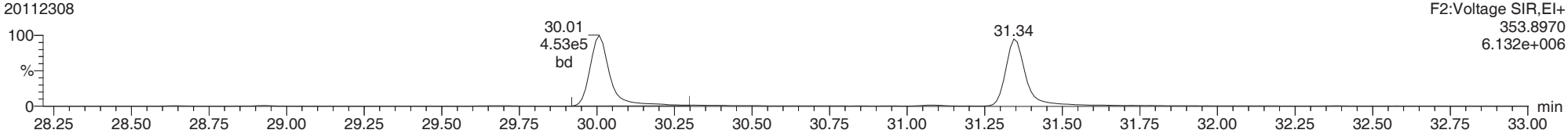
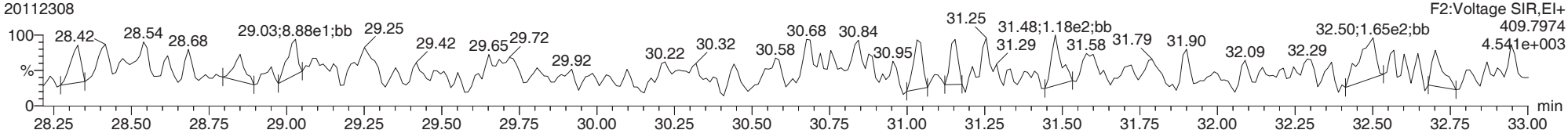


FUNCTION2 HPCDPE



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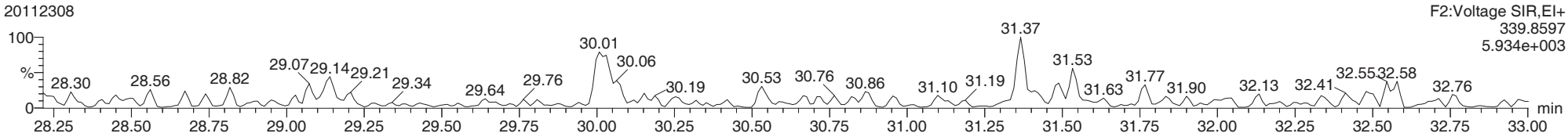
23478-PeCDF



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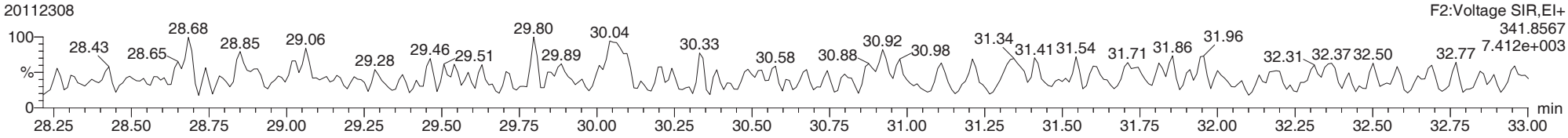

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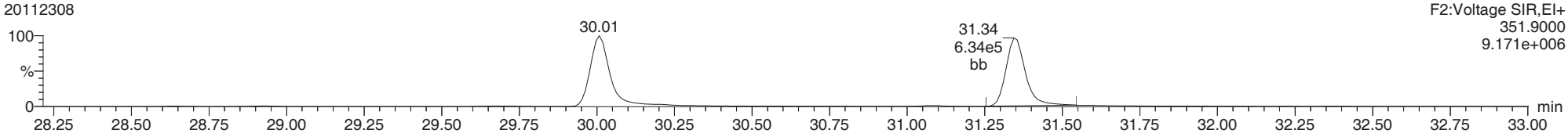

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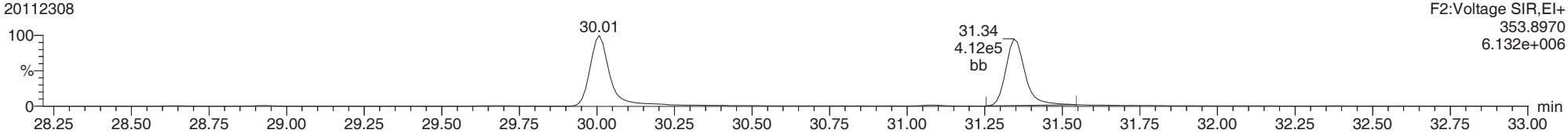
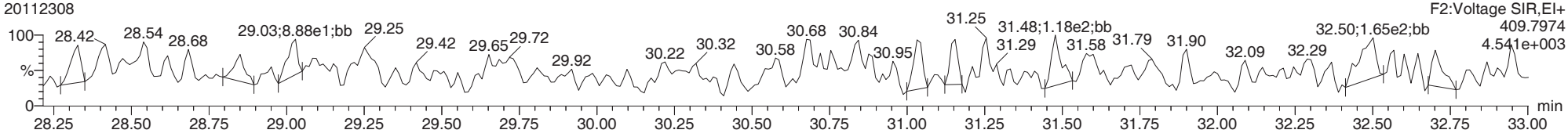


FUNCTION2 HPCDPE



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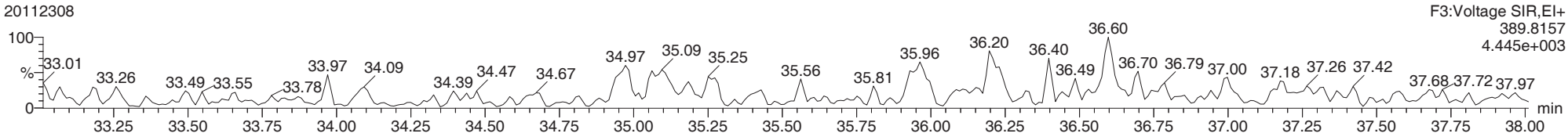
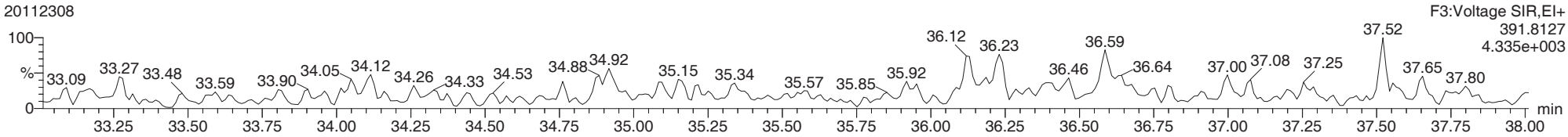
ID: 20J0389-02, Name: 20112308, Date: 23-Nov-2020, Time: 15:28:51, Conditions: AUTOSPEC01, User: pk

123478-HxCDD



123478-HxCDD



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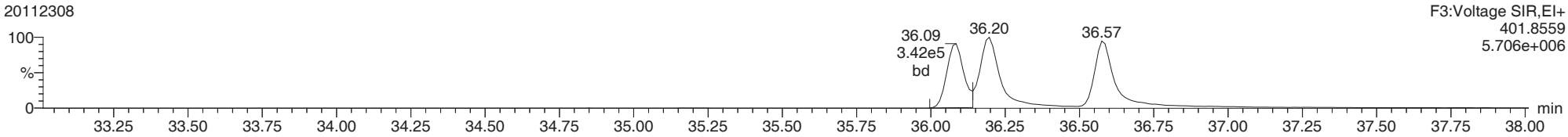

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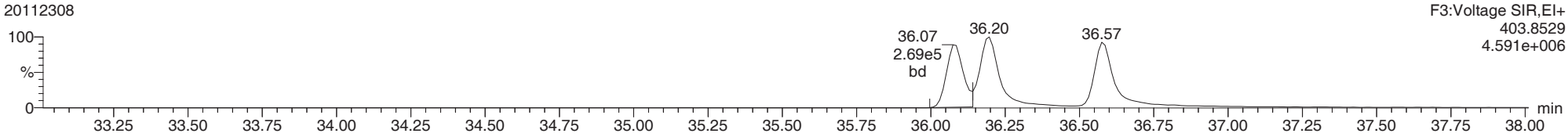

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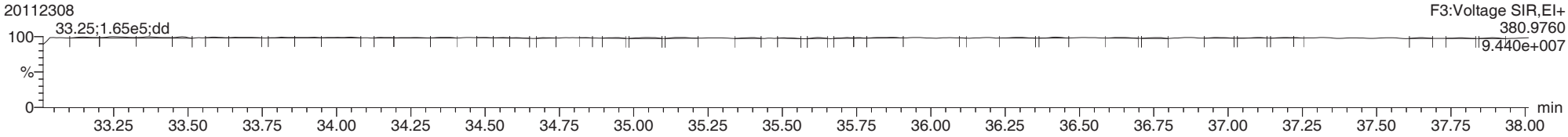

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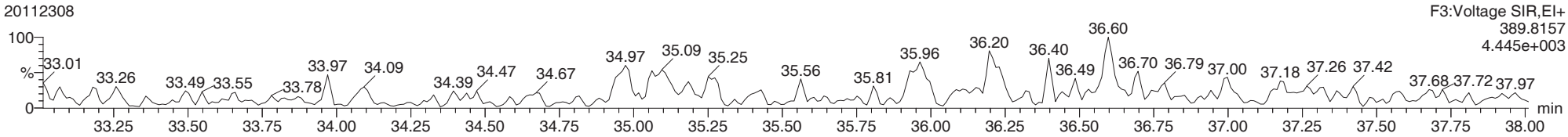
123678-HxCDD



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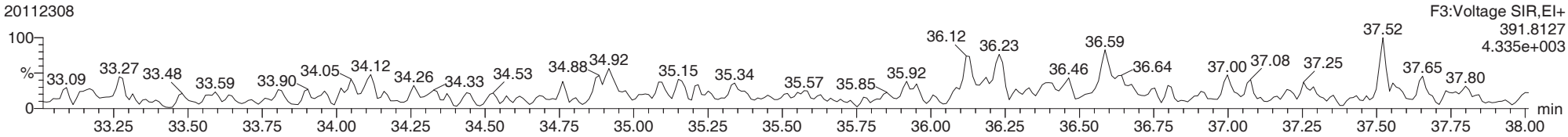

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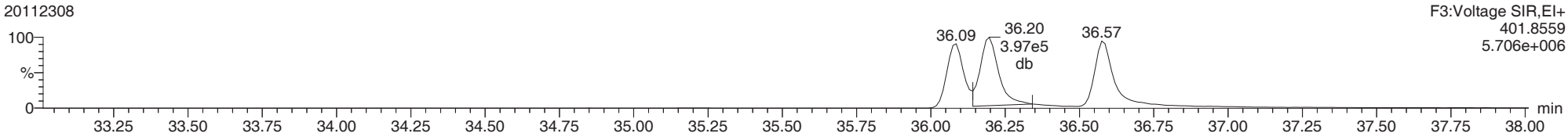

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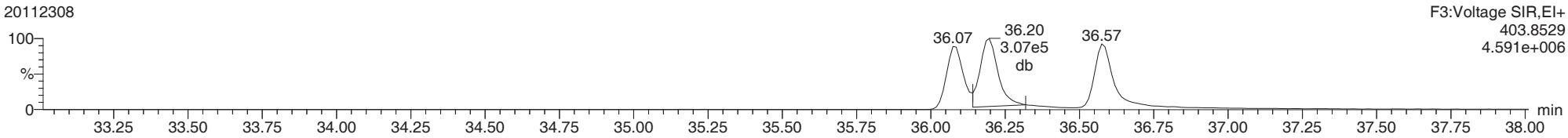

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Printed: Tuesday, November 24, 2020 10:00:55 Pacific Standard Time

ID: 20J0389-02, Name: 20112308, Date: 23-Nov-2020, Time: 15:28:51, Conditions: AUTOSPEC01, User: pk

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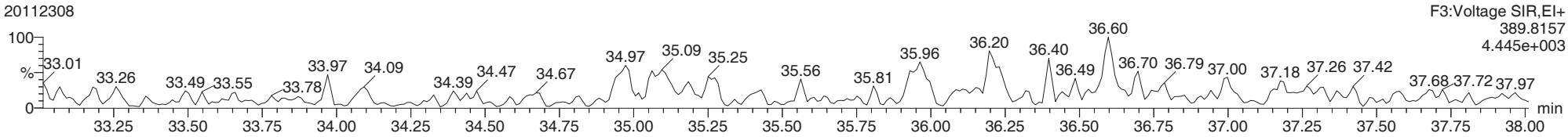

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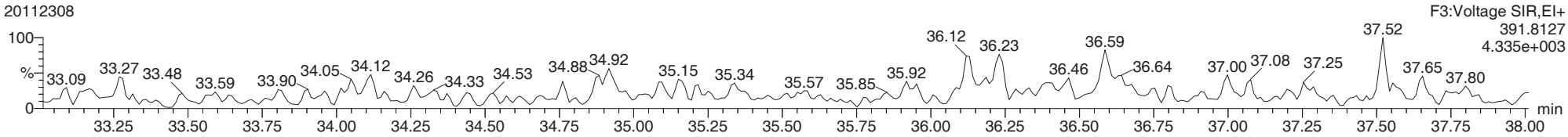

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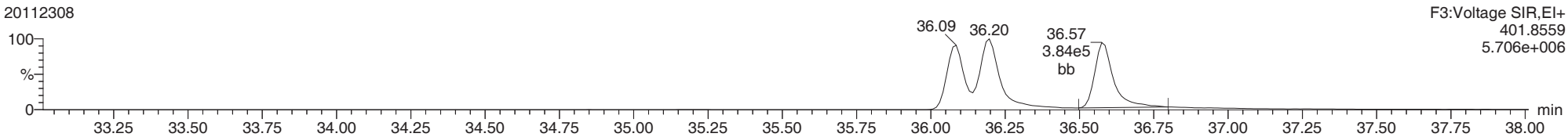

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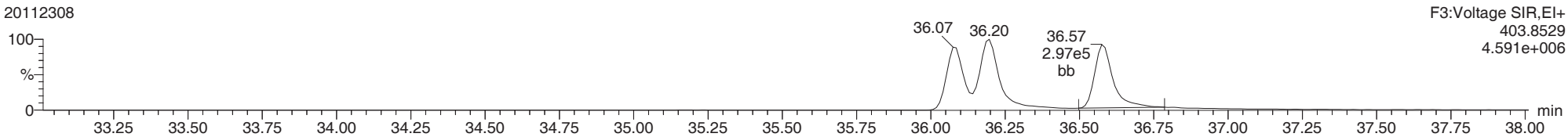

ID: 20J0389-02, Name: 20112308, Date: 23-Nov-2020, Time: 15:28:51, Conditions: AUTOSPEC01, User: pk

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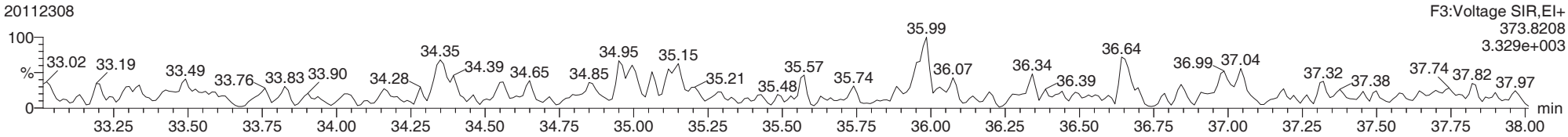

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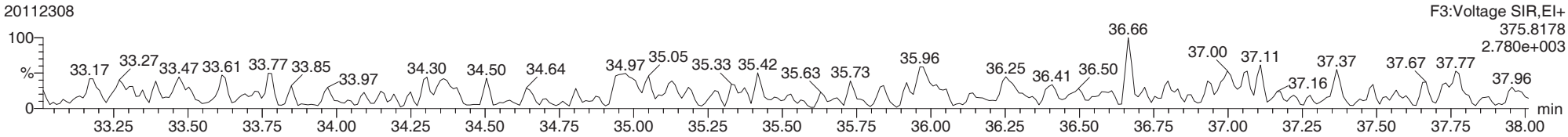

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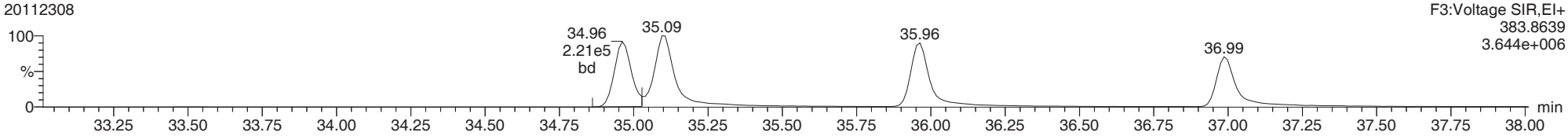

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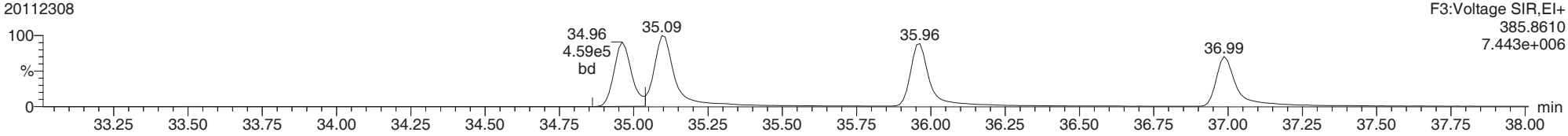

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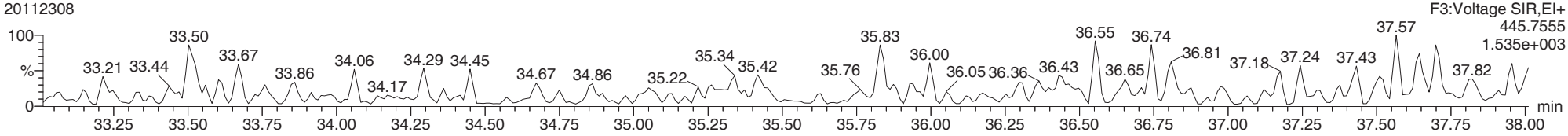

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ID: 20J0389-02, Name: 20112308, Date: 23-Nov-2020, Time: 15:28:51, Conditions: AUTOSPEC01, User: pk

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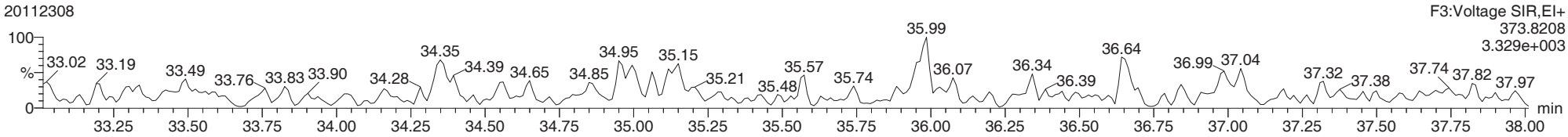

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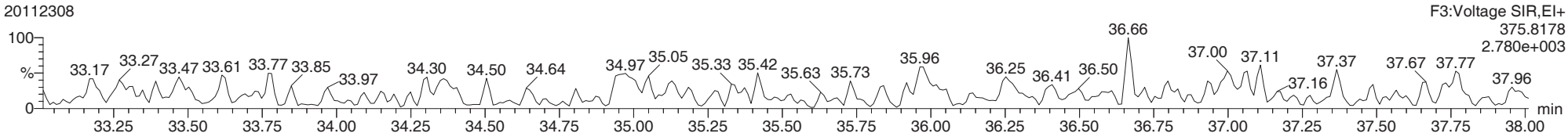

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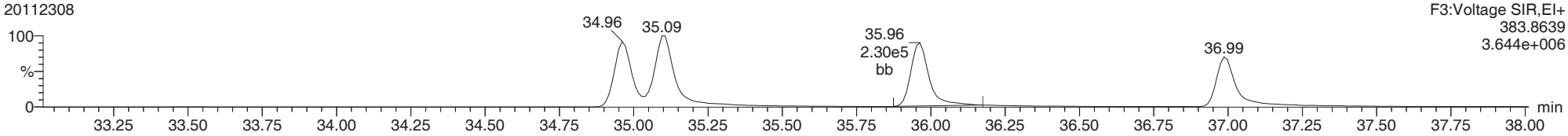

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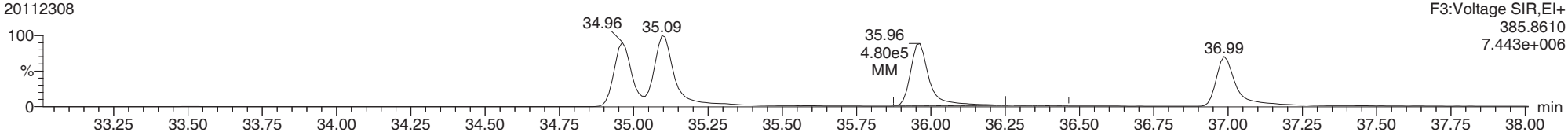

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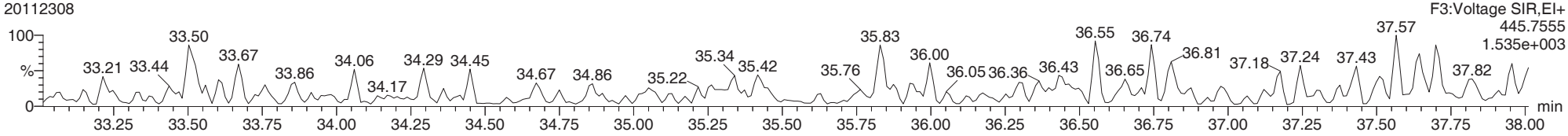

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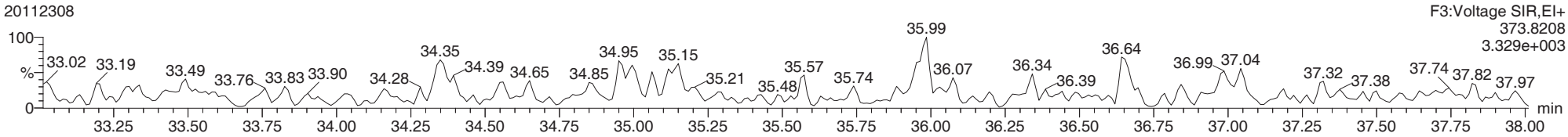

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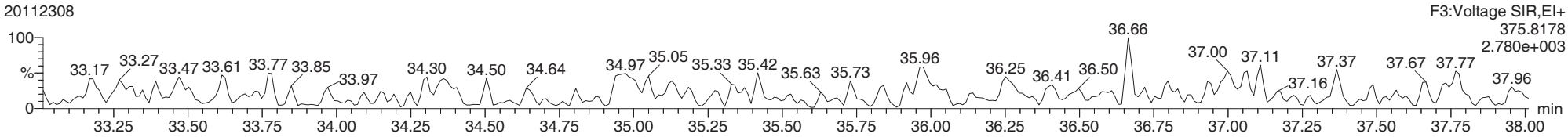

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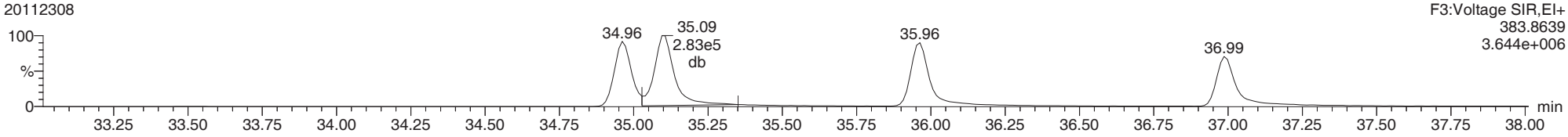

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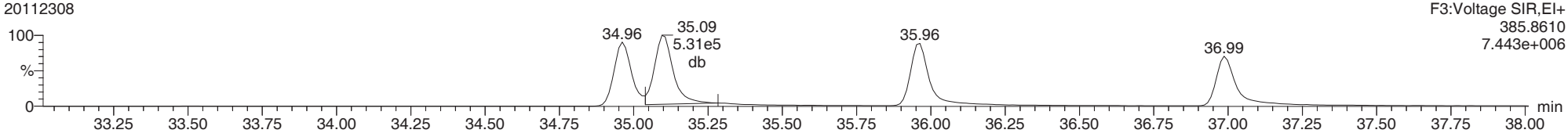

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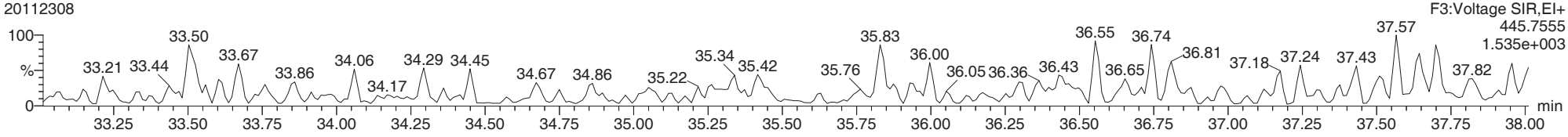

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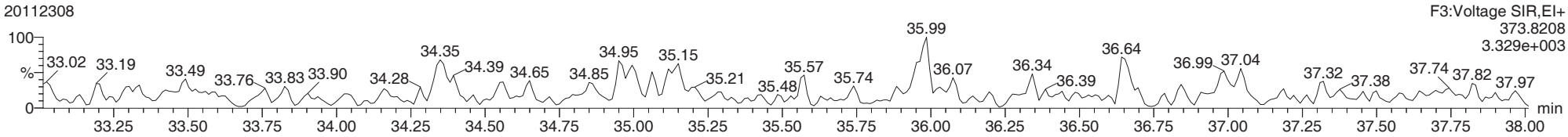

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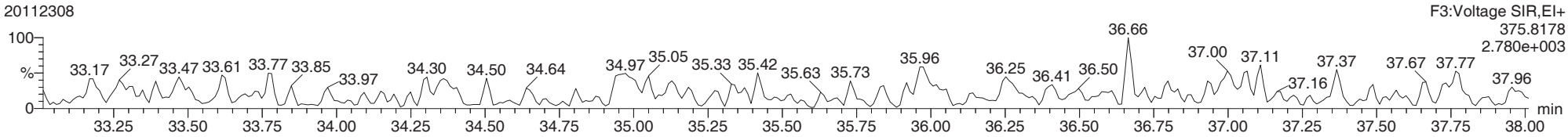

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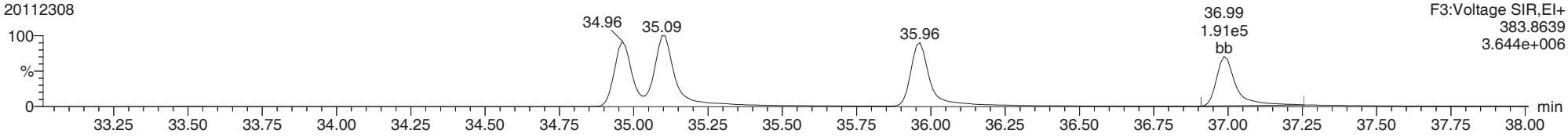

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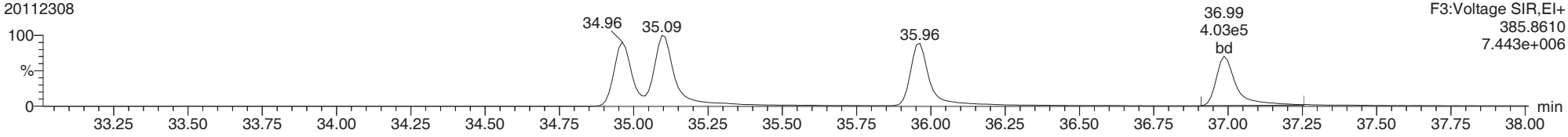

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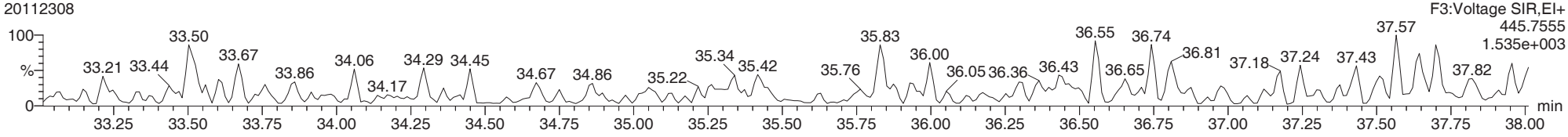

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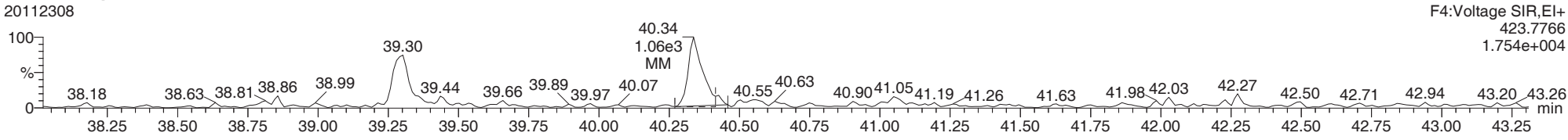

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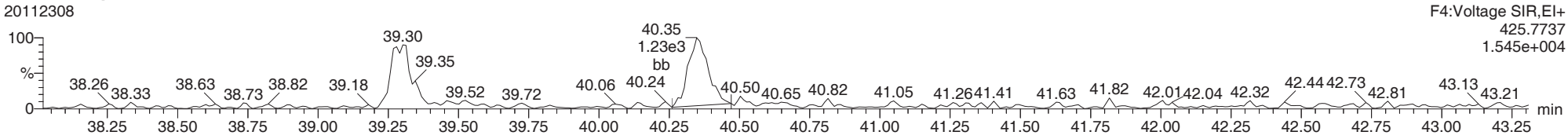

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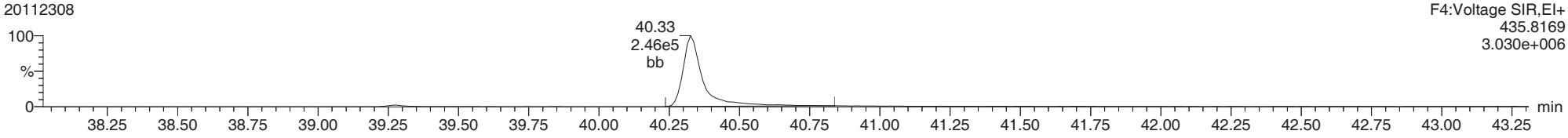

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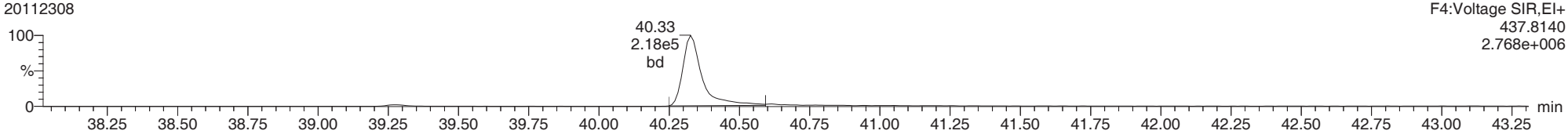

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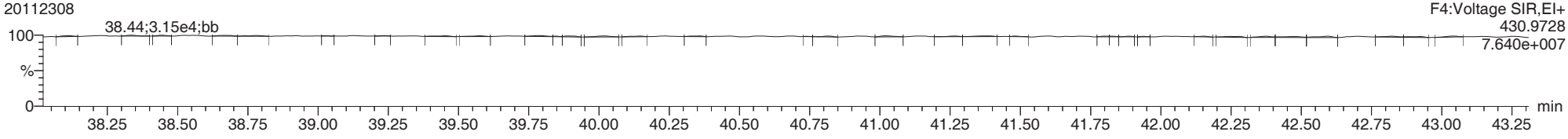

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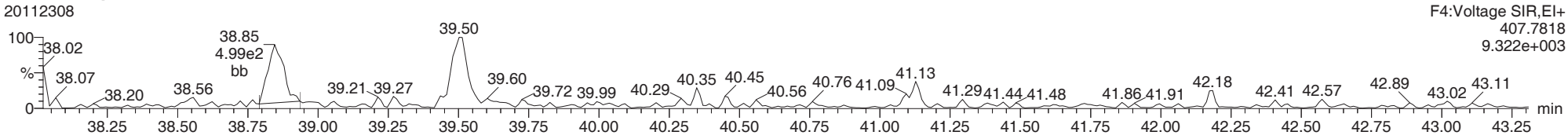

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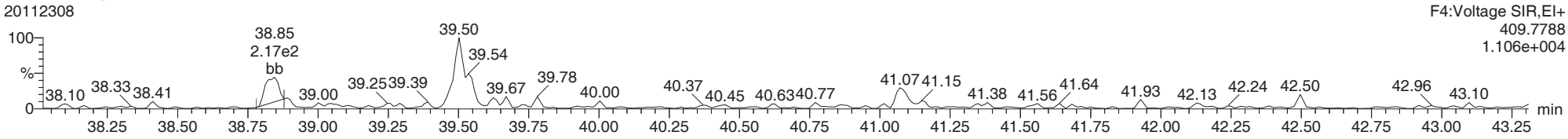

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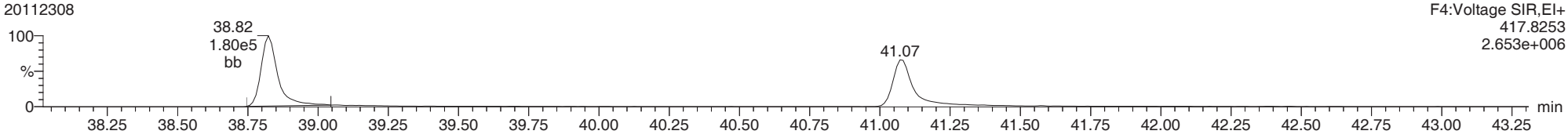

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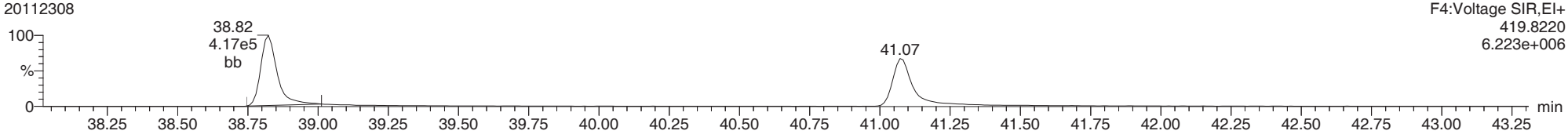

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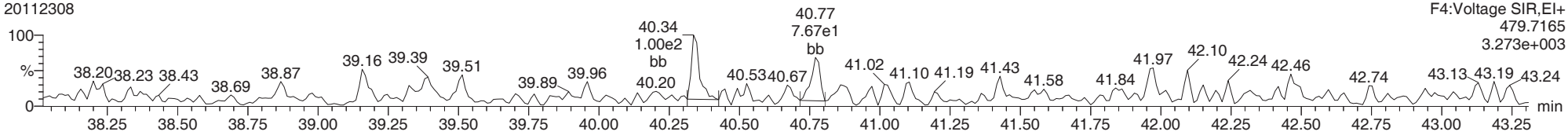

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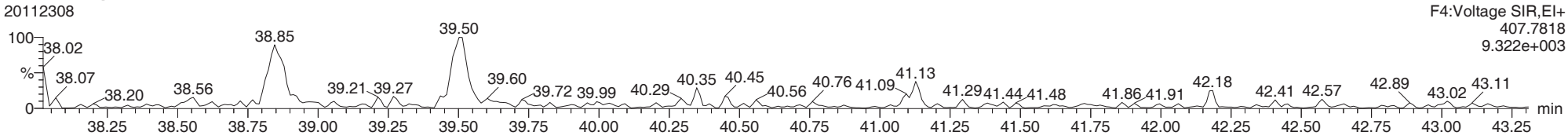

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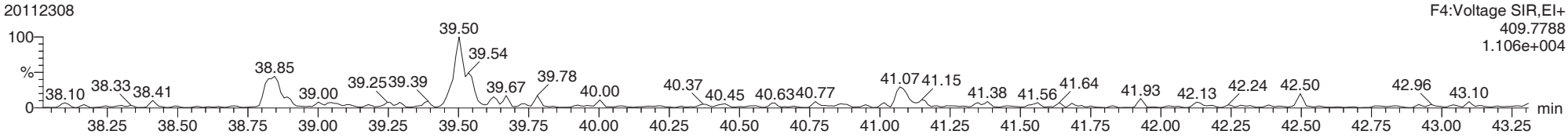

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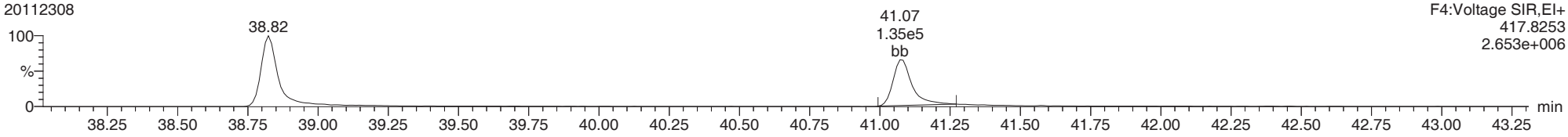

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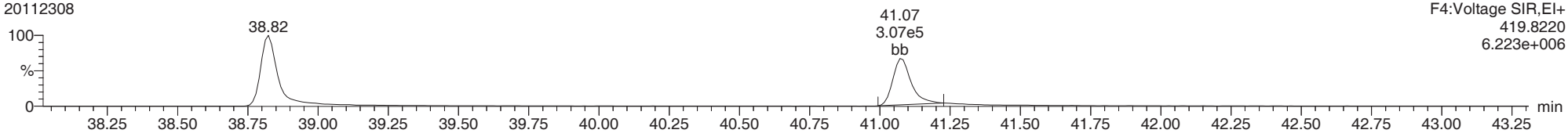

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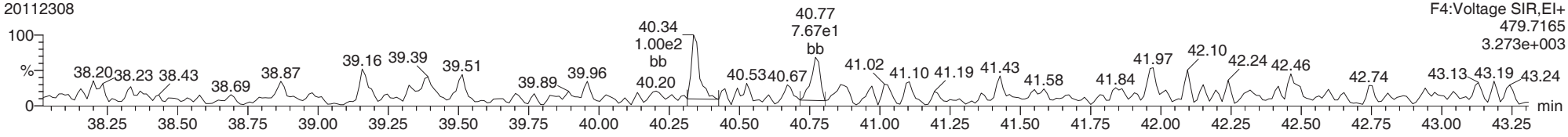

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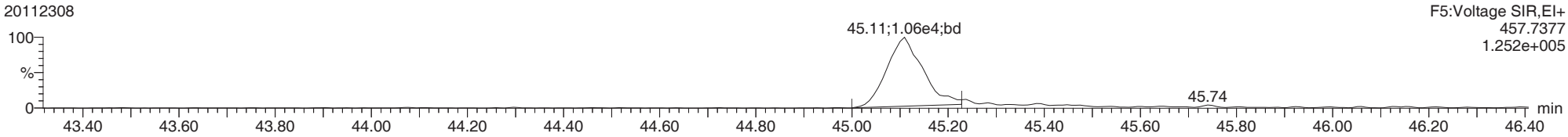

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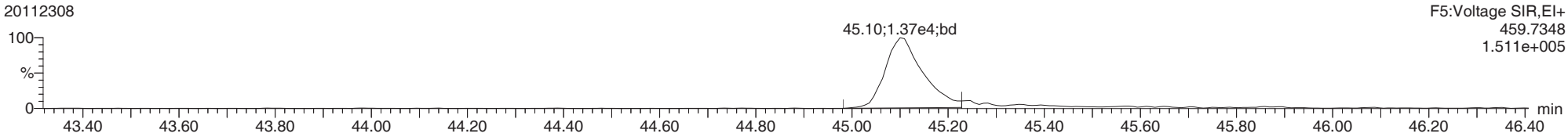

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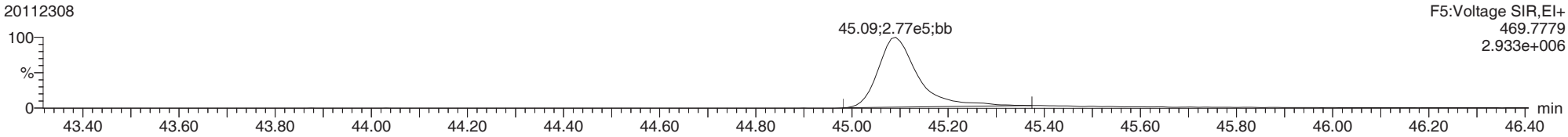

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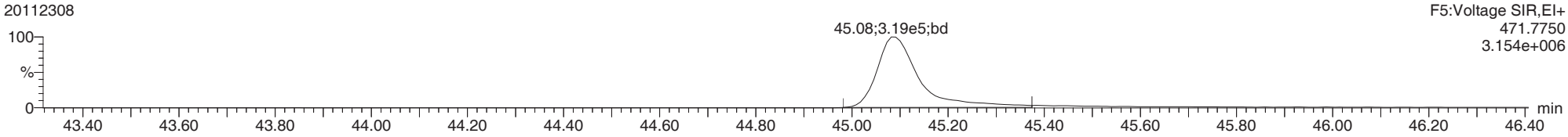

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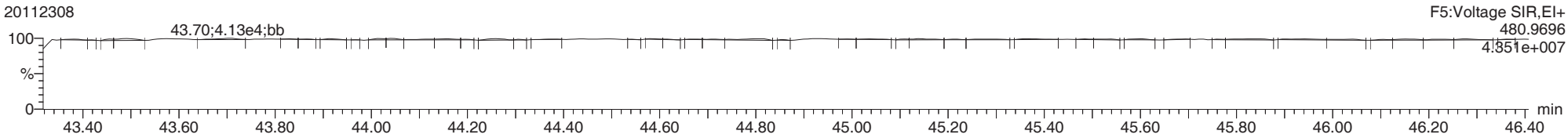

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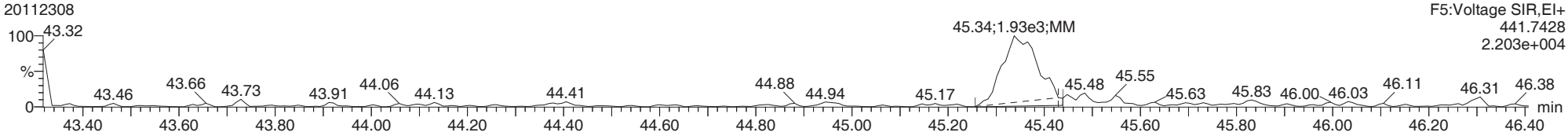

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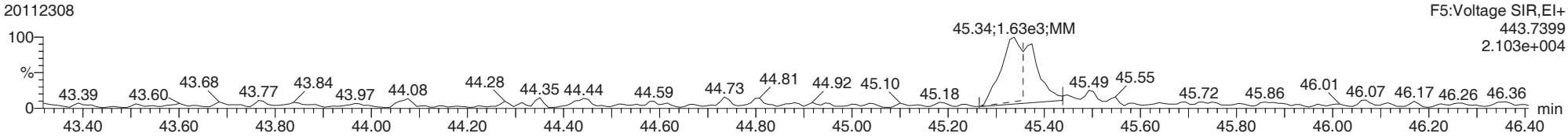

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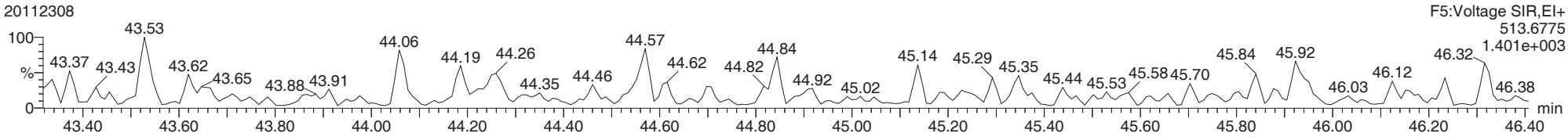
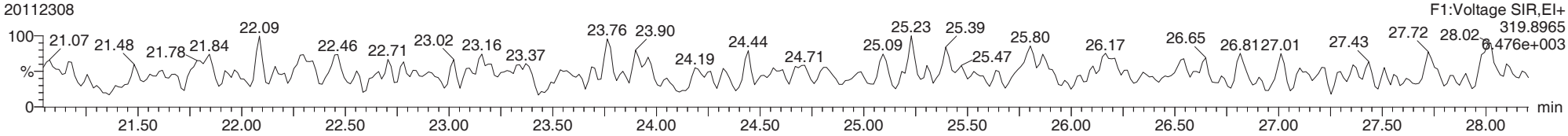


ID: 20J0389-02, Name: 20112308, Date: 23-Nov-2020, Time: 15:28:51, Conditions: AUTOSPEC01, User: pk

Total-tetradioxins



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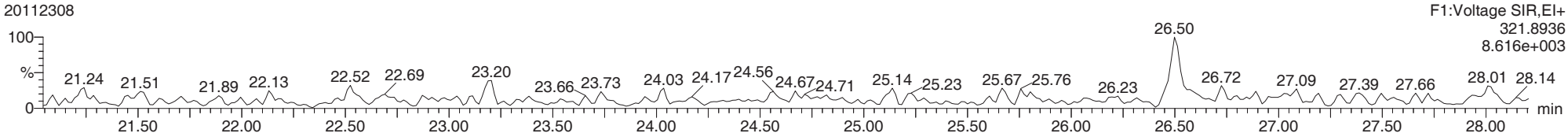

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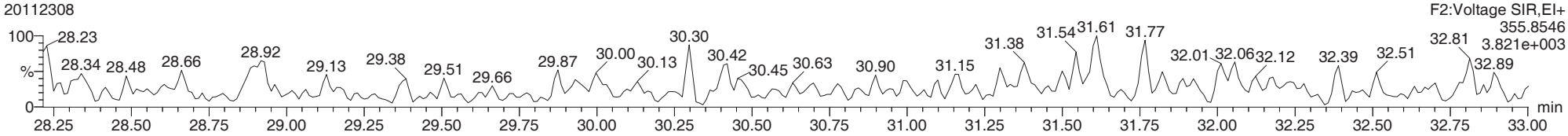
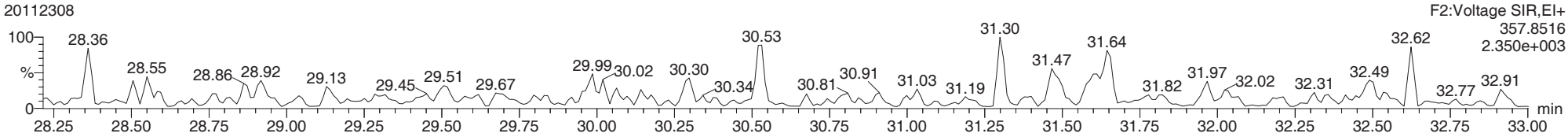


Total-pentadioxins



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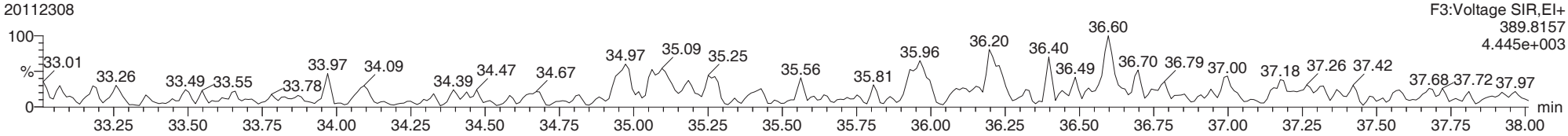
Total-hexadioxins



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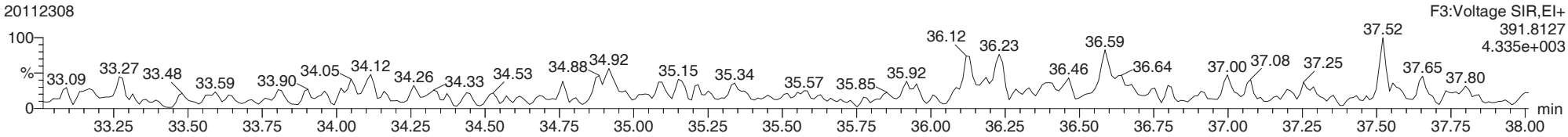
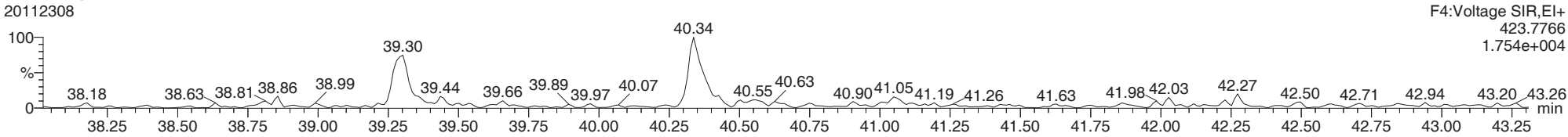
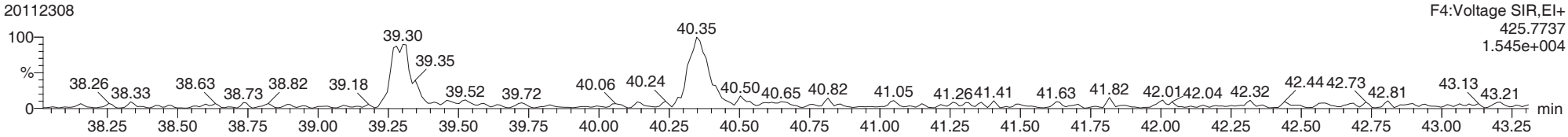


Total-heptadioxins

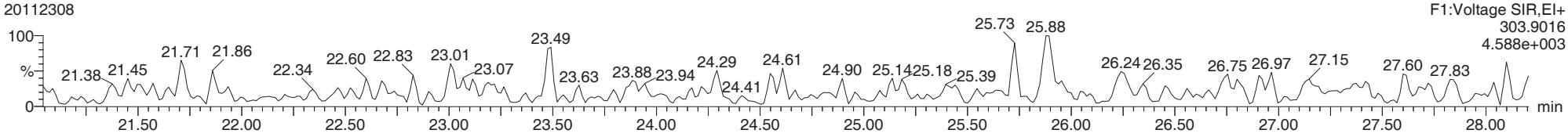


Total-heptadioxins

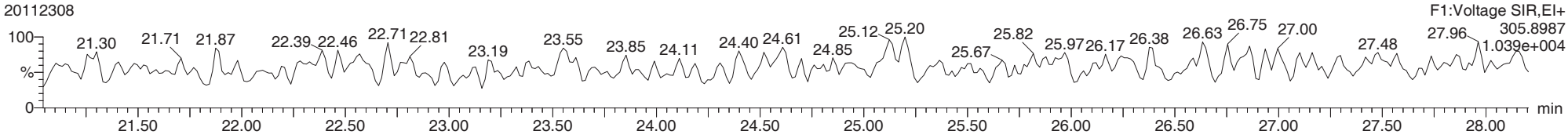


ID: 20J0389-02, Name: 20112308, Date: 23-Nov-2020, Time: 15:28:51, Conditions: AUTOSPEC01, User: pk

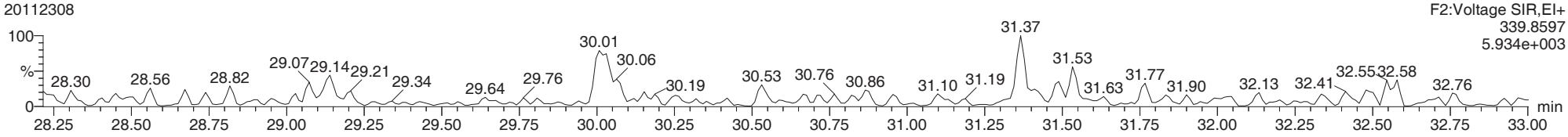
Total-tetrafurans



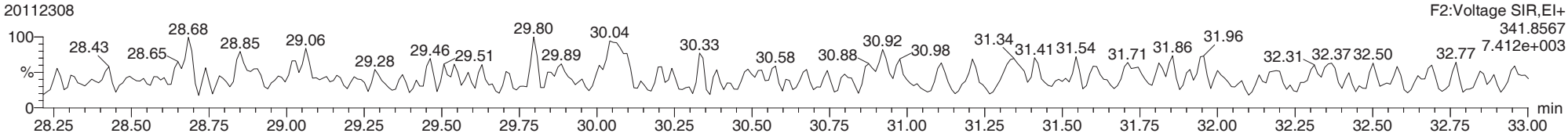
Total-tetrafurans



Total-pentafurans



Total-pentafurans



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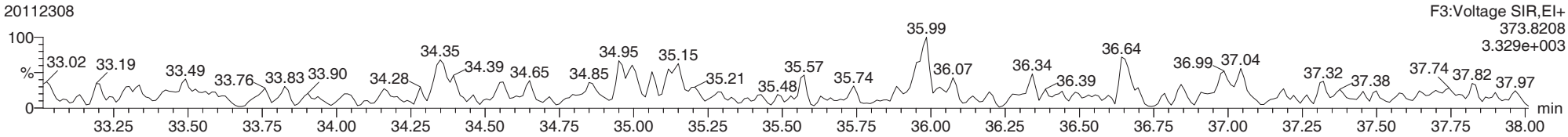
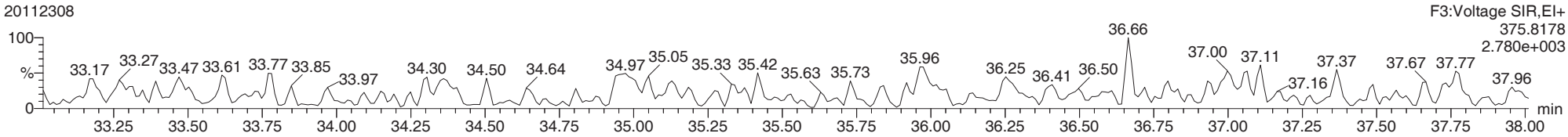
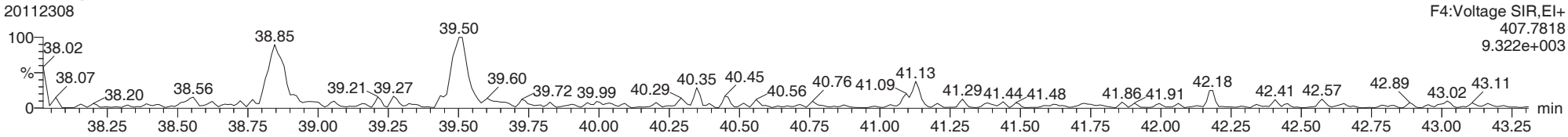
Total-hexafurans



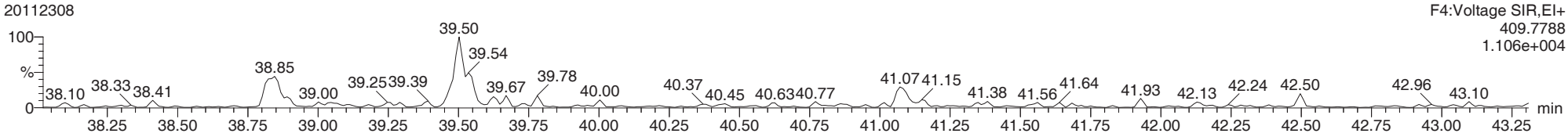
Total-hexafurans



Total-heptafurans



Total-heptafurans



MW-CP2-102720

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider				
Project:	Lora Lake Apartments				
Matrix:	Ground Water	Laboratory ID:	20J0389-03 A	File ID:	20112309
Sampled:	10/27/20 15:40	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 16:18
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1055 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	1.15	9.48	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	0.96	9.48	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.39	9.48	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	1.26	9.48	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	0.95	9.48	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.61	9.48	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.57	9.48	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.60	9.48	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	0.90	9.48	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	1.06	9.48	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	0.90	9.48	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	1.09	9.48	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1		0.893-1.208	0.56	9.48	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	0.84	9.48	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.356	0.893-1.208	1.17	9.48	1.68	pg/L	EMPC, J
39001-02-0	OCDF	1		0.757-1.024	3.08	19.0	ND	pg/L	U
3268-87-9	OCDD	1	0.768	0.757-1.024	2.78	47.4	27.0	pg/L	J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.48	ND	pg/L
41903-57-5	Total TCDD	1	0.000			9.48	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			9.48	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			9.48	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			9.48	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			9.48	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			9.48	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			9.48	ND	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.025
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.54

MW-CP2-102720

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider			Project:	Lora Lake Apartments
Matrix:	Ground Water	Laboratory ID:	20J0389-03	File ID:	20112309
Sampled:	10/27/20 15:40	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 16:18
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1055 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.778	0.655-0.886	1.74	83.2	24 - 169 %	
13C12-2,3,7,8-TCDD		0.813	0.655-0.886	1.68	81.0	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.579	1.318-1.783	2.07	74.7	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.558	1.318-1.783	2.16	72.5	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.623	1.318-1.783	1.51	73.6	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.494	0.434-0.587	3.65	89.4	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.487	0.434-0.587	3.11	98.2	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.467	0.434-0.587	3.48	92.2	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.501	0.434-0.587	4.06	87.8	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.277	1.054-1.426	3.28	86.5	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.227	1.054-1.426	2.71	82.6	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.423	0.374-0.506	4.18	84.6	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.443	0.374-0.506	5.25	81.0	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.073	0.893-1.208	4.12	86.9	23 - 140 %	
13C12-OCDD		0.977	0.757-1.024	7.08	56.7	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.91	101	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:01:01 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-03, Name: 20112309, Date: 23-Nov-2020, Time: 16:18:20, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF					0.729		0.770	891	2504								
12378-PeCDF					0.779		1.550	708	2118								
23478-PeCDF					0.880		1.550	708	2118								
123478-HxCDF					0.880		1.240	525	426								
234678-HxCDF					0.863		1.240	525	426								
123678-HxCDF					0.853		1.240	525	426								
123789-HxCDF					0.780		1.240	525	426								
1234678-HpCDF					1.001		1.050	383	454								
1234789-HpCDF					0.994		1.050	383	454								
OCDF					1.158		0.890	722	1110								
2378-TCDD					1.238		0.770	1617	824								
12378-PeCDD					0.988		1.550	899	538								
123478-HxCDD					0.842		1.240	639	797								
123678-HxCDD					0.907		1.240	639	797								
123789-HxCDD					0.784		1.240	639	797								
1234678-HpCDD	40.326	1.000	2.174e2	1.603e2	1.044	1.356	1.050	572	602	3.15e3	2.22e3	5.5	3.7	YES	MM	MM	0.088
OCDD	45.110	1.000	1.673e3	2.178e3	0.963	0.768	0.890	807	568	2.13e4	2.58e4	26.3	45.4	NO	MM	MM	1.424
13C-2378-TCDF	25.848	1.007	6.840e5	8.788e5	2.203	0.778	0.770	5796	2838	1.01e7	1.29e7	1742.4	4548.3	NO	bb	bb	83.227
13C-12378-PeCDF	30.008	1.168	6.784e5	4.296e5	1.741	1.579	1.550	4933	3182	9.07e6	5.86e6	1838.8	1842.0	NO	bd	bb	74.658
13C-23478-PeCDF	31.344	1.220	6.287e5	4.036e5	1.669	1.558	1.550	4933	3182	8.80e6	5.72e6	1783.7	1799.2	NO	bb	bb	72.539
13C-123478-HxCDF	34.961	0.956	2.208e5	4.468e5	1.022	0.494	0.510	2943	3730	3.32e6	6.66e6	1126.8	1785.5	NO	bd	bd	89.450
13C-123678-HxCDF	35.095	0.960	2.820e5	5.787e5	1.200	0.487	0.510	2943	3730	3.64e6	7.29e6	1238.1	1955.3	NO	db	db	98.236
13C-234678-HxCDF	35.963	0.983	2.296e5	4.915e5	1.071	0.467	0.510	2943	3730	3.30e6	6.57e6	1121.6	1760.8	NO	bb	bd	92.213
13C-123789-HxCDF	36.987	1.011	1.966e5	3.924e5	0.919	0.501	0.510	2943	3730	2.58e6	5.14e6	875.6	1379.0	NO	bd	bb	87.823
13C-1234678-HpCDF	38.824	1.061	1.667e5	3.944e5	0.909	0.423	0.440	2996	3802	2.51e6	5.92e6	836.7	1558.4	NO	bb	bb	84.584
13C-1234789-HpCDF	41.072	1.123	1.313e5	2.967e5	0.724	0.443	0.440	2996	3802	1.74e6	4.09e6	581.9	1075.1	NO	bb	bb	81.017
13C-1234-TCDD	25.682	0.000	3.881e5	4.643e5	1.000	0.836	0.770	2522	1945	5.82e6	6.89e6	2308.9	3544.5	NO	bb	bb	100.000
13C-2378-TCDD	26.482	1.031	3.660e5	4.500e5	1.181	0.813	0.770	2522	1945	5.24e6	6.44e6	2076.2	3311.9	NO	bb	bb	81.021
13C-12378-PeCDD	31.600	1.230	3.795e5	2.339e5	0.978	1.623	1.550	1918	1398	5.37e6	3.34e6	2803.0	2391.9	NO	bb	bb	73.589
13C-123478-HxCDD	36.074	0.986	3.416e5	2.676e5	0.965	1.277	1.240	2866	2795	5.15e6	3.98e6	1797.2	1422.7	NO	bd	bd	86.472
13C-123678-HxCDD	36.197	0.990	3.881e5	3.164e5	1.168	1.227	1.240	2866	2795	5.50e6	4.33e6	1919.9	1547.7	NO	db	db	82.603
13C-1234678-HpCDD	40.326	1.103	2.119e5	1.974e5	0.645	1.073	1.050	2655	2099	2.84e6	2.59e6	1068.1	1233.3	NO	bb	bb	86.858
13C-OCDD	45.092	1.233	2.775e5	2.841e5	0.678	0.977	0.890	5702	2890	2.89e6	3.10e6	506.8	1071.4	NO	bd	bb	113.425
13C-123789-HxCDD	36.575	0.000	4.050e5	3.251e5	1.000	1.246	1.240	2866	2795	5.65e6	4.49e6	1969.8	1606.1	NO	bb	bb	100.000
37CL-2378-TCDD	26.513	1.032	4.366e5		1.264			2588		6.29e6		2431.2			bb		40.506

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:01:01 Pacific Standard Time

ID: 20J0389-03, Name: 20112309, Date: 23-Nov-2020, Time: 16:18:20, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	891	2504								
1289-TCDF					0.688		0.770	891	2504								
13468-PECDF					1.181		1.550	442	1563								
12389-PECDF					0.766		1.550	708	2118								
123468-HXCDF					1.003		1.240	525	426								
1368-TCDD					1.179		0.770	1617	824								
1289-TCDD					1.042		0.770	1617	824								
12479-PECDD					1.810		1.550	899	538								
12389-PECDD					1.165		1.550	899	538								
124679-HXCDD					1.056		1.240	639	797								
1234679-HPCDD					1.285		1.050	572	602								
Total-tetrafurans			0.000e0		0.754			891		0.00e0							
Total-penta1			0.000e0					442		0.00e0							
Total-pentafurans			0.000e0		0.809			708		0.00e0							
Total-hexafurans			0.000e0		0.876			525		0.00e0							
Total-heptafurans			0.000e0		0.997			383		0.00e0							
Total-Furans			0.000e0		0.893			891		0.00e0							
Total-tetradioxins			0.000e0		1.153			1617		0.00e0							
Total-pentadioxins			0.000e0		1.321			899		0.00e0							
Total-hexadioxins			0.000e0		0.897			639		0.00e0							
Total-heptadioxins			0.000e0		1.165			572		0.00e0							
Total-Dioxins			1.673e3		1.100			1617		2.13e4							1.424
Total-TEQ			1.673e3					1617		2.13e4							1.424
FUNCTION1 PFK			3.727e7					924601		3.38e8							
FUNCTION2 PFK			2.636e7					523006		2.12e8							0.000
FUNCTION3 PFK			1.700e6					560833		3.46e7							0.000
FUNCTION4 PFK			1.653e6					515078		3.27e7							
FUNCTION5 PFK			4.685e5					287355		1.11e7							
FUNCTION1 HXCD...			2.526e2					544		4.23e3							0.000
FUNCTION1 HPCD...			1.482e3					1498		3.35e4							0.000
FUNCTION2 HPCD...			1.415e3					1544		3.71e4							0.000
FUNCTION3 OCDPE			0.000e0					384		0.00e0							
FUNCTION4 NCDPE			0.000e0					730		0.00e0							
FUNCTION5 DCDPE			0.000e0					366		0.00e0							

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-03, Name: 20112309, Date: 23-Nov-2020, Time: 16:18:20, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ID: 20J0389-03, Name: 20112309, Date: 23-Nov-2020, Time: 16:18:20, Conditions: AUTOSPEC01, User: pk

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	OCDD	45.11	1.673e3	2.178e3	0.963	0.77	0.89	26.3	YES	NO	MM	MM	1.424

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	22.25	1.994e6					12.9	YES		dd		
2	FUNCTION1 PFK	22.04	2.929e6					19.0	YES		dd		
3	FUNCTION1 PFK	21.93	2.887e6					21.2	YES		dd		
4	FUNCTION1 PFK	21.80	2.024e6					25.2	YES		dd		
5	FUNCTION1 PFK	21.69	3.039e6					27.9	YES		dd		
6	FUNCTION1 PFK	21.59	2.507e6					31.3	YES		dd		
7	FUNCTION1 PFK	21.36	8.341e6					37.8	YES		dd		
8	FUNCTION1 PFK	21.28	2.185e6					39.1	YES		dd		
9	FUNCTION1 PFK	21.24	1.641e6					39.3	YES		dd		
10	FUNCTION1 PFK	21.15	5.378e6					43.3	YES		bd		
11	FUNCTION1 PFK	24.28	1.050e5					1.7	NO		bd		
12	FUNCTION1 PFK	24.16	3.717e4					1.1	NO		bb		
13	FUNCTION1 PFK	24.07	6.178e4					1.2	NO		bb		
14	FUNCTION1 PFK	23.94	1.127e5					2.5	NO		db		
15	FUNCTION1 PFK	23.84	1.414e5					1.9	NO		bd		
16	FUNCTION1 PFK	23.72	1.441e5					1.8	NO		db		
17	FUNCTION1 PFK	23.60	1.337e5					2.0	NO		dd		
18	FUNCTION1 PFK	23.51	1.728e5					2.0	NO		dd		
19	FUNCTION1 PFK	23.40	1.566e5					2.2	NO		dd		
20	FUNCTION1 PFK	23.26	1.838e5					2.3	NO		dd		
21	FUNCTION1 PFK	23.17	1.623e5					1.8	NO		dd		
22	FUNCTION1 PFK	23.05	9.600e4					1.5	NO		dd		
23	FUNCTION1 PFK	22.93	1.590e5					2.5	NO		dd		
24	FUNCTION1 PFK	22.81	6.566e4					1.4	NO		bd		
25	FUNCTION1 PFK	22.60	2.323e5					2.8	NO		db		
26	FUNCTION1 PFK	22.48	6.244e5					6.4	YES		dd		
27	FUNCTION1 PFK	26.27	8.201e4					1.7	NO		bb		
28	FUNCTION1 PFK	26.04	5.593e4					1.2	NO		bb		
29	FUNCTION1 PFK	25.83	4.397e4					1.2	NO		db		
30	FUNCTION1 PFK	25.70	1.292e5					1.4	NO		bd		
31	FUNCTION1 PFK	25.61	6.440e4					1.7	NO		bb		
32	FUNCTION1 PFK	25.50	4.096e4					0.9	NO		db		
33	FUNCTION1 PFK	25.38	5.868e4					1.1	NO		dd		
34	FUNCTION1 PFK	25.26	1.267e5					1.7	NO		bd		
35	FUNCTION1 PFK	25.15	7.304e4					1.3	NO		bb		
36	FUNCTION1 PFK	25.05	7.496e4					1.3	NO		db		
37	FUNCTION1 PFK	24.94	5.673e4					1.3	NO		dd		

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:01:01 Pacific Standard Time

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	24.84	8.255e4					1.5	NO		bd		
39	FUNCTION1 PFK	24.68	3.707e3					0.3	NO		bb		
40	FUNCTION1 PFK	24.59	5.022e4					1.0	NO		db		
41	FUNCTION1 PFK	24.52	8.049e4					1.6	NO		dd		
42	FUNCTION1 PFK	24.40	1.339e5					1.6	NO		dd		
43	FUNCTION1 PFK	27.86	5.868e4					1.0	NO		bb		
44	FUNCTION1 PFK	27.60	6.684e4					1.3	NO		db		
45	FUNCTION1 PFK	27.51	4.418e4					1.0	NO		bd		
46	FUNCTION1 PFK	27.28	2.229e4					0.8	NO		bb		
47	FUNCTION1 PFK	27.16	8.874e4					1.8	NO		db		
48	FUNCTION1 PFK	27.06	6.143e4					1.3	NO		dd		
49	FUNCTION1 PFK	26.95	4.865e4					1.1	NO		bd		
50	FUNCTION1 PFK	26.72	4.694e4					0.9	NO		bb		
51	FUNCTION1 PFK	26.59	1.864e4					0.6	NO		bb		
52	FUNCTION1 PFK	26.51	1.715e4					0.7	NO		db		
53	FUNCTION1 PFK	26.47	3.267e4					0.8	NO		dd		
54	FUNCTION1 PFK	26.38	9.414e4					1.6	NO		bd		

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:01:01 Pacific Standard Time

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.52	4.219e6					43.0	YES		dd		0.000
2	FUNCTION2 PFK	28.32	2.078e6					46.8	YES		dd		0.000
3	FUNCTION2 PFK	28.28	1.930e6					47.6	YES		bd		0.000
4	FUNCTION2 PFK	30.75	8.481e4					2.5	NO		bd		0.000
5	FUNCTION2 PFK	30.64	8.090e4					2.7	NO		db		0.000
6	FUNCTION2 PFK	30.53	9.443e4					2.5	NO		dd		0.000
7	FUNCTION2 PFK	30.43	4.402e4					1.9	NO		bd		0.000
8	FUNCTION2 PFK	30.32	2.911e4					1.7	NO		bb		0.000
9	FUNCTION2 PFK	30.09	7.229e4					2.7	NO		db		0.000
10	FUNCTION2 PFK	30.00	2.436e5					4.7	YES		dd		0.000
11	FUNCTION2 PFK	29.85	4.750e5					8.9	YES		dd		0.000
12	FUNCTION2 PFK	29.79	6.363e5					10.9	YES		dd		0.000
13	FUNCTION2 PFK	29.65	7.157e5					14.9	YES		dd		0.000
14	FUNCTION2 PFK	29.53	7.103e5					16.8	YES		dd		0.000
15	FUNCTION2 PFK	29.21	3.814e6					25.8	YES		dd		0.000
16	FUNCTION2 PFK	29.05	2.088e6					29.8	YES		dd		0.000
17	FUNCTION2 PFK	28.97	1.589e6					31.5	YES		dd		0.000
18	FUNCTION2 PFK	28.88	1.747e6					33.8	YES		dd		0.000
19	FUNCTION2 PFK	28.63	4.848e6					40.7	YES		dd		0.000
20	FUNCTION2 PFK	32.45	5.564e4					1.9	NO		db		0.000
21	FUNCTION2 PFK	32.33	8.394e4					2.4	NO		bd		0.000
22	FUNCTION2 PFK	32.21	1.160e5					2.3	NO		db		0.000
23	FUNCTION2 PFK	32.08	6.171e4					2.6	NO		bd		0.000
24	FUNCTION2 PFK	31.89	2.332e4					1.6	NO		db		0.000
25	FUNCTION2 PFK	31.84	1.696e4					1.1	NO		bd		0.000
26	FUNCTION2 PFK	31.66	5.094e4					2.3	NO		db		0.000
27	FUNCTION2 PFK	31.62	2.928e4					1.4	NO		bd		0.000
28	FUNCTION2 PFK	31.53	3.266e4					1.9	NO		bb		0.000
29	FUNCTION2 PFK	31.42	5.205e3					0.6	NO		bb		0.000
30	FUNCTION2 PFK	31.19	5.407e4					2.5	NO		bb		0.000
31	FUNCTION2 PFK	31.10	4.373e4					1.9	NO		bb		0.000
32	FUNCTION2 PFK	30.98	2.316e4					1.5	NO		db		0.000
33	FUNCTION2 PFK	30.97	1.781e4					1.6	NO		bd		0.000
34	FUNCTION2 PFK	30.87	3.480e4					2.0	NO		db		0.000
35	FUNCTION2 PFK	30.83	4.131e4					2.0	NO		dd		0.000
36	FUNCTION2 PFK	32.78	4.347e4					1.8	NO		bb		0.000
37	FUNCTION2 PFK	32.66	6.505e4					2.1	NO		bb		0.000

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION2 PFK	32.55	5.733e4					2.6	NO		db		0.000
39	FUNCTION2 PFK	32.49	1.048e4					0.9	NO		bd		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.68	7.446e4					2.2	NO		bb		0.000
2	FUNCTION3 PFK	34.46	6.194e4					2.3	NO		bb		0.000
3	FUNCTION3 PFK	34.36	6.852e4					2.2	NO		bb		0.000
4	FUNCTION3 PFK	34.26	7.891e4					1.9	NO		db		0.000
5	FUNCTION3 PFK	34.13	5.025e4					2.2	NO		bd		0.000
6	FUNCTION3 PFK	34.00	3.488e4					1.7	NO		bb		0.000
7	FUNCTION3 PFK	33.78	2.307e4					1.1	NO		bb		0.000
8	FUNCTION3 PFK	33.56	8.271e4					2.5	NO		bb		0.000
9	FUNCTION3 PFK	33.34	5.416e4					2.0	NO		db		0.000
10	FUNCTION3 PFK	33.28	1.604e4					1.3	NO		bd		0.000
11	FUNCTION3 PFK	33.10	6.033e4					3.0	NO		bb		0.000
12	FUNCTION3 PFK	37.15	4.524e4					1.8	NO		bb		0.000
13	FUNCTION3 PFK	36.93	2.335e4					1.2	NO		bb		0.000
14	FUNCTION3 PFK	36.70	8.411e4					2.2	NO		bb		0.000
15	FUNCTION3 PFK	36.58	7.154e4					2.4	NO		bb		0.000
16	FUNCTION3 PFK	36.36	7.440e4					2.1	NO		db		0.000
17	FUNCTION3 PFK	36.26	5.812e4					2.2	NO		bd		0.000
18	FUNCTION3 PFK	36.03	4.485e4					1.6	NO		bb		0.000
19	FUNCTION3 PFK	35.92	2.921e4					1.4	NO		bb		0.000
20	FUNCTION3 PFK	35.70	7.342e4					2.3	NO		bb		0.000
21	FUNCTION3 PFK	35.54	4.535e3					0.5	NO		db		0.000
22	FUNCTION3 PFK	35.46	4.144e4					1.6	NO		bd		0.000
23	FUNCTION3 PFK	35.37	9.362e4					2.5	NO		bb		0.000
24	FUNCTION3 PFK	35.14	7.015e4					2.6	NO		db		0.000
25	FUNCTION3 PFK	35.04	5.490e4					2.5	NO		dd		0.000
26	FUNCTION3 PFK	35.01	3.448e4					2.2	NO		bd		0.000
27	FUNCTION3 PFK	34.91	6.451e4					2.0	NO		bb		0.000
28	FUNCTION3 PFK	37.91	6.834e4					1.8	NO		db		0.000
29	FUNCTION3 PFK	37.82	4.920e4					1.9	NO		bd		0.000
30	FUNCTION3 PFK	37.61	3.303e4					1.1	NO		bb		0.000
31	FUNCTION3 PFK	37.49	6.676e4					2.4	NO		db		0.000
32	FUNCTION3 PFK	37.38	6.395e3					0.6	NO		bd		0.000
33	FUNCTION3 PFK	37.33	3.056e3					0.5	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	39.38	5.457e4					1.9	NO		bb		
2	FUNCTION4 PFK	39.26	4.077e4					1.8	NO		bb		
3	FUNCTION4 PFK	39.15	4.074e4					1.5	NO		bb		
4	FUNCTION4 PFK	38.81	5.868e4					2.0	NO		bb		
5	FUNCTION4 PFK	38.65	1.542e4					1.1	NO		db		
6	FUNCTION4 PFK	38.58	6.184e4					2.1	NO		bd		
7	FUNCTION4 PFK	38.38	4.567e4					1.9	NO		bb		
8	FUNCTION4 PFK	38.13	6.813e4					2.6	NO		db		
9	FUNCTION4 PFK	38.04	5.769e4					2.7	NO		bd		
10	FUNCTION4 PFK	41.15	6.625e3					0.6	NO		bb		
11	FUNCTION4 PFK	41.07	5.095e4					2.0	NO		bb		
12	FUNCTION4 PFK	40.85	4.833e4					1.8	NO		db		
13	FUNCTION4 PFK	40.74	2.246e4					0.9	NO		dd		
14	FUNCTION4 PFK	40.69	1.125e4					0.8	NO		bd		
15	FUNCTION4 PFK	40.58	1.533e3					0.3	NO		bb		
16	FUNCTION4 PFK	40.48	5.827e3					0.5	NO		bb		
17	FUNCTION4 PFK	40.40	5.891e4					2.3	NO		db		
18	FUNCTION4 PFK	40.28	9.045e4					2.1	NO		dd		
19	FUNCTION4 PFK	40.18	1.011e5					2.6	NO		bd		
20	FUNCTION4 PFK	40.03	7.188e4					1.7	NO		db		
21	FUNCTION4 PFK	39.95	5.462e4					2.1	NO		dd		
22	FUNCTION4 PFK	39.91	1.612e4					1.4	NO		bd		
23	FUNCTION4 PFK	39.84	6.471e4					1.8	NO		db		
24	FUNCTION4 PFK	39.70	3.594e4					1.3	NO		bd		
25	FUNCTION4 PFK	39.48	2.604e4					1.2	NO		bb		
26	FUNCTION4 PFK	43.19	2.639e4					1.3	NO		bb		
27	FUNCTION4 PFK	43.09	4.174e4					1.6	NO		db		
28	FUNCTION4 PFK	43.04	6.271e3					0.5	NO		bd		
29	FUNCTION4 PFK	42.98	3.255e4					1.2	NO		bb		
30	FUNCTION4 PFK	42.74	3.334e4					1.7	NO		bb		
31	FUNCTION4 PFK	42.65	3.183e4					1.5	NO		bb		
32	FUNCTION4 PFK	42.53	2.928e4					1.4	NO		bb		
33	FUNCTION4 PFK	42.42	1.683e4					1.1	NO		bb		
34	FUNCTION4 PFK	42.32	9.795e3					0.8	NO		bb		
35	FUNCTION4 PFK	42.17	5.081e4					1.8	NO		bb		
36	FUNCTION4 PFK	42.09	6.923e4					2.2	NO		db		
37	FUNCTION4 PFK	41.97	7.875e4					2.3	NO		bd		

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION4 PFK	41.84	5.161e4					2.1	NO		bb		
39	FUNCTION4 PFK	41.75	3.178e4					1.6	NO		bb		
40	FUNCTION4 PFK	41.29	3.256e4					1.4	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	45.43	1.525e4					1.6	NO		bb		
2	FUNCTION5 PFK	45.33	1.147e4					1.1	NO		db		
3	FUNCTION5 PFK	45.29	5.207e3					1.0	NO		bd		
4	FUNCTION5 PFK	45.23	4.019e4					2.6	NO		db		
5	FUNCTION5 PFK	45.12	2.650e4					2.3	NO		dd		
6	FUNCTION5 PFK	45.07	1.828e4					2.0	NO		dd		
7	FUNCTION5 PFK	44.96	4.520e4					2.4	NO		dd		
8	FUNCTION5 PFK	44.89	5.261e4					2.6	NO		bd		
9	FUNCTION5 PFK	44.77	8.842e3					1.5	NO		bb		
10	FUNCTION5 PFK	44.73	1.836e3					0.7	NO		bb		
11	FUNCTION5 PFK	44.67	1.182e4					1.8	NO		bb		
12	FUNCTION5 PFK	44.55	2.479e4					2.3	NO		bb		
13	FUNCTION5 PFK	44.45	2.404e4					1.5	NO		bb		
14	FUNCTION5 PFK	44.10	4.586e4					3.3	YES		bb		
15	FUNCTION5 PFK	43.52	7.325e3					1.0	NO		bb		
16	FUNCTION5 PFK	43.41	2.760e4					1.8	NO		bb		
17	FUNCTION5 PFK	46.34	1.130e4					1.9	NO		db		
18	FUNCTION5 PFK	46.30	3.277e3					0.7	NO		bd		
19	FUNCTION5 PFK	46.02	2.115e4					1.8	NO		bb		
20	FUNCTION5 PFK	45.89	3.657e4					1.7	NO		bb		
21	FUNCTION5 PFK	45.80	2.208e4					1.7	NO		db		
22	FUNCTION5 PFK	45.74	7.326e3					1.3	NO		bd		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	22.48	8.382e1					2.7	NO		db		0.000
2	FUNCTION1 HXCD...	22.31	7.656e1					2.7	NO		bd		0.000
3	FUNCTION1 HXCD...	21.47	9.221e1					2.3	NO		bb		0.000

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	23.16	8.911e1					1.6	NO		db		0.000
2	FUNCTION1 HPCD...	23.10	1.370e2					2.6	NO		bd		0.000
3	FUNCTION1 HPCD...	22.21	1.005e2					2.3	NO		bb		0.000
4	FUNCTION1 HPCD...	22.04	7.656e1					1.1	NO		bb		0.000
5	FUNCTION1 HPCD...	21.65	1.184e2					1.6	NO		bb		0.000
6	FUNCTION1 HPCD...	27.33	9.545e1					1.9	NO		db		0.000
7	FUNCTION1 HPCD...	27.28	1.116e2					1.8	NO		bd		0.000
8	FUNCTION1 HPCD...	27.03	1.087e2					1.6	NO		bb		0.000
9	FUNCTION1 HPCD...	26.03	1.081e2					1.4	NO		bb		0.000
10	FUNCTION1 HPCD...	25.67	7.491e1					1.2	NO		bb		0.000
11	FUNCTION1 HPCD...	24.11	1.871e2					2.0	NO		db		0.000
12	FUNCTION1 HPCD...	24.00	1.711e2					1.7	NO		bd		0.000
13	FUNCTION1 HPCD...	23.81	1.038e2					1.5	NO		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	30.04	1.212e2					1.4	NO		db		0.000
2	FUNCTION2 HPCD...	29.96	7.872e1					1.4	NO		bd		0.000
3	FUNCTION2 HPCD...	29.65	1.214e2					1.8	NO		bb		0.000
4	FUNCTION2 HPCD...	29.48	1.775e2					2.4	NO		bb		0.000
5	FUNCTION2 HPCD...	28.74	7.331e1					2.0	NO		db		0.000
6	FUNCTION2 HPCD...	28.69	1.082e2					2.5	NO		bd		0.000
7	FUNCTION2 HPCD...	28.29	8.253e1					1.1	NO		bb		0.000
8	FUNCTION2 HPCD...	32.23	8.524e1					2.1	NO		bb		0.000
9	FUNCTION2 HPCD...	31.78	9.262e1					1.2	NO		bb		0.000
10	FUNCTION2 HPCD...	31.44	7.981e1					1.8	NO		bb		0.000
11	FUNCTION2 HPCD...	31.02	8.684e1					1.0	NO		db		0.000
12	FUNCTION2 HPCD...	30.92	7.783e1					1.1	NO		bd		0.000
13	FUNCTION2 HPCD...	30.63	8.370e1					2.0	NO		bb		0.000
14	FUNCTION2 HPCD...	30.41	1.460e2					2.2	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
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Dataset: T:\Autospec\Processed Data Batch\201123.qld
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Printed: Tuesday, November 24, 2020 10:01:01 Pacific Standard Time

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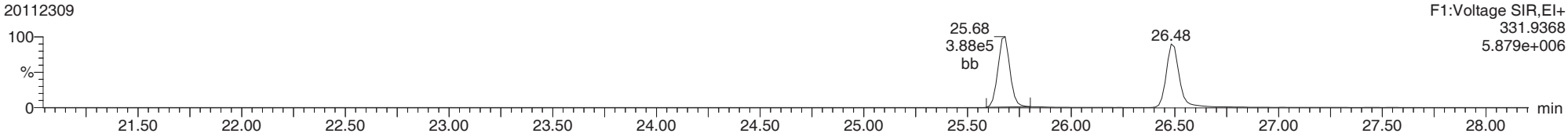
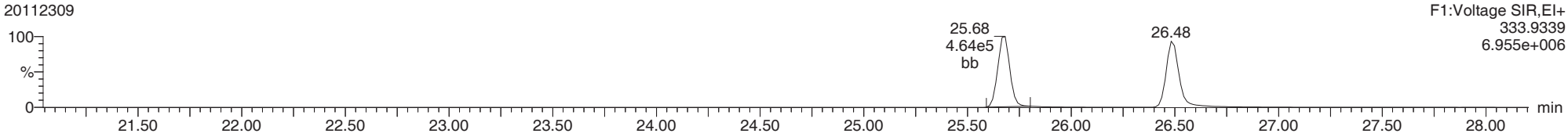
ID: 20J0389-03, Name: 20112309, Date: 23-Nov-2020, Time: 16:18:20, Conditions: AUTOSPEC01, User: pk

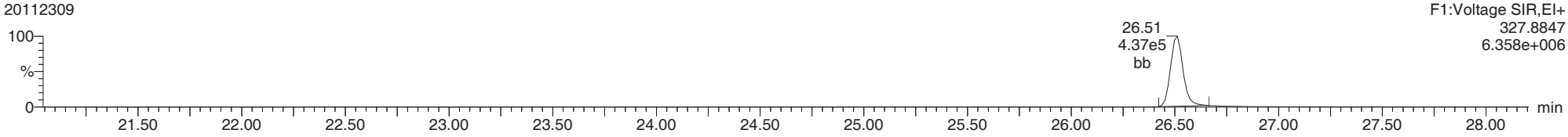
13C-1234-TCDD



13C-1234-TCDD



37CL-2378-TCDD



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Printed: Tuesday, November 24, 2020 10:01:01 Pacific Standard Time

ID: 20J0389-03, Name: 20112309, Date: 23-Nov-2020, Time: 16:18:20, Conditions: AUTOSPEC01, User: pk

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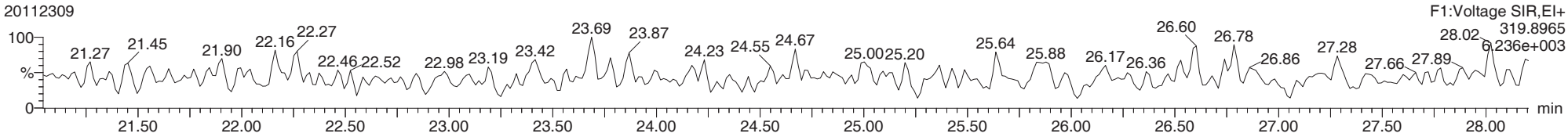

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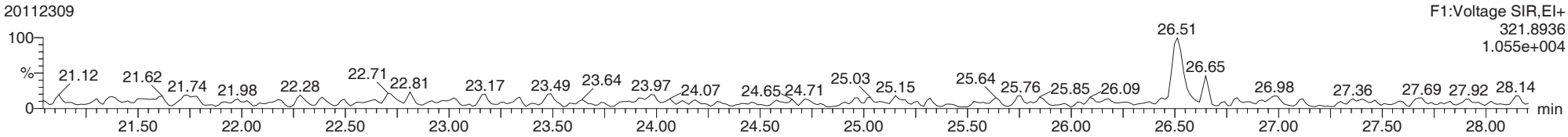

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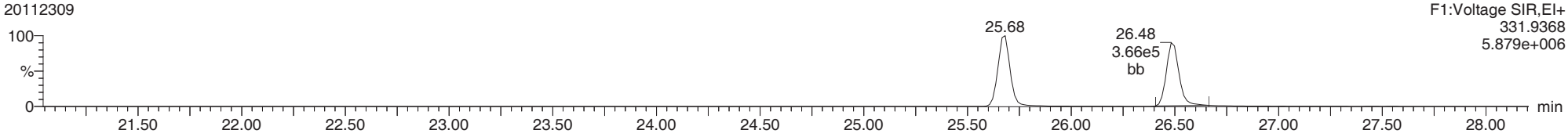

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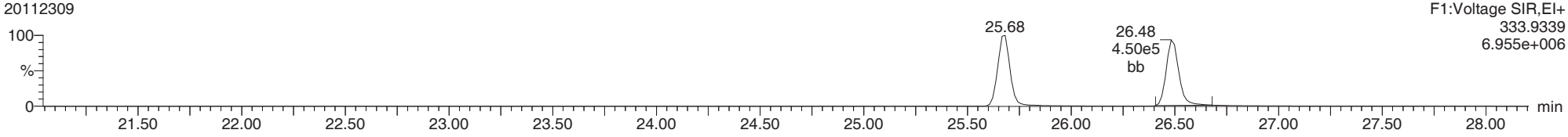

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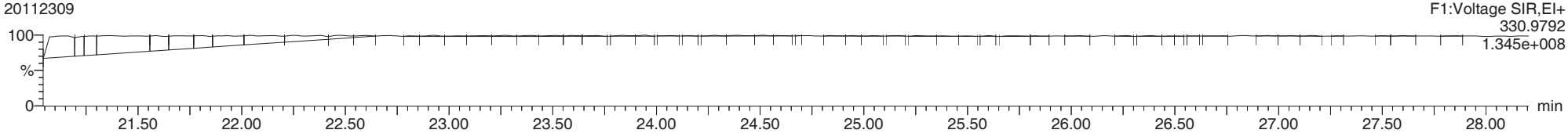

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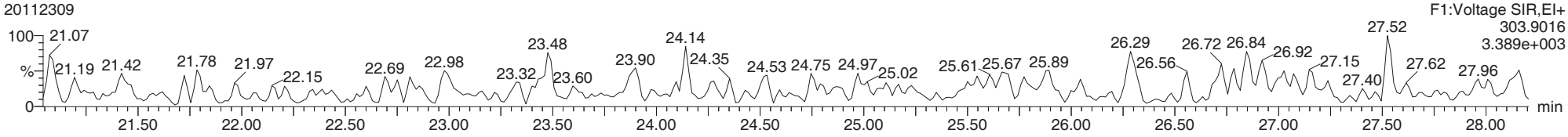
ID: 20J0389-03, Name: 20112309, Date: 23-Nov-2020, Time: 16:18:20, Conditions: AUTOSPEC01, User: pk

2378-TCDF



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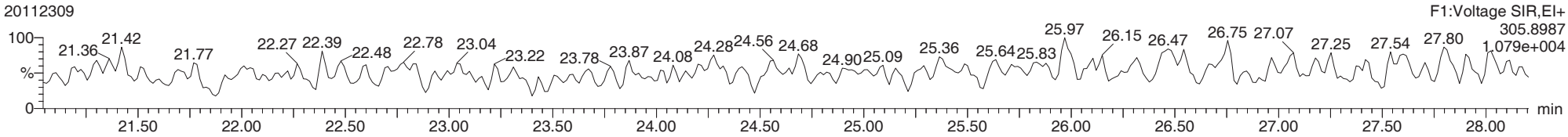

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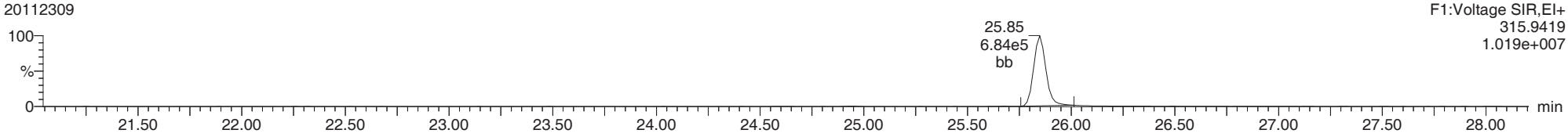

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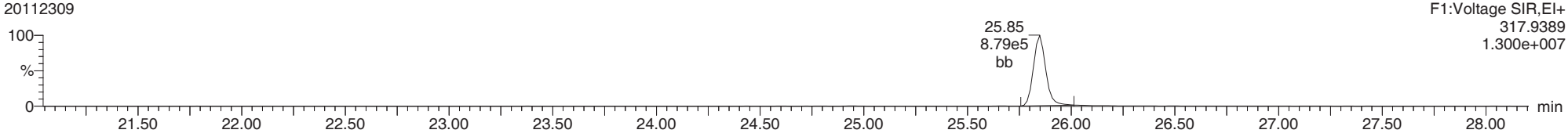
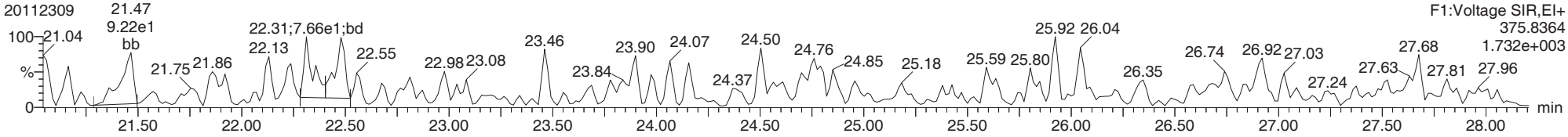


FUNCTION1 HXCDPE



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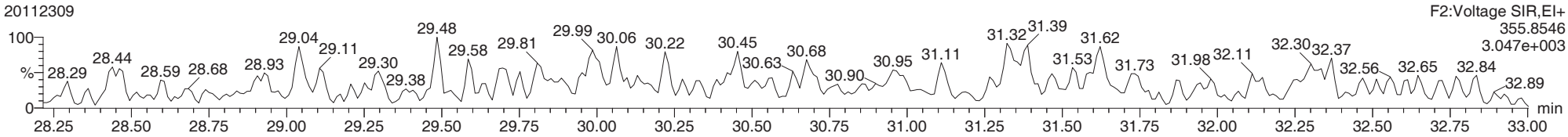
ID: 20J0389-03, Name: 20112309, Date: 23-Nov-2020, Time: 16:18:20, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



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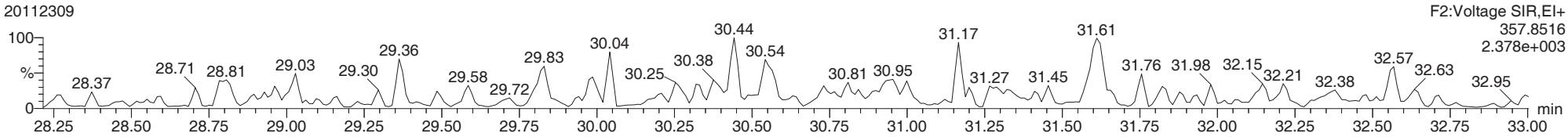

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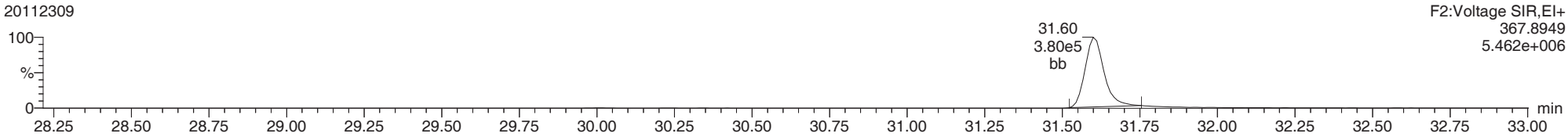

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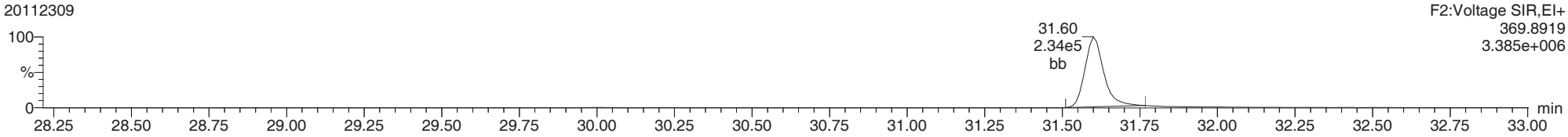

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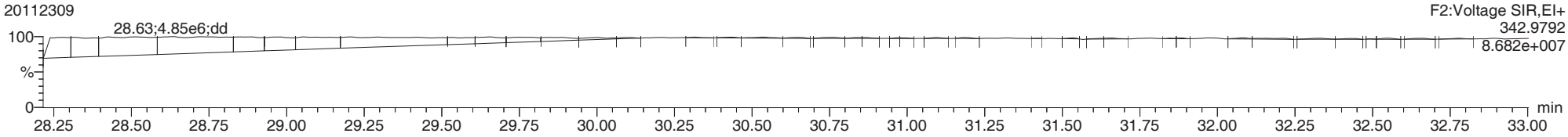

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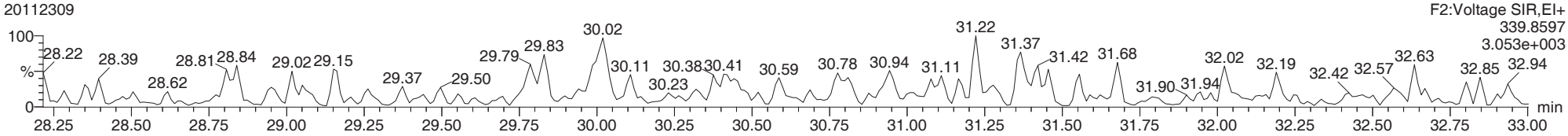

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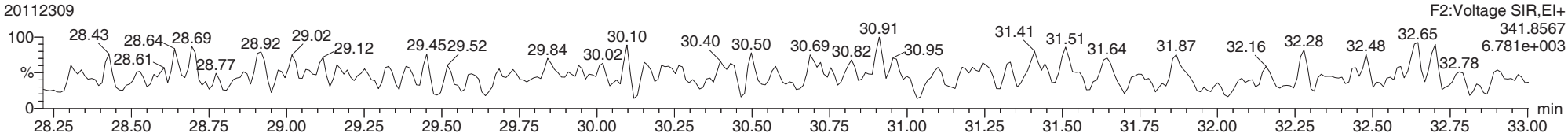

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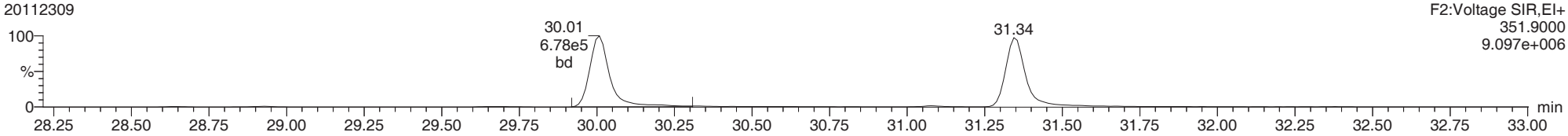

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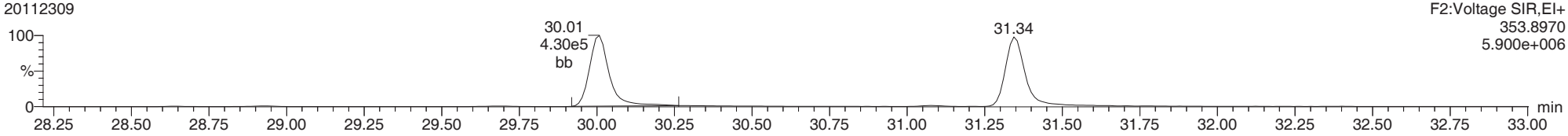
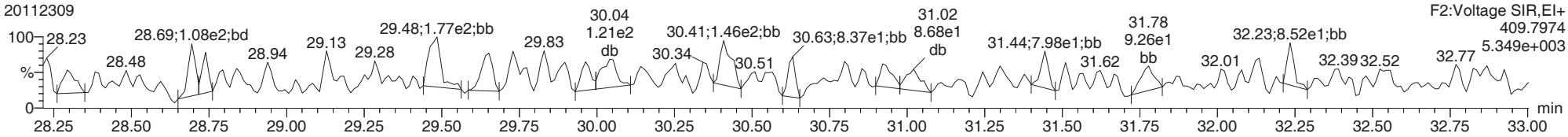
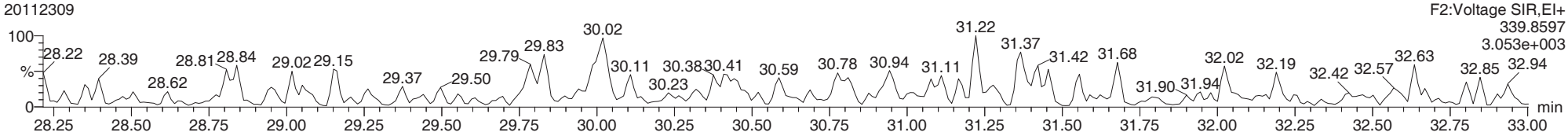


FUNCTION2 HPCDPE



ID: 20J0389-03, Name: 20112309, Date: 23-Nov-2020, Time: 16:18:20, Conditions: AUTOSPEC01, User: pk

23478-PeCDF



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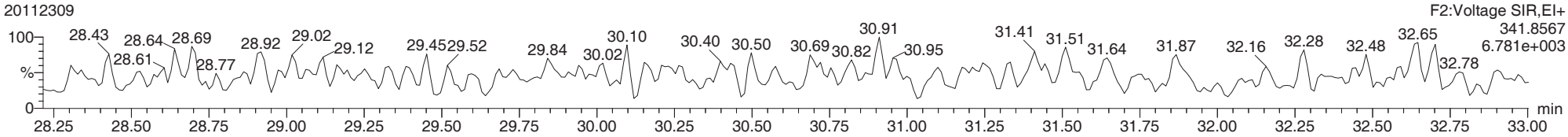

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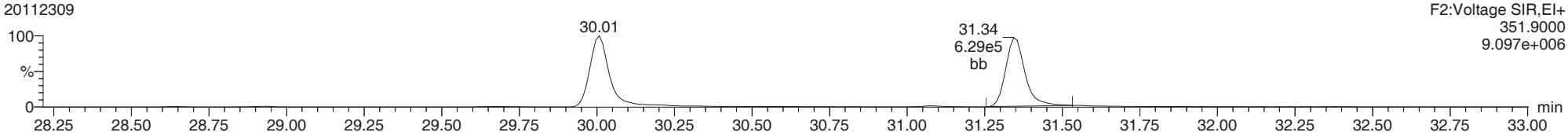

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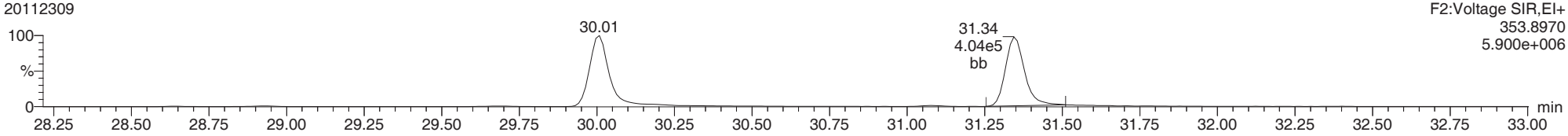

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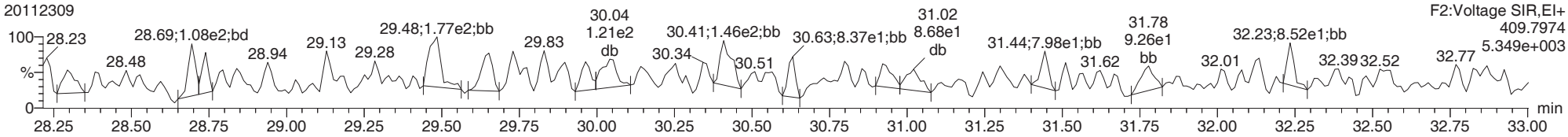

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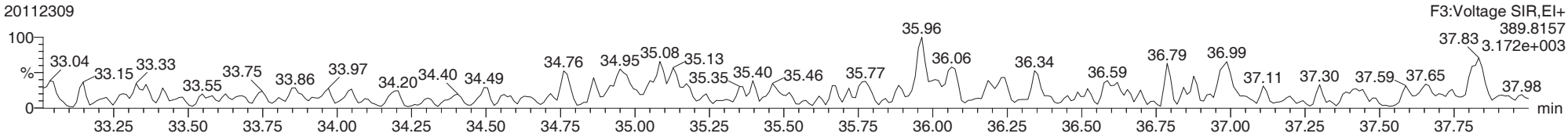
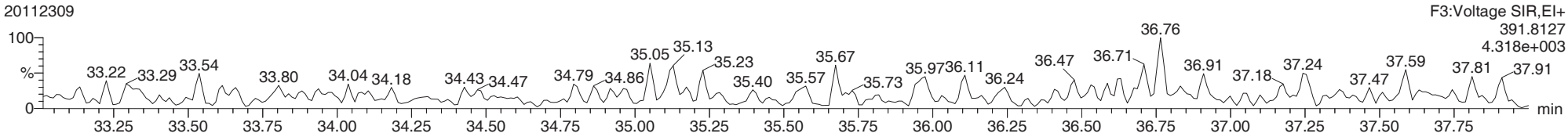
123478-HxCDD



123478-HxCDD



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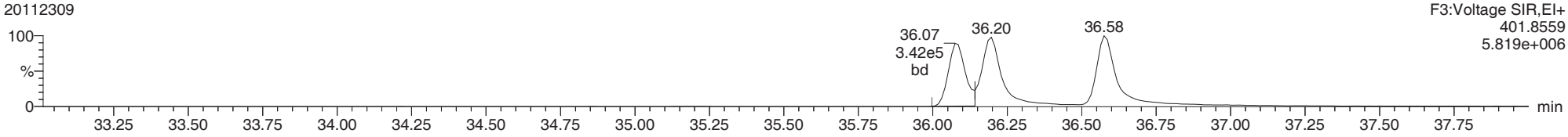

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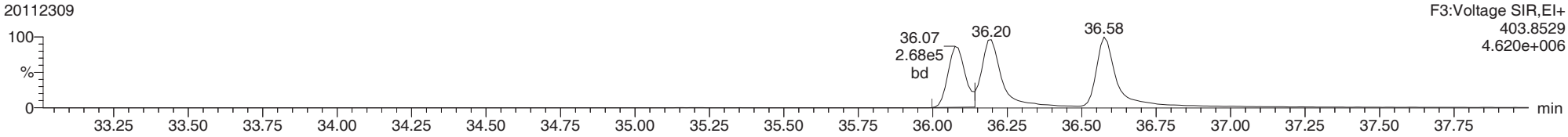

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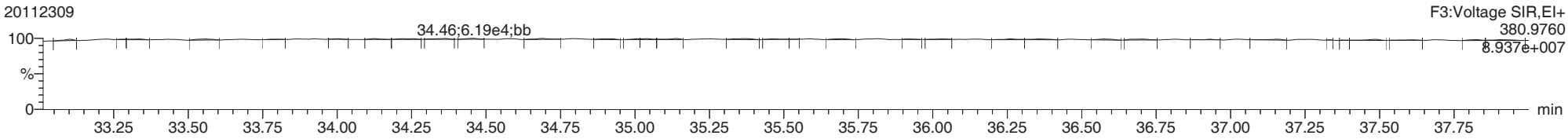

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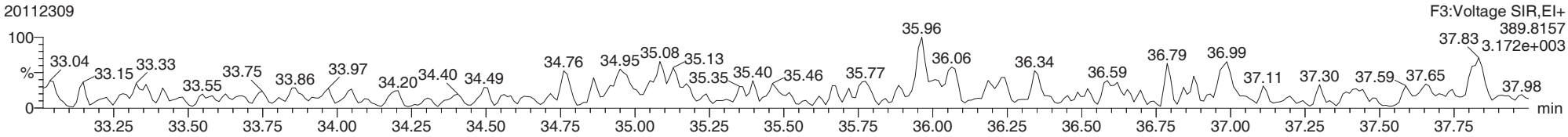
123678-HxCDD



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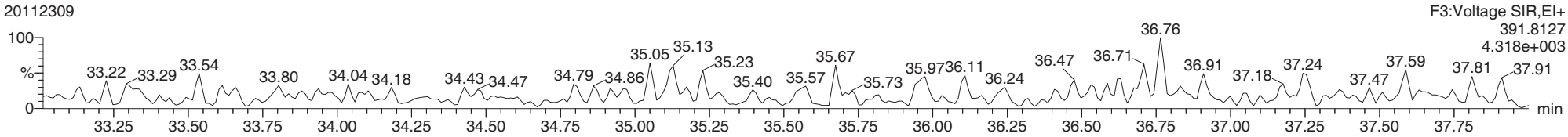

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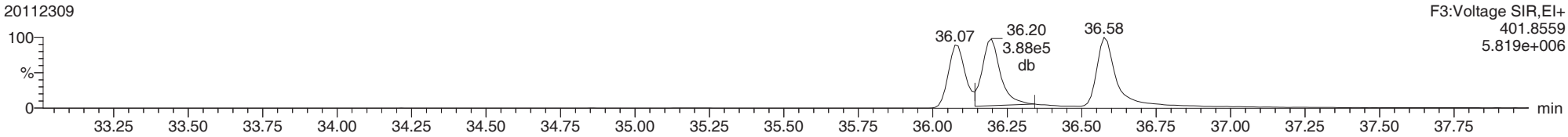

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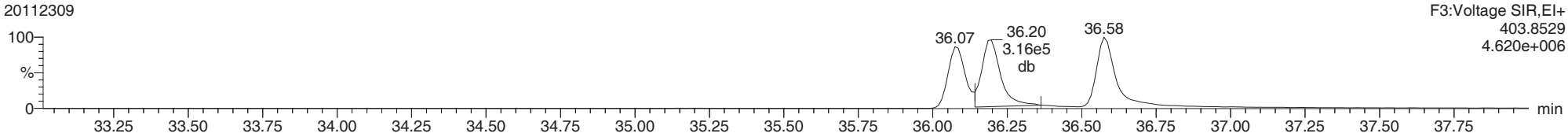

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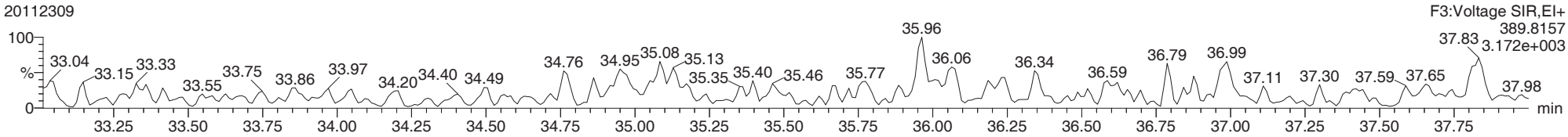

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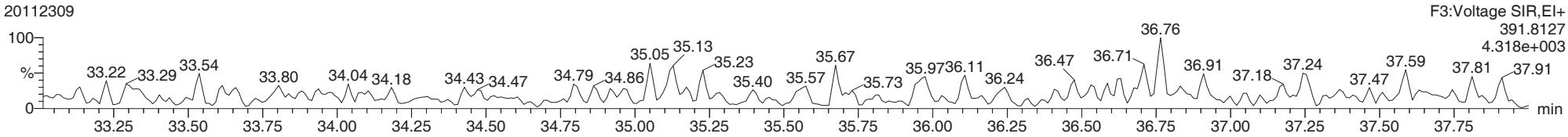

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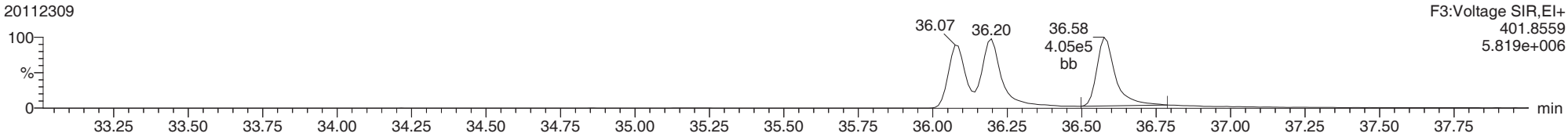

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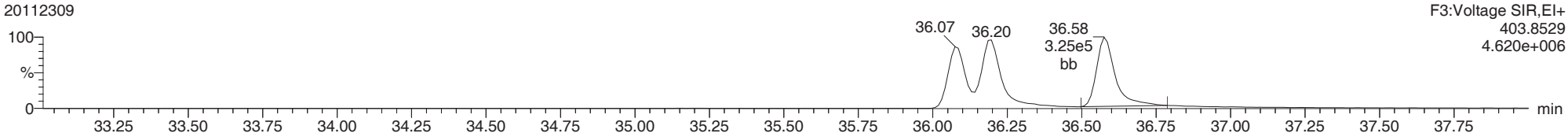

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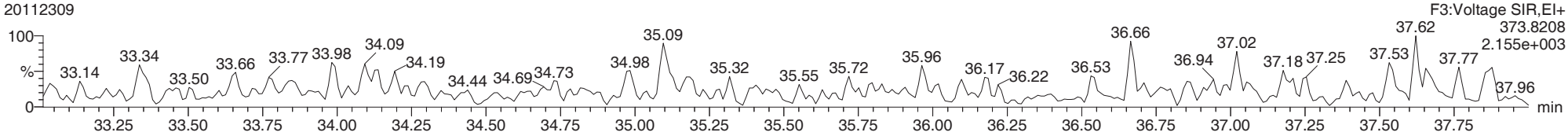
123478-HxCDF



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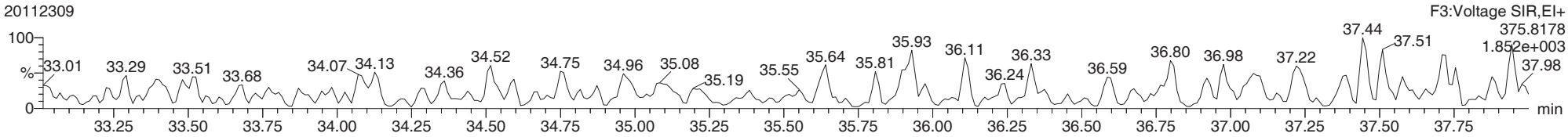

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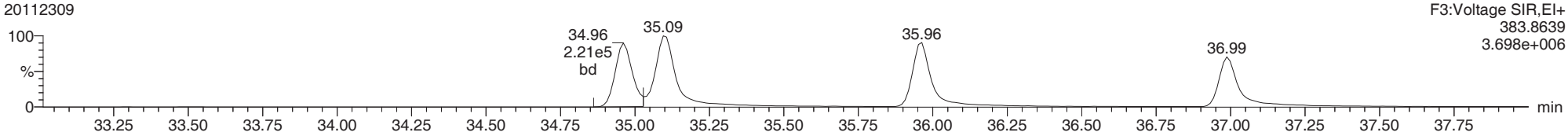

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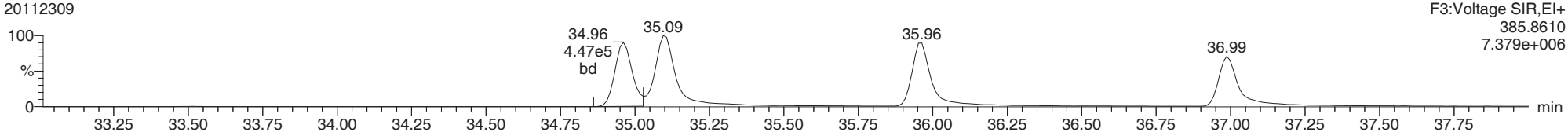
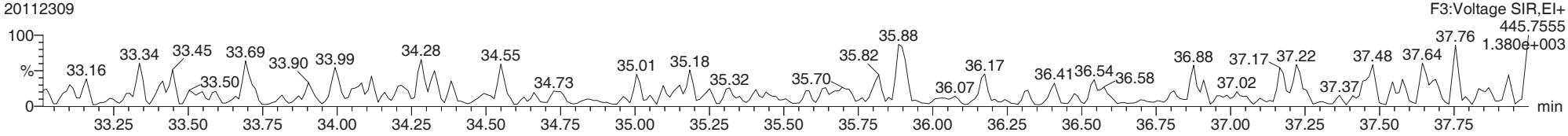


FUNCTION3 OCDPE



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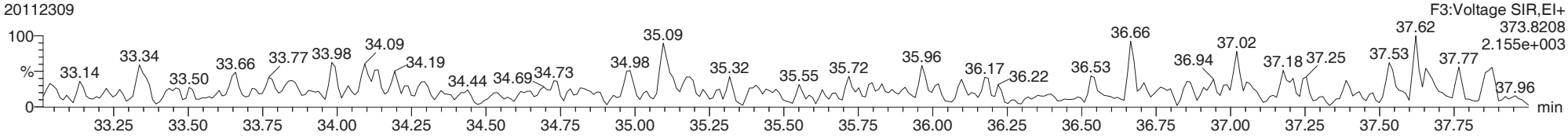
ID: 20J0389-03, Name: 20112309, Date: 23-Nov-2020, Time: 16:18:20, Conditions: AUTOSPEC01, User: pk

234678-HxCDF



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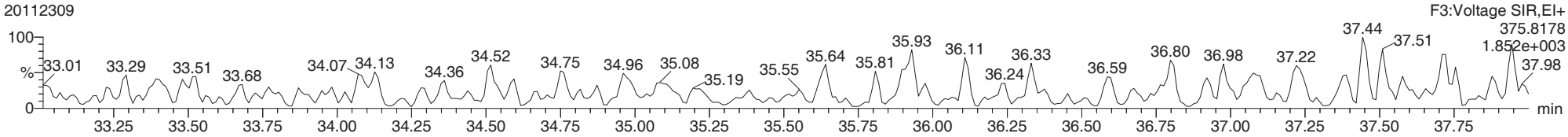

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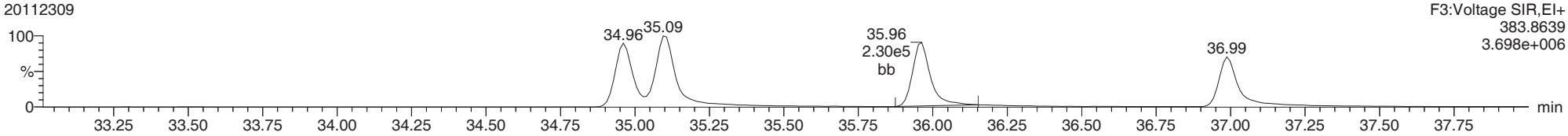

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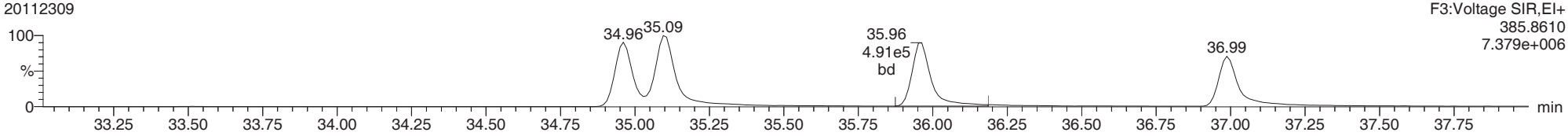
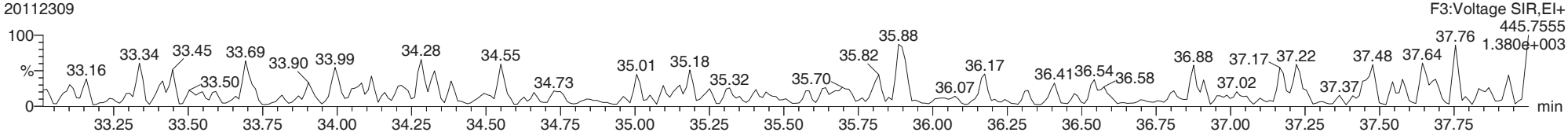


FUNCTION3 OCDPE



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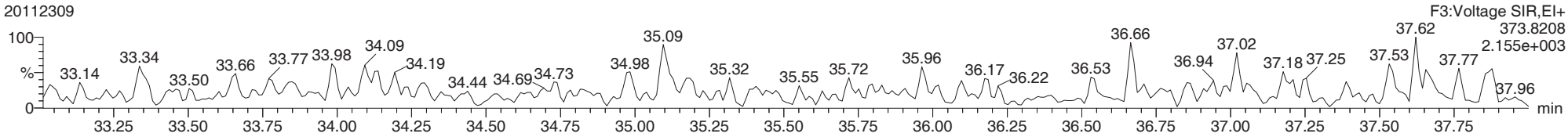

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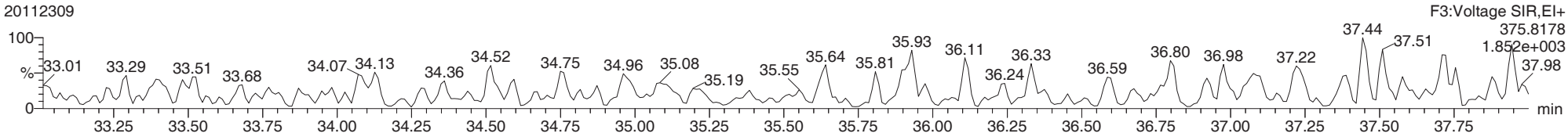

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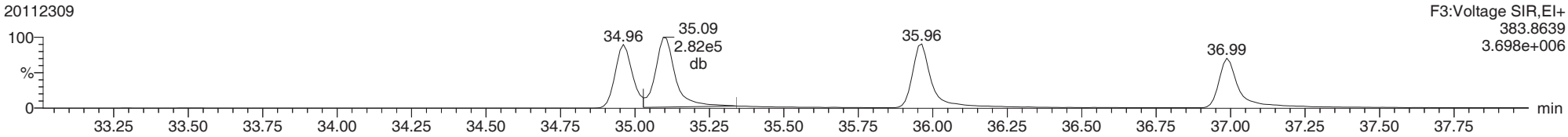

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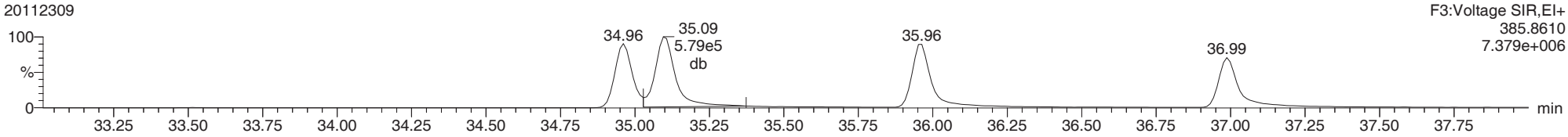

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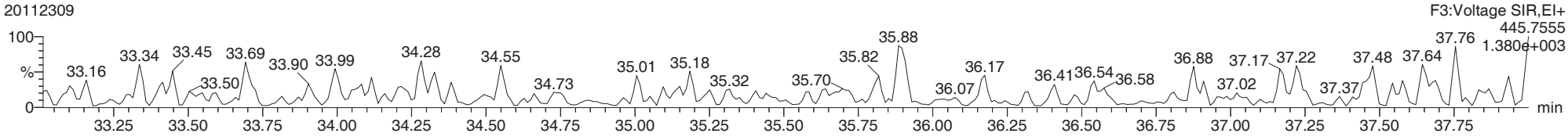

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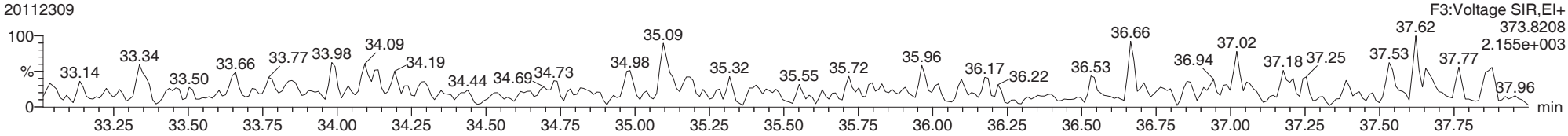

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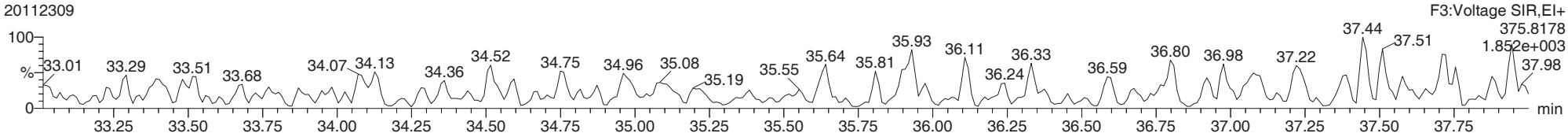

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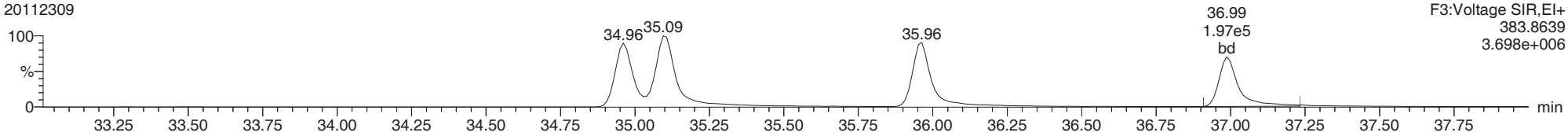

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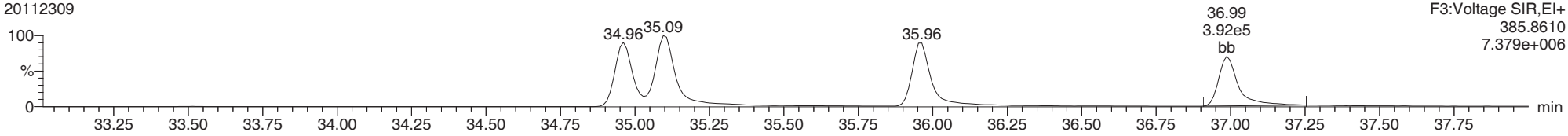
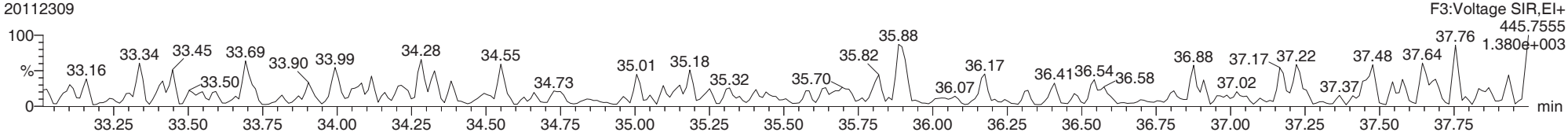


FUNCTION3 OCDPE



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ID: 20J0389-03, Name: 20112309, Date: 23-Nov-2020, Time: 16:18:20, Conditions: AUTOSPEC01, User: pk

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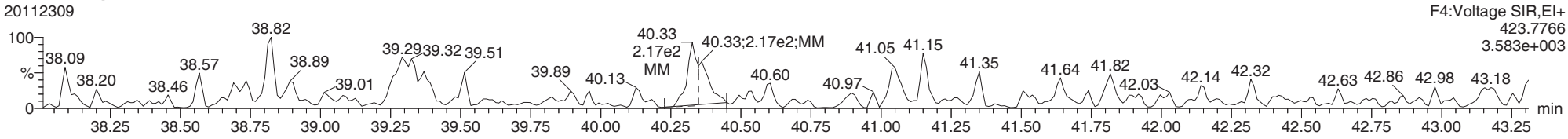

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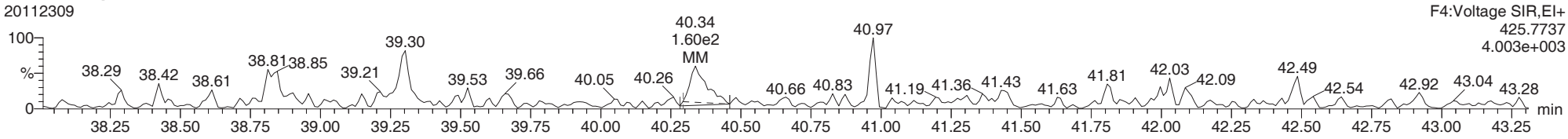

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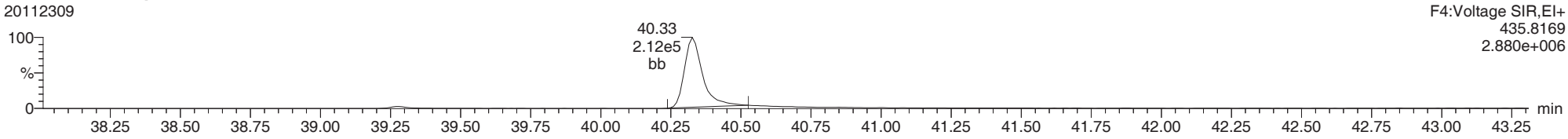

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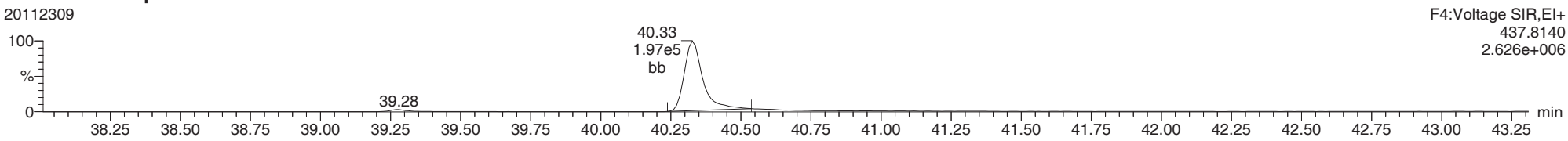

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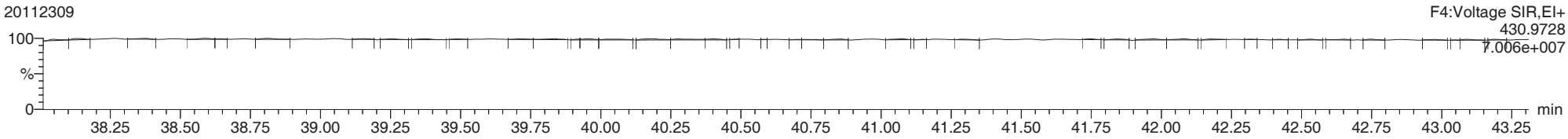

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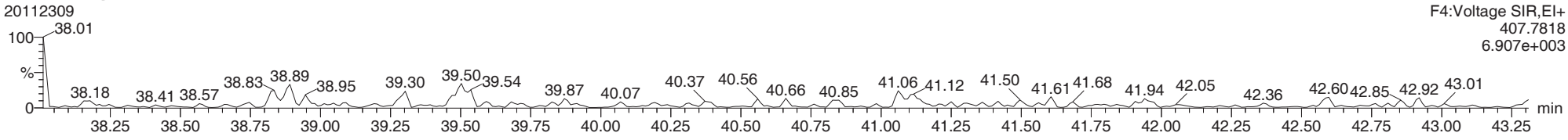

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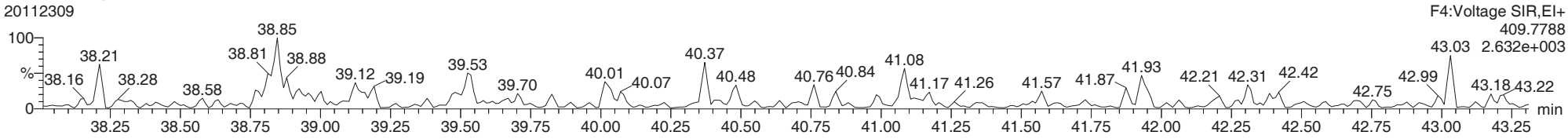

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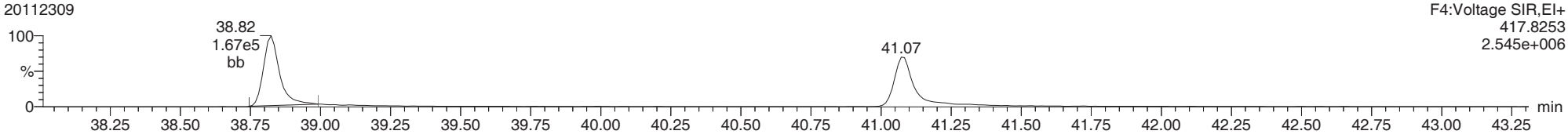

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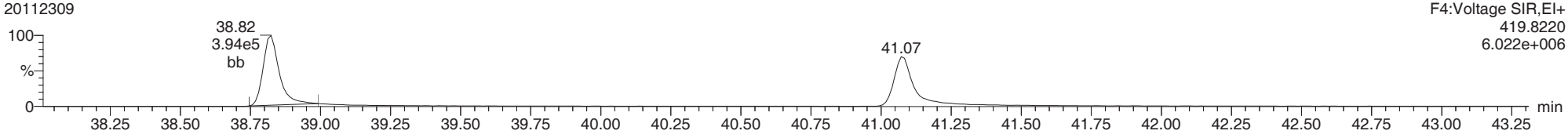

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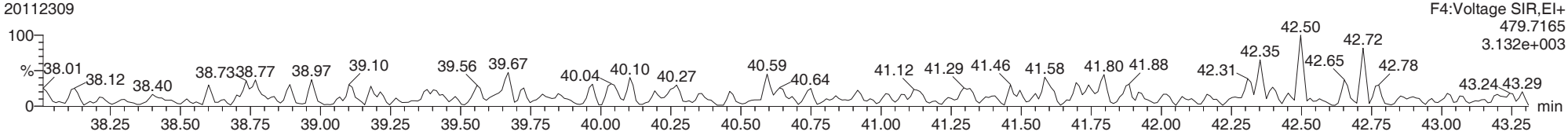

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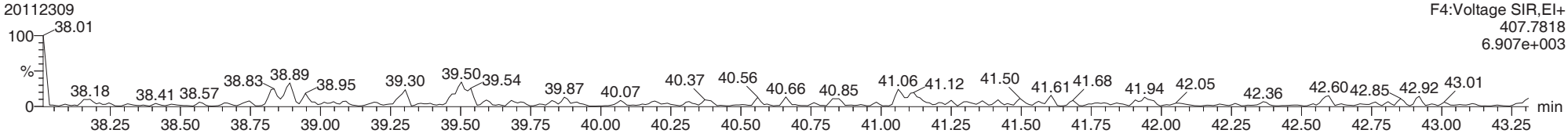

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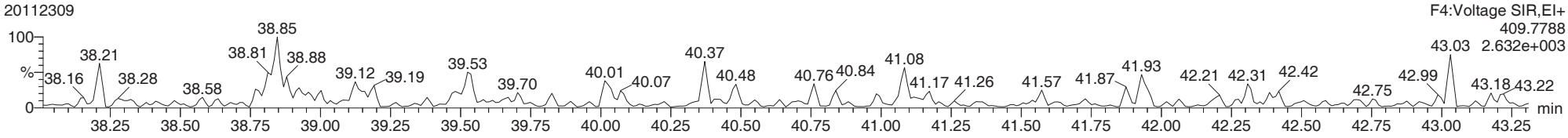

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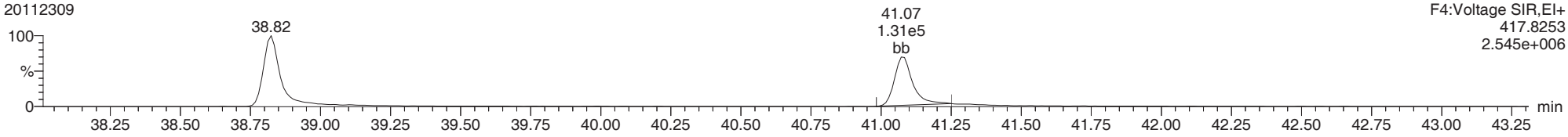

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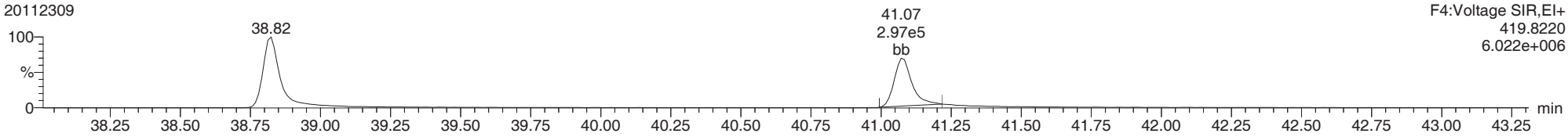

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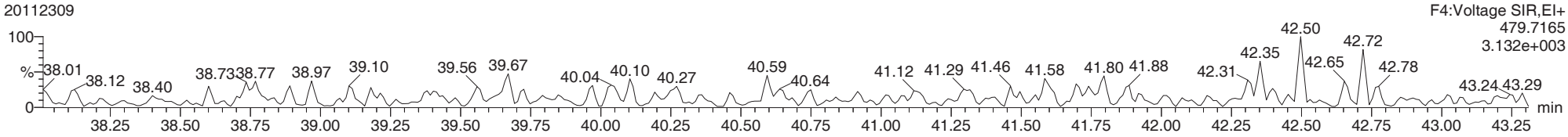

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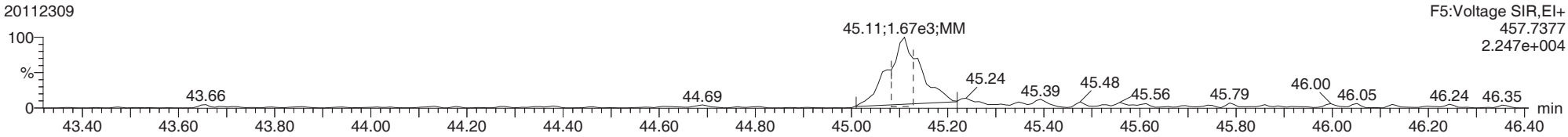

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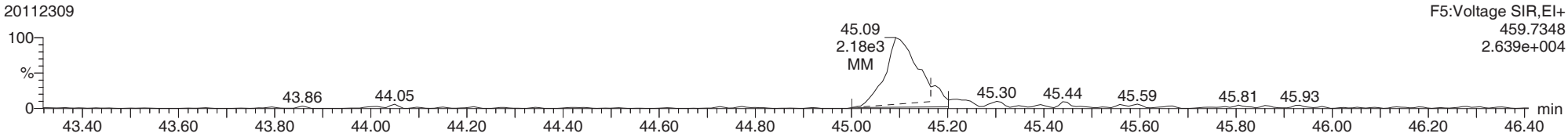

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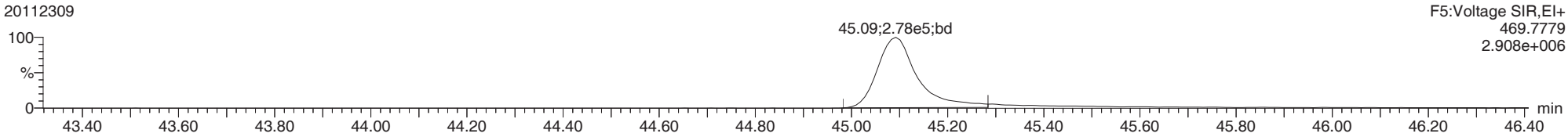

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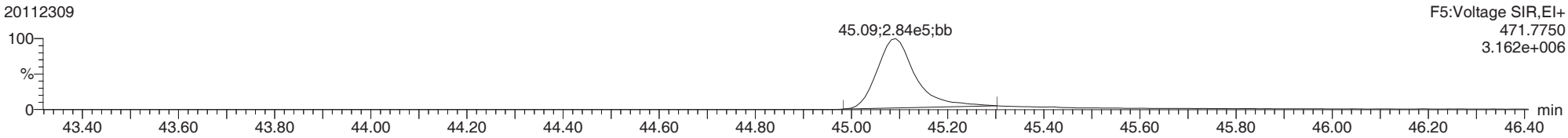

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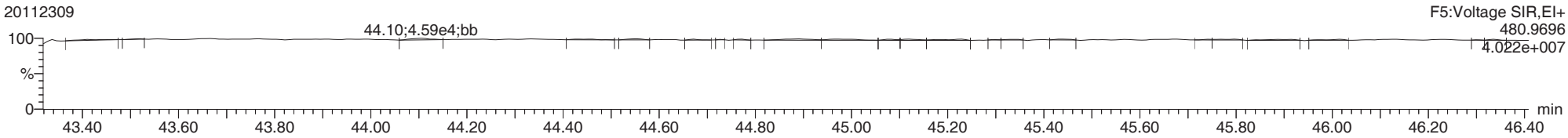

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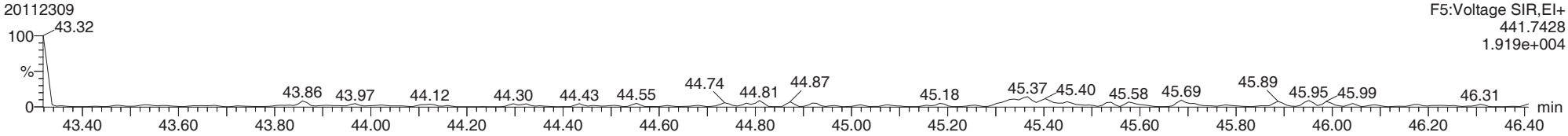

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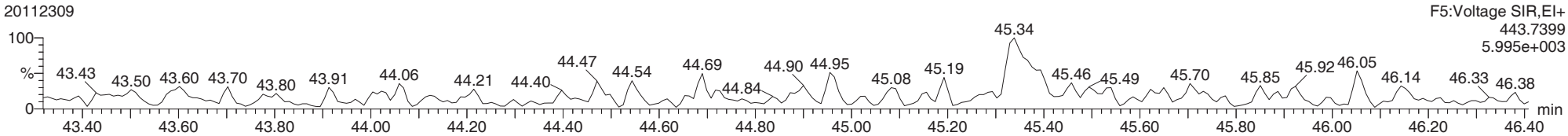
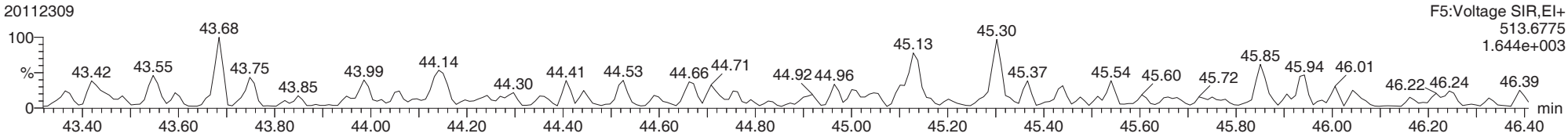


FUNCTION5 DCDPE



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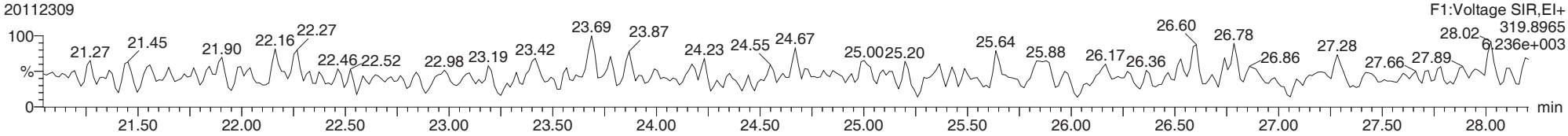
ID: 20J0389-03, Name: 20112309, Date: 23-Nov-2020, Time: 16:18:20, Conditions: AUTOSPEC01, User: pk

Total-tetradioxins



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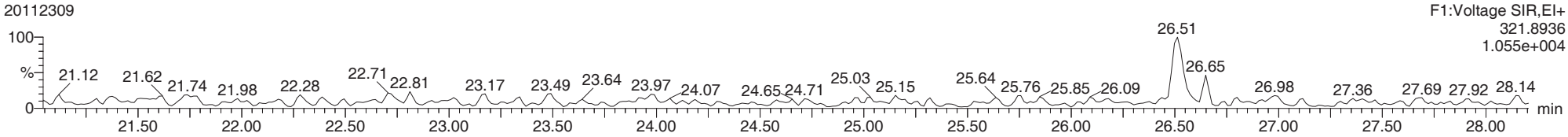
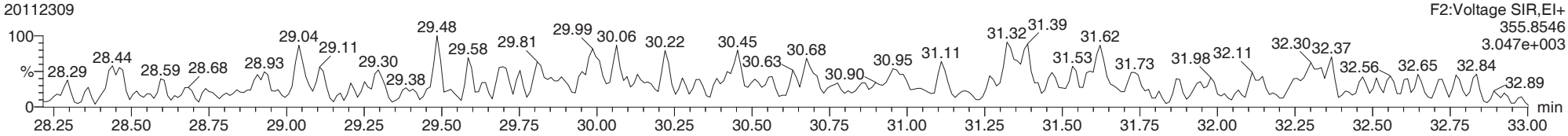


Total-pentadioxins



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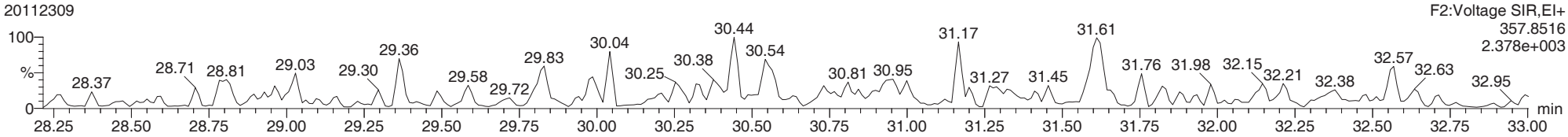

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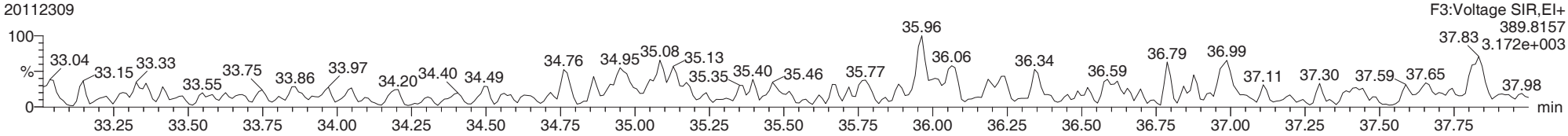

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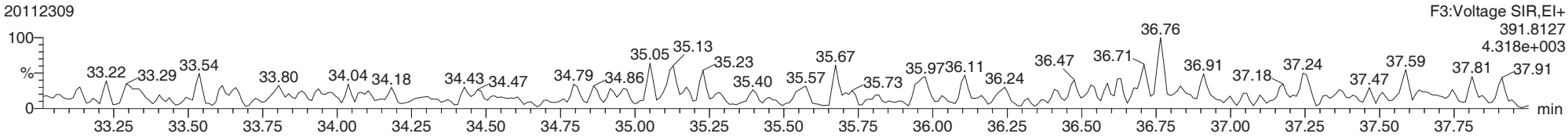

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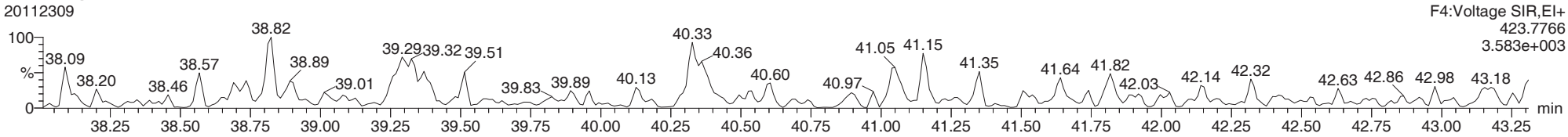

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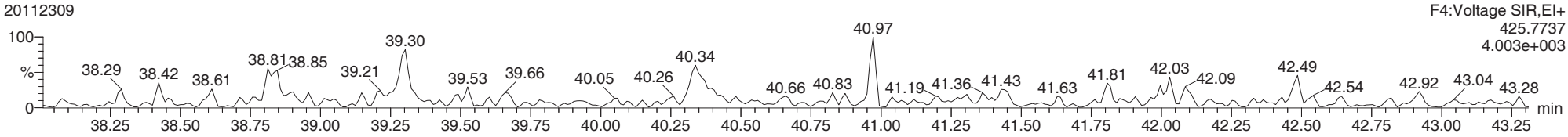

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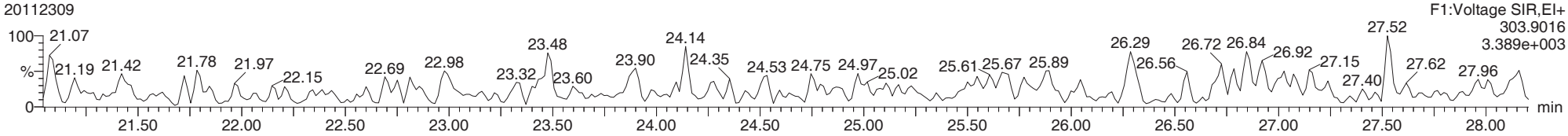
Total-tetrafurans



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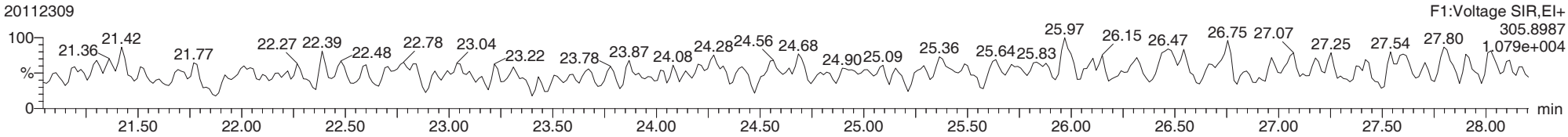

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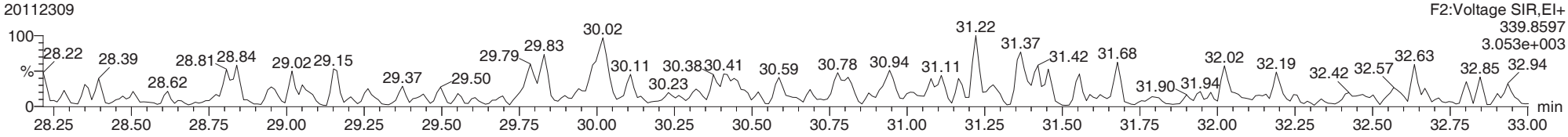

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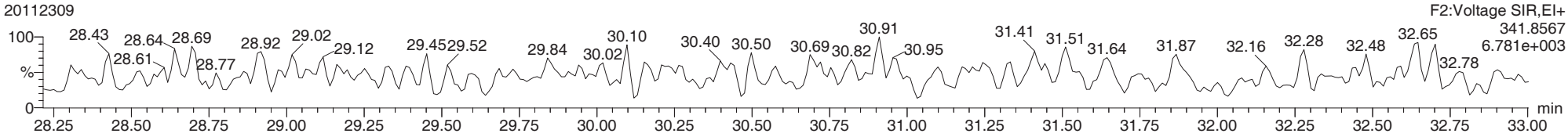

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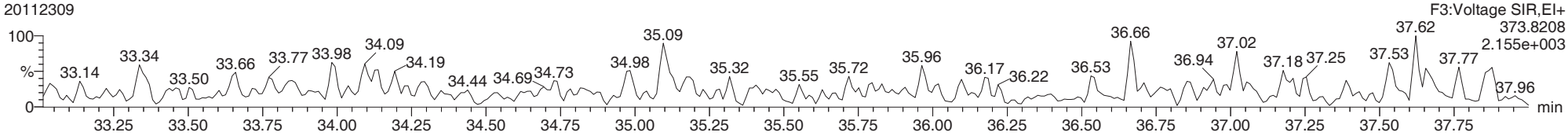

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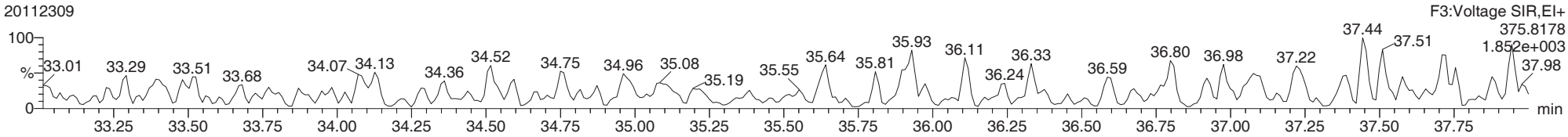

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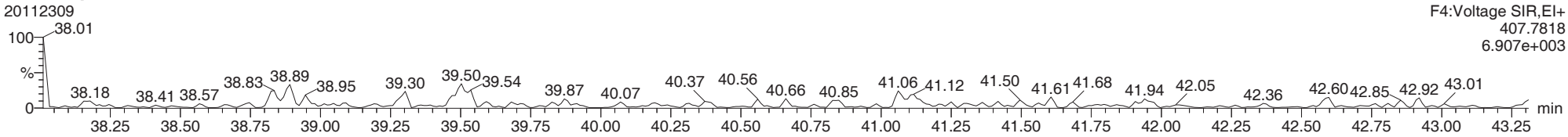
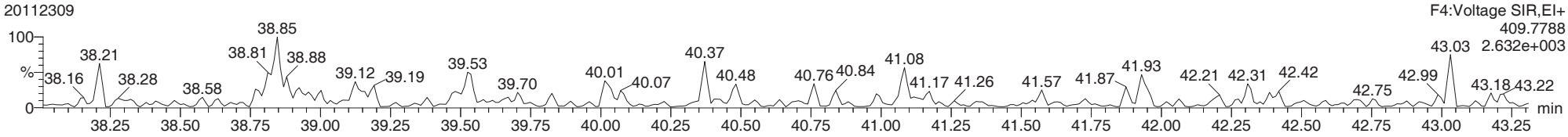


Total-heptafurans



MW-CP3-102720

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider				
Project:	Lora Lake Apartments				
Matrix:	Ground Water	Laboratory ID:	20J0389-04 A	File ID:	20112310
Sampled:	10/27/20 12:42	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 17:07
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1072 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	1.39	9.33	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	1.03	9.33	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.29	9.33	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	1.17	9.33	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	0.84	9.33	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.79	9.33	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.74	9.33	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.82	9.33	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	1.20	9.33	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	1.36	9.33	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	1.18	9.33	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	1.41	9.33	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1		0.893-1.208	0.88	9.33	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	1.14	9.33	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	0.714	0.893-1.208	1.62	9.33	2.03	pg/L	EMPC, J
39001-02-0	OCDF	1		0.757-1.024	2.84	18.7	ND	pg/L	U
3268-87-9	OCDD	1	0.995	0.757-1.024	3.42	46.6	33.0	pg/L	J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.33	ND	pg/L
41903-57-5	Total TCDD	1	0.000			9.33	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			9.33	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			9.33	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			9.33	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			9.33	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			9.33	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			9.33	ND	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.030
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.62

MW-CP3-102720

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider			Project:	Lora Lake Apartments
Matrix:	Ground Water	Laboratory ID:	20J0389-04	File ID:	20112310
Sampled:	10/27/20 12:42	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 17:07
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1072 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.792	0.655-0.886	1.87	84.1	24 - 169 %	
13C12-2,3,7,8-TCDD		0.801	0.655-0.886	1.88	82.6	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.675	1.318-1.783	2.39	74.6	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.523	1.318-1.783	2.49	70.9	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.622	1.318-1.783	1.61	71.4	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.489	0.434-0.587	4.88	101	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.522	0.434-0.587	4.16	110	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.493	0.434-0.587	4.66	96.1	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.486	0.434-0.587	5.43	91.5	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.292	1.054-1.426	4.85	90.5	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.283	1.054-1.426	4.01	89.1	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.464	0.374-0.506	5.27	89.8	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.416	0.374-0.506	6.62	99.1	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.077	0.893-1.208	4.77	89.6	23 - 140 %	
13C12-OCDD		0.892	0.757-1.024	6.00	57.9	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		1.29	94.6	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:01:07 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-04, Name: 20112310, Date: 23-Nov-2020, Time: 17:07:37, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF					0.729		0.770	976	2756								
12378-PeCDF					0.779		1.550	867	1497								
23478-PeCDF					0.880		1.550	867	1497								
123478-HxCDF					0.880		1.240	527	538								
234678-HxCDF					0.863		1.240	527	538								
123678-HxCDF					0.853		1.240	527	538								
123789-HxCDF					0.780		1.240	527	538								
1234678-HpCDF					1.001		1.050	520	474								
1234789-HpCDF					0.994		1.050	520	474								
OCDF					1.158		0.890	457	967								
2378-TCDD					1.238		0.770	1577	869								
12378-PeCDD					0.988		1.550	735	422								
123478-HxCDD					0.842		1.240	721	860								
123678-HxCDD					0.907		1.240	721	860								
123789-HxCDD					0.784		1.240	721	860								
1234678-HpCDD	40.348	1.001	1.565e2	2.192e2	1.044	0.714	1.050	580	733	4.47e3	4.54e3	7.7	6.2	YES	bd	bd	0.109
OCDD	45.119	1.001	1.911e3	1.920e3	0.963	0.995	0.890	737	688	2.51e4	2.38e4	34.1	34.6	NO	bd	MM	1.768
13C-2378-TCDF	25.848	1.007	6.377e5	8.052e5	2.203	0.792	0.770	5644	3090	9.08e6	1.15e7	1609.6	3733.7	NO	bb	bb	84.064
13C-12378-PeCDF	30.008	1.168	6.340e5	3.785e5	1.741	1.675	1.550	4486	4354	8.25e6	5.22e6	1838.4	1199.6	NO	bb	bb	74.632
13C-23478-PeCDF	31.355	1.221	5.566e5	3.656e5	1.669	1.523	1.550	4486	4354	7.78e6	5.07e6	1734.5	1164.4	NO	bb	bb	70.891
13C-123478-HxCDF	34.961	0.956	1.938e5	3.959e5	1.022	0.489	0.510	2920	4368	2.81e6	5.72e6	960.8	1309.4	NO	bd	bd	100.610
13C-123678-HxCDF	35.106	0.960	2.607e5	4.994e5	1.200	0.522	0.510	2920	4368	3.23e6	6.39e6	1105.0	1462.1	NO	db	db	110.474
13C-234678-HxCDF	35.963	0.983	1.949e5	3.955e5	1.071	0.493	0.510	2920	4368	2.78e6	5.56e6	953.4	1273.4	NO	bb	bb	96.144
13C-123789-HxCDF	36.998	1.011	1.577e5	3.241e5	0.919	0.486	0.510	2920	4368	2.08e6	4.25e6	713.8	971.9	NO	bb	bb	91.480
13C-1234678-HpCDF	38.824	1.061	1.483e5	3.195e5	0.909	0.464	0.440	2942	4058	2.00e6	4.79e6	680.6	1181.2	NO	bd	bb	89.813
13C-1234789-HpCDF	41.083	1.123	1.208e5	2.902e5	0.724	0.416	0.440	2942	4058	1.44e6	3.28e6	488.8	807.3	NO	bd	bb	99.101
13C-1234-TCDD	25.682	0.000	3.503e5	4.289e5	1.000	0.817	0.770	2958	1761	5.35e6	6.53e6	1807.3	3708.2	NO	bb	bb	100.000
13C-2378-TCDD	26.497	1.032	3.382e5	4.220e5	1.181	0.801	0.770	2958	1761	4.78e6	6.01e6	1616.0	3412.3	NO	bb	bb	82.579
13C-12378-PeCDD	31.611	1.231	3.364e5	2.075e5	0.978	1.622	1.550	1709	1635	4.82e6	2.87e6	2822.5	1756.9	NO	bb	bb	71.387
13C-123478-HxCDD	36.085	0.986	2.821e5	2.183e5	0.965	1.292	1.240	3117	3719	4.37e6	3.39e6	1402.5	911.9	NO	bd	bd	90.454
13C-123678-HxCDD	36.197	0.989	3.354e5	2.615e5	1.168	1.283	1.240	3117	3719	4.66e6	3.74e6	1494.1	1006.2	NO	db	db	89.138
13C-1234678-HpCDD	40.326	1.102	1.718e5	1.596e5	0.645	1.077	1.050	2400	2094	2.26e6	2.10e6	940.2	1002.0	NO	bb	bb	89.569
13C-OCDD	45.092	1.232	2.123e5	2.379e5	0.678	0.892	0.890	3520	2426	2.28e6	2.51e6	648.3	1034.4	NO	bd	bd	115.760
13C-123789-HxCDD	36.586	0.000	3.043e5	2.690e5	1.000	1.131	1.240	3117	3719	4.34e6	3.51e6	1392.5	944.4	NO	bb	bb	100.000
37CL-2378-TCDD	26.513	1.032	3.727e5		1.264			3462		5.43e6		1568.2			bb		37.826

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:01:07 Pacific Standard Time

ID: 20J0389-04, Name: 20112310, Date: 23-Nov-2020, Time: 17:07:37, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	976	2756								
1289-TCDF					0.688		0.770	976	2756								
13468-PECDF					1.181		1.550	473	1528								
12389-PECDF					0.766		1.550	867	1497								
123468-HXCDF					1.003		1.240	527	538								
1368-TCDD					1.179		0.770	1577	869								
1289-TCDD					1.042		0.770	1577	869								
12479-PECDD					1.810		1.550	735	422								
12389-PECDD					1.165		1.550	735	422								
124679-HXCDD					1.056		1.240	721	860								
1234679-HPCDD	39.280	0.974	1.752e2	1.040e2	1.285	1.685	1.050	580	733	3.77e3	2.35e3	6.5	3.2	YES	bd	bd	0.066
Total-tetrafurans			0.000e0		0.754			976		0.00e0							
Total-penta1			0.000e0					473		0.00e0							
Total-pentafurans			0.000e0		0.809			867		0.00e0							
Total-hexafurans			0.000e0		0.876			527		0.00e0							
Total-heptafurans			0.000e0		0.997			520		0.00e0							
Total-Furans			0.000e0		0.893			976		0.00e0							
Total-tetradioxins			0.000e0		1.153			1577		0.00e0							
Total-pentadioxins			0.000e0		1.321			735		0.00e0							
Total-hexadioxins			0.000e0		0.897			721		0.00e0							
Total-heptadioxins			0.000e0		1.165			580		0.00e0							
Total-Dioxins			1.911e3		1.100			1577		2.51e4							1.768
Total-TEQ			1.911e3					1577		2.51e4							1.768
FUNCTION1 PFK			6.759e5					932814		1.19e7							
FUNCTION2 PFK			1.206e6					501090		2.38e7							0.000
FUNCTION3 PFK			9.338e5					512050		2.22e7							0.000
FUNCTION4 PFK			1.147e5					503581		2.81e6							
FUNCTION5 PFK			0.000e0					347241		0.00e0							
FUNCTION1 HXCD...			3.423e2					555		8.12e3							0.000
FUNCTION1 HPCD...			2.859e3					1354		5.85e4							0.000
FUNCTION2 HPCD...			1.173e3					1262		2.86e4							0.000
FUNCTION3 OCDPE			0.000e0					381		0.00e0							
FUNCTION4 NCDPE			0.000e0					532		0.00e0							
FUNCTION5 DCDPE			0.000e0					313		0.00e0							

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-04, Name: 20112310, Date: 23-Nov-2020, Time: 17:07:37, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ID: 20J0389-04, Name: 20112310, Date: 23-Nov-2020, Time: 17:07:37, Conditions: AUTOSPEC01, User: pk

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	OCDD	45.12	1.911e3	1.920e3	0.963	1.00	0.89	34.1	YES	NO	bd	MM	1.768

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	24.43	1.029e5					2.4	NO		bb		
2	FUNCTION1 PFK	23.73	6.774e4					1.6	NO		bb		
3	FUNCTION1 PFK	21.30	2.211e5					2.1	NO		bb		
4	FUNCTION1 PFK	21.15	7.425e4					1.9	NO		bb		
5	FUNCTION1 PFK	26.32	5.186e4					1.4	NO		bb		
6	FUNCTION1 PFK	25.77	8.672e4					1.8	NO		bb		
7	FUNCTION1 PFK	24.76	7.137e4					1.7	NO		bb		

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
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ID: 20J0389-04, Name: 20112310, Date: 23-Nov-2020, Time: 17:07:37, Conditions: AUTOSPEC01, User: pk

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.79	4.889e4					1.7	NO		bb		0.000
2	FUNCTION2 PFK	29.56	1.126e4					1.0	NO		bb		0.000
3	FUNCTION2 PFK	29.47	4.011e4					1.4	NO		bb		0.000
4	FUNCTION2 PFK	29.37	2.938e4					1.6	NO		db		0.000
5	FUNCTION2 PFK	29.34	3.957e4					1.9	NO		bd		0.000
6	FUNCTION2 PFK	29.26	6.431e4					2.2	NO		db		0.000
7	FUNCTION2 PFK	29.14	1.747e4					1.2	NO		bd		0.000
8	FUNCTION2 PFK	28.90	4.159e4					1.9	NO		bb		0.000
9	FUNCTION2 PFK	28.81	1.843e4					1.5	NO		bb		0.000
10	FUNCTION2 PFK	28.67	5.105e4					1.9	NO		bb		0.000
11	FUNCTION2 PFK	28.45	1.661e4					1.0	NO		bb		0.000
12	FUNCTION2 PFK	28.36	5.744e3					0.7	NO		bb		0.000
13	FUNCTION2 PFK	32.62	5.763e4					1.7	NO		bb		0.000
14	FUNCTION2 PFK	32.25	5.435e4					1.6	NO		bb		0.000
15	FUNCTION2 PFK	32.18	4.859e3					0.3	NO		bb		0.000
16	FUNCTION2 PFK	31.92	5.668e4					2.1	NO		bb		0.000
17	FUNCTION2 PFK	31.61	5.148e4					1.8	NO		bb		0.000
18	FUNCTION2 PFK	31.49	5.149e4					2.1	NO		bb		0.000
19	FUNCTION2 PFK	31.39	8.756e4					2.3	NO		db		0.000
20	FUNCTION2 PFK	31.28	7.330e4					2.3	NO		dd		0.000
21	FUNCTION2 PFK	31.15	3.432e4					1.7	NO		bd		0.000
22	FUNCTION2 PFK	30.93	3.201e4					1.3	NO		bb		0.000
23	FUNCTION2 PFK	30.71	1.137e4					0.8	NO		bb		0.000
24	FUNCTION2 PFK	30.64	1.873e3					0.3	NO		bb		0.000
25	FUNCTION2 PFK	30.49	3.055e4					1.7	NO		db		0.000
26	FUNCTION2 PFK	30.35	8.110e4					2.3	NO		bd		0.000
27	FUNCTION2 PFK	30.23	3.492e4					1.2	NO		bb		0.000
28	FUNCTION2 PFK	29.90	5.348e4					1.9	NO		bb		0.000
29	FUNCTION2 PFK	32.95	4.681e4					2.1	NO		db		0.000
30	FUNCTION2 PFK	32.89	7.269e3					0.7	NO		dd		0.000
31	FUNCTION2 PFK	32.80	5.090e4					1.3	NO		bd		0.000

ID: 20J0389-04, Name: 20112310, Date: 23-Nov-2020, Time: 17:07:37, Conditions: AUTOSPEC01, User: pk

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.72	2.284e4					1.7	NO		bd		0.000
2	FUNCTION3 PFK	34.64	5.360e4					2.7	NO		bb		0.000
3	FUNCTION3 PFK	34.54	1.055e4					0.9	NO		bb		0.000
4	FUNCTION3 PFK	34.29	5.550e4					1.9	NO		bb		0.000
5	FUNCTION3 PFK	34.19	5.138e4					2.1	NO		bb		0.000
6	FUNCTION3 PFK	34.06	4.647e4					1.5	NO		bb		0.000
7	FUNCTION3 PFK	33.83	2.740e3					0.5	NO		bb		0.000
8	FUNCTION3 PFK	33.63	4.572e4					2.0	NO		bb		0.000
9	FUNCTION3 PFK	33.53	4.292e4					1.4	NO		bb		0.000
10	FUNCTION3 PFK	33.21	2.070e3					0.4	NO		bb		0.000
11	FUNCTION3 PFK	33.17	5.092e3					0.9	NO		bb		0.000
12	FUNCTION3 PFK	33.11	7.985e3					0.7	NO		bb		0.000
13	FUNCTION3 PFK	37.92	3.247e4					1.5	NO		bb		0.000
14	FUNCTION3 PFK	37.48	5.289e4					2.0	NO		bb		0.000
15	FUNCTION3 PFK	36.89	3.081e4					1.3	NO		db		0.000
16	FUNCTION3 PFK	36.85	1.307e4					0.9	NO		dd		0.000
17	FUNCTION3 PFK	36.78	6.991e4					2.4	NO		dd		0.000
18	FUNCTION3 PFK	36.69	5.328e4					2.2	NO		dd		0.000
19	FUNCTION3 PFK	36.65	3.815e4					1.8	NO		bd		0.000
20	FUNCTION3 PFK	36.56	2.017e4					1.7	NO		db		0.000
21	FUNCTION3 PFK	36.53	2.273e4					1.4	NO		bd		0.000
22	FUNCTION3 PFK	36.00	5.572e4					2.2	NO		bb		0.000
23	FUNCTION3 PFK	35.66	2.038e4					1.6	NO		bb		0.000
24	FUNCTION3 PFK	35.54	3.470e4					1.4	NO		bb		0.000
25	FUNCTION3 PFK	35.44	6.576e4					2.3	NO		bb		0.000
26	FUNCTION3 PFK	34.98	5.541e4					2.6	NO		bb		0.000
27	FUNCTION3 PFK	34.75	2.146e4					1.3	NO		db		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	42.43	5.481e4					2.2	NO		bb		
2	FUNCTION4 PFK	41.98	3.631e4					1.8	NO		bb		
3	FUNCTION4 PFK	39.06	2.355e4					1.5	NO		bb		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.83	7.104e1					4.4	YES		bb		0.000
2	FUNCTION1 HXCD...	27.16	8.917e1					4.8	YES		bb		0.000
3	FUNCTION1 HXCD...	26.26	1.051e2					2.8	NO		bb		0.000
4	FUNCTION1 HXCD...	22.06	7.699e1					2.7	NO		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	22.77	1.820e2					2.0	NO		bb		0.000
2	FUNCTION1 HPCD...	22.45	7.445e1					1.3	NO		bb		0.000
3	FUNCTION1 HPCD...	22.28	1.152e2					2.2	NO		bb		0.000
4	FUNCTION1 HPCD...	22.18	1.101e2					1.4	NO		bb		0.000
5	FUNCTION1 HPCD...	22.06	7.560e1					1.7	NO		bb		0.000
6	FUNCTION1 HPCD...	21.48	9.771e1					1.8	NO		bb		0.000
7	FUNCTION1 HPCD...	27.81	1.125e2					1.4	NO		bb		0.000
8	FUNCTION1 HPCD...	26.97	9.908e1					1.2	NO		bb		0.000
9	FUNCTION1 HPCD...	26.59	2.527e2					4.1	YES		bb		0.000
10	FUNCTION1 HPCD...	25.91	1.661e2					2.0	NO		bb		0.000
11	FUNCTION1 HPCD...	24.93	7.410e1					1.7	NO		bb		0.000
12	FUNCTION1 HPCD...	24.49	3.023e2					2.5	NO		db		0.000
13	FUNCTION1 HPCD...	24.40	7.022e1					1.5	NO		bd		0.000
14	FUNCTION1 HPCD...	23.58	1.869e2					3.0	YES		db		0.000
15	FUNCTION1 HPCD...	23.51	1.820e2					2.9	NO		dd		0.000
16	FUNCTION1 HPCD...	23.43	2.738e2					4.2	YES		dd		0.000
17	FUNCTION1 HPCD...	23.40	1.827e2					4.1	YES		dd		0.000
18	FUNCTION1 HPCD...	23.31	1.488e2					1.8	NO		bd		0.000
19	FUNCTION1 HPCD...	23.19	1.530e2					2.2	NO		bb		0.000

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ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	29.32	2.022e2					3.5	YES		bb		0.000
2	FUNCTION2 HPCD...	28.28	1.152e2					2.5	NO		bb		0.000
3	FUNCTION2 HPCD...	32.62	8.091e1					1.8	NO		bb		0.000
4	FUNCTION2 HPCD...	32.21	1.217e2					2.1	NO		bb		0.000
5	FUNCTION2 HPCD...	32.01	1.073e2					2.2	NO		db		0.000
6	FUNCTION2 HPCD...	31.92	1.080e2					2.6	NO		bd		0.000
7	FUNCTION2 HPCD...	31.48	1.575e2					2.0	NO		bb		0.000
8	FUNCTION2 HPCD...	31.02	7.024e1					2.0	NO		bb		0.000
9	FUNCTION2 HPCD...	30.92	9.603e1					1.7	NO		bb		0.000
10	FUNCTION2 HPCD...	30.35	1.135e2					2.3	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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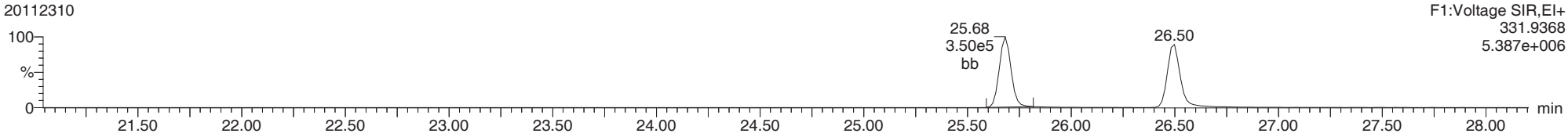
13C-1234-TCDD



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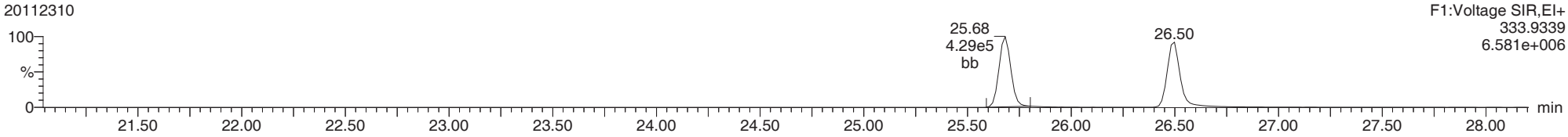

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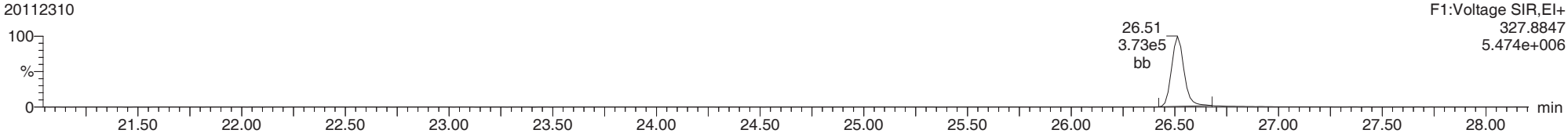

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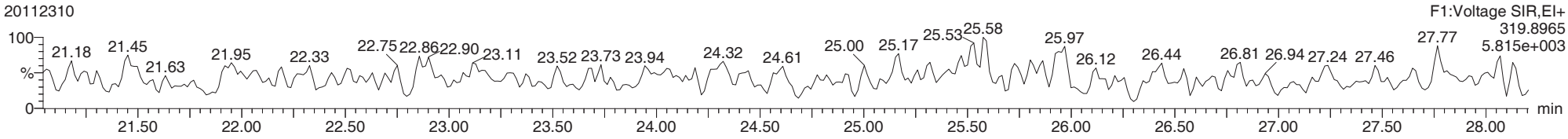

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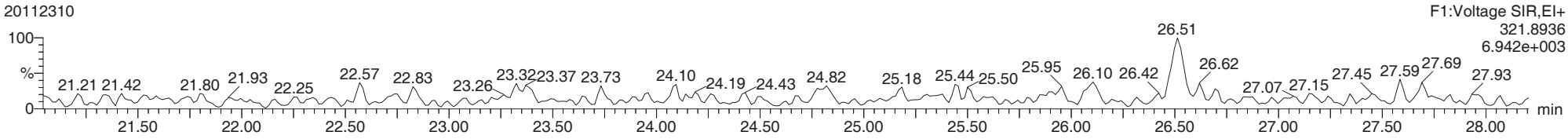

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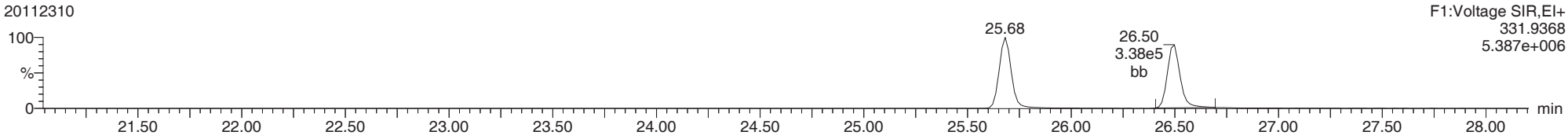

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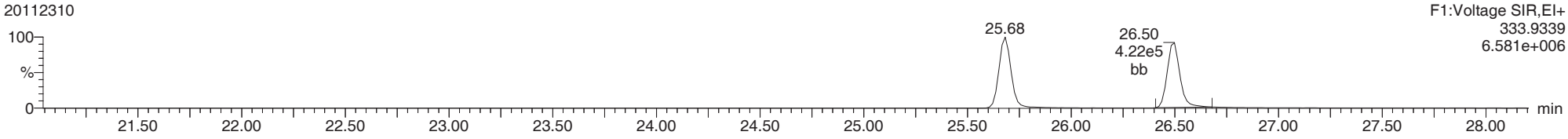

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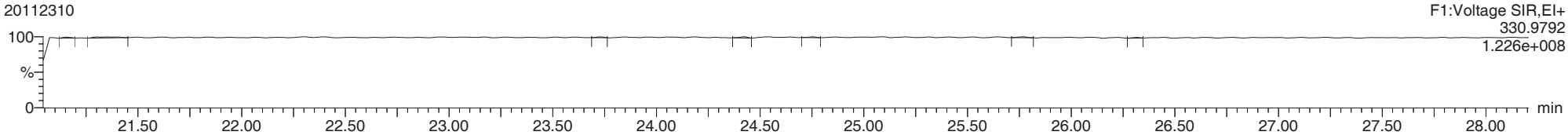

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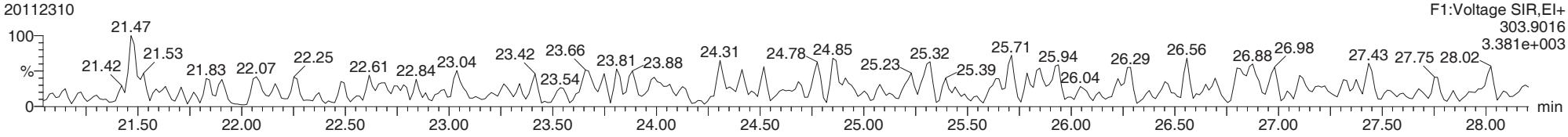
2378-TCDF



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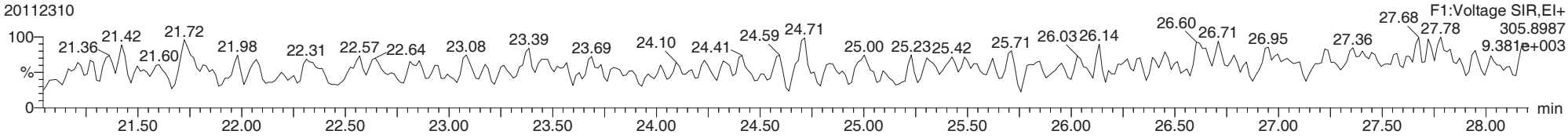

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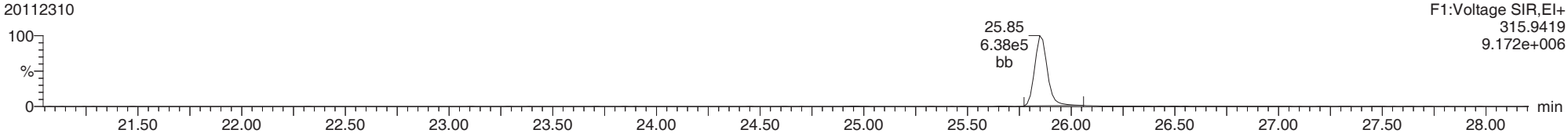

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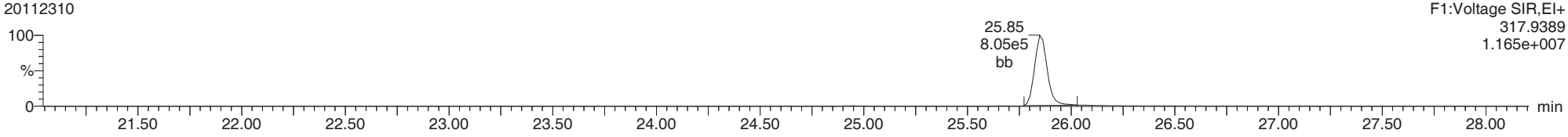

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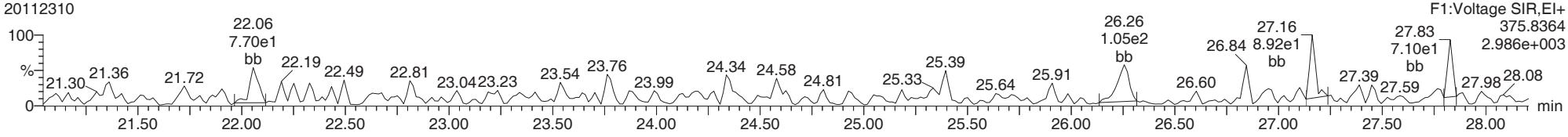

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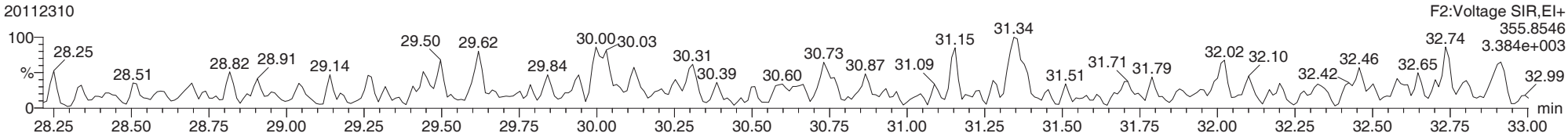
12378-PeCDD



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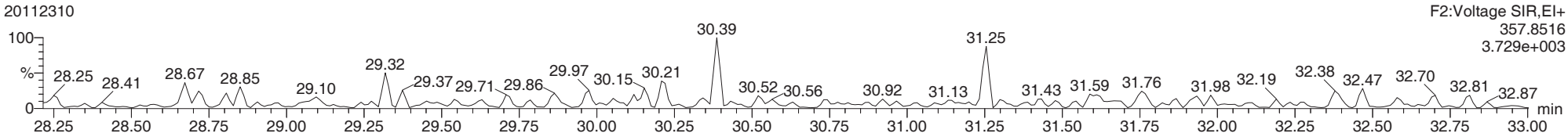

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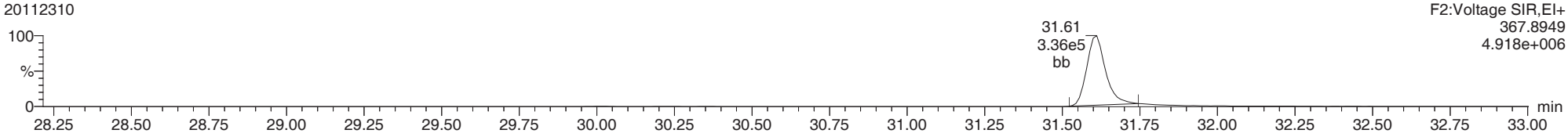

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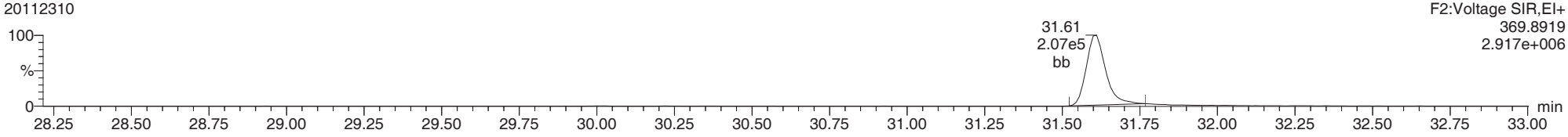
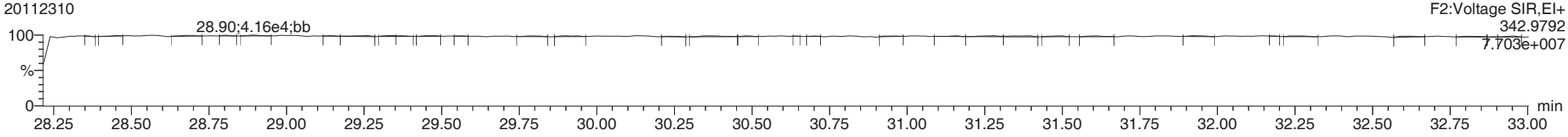


FUNCTION2 PFK



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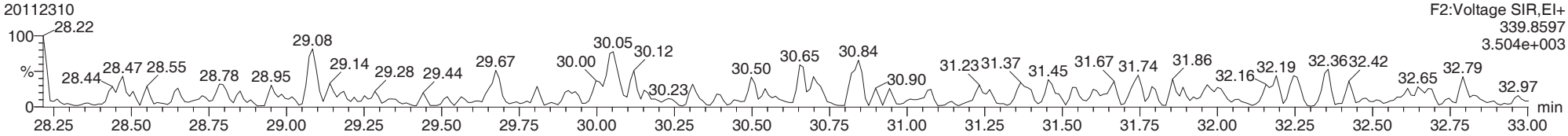

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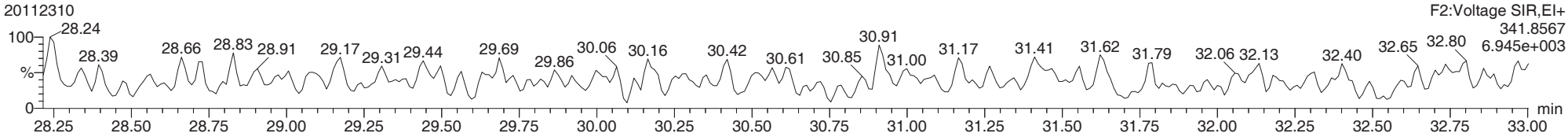

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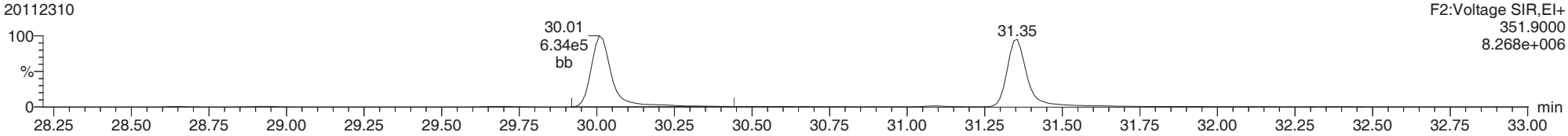

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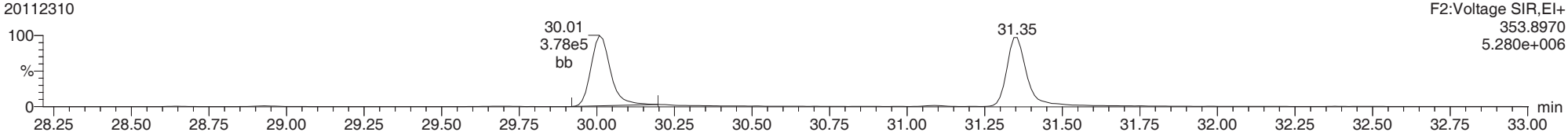
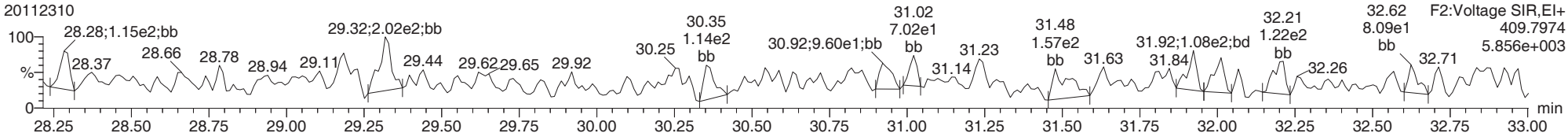


FUNCTION2 HPCDPE



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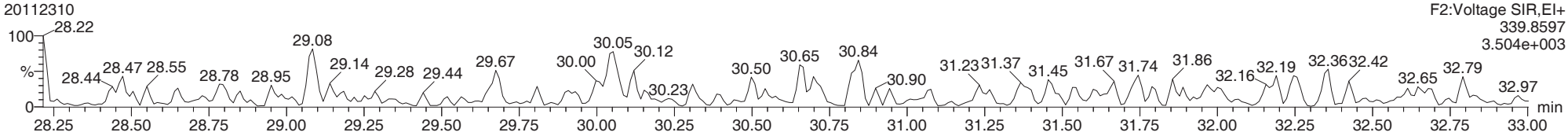
23478-PeCDF



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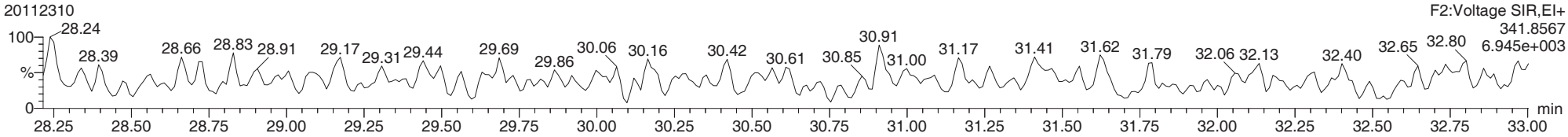

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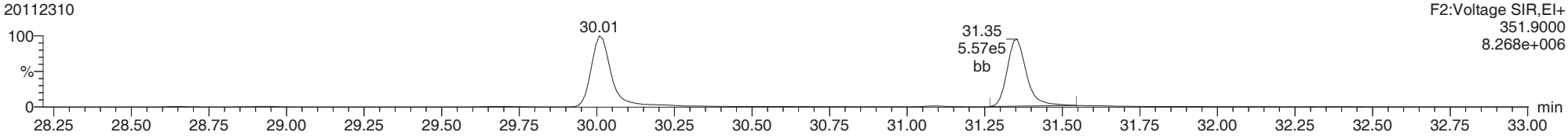

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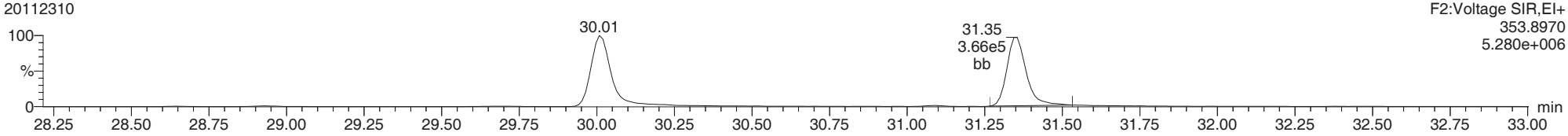

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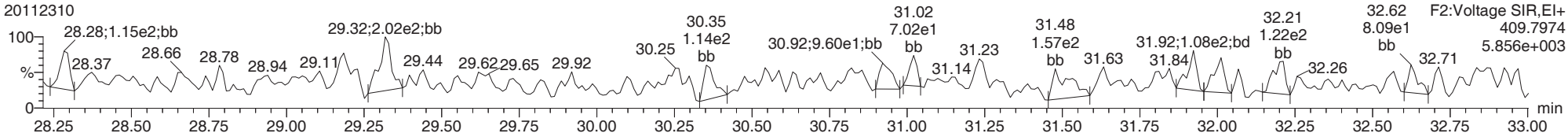

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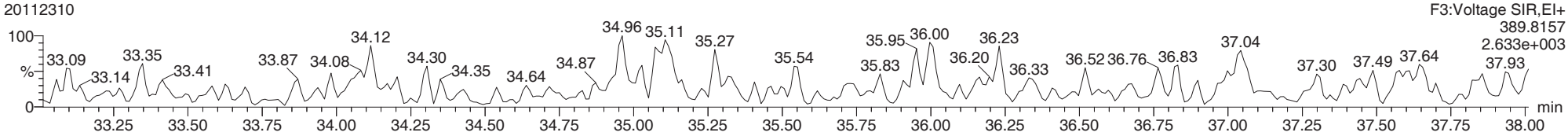
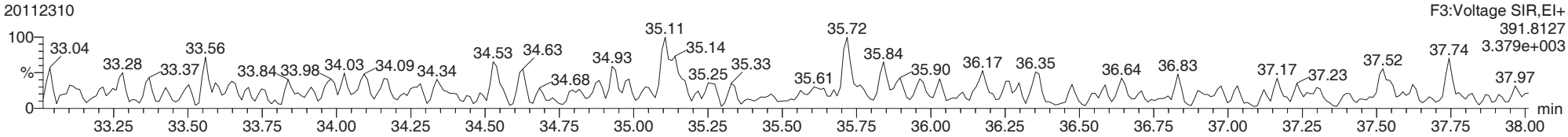
123478-HxCDD



123478-HxCDD



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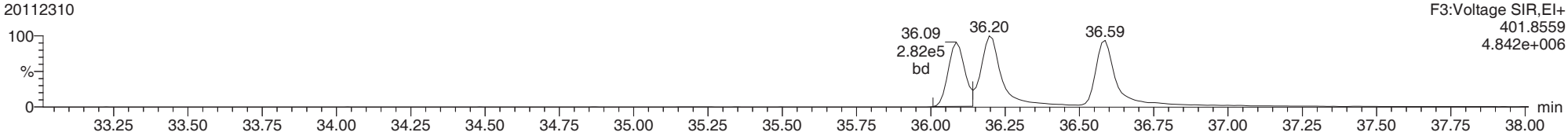

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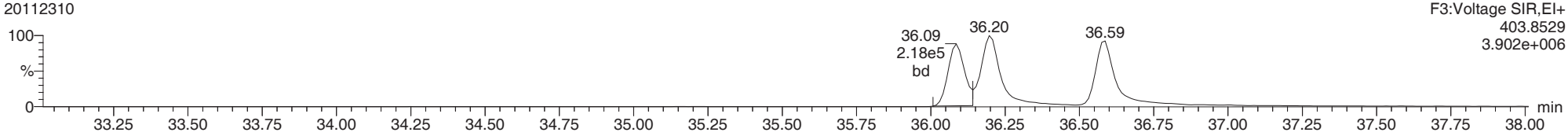

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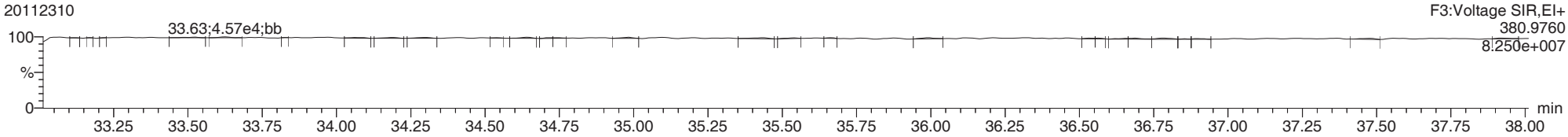

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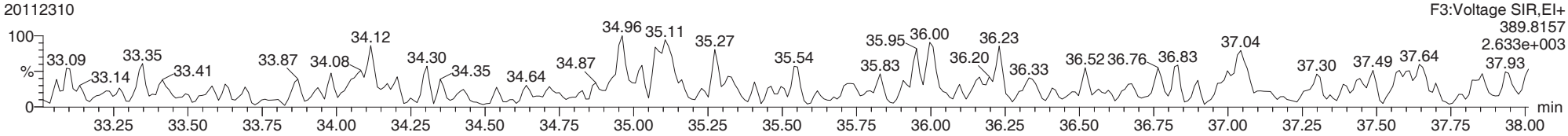

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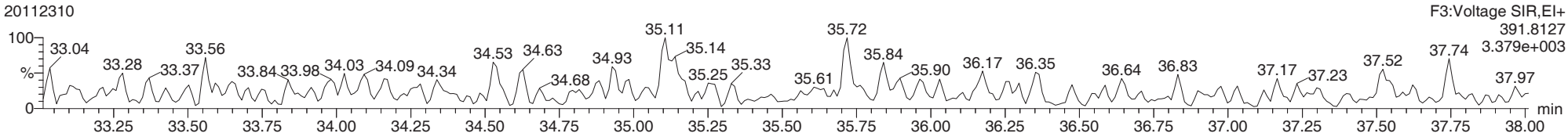

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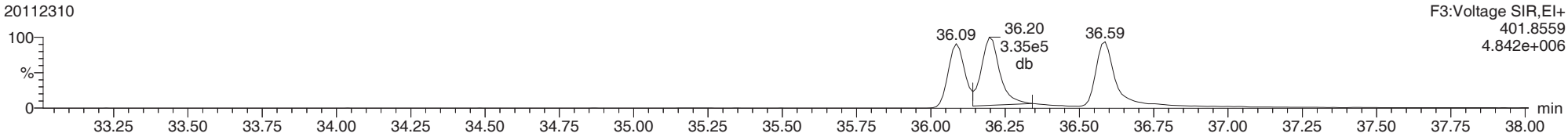

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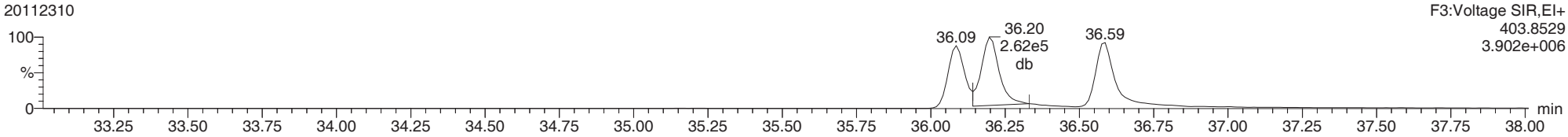

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ID: 20J0389-04, Name: 20112310, Date: 23-Nov-2020, Time: 17:07:37, Conditions: AUTOSPEC01, User: pk

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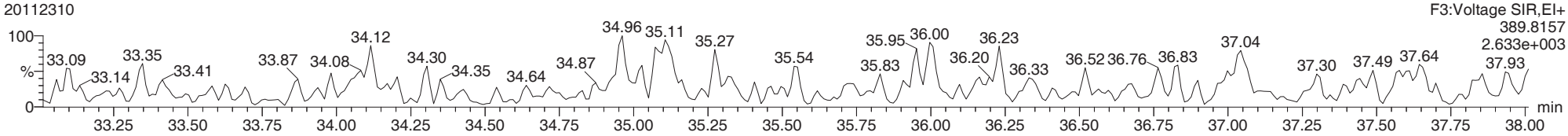

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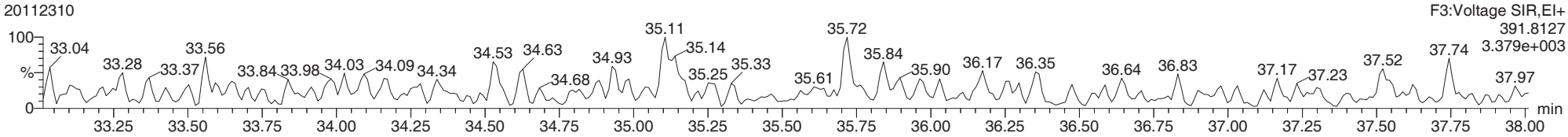

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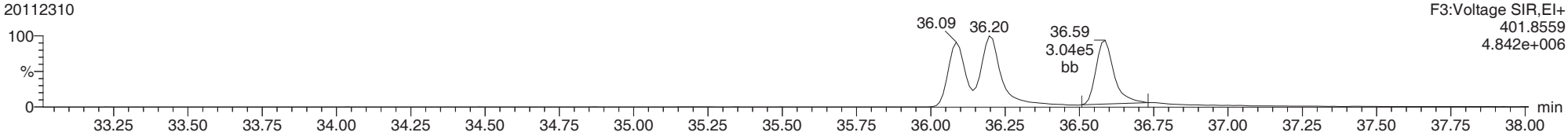

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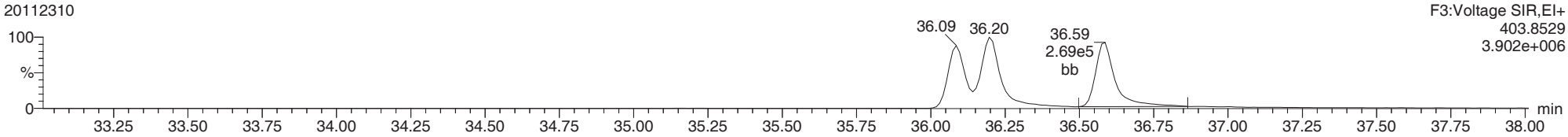

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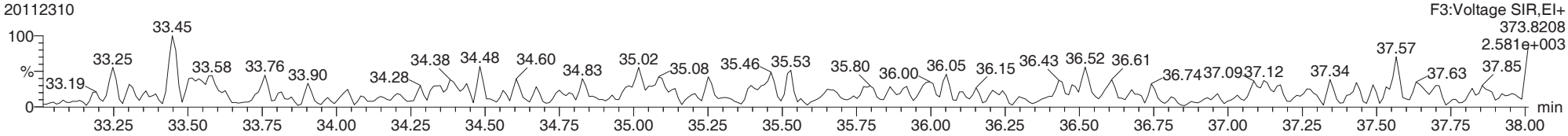
123478-HxCDF



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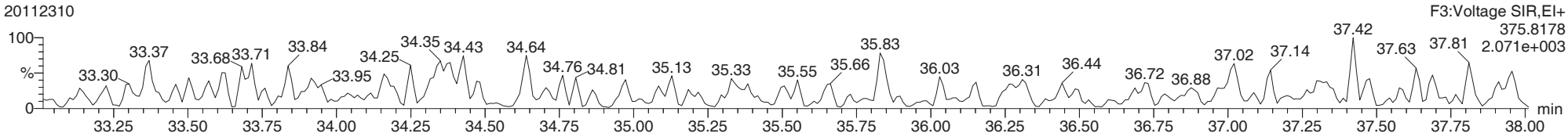

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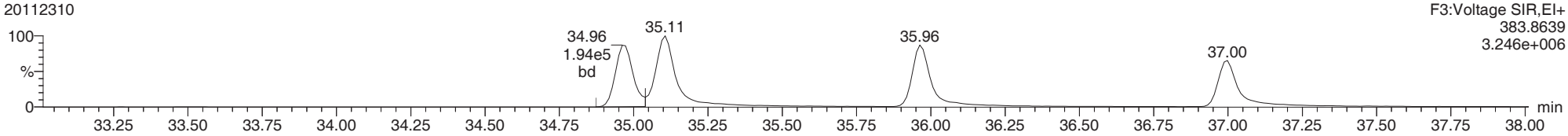

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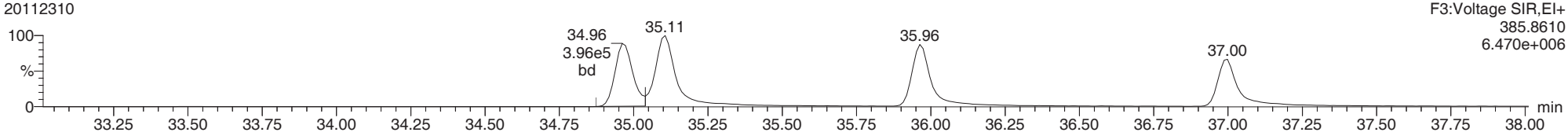

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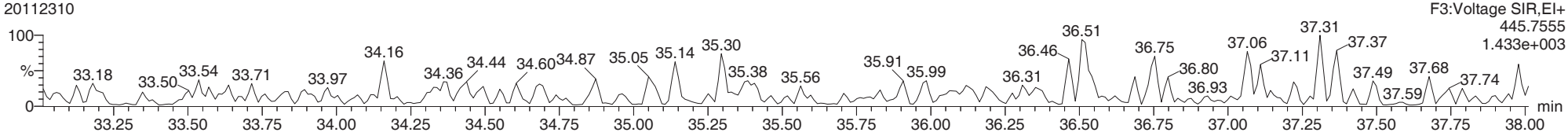

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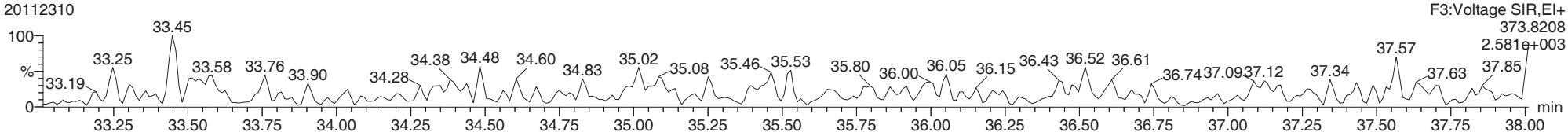
234678-HxCDF



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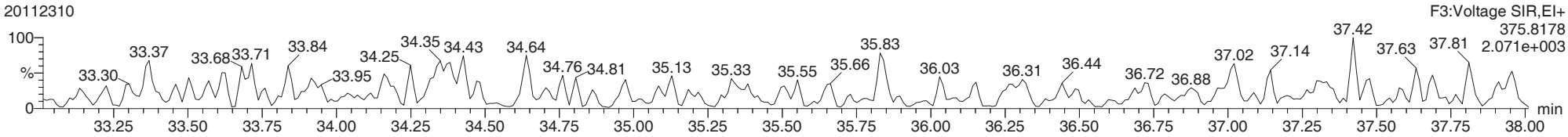

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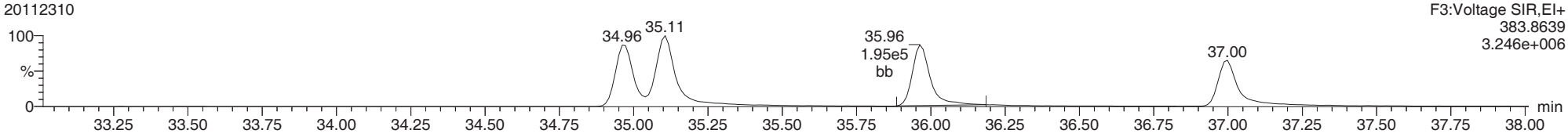

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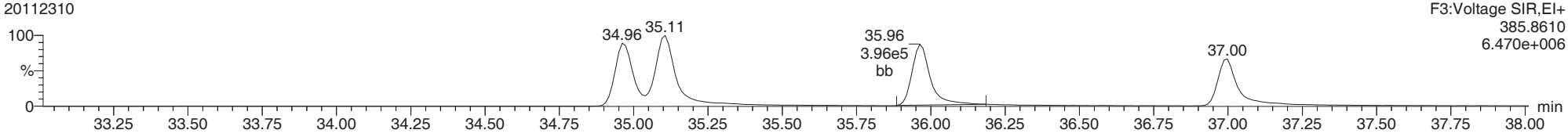

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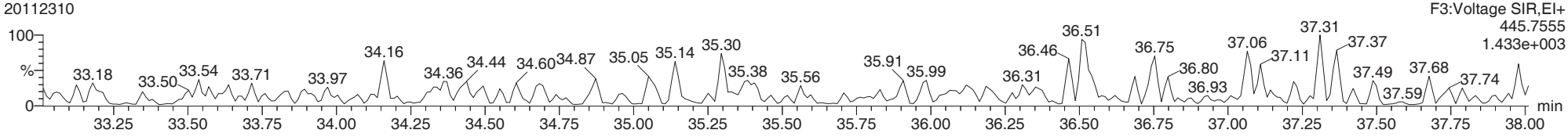

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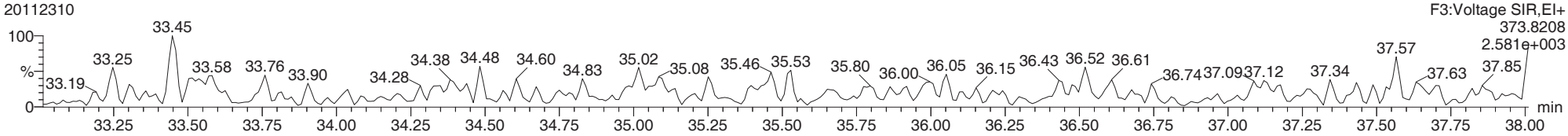

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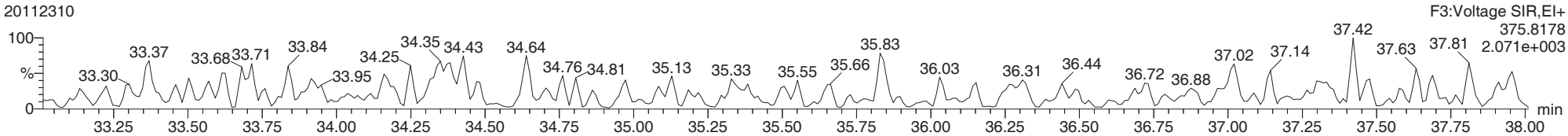

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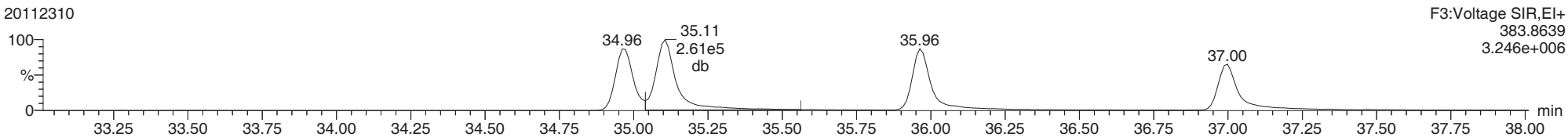

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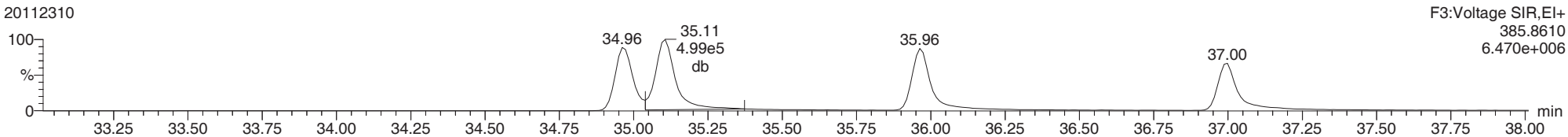

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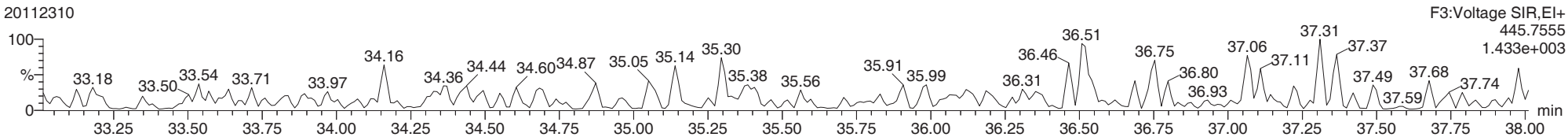

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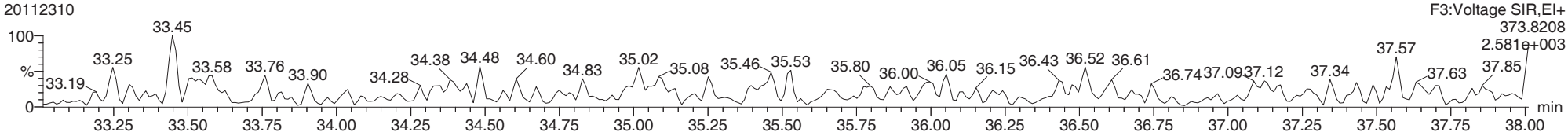

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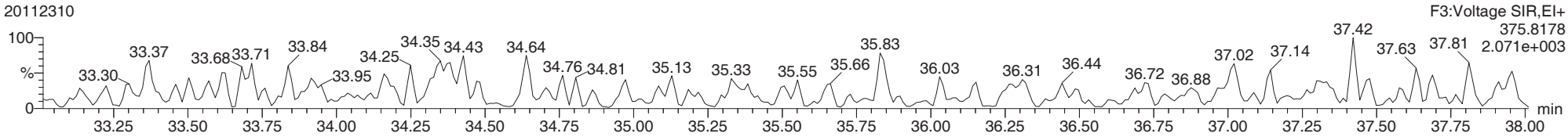

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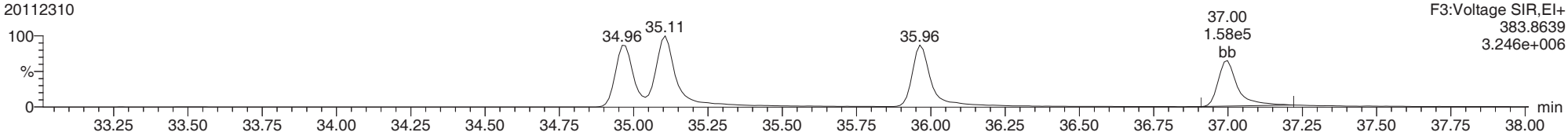

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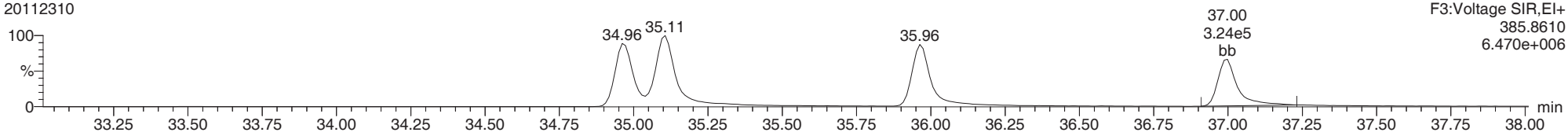

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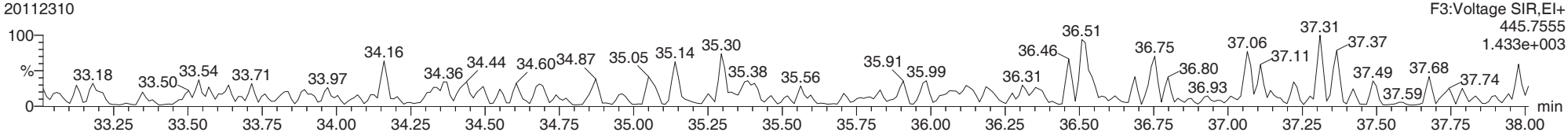

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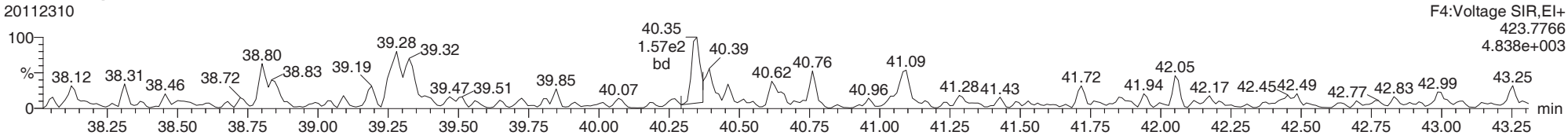

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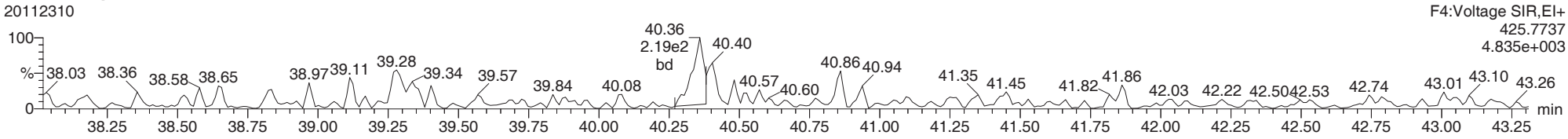

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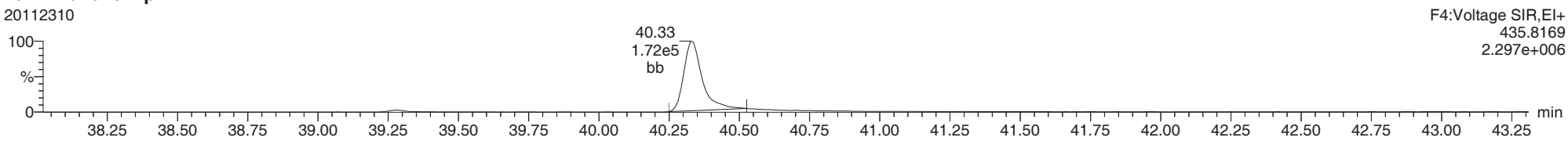

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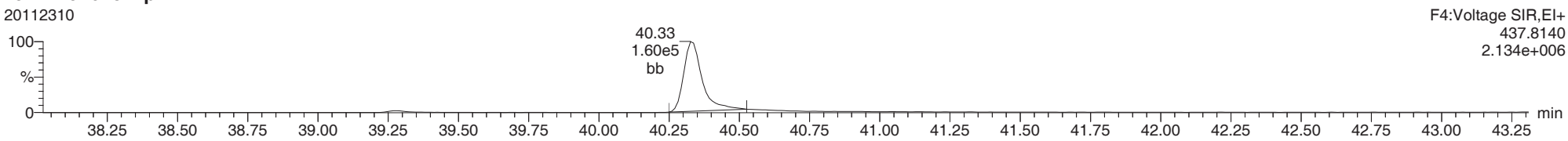

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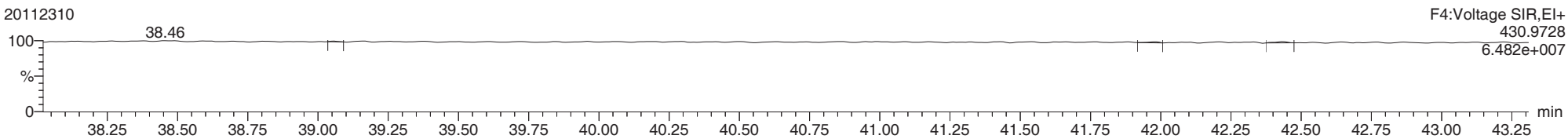

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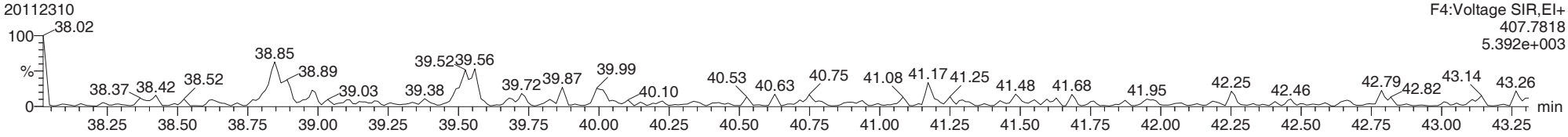

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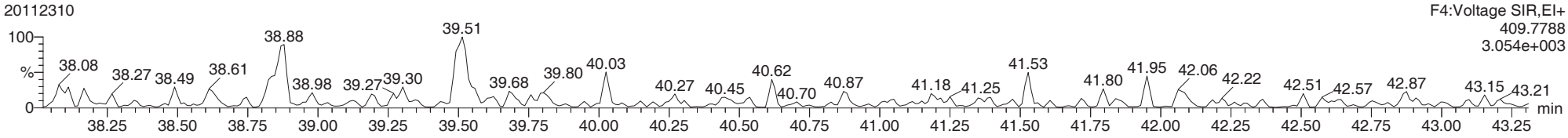

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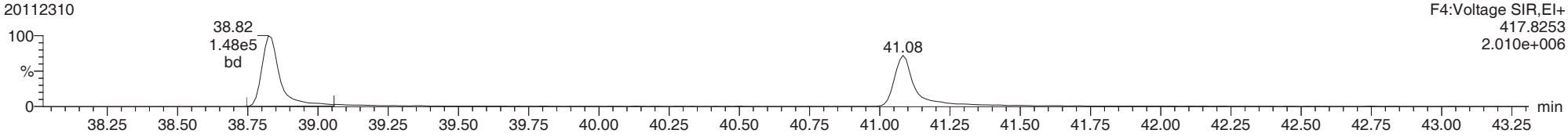

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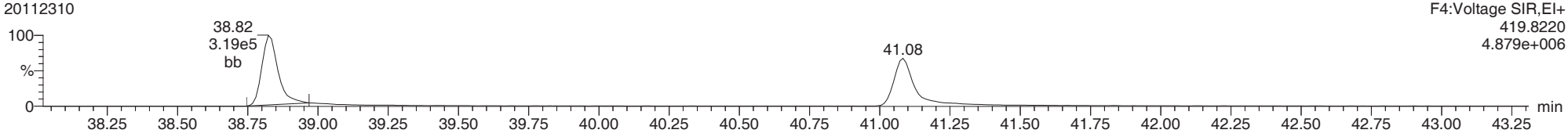

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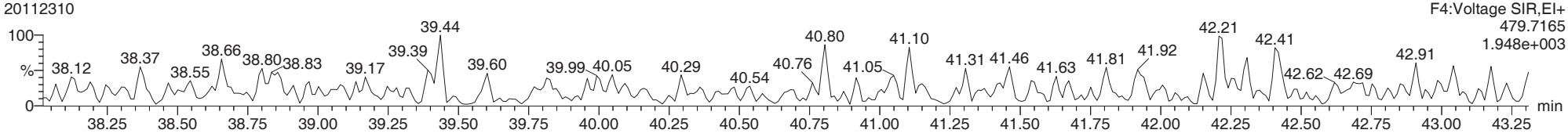

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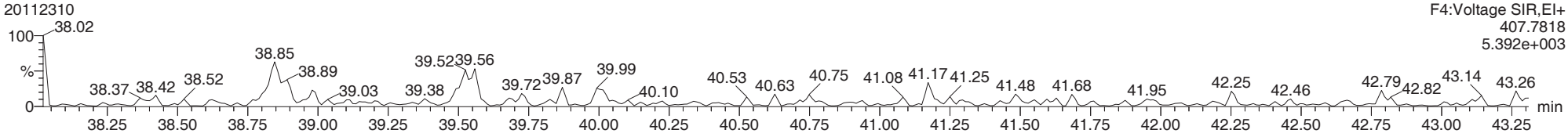

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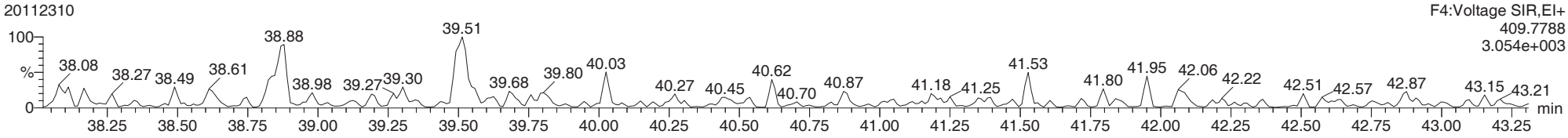

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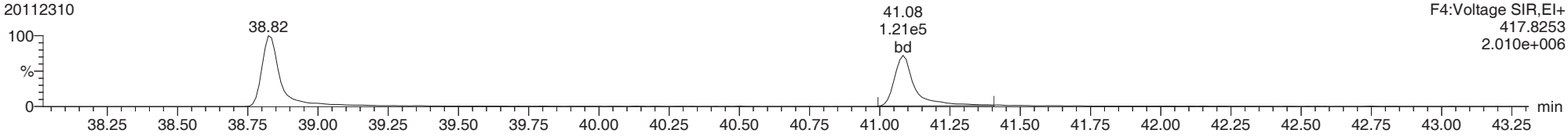

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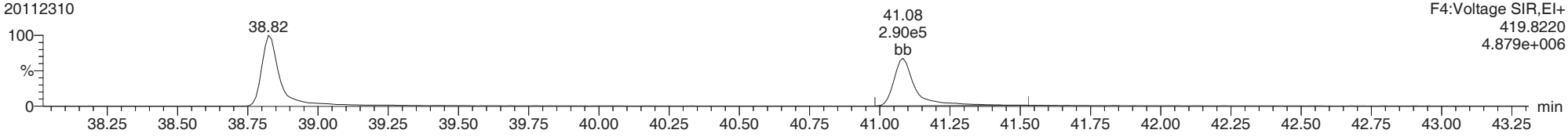

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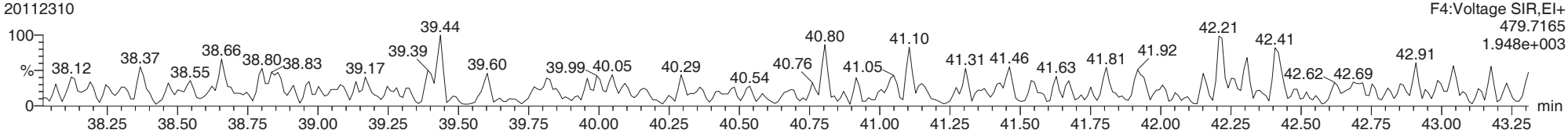

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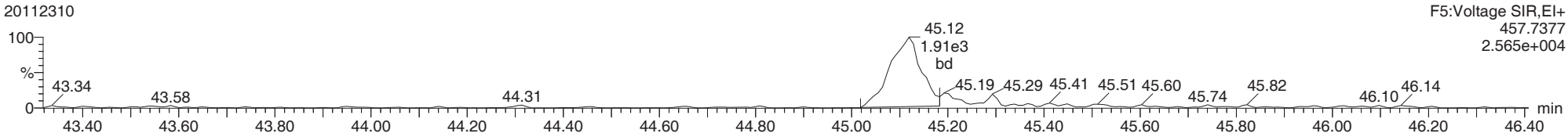
OCDD



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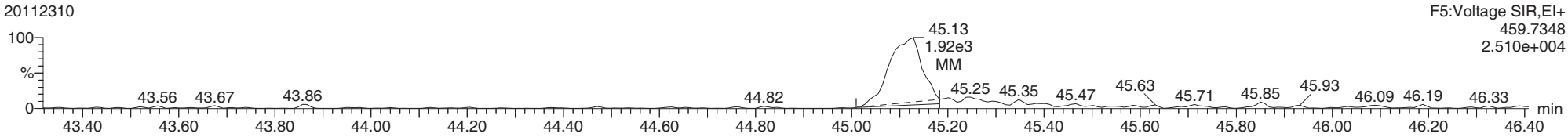

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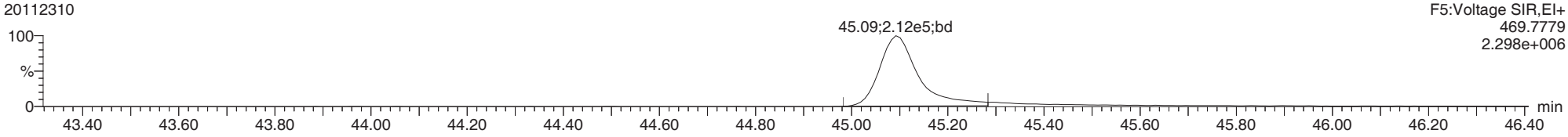

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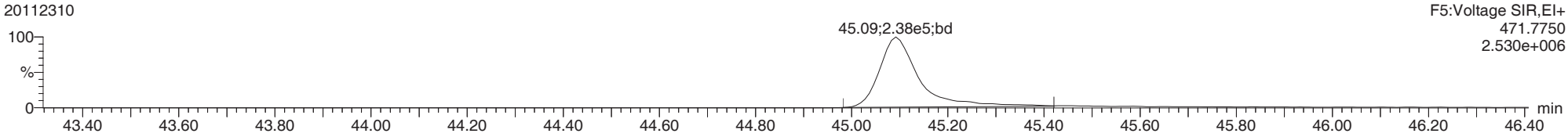

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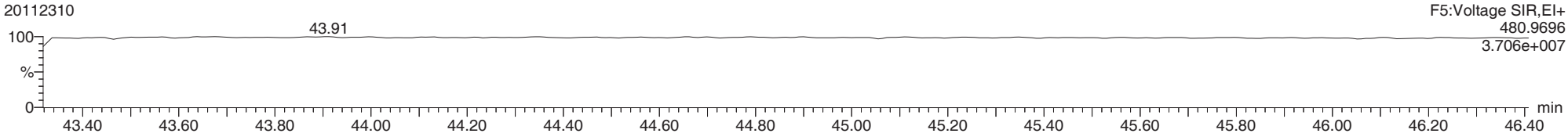

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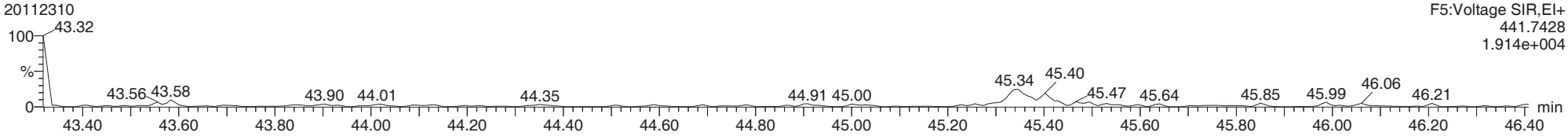
OCDF



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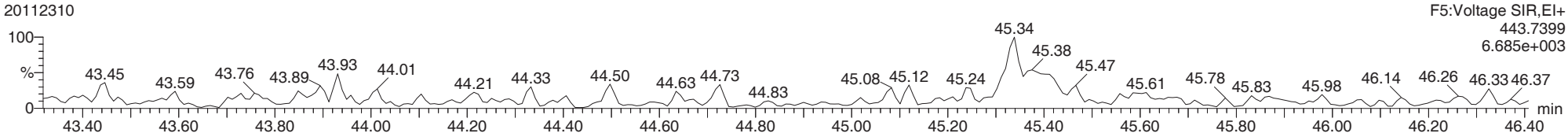

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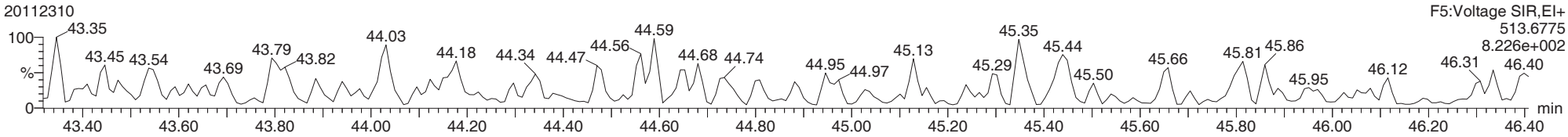

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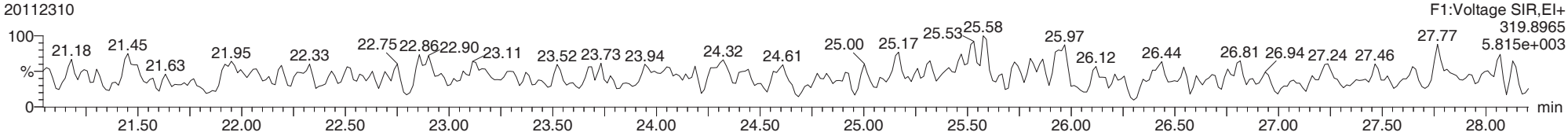
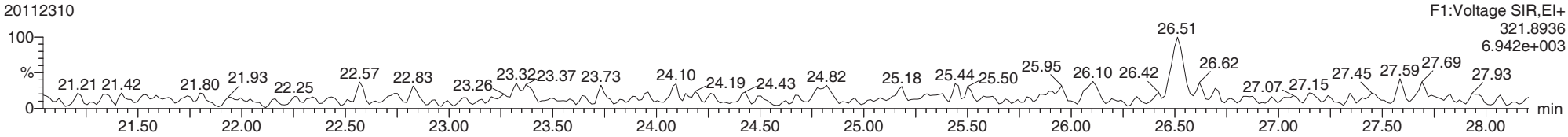
Total-tetradioxins



Total-tetradioxins



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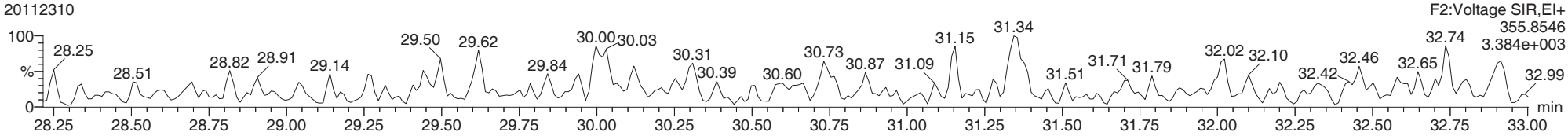
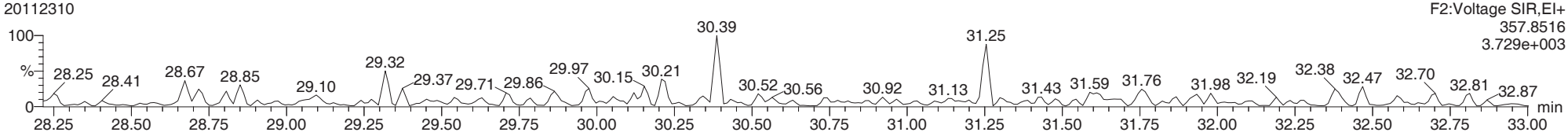
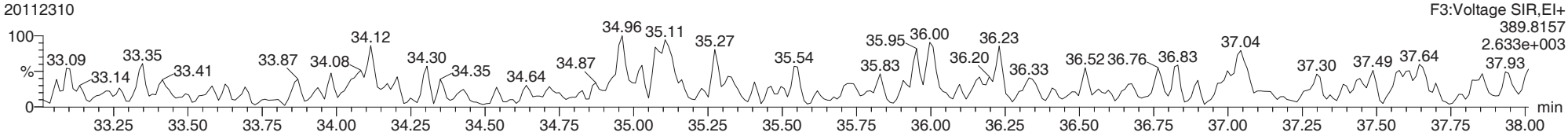


Total-pentadioxins

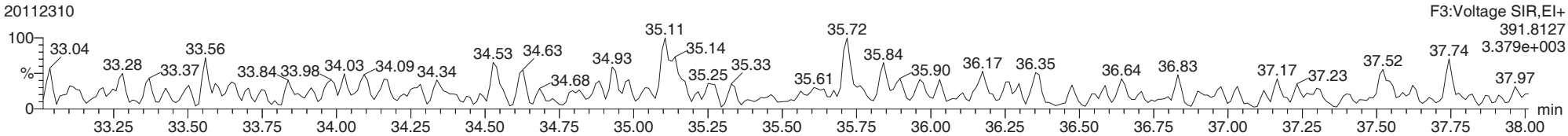


ID: 20J0389-04, Name: 20112310, Date: 23-Nov-2020, Time: 17:07:37, Conditions: AUTOSPEC01, User: pk

Total-hexadioxins



Total-hexadioxins



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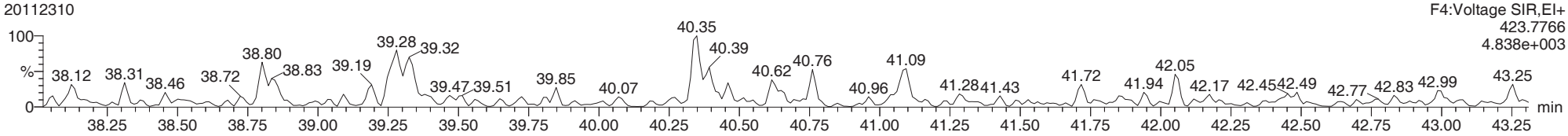
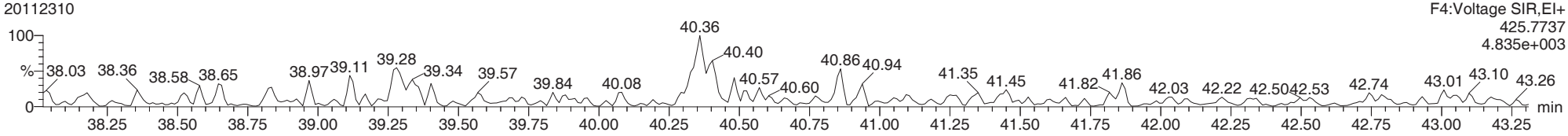
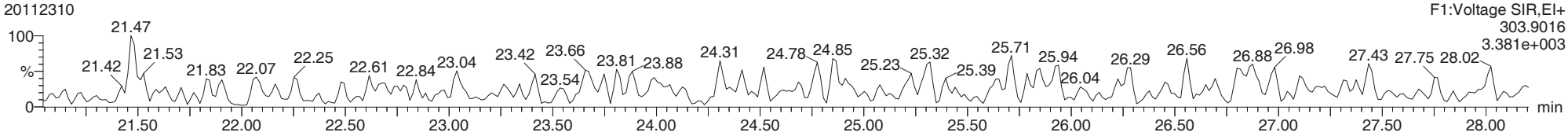


Total-heptadioxins

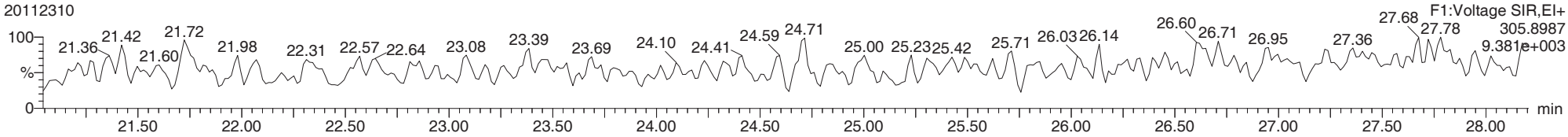


ID: 20J0389-04, Name: 20112310, Date: 23-Nov-2020, Time: 17:07:37, Conditions: AUTOSPEC01, User: pk

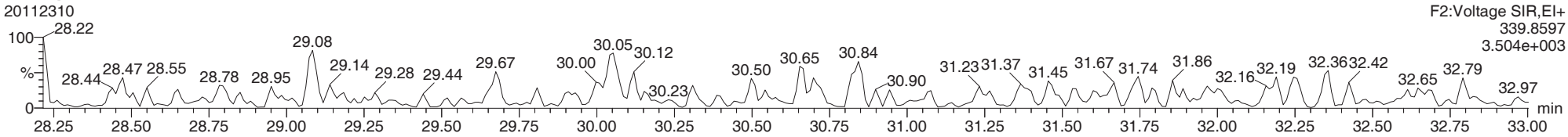
Total-tetrafurans



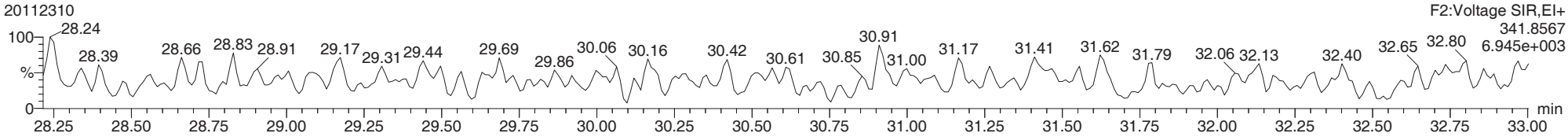
Total-tetrafurans



Total-pentafurans



Total-pentafurans



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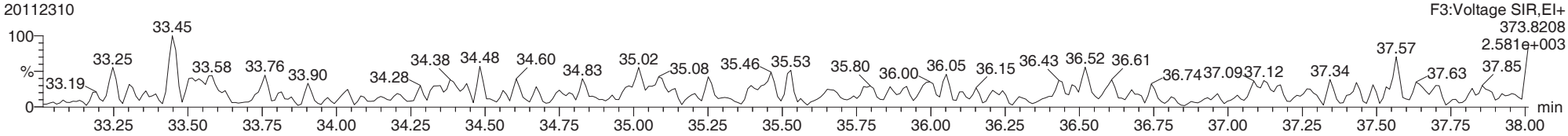
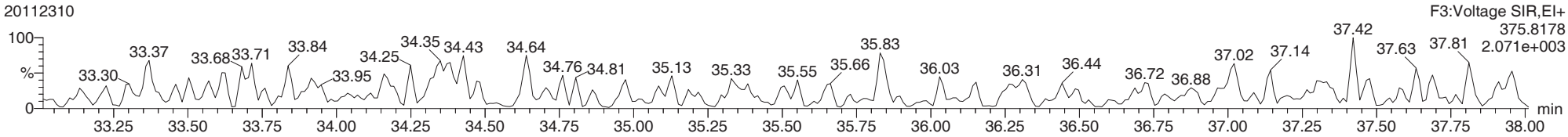
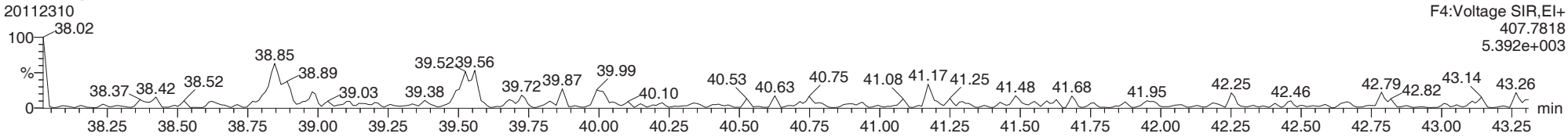
Total-hexafurans



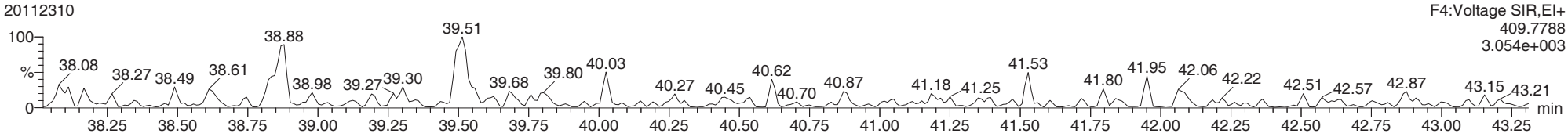
Total-hexafurans



Total-heptafurans



Total-heptafurans



MW-CP4-102720

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider				
Project:	Lora Lake Apartments				
Matrix:	Ground Water	Laboratory ID:	20J0389-05 A	File ID:	20112313
Sampled:	10/27/20 14:20	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 19:42
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1067 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	1.23	9.37	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	1.05	9.37	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.83	9.37	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	1.65	9.37	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	0.94	9.37	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.72	9.37	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.65	9.37	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.77	9.37	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	1.05	9.37	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	1.41	9.37	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	1.21	9.37	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	1.46	9.37	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1		0.893-1.208	0.60	9.37	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	0.96	9.37	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	0.767	0.893-1.208	1.82	9.37	2.57	pg/L	EMPC, J
39001-02-0	OCDF	1	0.825	0.757-1.024	3.72	18.7	5.93	pg/L	J
3268-87-9	OCDD	1	0.800	0.757-1.024	4.79	46.9	54.1	pg/L	B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.37	ND	pg/L
41903-57-5	Total TCDD	1	0.000			9.37	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			9.37	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			9.37	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			9.37	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			9.37	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			9.37	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			9.37	ND	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.044

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.75

MW-CP4-102720

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider			Project:	Lora Lake Apartments
Matrix:	Ground Water	Laboratory ID:	20J0389-05	File ID:	20112313
Sampled:	10/27/20 14:20	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 19:42
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1067 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.797	0.655-0.886	1.55	81.9	24 - 169 %	
13C12-2,3,7,8-TCDD		0.812	0.655-0.886	1.82	82.4	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.629	1.318-1.783	2.90	70.7	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.539	1.318-1.783	3.02	70.1	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.701	1.318-1.783	1.43	71.0	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.496	0.434-0.587	4.31	97.5	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.461	0.434-0.587	3.67	105	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.486	0.434-0.587	4.11	96.3	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.473	0.434-0.587	4.79	90.9	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.351	1.054-1.426	3.46	89.4	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.253	1.054-1.426	2.85	86.0	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.389	0.374-0.506	7.73	94.3	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.419	0.374-0.506	9.70	92.4	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.057	0.893-1.208	7.88	86.7	23 - 140 %	
13C12-OCDD		0.864	0.757-1.024	5.90	51.9	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		1.06	95.4	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:09:37 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-05, Name: 20112313, Date: 23-Nov-2020, Time: 19:42:21, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF					0.729		0.770	856	2207								
12378-PeCDF					0.779		1.550	643	2482								
23478-PeCDF					0.880		1.550	643	2482								
123478-HxCDF					0.880		1.240	505	418								
234678-HxCDF					0.863		1.240	505	418								
123678-HxCDF					0.853		1.240	505	418								
123789-HxCDF					0.780		1.240	505	418								
1234678-HpCDF					1.001		1.050	430	347								
1234789-HpCDF					0.994		1.050	430	347								
OCDF	45.329	1.005	3.219e2	3.901e2	1.158	0.825	0.890	872	757	4.85e3	5.06e3	5.6	6.7	NO	MM	MM	0.316
2378-TCDD					1.238		0.770	1526	854								
12378-PeCDD					0.988		1.550	797	377								
123478-HxCDD					0.842		1.240	683	850								
123678-HxCDD					0.907		1.240	683	850								
123789-HxCDD					0.784		1.240	683	850								
1234678-HpCDD	40.337	1.000	1.919e2	2.501e2	1.044	0.767	1.050	773	617	3.92e3	4.45e3	5.1	7.2	YES	MM	bb	0.137
OCDD	45.092	1.000	2.403e3	3.002e3	0.963	0.800	0.890	903	841	2.90e4	3.46e4	32.1	41.2	NO	bd	bd	2.886
13C-2378-TCDF	25.848	1.007	5.947e5	7.462e5	2.203	0.797	0.770	4041	2669	8.54e6	1.08e7	2113.5	4055.1	NO	bb	bb	81.926
13C-12378-PeCDF	30.008	1.169	5.663e5	3.476e5	1.741	1.629	1.550	5614	4277	7.63e6	4.88e6	1358.8	1141.4	NO	bd	bb	70.655
13C-23478-PeCDF	31.343	1.221	5.274e5	3.427e5	1.669	1.539	1.550	5614	4277	7.31e6	4.84e6	1302.7	1131.8	NO	bb	bb	70.150
13C-123478-HxCDF	34.961	0.956	1.826e5	3.680e5	1.022	0.496	0.510	2510	3230	2.71e6	5.34e6	1080.3	1653.7	NO	bd	bd	97.461
13C-123678-HxCDF	35.095	0.960	2.203e5	4.775e5	1.200	0.461	0.510	2510	3230	2.96e6	6.15e6	1178.7	1905.1	NO	db	db	105.227
13C-234678-HxCDF	35.963	0.983	1.866e5	3.836e5	1.071	0.486	0.510	2510	3230	2.55e6	5.29e6	1014.6	1636.5	NO	bb	bb	96.334
13C-123789-HxCDF	36.987	1.011	1.480e5	3.132e5	0.919	0.473	0.510	2510	3230	2.04e6	4.16e6	812.6	1287.7	NO	bb	bb	90.871
13C-1234678-HpCDF	38.823	1.061	1.326e5	3.407e5	0.909	0.389	0.440	4230	4924	2.05e6	4.75e6	484.1	964.9	NO	bb	bd	94.274
13C-1234789-HpCDF	41.072	1.123	1.092e5	2.604e5	0.724	0.419	0.440	4230	4924	1.35e6	3.08e6	319.7	625.2	NO	MM	MM	92.428
13C-1234-TCDD	25.667	0.000	3.349e5	4.081e5	1.000	0.821	0.770	2711	1497	4.97e6	6.06e6	1834.5	4049.3	NO	bb	bb	100.000
13C-2378-TCDD	26.482	1.032	3.244e5	3.993e5	1.181	0.812	0.770	2711	1497	4.63e6	5.63e6	1707.7	3758.2	NO	bb	bb	82.442
13C-12378-PeCDD	31.599	1.231	3.248e5	1.910e5	0.978	1.701	1.550	1551	1197	4.50e6	2.66e6	2900.2	2222.6	NO	bb	bb	70.996
13C-123478-HxCDD	36.074	0.986	2.739e5	2.027e5	0.965	1.351	1.240	2005	2342	4.16e6	3.25e6	2076.6	1389.4	NO	bd	bd	89.372
13C-123678-HxCDD	36.185	0.989	3.088e5	2.464e5	1.168	1.253	1.240	2005	2342	4.35e6	3.53e6	2172.3	1508.6	NO	db	db	86.014
13C-1234678-HpCDD	40.326	1.103	1.588e5	1.502e5	0.645	1.057	1.050	2891	3739	2.11e6	1.97e6	730.7	527.5	NO	bb	bb	86.660
13C-OCDD	45.083	1.233	1.804e5	2.086e5	0.678	0.864	0.890	2500	2713	1.97e6	2.21e6	788.6	813.7	NO	bb	bd	103.787
13C-123789-HxCDD	36.575	0.000	3.113e5	2.413e5	1.000	1.290	1.240	2005	2342	4.13e6	3.37e6	2060.2	1437.6	NO	bb	bb	100.000
37CL-2378-TCDD	26.513	1.033	3.585e5		1.264			2632		5.01e6		1901.9			bb		38.160

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:09:37 Pacific Standard Time

ID: 20J0389-05, Name: 20112313, Date: 23-Nov-2020, Time: 19:42:21, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	856	2207								
1289-TCDF					0.688		0.770	856	2207								
13468-PECDF					1.181		1.550	447	1217								
12389-PECDF					0.766		1.550	643	2482								
123468-HXCDF					1.003		1.240	505	418								
1368-TCDD					1.179		0.770	1526	854								
1289-TCDD					1.042		0.770	1526	854								
12479-PECDD					1.810		1.550	797	377								
12389-PECDD					1.165		1.550	797	377								
124679-HXCDD					1.056		1.240	683	850								
1234679-HPCDD	39.280	0.974	3.477e2	2.623e2	1.285	1.325	1.050	773	617	6.49e3	5.29e3	8.4	8.6	YES	bb	bd	0.154
Total-tetrafurans			0.000e0		0.754			856		0.00e0							
Total-penta1			0.000e0					447		0.00e0							
Total-pentafurans			0.000e0		0.809			643		0.00e0							
Total-hexafurans			0.000e0		0.876			505		0.00e0							
Total-heptafurans			0.000e0		0.997			430		0.00e0							
Total-Furans			3.219e2		0.893			856		4.85e3							0.316
Total-tetradioxins			0.000e0		1.153			1526		0.00e0							
Total-pentadioxins			0.000e0		1.321			797		0.00e0							
Total-hexadioxins			0.000e0		0.897			683		0.00e0							
Total-heptadioxins			0.000e0		1.165			773		0.00e0							
Total-Dioxins			2.403e3		1.100			1526		2.90e4							2.886
Total-TEQ			2.724e3					1526		3.38e4							3.202
FUNCTION1 PFK			5.525e6					772688		8.21e7							
FUNCTION2 PFK			7.367e5					398829		1.80e7							0.000
FUNCTION3 PFK			1.129e6					397492		2.18e7							0.000
FUNCTION4 PFK			1.013e6					313837		2.03e7							
FUNCTION5 PFK			7.459e3					179564		3.93e5							
FUNCTION1 HXCD...			2.307e2					366		6.97e3							0.000
FUNCTION1 HPCD...			1.621e3					1495		3.37e4							0.000
FUNCTION2 HPCD...			7.017e2					1424		2.02e4							0.000
FUNCTION3 OCDPE			0.000e0					374		0.00e0							
FUNCTION4 NCDPE			0.000e0					538		0.00e0							
FUNCTION5 DCDPE			0.000e0					282		0.00e0							

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-05, Name: 20112313, Date: 23-Nov-2020, Time: 19:42:21, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	OCDF	45.33	3.219e2	3.901e2	1.158	0.83	0.89	5.6	YES	NO	MM	MM	0.316

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	OCDD	45.09	2.403e3	3.002e3	0.963	0.80	0.89	32.1	YES	NO	bd	bd	2.886

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	OCDF	45.33	3.219e2	3.901e2	1.158	0.83	0.89	5.6	YES	NO	MM	MM	0.316
2	OCDD	45.09	2.403e3	3.002e3	0.963	0.80	0.89	32.1	YES	NO	bd	bd	2.886

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.62	1.364e5					1.8	NO		dd		
2	FUNCTION1 PFK	21.51	1.778e5					2.2	NO		dd		
3	FUNCTION1 PFK	21.39	1.106e5					2.3	NO		dd		
4	FUNCTION1 PFK	21.30	1.222e5					2.3	NO		bd		
5	FUNCTION1 PFK	21.18	1.058e5					2.1	NO		bb		
6	FUNCTION1 PFK	23.22	9.362e4					1.7	NO		dd		
7	FUNCTION1 PFK	23.10	1.477e5					2.7	NO		dd		
8	FUNCTION1 PFK	22.98	8.544e4					1.7	NO		dd		
9	FUNCTION1 PFK	22.87	1.060e5					2.1	NO		dd		
10	FUNCTION1 PFK	22.75	1.291e5					2.3	NO		dd		
11	FUNCTION1 PFK	22.66	6.147e4					1.9	NO		dd		
12	FUNCTION1 PFK	22.61	4.031e4					1.1	NO		bd		
13	FUNCTION1 PFK	22.52	7.500e4					1.7	NO		db		
14	FUNCTION1 PFK	22.40	9.306e4					1.9	NO		bd		
15	FUNCTION1 PFK	22.31	3.911e4					1.2	NO		bb		
16	FUNCTION1 PFK	22.19	6.864e4					1.5	NO		db		
17	FUNCTION1 PFK	22.09	6.647e4					1.5	NO		dd		
18	FUNCTION1 PFK	22.03	4.022e4					1.0	NO		dd		
19	FUNCTION1 PFK	21.95	7.849e4					1.6	NO		dd		
20	FUNCTION1 PFK	21.86	9.427e4					1.6	NO		dd		
21	FUNCTION1 PFK	21.74	1.111e5					1.8	NO		dd		
22	FUNCTION1 PFK	25.00	5.418e4					1.7	NO		bd		
23	FUNCTION1 PFK	24.90	8.540e4					1.9	NO		db		
24	FUNCTION1 PFK	24.79	1.684e5					2.8	NO		dd		
25	FUNCTION1 PFK	24.71	7.179e4					2.3	NO		dd		
26	FUNCTION1 PFK	24.68	9.758e4					2.5	NO		dd		
27	FUNCTION1 PFK	24.58	1.817e5					3.0	NO		dd		
28	FUNCTION1 PFK	24.46	1.372e5					2.4	NO		dd		
29	FUNCTION1 PFK	24.34	1.124e5					1.8	NO		dd		
30	FUNCTION1 PFK	24.25	2.632e4					1.1	NO		bd		
31	FUNCTION1 PFK	24.00	1.046e4					0.4	NO		bb		
32	FUNCTION1 PFK	23.88	5.073e4					1.2	NO		bb		
33	FUNCTION1 PFK	23.79	4.428e4					1.4	NO		bb		
34	FUNCTION1 PFK	23.67	5.250e4					1.1	NO		db		
35	FUNCTION1 PFK	23.57	1.351e5					2.4	NO		dd		
36	FUNCTION1 PFK	23.45	1.441e5					2.2	NO		dd		
37	FUNCTION1 PFK	23.32	1.479e5					2.8	NO		dd		

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	27.04	1.155e5					1.9	NO		dd		
39	FUNCTION1 PFK	26.94	9.538e4					2.0	NO		bd		
40	FUNCTION1 PFK	26.81	1.197e5					1.9	NO		db		
41	FUNCTION1 PFK	26.66	1.806e4					0.6	NO		dd		
42	FUNCTION1 PFK	26.57	5.620e4					1.3	NO		bd		
43	FUNCTION1 PFK	26.48	1.322e4					0.6	NO		bb		
44	FUNCTION1 PFK	26.26	2.907e4					1.0	NO		bb		
45	FUNCTION1 PFK	26.15	6.940e4					1.3	NO		bb		
46	FUNCTION1 PFK	26.01	5.661e4					1.4	NO		db		
47	FUNCTION1 PFK	25.91	1.076e5					1.6	NO		dd		
48	FUNCTION1 PFK	25.82	3.226e4					1.0	NO		dd		
49	FUNCTION1 PFK	25.70	8.803e4					1.5	NO		bd		
50	FUNCTION1 PFK	25.55	1.034e5					1.4	NO		db		
51	FUNCTION1 PFK	25.47	5.736e4					1.2	NO		bd		
52	FUNCTION1 PFK	25.24	5.101e4					1.2	NO		db		
53	FUNCTION1 PFK	25.11	1.667e5					2.3	NO		dd		
54	FUNCTION1 PFK	28.17	3.720e4					1.0	NO		bb		
55	FUNCTION1 PFK	28.04	9.554e4					1.8	NO		db		
56	FUNCTION1 PFK	27.93	5.778e4					1.0	NO		bd		
57	FUNCTION1 PFK	27.81	1.089e5					2.0	NO		db		
58	FUNCTION1 PFK	27.71	1.272e5					2.3	NO		dd		
59	FUNCTION1 PFK	27.62	9.964e4					2.0	NO		dd		
60	FUNCTION1 PFK	27.51	6.822e4					1.3	NO		dd		
61	FUNCTION1 PFK	27.37	1.175e5					1.3	NO		dd		
62	FUNCTION1 PFK	27.25	1.961e4					0.7	NO		dd		
63	FUNCTION1 PFK	27.16	1.112e5					1.7	NO		dd		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.06	2.705e4					1.7	NO		bb		0.000
2	FUNCTION2 PFK	28.94	1.872e4					1.2	NO		bb		0.000
3	FUNCTION2 PFK	28.85	1.254e4					1.1	NO		bb		0.000
4	FUNCTION2 PFK	28.79	1.703e3					0.4	NO		bb		0.000
5	FUNCTION2 PFK	28.72	2.902e4					1.6	NO		bb		0.000
6	FUNCTION2 PFK	32.18	2.949e3					0.5	NO		bd		0.000
7	FUNCTION2 PFK	32.13	4.278e3					0.6	NO		bb		0.000
8	FUNCTION2 PFK	32.02	2.407e4					1.7	NO		bb		0.000
9	FUNCTION2 PFK	31.91	1.355e4					1.4	NO		bb		0.000
10	FUNCTION2 PFK	31.68	3.717e4					2.1	NO		bb		0.000
11	FUNCTION2 PFK	31.45	6.178e4					3.0	YES		bb		0.000
12	FUNCTION2 PFK	31.23	1.915e4					1.2	NO		bb		0.000
13	FUNCTION2 PFK	30.05	9.470e3					0.9	NO		db		0.000
14	FUNCTION2 PFK	30.00	4.681e4					2.3	NO		bd		0.000
15	FUNCTION2 PFK	29.87	6.257e4					2.7	NO		db		0.000
16	FUNCTION2 PFK	29.76	3.023e4					1.8	NO		dd		0.000
17	FUNCTION2 PFK	29.72	1.576e4					1.6	NO		bd		0.000
18	FUNCTION2 PFK	29.66	1.053e4					1.0	NO		db		0.000
19	FUNCTION2 PFK	29.63	2.117e4					1.9	NO		bd		0.000
20	FUNCTION2 PFK	29.53	1.686e4					1.0	NO		bb		0.000
21	FUNCTION2 PFK	29.30	4.616e4					1.7	NO		bb		0.000
22	FUNCTION2 PFK	32.89	6.187e4					3.0	NO		db		0.000
23	FUNCTION2 PFK	32.80	4.795e4					2.4	NO		bd		0.000
24	FUNCTION2 PFK	32.58	1.741e4					1.4	NO		bb		0.000
25	FUNCTION2 PFK	32.50	3.355e3					0.6	NO		db		0.000
26	FUNCTION2 PFK	32.46	2.005e4					1.5	NO		dd		0.000
27	FUNCTION2 PFK	32.41	2.519e3					0.5	NO		bd		0.000
28	FUNCTION2 PFK	32.33	6.121e4					3.1	YES		bb		0.000
29	FUNCTION2 PFK	32.21	1.076e4					1.1	NO		db		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.95	2.724e4					1.4	NO		bb		0.000
2	FUNCTION3 PFK	33.81	2.799e4					2.2	NO		bb		0.000
3	FUNCTION3 PFK	33.71	4.010e4					2.6	NO		db		0.000
4	FUNCTION3 PFK	33.67	1.179e4					1.3	NO		bd		0.000
5	FUNCTION3 PFK	33.59	3.706e4					2.2	NO		bb		0.000
6	FUNCTION3 PFK	33.26	7.966e4					3.8	YES		bb		0.000
7	FUNCTION3 PFK	33.14	5.534e4					2.0	NO		bb		0.000
8	FUNCTION3 PFK	37.33	2.500e4					1.8	NO		dd		0.000
9	FUNCTION3 PFK	37.31	1.826e4					1.8	NO		bd		0.000
10	FUNCTION3 PFK	37.20	8.993e4					3.2	YES		db		0.000
11	FUNCTION3 PFK	37.11	6.109e4					3.0	NO		bd		0.000
12	FUNCTION3 PFK	36.65	1.091e5					2.8	NO		bb		0.000
13	FUNCTION3 PFK	36.44	3.921e4					2.5	NO		bb		0.000
14	FUNCTION3 PFK	36.20	2.935e4					1.9	NO		bb		0.000
15	FUNCTION3 PFK	36.11	3.958e4					2.2	NO		bb		0.000
16	FUNCTION3 PFK	35.65	3.653e4					1.8	NO		db		0.000
17	FUNCTION3 PFK	35.54	1.885e4					1.0	NO		bd		0.000
18	FUNCTION3 PFK	35.29	3.999e4					2.3	NO		db		0.000
19	FUNCTION3 PFK	35.17	6.353e4					2.0	NO		bd		0.000
20	FUNCTION3 PFK	34.93	4.617e4					2.0	NO		bb		0.000
21	FUNCTION3 PFK	34.72	3.535e4					2.0	NO		db		0.000
22	FUNCTION3 PFK	34.60	8.764e4					3.1	YES		bd		0.000
23	FUNCTION3 PFK	34.04	6.065e4					3.0	YES		bb		0.000
24	FUNCTION3 PFK	37.92	5.653e3					0.7	NO		bb		0.000
25	FUNCTION3 PFK	37.44	4.377e4					1.9	NO		db		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	40.48	1.847e4					2.2	NO		bd		
2	FUNCTION4 PFK	40.26	5.420e4					2.8	NO		bb		
3	FUNCTION4 PFK	40.16	4.932e4					2.4	NO		db		
4	FUNCTION4 PFK	40.06	3.655e4					2.4	NO		bd		
5	FUNCTION4 PFK	39.38	3.579e4					2.1	NO		bb		
6	FUNCTION4 PFK	39.26	3.311e4					2.2	NO		bb		
7	FUNCTION4 PFK	39.06	4.236e4					2.3	NO		bb		
8	FUNCTION4 PFK	38.92	3.263e4					1.9	NO		db		
9	FUNCTION4 PFK	38.80	6.770e4					3.3	YES		bd		
10	FUNCTION4 PFK	38.57	4.301e3					0.7	NO		bb		
11	FUNCTION4 PFK	38.46	4.880e4					2.7	NO		db		
12	FUNCTION4 PFK	38.36	5.005e4					2.7	NO		bd		
13	FUNCTION4 PFK	38.10	4.627e4					2.9	NO		bb		
14	FUNCTION4 PFK	43.09	3.493e4					2.3	NO		bb		
15	FUNCTION4 PFK	42.99	6.479e4					3.1	YES		db		
16	FUNCTION4 PFK	42.88	3.304e4					1.9	NO		bd		
17	FUNCTION4 PFK	42.65	2.919e4					2.3	NO		bb		
18	FUNCTION4 PFK	42.30	2.549e4					2.2	NO		bb		
19	FUNCTION4 PFK	42.08	5.881e3					1.0	NO		bb		
20	FUNCTION4 PFK	41.96	3.390e4					1.8	NO		db		
21	FUNCTION4 PFK	41.85	2.883e4					2.4	NO		bd		
22	FUNCTION4 PFK	41.76	3.814e4					1.8	NO		bb		
23	FUNCTION4 PFK	41.29	4.680e4					3.2	YES		bb		
24	FUNCTION4 PFK	41.21	2.354e4					1.9	NO		db		
25	FUNCTION4 PFK	41.14	3.559e4					2.4	NO		dd		
26	FUNCTION4 PFK	41.07	3.165e4					2.4	NO		bd		
27	FUNCTION4 PFK	40.85	2.191e4					2.1	NO		bb		
28	FUNCTION4 PFK	40.62	1.918e4					1.3	NO		bb		
29	FUNCTION4 PFK	40.50	2.045e4					2.2	NO		db		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.39	7.459e3					2.2	NO		bb		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	28.16	8.813e1					7.0	YES		bb		0.000
2	FUNCTION1 HXCD...	21.93	7.086e1					6.4	YES		bb		0.000
3	FUNCTION1 HXCD...	21.53	7.167e1					5.6	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	26.15	7.909e1					1.1	NO		bb		0.000
2	FUNCTION1 HPCD...	25.79	1.209e2					2.3	NO		bb		0.000
3	FUNCTION1 HPCD...	24.82	1.351e2					2.6	NO		bb		0.000
4	FUNCTION1 HPCD...	24.70	1.145e2					1.8	NO		bb		0.000
5	FUNCTION1 HPCD...	24.17	7.623e1					1.5	NO		bb		0.000
6	FUNCTION1 HPCD...	23.94	7.859e1					1.6	NO		bb		0.000
7	FUNCTION1 HPCD...	23.42	2.691e2					2.3	NO		bb		0.000
8	FUNCTION1 HPCD...	22.63	8.902e1					1.7	NO		bb		0.000
9	FUNCTION1 HPCD...	21.09	8.995e1					1.7	NO		bb		0.000
10	FUNCTION1 HPCD...	27.86	7.260e1					1.7	NO		bb		0.000
11	FUNCTION1 HPCD...	27.15	3.059e2					2.5	NO		bb		0.000
12	FUNCTION1 HPCD...	26.36	1.899e2					1.7	NO		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.75	1.276e2					2.7	NO		bb		0.000
2	FUNCTION2 HPCD...	32.43	9.167e1					2.4	NO		bb		0.000
3	FUNCTION2 HPCD...	31.59	9.223e1					2.0	NO		bb		0.000
4	FUNCTION2 HPCD...	31.10	1.079e2					1.6	NO		bb		0.000
5	FUNCTION2 HPCD...	30.07	1.011e2					1.8	NO		bb		0.000
6	FUNCTION2 HPCD...	29.90	8.639e1					1.8	NO		bb		0.000
7	FUNCTION2 HPCD...	29.54	9.482e1					1.7	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
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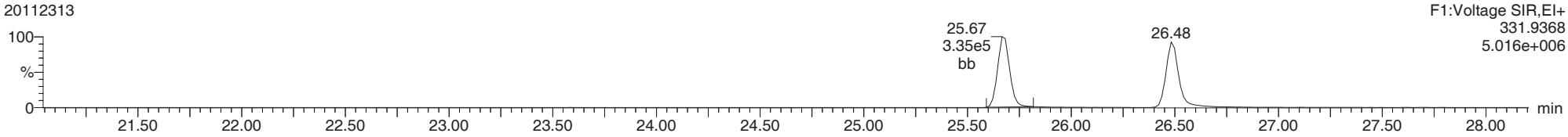
13C-1234-TCDD



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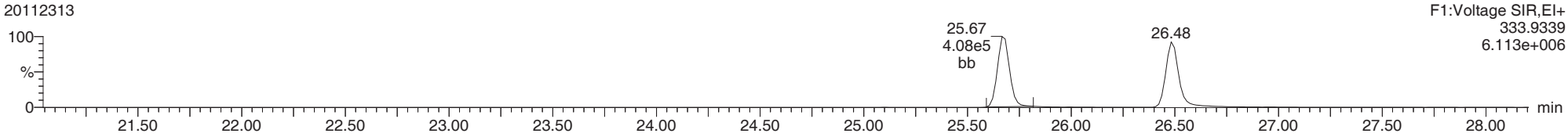

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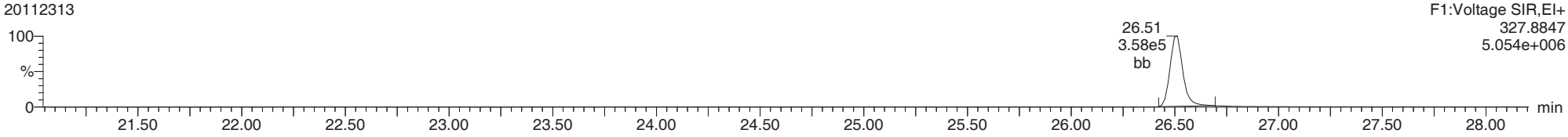

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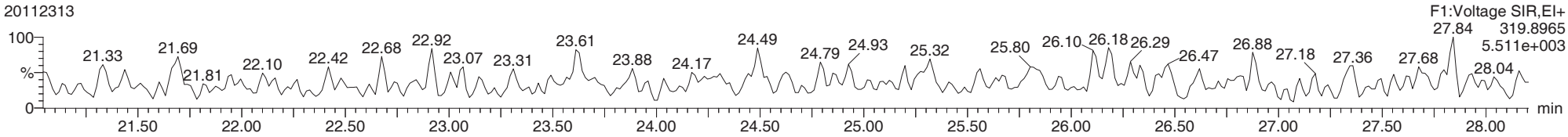
2378-TCDD



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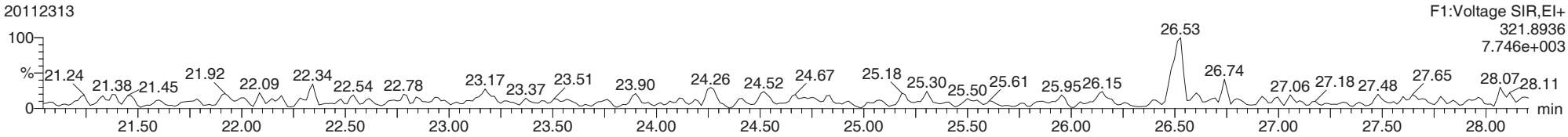

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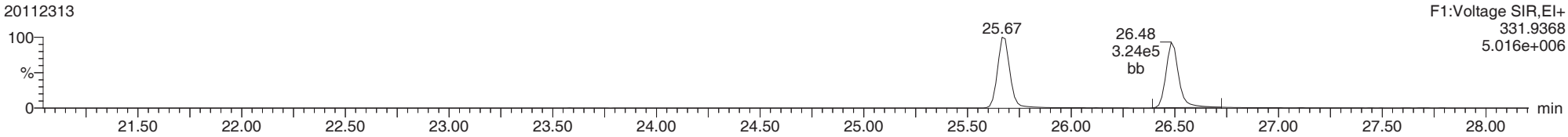
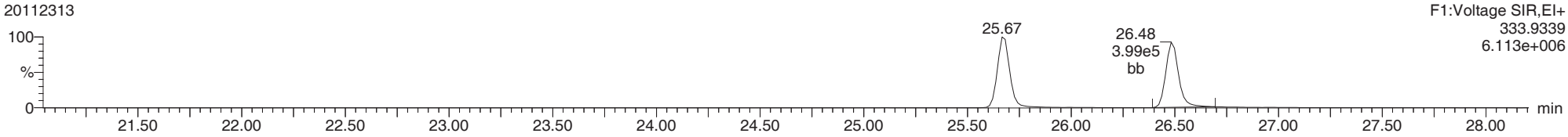
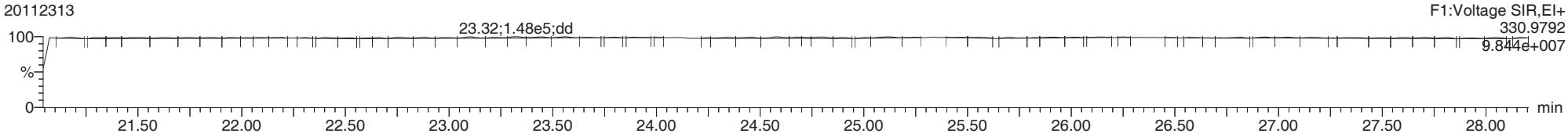


13C-2378-TCDD



FUNCTION1 PFK



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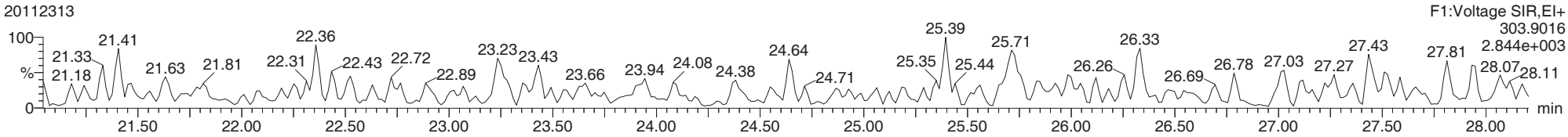
ID: 20J0389-05, Name: 20112313, Date: 23-Nov-2020, Time: 19:42:21, Conditions: AUTOSPEC01, User: pk

2378-TCDF



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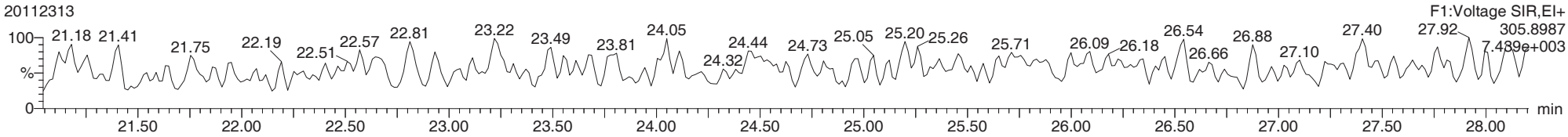

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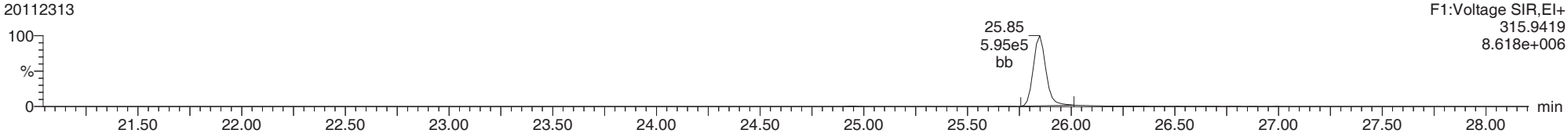

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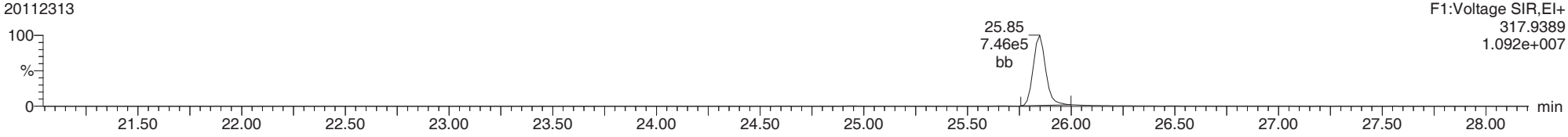
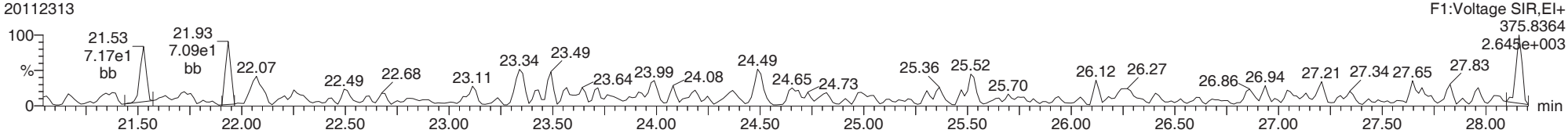


FUNCTION1 HXCDPE



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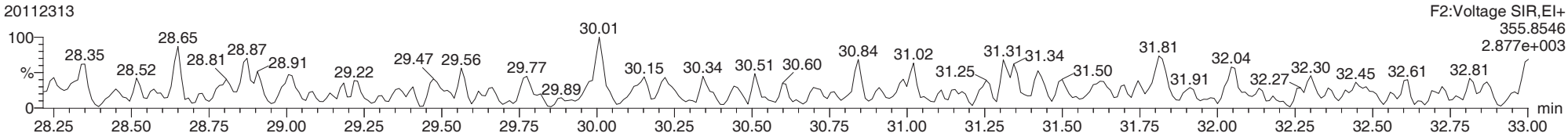
12378-PeCDD



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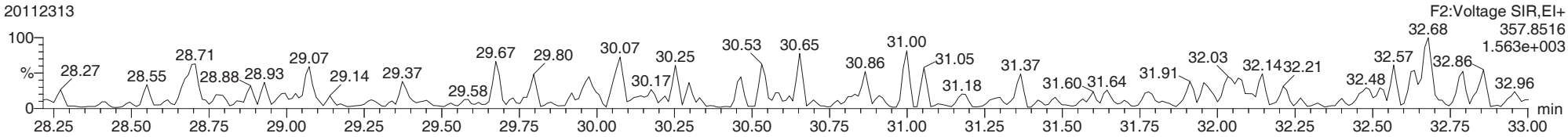

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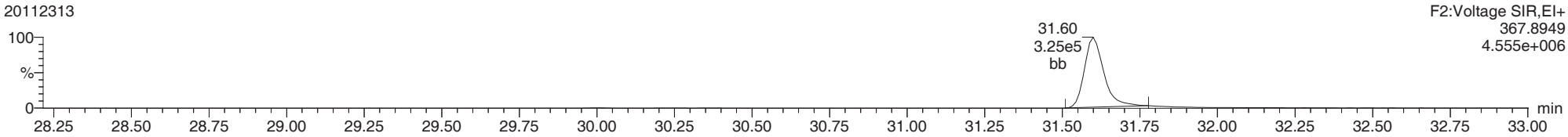

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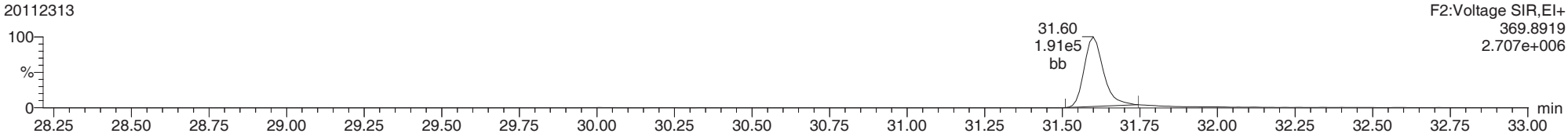
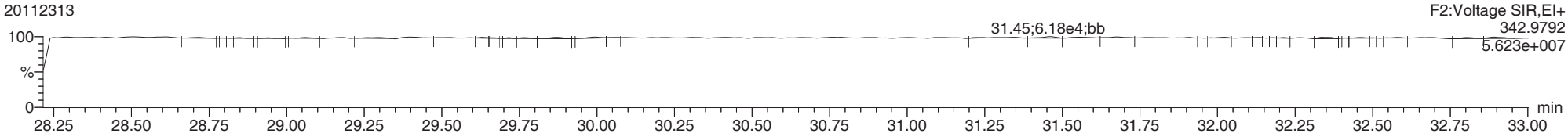


FUNCTION2 PFK



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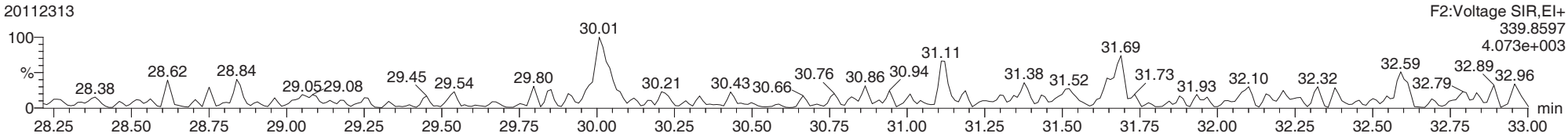
12378-PeCDF



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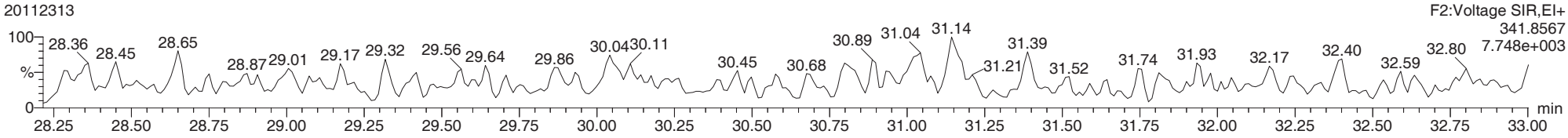

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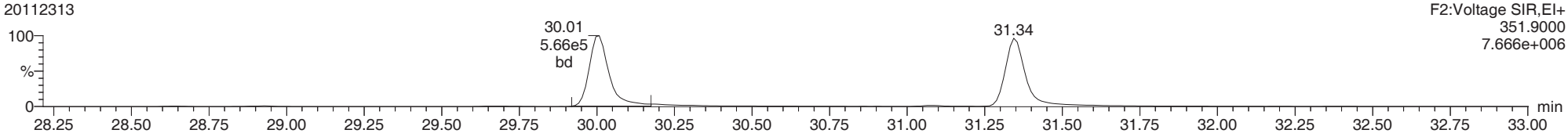

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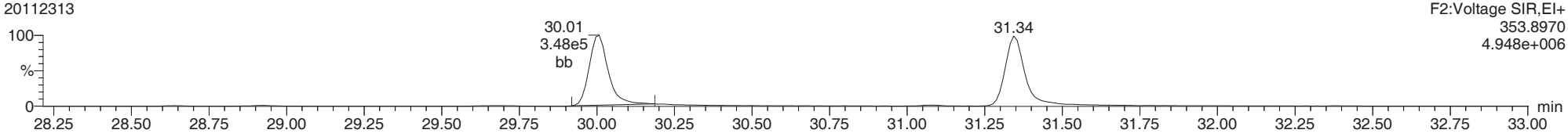
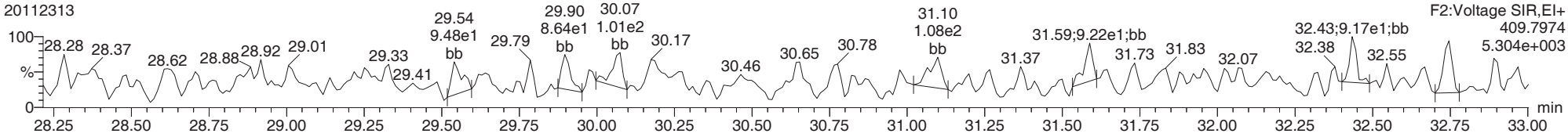


FUNCTION2 HPCDPE



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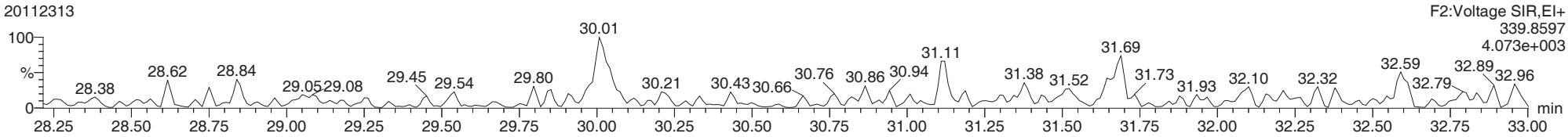
23478-PeCDF



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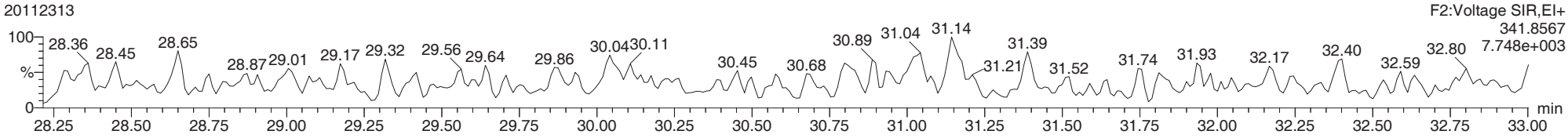

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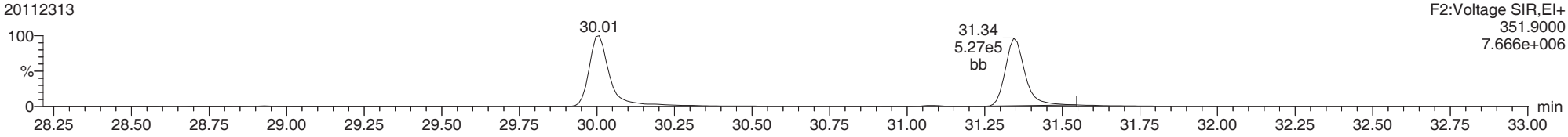

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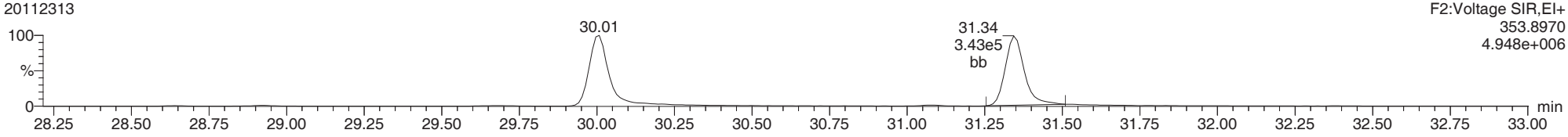
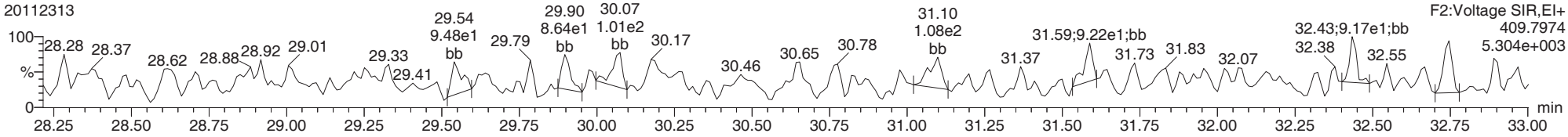


FUNCTION2 HPCDPE



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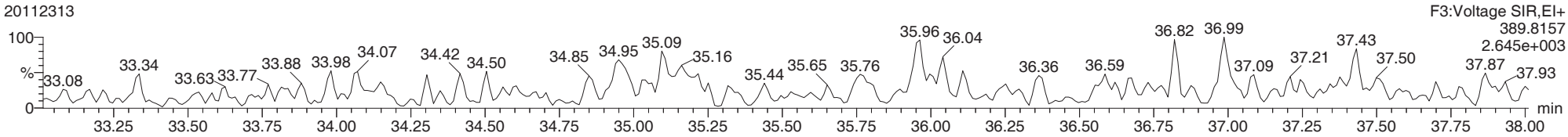
123478-HxCDD



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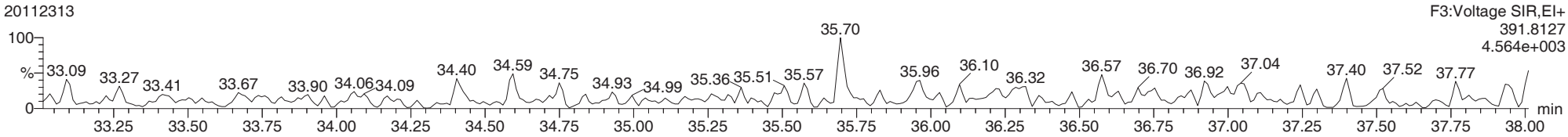

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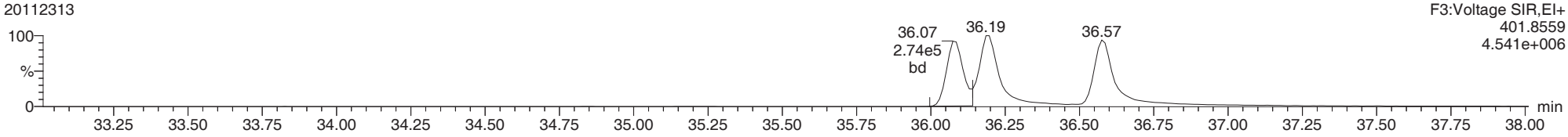

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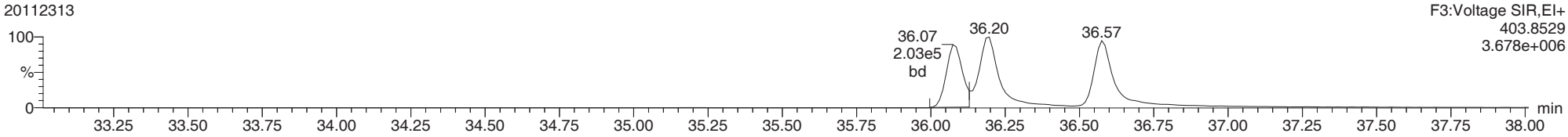
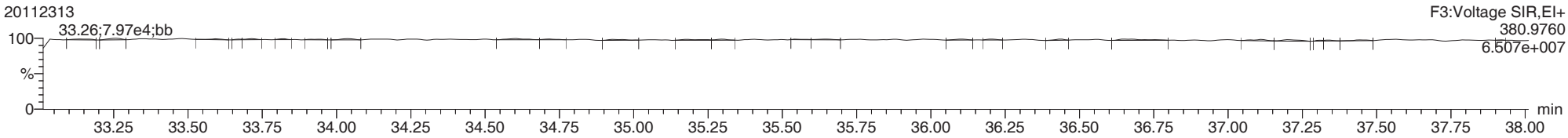


FUNCTION3 PFK



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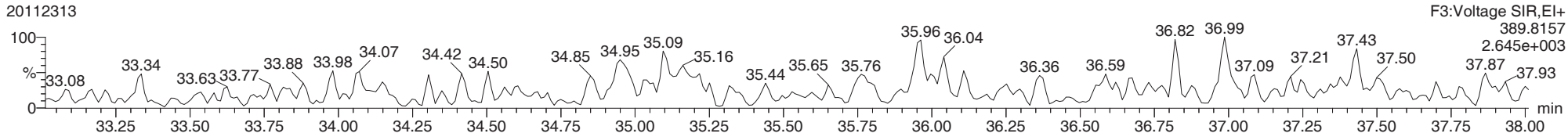
123678-HxCDD



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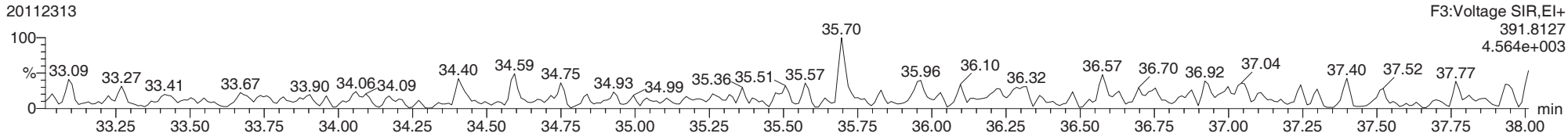

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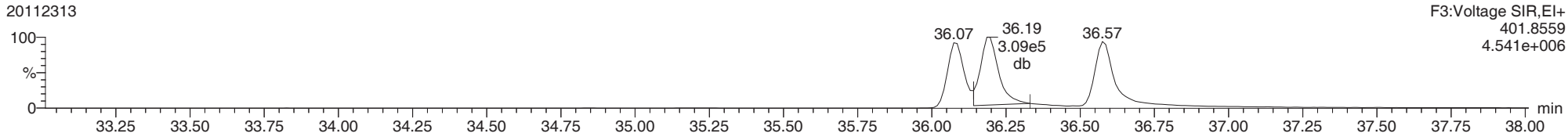

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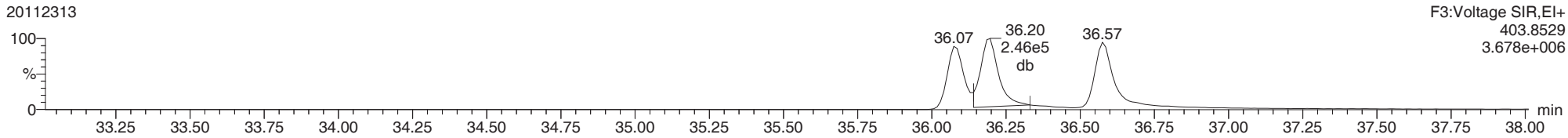

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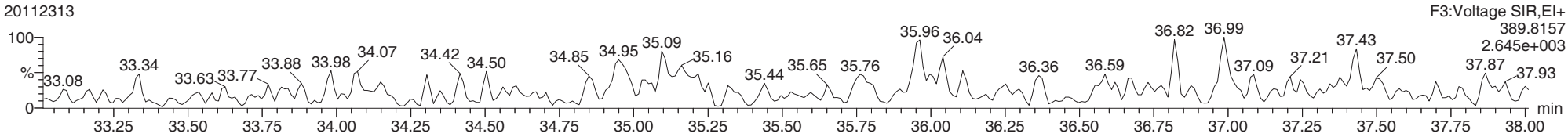
123789-HxCDD



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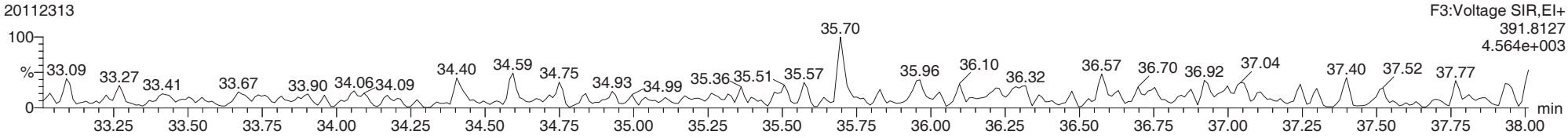

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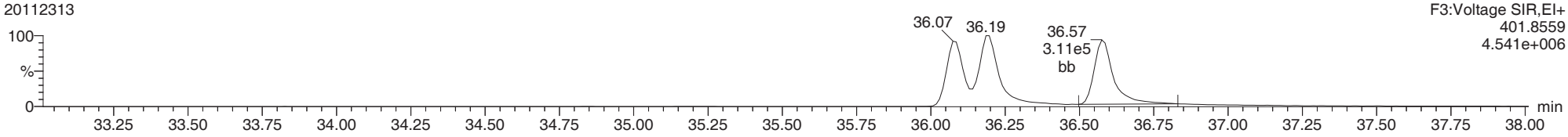

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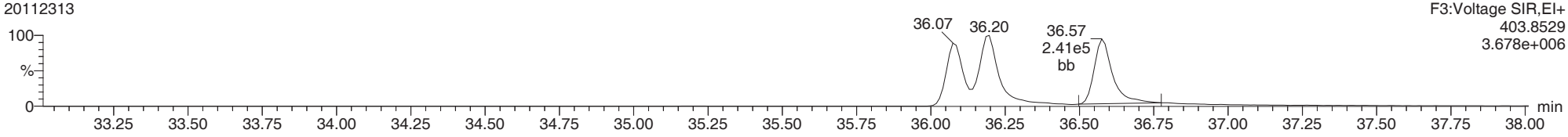

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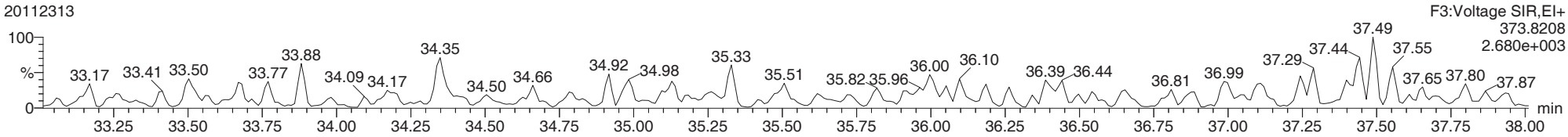
123478-HxCDF



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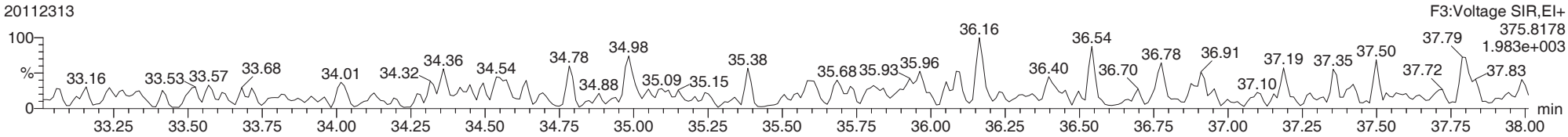

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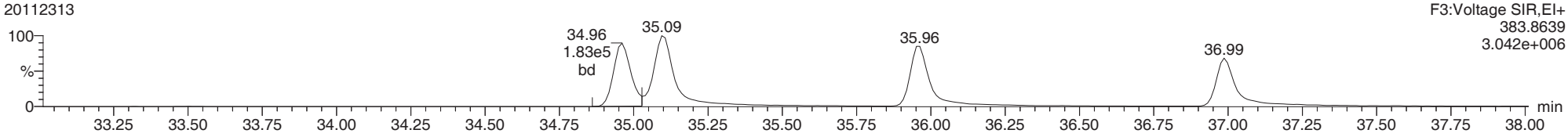

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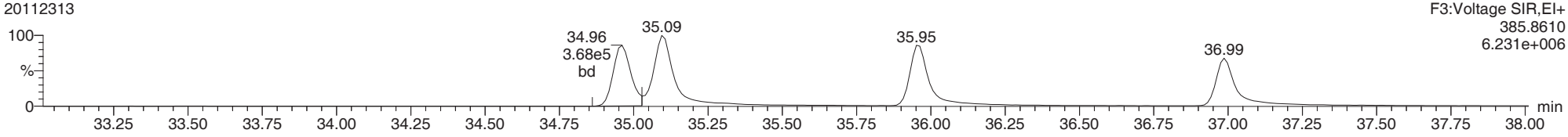
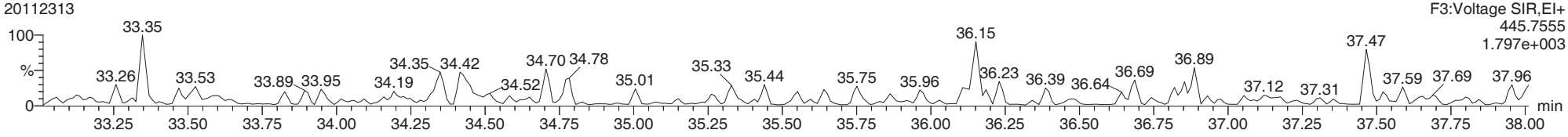


FUNCTION3 OCDPE



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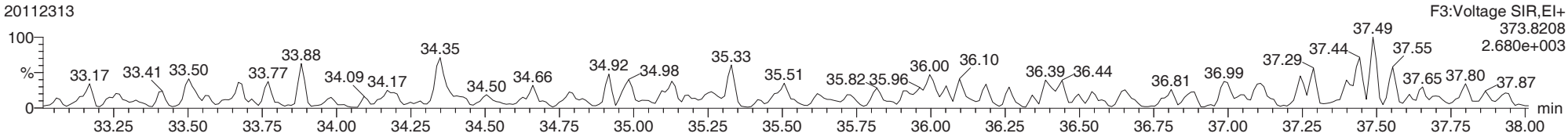
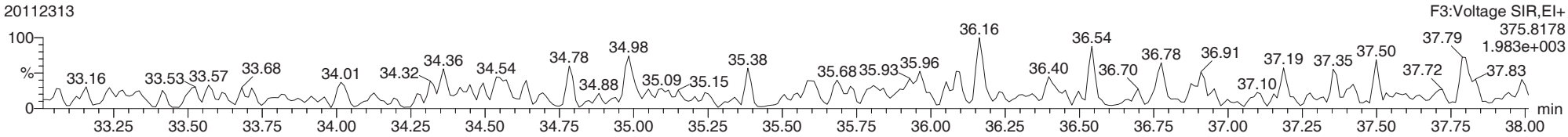
234678-HxCDF



234678-HxCDF



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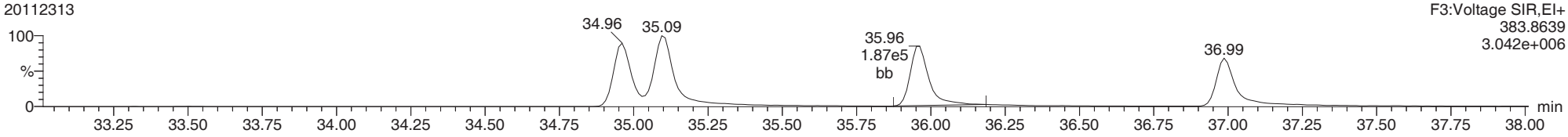

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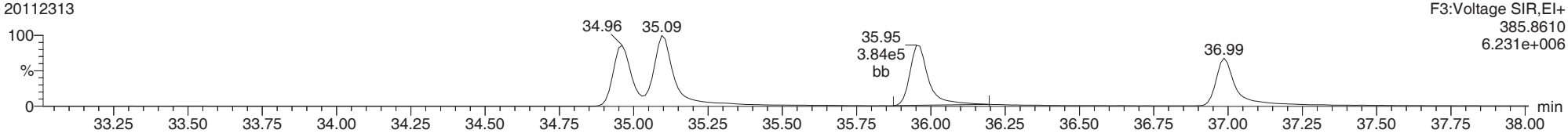
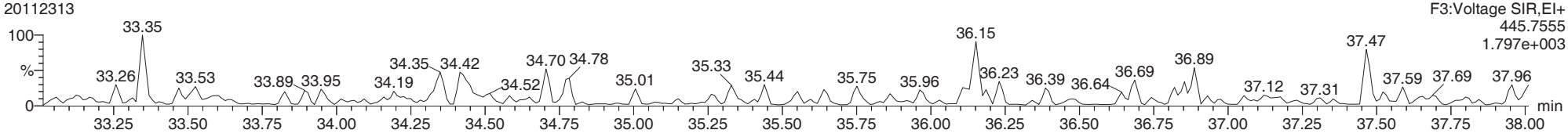


FUNCTION3 OCDPE



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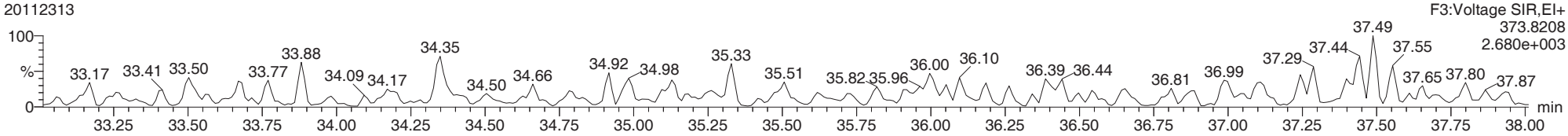
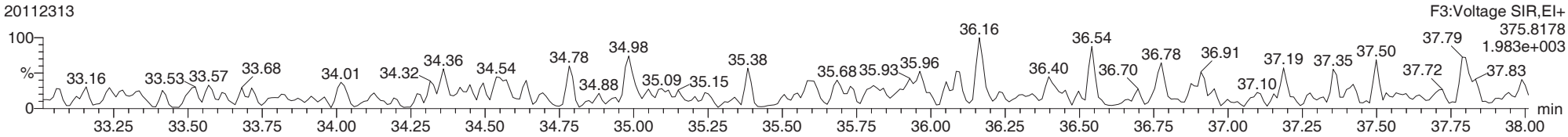
123678-HxCDF



123678-HxCDF



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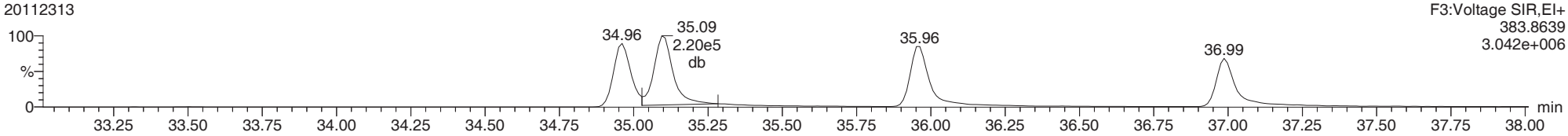

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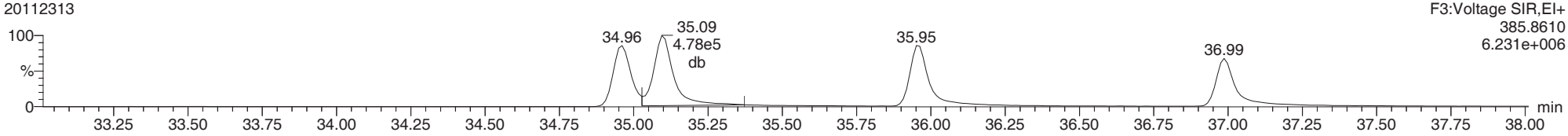
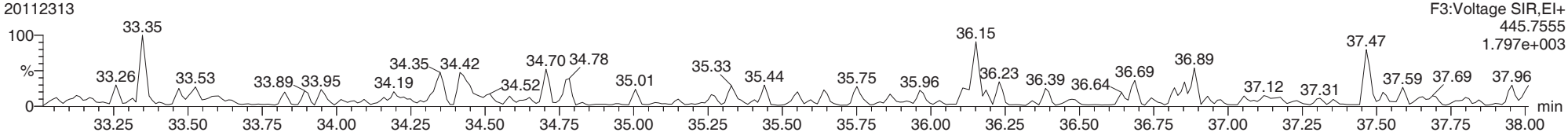


FUNCTION3 OCDPE



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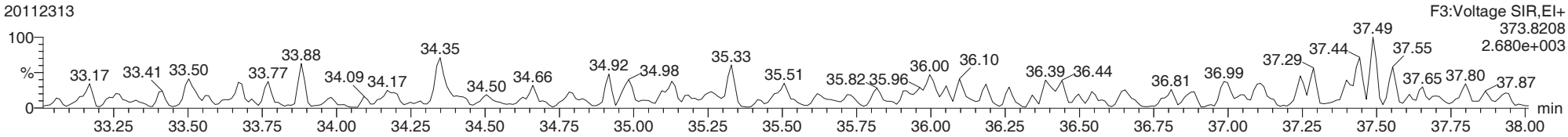
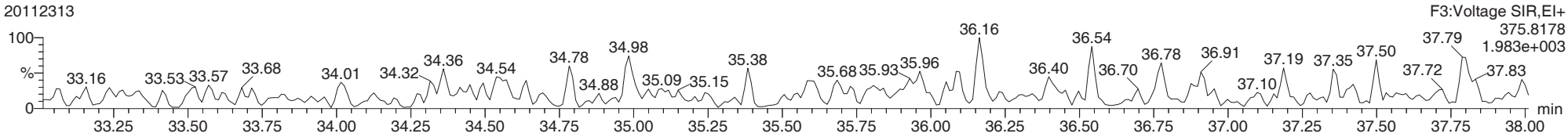
123789-HxCDF



123789-HxCDF



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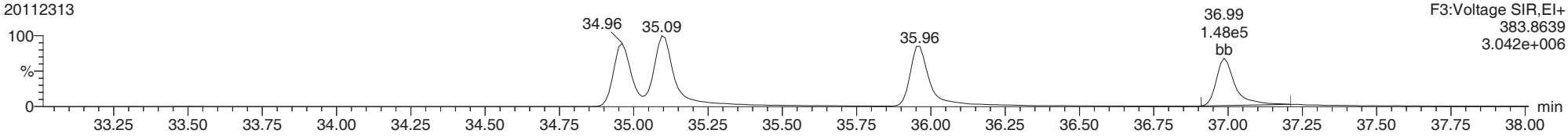

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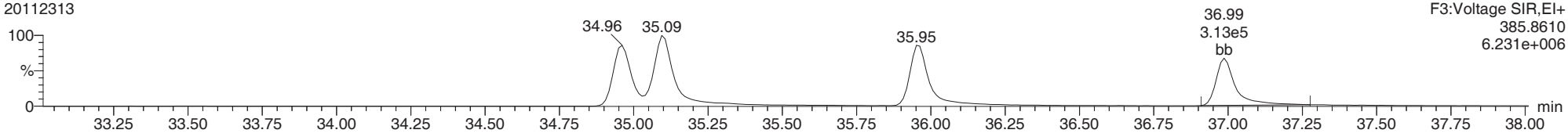
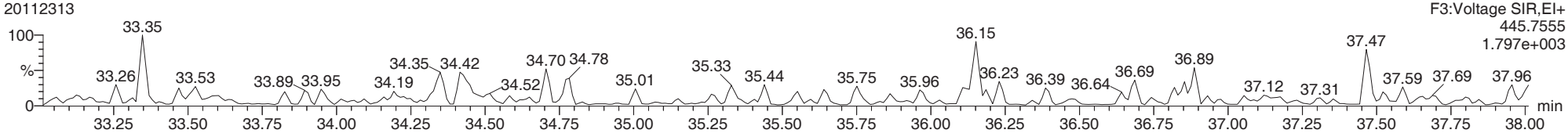


FUNCTION3 OCDPE



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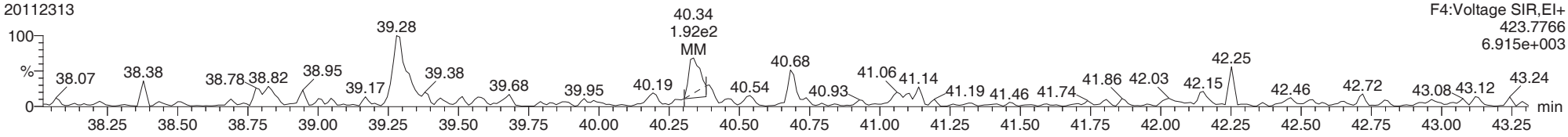
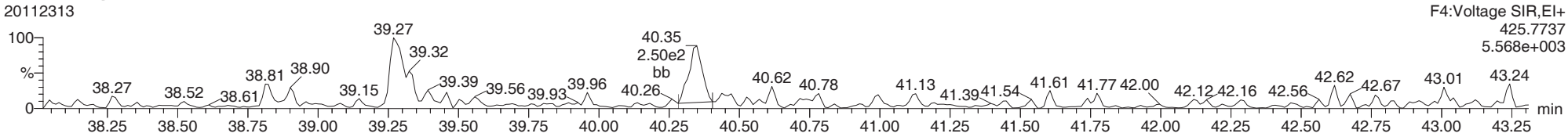


1234678-HpCDD



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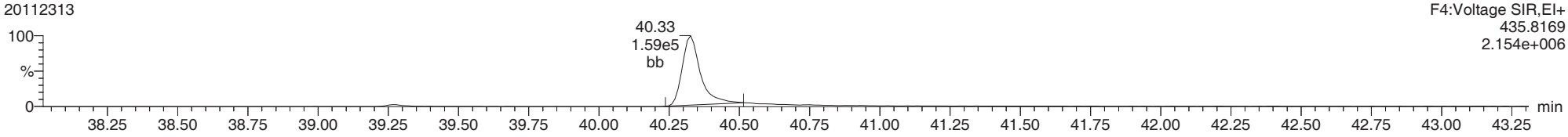

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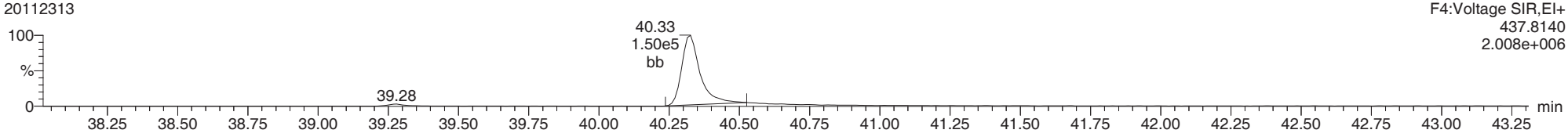

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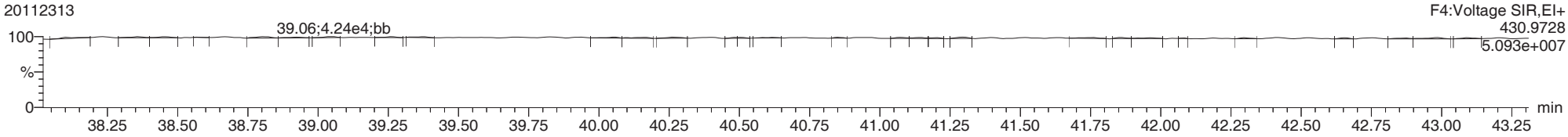

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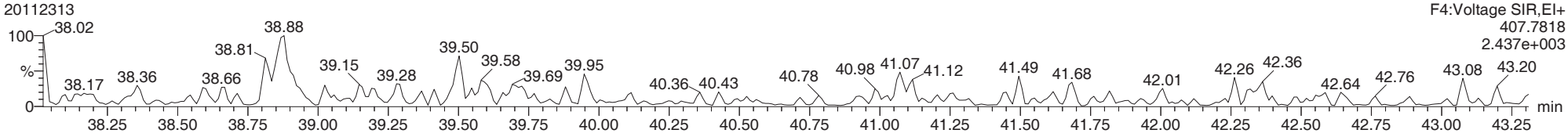
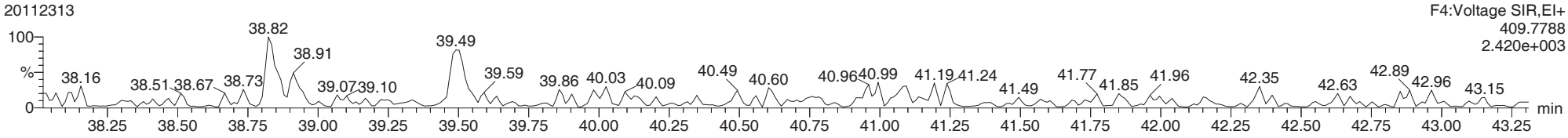


1234678-HpCDF



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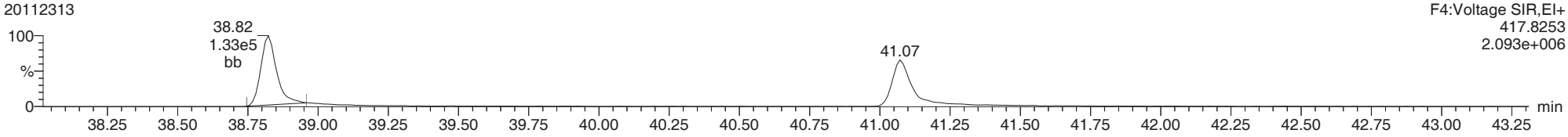

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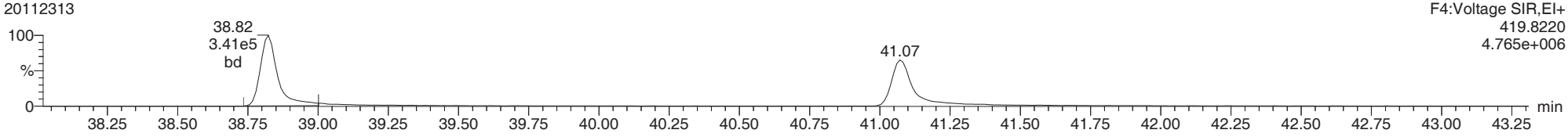
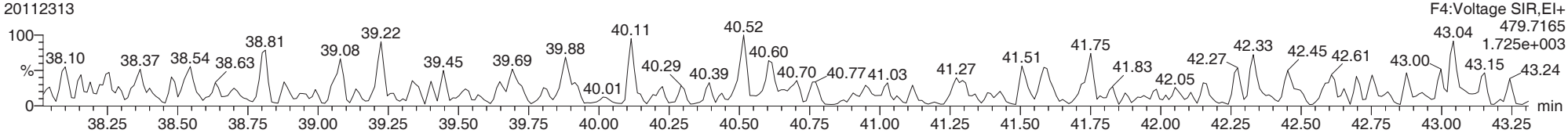


FUNCTION4 NCDPE



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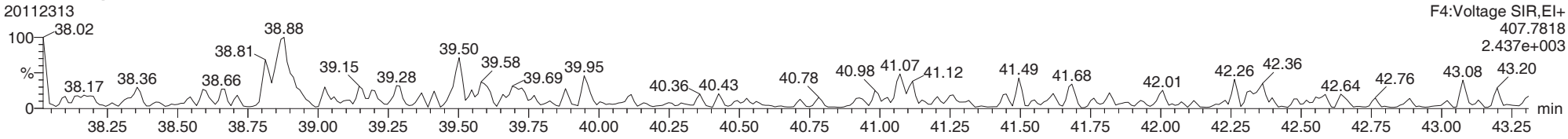
1234789-HpCDF



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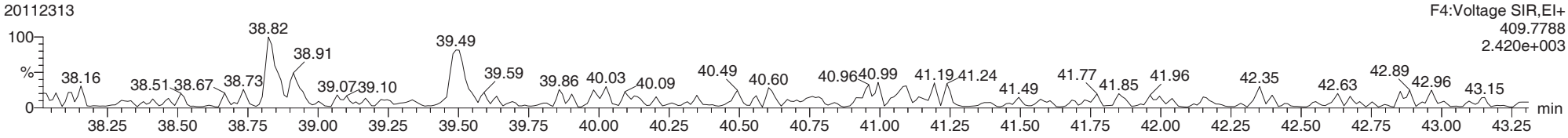

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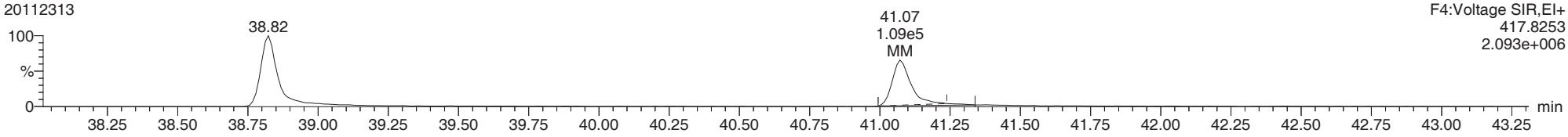

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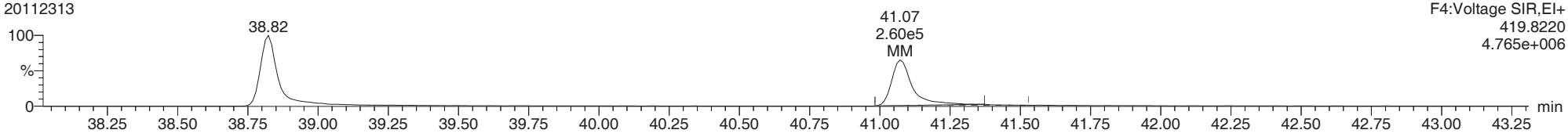
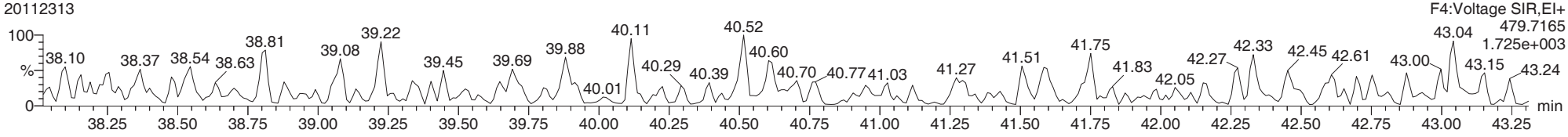


FUNCTION4 NCDPE



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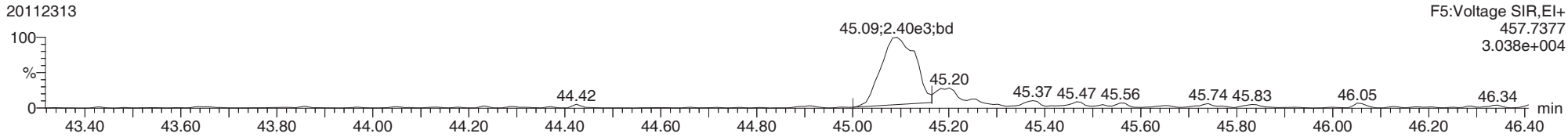
Printed: Tuesday, November 24, 2020 10:09:37 Pacific Standard Time

ID: 20J0389-05, Name: 20112313, Date: 23-Nov-2020, Time: 19:42:21, Conditions: AUTOSPEC01, User: pk

OCDD



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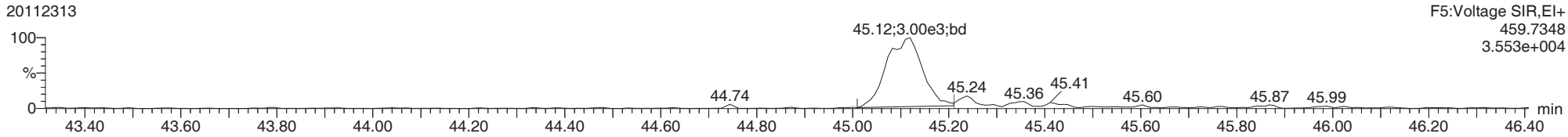
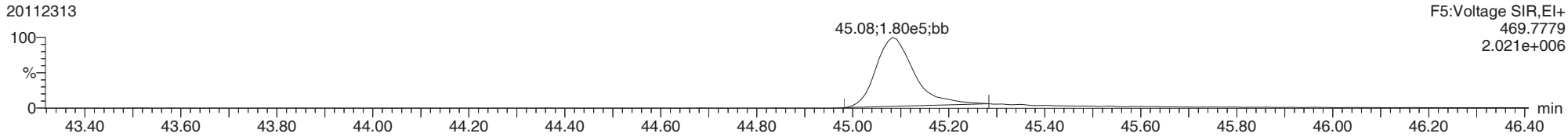
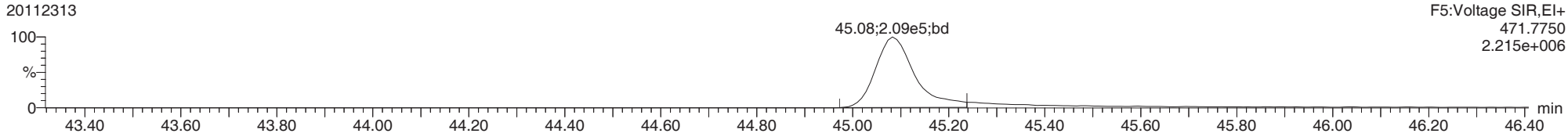


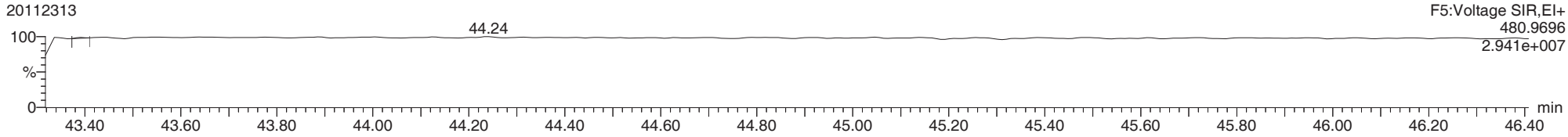
13C-OCDD



13C-OCDD



FUNCTION5 PFK



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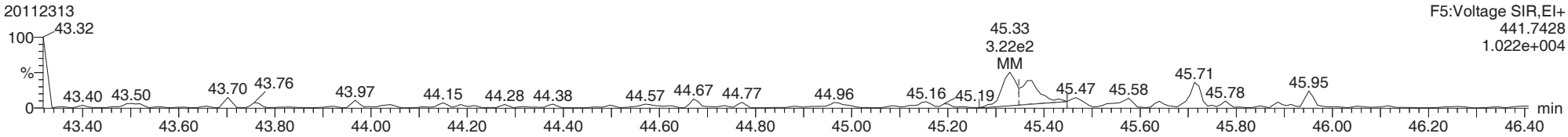
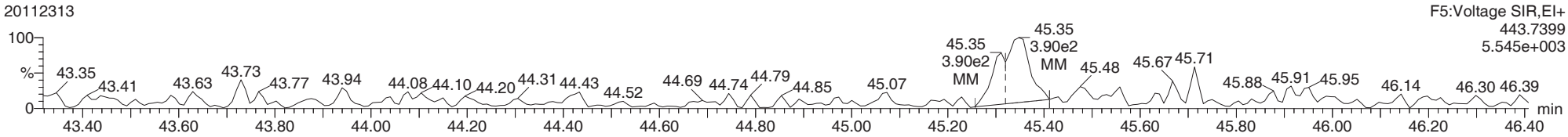
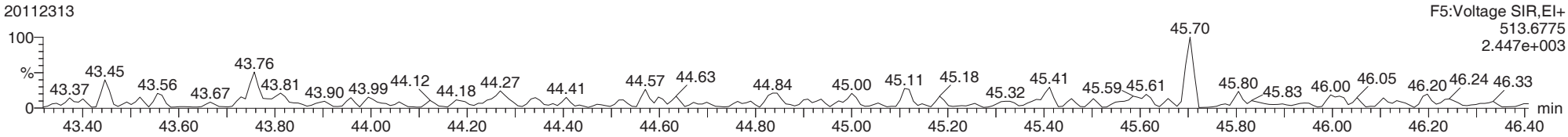
OCDF



OCDF



FUNCTION5 DCDPE



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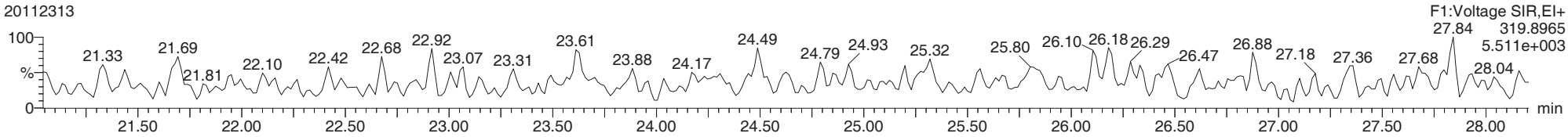
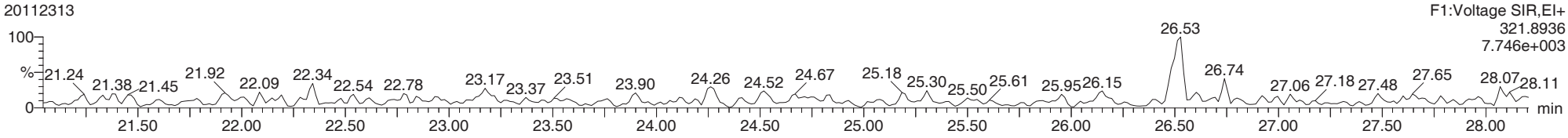
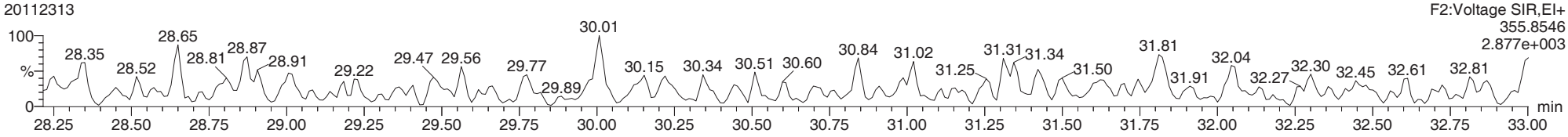
Total-tetradioxins



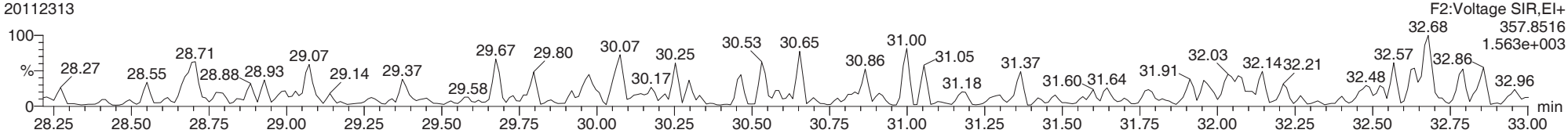
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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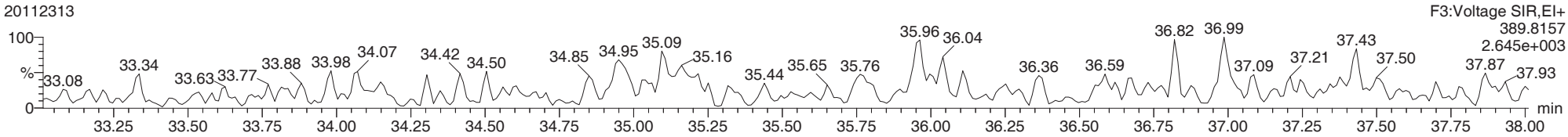
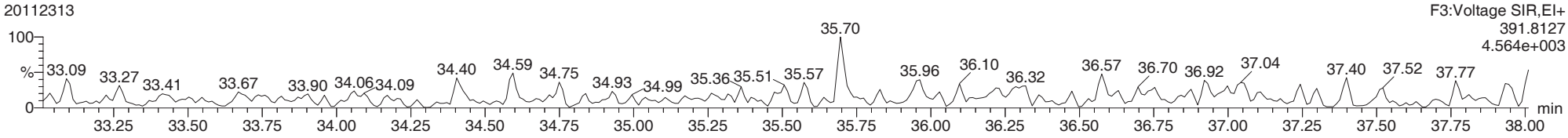
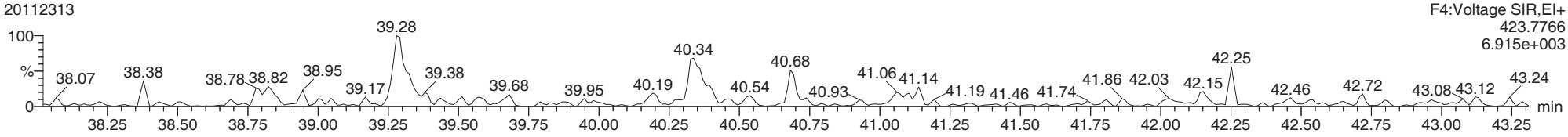
Total-hexadioxins



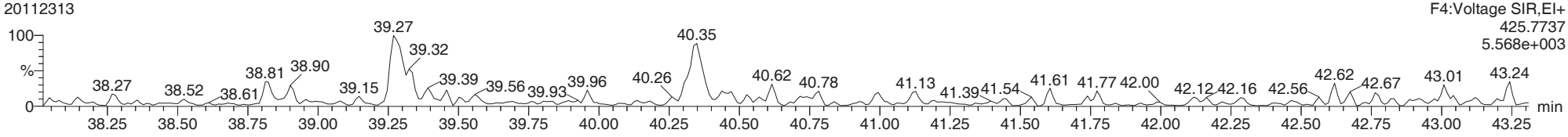
Total-hexadioxins



Total-heptadioxins



Total-heptadioxins



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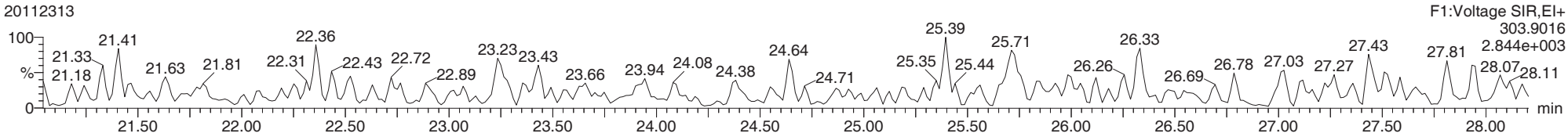
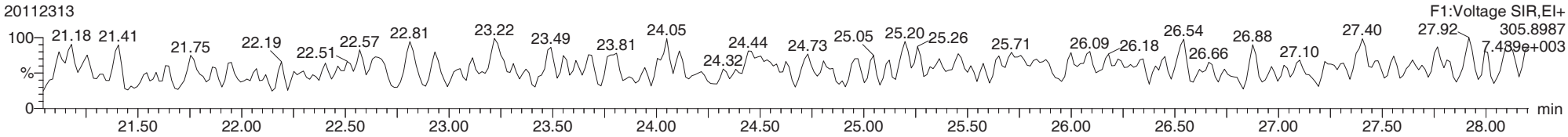
Total-tetrafurans



Total-tetrafurans



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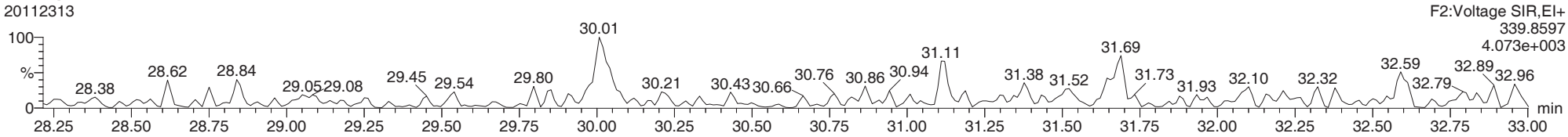
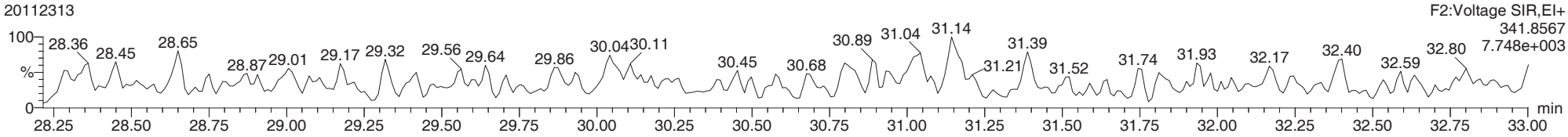


Total-pentafurans



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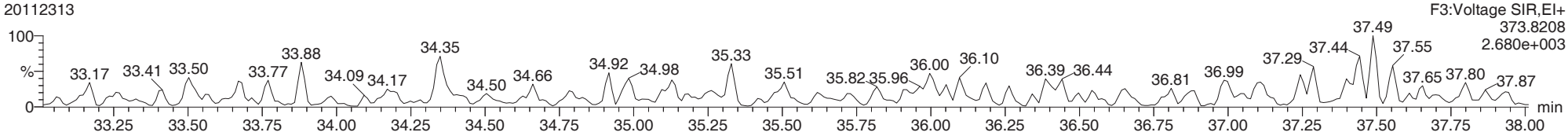
Total-hexafurans



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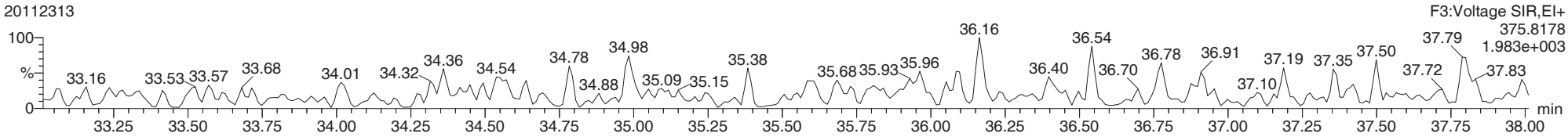

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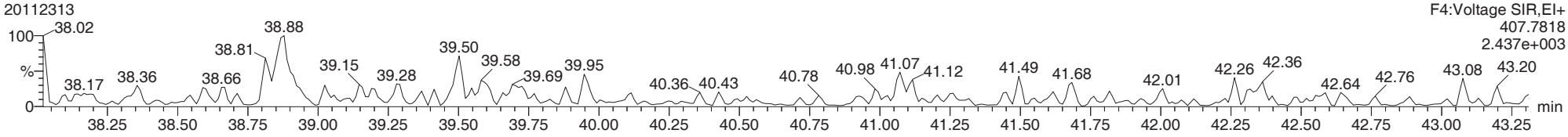

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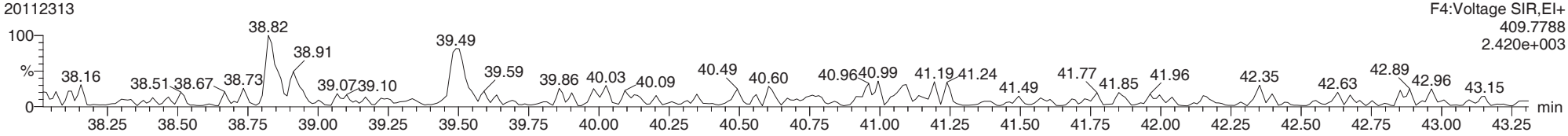

MW-CP5-102720

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider				
Project:	Lora Lake Apartments				
Matrix:	Ground Water	Laboratory ID:	20J0389-06 A	File ID:	20111806
Sampled:	10/27/20 14:28	Prepared:	11/11/20 13:40	Analyzed:	11/18/20 14:52
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1033 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0272	Calibration:	DJ00101
Batch:	BIK0278	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	0.78	9.68	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	0.78	9.68	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.32	9.68	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	1.18	9.68	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	0.67	9.68	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.59	9.68	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.57	9.68	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.56	9.68	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	0.76	9.68	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	0.67	9.68	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	0.63	9.68	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	0.72	9.68	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	3.435	0.893-1.208	0.58	9.68	0.68	pg/L	EMPC, J, B
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	0.76	9.68	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.144	0.893-1.208	0.71	9.68	2.18	pg/L	J, B
39001-02-0	OCDF	1	1.423	0.757-1.024	1.16	19.4	4.01	pg/L	EMPC, J, B
3268-87-9	OCDD	1	0.850	0.757-1.024	1.22	48.4	23.8	pg/L	J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.68	ND	pg/L
41903-57-5	Total TCDD	1	0.000			9.68	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			9.68	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			9.68	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			9.68	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			9.68	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			9.68	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			9.68	2.18	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.037

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.23

MW-CP5-102720

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider			Project:	Lora Lake Apartments
Matrix:	Ground Water	Laboratory ID:	20J0389-06	File ID:	20111806
Sampled:	10/27/20 14:28	Prepared:	11/11/20 13:40	Analyzed:	11/18/20 14:52
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1033 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0272	Calibration:	DJ00101
Batch:	BIK0278	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.785	0.655-0.886	1.16	78.8	24 - 169 %	
13C12-2,3,7,8-TCDD		0.827	0.655-0.886	0.93	76.9	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.540	1.318-1.783	1.52	76.5	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.548	1.318-1.783	1.58	77.4	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.636	1.318-1.783	1.05	82.9	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.492	0.434-0.587	2.62	82.0	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.524	0.434-0.587	2.23	76.1	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.488	0.434-0.587	2.50	79.6	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.494	0.434-0.587	2.92	81.6	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.276	1.054-1.426	1.52	80.9	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.270	1.054-1.426	1.25	69.8	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.431	0.374-0.506	1.71	81.3	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.429	0.374-0.506	2.15	91.7	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.066	0.893-1.208	1.84	96.4	23 - 140 %	
13C12-OCDD		0.909	0.757-1.024	1.56	59.6	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.40	91.8	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\201118IH.qld
Last Altered: Thursday, November 19, 2020 09:45:12 Pacific Standard Time
Printed: Thursday, November 19, 2020 09:48:23 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 18 Nov 2020 14:35:19
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-06, Name: 20111806, Date: 18-Nov-2020, Time: 14:52:06, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF					0.729		0.770	1005	1802								
12378-PeCDF					0.779		1.550	1657	2268								
23478-PeCDF					0.880		1.550	1657	2268								
123478-HxCDF					0.880		1.240	781	758								
234678-HxCDF					0.863		1.240	781	758								
123678-HxCDF					0.853		1.240	781	758								
123789-HxCDF					0.780		1.240	781	758								
1234678-HpCDF	38.912	1.001	2.687e2	7.822e1	1.001	3.435	1.050	1206	405	4.34e3	1.48e3	3.6	3.6	YES	bb	bb	0.035
1234789-HpCDF					0.994		1.050	1206	405								
OCDF	45.438	1.005	7.555e2	5.309e2	1.158	1.423	0.890	771	657	1.01e4	5.93e3	13.1	9.0	YES	MM	MM	0.207
2378-TCDD					1.238		0.770	1613	896								
12378-PeCDD					0.988		1.550	879	687								
123478-HxCDD					0.842		1.240	866	815								
123678-HxCDD					0.907		1.240	866	815								
123789-HxCDD					0.784		1.240	866	815								
1234678-HpCDD	40.437	1.001	5.175e2	4.525e2	1.044	1.144	1.050	770	792	7.80e3	5.79e3	10.1	7.3	NO	bb	bb	0.113
OCDD	45.200	1.000	2.920e3	3.433e3	0.963	0.850	0.890	518	730	3.24e4	4.09e4	62.5	56.0	NO	bb	bd	1.230
13C-2378-TCDF	25.923	1.007	8.385e5	1.067e6	2.203	0.785	0.770	5073	2490	1.27e7	1.60e7	2502.4	6421.0	NO	bb	bb	78.847
13C-12378-PeCDF	30.074	1.168	8.858e5	5.751e5	1.741	1.540	1.550	4396	3452	1.34e7	8.87e6	3057.0	2569.5	NO	bb	bb	76.465
13C-23478-PeCDF	31.421	1.221	8.612e5	5.565e5	1.669	1.548	1.550	4396	3452	1.33e7	8.63e6	3033.1	2498.9	NO	bb	bb	77.385
13C-123478-HxCDF	35.028	0.956	3.667e5	7.456e5	1.022	0.492	0.510	3085	6491	5.66e6	1.15e7	1833.5	1778.1	NO	bd	bd	82.030
13C-123678-HxCDF	35.172	0.960	4.168e5	7.953e5	1.200	0.524	0.510	3085	6491	6.27e6	1.23e7	2032.9	1894.2	NO	dd	db	76.138
13C-234678-HxCDF	36.029	0.983	3.712e5	7.603e5	1.071	0.488	0.510	3085	6491	6.03e6	1.22e7	1955.0	1872.9	NO	bb	bb	79.640
13C-123789-HxCDF	37.053	1.011	3.285e5	6.653e5	0.919	0.494	0.510	3085	6491	5.01e6	1.01e7	1625.0	1558.4	NO	bb	bb	81.558
13C-1234678-HpCDF	38.890	1.061	2.952e5	6.852e5	0.909	0.431	0.440	2166	3389	4.89e6	1.12e7	2255.0	3311.4	NO	bb	bb	81.339
13C-1234789-HpCDF	41.149	1.123	2.643e5	6.156e5	0.724	0.429	0.440	2166	3389	3.73e6	8.75e6	1724.2	2582.5	NO	bb	bb	91.665
13C-1234-TCDD	25.742	0.000	4.943e5	6.031e5	1.000	0.820	0.770	2120	1152	7.77e6	9.55e6	3664.9	8286.6	NO	bb	bb	100.000
13C-2378-TCDD	26.558	1.032	4.513e5	5.459e5	1.181	0.827	0.770	2120	1152	6.79e6	8.25e6	3203.9	7162.2	NO	bb	bb	76.918
13C-12378-PeCDD	31.677	1.231	5.519e5	3.373e5	0.978	1.636	1.550	1761	1281	8.52e6	5.22e6	4836.1	4074.7	NO	bb	bb	82.871
13C-123478-HxCDD	36.152	0.986	5.806e5	4.549e5	0.965	1.276	1.240	2357	2871	9.66e6	7.65e6	4099.6	2665.9	NO	bd	bd	80.901
13C-123678-HxCDD	36.263	0.989	6.051e5	4.765e5	1.168	1.270	1.240	2357	2871	9.61e6	7.60e6	4078.8	2648.5	NO	db	db	69.802
13C-1234678-HpCDD	40.403	1.102	4.258e5	3.996e5	0.645	1.066	1.050	2108	2123	6.32e6	5.96e6	2998.3	2807.7	NO	bb	bb	96.411
13C-OCDD	45.191	1.233	5.105e5	5.617e5	0.678	0.909	0.890	1433	2337	5.89e6	6.54e6	4109.4	2797.6	NO	bb	bb	119.172
13C-123789-HxCDD	36.653	0.000	7.350e5	5.916e5	1.000	1.242	1.240	2357	2871	1.15e7	9.18e6	4874.7	3197.8	NO	bb	bb	100.000
37CL-2378-TCDD	26.573	1.032	5.094e5		1.264			1518		7.54e6		4966.1			bb		36.709

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ID: 20J0389-06, Name: 20111806, Date: 18-Nov-2020, Time: 14:52:06, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	1005	1802								
1289-TCDF					0.688		0.770	1005	1802								
13468-PECDF					1.181		1.550	695	1190								
12389-PECDF	32.479	1.080	9.016e1	1.480e2	0.766	0.609	1.550	1657	2268	2.74e3	4.42e3	1.7	1.9	YES	bd	dd	0.021
123468-HXCDF					1.003		1.240	781	758								
1368-TCDD					1.179		0.770	1613	896								
1289-TCDD					1.042		0.770	1613	896								
12479-PECDD					1.810		1.550	879	687								
12389-PECDD					1.165		1.550	879	687								
124679-HXCDD					1.056		1.240	866	815								
1234679-HPCDD	39.346	0.974	2.483e2	3.087e2	1.285	0.804	1.050	770	792	5.97e3	4.78e3	7.8	6.0	YES	bd	bb	0.052
Total-tetrafurans			0.000e0		0.754			1005		0.00e0							
Total-penta1			0.000e0					695		0.00e0							
Total-pentafurans			0.000e0		0.809			1657		0.00e0							
Total-hexafurans			0.000e0		0.876			781		0.00e0							
Total-heptafurans			0.000e0		0.997			1206		0.00e0							
Total-Furans			0.000e0		0.893			1005		0.00e0							
Total-tetradioxins			0.000e0		1.153			1613		0.00e0							
Total-pentadioxins			0.000e0		1.321			879		0.00e0							
Total-hexadioxins			0.000e0		0.897			866		0.00e0							
Total-heptadioxins			5.175e2		1.165			770		7.80e3							0.113
Total-Dioxins			3.437e3		1.100			1613		4.02e4							1.343
Total-TEQ			3.437e3					1613		4.02e4							1.343
FUNCTION1 PFK			0.000e0					678335		0.00e0							
FUNCTION2 PFK			1.037e6					430536		1.90e7							0.000
FUNCTION3 PFK			1.395e6					456795		2.89e7							0.000
FUNCTION4 PFK			9.535e5					425010		2.04e7							
FUNCTION5 PFK			8.184e5					271066		1.94e7							
FUNCTION1 HXCD...			1.613e2					683		3.11e3							0.000
FUNCTION1 HPCD...			1.653e3					989		2.94e4							0.000
FUNCTION2 HPCD...			5.584e2					1032		1.38e4							0.000
FUNCTION3 OCDPE			7.152e1					395		1.92e3							0.000
FUNCTION4 NCDPE			0.000e0					592		0.00e0							
FUNCTION5 DCDPE			0.000e0					350		0.00e0							

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ID: 20J0389-06, Name: 20111806, Date: 18-Nov-2020, Time: 14:52:06, Conditions: AUTOSPEC01, User: pk

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.44	5.175e2	4.525e2	1.044	1.14	1.05	10.1	YES	NO	bb	bb	0.113

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.44	5.175e2	4.525e2	1.044	1.14	1.05	10.1	YES	NO	bb	bb	0.113
2	OCDD	45.20	2.920e3	3.433e3	0.963	0.85	0.89	62.5	YES	NO	bb	bd	1.230

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ID: 20J0389-06, Name: 20111806, Date: 18-Nov-2020, Time: 14:52:06, Conditions: AUTOSPEC01, User: pk

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	30.55	6.024e4					2.3	NO		db		0.000
2	FUNCTION2 PFK	30.42	7.446e4					2.4	NO		dd		0.000
3	FUNCTION2 PFK	30.34	2.640e4					2.1	NO		dd		0.000
4	FUNCTION2 PFK	30.32	2.050e4					2.0	NO		dd		0.000
5	FUNCTION2 PFK	30.22	3.867e4					1.9	NO		bd		0.000
6	FUNCTION2 PFK	30.10	4.384e4					2.1	NO		bb		0.000
7	FUNCTION2 PFK	30.00	3.456e4					2.1	NO		bb		0.000
8	FUNCTION2 PFK	29.67	1.582e4					1.6	NO		bb		0.000
9	FUNCTION2 PFK	29.52	1.697e4					1.6	NO		bb		0.000
10	FUNCTION2 PFK	29.45	1.237e4					1.2	NO		bb		0.000
11	FUNCTION2 PFK	29.24	4.238e4					1.8	NO		bb		0.000
12	FUNCTION2 PFK	28.69	3.976e4					2.5	NO		db		0.000
13	FUNCTION2 PFK	28.64	2.512e4					1.7	NO		dd		0.000
14	FUNCTION2 PFK	28.48	2.738e5					4.4	YES		dd		0.000
15	FUNCTION2 PFK	28.33	7.837e4					3.5	YES		bd		0.000
16	FUNCTION2 PFK	32.68	4.203e4					2.2	NO		bb		0.000
17	FUNCTION2 PFK	32.02	5.293e4					2.7	NO		bb		0.000
18	FUNCTION2 PFK	31.59	5.292e4					2.1	NO		bb		0.000
19	FUNCTION2 PFK	31.34	3.105e4					2.0	NO		bb		0.000
20	FUNCTION2 PFK	30.90	5.471e4					1.7	NO		bb		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.24	7.185e4					2.3	NO		bd		0.000
2	FUNCTION3 PFK	34.10	6.495e4					2.3	NO		db		0.000
3	FUNCTION3 PFK	34.03	5.061e4					1.8	NO		bd		0.000
4	FUNCTION3 PFK	33.79	8.548e4					2.4	NO		db		0.000
5	FUNCTION3 PFK	33.67	3.024e4					1.9	NO		bd		0.000
6	FUNCTION3 PFK	33.57	3.161e4					1.6	NO		bb		0.000
7	FUNCTION3 PFK	33.35	1.100e4					1.0	NO		bb		0.000
8	FUNCTION3 PFK	33.25	3.975e4					1.5	NO		bb		0.000
9	FUNCTION3 PFK	33.17	9.620e3					1.1	NO		db		0.000
10	FUNCTION3 PFK	33.14	1.395e4					0.9	NO		bd		0.000
11	FUNCTION3 PFK	36.42	2.938e4					1.9	NO		bb		0.000
12	FUNCTION3 PFK	36.30	4.034e4					2.1	NO		db		0.000
13	FUNCTION3 PFK	36.23	1.263e4					1.2	NO		dd		0.000
14	FUNCTION3 PFK	36.19	4.993e4					2.7	NO		bd		0.000
15	FUNCTION3 PFK	36.05	7.483e4					2.0	NO		bb		0.000
16	FUNCTION3 PFK	35.76	4.204e4					1.8	NO		bb		0.000
17	FUNCTION3 PFK	35.64	3.697e4					1.4	NO		db		0.000
18	FUNCTION3 PFK	35.55	7.002e4					2.5	NO		dd		0.000
19	FUNCTION3 PFK	35.49	1.034e4					0.9	NO		bd		0.000
20	FUNCTION3 PFK	35.09	3.680e4					1.7	NO		db		0.000
21	FUNCTION3 PFK	34.98	5.834e4					2.2	NO		bd		0.000
22	FUNCTION3 PFK	34.77	4.139e4					2.2	NO		bb		0.000
23	FUNCTION3 PFK	34.67	3.079e4					2.2	NO		db		0.000
24	FUNCTION3 PFK	34.65	2.253e4					1.9	NO		bd		0.000
25	FUNCTION3 PFK	34.45	2.730e4					1.5	NO		bb		0.000
26	FUNCTION3 PFK	34.35	2.428e4					1.4	NO		db		0.000
27	FUNCTION3 PFK	37.97	1.800e3					0.4	NO		bb		0.000
28	FUNCTION3 PFK	37.90	2.957e4					1.3	NO		bb		0.000
29	FUNCTION3 PFK	37.79	2.944e4					1.5	NO		bb		0.000
30	FUNCTION3 PFK	37.49	1.328e4					1.1	NO		bb		0.000
31	FUNCTION3 PFK	37.38	4.653e4					1.8	NO		bb		0.000
32	FUNCTION3 PFK	37.25	1.922e4					1.2	NO		bb		0.000
33	FUNCTION3 PFK	36.98	6.272e4					1.6	NO		bb		0.000
34	FUNCTION3 PFK	36.85	3.914e4					1.9	NO		db		0.000
35	FUNCTION3 PFK	36.80	4.630e3					0.6	NO		bd		0.000
36	FUNCTION3 PFK	36.74	2.918e4					1.5	NO		bb		0.000
37	FUNCTION3 PFK	36.65	4.396e4					1.4	NO		db		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION3 PFK	36.52	5.812e4					2.8	NO		bd		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.17	1.973e4					1.3	NO		dd		
2	FUNCTION4 PFK	38.12	3.193e4					2.3	NO		dd		
3	FUNCTION4 PFK	38.05	5.300e4					2.7	NO		bd		
4	FUNCTION4 PFK	40.33	5.306e4					2.3	NO		db		
5	FUNCTION4 PFK	40.23	2.993e4					1.4	NO		bd		
6	FUNCTION4 PFK	40.06	1.619e3					0.3	NO		bb		
7	FUNCTION4 PFK	39.82	5.515e3					0.5	NO		db		
8	FUNCTION4 PFK	39.76	1.988e4					1.1	NO		bd		
9	FUNCTION4 PFK	39.51	5.977e3					0.7	NO		bb		
10	FUNCTION4 PFK	39.45	4.131e4					1.6	NO		db		
11	FUNCTION4 PFK	39.31	2.988e4					1.4	NO		bd		
12	FUNCTION4 PFK	39.26	1.570e4					1.6	NO		db		
13	FUNCTION4 PFK	39.20	4.631e4					1.9	NO		bd		
14	FUNCTION4 PFK	38.90	3.586e4					1.7	NO		db		
15	FUNCTION4 PFK	38.79	3.218e4					1.7	NO		dd		
16	FUNCTION4 PFK	38.67	5.105e4					1.6	NO		bd		
17	FUNCTION4 PFK	38.46	3.713e4					1.7	NO		bb		
18	FUNCTION4 PFK	38.34	2.702e4					1.5	NO		bb		
19	FUNCTION4 PFK	38.24	3.033e4					2.1	NO		db		
20	FUNCTION4 PFK	43.27	3.782e3					0.5	NO		bb		
21	FUNCTION4 PFK	42.55	2.526e4					1.3	NO		db		
22	FUNCTION4 PFK	42.46	5.587e4					1.7	NO		bd		
23	FUNCTION4 PFK	42.23	4.010e4					1.9	NO		db		
24	FUNCTION4 PFK	42.14	4.110e4					1.4	NO		bd		
25	FUNCTION4 PFK	42.03	2.834e4					1.7	NO		bb		
26	FUNCTION4 PFK	41.92	4.601e4					2.1	NO		bb		
27	FUNCTION4 PFK	41.59	1.943e3					0.4	NO		bb		
28	FUNCTION4 PFK	41.52	4.583e4					1.8	NO		bb		
29	FUNCTION4 PFK	41.38	2.772e4					1.1	NO		bb		
30	FUNCTION4 PFK	41.19	2.808e4					1.4	NO		bb		
31	FUNCTION4 PFK	40.87	7.074e3					0.7	NO		bb		
32	FUNCTION4 PFK	40.76	2.430e3					0.5	NO		bb		
33	FUNCTION4 PFK	40.72	2.021e3					0.4	NO		bb		
34	FUNCTION4 PFK	40.44	3.051e4					1.5	NO		bb		

ID: 20J0389-06, Name: 20111806, Date: 18-Nov-2020, Time: 14:52:06, Conditions: AUTOSPEC01, User: pk

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.52	6.902e3					1.2	NO		bb		
2	FUNCTION5 PFK	44.41	1.676e4					1.3	NO		db		
3	FUNCTION5 PFK	44.35	9.487e2					0.2	NO		bd		
4	FUNCTION5 PFK	44.30	9.913e3					1.6	NO		bb		
5	FUNCTION5 PFK	44.19	2.679e4					1.6	NO		db		
6	FUNCTION5 PFK	44.09	3.635e4					2.6	NO		dd		
7	FUNCTION5 PFK	43.98	2.347e4					2.0	NO		dd		
8	FUNCTION5 PFK	43.95	1.589e4					2.4	NO		bd		
9	FUNCTION5 PFK	43.87	4.179e4					2.8	NO		bb		
10	FUNCTION5 PFK	43.74	1.833e4					1.2	NO		db		
11	FUNCTION5 PFK	43.64	5.588e4					2.6	NO		dd		
12	FUNCTION5 PFK	43.57	1.496e4					2.3	NO		dd		
13	FUNCTION5 PFK	43.54	2.537e4					3.0	YES		dd		
14	FUNCTION5 PFK	43.50	4.185e4					3.5	YES		dd		
15	FUNCTION5 PFK	43.44	1.821e4					2.9	NO		bd		
16	FUNCTION5 PFK	43.38	1.652e4					2.0	NO		bb		
17	FUNCTION5 PFK	45.64	1.428e4					1.8	NO		db		
18	FUNCTION5 PFK	45.60	2.342e4					1.9	NO		dd		
19	FUNCTION5 PFK	45.51	2.309e4					2.0	NO		dd		
20	FUNCTION5 PFK	45.47	6.207e3					0.9	NO		bd		
21	FUNCTION5 PFK	45.40	3.272e4					2.3	NO		db		
22	FUNCTION5 PFK	45.28	6.680e4					3.2	YES		dd		
23	FUNCTION5 PFK	45.19	4.134e4					3.0	YES		dd		
24	FUNCTION5 PFK	45.13	1.237e4					2.0	NO		bd		
25	FUNCTION5 PFK	45.07	1.703e4					1.8	NO		db		
26	FUNCTION5 PFK	45.03	4.464e3					0.7	NO		dd		
27	FUNCTION5 PFK	44.98	8.805e3					0.8	NO		bd		
28	FUNCTION5 PFK	44.86	2.059e4					1.5	NO		db		
29	FUNCTION5 PFK	44.76	2.910e4					2.1	NO		dd		
30	FUNCTION5 PFK	44.70	1.549e4					1.9	NO		dd		
31	FUNCTION5 PFK	44.63	2.370e4					2.2	NO		dd		
32	FUNCTION5 PFK	44.59	4.083e3					0.7	NO		bd		
33	FUNCTION5 PFK	46.29	4.881e3					0.7	NO		bb		
34	FUNCTION5 PFK	46.17	1.912e4					1.3	NO		bb		
35	FUNCTION5 PFK	46.07	1.987e4					2.0	NO		bb		
36	FUNCTION5 PFK	45.97	2.003e4					1.4	NO		bb		
37	FUNCTION5 PFK	45.84	1.389e4					1.6	NO		bb		

ID: 20J0389-06, Name: 20111806, Date: 18-Nov-2020, Time: 14:52:06, Conditions: AUTOSPEC01, User: pk

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION5 PFK	45.76	6.778e3					1.3	NO		db		
39	FUNCTION5 PFK	45.73	2.043e4					1.5	NO		bd		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	25.98	7.106e1					1.5	NO		bb		0.000
2	FUNCTION1 HXCD...	22.87	9.028e1					3.1	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	22.22	1.974e2					2.7	NO		bb		0.000
2	FUNCTION1 HPCD...	22.06	9.383e1					1.5	NO		bb		0.000
3	FUNCTION1 HPCD...	21.83	1.063e2					2.1	NO		db		0.000
4	FUNCTION1 HPCD...	21.65	1.270e2					1.4	NO		bd		0.000
5	FUNCTION1 HPCD...	21.12	7.297e1					3.0	NO		bb		0.000
6	FUNCTION1 HPCD...	27.66	1.324e2					3.2	YES		bb		0.000
7	FUNCTION1 HPCD...	27.16	8.823e1					1.6	NO		bb		0.000
8	FUNCTION1 HPCD...	25.95	7.261e1					2.2	NO		bb		0.000
9	FUNCTION1 HPCD...	25.64	1.195e2					2.5	NO		bb		0.000
10	FUNCTION1 HPCD...	25.55	1.009e2					2.3	NO		bb		0.000
11	FUNCTION1 HPCD...	23.61	1.092e2					1.9	NO		db		0.000
12	FUNCTION1 HPCD...	23.48	4.328e2					5.6	YES		bd		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.94	7.020e1					1.6	NO		bb		0.000
2	FUNCTION2 HPCD...	31.80	8.174e1					2.0	NO		bb		0.000
3	FUNCTION2 HPCD...	31.60	9.244e1					1.3	NO		bb		0.000
4	FUNCTION2 HPCD...	31.45	9.803e1					1.7	NO		bb		0.000
5	FUNCTION2 HPCD...	30.63	8.883e1					2.2	NO		bb		0.000
6	FUNCTION2 HPCD...	28.64	1.272e2					4.5	YES		bb		0.000

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ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	34.46	7.152e1					4.9	YES		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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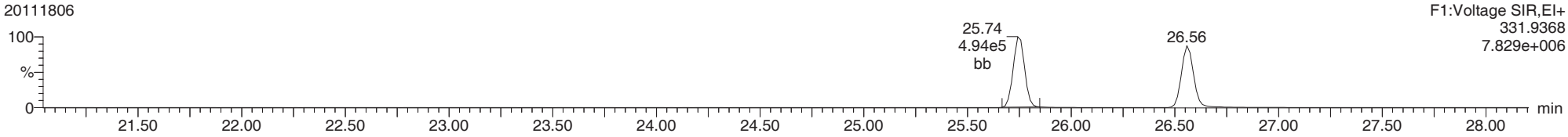
ID: 20J0389-06, Name: 20111806, Date: 18-Nov-2020, Time: 14:52:06, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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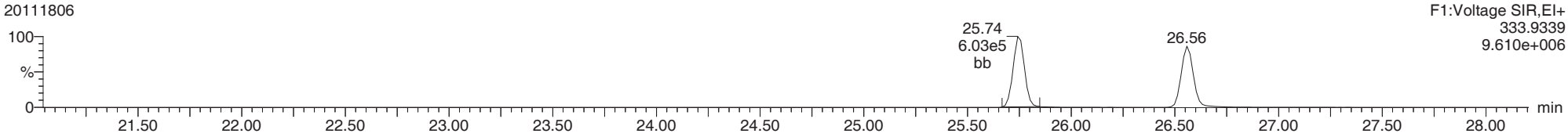

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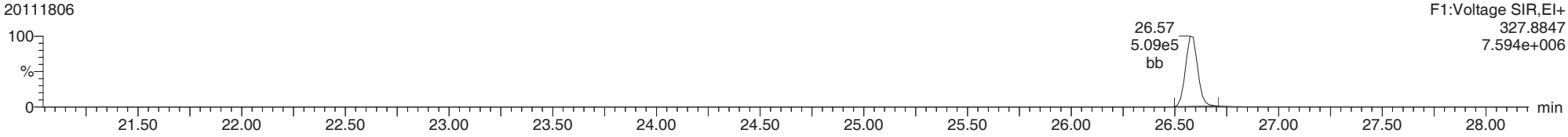

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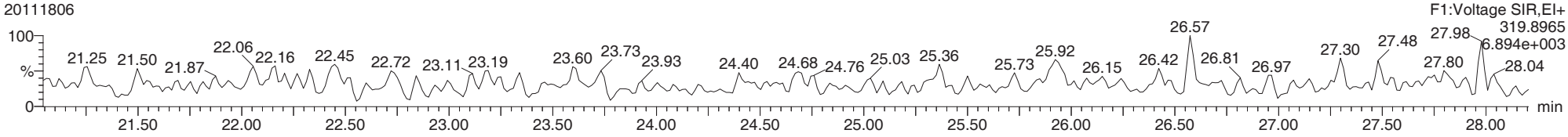

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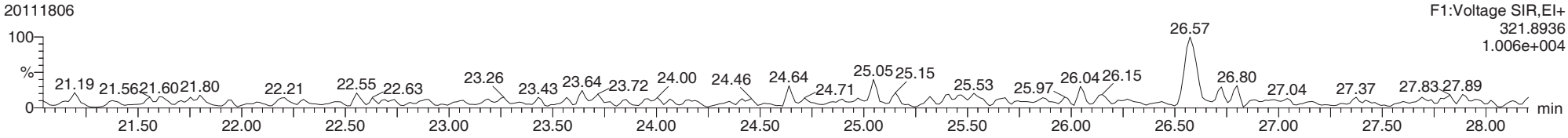

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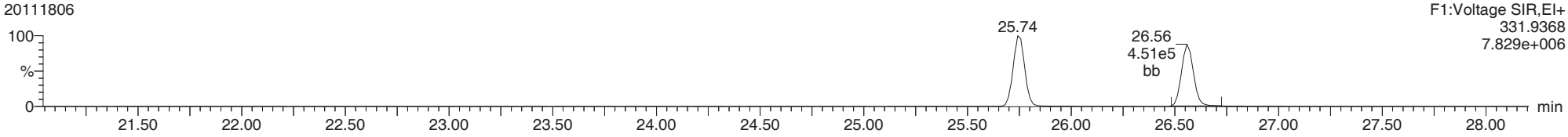

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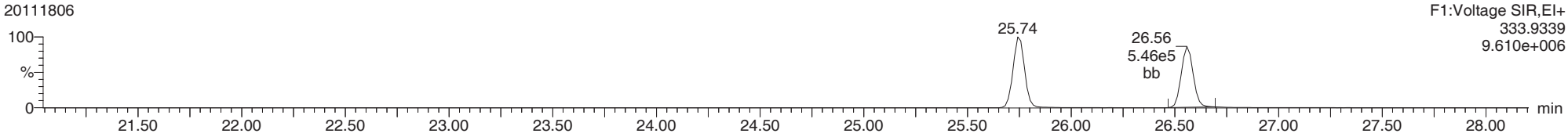

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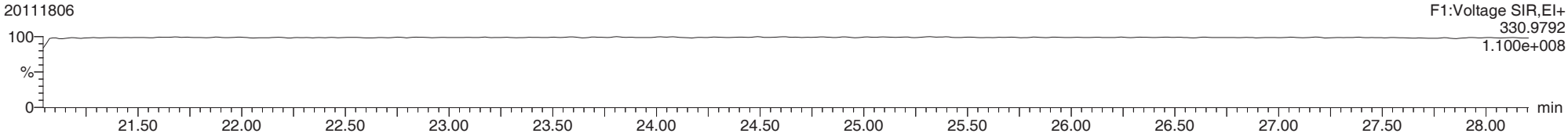

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ID: 20J0389-06, Name: 20111806, Date: 18-Nov-2020, Time: 14:52:06, Conditions: AUTOSPEC01, User: pk

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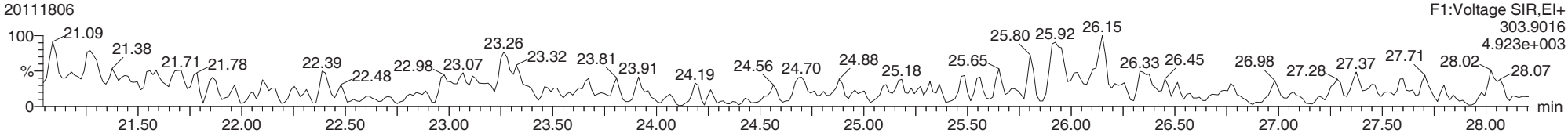

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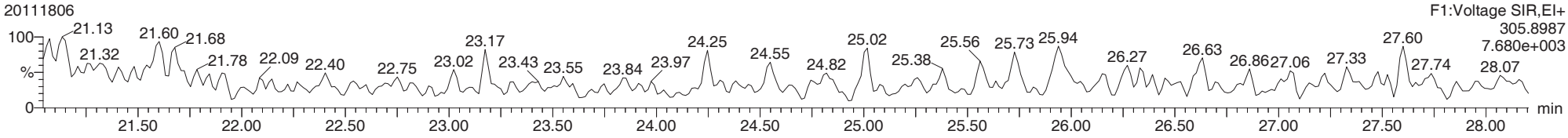

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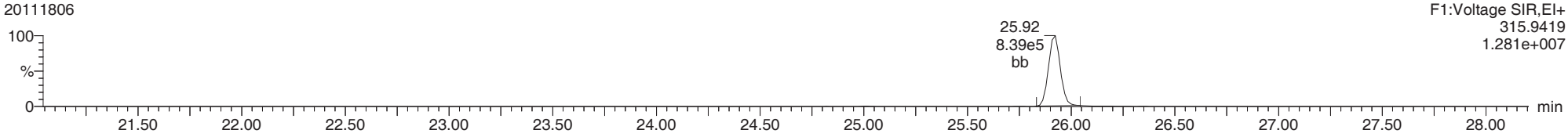

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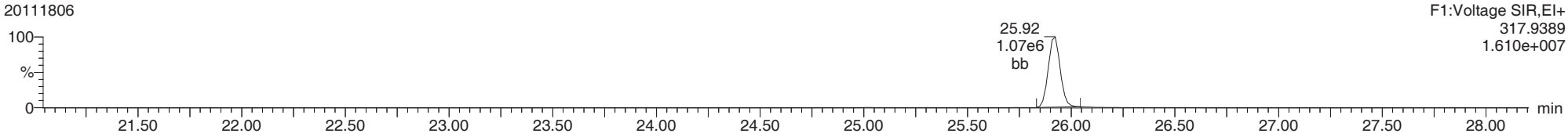
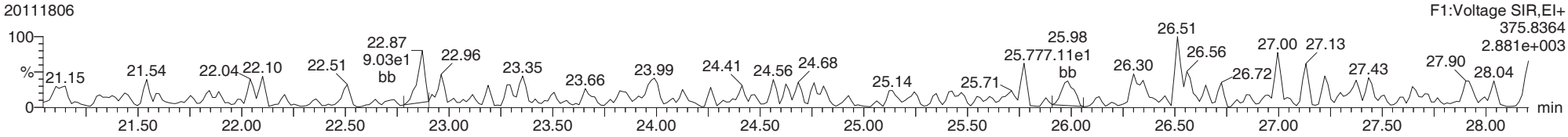
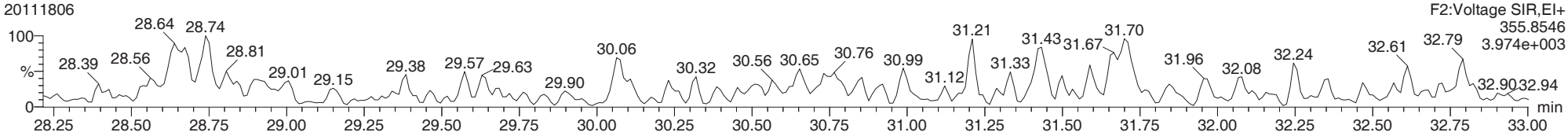


FUNCTION1 HXCDPE



ID: 20J0389-06, Name: 20111806, Date: 18-Nov-2020, Time: 14:52:06, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



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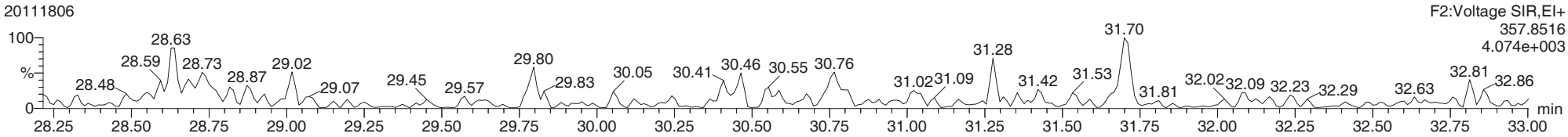

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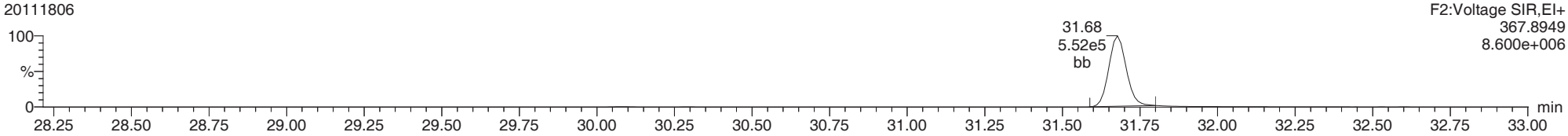

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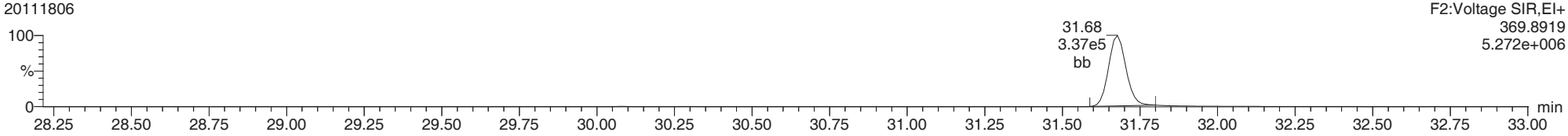
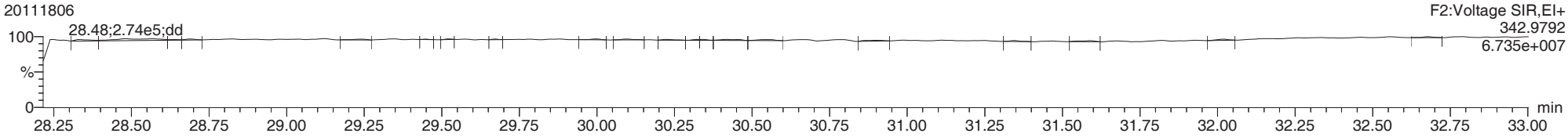


FUNCTION2 PFK



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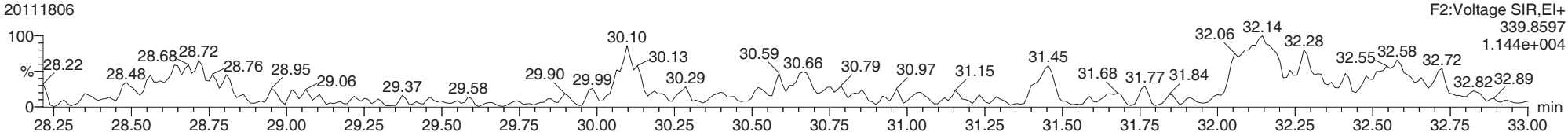

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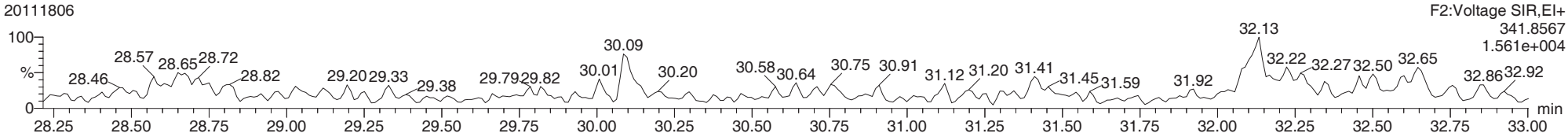

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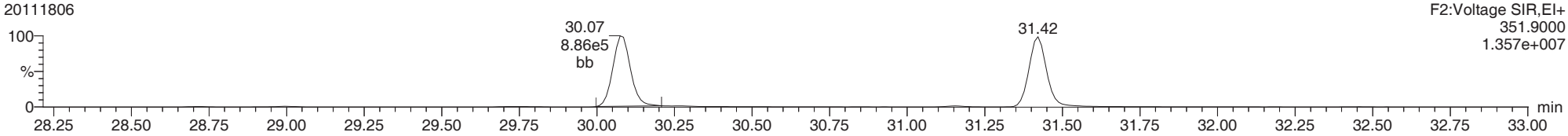

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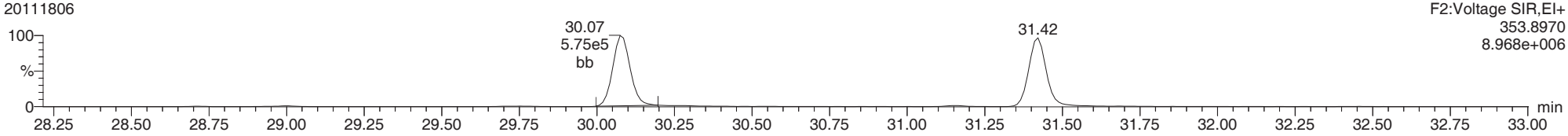
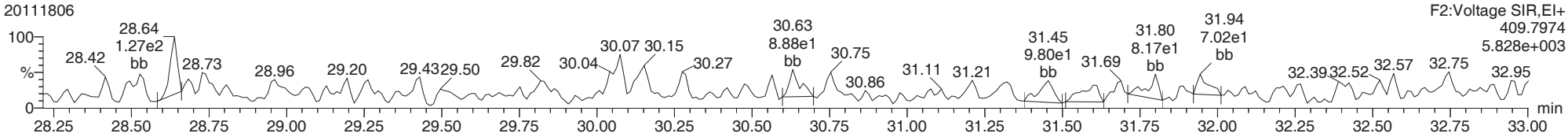


FUNCTION2 HPCDPE



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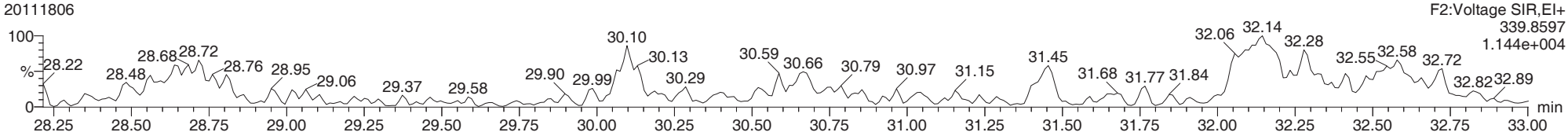
23478-PeCDF



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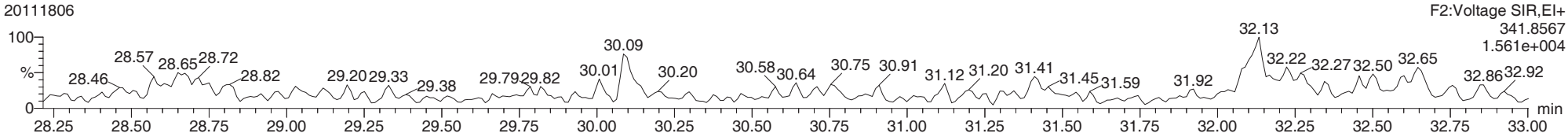

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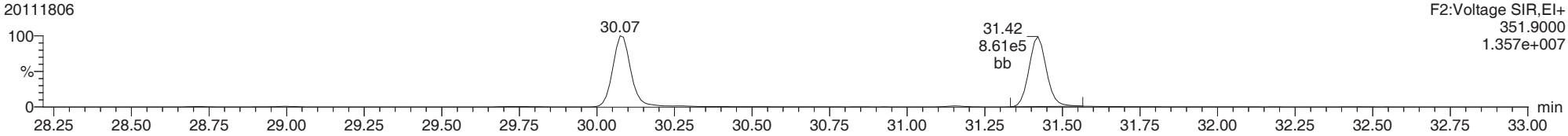

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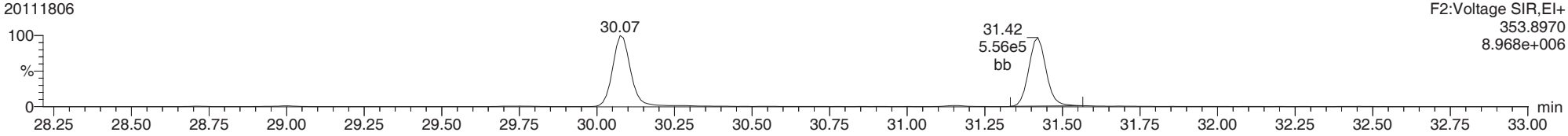

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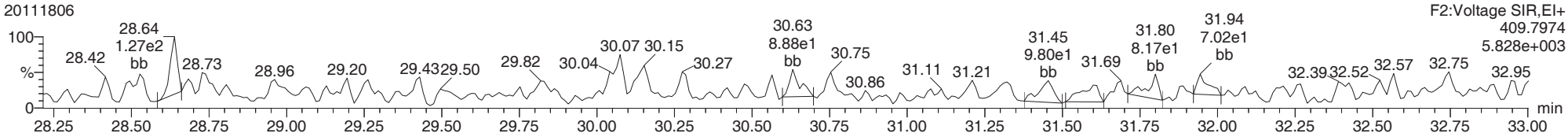

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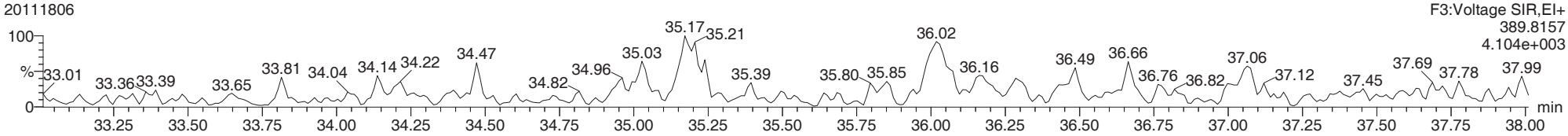
123478-HxCDD



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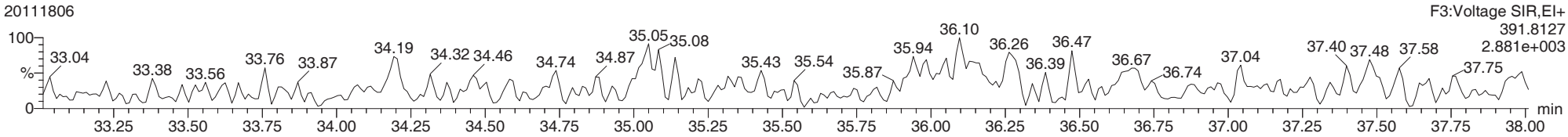

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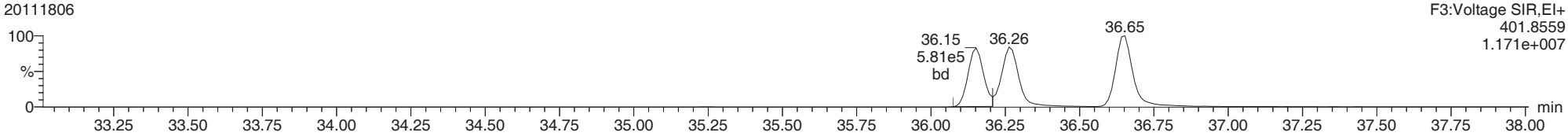

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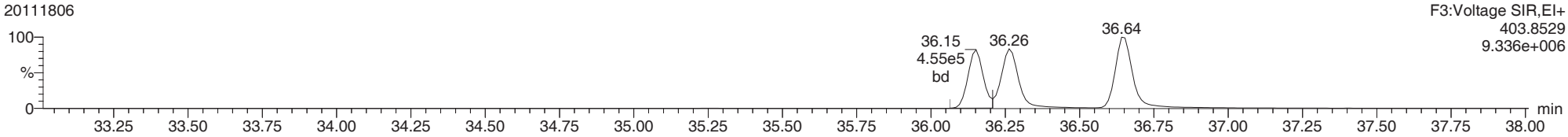
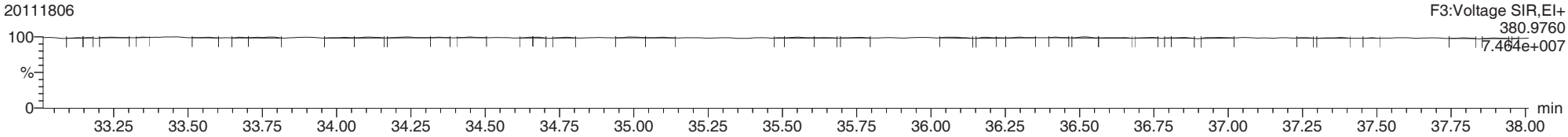


FUNCTION3 PFK



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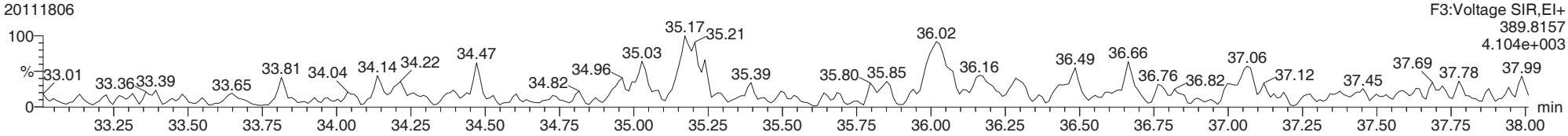

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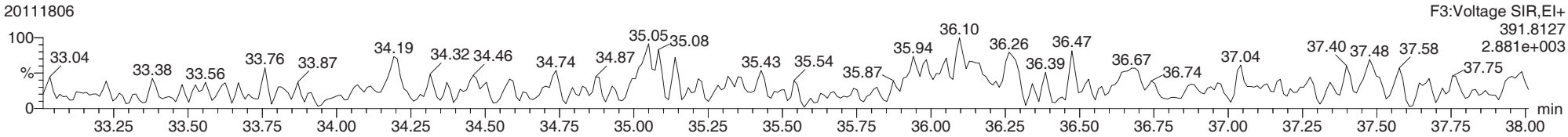

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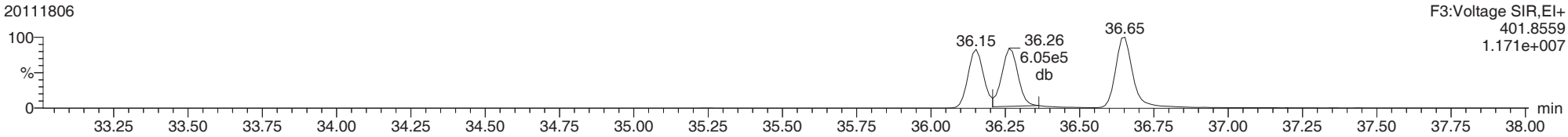

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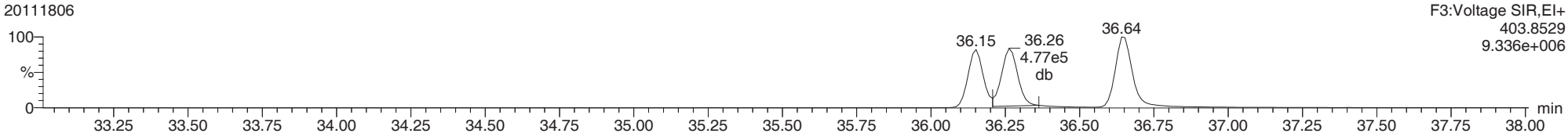

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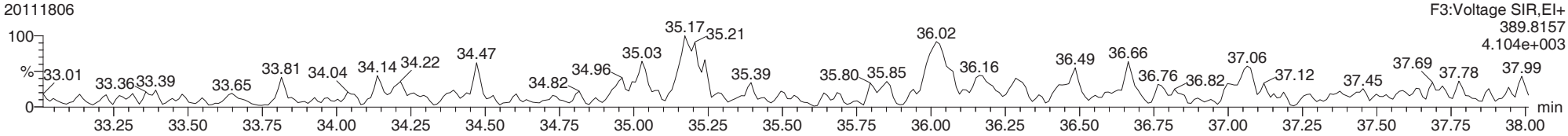

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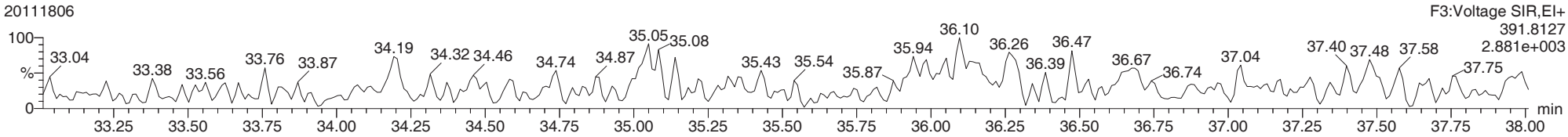

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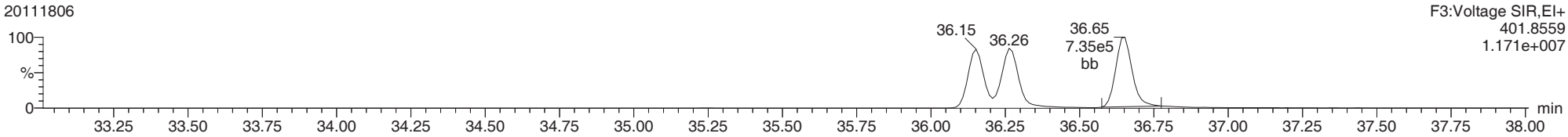

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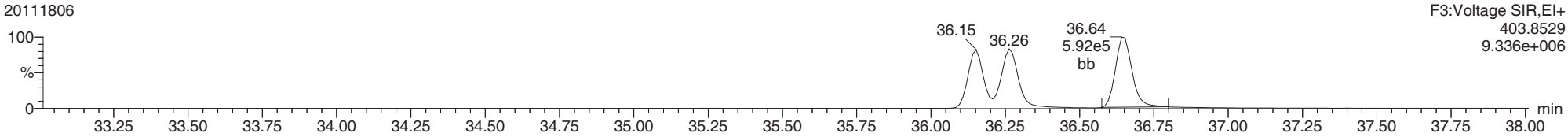

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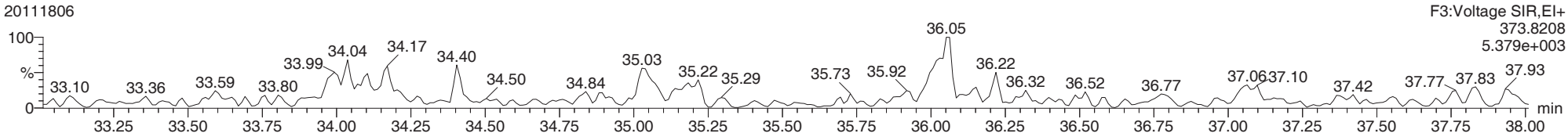

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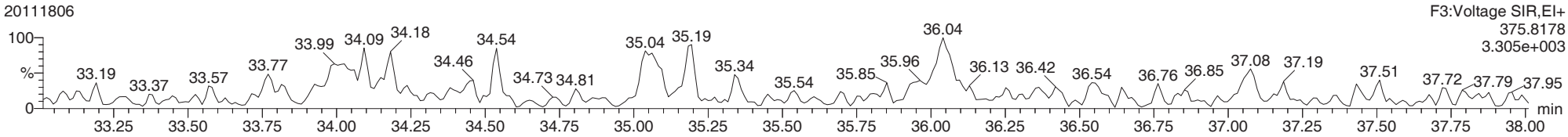

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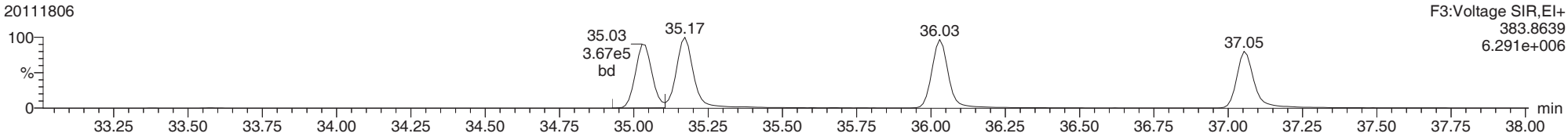

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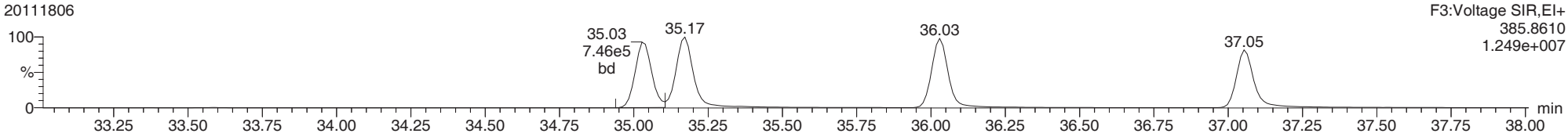

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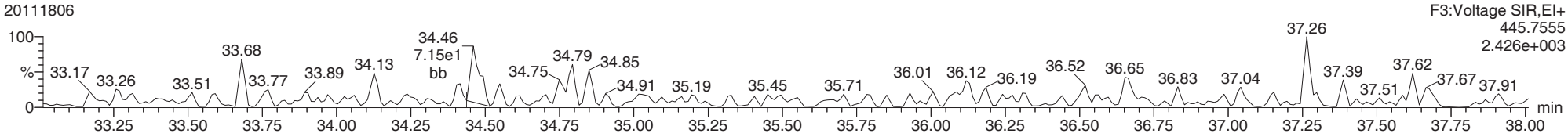

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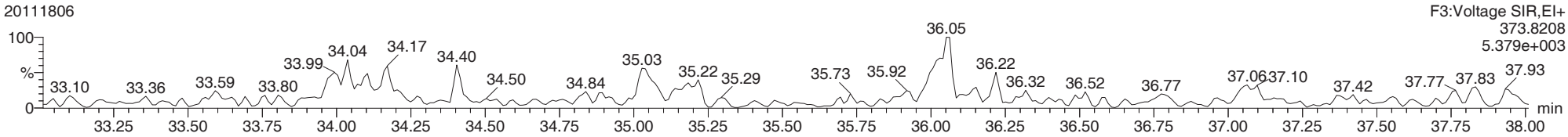

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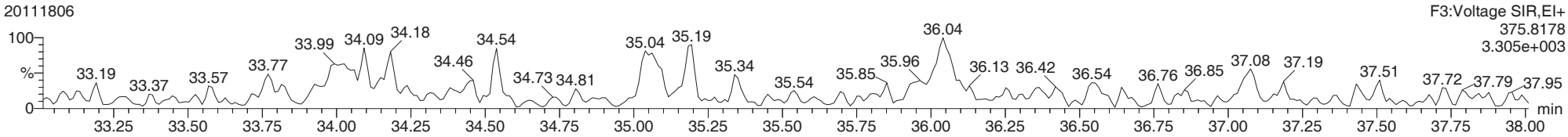

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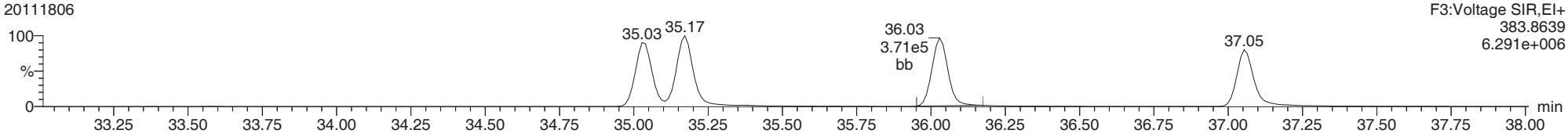

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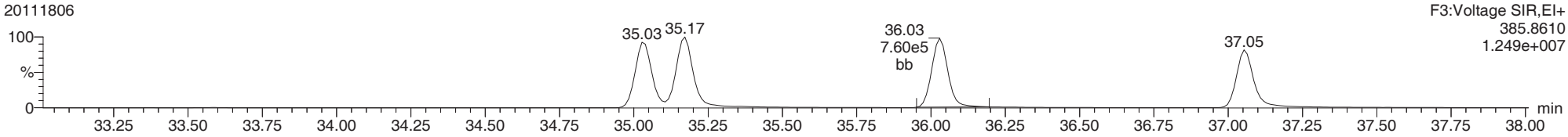

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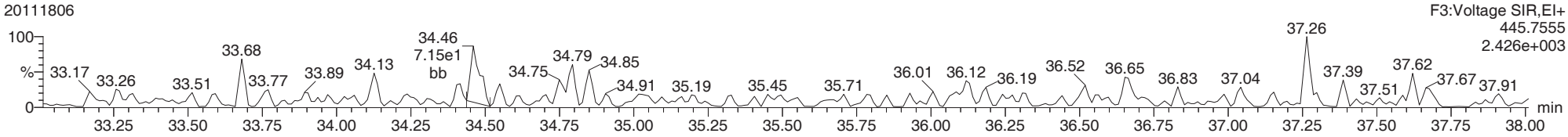

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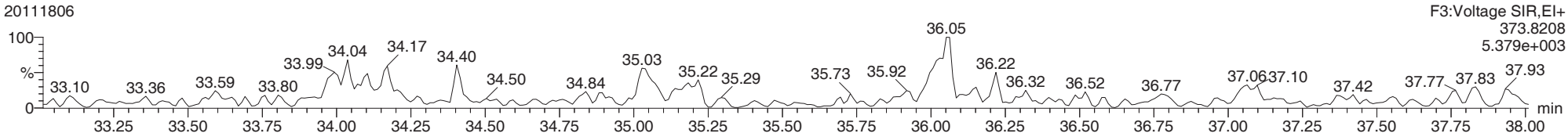

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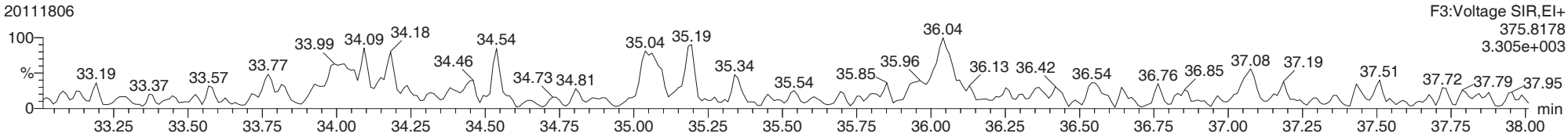

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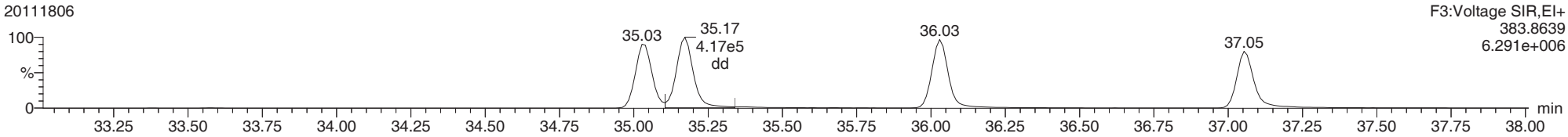

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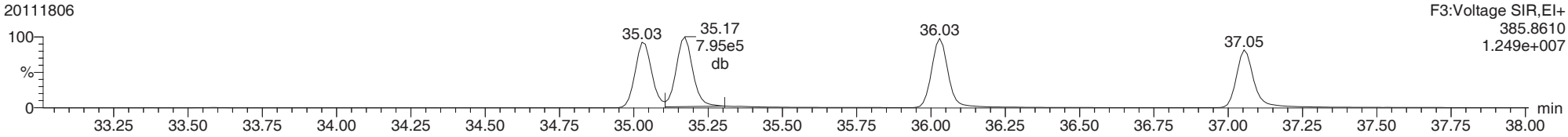

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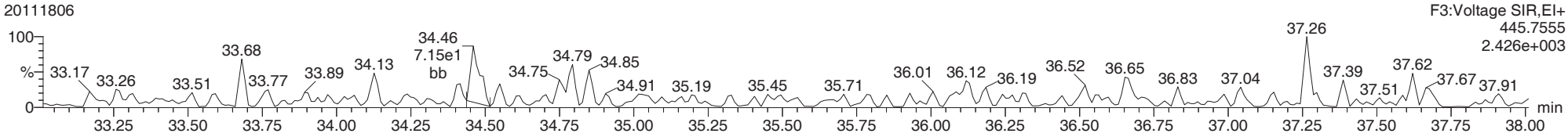

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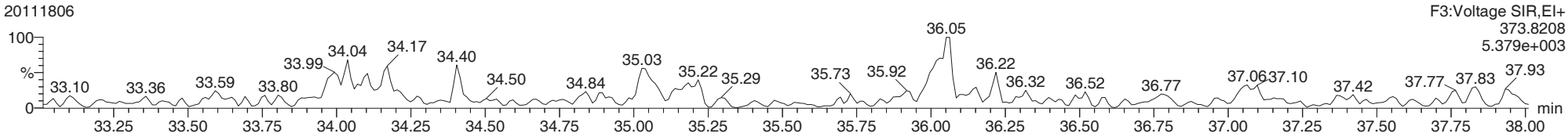

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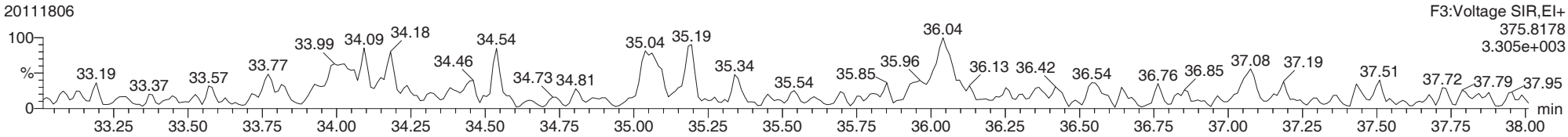

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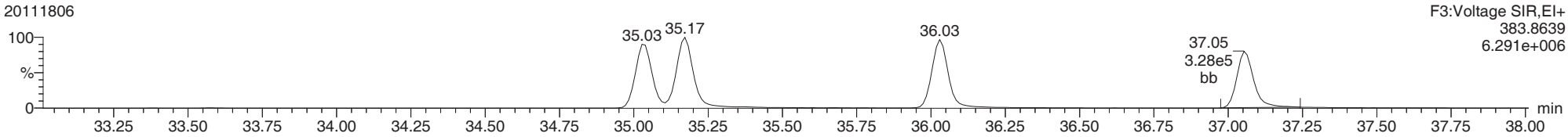

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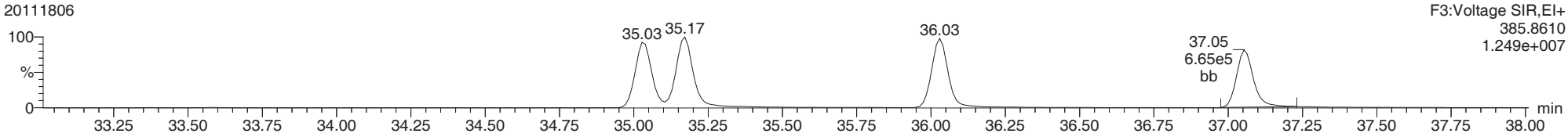

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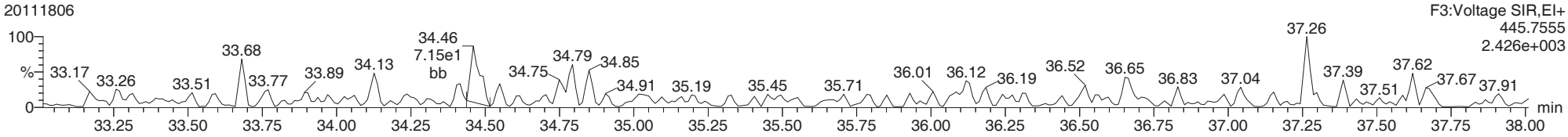

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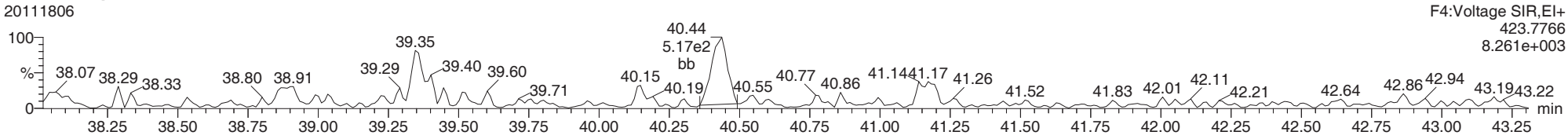

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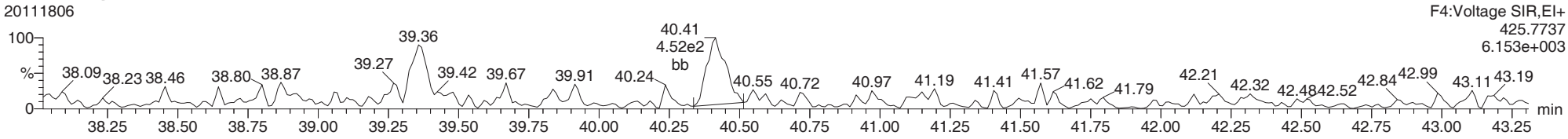

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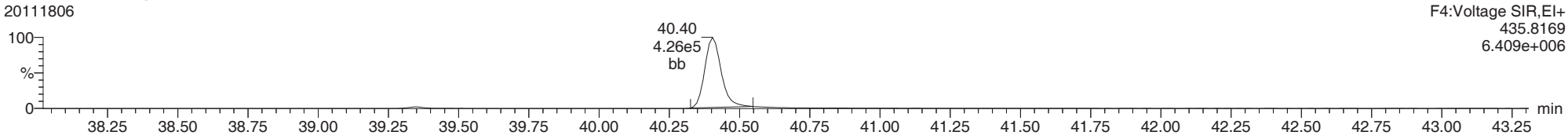

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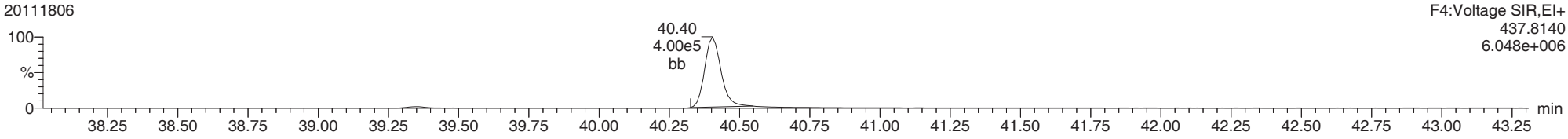

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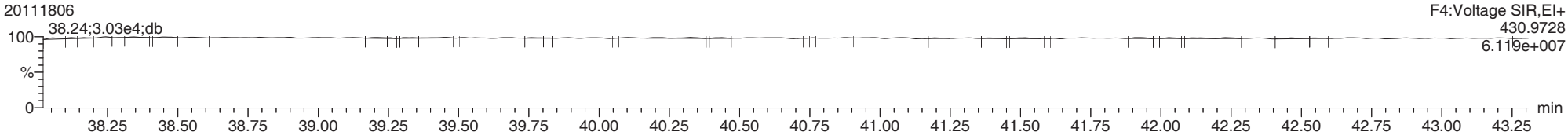

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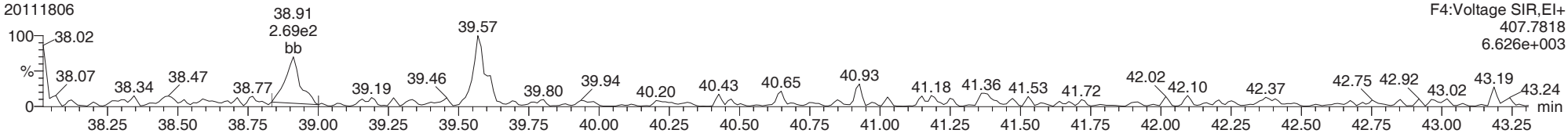
1234678-HpCDF



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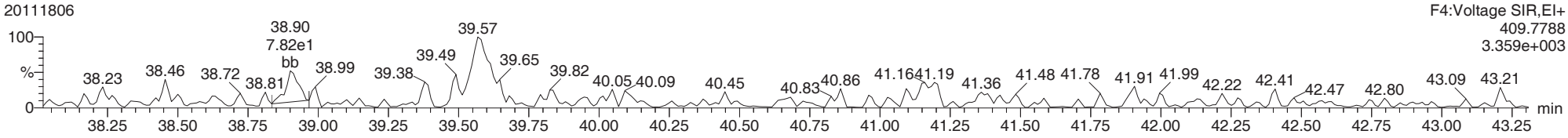

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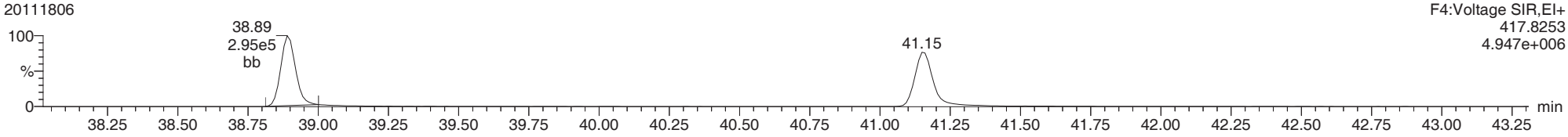

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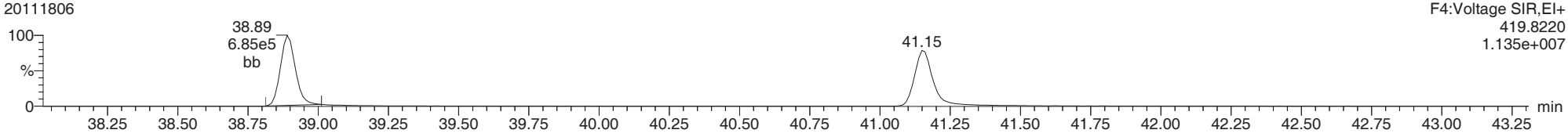

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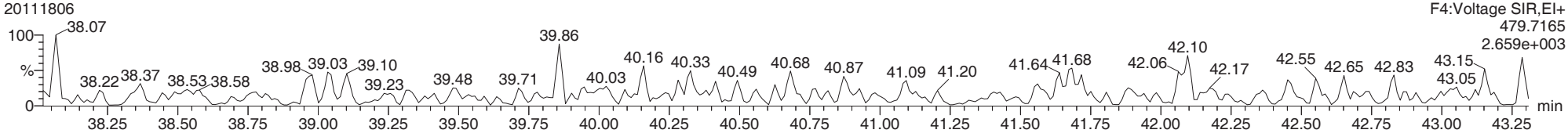

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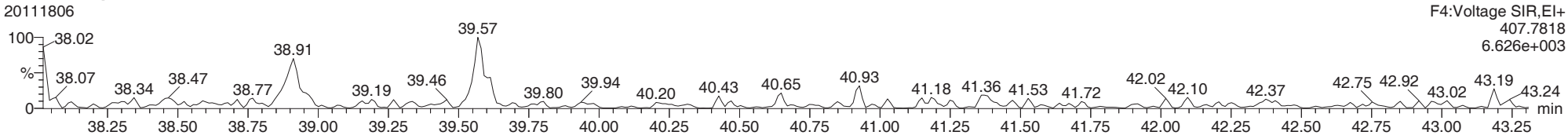
1234789-HpCDF



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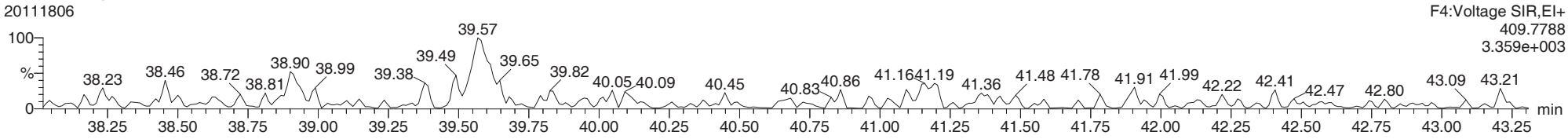

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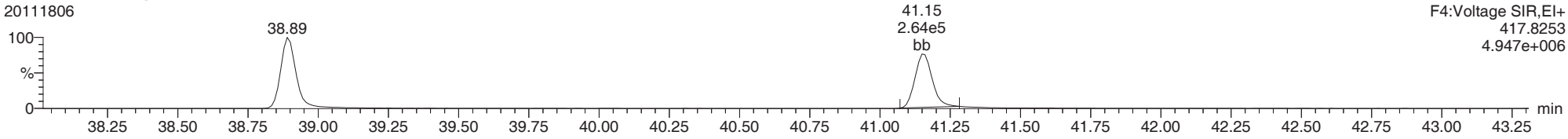

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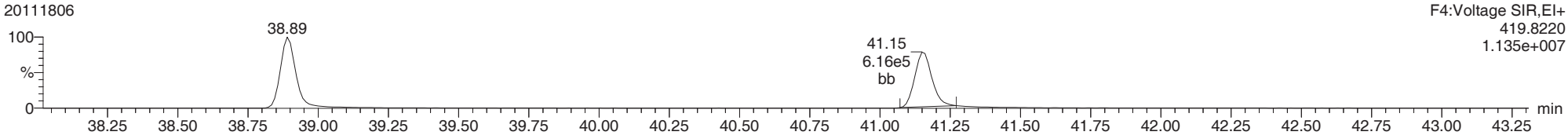

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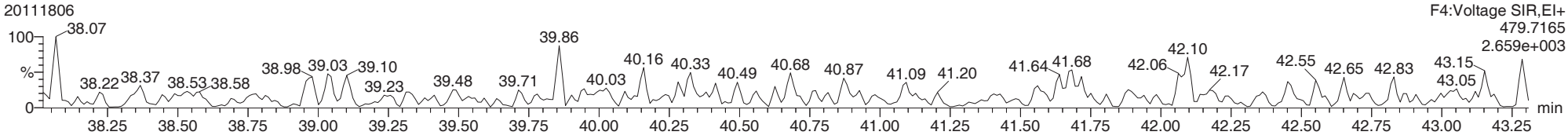

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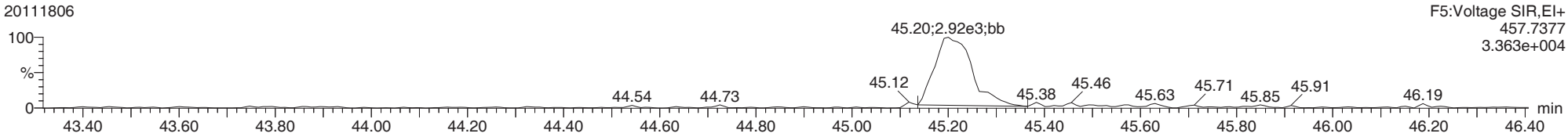

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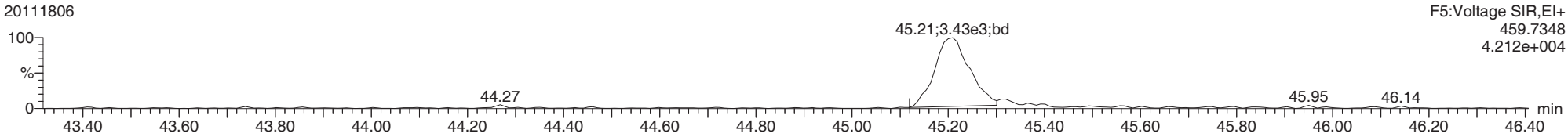

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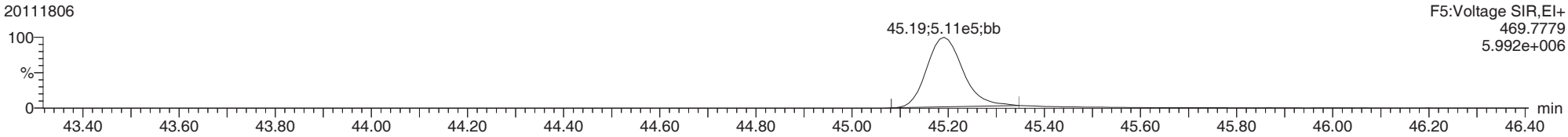

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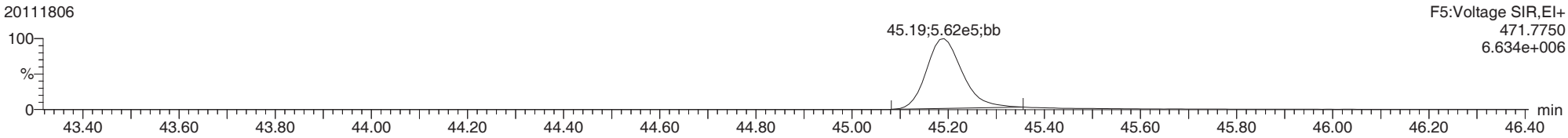
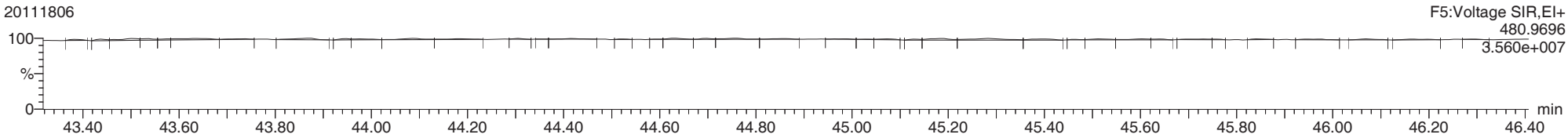


FUNCTION5 PFK



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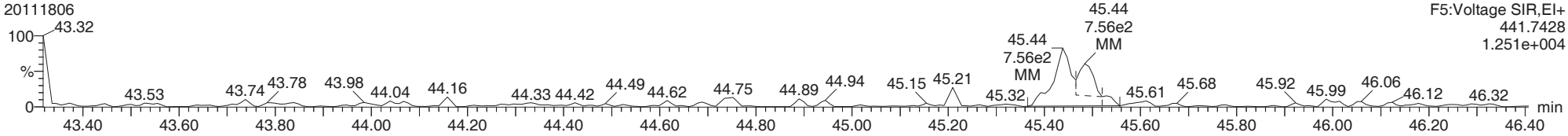

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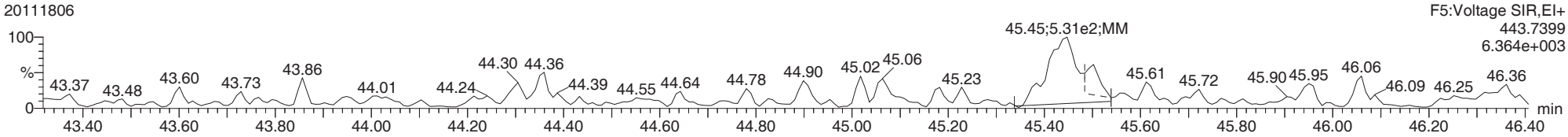
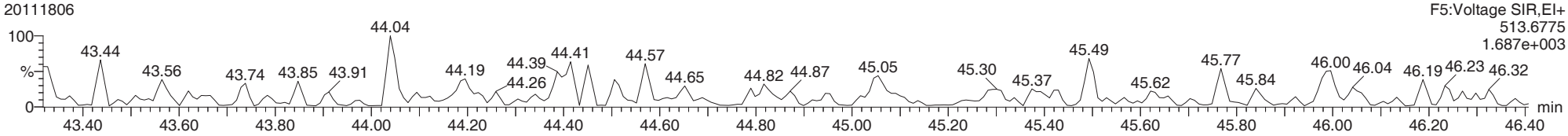


FUNCTION5 DCDPE



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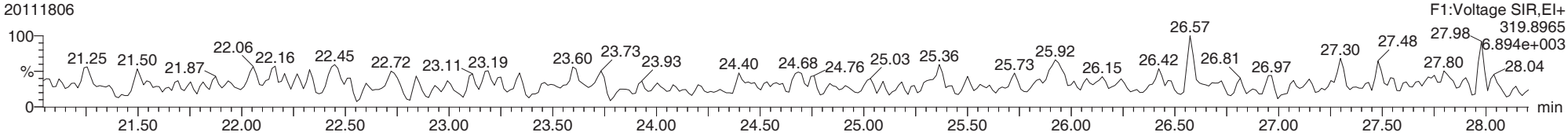
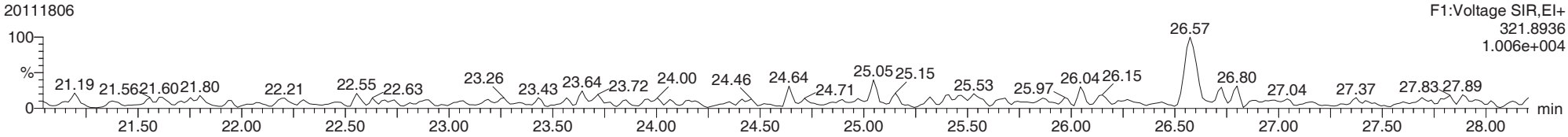
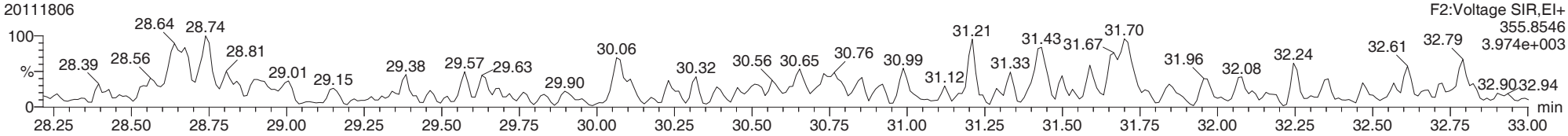
Total-tetradioxins



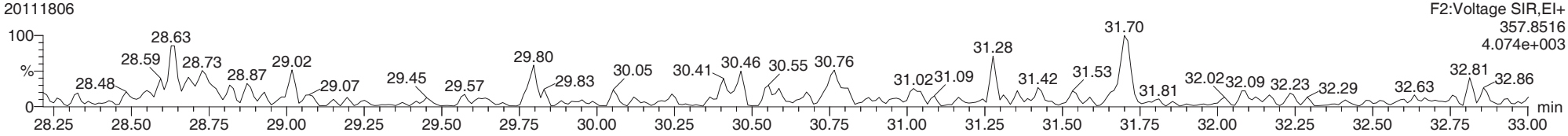
Total-tetradioxins



Total-pentadioxins

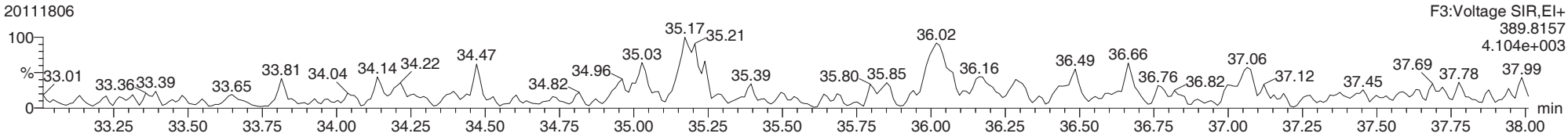


Total-pentadioxins

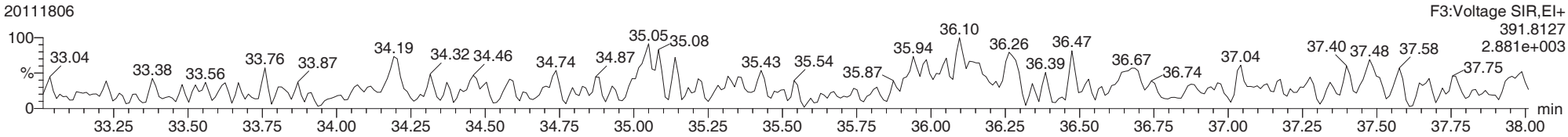


ID: 20J0389-06, Name: 20111806, Date: 18-Nov-2020, Time: 14:52:06, Conditions: AUTOSPEC01, User: pk

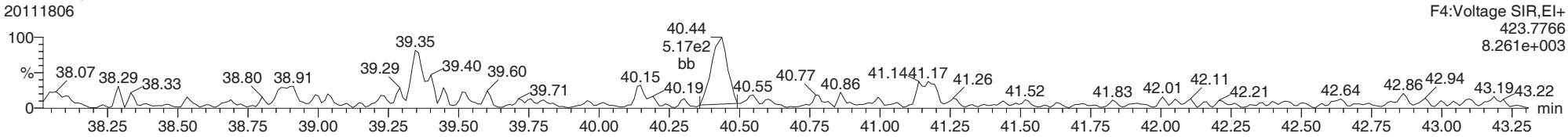
Total-hexadioxins



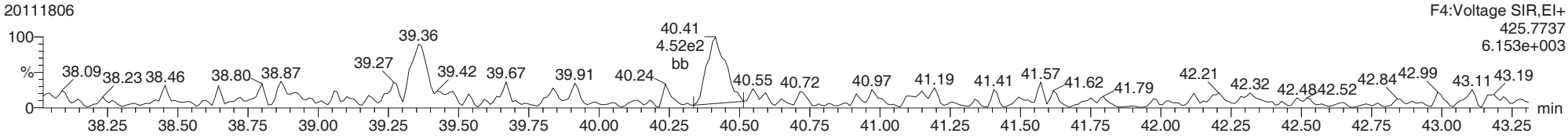
Total-hexadioxins



Total-heptadioxins

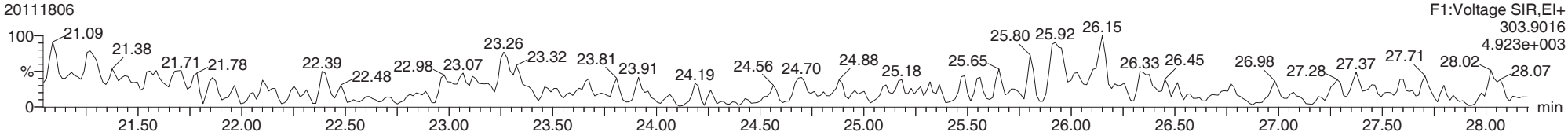


Total-heptadioxins

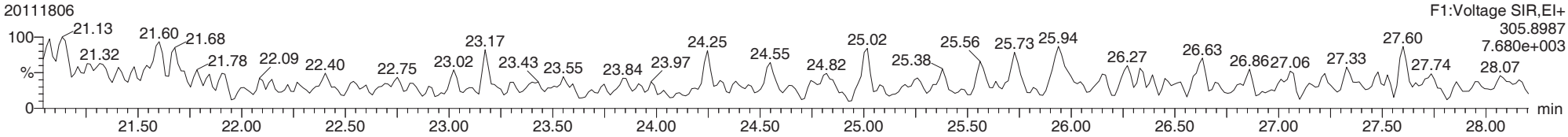


ID: 20J0389-06, Name: 20111806, Date: 18-Nov-2020, Time: 14:52:06, Conditions: AUTOSPEC01, User: pk

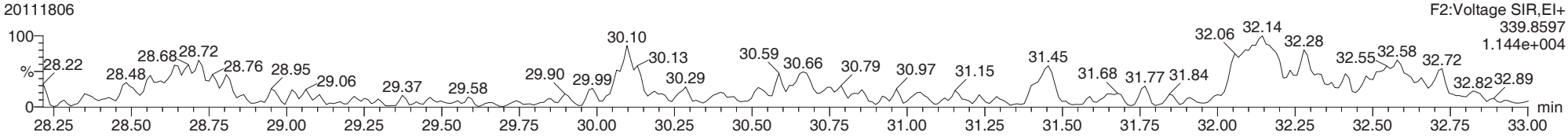
Total-tetrafurans



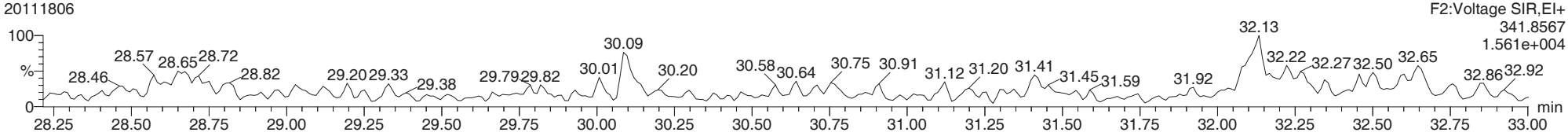
Total-tetrafurans



Total-pentafurans

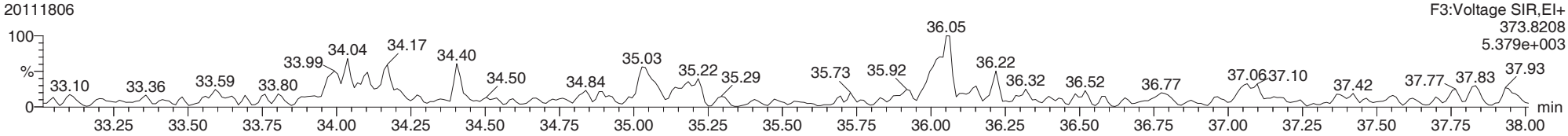


Total-pentafurans

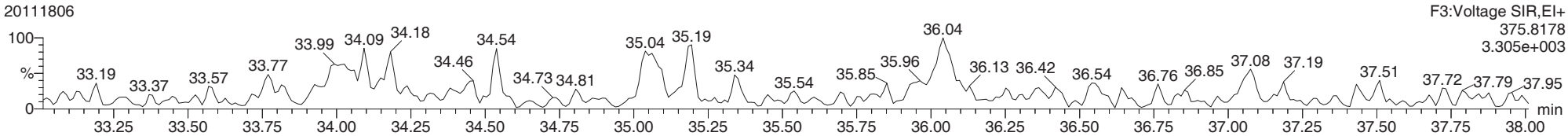


ID: 20J0389-06, Name: 20111806, Date: 18-Nov-2020, Time: 14:52:06, Conditions: AUTOSPEC01, User: pk

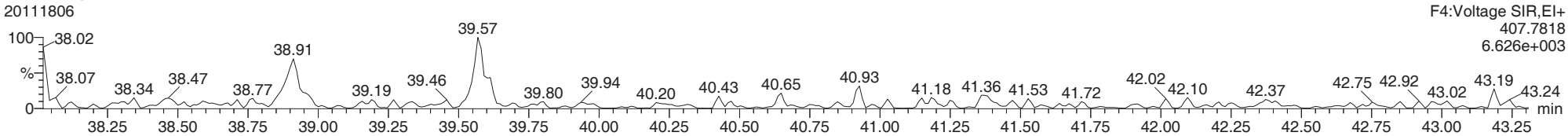
Total-hexafurans



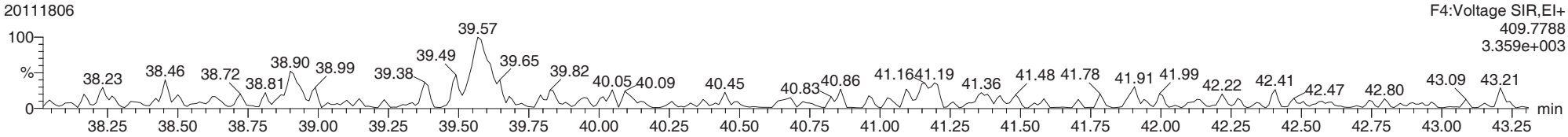
Total-hexafurans



Total-heptafurans



Total-heptafurans



MW-CP6-102720

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider				
Project:	Lora Lake Apartments				
Matrix:	Ground Water	Laboratory ID:	20J0389-07 A	File ID:	20112314
Sampled:	10/27/20 13:20	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 20:31
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1067 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	0.99	9.37	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	0.93	9.37	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.53	9.37	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	1.42	9.37	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	0.92	9.37	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.70	9.37	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.69	9.37	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.72	9.37	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	1.09	9.37	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	1.40	9.37	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	1.20	9.37	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	1.44	9.37	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1		0.893-1.208	0.66	9.37	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	1.06	9.37	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1		0.893-1.208	1.32	9.37	ND	pg/L	U
39001-02-0	OCDF	1		0.757-1.024	3.20	18.7	ND	pg/L	U
3268-87-9	OCDD	1	1.047	0.757-1.024	3.19	46.9	28.6	pg/L	EMPC, J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.37	ND	pg/L
41903-57-5	Total TCDD	1	0.000			9.37	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			9.37	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			9.37	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			9.37	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			9.37	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			9.37	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			9.37	ND	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.009

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.60

MW-CP6-102720

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider			Project:	Lora Lake Apartments
Matrix:	Ground Water	Laboratory ID:	20J0389-07	File ID:	20112314
Sampled:	10/27/20 13:20	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 20:31
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1067 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.766	0.655-0.886	1.54	78.6	24 - 169 %	
13C12-2,3,7,8-TCDD		0.809	0.655-0.886	1.51	75.5	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.582	1.318-1.783	2.18	65.8	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.522	1.318-1.783	2.28	65.0	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.506	1.318-1.783	1.67	67.4	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.490	0.434-0.587	4.63	92.0	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.520	0.434-0.587	3.94	94.4	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.472	0.434-0.587	4.42	90.4	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.494	0.434-0.587	5.15	84.3	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.287	1.054-1.426	3.07	81.9	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.307	1.054-1.426	2.53	80.8	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.445	0.374-0.506	6.60	84.3	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.474	0.374-0.506	8.29	80.9	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		0.980	0.893-1.208	5.71	83.9	23 - 140 %	
13C12-OCDD		0.935	0.757-1.024	5.18	53.6	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.95	90.1	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:09:43 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-07, Name: 20112314, Date: 23-Nov-2020, Time: 20:31:38, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF					0.729		0.770	757	1789								
12378-PeCDF					0.779		1.550	665	2012								
23478-PeCDF					0.880		1.550	665	2012								
123478-HxCDF					0.880		1.240	417	471								
234678-HxCDF					0.863		1.240	417	471								
123678-HxCDF					0.853		1.240	417	471								
123789-HxCDF					0.780		1.240	417	471								
1234678-HpCDF					1.001		1.050	361	374								
1234789-HpCDF					0.994		1.050	361	374								
OCDF					1.158		0.890	755	640								
2378-TCDD					1.238		0.770	1384	633								
12378-PeCDD					0.988		1.550	852	346								
123478-HxCDD					0.842		1.240	836	645								
123678-HxCDD					0.907		1.240	836	645								
123789-HxCDD					0.784		1.240	836	645								
1234678-HpCDD					1.044		1.050	427	615								
OCDD	45.100	1.000	1.595e3	1.523e3	0.963	1.047	0.890	565	590	1.76e4	1.85e4	31.1	31.3	YES	MM	MM	1.526
13C-2378-TCDF	25.848	1.007	5.945e5	7.759e5	2.203	0.766	0.770	3896	3445	8.57e6	1.10e7	2199.2	3197.4	NO	bb	bb	78.618
13C-12378-PeCDF	30.008	1.168	5.556e5	3.512e5	1.741	1.582	1.550	4759	3480	7.74e6	4.99e6	1626.4	1432.5	NO	bb	bb	65.819
13C-23478-PeCDF	31.343	1.220	5.185e5	3.406e5	1.669	1.522	1.550	4759	3480	7.25e6	4.73e6	1523.4	1359.0	NO	bb	bb	65.039
13C-123478-HxCDF	34.960	0.956	1.806e5	3.686e5	1.022	0.490	0.510	2060	4567	2.68e6	5.39e6	1301.7	1179.5	NO	bd	bd	91.986
13C-123678-HxCDF	35.105	0.960	2.263e5	4.352e5	1.200	0.520	0.510	2060	4567	2.89e6	5.67e6	1402.4	1241.8	NO	db	db	94.367
13C-234678-HxCDF	35.962	0.983	1.815e5	3.843e5	1.071	0.472	0.510	2060	4567	2.59e6	5.27e6	1258.2	1154.0	NO	bb	bd	90.428
13C-123789-HxCDF	36.986	1.011	1.497e5	3.029e5	0.919	0.494	0.510	2060	4567	1.94e6	3.97e6	940.8	868.2	NO	MM	MM	84.347
13C-1234678-HpCDF	38.823	1.061	1.377e5	3.096e5	0.909	0.445	0.440	4083	4321	1.93e6	4.55e6	471.6	1052.1	NO	bd	bb	84.290
13C-1234789-HpCDF	41.071	1.123	1.099e5	2.319e5	0.724	0.474	0.440	4083	4321	1.26e6	3.01e6	308.9	697.6	NO	bb	bb	80.889
13C-1234-TCDD	25.681	0.000	3.557e5	4.355e5	1.000	0.817	0.770	2477	1393	5.48e6	6.64e6	2211.5	4765.0	NO	bb	bb	100.000
13C-2378-TCDD	26.482	1.031	3.156e5	3.903e5	1.181	0.809	0.770	2477	1393	4.41e6	5.52e6	1781.7	3964.7	NO	bb	bb	75.509
13C-12378-PeCDD	31.599	1.230	3.133e5	2.081e5	0.978	1.506	1.550	1469	2079	4.44e6	2.79e6	3020.2	1342.4	NO	bb	bd	67.389
13C-123478-HxCDD	36.085	0.986	2.597e5	2.018e5	0.965	1.287	1.240	2558	1590	3.98e6	3.07e6	1557.5	1929.3	NO	bd	bd	81.866
13C-123678-HxCDD	36.196	0.989	3.125e5	2.391e5	1.168	1.307	1.240	2558	1590	4.33e6	3.38e6	1693.9	2126.0	NO	db	db	80.847
13C-1234678-HpCDD	40.325	1.102	1.566e5	1.597e5	0.645	0.980	1.050	2781	2381	2.11e6	1.94e6	758.8	814.6	NO	bb	bd	83.911
13C-OCDD	45.090	1.232	2.051e5	2.194e5	0.678	0.935	0.890	1984	2938	2.04e6	2.21e6	1030.1	753.0	NO	bd	bd	107.150
13C-123789-HxCDD	36.585	0.000	3.210e5	2.631e5	1.000	1.220	1.240	2558	1590	4.33e6	3.53e6	1693.0	2220.8	NO	bb	bb	100.000
37CL-2378-TCDD	26.512	1.032	3.606e5		1.264			2612		5.26e6		2013.5			bb		36.042

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:09:43 Pacific Standard Time

ID: 20J0389-07, Name: 20112314, Date: 23-Nov-2020, Time: 20:31:38, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	757	1789								
1289-TCDF					0.688		0.770	757	1789								
13468-PECDF					1.181		1.550	390	1127								
12389-PECDF					0.766		1.550	665	2012								
123468-HXCDF					1.003		1.240	417	471								
1368-TCDD					1.179		0.770	1384	633								
1289-TCDD					1.042		0.770	1384	633								
12479-PECDD					1.810		1.550	852	346								
12389-PECDD					1.165		1.550	852	346								
124679-HXCDD					1.056		1.240	836	645								
1234679-HPCDD	39.290	0.974	1.544e2	1.028e2	1.285	1.502	1.050	427	615	2.55e3	1.83e3	6.0	3.0	YES	bb	bb	0.063
Total-tetrafurans			0.000e0		0.754			757		0.00e0							
Total-penta1			0.000e0					390		0.00e0							
Total-pentafurans			0.000e0		0.809			665		0.00e0							
Total-hexafurans			0.000e0		0.876			417		0.00e0							
Total-heptafurans			0.000e0		0.997			361		0.00e0							
Total-Furans			0.000e0		0.893			757		0.00e0							
Total-tetradioxins			0.000e0		1.153			1384		0.00e0							
Total-pentadioxins			0.000e0		1.321			852		0.00e0							
Total-hexadioxins			0.000e0		0.897			836		0.00e0							
Total-heptadioxins			0.000e0		1.165			427		0.00e0							
Total-Dioxins			0.000e0		1.100			1384		0.00e0							
Total-TEQ			0.000e0					1384		0.00e0							
FUNCTION1 PFK			2.382e6					543266		4.38e7							
FUNCTION2 PFK			1.182e6					387490		2.69e7							0.000
FUNCTION3 PFK			1.104e5					451768		2.75e6							0.000
FUNCTION4 PFK			9.118e5					279088		1.95e7							
FUNCTION5 PFK			4.689e5					201328		1.32e7							
FUNCTION1 HXCD...			2.486e2					443		5.59e3							0.000
FUNCTION1 HPCD...			1.210e3					1221		2.29e4							0.000
FUNCTION2 HPCD...			7.907e2					1477		2.24e4							0.000
FUNCTION3 OCDPE			0.000e0					302		0.00e0							
FUNCTION4 NCDPE			0.000e0					537		0.00e0							
FUNCTION5 DCDPE			0.000e0					284		0.00e0							

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	22.34	5.127e4					1.8	NO		db		
2	FUNCTION1 PFK	22.21	5.024e4					1.5	NO		bd		
3	FUNCTION1 PFK	22.12	6.584e4					2.0	NO		db		
4	FUNCTION1 PFK	22.00	3.451e4					1.2	NO		dd		
5	FUNCTION1 PFK	21.90	7.848e4					2.3	NO		dd		
6	FUNCTION1 PFK	21.78	8.793e4					2.0	NO		bd		
7	FUNCTION1 PFK	21.63	2.361e4					0.9	NO		db		
8	FUNCTION1 PFK	21.56	3.083e4					1.3	NO		bd		
9	FUNCTION1 PFK	21.44	4.211e4					1.4	NO		bb		
10	FUNCTION1 PFK	21.33	6.261e4					2.4	NO		bb		
11	FUNCTION1 PFK	24.47	6.648e4					2.3	NO		dd		
12	FUNCTION1 PFK	24.38	9.439e4					2.7	NO		dd		
13	FUNCTION1 PFK	24.26	1.010e5					2.8	NO		dd		
14	FUNCTION1 PFK	24.14	8.273e4					2.5	NO		dd		
15	FUNCTION1 PFK	24.05	9.027e4					2.2	NO		dd		
16	FUNCTION1 PFK	23.93	9.409e4					2.4	NO		dd		
17	FUNCTION1 PFK	23.81	7.264e4					2.2	NO		bd		
18	FUNCTION1 PFK	23.70	4.682e4					1.9	NO		bb		
19	FUNCTION1 PFK	23.60	2.934e4					1.4	NO		bb		
20	FUNCTION1 PFK	23.42	8.971e3					0.6	NO		db		
21	FUNCTION1 PFK	23.37	4.090e4					1.8	NO		bd		
22	FUNCTION1 PFK	23.13	7.882e4					2.5	NO		bb		
23	FUNCTION1 PFK	23.04	2.777e4					1.6	NO		db		
24	FUNCTION1 PFK	23.01	2.994e4					1.6	NO		bd		
25	FUNCTION1 PFK	22.92	2.736e4					1.3	NO		bb		
26	FUNCTION1 PFK	22.45	2.534e4					1.4	NO		bb		
27	FUNCTION1 PFK	27.10	9.255e3					0.7	NO		bb		
28	FUNCTION1 PFK	27.00	4.389e4					1.6	NO		bb		
29	FUNCTION1 PFK	26.88	7.977e4					2.5	NO		db		
30	FUNCTION1 PFK	26.77	3.645e4					1.9	NO		bd		
31	FUNCTION1 PFK	26.65	6.202e4					1.7	NO		db		
32	FUNCTION1 PFK	26.54	5.538e4					1.8	NO		bd		
33	FUNCTION1 PFK	26.42	2.749e4					1.2	NO		bb		
34	FUNCTION1 PFK	26.30	6.817e4					2.1	NO		bb		
35	FUNCTION1 PFK	25.85	2.284e4					0.8	NO		bb		
36	FUNCTION1 PFK	25.61	4.557e4					1.8	NO		bb		
37	FUNCTION1 PFK	25.53	3.508e4					1.3	NO		bb		

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:09:43 Pacific Standard Time

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	25.18	2.548e4					1.0	NO		bb		
39	FUNCTION1 PFK	24.96	5.234e4					1.3	NO		db		
40	FUNCTION1 PFK	24.84	7.060e4					2.0	NO		bd		
41	FUNCTION1 PFK	24.61	3.413e4					2.0	NO		db		
42	FUNCTION1 PFK	24.58	4.493e4					2.0	NO		dd		
43	FUNCTION1 PFK	28.01	5.729e4					2.2	NO		bb		
44	FUNCTION1 PFK	27.89	4.868e4					1.8	NO		db		
45	FUNCTION1 PFK	27.78	8.586e4					2.0	NO		bd		
46	FUNCTION1 PFK	27.56	3.255e4					1.1	NO		bb		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.70	3.069e4					2.6	NO		bb		0.000
2	FUNCTION2 PFK	29.46	4.245e4					2.9	NO		bb		0.000
3	FUNCTION2 PFK	29.33	2.319e4					1.6	NO		bb		0.000
4	FUNCTION2 PFK	29.23	2.763e4					1.4	NO		bb		0.000
5	FUNCTION2 PFK	29.00	2.524e4					1.3	NO		bb		0.000
6	FUNCTION2 PFK	28.91	3.323e4					2.1	NO		db		0.000
7	FUNCTION2 PFK	28.81	2.221e4					1.5	NO		dd		0.000
8	FUNCTION2 PFK	28.77	1.177e4					1.4	NO		bd		0.000
9	FUNCTION2 PFK	28.67	4.641e4					1.9	NO		db		0.000
10	FUNCTION2 PFK	28.55	3.854e4					1.4	NO		bd		0.000
11	FUNCTION2 PFK	28.34	4.960e4					3.2	YES		bb		0.000
12	FUNCTION2 PFK	31.45	2.983e4					1.2	NO		bb		0.000
13	FUNCTION2 PFK	31.37	4.991e4					2.5	NO		bb		0.000
14	FUNCTION2 PFK	31.27	2.466e4					1.4	NO		bb		0.000
15	FUNCTION2 PFK	31.11	3.183e4					1.3	NO		bb		0.000
16	FUNCTION2 PFK	31.07	4.458e3					0.8	NO		db		0.000
17	FUNCTION2 PFK	31.03	2.482e4					1.5	NO		bd		0.000
18	FUNCTION2 PFK	30.82	2.792e4					1.5	NO		bb		0.000
19	FUNCTION2 PFK	30.72	1.687e4					1.5	NO		bb		0.000
20	FUNCTION2 PFK	30.54	3.990e3					0.6	NO		bb		0.000
21	FUNCTION2 PFK	30.34	1.464e4					1.3	NO		bb		0.000
22	FUNCTION2 PFK	30.25	2.357e4					1.7	NO		bb		0.000
23	FUNCTION2 PFK	30.14	4.199e4					2.1	NO		bb		0.000
24	FUNCTION2 PFK	30.03	2.531e4					1.8	NO		bb		0.000
25	FUNCTION2 PFK	29.92	3.020e4					1.6	NO		bb		0.000
26	FUNCTION2 PFK	29.83	2.266e4					1.6	NO		db		0.000
27	FUNCTION2 PFK	29.79	3.403e4					2.2	NO		bd		0.000
28	FUNCTION2 PFK	32.95	4.984e4					2.3	NO		db		0.000
29	FUNCTION2 PFK	32.90	1.253e4					1.2	NO		bd		0.000
30	FUNCTION2 PFK	32.83	6.566e4					2.8	NO		db		0.000
31	FUNCTION2 PFK	32.73	2.574e4					1.9	NO		dd		0.000
32	FUNCTION2 PFK	32.70	2.012e4					1.7	NO		dd		0.000
33	FUNCTION2 PFK	32.66	1.384e4					1.3	NO		dd		0.000
34	FUNCTION2 PFK	32.59	6.066e3					0.8	NO		bd		0.000
35	FUNCTION2 PFK	32.37	1.838e4					0.8	NO		bb		0.000
36	FUNCTION2 PFK	32.28	5.430e4					2.9	NO		bb		0.000
37	FUNCTION2 PFK	32.18	5.835e3					0.7	NO		bb		0.000

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION2 PFK	32.07	4.360e4					1.7	NO		db		0.000
39	FUNCTION2 PFK	31.92	4.931e4					1.9	NO		bd		0.000
40	FUNCTION2 PFK	31.86	8.112e3					0.9	NO		db		0.000
41	FUNCTION2 PFK	31.79	2.261e4					1.5	NO		bd		0.000
42	FUNCTION2 PFK	31.61	2.797e4					1.5	NO		bb		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.76	5.737e4					2.7	NO		bb		0.000
2	FUNCTION3 PFK	33.51	3.399e4					2.1	NO		bb		0.000
3	FUNCTION3 PFK	33.17	1.901e4					1.3	NO		bb		0.000

Dataset: T:\Autospec\Processed Data Batch\201123.qld
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Printed: Tuesday, November 24, 2020 10:09:43 Pacific Standard Time

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	39.82	3.307e4					2.5	NO		bb		
2	FUNCTION4 PFK	39.70	3.636e4					2.3	NO		bb		
3	FUNCTION4 PFK	39.61	6.133e4					3.7	YES		db		
4	FUNCTION4 PFK	39.49	4.512e4					2.6	NO		bd		
5	FUNCTION4 PFK	39.40	1.280e3					0.4	NO		bb		
6	FUNCTION4 PFK	39.17	2.449e4					2.1	NO		bb		
7	FUNCTION4 PFK	39.03	2.511e4					2.2	NO		bb		
8	FUNCTION4 PFK	38.93	4.001e4					1.9	NO		bb		
9	FUNCTION4 PFK	38.81	3.604e4					2.6	NO		bb		
10	FUNCTION4 PFK	38.26	6.413e4					3.8	YES		db		
11	FUNCTION4 PFK	38.15	3.431e4					3.2	YES		dd		
12	FUNCTION4 PFK	38.12	3.915e4					3.3	YES		bd		
13	FUNCTION4 PFK	41.94	1.289e4					1.6	NO		dd		
14	FUNCTION4 PFK	41.85	3.005e4					2.0	NO		bd		
15	FUNCTION4 PFK	41.72	9.966e3					1.5	NO		bb		
16	FUNCTION4 PFK	41.65	5.146e3					0.8	NO		bb		
17	FUNCTION4 PFK	41.49	4.510e4					3.3	YES		bb		
18	FUNCTION4 PFK	41.42	4.557e4					3.5	YES		bb		
19	FUNCTION4 PFK	41.32	2.949e4					2.4	NO		db		
20	FUNCTION4 PFK	41.25	7.133e3					1.0	NO		bd		
21	FUNCTION4 PFK	40.86	2.716e4					2.3	NO		db		
22	FUNCTION4 PFK	40.79	9.573e3					0.8	NO		dd		
23	FUNCTION4 PFK	40.71	1.338e4					1.4	NO		dd		
24	FUNCTION4 PFK	40.68	8.473e3					1.4	NO		bd		
25	FUNCTION4 PFK	40.53	1.581e4					1.5	NO		bb		
26	FUNCTION4 PFK	40.16	2.767e4					1.8	NO		bb		
27	FUNCTION4 PFK	40.10	1.071e4					1.7	NO		db		
28	FUNCTION4 PFK	40.07	3.857e4					2.8	NO		bd		
29	FUNCTION4 PFK	43.00	1.807e4					1.9	NO		bb		
30	FUNCTION4 PFK	42.86	3.043e4					2.1	NO		db		
31	FUNCTION4 PFK	42.73	3.380e4					2.4	NO		bd		
32	FUNCTION4 PFK	42.16	4.200e4					1.7	NO		bb		
33	FUNCTION4 PFK	41.98	1.046e4					1.3	NO		db		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.24	1.207e4					1.8	NO		db		
2	FUNCTION5 PFK	44.19	3.649e3					0.9	NO		bd		
3	FUNCTION5 PFK	44.16	4.910e3					1.2	NO		bb		
4	FUNCTION5 PFK	43.97	1.815e4					2.0	NO		bb		
5	FUNCTION5 PFK	43.88	4.111e4					3.3	YES		bb		
6	FUNCTION5 PFK	43.77	2.427e4					2.2	NO		db		
7	FUNCTION5 PFK	43.68	1.118e4					1.6	NO		dd		
8	FUNCTION5 PFK	43.65	1.666e4					2.1	NO		bd		
9	FUNCTION5 PFK	43.41	2.188e4					2.1	NO		db		
10	FUNCTION5 PFK	43.37	8.267e3					1.5	NO		bd		
11	FUNCTION5 PFK	45.47	7.883e3					1.7	NO		bb		
12	FUNCTION5 PFK	45.35	1.292e4					2.1	NO		db		
13	FUNCTION5 PFK	45.32	7.056e3					1.6	NO		bd		
14	FUNCTION5 PFK	45.25	1.630e4					2.8	NO		db		
15	FUNCTION5 PFK	45.22	1.522e4					2.5	NO		dd		
16	FUNCTION5 PFK	45.14	2.196e4					2.8	NO		dd		
17	FUNCTION5 PFK	45.10	5.569e3					1.4	NO		bd		
18	FUNCTION5 PFK	45.04	9.980e3					2.0	NO		db		
19	FUNCTION5 PFK	45.02	2.486e4					3.0	NO		bd		
20	FUNCTION5 PFK	44.82	5.550e3					1.3	NO		db		
21	FUNCTION5 PFK	44.78	8.963e3					1.6	NO		bd		
22	FUNCTION5 PFK	44.64	2.940e3					1.0	NO		bb		
23	FUNCTION5 PFK	44.59	5.706e3					1.3	NO		db		
24	FUNCTION5 PFK	44.55	1.122e4					2.2	NO		dd		
25	FUNCTION5 PFK	44.51	5.527e3					1.0	NO		bd		
26	FUNCTION5 PFK	44.32	1.747e4					2.6	NO		bb		
27	FUNCTION5 PFK	46.32	2.560e3					0.7	NO		bb		
28	FUNCTION5 PFK	46.22	2.045e4					2.0	NO		bb		
29	FUNCTION5 PFK	46.15	8.168e3					1.5	NO		bb		
30	FUNCTION5 PFK	46.03	1.656e4					2.0	NO		bb		
31	FUNCTION5 PFK	45.92	1.076e4					1.8	NO		db		
32	FUNCTION5 PFK	45.89	1.059e4					2.3	NO		bd		
33	FUNCTION5 PFK	45.84	3.612e3					1.1	NO		bb		
34	FUNCTION5 PFK	45.67	3.957e4					2.3	NO		db		
35	FUNCTION5 PFK	45.58	1.331e4					1.8	NO		dd		
36	FUNCTION5 PFK	45.54	1.984e3					0.5	NO		bd		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.07	8.214e1					6.0	YES		bb		0.000
2	FUNCTION1 HXCD...	26.62	8.607e1					4.1	YES		bb		0.000
3	FUNCTION1 HXCD...	22.69	8.044e1					2.5	NO		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	21.87	2.836e2					3.6	YES		bb		0.000
2	FUNCTION1 HPCD...	27.77	1.666e2					2.6	NO		bb		0.000
3	FUNCTION1 HPCD...	27.43	9.129e1					1.7	NO		bb		0.000
4	FUNCTION1 HPCD...	27.33	7.644e1					1.6	NO		db		0.000
5	FUNCTION1 HPCD...	27.25	9.971e1					1.5	NO		bd		0.000
6	FUNCTION1 HPCD...	26.78	7.616e1					1.7	NO		bb		0.000
7	FUNCTION1 HPCD...	26.03	1.078e2					1.5	NO		bb		0.000
8	FUNCTION1 HPCD...	24.07	1.552e2					1.6	NO		bb		0.000
9	FUNCTION1 HPCD...	23.39	7.122e1					1.6	NO		bb		0.000
10	FUNCTION1 HPCD...	22.96	8.185e1					1.5	NO		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.60	7.641e1					1.3	NO		bb		0.000
2	FUNCTION2 HPCD...	31.50	8.669e1					1.8	NO		bb		0.000
3	FUNCTION2 HPCD...	31.27	9.201e1					1.7	NO		bb		0.000
4	FUNCTION2 HPCD...	31.09	1.268e2					2.6	NO		bb		0.000
5	FUNCTION2 HPCD...	29.95	9.295e1					1.7	NO		bb		0.000
6	FUNCTION2 HPCD...	29.36	8.847e1					1.5	NO		bb		0.000
7	FUNCTION2 HPCD...	32.81	8.088e1					1.6	NO		bb		0.000
8	FUNCTION2 HPCD...	32.66	7.619e1					1.7	NO		bb		0.000
9	FUNCTION2 HPCD...	32.14	7.034e1					1.3	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

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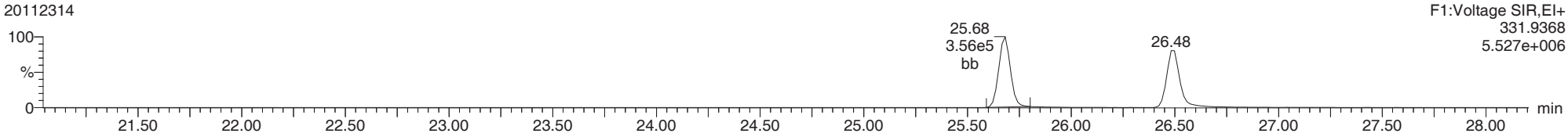
13C-1234-TCDD



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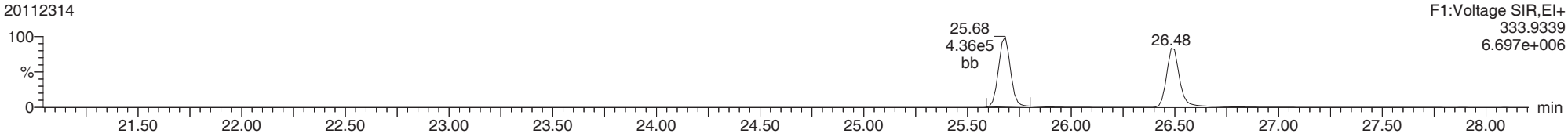
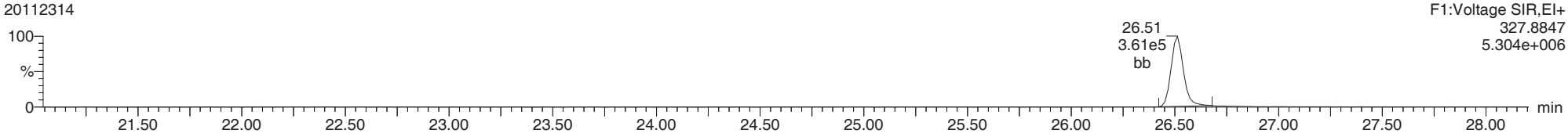


37CL-2378-TCDD



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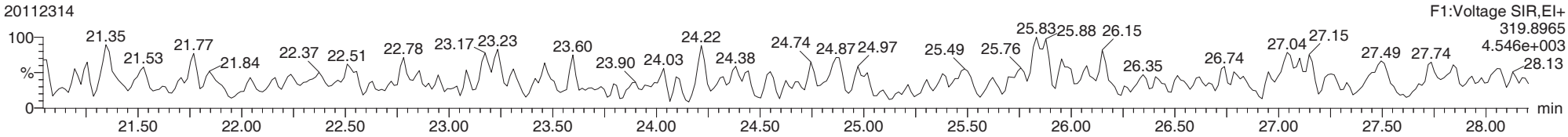
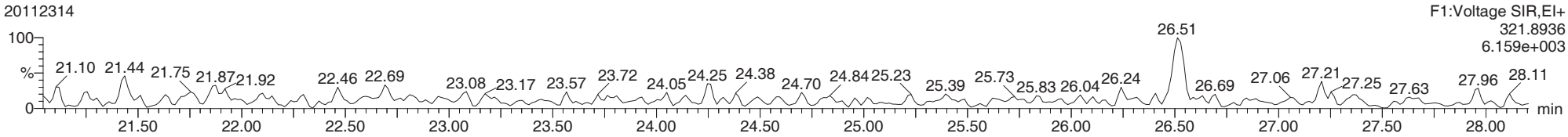
Printed: Tuesday, November 24, 2020 10:09:43 Pacific Standard Time

ID: 20J0389-07, Name: 20112314, Date: 23-Nov-2020, Time: 20:31:38, Conditions: AUTOSPEC01, User: pk

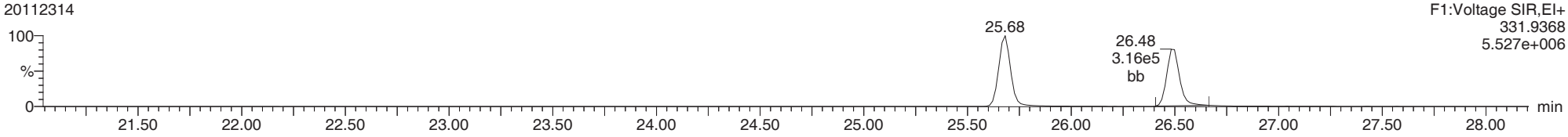
2378-TCDD



2378-TCDD



13C-2378-TCDD



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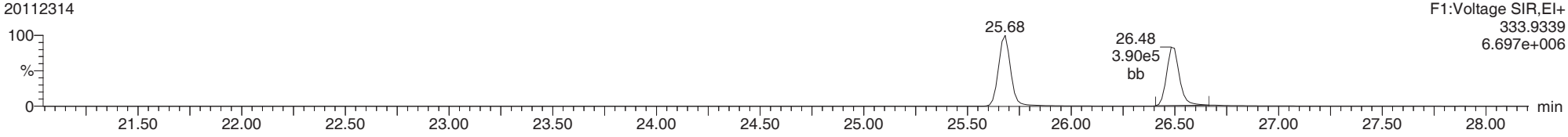
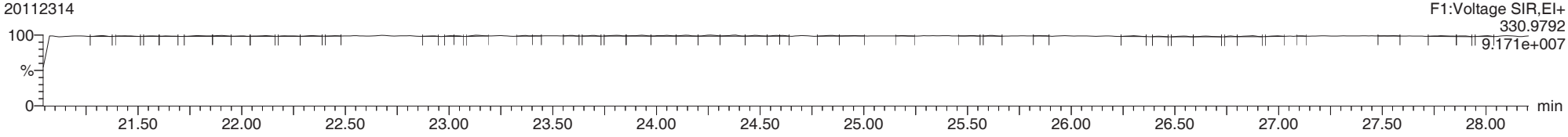


FUNCTION1 PFK



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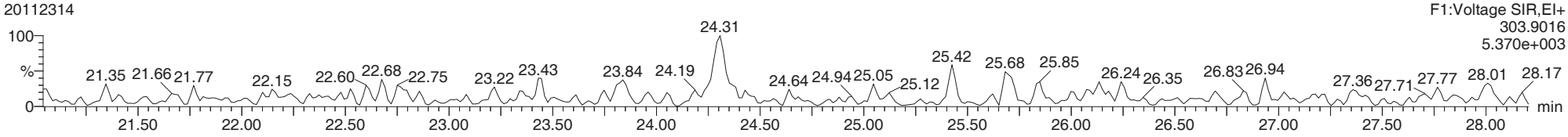
2378-TCDF



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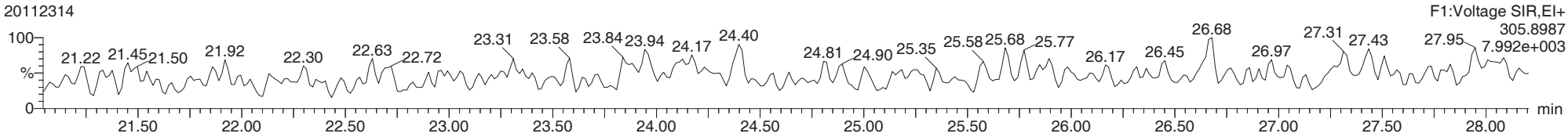

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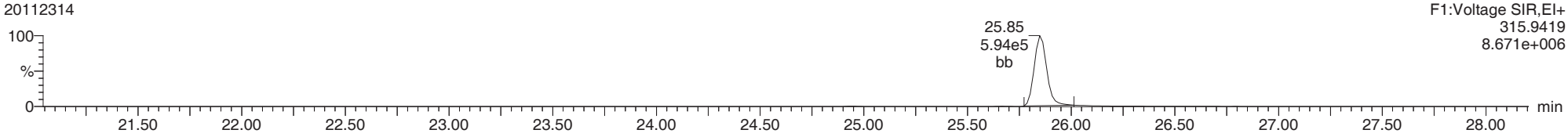

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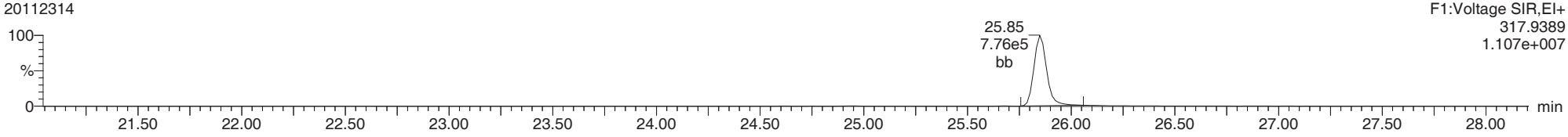
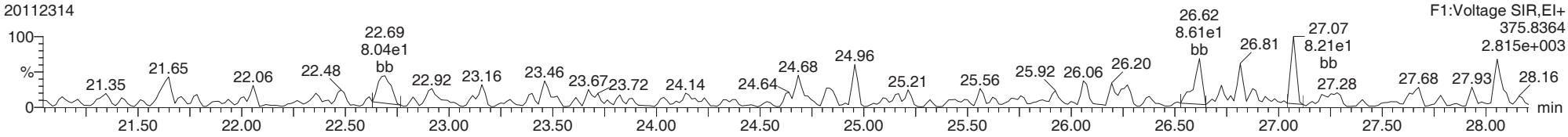


FUNCTION1 HXCDPE



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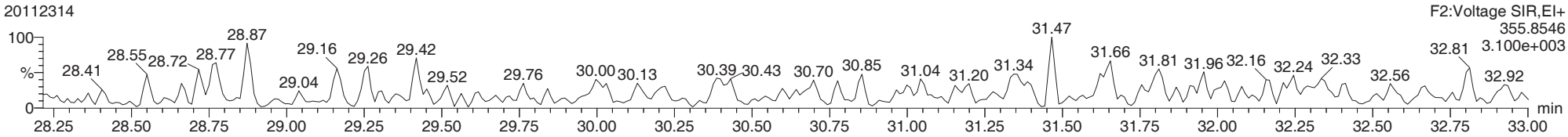
12378-PeCDD



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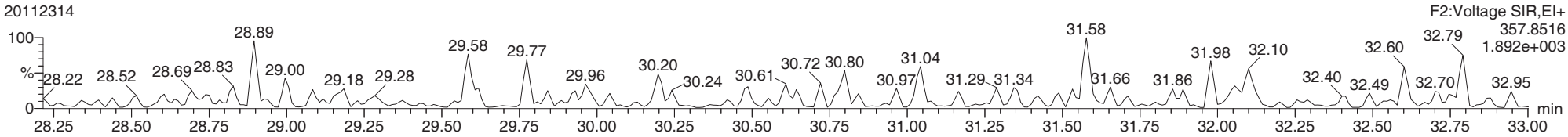

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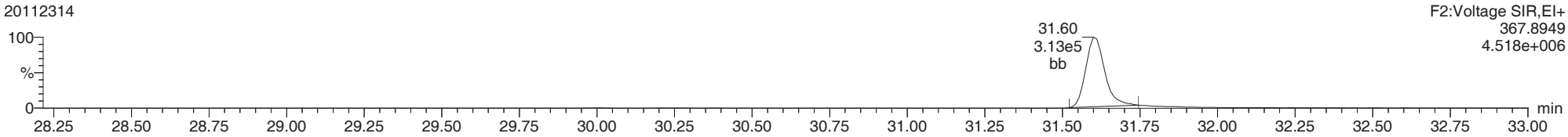

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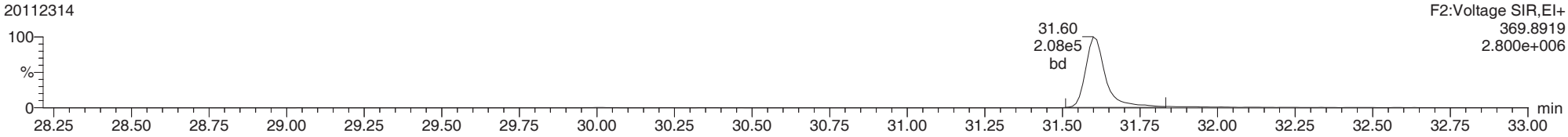
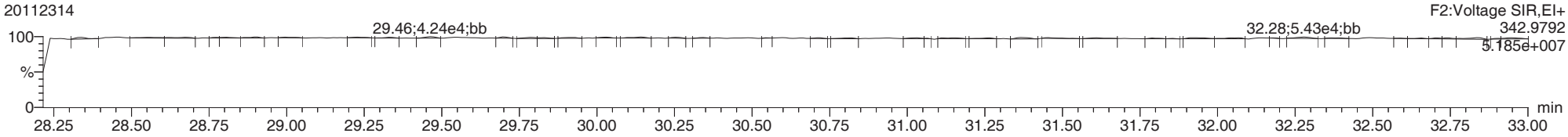


FUNCTION2 PFK



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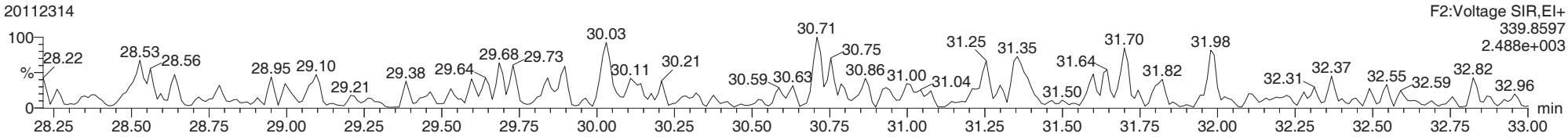
12378-PeCDF



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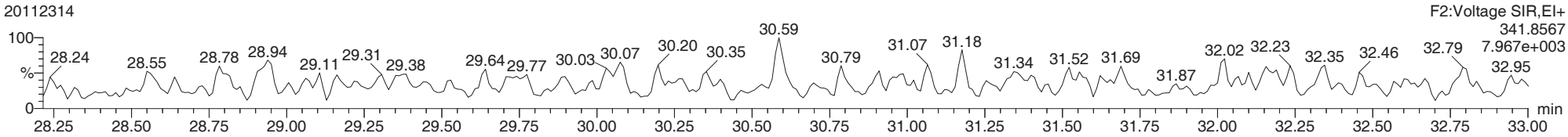

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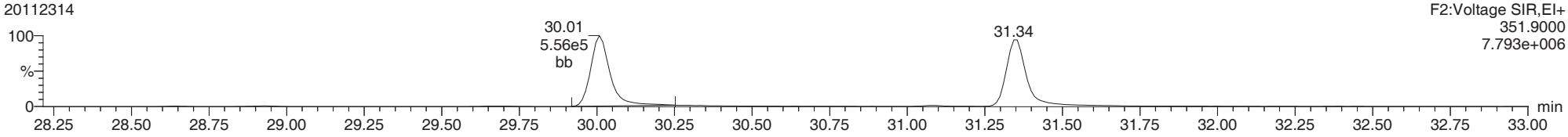

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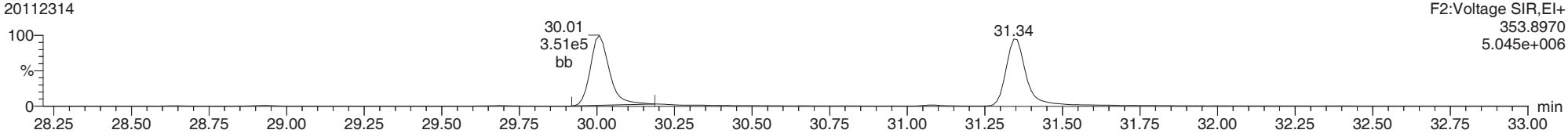
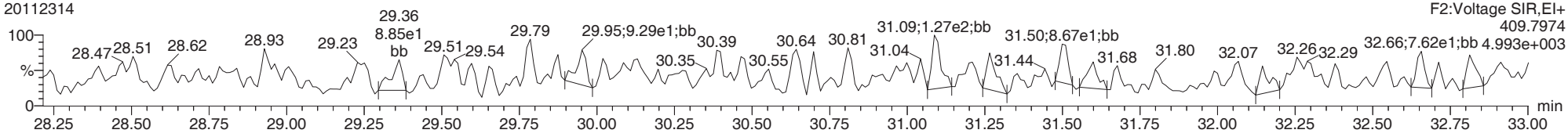


FUNCTION2 HPCDPE



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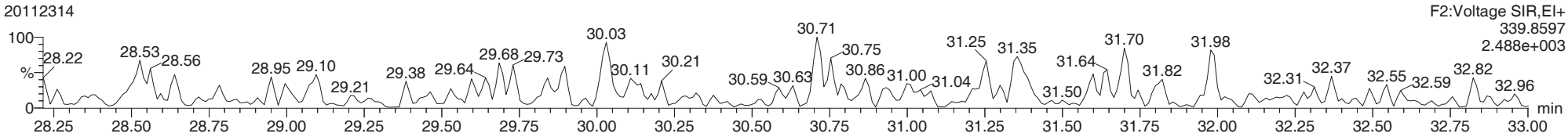
23478-PeCDF



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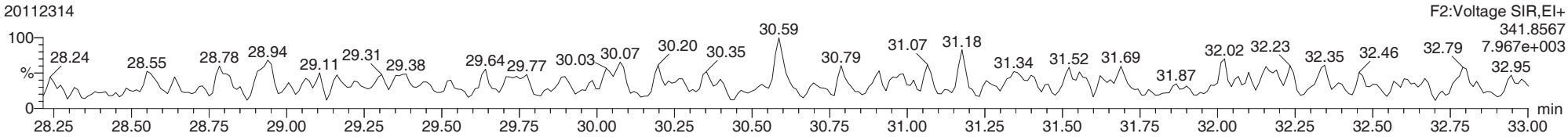

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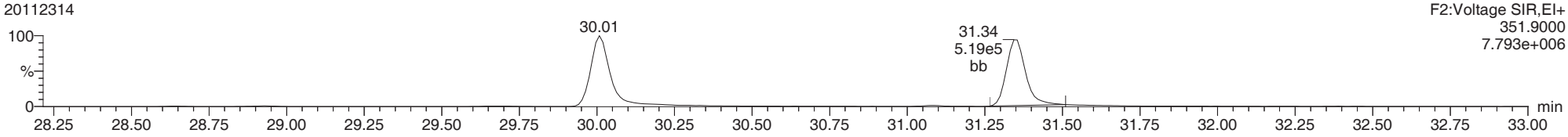

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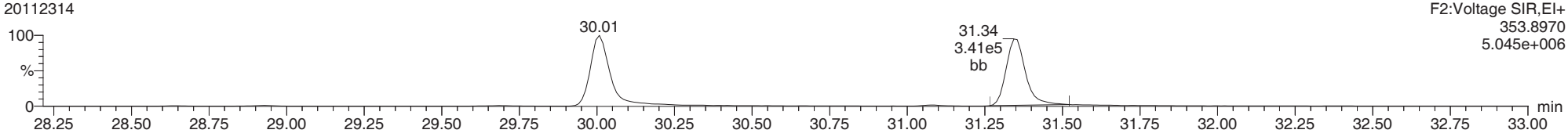
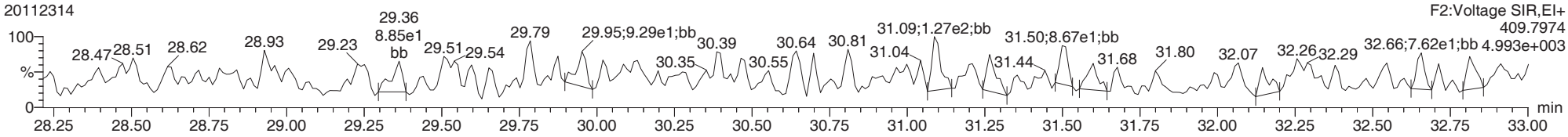


FUNCTION2 HPCDPE



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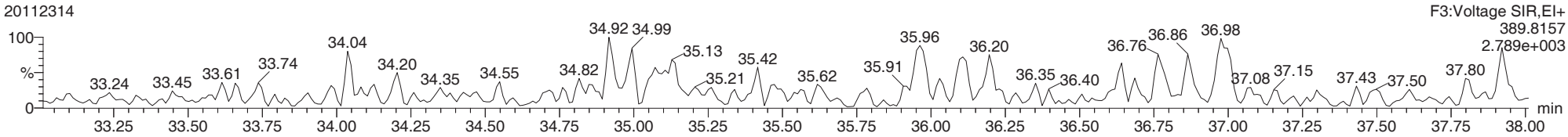
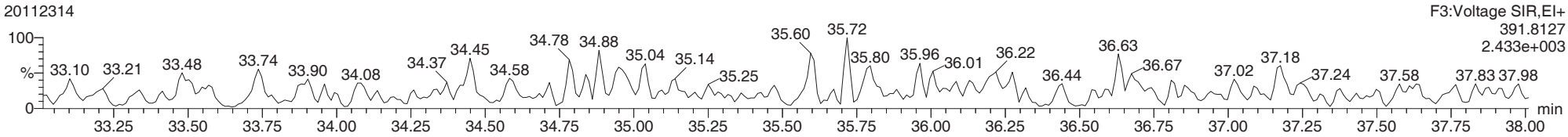
ID: 20J0389-07, Name: 20112314, Date: 23-Nov-2020, Time: 20:31:38, Conditions: AUTOSPEC01, User: pk

123478-HxCDD



123478-HxCDD



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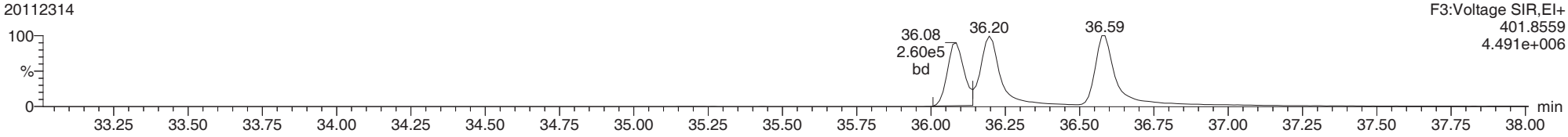

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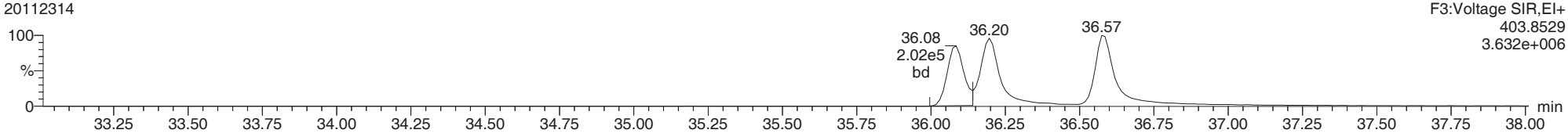
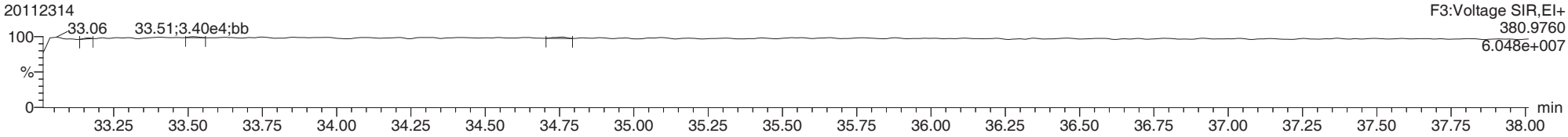


FUNCTION3 PFK



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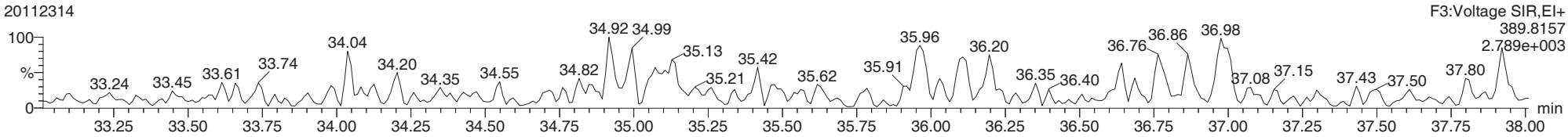
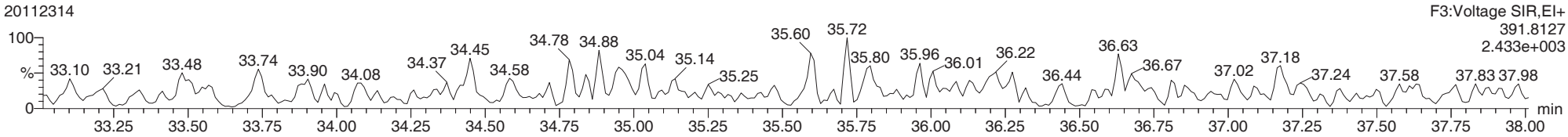
123678-HxCDD



123678-HxCDD



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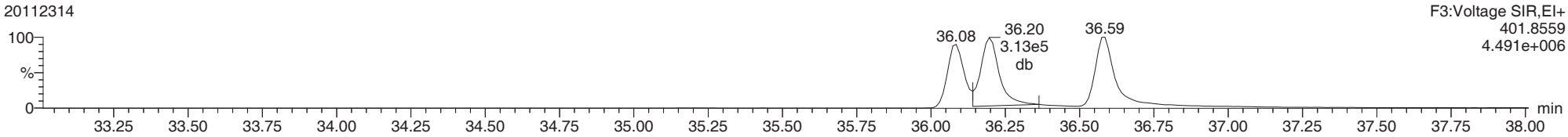

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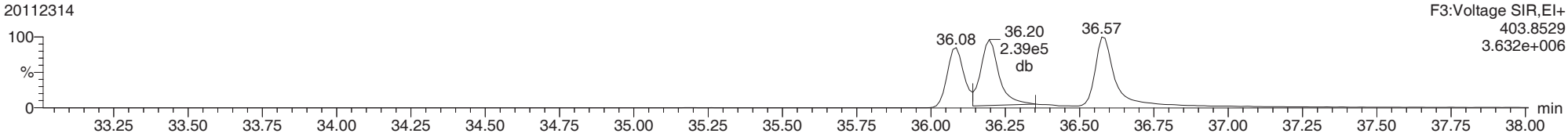

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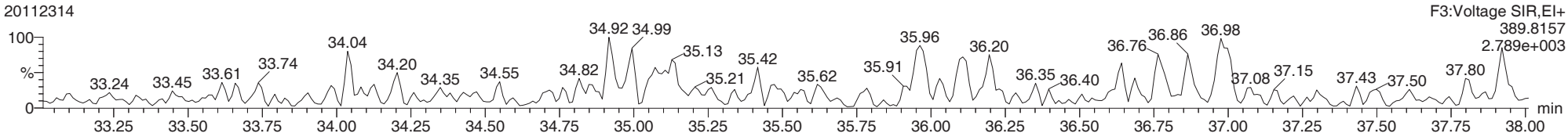
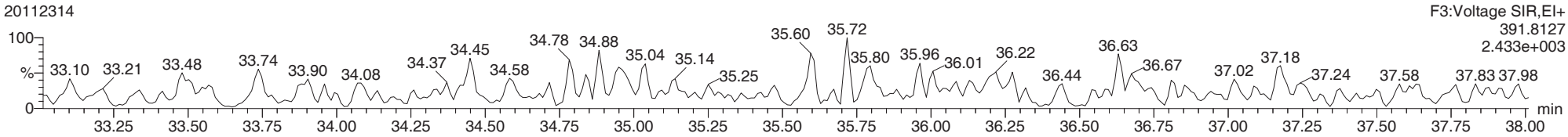
123789-HxCDD



123789-HxCDD



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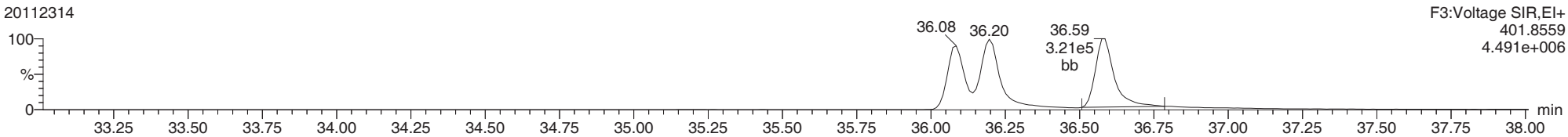

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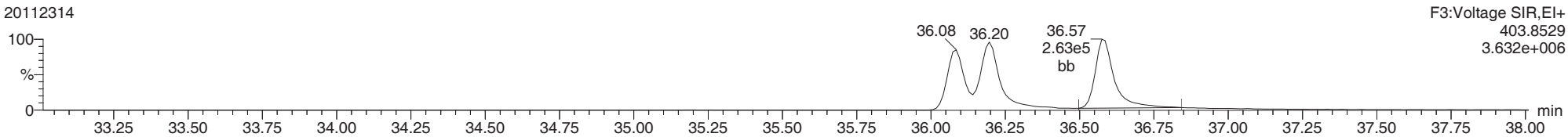

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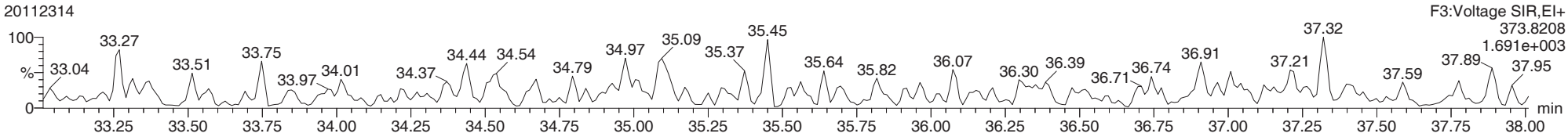
123478-HxCDF



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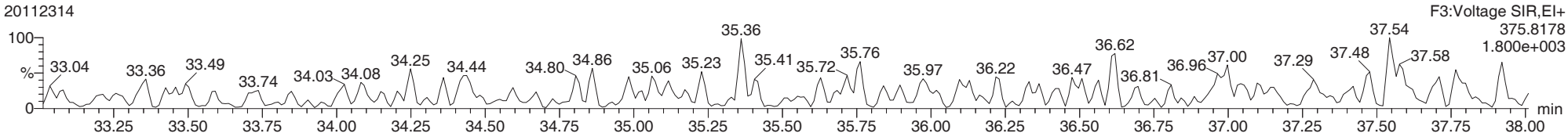

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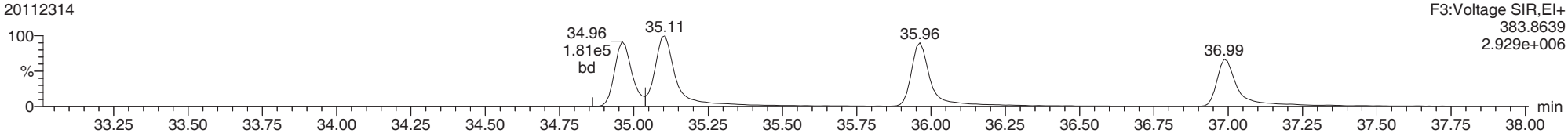

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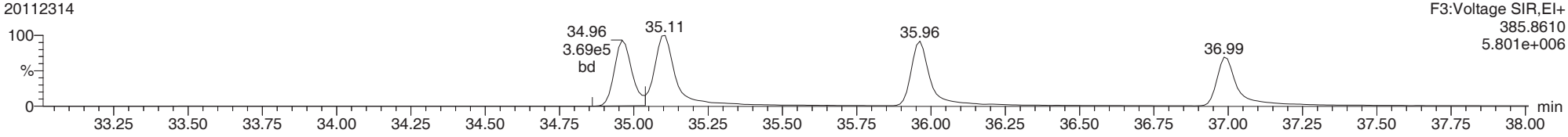
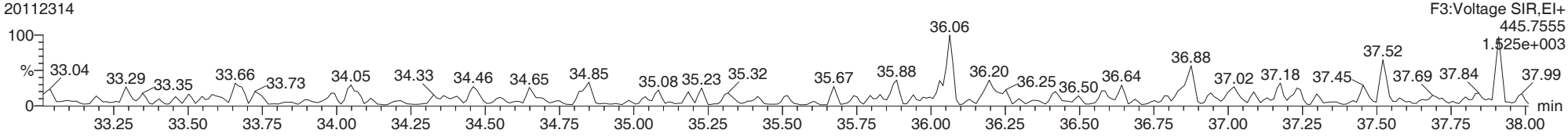


FUNCTION3 OCDPE



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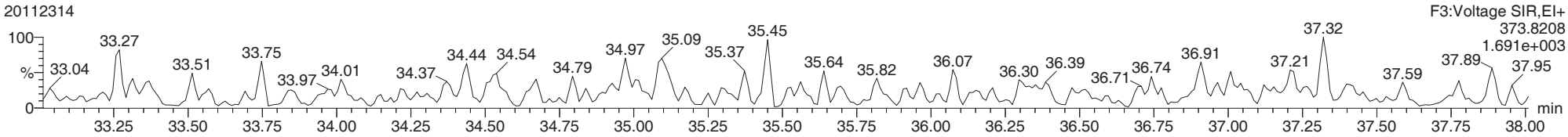
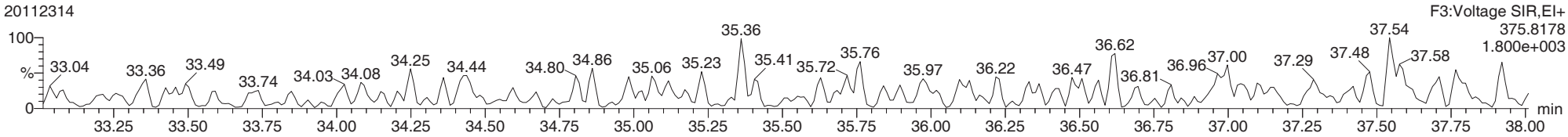
234678-HxCDF



234678-HxCDF



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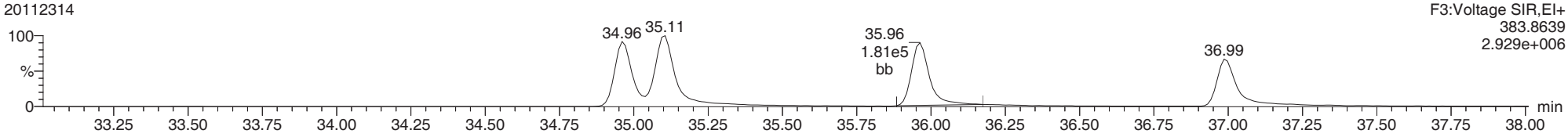

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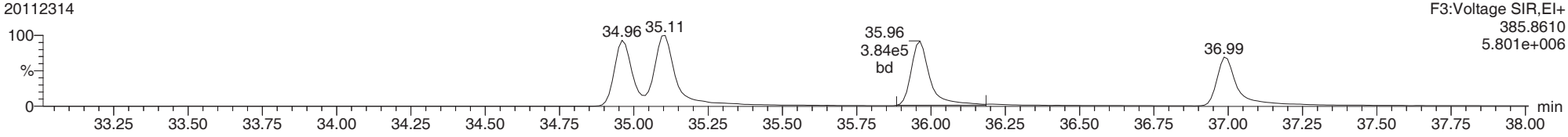
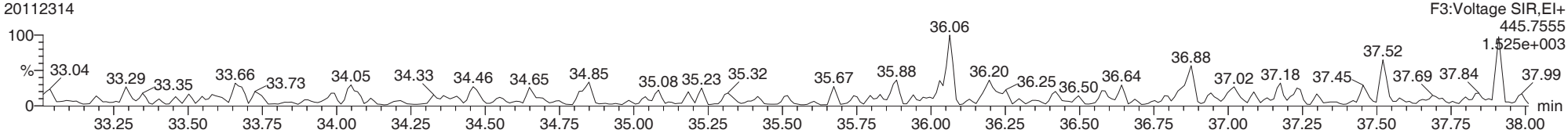


FUNCTION3 OCDPE



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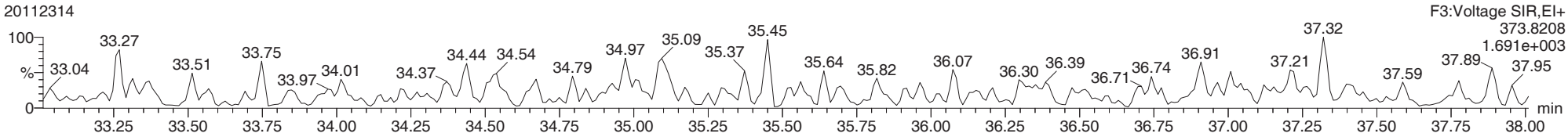
123678-HxCDF



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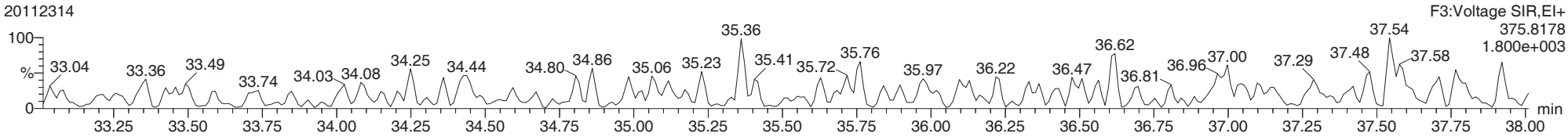

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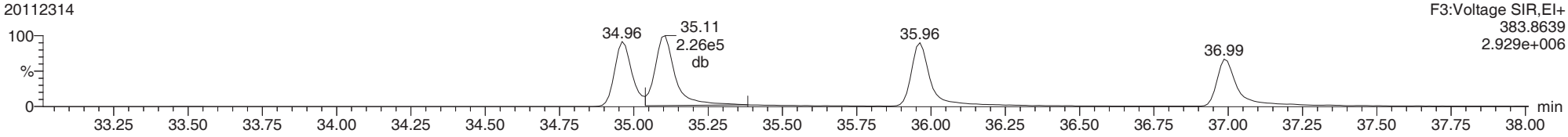

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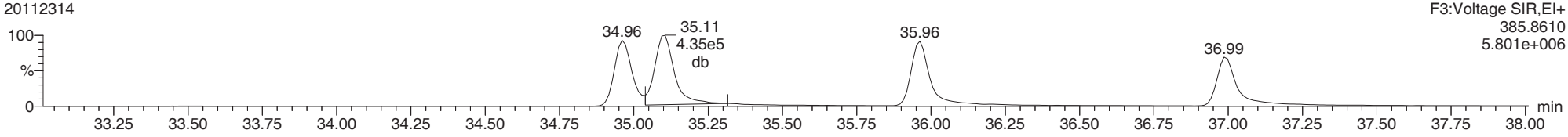
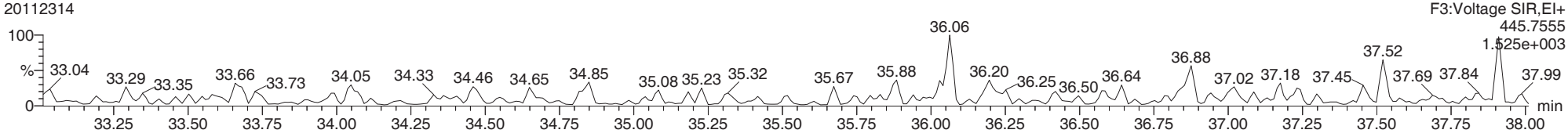


FUNCTION3 OCDPE



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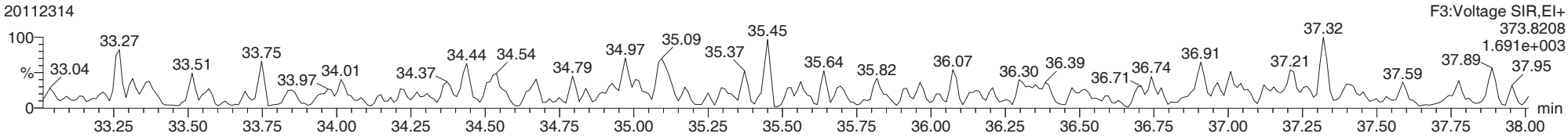
Printed: Tuesday, November 24, 2020 10:09:43 Pacific Standard Time

ID: 20J0389-07, Name: 20112314, Date: 23-Nov-2020, Time: 20:31:38, Conditions: AUTOSPEC01, User: pk

123789-HxCDF



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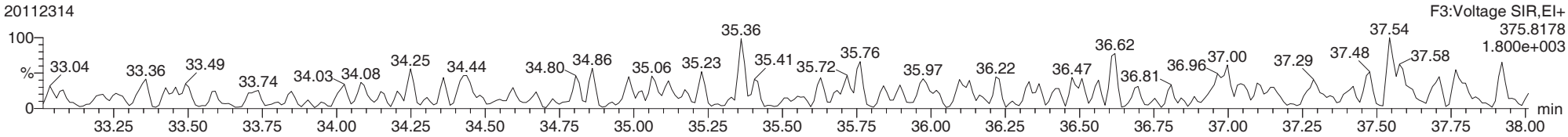

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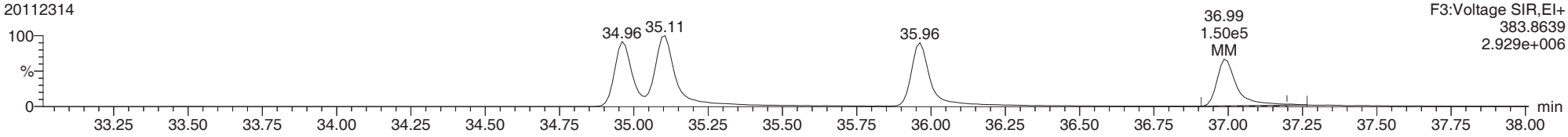

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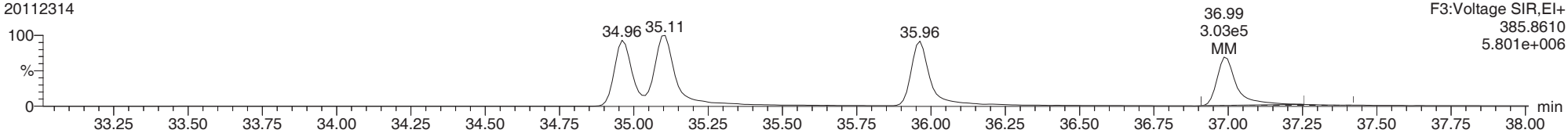
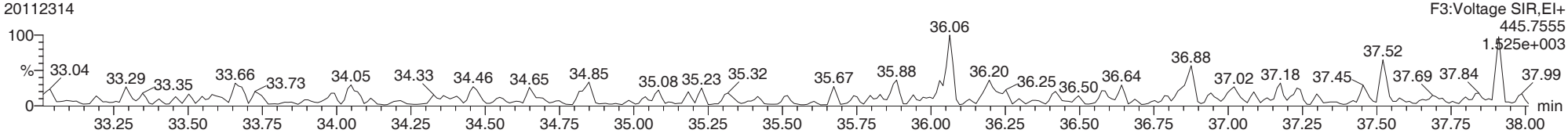


FUNCTION3 OCDPE



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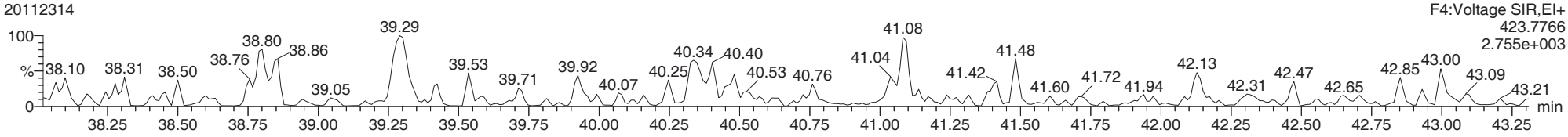
ID: 20J0389-07, Name: 20112314, Date: 23-Nov-2020, Time: 20:31:38, Conditions: AUTOSPEC01, User: pk

1234678-HpCDD



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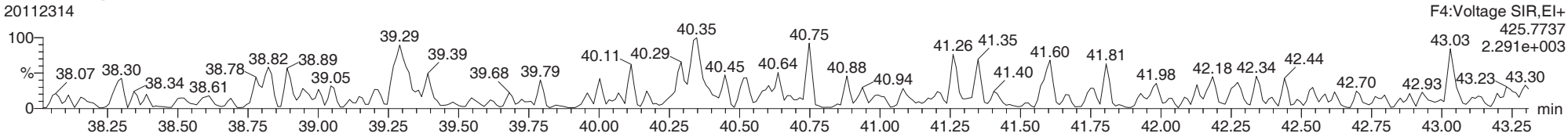

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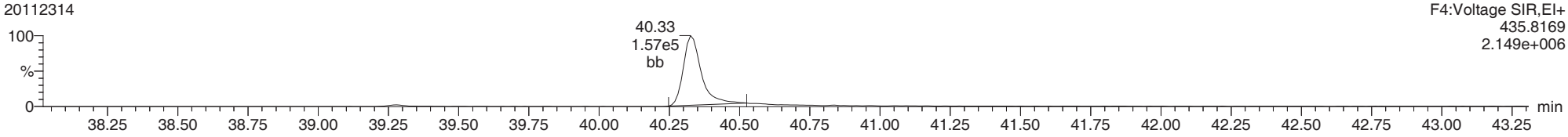

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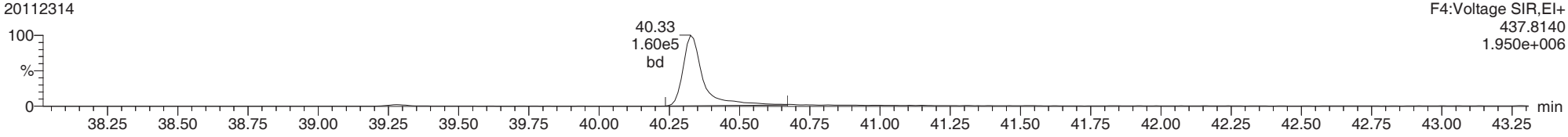
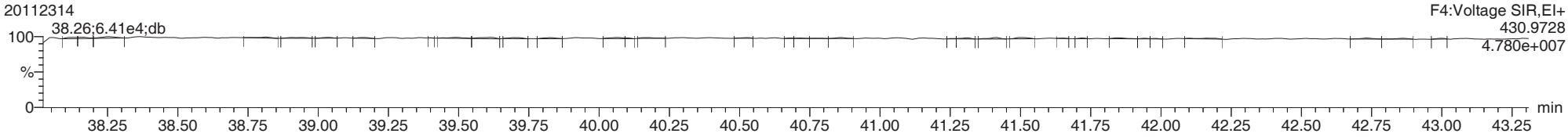


FUNCTION4 PFK



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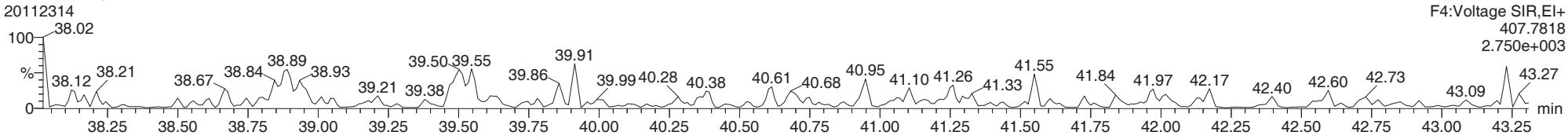
1234678-HpCDF



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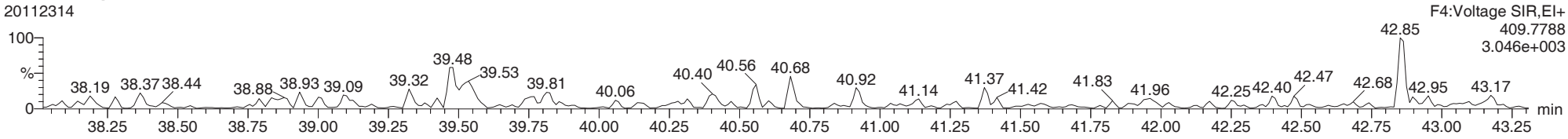

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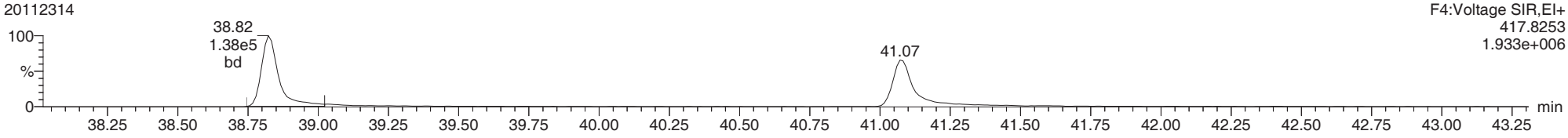

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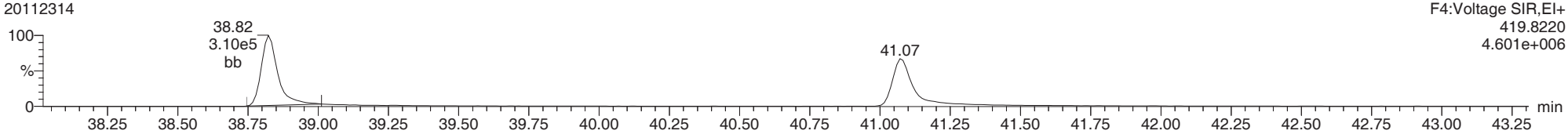
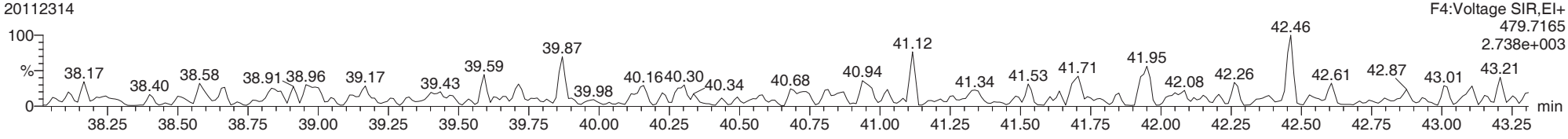


FUNCTION4 NCDPE



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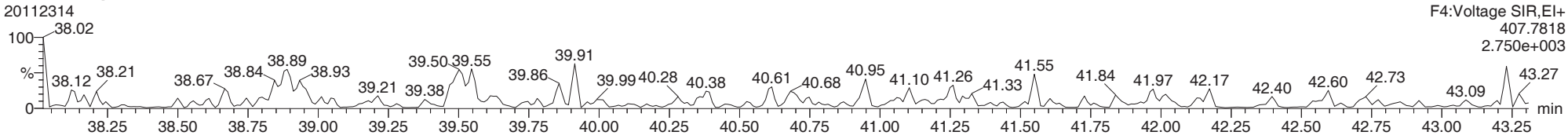

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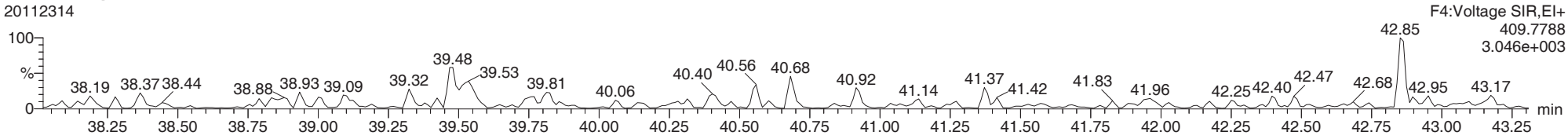

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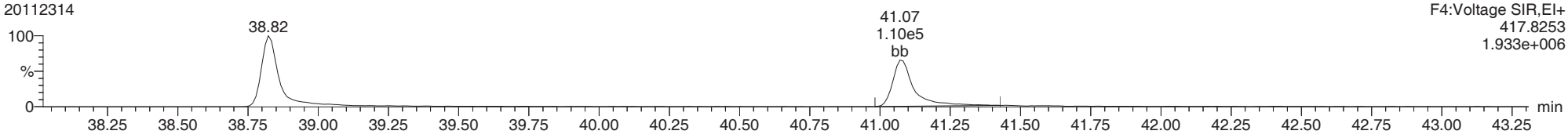

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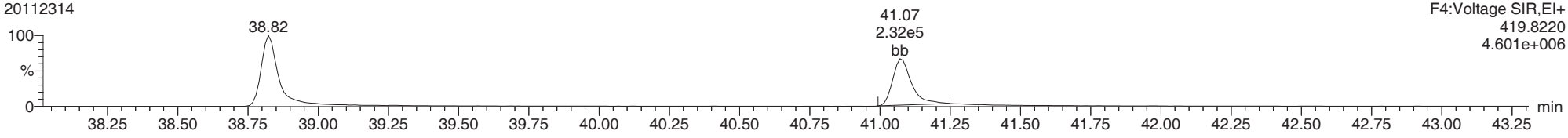
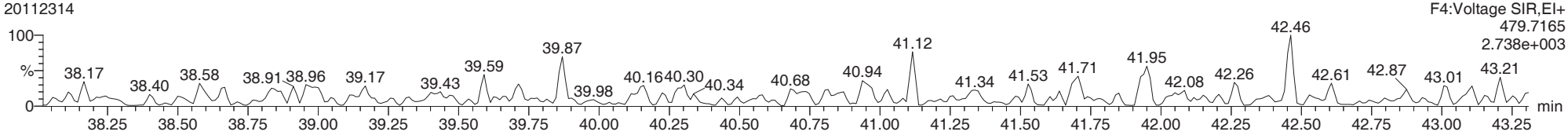


FUNCTION4 NCDPE



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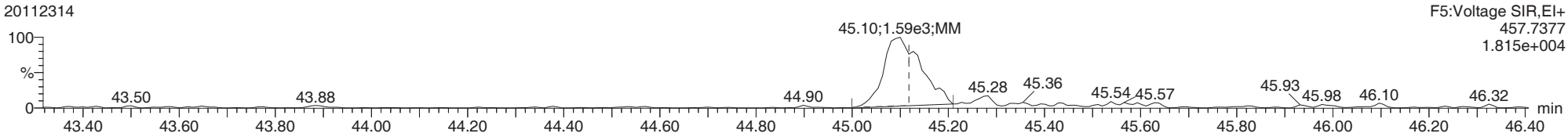
ID: 20J0389-07, Name: 20112314, Date: 23-Nov-2020, Time: 20:31:38, Conditions: AUTOSPEC01, User: pk

OCDD



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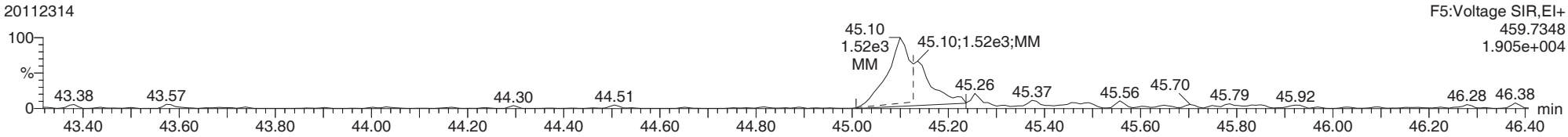
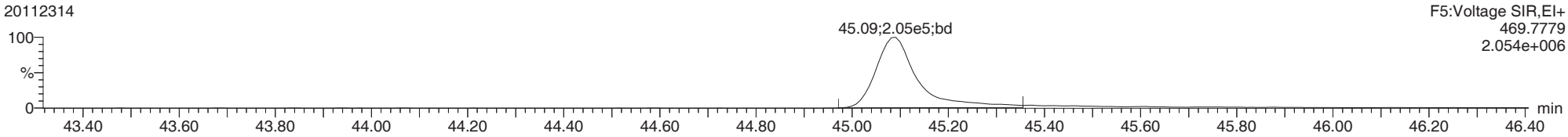


13C-OCDD



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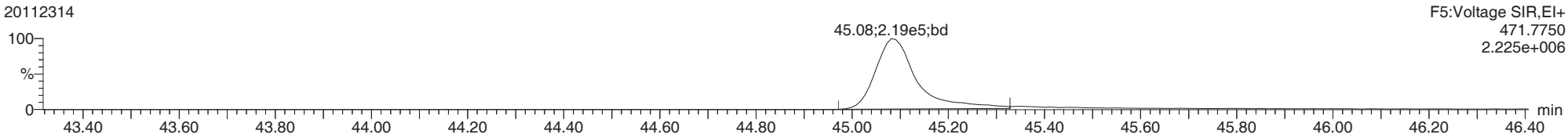
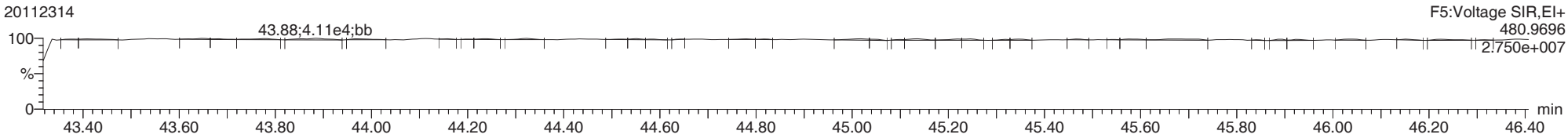


FUNCTION5 PFK



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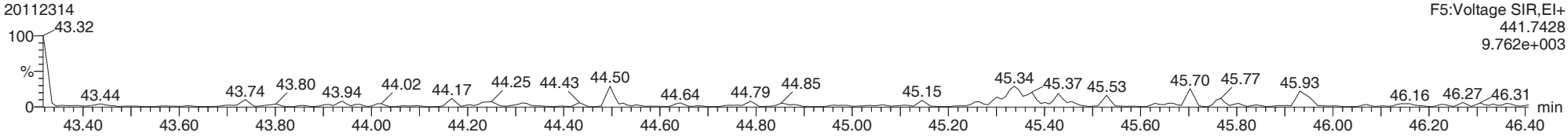
OCDF



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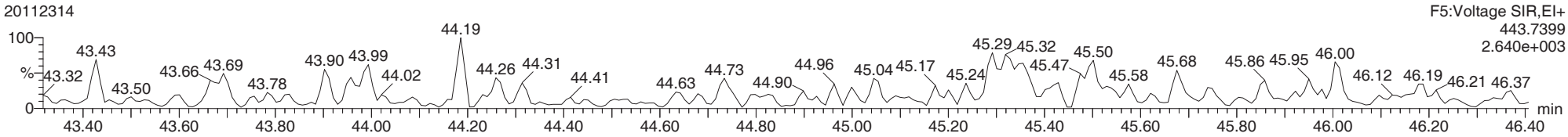
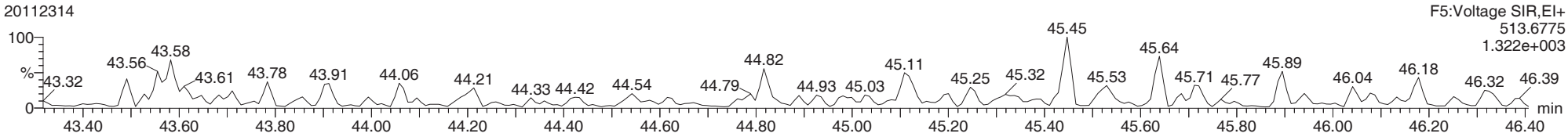
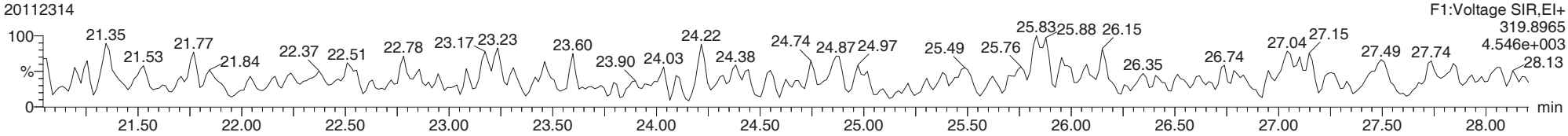


FUNCTION5 DCDPE

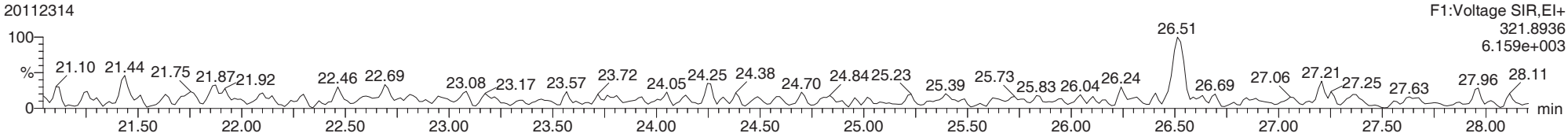


ID: 20J0389-07, Name: 20112314, Date: 23-Nov-2020, Time: 20:31:38, Conditions: AUTOSPEC01, User: pk

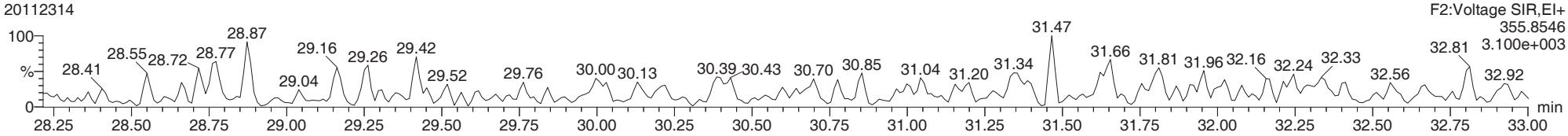
Total-tetradioxins



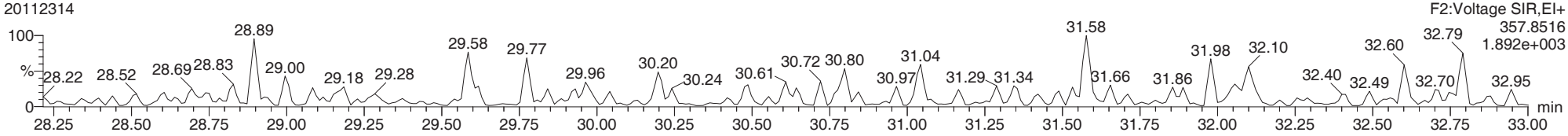
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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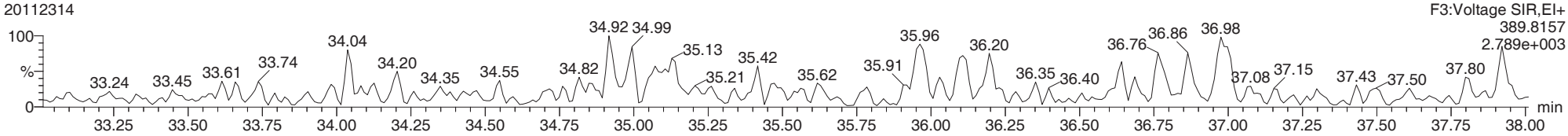
Total-hexadioxins



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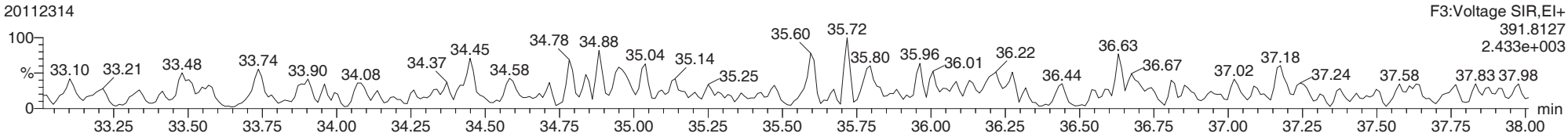
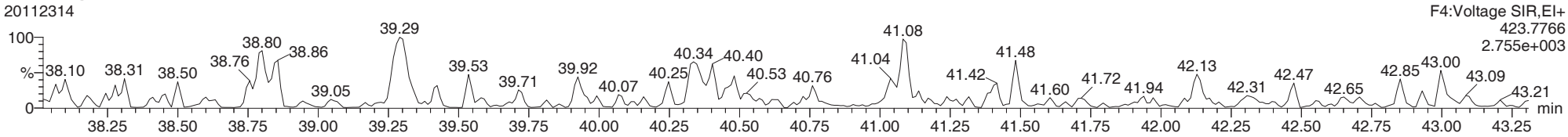


Total-heptadioxins



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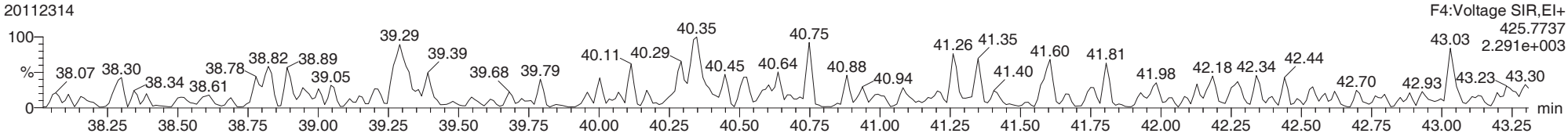
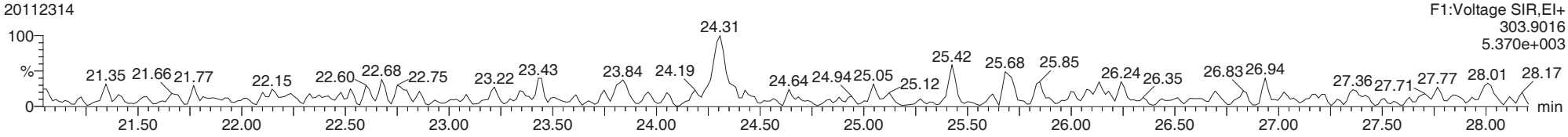
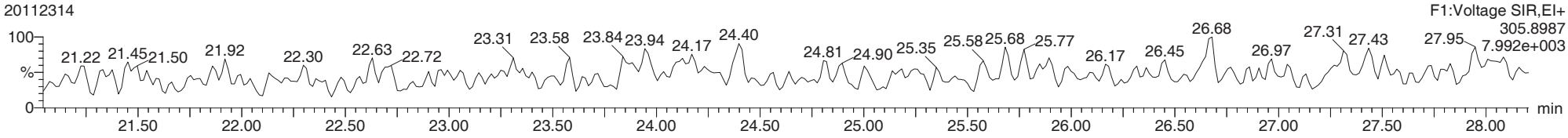


ID: 20J0389-07, Name: 20112314, Date: 23-Nov-2020, Time: 20:31:38, Conditions: AUTOSPEC01, User: pk

Total-tetrafurans



Total-tetrafurans



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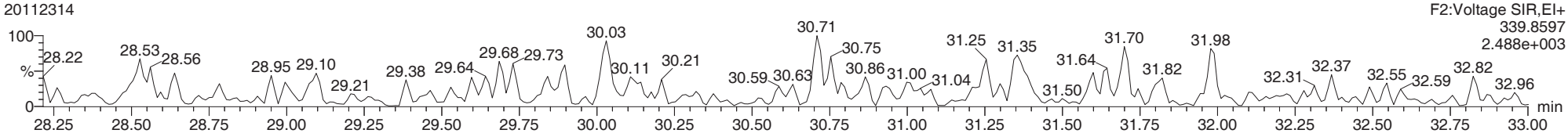

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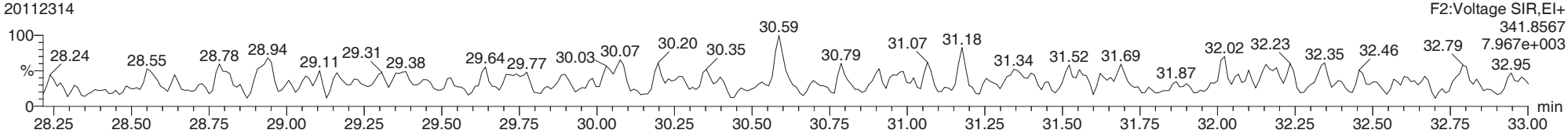

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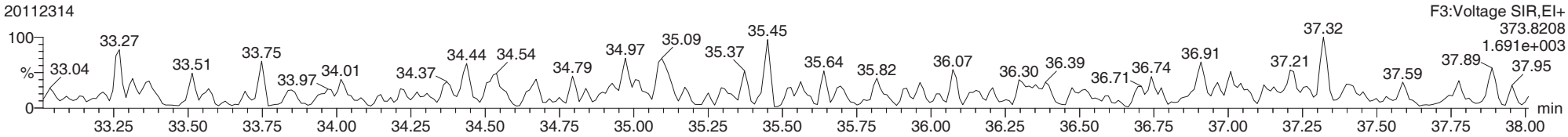
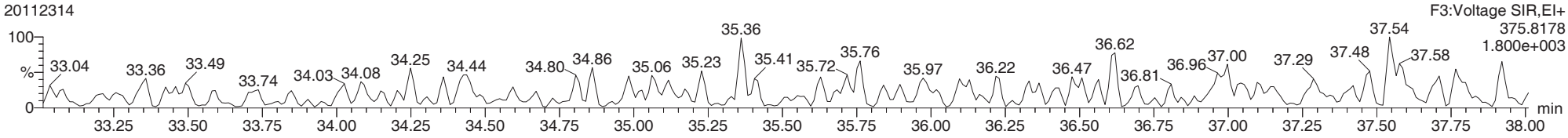
Total-hexafurans



Total-hexafurans



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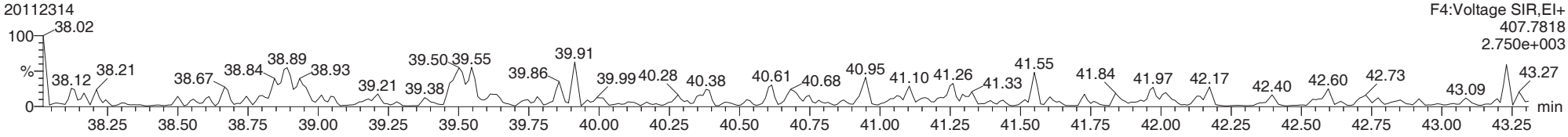

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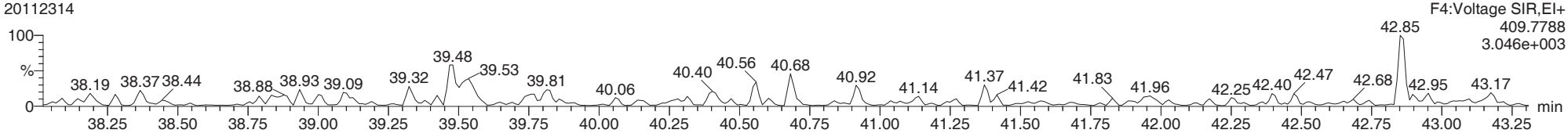

MW-CP7-102720

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider				
Project:	Lora Lake Apartments				
Matrix:	Ground Water	Laboratory ID:	20J0389-08 A	File ID:	20112315
Sampled:	10/27/20 12:00	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 21:20
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1072 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	0.74	9.33	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	0.67	9.33	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.14	9.33	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	1.01	9.33	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	0.66	9.33	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.54	9.33	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.50	9.33	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.57	9.33	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	0.79	9.33	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	0.81	9.33	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	0.68	9.33	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	0.83	9.33	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1		0.893-1.208	0.51	9.33	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	0.73	9.33	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	0.995	0.893-1.208	1.01	9.33	3.02	pg/L	J
39001-02-0	OCDF	1	1.197	0.757-1.024	2.54	18.7	5.16	pg/L	EMPC, J
3268-87-9	OCDD	1	0.932	0.757-1.024	3.59	46.6	36.1	pg/L	J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.33	ND	pg/L
41903-57-5	Total TCDD	1	0.000			9.33	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			9.33	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			9.33	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			9.33	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			9.33	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			9.33	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			9.33	3.02	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.043

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.16

MW-CP7-102720

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider			Project:	Lora Lake Apartments
Matrix:	Ground Water	Laboratory ID:	20J0389-08	File ID:	20112315
Sampled:	10/27/20 12:00	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 21:20
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1072 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.789	0.655-0.886	1.06	81.1	24 - 169 %	
13C12-2,3,7,8-TCDD		0.803	0.655-0.886	1.73	80.3	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.518	1.318-1.783	2.00	75.4	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.541	1.318-1.783	2.09	73.8	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.544	1.318-1.783	1.11	77.3	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.493	0.434-0.587	2.95	90.5	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.480	0.434-0.587	2.51	99.5	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.489	0.434-0.587	2.81	88.9	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.494	0.434-0.587	3.28	87.2	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.283	1.054-1.426	2.95	84.6	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.134	1.054-1.426	2.44	83.3	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.465	0.374-0.506	3.82	86.3	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.436	0.374-0.506	4.80	84.4	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.077	0.893-1.208	3.64	95.0	23 - 140 %	
13C12-OCDD		0.931	0.757-1.024	4.01	57.8	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.82	95.5	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:09:50 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-08, Name: 20112315, Date: 23-Nov-2020, Time: 21:20:59, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF					0.729		0.770	597	1827								
12378-PeCDF					0.779		1.550	836	1850								
23478-PeCDF					0.880		1.550	836	1850								
123478-HxCDF					0.880		1.240	537	498								
234678-HxCDF					0.863		1.240	537	498								
123678-HxCDF					0.853		1.240	537	498								
123789-HxCDF					0.780		1.240	537	498								
1234678-HpCDF					1.001		1.050	489	391								
1234789-HpCDF					0.994		1.050	489	391								
OCDF	45.329	1.006	5.902e2	4.932e2	1.158	1.197	0.890	878	958	7.73e3	6.72e3	8.8	7.0	YES	MM	MM	0.277
2378-TCDD					1.238		0.770	1142	762								
12378-PeCDD					0.988		1.550	797	420								
123478-HxCDD					0.842		1.240	613	710								
123678-HxCDD					0.907		1.240	613	710								
123789-HxCDD					0.784		1.240	613	710								
1234678-HpCDD	40.326	1.000	4.462e2	4.484e2	1.044	0.995	1.050	536	694	6.05e3	6.60e3	11.3	9.5	NO	bb	bd	0.162
OCDD	45.083	1.000	3.044e3	3.267e3	0.963	0.932	0.890	784	1377	3.34e4	3.66e4	42.7	26.6	NO	bb	MM	1.937
13C-2378-TCDF	25.833	1.007	7.590e5	9.617e5	2.203	0.789	0.770	4111	2021	1.11e7	1.41e7	2688.4	6979.5	NO	bb	bb	81.132
13C-12378-PeCDF	29.997	1.169	7.621e5	5.020e5	1.741	1.518	1.550	4666	4521	1.02e7	6.76e6	2192.6	1495.0	NO	bd	bd	75.413
13C-23478-PeCDF	31.333	1.221	7.199e5	4.670e5	1.669	1.541	1.550	4666	4521	1.03e7	6.67e6	2198.1	1474.6	NO	bb	bb	73.845
13C-123478-HxCDF	34.950	0.956	2.638e5	5.351e5	1.022	0.493	0.510	2482	3891	4.05e6	8.17e6	1630.0	2101.2	NO	bd	bd	90.546
13C-123678-HxCDF	35.095	0.960	3.339e5	6.963e5	1.200	0.480	0.510	2482	3891	4.36e6	8.69e6	1755.9	2232.7	NO	db	MM	99.466
13C-234678-HxCDF	35.952	0.983	2.701e5	5.521e5	1.071	0.489	0.510	2482	3891	3.84e6	7.75e6	1548.8	1992.7	NO	bb	bb	88.939
13C-123789-HxCDF	36.976	1.011	2.287e5	4.629e5	0.919	0.494	0.510	2482	3891	3.12e6	6.21e6	1257.0	1595.2	NO	bb	bb	87.226
13C-1234678-HpCDF	38.813	1.061	2.149e5	4.623e5	0.909	0.465	0.440	3575	3761	3.05e6	7.06e6	853.1	1878.1	NO	bd	bb	86.349
13C-1234789-HpCDF	41.061	1.123	1.599e5	3.669e5	0.724	0.436	0.440	3575	3761	2.07e6	4.81e6	579.1	1278.3	NO	bb	bb	84.355
13C-1234-TCDD	25.667	0.000	4.336e5	5.291e5	1.000	0.819	0.770	3879	1511	6.64e6	8.11e6	1712.7	5371.5	NO	bb	bb	100.000
13C-2378-TCDD	26.483	1.032	4.068e5	5.063e5	1.181	0.803	0.770	3879	1511	5.75e6	7.06e6	1483.3	4676.0	NO	bb	bb	80.272
13C-12378-PeCDD	31.589	1.231	4.416e5	2.859e5	0.978	1.544	1.550	1354	1509	6.39e6	3.84e6	4719.2	2546.5	NO	bb	bb	77.277
13C-123478-HxCDD	36.074	0.987	3.958e5	3.086e5	0.965	1.283	1.240	3649	2369	6.11e6	4.67e6	1674.0	1972.5	NO	bd	bd	84.573
13C-123678-HxCDD	36.186	0.990	4.463e5	3.936e5	1.168	1.134	1.240	3649	2369	6.34e6	5.24e6	1736.6	2211.6	NO	db	db	83.315
13C-1234678-HpCDD	40.315	1.103	2.744e5	2.548e5	0.645	1.077	1.050	2351	2617	3.40e6	3.20e6	1447.0	1222.9	NO	bb	bd	95.000
13C-OCDD	45.073	1.233	3.262e5	3.504e5	0.678	0.931	0.890	2672	3071	3.37e6	3.67e6	1262.8	1194.1	NO	bd	bd	115.575
13C-123789-HxCDD	36.564	0.000	4.757e5	3.874e5	1.000	1.228	1.240	3649	2369	6.52e6	5.30e6	1787.2	2237.9	NO	bb	bb	100.000
37CL-2378-TCDD	26.498	1.032	4.651e5		1.264			2719		6.76e6		2484.8			bb		38.207

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:09:50 Pacific Standard Time

ID: 20J0389-08, Name: 20112315, Date: 23-Nov-2020, Time: 21:20:59, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	597	1827								
1289-TCDF					0.688		0.770	597	1827								
13468-PECDF					1.181		1.550	464	1247								
12389-PECDF					0.766		1.550	836	1850								
123468-HXCDF					1.003		1.240	537	498								
1368-TCDD					1.179		0.770	1142	762								
1289-TCDD					1.042		0.770	1142	762								
12479-PECDD					1.810		1.550	797	420								
12389-PECDD					1.165		1.550	797	420								
124679-HXCDD					1.056		1.240	613	710								
1234679-HPCDD	39.280	0.974	5.287e2	3.759e2	1.285	1.407	1.050	536	694	9.86e3	6.26e3	18.4	9.0	YES	bd	bb	0.133
Total-tetrafurans			0.000e0		0.754			597		0.00e0							
Total-penta1			0.000e0					464		0.00e0							
Total-pentafurans			0.000e0		0.809			836		0.00e0							
Total-hexafurans			0.000e0		0.876			537		0.00e0							
Total-heptafurans			0.000e0		0.997			489		0.00e0							
Total-Furans			0.000e0		0.893			597		0.00e0							
Total-tetradioxins			0.000e0		1.153			1142		0.00e0							
Total-pentadioxins			0.000e0		1.321			797		0.00e0							
Total-hexadioxins			0.000e0		0.897			613		0.00e0							
Total-heptadioxins			4.462e2		1.165			536		6.05e3							0.162
Total-Dioxins			3.490e3		1.100			1142		3.95e4							2.099
Total-TEQ			3.490e3					1142		3.95e4							2.099
FUNCTION1 PFK			3.146e6					734295		4.99e7							
FUNCTION2 PFK			1.226e7					398865		2.59e7							0.000
FUNCTION3 PFK			8.722e5					390223		2.07e7							0.000
FUNCTION4 PFK			1.041e6					331344		2.17e7							
FUNCTION5 PFK			2.084e5					207312		6.85e6							
FUNCTION1 HXCD...			1.022e3					498		2.10e4							0.000
FUNCTION1 HPCD...			1.540e3					2864		3.22e4							0.000
FUNCTION2 HPCD...			5.538e2					1102		1.53e4							0.000
FUNCTION3 OCDPE			0.000e0					273		0.00e0							
FUNCTION4 NCDPE			0.000e0					324		0.00e0							
FUNCTION5 DCDPE			0.000e0					323		0.00e0							

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-08, Name: 20112315, Date: 23-Nov-2020, Time: 21:20:59, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ID: 20J0389-08, Name: 20112315, Date: 23-Nov-2020, Time: 21:20:59, Conditions: AUTOSPEC01, User: pk

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.33	4.462e2	4.484e2	1.044	1.00	1.05	11.3	YES	NO	bb	bd	0.162

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	OCDD	45.08	3.044e3	3.267e3	0.963	0.93	0.89	42.7	YES	NO	bb	MM	1.937
2	1234678-HpCDD	40.33	4.462e2	4.484e2	1.044	1.00	1.05	11.3	YES	NO	bb	bd	0.162

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ID: 20J0389-08, Name: 20112315, Date: 23-Nov-2020, Time: 21:20:59, Conditions: AUTOSPEC01, User: pk

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	23.57	3.180e4					0.9	NO		bb		
2	FUNCTION1 PFK	23.45	3.757e4					1.2	NO		bb		
3	FUNCTION1 PFK	23.10	3.209e4					1.0	NO		bb		
4	FUNCTION1 PFK	23.01	6.140e4					1.1	NO		db		
5	FUNCTION1 PFK	22.87	4.837e4					1.4	NO		dd		
6	FUNCTION1 PFK	22.77	1.094e5					2.3	NO		bd		
7	FUNCTION1 PFK	22.64	8.521e4					2.0	NO		db		
8	FUNCTION1 PFK	22.52	9.354e4					2.1	NO		dd		
9	FUNCTION1 PFK	22.43	1.284e5					2.2	NO		dd		
10	FUNCTION1 PFK	22.31	8.403e4					1.8	NO		dd		
11	FUNCTION1 PFK	22.21	9.543e4					1.8	NO		bd		
12	FUNCTION1 PFK	21.86	8.342e4					1.5	NO		bb		
13	FUNCTION1 PFK	21.74	1.847e4					0.7	NO		bb		
14	FUNCTION1 PFK	21.63	6.876e4					1.4	NO		db		
15	FUNCTION1 PFK	21.53	4.392e4					1.0	NO		bd		
16	FUNCTION1 PFK	21.12	4.524e3					0.4	NO		bb		
17	FUNCTION1 PFK	25.71	9.872e4					2.3	NO		db		
18	FUNCTION1 PFK	25.61	8.178e4					2.1	NO		dd		
19	FUNCTION1 PFK	25.55	4.907e4					1.3	NO		dd		
20	FUNCTION1 PFK	25.47	9.851e4					1.7	NO		dd		
21	FUNCTION1 PFK	25.35	6.936e4					1.3	NO		bd		
22	FUNCTION1 PFK	25.17	5.440e3					0.3	NO		bb		
23	FUNCTION1 PFK	25.00	6.703e4					1.5	NO		bb		
24	FUNCTION1 PFK	24.88	8.421e4					1.9	NO		db		
25	FUNCTION1 PFK	24.76	1.132e5					1.8	NO		dd		
26	FUNCTION1 PFK	24.68	6.822e4					1.5	NO		dd		
27	FUNCTION1 PFK	24.56	7.042e4					1.4	NO		dd		
28	FUNCTION1 PFK	24.46	8.172e4					1.5	NO		dd		
29	FUNCTION1 PFK	24.35	9.139e4					1.4	NO		dd		
30	FUNCTION1 PFK	24.23	8.249e4					1.7	NO		bd		
31	FUNCTION1 PFK	24.10	3.714e4					1.1	NO		db		
32	FUNCTION1 PFK	23.99	4.200e4					1.2	NO		bd		
33	FUNCTION1 PFK	27.86	4.823e4					1.2	NO		db		
34	FUNCTION1 PFK	27.74	3.935e4					1.2	NO		bd		
35	FUNCTION1 PFK	27.63	3.557e4					1.2	NO		db		
36	FUNCTION1 PFK	27.59	4.745e4					1.4	NO		dd		
37	FUNCTION1 PFK	27.49	1.042e5					2.1	NO		dd		

ID: 20J0389-08, Name: 20112315, Date: 23-Nov-2020, Time: 21:20:59, Conditions: AUTOSPEC01, User: pk

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	27.39	1.169e5					1.9	NO		bd		
39	FUNCTION1 PFK	27.27	1.765e5					2.2	NO		bb		
40	FUNCTION1 PFK	26.69	3.901e4					0.9	NO		db		
41	FUNCTION1 PFK	26.60	7.201e4					1.5	NO		dd		
42	FUNCTION1 PFK	26.48	7.363e4					1.9	NO		bd		
43	FUNCTION1 PFK	26.36	5.634e4					1.3	NO		bb		
44	FUNCTION1 PFK	26.26	6.609e4					1.5	NO		db		
45	FUNCTION1 PFK	26.15	6.946e4					1.6	NO		bd		
46	FUNCTION1 PFK	26.04	1.667e4					0.8	NO		db		
47	FUNCTION1 PFK	26.01	1.792e4					0.7	NO		bd		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	32.80	1.949e4					1.6	NO		bb		0.000
2	FUNCTION2 PFK	32.76	3.475e3					0.8	NO		bb		0.000
3	FUNCTION2 PFK	32.12	2.386e4					1.8	NO		bb		0.000
4	FUNCTION2 PFK	30.76	2.375e4					1.6	NO		bb		0.000
5	FUNCTION2 PFK	29.86	6.941e4					2.0	NO		bb		0.000
6	FUNCTION2 PFK	29.61	5.192e4					2.2	NO		bb		0.000
7	FUNCTION2 PFK	29.31	4.051e6					5.0	YES		db		0.000
8	FUNCTION2 PFK	28.29	8.021e6					50.0	YES		bd		0.000

ID: 20J0389-08, Name: 20112315, Date: 23-Nov-2020, Time: 21:20:59, Conditions: AUTOSPEC01, User: pk

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.05	2.685e4					1.8	NO		db		0.000
2	FUNCTION3 PFK	34.00	1.549e4					1.3	NO		bd		0.000
3	FUNCTION3 PFK	33.81	5.291e4					2.6	NO		bb		0.000
4	FUNCTION3 PFK	33.48	3.900e4					1.3	NO		bb		0.000
5	FUNCTION3 PFK	33.22	1.428e3					0.0	NO		bb		0.000
6	FUNCTION3 PFK	33.15	2.584e4					2.9	NO		bb		0.000
7	FUNCTION3 PFK	33.07	1.343e4					1.1	NO		bb		0.000
8	FUNCTION3 PFK	36.51	3.032e4					1.8	NO		bb		0.000
9	FUNCTION3 PFK	36.25	2.078e4					1.5	NO		bb		0.000
10	FUNCTION3 PFK	36.17	4.267e4					2.5	NO		bb		0.000
11	FUNCTION3 PFK	36.06	1.554e4					1.3	NO		db		0.000
12	FUNCTION3 PFK	36.04	1.816e4					1.7	NO		bd		0.000
13	FUNCTION3 PFK	35.91	1.558e3					0.4	NO		bb		0.000
14	FUNCTION3 PFK	35.85	1.453e4					1.5	NO		db		0.000
15	FUNCTION3 PFK	35.83	1.500e4					1.6	NO		bd		0.000
16	FUNCTION3 PFK	35.73	4.231e4					2.1	NO		bb		0.000
17	FUNCTION3 PFK	35.38	4.616e4					2.7	NO		bb		0.000
18	FUNCTION3 PFK	35.31	3.478e4					1.5	NO		bb		0.000
19	FUNCTION3 PFK	34.73	3.116e4					1.5	NO		bb		0.000
20	FUNCTION3 PFK	34.62	1.290e4					0.9	NO		db		0.000
21	FUNCTION3 PFK	34.49	4.710e4					2.2	NO		dd		0.000
22	FUNCTION3 PFK	34.38	3.643e4					1.8	NO		bd		0.000
23	FUNCTION3 PFK	34.17	3.371e4					1.6	NO		bb		0.000
24	FUNCTION3 PFK	37.96	1.320e4					0.9	NO		bb		0.000
25	FUNCTION3 PFK	37.86	3.590e3					0.6	NO		db		0.000
26	FUNCTION3 PFK	37.82	1.660e4					1.7	NO		bd		0.000
27	FUNCTION3 PFK	37.65	3.156e4					1.5	NO		bb		0.000
28	FUNCTION3 PFK	37.31	2.774e4					1.7	NO		db		0.000
29	FUNCTION3 PFK	37.28	1.781e4					1.5	NO		bd		0.000
30	FUNCTION3 PFK	37.17	5.637e4					2.4	NO		db		0.000
31	FUNCTION3 PFK	37.08	3.711e4					2.1	NO		bd		0.000
32	FUNCTION3 PFK	36.85	4.655e4					2.6	NO		bb		0.000
33	FUNCTION3 PFK	36.58	3.582e3					0.6	NO		bb		0.000

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Printed: Tuesday, November 24, 2020 10:09:50 Pacific Standard Time

ID: 20J0389-08, Name: 20112315, Date: 23-Nov-2020, Time: 21:20:59, Conditions: AUTOSPEC01, User: pk

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.65	3.450e4					2.1	NO		bb		
2	FUNCTION4 PFK	38.55	2.996e4					1.3	NO		bb		
3	FUNCTION4 PFK	38.42	7.655e3					0.8	NO		bb		
4	FUNCTION4 PFK	38.22	3.878e4					1.2	NO		bb		
5	FUNCTION4 PFK	38.09	9.292e3					1.2	NO		bb		
6	FUNCTION4 PFK	40.79	2.074e4					1.7	NO		bb		
7	FUNCTION4 PFK	40.67	1.231e4					1.2	NO		bb		
8	FUNCTION4 PFK	40.55	1.790e4					1.2	NO		bb		
9	FUNCTION4 PFK	40.46	2.670e4					1.7	NO		bb		
10	FUNCTION4 PFK	40.35	1.124e4					1.3	NO		db		
11	FUNCTION4 PFK	40.33	8.544e3					1.0	NO		bd		
12	FUNCTION4 PFK	40.23	2.640e4					1.8	NO		bb		
13	FUNCTION4 PFK	40.11	2.012e4					1.5	NO		db		
14	FUNCTION4 PFK	39.98	3.559e4					1.7	NO		bd		
15	FUNCTION4 PFK	39.77	2.916e4					1.7	NO		bb		
16	FUNCTION4 PFK	39.45	3.482e4					2.0	NO		bb		
17	FUNCTION4 PFK	39.22	1.591e4					1.0	NO		bb		
18	FUNCTION4 PFK	38.94	9.990e2					0.3	NO		bb		
19	FUNCTION4 PFK	38.89	1.079e4					1.1	NO		db		
20	FUNCTION4 PFK	38.86	6.987e3					1.0	NO		bd		
21	FUNCTION4 PFK	38.75	3.015e4					2.0	NO		bb		
22	FUNCTION4 PFK	42.59	3.479e4					2.1	NO		bb		
23	FUNCTION4 PFK	42.33	2.357e4					1.2	NO		bb		
24	FUNCTION4 PFK	42.12	2.823e4					1.5	NO		bb		
25	FUNCTION4 PFK	42.01	2.242e4					1.6	NO		bb		
26	FUNCTION4 PFK	41.88	4.941e4					1.9	NO		db		
27	FUNCTION4 PFK	41.80	7.281e4					2.8	NO		dd		
28	FUNCTION4 PFK	41.70	1.898e4					1.4	NO		dd		
29	FUNCTION4 PFK	41.60	1.650e4					1.4	NO		dd		
30	FUNCTION4 PFK	41.56	1.870e4					1.5	NO		dd		
31	FUNCTION4 PFK	41.49	1.747e3					0.4	NO		bd		
32	FUNCTION4 PFK	41.44	3.308e4					2.1	NO		db		
33	FUNCTION4 PFK	41.35	6.005e4					2.5	NO		dd		
34	FUNCTION4 PFK	41.24	2.958e4					1.7	NO		bd		
35	FUNCTION4 PFK	41.02	2.945e4					2.0	NO		db		
36	FUNCTION4 PFK	40.96	3.127e3					0.7	NO		bd		
37	FUNCTION4 PFK	40.88	3.262e4					1.9	NO		bb		

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION4 PFK	43.20	4.456e3					0.7	NO		db		
39	FUNCTION4 PFK	43.14	1.438e4					1.5	NO		bd		
40	FUNCTION4 PFK	42.91	5.070e4					2.5	NO		db		
41	FUNCTION4 PFK	42.82	4.075e4					2.0	NO		bd		
42	FUNCTION4 PFK	42.72	1.116e4					1.1	NO		db		
43	FUNCTION4 PFK	42.70	9.569e3					1.2	NO		bd		
44	FUNCTION4 PFK	42.64	6.709e3					1.0	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.42	1.402e4					2.2	NO		bb		
2	FUNCTION5 PFK	44.30	1.722e4					2.0	NO		db		
3	FUNCTION5 PFK	44.26	6.236e3					1.2	NO		bd		
4	FUNCTION5 PFK	44.05	6.785e2					0.4	NO		bb		
5	FUNCTION5 PFK	43.85	2.239e4					2.1	NO		bb		
6	FUNCTION5 PFK	43.57	4.823e3					0.9	NO		bb		
7	FUNCTION5 PFK	43.51	1.395e4					1.9	NO		bb		
8	FUNCTION5 PFK	43.39	8.714e2					0.5	NO		bb		
9	FUNCTION5 PFK	46.34	6.986e3					1.4	NO		bb		
10	FUNCTION5 PFK	45.89	1.913e4					2.3	NO		bb		
11	FUNCTION5 PFK	45.76	9.796e3					1.6	NO		bb		
12	FUNCTION5 PFK	45.67	1.811e4					2.7	NO		db		
13	FUNCTION5 PFK	45.64	9.372e3					2.2	NO		dd		
14	FUNCTION5 PFK	45.61	6.200e3					1.5	NO		bd		
15	FUNCTION5 PFK	45.45	9.333e3					1.5	NO		db		
16	FUNCTION5 PFK	45.42	9.773e3					1.9	NO		bd		
17	FUNCTION5 PFK	45.37	4.722e3					1.3	NO		db		
18	FUNCTION5 PFK	45.33	8.953e3					1.7	NO		bd		
19	FUNCTION5 PFK	45.28	2.541e3					0.8	NO		bb		
20	FUNCTION5 PFK	45.19	1.342e4					1.4	NO		bb		
21	FUNCTION5 PFK	45.09	6.251e3					1.1	NO		bb		
22	FUNCTION5 PFK	44.79	3.595e3					0.9	NO		bb		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	21.75	9.251e2					37.4	YES		bb		0.000
2	FUNCTION1 HXCD...	26.23	9.661e1					4.8	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	27.01	1.108e2					0.8	NO		bb		0.000
2	FUNCTION1 HPCD...	25.44	1.125e2					0.7	NO		bb		0.000
3	FUNCTION1 HPCD...	24.91	8.587e1					0.9	NO		bb		0.000
4	FUNCTION1 HPCD...	22.15	1.636e2					1.0	NO		bb		0.000
5	FUNCTION1 HPCD...	21.75	9.661e2					7.1	YES		bb		0.000
6	FUNCTION1 HPCD...	21.21	1.011e2					0.7	NO		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.99	9.969e1					2.2	NO		bb		0.000
2	FUNCTION2 HPCD...	30.43	1.106e2					2.0	NO		bb		0.000
3	FUNCTION2 HPCD...	29.47	7.475e1					3.0	NO		bb		0.000
4	FUNCTION2 HPCD...	29.36	1.173e2					3.1	YES		db		0.000
5	FUNCTION2 HPCD...	29.26	7.318e1					2.1	NO		bd		0.000
6	FUNCTION2 HPCD...	28.92	7.829e1					1.6	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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ID: 20J0389-08, Name: 20112315, Date: 23-Nov-2020, Time: 21:20:59, Conditions: AUTOSPEC01, User: pk

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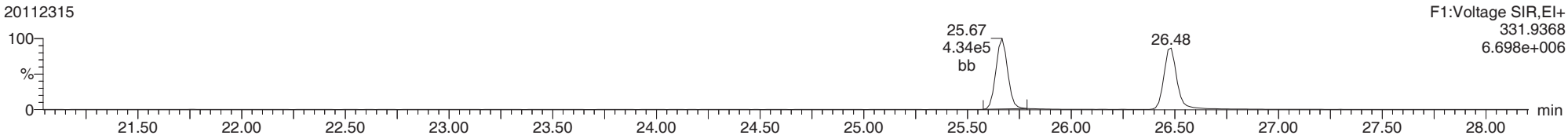

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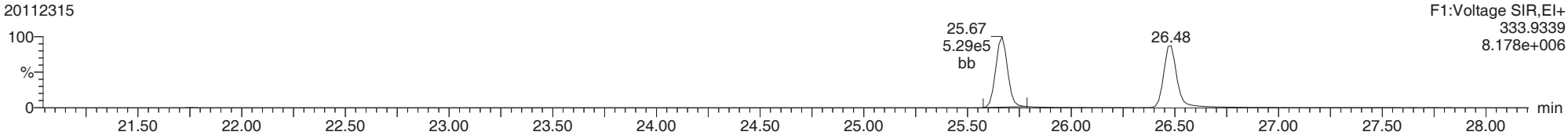

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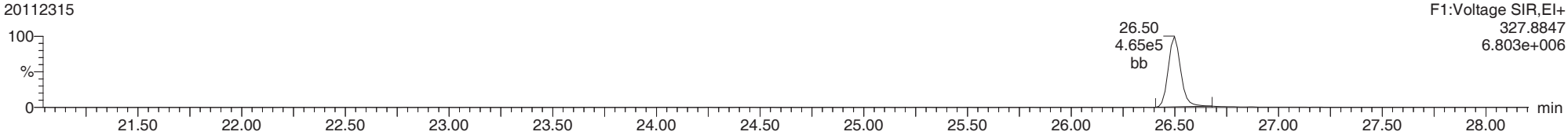

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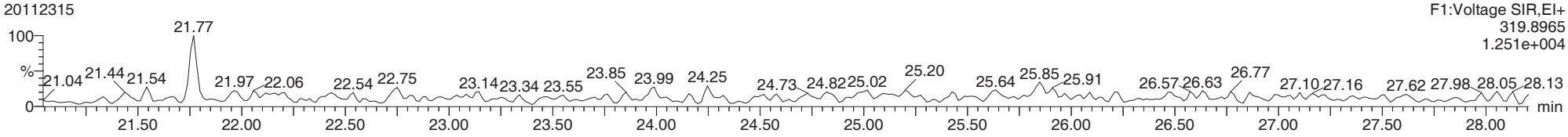

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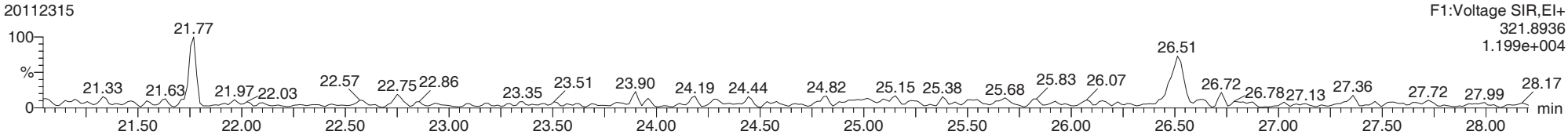

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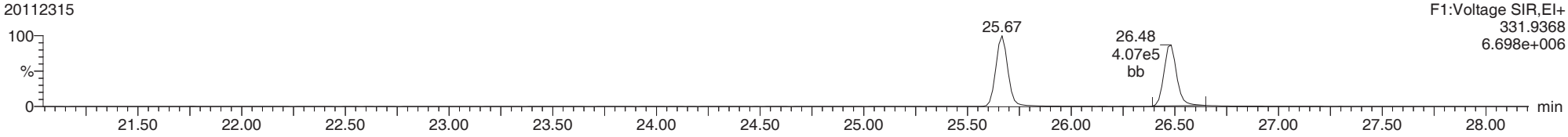

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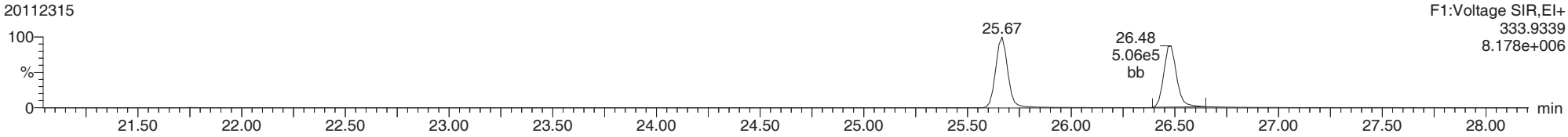

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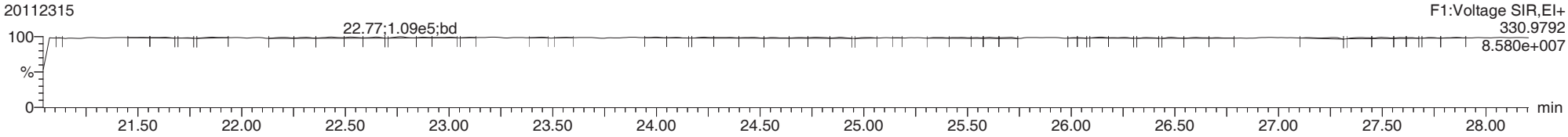

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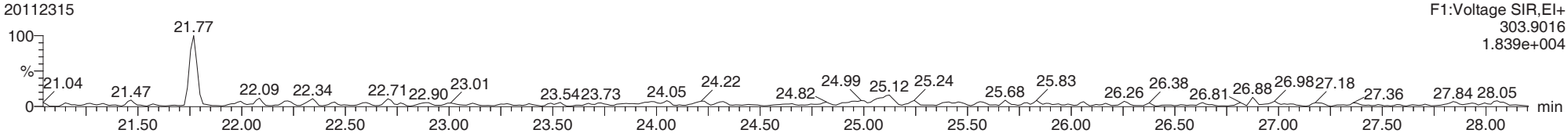

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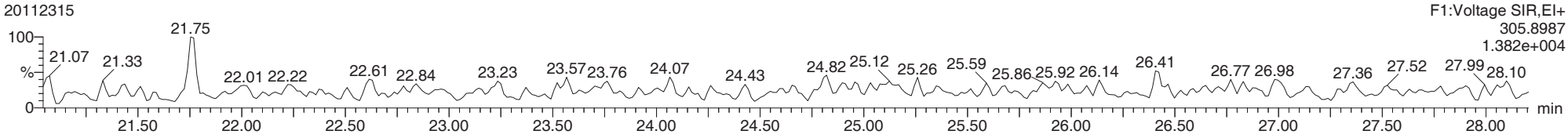

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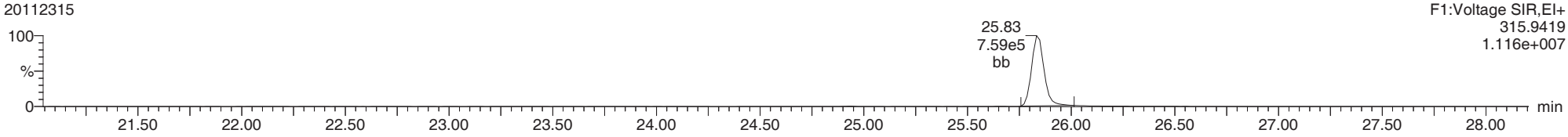

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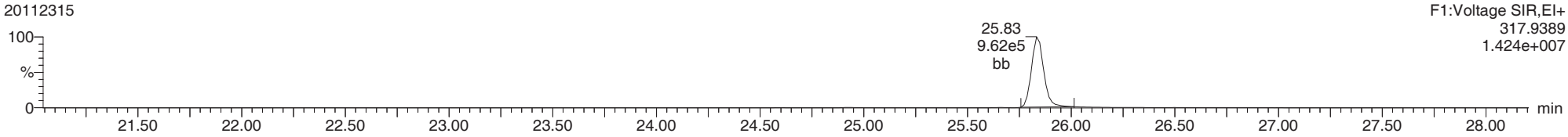
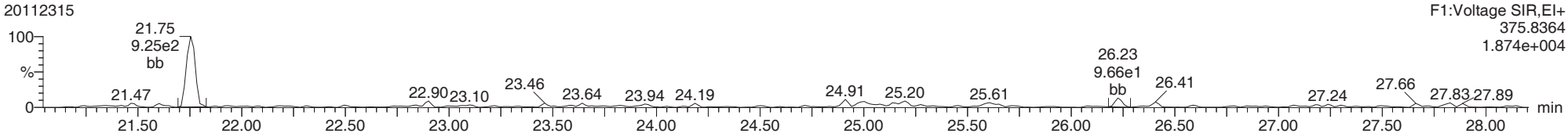


FUNCTION1 HXCDPE



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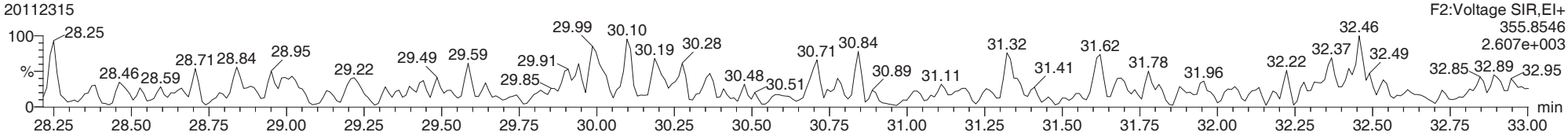

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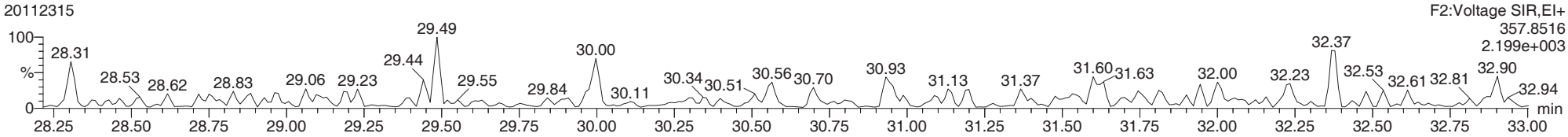

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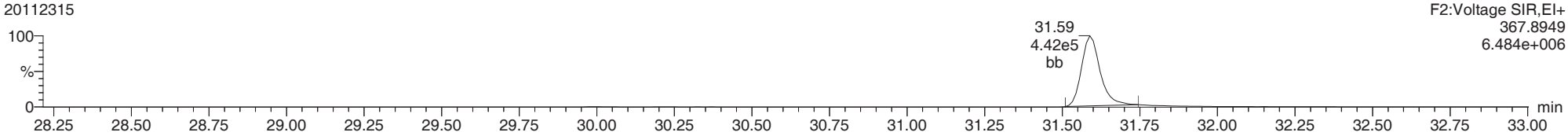

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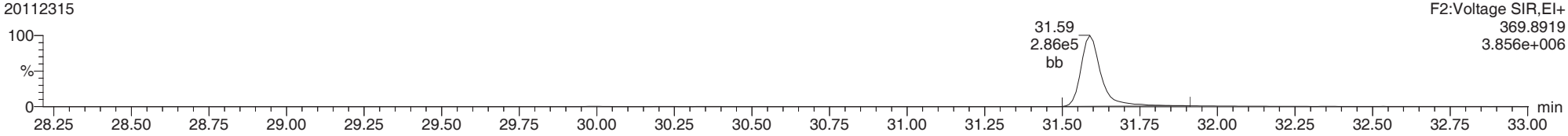
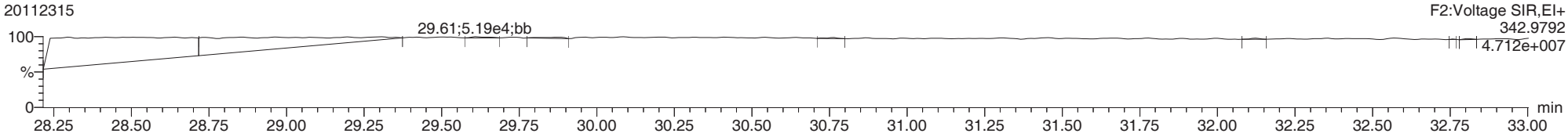


FUNCTION2 PFK



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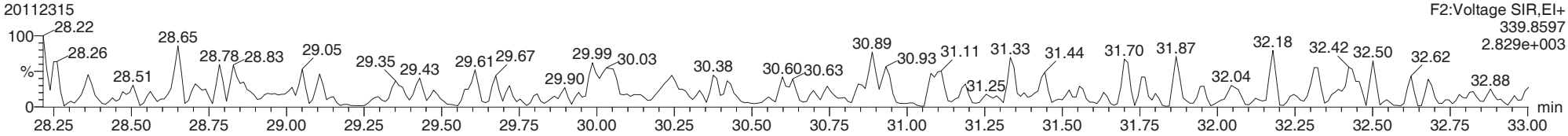

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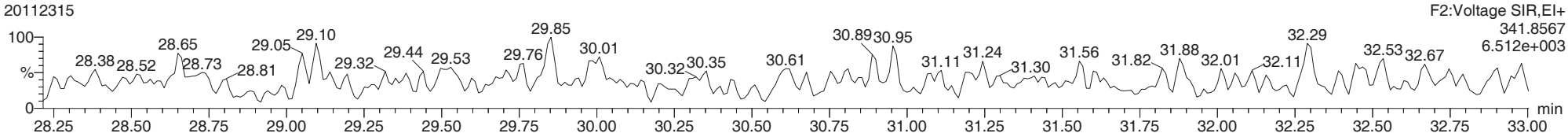

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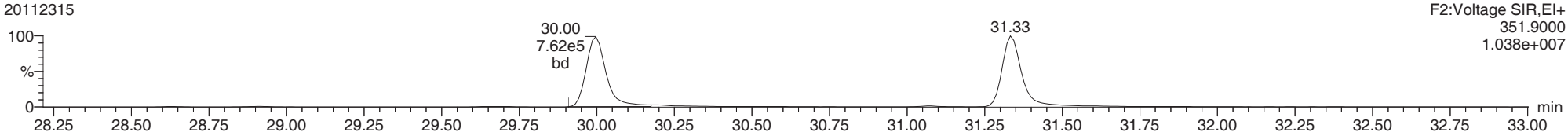

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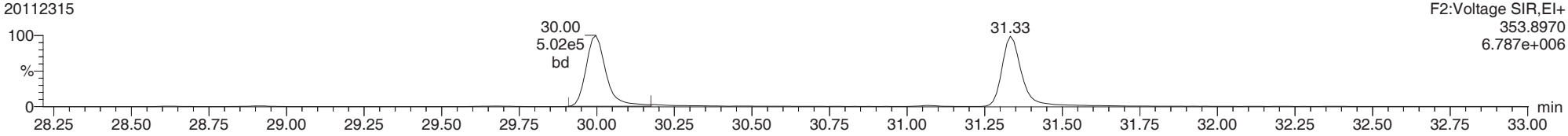
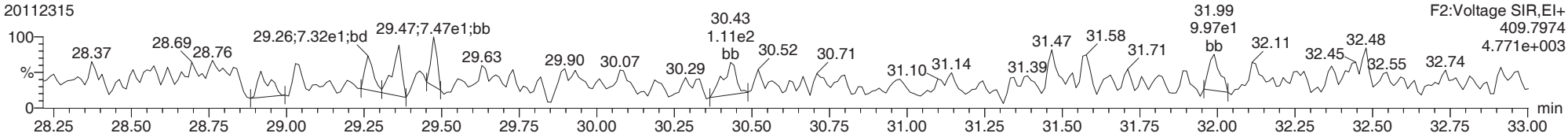


FUNCTION2 HPCDPE



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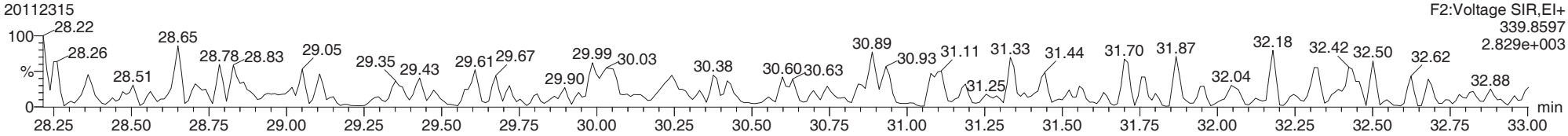
23478-PeCDF



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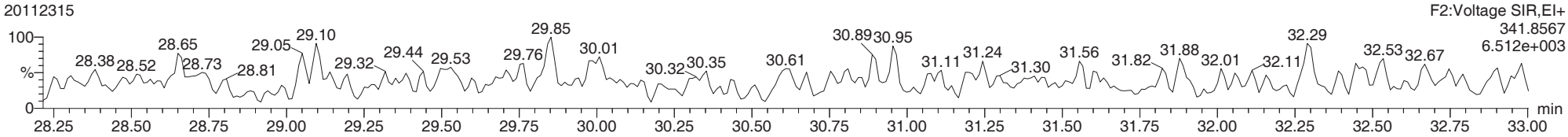

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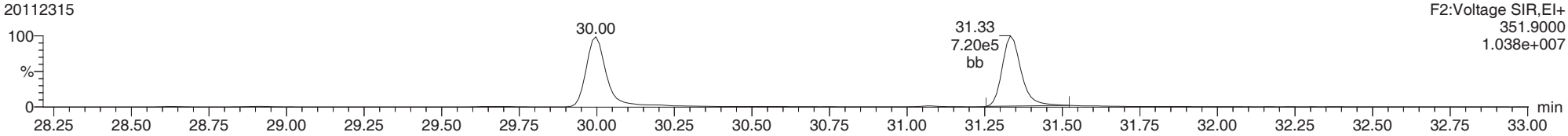

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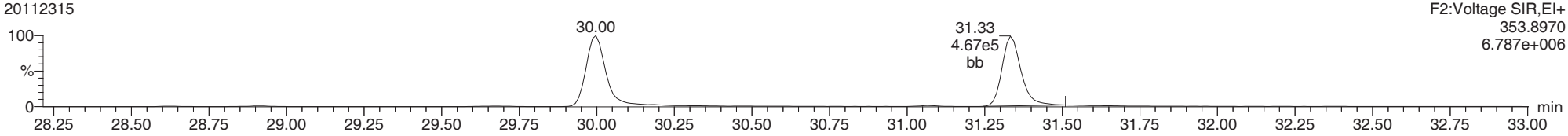
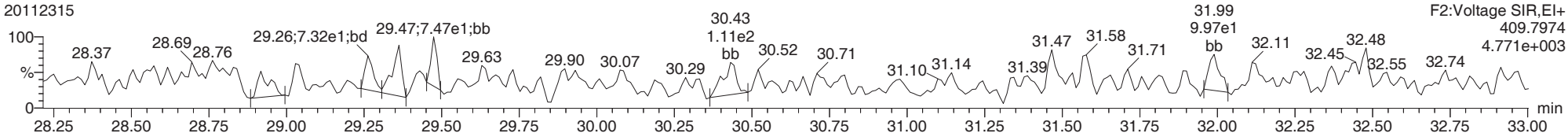


FUNCTION2 HPCDPE



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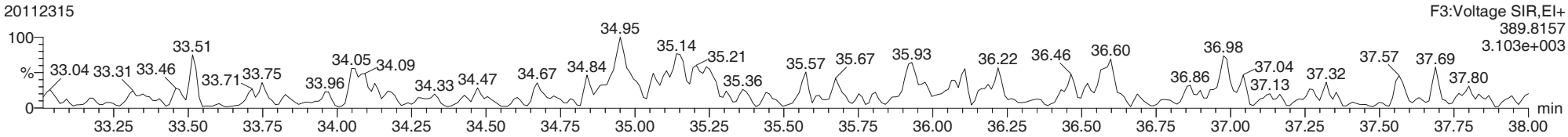
ID: 20J0389-08, Name: 20112315, Date: 23-Nov-2020, Time: 21:20:59, Conditions: AUTOSPEC01, User: pk

123478-HxCDD



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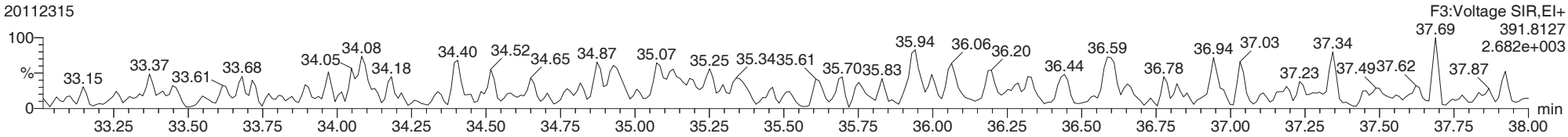

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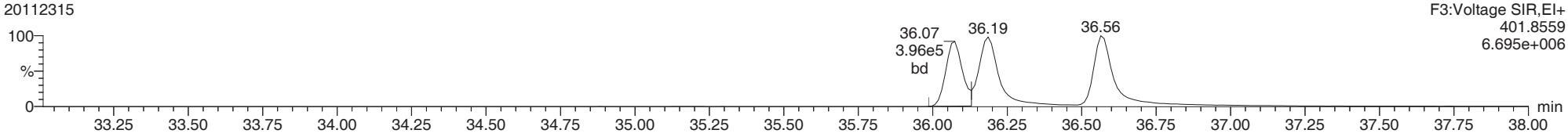

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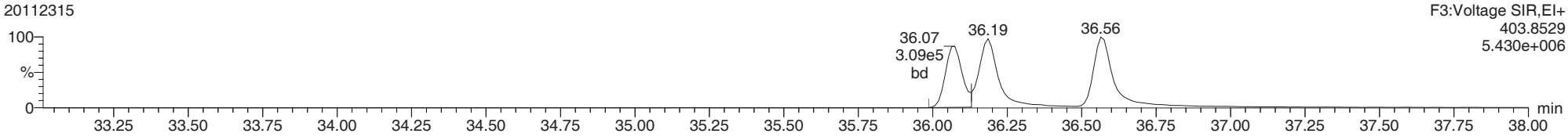

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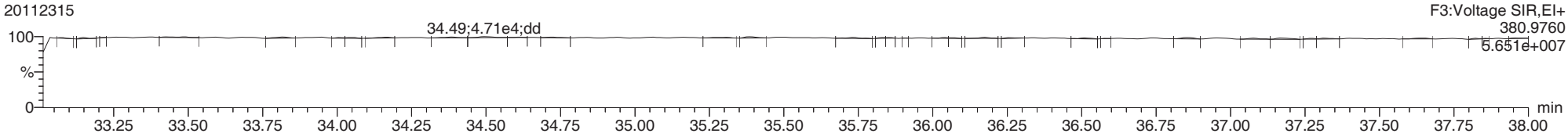

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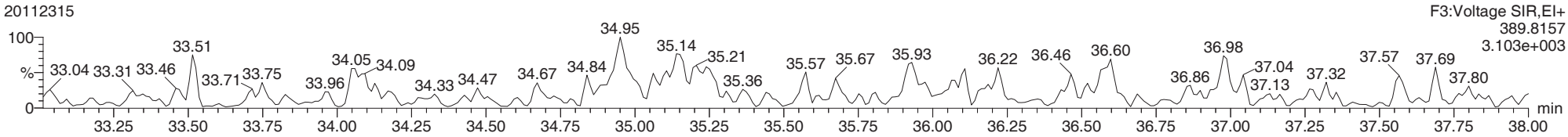
123678-HxCDD



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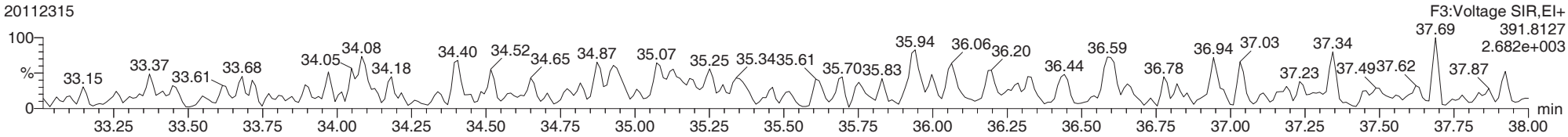

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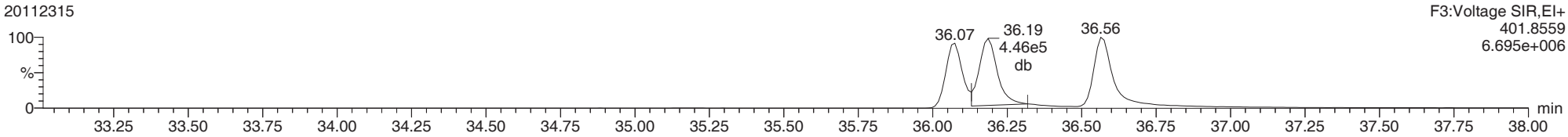

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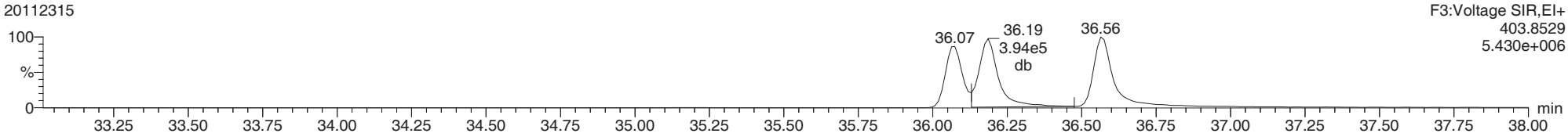

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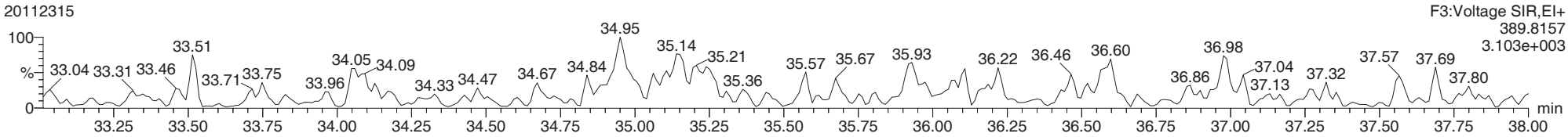
123789-HxCDD



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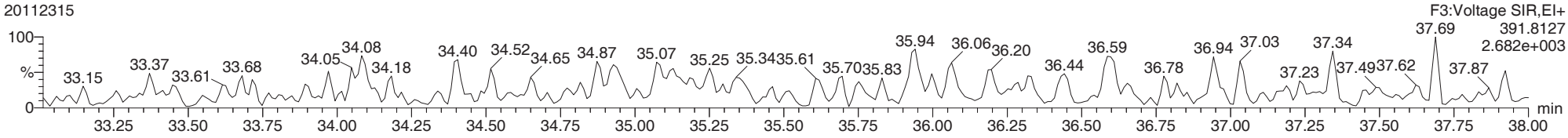

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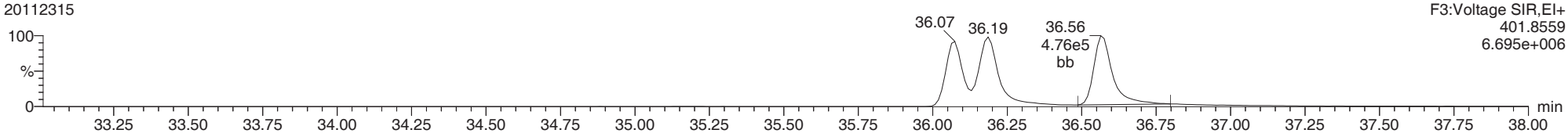

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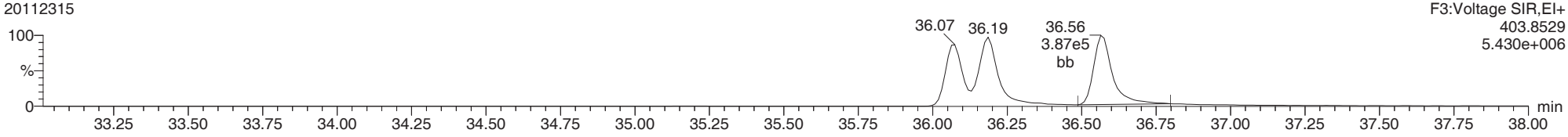

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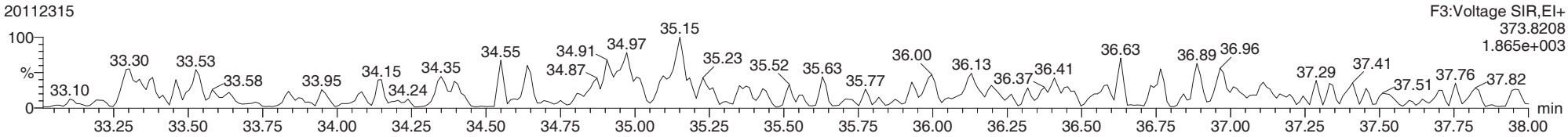
123478-HxCDF



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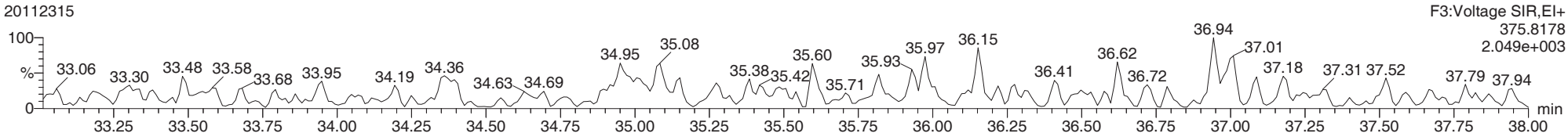

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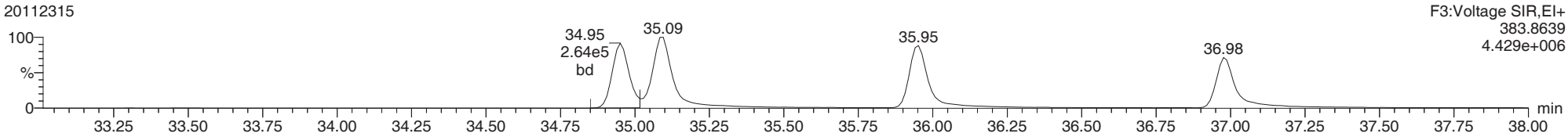

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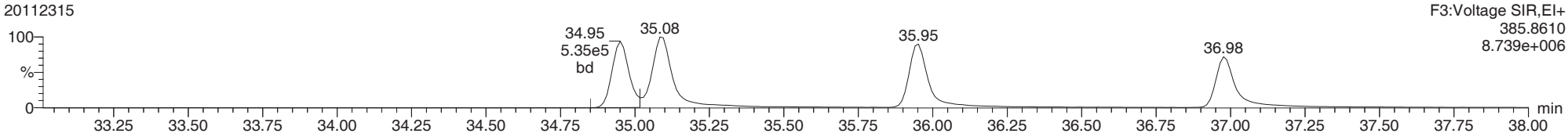
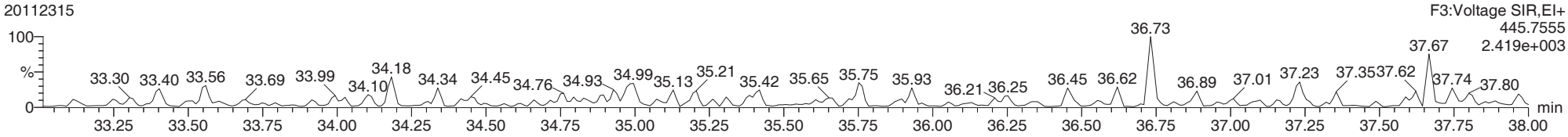


FUNCTION3 OCDPE



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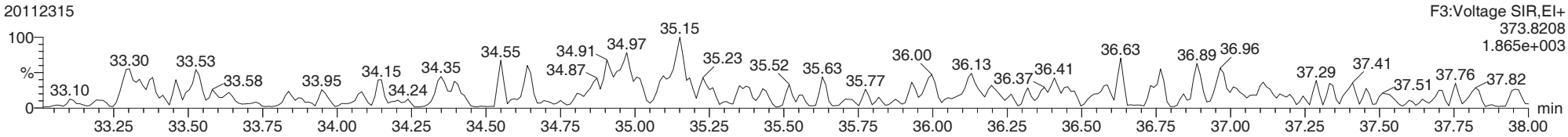
234678-HxCDF



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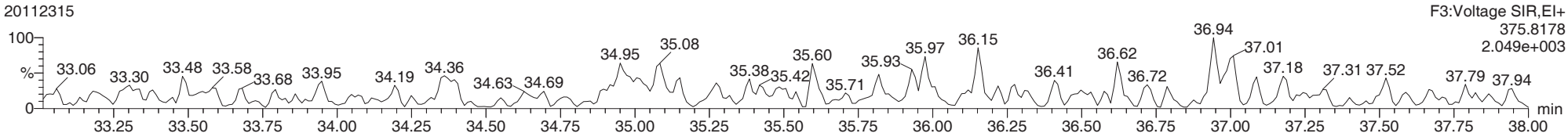

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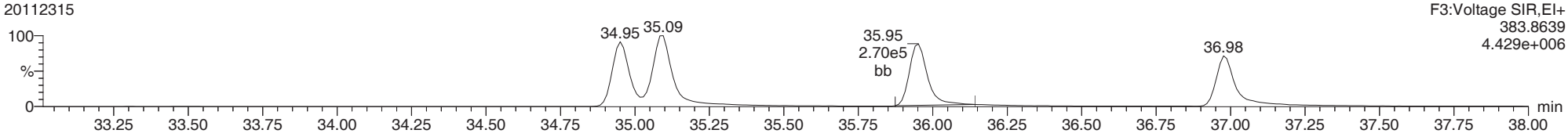

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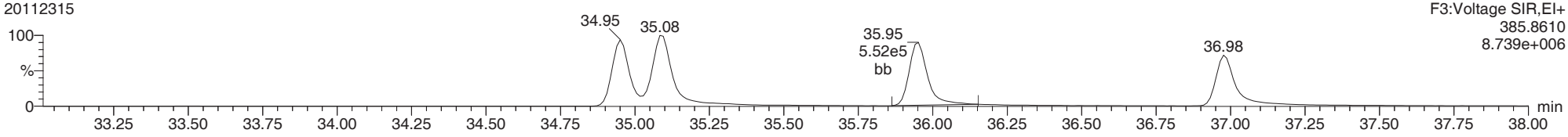

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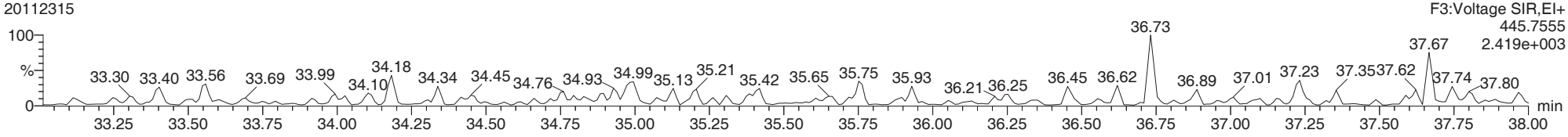

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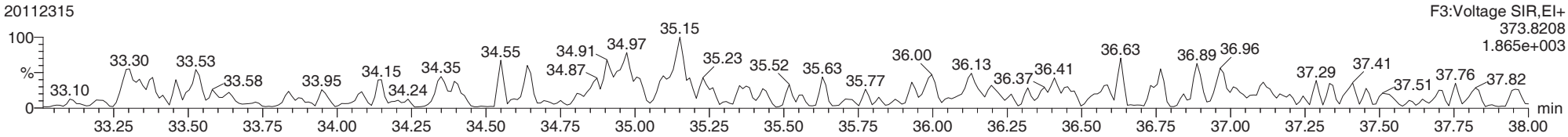
123678-HxCDF



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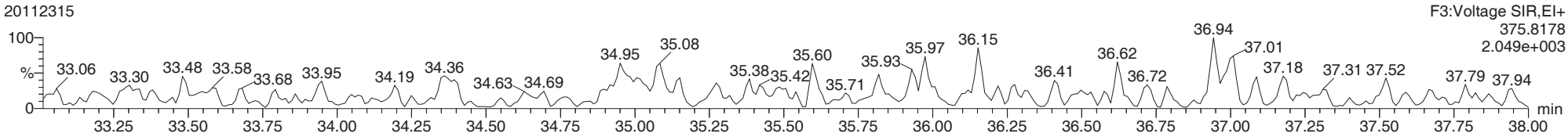

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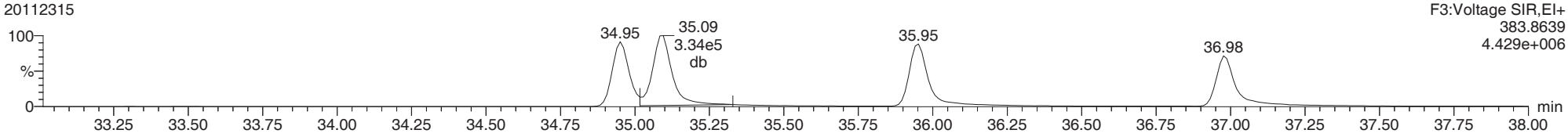

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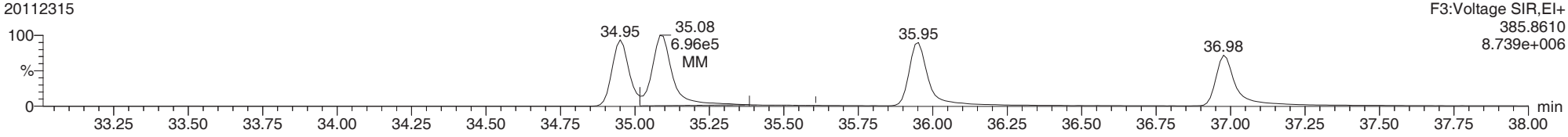
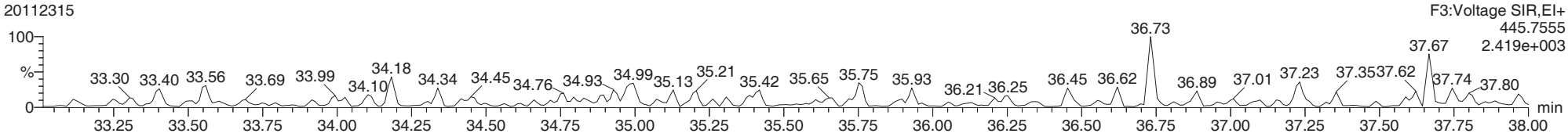


FUNCTION3 OCDPE



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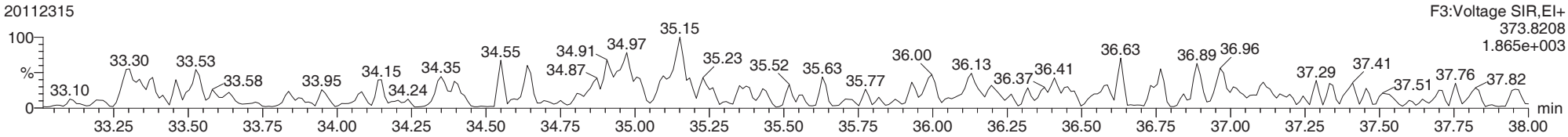
123789-HxCDF



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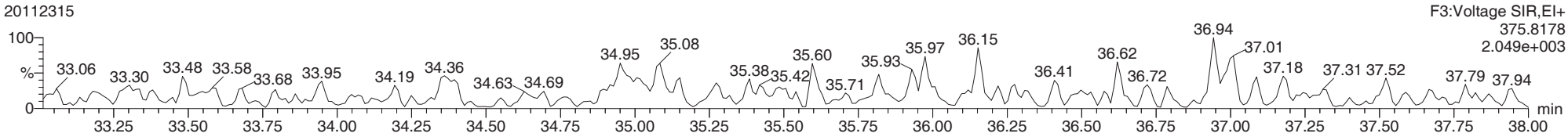

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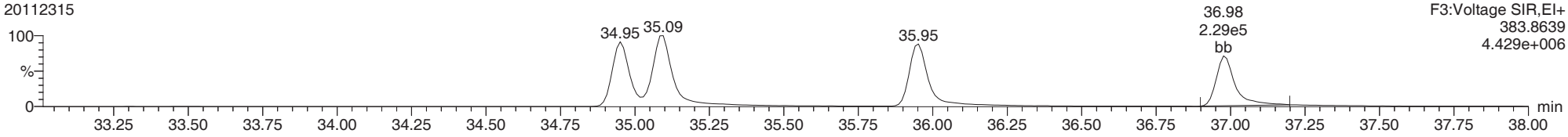

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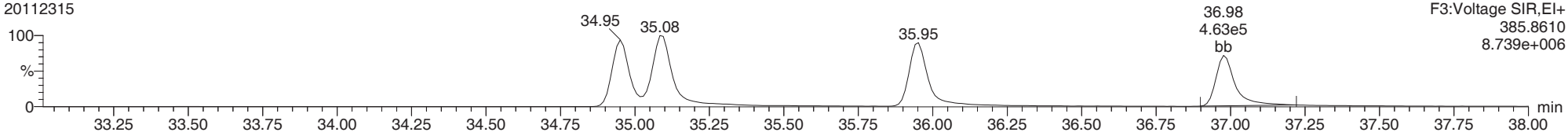
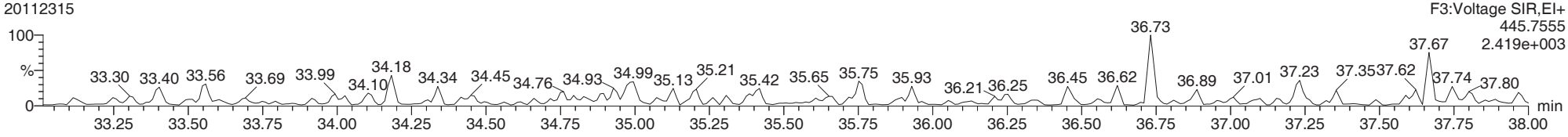


FUNCTION3 OCDPE



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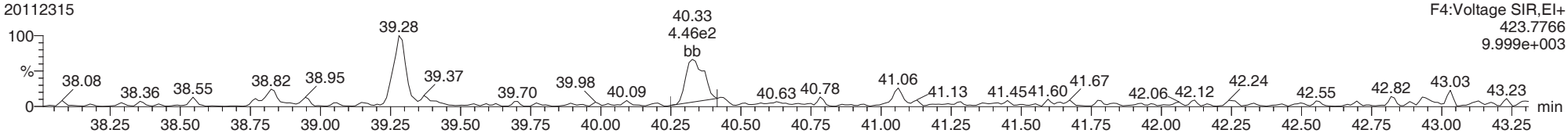
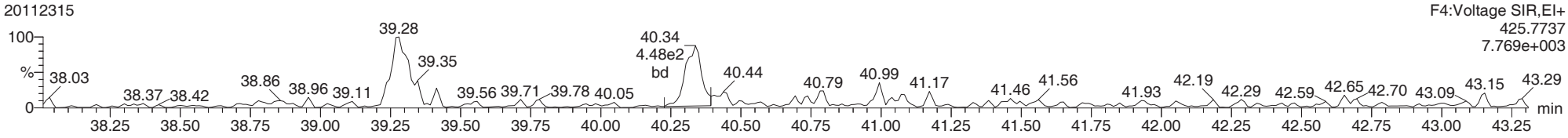
1234678-HpCDD



1234678-HpCDD



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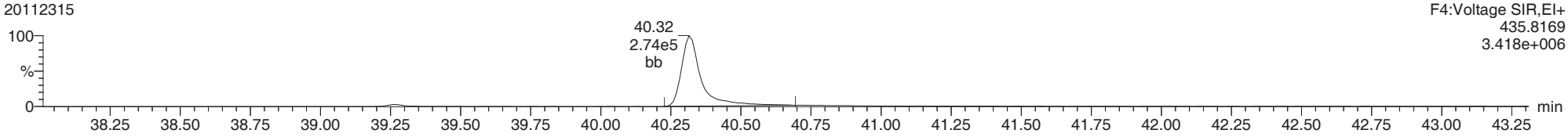

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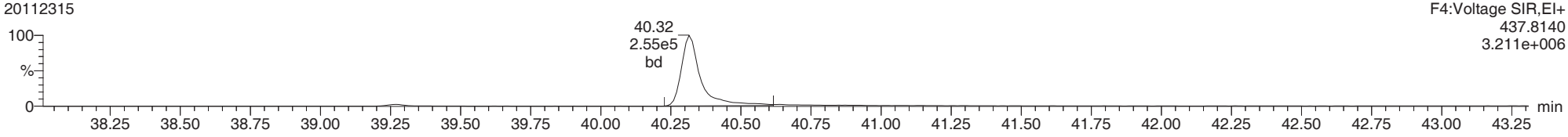
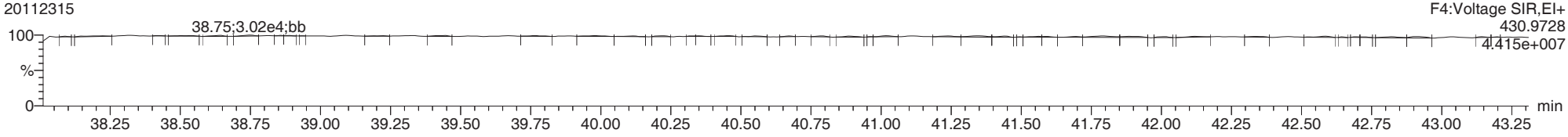


FUNCTION4 PFK



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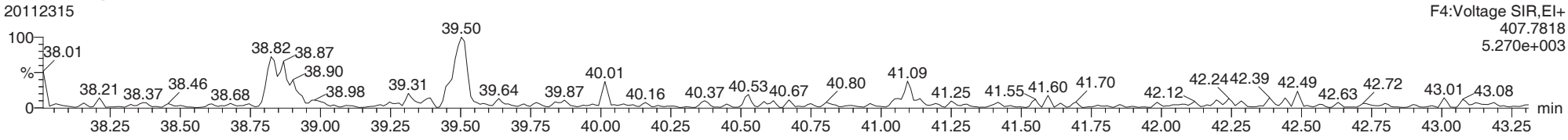
1234678-HpCDF



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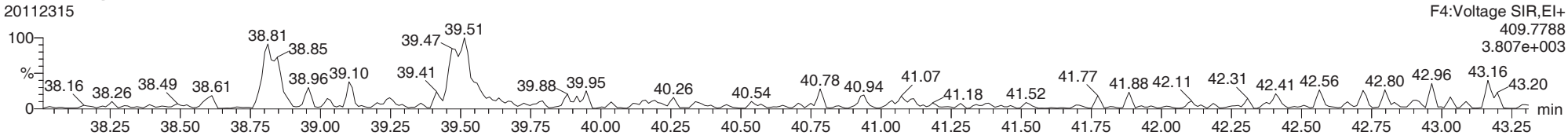

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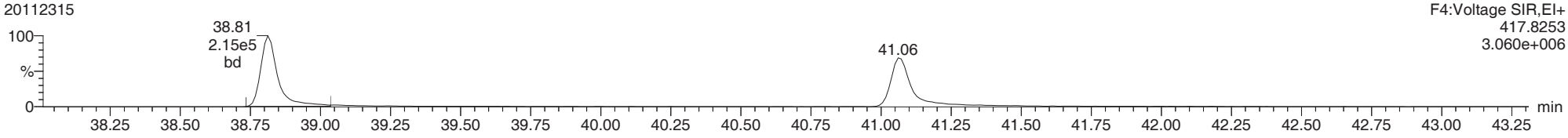

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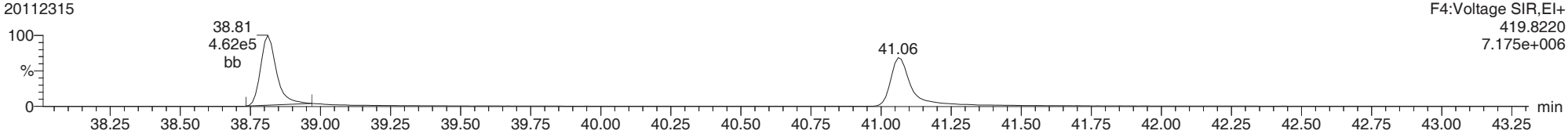
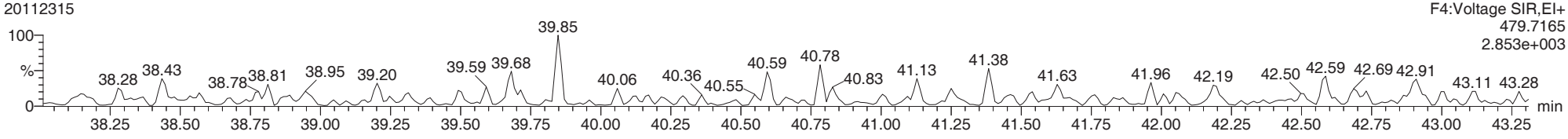


FUNCTION4 NCDPE



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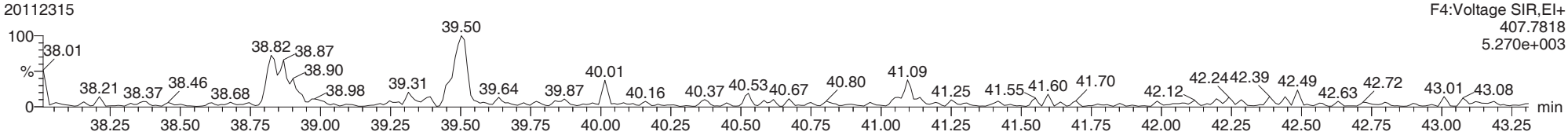
1234789-HpCDF



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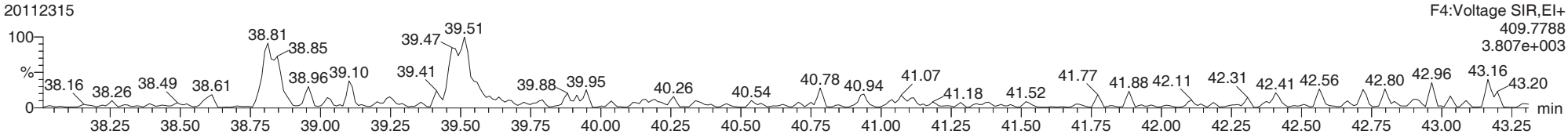

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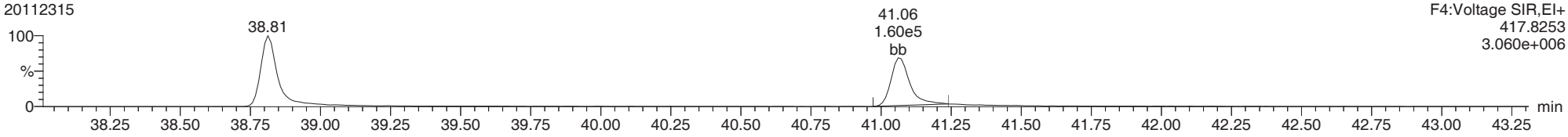

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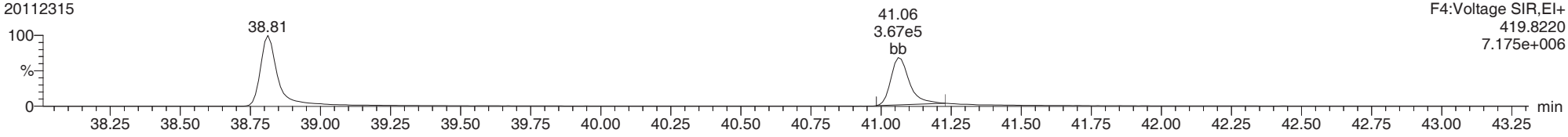
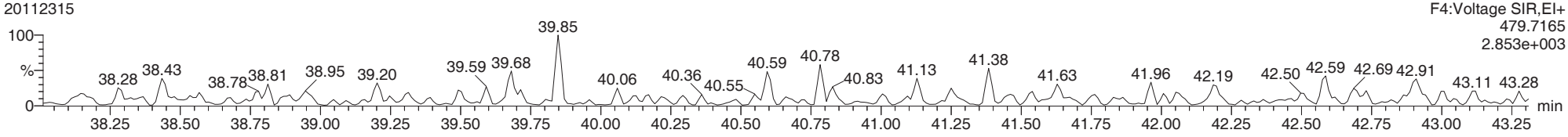


FUNCTION4 NCDPE



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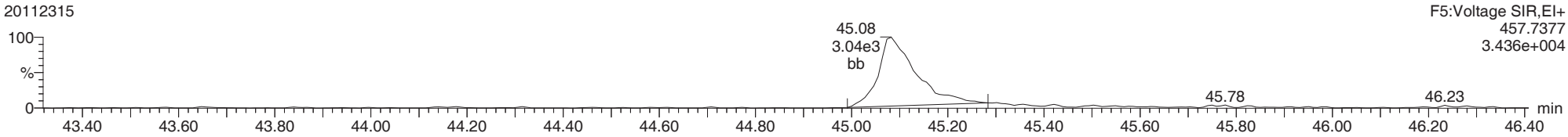
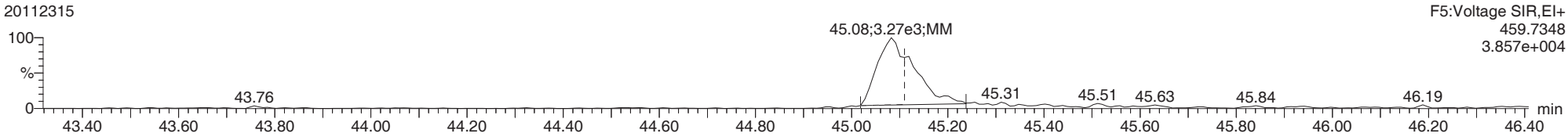
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:09:50 Pacific Standard Time

ID: 20J0389-08, Name: 20112315, Date: 23-Nov-2020, Time: 21:20:59, Conditions: AUTOSPEC01, User: pk

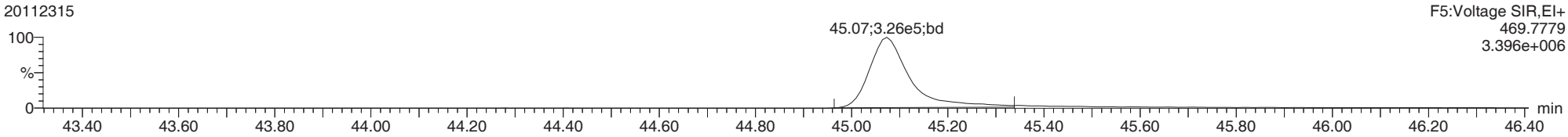
OCDD



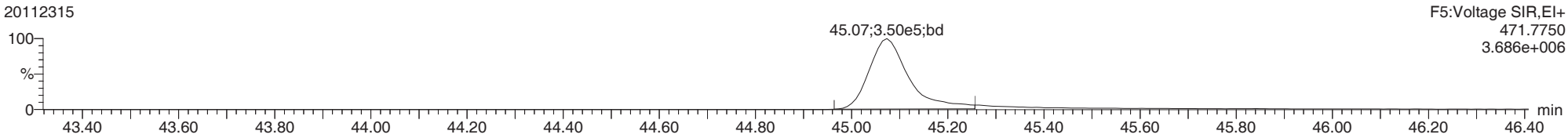
OCDD



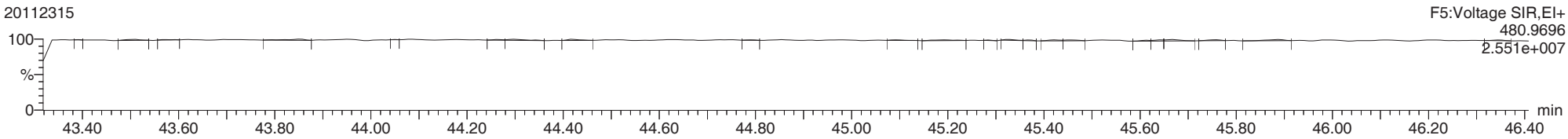
13C-OCDD



13C-OCDD



FUNCTION5 PFK



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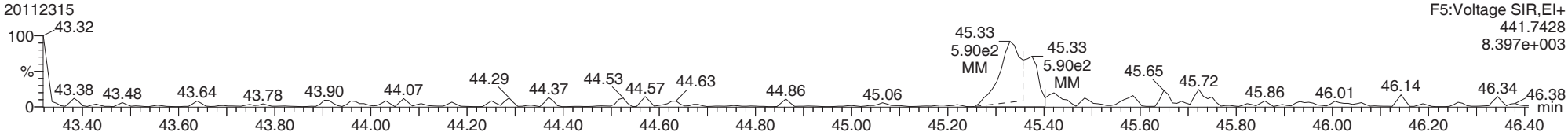
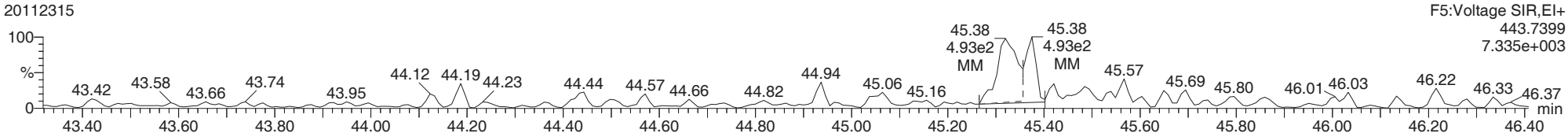
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:09:50 Pacific Standard Time

ID: 20J0389-08, Name: 20112315, Date: 23-Nov-2020, Time: 21:20:59, Conditions: AUTOSPEC01, User: pk

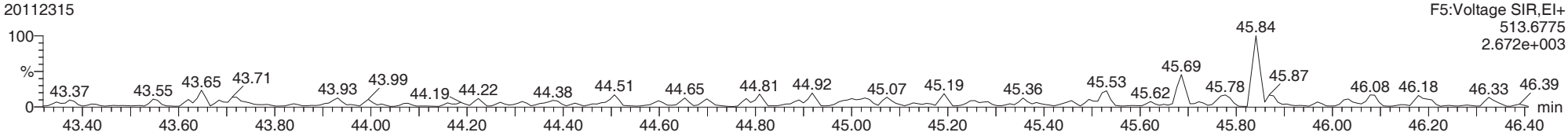
OCDF



OCDF

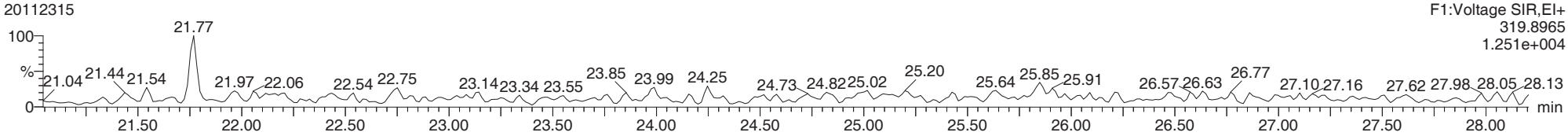


FUNCTION5 DCDPE

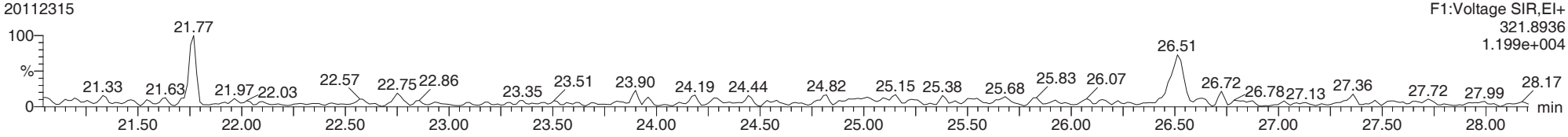


ID: 20J0389-08, Name: 20112315, Date: 23-Nov-2020, Time: 21:20:59, Conditions: AUTOSPEC01, User: pk

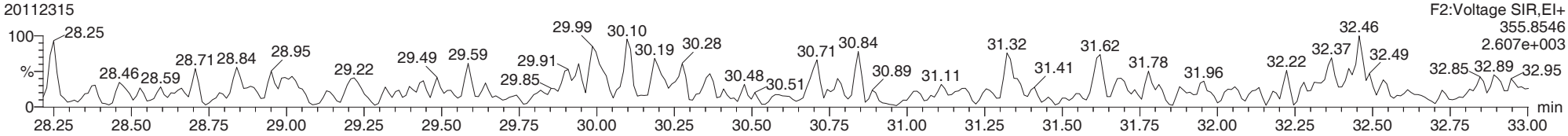
Total-tetradioxins



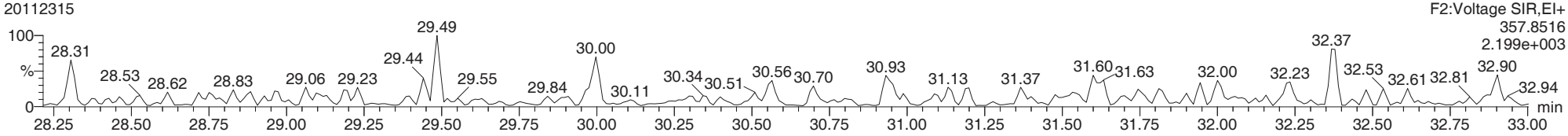
Total-tetradioxins



Total-pentadioxins

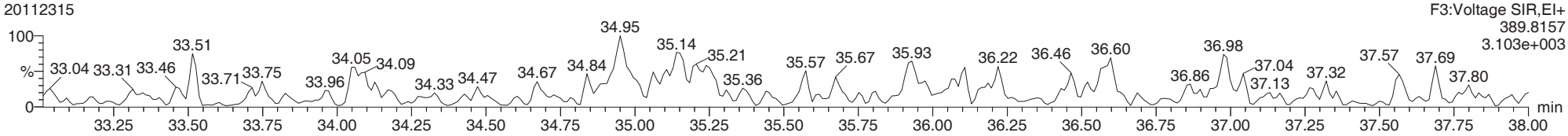


Total-pentadioxins

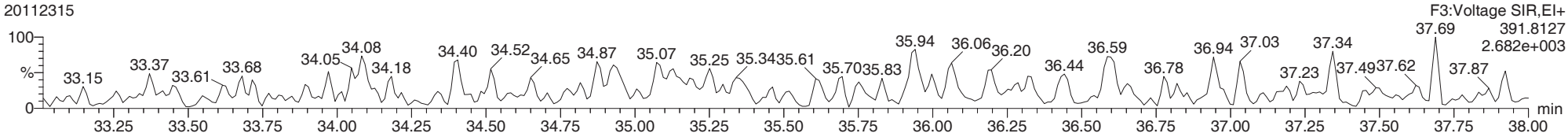


ID: 20J0389-08, Name: 20112315, Date: 23-Nov-2020, Time: 21:20:59, Conditions: AUTOSPEC01, User: pk

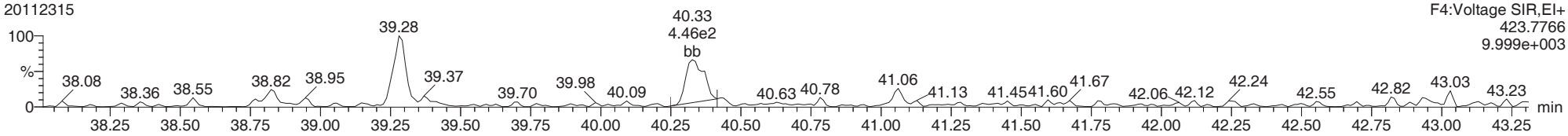
Total-hexadioxins



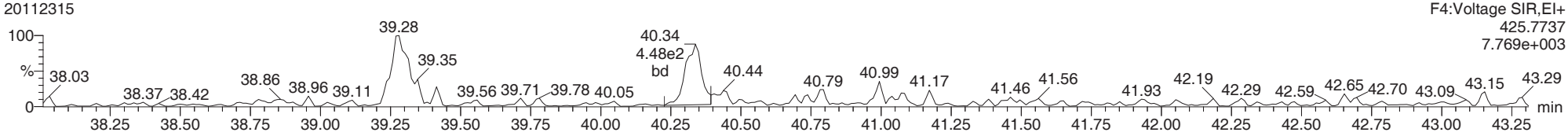
Total-hexadioxins



Total-heptadioxins

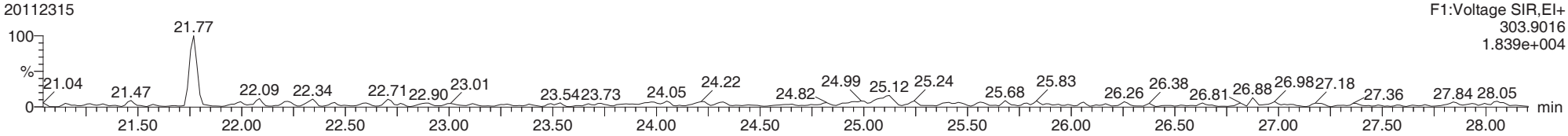


Total-heptadioxins

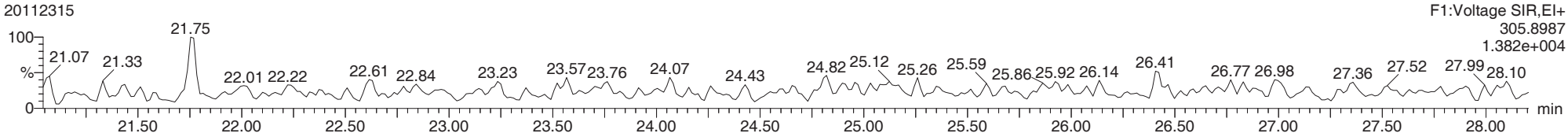


ID: 20J0389-08, Name: 20112315, Date: 23-Nov-2020, Time: 21:20:59, Conditions: AUTOSPEC01, User: pk

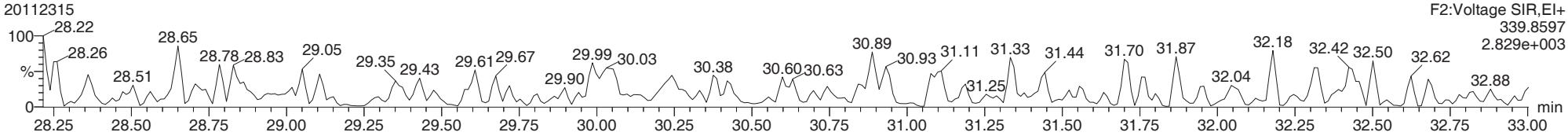
Total-tetrafurans



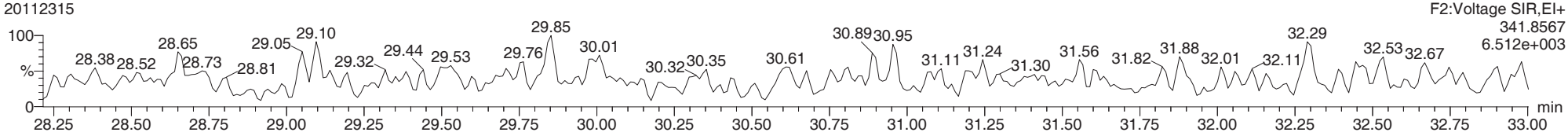
Total-tetrafurans



Total-pentafurans

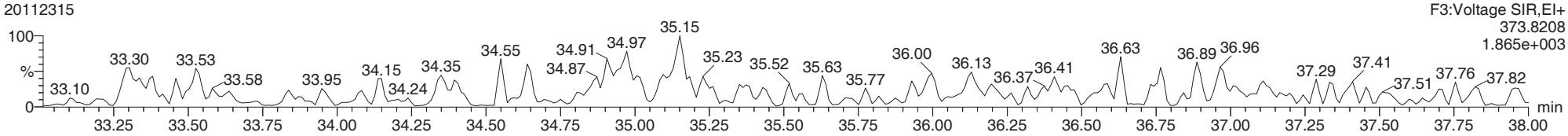


Total-pentafurans

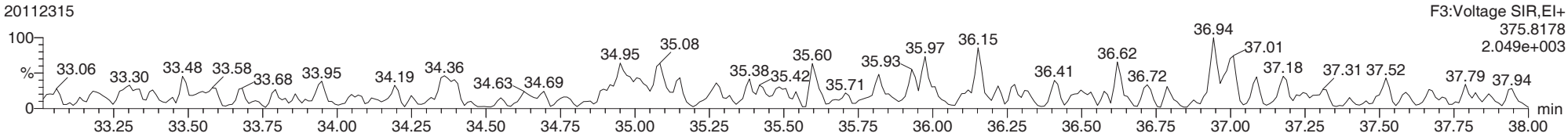


ID: 20J0389-08, Name: 20112315, Date: 23-Nov-2020, Time: 21:20:59, Conditions: AUTOSPEC01, User: pk

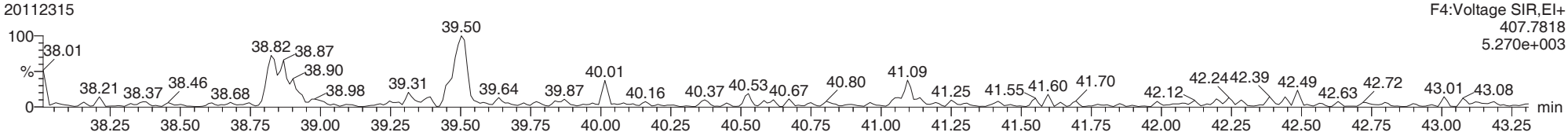
Total-hexafurans



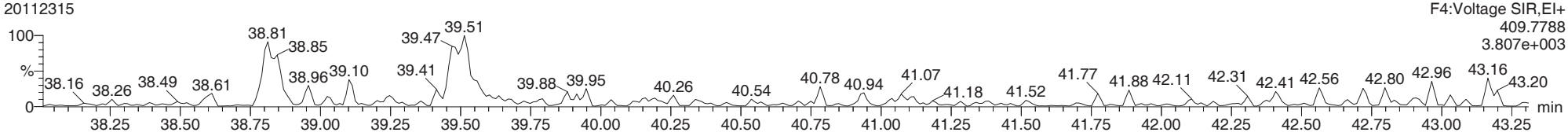
Total-hexafurans



Total-heptafurans



Total-heptafurans



MW-CP2-102720-D

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider				
Project:	Lora Lake Apartments				
Matrix:	Ground Water	Laboratory ID:	20J0389-09 A	File ID:	20112316
Sampled:	10/27/20 15:45	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 22:10
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1055 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	0.80	9.48	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	0.80	9.48	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.11	9.48	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	0.99	9.48	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	0.62	9.48	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.44	9.48	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.43	9.48	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.46	9.48	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	0.63	9.48	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	0.78	9.48	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	0.65	9.48	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	0.79	9.48	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1		0.893-1.208	0.55	9.48	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	0.79	9.48	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.271	0.893-1.208	1.17	9.48	1.26	pg/L	EMPC, J
39001-02-0	OCDF	1	1.451	0.757-1.024	1.49	19.0	2.88	pg/L	EMPC, J
3268-87-9	OCDD	1	0.913	0.757-1.024	1.65	47.4	21.3	pg/L	J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.48	ND	pg/L
41903-57-5	Total TCDD	1	0.000			9.48	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			9.48	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			9.48	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			9.48	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			9.48	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			9.48	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			9.48	ND	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.020
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.15

MW-CP2-102720-D

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider			Project:	Lora Lake Apartments
Matrix:	Ground Water	Laboratory ID:	20J0389-09	File ID:	20112316
Sampled:	10/27/20 15:45	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 22:10
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1055 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.766	0.655-0.886	1.01	85.3	24 - 169 %	
13C12-2,3,7,8-TCDD		0.807	0.655-0.886	1.46	83.3	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.577	1.318-1.783	2.47	79.8	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.525	1.318-1.783	2.58	77.0	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.524	1.318-1.783	1.26	80.6	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.492	0.434-0.587	3.67	94.1	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.513	0.434-0.587	3.13	98.3	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.487	0.434-0.587	3.51	92.6	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.507	0.434-0.587	4.09	91.7	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.332	1.054-1.426	2.59	87.6	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.087	1.054-1.426	2.14	87.6	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.459	0.374-0.506	4.27	91.9	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.426	0.374-0.506	5.36	91.5	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.176	0.893-1.208	4.32	95.7	23 - 140 %	
13C12-OCDD		0.924	0.757-1.024	4.93	58.8	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.67	97.6	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:09:55 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-09, Name: 20112316, Date: 23-Nov-2020, Time: 22:10:16, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF					0.729		0.770	725	1820								
12378-PeCDF					0.779		1.550	705	1876								
23478-PeCDF					0.880		1.550	705	1876								
123478-HxCDF					0.880		1.240	458	341								
234678-HxCDF					0.863		1.240	458	341								
123678-HxCDF					0.853		1.240	458	341								
123789-HxCDF					0.780		1.240	458	341								
1234678-HpCDF					1.001		1.050	355	572								
1234789-HpCDF					0.994		1.050	355	572								
OCDF	45.320	1.005	3.345e2	2.305e2	1.158	1.451	0.890	393	657	6.21e3	4.28e3	15.8	6.5	YES	bb	bb	0.152
2378-TCDD					1.238		0.770	1197	1006								
12378-PeCDD					0.988		1.550	791	349								
123478-HxCDD					0.842		1.240	624	577								
123678-HxCDD					0.907		1.240	624	577								
123789-HxCDD					0.784		1.240	624	577								
1234678-HpCDD	40.326	1.000	1.930e2	1.519e2	1.044	1.271	1.050	868	479	4.62e3	3.13e3	5.3	6.5	YES	bb	bb	0.066
OCDD	45.091	1.000	1.663e3	1.821e3	0.963	0.913	0.890	510	462	1.94e4	2.27e4	38.1	49.2	NO	MM	MM	1.125
13C-2378-TCDF	25.833	1.007	7.380e5	9.634e5	2.203	0.766	0.770	3432	2089	1.08e7	1.40e7	3154.5	6678.3	NO	bb	bb	85.317
13C-12378-PeCDF	29.997	1.169	7.696e5	4.882e5	1.741	1.577	1.550	5143	5507	1.04e7	6.78e6	2014.7	1231.1	NO	bd	bd	79.800
13C-23478-PeCDF	31.332	1.221	7.024e5	4.607e5	1.669	1.525	1.550	5143	5507	1.02e7	6.66e6	1979.8	1209.1	NO	bb	bb	76.954
13C-123478-HxCDF	34.950	0.956	2.554e5	5.193e5	1.022	0.492	0.510	3412	3895	3.88e6	7.84e6	1138.0	2014.0	NO	bd	bd	94.094
13C-123678-HxCDF	35.083	0.960	3.224e5	6.279e5	1.200	0.513	0.510	3412	3895	4.23e6	8.45e6	1238.3	2169.1	NO	db	db	98.301
13C-234678-HxCDF	35.951	0.983	2.617e5	5.373e5	1.071	0.487	0.510	3412	3895	3.72e6	7.54e6	1091.7	1937.2	NO	bb	bb	92.603
13C-123789-HxCDF	36.975	1.011	2.284e5	4.503e5	0.919	0.507	0.510	3412	3895	3.09e6	6.16e6	906.8	1581.6	NO	bd	bb	91.728
13C-1234678-HpCDF	38.812	1.061	2.116e5	4.612e5	0.909	0.459	0.440	3110	4439	2.99e6	7.03e6	960.7	1584.5	NO	bd	bb	91.932
13C-1234789-HpCDF	41.060	1.123	1.592e5	3.741e5	0.724	0.426	0.440	3110	4439	2.00e6	4.90e6	644.5	1104.6	NO	bb	bb	91.514
13C-1234-TCDD	25.667	0.000	4.015e5	5.037e5	1.000	0.797	0.770	2440	1835	6.24e6	7.75e6	2556.3	4223.0	NO	bb	bb	100.000
13C-2378-TCDD	26.483	1.032	3.979e5	4.930e5	1.181	0.807	0.770	2440	1835	5.65e6	6.95e6	2314.5	3785.5	NO	bb	bb	83.298
13C-12378-PeCDD	31.588	1.231	4.306e5	2.826e5	0.978	1.524	1.550	1964	1089	6.34e6	3.88e6	3227.8	3563.1	NO	bb	bd	80.569
13C-123478-HxCDD	36.063	0.986	3.891e5	2.922e5	0.965	1.332	1.240	2373	2485	5.91e6	4.72e6	2489.9	1898.3	NO	bd	bd	87.643
13C-123678-HxCDD	36.185	0.990	4.293e5	3.949e5	1.168	1.087	1.240	2373	2485	6.06e6	4.93e6	2553.3	1983.0	NO	db	db	87.605
13C-1234678-HpCDD	40.314	1.103	2.687e5	2.285e5	0.645	1.176	1.050	2816	2602	3.39e6	3.09e6	1204.1	1187.4	NO	bd	bb	95.655
13C-OCDD	45.073	1.233	3.088e5	3.342e5	0.678	0.924	0.890	2210	4293	3.34e6	3.63e6	1509.3	844.9	NO	bb	bb	117.686
13C-123789-HxCDD	36.563	0.000	4.509e5	3.545e5	1.000	1.272	1.240	2373	2485	6.19e6	4.82e6	2609.7	1940.2	NO	bb	bb	100.000
37CL-2378-TCDD	26.497	1.032	4.469e5		1.264			2095		6.51e6		3108.3			bb		39.039

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:09:55 Pacific Standard Time

ID: 20J0389-09, Name: 20112316, Date: 23-Nov-2020, Time: 22:10:16, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	725	1820								
1289-TCDF					0.688		0.770	725	1820								
13468-PECDF					1.181		1.550	543	1287								
12389-PECDF					0.766		1.550	705	1876								
123468-HXCDF					1.003		1.240	458	341								
1368-TCDD					1.179		0.770	1197	1006								
1289-TCDD					1.042		0.770	1197	1006								
12479-PECDD					1.810		1.550	791	349								
12389-PECDD					1.165		1.550	791	349								
124679-HXCDD					1.056		1.240	624	577								
1234679-HPCDD	39.290	0.975	1.751e2	7.590e1	1.285	2.306	1.050	868	479	4.29e3	2.33e3	4.9	4.9	YES	db	bb	0.039
Total-tetrafurans			0.000e0		0.754			725		0.00e0							
Total-penta1			0.000e0					543		0.00e0							
Total-pentafurans			0.000e0		0.809			705		0.00e0							
Total-hexafurans			0.000e0		0.876			458		0.00e0							
Total-heptafurans			0.000e0		0.997			355		0.00e0							
Total-Furans			0.000e0		0.893			725		0.00e0							
Total-tetradioxins			0.000e0		1.153			1197		0.00e0							
Total-pentadioxins			0.000e0		1.321			791		0.00e0							
Total-hexadioxins			0.000e0		0.897			624		0.00e0							
Total-heptadioxins			0.000e0		1.165			868		0.00e0							
Total-Dioxins			1.663e3		1.100			1197		1.94e4							1.125
Total-TEQ			1.663e3					1197		1.94e4							1.125
FUNCTION1 PFK			2.244e6					512667		3.86e7							
FUNCTION2 PFK			6.679e5					422512		1.50e7							0.000
FUNCTION3 PFK			1.276e6					388169		2.58e7							0.000
FUNCTION4 PFK			1.269e5					295199		2.13e6							
FUNCTION5 PFK			1.073e5					248959		3.31e6							
FUNCTION1 HXCD...			7.764e1					296		2.41e3							0.000
FUNCTION1 HPCD...			2.014e3					1152		4.05e4							0.000
FUNCTION2 HPCD...			1.052e3					1472		2.40e4							0.000
FUNCTION3 OCDPE			0.000e0					246		0.00e0							
FUNCTION4 NCDPE			0.000e0					366		0.00e0							
FUNCTION5 DCDPE			0.000e0					248		0.00e0							

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	OCDD	45.09	1.663e3	1.821e3	0.963	0.91	0.89	38.1	YES	NO	MM	MM	1.125

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.87	6.178e4					2.0	NO		bd		
2	FUNCTION1 PFK	21.80	3.772e4					1.6	NO		bb		
3	FUNCTION1 PFK	21.68	3.140e4					1.6	NO		bb		
4	FUNCTION1 PFK	21.44	2.842e4					0.9	NO		db		
5	FUNCTION1 PFK	21.35	6.404e4					1.8	NO		bd		
6	FUNCTION1 PFK	21.21	5.334e4					2.1	NO		bb		
7	FUNCTION1 PFK	24.52	5.116e4					1.8	NO		bb		
8	FUNCTION1 PFK	24.40	4.537e4					1.3	NO		bb		
9	FUNCTION1 PFK	24.08	4.127e4					1.4	NO		bb		
10	FUNCTION1 PFK	23.94	4.077e4					1.3	NO		bb		
11	FUNCTION1 PFK	23.60	6.744e4					1.0	NO		bb		
12	FUNCTION1 PFK	23.39	4.651e4					2.0	NO		bb		
13	FUNCTION1 PFK	23.28	1.065e5					2.8	NO		db		
14	FUNCTION1 PFK	23.14	8.923e4					2.3	NO		dd		
15	FUNCTION1 PFK	23.04	6.112e4					1.8	NO		dd		
16	FUNCTION1 PFK	22.95	9.927e4					2.4	NO		dd		
17	FUNCTION1 PFK	22.81	6.445e4					1.8	NO		dd		
18	FUNCTION1 PFK	22.71	7.194e4					2.2	NO		dd		
19	FUNCTION1 PFK	22.57	4.269e4					1.1	NO		bd		
20	FUNCTION1 PFK	22.37	1.655e4					0.9	NO		bb		
21	FUNCTION1 PFK	22.25	2.215e4					1.4	NO		bb		
22	FUNCTION1 PFK	22.01	4.928e4					1.6	NO		db		
23	FUNCTION1 PFK	27.22	4.663e4					1.8	NO		bd		
24	FUNCTION1 PFK	27.10	5.555e4					2.1	NO		db		
25	FUNCTION1 PFK	27.01	2.065e4					1.2	NO		bd		
26	FUNCTION1 PFK	26.88	6.120e4					1.9	NO		bb		
27	FUNCTION1 PFK	26.66	4.973e4					1.7	NO		bb		
28	FUNCTION1 PFK	26.54	6.460e4					1.9	NO		db		
29	FUNCTION1 PFK	26.41	5.569e4					1.8	NO		bd		
30	FUNCTION1 PFK	26.32	3.696e4					1.4	NO		bb		
31	FUNCTION1 PFK	26.10	3.804e4					1.3	NO		db		
32	FUNCTION1 PFK	25.98	1.695e4					0.9	NO		bd		
33	FUNCTION1 PFK	25.88	3.428e4					1.4	NO		bb		
34	FUNCTION1 PFK	25.64	4.075e4					1.6	NO		db		
35	FUNCTION1 PFK	25.53	5.140e4					2.4	NO		dd		
36	FUNCTION1 PFK	25.42	5.269e4					1.8	NO		bd		
37	FUNCTION1 PFK	24.96	7.372e4					2.1	NO		bb		

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	24.75	5.312e4					1.7	NO		bb		
39	FUNCTION1 PFK	28.11	8.619e4					2.2	NO		bb		
40	FUNCTION1 PFK	28.01	5.166e4					1.9	NO		bb		
41	FUNCTION1 PFK	27.78	1.599e4					1.3	NO		bb		
42	FUNCTION1 PFK	27.72	3.300e3					0.4	NO		bb		
43	FUNCTION1 PFK	27.66	1.296e4					0.8	NO		bb		
44	FUNCTION1 PFK	27.56	4.802e4					1.6	NO		db		
45	FUNCTION1 PFK	27.45	4.796e4					1.6	NO		bd		
46	FUNCTION1 PFK	27.34	3.336e4					1.4	NO		db		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.26	1.861e4					1.1	NO		bb		0.000
2	FUNCTION2 PFK	29.13	1.652e3					0.0	NO		bb		0.000
3	FUNCTION2 PFK	28.82	3.943e4					1.6	NO		bb		0.000
4	FUNCTION2 PFK	28.58	2.454e4					1.2	NO		bb		0.000
5	FUNCTION2 PFK	28.49	1.459e4					1.2	NO		db		0.000
6	FUNCTION2 PFK	28.45	2.243e4					1.3	NO		dd		0.000
7	FUNCTION2 PFK	28.35	1.320e5					3.4	YES		bd		0.000
8	FUNCTION2 PFK	31.87	1.875e4					1.4	NO		db		0.000
9	FUNCTION2 PFK	31.82	6.452e3					0.6	NO		bd		0.000
10	FUNCTION2 PFK	31.03	4.618e4					1.4	NO		bb		0.000
11	FUNCTION2 PFK	30.91	8.209e3					0.8	NO		bb		0.000
12	FUNCTION2 PFK	30.78	7.174e3					0.8	NO		bb		0.000
13	FUNCTION2 PFK	30.61	7.053e3					0.8	NO		bb		0.000
14	FUNCTION2 PFK	30.51	1.000e4					0.9	NO		bb		0.000
15	FUNCTION2 PFK	30.38	3.135e4					1.4	NO		db		0.000
16	FUNCTION2 PFK	30.29	3.380e4					1.6	NO		bd		0.000
17	FUNCTION2 PFK	30.12	1.994e3					0.4	NO		bb		0.000
18	FUNCTION2 PFK	29.95	7.520e3					0.7	NO		bb		0.000
19	FUNCTION2 PFK	29.71	9.426e3					0.8	NO		bb		0.000
20	FUNCTION2 PFK	29.66	1.014e4					0.8	NO		db		0.000
21	FUNCTION2 PFK	29.58	2.599e4					1.3	NO		bd		0.000
22	FUNCTION2 PFK	29.43	2.338e3					0.5	NO		bb		0.000
23	FUNCTION2 PFK	29.36	5.139e4					2.0	NO		bb		0.000
24	FUNCTION2 PFK	32.87	1.650e4					1.4	NO		bb		0.000
25	FUNCTION2 PFK	32.80	1.500e3					0.3	NO		bb		0.000
26	FUNCTION2 PFK	32.63	3.725e4					1.7	NO		bb		0.000
27	FUNCTION2 PFK	32.51	3.397e3					0.7	NO		bb		0.000
28	FUNCTION2 PFK	32.29	9.789e3					0.7	NO		bb		0.000
29	FUNCTION2 PFK	32.24	7.845e3					0.8	NO		bb		0.000
30	FUNCTION2 PFK	32.09	3.392e4					1.6	NO		bb		0.000
31	FUNCTION2 PFK	31.98	1.213e4					1.3	NO		db		0.000
32	FUNCTION2 PFK	31.94	1.456e4					1.2	NO		bd		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.96	2.029e4					1.7	NO		dd		0.000
2	FUNCTION3 PFK	33.86	4.076e4					1.7	NO		dd		0.000
3	FUNCTION3 PFK	33.76	7.798e4					2.9	NO		bd		0.000
4	FUNCTION3 PFK	33.67	1.845e4					1.6	NO		bb		0.000
5	FUNCTION3 PFK	33.42	2.781e5					2.7	NO		bb		0.000
6	FUNCTION3 PFK	33.08	3.434e4					2.0	NO		bb		0.000
7	FUNCTION3 PFK	35.88	1.460e4					1.3	NO		bd		0.000
8	FUNCTION3 PFK	35.71	1.052e4					1.0	NO		bb		0.000
9	FUNCTION3 PFK	35.66	3.963e3					0.6	NO		bb		0.000
10	FUNCTION3 PFK	35.34	3.188e4					2.4	NO		db		0.000
11	FUNCTION3 PFK	35.32	2.177e4					1.8	NO		bd		0.000
12	FUNCTION3 PFK	35.24	6.781e4					3.4	YES		bb		0.000
13	FUNCTION3 PFK	35.07	1.790e3					0.4	NO		bb		0.000
14	FUNCTION3 PFK	35.02	3.124e4					2.3	NO		bb		0.000
15	FUNCTION3 PFK	34.79	1.446e4					1.3	NO		db		0.000
16	FUNCTION3 PFK	34.68	7.219e4					2.5	NO		dd		0.000
17	FUNCTION3 PFK	34.65	2.260e4					2.1	NO		dd		0.000
18	FUNCTION3 PFK	34.62	1.721e4					1.7	NO		dd		0.000
19	FUNCTION3 PFK	34.56	5.205e4					2.3	NO		bd		0.000
20	FUNCTION3 PFK	34.45	3.936e4					1.8	NO		bb		0.000
21	FUNCTION3 PFK	34.10	1.547e4					1.2	NO		bb		0.000
22	FUNCTION3 PFK	34.00	2.905e4					2.3	NO		db		0.000
23	FUNCTION3 PFK	37.75	3.585e4					2.1	NO		db		0.000
24	FUNCTION3 PFK	37.71	8.686e3					0.9	NO		bd		0.000
25	FUNCTION3 PFK	37.64	2.032e4					1.5	NO		bb		0.000
26	FUNCTION3 PFK	37.54	3.008e4					2.3	NO		db		0.000
27	FUNCTION3 PFK	37.50	2.832e4					2.0	NO		bd		0.000
28	FUNCTION3 PFK	37.42	1.615e4					1.4	NO		db		0.000
29	FUNCTION3 PFK	37.39	1.638e4					1.3	NO		bd		0.000
30	FUNCTION3 PFK	37.33	3.654e3					0.6	NO		bb		0.000
31	FUNCTION3 PFK	36.95	3.379e4					2.3	NO		bb		0.000
32	FUNCTION3 PFK	36.72	2.665e4					1.8	NO		db		0.000
33	FUNCTION3 PFK	36.66	4.882e3					0.6	NO		bd		0.000
34	FUNCTION3 PFK	36.61	2.277e4					1.6	NO		bb		0.000
35	FUNCTION3 PFK	36.51	2.316e4					1.1	NO		bb		0.000
36	FUNCTION3 PFK	36.27	2.186e4					1.9	NO		bb		0.000
37	FUNCTION3 PFK	36.04	2.878e4					1.9	NO		bb		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION3 PFK	35.94	3.854e4					2.1	NO		db		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.07	1.269e5					7.2	YES		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	45.96	4.275e3					0.9	NO		bb		
2	FUNCTION5 PFK	45.88	1.119e4					1.5	NO		bb		
3	FUNCTION5 PFK	45.75	1.800e4					2.0	NO		bb		
4	FUNCTION5 PFK	45.63	9.273e3					1.1	NO		bb		
5	FUNCTION5 PFK	44.80	7.840e2					0.3	NO		bb		
6	FUNCTION5 PFK	43.72	1.206e4					1.5	NO		bb		
7	FUNCTION5 PFK	43.64	1.237e4					1.5	NO		db		
8	FUNCTION5 PFK	43.60	1.545e4					1.9	NO		bd		
9	FUNCTION5 PFK	43.52	8.662e2					0.0	NO		bb		
10	FUNCTION5 PFK	43.40	2.301e4					2.6	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	26.63	7.764e1					8.2	YES		bb		0.000

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	28.01	1.119e2					1.6	NO		bb		0.000
2	FUNCTION1 HPCD...	27.28	1.561e2					2.6	NO		bb		0.000
3	FUNCTION1 HPCD...	26.51	7.631e1					2.3	NO		bb		0.000
4	FUNCTION1 HPCD...	26.04	8.402e1					2.3	NO		db		0.000
5	FUNCTION1 HPCD...	25.91	2.400e2					2.8	NO		bd		0.000
6	FUNCTION1 HPCD...	25.55	1.590e2					2.2	NO		db		0.000
7	FUNCTION1 HPCD...	25.44	2.042e2					2.8	NO		bd		0.000
8	FUNCTION1 HPCD...	24.23	1.924e2					2.7	NO		bb		0.000
9	FUNCTION1 HPCD...	23.40	1.462e2					3.2	YES		bb		0.000
10	FUNCTION1 HPCD...	23.20	9.910e1					1.7	NO		bb		0.000
11	FUNCTION1 HPCD...	22.78	1.356e2					3.6	YES		bb		0.000
12	FUNCTION1 HPCD...	22.31	1.237e2					1.5	NO		bb		0.000
13	FUNCTION1 HPCD...	21.60	8.051e1					1.7	NO		bb		0.000
14	FUNCTION1 HPCD...	21.19	2.044e2					4.4	YES		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	28.58	8.824e1					1.5	NO		bb		0.000
2	FUNCTION2 HPCD...	32.85	7.820e1					1.5	NO		bb		0.000
3	FUNCTION2 HPCD...	32.06	8.421e1					1.3	NO		db		0.000
4	FUNCTION2 HPCD...	31.98	1.345e2					1.8	NO		bd		0.000
5	FUNCTION2 HPCD...	31.66	8.958e1					1.4	NO		bb		0.000
6	FUNCTION2 HPCD...	31.25	7.292e1					1.4	NO		bb		0.000
7	FUNCTION2 HPCD...	30.82	1.927e2					2.0	NO		bb		0.000
8	FUNCTION2 HPCD...	29.13	9.814e1					1.5	NO		bb		0.000
9	FUNCTION2 HPCD...	28.87	1.290e2					2.2	NO		bb		0.000
10	FUNCTION2 HPCD...	28.67	8.439e1					1.6	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ID: 20J0389-09, Name: 20112316, Date: 23-Nov-2020, Time: 22:10:16, Conditions: AUTOSPEC01, User: pk

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

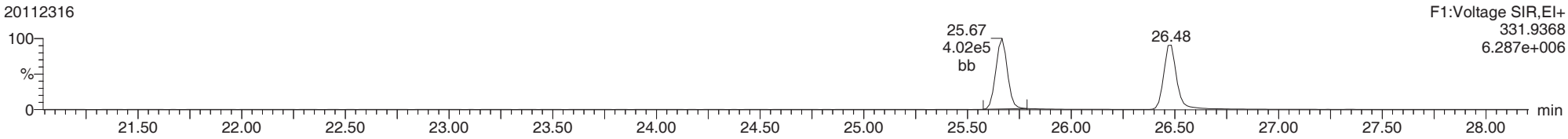
ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

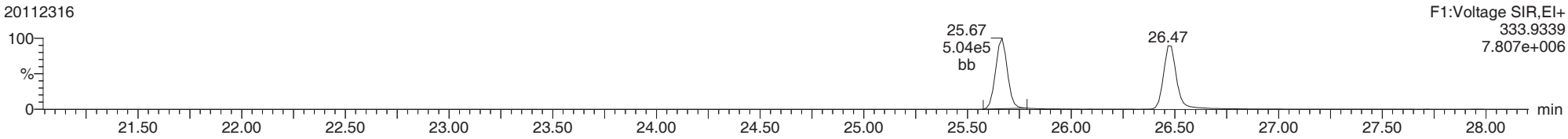
Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-09, Name: 20112316, Date: 23-Nov-2020, Time: 22:10:16, Conditions: AUTOSPEC01, User: pk

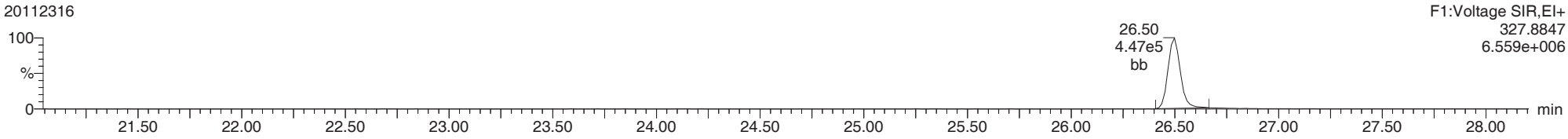
13C-1234-TCDD



13C-1234-TCDD



37CL-2378-TCDD



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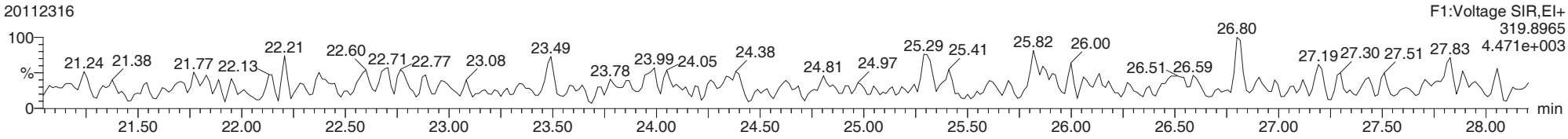
2378-TCDD



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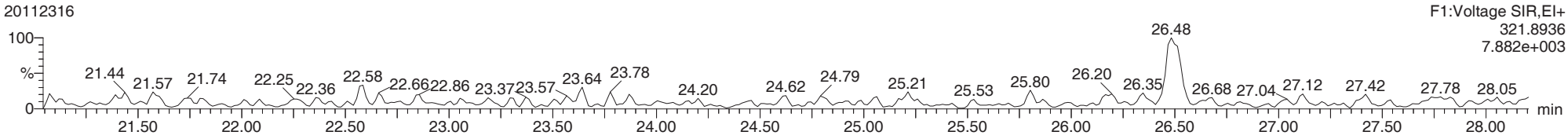

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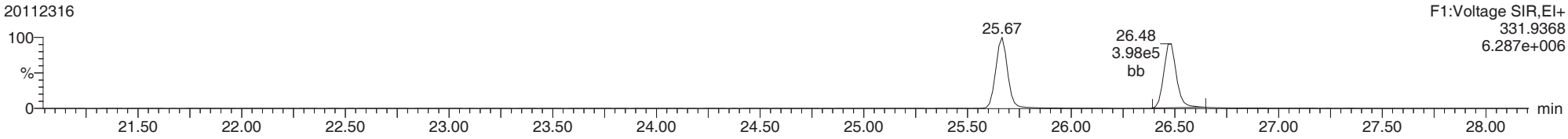

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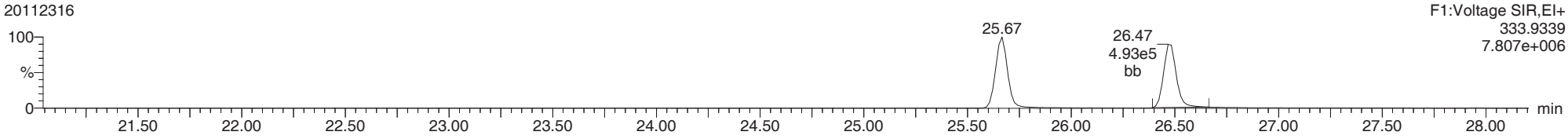

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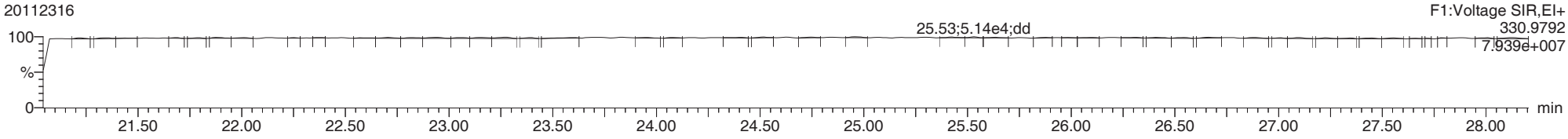

ID: 20J0389-09, Name: 20112316, Date: 23-Nov-2020, Time: 22:10:16, Conditions: AUTOSPEC01, User: pk

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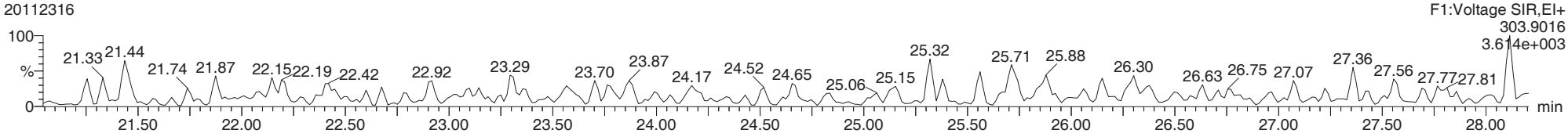

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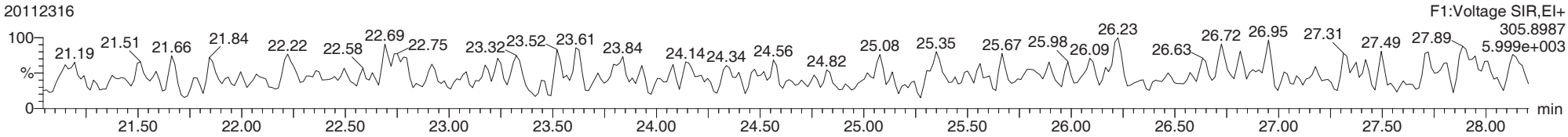

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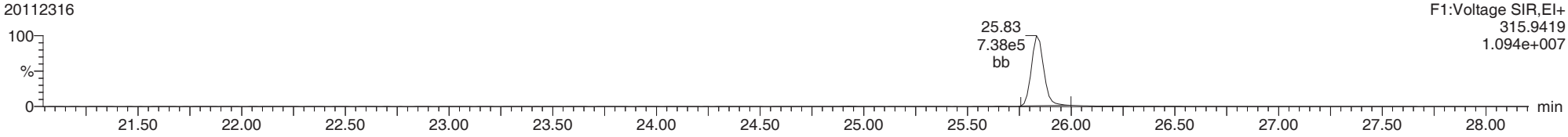

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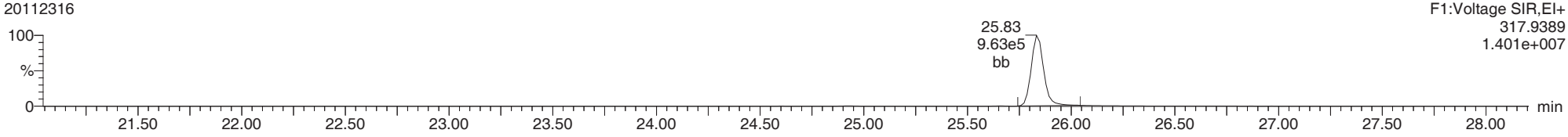

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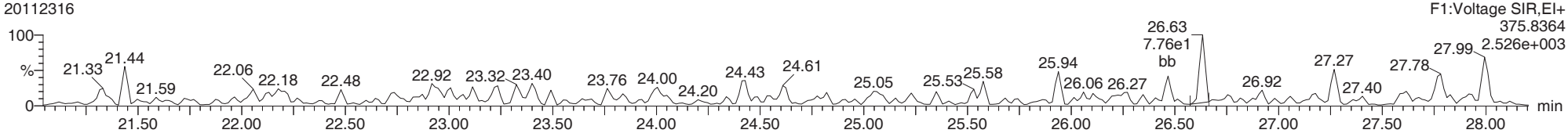

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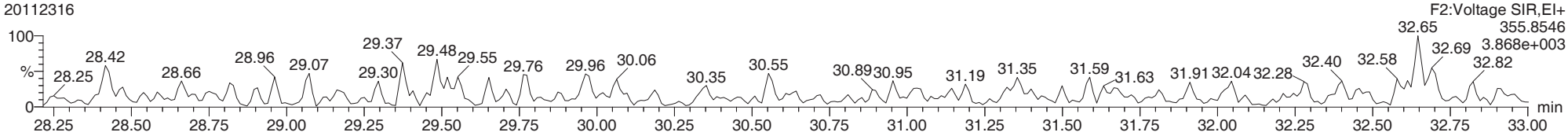
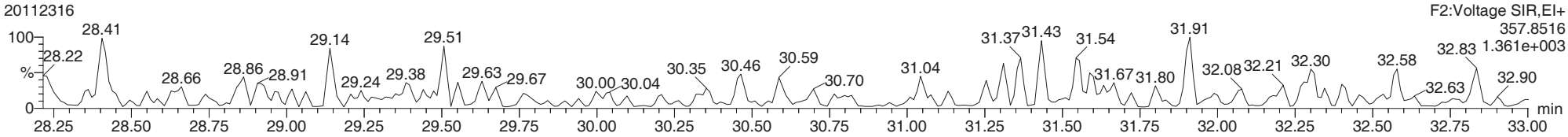
ID: 20J0389-09, Name: 20112316, Date: 23-Nov-2020, Time: 22:10:16, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



12378-PeCDD



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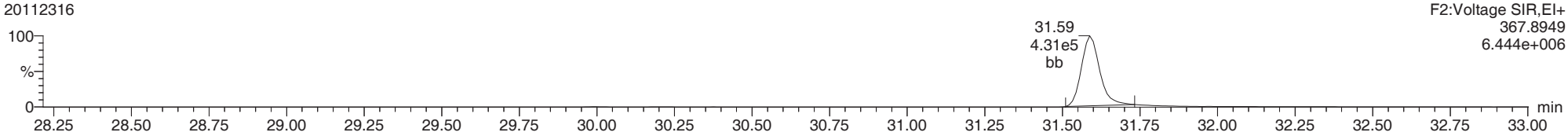

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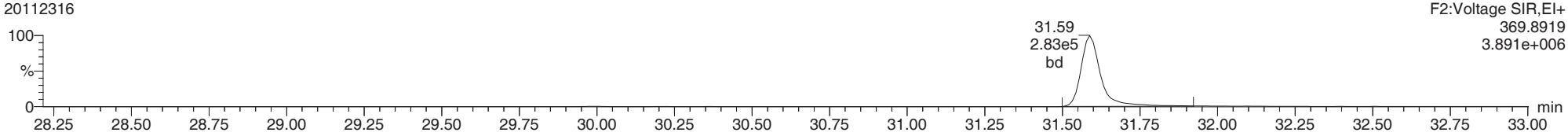
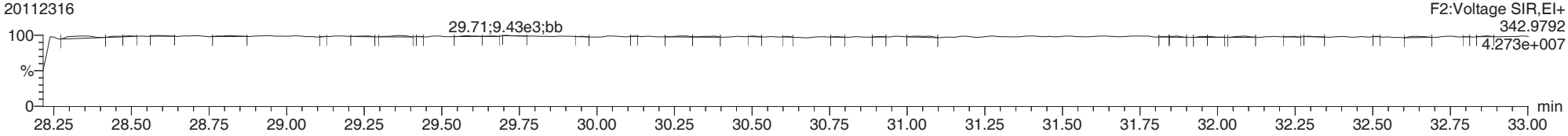


FUNCTION2 PFK



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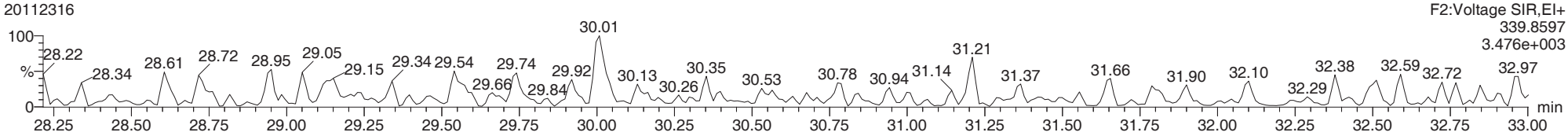
12378-PeCDF



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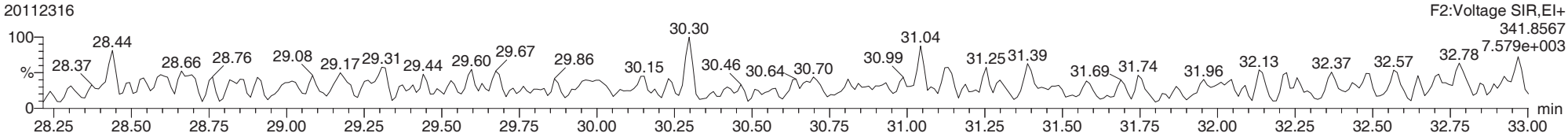

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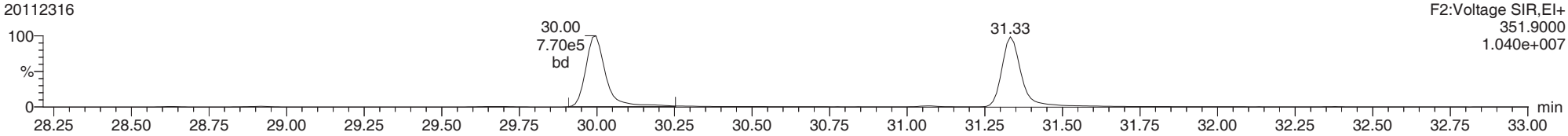

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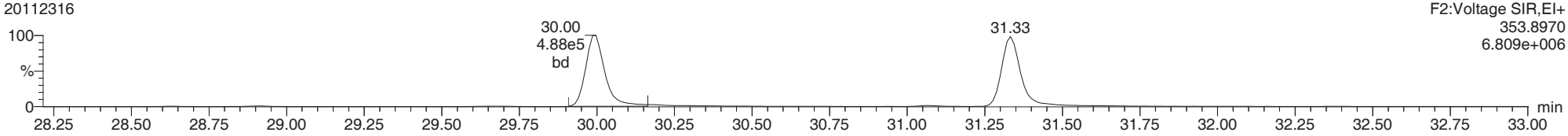
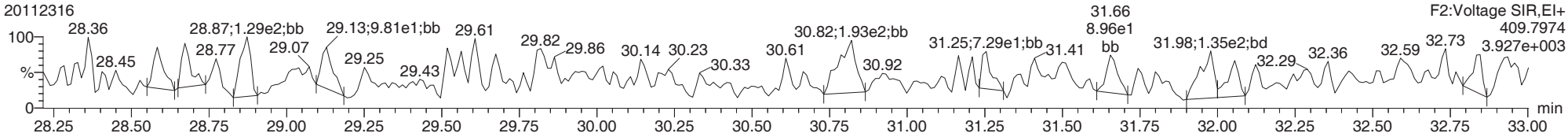


FUNCTION2 HPCDPE



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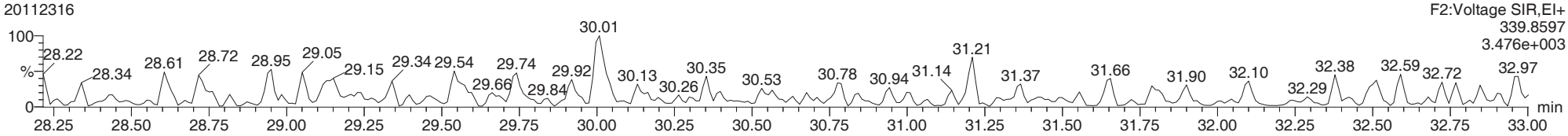
ID: 20J0389-09, Name: 20112316, Date: 23-Nov-2020, Time: 22:10:16, Conditions: AUTOSPEC01, User: pk

23478-PeCDF



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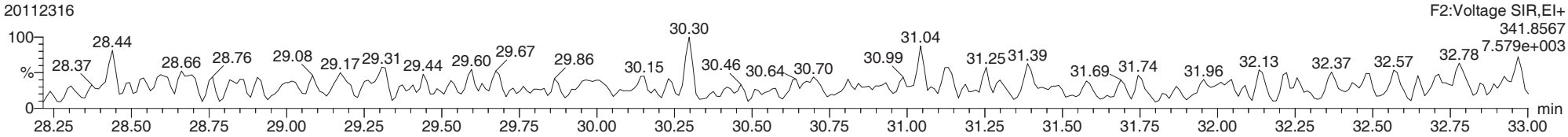

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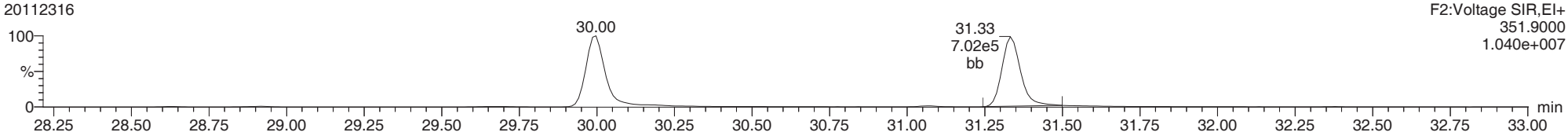

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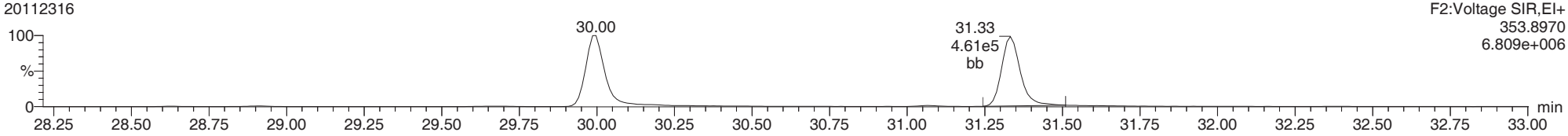

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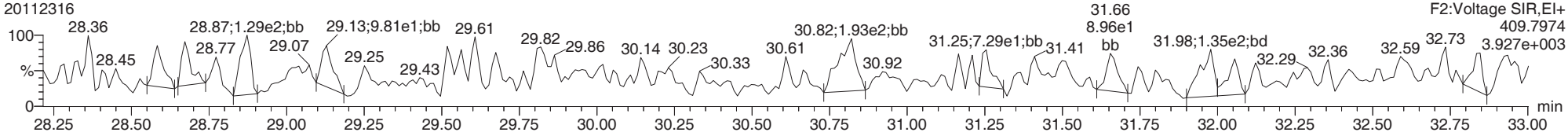

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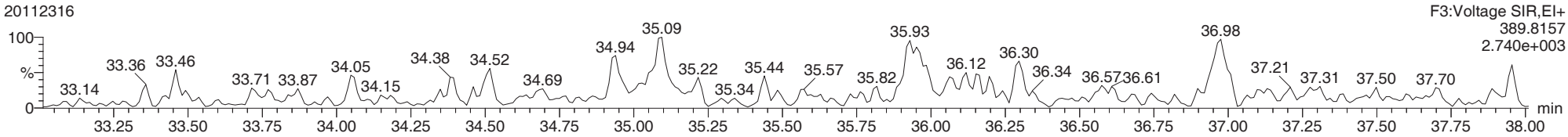
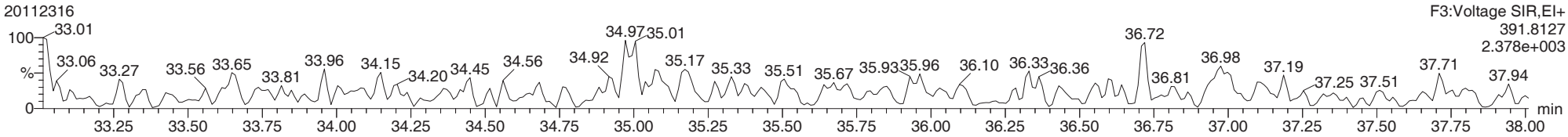
123478-HxCDD



123478-HxCDD



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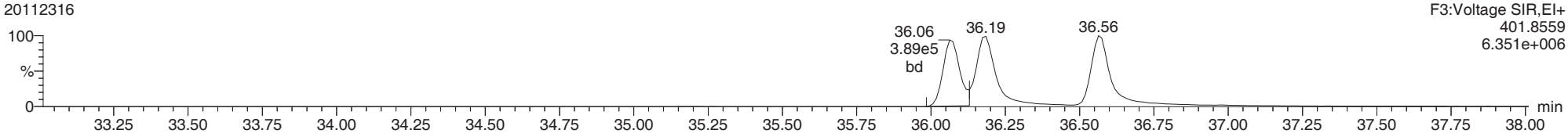

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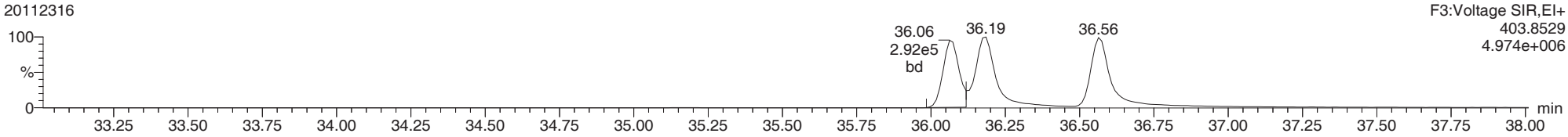
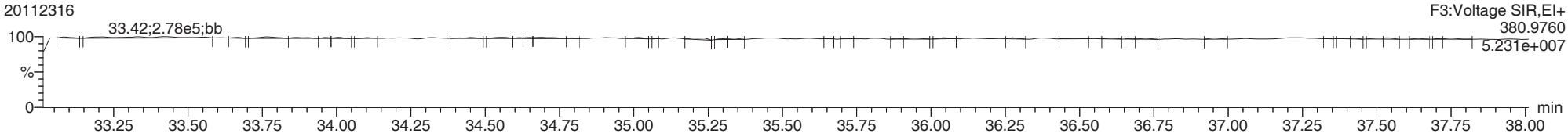


FUNCTION3 PFK



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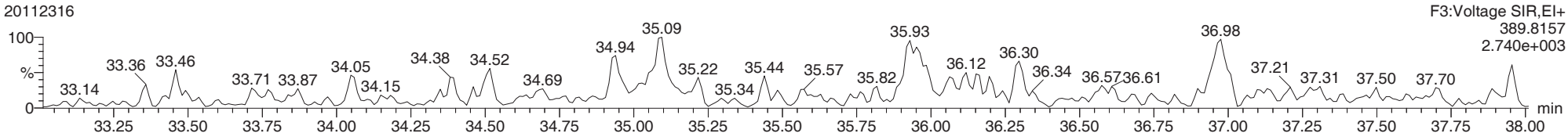
123678-HxCDD



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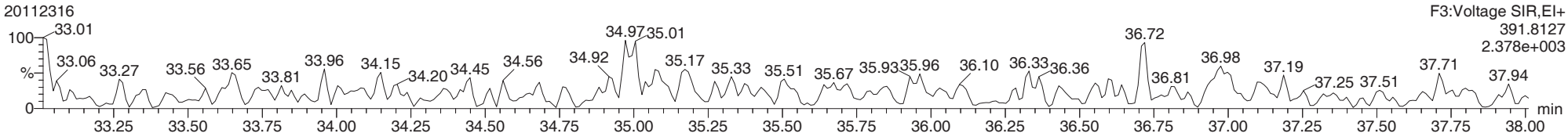

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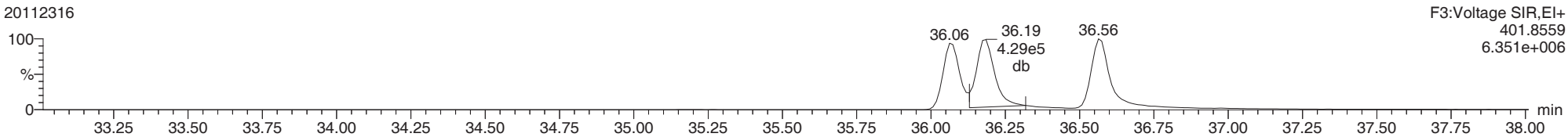

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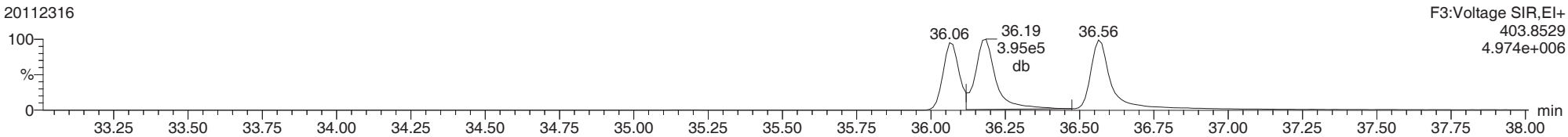

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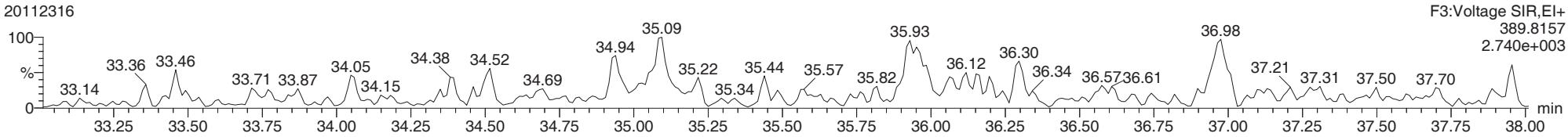

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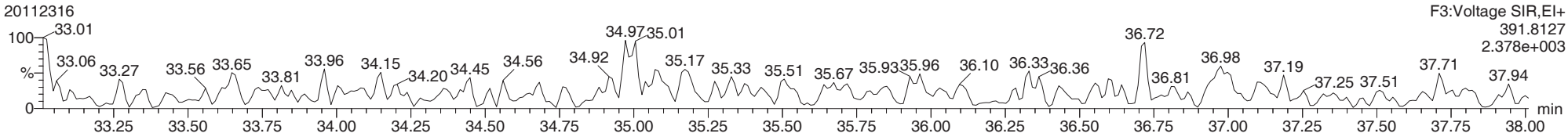

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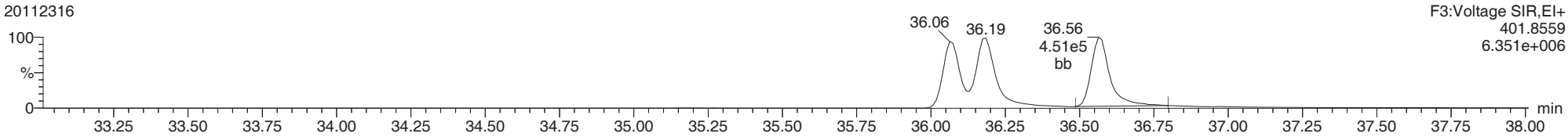

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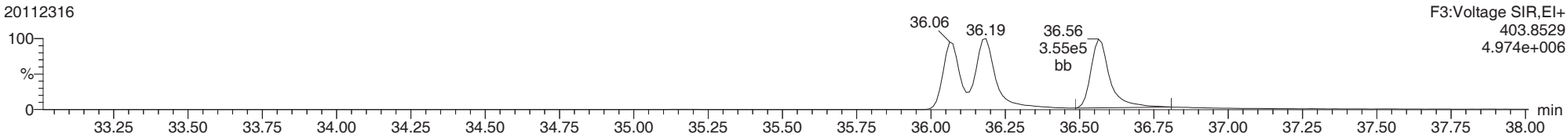

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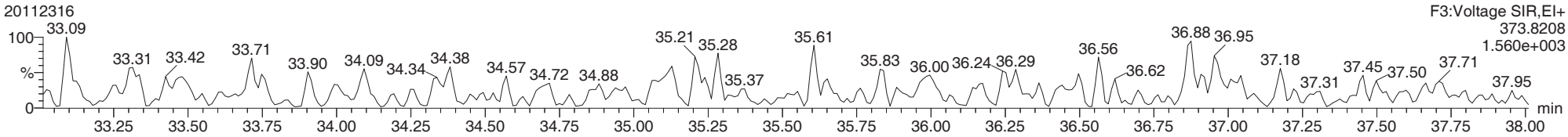

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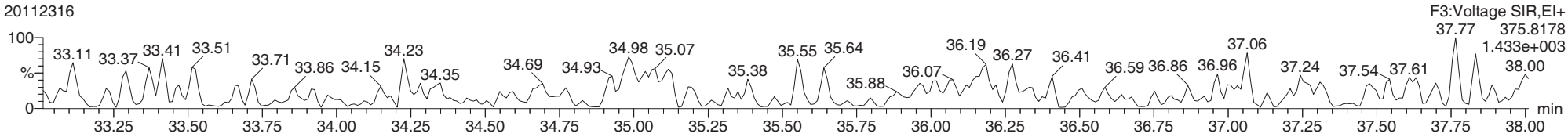

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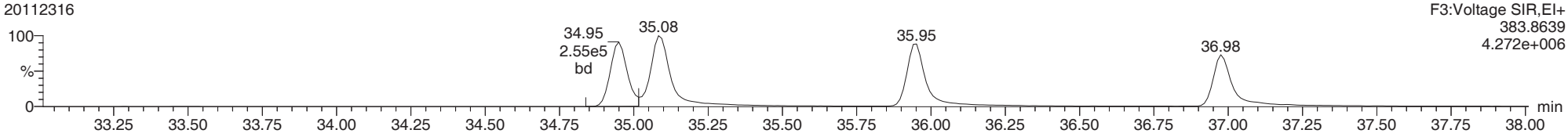

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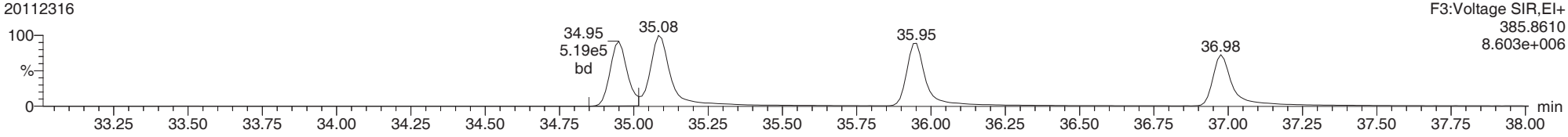
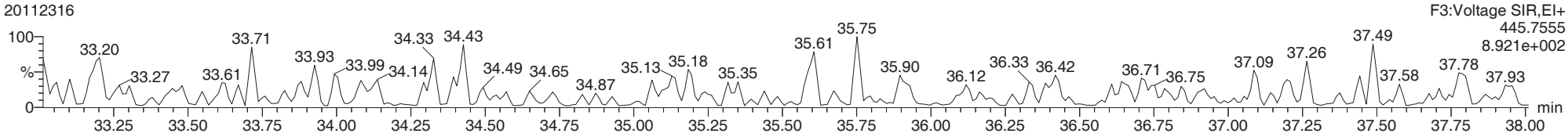


FUNCTION3 OCDPE



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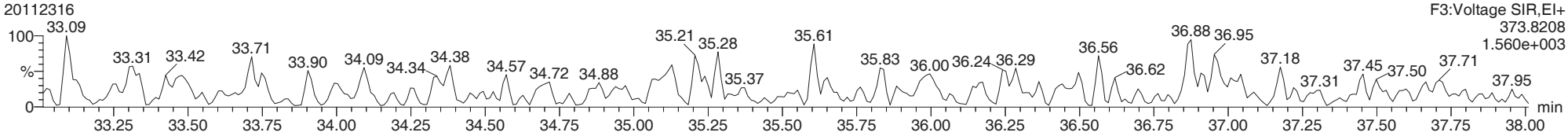
234678-HxCDF



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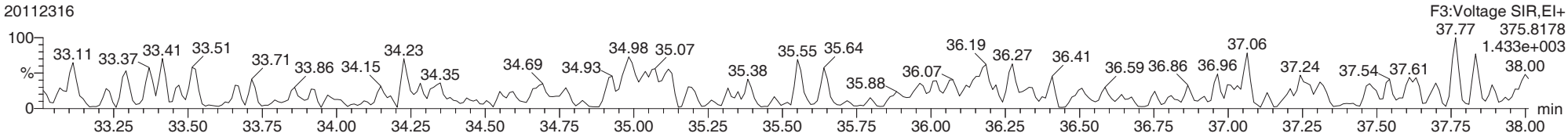

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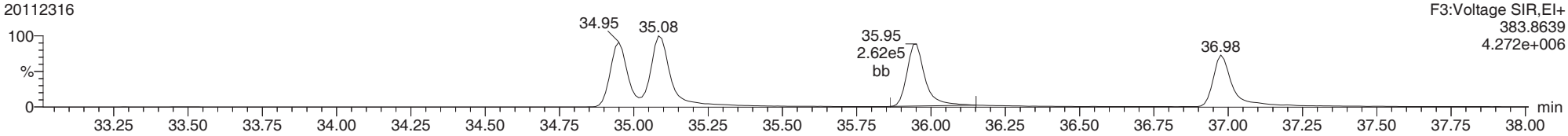

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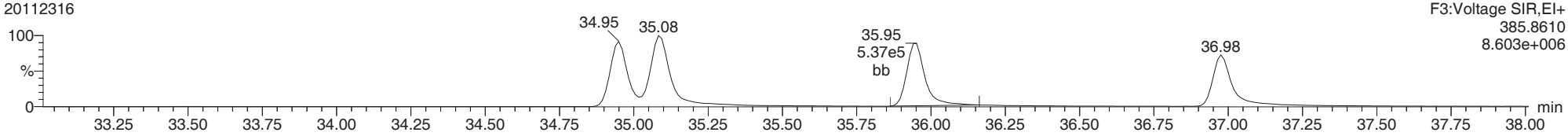
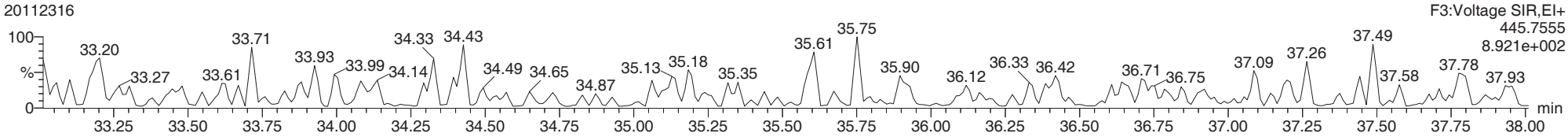


FUNCTION3 OCDPE



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ID: 20J0389-09, Name: 20112316, Date: 23-Nov-2020, Time: 22:10:16, Conditions: AUTOSPEC01, User: pk

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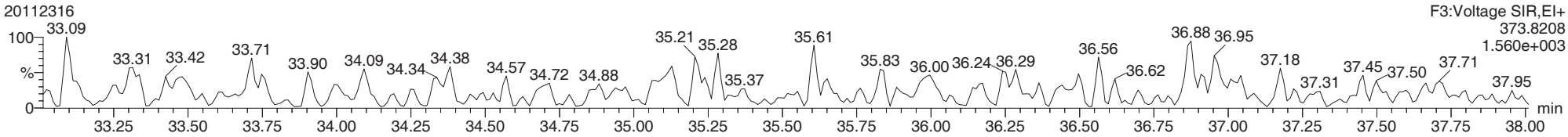

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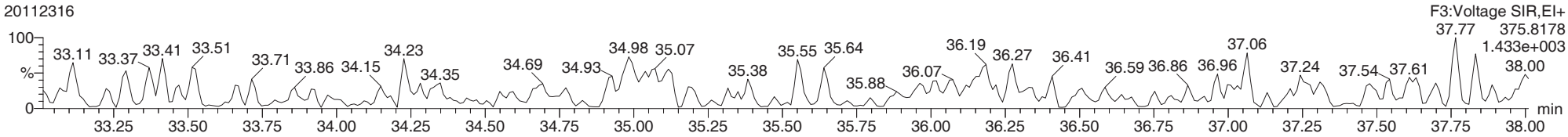

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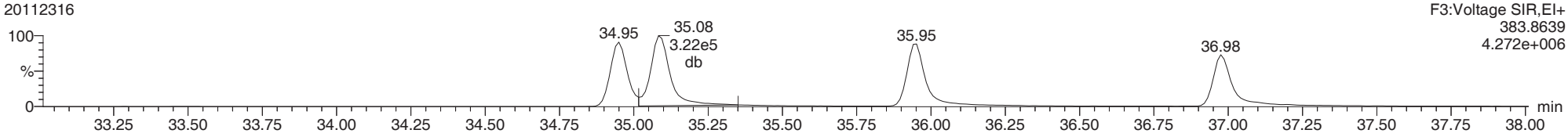

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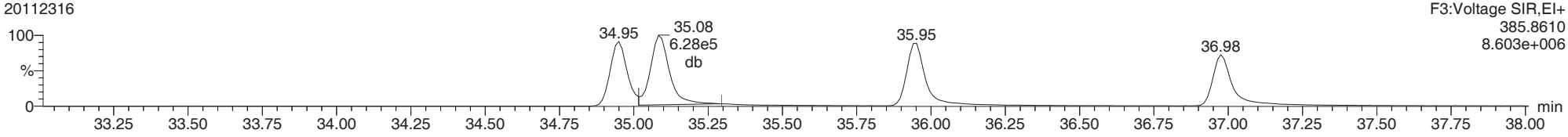

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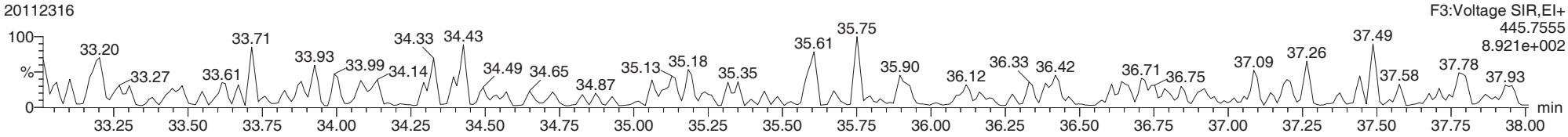

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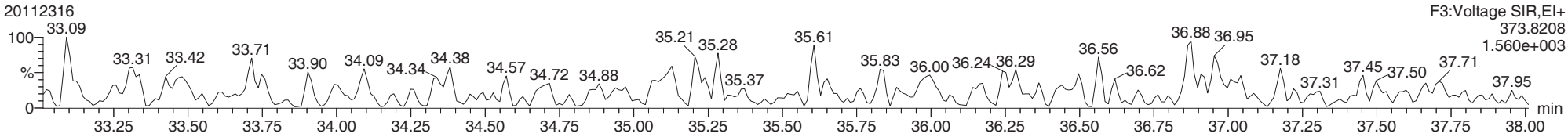

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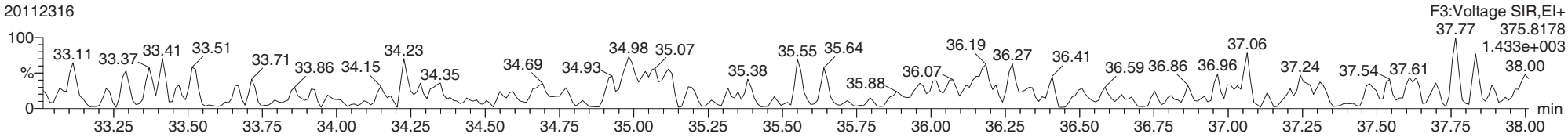

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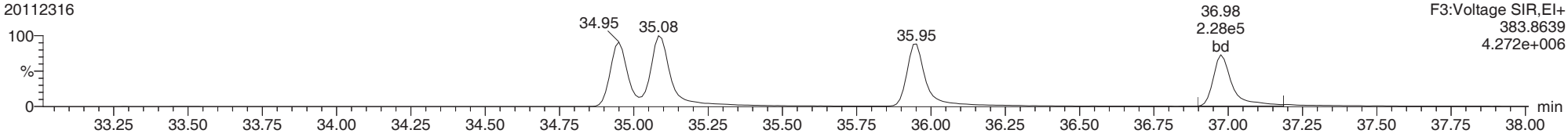

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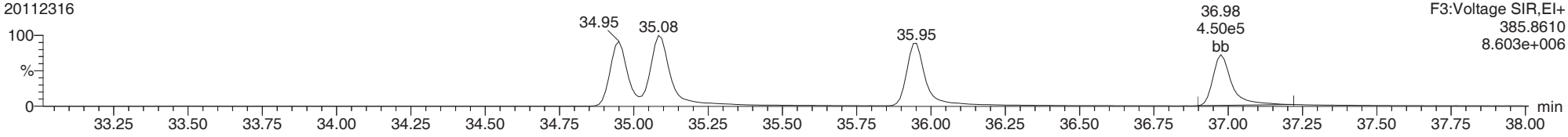

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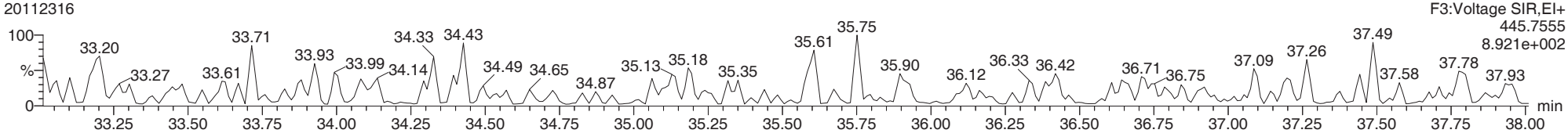

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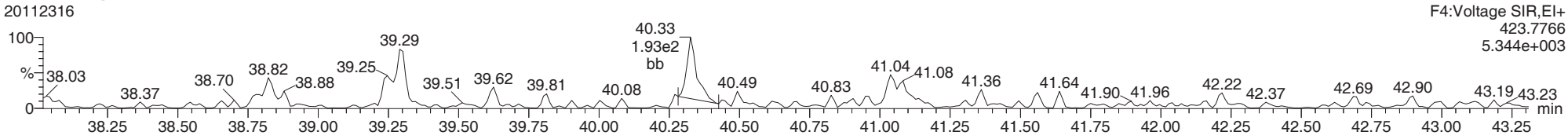

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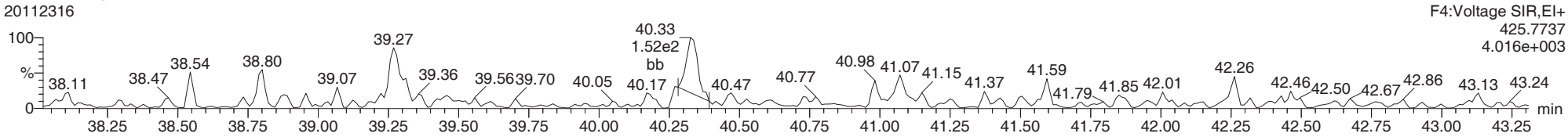

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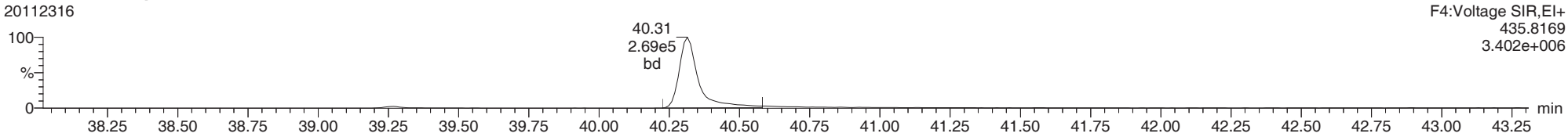

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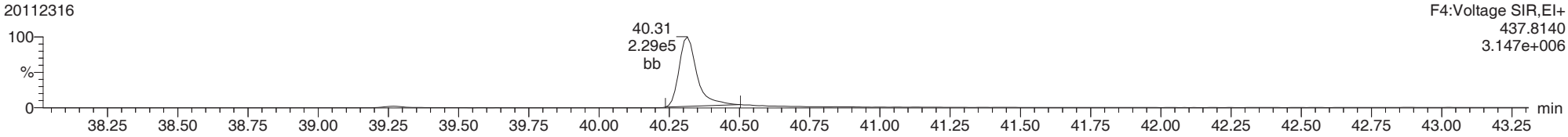

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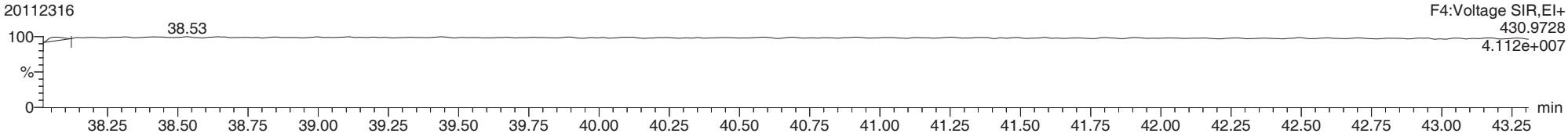

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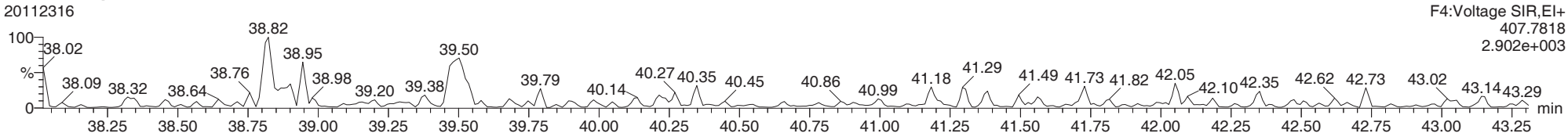

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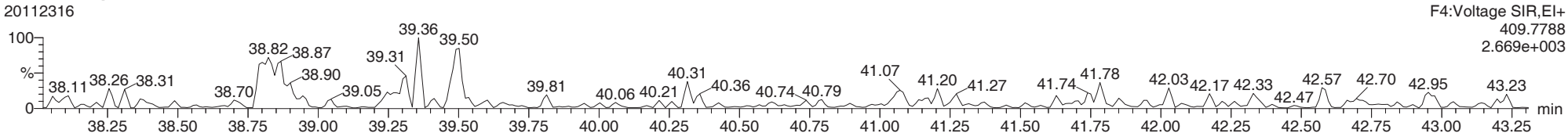

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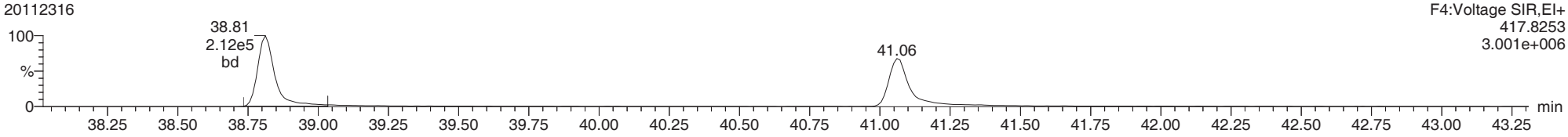

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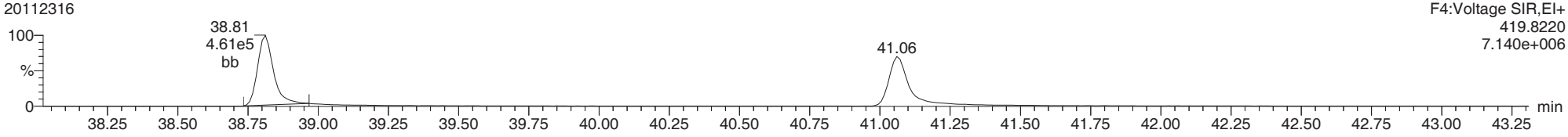

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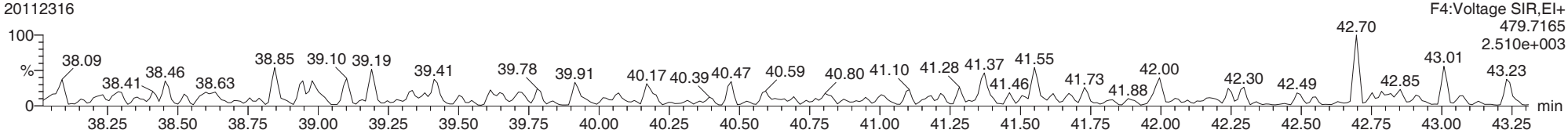

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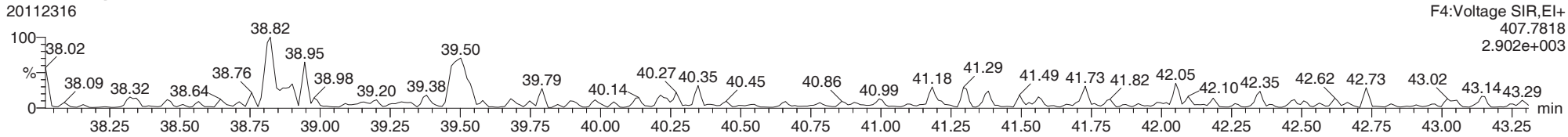

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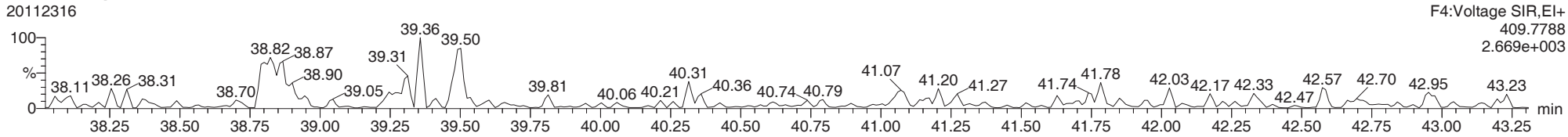

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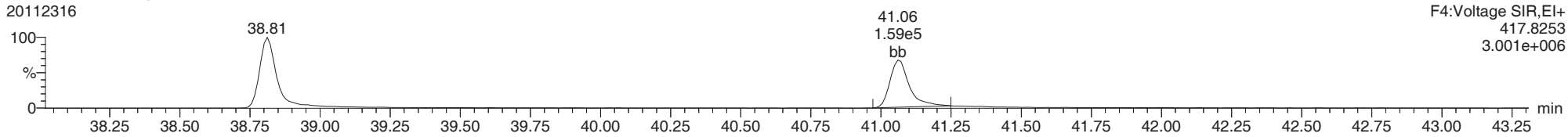

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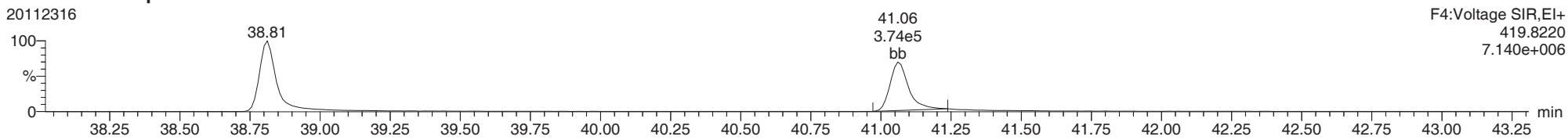

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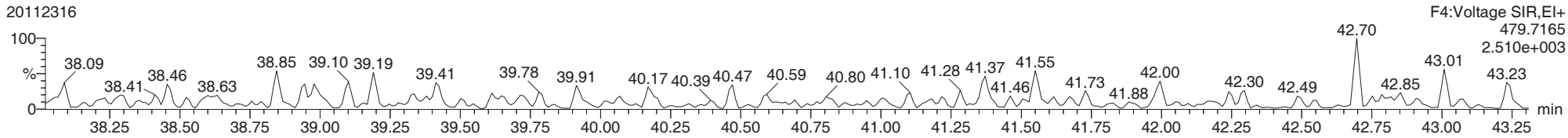

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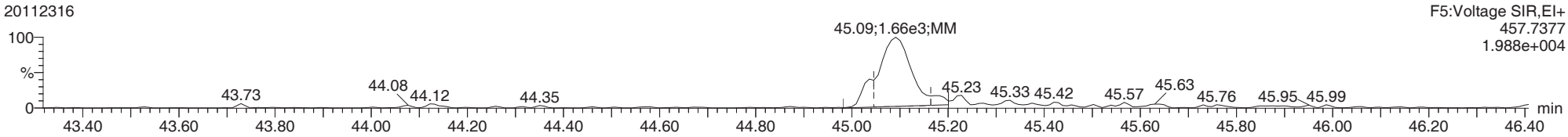

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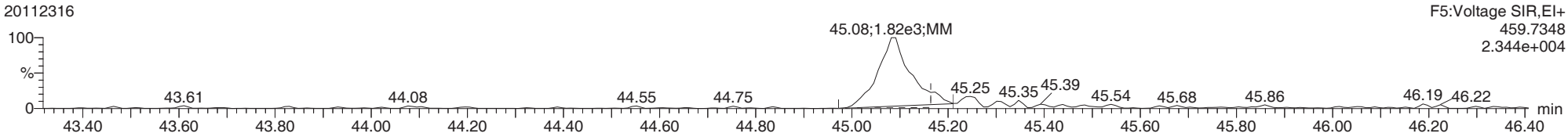

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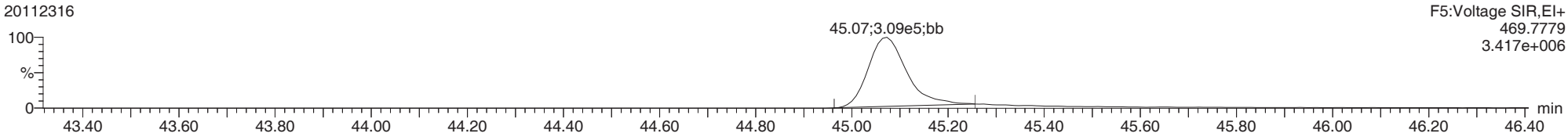

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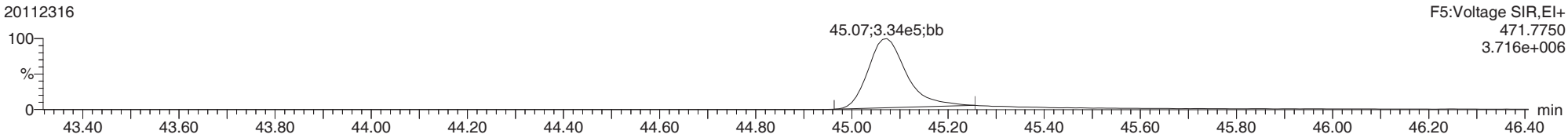

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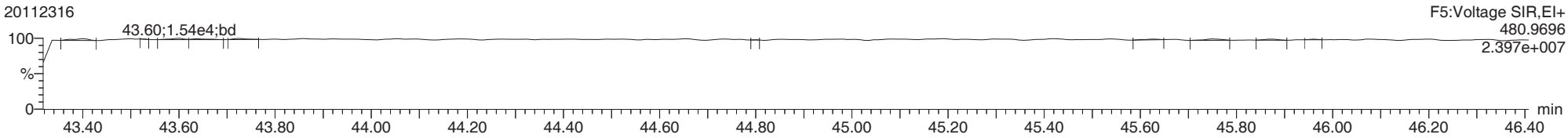

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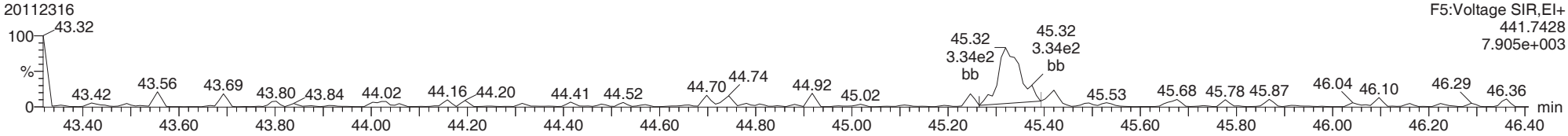
OCDF



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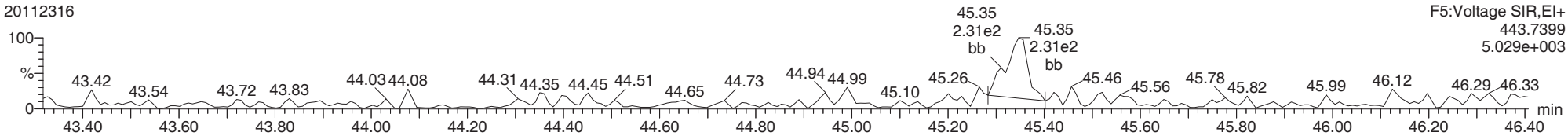

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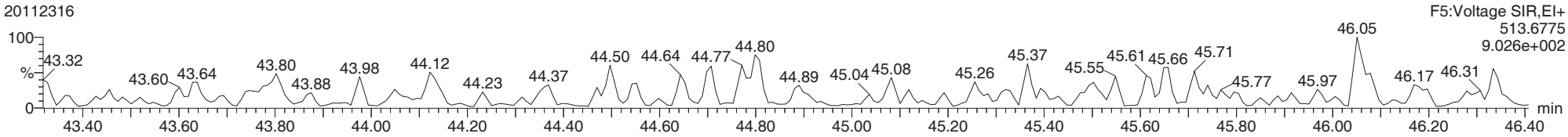

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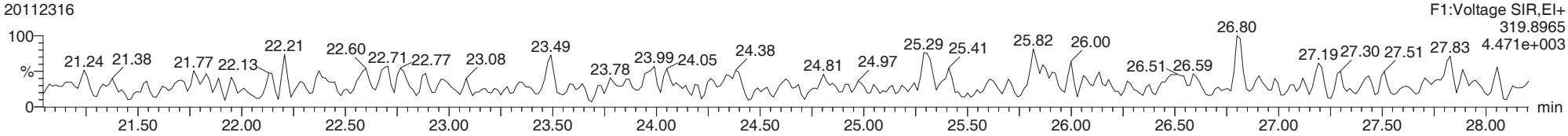
Total-tetradioxins



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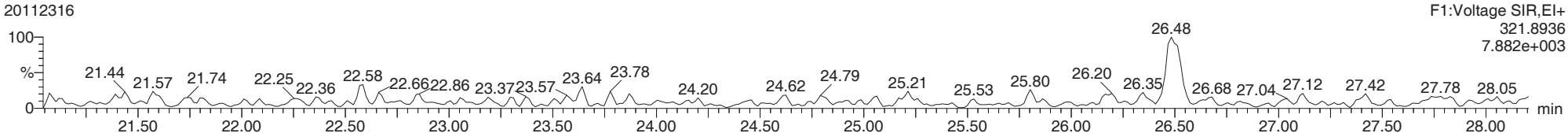
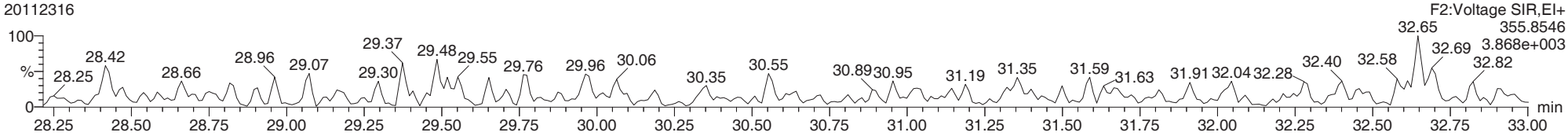


Total-pentadioxins



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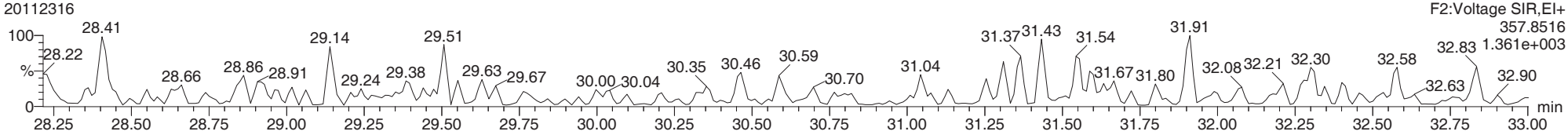

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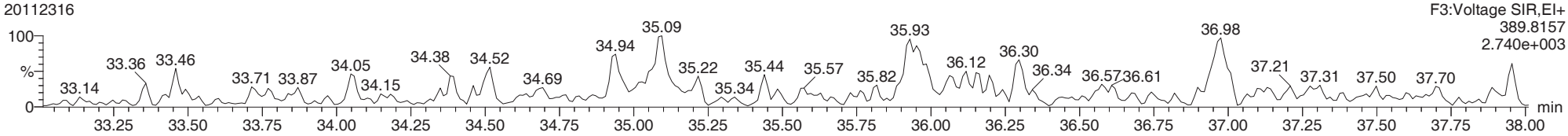
Total-hexadioxins



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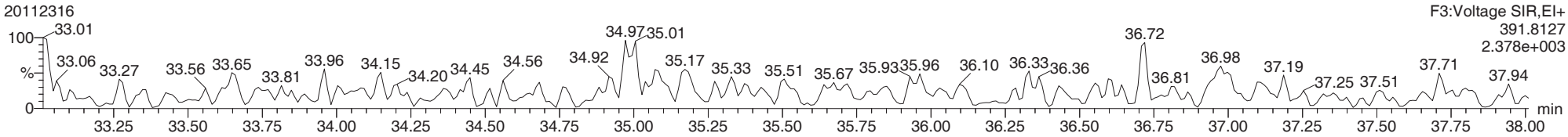

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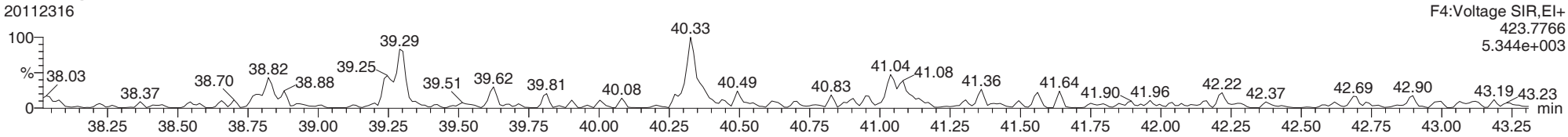

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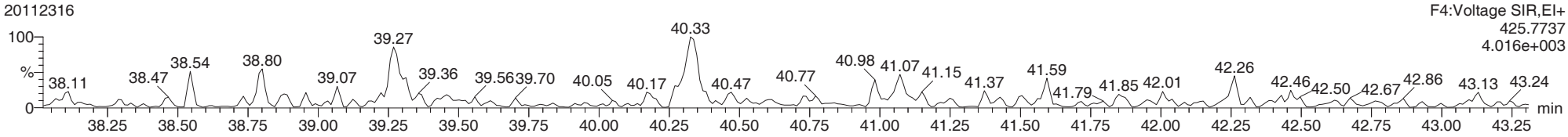

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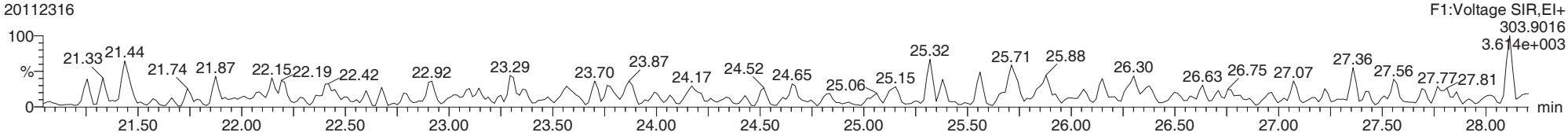
Total-tetrafurans



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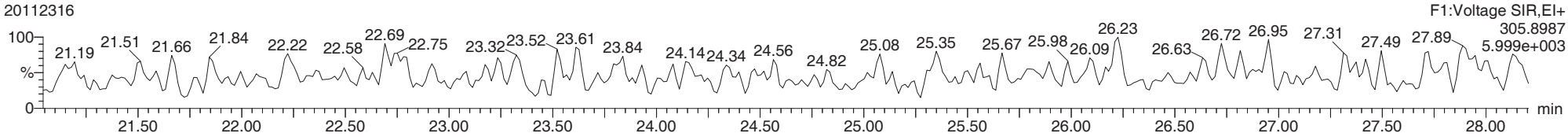

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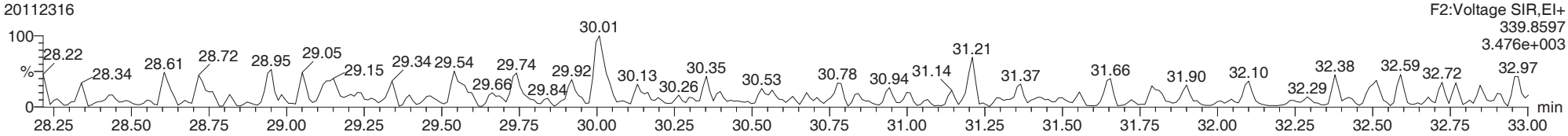

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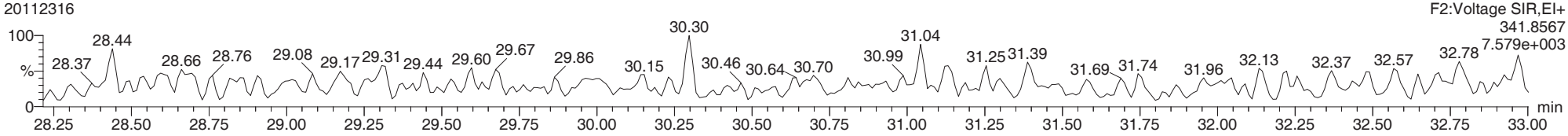

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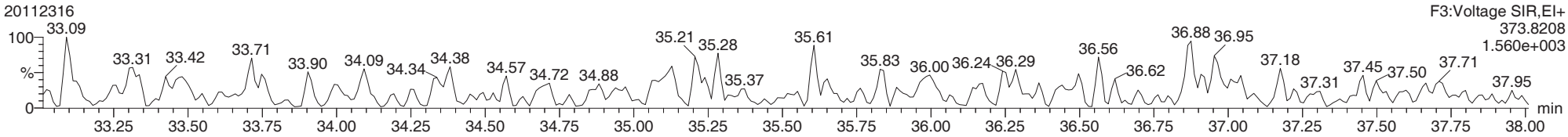
Total-hexafurans



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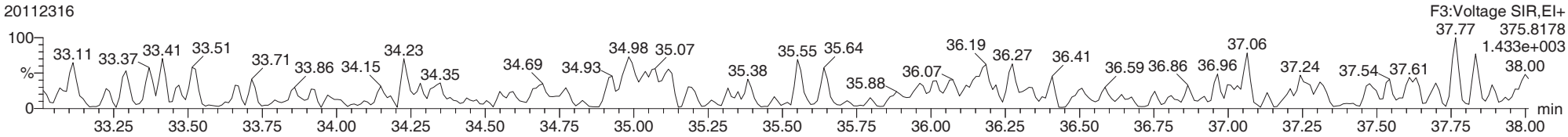

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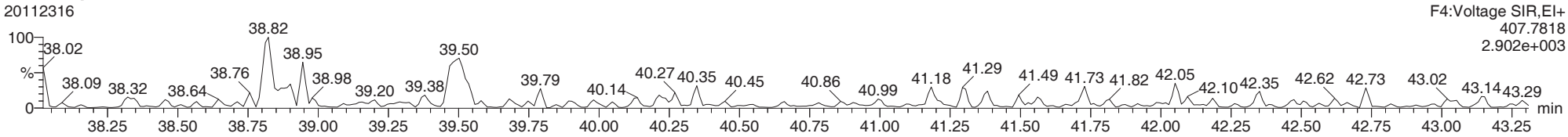

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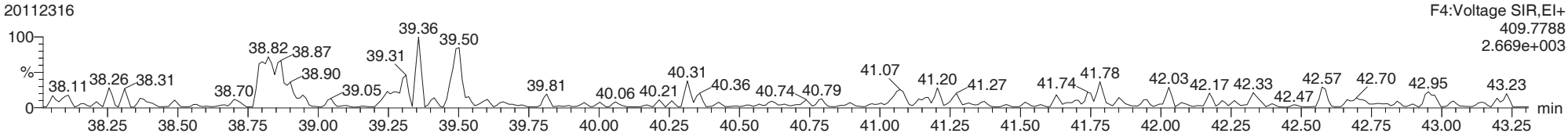

MW-C1/VB1-102820

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider				
Project:	Lora Lake Apartments				
Matrix:	Ground Water	Laboratory ID:	20J0389-10 A	File ID:	20112317
Sampled:	10/28/20 09:37	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 22:59
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1022 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	1.11	9.78	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	0.75	9.78	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.41	9.78	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	1.36	9.78	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	0.90	9.78	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.71	9.78	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.73	9.78	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.75	9.78	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	1.11	9.78	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	1.03	9.78	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	0.92	9.78	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	1.08	9.78	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1		0.893-1.208	0.66	9.78	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	0.94	9.78	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	2.023	0.893-1.208	1.50	9.78	1.76	pg/L	EMPC, J
39001-02-0	OCDF	1	1.063	0.757-1.024	2.21	19.6	5.84	pg/L	EMPC, J
3268-87-9	OCDD	1	0.857	0.757-1.024	2.77	48.9	49.1	pg/L	B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.78	ND	pg/L
41903-57-5	Total TCDD	1	0.000			9.78	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			9.78	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			9.78	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			9.78	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			9.78	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			9.78	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			9.78	2.12	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.034

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.46

MW-C1/VB1-102820

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider			Project:	Lora Lake Apartments
Matrix:	Ground Water	Laboratory ID:	20J0389-10	File ID:	20112317
Sampled:	10/28/20 09:37	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 22:59
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1022 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.790	0.655-0.886	1.42	89.5	24 - 169 %	
13C12-2,3,7,8-TCDD		0.798	0.655-0.886	1.45	86.4	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.503	1.318-1.783	2.65	78.1	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.562	1.318-1.783	2.76	75.6	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.650	1.318-1.783	1.63	74.8	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.493	0.434-0.587	3.88	98.7	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.558	0.434-0.587	3.30	98.0	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.484	0.434-0.587	3.70	91.1	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.505	0.434-0.587	4.32	90.1	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.288	1.054-1.426	4.19	87.2	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.272	1.054-1.426	3.46	79.7	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.409	0.374-0.506	4.78	84.4	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.397	0.374-0.506	6.01	95.2	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.102	0.893-1.208	4.34	94.5	23 - 140 %	
13C12-OCDD		0.845	0.757-1.024	5.41	49.8	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.91	103	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:10:01 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-10, Name: 20112317, Date: 23-Nov-2020, Time: 22:59:53, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF					0.729		0.770	1377	1422								
12378-PeCDF					0.779		1.550	749	1810								
23478-PeCDF					0.880		1.550	749	1810								
123478-HxCDF					0.880		1.240	525	412								
234678-HxCDF					0.863		1.240	525	412								
123678-HxCDF					0.853		1.240	525	412								
123789-HxCDF					0.780		1.240	525	412								
1234678-HpCDF					1.001		1.050	455	315								
1234789-HpCDF					0.994		1.050	455	315								
OCDF	45.347	1.006	3.469e2	3.263e2	1.158	1.063	0.890	403	579	4.70e3	4.84e3	11.7	8.4	YES	MM	MM	0.298
2378-TCDD					1.238		0.770	1078	598								
12378-PeCDD					0.988		1.550	684	446								
123478-HxCDD					0.842		1.240	466	656								
123678-HxCDD					0.907		1.240	466	656								
123789-HxCDD					0.784		1.240	466	656								
1234678-HpCDD	40.336	1.001	2.205e2	1.090e2	1.044	2.023	1.050	492	692	4.33e3	3.02e3	8.8	4.4	YES	MM	MM	0.090
OCDD	45.082	1.000	2.172e3	2.535e3	0.963	0.857	0.890	506	518	2.61e4	3.13e4	51.7	60.4	NO	bd	bd	2.507
13C-2378-TCDF	25.848	1.007	6.152e5	7.785e5	2.203	0.790	0.770	3778	2055	8.96e6	1.12e7	2371.3	5468.6	NO	bb	bb	89.474
13C-12378-PeCDF	29.997	1.169	5.769e5	3.839e5	1.741	1.503	1.550	5586	3025	8.23e6	5.30e6	1474.0	1752.1	NO	bd	bd	78.051
13C-23478-PeCDF	31.332	1.221	5.442e5	3.484e5	1.669	1.562	1.550	5586	3025	7.65e6	4.97e6	1369.5	1644.2	NO	bb	bb	75.612
13C-123478-HxCDF	34.949	0.956	1.923e5	3.902e5	1.022	0.493	0.510	2162	3246	2.91e6	5.89e6	1344.4	1813.7	NO	bd	bd	98.721
13C-123678-HxCDF	35.094	0.960	2.432e5	4.356e5	1.200	0.558	0.510	2162	3246	3.16e6	6.24e6	1461.2	1921.1	NO	db	db	97.994
13C-234678-HxCDF	35.951	0.983	1.837e5	3.796e5	1.071	0.484	0.510	2162	3246	2.78e6	5.71e6	1283.5	1760.5	NO	bb	bb	91.133
13C-123789-HxCDF	36.986	1.011	1.604e5	3.173e5	0.919	0.505	0.510	2162	3246	2.12e6	4.29e6	981.8	1320.1	NO	bd	bb	90.086
13C-1234678-HpCDF	38.812	1.061	1.284e5	3.140e5	0.909	0.409	0.440	1888	4041	1.98e6	4.80e6	1047.8	1187.8	NO	bb	bb	84.372
13C-1234789-HpCDF	41.071	1.123	1.129e5	2.845e5	0.724	0.397	0.440	1888	4041	1.37e6	3.35e6	726.5	829.7	NO	bd	bb	95.172
13C-1234-TCDD	25.667	0.000	3.191e5	3.879e5	1.000	0.823	0.770	1867	1321	4.94e6	6.03e6	2647.7	4564.2	NO	bb	bb	100.000
13C-2378-TCDD	26.482	1.032	3.205e5	4.016e5	1.181	0.798	0.770	1867	1321	4.73e6	5.91e6	2532.9	4470.9	NO	bb	bb	86.437
13C-12378-PeCDD	31.588	1.231	3.219e5	1.950e5	0.978	1.650	1.550	1680	1297	4.67e6	2.80e6	2779.3	2159.2	NO	bb	bb	74.760
13C-123478-HxCDD	36.073	0.986	2.733e5	2.122e5	0.965	1.288	1.240	3600	1918	4.29e6	3.44e6	1191.4	1791.6	NO	bd	bd	87.166
13C-123678-HxCDD	36.185	0.989	3.008e5	2.365e5	1.168	1.272	1.240	3600	1918	4.42e6	3.47e6	1228.4	1809.1	NO	db	db	79.710
13C-1234678-HpCDD	40.314	1.102	1.844e5	1.674e5	0.645	1.102	1.050	1803	2019	2.33e6	2.16e6	1293.7	1071.0	NO	bb	bd	94.464
13C-OCDD	45.072	1.232	1.786e5	2.114e5	0.678	0.845	0.890	3018	1993	2.06e6	2.27e6	682.9	1139.6	NO	bb	bd	99.608
13C-123789-HxCDD	36.574	0.000	3.193e5	2.579e5	1.000	1.238	1.240	3600	1918	4.43e6	3.55e6	1230.9	1848.9	NO	bb	bb	100.000
37CL-2378-TCDD	26.497	1.032	3.699e5		1.264			2138		5.47e6		2557.8			bb		41.376

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:10:01 Pacific Standard Time

ID: 20J0389-10, Name: 20112317, Date: 23-Nov-2020, Time: 22:59:53, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	1377	1422								
1289-TCDF					0.688		0.770	1377	1422								
13468-PECDF					1.181		1.550	461	1122								
12389-PECDF	32.323	1.077	2.436e2	1.271e2	0.766	1.917	1.550	749	1810	4.53e3	3.32e3	6.0	1.8	YES	bb	bb	0.050
123468-HXCDF					1.003		1.240	525	412								
1368-TCDD					1.179		0.770	1078	598								
1289-TCDD					1.042		0.770	1078	598								
12479-PECDD					1.810		1.550	684	446								
12389-PECDD					1.165		1.550	684	446								
124679-HXCDD					1.056		1.240	466	656								
1234679-HPCDD	39.279	0.974	2.340e2	2.556e2	1.285	0.916	1.050	492	692	3.84e3	3.25e3	7.8	4.7	NO	bb	bb	0.108
Total-tetrafurans			0.000e0		0.754			1377		0.00e0							
Total-penta1			0.000e0					461		0.00e0							
Total-pentafurans			0.000e0		0.809			749		0.00e0							
Total-hexafurans			0.000e0		0.876			525		0.00e0							
Total-heptafurans			0.000e0		0.997			455		0.00e0							
Total-Furans			0.000e0		0.893			1377		0.00e0							
Total-tetradioxins			0.000e0		1.153			1078		0.00e0							
Total-pentadioxins			0.000e0		1.321			684		0.00e0							
Total-hexadioxins			0.000e0		0.897			466		0.00e0							
Total-heptadioxins			2.340e2		1.165			492		3.84e3							0.108
Total-Dioxins			2.406e3		1.100			1078		3.00e4							2.615
Total-TEQ			2.406e3					1078		3.00e4							2.615
FUNCTION1 PFK			2.708e6					582641		4.57e7							
FUNCTION2 PFK			7.243e5					309449		1.71e7							0.000
FUNCTION3 PFK			1.078e6					341487		2.33e7							0.000
FUNCTION4 PFK			1.803e6					294782		3.29e7							
FUNCTION5 PFK			0.000e0					162743		0.00e0							
FUNCTION1 HXCD...			1.098e3					527		1.90e4							0.000
FUNCTION1 HPCD...			1.500e3					1293		2.84e4							0.000
FUNCTION2 HPCD...			8.949e2					1112		2.17e4							0.000
FUNCTION3 OCDPE			0.000e0					284		0.00e0							
FUNCTION4 NCDPE			0.000e0					403		0.00e0							
FUNCTION5 DCDPE			0.000e0					195		0.00e0							

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-10, Name: 20112317, Date: 23-Nov-2020, Time: 22:59:53, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ID: 20J0389-10, Name: 20112317, Date: 23-Nov-2020, Time: 22:59:53, Conditions: AUTOSPEC01, User: pk

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234679-HPCDD	39.28	2.340e2	2.556e2	1.285	0.92	1.05	7.8	YES	NO	bb	bb	0.108

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	OCDD	45.08	2.172e3	2.535e3	0.963	0.86	0.89	51.7	YES	NO	bd	bd	2.507
2	1234679-HPCDD	39.28	2.340e2	2.556e2	1.285	0.92	1.05	7.8	YES	NO	bb	bb	0.108

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:10:01 Pacific Standard Time

ID: 20J0389-10, Name: 20112317, Date: 23-Nov-2020, Time: 22:59:53, Conditions: AUTOSPEC01, User: pk

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	22.21	2.481e4					1.0	NO		bb		
2	FUNCTION1 PFK	22.10	6.733e4					1.7	NO		db		
3	FUNCTION1 PFK	21.98	7.983e4					1.8	NO		dd		
4	FUNCTION1 PFK	21.89	3.848e4					1.7	NO		dd		
5	FUNCTION1 PFK	21.84	6.219e4					2.2	NO		dd		
6	FUNCTION1 PFK	21.77	8.744e4					2.2	NO		dd		
7	FUNCTION1 PFK	21.65	1.152e5					2.5	NO		dd		
8	FUNCTION1 PFK	21.54	9.247e4					2.1	NO		dd		
9	FUNCTION1 PFK	21.44	1.386e5					2.8	NO		dd		
10	FUNCTION1 PFK	21.33	8.819e4					2.5	NO		bd		
11	FUNCTION1 PFK	21.19	4.954e4					1.8	NO		bb		
12	FUNCTION1 PFK	24.81	4.316e4					1.4	NO		db		
13	FUNCTION1 PFK	24.71	7.306e4					2.3	NO		bd		
14	FUNCTION1 PFK	24.49	5.576e4					1.9	NO		db		
15	FUNCTION1 PFK	24.37	3.283e4					1.1	NO		bd		
16	FUNCTION1 PFK	24.26	4.640e4					1.7	NO		bb		
17	FUNCTION1 PFK	24.14	3.540e4					1.2	NO		bb		
18	FUNCTION1 PFK	23.81	7.783e4					2.2	NO		db		
19	FUNCTION1 PFK	23.70	7.280e4					1.9	NO		dd		
20	FUNCTION1 PFK	23.58	7.673e4					2.0	NO		bd		
21	FUNCTION1 PFK	23.48	8.243e4					1.4	NO		bb		
22	FUNCTION1 PFK	23.13	9.482e4					2.1	NO		db		
23	FUNCTION1 PFK	23.01	7.404e4					2.0	NO		bd		
24	FUNCTION1 PFK	22.89	4.979e4					1.4	NO		bb		
25	FUNCTION1 PFK	22.78	5.751e4					1.8	NO		bb		
26	FUNCTION1 PFK	22.54	5.372e4					1.5	NO		bb		
27	FUNCTION1 PFK	22.42	2.634e4					0.8	NO		bb		
28	FUNCTION1 PFK	27.54	2.276e4					0.9	NO		bb		
29	FUNCTION1 PFK	27.31	4.492e4					1.7	NO		db		
30	FUNCTION1 PFK	27.21	4.038e4					1.3	NO		bd		
31	FUNCTION1 PFK	26.97	6.531e4					2.1	NO		bb		
32	FUNCTION1 PFK	26.86	7.145e4					2.4	NO		bb		
33	FUNCTION1 PFK	26.62	5.607e4					1.7	NO		db		
34	FUNCTION1 PFK	26.51	2.511e4					0.9	NO		dd		
35	FUNCTION1 PFK	26.39	8.332e4					2.2	NO		dd		
36	FUNCTION1 PFK	26.29	5.761e4					1.6	NO		dd		
37	FUNCTION1 PFK	26.18	4.824e4					1.6	NO		bd		

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ID: 20J0389-10, Name: 20112317, Date: 23-Nov-2020, Time: 22:59:53, Conditions: AUTOSPEC01, User: pk

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	25.83	4.169e4					1.6	NO		bb		
39	FUNCTION1 PFK	25.73	4.372e4					1.4	NO		bb		
40	FUNCTION1 PFK	25.61	3.543e4					1.3	NO		bb		
41	FUNCTION1 PFK	25.39	1.572e4					0.9	NO		bb		
42	FUNCTION1 PFK	25.17	4.081e4					1.2	NO		db		
43	FUNCTION1 PFK	25.03	4.552e4					1.3	NO		bd		
44	FUNCTION1 PFK	28.10	3.423e4					1.1	NO		bb		
45	FUNCTION1 PFK	27.99	5.782e4					1.6	NO		db		
46	FUNCTION1 PFK	27.89	3.810e4					1.4	NO		bd		
47	FUNCTION1 PFK	27.77	4.258e4					1.3	NO		bb		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.80	1.903e4					1.4	NO		bb		0.000
2	FUNCTION2 PFK	29.47	1.963e4					1.5	NO		bb		0.000
3	FUNCTION2 PFK	29.24	1.547e4					1.5	NO		bb		0.000
4	FUNCTION2 PFK	29.14	2.774e4					1.9	NO		bb		0.000
5	FUNCTION2 PFK	28.68	5.223e4					3.2	YES		db		0.000
6	FUNCTION2 PFK	28.59	1.782e4					2.1	NO		dd		0.000
7	FUNCTION2 PFK	28.55	4.085e4					3.1	YES		dd		0.000
8	FUNCTION2 PFK	28.52	1.790e4					2.1	NO		dd		0.000
9	FUNCTION2 PFK	28.46	7.360e4					3.4	YES		dd		0.000
10	FUNCTION2 PFK	28.34	1.411e4					1.6	NO		bd		0.000
11	FUNCTION2 PFK	28.28	5.333e3					0.9	NO		bb		0.000
12	FUNCTION2 PFK	32.20	3.545e4					1.7	NO		bb		0.000
13	FUNCTION2 PFK	31.94	1.995e4					1.5	NO		bb		0.000
14	FUNCTION2 PFK	31.87	1.774e4					1.6	NO		bb		0.000
15	FUNCTION2 PFK	31.74	2.593e4					2.1	NO		db		0.000
16	FUNCTION2 PFK	31.71	1.728e4					1.7	NO		dd		0.000
17	FUNCTION2 PFK	31.66	1.877e4					1.7	NO		dd		0.000
18	FUNCTION2 PFK	31.61	7.274e3					1.1	NO		bd		0.000
19	FUNCTION2 PFK	31.43	3.383e3					0.6	NO		bb		0.000
20	FUNCTION2 PFK	31.31	3.765e4					1.9	NO		bb		0.000
21	FUNCTION2 PFK	31.17	1.498e4					1.5	NO		bb		0.000
22	FUNCTION2 PFK	31.04	2.638e4					1.6	NO		bb		0.000
23	FUNCTION2 PFK	30.83	2.486e4					1.6	NO		bb		0.000
24	FUNCTION2 PFK	30.49	1.443e4					1.9	NO		bb		0.000
25	FUNCTION2 PFK	30.38	2.686e4					2.0	NO		bb		0.000
26	FUNCTION2 PFK	30.25	2.082e4					1.8	NO		bb		0.000
27	FUNCTION2 PFK	30.02	2.529e4					2.0	NO		bb		0.000
28	FUNCTION2 PFK	32.90	1.483e4					1.4	NO		bb		0.000
29	FUNCTION2 PFK	32.76	2.640e4					1.3	NO		bb		0.000
30	FUNCTION2 PFK	32.50	1.331e3					0.4	NO		bb		0.000
31	FUNCTION2 PFK	32.42	2.822e4					2.3	NO		db		0.000
32	FUNCTION2 PFK	32.33	1.271e4					1.0	NO		bd		0.000

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Printed: Tuesday, November 24, 2020 10:10:01 Pacific Standard Time

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.20	1.782e3					0.4	NO		bb		0.000
2	FUNCTION3 PFK	34.13	3.745e4					1.7	NO		bb		0.000
3	FUNCTION3 PFK	34.01	3.480e4					2.0	NO		bb		0.000
4	FUNCTION3 PFK	33.80	1.972e4					2.1	NO		db		0.000
5	FUNCTION3 PFK	33.77	2.959e4					2.1	NO		dd		0.000
6	FUNCTION3 PFK	33.68	3.515e4					2.4	NO		dd		0.000
7	FUNCTION3 PFK	33.64	2.037e4					1.6	NO		dd		0.000
8	FUNCTION3 PFK	33.58	2.163e4					1.7	NO		bd		0.000
9	FUNCTION3 PFK	33.20	1.835e4					2.2	NO		bb		0.000
10	FUNCTION3 PFK	33.14	1.998e4					2.1	NO		bb		0.000
11	FUNCTION3 PFK	36.32	8.906e3					1.1	NO		bb		0.000
12	FUNCTION3 PFK	36.06	3.144e4					2.0	NO		bb		0.000
13	FUNCTION3 PFK	35.95	2.738e4					2.3	NO		bb		0.000
14	FUNCTION3 PFK	35.63	2.807e4					1.6	NO		bb		0.000
15	FUNCTION3 PFK	35.48	4.310e4					1.8	NO		db		0.000
16	FUNCTION3 PFK	35.38	5.159e4					2.9	NO		dd		0.000
17	FUNCTION3 PFK	35.28	4.057e4					2.4	NO		dd		0.000
18	FUNCTION3 PFK	35.24	8.791e3					1.2	NO		bd		0.000
19	FUNCTION3 PFK	35.15	3.951e4					2.0	NO		bb		0.000
20	FUNCTION3 PFK	34.94	3.989e4					2.5	NO		bb		0.000
21	FUNCTION3 PFK	34.84	2.882e4					1.6	NO		bb		0.000
22	FUNCTION3 PFK	34.72	3.459e4					1.5	NO		bb		0.000
23	FUNCTION3 PFK	34.60	1.447e4					1.5	NO		bb		0.000
24	FUNCTION3 PFK	34.47	2.589e4					1.4	NO		bb		0.000
25	FUNCTION3 PFK	34.38	4.407e4					1.6	NO		bb		0.000
26	FUNCTION3 PFK	34.27	9.018e3					1.0	NO		bb		0.000
27	FUNCTION3 PFK	37.98	1.395e4					1.2	NO		bb		0.000
28	FUNCTION3 PFK	37.84	2.048e4					1.2	NO		bb		0.000
29	FUNCTION3 PFK	37.77	4.915e4					2.2	NO		bb		0.000
30	FUNCTION3 PFK	37.58	1.072e3					0.3	NO		bb		0.000
31	FUNCTION3 PFK	37.42	3.621e4					2.1	NO		bb		0.000
32	FUNCTION3 PFK	37.31	3.879e4					2.2	NO		bb		0.000
33	FUNCTION3 PFK	37.19	8.991e3					0.7	NO		bb		0.000
34	FUNCTION3 PFK	37.12	2.710e3					0.5	NO		db		0.000
35	FUNCTION3 PFK	37.08	1.686e4					1.1	NO		dd		0.000
36	FUNCTION3 PFK	37.02	1.161e4					1.1	NO		dd		0.000
37	FUNCTION3 PFK	36.96	3.839e4					2.5	NO		dd		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION3 PFK	36.89	5.297e4					1.7	NO		bd		0.000
39	FUNCTION3 PFK	36.64	3.372e4					2.1	NO		bb		0.000
40	FUNCTION3 PFK	36.53	1.480e4					1.1	NO		bb		0.000
41	FUNCTION3 PFK	36.38	2.312e4					1.4	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	39.23	3.611e4					1.9	NO		db		
2	FUNCTION4 PFK	39.15	1.296e4					1.1	NO		dd		
3	FUNCTION4 PFK	39.10	6.477e3					0.9	NO		bd		
4	FUNCTION4 PFK	39.07	9.773e2					0.3	NO		bb		
5	FUNCTION4 PFK	39.00	2.606e4					1.8	NO		db		
6	FUNCTION4 PFK	38.97	1.384e4					1.5	NO		dd		
7	FUNCTION4 PFK	38.90	3.229e4					1.7	NO		dd		
8	FUNCTION4 PFK	38.81	7.897e3					0.9	NO		dd		
9	FUNCTION4 PFK	38.74	2.254e4					1.4	NO		dd		
10	FUNCTION4 PFK	38.66	2.793e4					1.3	NO		bd		
11	FUNCTION4 PFK	38.56	1.194e4					1.5	NO		bb		
12	FUNCTION4 PFK	38.43	3.022e4					2.3	NO		db		
13	FUNCTION4 PFK	38.30	1.497e5					6.2	YES		dd		
14	FUNCTION4 PFK	38.20	2.126e5					8.3	YES		dd		
15	FUNCTION4 PFK	38.18	1.322e5					7.7	YES		dd		
16	FUNCTION4 PFK	38.08	2.526e5					11.5	YES		bd		
17	FUNCTION4 PFK	41.13	6.830e3					1.0	NO		bd		
18	FUNCTION4 PFK	40.90	3.023e4					1.8	NO		bb		
19	FUNCTION4 PFK	40.83	2.111e4					1.7	NO		db		
20	FUNCTION4 PFK	40.78	1.038e4					1.5	NO		bd		
21	FUNCTION4 PFK	40.59	2.267e4					1.7	NO		bb		
22	FUNCTION4 PFK	40.47	2.357e4					1.7	NO		bb		
23	FUNCTION4 PFK	40.36	2.883e4					1.8	NO		db		
24	FUNCTION4 PFK	40.26	2.815e4					2.1	NO		dd		
25	FUNCTION4 PFK	40.10	4.418e4					2.0	NO		bd		
26	FUNCTION4 PFK	40.02	2.674e4					1.6	NO		db		
27	FUNCTION4 PFK	39.92	4.884e4					2.2	NO		bd		
28	FUNCTION4 PFK	39.70	1.474e4					1.3	NO		bb		
29	FUNCTION4 PFK	39.56	2.052e4					1.8	NO		bb		
30	FUNCTION4 PFK	39.46	3.441e4					1.8	NO		db		
31	FUNCTION4 PFK	39.36	2.726e4					2.0	NO		dd		
32	FUNCTION4 PFK	39.32	1.841e4					2.1	NO		bd		
33	FUNCTION4 PFK	43.06	1.476e4					1.7	NO		dd		
34	FUNCTION4 PFK	42.99	4.032e4					1.8	NO		bd		
35	FUNCTION4 PFK	42.76	7.807e3					1.0	NO		bb		
36	FUNCTION4 PFK	42.71	1.211e4					1.7	NO		bb		
37	FUNCTION4 PFK	42.64	3.781e4					1.8	NO		bb		

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION4 PFK	42.41	1.858e4					1.5	NO		bb		
39	FUNCTION4 PFK	42.18	2.850e4					2.7	NO		bb		
40	FUNCTION4 PFK	42.08	2.946e4					1.5	NO		bb		
41	FUNCTION4 PFK	41.94	1.421e4					1.5	NO		bb		
42	FUNCTION4 PFK	41.82	2.027e4					1.5	NO		bb		
43	FUNCTION4 PFK	41.62	1.775e4					1.5	NO		bb		
44	FUNCTION4 PFK	41.49	2.790e4					1.8	NO		bb		
45	FUNCTION4 PFK	41.38	2.352e4					2.3	NO		db		
46	FUNCTION4 PFK	41.36	2.636e4					2.3	NO		dd		
47	FUNCTION4 PFK	41.27	3.930e4					2.5	NO		dd		
48	FUNCTION4 PFK	41.16	2.034e4					1.8	NO		dd		
49	FUNCTION4 PFK	43.21	1.563e4					1.5	NO		db		
50	FUNCTION4 PFK	43.17	1.175e4					1.4	NO		dd		
51	FUNCTION4 PFK	43.10	1.355e4					1.4	NO		dd		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	26.89	8.280e1					2.8	NO		bb		0.000
2	FUNCTION1 HXCD...	26.23	2.491e2					8.8	YES		bb		0.000
3	FUNCTION1 HXCD...	25.88	2.354e2					6.9	YES		bb		0.000
4	FUNCTION1 HXCD...	23.88	3.965e2					13.2	YES		bb		0.000
5	FUNCTION1 HXCD...	22.84	1.345e2					4.4	YES		bb		0.000

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	23.40	1.359e2					2.4	NO		bd		0.000
2	FUNCTION1 HPCD...	22.22	7.879e1					1.2	NO		db		0.000
3	FUNCTION1 HPCD...	22.07	9.845e1					1.3	NO		dd		0.000
4	FUNCTION1 HPCD...	22.01	1.065e2					1.9	NO		bd		0.000
5	FUNCTION1 HPCD...	21.86	1.389e2					1.6	NO		bb		0.000
6	FUNCTION1 HPCD...	28.07	7.702e1					1.7	NO		bb		0.000
7	FUNCTION1 HPCD...	27.56	9.645e1					0.8	NO		bb		0.000
8	FUNCTION1 HPCD...	27.28	1.104e2					1.5	NO		bb		0.000
9	FUNCTION1 HPCD...	26.91	7.551e1					1.3	NO		bb		0.000
10	FUNCTION1 HPCD...	26.50	7.595e1					1.0	NO		bb		0.000
11	FUNCTION1 HPCD...	25.85	1.432e2					1.7	NO		bb		0.000
12	FUNCTION1 HPCD...	25.55	7.013e1					1.0	NO		bb		0.000
13	FUNCTION1 HPCD...	24.38	7.489e1					1.5	NO		bb		0.000
14	FUNCTION1 HPCD...	23.45	2.173e2					3.0	NO		db		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.27	1.062e2					1.5	NO		bd		0.000
2	FUNCTION2 HPCD...	31.59	7.549e1					1.7	NO		bb		0.000
3	FUNCTION2 HPCD...	31.41	7.608e1					1.2	NO		bb		0.000
4	FUNCTION2 HPCD...	31.27	9.105e1					1.6	NO		bb		0.000
5	FUNCTION2 HPCD...	29.07	2.906e2					6.2	YES		bb		0.000
6	FUNCTION2 HPCD...	28.73	9.285e1					1.9	NO		bb		0.000
7	FUNCTION2 HPCD...	32.65	7.673e1					3.0	YES		bb		0.000
8	FUNCTION2 HPCD...	32.35	8.596e1					2.4	NO		db		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dataset: T:\Autospec\Processed Data Batch\201123.qld
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Printed: Tuesday, November 24, 2020 10:10:01 Pacific Standard Time

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ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:10:01 Pacific Standard Time

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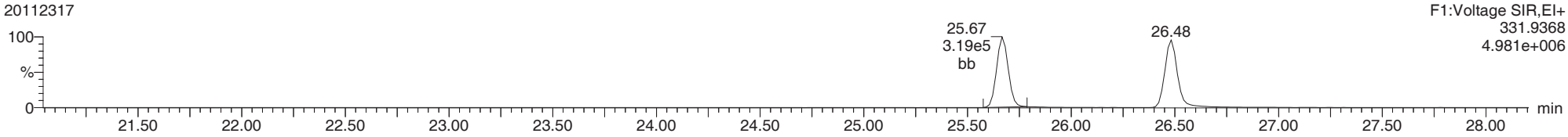
ID: 20J0389-10, Name: 20112317, Date: 23-Nov-2020, Time: 22:59:53, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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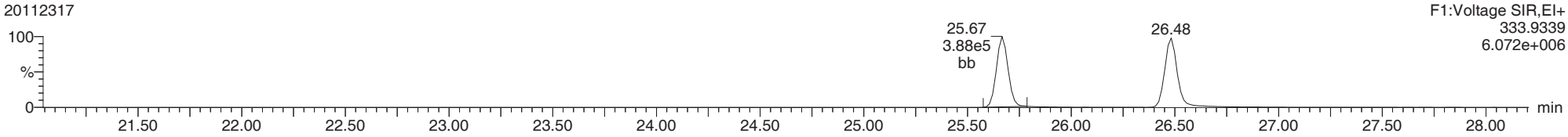
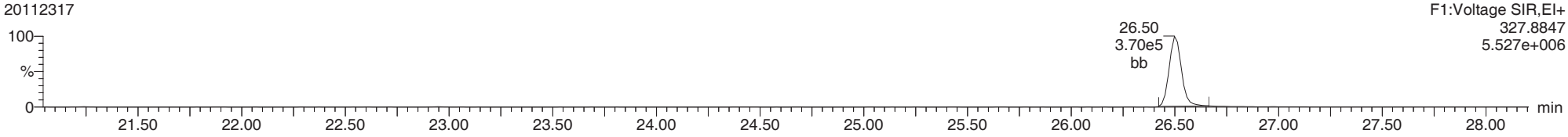


37CL-2378-TCDD



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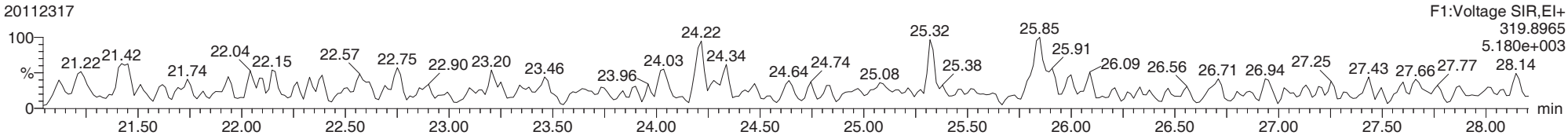
2378-TCDD



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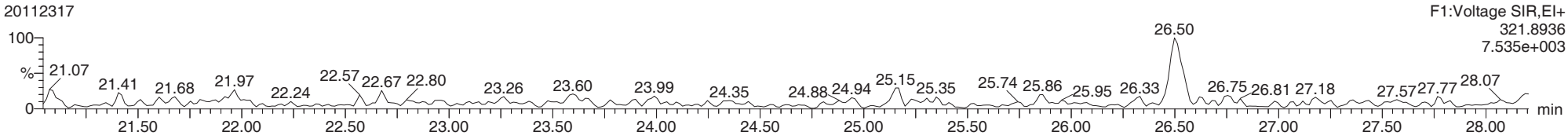

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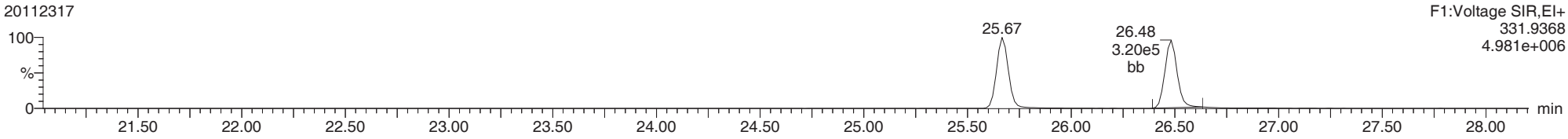

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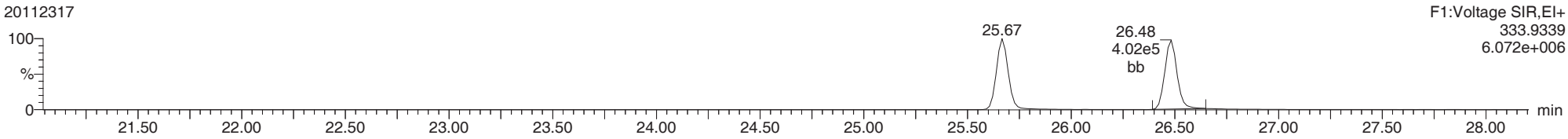

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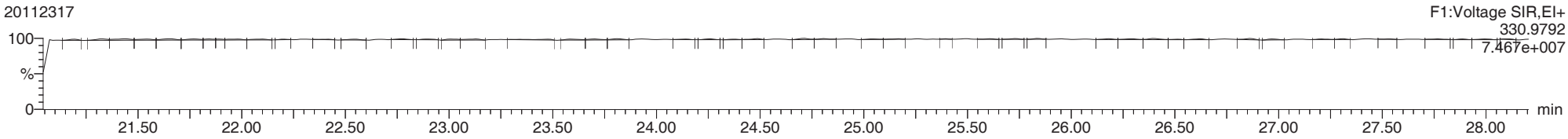

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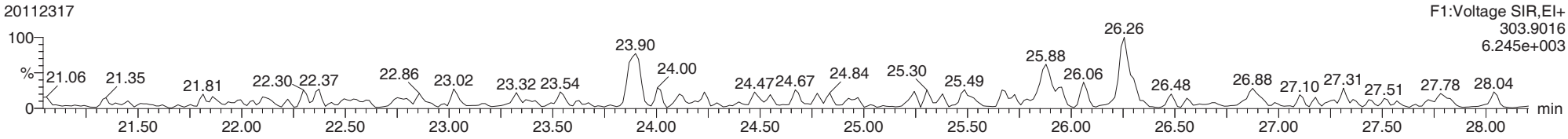

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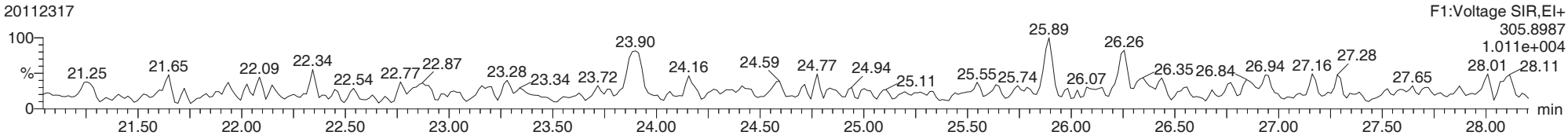

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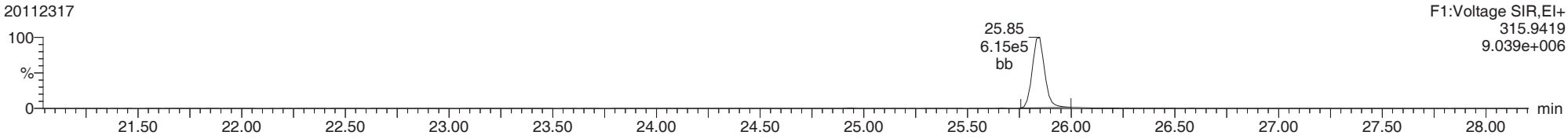

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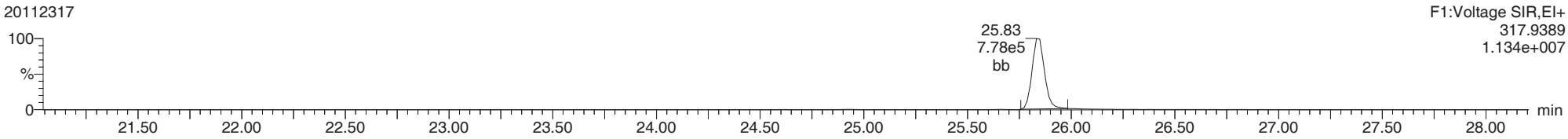

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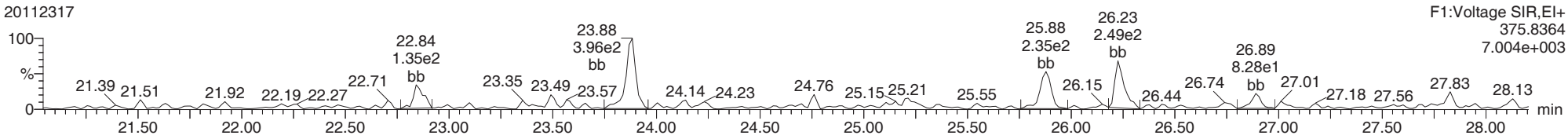

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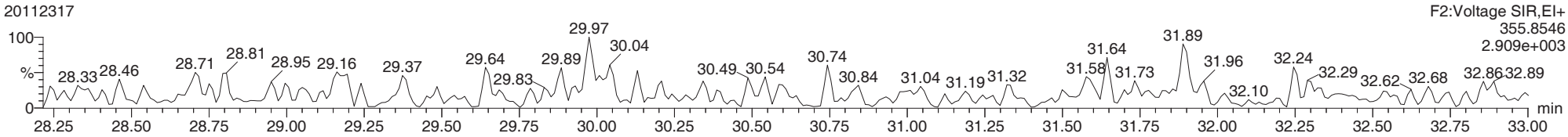
12378-PeCDD



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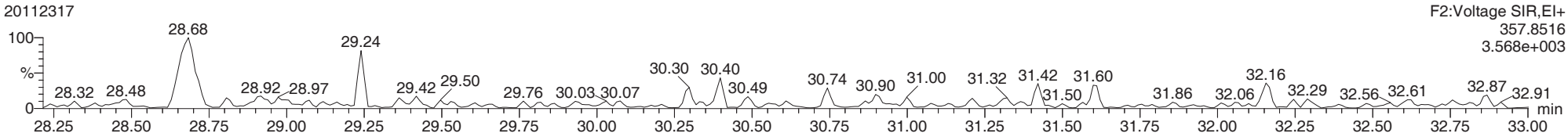

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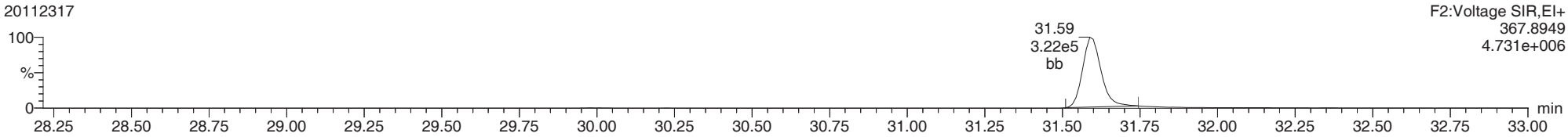

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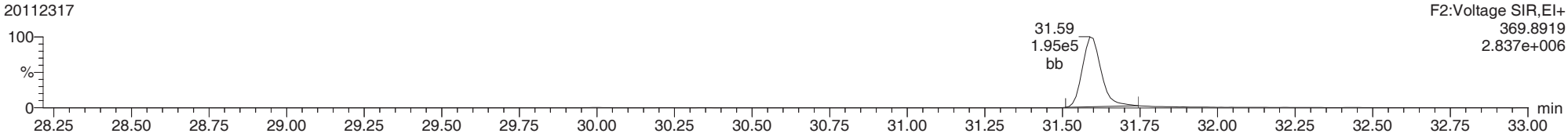

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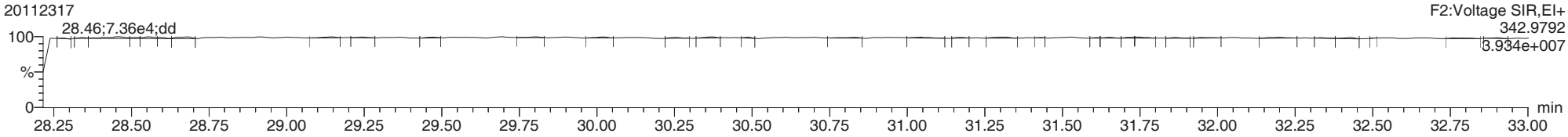

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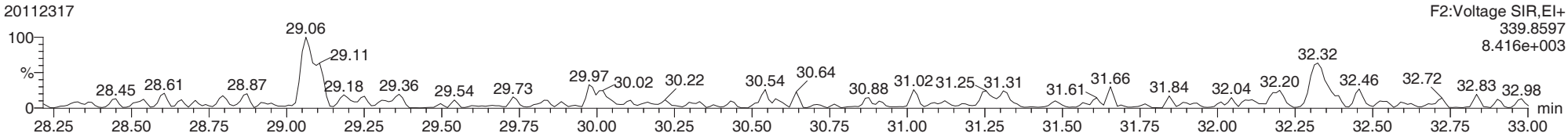

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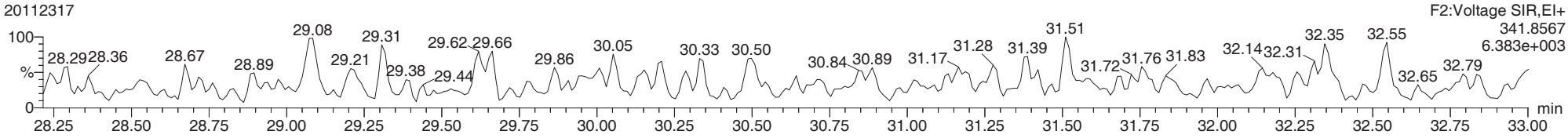

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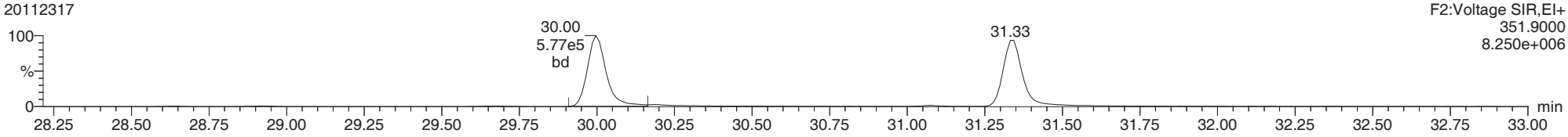

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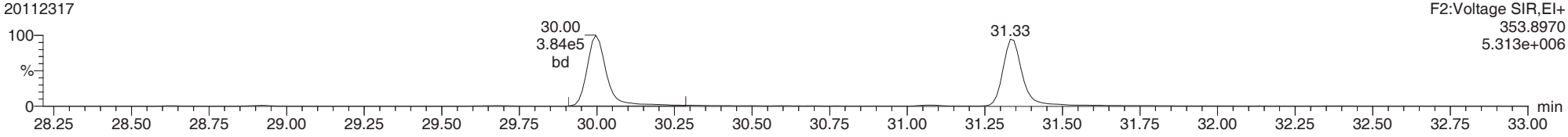
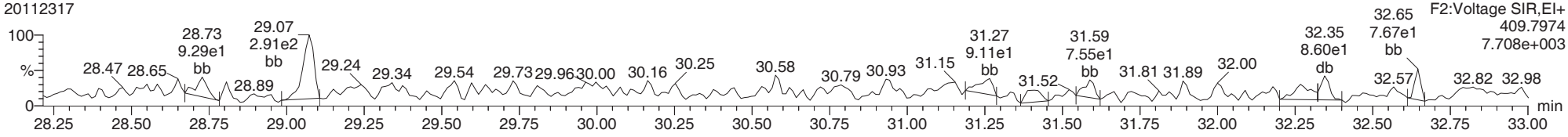


FUNCTION2 HPCDPE



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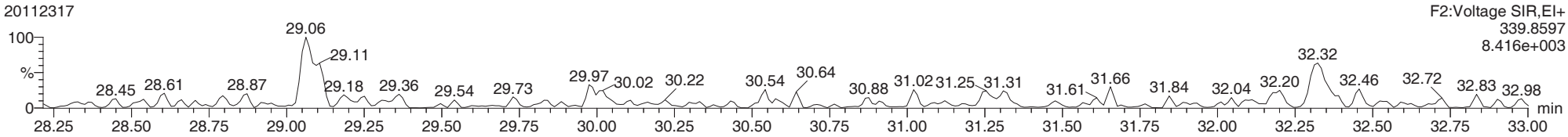
23478-PeCDF



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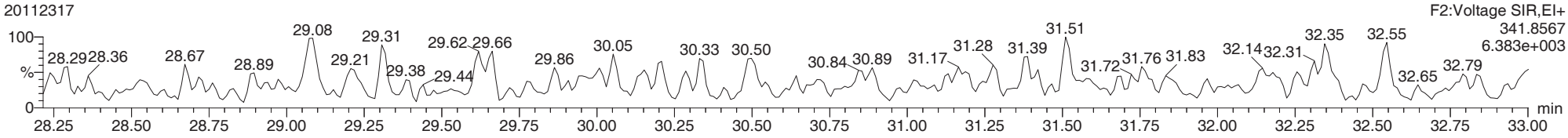

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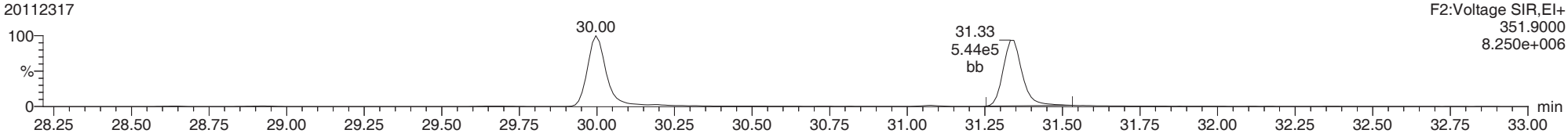

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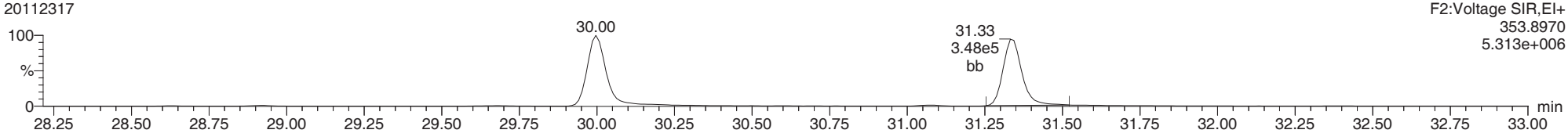

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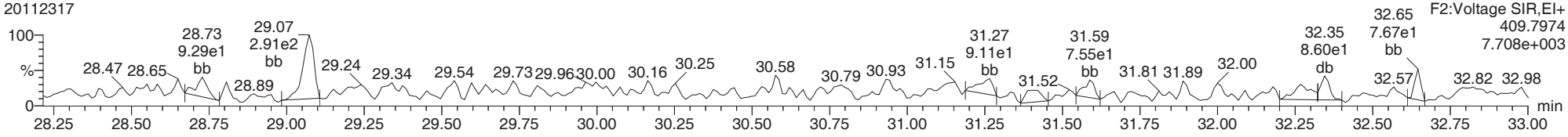

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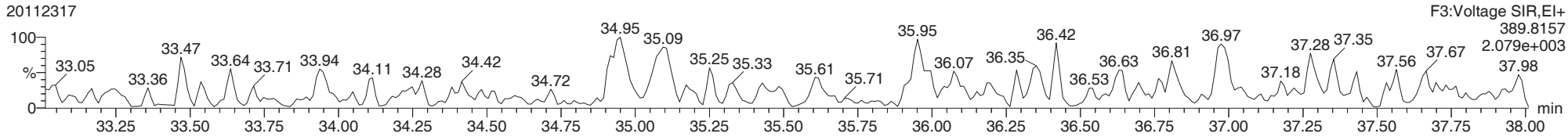
123478-HxCDD



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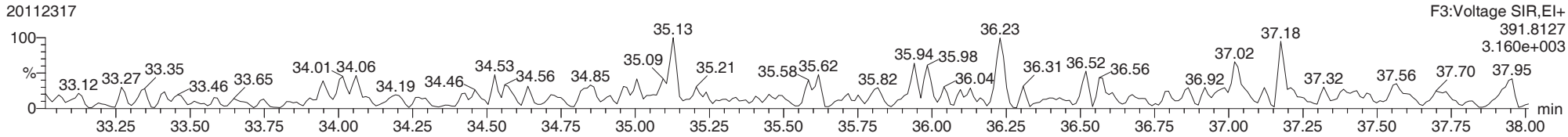

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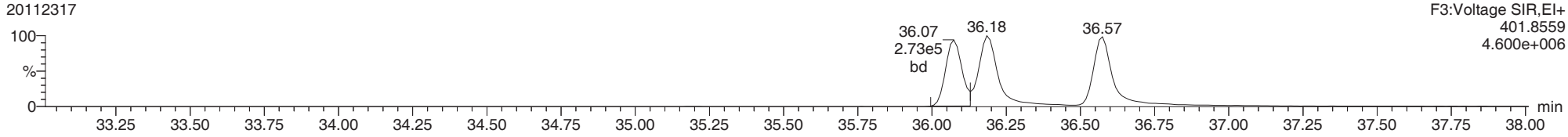

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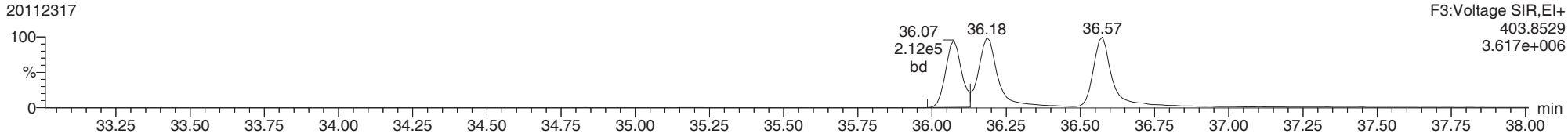

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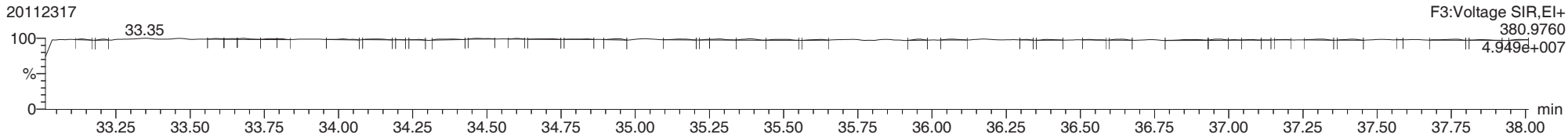

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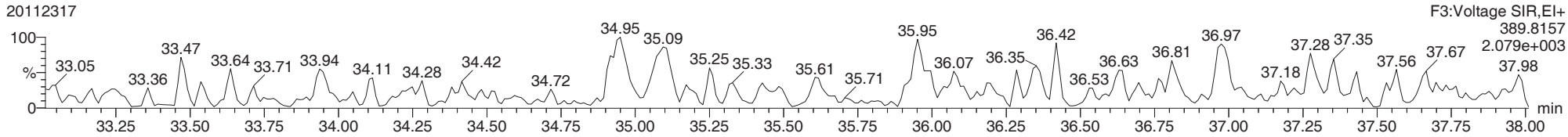
123678-HxCDD



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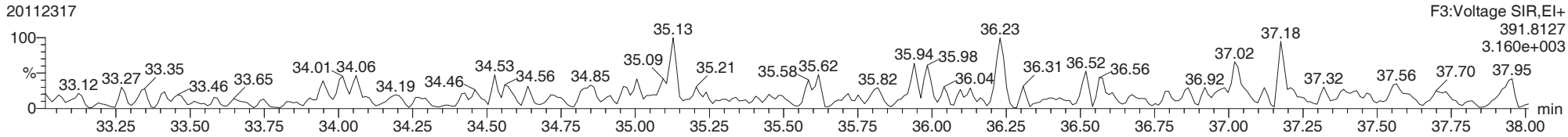

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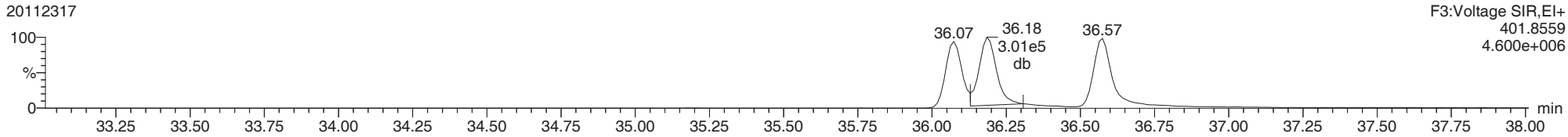

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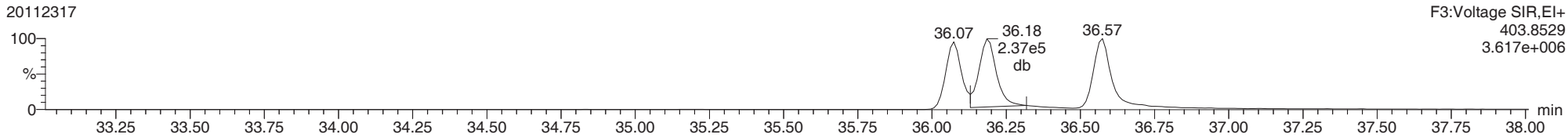

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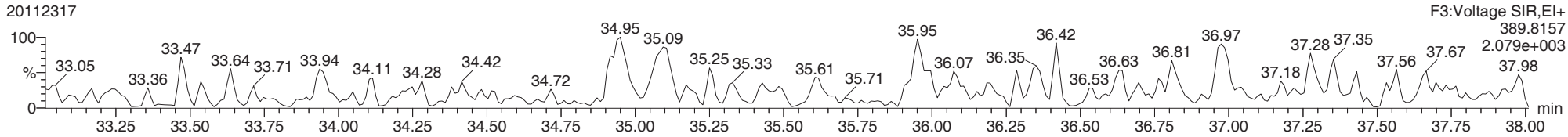
123789-HxCDD



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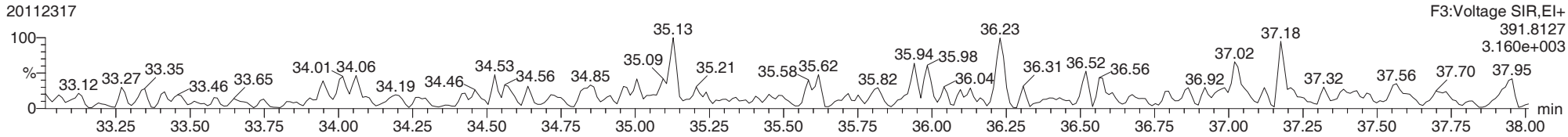

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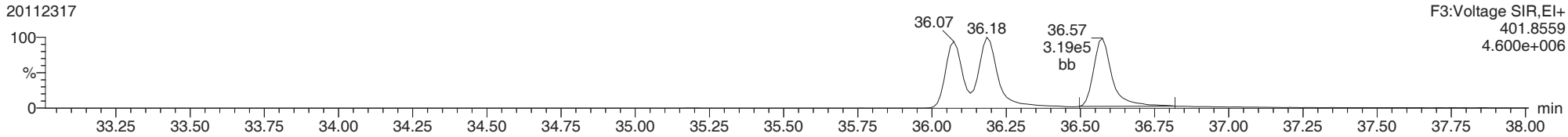

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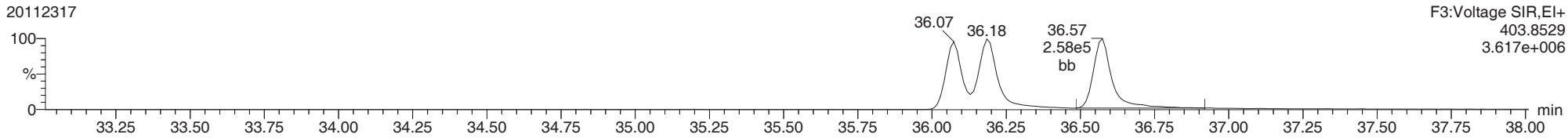

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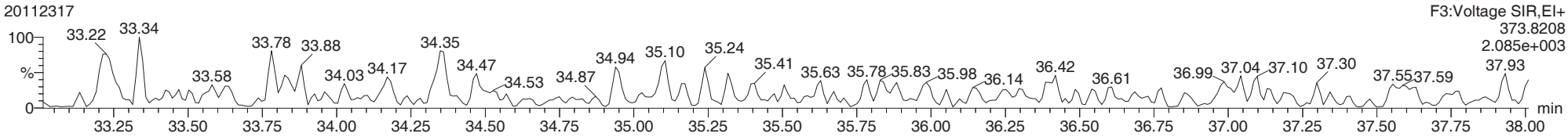

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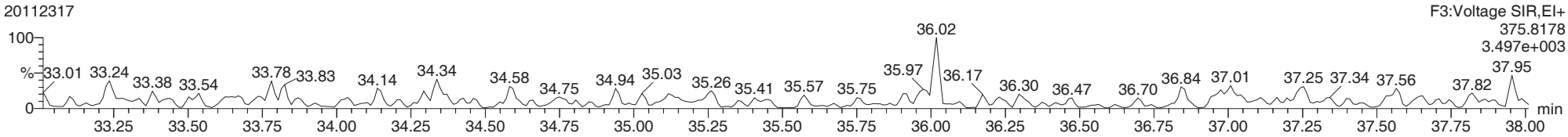

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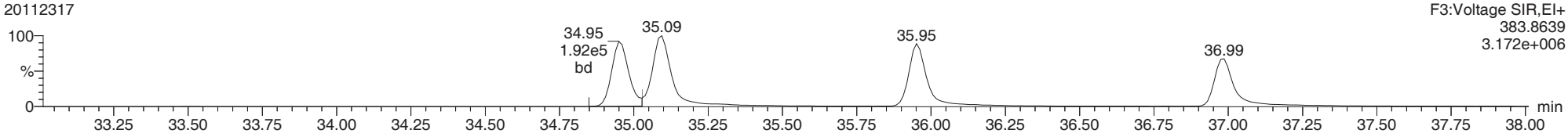

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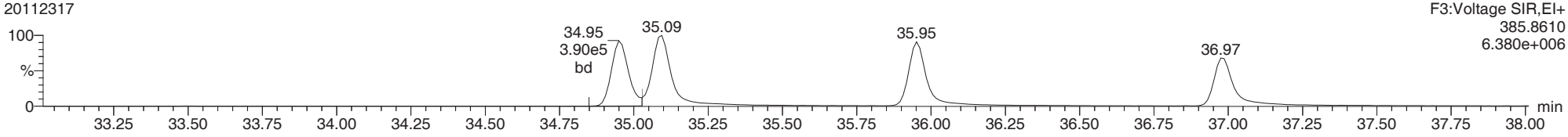
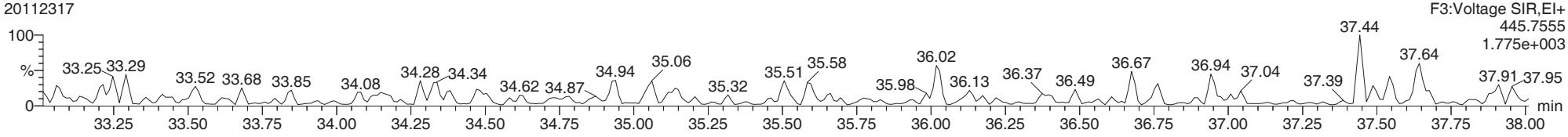


FUNCTION3 OCDPE



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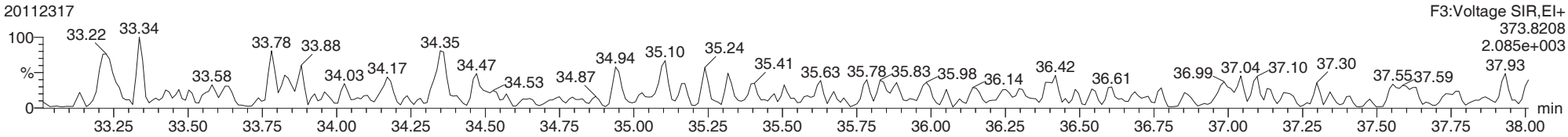
234678-HxCDF



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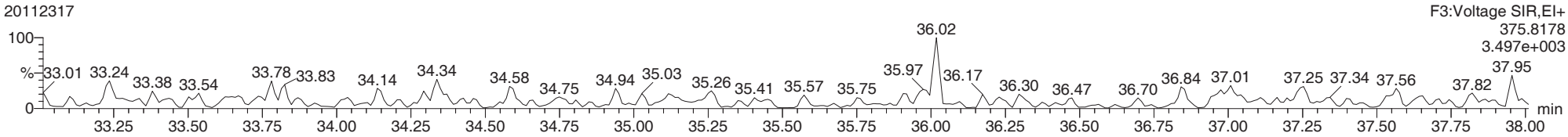

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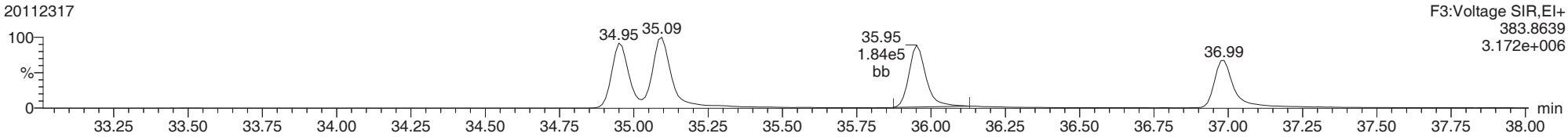

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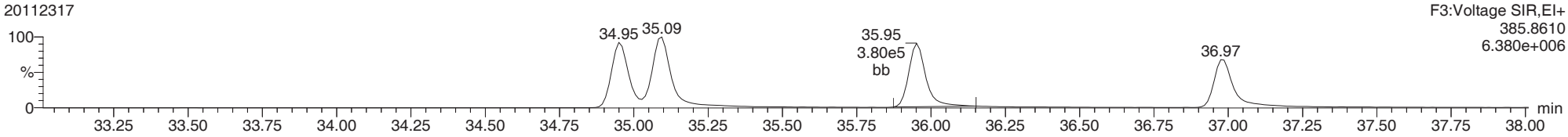
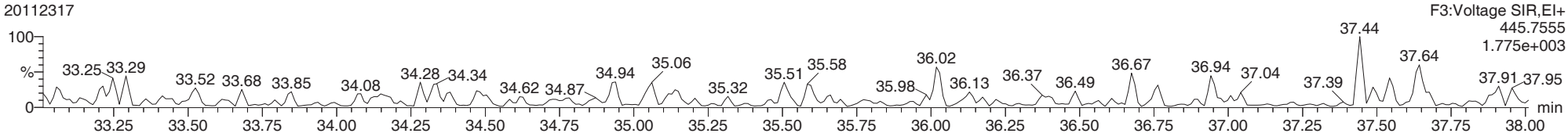


FUNCTION3 OCDPE



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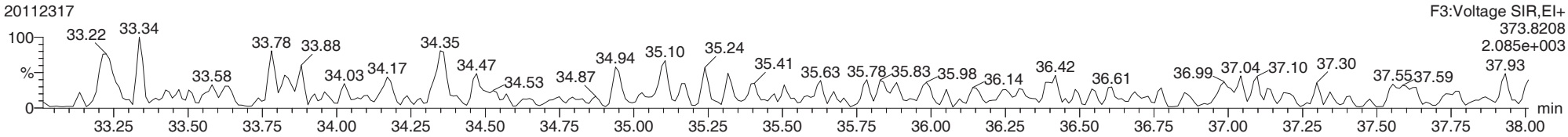
123678-HxCDF



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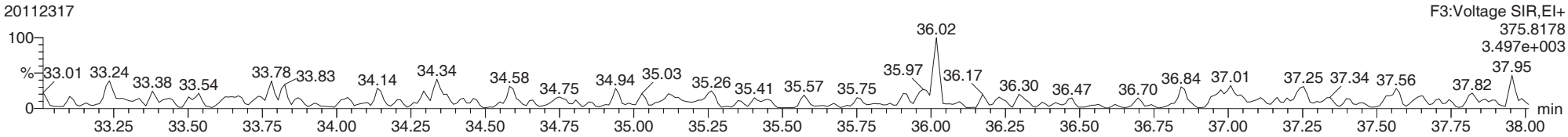

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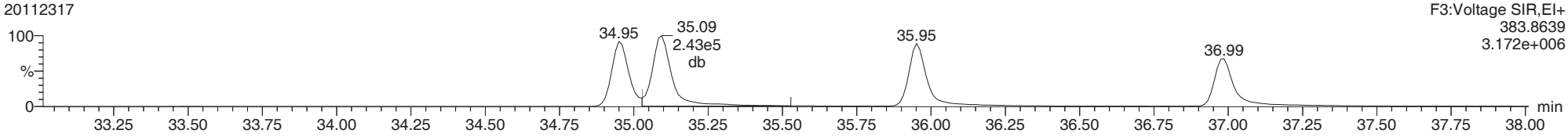

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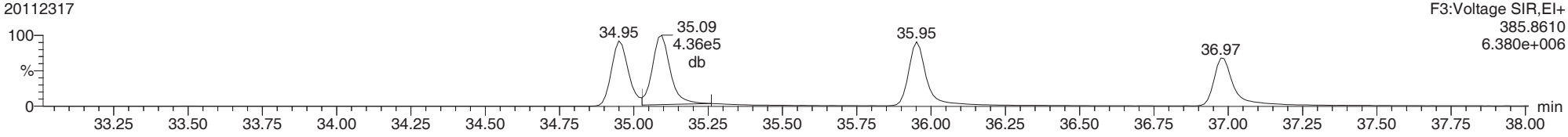
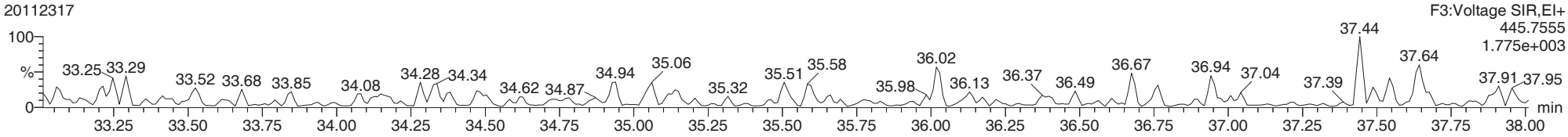


FUNCTION3 OCDPE



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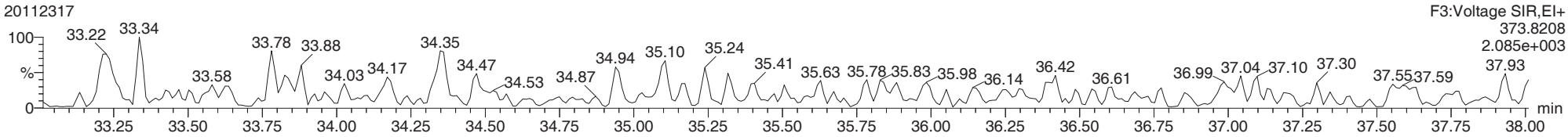

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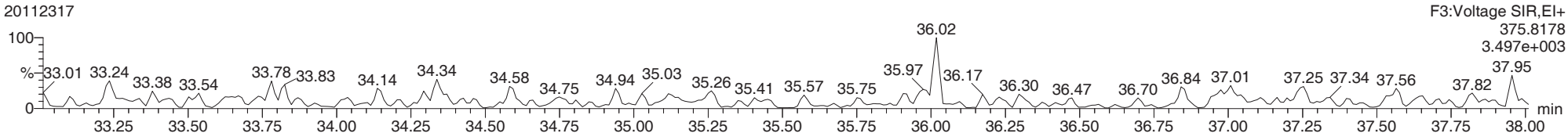

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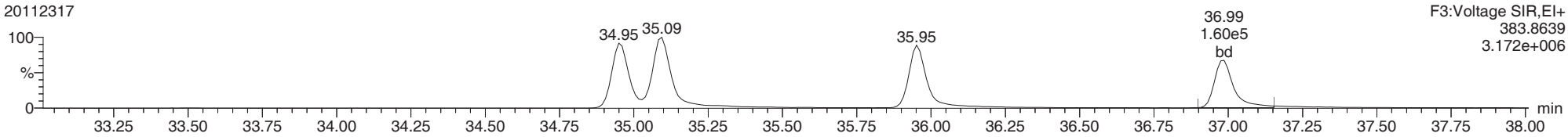

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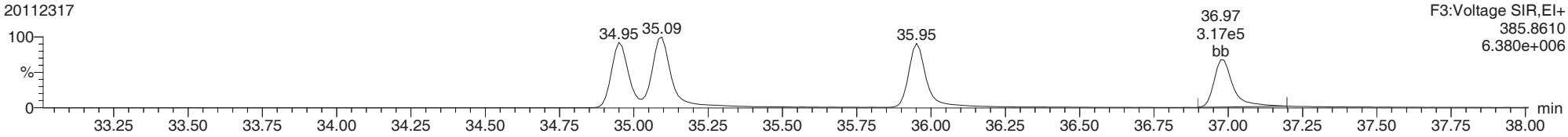
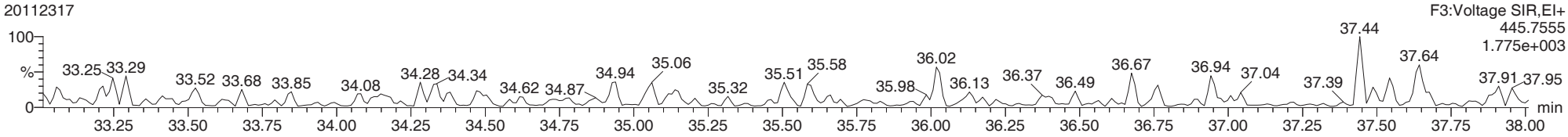


FUNCTION3 OCDPE



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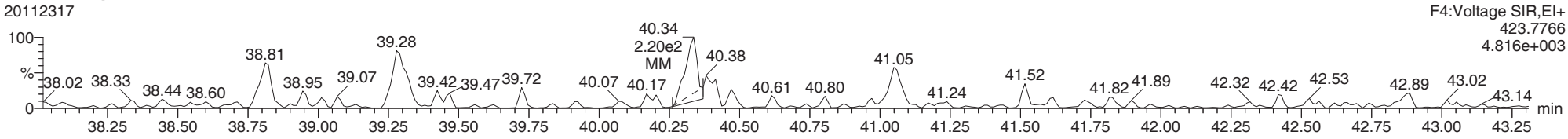
1234678-HpCDD



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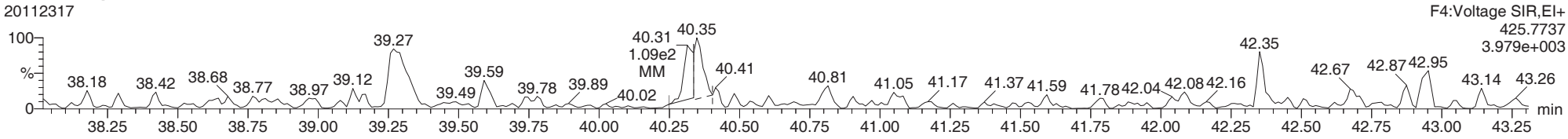
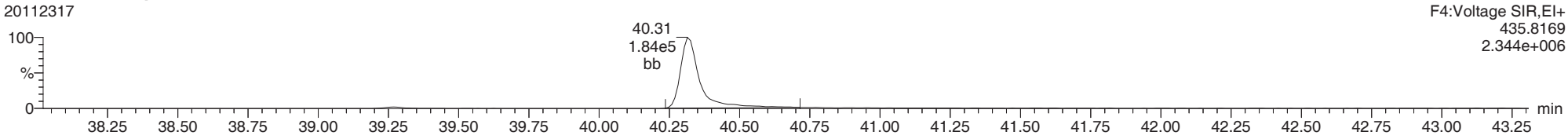
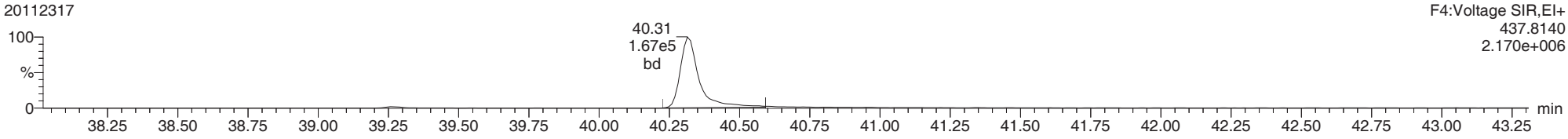


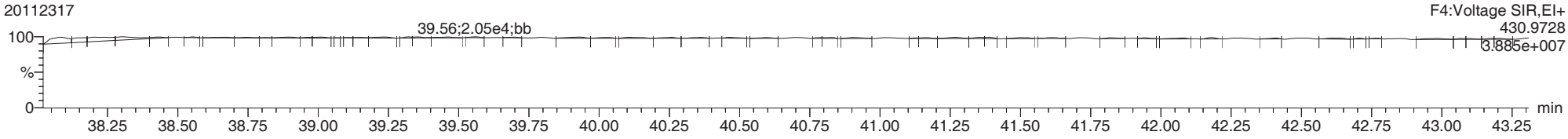
13C-1234678-HpCDD



13C-1234678-HpCDD



FUNCTION4 PFK



ID: 20J0389-10, Name: 20112317, Date: 23-Nov-2020, Time: 22:59:53, Conditions: AUTOSPEC01, User: pk

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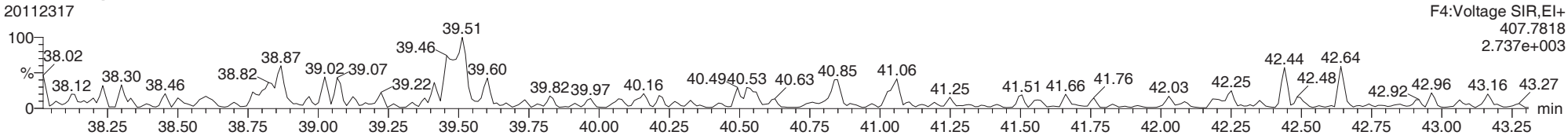

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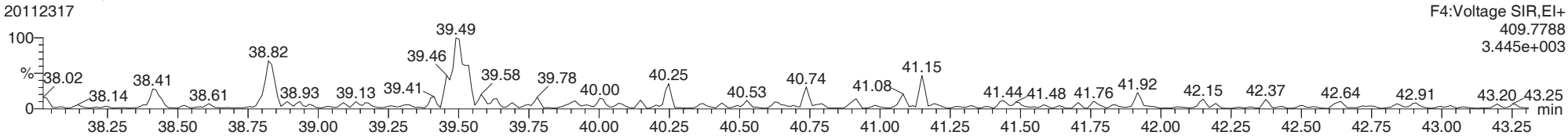

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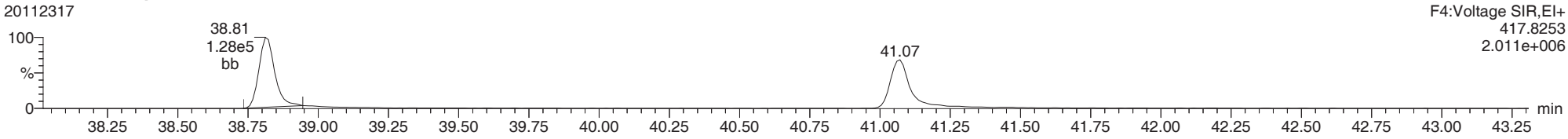

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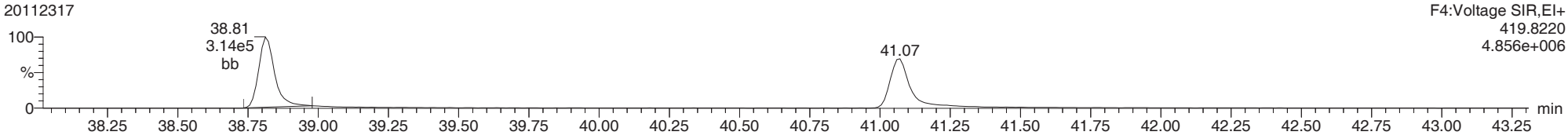
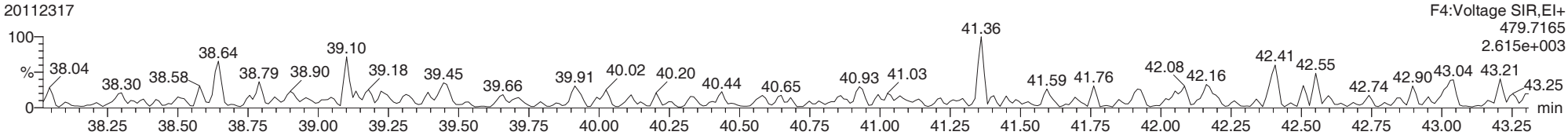
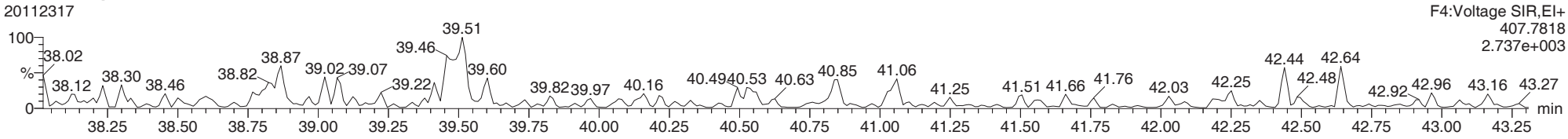


FUNCTION4 NCDPE



ID: 20J0389-10, Name: 20112317, Date: 23-Nov-2020, Time: 22:59:53, Conditions: AUTOSPEC01, User: pk

1234789-HpCDF



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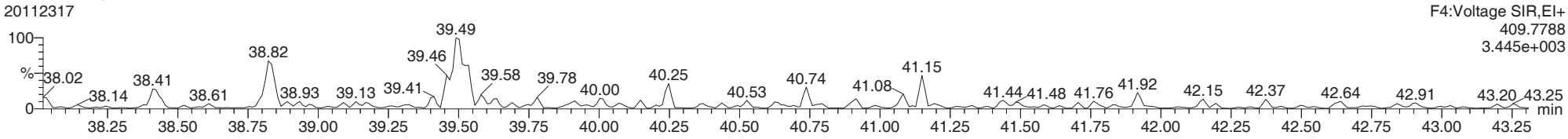

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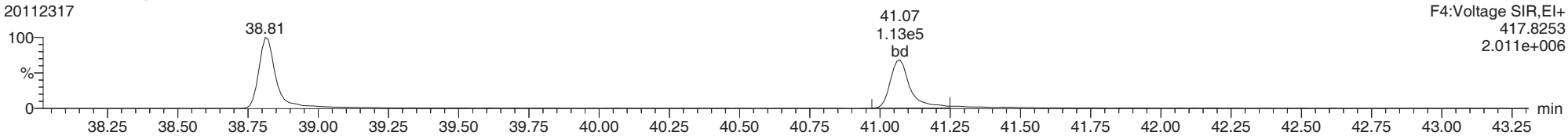

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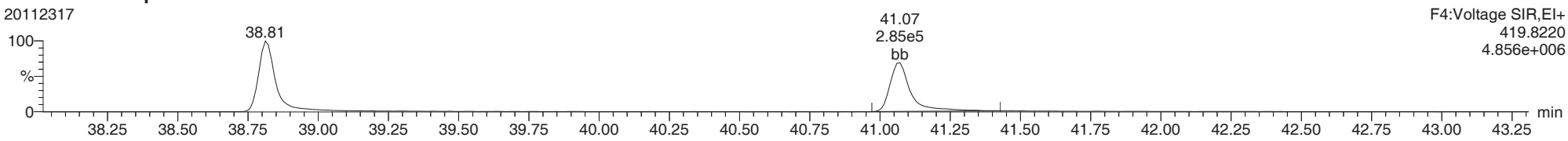
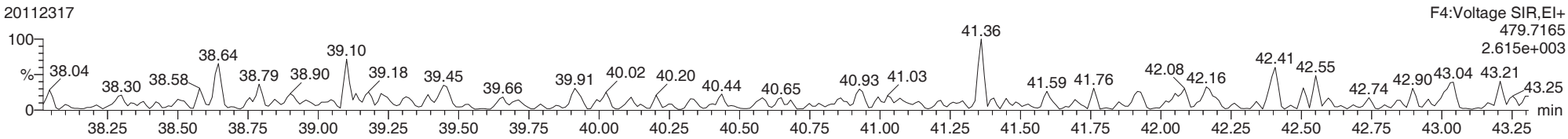


FUNCTION4 NCDPE



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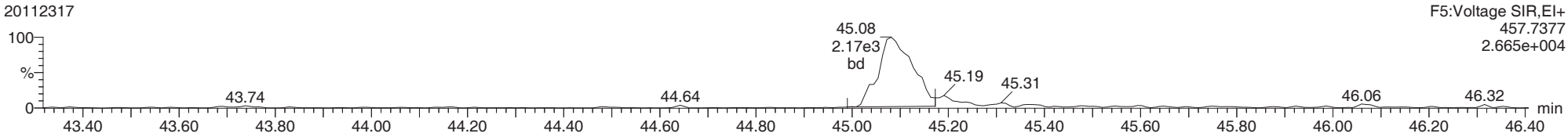
Printed: Tuesday, November 24, 2020 10:10:01 Pacific Standard Time

ID: 20J0389-10, Name: 20112317, Date: 23-Nov-2020, Time: 22:59:53, Conditions: AUTOSPEC01, User: pk

OCDD



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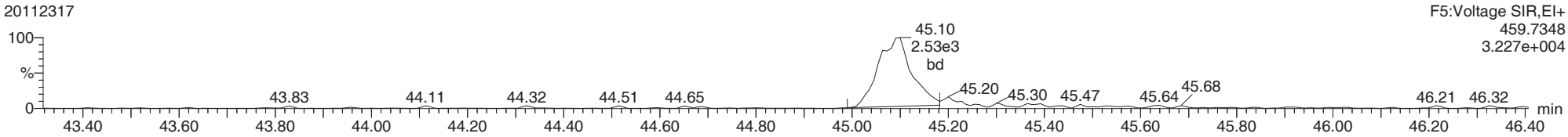
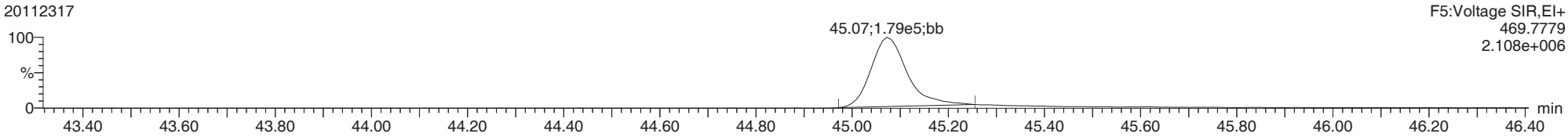


13C-OCDD



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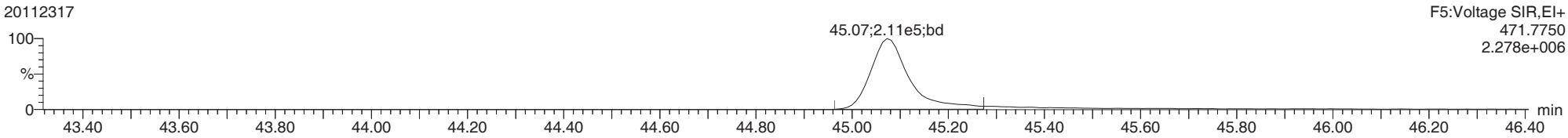
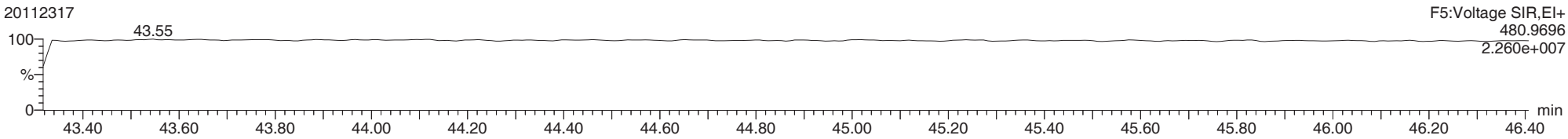


FUNCTION5 PFK



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Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
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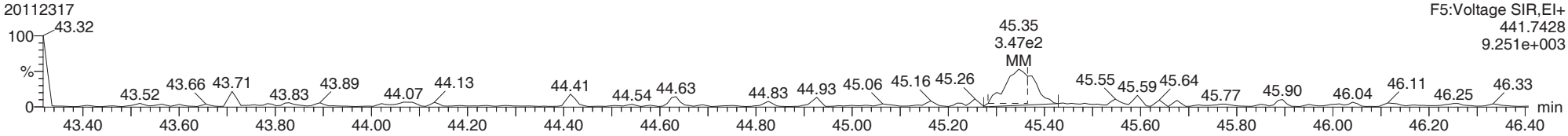
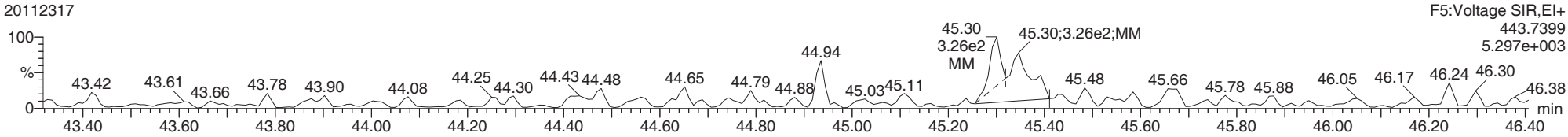
ID: 20J0389-10, Name: 20112317, Date: 23-Nov-2020, Time: 22:59:53, Conditions: AUTOSPEC01, User: pk

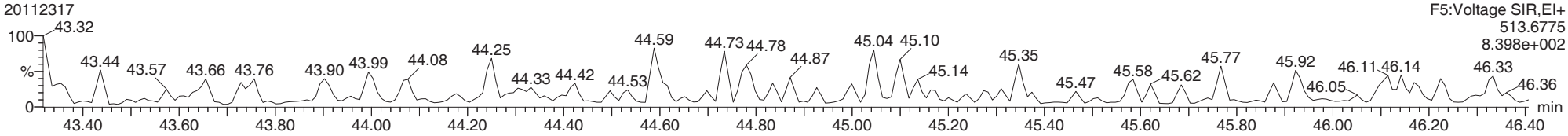
OCDF



OCDF



FUNCTION5 DCDPE



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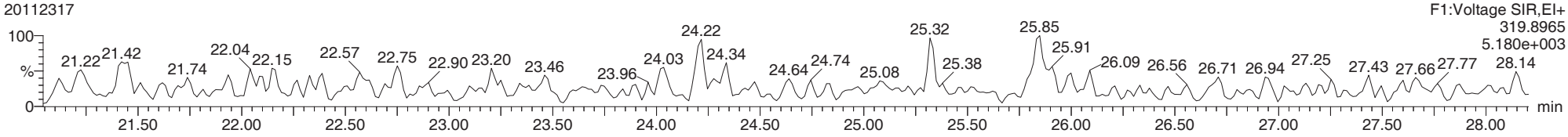
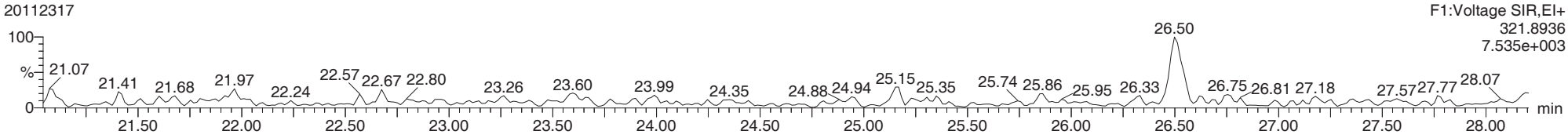
ID: 20J0389-10, Name: 20112317, Date: 23-Nov-2020, Time: 22:59:53, Conditions: AUTOSPEC01, User: pk

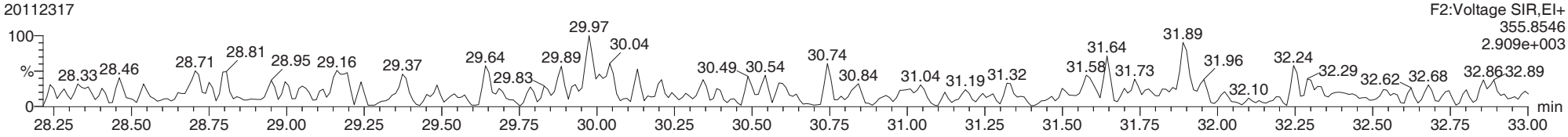
Total-tetradioxins



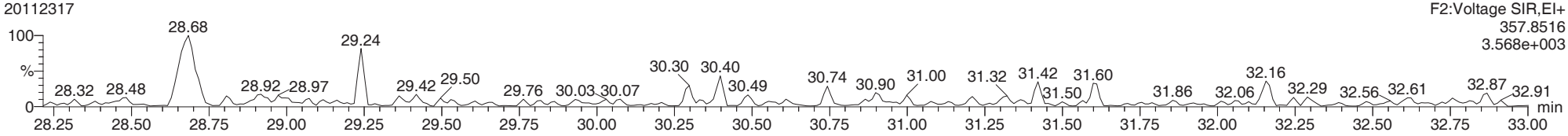
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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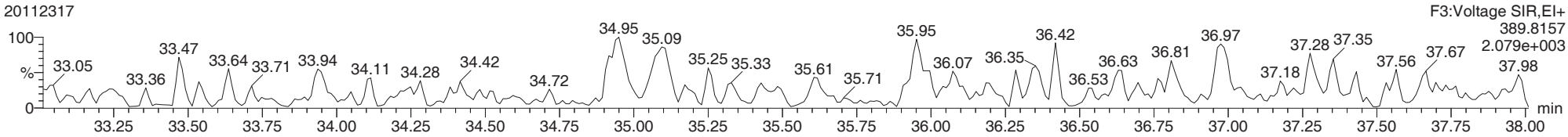
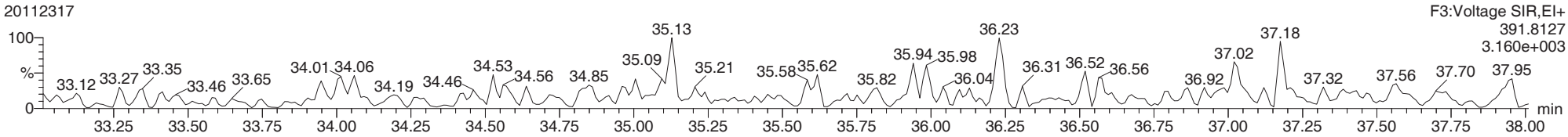
Printed: Tuesday, November 24, 2020 10:10:01 Pacific Standard Time

ID: 20J0389-10, Name: 20112317, Date: 23-Nov-2020, Time: 22:59:53, Conditions: AUTOSPEC01, User: pk

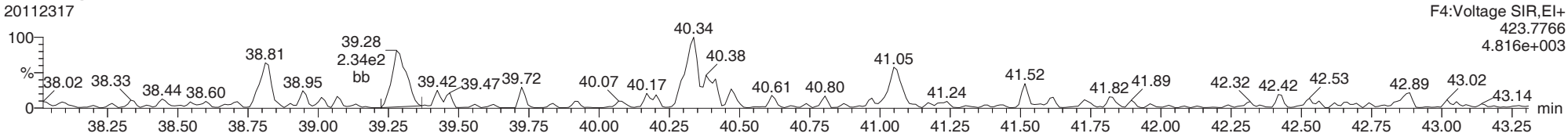
Total-hexadioxins



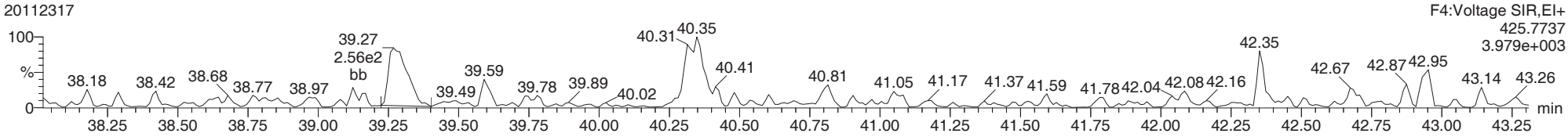
Total-hexadioxins



Total-heptadioxins



Total-heptadioxins



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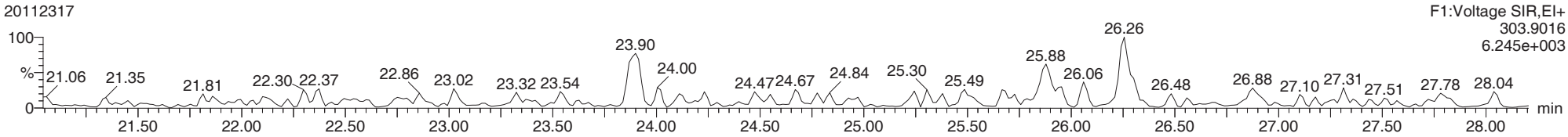
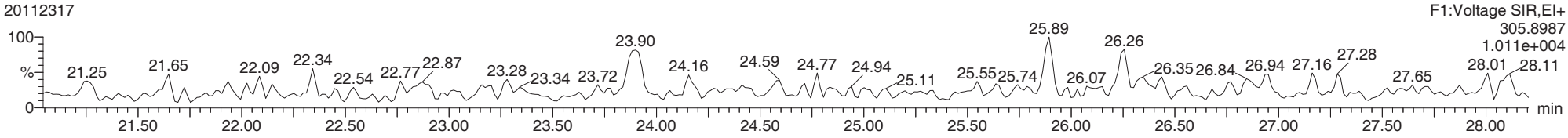
Printed: Tuesday, November 24, 2020 10:10:01 Pacific Standard Time

ID: 20J0389-10, Name: 20112317, Date: 23-Nov-2020, Time: 22:59:53, Conditions: AUTOSPEC01, User: pk

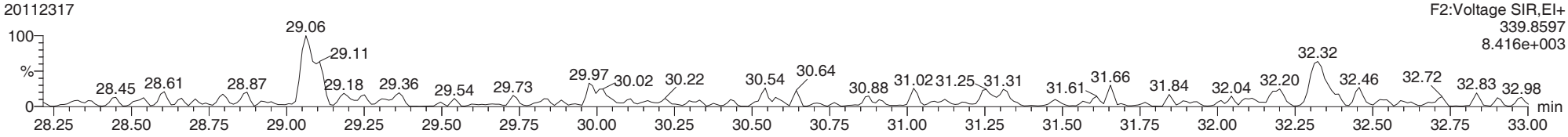
Total-tetrafurans



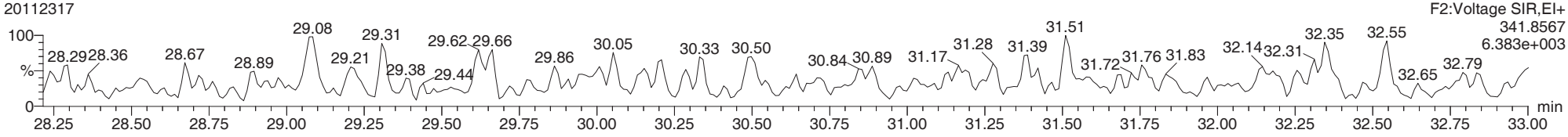
Total-tetrafurans



Total-pentafurans

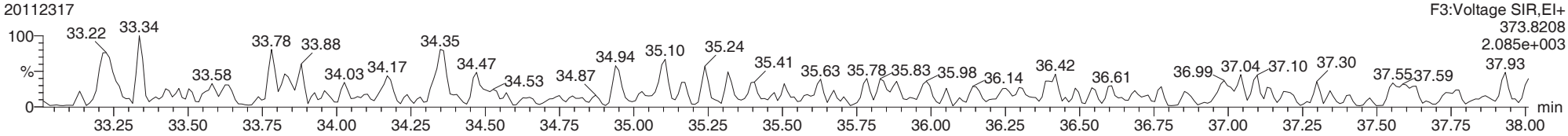


Total-pentafurans

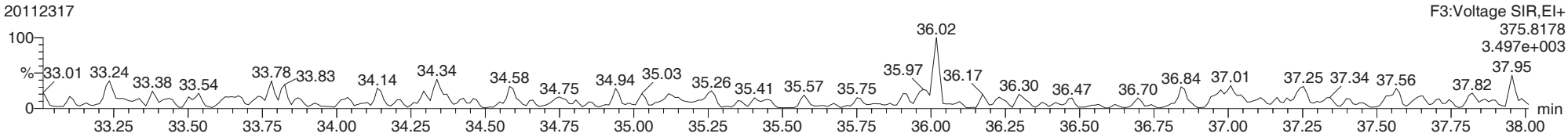


ID: 20J0389-10, Name: 20112317, Date: 23-Nov-2020, Time: 22:59:53, Conditions: AUTOSPEC01, User: pk

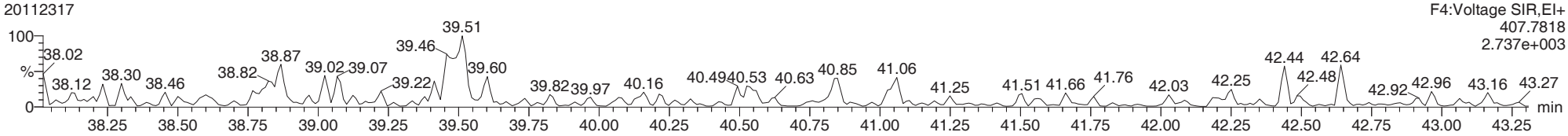
Total-hexafurans



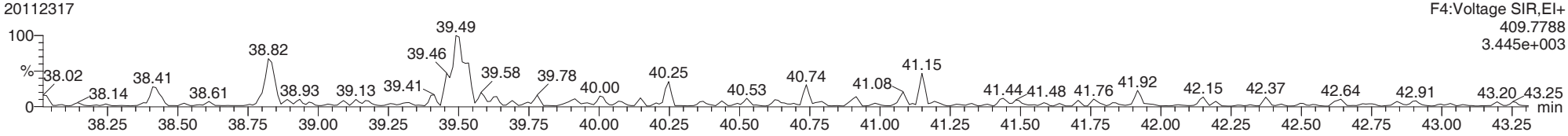
Total-hexafurans



Total-heptafurans



Total-heptafurans



MW-C101-102820

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider				
Project:	Lora Lake Apartments				
Matrix:	Ground Water	Laboratory ID:	20J0389-11 A	File ID:	20112318
Sampled:	10/28/20 09:47	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 23:49
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1052 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	0.81	9.51	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	0.86	9.51	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.29	9.51	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	1.18	9.51	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	0.82	9.51	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.65	9.51	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.59	9.51	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.69	9.51	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	0.94	9.51	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	0.99	9.51	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	0.84	9.51	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	1.02	9.51	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1		0.893-1.208	0.77	9.51	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	1.25	9.51	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1		0.893-1.208	1.42	9.51	ND	pg/L	U
39001-02-0	OCDF	1	1.005	0.757-1.024	3.05	19.0	10.2	pg/L	J
3268-87-9	OCDD	1	0.829	0.757-1.024	2.79	47.5	66.5	pg/L	B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.51	ND	pg/L	
41903-57-5	Total TCDD	1	0.000			9.51	ND	pg/L	
30402-15-4	Total PeCDF	1	0.000			9.51	ND	pg/L	
36088-22-9	Total PeCDD	1	0.000			9.51	ND	pg/L	
55684-94-1	Total HxCDF	1	0.000			9.51	ND	pg/L	
34465-46-8	Total HxCDD	1	0.000			9.51	ND	pg/L	
38998-75-3	Total HpCDF	1	0.000			9.51	ND	pg/L	
37871-00-4	Total HpCDD	1	0.000			9.51	ND	pg/L	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.023

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.40

Analytical Resources, Incorporated
Analytical Chemists and Consultants

MW-C101-102820

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider			Project:	Lora Lake Apartments
Matrix:	Ground Water	Laboratory ID:	20J0389-11	File ID:	20112318
Sampled:	10/28/20 09:47	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 23:49
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1052 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.792	0.655-0.886	1.27	78.9	24 - 169 %	
13C12-2,3,7,8-TCDD		0.802	0.655-0.886	1.55	77.2	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.594	1.318-1.783	2.27	70.2	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.537	1.318-1.783	2.37	67.7	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.647	1.318-1.783	1.67	68.2	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.501	0.434-0.587	4.11	93.6	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.455	0.434-0.587	3.50	96.9	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.498	0.434-0.587	3.92	88.9	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.483	0.434-0.587	4.57	86.7	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.294	1.054-1.426	4.23	86.3	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.266	1.054-1.426	3.50	82.1	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.379	0.374-0.506	4.82	88.2	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.432	0.374-0.506	6.05	81.9	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.089	0.893-1.208	5.22	84.6	23 - 140 %	
13C12-OCDD		0.912	0.757-1.024	6.47	48.9	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.92	91.7	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:10:07 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-11, Name: 20112318, Date: 23-Nov-2020, Time: 23:49:10, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF					0.729		0.770	622	1328								
12378-PeCDF					0.779		1.550	650	1545								
23478-PeCDF					0.880		1.550	650	1545								
123478-HxCDF					0.880		1.240	459	355								
234678-HxCDF					0.863		1.240	459	355								
123678-HxCDF					0.853		1.240	459	355								
123789-HxCDF					0.780		1.240	459	355								
1234678-HpCDF					1.001		1.050	497	433								
1234789-HpCDF					0.994		1.050	497	433								
OCDF	45.339	1.006	5.801e2	5.772e2	1.158	1.005	0.890	343	879	8.83e3	7.46e3	25.7	8.5	NO	MM	MM	0.539
2378-TCDD					1.238		0.770	1258	591								
12378-PeCDD					0.988		1.550	588	443								
123478-HxCDD					0.842		1.240	522	527								
123678-HxCDD					0.907		1.240	522	527								
123789-HxCDD					0.784		1.240	522	527								
1234678-HpCDD					1.044		1.050	645	471								
OCDD	45.074	1.000	2.832e3	3.414e3	0.963	0.829	0.890	439	491	3.01e4	4.13e4	68.6	84.2	NO	bb	bd	3.498
13C-2378-TCDF	25.833	1.007	5.657e5	7.142e5	2.203	0.792	0.770	2945	2610	8.28e6	1.03e7	2811.4	3963.1	NO	bb	bb	78.893
13C-12378-PeCDF	29.986	1.169	5.534e5	3.471e5	1.741	1.594	1.550	3267	4560	7.65e6	4.90e6	2343.2	1075.2	NO	bb	bd	70.236
13C-23478-PeCDF	31.322	1.221	5.040e5	3.280e5	1.669	1.537	1.550	3267	4560	7.28e6	4.79e6	2227.8	1050.7	NO	bb	bb	67.671
13C-123478-HxCDF	34.939	0.956	1.787e5	3.563e5	1.022	0.501	0.510	2507	3243	2.70e6	5.42e6	1076.0	1670.0	NO	bd	bd	93.593
13C-123678-HxCDF	35.084	0.960	2.035e5	4.469e5	1.200	0.455	0.510	2507	3243	2.89e6	5.83e6	1153.0	1797.4	NO	db	dd	96.914
13C-234678-HxCDF	35.941	0.983	1.771e5	3.556e5	1.071	0.498	0.510	2507	3243	2.60e6	5.23e6	1037.6	1612.3	NO	bb	bb	88.946
13C-123789-HxCDF	36.965	1.011	1.450e5	3.003e5	0.919	0.483	0.510	2507	3243	2.06e6	4.16e6	821.0	1282.5	NO	bb	bb	86.695
13C-1234678-HpCDF	38.801	1.061	1.230e5	3.249e5	0.909	0.379	0.440	2817	3176	1.90e6	4.49e6	674.5	1414.5	NO	bb	bd	88.158
13C-1234789-HpCDF	41.050	1.123	1.000e5	2.314e5	0.724	0.432	0.440	2817	3176	1.28e6	3.11e6	455.8	979.5	NO	bb	bb	81.904
13C-1234-TCDD	25.652	0.000	3.302e5	4.062e5	1.000	0.813	0.770	2328	1298	5.06e6	6.26e6	2172.9	4824.7	NO	bb	bb	100.000
13C-2378-TCDD	26.468	1.032	2.989e5	3.728e5	1.181	0.802	0.770	2328	1298	4.42e6	5.48e6	1900.9	4224.5	NO	bb	bb	77.194
13C-12378-PeCDD	31.578	1.231	3.055e5	1.855e5	0.978	1.647	1.550	1676	1549	4.52e6	2.72e6	2695.7	1758.0	NO	bb	bb	68.177
13C-123478-HxCDD	36.063	0.987	2.626e5	2.030e5	0.965	1.294	1.240	2635	2961	4.06e6	3.15e6	1539.3	1062.3	NO	bd	bd	86.292
13C-123678-HxCDD	36.175	0.990	2.994e5	2.365e5	1.168	1.266	1.240	2635	2961	4.36e6	3.44e6	1654.3	1161.4	NO	db	db	82.061
13C-1234678-HpCDD	40.304	1.103	1.591e5	1.462e5	0.645	1.089	1.050	2219	2389	2.24e6	2.11e6	1007.8	882.4	NO	bb	bb	84.620
13C-OCDD	45.064	1.233	1.769e5	1.939e5	0.678	0.912	0.890	3437	2576	1.88e6	2.08e6	548.2	809.1	NO	bd	bd	97.776
13C-123789-HxCDD	36.553	0.000	3.201e5	2.391e5	1.000	1.339	1.240	2635	2961	4.47e6	3.49e6	1696.4	1179.2	NO	bb	bb	100.000
37CL-2378-TCDD	26.483	1.032	3.415e5		1.264			2300		5.00e6		2174.7			bb		36.673

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:10:07 Pacific Standard Time

ID: 20J0389-11, Name: 20112318, Date: 23-Nov-2020, Time: 23:49:10, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	622	1328								
1289-TCDF					0.688		0.770	622	1328								
13468-PECDF					1.181		1.550	401	1055								
12389-PECDF					0.766		1.550	650	1545								
123468-HXCDF					1.003		1.240	459	355								
1368-TCDD					1.179		0.770	1258	591								
1289-TCDD					1.042		0.770	1258	591								
12479-PECDD					1.810		1.550	588	443								
12389-PECDD					1.165		1.550	588	443								
124679-HXCDD					1.056		1.240	522	527								
1234679-HPCDD	39.269	0.974	2.796e2	2.193e2	1.285	1.275	1.050	645	471	5.14e3	4.41e3	8.0	9.4	YES	bb	bb	0.127
Total-tetrafurans			0.000e0		0.754			622		0.00e0							
Total-penta1			0.000e0					401		0.00e0							
Total-pentafurans			0.000e0		0.809			650		0.00e0							
Total-hexafurans			0.000e0		0.876			459		0.00e0							
Total-heptafurans			0.000e0		0.997			497		0.00e0							
Total-Furans			5.801e2		0.893			622		8.83e3							0.539
Total-tetradioxins			0.000e0		1.153			1258		0.00e0							
Total-pentadioxins			0.000e0		1.321			588		0.00e0							
Total-hexadioxins			0.000e0		0.897			522		0.00e0							
Total-heptadioxins			0.000e0		1.165			645		0.00e0							
Total-Dioxins			2.832e3		1.100			1258		3.01e4							3.498
Total-TEQ			3.412e3					1258		3.90e4							4.037
FUNCTION1 PFK			3.037e7					573290		1.65e8							
FUNCTION2 PFK			9.871e4					312131		2.84e6							0.000
FUNCTION3 PFK			1.100e6					292541		2.16e7							0.000
FUNCTION4 PFK			5.064e5					269857		1.12e7							
FUNCTION5 PFK			2.942e5					179570		6.63e6							
FUNCTION1 HXCD...			1.686e2					359		4.39e3							0.000
FUNCTION1 HPCD...			1.273e3					990		2.69e4							0.000
FUNCTION2 HPCD...			5.526e2					996		1.60e4							0.000
FUNCTION3 OCDPE			0.000e0					290		0.00e0							
FUNCTION4 NCDPE			0.000e0					338		0.00e0							
FUNCTION5 DCDPE			0.000e0					199		0.00e0							

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-11, Name: 20112318, Date: 23-Nov-2020, Time: 23:49:10, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	OCDF	45.34	5.801e2	5.772e2	1.158	1.00	0.89	25.7	YES	NO	MM	MM	0.539

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ID: 20J0389-11, Name: 20112318, Date: 23-Nov-2020, Time: 23:49:10, Conditions: AUTOSPEC01, User: pk

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	OCDD	45.07	2.832e3	3.414e3	0.963	0.83	0.89	68.6	YES	NO	bb	bd	3.498

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	OCDF	45.34	5.801e2	5.772e2	1.158	1.00	0.89	25.7	YES	NO	MM	MM	0.539
2	OCDD	45.07	2.832e3	3.414e3	0.963	0.83	0.89	68.6	YES	NO	bb	bd	3.498

ID: 20J0389-11, Name: 20112318, Date: 23-Nov-2020, Time: 23:49:10, Conditions: AUTOSPEC01, User: pk

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.63	5.461e6					38.1	YES		dd		
2	FUNCTION1 PFK	21.39	4.764e6					45.5	YES		dd		
3	FUNCTION1 PFK	21.16	6.261e6					52.7	YES		bd		
4	FUNCTION1 PFK	24.14	8.929e4					2.3	NO		dd		
5	FUNCTION1 PFK	24.02	7.117e4					1.7	NO		dd		
6	FUNCTION1 PFK	23.91	3.775e4					1.7	NO		bd		
7	FUNCTION1 PFK	23.78	5.707e4					1.7	NO		db		
8	FUNCTION1 PFK	23.69	1.262e5					3.0	NO		dd		
9	FUNCTION1 PFK	23.57	1.545e5					3.2	YES		dd		
10	FUNCTION1 PFK	23.43	9.201e4					2.3	NO		bd		
11	FUNCTION1 PFK	23.22	3.347e4					1.1	NO		bb		
12	FUNCTION1 PFK	23.11	3.489e4					1.1	NO		bb		
13	FUNCTION1 PFK	23.01	7.186e3					0.4	NO		bb		
14	FUNCTION1 PFK	22.87	2.463e4					0.6	NO		bb		
15	FUNCTION1 PFK	22.66	1.876e5					5.9	YES		db		
16	FUNCTION1 PFK	22.63	4.878e5					5.4	YES		dd		
17	FUNCTION1 PFK	22.43	7.371e5					12.4	YES		dd		
18	FUNCTION1 PFK	22.31	1.034e6					16.5	YES		dd		
19	FUNCTION1 PFK	21.74	8.697e6					35.2	YES		dd		
20	FUNCTION1 PFK	25.79	4.208e4					1.7	NO		dd		
21	FUNCTION1 PFK	25.71	4.443e4					1.5	NO		dd		
22	FUNCTION1 PFK	25.62	7.093e4					1.5	NO		dd		
23	FUNCTION1 PFK	25.49	5.394e4					1.6	NO		dd		
24	FUNCTION1 PFK	25.38	5.518e4					1.9	NO		bd		
25	FUNCTION1 PFK	25.24	6.851e4					1.6	NO		db		
26	FUNCTION1 PFK	25.14	5.346e4					1.8	NO		bd		
27	FUNCTION1 PFK	25.00	5.603e4					1.5	NO		bb		
28	FUNCTION1 PFK	24.93	1.104e4					0.5	NO		bb		
29	FUNCTION1 PFK	24.76	1.935e3					0.2	NO		bb		
30	FUNCTION1 PFK	24.70	2.968e4					1.2	NO		bb		
31	FUNCTION1 PFK	24.56	6.768e4					1.5	NO		db		
32	FUNCTION1 PFK	24.47	2.957e4					1.2	NO		dd		
33	FUNCTION1 PFK	24.41	1.576e4					1.0	NO		dd		
34	FUNCTION1 PFK	24.35	8.021e4					2.1	NO		dd		
35	FUNCTION1 PFK	24.25	7.669e4					1.8	NO		dd		
36	FUNCTION1 PFK	27.37	5.968e4					1.6	NO		dd		
37	FUNCTION1 PFK	27.27	7.954e4					1.9	NO		dd		

ID: 20J0389-11, Name: 20112318, Date: 23-Nov-2020, Time: 23:49:10, Conditions: AUTOSPEC01, User: pk

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	27.18	6.063e4					1.6	NO		dd		
39	FUNCTION1 PFK	27.07	6.290e4					1.7	NO		dd		
40	FUNCTION1 PFK	26.97	1.208e5					2.3	NO		dd		
41	FUNCTION1 PFK	26.86	6.952e4					2.1	NO		bd		
42	FUNCTION1 PFK	26.75	1.632e4					0.9	NO		db		
43	FUNCTION1 PFK	26.69	5.527e4					1.5	NO		dd		
44	FUNCTION1 PFK	26.62	5.847e4					2.1	NO		bd		
45	FUNCTION1 PFK	26.50	6.981e4					2.0	NO		db		
46	FUNCTION1 PFK	26.36	7.850e4					1.8	NO		dd		
47	FUNCTION1 PFK	26.27	5.099e4					1.5	NO		dd		
48	FUNCTION1 PFK	26.15	9.190e4					1.9	NO		dd		
49	FUNCTION1 PFK	26.03	4.704e4					1.5	NO		bd		
50	FUNCTION1 PFK	25.92	4.815e4					2.2	NO		bb		
51	FUNCTION1 PFK	25.83	4.885e4					1.6	NO		db		
52	FUNCTION1 PFK	28.07	4.203e4					1.2	NO		db		
53	FUNCTION1 PFK	27.96	6.810e4					1.9	NO		dd		
54	FUNCTION1 PFK	27.86	4.249e4					1.3	NO		bd		
55	FUNCTION1 PFK	27.63	1.943e4					0.8	NO		bb		
56	FUNCTION1 PFK	27.53	6.611e4					1.8	NO		db		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	31.86	3.681e4					2.9	NO		db		0.000
2	FUNCTION2 PFK	31.79	1.314e4					1.6	NO		bd		0.000
3	FUNCTION2 PFK	31.51	1.075e4					1.4	NO		bb		0.000
4	FUNCTION2 PFK	30.26	3.531e4					2.4	NO		bb		0.000
5	FUNCTION2 PFK	28.38	2.687e3					0.8	NO		bb		0.000

ID: 20J0389-11, Name: 20112318, Date: 23-Nov-2020, Time: 23:49:10, Conditions: AUTOSPEC01, User: pk

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.34	9.948e4					3.9	YES		dd		0.000
2	FUNCTION3 PFK	33.24	4.764e4					3.0	NO		dd		0.000
3	FUNCTION3 PFK	33.18	1.407e4					2.1	NO		bd		0.000
4	FUNCTION3 PFK	33.09	3.815e4					2.9	NO		bb		0.000
5	FUNCTION3 PFK	35.70	4.171e4					2.4	NO		dd		0.000
6	FUNCTION3 PFK	35.55	5.419e4					2.6	NO		dd		0.000
7	FUNCTION3 PFK	35.50	4.379e4					2.6	NO		bd		0.000
8	FUNCTION3 PFK	35.14	4.201e4					2.8	NO		bb		0.000
9	FUNCTION3 PFK	35.05	6.542e3					1.0	NO		bb		0.000
10	FUNCTION3 PFK	34.92	2.834e4					1.9	NO		bb		0.000
11	FUNCTION3 PFK	34.67	3.834e4					2.3	NO		bb		0.000
12	FUNCTION3 PFK	34.33	4.083e4					2.4	NO		bb		0.000
13	FUNCTION3 PFK	34.24	4.125e4					1.9	NO		db		0.000
14	FUNCTION3 PFK	34.09	3.416e4					2.0	NO		bd		0.000
15	FUNCTION3 PFK	34.02	5.546e4					3.5	YES		db		0.000
16	FUNCTION3 PFK	33.92	1.891e4					2.0	NO		dd		0.000
17	FUNCTION3 PFK	33.87	1.682e4					1.9	NO		bd		0.000
18	FUNCTION3 PFK	33.67	2.007e4					1.8	NO		db		0.000
19	FUNCTION3 PFK	33.53	4.812e4					2.2	NO		dd		0.000
20	FUNCTION3 PFK	33.45	5.289e4					2.7	NO		dd		0.000
21	FUNCTION3 PFK	37.86	1.442e4					1.5	NO		bb		0.000
22	FUNCTION3 PFK	37.74	1.248e4					1.4	NO		bb		0.000
23	FUNCTION3 PFK	37.63	1.447e4					1.4	NO		bb		0.000
24	FUNCTION3 PFK	37.15	7.742e3					1.2	NO		db		0.000
25	FUNCTION3 PFK	37.09	4.038e4					2.3	NO		bd		0.000
26	FUNCTION3 PFK	36.94	4.550e4					2.2	NO		bb		0.000
27	FUNCTION3 PFK	36.74	1.806e4					1.6	NO		bb		0.000
28	FUNCTION3 PFK	36.62	2.200e4					1.9	NO		bb		0.000
29	FUNCTION3 PFK	36.49	1.413e4					1.6	NO		db		0.000
30	FUNCTION3 PFK	36.44	4.783e3					0.7	NO		bd		0.000
31	FUNCTION3 PFK	36.40	1.637e4					1.8	NO		db		0.000
32	FUNCTION3 PFK	36.36	1.701e4					1.2	NO		bd		0.000
33	FUNCTION3 PFK	36.26	2.987e4					2.3	NO		bb		0.000
34	FUNCTION3 PFK	36.16	2.195e4					1.6	NO		bb		0.000
35	FUNCTION3 PFK	35.84	3.373e4					2.4	NO		bb		0.000
36	FUNCTION3 PFK	35.76	4.196e3					0.8	NO		db		0.000

Dataset: T:\Autospec\Processed Data Batch\201123.qld
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Printed: Tuesday, November 24, 2020 10:10:07 Pacific Standard Time

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	41.15	2.893e4					2.0	NO		bb		
2	FUNCTION4 PFK	41.04	2.667e4					2.1	NO		bb		
3	FUNCTION4 PFK	40.63	1.024e4					0.9	NO		bb		
4	FUNCTION4 PFK	40.57	1.089e4					1.3	NO		bb		
5	FUNCTION4 PFK	40.23	1.989e4					1.8	NO		bb		
6	FUNCTION4 PFK	40.14	2.410e4					1.8	NO		bb		
7	FUNCTION4 PFK	39.91	1.035e4					1.4	NO		db		
8	FUNCTION4 PFK	39.87	6.238e3					0.9	NO		bd		
9	FUNCTION4 PFK	39.61	1.492e3					0.5	NO		bb		
10	FUNCTION4 PFK	39.34	2.710e4					2.2	NO		bb		
11	FUNCTION4 PFK	39.11	2.657e4					2.0	NO		bb		
12	FUNCTION4 PFK	38.89	2.097e4					1.9	NO		bb		
13	FUNCTION4 PFK	38.66	2.558e4					2.2	NO		bb		
14	FUNCTION4 PFK	38.21	2.975e4					2.7	NO		bb		
15	FUNCTION4 PFK	38.11	4.613e4					3.0	YES		bb		
16	FUNCTION4 PFK	42.94	2.205e4					2.3	NO		db		
17	FUNCTION4 PFK	42.83	3.753e4					2.3	NO		bd		
18	FUNCTION4 PFK	42.60	6.511e3					1.0	NO		bb		
19	FUNCTION4 PFK	42.50	2.016e4					2.0	NO		bb		
20	FUNCTION4 PFK	42.37	2.960e4					2.2	NO		db		
21	FUNCTION4 PFK	42.27	5.305e4					2.8	NO		bd		
22	FUNCTION4 PFK	41.35	2.258e4					2.1	NO		bb		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.18	1.059e4					1.7	NO		bb		
2	FUNCTION5 PFK	44.06	6.557e3					1.3	NO		bb		
3	FUNCTION5 PFK	43.95	1.594e4					1.6	NO		db		
4	FUNCTION5 PFK	43.85	2.785e4					2.4	NO		bd		
5	FUNCTION5 PFK	43.59	3.049e4					2.2	NO		db		
6	FUNCTION5 PFK	43.50	3.060e4					3.1	YES		dd		
7	FUNCTION5 PFK	43.44	2.526e3					0.7	NO		dd		
8	FUNCTION5 PFK	43.39	1.171e4					2.0	NO		bd		
9	FUNCTION5 PFK	46.27	1.832e3					0.5	NO		bb		
10	FUNCTION5 PFK	46.23	1.401e4					1.9	NO		db		
11	FUNCTION5 PFK	46.12	2.351e4					2.5	NO		dd		
12	FUNCTION5 PFK	45.96	2.165e4					1.7	NO		bd		
13	FUNCTION5 PFK	45.64	1.481e4					2.0	NO		db		
14	FUNCTION5 PFK	45.59	3.590e3					0.5	NO		bd		
15	FUNCTION5 PFK	45.41	1.478e4					1.7	NO		db		
16	FUNCTION5 PFK	45.38	2.224e3					0.7	NO		bd		
17	FUNCTION5 PFK	45.31	2.904e3					0.4	NO		bb		
18	FUNCTION5 PFK	45.21	8.578e3					1.7	NO		db		
19	FUNCTION5 PFK	45.17	7.209e3					1.6	NO		bd		
20	FUNCTION5 PFK	44.98	1.876e4					2.1	NO		bb		
21	FUNCTION5 PFK	44.49	3.988e3					0.9	NO		bb		
22	FUNCTION5 PFK	44.41	1.311e4					1.9	NO		bb		
23	FUNCTION5 PFK	44.33	1.934e3					0.7	NO		bb		
24	FUNCTION5 PFK	44.29	5.070e3					1.0	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	23.43	7.797e1					7.0	YES		bb		0.000
2	FUNCTION1 HXCD...	22.31	9.062e1					5.2	YES		bb		0.000

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	26.75	8.417e1					2.4	NO		bb		0.000
2	FUNCTION1 HPCD...	26.50	1.020e2					3.4	YES		bb		0.000
3	FUNCTION1 HPCD...	26.35	8.424e1					1.8	NO		bb		0.000
4	FUNCTION1 HPCD...	26.03	8.291e1					1.6	NO		bb		0.000
5	FUNCTION1 HPCD...	25.50	1.558e2					1.7	NO		bb		0.000
6	FUNCTION1 HPCD...	25.17	1.171e2					2.4	NO		bb		0.000
7	FUNCTION1 HPCD...	24.68	1.014e2					1.6	NO		bb		0.000
8	FUNCTION1 HPCD...	23.96	9.975e1					1.8	NO		bb		0.000
9	FUNCTION1 HPCD...	23.49	1.112e2					3.0	YES		bb		0.000
10	FUNCTION1 HPCD...	23.19	9.126e1					2.2	NO		bb		0.000
11	FUNCTION1 HPCD...	22.84	8.700e1					2.1	NO		bb		0.000
12	FUNCTION1 HPCD...	21.90	8.405e1					1.5	NO		bb		0.000
13	FUNCTION1 HPCD...	27.92	7.239e1					1.6	NO		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.21	7.105e1					1.7	NO		bb		0.000
2	FUNCTION2 HPCD...	32.02	8.499e1					2.1	NO		bb		0.000
3	FUNCTION2 HPCD...	31.28	1.366e2					4.3	YES		bb		0.000
4	FUNCTION2 HPCD...	30.90	7.133e1					1.7	NO		db		0.000
5	FUNCTION2 HPCD...	30.84	1.091e2					3.7	YES		bd		0.000
6	FUNCTION2 HPCD...	29.04	7.950e1					2.5	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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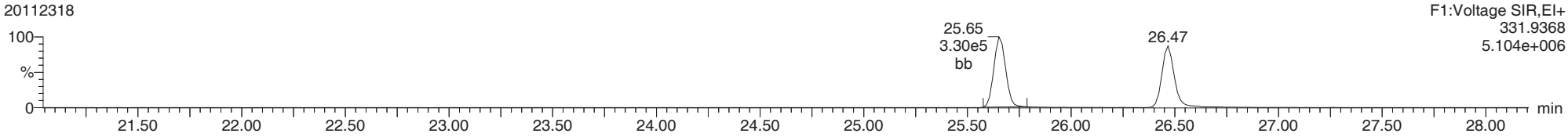
ID: 20J0389-11, Name: 20112318, Date: 23-Nov-2020, Time: 23:49:10, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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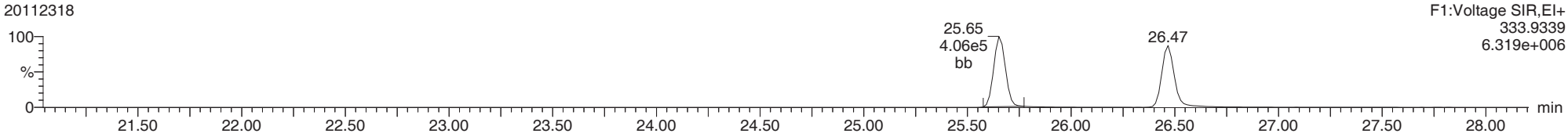
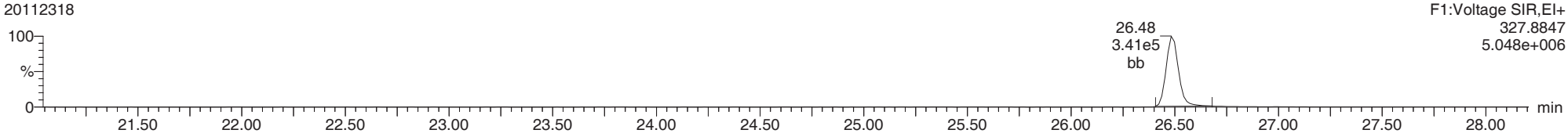


37CL-2378-TCDD



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ID: 20J0389-11, Name: 20112318, Date: 23-Nov-2020, Time: 23:49:10, Conditions: AUTOSPEC01, User: pk

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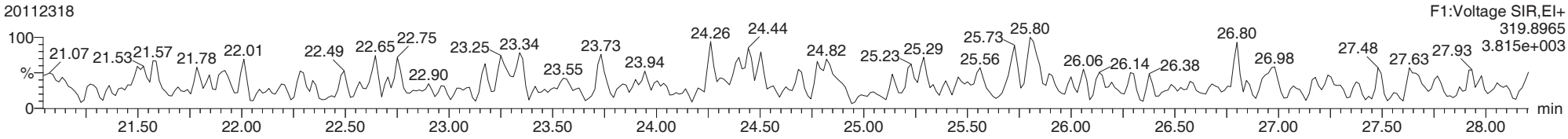

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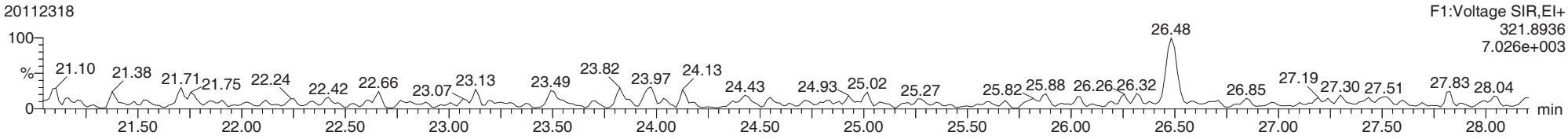

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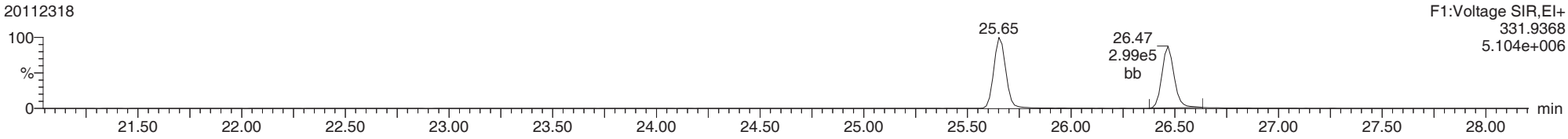

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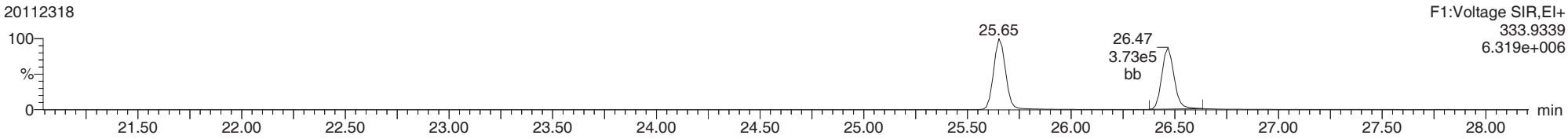

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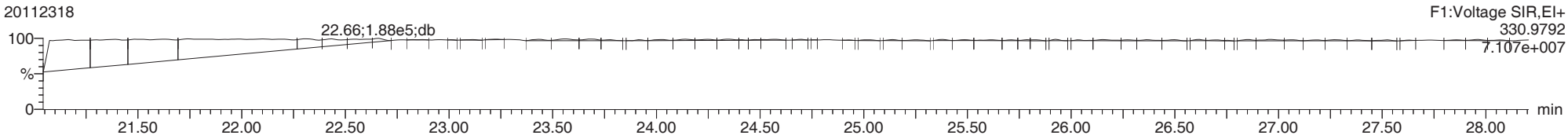

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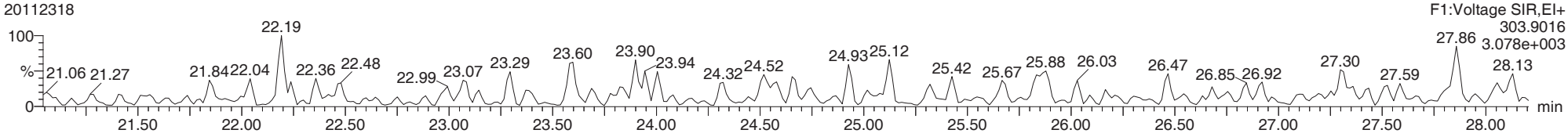

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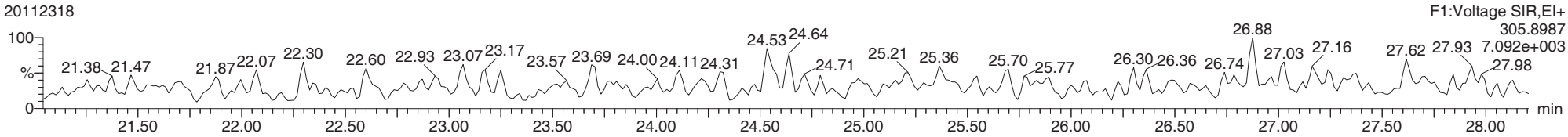

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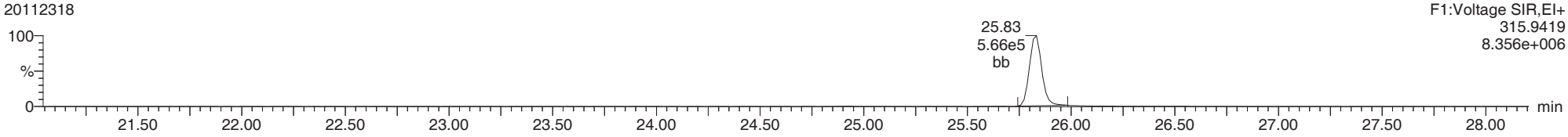

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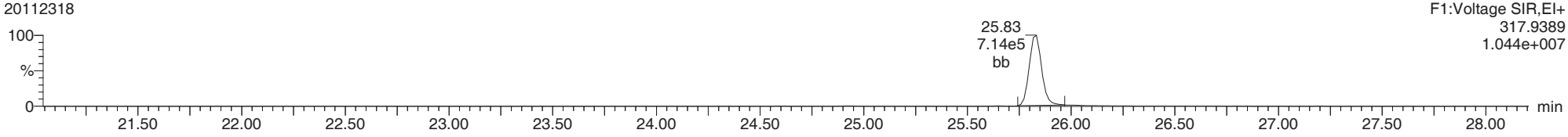

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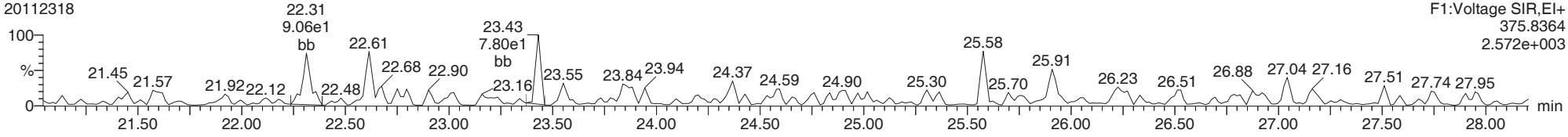

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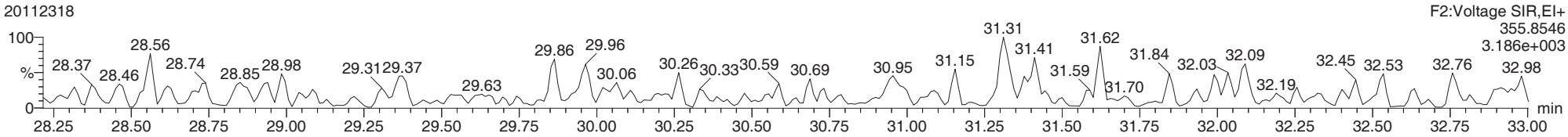
12378-PeCDD



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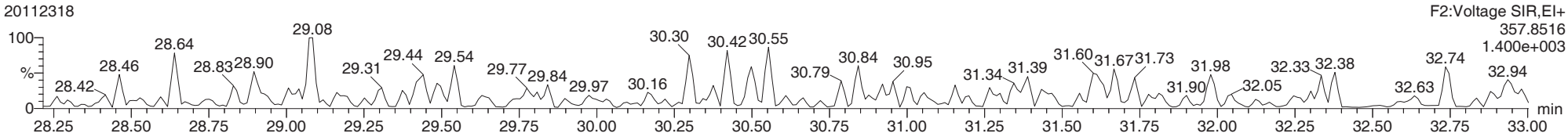

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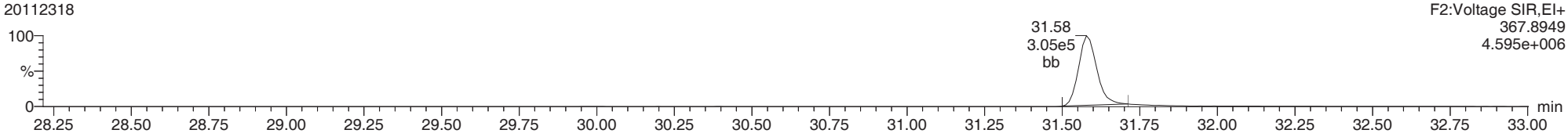

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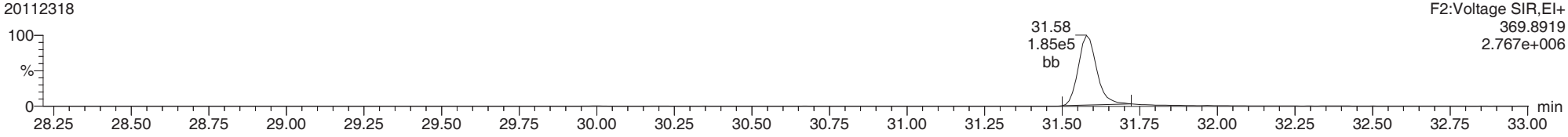
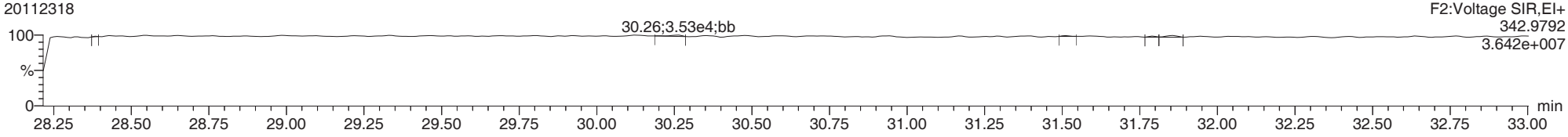


FUNCTION2 PFK



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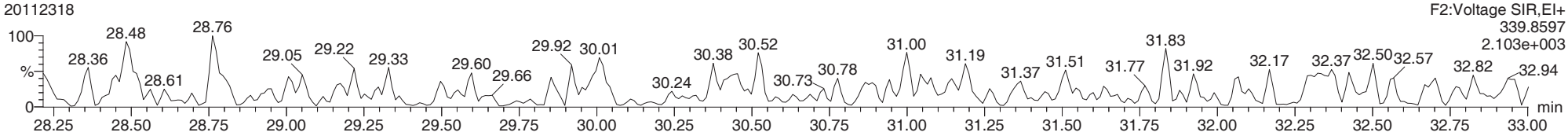

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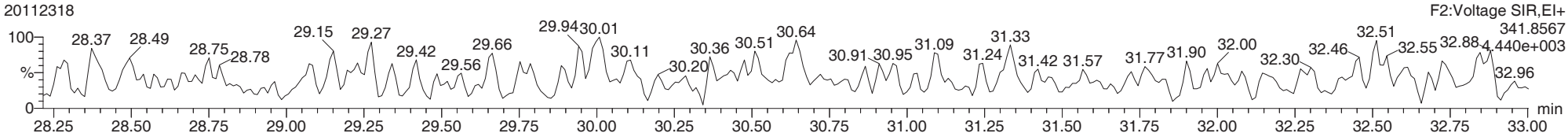

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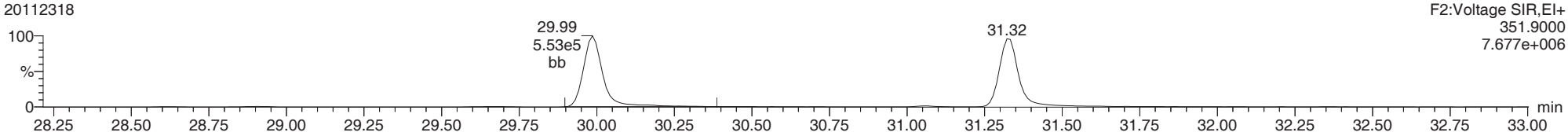

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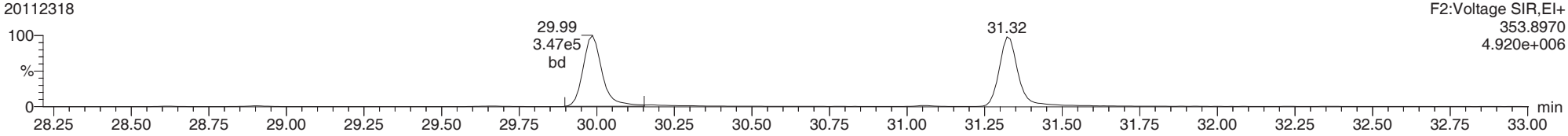
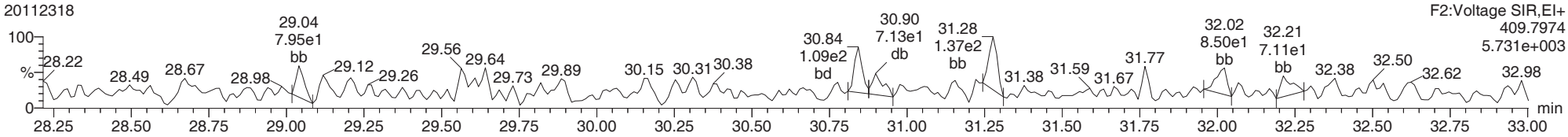


FUNCTION2 HPCDPE



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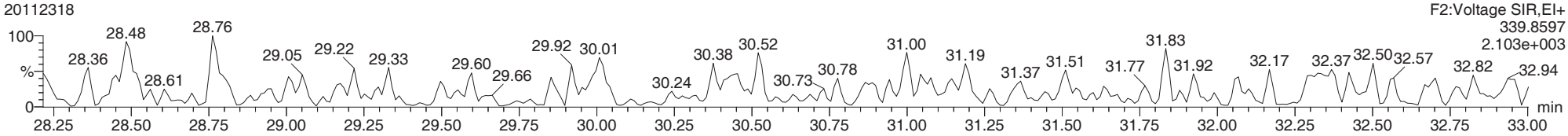
ID: 20J0389-11, Name: 20112318, Date: 23-Nov-2020, Time: 23:49:10, Conditions: AUTOSPEC01, User: pk

23478-PeCDF



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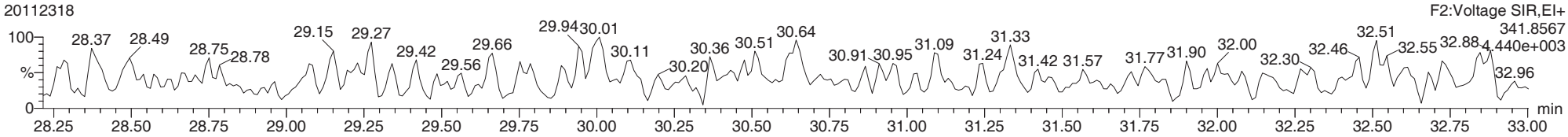

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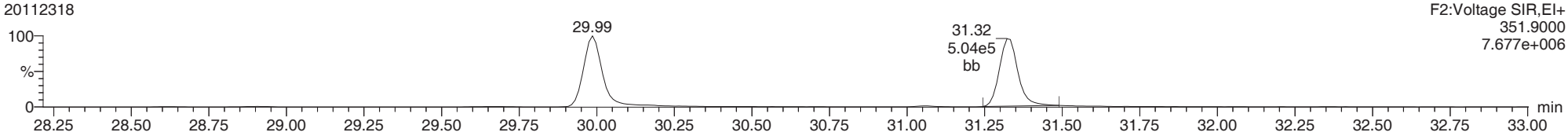

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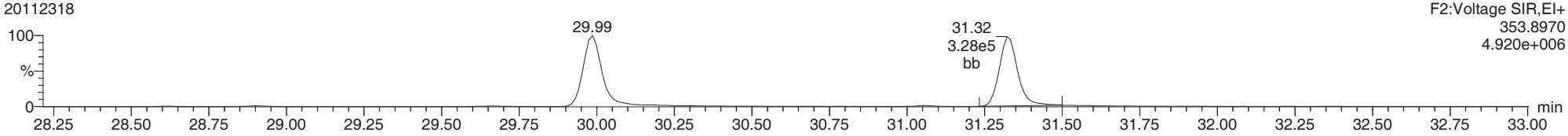
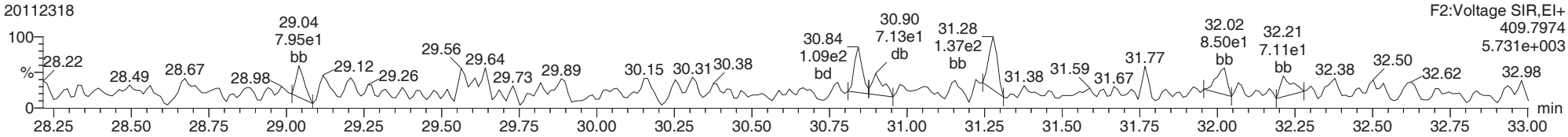


FUNCTION2 HPCDPE



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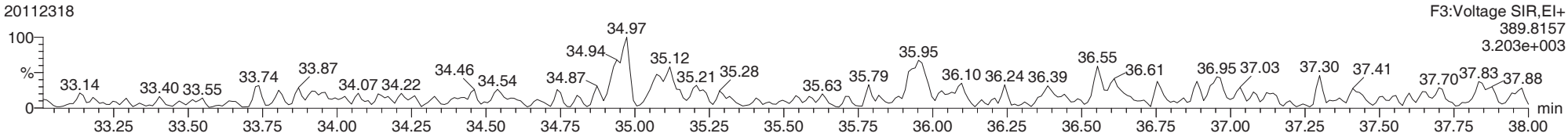
ID: 20J0389-11, Name: 20112318, Date: 23-Nov-2020, Time: 23:49:10, Conditions: AUTOSPEC01, User: pk

123478-HxCDD



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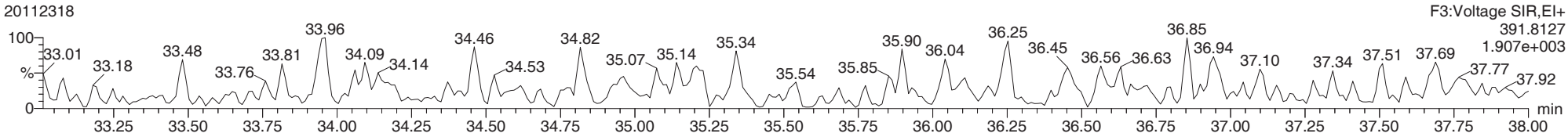

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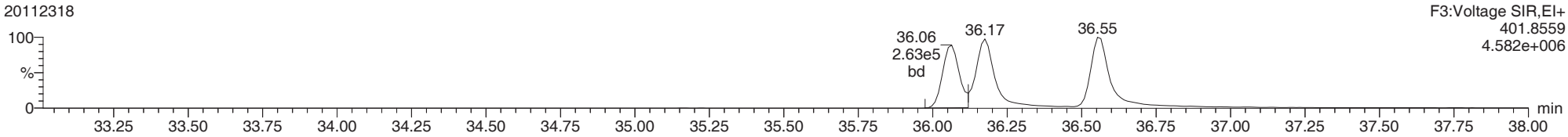

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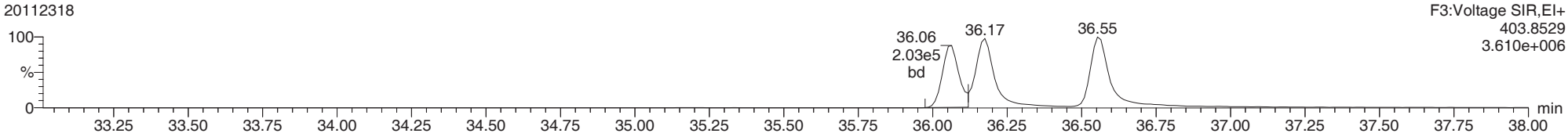

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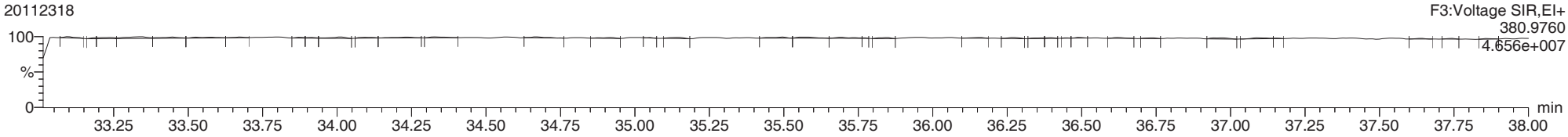

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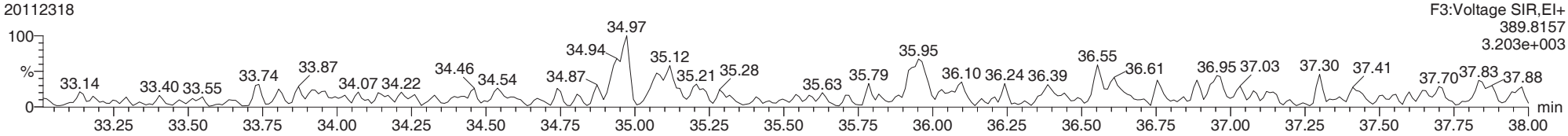

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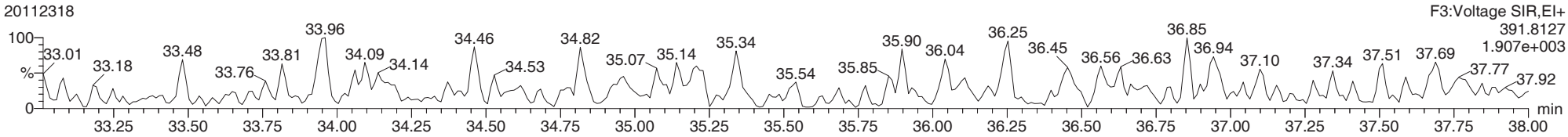

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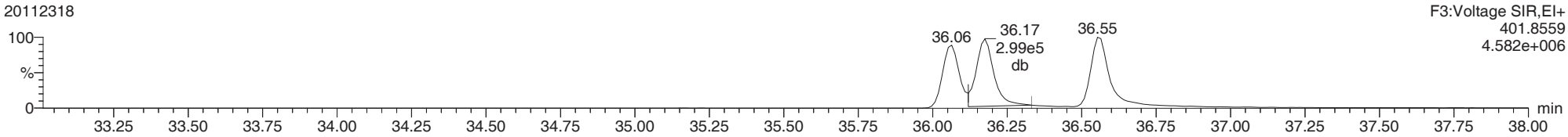

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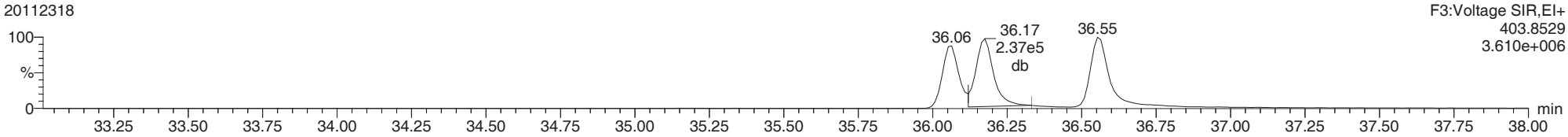

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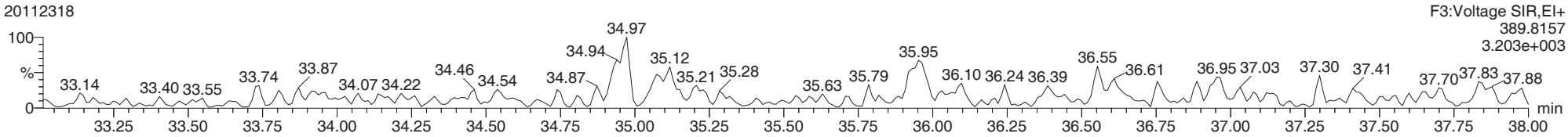

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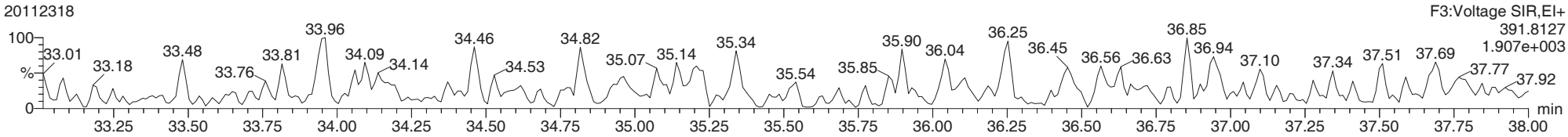

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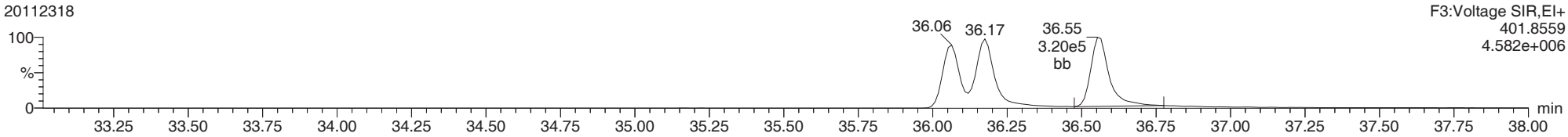

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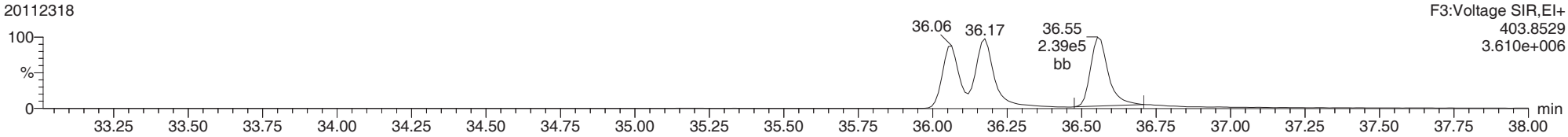

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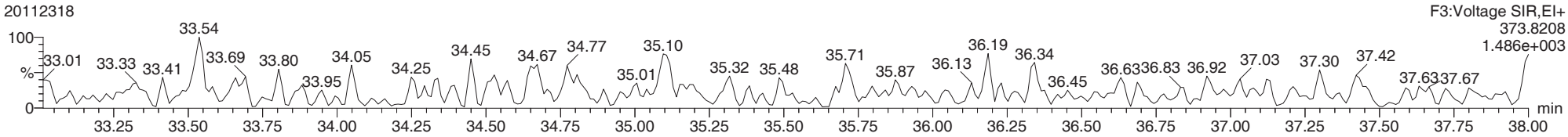

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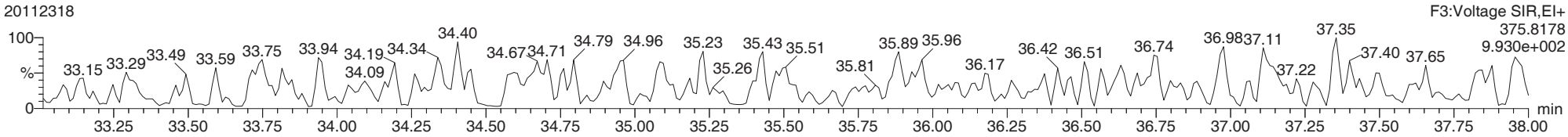

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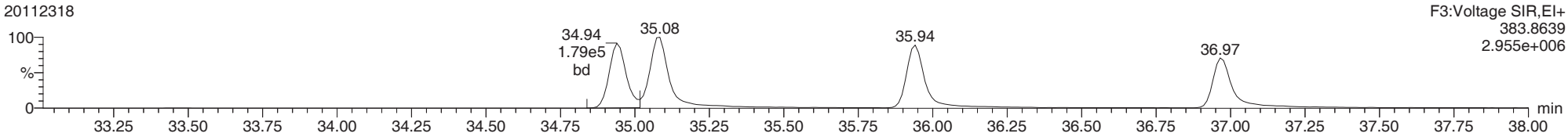

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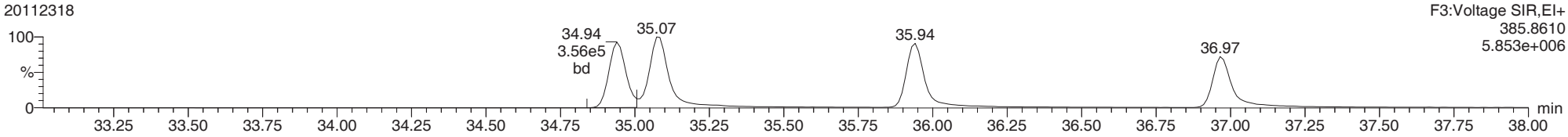

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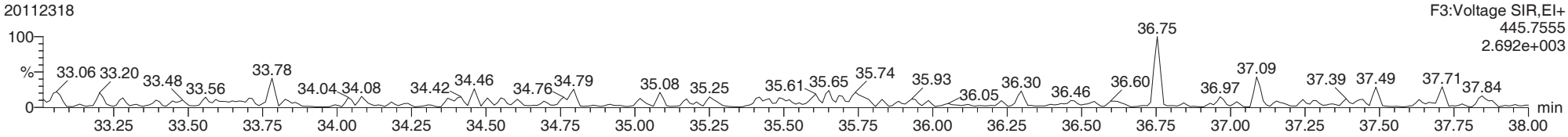

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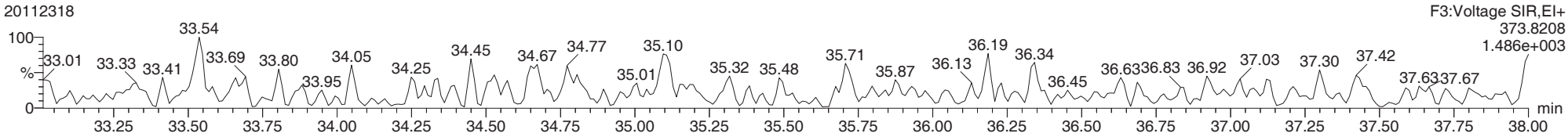
234678-HxCDF



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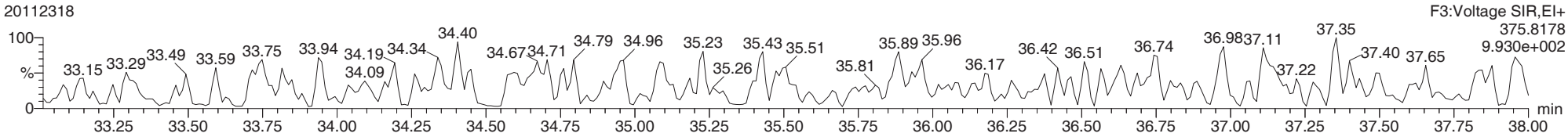

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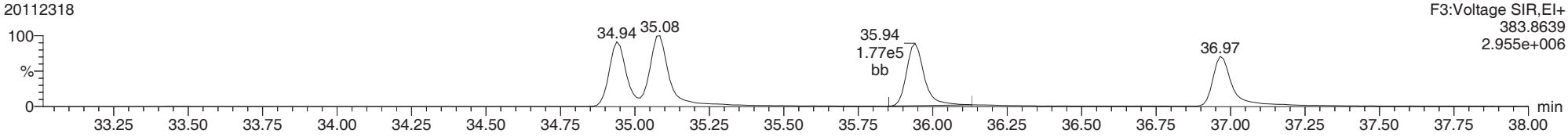

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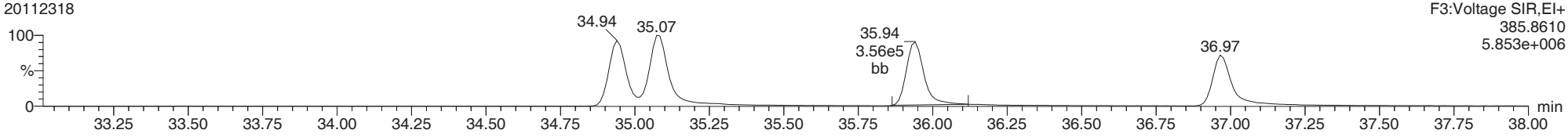

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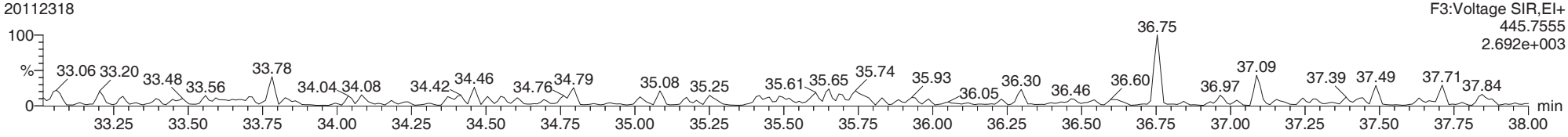

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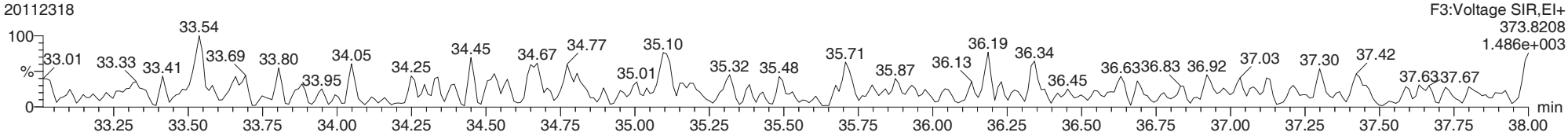

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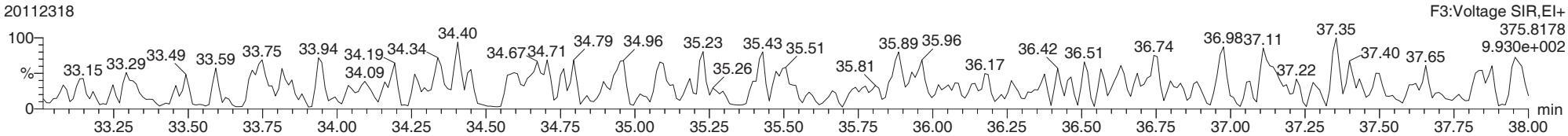

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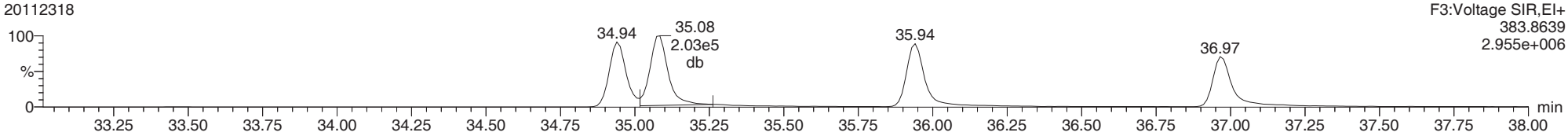

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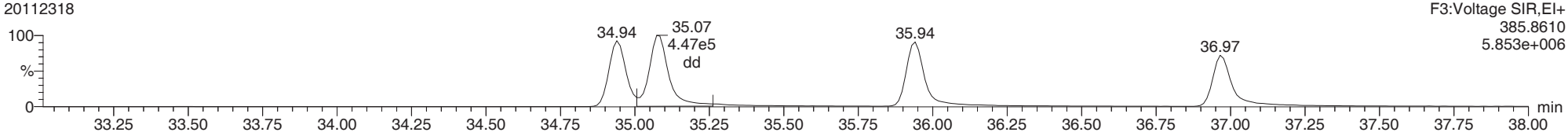

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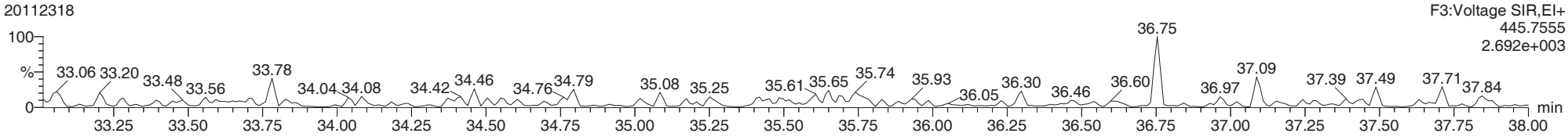

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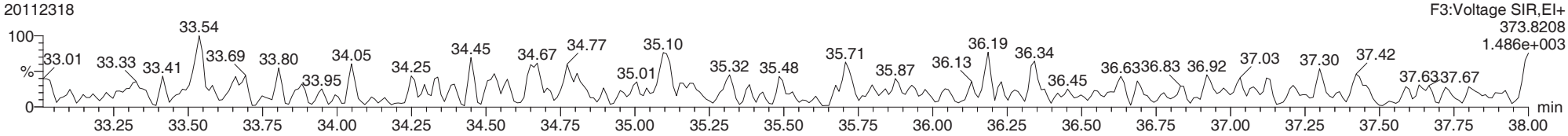

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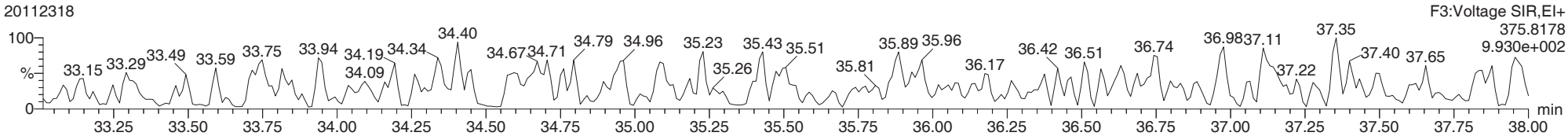

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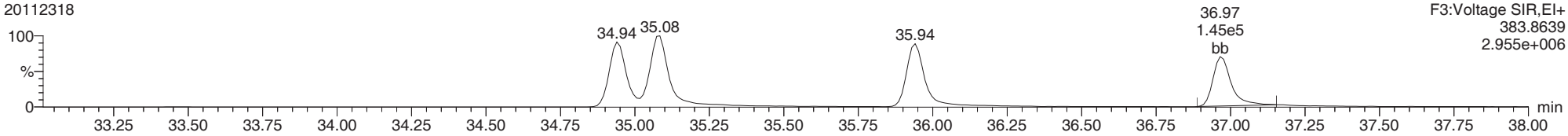

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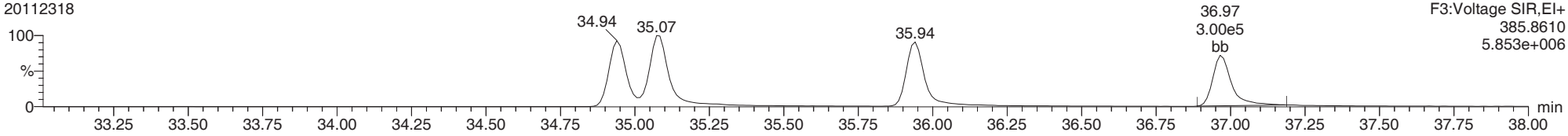

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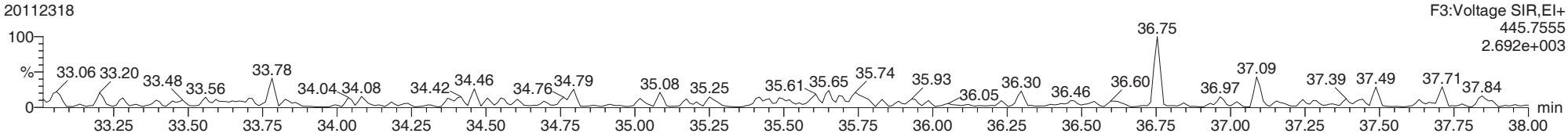

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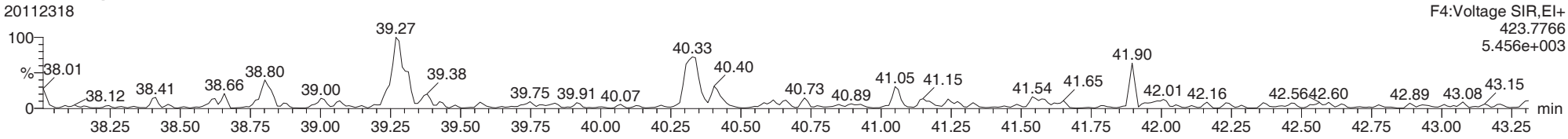

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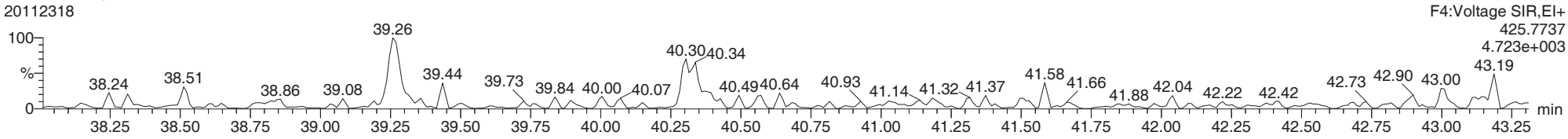

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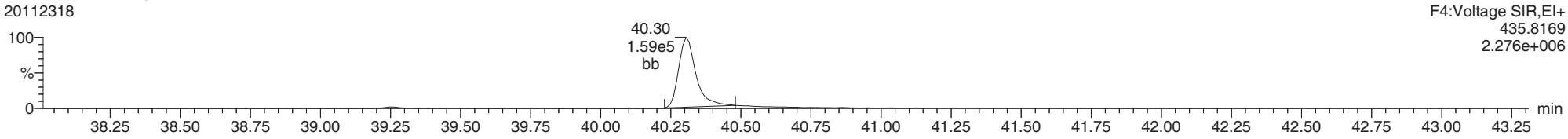

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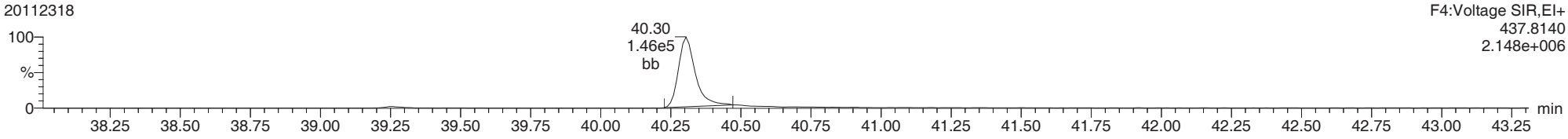
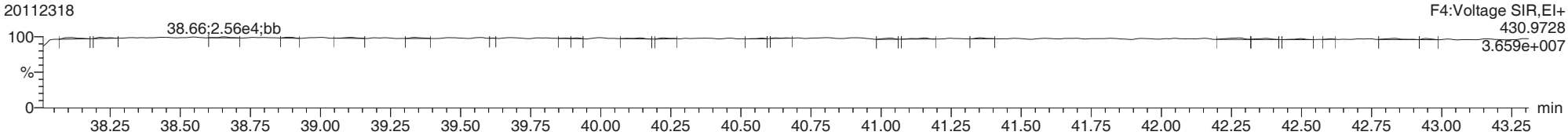


FUNCTION4 PFK



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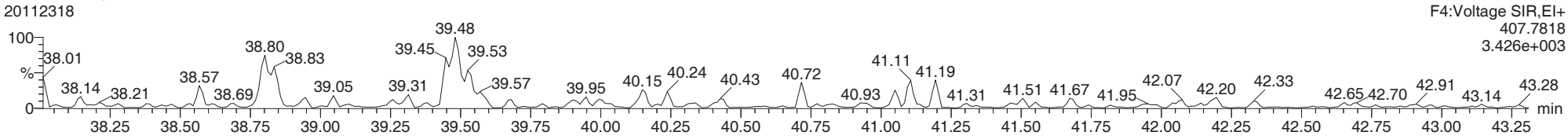
1234678-HpCDF



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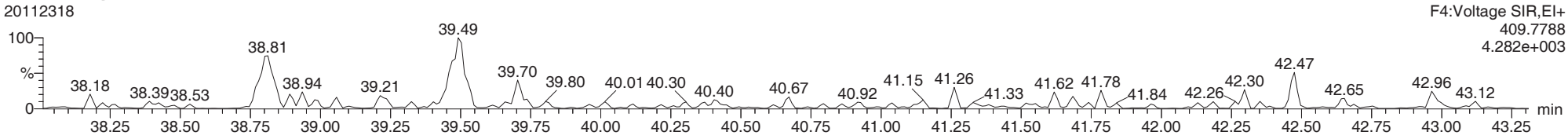

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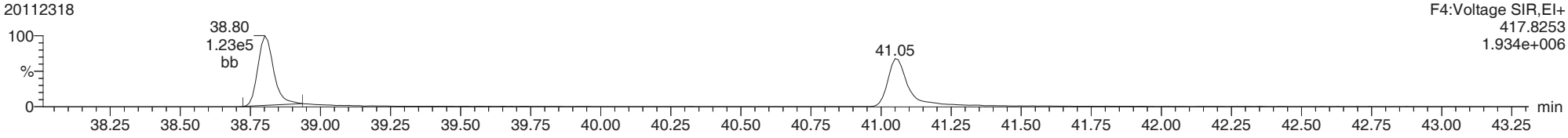

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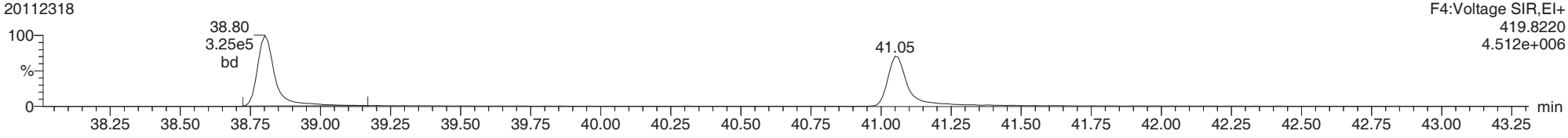
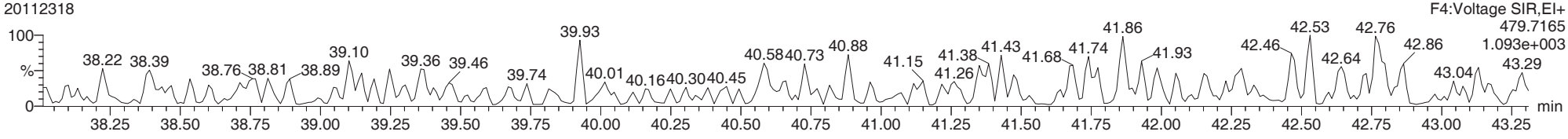


FUNCTION4 NCDPE



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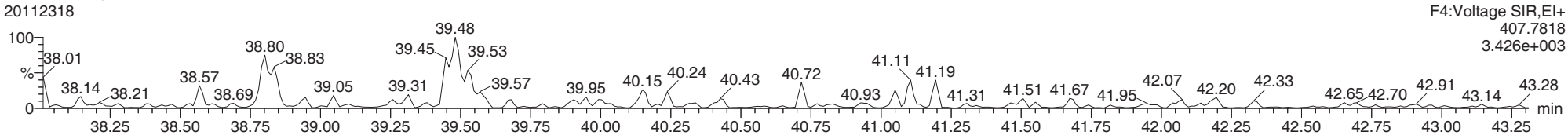
1234789-HpCDF



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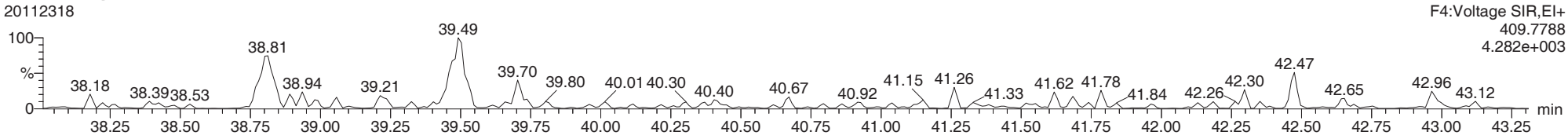

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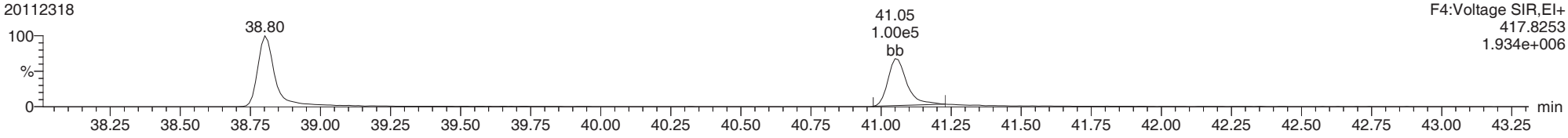

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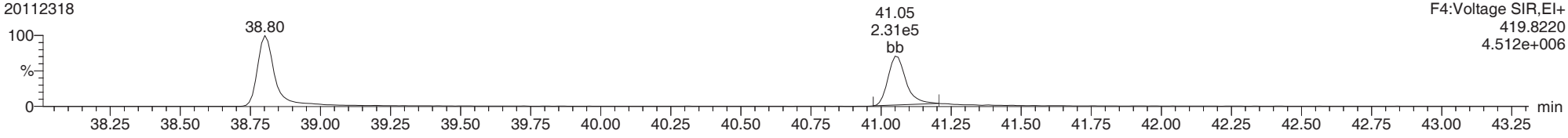

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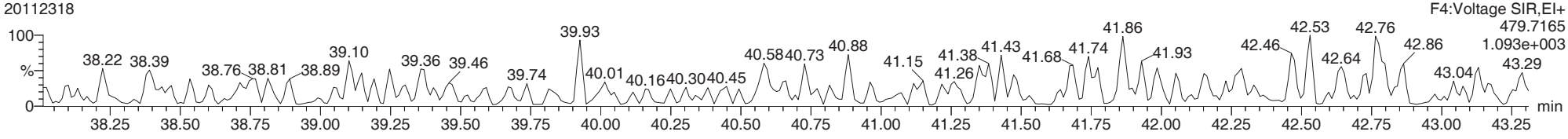

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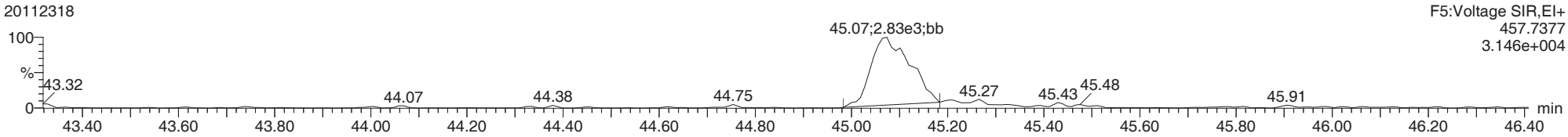
OCDD



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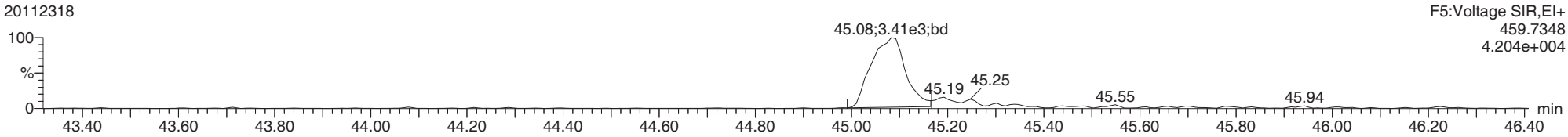

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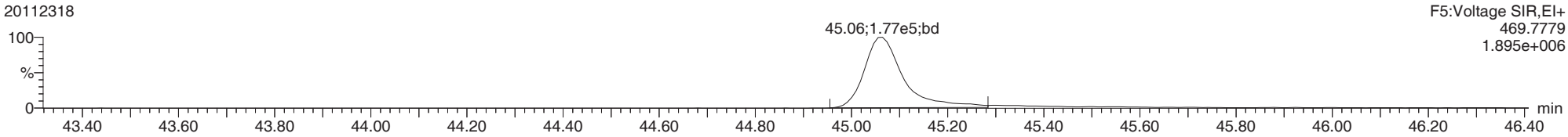

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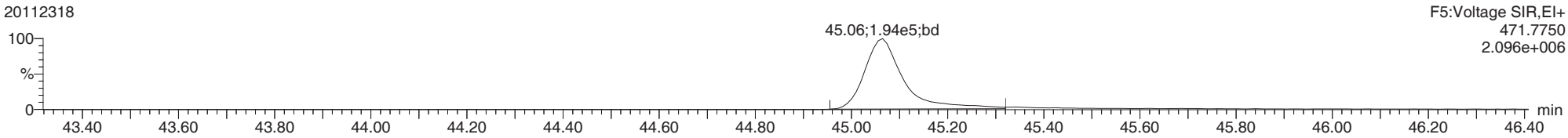
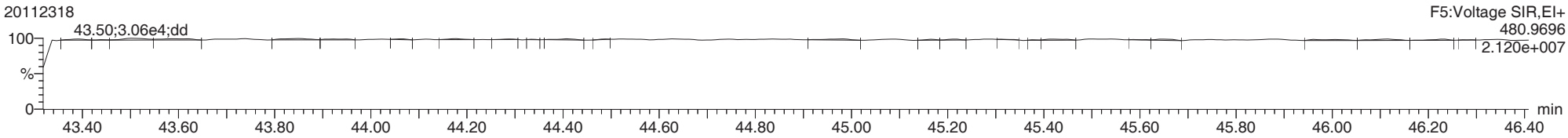


FUNCTION5 PFK



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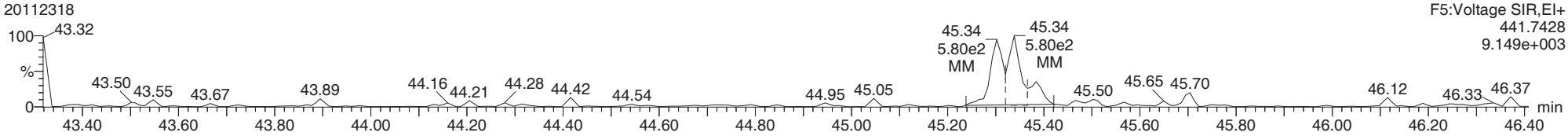
OCDF



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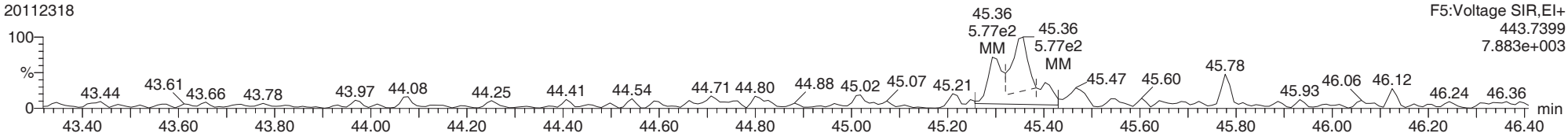
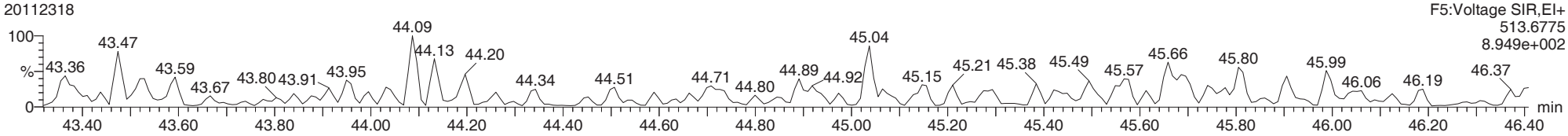


FUNCTION5 DCDPE



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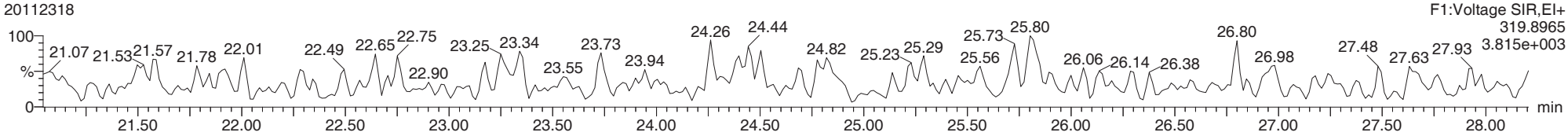
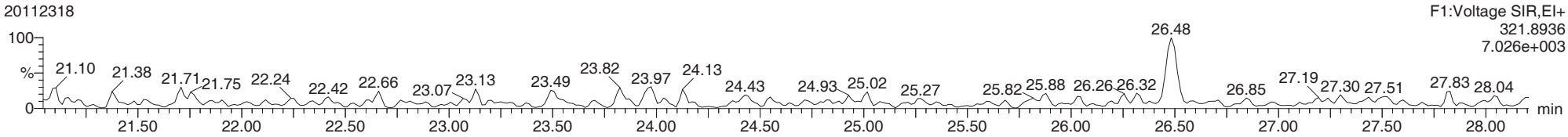
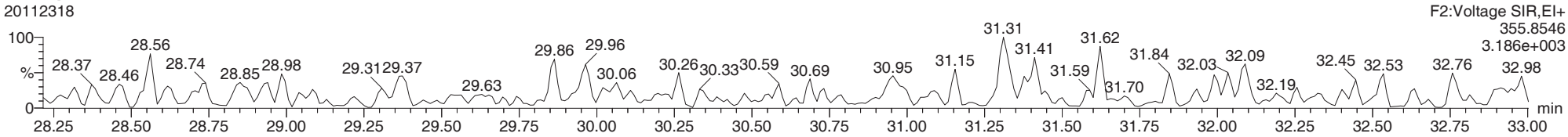
Total-tetradioxins



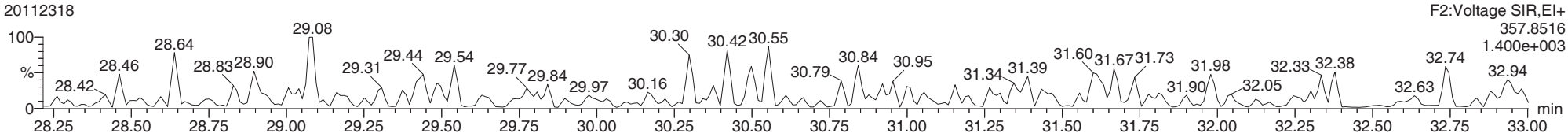
Total-tetradioxins



Total-pentadioxins

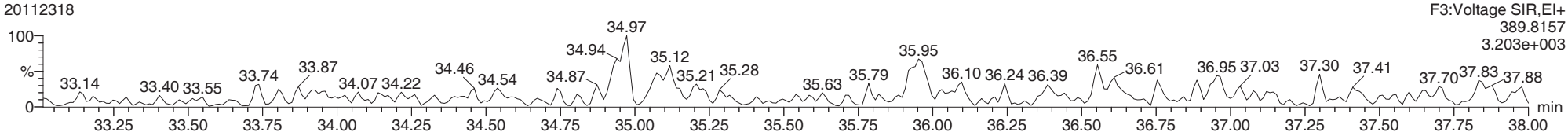


Total-pentadioxins

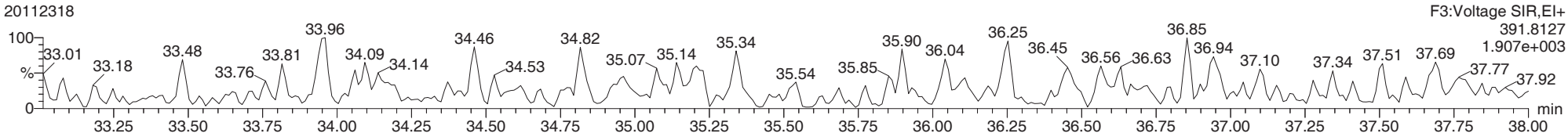


ID: 20J0389-11, Name: 20112318, Date: 23-Nov-2020, Time: 23:49:10, Conditions: AUTOSPEC01, User: pk

Total-hexadioxins



Total-hexadioxins



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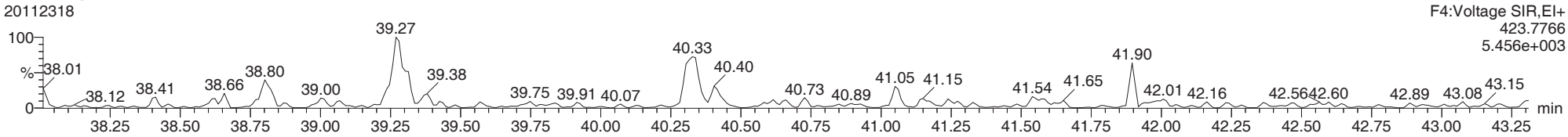

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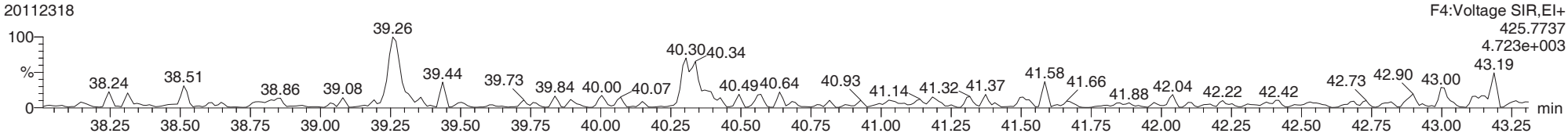
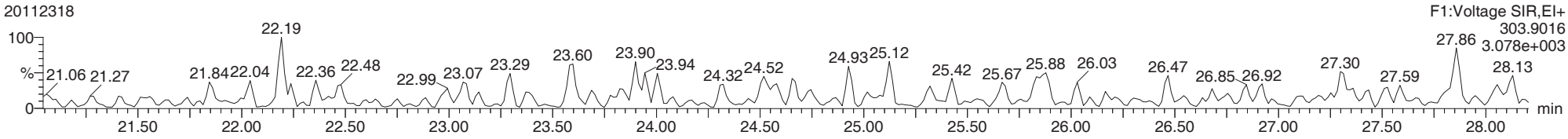
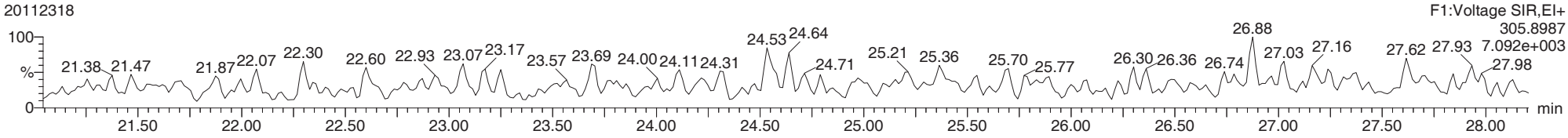


ID: 20J0389-11, Name: 20112318, Date: 23-Nov-2020, Time: 23:49:10, Conditions: AUTOSPEC01, User: pk

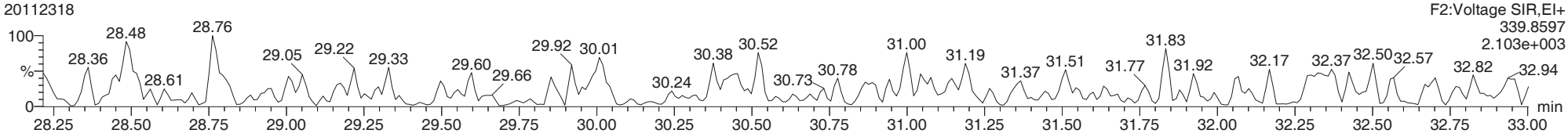
Total-tetrafurans



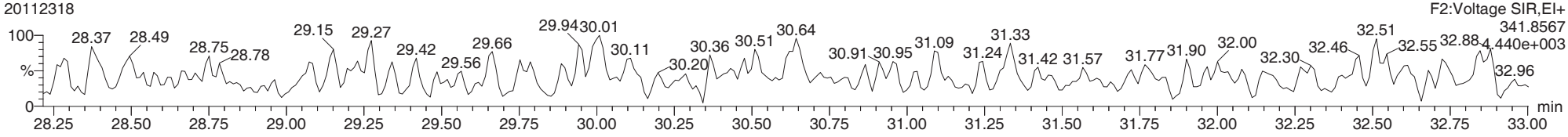
Total-tetrafurans



Total-pentafurans

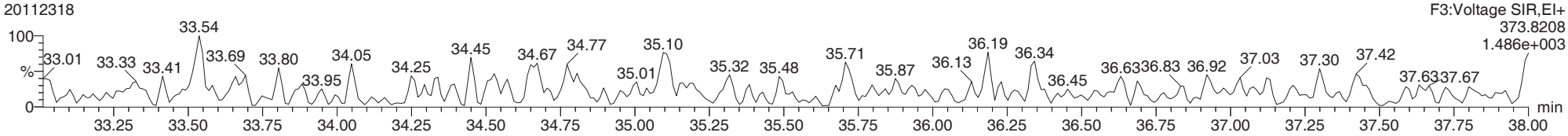


Total-pentafurans

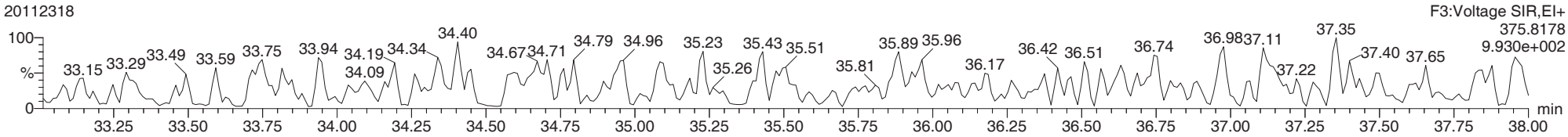


ID: 20J0389-11, Name: 20112318, Date: 23-Nov-2020, Time: 23:49:10, Conditions: AUTOSPEC01, User: pk

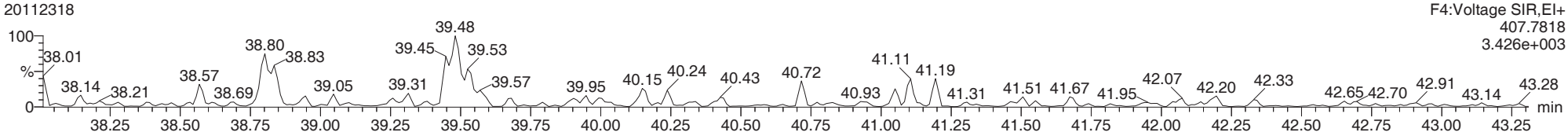
Total-hexafurans



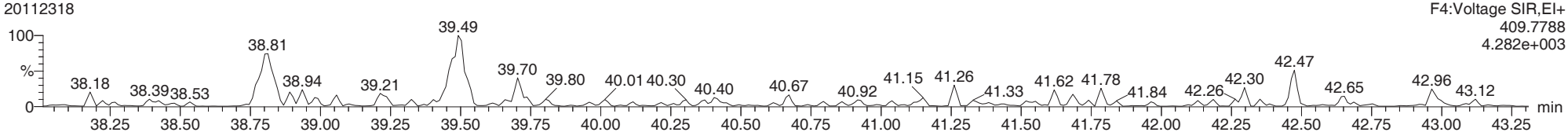
Total-hexafurans



Total-heptafurans



Total-heptafurans



HCOO-B312-102820

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider				
Project:	Lora Lake Apartments				
Matrix:	Ground Water	Laboratory ID:	20J0389-14 A	File ID:	20112319
Sampled:	10/28/20 13:00	Prepared:	11/19/20 07:10	Analyzed:	11/24/20 00:38
% Solids:	N/A	Preparation:	EPA 1613	Initial/Final:	1055 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1		0.655-0.886	0.87	9.48	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1		0.655-0.886	0.87	9.48	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1		1.318-1.783	1.19	9.48	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1		1.318-1.783	1.07	9.48	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1		1.318-1.783	0.91	9.48	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1		1.054-1.426	0.60	9.48	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1		1.054-1.426	0.57	9.48	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1		1.054-1.426	0.64	9.48	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1		1.054-1.426	0.85	9.48	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1		1.054-1.426	1.08	9.48	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1		1.054-1.426	1.00	9.48	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1		1.054-1.426	1.16	9.48	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1		0.893-1.208	0.59	9.48	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1		0.893-1.208	0.82	9.48	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1		0.893-1.208	1.10	9.48	ND	pg/L	U
39001-02-0	OCDF	1		0.757-1.024	2.09	19.0	ND	pg/L	U
3268-87-9	OCDD	1	0.998	0.757-1.024	1.94	47.4	10.2	pg/L	J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			9.48	ND	pg/L
41903-57-5	Total TCDD	1	0.000			9.48	ND	pg/L
30402-15-4	Total PeCDF	1	0.000			9.48	ND	pg/L
36088-22-9	Total PeCDD	1	0.000			9.48	ND	pg/L
55684-94-1	Total HxCDF	1	0.000			9.48	ND	pg/L
34465-46-8	Total HxCDD	1	0.000			9.48	ND	pg/L
38998-75-3	Total HpCDF	1	0.000			9.48	ND	pg/L
37871-00-4	Total HpCDD	1	0.000			9.48	ND	pg/L

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.003
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.42

HCOO-B312-102820

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider			Project:	Lora Lake Apartments
Matrix:	Ground Water	Laboratory ID:	20J0389-14	File ID:	20112319
Sampled:	10/28/20 13:00	Prepared:	11/19/20 07:10	Analyzed:	11/24/20 00:38
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1055 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.781	0.655-0.886	1.47	79.0	24 - 169 %	
13C12-2,3,7,8-TCDD		0.794	0.655-0.886	1.48	79.1	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.550	1.318-1.783	1.79	72.2	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.542	1.318-1.783	1.87	71.8	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.684	1.318-1.783	1.85	72.7	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.495	0.434-0.587	4.53	96.7	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.473	0.434-0.587	3.86	98.3	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.499	0.434-0.587	4.33	93.6	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.484	0.434-0.587	5.05	95.1	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.331	1.054-1.426	4.35	88.6	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.337	1.054-1.426	3.59	83.0	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.470	0.374-0.506	5.24	89.9	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.432	0.374-0.506	6.59	90.5	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.078	0.893-1.208	5.01	94.5	23 - 140 %	
13C12-OCDD		0.802	0.757-1.024	5.75	53.0	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.84	88.8	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:10:13 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-14, Name: 20112319, Date: 24-Nov-2020, Time: 00:38:40, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF					0.729		0.770	661	1421								
12378-PeCDF					0.779		1.550	632	1376								
23478-PeCDF					0.880		1.550	632	1376								
123478-HxCDF					0.880		1.240	346	438								
234678-HxCDF					0.863		1.240	346	438								
123678-HxCDF					0.853		1.240	346	438								
123789-HxCDF					0.780		1.240	346	438								
1234678-HpCDF					1.001		1.050	436	237								
1234789-HpCDF					0.994		1.050	436	237								
OCDF					1.158		0.890	345	647								
2378-TCDD					1.238		0.770	1051	695								
12378-PeCDD					0.988		1.550	763	386								
123478-HxCDD					0.842		1.240	648	538								
123678-HxCDD					0.907		1.240	648	538								
123789-HxCDD					0.784		1.240	648	538								
1234678-HpCDD					1.044		1.050	388	528								
OCDD	45.082	1.000	5.201e2	5.211e2	0.963	0.998	0.890	263	499	6.83e3	9.86e3	25.9	19.8	NO	MM	MM	0.540
13C-2378-TCDF	25.833	1.007	5.367e5	6.869e5	2.203	0.781	0.770	3862	2317	8.17e6	1.03e7	2114.1	4442.9	NO	bb	bb	79.009
13C-12378-PeCDF	29.997	1.169	5.375e5	3.468e5	1.741	1.550	1.550	3750	2212	7.47e6	4.82e6	1991.2	2178.8	NO	bd	bd	72.242
13C-23478-PeCDF	31.332	1.221	5.109e5	3.314e5	1.669	1.542	1.550	3750	2212	7.33e6	4.73e6	1953.5	2138.9	NO	bb	bb	71.770
13C-123478-HxCDF	34.950	0.956	1.825e5	3.682e5	1.022	0.495	0.510	2607	3918	2.81e6	5.50e6	1076.4	1405.1	NO	bd	bd	96.717
13C-123678-HxCDF	35.083	0.960	2.111e5	4.462e5	1.200	0.473	0.510	2607	3918	2.94e6	5.99e6	1127.8	1529.6	NO	db	db	98.326
13C-234678-HxCDF	35.951	0.983	1.860e5	3.725e5	1.071	0.499	0.510	2607	3918	2.69e6	5.32e6	1032.0	1357.0	NO	bb	bb	93.610
13C-123789-HxCDF	36.975	1.011	1.586e5	3.279e5	0.919	0.484	0.510	2607	3918	2.19e6	4.42e6	841.1	1129.0	NO	bb	bd	95.073
13C-1234678-HpCDF	38.812	1.061	1.454e5	3.094e5	0.909	0.470	0.440	2455	4253	2.08e6	4.79e6	846.2	1126.2	NO	bd	bb	89.867
13C-1234789-HpCDF	41.060	1.123	1.100e5	2.548e5	0.724	0.432	0.440	2455	4253	1.41e6	3.30e6	573.8	776.3	NO	bb	bb	90.515
13C-1234-TCDD	25.667	0.000	3.112e5	3.918e5	1.000	0.794	0.770	1995	1342	4.81e6	5.98e6	2413.2	4458.5	NO	bb	bb	100.000
13C-2378-TCDD	26.483	1.032	2.907e5	3.662e5	1.181	0.794	0.770	1995	1342	4.08e6	5.27e6	2043.3	3929.6	NO	bb	bb	79.089
13C-12378-PeCDD	31.588	1.231	3.137e5	1.863e5	0.978	1.684	1.550	2164	1292	4.54e6	2.72e6	2097.7	2103.2	NO	bb	bb	72.730
13C-123478-HxCDD	36.063	0.986	2.720e5	2.044e5	0.965	1.331	1.240	3150	2754	4.22e6	3.37e6	1340.4	1222.2	NO	bd	bd	88.627
13C-123678-HxCDD	36.185	0.990	3.090e5	2.312e5	1.168	1.337	1.240	3150	2754	4.28e6	3.39e6	1357.3	1230.7	NO	db	db	83.029
13C-1234678-HpCDD	40.314	1.103	1.762e5	1.635e5	0.645	1.078	1.050	2672	1883	2.36e6	2.19e6	884.2	1162.1	NO	MM	MM	94.499
13C-OCDD	45.064	1.232	1.782e5	2.223e5	0.678	0.802	0.890	2571	2924	2.07e6	2.32e6	805.0	791.9	NO	bb	bd	106.007
13C-123789-HxCDD	36.563	0.000	3.050e5	2.520e5	1.000	1.210	1.240	3150	2754	4.38e6	3.60e6	1391.6	1305.7	NO	bb	bb	100.000
37CL-2378-TCDD	26.497	1.032	3.159e5		1.264			2022		4.67e6		2311.1			bb		35.533

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
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ID: 20J0389-14, Name: 20112319, Date: 24-Nov-2020, Time: 00:38:40, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	661	1421								
1289-TCDF					0.688		0.770	661	1421								
13468-PECDF					1.181		1.550	399	950								
12389-PECDF					0.766		1.550	632	1376								
123468-HXCDF					1.003		1.240	346	438								
1368-TCDD					1.179		0.770	1051	695								
1289-TCDD					1.042		0.770	1051	695								
12479-PECDD					1.810		1.550	763	386								
12389-PECDD					1.165		1.550	763	386								
124679-HXCDD					1.056		1.240	648	538								
1234679-HPCDD					1.285		1.050	388	528								
Total-tetrafurans			0.000e0		0.754			661		0.00e0							
Total-penta1			0.000e0					399		0.00e0							
Total-pentafurans			0.000e0		0.809			632		0.00e0							
Total-hexafurans			0.000e0		0.876			346		0.00e0							
Total-heptafurans			0.000e0		0.997			436		0.00e0							
Total-Furans			0.000e0		0.893			661		0.00e0							
Total-tetradioxins			0.000e0		1.153			1051		0.00e0							
Total-pentadioxins			0.000e0		1.321			763		0.00e0							
Total-hexadioxins			0.000e0		0.897			648		0.00e0							
Total-heptadioxins			0.000e0		1.165			388		0.00e0							
Total-Dioxins			5.201e2		1.100			1051		6.83e3							0.540
Total-TEQ			5.201e2					1051		6.83e3							0.540
FUNCTION1 PFK			5.016e7					488127		3.60e8							
FUNCTION2 PFK			3.895e5					313829		1.01e7							0.000
FUNCTION3 PFK			0.000e0					333799		0.00e0							
FUNCTION4 PFK			7.198e5					284088		1.72e7							
FUNCTION5 PFK			2.395e5					206268		6.86e6							
FUNCTION1 HXCD...			0.000e0					401		0.00e0							
FUNCTION1 HPCD...			1.244e3					1110		2.19e4							0.000
FUNCTION2 HPCD...			2.403e2					977		5.27e3							0.000
FUNCTION3 OCDPE			0.000e0					229		0.00e0							
FUNCTION4 NCDPE			0.000e0					357		0.00e0							
FUNCTION5 DCDPE			0.000e0					222		0.00e0							

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: 20J0389-14, Name: 20112319, Date: 24-Nov-2020, Time: 00:38:40, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	OCDD	45.08	5.201e2	5.211e2	0.963	1.00	0.89	25.9	YES	NO	MM	MM	0.540

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dataset: T:\Autospec\Processed Data Batch\201123.qld
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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.93	1.660e6					45.6	YES		dd		
2	FUNCTION1 PFK	21.59	8.438e6					53.7	YES		dd		
3	FUNCTION1 PFK	21.50	2.410e6					55.1	YES		dd		
4	FUNCTION1 PFK	21.39	4.587e6					57.6	YES		dd		
5	FUNCTION1 PFK	21.24	3.038e6					60.1	YES		dd		
6	FUNCTION1 PFK	21.15	4.047e6					61.7	YES		bd		
7	FUNCTION1 PFK	24.20	8.073e4					2.3	NO		db		
8	FUNCTION1 PFK	24.08	1.826e5					4.6	YES		dd		
9	FUNCTION1 PFK	23.99	2.830e5					6.1	YES		dd		
10	FUNCTION1 PFK	23.82	4.225e5					9.3	YES		dd		
11	FUNCTION1 PFK	23.64	1.902e6					13.2	YES		dd		
12	FUNCTION1 PFK	23.40	1.087e6					17.4	YES		dd		
13	FUNCTION1 PFK	23.29	9.679e5					19.8	YES		dd		
14	FUNCTION1 PFK	23.16	1.240e6					22.7	YES		dd		
15	FUNCTION1 PFK	23.07	1.213e6					24.3	YES		dd		
16	FUNCTION1 PFK	22.96	1.320e6					26.5	YES		dd		
17	FUNCTION1 PFK	22.84	1.629e6					29.0	YES		dd		
18	FUNCTION1 PFK	22.72	3.214e6					31.3	YES		dd		
19	FUNCTION1 PFK	22.49	2.826e6					35.9	YES		dd		
20	FUNCTION1 PFK	22.25	3.346e6					39.9	YES		dd		
21	FUNCTION1 PFK	22.16	2.422e6					42.2	YES		dd		
22	FUNCTION1 PFK	22.04	2.888e6					44.7	YES		dd		
23	FUNCTION1 PFK	26.92	7.027e4					2.1	NO		bd		
24	FUNCTION1 PFK	26.80	4.698e4					1.6	NO		bb		
25	FUNCTION1 PFK	26.48	2.844e4					1.2	NO		bb		
26	FUNCTION1 PFK	26.36	4.174e4					1.4	NO		db		
27	FUNCTION1 PFK	26.23	6.894e4					2.1	NO		dd		
28	FUNCTION1 PFK	26.14	5.000e4					2.0	NO		dd		
29	FUNCTION1 PFK	26.03	5.202e4					1.8	NO		bd		
30	FUNCTION1 PFK	25.91	4.357e4					2.0	NO		bb		
31	FUNCTION1 PFK	25.56	3.520e4					1.7	NO		bb		
32	FUNCTION1 PFK	25.44	5.791e4					2.3	NO		bb		
33	FUNCTION1 PFK	25.21	2.802e4					1.1	NO		bb		
34	FUNCTION1 PFK	25.09	2.751e4					0.8	NO		bb		
35	FUNCTION1 PFK	25.00	4.777e4					1.7	NO		bb		
36	FUNCTION1 PFK	24.78	7.609e4					2.2	NO		bb		
37	FUNCTION1 PFK	24.64	5.003e4					1.6	NO		bb		

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	24.55	2.878e4					1.0	NO		bb		
39	FUNCTION1 PFK	28.07	2.670e4					1.1	NO		bb		
40	FUNCTION1 PFK	27.95	3.330e4					1.4	NO		db		
41	FUNCTION1 PFK	27.84	5.138e4					1.7	NO		bd		
42	FUNCTION1 PFK	27.60	2.308e4					1.2	NO		bb		
43	FUNCTION1 PFK	27.16	4.379e4					1.7	NO		bb		
44	FUNCTION1 PFK	27.04	2.732e4					0.9	NO		db		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	30.04	5.528e3					0.8	NO		bd		0.000
2	FUNCTION2 PFK	29.86	1.326e4					1.3	NO		bb		0.000
3	FUNCTION2 PFK	29.45	1.945e3					0.5	NO		db		0.000
4	FUNCTION2 PFK	29.41	2.898e4					1.9	NO		bd		0.000
5	FUNCTION2 PFK	29.18	1.173e4					1.3	NO		bb		0.000
6	FUNCTION2 PFK	29.08	3.148e4					1.7	NO		bb		0.000
7	FUNCTION2 PFK	28.61	2.085e4					1.6	NO		bb		0.000
8	FUNCTION2 PFK	28.39	8.543e3					1.0	NO		bb		0.000
9	FUNCTION2 PFK	28.28	7.271e3					0.9	NO		bb		0.000
10	FUNCTION2 PFK	32.91	2.115e4					2.2	NO		db		0.000
11	FUNCTION2 PFK	32.87	2.878e3					0.6	NO		bd		0.000
12	FUNCTION2 PFK	32.47	2.348e4					1.4	NO		bb		0.000
13	FUNCTION2 PFK	32.11	1.918e4					1.2	NO		bb		0.000
14	FUNCTION2 PFK	31.90	1.789e4					1.8	NO		bb		0.000
15	FUNCTION2 PFK	31.80	2.662e4					2.0	NO		bb		0.000
16	FUNCTION2 PFK	31.54	2.257e4					1.2	NO		db		0.000
17	FUNCTION2 PFK	31.53	9.671e3					1.4	NO		bd		0.000
18	FUNCTION2 PFK	31.28	2.625e3					0.5	NO		bb		0.000
19	FUNCTION2 PFK	31.23	2.402e4					1.7	NO		bb		0.000
20	FUNCTION2 PFK	30.89	6.734e3					0.9	NO		bb		0.000
21	FUNCTION2 PFK	30.65	1.579e4					1.1	NO		bb		0.000
22	FUNCTION2 PFK	30.53	2.916e4					2.0	NO		bb		0.000
23	FUNCTION2 PFK	30.20	1.994e4					1.6	NO		db		0.000
24	FUNCTION2 PFK	30.11	1.815e4					1.5	NO		dd		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	40.33	8.949e3					1.4	NO		bd		
2	FUNCTION4 PFK	40.03	2.448e4					1.8	NO		bb		
3	FUNCTION4 PFK	39.92	1.753e4					1.2	NO		bb		
4	FUNCTION4 PFK	39.82	8.752e3					1.0	NO		db		
5	FUNCTION4 PFK	39.79	1.353e4					1.6	NO		bd		
6	FUNCTION4 PFK	39.46	2.639e4					1.4	NO		bb		
7	FUNCTION4 PFK	39.22	2.216e4					1.7	NO		bb		
8	FUNCTION4 PFK	39.01	3.249e4					2.5	NO		bb		
9	FUNCTION4 PFK	38.77	2.444e4					1.6	NO		bb		
10	FUNCTION4 PFK	38.58	1.339e4					1.5	NO		db		
11	FUNCTION4 PFK	38.54	1.288e4					1.5	NO		bd		
12	FUNCTION4 PFK	38.47	2.107e4					1.3	NO		bb		
13	FUNCTION4 PFK	38.23	8.690e3					1.3	NO		bb		
14	FUNCTION4 PFK	38.12	2.737e4					2.6	NO		db		
15	FUNCTION4 PFK	38.08	3.533e3					0.8	NO		bd		
16	FUNCTION4 PFK	42.05	2.119e4					2.0	NO		bb		
17	FUNCTION4 PFK	41.97	7.823e3					1.0	NO		db		
18	FUNCTION4 PFK	41.94	1.944e4					1.7	NO		dd		
19	FUNCTION4 PFK	41.90	6.774e3					1.1	NO		bd		
20	FUNCTION4 PFK	41.81	1.135e4					1.3	NO		bb		
21	FUNCTION4 PFK	41.69	2.611e4					1.6	NO		bb		
22	FUNCTION4 PFK	41.38	1.659e4					1.4	NO		bb		
23	FUNCTION4 PFK	41.28	1.860e4					1.7	NO		db		
24	FUNCTION4 PFK	41.24	1.350e4					1.4	NO		bd		
25	FUNCTION4 PFK	41.06	3.152e4					1.8	NO		bb		
26	FUNCTION4 PFK	40.92	2.498e4					1.5	NO		db		
27	FUNCTION4 PFK	40.87	1.045e4					1.6	NO		bd		
28	FUNCTION4 PFK	40.82	1.238e4					1.4	NO		bb		
29	FUNCTION4 PFK	40.59	2.045e4					1.8	NO		bb		
30	FUNCTION4 PFK	40.46	3.499e4					2.1	NO		db		
31	FUNCTION4 PFK	40.36	1.174e4					1.3	NO		dd		
32	FUNCTION4 PFK	43.20	1.322e4					1.2	NO		bb		
33	FUNCTION4 PFK	43.06	2.460e4					1.9	NO		db		
34	FUNCTION4 PFK	43.02	1.487e4					1.7	NO		bd		
35	FUNCTION4 PFK	42.95	2.799e4					2.1	NO		bb		
36	FUNCTION4 PFK	42.60	3.140e4					1.9	NO		db		
37	FUNCTION4 PFK	42.50	2.718e4					1.9	NO		bd		

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION4 PFK	42.38	2.704e4					2.0	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.42	1.838e4					2.0	NO		bb		
2	FUNCTION5 PFK	44.32	1.025e4					1.9	NO		bb		
3	FUNCTION5 PFK	43.87	4.461e3					0.9	NO		bb		
4	FUNCTION5 PFK	43.76	1.247e4					1.9	NO		bb		
5	FUNCTION5 PFK	43.65	2.203e4					2.0	NO		bb		
6	FUNCTION5 PFK	43.51	4.543e3					1.2	NO		bb		
7	FUNCTION5 PFK	43.44	4.422e3					1.0	NO		db		
8	FUNCTION5 PFK	43.39	7.486e3					1.5	NO		bd		
9	FUNCTION5 PFK	46.08	1.147e4					1.4	NO		bb		
10	FUNCTION5 PFK	45.98	1.209e4					1.5	NO		bb		
11	FUNCTION5 PFK	45.83	6.057e2					0.3	NO		bb		
12	FUNCTION5 PFK	45.73	3.388e3					0.9	NO		bb		
13	FUNCTION5 PFK	45.69	2.854e4					2.1	NO		db		
14	FUNCTION5 PFK	45.53	2.124e4					1.8	NO		bd		
15	FUNCTION5 PFK	45.43	1.906e3					0.6	NO		bb		
16	FUNCTION5 PFK	45.32	1.026e4					1.4	NO		bb		
17	FUNCTION5 PFK	45.20	3.841e3					0.9	NO		db		
18	FUNCTION5 PFK	45.14	4.319e3					0.7	NO		bd		
19	FUNCTION5 PFK	45.05	1.446e3					0.5	NO		bb		
20	FUNCTION5 PFK	44.98	7.997e3					1.4	NO		bb		
21	FUNCTION5 PFK	44.89	6.564e3					1.3	NO		db		
22	FUNCTION5 PFK	44.86	1.513e4					2.3	NO		bd		
23	FUNCTION5 PFK	44.66	2.287e3					0.6	NO		bb		
24	FUNCTION5 PFK	44.53	1.241e4					1.8	NO		bb		
25	FUNCTION5 PFK	46.35	1.124e4					1.2	NO		bb		
26	FUNCTION5 PFK	46.14	6.783e2					0.4	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	27.09	1.376e2					1.9	NO		bb		0.000
2	FUNCTION1 HPCD...	26.71	1.466e2					1.7	NO		db		0.000
3	FUNCTION1 HPCD...	26.65	7.514e1					1.7	NO		dd		0.000
4	FUNCTION1 HPCD...	26.57	9.936e1					2.0	NO		dd		0.000
5	FUNCTION1 HPCD...	26.48	1.341e2					2.5	NO		bd		0.000
6	FUNCTION1 HPCD...	26.04	1.624e2					2.0	NO		bb		0.000
7	FUNCTION1 HPCD...	25.53	9.978e1					1.5	NO		bb		0.000
8	FUNCTION1 HPCD...	25.00	7.114e1					1.4	NO		bb		0.000
9	FUNCTION1 HPCD...	24.50	9.051e1					1.4	NO		bb		0.000
10	FUNCTION1 HPCD...	24.02	1.198e2					1.5	NO		bb		0.000
11	FUNCTION1 HPCD...	22.09	1.075e2					1.9	NO		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.94	7.308e1					1.7	NO		bb		0.000
2	FUNCTION2 HPCD...	31.51	9.624e1					1.6	NO		bb		0.000
3	FUNCTION2 HPCD...	29.41	7.101e1					2.1	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

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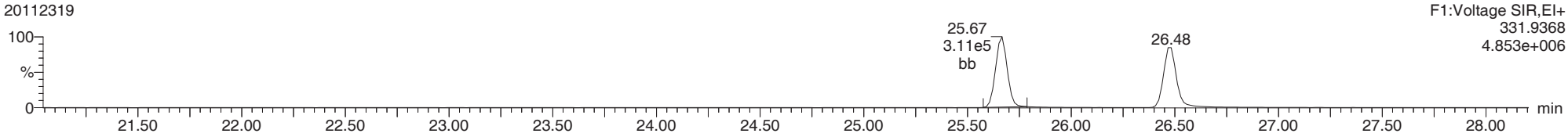
13C-1234-TCDD



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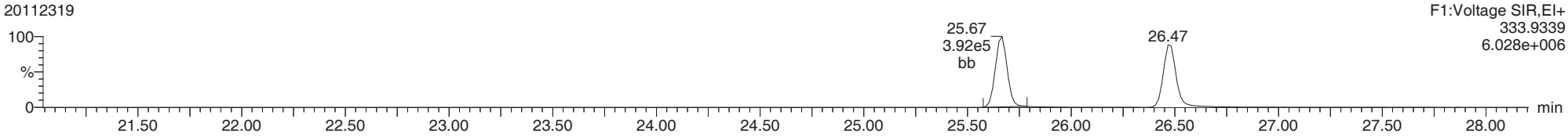

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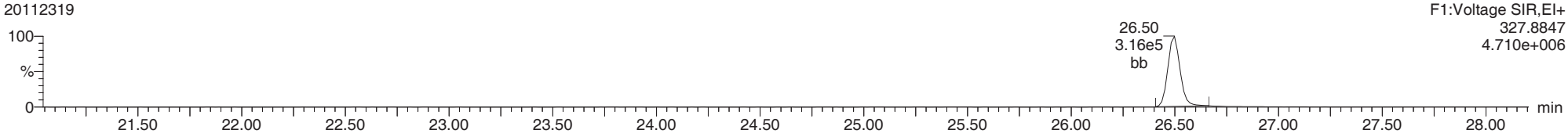

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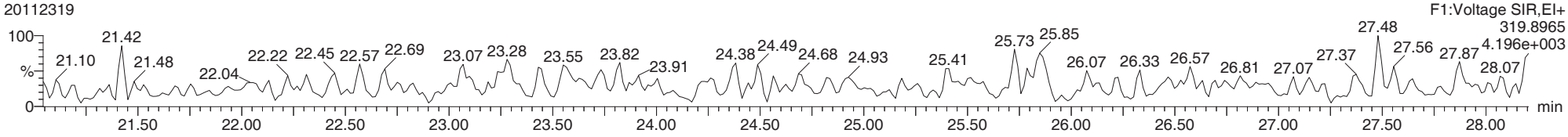
2378-TCDD



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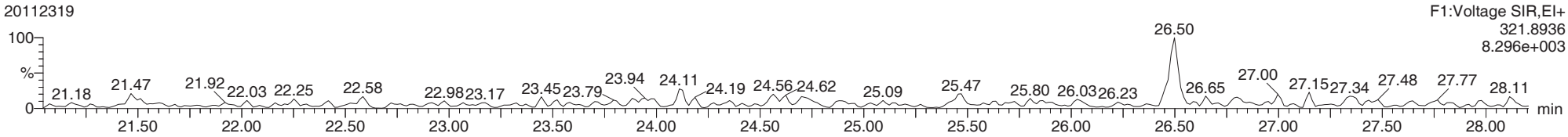

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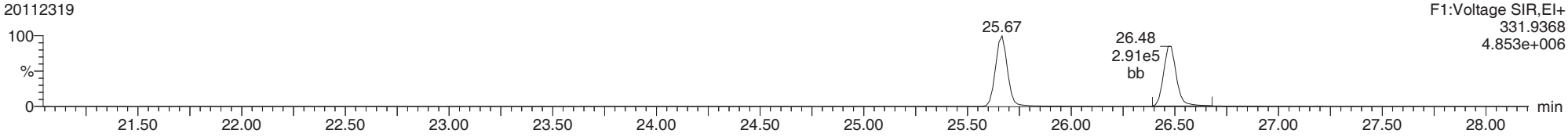

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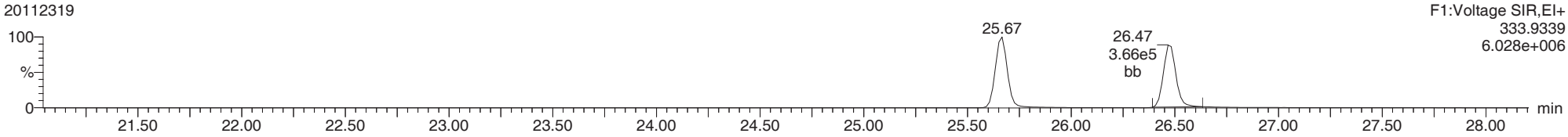
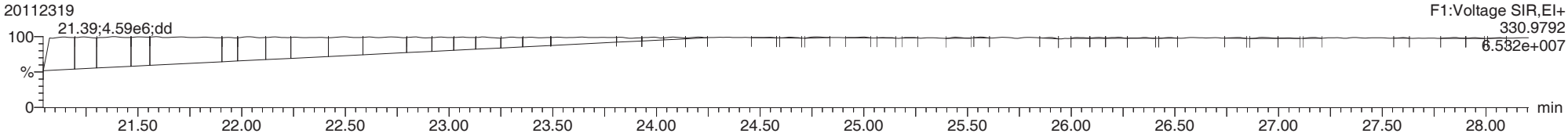


FUNCTION1 PFK



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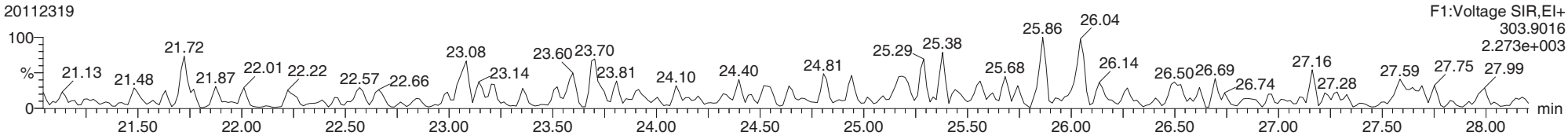
2378-TCDF



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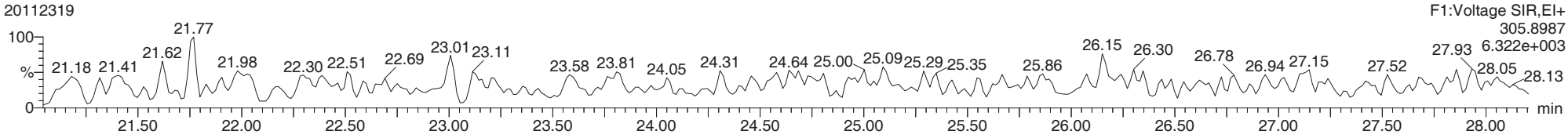
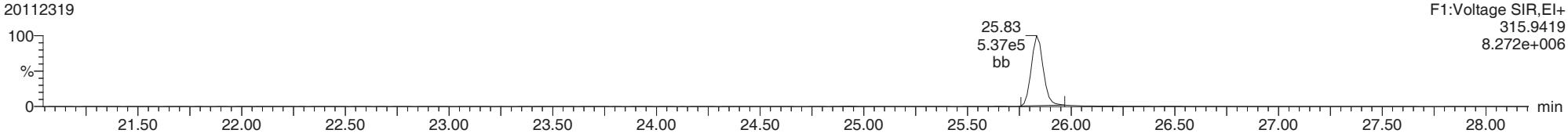


13C-2378-TCDF



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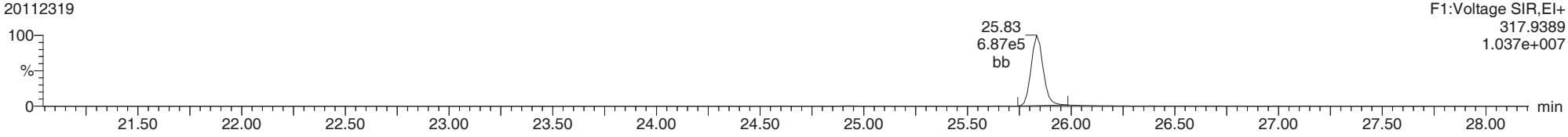
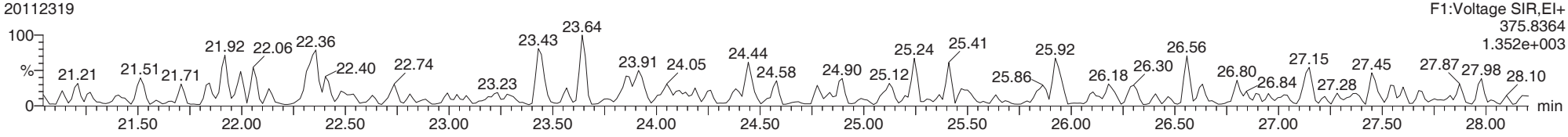


FUNCTION1 HXCDPE



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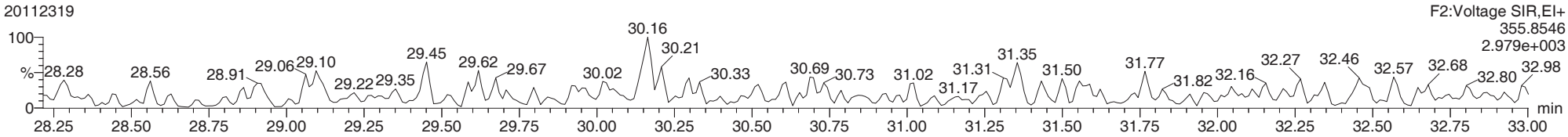
ID: 20J0389-14, Name: 20112319, Date: 24-Nov-2020, Time: 00:38:40, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



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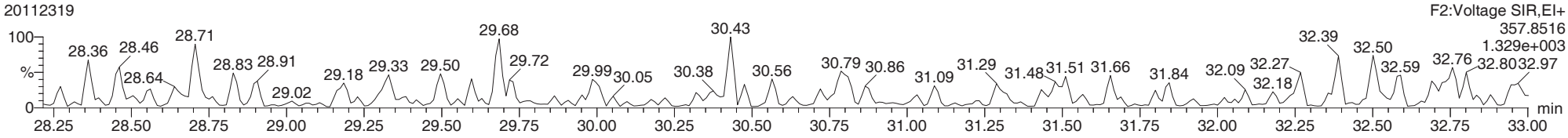

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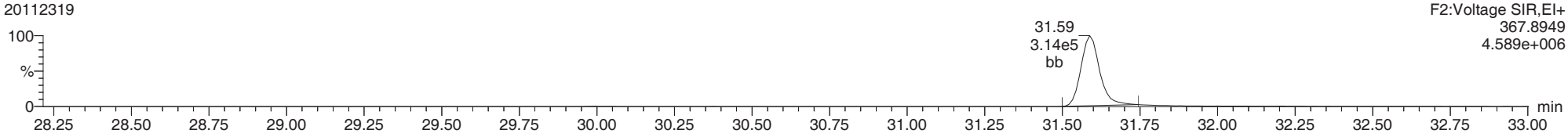

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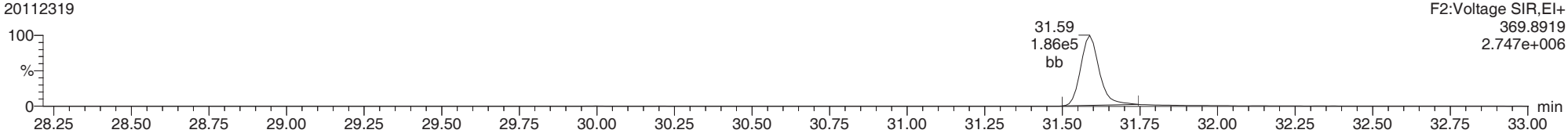
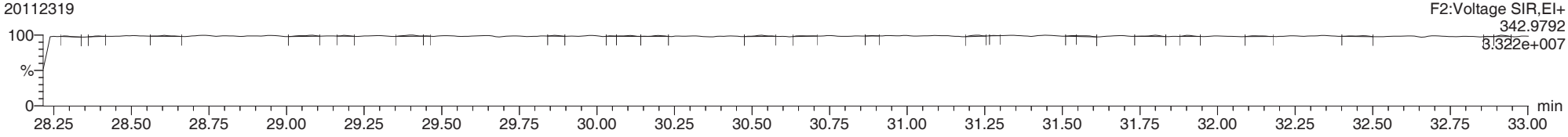


FUNCTION2 PFK



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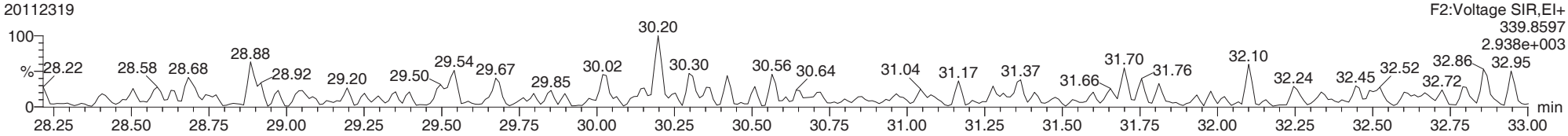
12378-PeCDF



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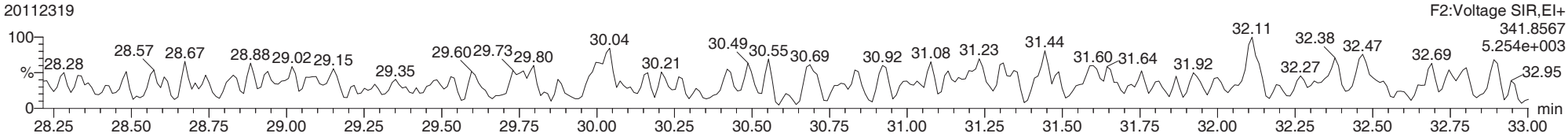

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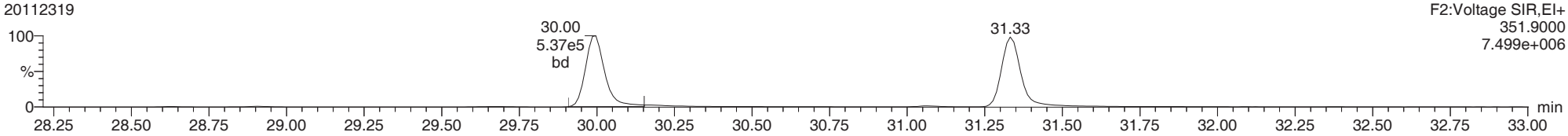

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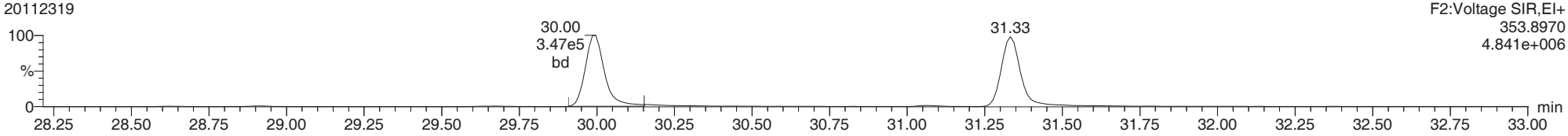
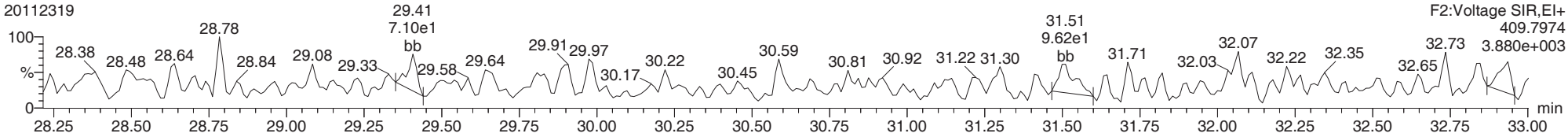


FUNCTION2 HPCDPE



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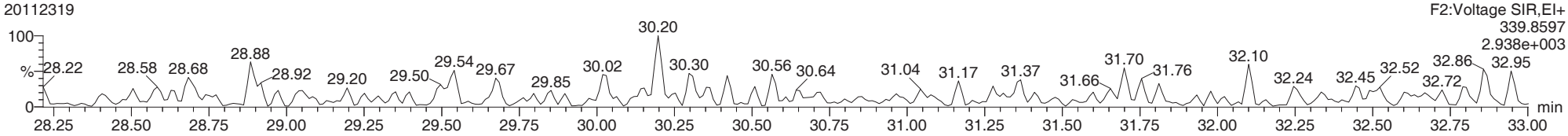
23478-PeCDF



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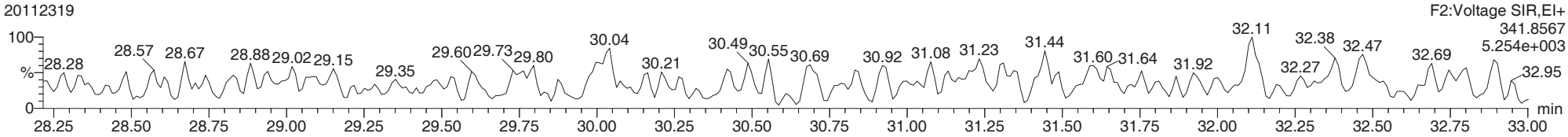

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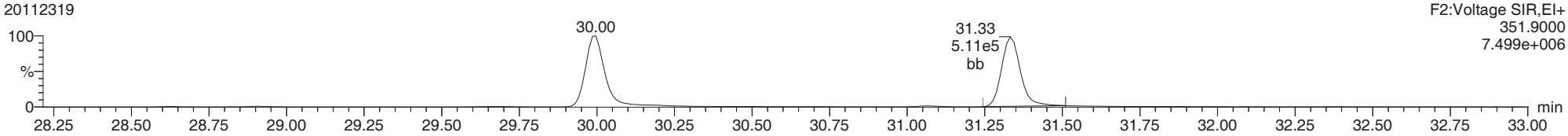

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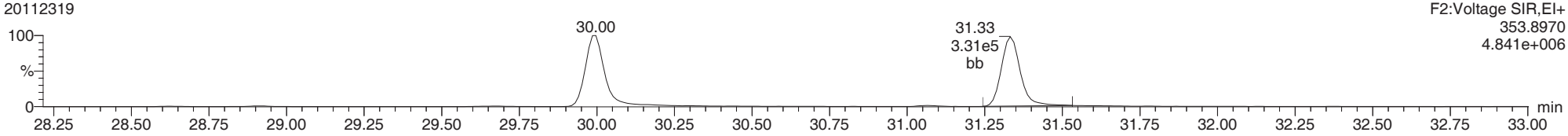

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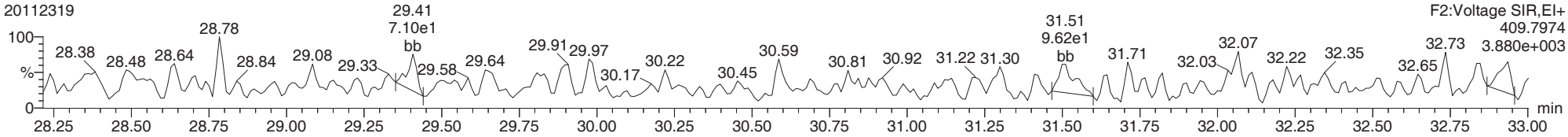

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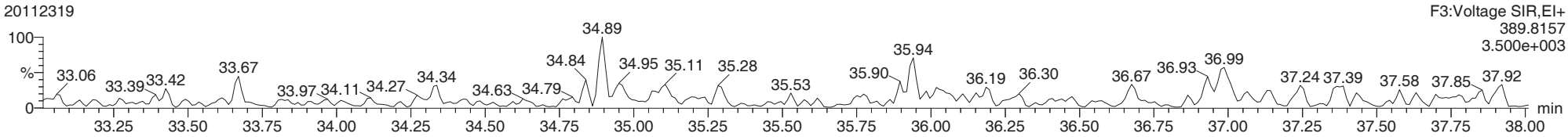
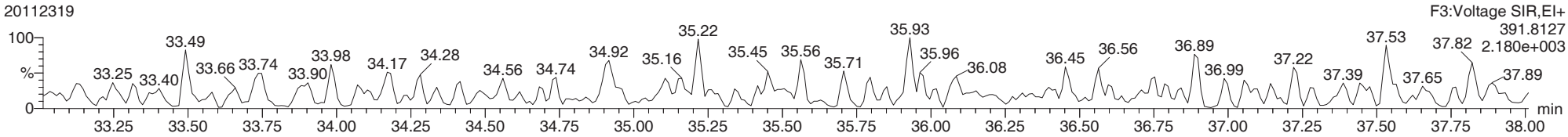
123478-HxCDD



123478-HxCDD



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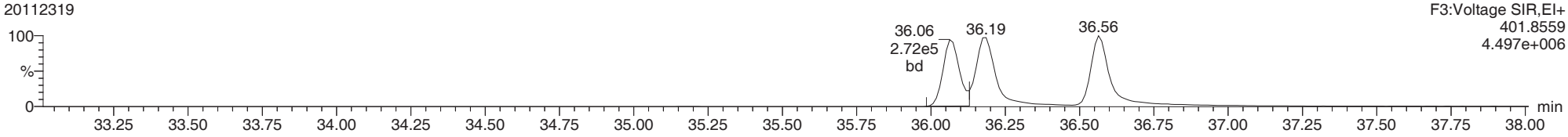

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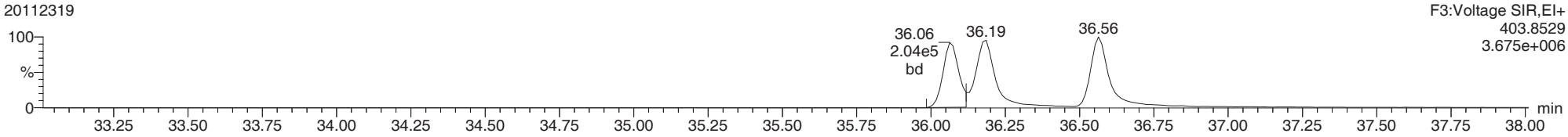
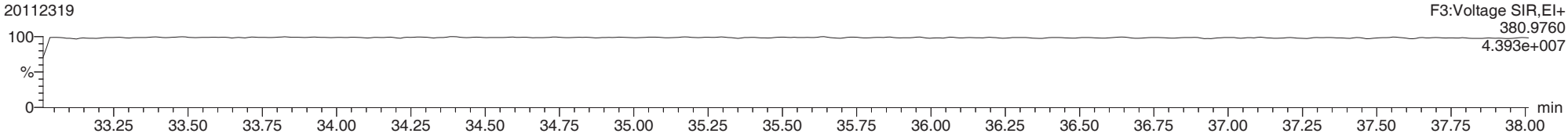


FUNCTION3 PFK



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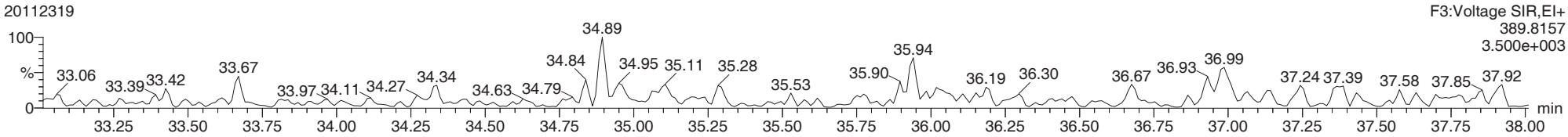
123678-HxCDD



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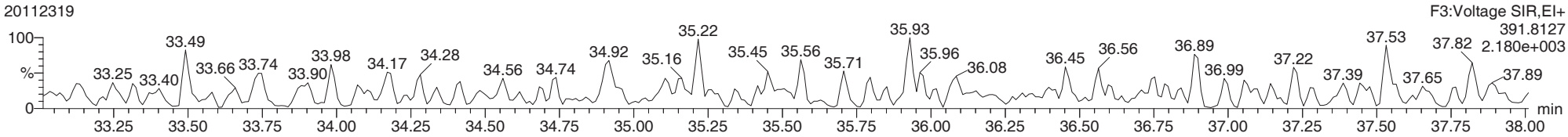

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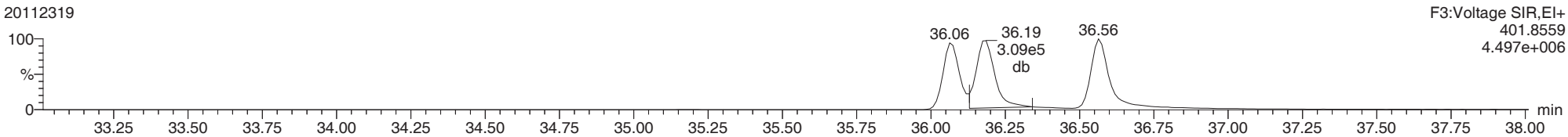

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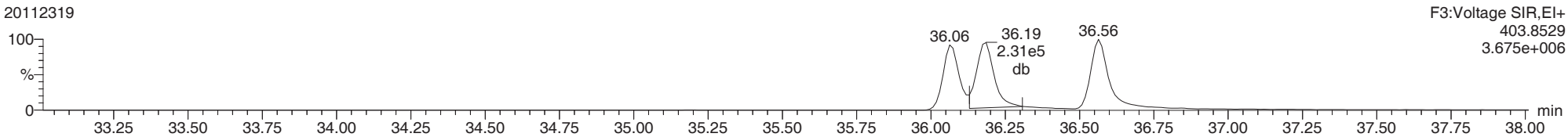

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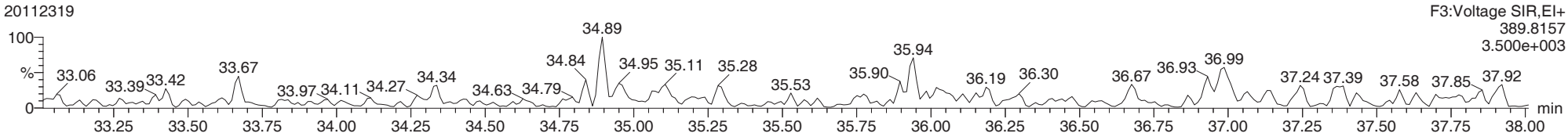
123789-HxCDD



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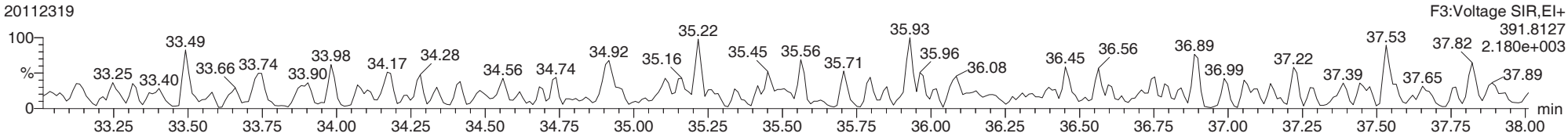

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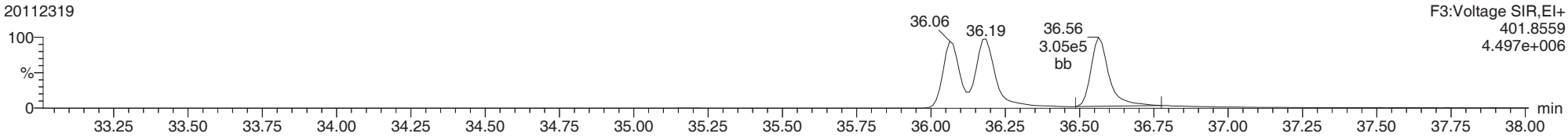

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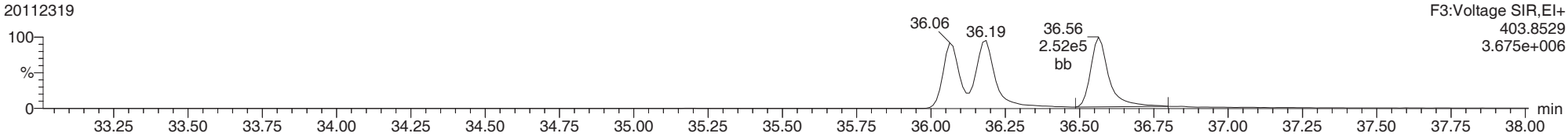

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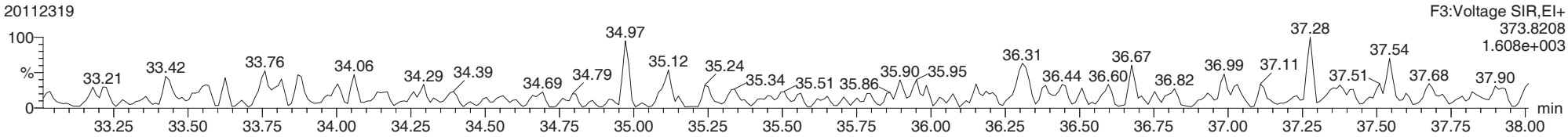
123478-HxCDF



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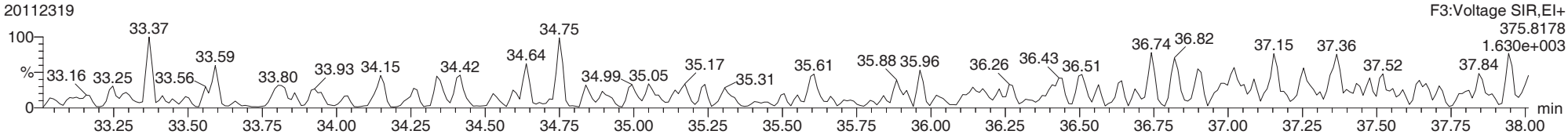

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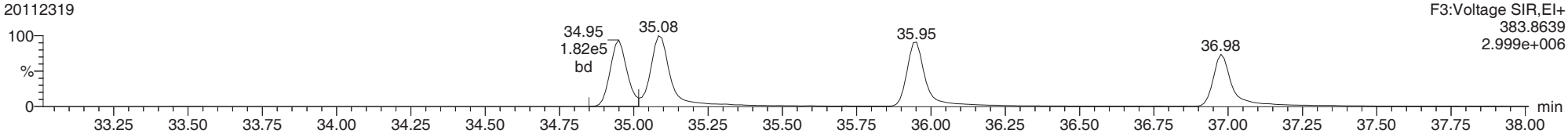

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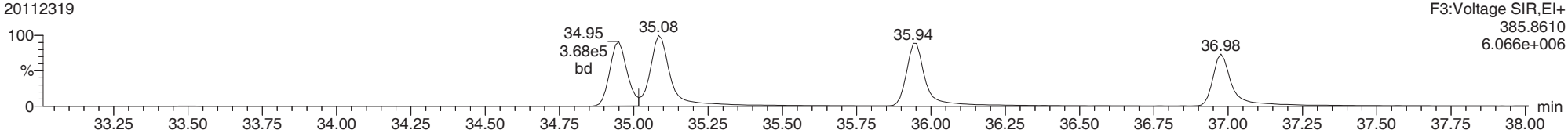
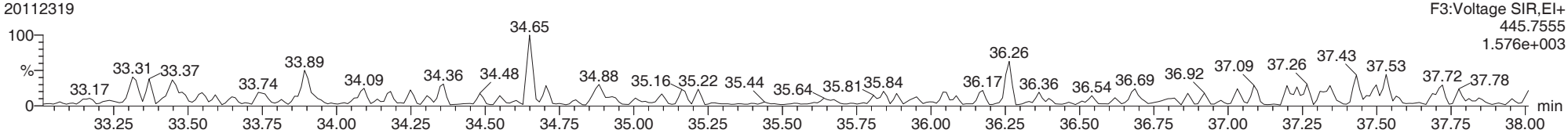


FUNCTION3 OCDPE



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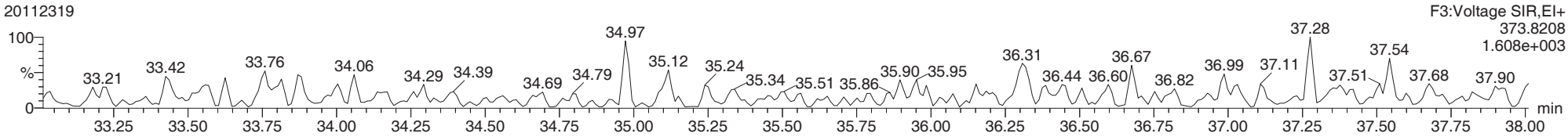
234678-HxCDF



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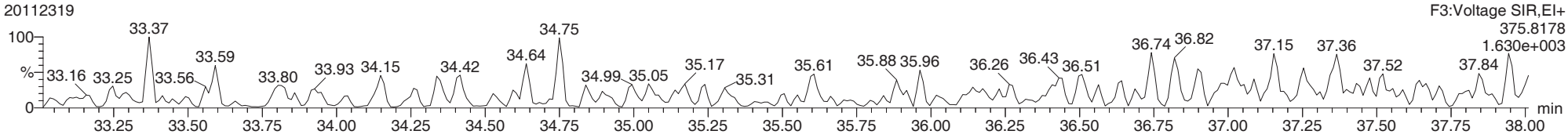

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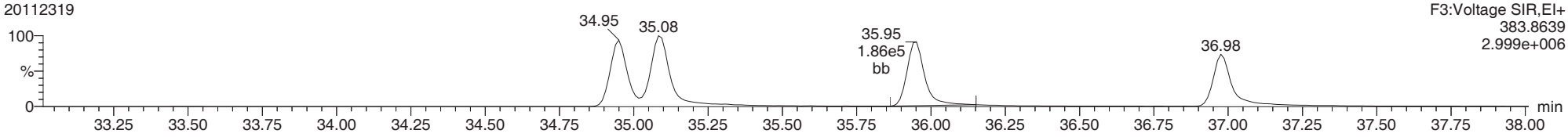

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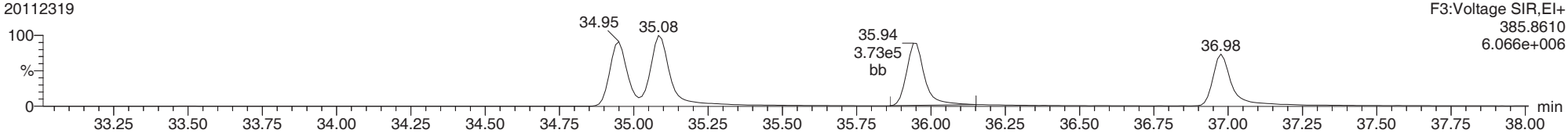
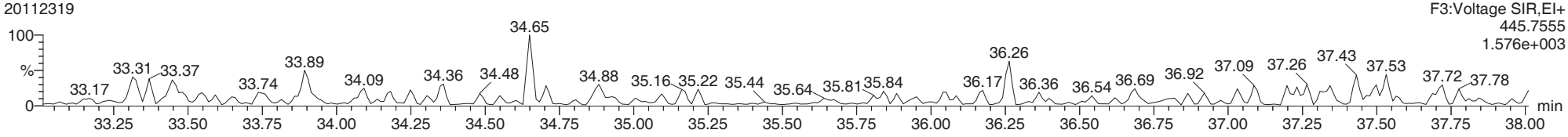


FUNCTION3 OCDPE



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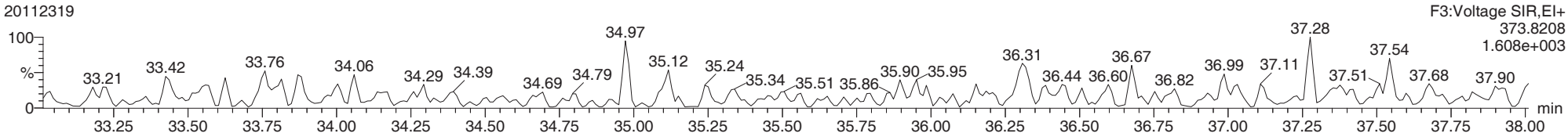
123678-HxCDF



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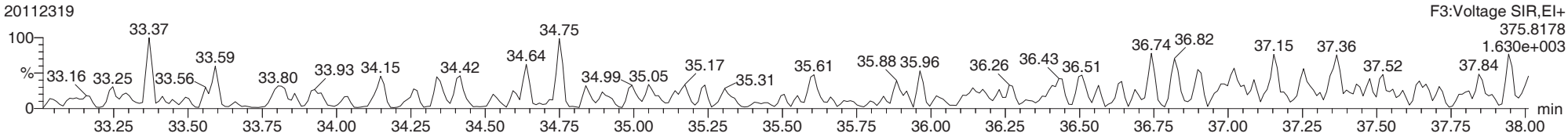

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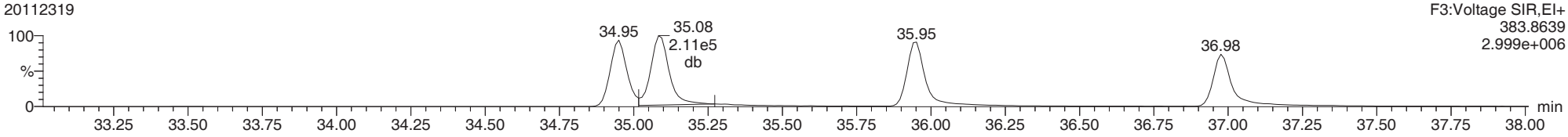

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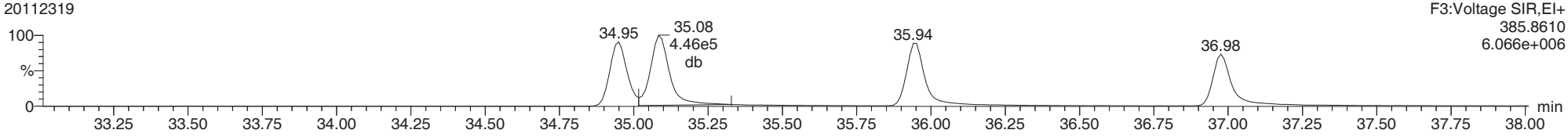
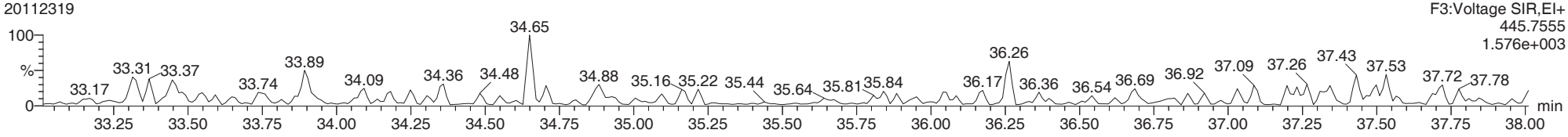


FUNCTION3 OCDPE



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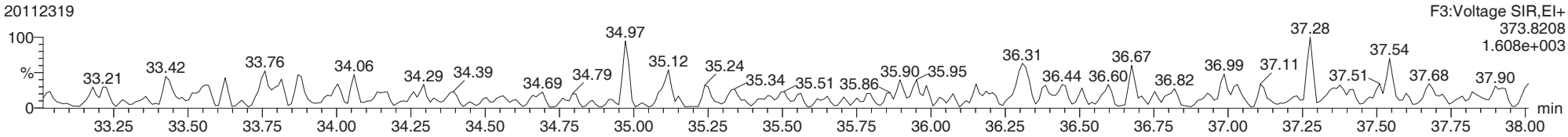
123789-HxCDF



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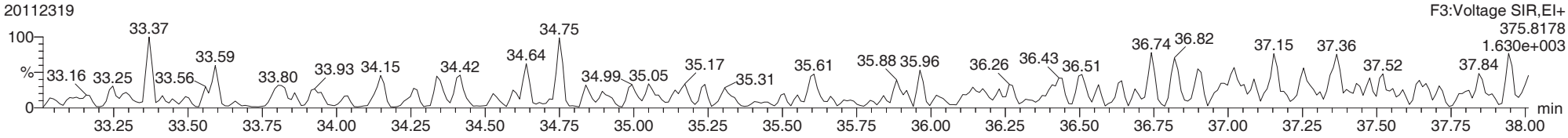

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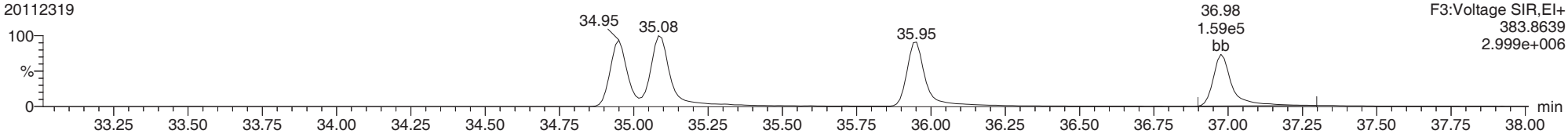

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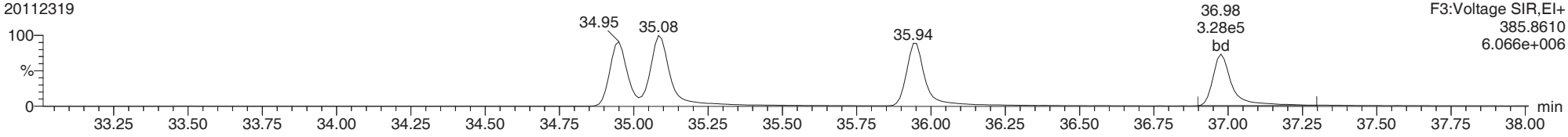
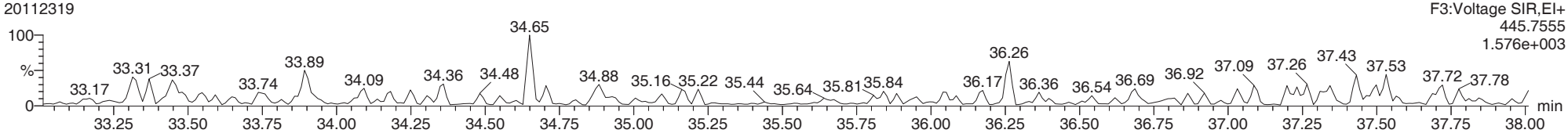


FUNCTION3 OCDPE



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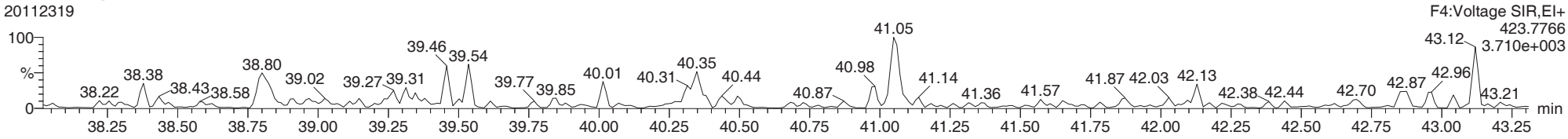

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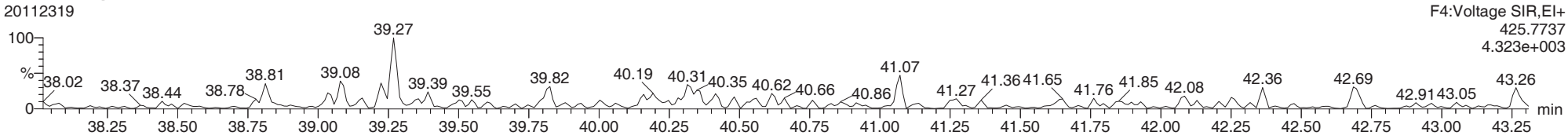

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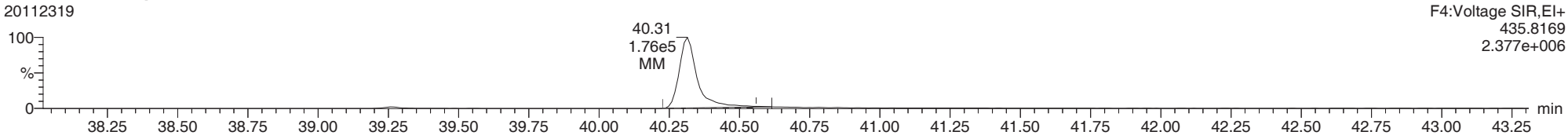

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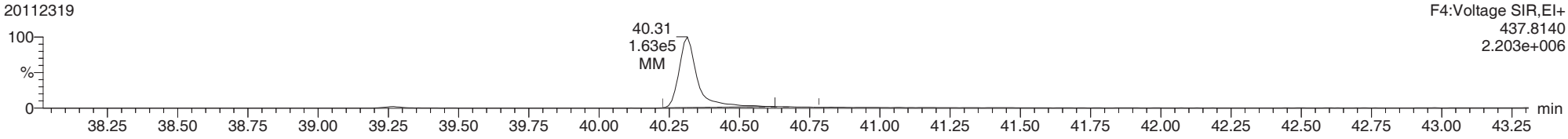

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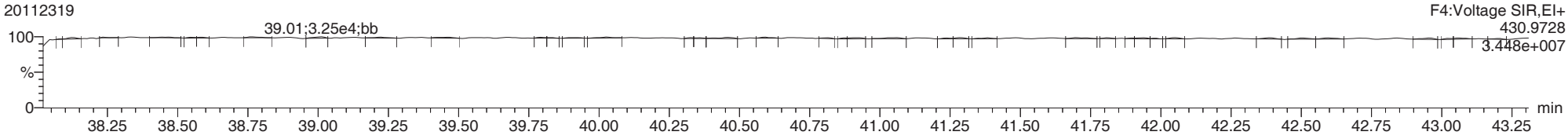

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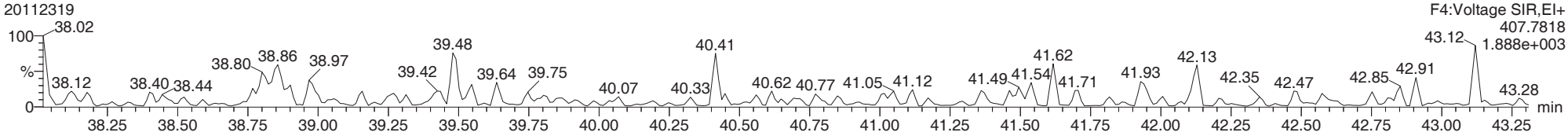

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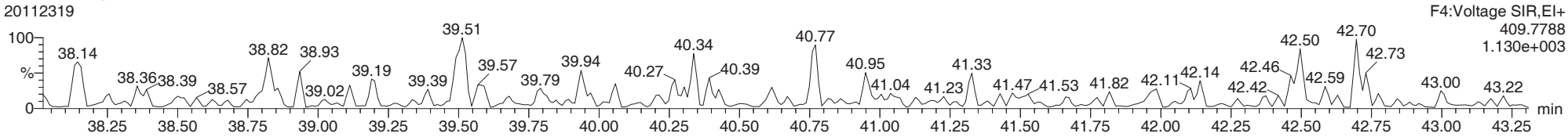

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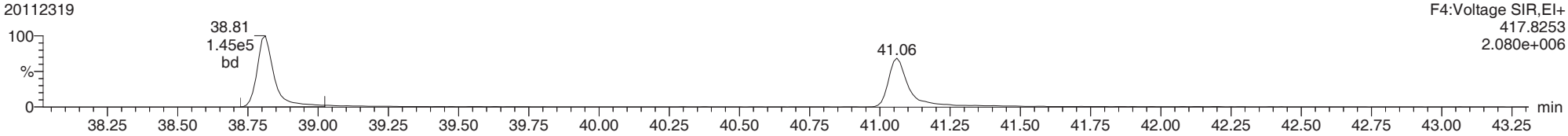

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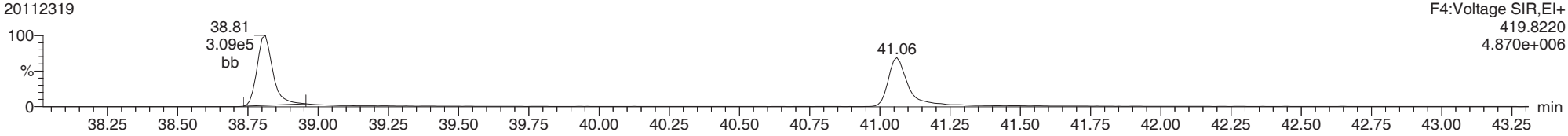

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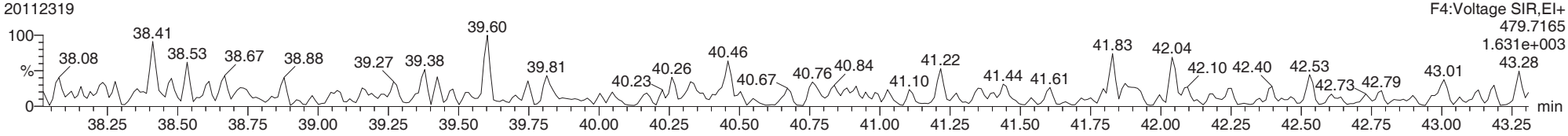

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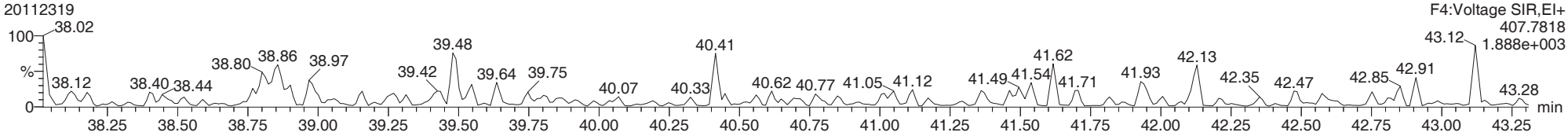

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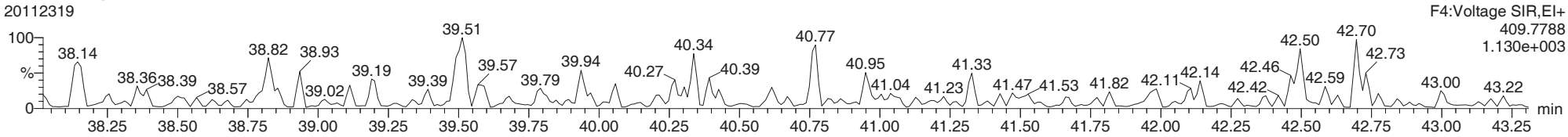

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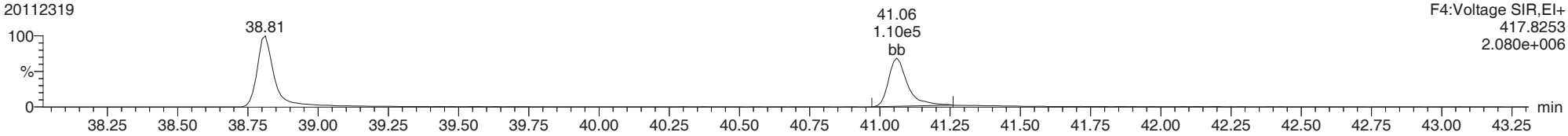

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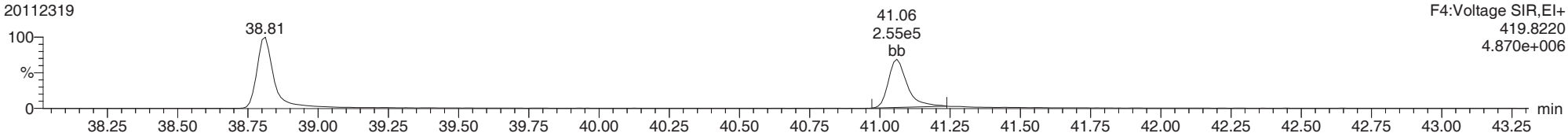
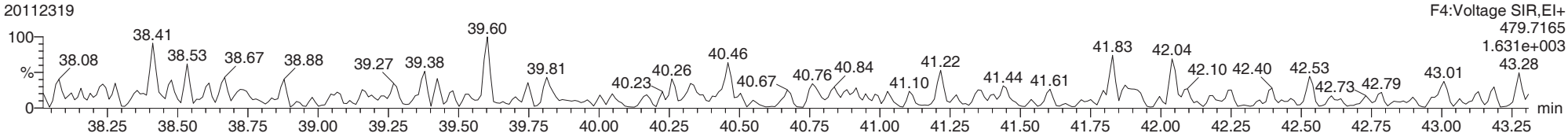


FUNCTION4 NCDPE



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Printed: Tuesday, November 24, 2020 10:10:13 Pacific Standard Time

ID: 20J0389-14, Name: 20112319, Date: 24-Nov-2020, Time: 00:38:40, Conditions: AUTOSPEC01, User: pk

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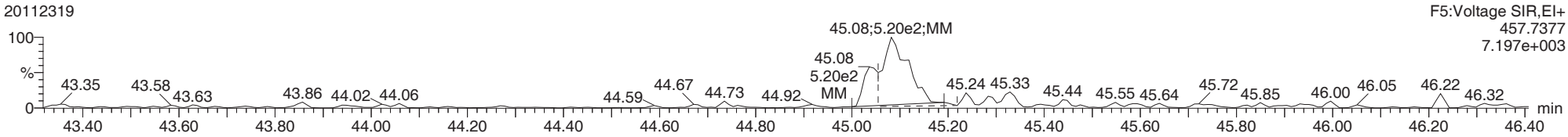

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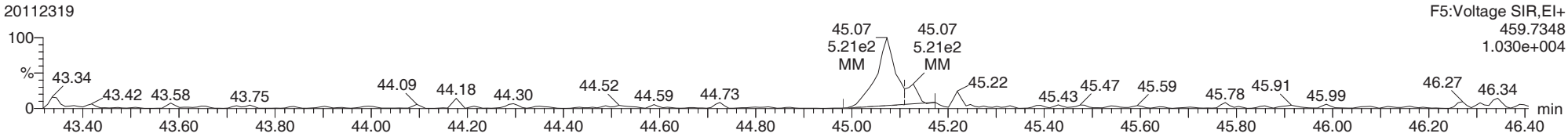

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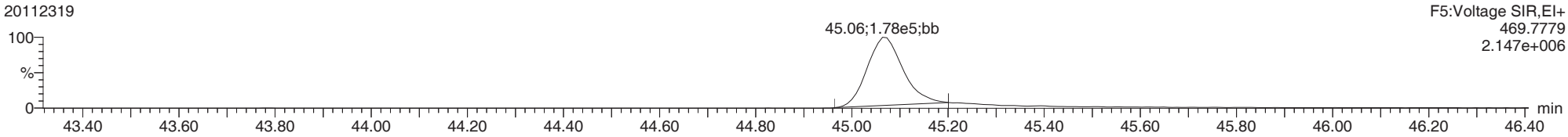

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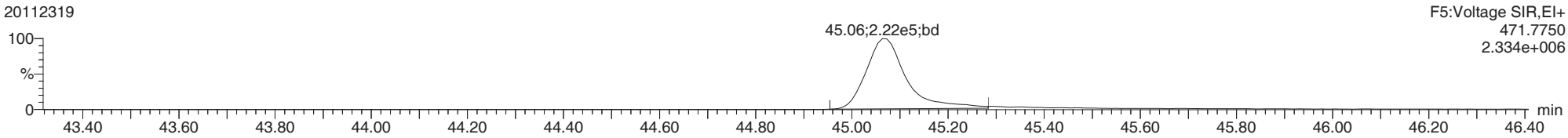
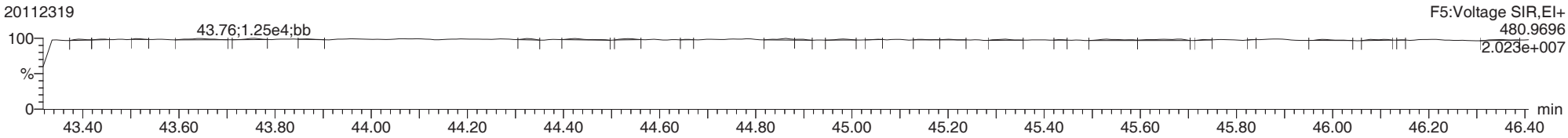


FUNCTION5 PFK



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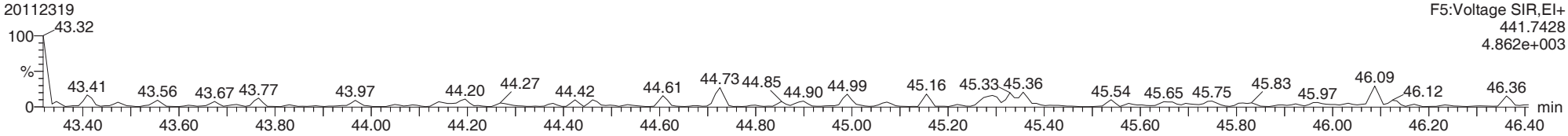

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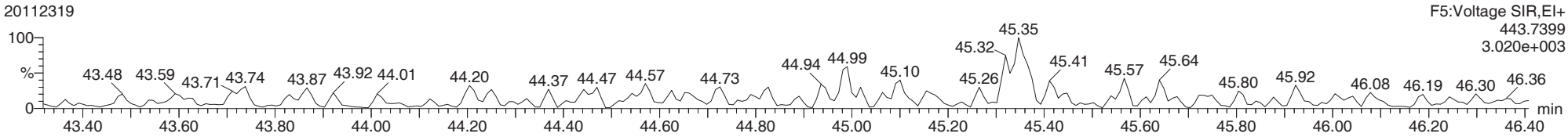

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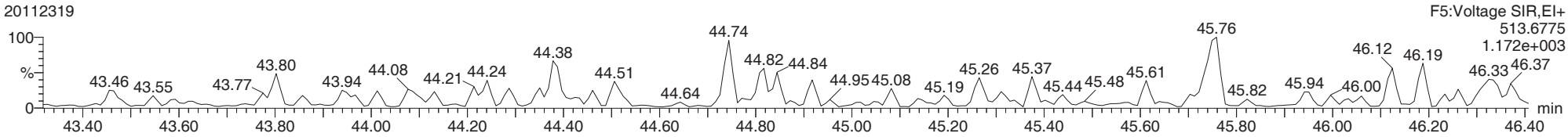

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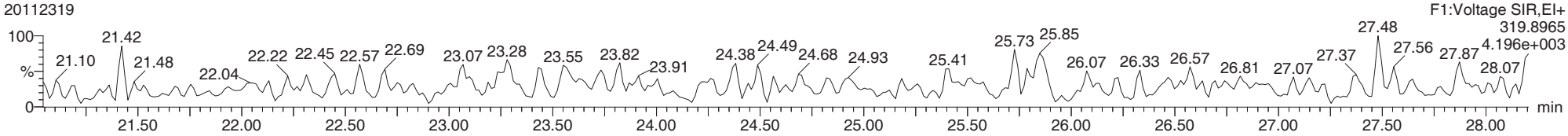
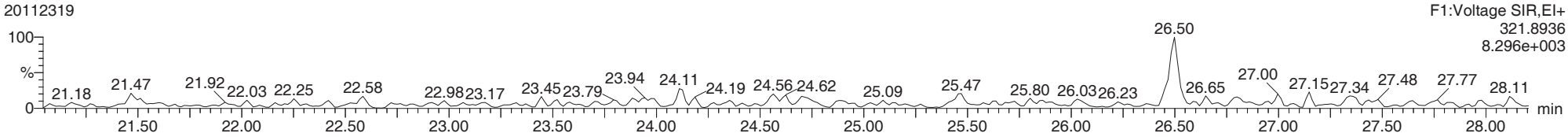


Total-tetradioxins



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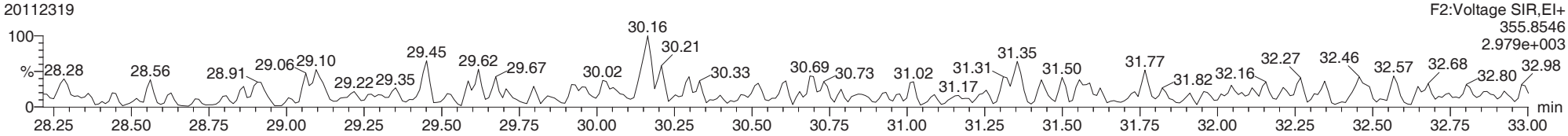
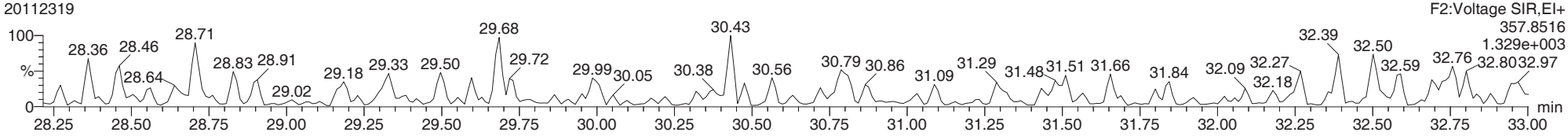


Total-pentadioxins



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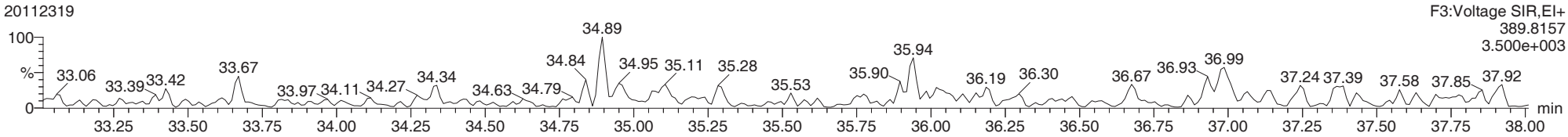
Total-hexadioxins



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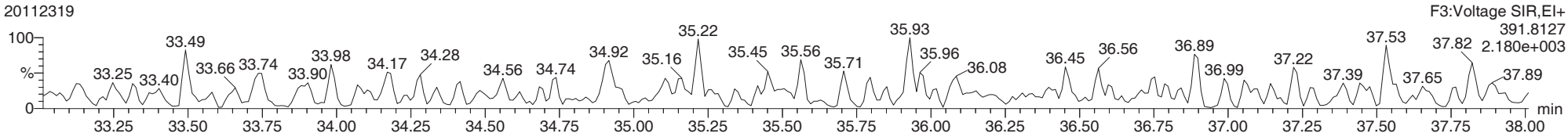

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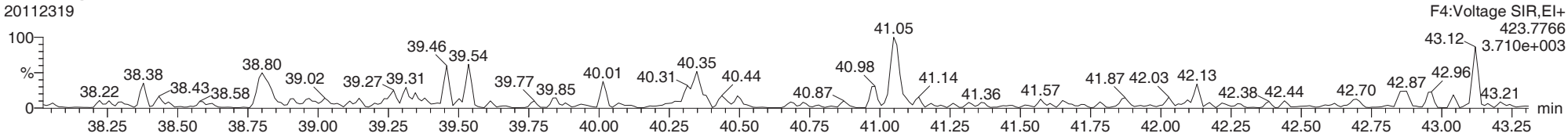

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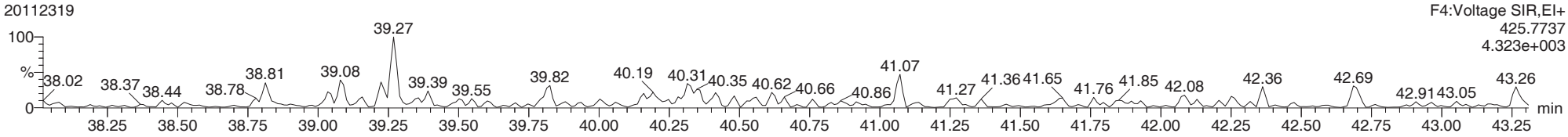

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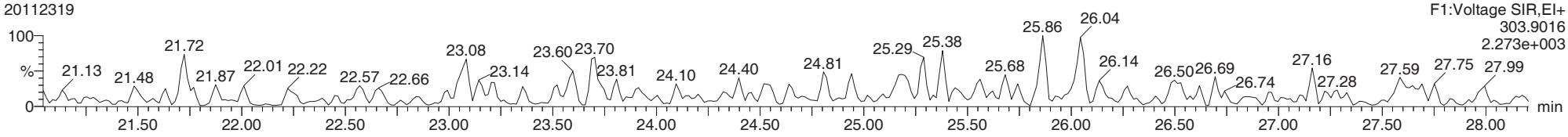
Total-tetrafurans



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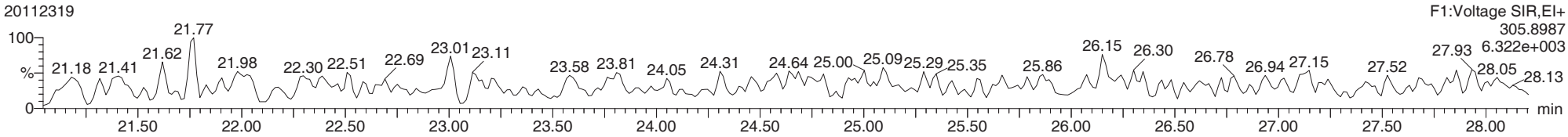

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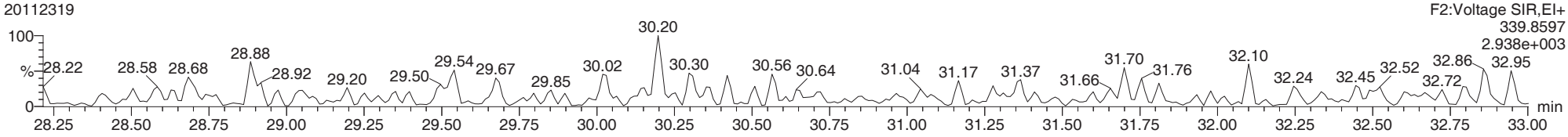

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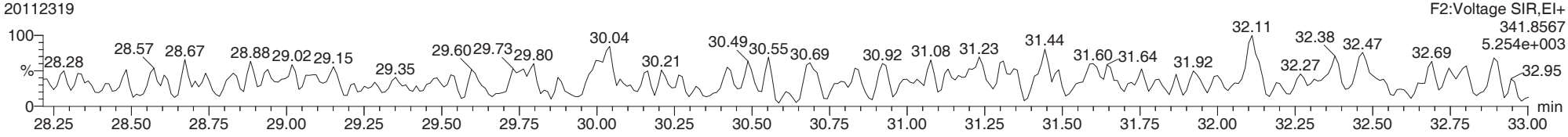

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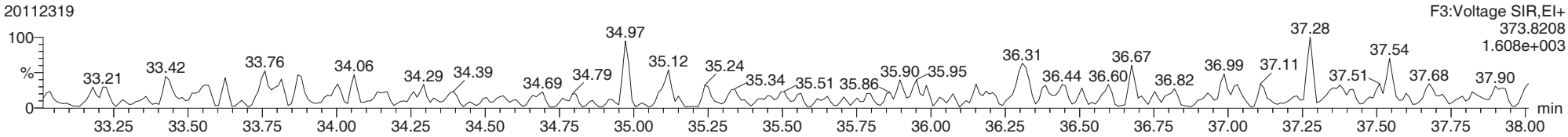
Total-hexafurans



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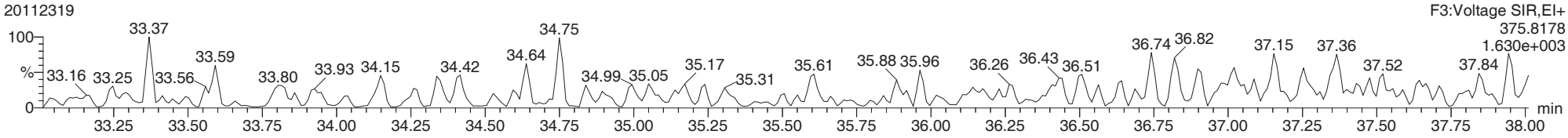

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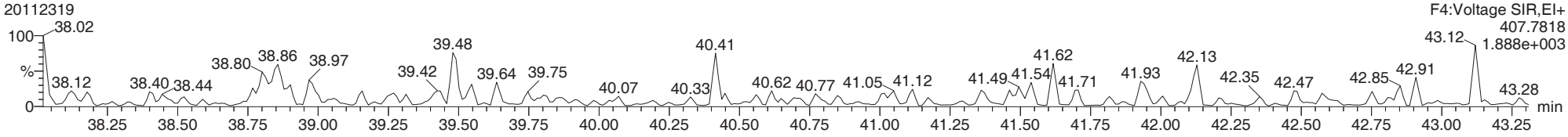

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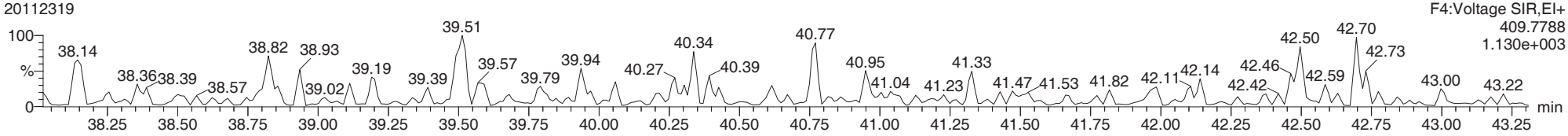

PREPARATION BATCH SUMMARY

EPA 1613B

Laboratory: Analytical Resources, Inc.
SDG: 20J0389
Client: Floyd - Snider
Project: Lora Lake Apartments
Batch: BIK0278
Batch Matrix: Water
Preparation: EPA 1613

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
MW-CP5-102720	20J0389-06	20111806	11/11/20 13:40	
Blank	BIK0278-BLK2	20111810	11/11/20 13:40	
LCS	BIK0278-BS2	20111811	11/11/20 13:40	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HRGCMS Dioxin/Furan Preparation Bench Sheet EPA Methods 8290A & 1613B

Batch: BIK0278

Aqueous Samples

ARI Work Orders:	20J0389,20J0423,20K0005	
Method (circle one)	**Solid Phase Extraction** (circled)	Separatory Funnel
Extraction Method	Start Date/Time:	End Date/Time:
Soxhlet (circled) SepF Shake out	11/11/20 1340	11/12/20 0547
Tumble (circled)	11/11/20 0657	11/11/20 1100

Reagents/Equipment Used	NA	ID / Lot Number	Initials	Date
~~Balance~~				
CH2Cl2		I010090	M	11/13/20
MeOH		H006611	M	11/11/20
Hexane		I009056	M	11/12/20 / 11/16/20
XAD-2		H008692	M	11/11/20
H2SO4		I007088	M	11/12/20
Na2SO4		I009762	M	11/12/20 / 11/16/20
Glasswool		H006181	M	11/13/20 / 11/16/20
Basic Silica		I008750	M	11/16/20
Acid Silica		I008874	M	11/16/20
0% Silica		I008937	M	11/11/20 / 11/16/20
Activated Florisil		I005135	M	11/18/20
~~CH2Cl2/Hex/DCM~~				
Nonane		H006038	M	11/16/20
KI Strips		E001858	M	11/11/20
pH Paper		E001859	M	11/11/20
Other (Toluene)		I008604	M	11/11/20

Lab Number & Container	Sample Name	Sample Vol (mL) (Target)/Actual	pH >9 Adjust 7-9	Res Cl Check	RotoVap 45 °C	Final Vol (uL)
20J0389-06 A	MW-CP5-102720	(1,000.00) 1033	7	(P) F	1 / (2)	20
20J0423-01 B	WTS-Dioxin 10-28-20	(1,000.00) 1026	7	(P) F	(1) / 2	20
20K0005-03 A	PC0AA5	(1,000.00) 980	7	(P) F	1 (2)	20
20K0005-06 A	PC0AA9	(1,000.00) 1040	7	(P) F	(1) / 2	20
BIK0278-BLK1	DBLK11	(1,000.00)	7	(P) F	(1) 2	20
BIK0278-BS1	DLCS11	(1,000.00)	7	(P) F	1 (2)	20
BIK0278-BSD1	DLCSD11	(1,000.00)	7	(P) F	(1) 2	20
Prep Analyst / Date:	M 11/11/20		M 11/11/20	M 11/11/20	M 11/12/20	M 11/16/20

Standards Used	Vol	ID / Lot Number	Concentration	Expiration Date	Analyst	Witness	Date
Recovery Standard	1.0 mL	I009239	2/4 ng/mL	4/6/21	M	BH	11/11/20
OPR	1.0 mL	I006649	0.2/1.0/2.0 ng/mL	7/30/21	M	BH	11/11/20
~~OLS Standard~~	~~1.0 mL~~		~~ng/mL~~				
Clean-up Standard	1.0 mL	I009240	0.8 ng/mL	4/6/21	M	M K2	11/16/20

Verify Client ID	
Analyst / Date:	M 11/11/20
Acid Clean **Y** (boxed) N — Analyst / Date:	M 11/13/20
Silica-Florisil Clean **Y** (boxed) N — Analyst / Date:	M 11/16/20

Supervisor Review By: [signature] Date: 11/16/20

Printed: 11 11 2020 6:24:40AM

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dioxin Extraction Laboratory – Glassware

Batch ID: BIKΦ278 Work Order: 2ΦJΦ389, 2ΦJΦ423, 2ΦKΦΦ5 Extraction Parameter: Dioxin ARI Analyst ML

ARI Sample ID	300 mL Flat Bottom	Small Soxhlet	Large Soxhlet	250 mL Beaker	Funnel	Column	Florisil Column	Turbo Tube	Sep Funnel	Erlenmeyer Flask	Centrifuge Bottle	Turbo-Vap	Vortex Mixer	Heating Mantle
BIKΦ278 - BLK1	22	47			127	229	4	31				4	4	B2
BS1	23	2			109	143	140	8				4	4	B3
BSD1	76	4			11	185	135	48				4	4	B4
2ΦJΦ389 - Φ6A	2Φ		75		62	17	24	11				4	4	B5
2ΦJΦ423 - Φ1B	18		32		24	161	159	81				4	4	B6
2ΦKΦΦ5 - Φ3A	4Φ		61		5	128	131	78				4	4	C1
Φ6A	9		23		26	176	103	69				4	4	C2
												4	4	
												4	4	
												4	4	
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Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: Dioxin Extraction Batch: BJK0278

Total Solids Batch: N/A Work Order(s): 20J0389, 20J0423, 20K0005

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☒ Turbid/Color= 20J0389-06A, 20J0423-01B, 20K0005-03A, 06A = Tan, turbid	KL 11/11/20
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions). Water trap vol. for BLK1 = 17.2mL, BS1 = 16.0mL, BSD1 = 11.8mL, 20J0389-06A = 8mL, 20J0423-01B = 11.0mL, 20J0005-03A = 12mL, 06A = 15mL	KL 11/12/20
☐ Share Samples Y / N	
☐ Multiple Jars Y / N	
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

PREPARATION BATCH SUMMARY

EPA 1613B

Laboratory: Analytical Resources, Inc. SDG: 20J0389

Client: Floyd - Snider Project: Lora Lake Apartments

Batch: BIK0510 Batch Matrix: Water Preparation: EPA 1613

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
MW-VB3-102720	20J0389-01	20112307	11/19/20 07:10	
MW-CP1-102720	20J0389-02	20112308	11/19/20 07:10	
MW-CP2-102720	20J0389-03	20112309	11/19/20 07:10	
MW-CP3-102720	20J0389-04	20112310	11/19/20 07:10	
MW-CP4-102720	20J0389-05	20112313	11/19/20 07:10	
MW-CP6-102720	20J0389-07	20112314	11/19/20 07:10	
MW-CP7-102720	20J0389-08	20112315	11/19/20 07:10	
MW-CP2-102720-D	20J0389-09	20112316	11/19/20 07:10	
MW-C1/VB1-102820	20J0389-10	20112317	11/19/20 07:10	
MW-C101-102820	20J0389-11	20112318	11/19/20 07:10	
HCOO-B312-102820	20J0389-14	20112319	11/19/20 07:10	
Blank	BIK0510-BLK1	20112304	11/19/20 07:10	
LCS	BIK0510-BS1	20112305	11/19/20 07:10	
LCS Dup	BIK0510-BSD1	20112306	11/19/20 07:10	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HRGCMS Dioxin/Furan Preparation Bench Sheet EPA Methods 8290A & 1613B

Batch: BIK0510

Aqueous Samples

ARI Work Orders:	20J0389	
Method (circle one)	Solid Phase Extraction	Separatory Funnel
Extraction Method	Start Date/Time:	End Date/Time:
Soxhlet / SepF Shake out	11/19/20 0710	11/19/20 0845
Tumble		

Reagents/Equipment Used	NA	ID / Lot Number	Initials	Date
~~Balance~~				
CH2Cl2		I010678	M	11/19/20 / 11/20/20
~~MeOH~~				
Hexane		I009056	M	11/19/20 / 11/20/20
~~KOH~~				
~~H2SO4~~				
Na2SO4		I009762 / I010485	M	11/19/20 / 11/20/20
Glasswool		H006181	M	11/19/20 / 11/20/20
Basic Silica		I008750	M	11/20/20
Acid Silica		I008874	M	11/20/20
0% Silica		I008957	M	11/20/20
Activated Florisil		I005135	M	11/20/20
~~(50:2)Hex/DCM~~				
Nonane		H006038	M	11/20/20
KI Strips		E001585	M	11/19/20
pH Paper		E001859	M	11/19/20
~~Silica~~				

Lab Number & Container	Sample Name	Sample Vol (mL) (Target)/Actual	pH >9 Adjust 7-9	Res Cl Check	RotoVap 45 °C	Final Vol (uL)
20J0389-01 A	MW-VB3-102720	(1,000.00) 1067	7	P / F	1 2	20
20J0389-02 A	MW-CP1-102720	(1,000.00) 1022	7	P / F	1 2	20
20J0389-03 A	MW-CP2-102720	(1,000.00) 1055	7	P / F	1 2	20
20J0389-04 A	MW-CP3-102720	(1,000.00) 1072	7	P / F	1 2	20
20J0389-05 A	MW-CP4-102720	(1,000.00) 1067	7	P / F	1 2	20
20J0389-07 A	MW-CP6-102720	(1,000.00) 1067	7	P / F	1 2	20
20J0389-08 A	MW-CP7-102720	(1,000.00) 1072	7	P / F	1 2	20
20J0389-09 A	MW-CP2-102720-D	(1,000.00) 1055	7	P / F	1 2	20
20J0389-10 A	MW-C1/VB1-102820	(1,000.00) 1022	7	P / F	1 2	20
20J0389-11 A	MW-C101-102820	(1,000.00) 1052	7	P / F	1 2	20
20J0389-14 A	HCOO-B12-102820	(1,000.00) 1055	7	P / F	1 2	20
BIK0510-BLK1	DBLK19	(1,000.00)	7	P / F	1 2	20
BIK0510-BS1	DLCS19	(1,000.00)	7	P / F	1 2	20
BIK0510-BSD1	DLCSD19	(1,000.00)	7	P / F	1 2	20
Prep Analyst / Date:	~~M 11/20/20~~ M 11/19/20		M 11/19/20	M 11/19/20	M 11/19/20	M 11/20/20

Standards Used	Vol	ID / Lot Number	Concentration	Expiration Date	Analyst	Witness	Date
Recovery Standard	1.0 mL	I009239	2/4 ng/mL	4/6/21	M	BH	11/19/20
OPR	1.0 mL	I006649	0.2/1.0/2.0 ng/mL	7/30/21	M	BH	11/19/20
~~QLS Standard~~	~~1.0 mL~~		~~0.01/0.05/0.1 ng/mL~~				
Clean-up Standard	1.0 mL	I009240	0.8 ng/mL	4/6/21	M	BH	11/20/20

Verify Client ID
Analyst / Date: M 11/19/20

Acid Clean
Y [N]
Analyst / Date:

Silica-Florisil Clean
[Y] N
Analyst / Date: M 11/20/20

Supervisor Review By 11/23/20
Date

Printed: 11/18/2020 1:31:01PM

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Page 1 of 1

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dioxin Extraction Laboratory – Glassware

Batch ID: BIKØ51Ø Work Order: 2ØJØ389 Extraction Parameter: Dioxin ARI Analyst: M

ARI Sample ID	300 mL Flat Bottom	Small Soxhlet	Large Soxhlet	250 mL Beaker	Funnel	Column	Florisil Column	Turbo Tube	Sep Funnel	Erlenmeyer Flask	Centrifuge Bottle	Turbo-Vap	Vortex Mixer	Heating Mantle
BIKØ51Ø - BLK	27				19	37	12	36	48	16		4	4	
BS1	25				39	9	26	41	31	11		4	4	
BSD1	14				1	36	31	43	28	5		4	4	
2ØJØ389 - Ø1A	23				2Ø	32	21	32	6	34		4	4	
Ø2A	24				21	13	1	47	4Ø	24		4	4	
Ø3A	4				22	8	25	1	5Ø	33		4	4	
Ø4A	28				16	5	19	21	1Ø	5Ø		4	4	
Ø5A	13				23	6	28	16	33	21		4	4	
Ø7A	76				34	12	4	44	36	15		4	4	
Ø8A	1				41	16	1Ø	26	35	18		4	4	
Ø9A	22				43	21	16	28	26	23		4	4	
1ØA	2Ø				28	22	L1Ø	35	38	1		4	4	
11A	4				12	14	14	12	37	9		4	4	
14A	3Ø				4	11	3	27	83	12		4	4	
												4	4	
												4	4	
												4	4	
												4	4	
												4	4	
												4	4	
												4	4	
												4	4	
												4	4	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: Dioxin   Extraction Batch BJK0510

Total Solids Batch: N/A   Work Order(s): 20J0389

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☒ No Anomalies 20J0389 - 01A - 05A, 07A - 11A, 14A	M 11/19/20
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☐ Share Samples Y / N	
☐ Multiple Jars Y / N	
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

3056F

Revision 15
07/01/19

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Cleanup Batch:	CIK0125	Cleanup Type:	Sulfuric Acid
Cleanup Method:	EPA 3665A Sulfuric Acid Cleanup	Analysis:	EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
MW-CP5-102720	20J0389-06	20111806	11/12/2020	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CIK0125

Matrix: Water **Cleanup using: HRGCMS - EPA 3665A Sulfuric Acid Cleanup** **Printed: 11/16/2020 2:22:39PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
20J0389-06	A	MW-CP5-102720	A 01	20	20	1613B Dioxin	11/12/2020	NPL	
20J0423-01	B	WTS-Dioxin 10-28-20	B 01	20	20	1613B Dioxin	11/12/2020	NPL	
20K0005-03	A	PC0AA5	A 01	20	20	HRSM01.2	11/12/2020	NPL	
20K0005-06	A	PC0AA9	A 01	20	20	HRSM01.2	11/12/2020	NPL	
BIK0278-BLK1	-	DBLK11	-	20	20	-	11/12/2020	NPL	
BIK0278-BS1	-	DLCS11	-	20	20	-	11/12/2020	NPL	
BIK0278-BSD1	-	DLCSD11	-	20	20	-	11/12/2020	NPL	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Cleanup Batch:	CIK0126	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup	Analysis:	EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
MW-CP5-102720	20J0389-06	20111806	11/16/2020	

Analytical Resources, Incorporated
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CLEANUP BENCH SHEET

CIK0126

Matrix: Water **Cleanup using: HRGCMS - EPA 3630C Silica Gel Cleanup** **Printed: 11/16/2020 2:23:40PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
20J0389-06	A	MW-CP5-102720	A 01	20	20	1613B Dioxin	11/16/2020	NPL	
20J0423-01	B	WTS-Dioxin 10-28-20	B 01	20	20	1613B Dioxin	11/16/2020	NPL	
20K0005-03	A	PC0AA5	A 01	20	20	HRSM01.2	11/16/2020	NPL	
20K0005-06	A	PC0AA9	A 01	20	20	HRSM01.2	11/16/2020	NPL	
BIK0278-BLK1	-	DBLK11	-	20	20	-	11/16/2020	NPL	
BIK0278-BS1	-	DLCS11	-	20	20	-	11/16/2020	NPL	
BIK0278-BSD1	-	DLCSD11	-	20	20	-	11/16/2020	NPL	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Cleanup Batch:	CIK0127	Cleanup Type:	Florisil
Cleanup Method:	EPA 3620B Florisil Cleanup (mL)	Analysis:	EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
MW-CP5-102720	20J0389-06	20111806	11/16/2020	

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CLEANUP BENCH SHEET

CIK0127

Matrix: Water **Cleanup using: HRGCMS - EPA 3620B Florisil Cleanup** **Printed: 11/16/2020 2:23:49PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
20J0389-06	A	MW-CP5-102720	A 01	20	20	1613B Dioxin	11/16/2020	NPL	
20J0423-01	B	WTS-Dioxin 10-28-20	B 01	20	20	1613B Dioxin	11/16/2020	NPL	
20K0005-03	A	PC0AA5	A 01	20	20	HRSM01.2	11/16/2020	NPL	
20K0005-06	A	PC0AA9	A 01	20	20	HRSM01.2	11/16/2020	NPL	
BIK0278-BLK1	-	DBLK11	-	20	20	-	11/16/2020	NPL	
BIK0278-BS1	-	DLCS11	-	20	20	-	11/16/2020	NPL	
BIK0278-BSD1	-	DLCSD11	-	20	20	-	11/16/2020	NPL	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Cleanup Batch:	CIK0169	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup	Analysis:	EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
MW-CP2-102720	20J0389-03	20112309	11/20/2020	
LCS Dup	BIK0510-BSD1	20112306	11/20/2020	
LCS	BIK0510-BS1	20112305	11/20/2020	
Blank	BIK0510-BLK1	20112304	11/20/2020	
HCOO-B312-102820	20J0389-14	20112319	11/20/2020	
MW-C1/VB1-102820	20J0389-10	20112317	11/20/2020	
MW-CP1-102720	20J0389-02	20112308	11/20/2020	
MW-VB3-102720	20J0389-01	20112307	11/20/2020	
MW-CP2-102720-D	20J0389-09	20112316	11/20/2020	
MW-CP3-102720	20J0389-04	20112310	11/20/2020	
MW-CP4-102720	20J0389-05	20112313	11/20/2020	
MW-CP6-102720	20J0389-07	20112314	11/20/2020	
MW-CP7-102720	20J0389-08	20112315	11/20/2020	
MW-C101-102820	20J0389-11	20112318	11/20/2020	

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CLEANUP BENCH SHEET

CIK0169

Matrix: Water **Cleanup using: HRGCMS - EPA 3630C Silica Gel Cleanup** **Printed: 11/23/2020 5:47:06AM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
20J0389-14	A	HCOO-B312-102820	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
20J0389-11	A	MW-C101-102820	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
20J0389-10	A	MW-C1/VB1-102820	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
20J0389-07	A	MW-CP6-102720	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
20J0389-08	A	MW-CP7-102720	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
20J0389-09	A	MW-CP2-102720-D	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
20J0389-03	A	MW-CP2-102720	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
20J0389-02	A	MW-CP1-102720	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
20J0389-01	A	MW-VB3-102720	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
20J0389-04	A	MW-CP3-102720	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
20J0389-05	A	MW-CP4-102720	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
BIK0510-BSD1	-	DLCSD19	-	20	20	-	11/20/2020	NPL	
BIK0510-BS1	-	DLCS19	-	20	20	-	11/20/2020	NPL	
BIK0510-BLK1	-	DBLK19	-	20	20	-	11/20/2020	NPL	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Cleanup Batch:	CIK0170	Cleanup Type:	Florisil
Cleanup Method:	EPA 3620B Florisil Cleanup (mL)	Analysis:	EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
HCOO-B312-102820	20J0389-14	20112319	11/20/2020	
LCS	BIK0510-BS1	20112305	11/20/2020	
Blank	BIK0510-BLK1	20112304	11/20/2020	
MW-VB3-102720	20J0389-01	20112307	11/20/2020	
MW-CP7-102720	20J0389-08	20112315	11/20/2020	
MW-CP6-102720	20J0389-07	20112314	11/20/2020	
MW-CP4-102720	20J0389-05	20112313	11/20/2020	
MW-CP3-102720	20J0389-04	20112310	11/20/2020	
MW-CP2-102720-D	20J0389-09	20112316	11/20/2020	
MW-CP2-102720	20J0389-03	20112309	11/20/2020	
MW-CP1-102720	20J0389-02	20112308	11/20/2020	
LCS Dup	BIK0510-BSD1	20112306	11/20/2020	
MW-C1/VB1-102820	20J0389-10	20112317	11/20/2020	
MW-C101-102820	20J0389-11	20112318	11/20/2020	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CIK0170

Matrix: Water **Cleanup using: HRGCMS - EPA 3620B Florisil Cleanup** **Printed: 11/23/2020 5:47:33AM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
20J0389-14	A	HCOO-B312-102820	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
20J0389-11	A	MW-C101-102820	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
20J0389-10	A	MW-C1/VB1-102820	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
20J0389-07	A	MW-CP6-102720	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
20J0389-08	A	MW-CP7-102720	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
20J0389-09	A	MW-CP2-102720-D	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
20J0389-03	A	MW-CP2-102720	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
20J0389-02	A	MW-CP1-102720	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
20J0389-01	A	MW-VB3-102720	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
20J0389-04	A	MW-CP3-102720	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
20J0389-05	A	MW-CP4-102720	A 01	20	20	1613B Dioxin	11/20/2020	NPL	
BIK0510-BSD1	-	DLCSD19	-	20	20	-	11/20/2020	NPL	
BIK0510-BS1	-	DLCS19	-	20	20	-	11/20/2020	NPL	
BIK0510-BLK1	-	DBLK19	-	20	20	-	11/20/2020	NPL	

Blank

Form 1
METHOD BLANK DATA SHEET
EPA 1613B
Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider			Project:	Lora Lake Apartments
Matrix:	Water	Laboratory ID:	BIK0278-BLK2	File ID:	20111810
Sampled:	N/A	Prepared:	11/11/20 13:40	Analyzed:	11/18/20 18:17
Solids Wt%:		Preparation:	EPA 1613	Initial/Final:	1000 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0272	Calibration:	DJ00101
Batch:	BIK0278	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.000	0.655-0.886	1.34	10.0	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1	0.000	0.655-0.886	0.92	10.0	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1	0.000	1.318-1.783	1.36	10.0	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1	0.000	1.318-1.783	1.25	10.0	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1	0.000	1.318-1.783	1.03	10.0	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1	0.000	1.054-1.426	0.67	10.0	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1	0.000	1.054-1.426	0.61	10.0	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1	0.000	1.054-1.426	0.76	10.0	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1	0.000	1.054-1.426	0.97	10.0	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1	0.000	1.054-1.426	1.02	10.0	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1	0.000	1.054-1.426	0.90	10.0	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1	0.000	1.054-1.426	1.07	10.0	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	0.583	0.893-1.208	1.09	10.0	1.10	pg/L	EMPC, J
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	0.000	0.893-1.208	1.72	10.0	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	2.067	0.893-1.208	1.18	10.0	2.34	pg/L	EMPC, J
39001-02-0	OCDF	1	1.097	0.757-1.024	4.20	20.0	8.61	pg/L	EMPC, J
3268-87-9	OCDD	1	0.881	0.757-1.024	5.01	50.0	56.7	pg/L	

Homologue Groups

55722-27-5	Total TCDF	1	0.000			10.0	ND	pg/L	
41903-57-5	Total TCDD	1	0.000			10.0	ND	pg/L	
30402-15-4	Total PeCDF	1	0.000			10.0	ND	pg/L	
36088-22-9	Total PeCDD	1	0.000			10.0	ND	pg/L	
55684-94-1	Total HxCDF	1	0.000			10.0	ND	pg/L	
34465-46-8	Total HxCDD	1	0.000			10.0	ND	pg/L	
38998-75-3	Total HpCDF	1	0.000			10.0	1.11	pg/L	
37871-00-4	Total HpCDD	1	0.000			10.0	ND	pg/L	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.054
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.61

Blank

Form 2

METHOD BLANK DATA SHEET

EPA 1613B

Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider			Project:	Lora Lake Apartments
Matrix:	Water	Laboratory ID:	BIK0278-BLK2	File ID:	20111810
Sampled:	N/A	Prepared:	11/11/20 13:40	Analyzed:	11/18/20 18:17
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1000 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0272	Calibration:	DJ00101
Batch:	BIK0278	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF	1	0.778	0.655-0.886	0.00	75.0	24 - 169 %	
13C12-2,3,7,8-TCDD	1	0.800	0.655-0.886	0.00	74.5	25 - 164 %	
13C12-1,2,3,7,8-PeCDF	1	1.588	1.318-1.783	0.00	70.0	24 - 185 %	
13C12-2,3,4,7,8-PeCDF	1	1.533	1.318-1.783	0.00	67.7	21 - 178 %	
13C12-1,2,3,7,8-PeCDD	1	1.646	1.318-1.783	0.00	70.1	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF	1	0.487	0.434-0.587	0.00	86.4	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF	1	0.449	0.434-0.587	0.00	89.9	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF	1	0.521	0.434-0.587	0.00	83.2	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF	1	0.465	0.434-0.587	0.00	81.6	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD	1	1.277	1.054-1.426	0.00	84.8	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD	1	1.266	1.054-1.426	0.00	72.3	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF	1	0.389	0.374-0.506	0.00	84.3	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF	1	0.473	0.374-0.506	0.00	84.1	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD	1	1.075	0.893-1.208	0.00	89.5	23 - 140 %	
13C12-OCDD	1	0.929	0.757-1.024	0.00	43.3	17 - 157 %	
37Cl4-2,3,7,8-TCDD	1	328.000		0.00	93.1	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\201118IHQC.qld
Last Altered: Thursday, November 19, 2020 10:22:14 Pacific Standard Time
Printed: Thursday, November 19, 2020 10:24:35 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 18 Nov 2020 14:35:19
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: DBLK11, Name: 20111810, Date: 18-Nov-2020, Time: 18:17:49, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF					0.729		0.770	1217	2422								
12378-PeCDF					0.779		1.550	731	2010								
23478-PeCDF					0.880		1.550	731	2010								
123478-HxCDF					0.880		1.240	591	480								
234678-HxCDF					0.863		1.240	591	480								
123678-HxCDF					0.853		1.240	591	480								
123789-HxCDF					0.780		1.240	591	480								
1234678-HpCDF	38.890	1.001	1.201e2	2.061e2	1.001	0.583	1.050	537	1175	3.17e3	4.39e3	5.9	3.7	YES	db	bb	0.055
1234789-HpCDF					0.994		1.050	537	1175								
OCDF	45.430	1.006	5.942e2	5.419e2	1.158	1.097	0.890	906	1245	6.79e3	7.48e3	7.5	6.0	YES	MM	MM	0.430
2378-TCDD					1.238		0.770	1485	666								
12378-PeCDD					0.988		1.550	1063	462								
123478-HxCDD					0.842		1.240	640	814								
123678-HxCDD					0.907		1.240	640	814								
123789-HxCDD					0.784		1.240	640	814								
1234678-HpCDD	40.382	1.000	3.687e2	1.783e2	1.044	2.067	1.050	671	643	7.30e3	5.60e3	10.9	8.7	YES	bb	bd	0.117
OCDD	45.155	1.000	2.914e3	3.308e3	0.963	0.881	0.890	559	1575	3.36e4	4.07e4	60.0	25.9	NO	bd	bd	2.834
13C-2378-TCDF	25.893	1.006	6.393e5	8.217e5	2.203	0.778	0.770	5296	2764	9.78e6	1.26e7	1845.9	4543.2	NO	bb	bb	74.980
13C-12378-PeCDF	30.052	1.168	6.614e5	4.165e5	1.741	1.588	1.550	4277	2503	9.53e6	6.22e6	2227.5	2485.4	NO	bd	bb	69.993
13C-23478-PeCDF	31.388	1.220	6.046e5	3.945e5	1.669	1.533	1.550	4277	2503	9.05e6	5.95e6	2115.0	2378.0	NO	bb	bb	67.658
13C-123478-HxCDF	35.006	0.956	2.242e5	4.605e5	1.022	0.487	0.510	2215	1838	3.55e6	7.11e6	1600.7	3869.4	NO	bd	bd	86.358
13C-123678-HxCDF	35.139	0.960	2.593e5	5.773e5	1.200	0.449	0.510	2215	1838	3.81e6	7.88e6	1718.6	4288.9	NO	db	db	89.871
13C-234678-HxCDF	36.007	0.983	2.369e5	4.543e5	1.071	0.521	0.510	2215	1838	3.37e6	6.89e6	1522.2	3746.6	NO	bb	bb	83.196
13C-123789-HxCDF	37.031	1.011	1.846e5	3.968e5	0.919	0.465	0.510	2215	1838	2.70e6	5.59e6	1217.8	3042.8	NO	bb	bd	81.603
13C-1234678-HpCDF	38.857	1.061	1.664e5	4.281e5	0.909	0.389	0.440	3180	3410	2.64e6	6.30e6	828.7	1848.4	NO	bb	bd	84.348
13C-1234789-HpCDF	41.116	1.123	1.515e5	3.204e5	0.724	0.473	0.440	3180	3410	1.93e6	4.54e6	606.8	1332.7	NO	bb	bb	84.074
13C-1234-TCDD	25.727	0.000	3.935e5	4.910e5	1.000	0.801	0.770	2245	1367	6.09e6	7.59e6	2712.8	5551.6	NO	bb	bb	100.000
13C-2378-TCDD	26.528	1.031	3.460e5	4.323e5	1.181	0.800	0.770	2245	1367	5.04e6	6.31e6	2246.4	4614.3	NO	bb	bb	74.476
13C-12378-PeCDD	31.655	1.230	3.774e5	2.293e5	0.978	1.646	1.550	1312	1339	5.57e6	3.41e6	4245.3	2547.6	NO	bb	bb	70.136
13C-123478-HxCDD	36.119	0.986	3.561e5	2.789e5	0.965	1.277	1.240	2005	3149	5.68e6	4.43e6	2830.1	1407.8	NO	bd	bd	84.831
13C-123678-HxCDD	36.241	0.990	3.660e5	2.891e5	1.168	1.266	1.240	2005	3149	5.94e6	4.62e6	2962.3	1468.5	NO	db	db	72.306
13C-1234678-HpCDD	40.370	1.102	2.322e5	2.160e5	0.645	1.075	1.050	2851	2248	3.32e6	3.12e6	1164.4	1388.7	NO	bb	bb	89.539
13C-OCDD	45.146	1.233	2.196e5	2.364e5	0.678	0.929	0.890	1992	1329	2.56e6	2.77e6	1282.9	2085.6	NO	bb	bb	86.690
13C-123789-HxCDD	36.619	0.000	4.279e5	3.478e5	1.000	1.230	1.240	2005	3149	6.51e6	5.26e6	3248.3	1668.9	NO	bb	bb	100.000
37CL-2378-TCDD	26.558	1.032	4.165e5		1.264			2669		6.30e6		2360.7			bb		37.235

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ID: DBLK11, Name: 20111810, Date: 18-Nov-2020, Time: 18:17:49, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	1217	2422								
1289-TCDF					0.688		0.770	1217	2422								
13468-PECDF					1.181		1.550	431	1417								
12389-PECDF					0.766		1.550	731	2010								
123468-HXCDF					1.003		1.240	591	480								
1368-TCDD	23.551	0.888	1.742e2	7.838e1	1.179	2.223	0.770	1485	666	3.71e3	1.75e3	2.5	2.6	YES	bb	bb	0.028
1289-TCDD					1.042		0.770	1485	666								
12479-PECDD					1.810		1.550	1063	462								
12389-PECDD					1.165		1.550	1063	462								
124679-HXCDD					1.056		1.240	640	814								
1234679-HPCDD	39.313	0.974	4.956e2	3.305e2	1.285	1.500	1.050	671	643	9.12e3	7.28e3	13.6	11.3	YES	bd	bb	0.143
Total-tetrafurans			0.000e0		0.754			1217		0.00e0							
Total-penta1			0.000e0					431		0.00e0							
Total-pentafurans			0.000e0		0.809			731		0.00e0							
Total-hexafurans			0.000e0		0.876			591		0.00e0							
Total-heptafurans			1.603e2		0.997			537		4.16e3							0.055
Total-Furans			2.542e2		0.893			1217		6.54e3							0.071
Total-tetradioxins			0.000e0		1.153			1485		0.00e0							
Total-pentadioxins			0.000e0		1.321			1063		0.00e0							
Total-hexadioxins			0.000e0		0.897			640		0.00e0							
Total-heptadioxins			0.000e0		1.165			671		0.00e0							
Total-Dioxins			2.914e3		1.100			1485		3.36e4							2.834
Total-TEQ			3.168e3					1485		4.01e4							2.905
FUNCTION1 PFK			1.460e6					890382		2.55e7							
FUNCTION2 PFK			8.390e5					576922		1.86e7							0.000
FUNCTION3 PFK			1.845e6					459693		3.79e7							0.000
FUNCTION4 PFK			1.221e7					486935		1.32e8							
FUNCTION5 PFK			6.405e5					252247		1.56e7							
FUNCTION1 HXCD...			3.792e2					712		6.52e3							0.000
FUNCTION1 HPCD...			3.037e3					1457		5.95e4							0.000
FUNCTION2 HPCD...			9.367e2					1830		2.63e4							0.000
FUNCTION3 OCDPE			0.000e0					461		0.00e0							
FUNCTION4 NCDPE			0.000e0					541		0.00e0							
FUNCTION5 DCDPE			0.000e0					353		0.00e0							

Method: T:\Autospec\Methods\Dioxin201118.mdb 18 Nov 2020 14:35:19
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: DBLK11, Name: 20111810, Date: 18-Nov-2020, Time: 18:17:49, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-heptafurans	39.57	1.603e2	1.342e2	0.997	1.19	1.05	7.8	YES	NO	db	db	0.055

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-Furans	27.99	9.396e1	1.087e2	0.893	0.86	0.77	2.0	NO	NO	db	bb	0.016
2	Total-heptafurans	39.57	1.603e2	1.342e2	0.997	1.19	1.05	7.8	YES	NO	db	db	0.055

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	OCDD	45.16	2.914e3	3.308e3	0.963	0.88	0.89	60.0	YES	NO	bd	bd	2.834

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-Furans	27.99	9.396e1	1.087e2	0.893	0.86	0.77	2.0	NO	NO	db	bb	0.016
2	Total-heptafurans	39.57	1.603e2	1.342e2	0.997	1.19	1.05	7.8	YES	NO	db	db	0.055
3	OCDD	45.16	2.914e3	3.308e3	0.963	0.88	0.89	60.0	YES	NO	bd	bd	2.834

Dataset: T:\Autospec\Processed Data Batch\201118IHQC.qld
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ID: DBLK11, Name: 20111810, Date: 18-Nov-2020, Time: 18:17:49, Conditions: AUTOSPEC01, User: pk

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	23.20	5.400e3					0.4	NO		bb		
2	FUNCTION1 PFK	22.98	6.579e4					1.4	NO		bb		
3	FUNCTION1 PFK	22.52	2.184e5					2.0	NO		bb		
4	FUNCTION1 PFK	21.19	1.601e5					1.9	NO		bb		
5	FUNCTION1 PFK	28.10	5.880e4					1.4	NO		bb		
6	FUNCTION1 PFK	27.52	6.645e4					1.8	NO		bb		
7	FUNCTION1 PFK	27.31	6.858e4					1.5	NO		bb		
8	FUNCTION1 PFK	27.09	6.957e4					1.4	NO		bb		
9	FUNCTION1 PFK	26.84	1.521e5					2.7	NO		db		
10	FUNCTION1 PFK	26.72	6.689e4					1.6	NO		bd		
11	FUNCTION1 PFK	25.83	8.858e4					1.8	NO		bb		
12	FUNCTION1 PFK	25.58	5.029e4					1.4	NO		bb		
13	FUNCTION1 PFK	25.36	4.976e4					1.3	NO		bb		
14	FUNCTION1 PFK	25.26	3.436e4					0.8	NO		bb		
15	FUNCTION1 PFK	25.03	8.441e4					1.8	NO		bb		
16	FUNCTION1 PFK	24.70	9.268e4					2.2	NO		bb		
17	FUNCTION1 PFK	24.46	8.222e4					1.9	NO		bb		
18	FUNCTION1 PFK	23.78	4.567e4					1.3	NO		bb		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.30	4.296e4					1.6	NO		bb		0.000
2	FUNCTION2 PFK	32.40	5.657e4					2.1	NO		bb		0.000
3	FUNCTION2 PFK	32.29	9.154e4					2.1	NO		db		0.000
4	FUNCTION2 PFK	32.19	4.001e4					1.7	NO		bd		0.000
5	FUNCTION2 PFK	31.94	3.130e4					2.2	NO		bb		0.000
6	FUNCTION2 PFK	31.72	3.403e4					1.5	NO		bb		0.000
7	FUNCTION2 PFK	31.27	2.771e4					1.4	NO		bb		0.000
8	FUNCTION2 PFK	31.17	4.329e4					1.8	NO		bb		0.000
9	FUNCTION2 PFK	30.70	2.662e4					1.3	NO		bb		0.000
10	FUNCTION2 PFK	30.62	4.640e3					0.7	NO		bb		0.000
11	FUNCTION2 PFK	30.02	3.974e4					1.7	NO		bb		0.000
12	FUNCTION2 PFK	29.47	3.245e4					1.2	NO		bb		0.000
13	FUNCTION2 PFK	29.35	4.865e4					1.6	NO		bb		0.000
14	FUNCTION2 PFK	29.02	5.695e4					1.8	NO		db		0.000
15	FUNCTION2 PFK	28.89	9.803e4					2.0	NO		bd		0.000
16	FUNCTION2 PFK	28.46	3.002e4					1.3	NO		db		0.000
17	FUNCTION2 PFK	28.42	3.996e4					1.8	NO		bd		0.000
18	FUNCTION2 PFK	32.76	1.963e4					1.1	NO		bb		0.000
19	FUNCTION2 PFK	32.71	1.563e4					1.2	NO		bb		0.000
20	FUNCTION2 PFK	32.63	5.931e4					2.2	NO		bb		0.000

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ID: DBLK11, Name: 20111810, Date: 18-Nov-2020, Time: 18:17:49, Conditions: AUTOSPEC01, User: pk

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.67	1.170e5					4.1	YES		dd		0.000
2	FUNCTION3 PFK	34.56	9.059e4					3.7	YES		dd		0.000
3	FUNCTION3 PFK	34.53	5.167e4					3.2	YES		bd		0.000
4	FUNCTION3 PFK	34.45	1.087e5					4.6	YES		bb		0.000
5	FUNCTION3 PFK	34.34	5.598e3					0.7	NO		bb		0.000
6	FUNCTION3 PFK	34.23	4.008e4					2.0	NO		bb		0.000
7	FUNCTION3 PFK	33.77	3.529e4					1.8	NO		db		0.000
8	FUNCTION3 PFK	33.73	3.099e4					1.9	NO		dd		0.000
9	FUNCTION3 PFK	33.65	4.680e4					2.5	NO		bd		0.000
10	FUNCTION3 PFK	33.32	5.162e4					1.9	NO		bb		0.000
11	FUNCTION3 PFK	33.20	7.325e4					3.1	YES		bb		0.000
12	FUNCTION3 PFK	33.09	4.779e3					0.9	NO		bb		0.000
13	FUNCTION3 PFK	36.15	3.308e3					0.5	NO		bb		0.000
14	FUNCTION3 PFK	36.11	5.637e3					0.6	NO		bb		0.000
15	FUNCTION3 PFK	36.03	6.390e4					2.7	NO		db		0.000
16	FUNCTION3 PFK	35.93	3.607e4					2.2	NO		dd		0.000
17	FUNCTION3 PFK	35.88	2.556e4					1.5	NO		dd		0.000
18	FUNCTION3 PFK	35.81	6.934e4					2.6	NO		dd		0.000
19	FUNCTION3 PFK	35.68	8.399e4					2.9	NO		dd		0.000
20	FUNCTION3 PFK	35.57	1.105e5					2.8	NO		dd		0.000
21	FUNCTION3 PFK	35.46	7.721e4					3.0	YES		bd		0.000
22	FUNCTION3 PFK	35.35	6.681e4					2.9	NO		db		0.000
23	FUNCTION3 PFK	35.24	1.094e4					0.9	NO		bd		0.000
24	FUNCTION3 PFK	35.19	8.537e3					0.9	NO		bb		0.000
25	FUNCTION3 PFK	35.13	5.646e4					2.5	NO		bb		0.000
26	FUNCTION3 PFK	34.99	3.243e4					1.8	NO		db		0.000
27	FUNCTION3 PFK	34.89	4.431e4					2.7	NO		dd		0.000
28	FUNCTION3 PFK	34.79	1.051e5					2.6	NO		dd		0.000
29	FUNCTION3 PFK	37.96	3.615e4					2.6	NO		db		0.000
30	FUNCTION3 PFK	37.93	2.823e4					2.0	NO		bd		0.000
31	FUNCTION3 PFK	37.70	3.277e4					1.1	NO		bb		0.000
32	FUNCTION3 PFK	37.62	1.542e4					1.0	NO		bb		0.000
33	FUNCTION3 PFK	37.28	3.738e4					2.1	NO		bb		0.000
34	FUNCTION3 PFK	37.17	3.381e4					2.0	NO		bb		0.000
35	FUNCTION3 PFK	37.05	6.015e4					2.5	NO		bb		0.000
36	FUNCTION3 PFK	36.71	6.264e4					2.3	NO		bb		0.000
37	FUNCTION3 PFK	36.49	7.651e4					2.7	NO		bb		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION3 PFK	36.27	5.449e3					0.6	NO		bb		0.000

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Last Altered: Thursday, November 19, 2020 10:22:14 Pacific Standard Time
Printed: Thursday, November 19, 2020 10:24:35 Pacific Standard Time

ID: DBLK11, Name: 20111810, Date: 18-Nov-2020, Time: 18:17:49, Conditions: AUTOSPEC01, User: pk

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.52	1.166e6					23.3	YES		dd		
2	FUNCTION4 PFK	38.47	5.027e5					23.5	YES		dd		
3	FUNCTION4 PFK	38.40	1.121e6					26.5	YES		dd		
4	FUNCTION4 PFK	38.29	3.555e6					29.8	YES		dd		
5	FUNCTION4 PFK	38.07	1.237e6					34.5	YES		bd		
6	FUNCTION4 PFK	40.49	7.844e4					2.4	NO		db		
7	FUNCTION4 PFK	40.36	5.327e4					2.2	NO		bd		
8	FUNCTION4 PFK	40.25	3.783e4					1.7	NO		bb		
9	FUNCTION4 PFK	39.81	7.297e4					2.6	NO		db		
10	FUNCTION4 PFK	39.70	3.650e4					2.6	NO		dd		
11	FUNCTION4 PFK	39.67	5.065e4					2.4	NO		bd		
12	FUNCTION4 PFK	39.56	7.550e4					2.0	NO		db		
13	FUNCTION4 PFK	39.44	4.370e4					1.6	NO		bd		
14	FUNCTION4 PFK	39.24	8.976e4					2.5	NO		db		
15	FUNCTION4 PFK	39.18	6.226e4					3.9	YES		dd		
16	FUNCTION4 PFK	39.09	2.993e5					6.6	YES		dd		
17	FUNCTION4 PFK	39.00	2.705e5					9.5	YES		dd		
18	FUNCTION4 PFK	38.96	2.139e5					10.4	YES		dd		
19	FUNCTION4 PFK	38.87	7.337e5					13.4	YES		dd		
20	FUNCTION4 PFK	38.76	8.387e5					16.5	YES		dd		
21	FUNCTION4 PFK	38.65	9.100e5					19.7	YES		dd		
22	FUNCTION4 PFK	42.85	2.389e4					1.4	NO		bd		
23	FUNCTION4 PFK	42.77	5.268e4					1.9	NO		db		
24	FUNCTION4 PFK	42.65	2.918e4					1.5	NO		bd		
25	FUNCTION4 PFK	42.42	5.206e4					2.3	NO		db		
26	FUNCTION4 PFK	42.30	4.144e4					2.0	NO		bd		
27	FUNCTION4 PFK	42.08	2.555e4					1.5	NO		bb		
28	FUNCTION4 PFK	41.94	6.953e4					1.5	NO		db		
29	FUNCTION4 PFK	41.85	2.817e4					1.6	NO		bd		
30	FUNCTION4 PFK	41.75	3.667e4					1.3	NO		bb		
31	FUNCTION4 PFK	41.63	5.650e4					2.2	NO		bb		
32	FUNCTION4 PFK	41.39	4.773e4					2.0	NO		bb		
33	FUNCTION4 PFK	41.28	5.823e4					2.1	NO		db		
34	FUNCTION4 PFK	41.17	5.084e4					1.9	NO		dd		
35	FUNCTION4 PFK	41.06	4.295e4					2.2	NO		dd		
36	FUNCTION4 PFK	41.02	2.544e4					1.5	NO		bd		
37	FUNCTION4 PFK	40.95	3.495e4					1.8	NO		bb		

ID: DBLK11, Name: 20111810, Date: 18-Nov-2020, Time: 18:17:49, Conditions: AUTOSPEC01, User: pk

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION4 PFK	43.20	3.181e4					1.9	NO		bb		
39	FUNCTION4 PFK	43.10	4.008e4					2.1	NO		bb		
40	FUNCTION4 PFK	42.89	1.230e4					1.1	NO		db		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.21	1.432e4					2.0	NO		bd		
2	FUNCTION5 PFK	44.01	1.425e4					2.1	NO		db		
3	FUNCTION5 PFK	43.98	7.290e3					1.3	NO		bd		
4	FUNCTION5 PFK	43.90	2.403e4					2.3	NO		bb		
5	FUNCTION5 PFK	43.82	9.146e3					1.5	NO		db		
6	FUNCTION5 PFK	43.77	3.273e4					2.9	NO		bd		
7	FUNCTION5 PFK	43.67	2.136e4					2.1	NO		bb		
8	FUNCTION5 PFK	43.56	1.777e4					2.5	NO		db		
9	FUNCTION5 PFK	43.54	9.685e3					2.0	NO		dd		
10	FUNCTION5 PFK	43.50	8.493e3					1.6	NO		bd		
11	FUNCTION5 PFK	43.46	3.215e3					0.7	NO		bb		
12	FUNCTION5 PFK	43.38	6.816e3					1.3	NO		bb		
13	FUNCTION5 PFK	46.29	3.288e4					3.2	YES		db		
14	FUNCTION5 PFK	46.25	3.767e4					2.7	NO		dd		
15	FUNCTION5 PFK	46.15	3.032e4					2.7	NO		dd		
16	FUNCTION5 PFK	46.06	3.953e4					2.3	NO		dd		
17	FUNCTION5 PFK	45.94	9.990e3					1.6	NO		bd		
18	FUNCTION5 PFK	45.48	3.214e4					3.0	YES		bb		
19	FUNCTION5 PFK	45.37	4.077e4					3.1	YES		db		
20	FUNCTION5 PFK	45.28	5.774e4					3.0	YES		bd		
21	FUNCTION5 PFK	45.14	4.440e4					3.0	NO		bb		
22	FUNCTION5 PFK	45.04	3.446e4					3.1	YES		bb		
23	FUNCTION5 PFK	44.93	2.131e4					2.5	NO		bb		
24	FUNCTION5 PFK	44.59	3.495e4					2.1	NO		bb		
25	FUNCTION5 PFK	44.46	2.450e4					2.4	NO		db		
26	FUNCTION5 PFK	44.37	1.202e4					2.0	NO		dd		
27	FUNCTION5 PFK	44.34	1.022e4					1.7	NO		bd		
28	FUNCTION5 PFK	44.25	8.475e3					1.4	NO		db		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	26.98	1.005e2					1.4	NO		bb		0.000
2	FUNCTION1 HXCD...	26.23	7.748e1					1.6	NO		bb		0.000
3	FUNCTION1 HXCD...	23.79	7.636e1					3.4	YES		bb		0.000
4	FUNCTION1 HXCD...	21.09	1.248e2					2.8	NO		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	23.46	2.126e2					2.7	NO		bb		0.000
2	FUNCTION1 HPCD...	23.20	1.772e2					2.1	NO		db		0.000
3	FUNCTION1 HPCD...	23.16	9.722e1					2.1	NO		bd		0.000
4	FUNCTION1 HPCD...	23.01	9.201e1					1.7	NO		bb		0.000
5	FUNCTION1 HPCD...	22.52	1.113e2					1.6	NO		bb		0.000
6	FUNCTION1 HPCD...	21.95	1.446e2					1.3	NO		db		0.000
7	FUNCTION1 HPCD...	21.81	1.830e2					2.4	NO		dd		0.000
8	FUNCTION1 HPCD...	21.66	1.412e2					1.6	NO		dd		0.000
9	FUNCTION1 HPCD...	21.51	1.115e2					1.1	NO		bd		0.000
10	FUNCTION1 HPCD...	21.25	2.218e2					3.9	YES		bb		0.000
11	FUNCTION1 HPCD...	28.04	8.337e1					1.0	NO		db		0.000
12	FUNCTION1 HPCD...	27.93	2.205e2					2.0	NO		dd		0.000
13	FUNCTION1 HPCD...	27.83	2.006e2					1.6	NO		dd		0.000
14	FUNCTION1 HPCD...	27.66	1.434e2					1.6	NO		bd		0.000
15	FUNCTION1 HPCD...	27.56	1.721e2					2.6	NO		db		0.000
16	FUNCTION1 HPCD...	27.46	7.273e1					1.2	NO		bd		0.000
17	FUNCTION1 HPCD...	26.29	7.467e1					1.5	NO		db		0.000
18	FUNCTION1 HPCD...	26.23	2.229e2					3.8	YES		bd		0.000
19	FUNCTION1 HPCD...	25.49	1.506e2					1.4	NO		bb		0.000
20	FUNCTION1 HPCD...	23.76	8.207e1					1.6	NO		db		0.000
21	FUNCTION1 HPCD...	23.72	1.216e2					2.1	NO		bd		0.000

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ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	29.37	7.750e1					1.8	NO		bb		0.000
2	FUNCTION2 HPCD...	29.20	8.840e1					1.2	NO		bb		0.000
3	FUNCTION2 HPCD...	28.82	7.633e1					1.6	NO		bb		0.000
4	FUNCTION2 HPCD...	28.64	7.534e1					1.8	NO		bb		0.000
5	FUNCTION2 HPCD...	32.40	1.028e2					1.2	NO		bb		0.000
6	FUNCTION2 HPCD...	32.19	9.318e1					1.3	NO		bb		0.000
7	FUNCTION2 HPCD...	31.94	1.786e2					1.6	NO		bb		0.000
8	FUNCTION2 HPCD...	31.57	1.544e2					2.2	NO		bb		0.000
9	FUNCTION2 HPCD...	30.24	9.010e1					1.6	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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ID: DBLK11, Name: 20111810, Date: 18-Nov-2020, Time: 18:17:49, Conditions: AUTOSPEC01, User: pk

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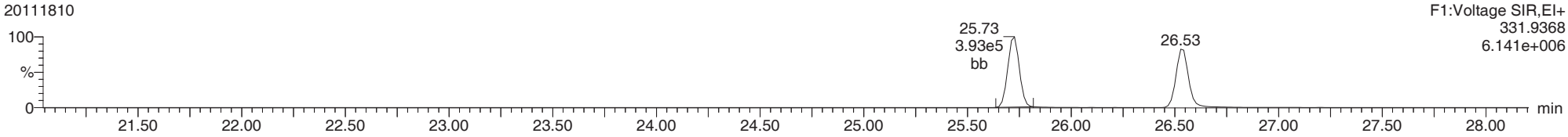

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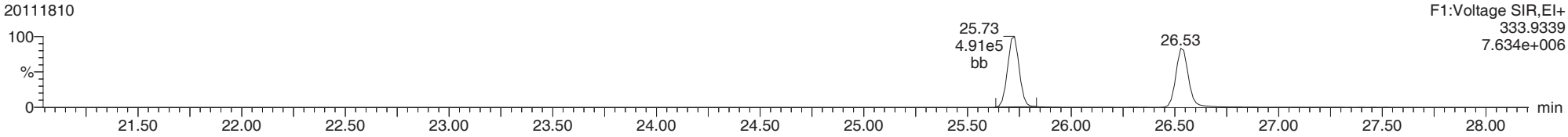

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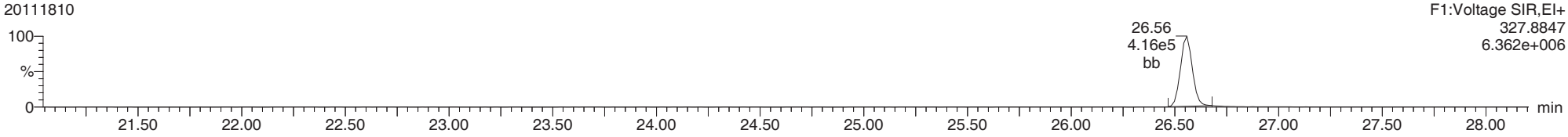

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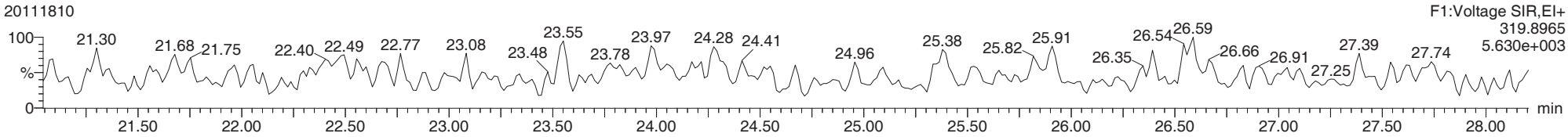

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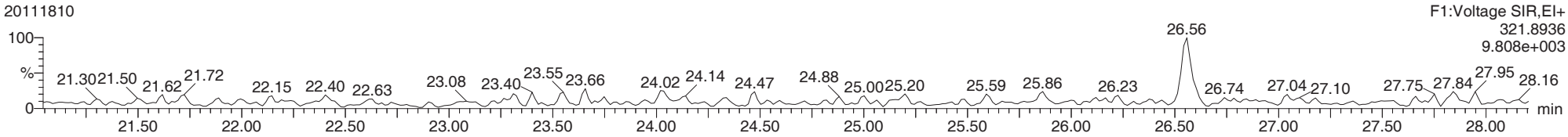

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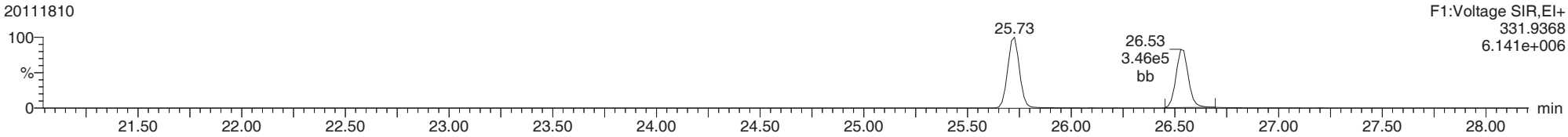

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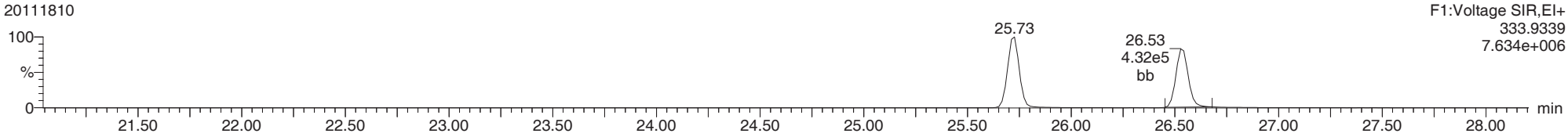
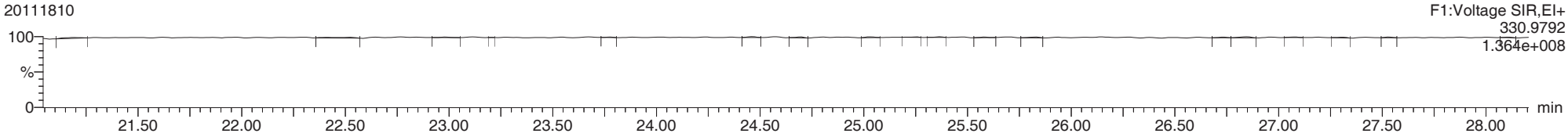


FUNCTION1 PFK



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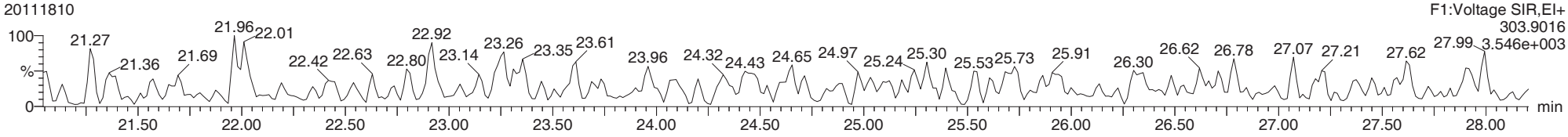

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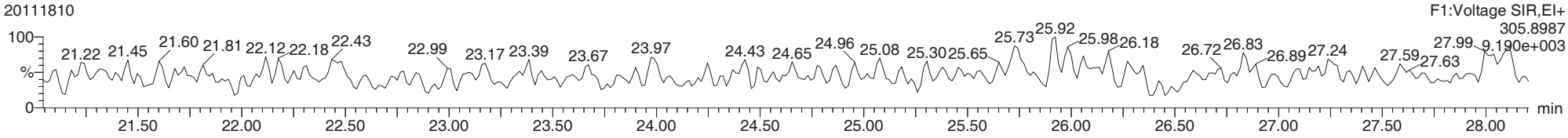

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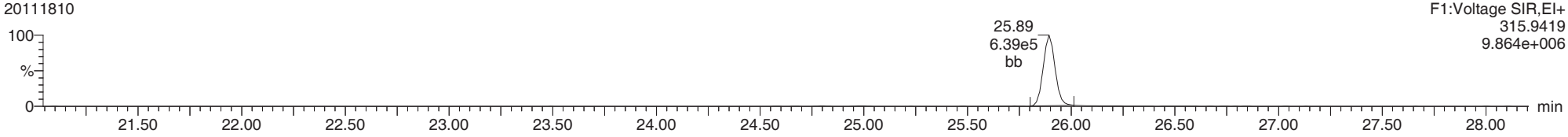

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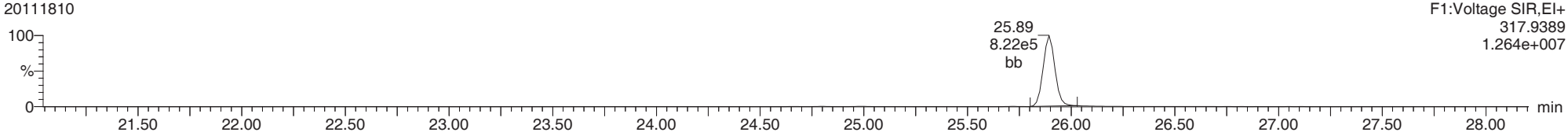

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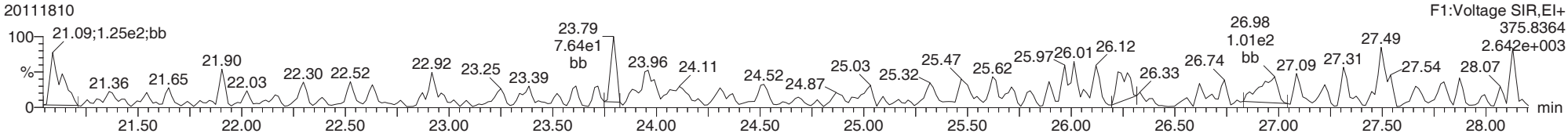

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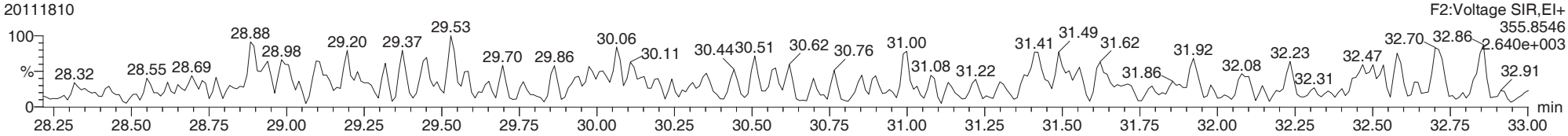
12378-PeCDD



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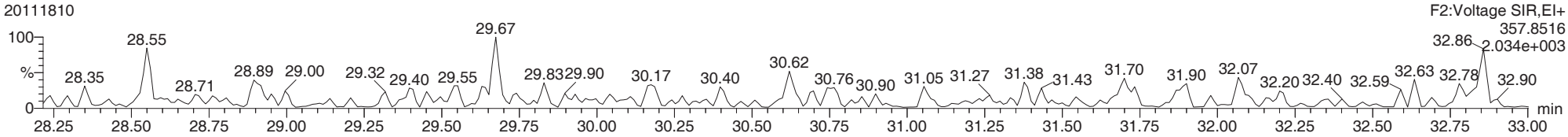

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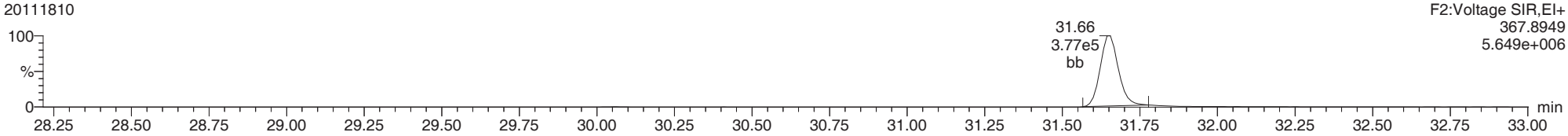

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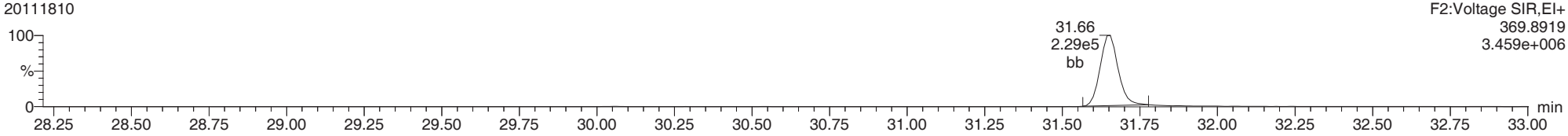
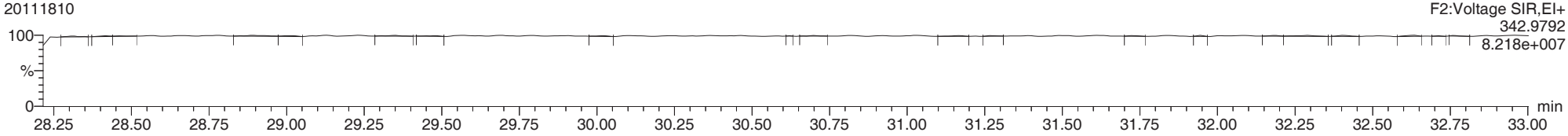


FUNCTION2 PFK



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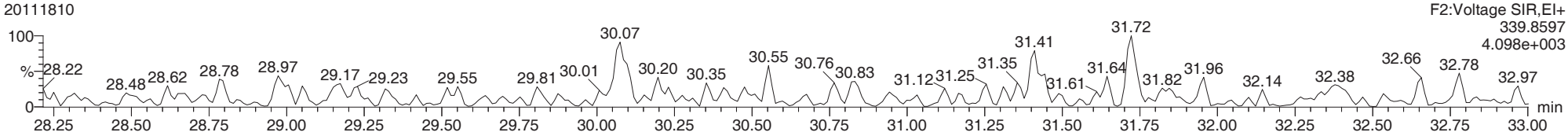
12378-PeCDF



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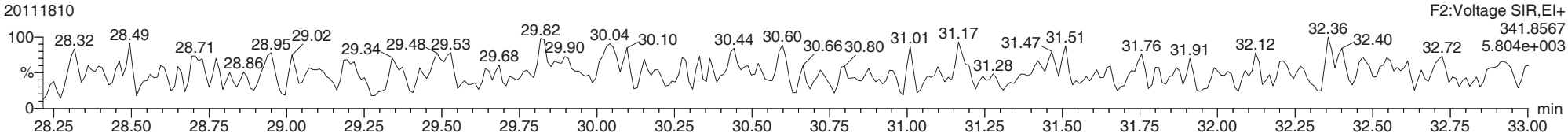

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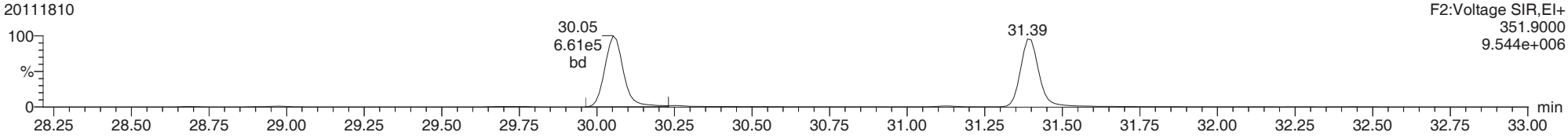

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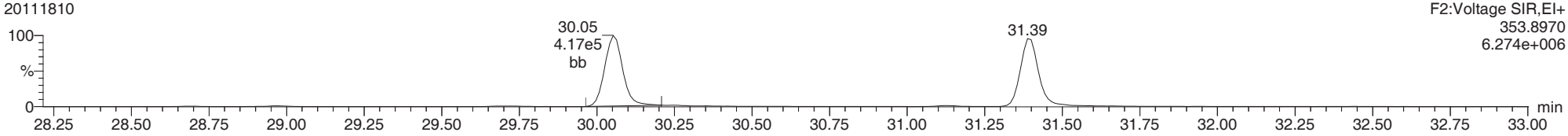
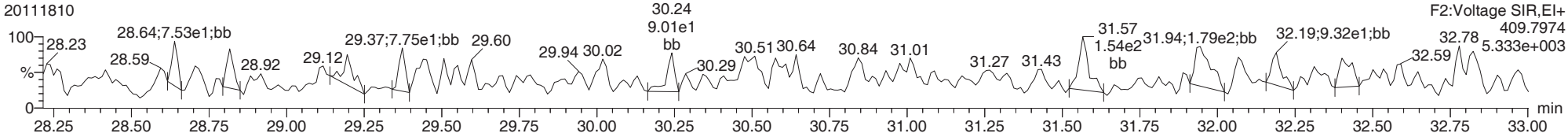


FUNCTION2 HPCDPE



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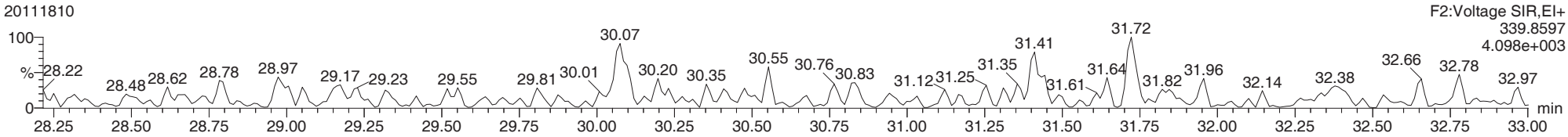
23478-PeCDF



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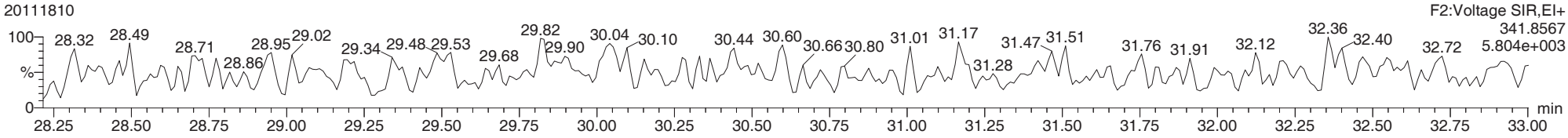

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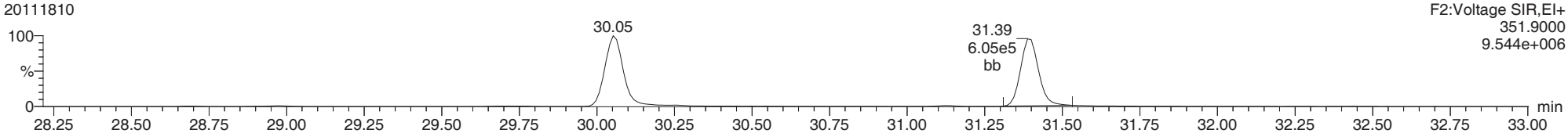

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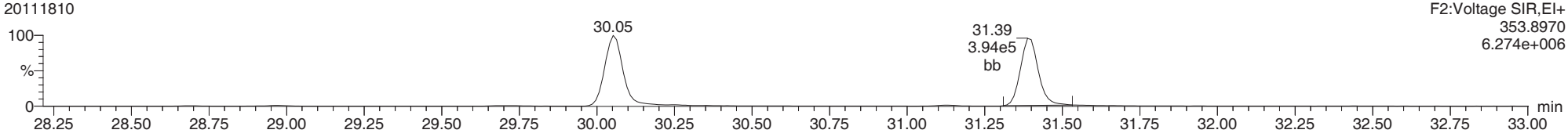

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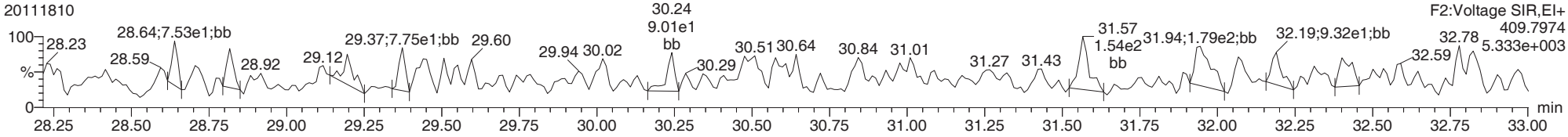

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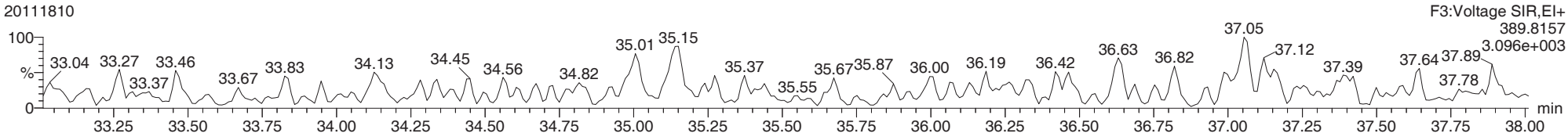

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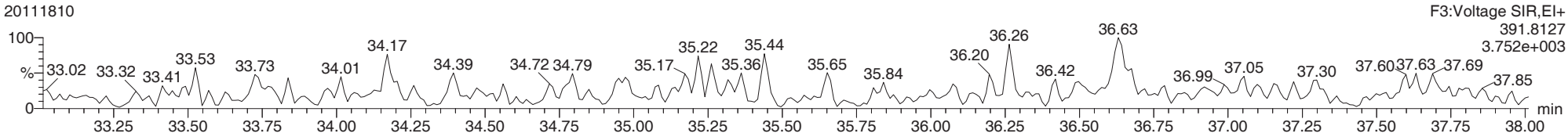

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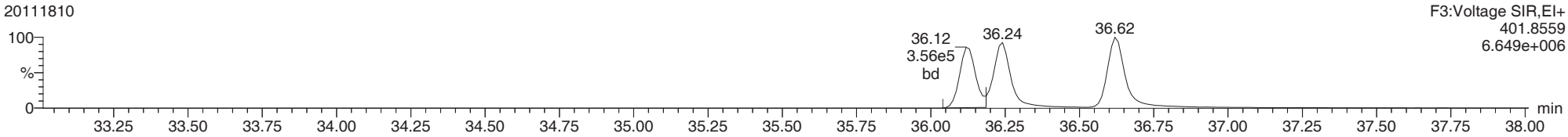

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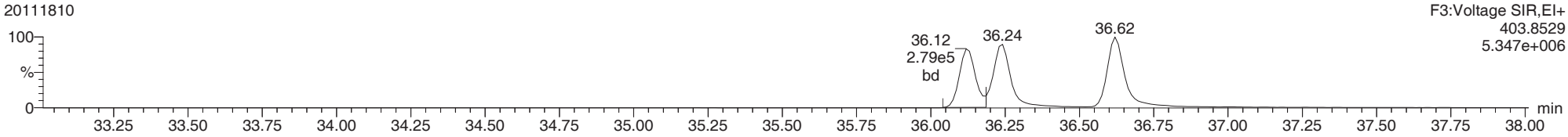
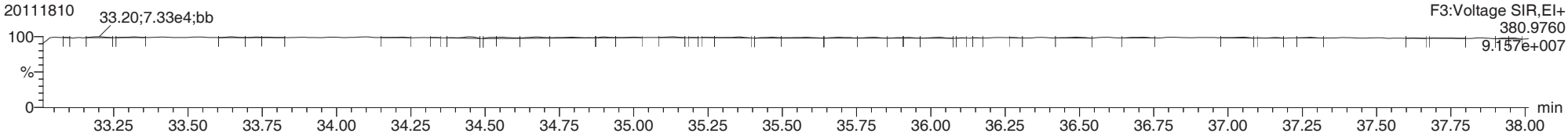


FUNCTION3 PFK



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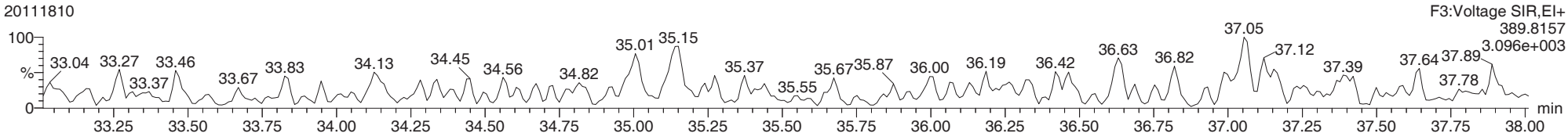

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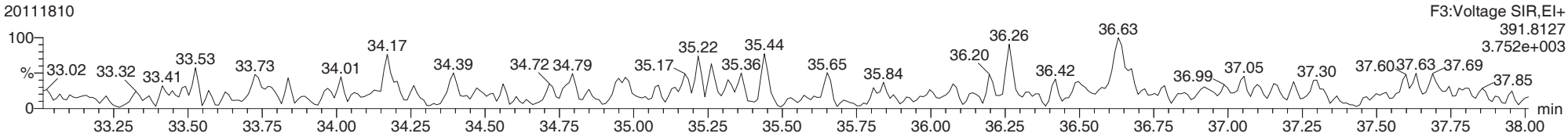

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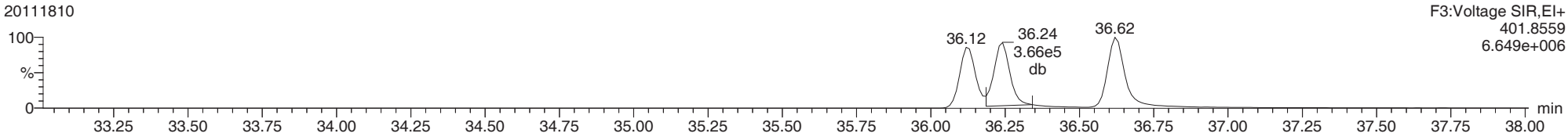

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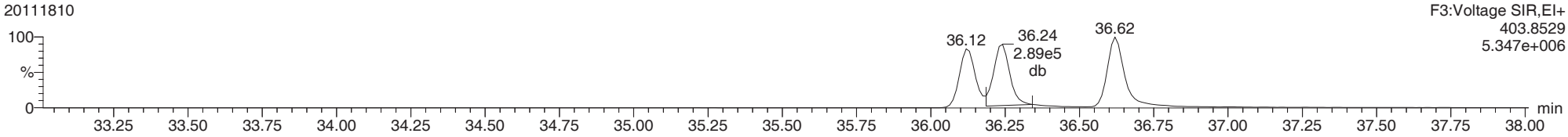

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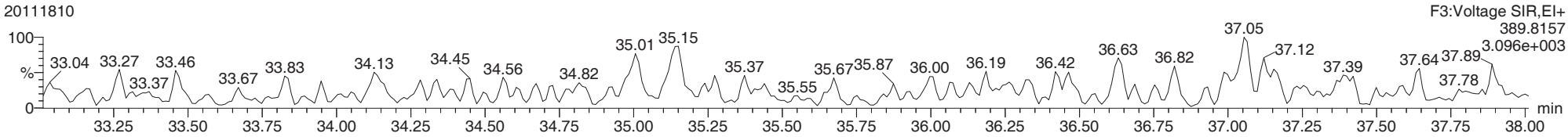

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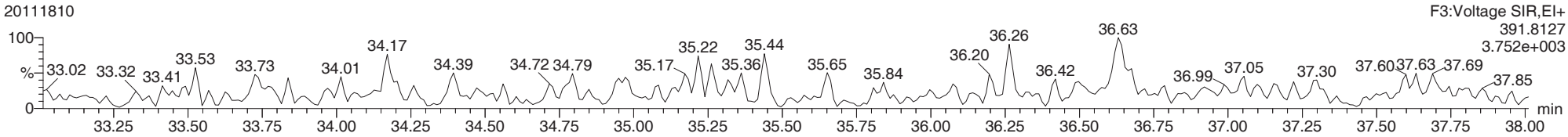

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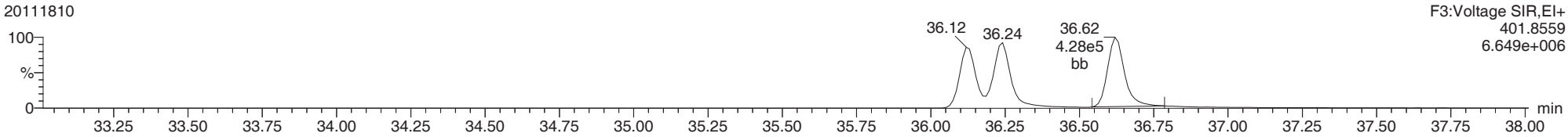

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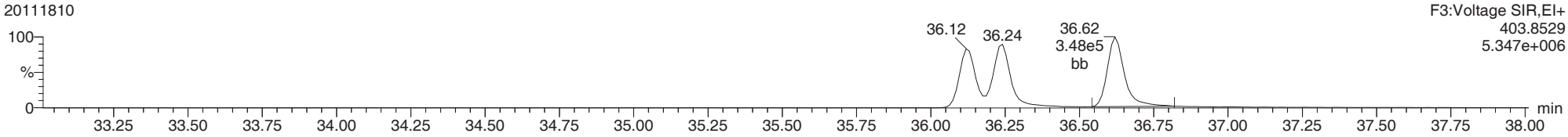

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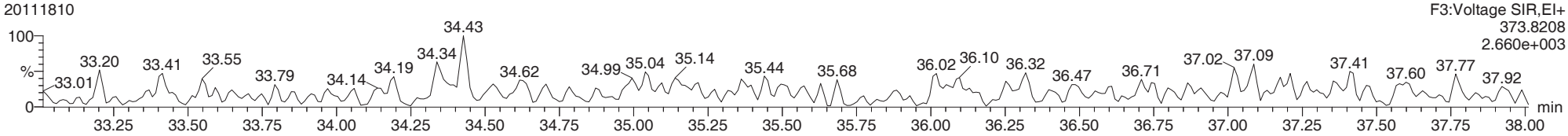

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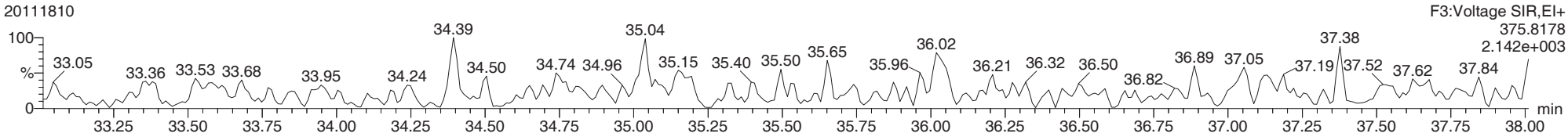

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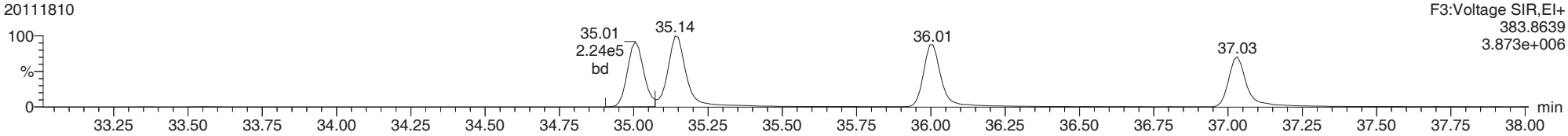

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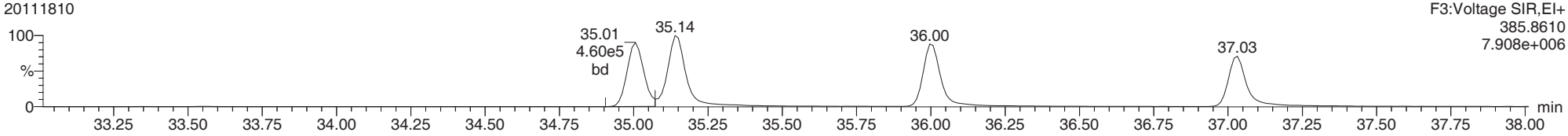
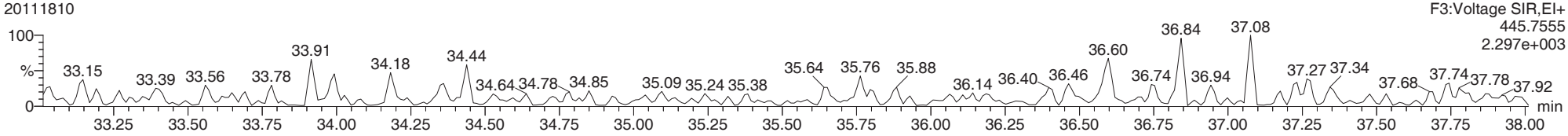


FUNCTION3 OCDPE



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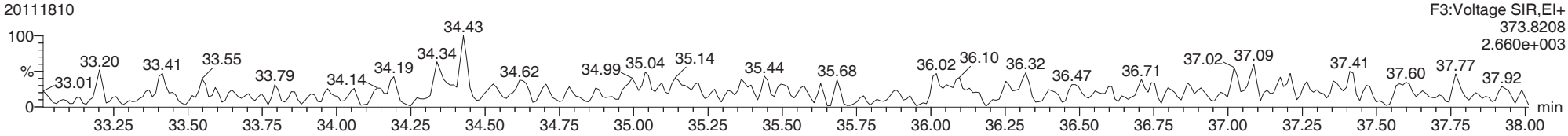
234678-HxCDF



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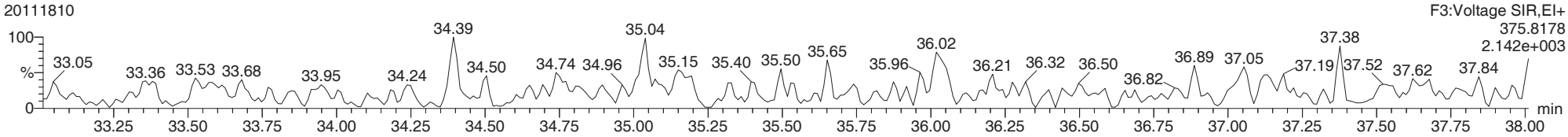

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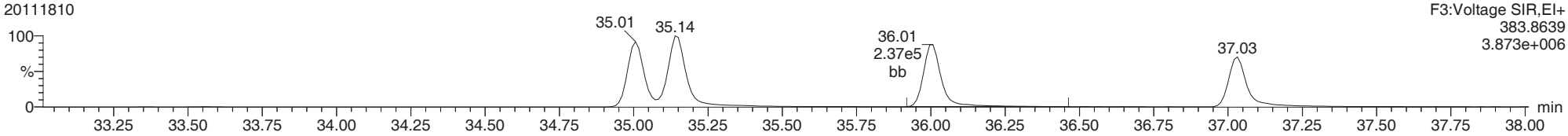

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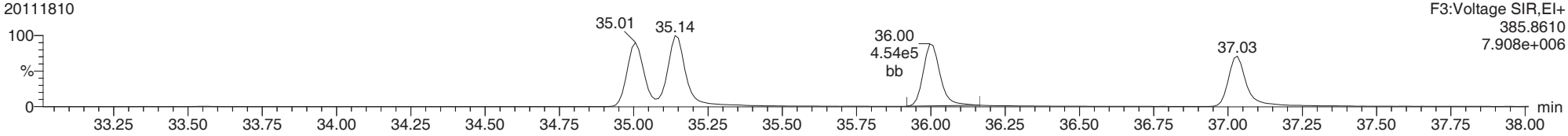

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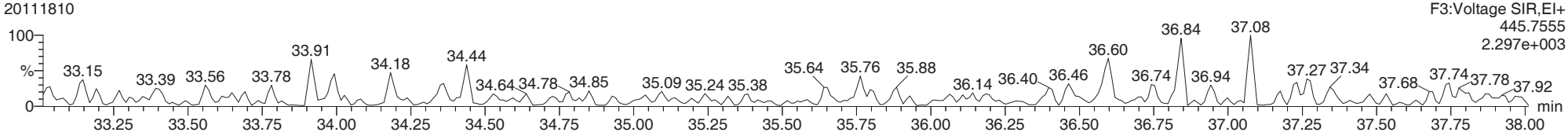

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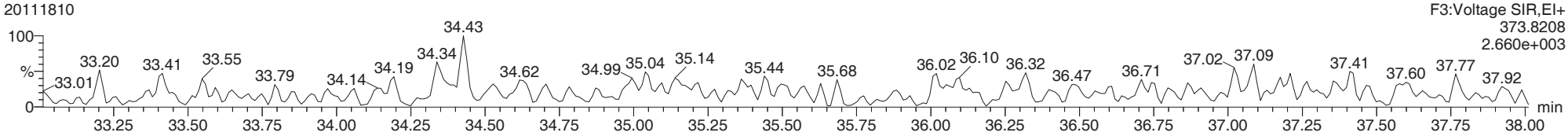

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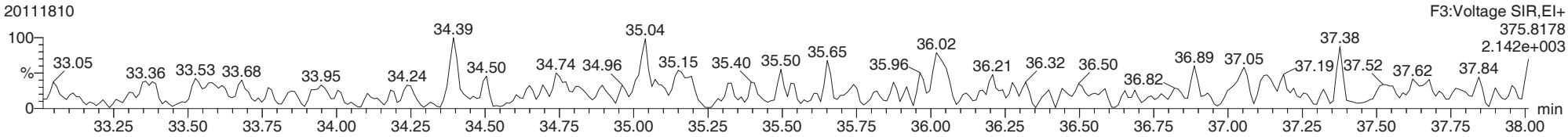

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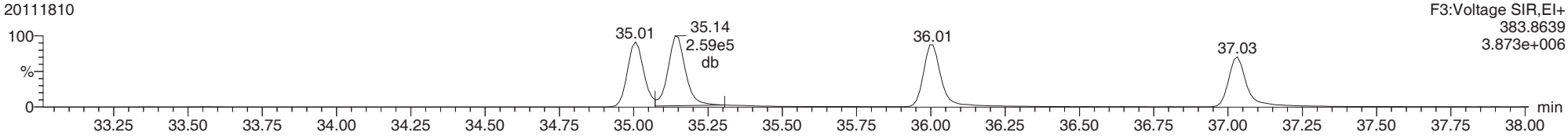

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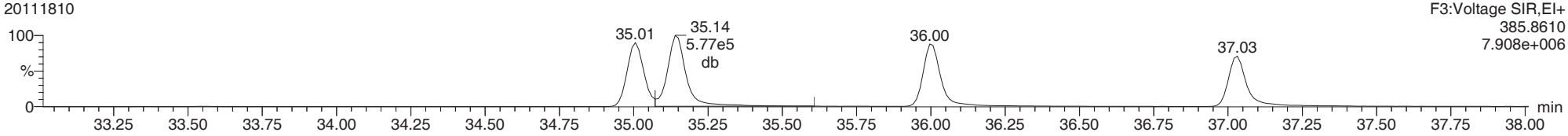
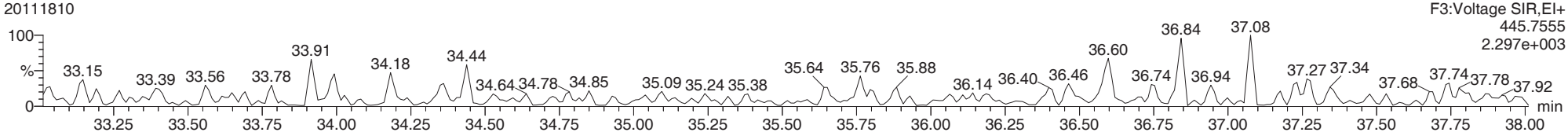


FUNCTION3 OCDPE



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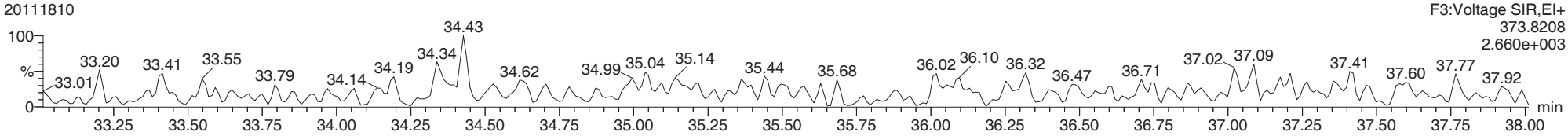

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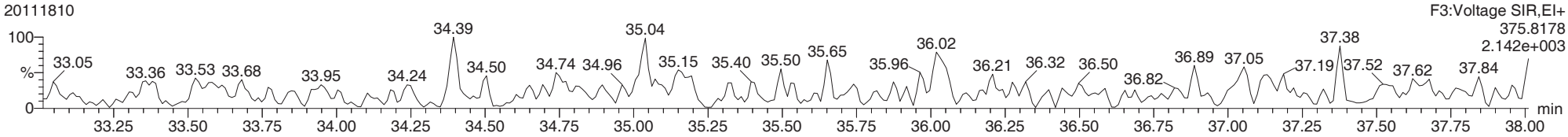

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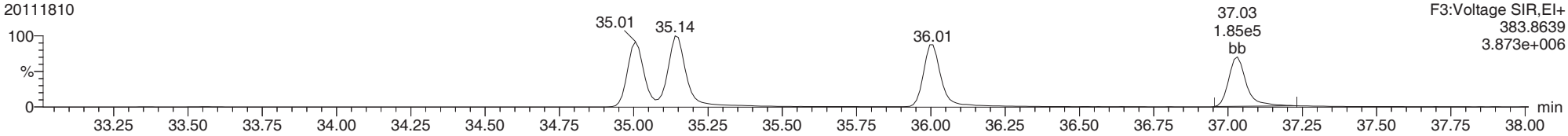

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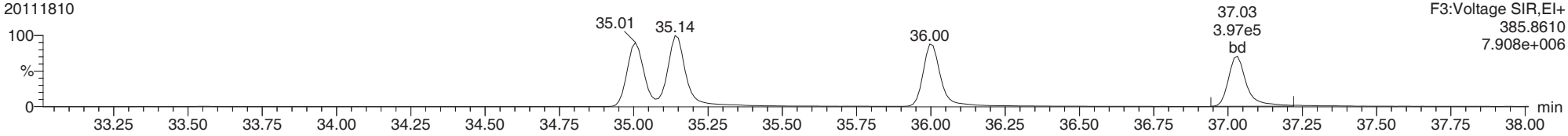
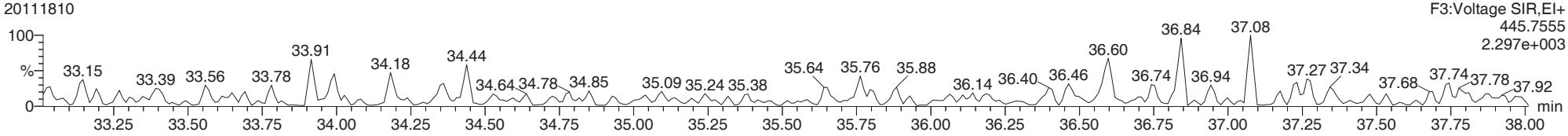


FUNCTION3 OCDPE



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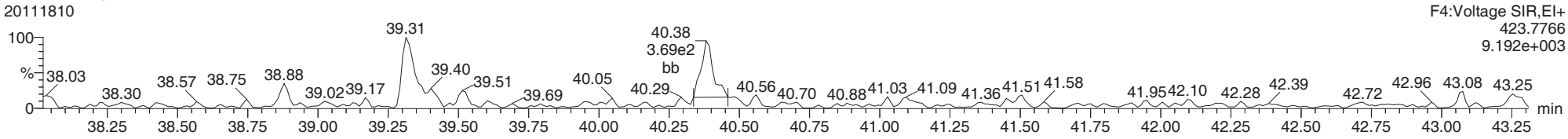

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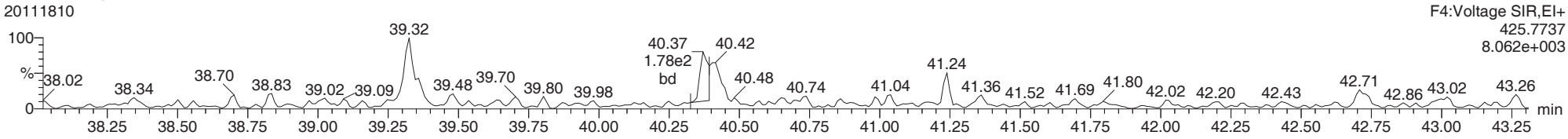

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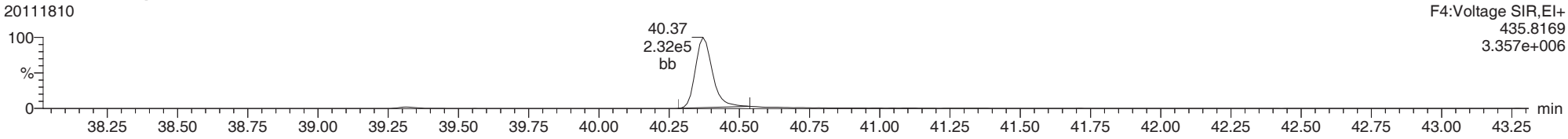

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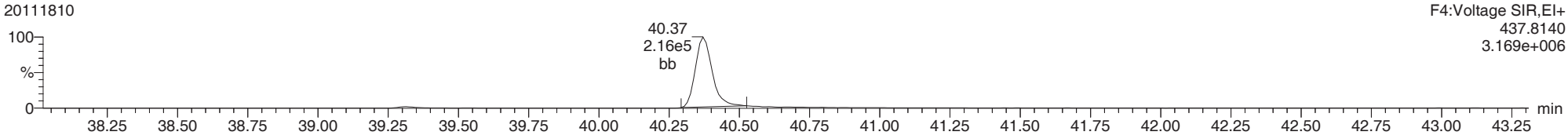
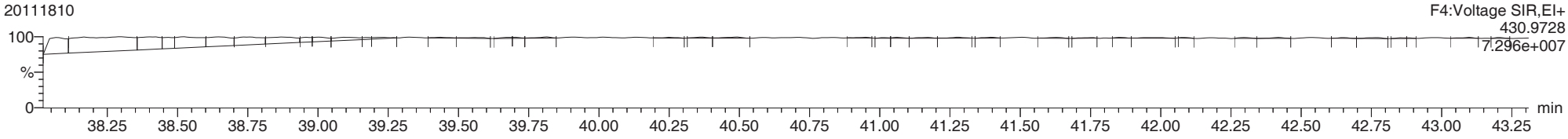


FUNCTION4 PFK



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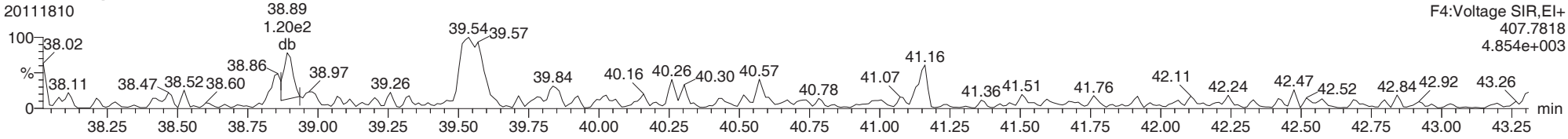
1234678-HpCDF



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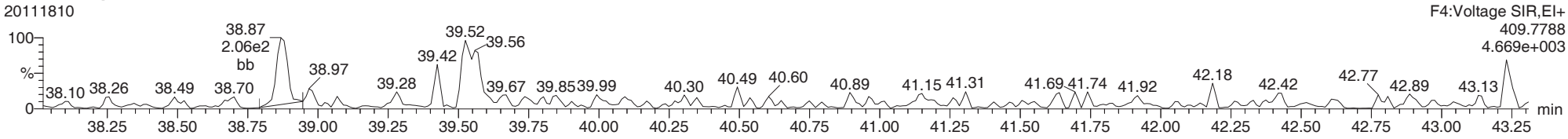

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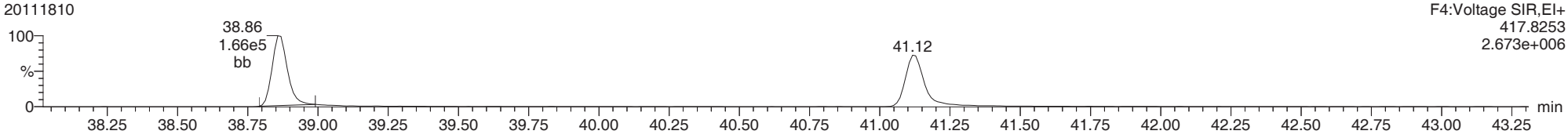

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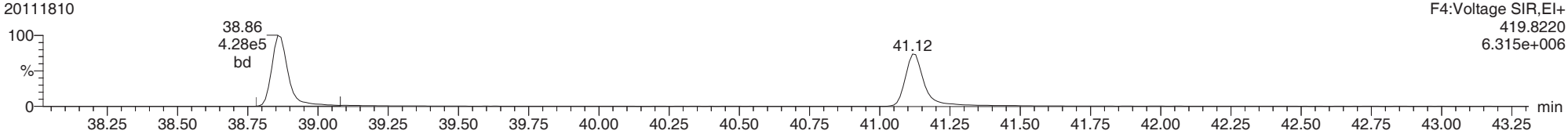
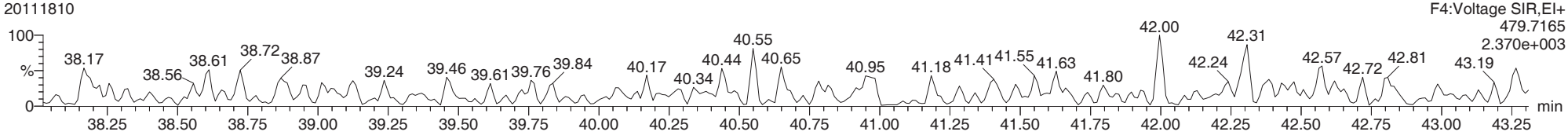


FUNCTION4 NCDPE



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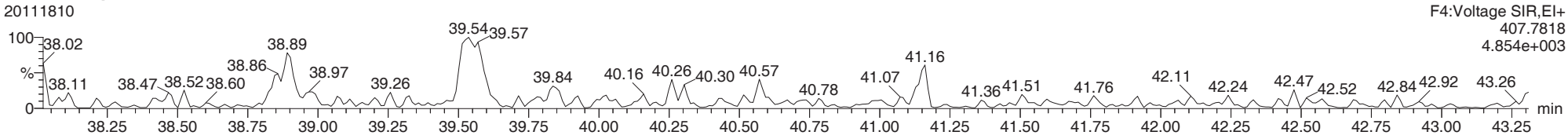
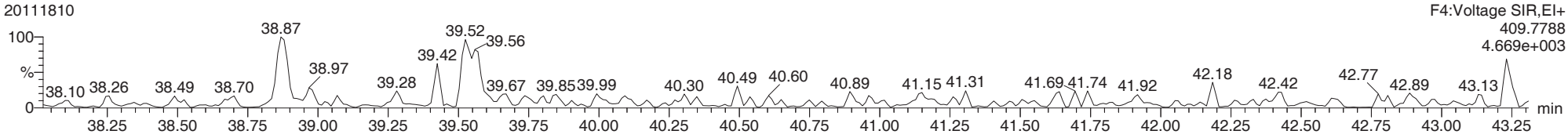


1234789-HpCDF



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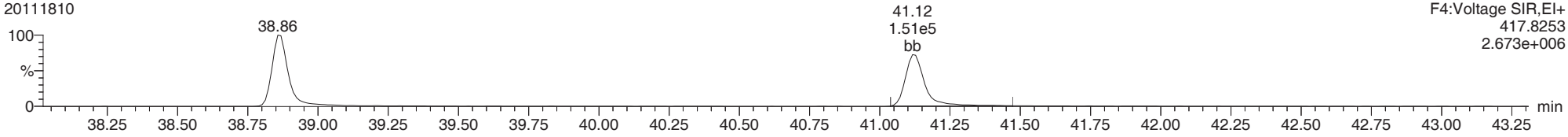

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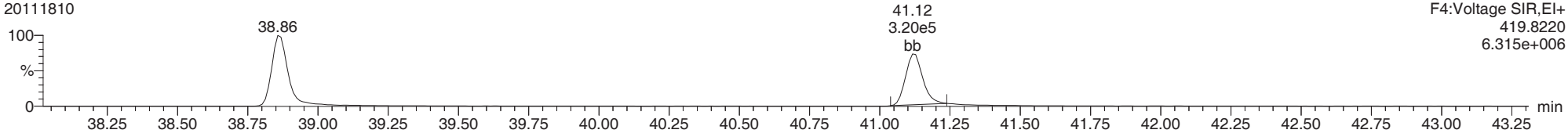
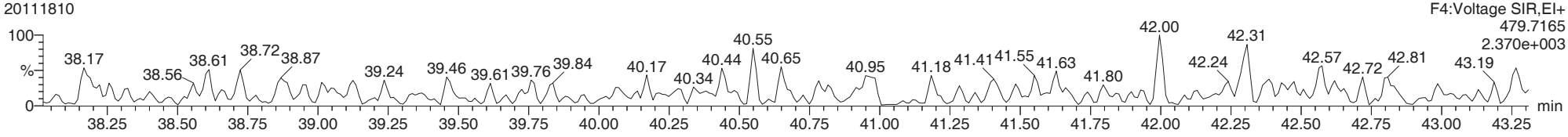


FUNCTION4 NCDPE



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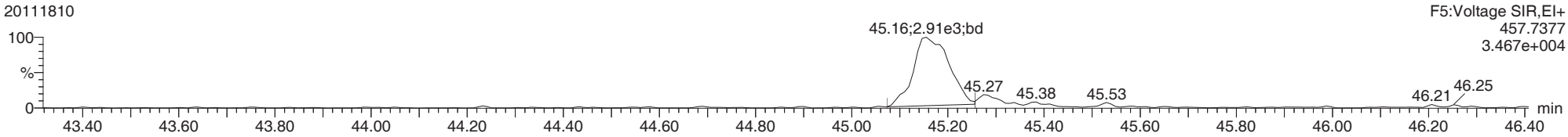
Printed: Thursday, November 19, 2020 10:24:35 Pacific Standard Time

ID: DBLK11, Name: 20111810, Date: 18-Nov-2020, Time: 18:17:49, Conditions: AUTOSPEC01, User: pk

OCDD



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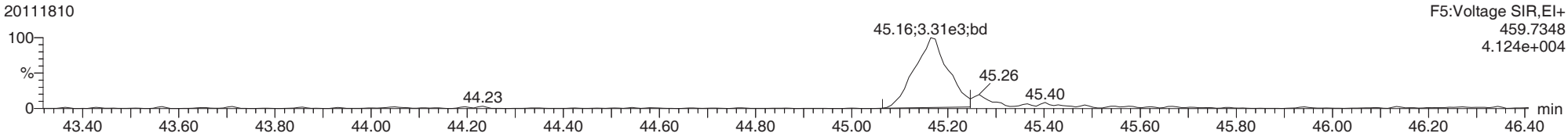

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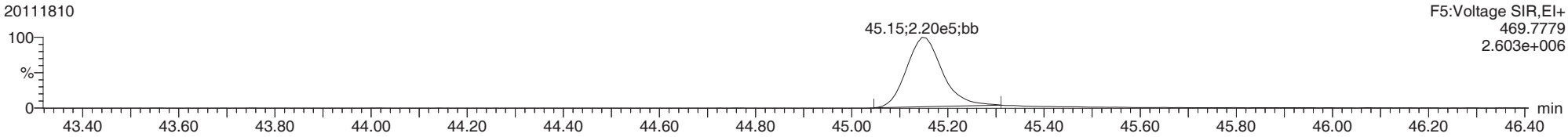

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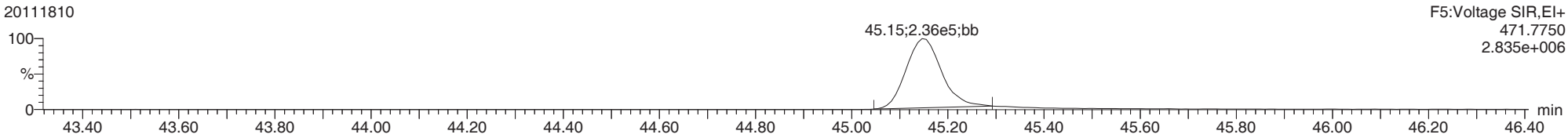
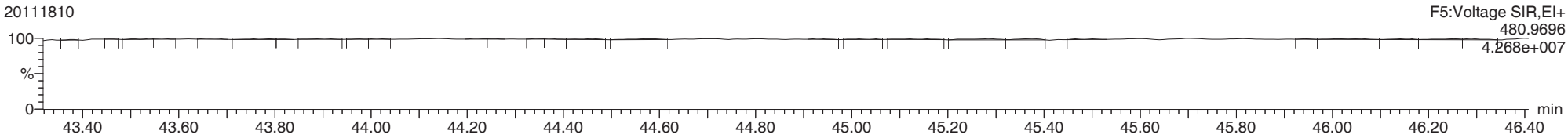
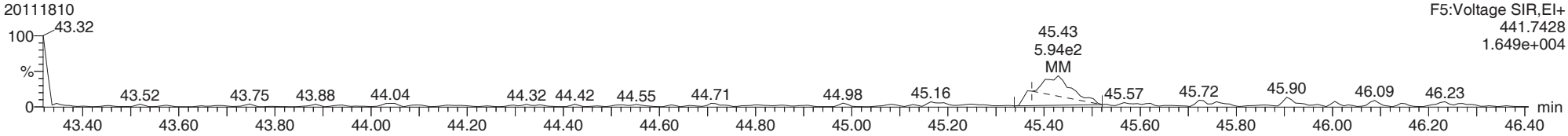


FUNCTION5 PFK

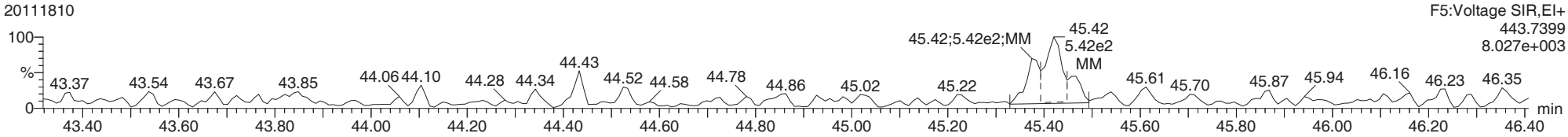


ID: DBLK11, Name: 20111810, Date: 18-Nov-2020, Time: 18:17:49, Conditions: AUTOSPEC01, User: pk

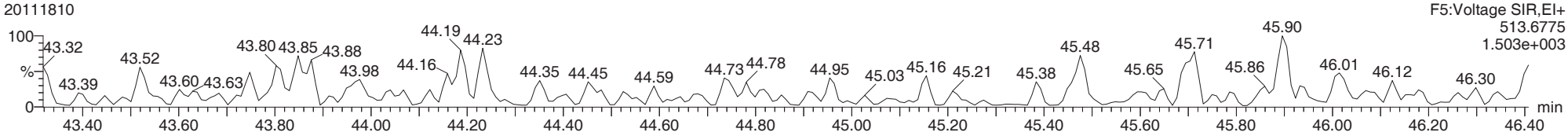
OCDF



OCDF

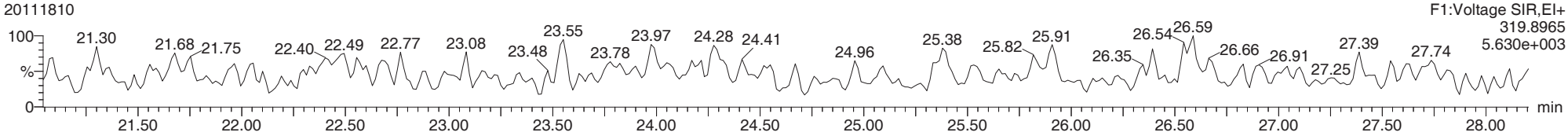


FUNCTION5 DCDPE

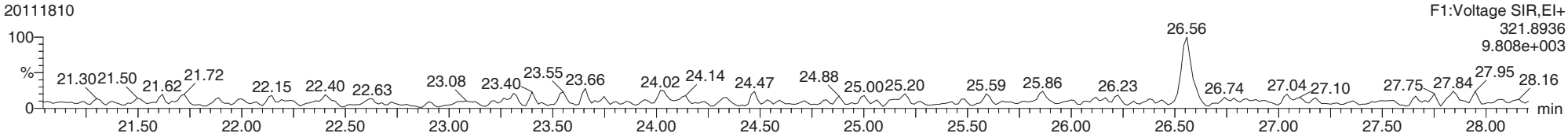


ID: DBLK11, Name: 20111810, Date: 18-Nov-2020, Time: 18:17:49, Conditions: AUTOSPEC01, User: pk

Total-tetradioxins



Total-tetradioxins



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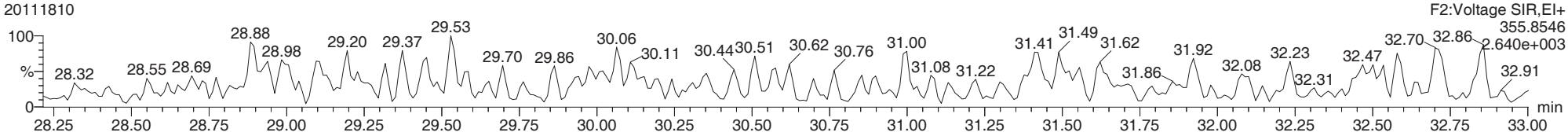
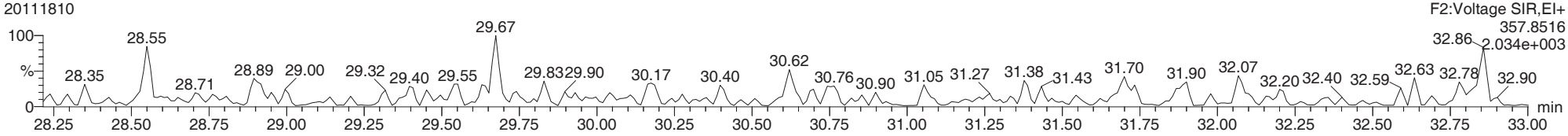
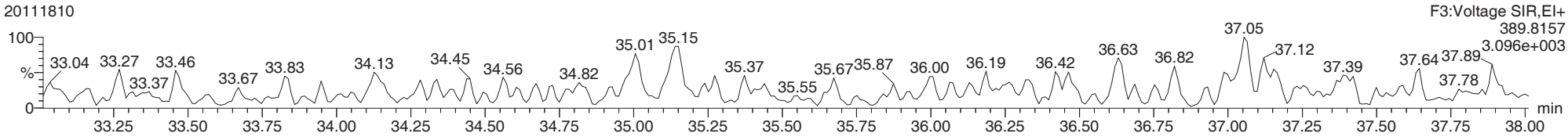


Total-pentadioxins

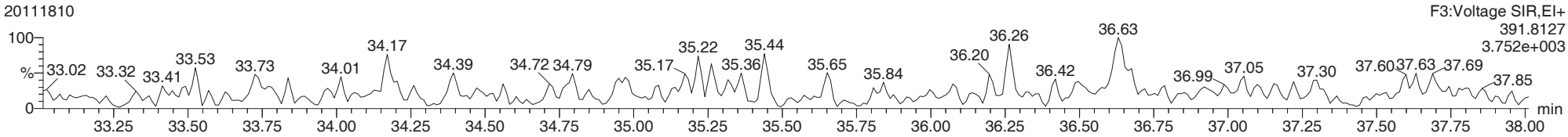


ID: DBLK11, Name: 20111810, Date: 18-Nov-2020, Time: 18:17:49, Conditions: AUTOSPEC01, User: pk

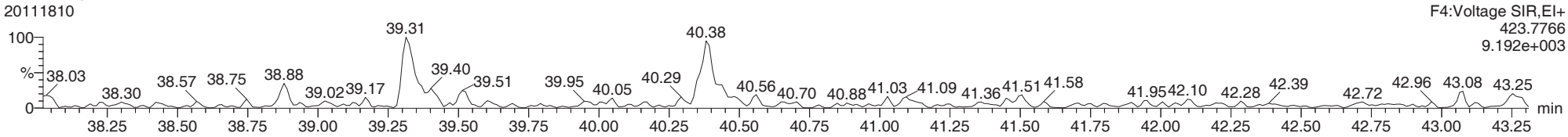
Total-hexadioxins



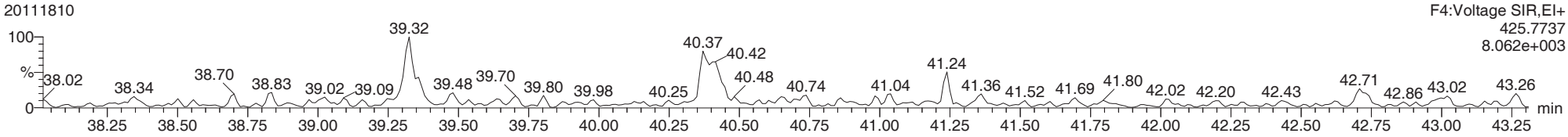
Total-hexadioxins



Total-heptadioxins

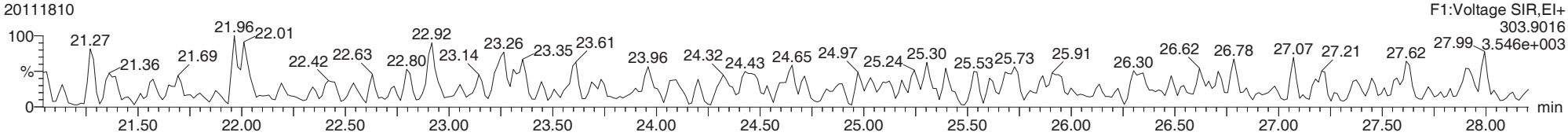


Total-heptadioxins

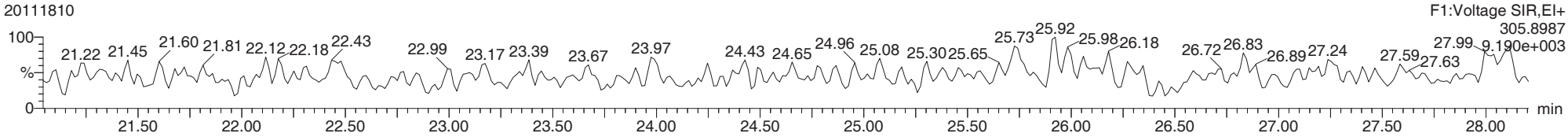


ID: DBLK11, Name: 20111810, Date: 18-Nov-2020, Time: 18:17:49, Conditions: AUTOSPEC01, User: pk

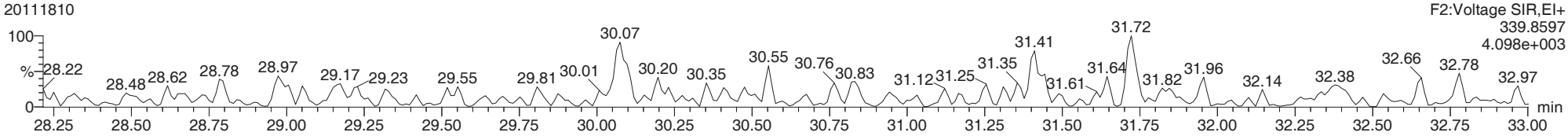
Total-tetrafurans



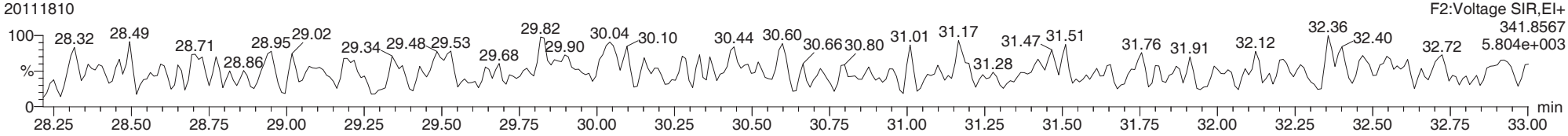
Total-tetrafurans



Total-pentafurans

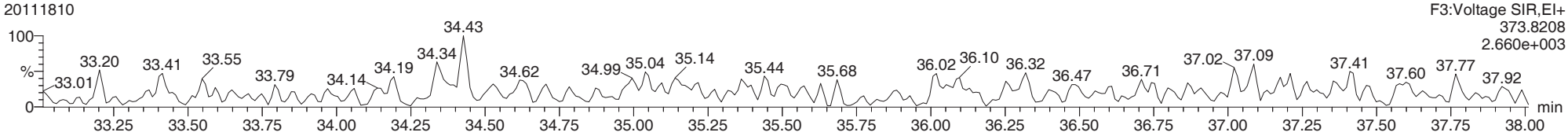


Total-pentafurans

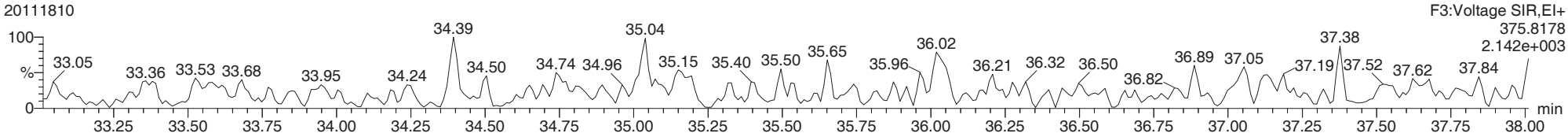


ID: DBLK11, Name: 20111810, Date: 18-Nov-2020, Time: 18:17:49, Conditions: AUTOSPEC01, User: pk

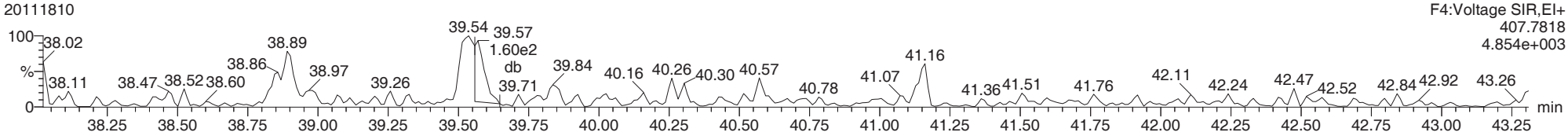
Total-hexafurans



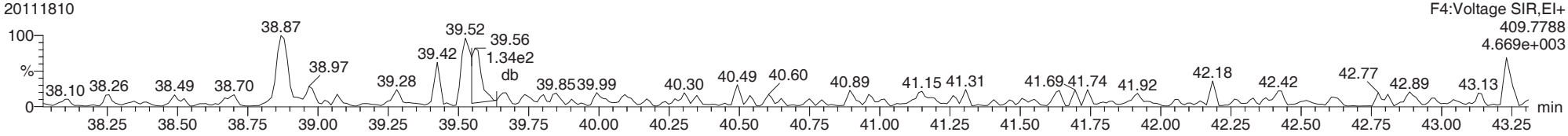
Total-hexafurans



Total-heptafurans



Total-heptafurans



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Form 1
METHOD BLANK DATA SHEET
EPA 1613B
Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider			Project:	Lora Lake Apartments
Matrix:	Water	Laboratory ID:	BIK0510-BLK1	File ID:	20112304
Sampled:	N/A	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 12:11
Solids Wt%:		Preparation:	EPA 1613	Initial/Final:	1000 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.000	0.655-0.886	1.26	10.0	ND	pg/L	U
1746-01-6	2,3,7,8-TCDD	1	0.000	0.655-0.886	0.88	10.0	ND	pg/L	U
57117-41-6	1,2,3,7,8-PeCDF	1	0.000	1.318-1.783	1.48	10.0	ND	pg/L	U
57117-31-4	2,3,4,7,8-PeCDF	1	0.000	1.318-1.783	1.37	10.0	ND	pg/L	U
40321-76-4	1,2,3,7,8-PeCDD	1	0.000	1.318-1.783	1.07	10.0	ND	pg/L	U
70648-26-9	1,2,3,4,7,8-HxCDF	1	0.000	1.054-1.426	0.70	10.0	ND	pg/L	U
57117-44-9	1,2,3,6,7,8-HxCDF	1	0.000	1.054-1.426	0.69	10.0	ND	pg/L	U
60851-34-5	2,3,4,6,7,8-HxCDF	1	0.000	1.054-1.426	0.81	10.0	ND	pg/L	U
72918-21-9	1,2,3,7,8,9-HxCDF	1	0.000	1.054-1.426	1.17	10.0	ND	pg/L	U
39227-28-6	1,2,3,4,7,8-HxCDD	1	0.000	1.054-1.426	0.99	10.0	ND	pg/L	U
57653-85-7	1,2,3,6,7,8-HxCDD	1	0.000	1.054-1.426	0.83	10.0	ND	pg/L	U
19408-74-3	1,2,3,7,8,9-HxCDD	1	0.000	1.054-1.426	1.01	10.0	ND	pg/L	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	0.000	0.893-1.208	0.54	10.0	ND	pg/L	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	0.000	0.893-1.208	0.82	10.0	ND	pg/L	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	0.000	0.893-1.208	1.48	10.0	ND	pg/L	U
39001-02-0	OCDF	1	0.000	0.757-1.024	2.56	20.0	ND	pg/L	U
3268-87-9	OCDD	1	0.890	0.757-1.024	2.33	50.0	31.1	pg/L	J
Homologue Groups									
55722-27-5	Total TCDF	1	0.000			10.0	0.701	pg/L	
41903-57-5	Total TCDD	1	0.000			10.0	ND	pg/L	
30402-15-4	Total PeCDF	1	0.000			10.0	ND	pg/L	
36088-22-9	Total PeCDD	1	0.000			10.0	ND	pg/L	
55684-94-1	Total HxCDF	1	0.000			10.0	ND	pg/L	
34465-46-8	Total HxCDD	1	0.000			10.0	ND	pg/L	
38998-75-3	Total HpCDF	1	0.000			10.0	ND	pg/L	
37871-00-4	Total HpCDD	1	0.000			10.0	ND	pg/L	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.009
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.60

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Form 2

METHOD BLANK DATA SHEET

EPA 1613B

Chlorinated Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, Inc.			SDG:	20J0389
Client:	Floyd - Snider			Project:	Lora Lake Apartments
Matrix:	Water	Laboratory ID:	BIK0510-BLK1	File ID:	20112304
Sampled:	N/A	Prepared:	11/19/20 07:10	Analyzed:	11/23/20 12:11
Solids Wt%:	N/A	Preparation:	EPA 1613	Initial/Final:	1000 mL / 20 uL
Result Basis:	Wet	Sequence:	SIK0339	Calibration:	DJ00101
Batch:	BIK0510	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF	1	0.783	0.655-0.886	0.00	84.5	24 - 169 %	
13C12-2,3,7,8-TCDD	1	0.802	0.655-0.886	0.00	84.6	25 - 164 %	
13C12-1,2,3,7,8-PeCDF	1	1.536	1.318-1.783	0.00	80.2	24 - 185 %	
13C12-2,3,4,7,8-PeCDF	1	1.552	1.318-1.783	0.00	76.0	21 - 178 %	
13C12-1,2,3,7,8-PeCDD	1	1.654	1.318-1.783	0.00	78.1	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF	1	0.490	0.434-0.587	0.00	104	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF	1	0.484	0.434-0.587	0.00	108	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF	1	0.521	0.434-0.587	0.00	96.4	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF	1	0.484	0.434-0.587	0.01	91.6	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD	1	1.276	1.054-1.426	0.00	91.5	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD	1	1.131	1.054-1.426	0.00	93.1	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF	1	0.423	0.374-0.506	0.01	89.4	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF	1	0.459	0.374-0.506	0.01	91.6	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD	1	1.089	0.893-1.208	0.01	90.6	23 - 140 %	
13C12-OCDD	1	0.917	0.757-1.024	0.01	66.9	17 - 157 %	
37Cl4-2,3,7,8-TCDD	1	328.000		0.00	99.6	35 - 197 %	

* Values outside of QC limits

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Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:00:29 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: BIK0510-BLK1, Name: 20112304, Date: 23-Nov-2020, Time: 12:11:55, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF					0.729		0.770	841	2329								
12378-PeCDF					0.779		1.550	865	1768								
23478-PeCDF					0.880		1.550	865	1768								
123478-HxCDF					0.880		1.240	558	558								
234678-HxCDF					0.863		1.240	558	558								
123678-HxCDF					0.853		1.240	558	558								
123789-HxCDF					0.780		1.240	558	558								
1234678-HpCDF					1.001		1.050	405	311								
1234789-HpCDF					0.994		1.050	405	311								
OCDF					1.158		0.890	699	767								
2378-TCDD					1.238		0.770	1342	629								
12378-PeCDD					0.988		1.550	1030	351								
123478-HxCDD					0.842		1.240	697	586								
123678-HxCDD					0.907		1.240	697	586								
123789-HxCDD					0.784		1.240	697	586								
1234678-HpCDD					1.044		1.050	751	568								
OCDD	45.137	1.000	2.148e3	2.414e3	0.963	0.890	0.890	622	488	2.47e4	2.81e4	39.7	57.6	NO	MM	MM	1.553
13C-2378-TCDF	25.878	1.007	6.269e5	8.006e5	2.203	0.783	0.770	4132	2233	9.08e6	1.16e7	2196.9	5199.6	NO	bb	bb	84.506
13C-12378-PeCDF	30.030	1.169	6.481e5	4.220e5	1.741	1.536	1.550	5191	3580	8.32e6	5.49e6	1603.4	1535.0	NO	bb	bb	80.152
13C-23478-PeCDF	31.377	1.221	5.915e5	3.812e5	1.669	1.552	1.550	5191	3580	7.96e6	5.13e6	1534.1	1432.7	NO	bb	bb	75.981
13C-123478-HxCDF	34.983	0.956	2.354e5	4.801e5	1.022	0.490	0.510	3318	3671	3.56e6	7.14e6	1071.5	1945.3	NO	bd	bd	104.226
13C-123678-HxCDF	35.128	0.960	2.846e5	5.885e5	1.200	0.484	0.510	3318	3671	3.70e6	7.48e6	1115.2	2037.9	NO	db	db	108.321
13C-234678-HxCDF	35.985	0.983	2.375e5	4.561e5	1.071	0.521	0.510	3318	3671	3.27e6	6.49e6	986.9	1767.8	NO	bd	bb	96.420
13C-123789-HxCDF	37.009	1.011	1.842e5	3.810e5	0.919	0.484	0.510	3318	3671	2.40e6	5.02e6	721.8	1367.4	NO	bb	bb	91.613
13C-1234678-HpCDF	38.846	1.061	1.622e5	3.830e5	0.909	0.423	0.440	2488	4300	2.37e6	5.65e6	952.3	1313.1	NO	bb	bb	89.351
13C-1234789-HpCDF	41.105	1.123	1.401e5	3.049e5	0.724	0.459	0.440	2488	4300	1.67e6	3.91e6	669.7	910.1	NO	bd	bb	91.575
13C-1234-TCDD	25.697	0.000	3.470e5	4.198e5	1.000	0.827	0.770	2694	1365	5.11e6	6.15e6	1896.4	4508.4	NO	bb	bb	100.000
13C-2378-TCDD	26.513	1.032	3.410e5	4.251e5	1.181	0.802	0.770	2694	1365	4.81e6	5.97e6	1785.5	4371.6	NO	bb	bb	84.563
13C-12378-PeCDD	31.633	1.231	3.652e5	2.208e5	0.978	1.654	1.550	2049	1536	4.89e6	3.05e6	2387.1	1983.5	NO	bb	bb	78.149
13C-123478-HxCDD	36.107	0.986	3.325e5	2.607e5	0.965	1.276	1.240	3426	1707	5.16e6	4.06e6	1506.4	2380.4	NO	bd	bd	91.533
13C-123678-HxCDD	36.219	0.989	3.875e5	3.426e5	1.168	1.131	1.240	3426	1707	5.41e6	4.35e6	1578.2	2545.2	NO	db	db	93.063
13C-1234678-HpCDD	40.348	1.102	2.048e5	1.880e5	0.645	1.089	1.050	2535	2777	2.67e6	2.52e6	1051.6	907.6	NO	bb	bb	90.643
13C-OCDD	45.119	1.232	2.917e5	3.182e5	0.678	0.917	0.890	2625	3148	2.84e6	3.08e6	1080.4	978.4	NO	bd	bd	133.882
13C-123789-HxCDD	36.609	0.000	3.771e5	2.945e5	1.000	1.281	1.240	3426	1707	5.02e6	3.94e6	1464.3	2306.2	NO	bb	bb	100.000
37CL-2378-TCDD	26.543	1.033	3.861e5		1.264			3785		5.37e6		1418.4			bb		39.821

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Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	841	2329								
1289-TCDF					0.688		0.770	841	2329								
13468-PECDF					1.181		1.550	448	1373								
12389-PECDF					0.766		1.550	865	1768								
123468-HXCDF					1.003		1.240	558	558								
1368-TCDD					1.179		0.770	1342	629								
1289-TCDD					1.042		0.770	1342	629								
12479-PECDD					1.810		1.550	1030	351								
12389-PECDD					1.165		1.550	1030	351								
124679-HXCDD					1.056		1.240	697	586								
1234679-HPCDD					1.285		1.050	751	568								
Total-tetrafurans			1.551e2		0.754			841		1.86e3							0.035
Total-penta1			0.000e0					448		0.00e0							
Total-pentafurans			0.000e0		0.809			865		0.00e0							
Total-hexafurans			0.000e0		0.876			558		0.00e0							
Total-heptafurans			0.000e0		0.997			405		0.00e0							
Total-Furans			1.551e2		0.893			841		1.86e3							0.035
Total-tetradioxins			0.000e0		1.153			1342		0.00e0							
Total-pentadioxins			0.000e0		1.321			1030		0.00e0							
Total-hexadioxins			0.000e0		0.897			697		0.00e0							
Total-heptadioxins			0.000e0		1.165			751		0.00e0							
Total-Dioxins			2.148e3		1.100			1342		2.47e4							1.553
Total-TEQ			2.303e3					1342		2.66e4							1.588
FUNCTION1 PFK			4.471e6					667495		7.44e7							
FUNCTION2 PFK			7.602e5					485610		1.85e7							0.000
FUNCTION3 PFK			4.316e5					483861		8.75e6							0.000
FUNCTION4 PFK			1.419e7					408499		1.16e8							
FUNCTION5 PFK			6.707e5					385864		1.83e7							
FUNCTION1 HXCD...			2.615e2					577		3.94e3							0.000
FUNCTION1 HPCD...			1.697e3					1298		3.56e4							0.000
FUNCTION2 HPCD...			8.593e2					1125		2.04e4							0.000
FUNCTION3 OCDPE			0.000e0					274		0.00e0							
FUNCTION4 NCDPE			7.765e1					557		2.54e3							0.000
FUNCTION5 DCDPE			0.000e0					348		0.00e0							

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	23.94	1.551e2	2.226e2	0.754	0.70	0.77	2.2	NO	NO	bb	db	0.035

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	23.94	1.551e2	2.226e2	0.754	0.70	0.77	2.2	NO	NO	bb	db	0.035

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	OCDD	45.14	2.148e3	2.414e3	0.963	0.89	0.89	39.7	YES	NO	MM	MM	1.553

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	23.94	1.551e2	2.226e2	0.754	0.70	0.77	2.2	NO	NO	bb	db	0.035
2	OCDD	45.14	2.148e3	2.414e3	0.963	0.89	0.89	39.7	YES	NO	MM	MM	1.553

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.89	8.683e4					1.8	NO		dd		
2	FUNCTION1 PFK	21.72	7.142e4					1.2	NO		dd		
3	FUNCTION1 PFK	21.62	7.180e4					1.6	NO		bd		
4	FUNCTION1 PFK	21.44	4.187e4					1.1	NO		bb		
5	FUNCTION1 PFK	21.21	3.949e4					1.6	NO		db		
6	FUNCTION1 PFK	21.10	1.736e5					3.9	YES		bd		
7	FUNCTION1 PFK	23.88	8.317e4					2.0	NO		bd		
8	FUNCTION1 PFK	23.78	7.312e4					2.0	NO		bb		
9	FUNCTION1 PFK	23.55	5.669e4					1.6	NO		db		
10	FUNCTION1 PFK	23.45	5.836e4					1.4	NO		dd		
11	FUNCTION1 PFK	23.34	1.179e5					1.7	NO		dd		
12	FUNCTION1 PFK	23.22	9.937e4					3.0	NO		bd		
13	FUNCTION1 PFK	23.11	1.842e5					3.0	NO		db		
14	FUNCTION1 PFK	23.01	1.570e5					3.1	YES		dd		
15	FUNCTION1 PFK	22.89	1.106e5					2.4	NO		bd		
16	FUNCTION1 PFK	22.77	6.228e4					2.5	NO		db		
17	FUNCTION1 PFK	22.72	2.245e4					0.9	NO		bd		
18	FUNCTION1 PFK	22.64	6.664e4					1.9	NO		db		
19	FUNCTION1 PFK	22.54	5.390e4					1.6	NO		bd		
20	FUNCTION1 PFK	22.34	7.754e4					1.9	NO		bb		
21	FUNCTION1 PFK	22.22	7.479e4					2.6	NO		bb		
22	FUNCTION1 PFK	22.00	3.894e4					1.6	NO		db		
23	FUNCTION1 PFK	25.79	1.217e5					1.8	NO		db		
24	FUNCTION1 PFK	25.67	1.325e5					2.2	NO		dd		
25	FUNCTION1 PFK	25.58	5.830e4					2.0	NO		bd		
26	FUNCTION1 PFK	25.44	1.202e5					2.2	NO		db		
27	FUNCTION1 PFK	25.33	1.205e5					2.5	NO		dd		
28	FUNCTION1 PFK	25.24	9.041e4					2.2	NO		bd		
29	FUNCTION1 PFK	25.11	5.676e4					2.1	NO		bb		
30	FUNCTION1 PFK	24.90	6.210e4					1.7	NO		db		
31	FUNCTION1 PFK	24.76	9.119e4					2.3	NO		dd		
32	FUNCTION1 PFK	24.67	8.666e4					2.1	NO		bd		
33	FUNCTION1 PFK	24.56	5.242e4					1.5	NO		db		
34	FUNCTION1 PFK	24.43	1.055e5					2.4	NO		dd		
35	FUNCTION1 PFK	24.32	9.122e4					1.9	NO		dd		
36	FUNCTION1 PFK	24.22	9.626e4					2.0	NO		bd		
37	FUNCTION1 PFK	24.11	1.349e5					2.4	NO		db		

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	23.99	9.100e4					2.6	NO		dd		
39	FUNCTION1 PFK	27.59	3.450e4					1.2	NO		bd		
40	FUNCTION1 PFK	27.45	6.007e4					1.8	NO		db		
41	FUNCTION1 PFK	27.37	4.834e4					1.4	NO		bd		
42	FUNCTION1 PFK	27.27	3.094e4					1.5	NO		db		
43	FUNCTION1 PFK	27.22	7.597e4					2.2	NO		dd		
44	FUNCTION1 PFK	27.15	1.126e5					2.2	NO		bd		
45	FUNCTION1 PFK	27.03	6.248e4					2.0	NO		bb		
46	FUNCTION1 PFK	26.91	6.124e4					1.8	NO		bb		
47	FUNCTION1 PFK	26.81	2.922e3					0.3	NO		bb		
48	FUNCTION1 PFK	26.68	1.820e4					0.7	NO		db		
49	FUNCTION1 PFK	26.63	1.448e4					0.6	NO		bd		
50	FUNCTION1 PFK	26.45	3.774e4					1.3	NO		db		
51	FUNCTION1 PFK	26.41	6.326e4					1.9	NO		dd		
52	FUNCTION1 PFK	26.35	7.626e4					2.2	NO		bd		
53	FUNCTION1 PFK	26.23	5.299e4					1.8	NO		bb		
54	FUNCTION1 PFK	26.10	3.648e4					1.3	NO		bb		
55	FUNCTION1 PFK	28.14	2.553e4					1.0	NO		db		
56	FUNCTION1 PFK	28.10	2.652e4					1.0	NO		dd		
57	FUNCTION1 PFK	28.02	5.702e4					1.5	NO		bd		
58	FUNCTION1 PFK	27.90	9.016e4					2.0	NO		db		
59	FUNCTION1 PFK	27.80	7.089e4					1.6	NO		bd		
60	FUNCTION1 PFK	27.69	7.863e4					1.9	NO		db		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.21	1.017e4					0.7	NO		bd		0.000
2	FUNCTION2 PFK	29.12	7.311e3					0.7	NO		bb		0.000
3	FUNCTION2 PFK	28.91	2.596e4					1.6	NO		bb		0.000
4	FUNCTION2 PFK	28.81	1.250e4					1.1	NO		db		0.000
5	FUNCTION2 PFK	28.76	3.704e4					1.8	NO		dd		0.000
6	FUNCTION2 PFK	28.71	4.515e4					1.9	NO		bd		0.000
7	FUNCTION2 PFK	28.45	4.872e4					1.8	NO		bb		0.000
8	FUNCTION2 PFK	28.37	6.262e3					0.6	NO		bb		0.000
9	FUNCTION2 PFK	28.28	1.115e4					1.5	NO		bb		0.000
10	FUNCTION2 PFK	31.94	9.659e3					0.8	NO		bb		0.000
11	FUNCTION2 PFK	31.84	2.493e4					1.2	NO		bb		0.000
12	FUNCTION2 PFK	31.52	3.465e4					1.2	NO		bb		0.000
13	FUNCTION2 PFK	31.03	1.036e4					0.8	NO		bb		0.000
14	FUNCTION2 PFK	30.95	2.293e4					1.7	NO		db		0.000
15	FUNCTION2 PFK	30.91	2.264e4					1.4	NO		bd		0.000
16	FUNCTION2 PFK	30.76	1.575e4					1.4	NO		db		0.000
17	FUNCTION2 PFK	30.71	5.108e4					1.7	NO		dd		0.000
18	FUNCTION2 PFK	30.60	2.893e4					1.6	NO		bd		0.000
19	FUNCTION2 PFK	30.38	4.548e4					1.9	NO		bb		0.000
20	FUNCTION2 PFK	30.28	1.727e4					1.3	NO		db		0.000
21	FUNCTION2 PFK	30.12	8.694e4					2.0	NO		bd		0.000
22	FUNCTION2 PFK	29.84	5.117e3					0.6	NO		bb		0.000
23	FUNCTION2 PFK	29.60	6.599e3					0.6	NO		bb		0.000
24	FUNCTION2 PFK	29.34	3.046e4					1.6	NO		db		0.000
25	FUNCTION2 PFK	29.25	2.093e4					1.1	NO		dd		0.000
26	FUNCTION2 PFK	32.79	1.741e3					0.3	NO		bb		0.000
27	FUNCTION2 PFK	32.74	3.227e4					1.5	NO		db		0.000
28	FUNCTION2 PFK	32.66	2.045e4					1.2	NO		bd		0.000
29	FUNCTION2 PFK	32.52	4.324e4					1.4	NO		bb		0.000
30	FUNCTION2 PFK	32.18	2.453e4					1.1	NO		bb		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	35.29	4.800e4					2.4	NO		bb		0.000
2	FUNCTION3 PFK	34.74	6.127e4					2.7	NO		bb		0.000
3	FUNCTION3 PFK	34.63	9.036e4					3.4	YES		bb		0.000
4	FUNCTION3 PFK	34.39	1.224e5					4.7	YES		bb		0.000
5	FUNCTION3 PFK	33.63	6.418e4					2.5	NO		bb		0.000
6	FUNCTION3 PFK	33.17	4.539e4					2.4	NO		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.40	2.794e6					35.1	YES		dd		
2	FUNCTION4 PFK	38.29	3.072e6					38.2	YES		dd		
3	FUNCTION4 PFK	38.08	2.828e6					44.3	YES		bd		
4	FUNCTION4 PFK	41.48	8.156e3					1.1	NO		bb		
5	FUNCTION4 PFK	41.33	2.121e4					1.5	NO		bb		
6	FUNCTION4 PFK	40.99	2.716e4					1.8	NO		bb		
7	FUNCTION4 PFK	40.75	3.121e4					1.7	NO		bb		
8	FUNCTION4 PFK	40.09	2.168e4					1.6	NO		bb		
9	FUNCTION4 PFK	39.98	2.117e4					2.0	NO		bb		
10	FUNCTION4 PFK	39.76	7.185e3					0.9	NO		bb		
11	FUNCTION4 PFK	39.71	3.249e3					0.7	NO		bb		
12	FUNCTION4 PFK	39.31	3.735e5					7.2	YES		db		
13	FUNCTION4 PFK	39.19	4.907e5					11.4	YES		dd		
14	FUNCTION4 PFK	39.08	5.073e5					14.1	YES		dd		
15	FUNCTION4 PFK	38.97	7.461e5					18.5	YES		dd		
16	FUNCTION4 PFK	38.93	3.361e5					18.2	YES		dd		
17	FUNCTION4 PFK	38.87	2.688e5					20.3	YES		dd		
18	FUNCTION4 PFK	38.76	1.230e6					24.8	YES		dd		
19	FUNCTION4 PFK	38.63	1.186e6					28.3	YES		dd		
20	FUNCTION4 PFK	42.99	4.313e4					2.1	NO		bb		
21	FUNCTION4 PFK	42.60	1.804e3					0.4	NO		bb		
22	FUNCTION4 PFK	42.55	5.419e3					0.8	NO		bb		
23	FUNCTION4 PFK	42.44	4.928e4					2.2	NO		bb		
24	FUNCTION4 PFK	42.21	3.152e4					1.7	NO		bb		
25	FUNCTION4 PFK	42.13	6.437e3					0.7	NO		bb		
26	FUNCTION4 PFK	41.88	3.076e4					1.6	NO		bb		
27	FUNCTION4 PFK	41.54	4.452e4					2.5	NO		bb		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.98	3.669e4					1.7	NO		bb		
2	FUNCTION5 PFK	43.78	4.518e3					0.6	NO		db		
3	FUNCTION5 PFK	43.75	7.263e3					0.7	NO		bd		
4	FUNCTION5 PFK	43.63	3.133e4					1.2	NO		bb		
5	FUNCTION5 PFK	43.55	4.608e4					2.0	NO		db		
6	FUNCTION5 PFK	43.45	8.850e3					1.2	NO		dd		
7	FUNCTION5 PFK	43.40	2.654e4					1.6	NO		bd		
8	FUNCTION5 PFK	45.10	4.668e3					0.6	NO		bb		
9	FUNCTION5 PFK	45.00	3.223e4					1.4	NO		db		
10	FUNCTION5 PFK	44.89	1.823e4					1.7	NO		dd		
11	FUNCTION5 PFK	44.87	1.289e4					1.8	NO		bd		
12	FUNCTION5 PFK	44.83	4.754e3					0.6	NO		bb		
13	FUNCTION5 PFK	44.79	1.979e4					1.5	NO		db		
14	FUNCTION5 PFK	44.75	2.207e4					1.4	NO		dd		
15	FUNCTION5 PFK	44.66	2.066e4					1.6	NO		dd		
16	FUNCTION5 PFK	44.62	1.191e4					1.1	NO		bd		
17	FUNCTION5 PFK	44.55	1.457e4					1.1	NO		db		
18	FUNCTION5 PFK	44.52	9.009e3					1.0	NO		bd		
19	FUNCTION5 PFK	44.42	3.107e4					1.7	NO		bb		
20	FUNCTION5 PFK	44.32	2.623e4					2.0	NO		db		
21	FUNCTION5 PFK	44.29	8.029e3					0.9	NO		bd		
22	FUNCTION5 PFK	44.11	8.381e3					1.0	NO		db		
23	FUNCTION5 PFK	44.07	1.470e4					1.4	NO		bd		
24	FUNCTION5 PFK	46.33	3.439e4					1.9	NO		db		
25	FUNCTION5 PFK	46.22	1.972e4					1.4	NO		bd		
26	FUNCTION5 PFK	46.09	2.125e4					1.3	NO		bb		
27	FUNCTION5 PFK	45.95	1.534e4					0.9	NO		bb		
28	FUNCTION5 PFK	45.89	1.268e4					1.0	NO		db		
29	FUNCTION5 PFK	45.85	1.650e4					1.4	NO		bd		
30	FUNCTION5 PFK	45.73	3.601e3					0.5	NO		bb		
31	FUNCTION5 PFK	45.64	2.473e4					1.4	NO		bb		
32	FUNCTION5 PFK	45.54	1.992e4					1.3	NO		db		
33	FUNCTION5 PFK	45.50	7.943e3					0.7	NO		dd		
34	FUNCTION5 PFK	45.43	2.301e4					1.4	NO		dd		
35	FUNCTION5 PFK	45.37	8.830e3					0.8	NO		dd		
36	FUNCTION5 PFK	45.32	1.155e4					0.9	NO		dd		
37	FUNCTION5 PFK	45.28	9.769e3					1.1	NO		bd		

ID: BIK0510-BLK1, Name: 20112304, Date: 23-Nov-2020, Time: 12:11:55, Conditions: AUTOSPEC01, User: pk

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION5 PFK	45.25	1.098e3					0.3	NO		bb		
39	FUNCTION5 PFK	45.18	1.988e4					1.5	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	25.30	8.549e1					2.3	NO		bb		0.000
2	FUNCTION1 HXCD...	23.90	1.760e2					4.5	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	27.51	1.322e2					2.2	NO		bb		0.000
2	FUNCTION1 HPCD...	26.91	7.560e1					1.6	NO		db		0.000
3	FUNCTION1 HPCD...	26.84	1.140e2					1.5	NO		bd		0.000
4	FUNCTION1 HPCD...	25.64	7.199e1					1.7	NO		bb		0.000
5	FUNCTION1 HPCD...	25.26	2.521e2					3.5	YES		bb		0.000
6	FUNCTION1 HPCD...	24.79	8.694e1					1.6	NO		bb		0.000
7	FUNCTION1 HPCD...	24.52	8.265e1					1.4	NO		db		0.000
8	FUNCTION1 HPCD...	24.40	8.261e1					1.8	NO		bd		0.000
9	FUNCTION1 HPCD...	23.90	1.506e2					2.3	NO		bb		0.000
10	FUNCTION1 HPCD...	23.43	3.869e2					4.0	YES		bb		0.000
11	FUNCTION1 HPCD...	22.90	7.496e1					1.5	NO		bb		0.000
12	FUNCTION1 HPCD...	21.65	9.817e1					2.0	NO		bb		0.000
13	FUNCTION1 HPCD...	27.84	8.837e1					2.3	NO		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.76	7.521e1					1.8	NO		bb		0.000
2	FUNCTION2 HPCD...	31.28	1.360e2					3.4	YES		bb		0.000
3	FUNCTION2 HPCD...	30.98	9.375e1					1.9	NO		bb		0.000
4	FUNCTION2 HPCD...	29.83	1.409e2					2.3	NO		bb		0.000
5	FUNCTION2 HPCD...	29.12	1.271e2					2.1	NO		bb		0.000
6	FUNCTION2 HPCD...	28.94	1.153e2					1.7	NO		bb		0.000
7	FUNCTION2 HPCD...	28.59	1.002e2					3.3	YES		bb		0.000
8	FUNCTION2 HPCD...	28.39	7.094e1					1.5	NO		bb		0.000

ID: BIK0510-BLK1, Name: 20112304, Date: 23-Nov-2020, Time: 12:11:55, Conditions: AUTOSPEC01, User: pk

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	38.40	7.765e1					4.6	YES		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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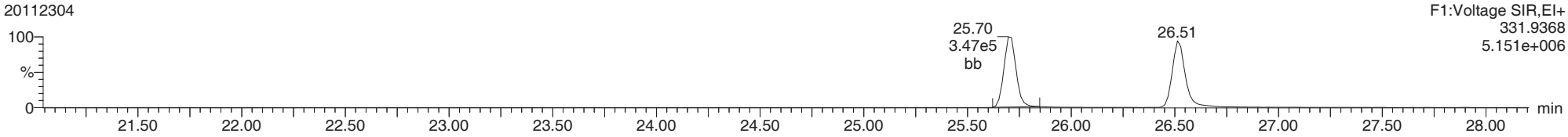
ID: BIK0510-BLK1, Name: 20112304, Date: 23-Nov-2020, Time: 12:11:55, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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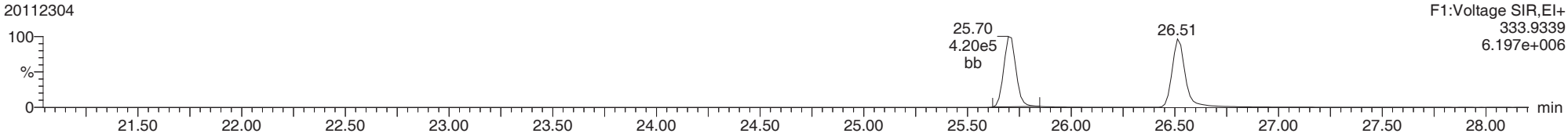
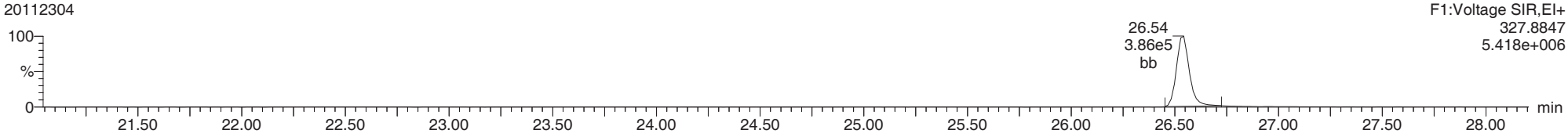


37CL-2378-TCDD



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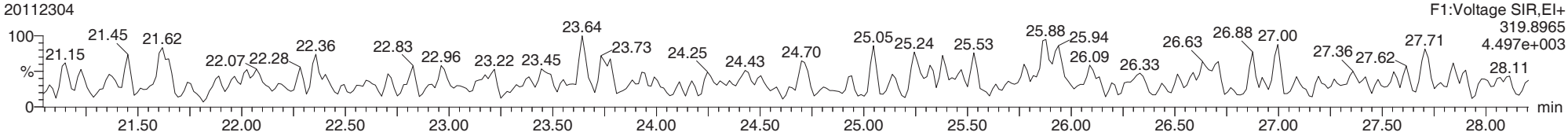
2378-TCDD



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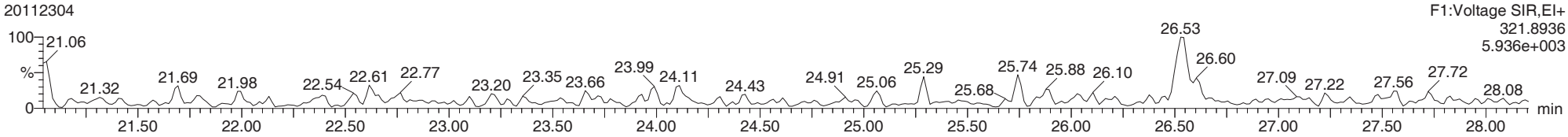

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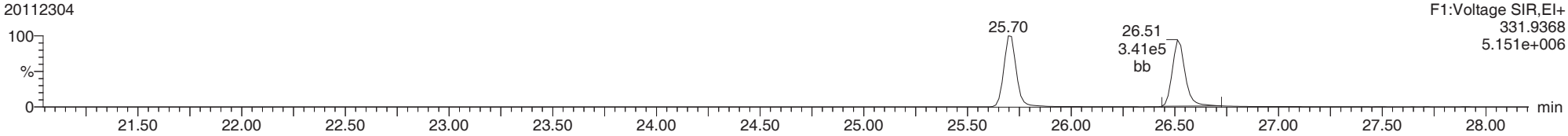

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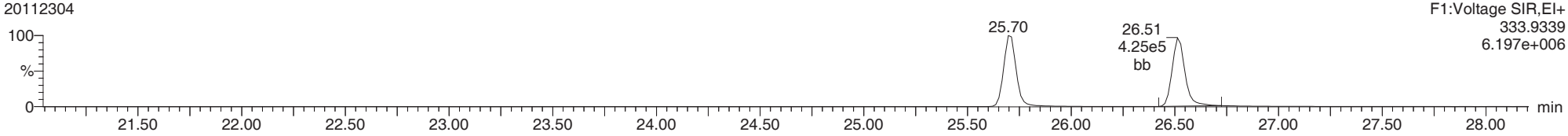
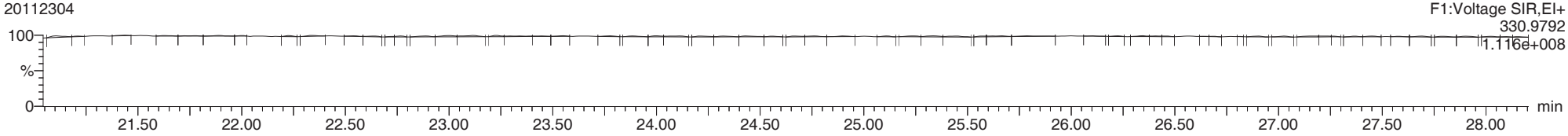


FUNCTION1 PFK



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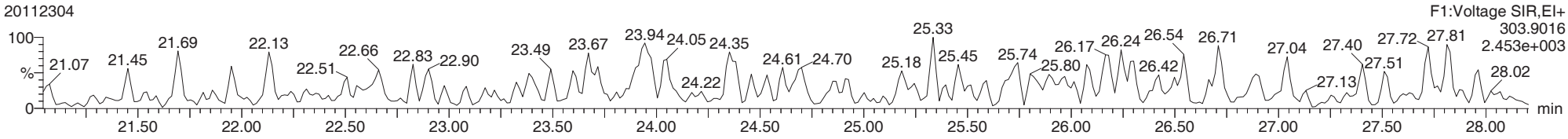
ID: BIK0510-BLK1, Name: 20112304, Date: 23-Nov-2020, Time: 12:11:55, Conditions: AUTOSPEC01, User: pk

2378-TCDF



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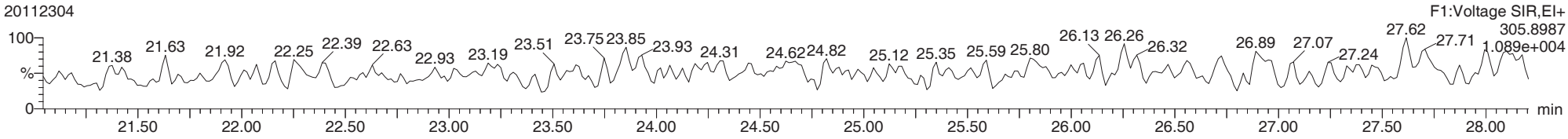

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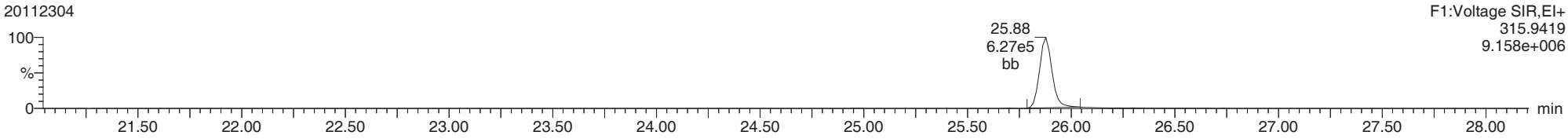

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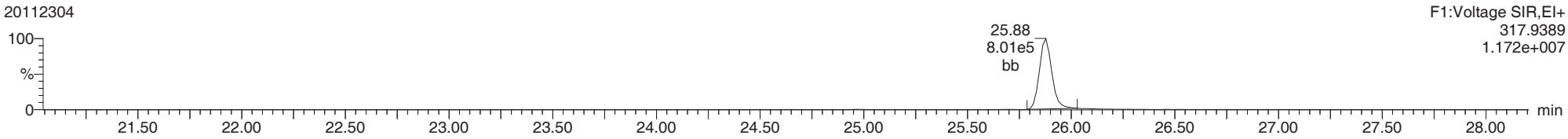
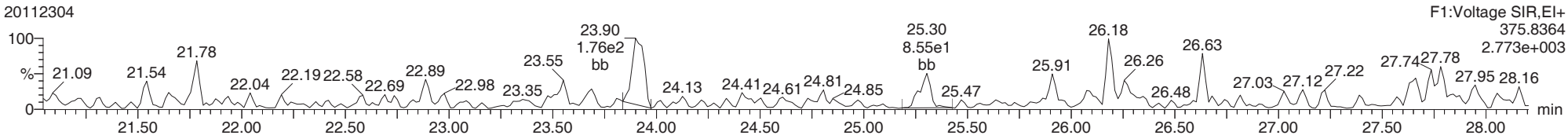
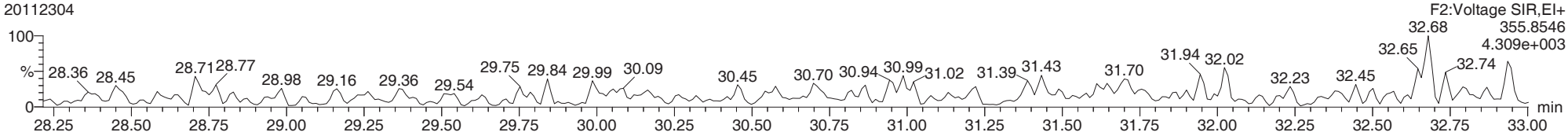


FUNCTION1 HXCDPE



ID: BIK0510-BLK1, Name: 20112304, Date: 23-Nov-2020, Time: 12:11:55, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



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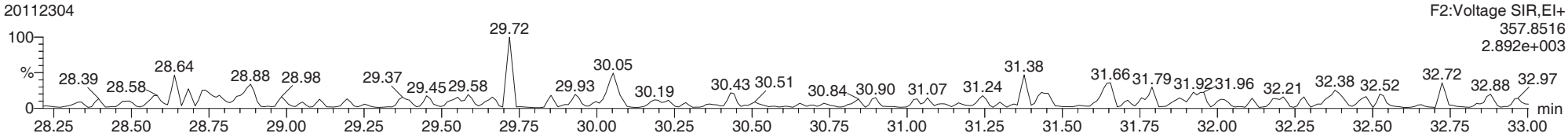

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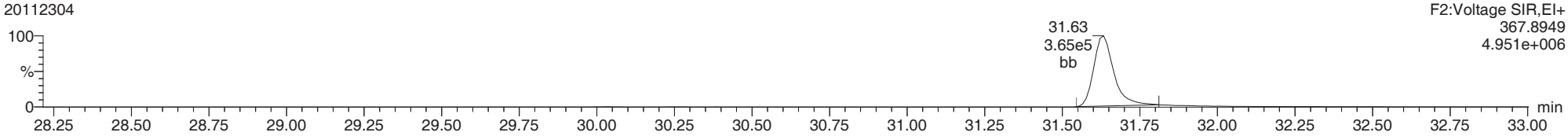

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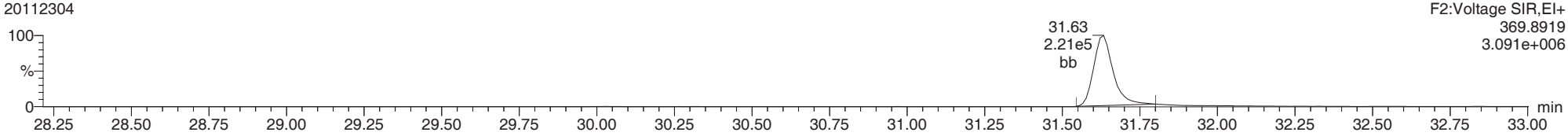
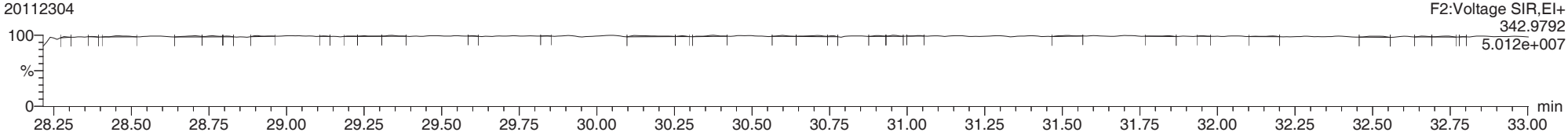


FUNCTION2 PFK



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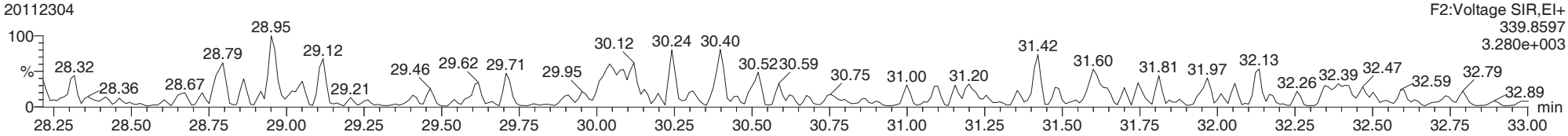
12378-PeCDF



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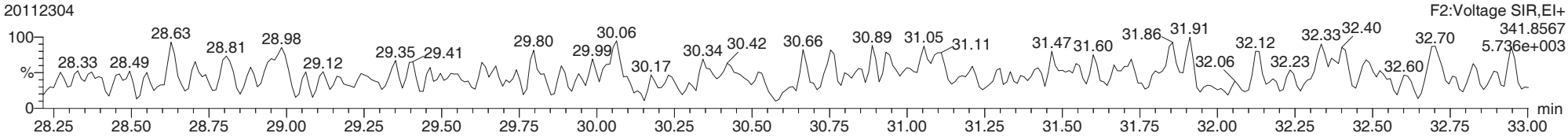

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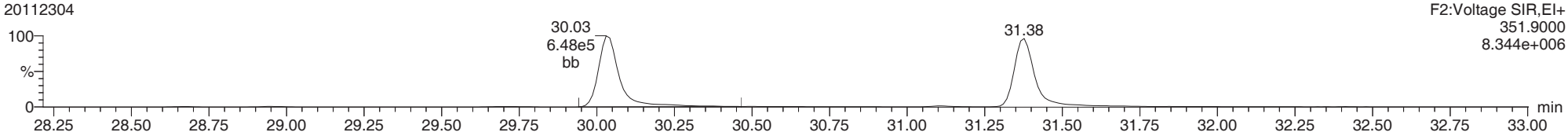

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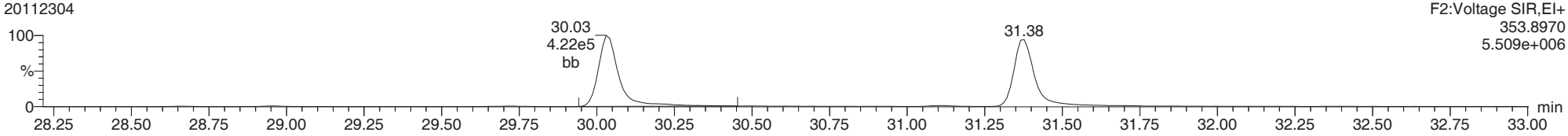
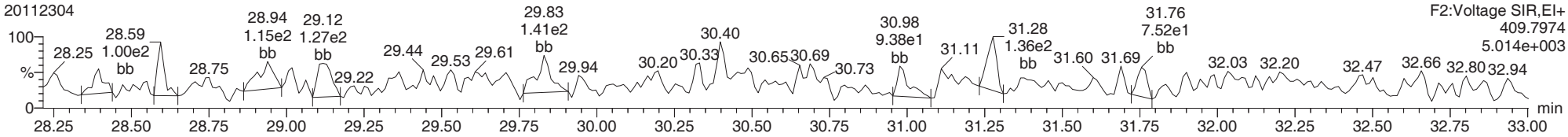


FUNCTION2 HPCDPE



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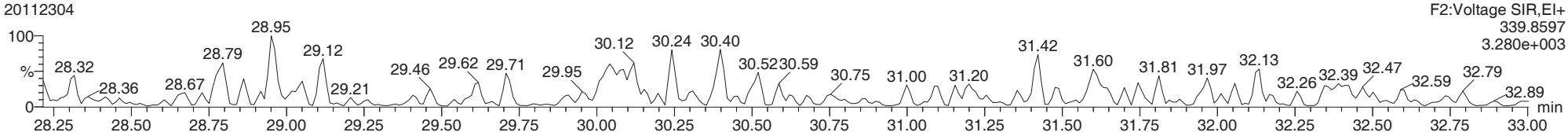
23478-PeCDF



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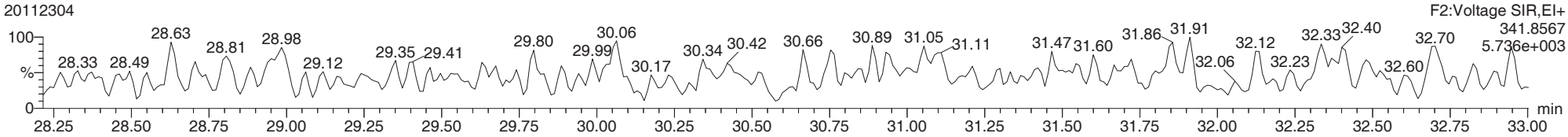

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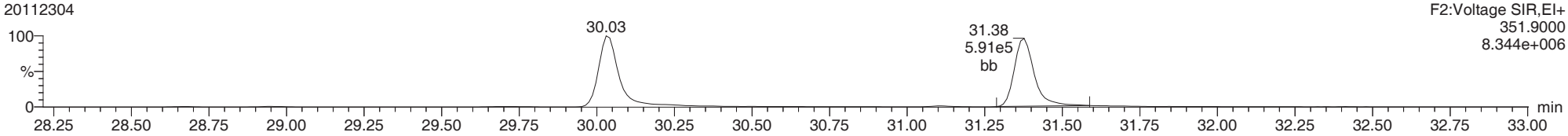

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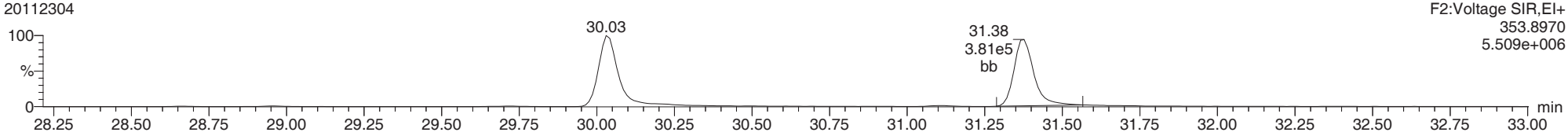
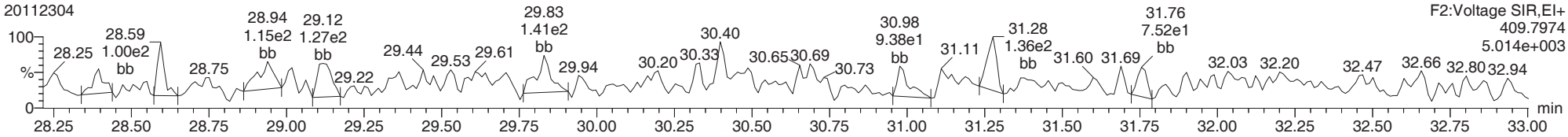


FUNCTION2 HPCDPE



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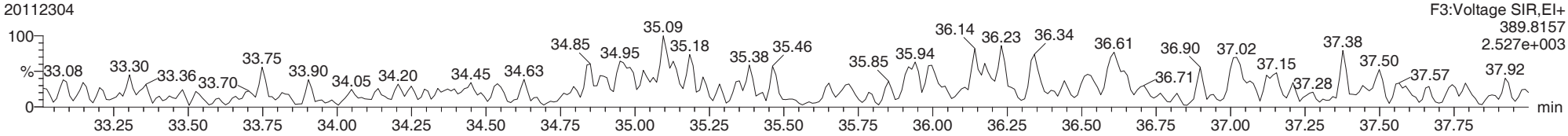
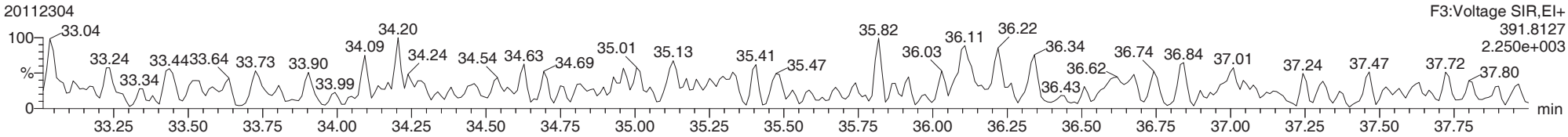
ID: BIK0510-BLK1, Name: 20112304, Date: 23-Nov-2020, Time: 12:11:55, Conditions: AUTOSPEC01, User: pk

123478-HxCDD



123478-HxCDD



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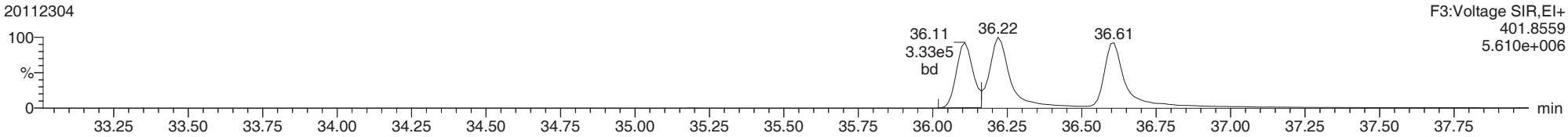

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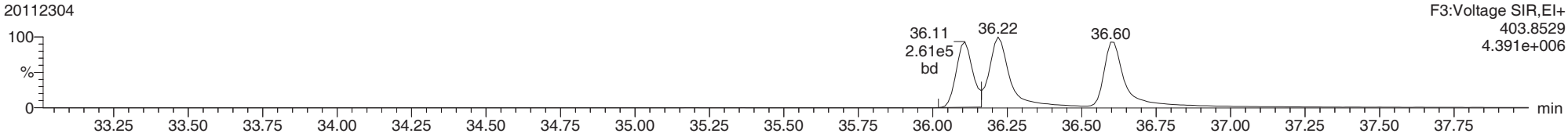

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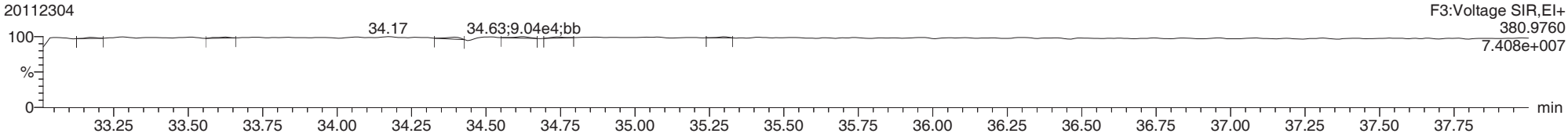

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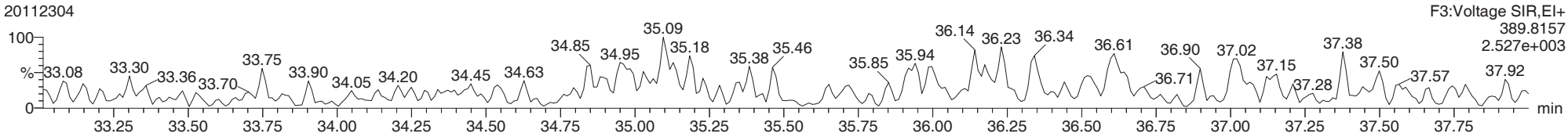
123678-HxCDD



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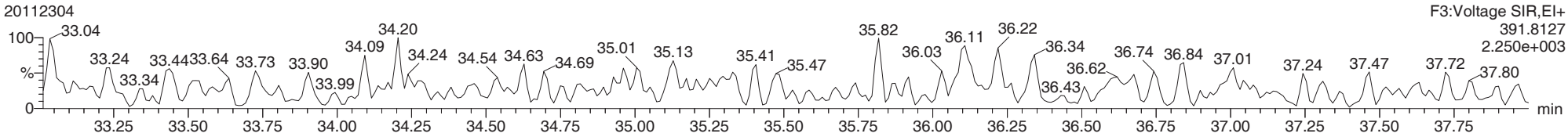

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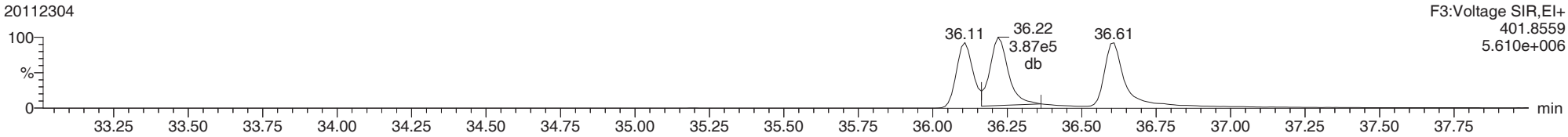

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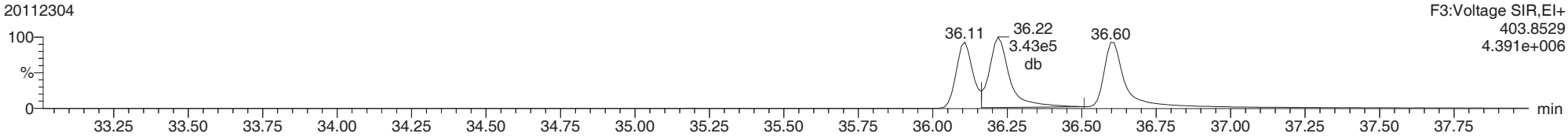

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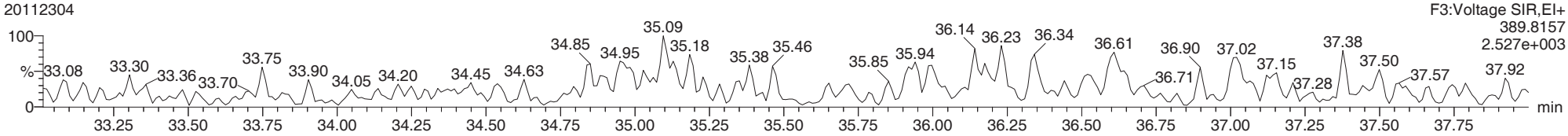
123789-HxCDD



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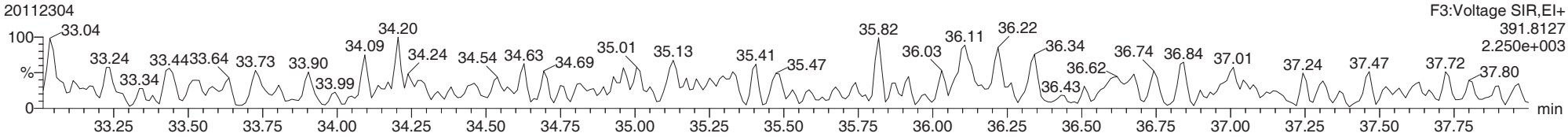

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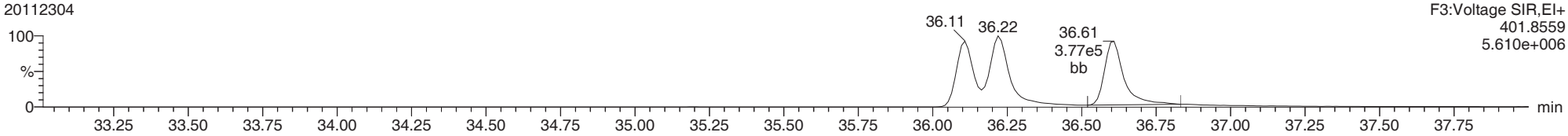
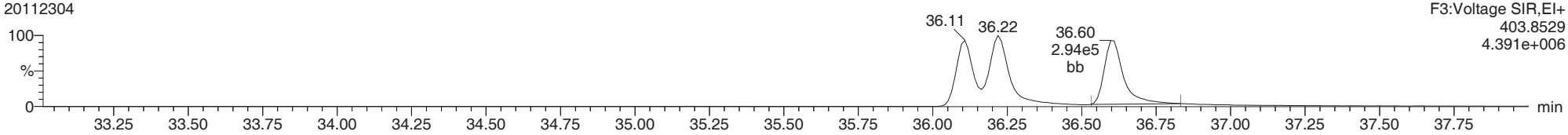


13C-123789-HxCDD



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Printed: Tuesday, November 24, 2020 10:00:29 Pacific Standard Time

ID: BIK0510-BLK1, Name: 20112304, Date: 23-Nov-2020, Time: 12:11:55, Conditions: AUTOSPEC01, User: pk

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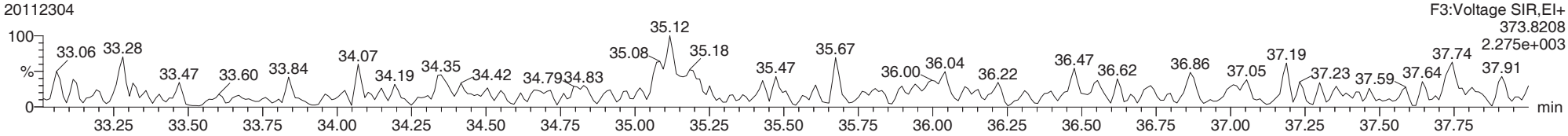

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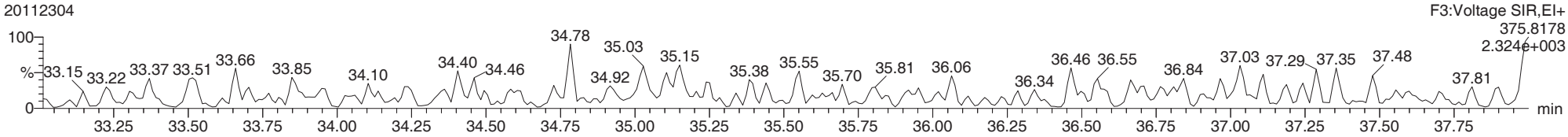

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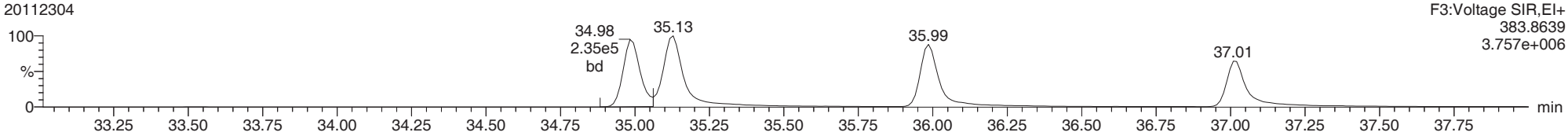

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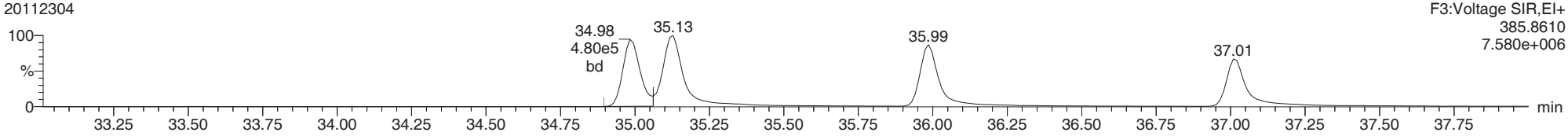

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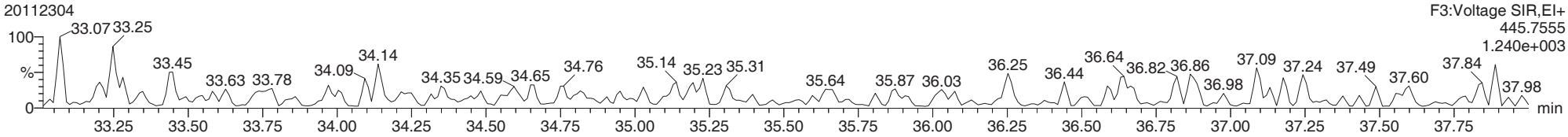

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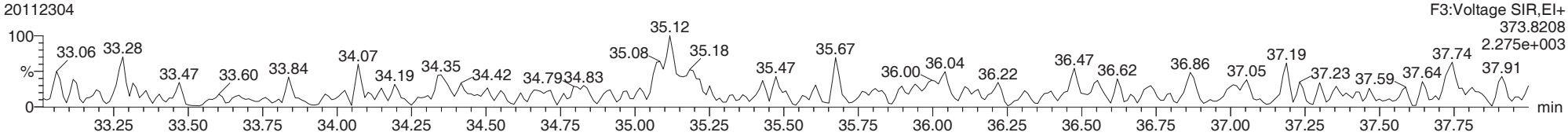
234678-HxCDF



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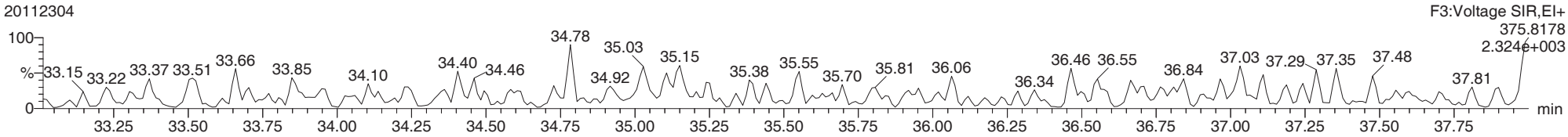

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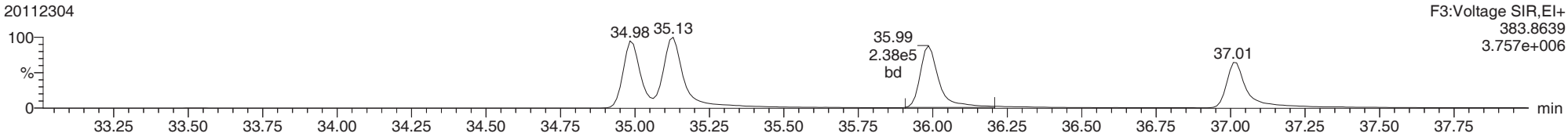

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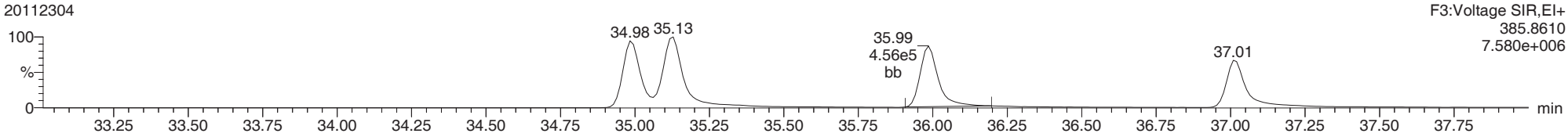

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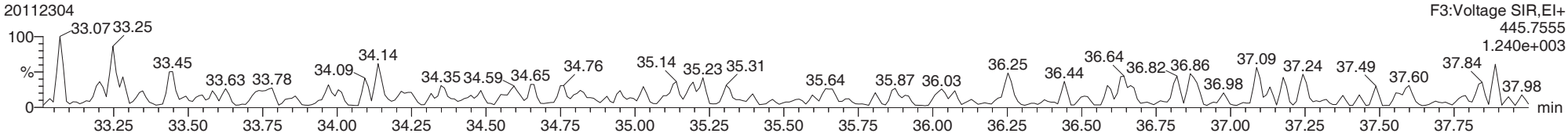

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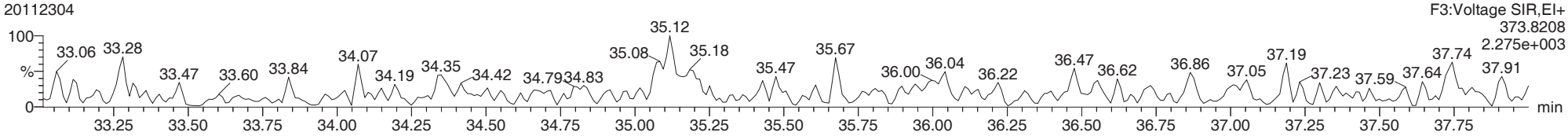
123678-HxCDF



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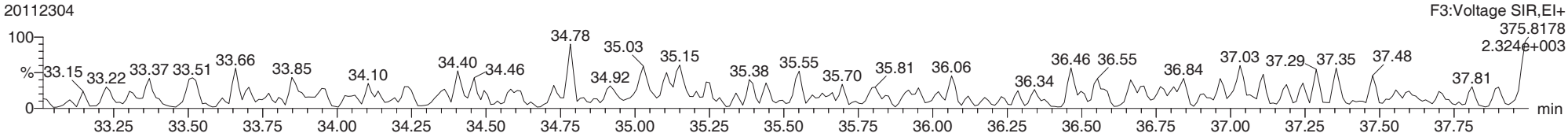

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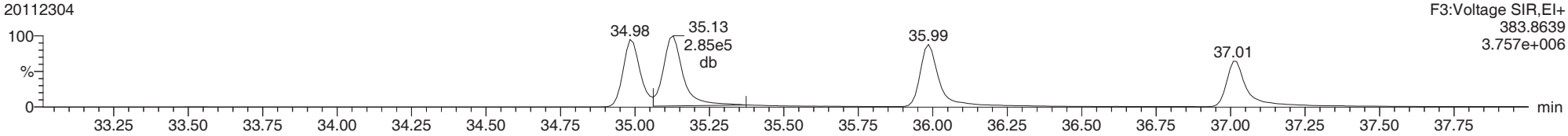

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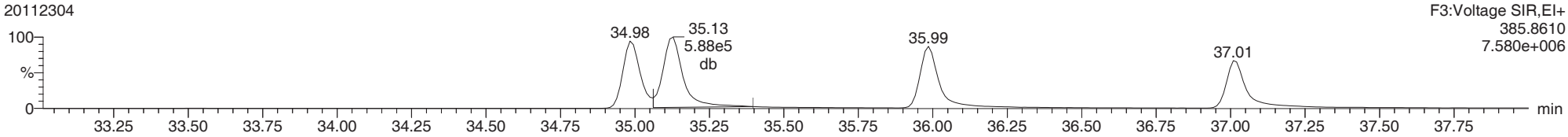

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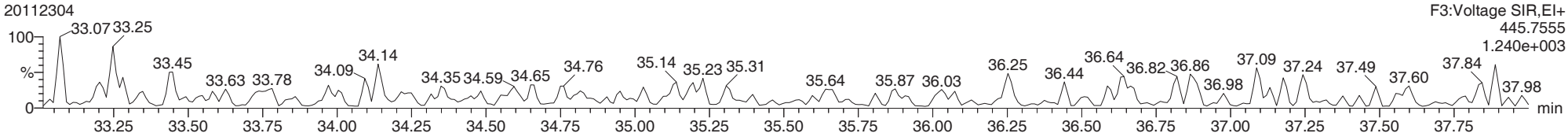

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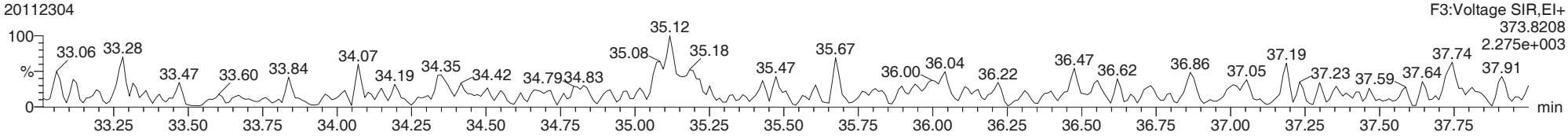

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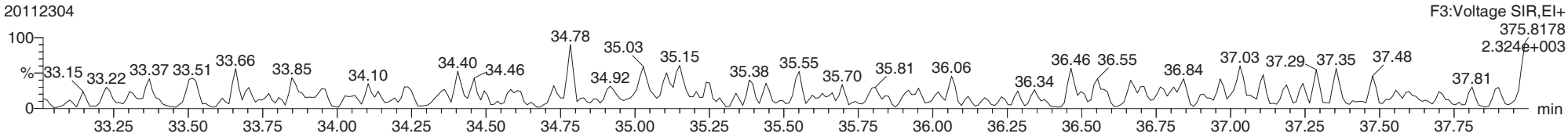

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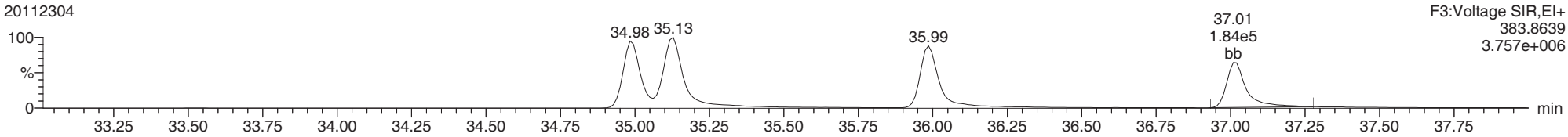

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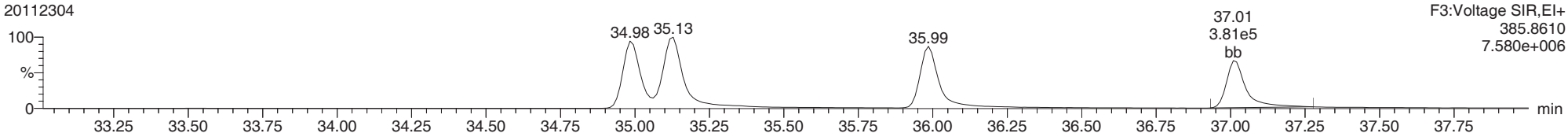

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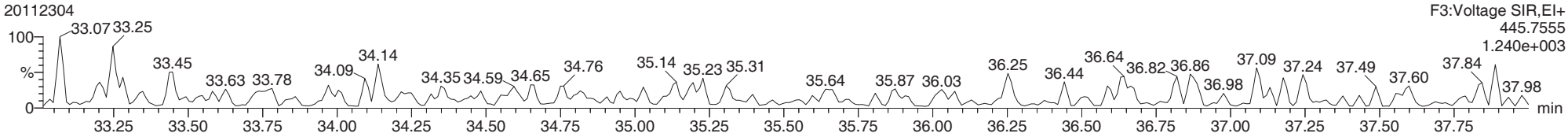

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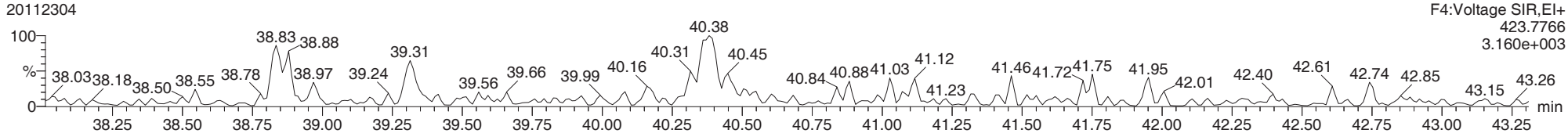
1234678-HpCDD



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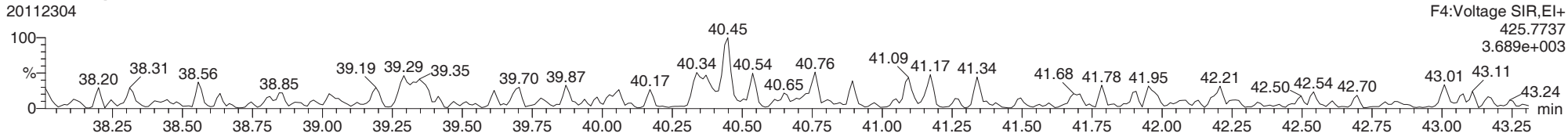

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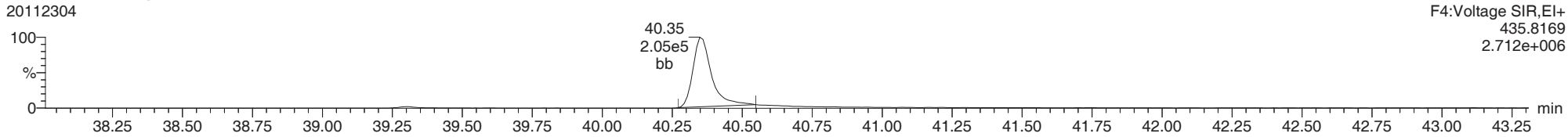

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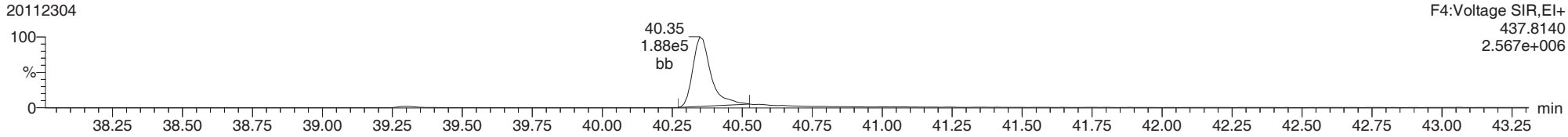

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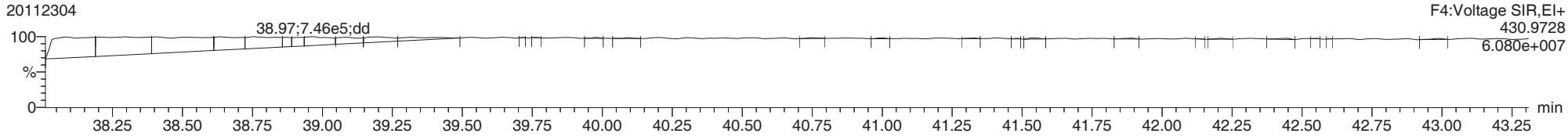

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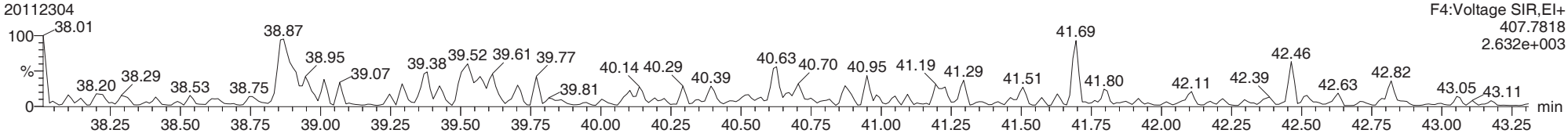

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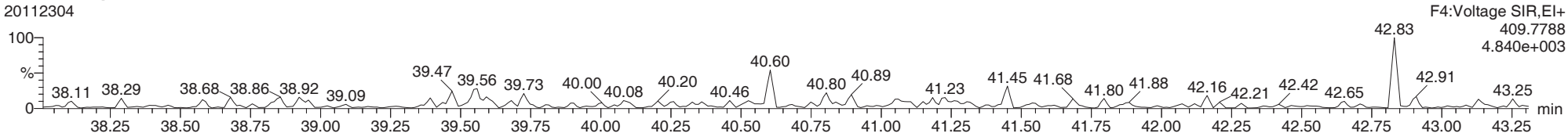

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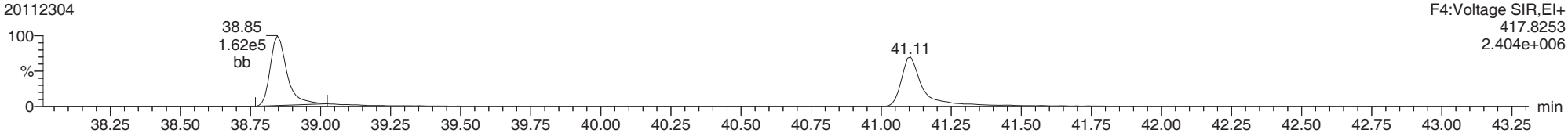

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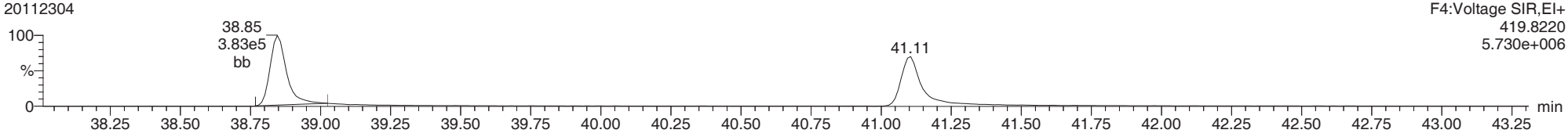
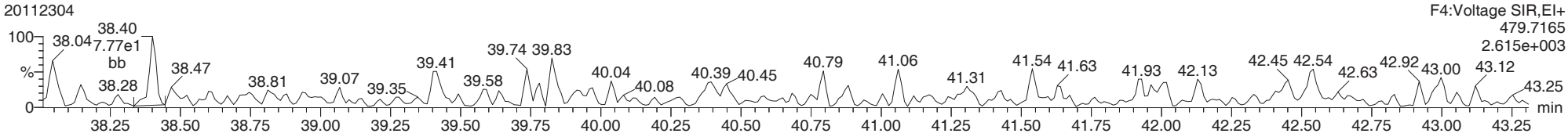


FUNCTION4 NCDPE



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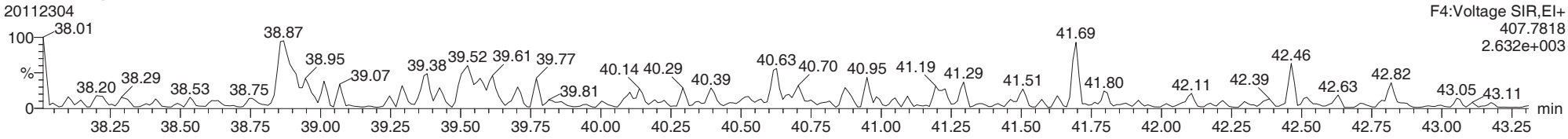
1234789-HpCDF



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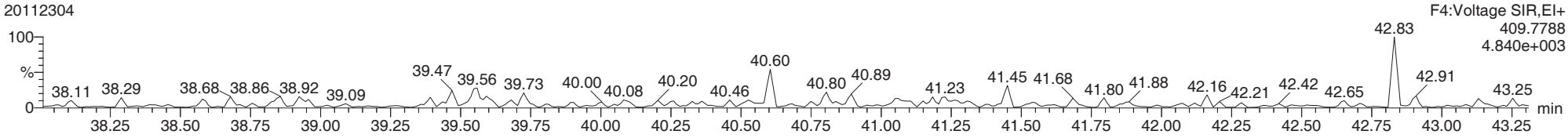

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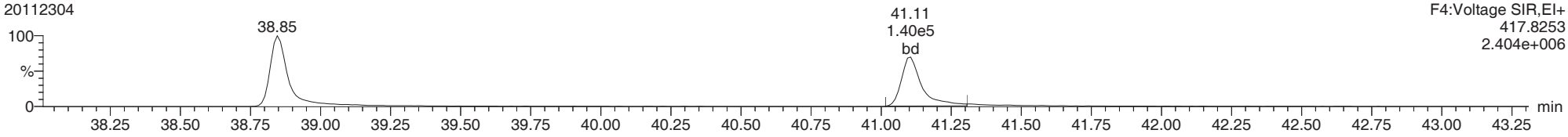

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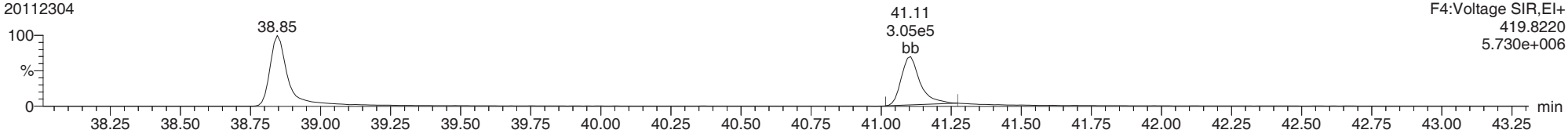

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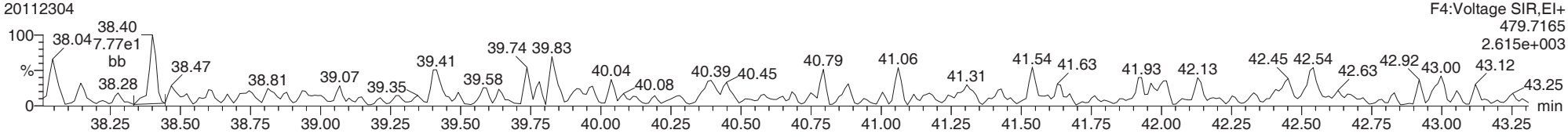

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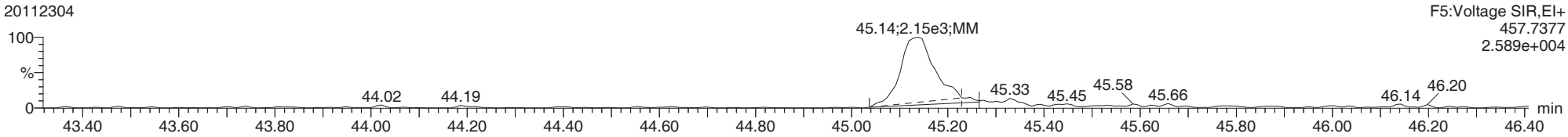
OCDD



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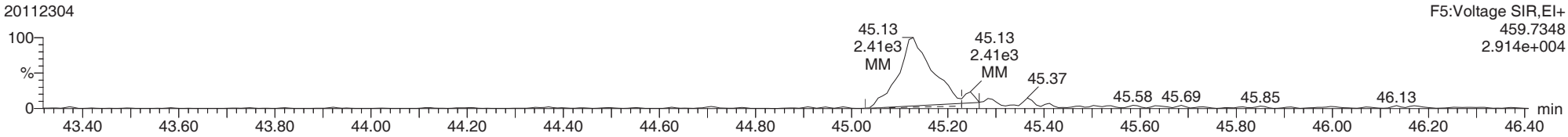

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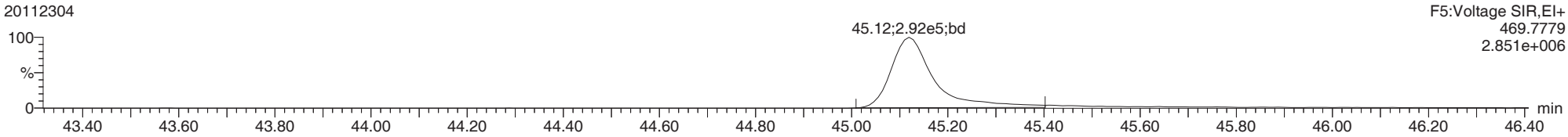

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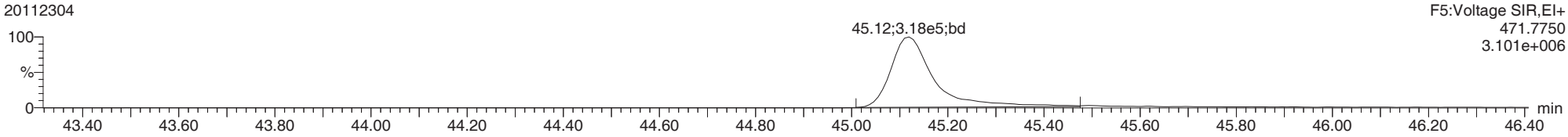
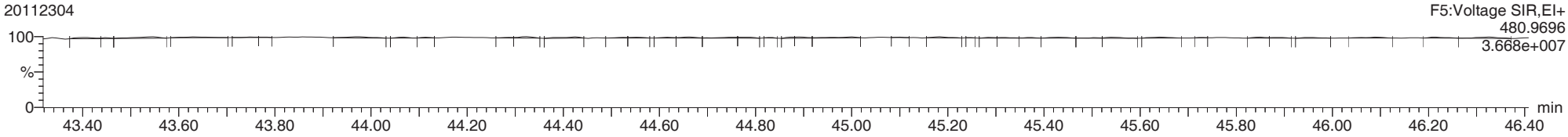


FUNCTION5 PFK



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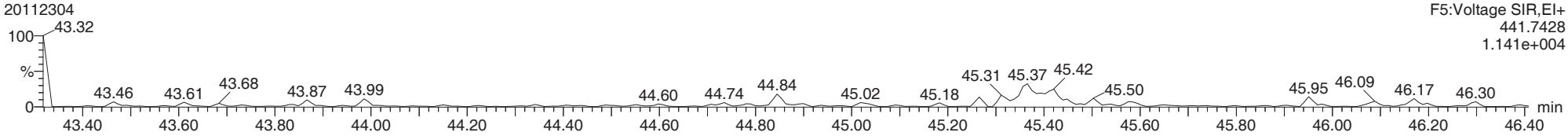
OCDF



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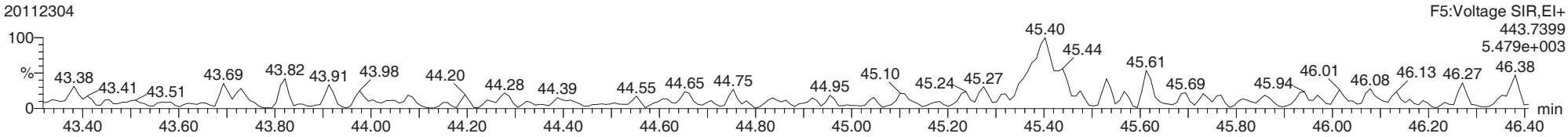

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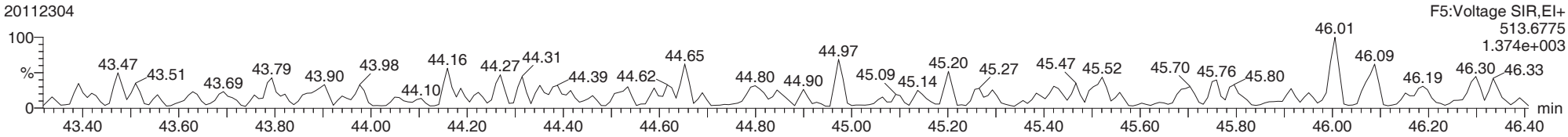

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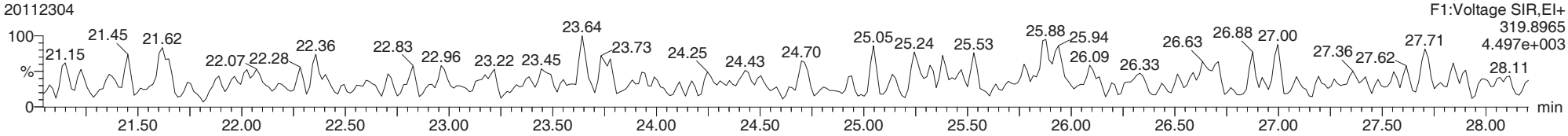
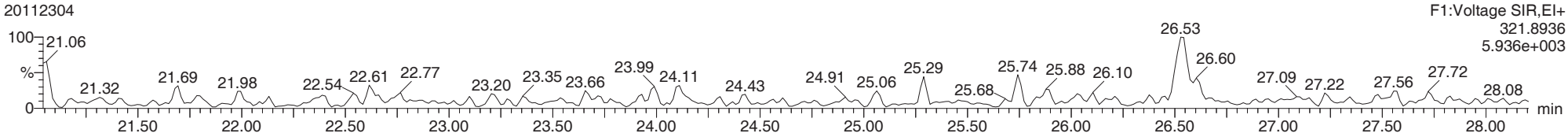
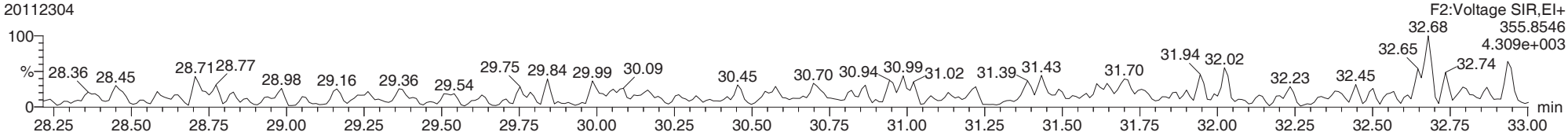
Total-tetradioxins



Total-tetradioxins



Total-pentadioxins



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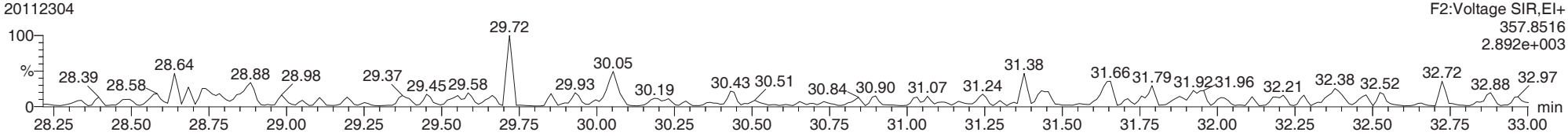

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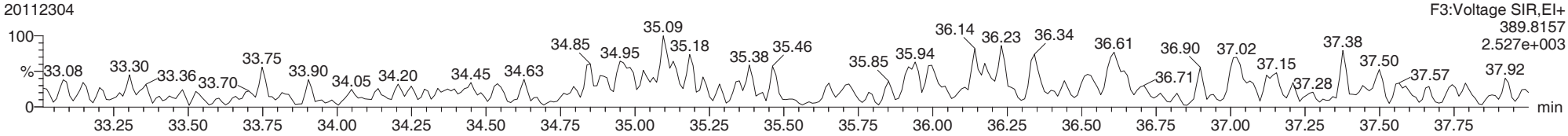

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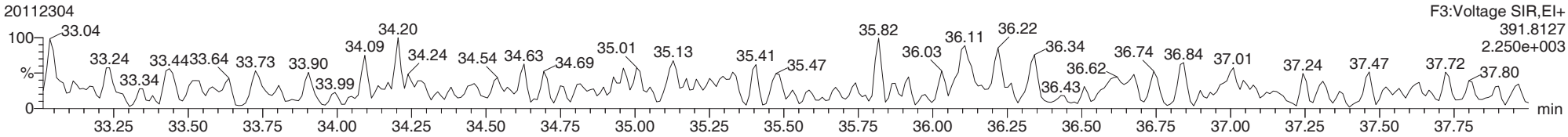
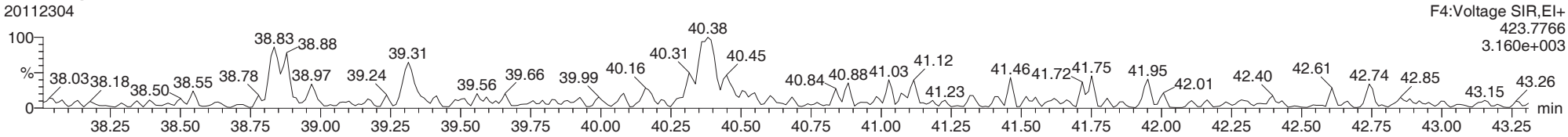
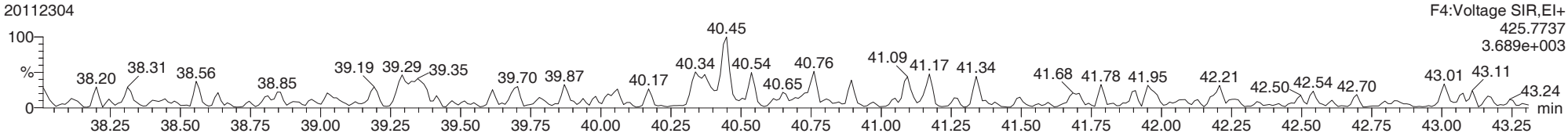


Total-heptadioxins



Total-heptadioxins



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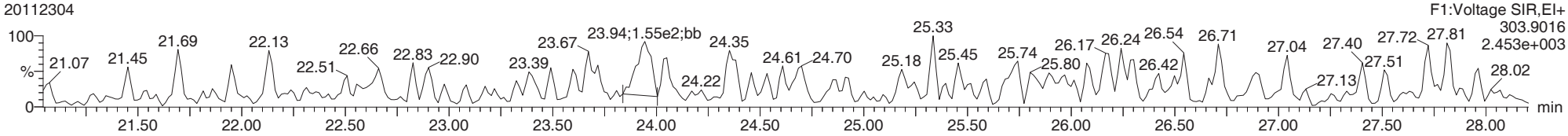
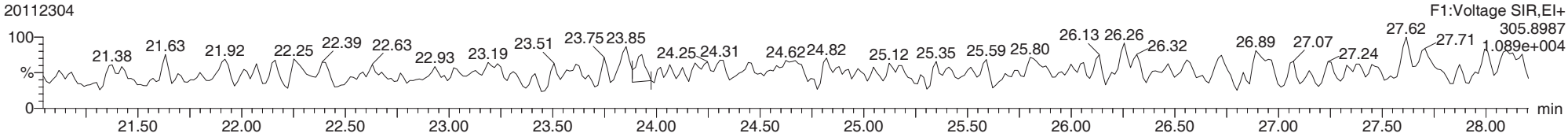
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:00:29 Pacific Standard Time

ID: BIK0510-BLK1, Name: 20112304, Date: 23-Nov-2020, Time: 12:11:55, Conditions: AUTOSPEC01, User: pk

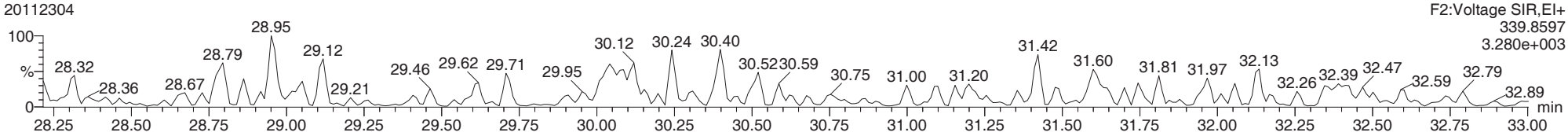
Total-tetrafurans



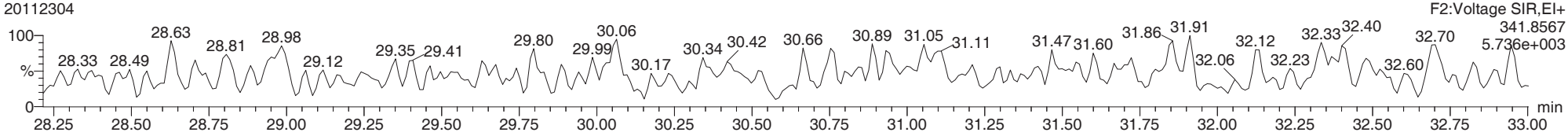
Total-tetrafurans



Total-pentafurans

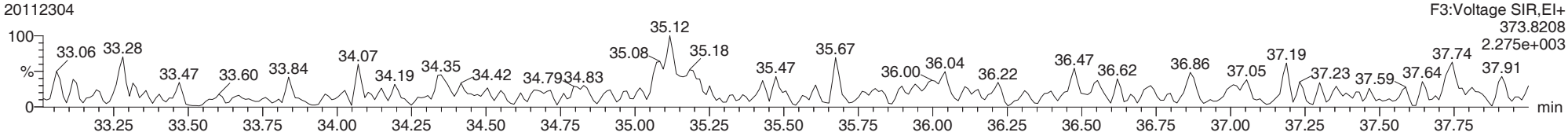


Total-pentafurans

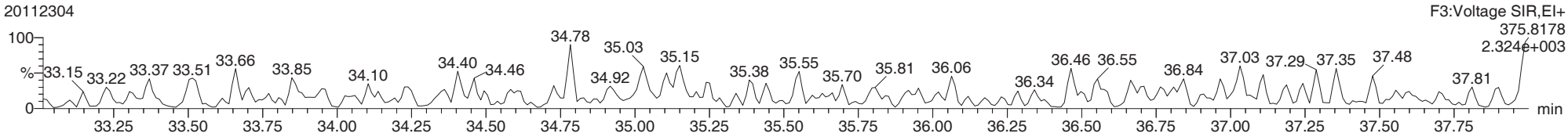


ID: BIK0510-BLK1, Name: 20112304, Date: 23-Nov-2020, Time: 12:11:55, Conditions: AUTOSPEC01, User: pk

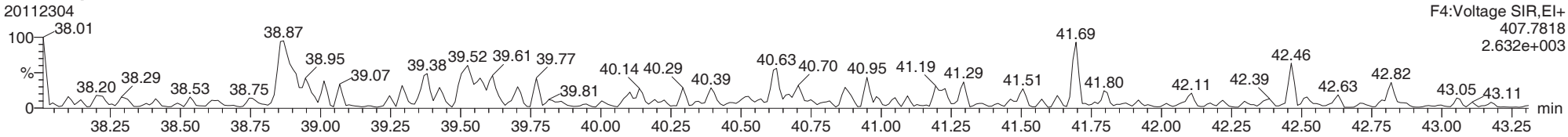
Total-hexafurans



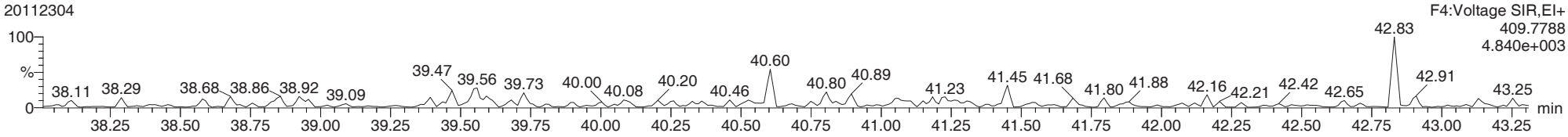
Total-hexafurans



Total-heptafurans



Total-heptafurans



LCS RECOVERY
EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Matrix:	Water	Analyzed:	11/18/20 19:07
Batch:	BIK0278	Laboratory ID:	BIK0278-BS2
Preparation:	EPA 1613	Sequence Name:	LCS
Initial/Final:	1000 mL / 20 uL		

COMPOUND	SPIKE ADDED (pg/L)	LCS CONCENTRATION (pg/L)	Q	LCS % REC. #	QC LIMITS REC.
2,3,7,8-TCDF	200	221		110	75 - 158
2,3,7,8-TCDD	200	214		107	67 - 158
1,2,3,7,8-PeCDF	1000	1230		123	80 - 134
2,3,4,7,8-PeCDF	1000	1210		121	68 - 160
1,2,3,7,8-PeCDD	1000	1100		110	70 - 142
1,2,3,4,7,8-HxCDF	1000	1160		116	72 - 134
1,2,3,6,7,8-HxCDF	1000	1110		111	84 - 130
2,3,4,6,7,8-HxCDF	1000	1190		119	70 - 156
1,2,3,7,8,9-HxCDF	1000	1190		119	78 - 130
1,2,3,4,7,8-HxCDD	1000	1110		111	70 - 164
1,2,3,6,7,8-HxCDD	1000	1130		113	76 - 134
1,2,3,7,8,9-HxCDD	1000	1110		111	64 - 162
1,2,3,4,6,7,8-HpCDF	1000	1130	B	113	82 - 122
1,2,3,4,7,8,9-HpCDF	1000	1070		107	78 - 138
1,2,3,4,6,7,8-HpCDD	1000	1020	B	102	70 - 140
OCDF	2000	2530	B	126	63 - 170
OCDD	2000	2000	B	100	78 - 144

* Indicates values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\201118IHQC.qld
Last Altered: Thursday, November 19, 2020 10:22:14 Pacific Standard Time
Printed: Thursday, November 19, 2020 10:24:41 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 18 Nov 2020 14:35:19
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: DLCS11, Name: 20111811, Date: 18-Nov-2020, Time: 19:07:19, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.908	1.001	5.756e4	7.178e4	0.729	0.802	0.770	1163	2306	8.44e5	1.09e6	725.5	472.5	NO	bb	bb	11.045
12378-PeCDF	30.074	1.001	3.622e5	2.059e5	0.779	1.759	1.550	2281	3300	5.43e6	3.23e6	2379.8	977.7	NO	bb	bb	61.611
23478-PeCDF	31.410	1.000	3.772e5	2.219e5	0.880	1.700	1.550	2281	3300	5.81e6	3.46e6	2549.2	1049.7	NO	bb	bb	60.289
123478-HxCDF	35.027	1.001	2.309e5	1.732e5	0.880	1.334	1.240	2081	2362	3.67e6	2.73e6	1762.9	1155.7	NO	bd	bd	57.755
234678-HxCDF	36.018	1.000	2.266e5	1.709e5	0.863	1.326	1.240	2081	2362	3.70e6	2.78e6	1780.2	1178.2	NO	bb	bb	59.395
123678-HxCDF	35.161	1.000	2.495e5	1.861e5	0.853	1.341	1.240	2081	2362	3.73e6	2.79e6	1791.6	1179.7	NO	db	db	55.475
123789-HxCDF	37.053	1.001	1.704e5	1.263e5	0.780	1.349	1.240	2081	2362	2.63e6	1.97e6	1262.7	833.0	NO	bb	bb	59.673
1234678-HpCDF	38.878	1.000	1.806e5	1.651e5	1.001	1.094	1.050	2455	2588	3.02e6	2.74e6	1228.2	1059.6	NO	bb	bb	56.595
1234789-HpCDF	41.138	1.000	1.480e5	1.355e5	0.994	1.092	1.050	2455	2588	2.17e6	1.99e6	883.3	770.6	NO	bb	bb	53.278
OCDF	45.410	1.006	2.143e5	2.131e5	1.158	1.005	0.890	1877	1673	2.37e6	2.43e6	1262.0	1453.1	NO	MM	bb	126.404
2378-TCDD	26.558	1.001	4.851e4	6.566e4	1.238	0.739	0.770	1584	1029	7.29e5	9.72e5	460.2	944.5	NO	bb	bd	10.676
12378-PeCDD	31.677	1.001	2.213e5	1.524e5	0.988	1.452	1.550	1319	1765	3.35e6	2.16e6	2537.5	1223.9	NO	bb	bd	54.892
123478-HxCDD	36.140	1.000	1.838e5	1.485e5	0.842	1.237	1.240	968	1295	3.01e6	2.46e6	3111.8	1898.1	NO	bd	bd	55.481
123678-HxCDD	36.251	1.000	2.224e5	1.681e5	0.907	1.323	1.240	968	1295	3.11e6	2.46e6	3215.8	1898.2	NO	dd	db	56.477
123789-HxCDD	36.641	1.011	1.741e5	1.458e5	0.784	1.194	1.240	968	1295	2.75e6	2.21e6	2840.9	1704.6	NO	bb	MM	55.394
1234678-HpCDD	40.392	1.001	1.376e5	1.333e5	1.044	1.032	1.050	2364	1427	2.04e6	1.93e6	862.0	1350.5	NO	bb	bb	50.945
OCDD	45.164	1.000	1.293e5	1.523e5	0.963	0.849	0.890	2215	1771	1.47e6	1.73e6	663.9	975.8	NO	bb	bb	100.144
13C-2378-TCDF	25.893	1.006	7.124e5	8.949e5	2.203	0.796	0.770	4530	2591	1.06e7	1.34e7	2342.0	5154.2	NO	bb	bb	75.787
13C-12378-PeCDF	30.052	1.168	7.020e5	4.811e5	1.741	1.459	1.550	3881	3945	1.03e7	6.84e6	2654.0	1734.9	NO	bb	bd	70.585
13C-23478-PeCDF	31.399	1.220	6.841e5	4.445e5	1.669	1.539	1.550	3881	3945	1.01e7	6.55e6	2601.8	1661.7	NO	bb	bb	70.218
13C-123478-HxCDF	35.005	0.956	2.631e5	5.318e5	1.022	0.495	0.510	3247	3094	3.96e6	8.01e6	1218.9	2588.2	NO	bd	bd	89.540
13C-123678-HxCDF	35.150	0.960	2.938e5	6.263e5	1.200	0.469	0.510	3247	3094	4.30e6	8.73e6	1323.3	2820.9	NO	db	dd	88.286
13C-234678-HxCDF	36.007	0.983	2.608e5	5.148e5	1.071	0.507	0.510	3247	3094	4.04e6	7.95e6	1245.3	2571.1	NO	bb	bb	83.381
13C-123789-HxCDF	37.031	1.011	2.112e5	4.264e5	0.919	0.495	0.510	3247	3094	3.12e6	6.38e6	961.6	2062.2	NO	MM	bb	79.925
13C-1234678-HpCDF	38.867	1.061	1.820e5	4.284e5	0.909	0.425	0.440	2481	3132	2.87e6	6.66e6	1157.0	2125.1	NO	bb	bb	77.365
13C-1234789-HpCDF	41.127	1.123	1.634e5	3.720e5	0.724	0.439	0.440	2481	3132	2.19e6	5.06e6	881.4	1616.3	NO	MM	bb	85.209
13C-1234-TCDD	25.727	0.000	4.359e5	5.268e5	1.000	0.827	0.770	2672	1184	6.81e6	8.18e6	2548.3	6906.9	NO	bb	bb	100.000
13C-2378-TCDD	26.542	1.032	3.862e5	4.775e5	1.181	0.809	0.770	2672	1184	5.61e6	6.96e6	2099.7	5877.1	NO	bb	bb	75.934
13C-12378-PeCDD	31.655	1.230	4.302e5	2.592e5	0.978	1.660	1.550	1708	1285	6.35e6	3.87e6	3719.2	3010.1	NO	bb	bb	73.226
13C-123478-HxCDD	36.129	0.987	4.017e5	3.098e5	0.965	1.297	1.240	2613	2324	6.51e6	5.06e6	2492.0	2177.5	NO	bd	bd	84.912
13C-123678-HxCDD	36.240	0.990	4.251e5	3.372e5	1.168	1.261	1.240	2613	2324	6.54e6	5.26e6	2503.3	2264.5	NO	db	db	75.149
13C-1234678-HpCDD	40.370	1.102	2.757e5	2.338e5	0.645	1.180	1.050	2333	2582	3.62e6	3.34e6	1552.2	1291.7	NO	bd	bb	90.917
13C-OCDD	45.154	1.233	2.650e5	3.190e5	0.678	0.831	0.890	2736	2604	3.00e6	3.30e6	1096.0	1266.4	NO	bb	bd	99.140
13C-123789-HxCDD	36.619	0.000	4.822e5	3.862e5	1.000	1.248	1.240	2613	2324	7.18e6	5.65e6	2745.6	2428.6	NO	bb	bb	100.000
37CL-2378-TCDD	26.558	1.032	4.459e5		1.264			2719		6.72e6		2471.4			bb		36.627

Dataset: T:\Autospec\Processed Data Batch\201118IHQC.qld
Last Altered: Thursday, November 19, 2020 10:22:14 Pacific Standard Time
Printed: Thursday, November 19, 2020 10:24:41 Pacific Standard Time

ID: DLCS11, Name: 20111811, Date: 18-Nov-2020, Time: 19:07:19, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	1163	2306								
1289-TCDF					0.688		0.770	1163	2306								
13468-PECDF					1.181		1.550	411	1324								
12389-PECDF					0.766		1.550	2281	3300								
123468-HXCDF					1.003		1.240	2081	2362								
1368-TCDD					1.179		0.770	1584	1029								
1289-TCDD					1.042		0.770	1584	1029								
12479-PECDD					1.810		1.550	1319	1765								
12389-PECDD	32.077	1.013	1.634e2	1.580e2	1.165	1.035	1.550	1319	1765	4.54e3	5.66e3	3.4	3.2	YES	bb	db	0.040
124679-HXCDD					1.056		1.240	968	1295								
1234679-HPCDD	39.324	0.974	7.721e2	1.651e3	1.285	0.468	1.050	2364	1427	1.99e4	2.62e4	8.4	18.4	YES	bd	bb	0.370
Total-tetrafurans			5.756e4		0.754			1163		8.44e5							11.045
Total-penta1			0.000e0					411		0.00e0							
Total-pentafurans			7.396e5		0.809			2281		1.13e7							121.944
Total-hexafurans			8.781e5		0.876			2081		1.37e7							232.479
Total-heptafurans			3.298e5		0.997			2455		5.21e6							110.274
Total-Furans			2.219e6		0.893			1163		3.34e7							602.145
Total-tetradioxins			4.974e4		1.153			1584		7.42e5							10.957
Total-pentadioxins			2.216e5		1.321			1319		3.35e6							54.953
Total-hexadioxins			5.805e5		0.897			968		8.89e6							167.421
Total-heptadioxins			1.376e5		1.165			2364		2.04e6							50.945
Total-Dioxins			1.119e6		1.100			1584		1.65e7							384.419
Total-TEQ			3.338e6					1584		4.99e7							986.564
FUNCTION1 PFK			6.385e6					749011		9.53e7							
FUNCTION2 PFK			8.228e5					529296		1.79e7							0.000
FUNCTION3 PFK			1.831e6					457835		3.17e7							0.000
FUNCTION4 PFK			1.413e6					412565		3.05e7							
FUNCTION5 PFK			5.096e5					261403		1.41e7							
FUNCTION1 HXCD...			7.691e1					441		2.20e3							0.000
FUNCTION1 HPCD...			2.057e3					1494		3.79e4							0.000
FUNCTION2 HPCD...			8.857e2					1606		2.47e4							0.000
FUNCTION3 OCDPE			0.000e0					398		0.00e0							
FUNCTION4 NCDPE			0.000e0					574		0.00e0							
FUNCTION5 DCDPE			0.000e0					456		0.00e0							

Method: T:\Autospec\Methods\Dioxin201118.mdb 18 Nov 2020 14:35:19
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: DLCS11, Name: 20111811, Date: 18-Nov-2020, Time: 19:07:19, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.91	5.756e4	7.178e4	0.729	0.80	0.77	725.5	YES	NO	bb	bb	11.045

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	31.67	2.595e2	1.566e2	0.809	1.66	1.55	3.7	NO	NO	bb	bb	0.045
2	23478-PeCDF	31.41	3.772e5	2.219e5	0.880	1.70	1.55	2549.2	YES	NO	bb	bb	60.289
3	12378-PeCDF	30.07	3.622e5	2.059e5	0.779	1.76	1.55	2379.8	YES	NO	bb	bb	61.611

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123678-HxCDF	35.16	2.495e5	1.861e5	0.853	1.34	1.24	1791.6	YES	NO	db	db	55.475
2	123478-HxCDF	35.03	2.309e5	1.732e5	0.880	1.33	1.24	1762.9	YES	NO	bd	bd	57.755
3	Total-hexafurans	33.58	7.013e2	5.269e2	0.876	1.33	1.24	6.0	YES	NO	bb	bb	0.179
4	123789-HxCDF	37.05	1.704e5	1.263e5	0.780	1.35	1.24	1262.7	YES	NO	bb	bb	59.673
5	234678-HxCDF	36.02	2.266e5	1.709e5	0.863	1.33	1.24	1780.2	YES	NO	bb	bb	59.395

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.14	1.480e5	1.355e5	0.994	1.09	1.05	883.3	YES	NO	bb	bb	53.278
2	Total-heptafurans	39.53	1.204e3	1.087e3	0.997	1.11	1.05	8.6	YES	NO	bd	bb	0.401
3	1234678-HpCDF	38.88	1.806e5	1.651e5	1.001	1.09	1.05	1228.2	YES	NO	bb	bb	56.595

ID: DLCS11, Name: 20111811, Date: 18-Nov-2020, Time: 19:07:19, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.91	5.756e4	7.178e4	0.729	0.80	0.77	725.5	YES	NO	bb	bb	11.045
2	Total-pentafurans	31.67	2.595e2	1.566e2	0.809	1.66	1.55	3.7	NO	NO	bb	bb	0.045
3	23478-PeCDF	31.41	3.772e5	2.219e5	0.880	1.70	1.55	2549.2	YES	NO	bb	bb	60.289
4	12378-PeCDF	30.07	3.622e5	2.059e5	0.779	1.76	1.55	2379.8	YES	NO	bb	bb	61.611
5	123678-HxCDF	35.16	2.495e5	1.861e5	0.853	1.34	1.24	1791.6	YES	NO	db	db	55.475
6	123478-HxCDF	35.03	2.309e5	1.732e5	0.880	1.33	1.24	1762.9	YES	NO	bd	bd	57.755
7	Total-hexafurans	33.58	7.013e2	5.269e2	0.876	1.33	1.24	6.0	YES	NO	bb	bb	0.179
8	123789-HxCDF	37.05	1.704e5	1.263e5	0.780	1.35	1.24	1262.7	YES	NO	bb	bb	59.673
9	234678-HxCDF	36.02	2.266e5	1.709e5	0.863	1.33	1.24	1780.2	YES	NO	bb	bb	59.395
10	1234789-HpCDF	41.14	1.480e5	1.355e5	0.994	1.09	1.05	883.3	YES	NO	bb	bb	53.278
11	Total-heptafurans	39.53	1.204e3	1.087e3	0.997	1.11	1.05	8.6	YES	NO	bd	bb	0.401
12	1234678-HpCDF	38.88	1.806e5	1.651e5	1.001	1.09	1.05	1228.2	YES	NO	bb	bb	56.595
13	OCDF	45.41	2.143e5	2.131e5	1.158	1.01	0.89	1262.0	YES	NO	MM	bb	126.404

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.56	4.851e4	6.566e4	1.238	0.74	0.77	460.2	YES	NO	bb	bd	10.676
2	Total-tetradioxins	26.18	1.226e3	1.570e3	1.153	0.78	0.77	8.5	YES	NO	bb	bb	0.281

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.68	2.213e5	1.524e5	0.988	1.45	1.55	2537.5	YES	NO	bb	bd	54.892
2	Total-pentadioxins	30.99	3.396e2	2.172e2	1.321	1.56	1.55	4.5	NO	NO	bb	bb	0.061

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.64	1.741e5	1.458e5	0.784	1.19	1.24	2840.9	YES	NO	bb	MM	55.394
2	123678-HxCDD	36.25	2.224e5	1.681e5	0.907	1.32	1.24	3215.8	YES	NO	dd	db	56.477
3	123478-HxCDD	36.14	1.838e5	1.485e5	0.842	1.24	1.24	3111.8	YES	NO	bd	bd	55.481
4	Total-hexadioxins	37.13	2.407e2		0.897			6.7	YES		dd		0.069

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HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.39	1.376e5	1.333e5	1.044	1.03	1.05	862.0	YES	NO	bb	bb	50.945

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.56	4.851e4	6.566e4	1.238	0.74	0.77	460.2	YES	NO	bb	bd	10.676
2	Total-tetradioxins	26.18	1.226e3	1.570e3	1.153	0.78	0.77	8.5	YES	NO	bb	bb	0.281
3	12378-PeCDD	31.68	2.213e5	1.524e5	0.988	1.45	1.55	2537.5	YES	NO	bb	bd	54.892
4	Total-pentadioxins	30.99	3.396e2	2.172e2	1.321	1.56	1.55	4.5	NO	NO	bb	bb	0.061
5	123789-HxCDD	36.64	1.741e5	1.458e5	0.784	1.19	1.24	2840.9	YES	NO	bb	MM	55.394
6	123678-HxCDD	36.25	2.224e5	1.681e5	0.907	1.32	1.24	3215.8	YES	NO	dd	db	56.477
7	123478-HxCDD	36.14	1.838e5	1.485e5	0.842	1.24	1.24	3111.8	YES	NO	bd	bd	55.481
8	Total-hexadioxins	37.13	2.407e2		0.897			6.7	YES		dd		0.069
9	1234678-HpCDD	40.39	1.376e5	1.333e5	1.044	1.03	1.05	862.0	YES	NO	bb	bb	50.945
10	OCDD	45.16	1.293e5	1.523e5	0.963	0.85	0.89	663.9	YES	NO	bb	bb	100.144

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.91	5.756e4	7.178e4	0.729	0.80	0.77	725.5	YES	NO	bb	bb	11.045
2	Total-pentafurans	31.67	2.595e2	1.566e2	0.809	1.66	1.55	3.7	NO	NO	bb	bb	0.045
3	23478-PeCDF	31.41	3.772e5	2.219e5	0.880	1.70	1.55	2549.2	YES	NO	bb	bb	60.289
4	12378-PeCDF	30.07	3.622e5	2.059e5	0.779	1.76	1.55	2379.8	YES	NO	bb	bb	61.611
5	123678-HxCDF	35.16	2.495e5	1.861e5	0.853	1.34	1.24	1791.6	YES	NO	db	db	55.475
6	123478-HxCDF	35.03	2.309e5	1.732e5	0.880	1.33	1.24	1762.9	YES	NO	bd	bd	57.755
7	Total-hexafurans	33.58	7.013e2	5.269e2	0.876	1.33	1.24	6.0	YES	NO	bb	bb	0.179
8	123789-HxCDF	37.05	1.704e5	1.263e5	0.780	1.35	1.24	1262.7	YES	NO	bb	bb	59.673
9	234678-HxCDF	36.02	2.266e5	1.709e5	0.863	1.33	1.24	1780.2	YES	NO	bb	bb	59.395
10	1234789-HpCDF	41.14	1.480e5	1.355e5	0.994	1.09	1.05	883.3	YES	NO	bb	bb	53.278
11	Total-heptafurans	39.53	1.204e3	1.087e3	0.997	1.11	1.05	8.6	YES	NO	bd	bb	0.401
12	1234678-HpCDF	38.88	1.806e5	1.651e5	1.001	1.09	1.05	1228.2	YES	NO	bb	bb	56.595
13	OCDF	45.41	2.143e5	2.131e5	1.158	1.01	0.89	1262.0	YES	NO	MM	bb	126.404
14	2378-TCDD	26.56	4.851e4	6.566e4	1.238	0.74	0.77	460.2	YES	NO	bb	bd	10.676
15	Total-tetradioxins	26.18	1.226e3	1.570e3	1.153	0.78	0.77	8.5	YES	NO	bb	bb	0.281
16	12378-PeCDD	31.68	2.213e5	1.524e5	0.988	1.45	1.55	2537.5	YES	NO	bb	bd	54.892
17	Total-pentadioxins	30.99	3.396e2	2.172e2	1.321	1.56	1.55	4.5	NO	NO	bb	bb	0.061
18	123789-HxCDD	36.64	1.741e5	1.458e5	0.784	1.19	1.24	2840.9	YES	NO	bb	MM	55.394
19	123678-HxCDD	36.25	2.224e5	1.681e5	0.907	1.32	1.24	3215.8	YES	NO	dd	db	56.477
20	123478-HxCDD	36.14	1.838e5	1.485e5	0.842	1.24	1.24	3111.8	YES	NO	bd	bd	55.481
21	Total-hexadioxins	37.13	2.407e2		0.897			6.7	YES		dd		0.069
22	1234678-HpCDD	40.39	1.376e5	1.333e5	1.044	1.03	1.05	862.0	YES	NO	bb	bb	50.945
23	OCDD	45.16	1.293e5	1.523e5	0.963	0.85	0.89	663.9	YES	NO	bb	bb	100.144

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.50	1.994e5					3.5	YES		dd		
2	FUNCTION1 PFK	21.39	2.310e5					3.3	YES		dd		
3	FUNCTION1 PFK	21.28	1.544e5					3.1	YES		bd		
4	FUNCTION1 PFK	21.16	9.471e4					2.6	NO		bb		
5	FUNCTION1 PFK	23.19	1.007e5					1.5	NO		dd		
6	FUNCTION1 PFK	23.07	5.524e4					1.6	NO		bd		
7	FUNCTION1 PFK	22.96	1.861e4					0.7	NO		bb		
8	FUNCTION1 PFK	22.84	6.903e4					1.5	NO		db		
9	FUNCTION1 PFK	22.74	1.197e5					2.2	NO		dd		
10	FUNCTION1 PFK	22.63	4.350e4					1.2	NO		dd		
11	FUNCTION1 PFK	22.51	9.502e4					2.1	NO		dd		
12	FUNCTION1 PFK	22.42	1.842e5					2.8	NO		dd		
13	FUNCTION1 PFK	22.30	1.389e5					2.6	NO		dd		
14	FUNCTION1 PFK	22.16	1.260e5					2.5	NO		dd		
15	FUNCTION1 PFK	22.07	1.339e5					2.8	NO		dd		
16	FUNCTION1 PFK	21.98	8.232e4					2.0	NO		dd		
17	FUNCTION1 PFK	21.93	6.142e4					2.1	NO		dd		
18	FUNCTION1 PFK	21.84	1.252e5					2.4	NO		dd		
19	FUNCTION1 PFK	21.72	1.667e5					2.8	NO		dd		
20	FUNCTION1 PFK	21.62	1.945e5					2.9	NO		dd		
21	FUNCTION1 PFK	24.90	9.401e4					2.2	NO		dd		
22	FUNCTION1 PFK	24.76	1.823e5					2.6	NO		dd		
23	FUNCTION1 PFK	24.67	9.785e4					2.2	NO		dd		
24	FUNCTION1 PFK	24.56	1.635e5					2.7	NO		dd		
25	FUNCTION1 PFK	24.44	1.644e5					3.1	YES		dd		
26	FUNCTION1 PFK	24.31	1.149e5					1.8	NO		dd		
27	FUNCTION1 PFK	24.22	1.416e5					3.3	YES		bd		
28	FUNCTION1 PFK	24.10	1.170e5					2.6	NO		db		
29	FUNCTION1 PFK	24.00	1.548e5					2.5	NO		dd		
30	FUNCTION1 PFK	23.88	1.993e5					2.9	NO		dd		
31	FUNCTION1 PFK	23.75	1.304e5					2.3	NO		bd		
32	FUNCTION1 PFK	23.66	3.921e4					1.7	NO		db		
33	FUNCTION1 PFK	23.63	4.603e4					1.3	NO		dd		
34	FUNCTION1 PFK	23.54	8.538e4					1.4	NO		bd		
35	FUNCTION1 PFK	23.40	5.936e4					1.7	NO		bb		
36	FUNCTION1 PFK	23.31	4.740e4					1.2	NO		db		
37	FUNCTION1 PFK	26.94	7.637e4					1.4	NO		bd		

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	26.83	8.047e4					1.9	NO		bb		
39	FUNCTION1 PFK	26.59	8.340e4					1.9	NO		bb		
40	FUNCTION1 PFK	26.48	1.416e5					2.1	NO		db		
41	FUNCTION1 PFK	26.36	2.957e4					1.1	NO		bd		
42	FUNCTION1 PFK	26.27	6.570e4					1.9	NO		bb		
43	FUNCTION1 PFK	26.03	2.894e4					1.0	NO		bb		
44	FUNCTION1 PFK	25.85	3.349e3					0.3	NO		bb		
45	FUNCTION1 PFK	25.79	3.404e4					1.1	NO		db		
46	FUNCTION1 PFK	25.68	8.215e4					2.0	NO		dd		
47	FUNCTION1 PFK	25.59	1.351e5					2.4	NO		bd		
48	FUNCTION1 PFK	25.47	7.085e4					1.4	NO		bb		
49	FUNCTION1 PFK	25.36	2.188e4					1.2	NO		bb		
50	FUNCTION1 PFK	25.24	4.935e4					1.2	NO		db		
51	FUNCTION1 PFK	25.11	7.646e4					1.7	NO		dd		
52	FUNCTION1 PFK	25.02	7.266e4					1.4	NO		dd		
53	FUNCTION1 PFK	27.96	5.029e4					1.5	NO		bb		
54	FUNCTION1 PFK	27.83	9.007e4					2.0	NO		db		
55	FUNCTION1 PFK	27.74	1.194e5					3.0	NO		dd		
56	FUNCTION1 PFK	27.63	1.353e5					2.3	NO		dd		
57	FUNCTION1 PFK	27.51	2.514e5					3.3	YES		bd		
58	FUNCTION1 PFK	27.37	1.233e5					2.8	NO		db		
59	FUNCTION1 PFK	27.28	1.118e5					1.9	NO		dd		
60	FUNCTION1 PFK	27.16	1.402e5					2.8	NO		dd		
61	FUNCTION1 PFK	27.06	7.897e4					1.7	NO		dd		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.43	3.374e4					1.5	NO		bb		0.000
2	FUNCTION2 PFK	29.21	4.894e4					2.2	NO		bb		0.000
3	FUNCTION2 PFK	28.74	1.258e4					1.0	NO		bb		0.000
4	FUNCTION2 PFK	28.64	1.163e4					0.8	NO		bb		0.000
5	FUNCTION2 PFK	28.43	4.173e4					1.8	NO		bb		0.000
6	FUNCTION2 PFK	28.30	2.278e4					1.2	NO		bb		0.000
7	FUNCTION2 PFK	32.96	4.269e4					1.6	NO		bb		0.000
8	FUNCTION2 PFK	32.72	3.290e4					1.9	NO		bb		0.000
9	FUNCTION2 PFK	32.54	7.199e3					0.7	NO		bb		0.000
10	FUNCTION2 PFK	32.49	3.517e4					1.9	NO		bb		0.000
11	FUNCTION2 PFK	32.40	6.565e4					1.9	NO		bb		0.000
12	FUNCTION2 PFK	32.02	5.683e4					1.8	NO		bb		0.000
13	FUNCTION2 PFK	31.82	3.831e4					1.3	NO		bb		0.000
14	FUNCTION2 PFK	31.12	4.730e4					2.3	NO		bb		0.000
15	FUNCTION2 PFK	31.08	5.649e3					0.6	NO		bb		0.000
16	FUNCTION2 PFK	30.91	5.762e4					2.1	NO		bb		0.000
17	FUNCTION2 PFK	30.59	1.339e4					1.0	NO		db		0.000
18	FUNCTION2 PFK	30.54	5.001e4					2.1	NO		bd		0.000
19	FUNCTION2 PFK	30.23	3.903e4					1.9	NO		bb		0.000
20	FUNCTION2 PFK	29.74	7.373e4					1.9	NO		bb		0.000
21	FUNCTION2 PFK	29.54	8.589e4					2.4	NO		bb		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	35.22	3.446e4					2.1	NO		bb		0.000
2	FUNCTION3 PFK	35.09	5.536e4					2.4	NO		bb		0.000
3	FUNCTION3 PFK	34.99	2.480e4					1.1	NO		bb		0.000
4	FUNCTION3 PFK	34.65	8.269e4					2.7	NO		bb		0.000
5	FUNCTION3 PFK	34.35	2.305e4					1.2	NO		db		0.000
6	FUNCTION3 PFK	34.29	1.446e4					1.3	NO		bd		0.000
7	FUNCTION3 PFK	34.16	2.526e3					0.5	NO		bb		0.000
8	FUNCTION3 PFK	34.07	4.090e4					2.0	NO		bb		0.000
9	FUNCTION3 PFK	33.97	9.622e4					3.0	YES		db		0.000
10	FUNCTION3 PFK	33.86	8.963e4					3.5	YES		bd		0.000
11	FUNCTION3 PFK	33.71	5.982e4					1.9	NO		bb		0.000
12	FUNCTION3 PFK	33.64	6.107e4					2.9	NO		bb		0.000
13	FUNCTION3 PFK	33.40	8.442e4					2.5	NO		db		0.000
14	FUNCTION3 PFK	33.29	1.394e5					3.5	YES		dd		0.000
15	FUNCTION3 PFK	33.16	1.827e5					4.8	YES		dd		0.000
16	FUNCTION3 PFK	33.08	1.964e5					5.3	YES		bd		0.000
17	FUNCTION3 PFK	37.94	4.650e4					1.9	NO		bb		0.000
18	FUNCTION3 PFK	37.83	6.604e4					2.9	NO		db		0.000
19	FUNCTION3 PFK	37.74	4.895e4					2.4	NO		bd		0.000
20	FUNCTION3 PFK	37.67	4.542e3					0.9	NO		bb		0.000
21	FUNCTION3 PFK	37.49	5.346e4					1.8	NO		bb		0.000
22	FUNCTION3 PFK	37.15	1.905e4					1.6	NO		bb		0.000
23	FUNCTION3 PFK	36.92	5.343e4					2.3	NO		db		0.000
24	FUNCTION3 PFK	36.81	7.157e4					2.4	NO		bd		0.000
25	FUNCTION3 PFK	36.59	5.573e4					2.3	NO		bb		0.000
26	FUNCTION3 PFK	36.35	4.396e4					1.7	NO		bb		0.000
27	FUNCTION3 PFK	36.12	4.901e4					2.1	NO		db		0.000
28	FUNCTION3 PFK	36.01	5.177e4					2.3	NO		bd		0.000
29	FUNCTION3 PFK	35.66	4.800e4					2.5	NO		bb		0.000
30	FUNCTION3 PFK	35.44	3.111e4					1.6	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.15	5.953e4					2.8	NO		bb		
2	FUNCTION4 PFK	39.99	2.911e4					1.9	NO		bb		
3	FUNCTION4 PFK	39.88	3.960e4					1.8	NO		bb		
4	FUNCTION4 PFK	39.77	2.045e4					1.3	NO		bb		
5	FUNCTION4 PFK	39.53	3.190e4					1.8	NO		bb		
6	FUNCTION4 PFK	39.42	3.459e4					1.7	NO		bb		
7	FUNCTION4 PFK	39.20	5.532e4					2.1	NO		db		
8	FUNCTION4 PFK	39.08	6.870e4					3.5	YES		dd		
9	FUNCTION4 PFK	38.98	6.757e4					2.6	NO		dd		
10	FUNCTION4 PFK	38.84	3.215e4					1.9	NO		dd		
11	FUNCTION4 PFK	38.79	6.421e3					0.8	NO		bd		
12	FUNCTION4 PFK	38.73	2.255e4					1.5	NO		bb		
13	FUNCTION4 PFK	38.62	2.118e4					1.3	NO		bb		
14	FUNCTION4 PFK	38.56	5.519e3					0.7	NO		bb		
15	FUNCTION4 PFK	38.52	3.459e3					0.5	NO		bb		
16	FUNCTION4 PFK	38.34	3.634e3					0.5	NO		db		
17	FUNCTION4 PFK	38.27	7.135e4					2.1	NO		bd		
18	FUNCTION4 PFK	42.04	6.409e4					2.3	NO		dd		
19	FUNCTION4 PFK	41.91	3.468e4					1.8	NO		bd		
20	FUNCTION4 PFK	41.69	1.905e4					1.4	NO		bb		
21	FUNCTION4 PFK	41.62	1.703e3					0.4	NO		bb		
22	FUNCTION4 PFK	41.56	1.460e4					1.0	NO		bb		
23	FUNCTION4 PFK	41.44	3.029e4					1.5	NO		bb		
24	FUNCTION4 PFK	41.37	2.904e4					1.9	NO		db		
25	FUNCTION4 PFK	41.34	1.563e4					1.6	NO		bd		
26	FUNCTION4 PFK	41.27	2.066e4					1.7	NO		db		
27	FUNCTION4 PFK	41.24	5.354e4					2.5	NO		dd		
28	FUNCTION4 PFK	41.14	4.630e4					2.3	NO		dd		
29	FUNCTION4 PFK	41.03	3.457e4					1.7	NO		bd		
30	FUNCTION4 PFK	40.89	3.239e4					1.8	NO		bb		
31	FUNCTION4 PFK	40.67	3.972e4					2.3	NO		bb		
32	FUNCTION4 PFK	40.33	5.783e4					2.3	NO		bb		
33	FUNCTION4 PFK	40.10	3.181e4					1.8	NO		bb		
34	FUNCTION4 PFK	43.27	1.772e4					1.2	NO		bb		
35	FUNCTION4 PFK	43.17	3.976e4					1.5	NO		bb		
36	FUNCTION4 PFK	42.94	4.584e4					2.5	NO		bb		
37	FUNCTION4 PFK	42.71	3.036e4					2.2	NO		bb		

ID: DLCS11, Name: 20111811, Date: 18-Nov-2020, Time: 19:07:19, Conditions: AUTOSPEC01, User: pk

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION4 PFK	42.60	4.007e4					1.5	NO		bb		
39	FUNCTION4 PFK	42.38	4.946e4					2.2	NO		bb		
40	FUNCTION4 PFK	42.27	1.771e4					1.5	NO		db		
41	FUNCTION4 PFK	42.23	3.340e4					2.5	NO		dd		
42	FUNCTION4 PFK	42.17	3.971e4					1.7	NO		dd		

ID: DLCS11, Name: 20111811, Date: 18-Nov-2020, Time: 19:07:19, Conditions: AUTOSPEC01, User: pk

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.75	2.198e4					1.9	NO		db		
2	FUNCTION5 PFK	43.62	3.798e4					2.2	NO		dd		
3	FUNCTION5 PFK	43.59	1.878e4					2.2	NO		bd		
4	FUNCTION5 PFK	43.51	3.148e4					3.0	YES		db		
5	FUNCTION5 PFK	43.46	1.026e4					1.5	NO		bd		
6	FUNCTION5 PFK	43.39	2.054e4					2.4	NO		bb		
7	FUNCTION5 PFK	44.76	2.529e4					1.8	NO		db		
8	FUNCTION5 PFK	44.64	2.469e4					1.6	NO		bd		
9	FUNCTION5 PFK	44.57	1.800e3					0.6	NO		db		
10	FUNCTION5 PFK	44.53	1.191e4					1.5	NO		bd		
11	FUNCTION5 PFK	44.44	2.744e4					1.5	NO		db		
12	FUNCTION5 PFK	44.35	9.780e3					1.6	NO		dd		
13	FUNCTION5 PFK	44.30	3.821e4					3.4	YES		dd		
14	FUNCTION5 PFK	44.28	7.378e3					1.6	NO		bd		
15	FUNCTION5 PFK	44.22	7.185e3					1.5	NO		db		
16	FUNCTION5 PFK	44.19	2.785e4					3.0	NO		dd		
17	FUNCTION5 PFK	44.14	5.539e3					1.1	NO		dd		
18	FUNCTION5 PFK	44.09	1.456e4					1.6	NO		dd		
19	FUNCTION5 PFK	44.06	1.407e4					1.9	NO		bd		
20	FUNCTION5 PFK	43.98	9.887e3					1.3	NO		bb		
21	FUNCTION5 PFK	43.89	8.124e3					1.3	NO		db		
22	FUNCTION5 PFK	43.86	1.893e4					1.5	NO		bd		
23	FUNCTION5 PFK	46.34	1.913e4					1.7	NO		bb		
24	FUNCTION5 PFK	46.29	3.007e3					0.7	NO		bb		
25	FUNCTION5 PFK	46.22	1.819e4					1.8	NO		bb		
26	FUNCTION5 PFK	46.14	2.219e4					2.2	NO		bb		
27	FUNCTION5 PFK	45.84	5.103e3					1.1	NO		db		
28	FUNCTION5 PFK	45.79	1.760e4					1.9	NO		bd		
29	FUNCTION5 PFK	45.57	2.126e4					2.1	NO		bb		
30	FUNCTION5 PFK	45.29	2.477e3					0.6	NO		bb		
31	FUNCTION5 PFK	45.18	1.056e3					0.4	NO		bb		
32	FUNCTION5 PFK	45.07	5.938e3					1.2	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	24.97	7.691e1					5.0	YES		bb		0.000

ID: DLCS11, Name: 20111811, Date: 18-Nov-2020, Time: 19:07:19, Conditions: AUTOSPEC01, User: pk

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	23.91	1.898e2					2.7	NO		bb		0.000
2	FUNCTION1 HPCD...	22.21	2.374e2					2.5	NO		db		0.000
3	FUNCTION1 HPCD...	22.10	1.115e2					1.4	NO		bd		0.000
4	FUNCTION1 HPCD...	28.11	2.099e2					2.0	NO		bb		0.000
5	FUNCTION1 HPCD...	27.74	1.072e2					1.7	NO		bb		0.000
6	FUNCTION1 HPCD...	26.81	2.064e2					2.2	NO		bb		0.000
7	FUNCTION1 HPCD...	25.95	9.700e1					1.3	NO		bb		0.000
8	FUNCTION1 HPCD...	25.88	2.155e2					2.0	NO		db		0.000
9	FUNCTION1 HPCD...	25.77	9.409e1					1.5	NO		dd		0.000
10	FUNCTION1 HPCD...	25.71	1.079e2					1.4	NO		dd		0.000
11	FUNCTION1 HPCD...	25.58	7.504e1					1.2	NO		dd		0.000
12	FUNCTION1 HPCD...	25.53	1.309e2					1.4	NO		bd		0.000
13	FUNCTION1 HPCD...	24.65	1.302e2					2.3	NO		bb		0.000
14	FUNCTION1 HPCD...	24.38	1.442e2					1.8	NO		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	29.64	9.167e1					2.0	NO		db		0.000
2	FUNCTION2 HPCD...	29.60	8.994e1					2.3	NO		bd		0.000
3	FUNCTION2 HPCD...	29.13	1.550e2					2.9	NO		bb		0.000
4	FUNCTION2 HPCD...	28.65	1.638e2					2.0	NO		bb		0.000
5	FUNCTION2 HPCD...	32.60	1.590e2					2.7	NO		bb		0.000
6	FUNCTION2 HPCD...	31.27	1.242e2					1.4	NO		bb		0.000
7	FUNCTION2 HPCD...	29.73	1.022e2					2.1	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ID: DLCS11, Name: 20111811, Date: 18-Nov-2020, Time: 19:07:19, Conditions: AUTOSPEC01, User: pk

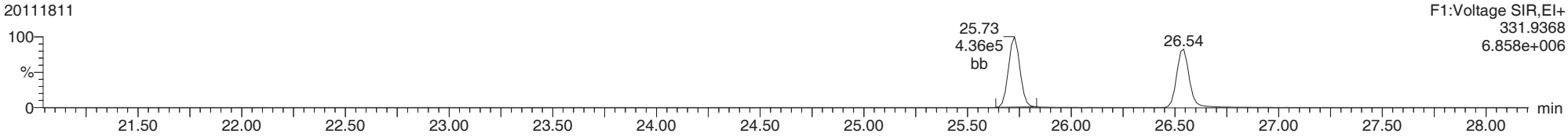
ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Method: T:\Autospec\Methods\Dioxin201118.mdb 18 Nov 2020 14:35:19
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: DLCS11, Name: 20111811, Date: 18-Nov-2020, Time: 19:07:19, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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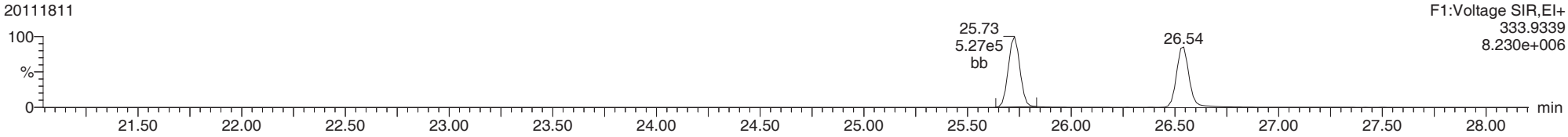
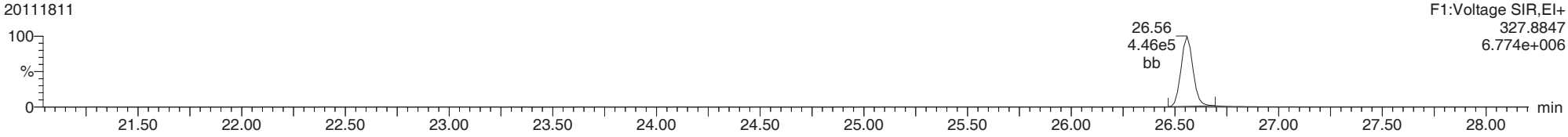


37CL-2378-TCDD



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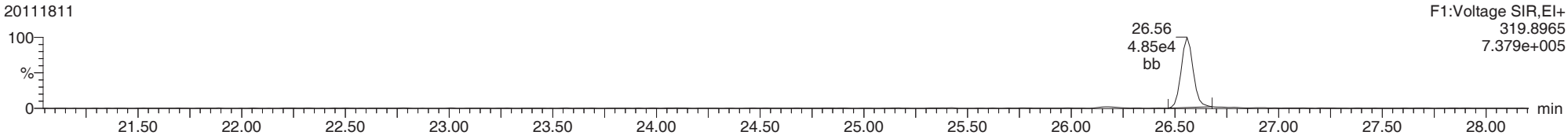
Printed: Thursday, November 19, 2020 10:24:41 Pacific Standard Time

ID: DLCS11, Name: 20111811, Date: 18-Nov-2020, Time: 19:07:19, Conditions: AUTOSPEC01, User: pk

2378-TCDD



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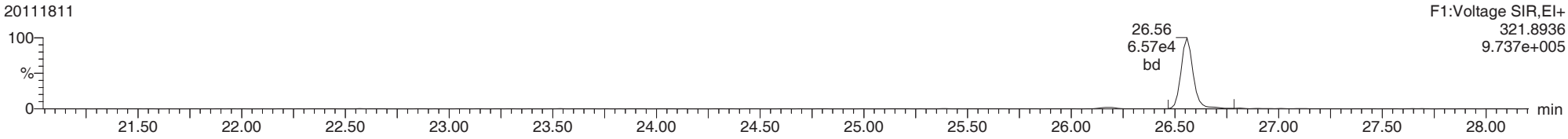

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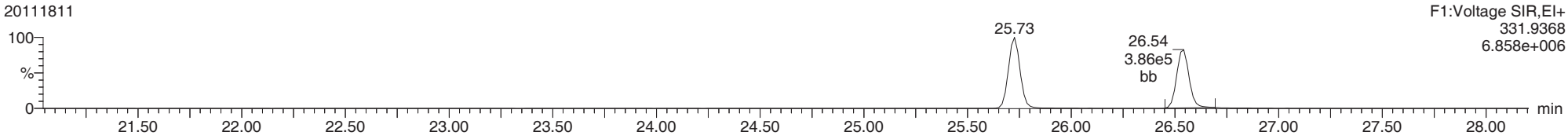

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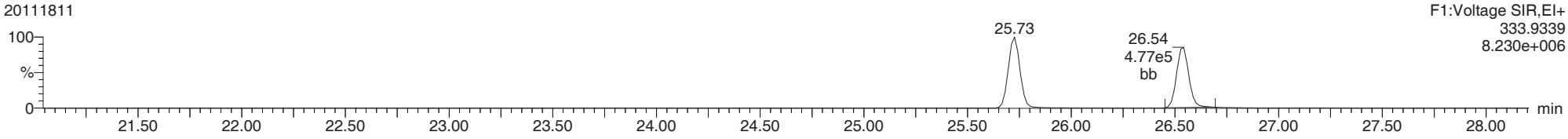

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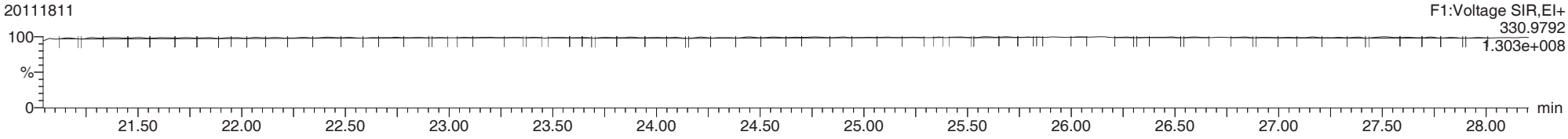

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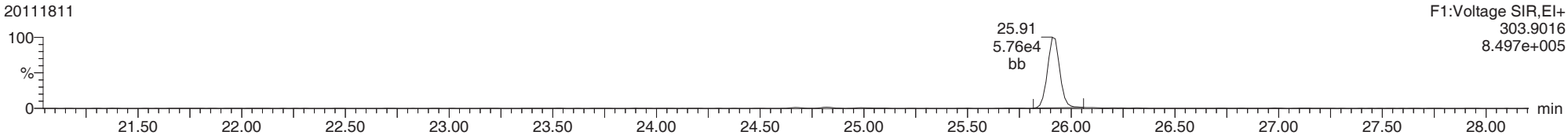
2378-TCDF



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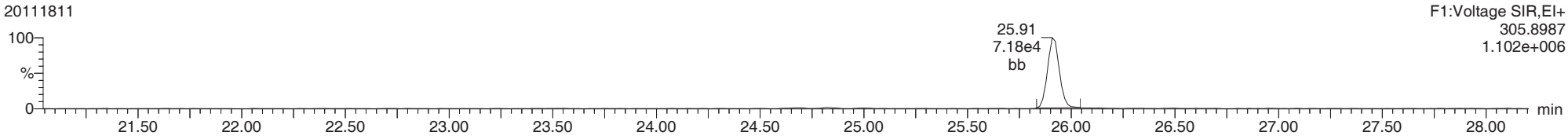

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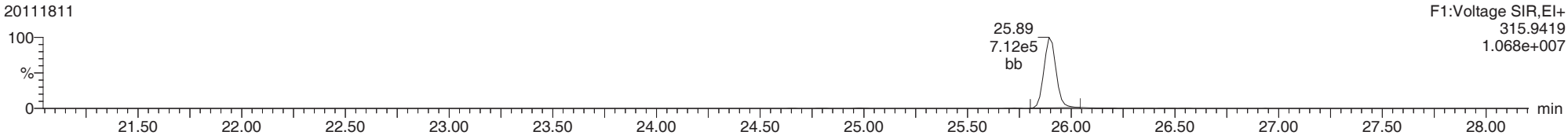

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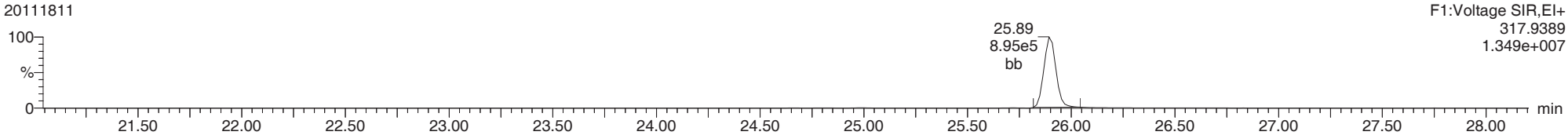
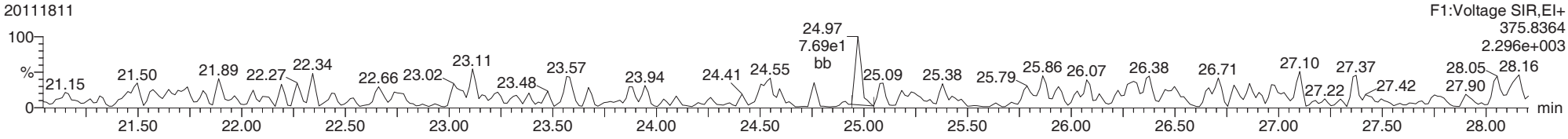


FUNCTION1 HXCDPE



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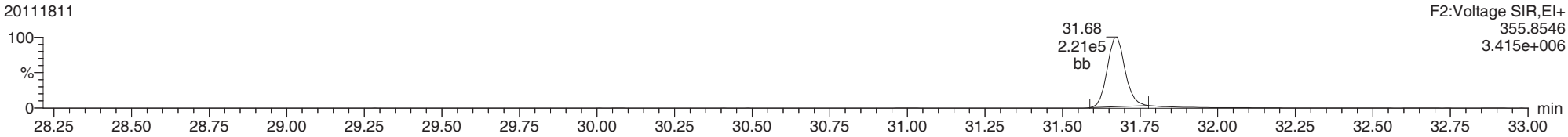
12378-PeCDD



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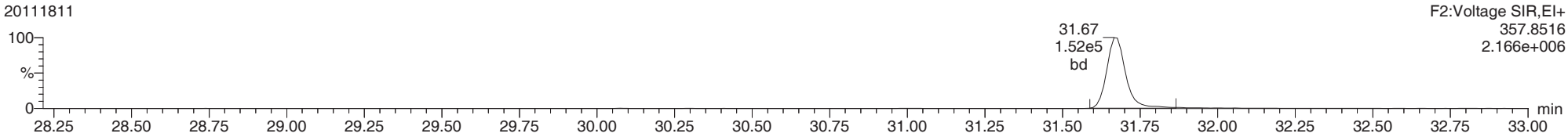

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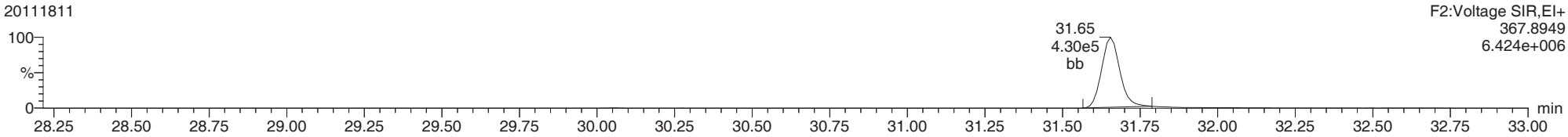

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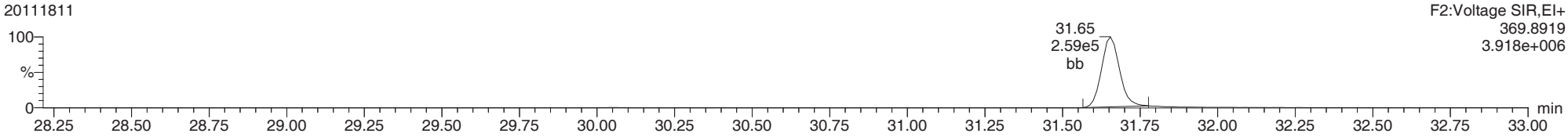

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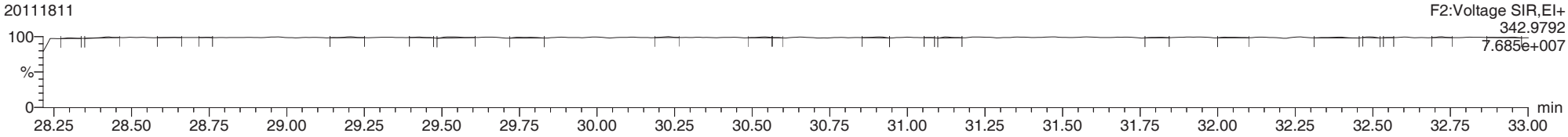

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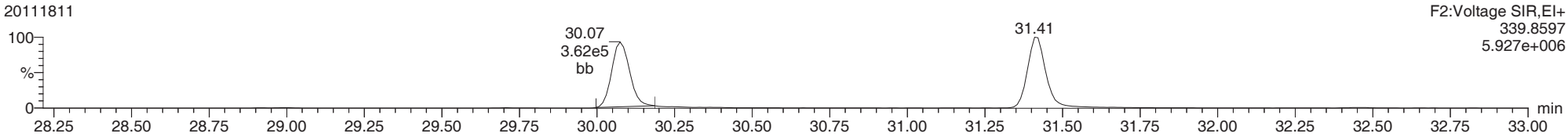

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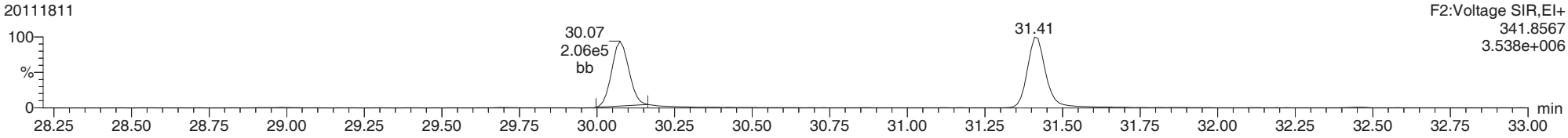

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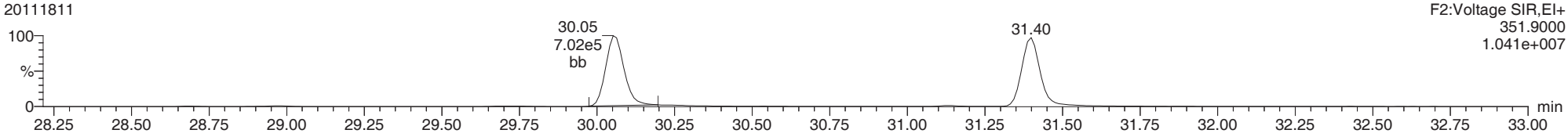

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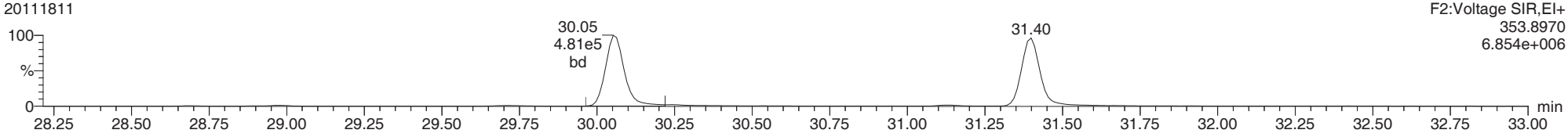
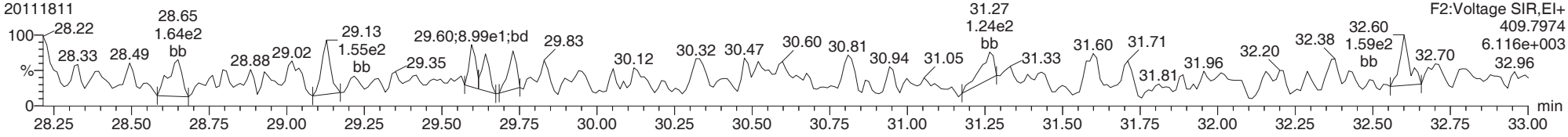


FUNCTION2 HPCDPE



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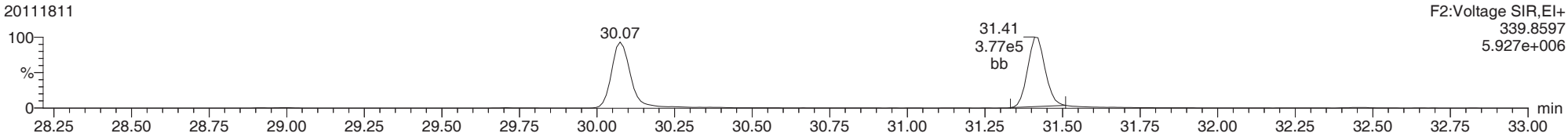
23478-PeCDF



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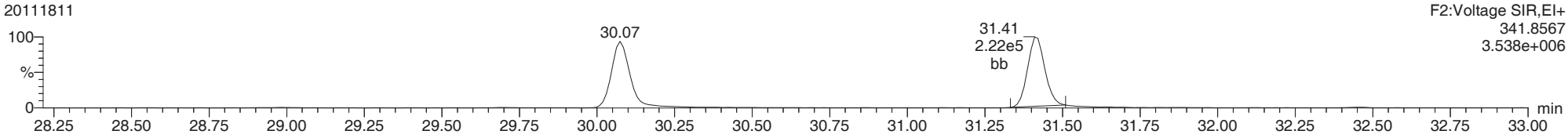

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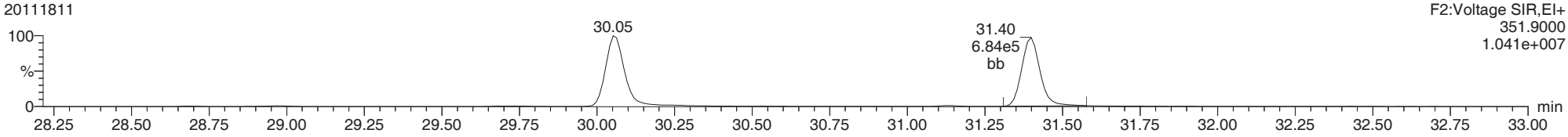

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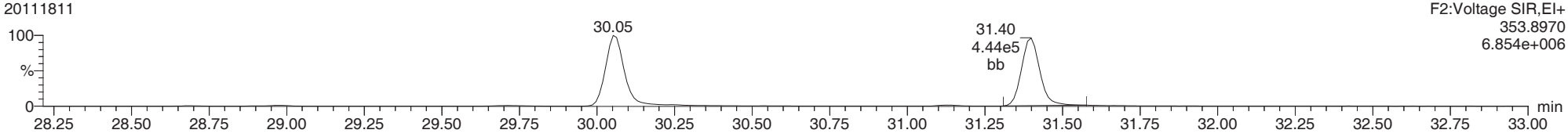

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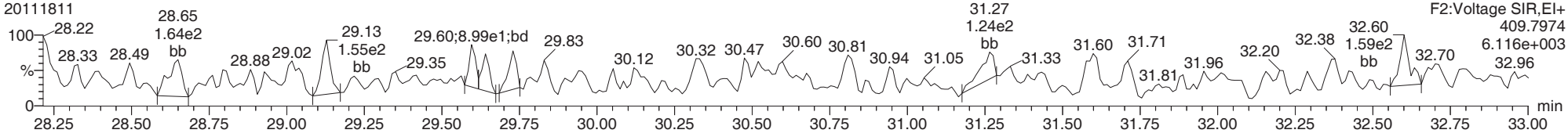

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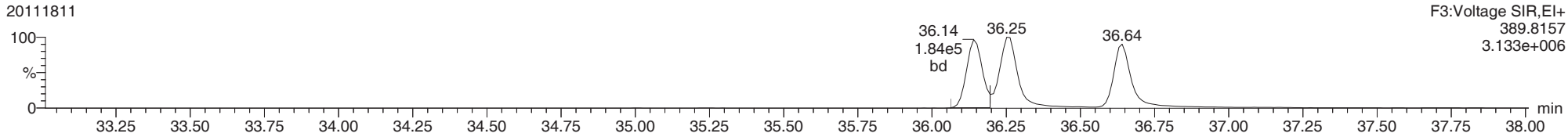
123478-HxCDD



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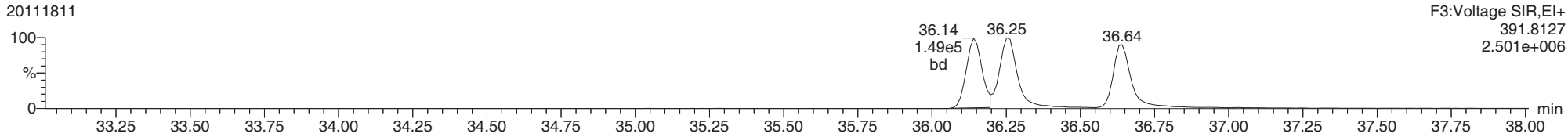

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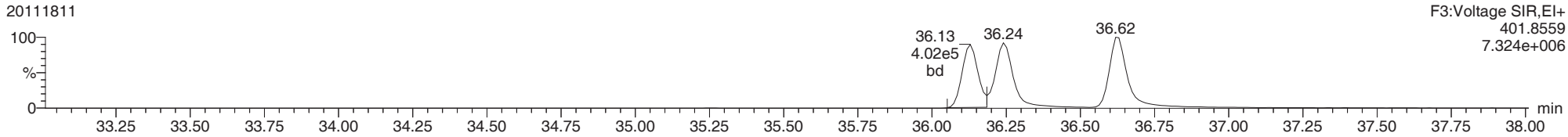

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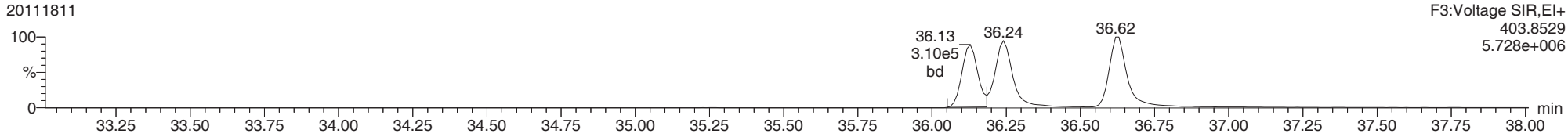

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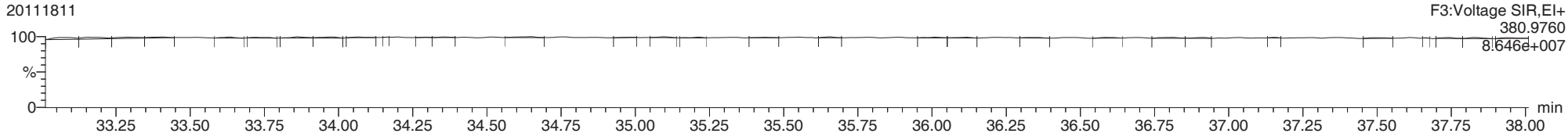

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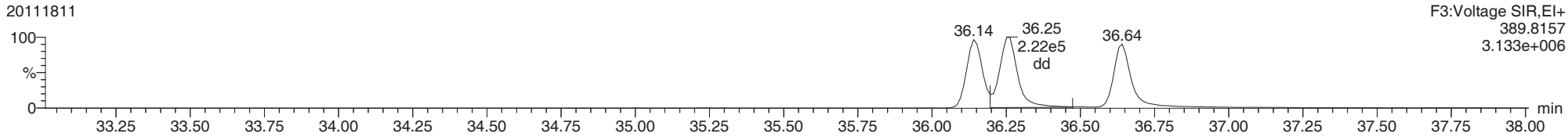

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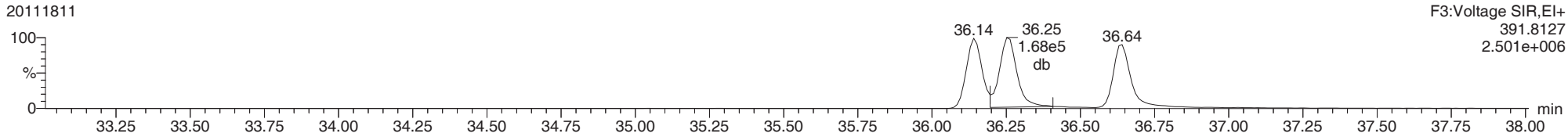

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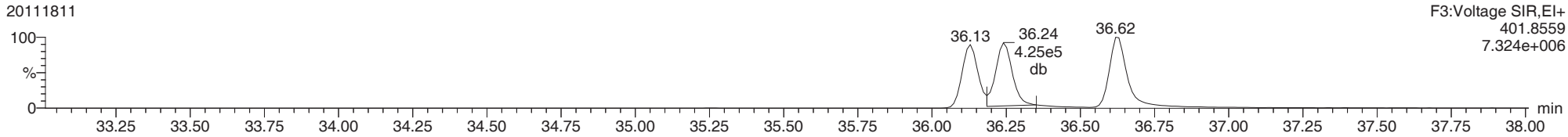

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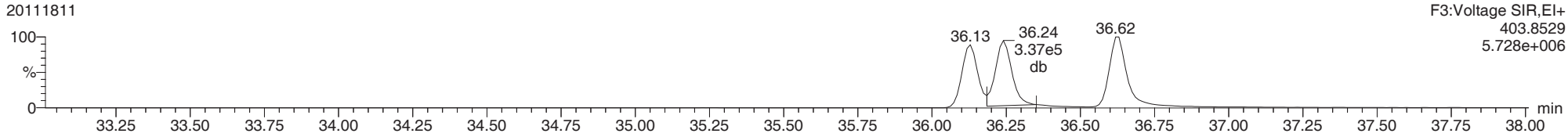

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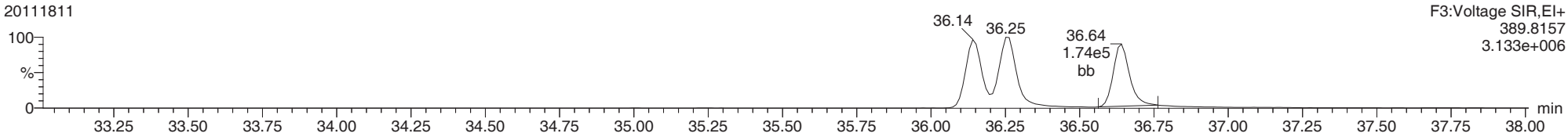

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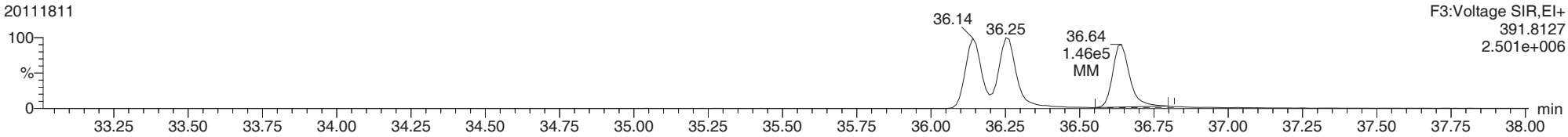

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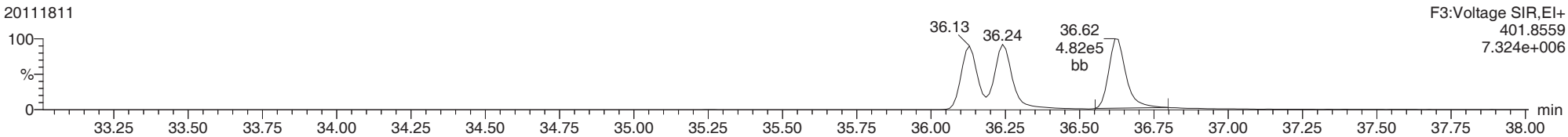

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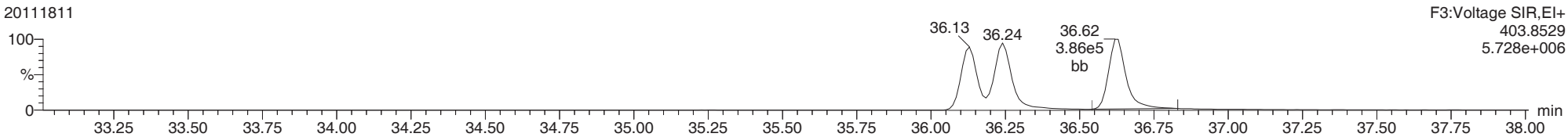

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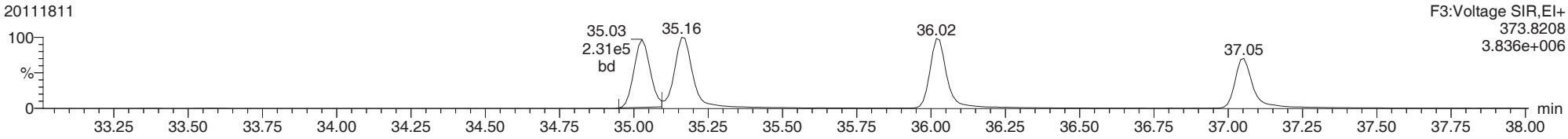

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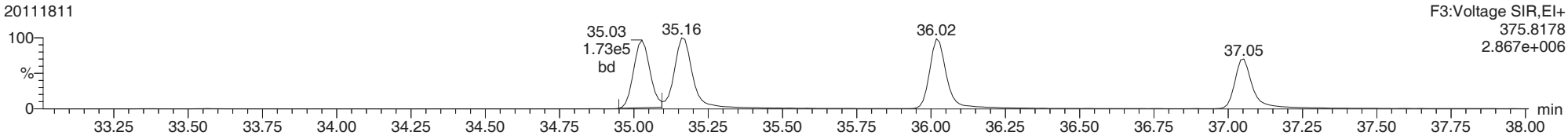

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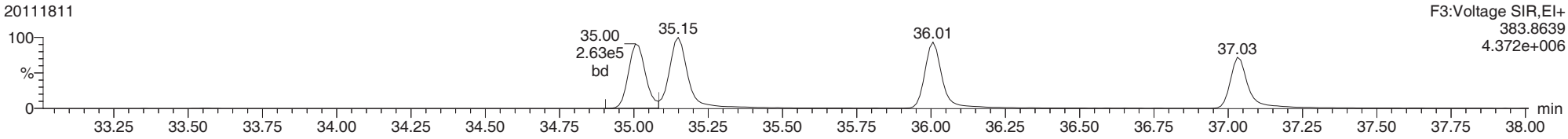

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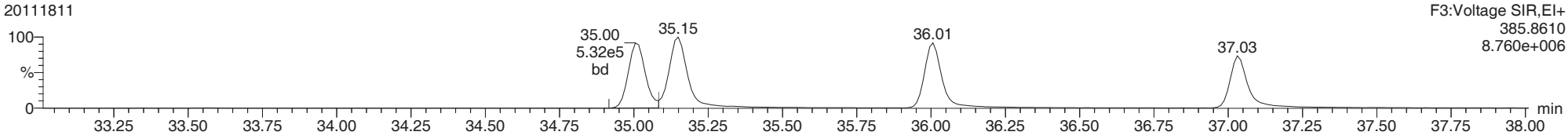
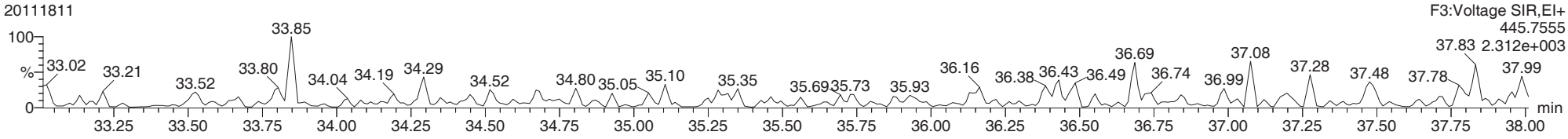


FUNCTION3 OCDPE



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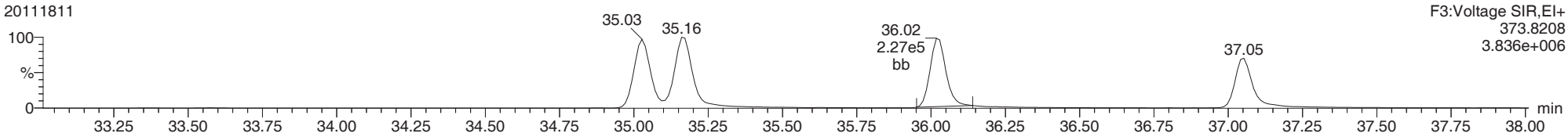
234678-HxCDF



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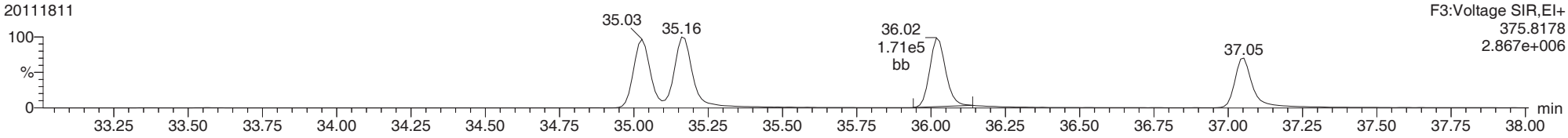

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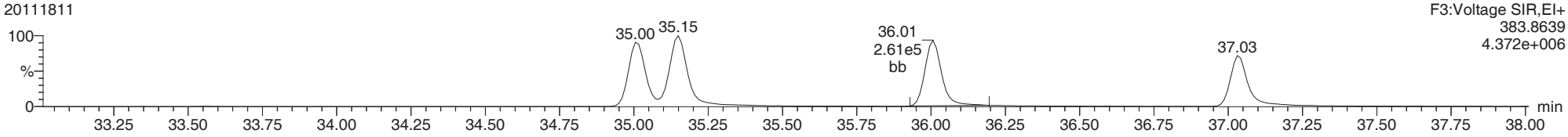

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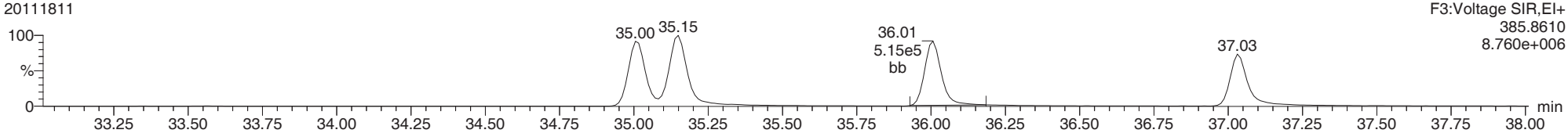

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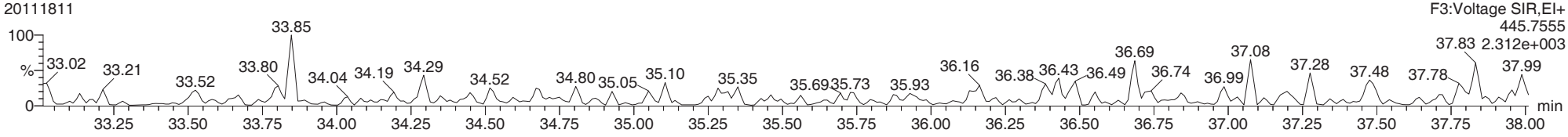

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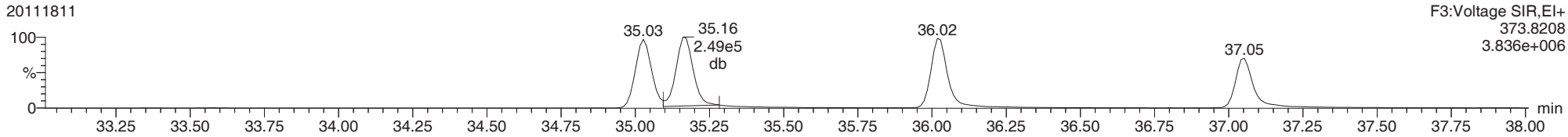

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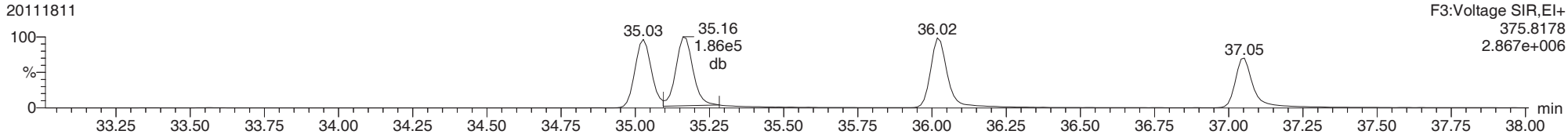

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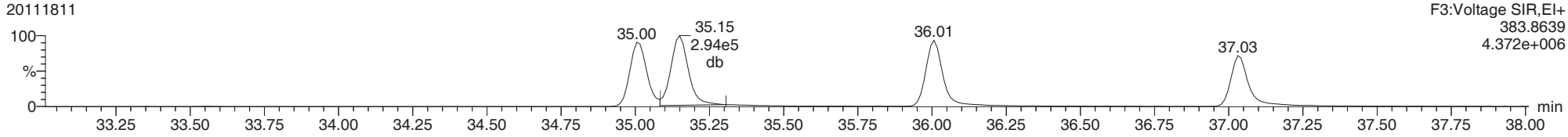

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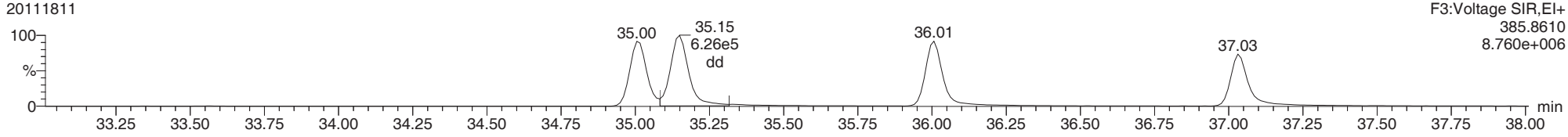
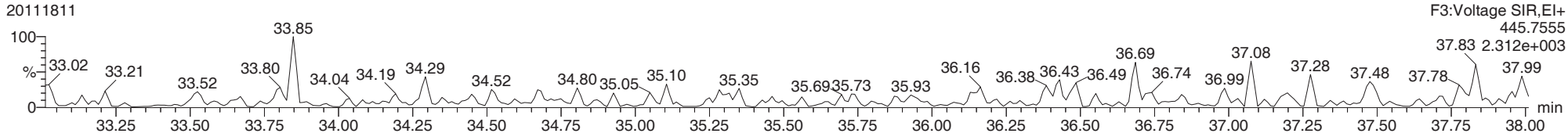


FUNCTION3 OCDPE



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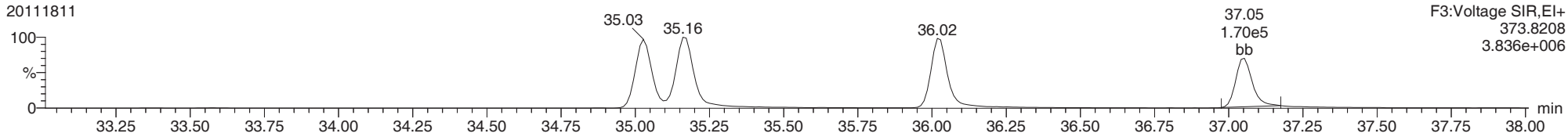

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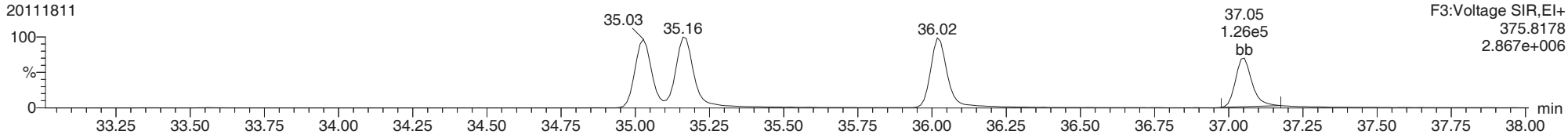

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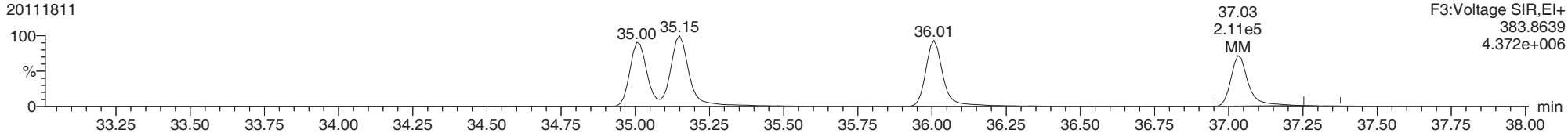

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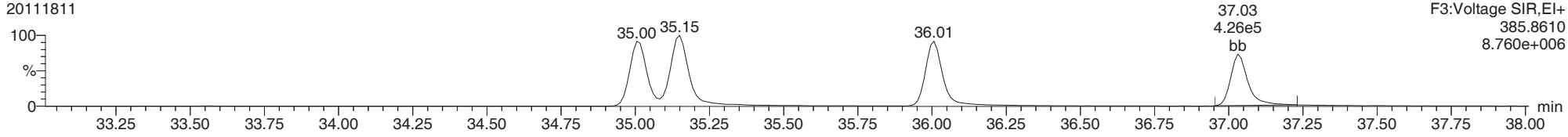

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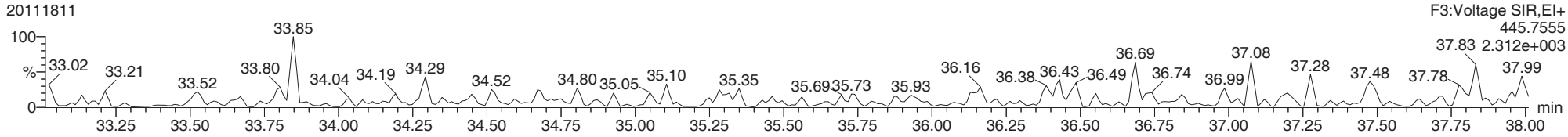

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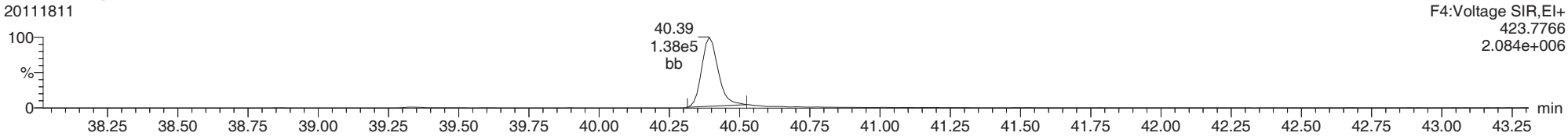

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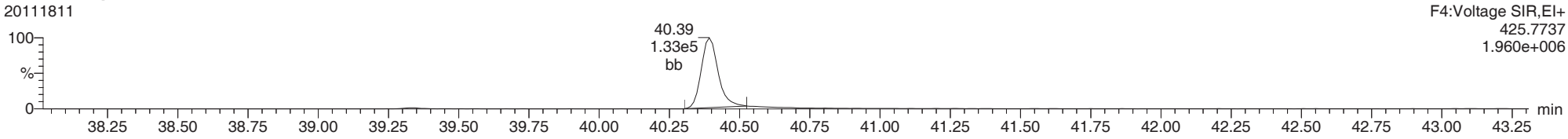

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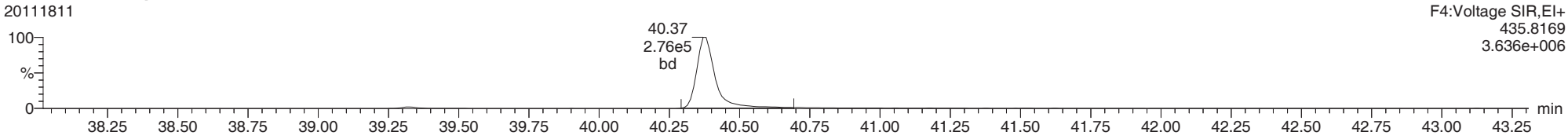

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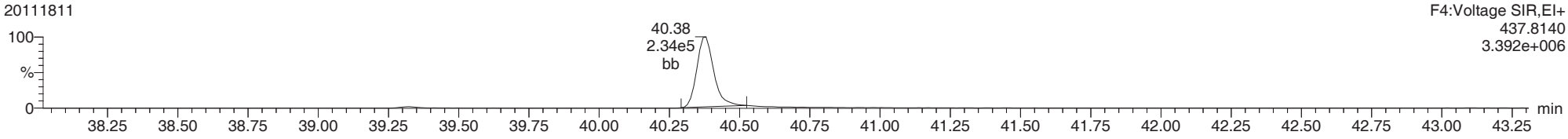
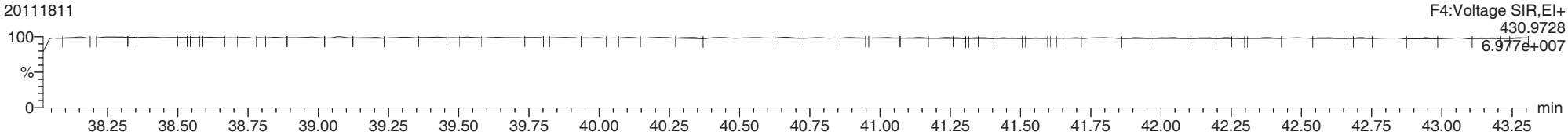


FUNCTION4 PFK



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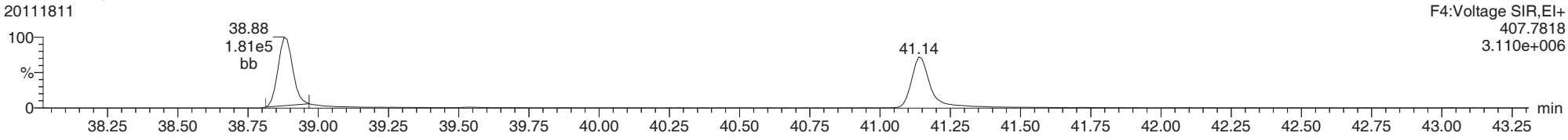
1234678-HpCDF



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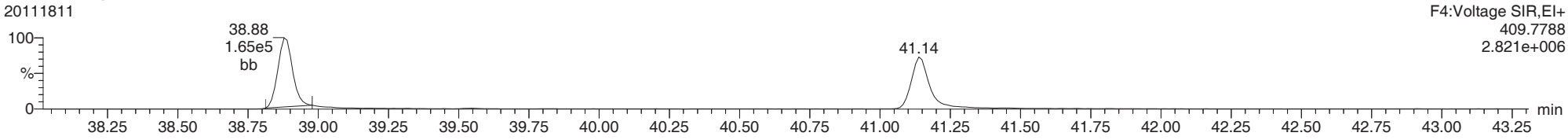

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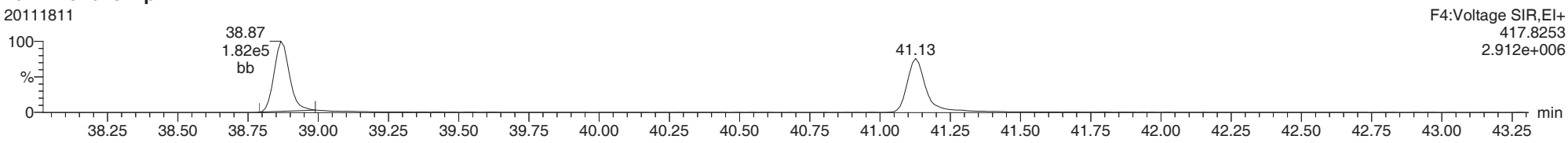

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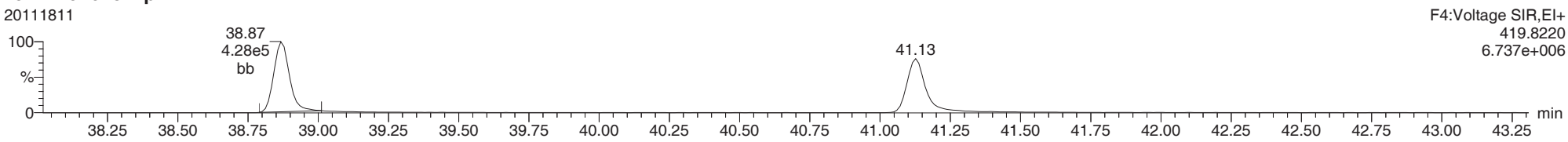
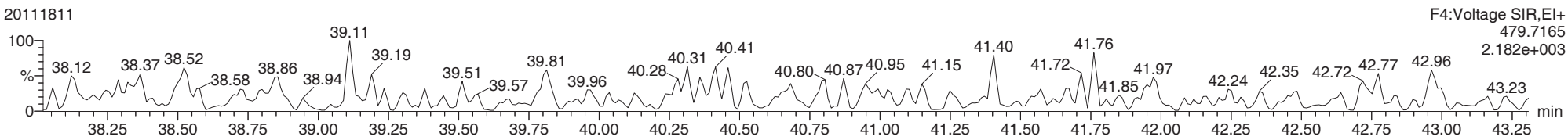


FUNCTION4 NCDPE



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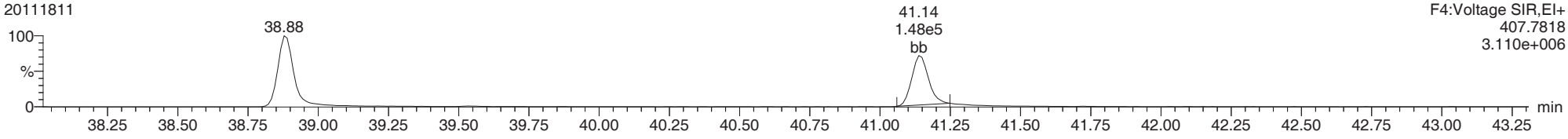
1234789-HpCDF



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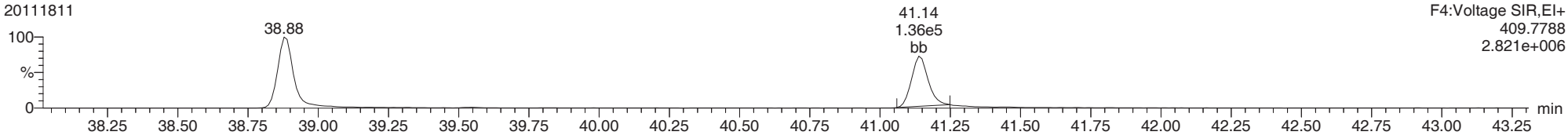

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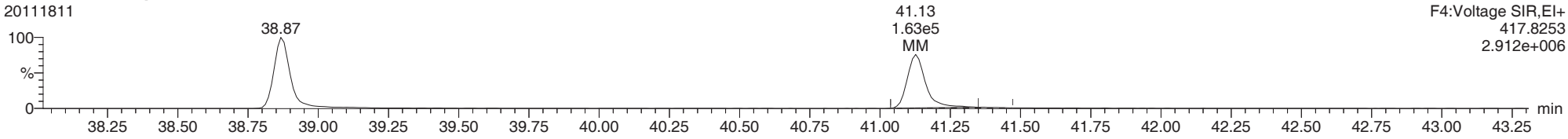

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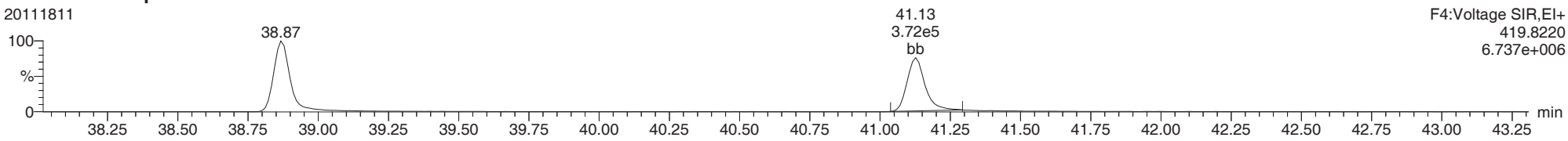

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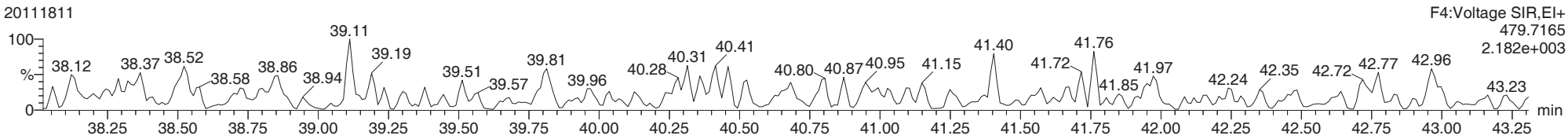

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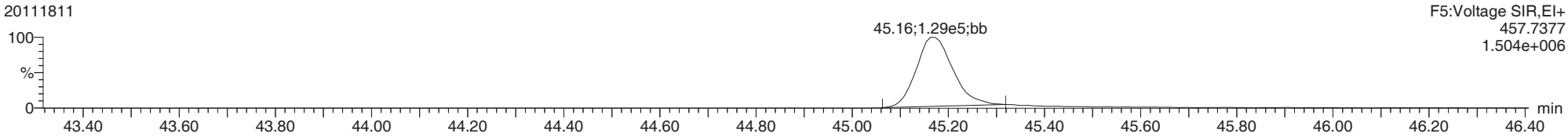
OCDD



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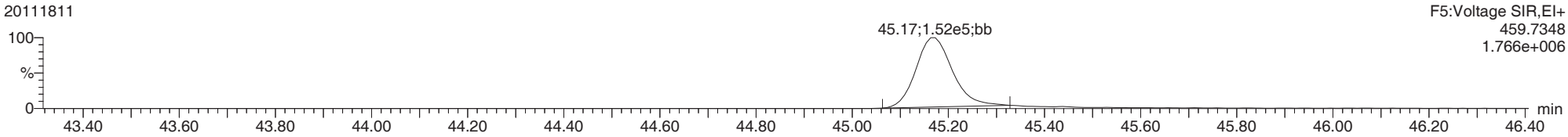

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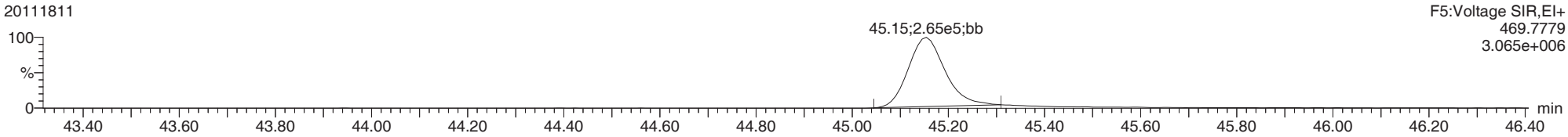

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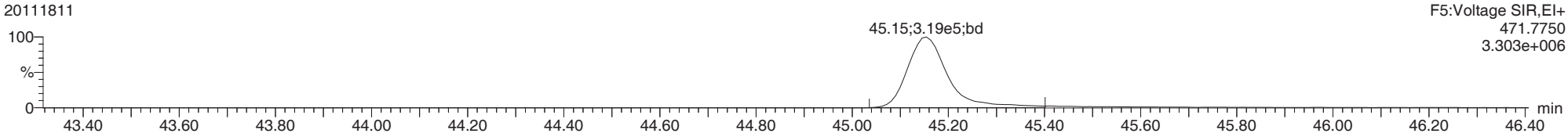
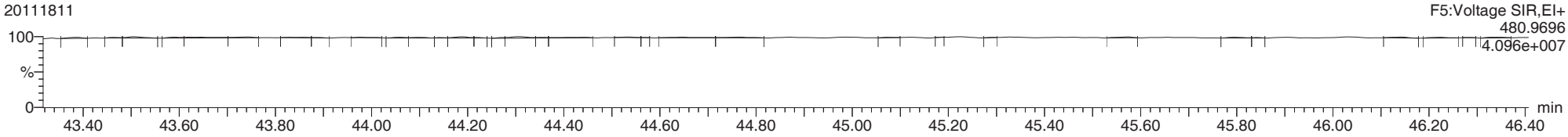


FUNCTION5 PFK



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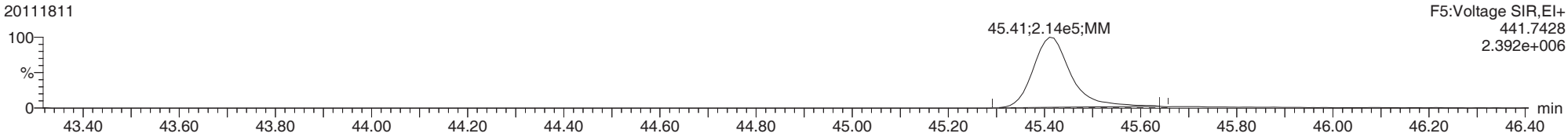
OCDF



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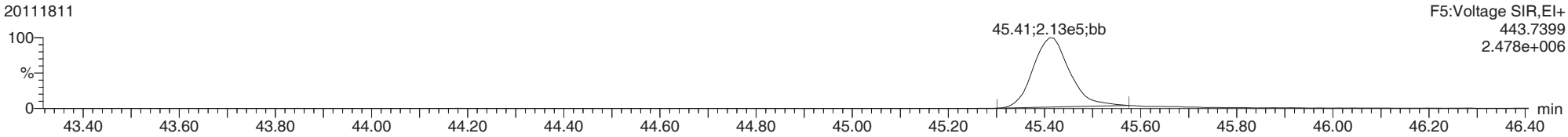
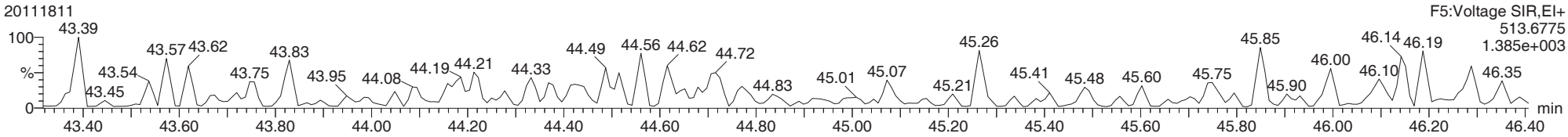


FUNCTION5 DCDPE



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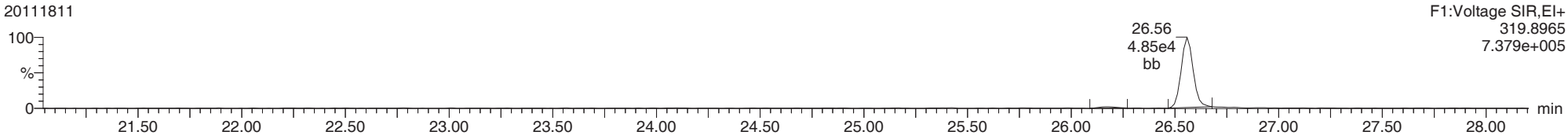
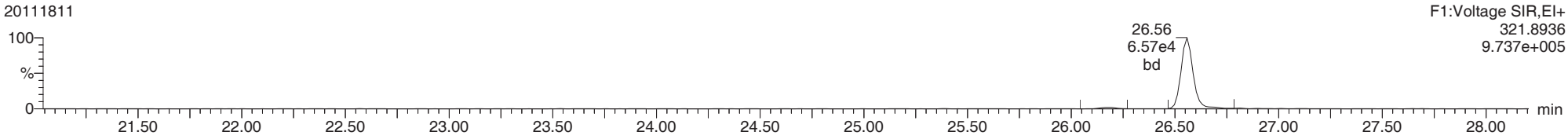
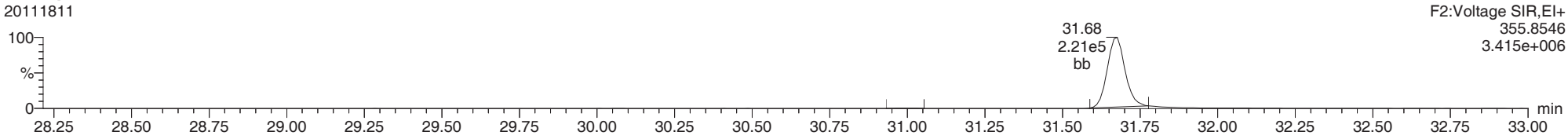
Total-tetradioxins



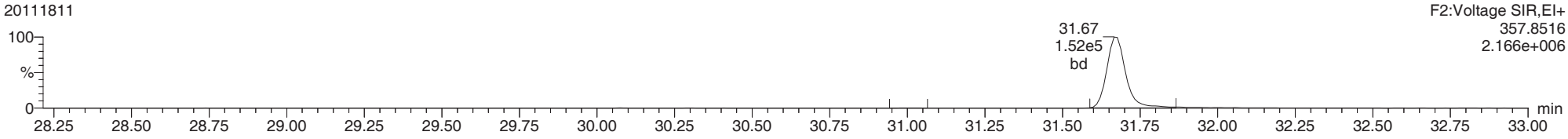
Total-tetradioxins



Total-pentadioxins

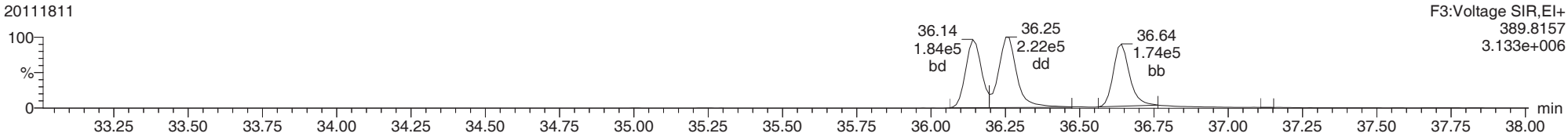


Total-pentadioxins

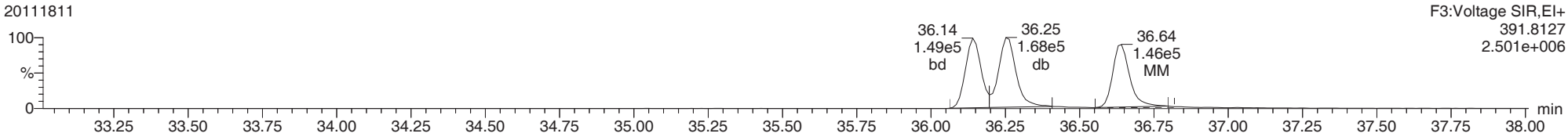


ID: DLCS11, Name: 20111811, Date: 18-Nov-2020, Time: 19:07:19, Conditions: AUTOSPEC01, User: pk

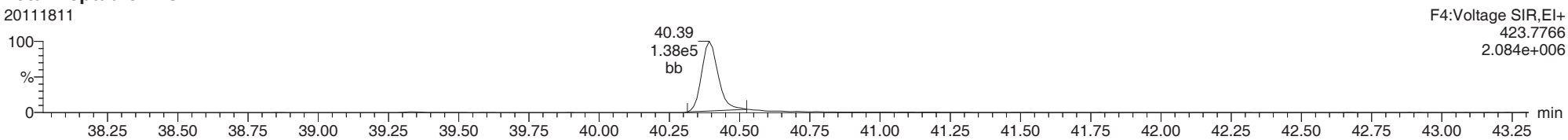
Total-hexadioxins



Total-hexadioxins



Total-heptadioxins



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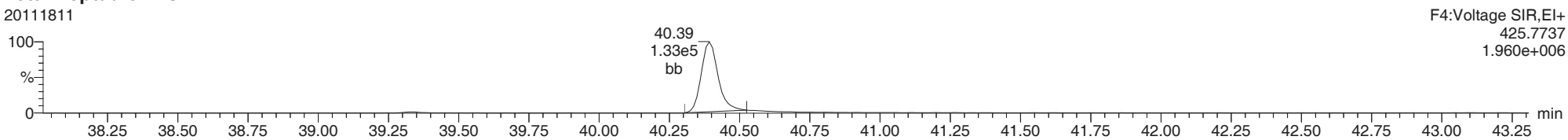

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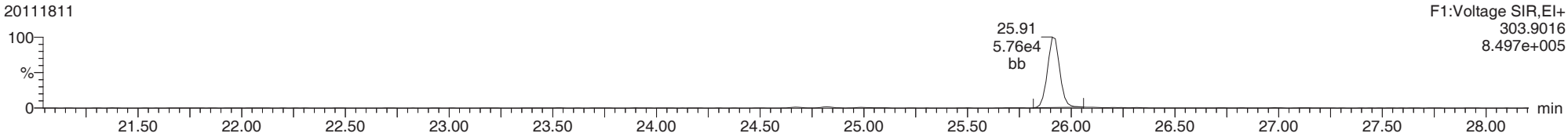
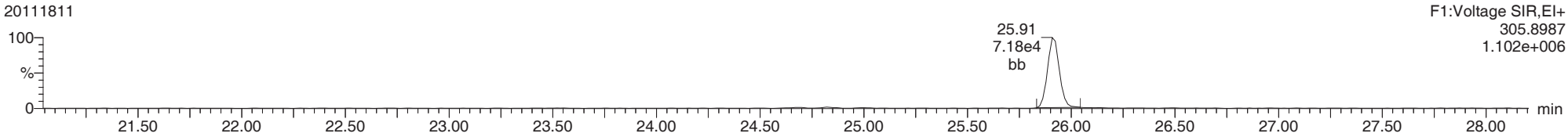
Printed: Thursday, November 19, 2020 10:24:41 Pacific Standard Time

ID: DLCS11, Name: 20111811, Date: 18-Nov-2020, Time: 19:07:19, Conditions: AUTOSPEC01, User: pk

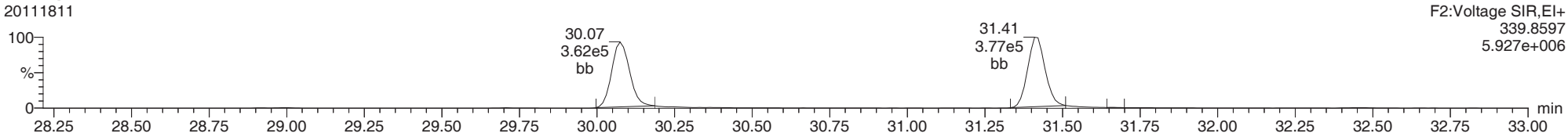
Total-tetrafurans



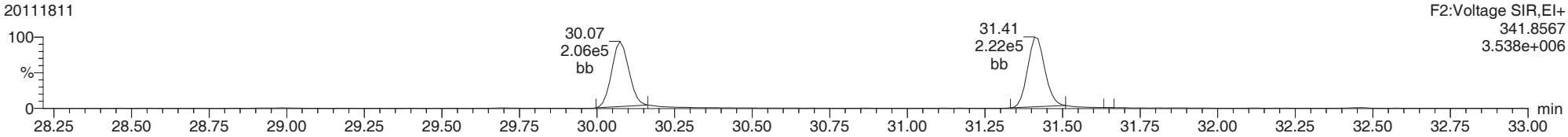
Total-tetrafurans



Total-pentafurans



Total-pentafurans



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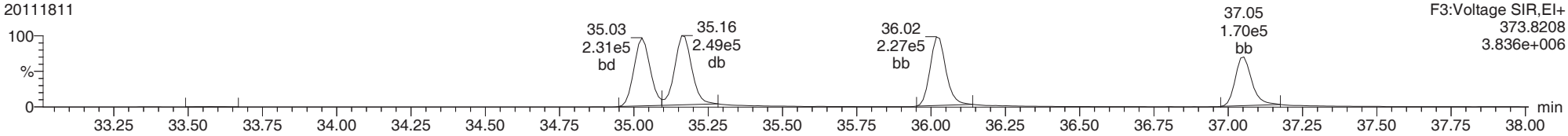
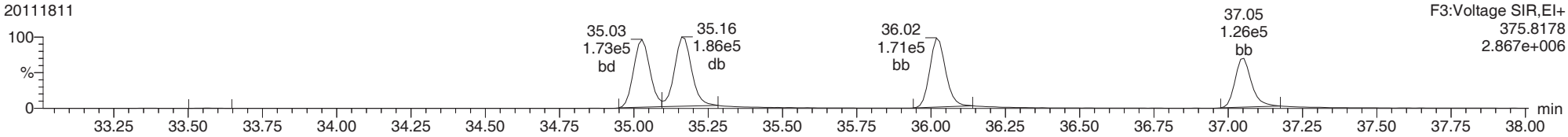
ID: DLCS11, Name: 20111811, Date: 18-Nov-2020, Time: 19:07:19, Conditions: AUTOSPEC01, User: pk

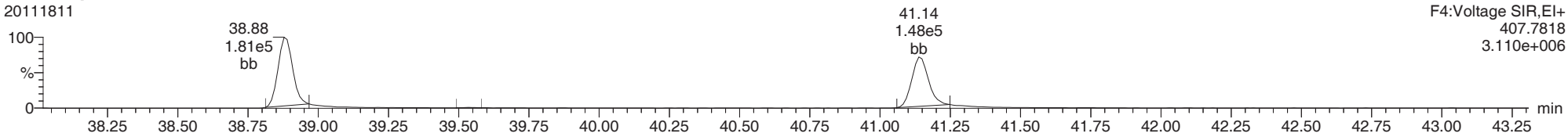
Total-hexafurans



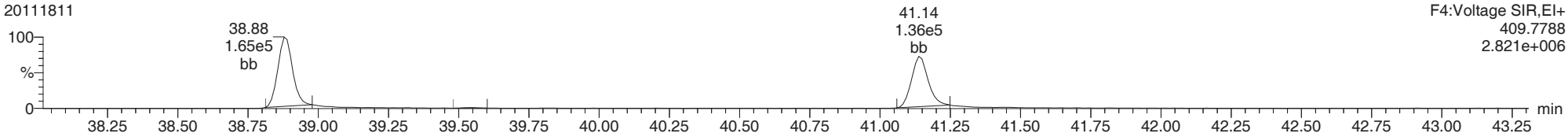
Total-hexafurans



Total-heptafurans



Total-heptafurans



LCS RECOVERY
EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Matrix:	Water	Analyzed:	11/23/20 13:00
Batch:	BIK0510	Laboratory ID:	BIK0510-BS1
Preparation:	EPA 1613	Sequence Name:	DLCS19
Initial/Final:	1000 mL / 20 uL		

COMPOUND	SPIKE ADDED (pg/L)	LCS CONCENTRATION (pg/L)	Q	LCS % REC. #	QC LIMITS REC.
2,3,7,8-TCDF	200	228		114	75 - 158
2,3,7,8-TCDD	200	205		103	67 - 158
1,2,3,7,8-PeCDF	1000	1220		122	80 - 134
2,3,4,7,8-PeCDF	1000	1270		127	68 - 160
1,2,3,7,8-PeCDD	1000	1130		113	70 - 142
1,2,3,4,7,8-HxCDF	1000	1190		119	72 - 134
1,2,3,6,7,8-HxCDF	1000	1120		112	84 - 130
2,3,4,6,7,8-HxCDF	1000	1160		116	70 - 156
1,2,3,7,8,9-HxCDF	1000	1150		115	78 - 130
1,2,3,4,7,8-HxCDD	1000	1130		113	70 - 164
1,2,3,6,7,8-HxCDD	1000	1140		114	76 - 134
1,2,3,7,8,9-HxCDD	1000	1080		108	64 - 162
1,2,3,4,6,7,8-HpCDF	1000	1180		118	82 - 122
1,2,3,4,7,8,9-HpCDF	1000	1160		116	78 - 138
1,2,3,4,6,7,8-HpCDD	1000	1170		117	70 - 140
OCDF	2000	2410		120	63 - 170
OCDD	2000	2140	B	107	78 - 144

* Indicates values outside of QC limits

LCS DUPLICATE RECOVERY/RPD

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Matrix:	Water	Analyzed:	11/23/20 13:49
Batch:	BIK0510	Laboratory ID:	BIK0510-BSD1
Preparation:	EPA 1613	Sequence Name:	DLCSD19
Initial/Final:	1000 mL / 20 uL		

COMPOUND	SPIKE ADDED (pg/L)	LCSD CONCENTRATION (pg/L)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
2,3,7,8-TCDF	200	224		112	1.51	25	75 - 158
2,3,7,8-TCDD	200	215		108	4.79	25	67 - 158
1,2,3,7,8-PeCDF	1000	1230		123	1.28	25	80 - 134
2,3,4,7,8-PeCDF	1000	1260		126	0.572	25	68 - 160
1,2,3,7,8-PeCDD	1000	1100		110	2.20	25	70 - 142
1,2,3,4,7,8-HxCDF	1000	1220		122	2.88	25	72 - 134
1,2,3,6,7,8-HxCDF	1000	1040		104	7.82	25	84 - 130
2,3,4,6,7,8-HxCDF	1000	1220		122	5.26	25	70 - 156
1,2,3,7,8,9-HxCDF	1000	1190		119	3.21	25	78 - 130
1,2,3,4,7,8-HxCDD	1000	1110		111	1.78	25	70 - 164
1,2,3,6,7,8-HxCDD	1000	1130		113	0.476	25	76 - 134
1,2,3,7,8,9-HxCDD	1000	1140		114	4.86	25	64 - 162
1,2,3,4,6,7,8-HpCDF	1000	1200		120	1.98	25	82 - 122
1,2,3,4,7,8,9-HpCDF	1000	1150		115	0.684	25	78 - 138
1,2,3,4,6,7,8-HpCDD	1000	1100		110	6.59	25	70 - 140
OCDF	2000	2650		133	9.57	25	63 - 170
OCDD	2000	2250	B	113	5.42	25	78 - 144

* Indicates values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:00:34 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: BIK0510-BS1, Name: 20112305, Date: 23-Nov-2020, Time: 13:00:40, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.878	1.001	5.529e4	6.649e4	0.729	0.832	0.770	1112	2634	8.29e5	9.87e5	745.1	374.6	NO	bb	bb	11.394
12378-PeCDF	30.041	1.001	3.285e5	1.904e5	0.779	1.725	1.550	4486	4014	4.68e6	2.72e6	1043.6	677.4	NO	bb	bb	60.859
23478-PeCDF	31.377	1.001	3.459e5	2.069e5	0.880	1.672	1.550	4486	4014	5.16e6	3.09e6	1150.6	769.3	NO	bb	bb	63.590
123478-HxCDF	34.994	1.001	1.968e5	1.462e5	0.880	1.346	1.240	2972	2992	2.98e6	2.23e6	1001.9	744.9	NO	bd	bd	59.264
234678-HxCDF	35.985	1.000	1.920e5	1.490e5	0.863	1.289	1.240	2972	2992	2.99e6	2.29e6	1005.5	763.9	NO	bb	bb	57.839
123678-HxCDF	35.127	1.001	2.280e5	1.673e5	0.853	1.363	1.240	2972	2992	3.35e6	2.49e6	1128.0	831.8	NO	db	db	56.203
123789-HxCDF	37.020	1.001	1.531e5	1.100e5	0.780	1.391	1.240	2972	2992	2.23e6	1.66e6	749.5	553.6	NO	bb	bb	57.385
1234678-HpCDF	38.845	1.000	1.734e5	1.555e5	1.001	1.115	1.050	3493	3101	2.65e6	2.37e6	759.0	765.6	NO	bb	bb	59.050
1234789-HpCDF	41.104	1.000	1.313e5	1.238e5	0.994	1.061	1.050	3493	3101	1.75e6	1.63e6	501.2	525.8	NO	bb	MM	58.063
OCDF	45.365	1.006	2.147e5	2.182e5	1.158	0.984	0.890	4138	3074	2.26e6	2.33e6	547.1	758.1	NO	MM	bb	120.405
2378-TCDD	26.528	1.001	4.394e4	5.790e4	1.238	0.759	0.770	1178	744	6.37e5	7.96e5	541.0	1070.4	NO	bb	MM	10.268
12378-PeCDD	31.632	1.001	2.061e5	1.416e5	0.988	1.456	1.550	1392	1175	2.89e6	1.90e6	2078.7	1617.5	NO	bb	bd	56.455
123478-HxCDD	36.107	1.000	1.538e5	1.274e5	0.842	1.207	1.240	1076	1801	2.44e6	1.99e6	2271.0	1107.4	NO	bd	bd	56.731
123678-HxCDD	36.218	1.000	1.923e5	1.703e5	0.907	1.129	1.240	1076	1801	2.67e6	2.24e6	2484.7	1242.8	NO	db	db	56.905
123789-HxCDD	36.608	1.011	1.486e5	1.252e5	0.784	1.186	1.240	1076	1801	2.04e6	1.72e6	1897.5	956.7	NO	bb	bb	54.120
1234678-HpCDD	40.359	1.001	1.264e5	1.176e5	1.044	1.074	1.050	2626	1984	1.63e6	1.55e6	618.9	781.6	NO	MM	bb	58.627
OCDD	45.118	1.000	1.393e5	1.801e5	0.963	0.774	0.890	2917	1270	1.50e6	1.79e6	514.3	1406.7	NO	bb	bd	106.800
13C-2378-TCDF	25.863	1.007	6.417e5	8.250e5	2.203	0.778	0.770	4071	1883	9.34e6	1.20e7	2293.2	6365.4	NO	bb	bb	78.452
13C-12378-PeCDF	30.019	1.169	6.712e5	4.229e5	1.741	1.587	1.550	3541	5748	8.62e6	5.67e6	2433.6	986.0	NO	bd	bd	74.041
13C-23478-PeCDF	31.354	1.221	5.975e5	3.898e5	1.669	1.533	1.550	3541	5748	8.37e6	5.46e6	2363.5	950.3	NO	bb	bb	69.685
13C-123478-HxCDF	34.972	0.956	2.200e5	4.375e5	1.022	0.503	0.510	3022	2008	3.21e6	6.52e6	1063.1	3248.0	NO	bd	bd	88.581
13C-123678-HxCDF	35.105	0.960	2.665e5	5.575e5	1.200	0.478	0.510	3022	2008	3.57e6	7.27e6	1182.4	3618.9	NO	db	db	94.572
13C-234678-HxCDF	35.973	0.983	2.319e5	4.514e5	1.071	0.514	0.510	3022	2008	3.12e6	6.21e6	1031.0	3092.1	NO	bb	bb	87.857
13C-123789-HxCDF	36.997	1.011	1.893e5	3.984e5	0.919	0.475	0.510	3022	2008	2.51e6	5.18e6	829.2	2577.0	NO	bb	MM	88.118
13C-1234678-HpCDF	38.834	1.061	1.784e5	3.780e5	0.909	0.472	0.440	2950	3202	2.43e6	5.66e6	824.1	1767.6	NO	bd	bb	84.355
13C-1234789-HpCDF	41.093	1.123	1.421e5	3.000e5	0.724	0.474	0.440	2950	3202	1.65e6	3.84e6	557.9	1200.4	NO	bd	bb	84.149
13C-1234-TCDD	25.682	0.000	3.803e5	4.684e5	1.000	0.812	0.770	2615	1506	5.76e6	7.17e6	2201.6	4762.0	NO	bb	bb	100.000
13C-2378-TCDD	26.497	1.032	3.620e5	4.390e5	1.181	0.825	0.770	2615	1506	5.08e6	6.20e6	1943.5	4119.6	NO	bb	bb	79.880
13C-12378-PeCDD	31.610	1.231	3.745e5	2.490e5	0.978	1.504	1.550	1945	1719	5.20e6	3.22e6	2673.7	1875.1	NO	bb	bd	75.128
13C-123478-HxCDD	36.096	0.987	3.305e5	2.583e5	0.965	1.280	1.240	3684	3037	4.97e6	3.90e6	1349.9	1284.3	NO	bd	bd	84.030
13C-123678-HxCDD	36.207	0.990	3.954e5	3.071e5	1.168	1.288	1.240	3684	3037	5.50e6	4.28e6	1492.5	1410.1	NO	db	db	82.841
13C-1234678-HpCDD	40.336	1.102	2.059e5	1.929e5	0.645	1.067	1.050	2706	2294	2.74e6	2.59e6	1013.3	1128.7	NO	bb	bb	85.118
13C-OCDD	45.100	1.233	2.955e5	3.255e5	0.678	0.908	0.890	2843	2731	2.95e6	3.23e6	1037.1	1182.2	NO	bd	bd	126.111
13C-123789-HxCDD	36.585	0.000	4.179e5	3.081e5	1.000	1.357	1.240	3684	3037	5.32e6	4.15e6	1444.7	1366.5	NO	bd	bb	100.000
37CL-2378-TCDD	26.513	1.032	4.020e5		1.264			2713		5.59e6		2059.6			bb		37.456

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:00:34 Pacific Standard Time

ID: BIK0510-BS1, Name: 20112305, Date: 23-Nov-2020, Time: 13:00:40, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	1112	2634								
1289-TCDF					0.688		0.770	1112	2634								
13468-PECDF					1.181		1.550	467	1304								
12389-PECDF	32.412	1.080	2.230e3	1.953e3	0.766	1.142	1.550	4486	4014	3.17e4	2.32e4	7.1	5.8	YES	bb	bb	0.499
123468-HXCDF					1.003		1.240	2972	2992								
1368-TCDD					1.179		0.770	1178	744								
1289-TCDD					1.042		0.770	1178	744								
12479-PECDD					1.810		1.550	1392	1175								
12389-PECDD	32.044	1.014	1.131e2	6.541e2	1.165	0.173	1.550	1392	1175	5.07e3	1.25e4	3.6	10.6	YES	bb	db	0.106
124679-HXCDD					1.056		1.240	1076	1801								
1234679-HPCDD	39.301	0.974	1.686e3	1.874e3	1.285	0.900	1.050	2626	1984	2.39e4	2.41e4	9.1	12.1	NO	bb	bb	0.694
Total-tetrafurans			5.529e4		0.754			1112		8.29e5							11.394
Total-penta1			0.000e0					467		0.00e0							
Total-pentafurans			6.744e5		0.809			4486		9.84e6							124.449
Total-hexafurans			7.698e5		0.876			2972		1.15e7							230.691
Total-heptafurans			3.047e5		0.997			3493		4.40e6							117.113
Total-Furans			2.019e6		0.893			1112		2.89e7							604.052
Total-tetradioxins			4.394e4		1.153			1178		6.37e5							10.268
Total-pentadioxins			2.062e5		1.321			1392		2.90e6							56.489
Total-hexadioxins			4.947e5		0.897			1076		7.16e6							167.755
Total-heptadioxins			1.281e5		1.165			2626		1.65e6							59.321
Total-Dioxins			1.012e6		1.100			1178		1.38e7							400.634
Total-TEQ			3.031e6					1178		4.27e7							1004.686
FUNCTION1 PFK			2.418e7					602817		2.23e8							
FUNCTION2 PFK			8.501e5					355622		1.77e7							0.000
FUNCTION3 PFK			9.747e5					494880		2.14e7							0.000
FUNCTION4 PFK			1.393e6					372698		2.80e7							
FUNCTION5 PFK			2.983e5					191076		8.35e6							
FUNCTION1 HXCD...			0.000e0					386		0.00e0							
FUNCTION1 HPCD...			1.950e3					1534		3.46e4							0.000
FUNCTION2 HPCD...			8.803e2					1235		2.09e4							0.000
FUNCTION3 OCDPE			0.000e0					325		0.00e0							
FUNCTION4 NCDPE			1.843e2					450		6.56e3							0.000
FUNCTION5 DCDPE			0.000e0					252		0.00e0							

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: BIK0510-BS1, Name: 20112305, Date: 23-Nov-2020, Time: 13:00:40, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.88	5.529e4	6.649e4	0.729	0.83	0.77	745.1	YES	NO	bb	bb	11.394

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.38	3.459e5	2.069e5	0.880	1.67	1.55	1150.6	YES	NO	bb	bb	63.590
2	12378-PeCDF	30.04	3.285e5	1.904e5	0.779	1.72	1.55	1043.6	YES	NO	bb	bb	60.859

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.02	1.531e5	1.100e5	0.780	1.39	1.24	749.5	YES	NO	bb	bb	57.385
2	234678-HxCDF	35.98	1.920e5	1.490e5	0.863	1.29	1.24	1005.5	YES	NO	bb	bb	57.839
3	123678-HxCDF	35.13	2.280e5	1.673e5	0.853	1.36	1.24	1128.0	YES	NO	db	db	56.203
4	123478-HxCDF	34.99	1.968e5	1.462e5	0.880	1.35	1.24	1001.9	YES	NO	bd	bd	59.264

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.10	1.313e5	1.238e5	0.994	1.06	1.05	501.2	YES	NO	bb	MM	58.063
2	1234678-HpCDF	38.84	1.734e5	1.555e5	1.001	1.12	1.05	759.0	YES	NO	bb	bb	59.050

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.88	5.529e4	6.649e4	0.729	0.83	0.77	745.1	YES	NO	bb	bb	11.394
2	23478-PeCDF	31.38	3.459e5	2.069e5	0.880	1.67	1.55	1150.6	YES	NO	bb	bb	63.590
3	12378-PeCDF	30.04	3.285e5	1.904e5	0.779	1.72	1.55	1043.6	YES	NO	bb	bb	60.859
4	123789-HxCDF	37.02	1.531e5	1.100e5	0.780	1.39	1.24	749.5	YES	NO	bb	bb	57.385
5	234678-HxCDF	35.98	1.920e5	1.490e5	0.863	1.29	1.24	1005.5	YES	NO	bb	bb	57.839
6	123678-HxCDF	35.13	2.280e5	1.673e5	0.853	1.36	1.24	1128.0	YES	NO	db	db	56.203
7	123478-HxCDF	34.99	1.968e5	1.462e5	0.880	1.35	1.24	1001.9	YES	NO	bd	bd	59.264
8	1234789-HpCDF	41.10	1.313e5	1.238e5	0.994	1.06	1.05	501.2	YES	NO	bb	MM	58.063
9	1234678-HpCDF	38.84	1.734e5	1.555e5	1.001	1.12	1.05	759.0	YES	NO	bb	bb	59.050
10	OCDF	45.37	2.147e5	2.182e5	1.158	0.98	0.89	547.1	YES	NO	MM	bb	120.405

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.53	4.394e4	5.790e4	1.238	0.76	0.77	541.0	YES	NO	bb	MM	10.268

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentadioxins	32.26	1.723e2	1.110e2	1.321	1.55	1.55	4.3	YES	NO	dd	bb	0.034
2	12378-PeCDD	31.63	2.061e5	1.416e5	0.988	1.46	1.55	2078.7	YES	NO	bb	bd	56.455

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.61	1.486e5	1.252e5	0.784	1.19	1.24	1897.5	YES	NO	bb	bb	54.120
2	123678-HxCDD	36.22	1.923e5	1.703e5	0.907	1.13	1.24	2484.7	YES	NO	db	db	56.905
3	123478-HxCDD	36.11	1.538e5	1.274e5	0.842	1.21	1.24	2271.0	YES	NO	bd	bd	56.731

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.36	1.264e5	1.176e5	1.044	1.07	1.05	618.9	YES	NO	MM	bb	58.627
2	1234679-HPCDD	39.30	1.686e3	1.874e3	1.285	0.90	1.05	9.1	YES	NO	bb	bb	0.694

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.53	4.394e4	5.790e4	1.238	0.76	0.77	541.0	YES	NO	bb	MM	10.268
2	Total-pentadioxins	32.26	1.723e2	1.110e2	1.321	1.55	1.55	4.3	YES	NO	dd	bb	0.034
3	12378-PeCDD	31.63	2.061e5	1.416e5	0.988	1.46	1.55	2078.7	YES	NO	bb	bd	56.455
4	123789-HxCDD	36.61	1.486e5	1.252e5	0.784	1.19	1.24	1897.5	YES	NO	bb	bb	54.120
5	123678-HxCDD	36.22	1.923e5	1.703e5	0.907	1.13	1.24	2484.7	YES	NO	db	db	56.905
6	123478-HxCDD	36.11	1.538e5	1.274e5	0.842	1.21	1.24	2271.0	YES	NO	bd	bd	56.731
7	1234678-HpCDD	40.36	1.264e5	1.176e5	1.044	1.07	1.05	618.9	YES	NO	MM	bb	58.627
8	1234679-HPCDD	39.30	1.686e3	1.874e3	1.285	0.90	1.05	9.1	YES	NO	bb	bb	0.694
9	OCDD	45.12	1.393e5	1.801e5	0.963	0.77	0.89	514.3	YES	NO	bb	bd	106.800

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.88	5.529e4	6.649e4	0.729	0.83	0.77	745.1	YES	NO	bb	bb	11.394
2	23478-PeCDF	31.38	3.459e5	2.069e5	0.880	1.67	1.55	1150.6	YES	NO	bb	bb	63.590
3	12378-PeCDF	30.04	3.285e5	1.904e5	0.779	1.72	1.55	1043.6	YES	NO	bb	bb	60.859
4	123789-HxCDF	37.02	1.531e5	1.100e5	0.780	1.39	1.24	749.5	YES	NO	bb	bb	57.385
5	234678-HxCDF	35.98	1.920e5	1.490e5	0.863	1.29	1.24	1005.5	YES	NO	bb	bb	57.839
6	123678-HxCDF	35.13	2.280e5	1.673e5	0.853	1.36	1.24	1128.0	YES	NO	db	db	56.203
7	123478-HxCDF	34.99	1.968e5	1.462e5	0.880	1.35	1.24	1001.9	YES	NO	bd	bd	59.264
8	1234789-HpCDF	41.10	1.313e5	1.238e5	0.994	1.06	1.05	501.2	YES	NO	bb	MM	58.063
9	1234678-HpCDF	38.84	1.734e5	1.555e5	1.001	1.12	1.05	759.0	YES	NO	bb	bb	59.050
10	OCDF	45.37	2.147e5	2.182e5	1.158	0.98	0.89	547.1	YES	NO	MM	bb	120.405
11	2378-TCDD	26.53	4.394e4	5.790e4	1.238	0.76	0.77	541.0	YES	NO	bb	MM	10.268
12	Total-pentadioxins	32.26	1.723e2	1.110e2	1.321	1.55	1.55	4.3	YES	NO	dd	bb	0.034
13	12378-PeCDD	31.63	2.061e5	1.416e5	0.988	1.46	1.55	2078.7	YES	NO	bb	bd	56.455
14	123789-HxCDD	36.61	1.486e5	1.252e5	0.784	1.19	1.24	1897.5	YES	NO	bb	bb	54.120
15	123678-HxCDD	36.22	1.923e5	1.703e5	0.907	1.13	1.24	2484.7	YES	NO	db	db	56.905
16	123478-HxCDD	36.11	1.538e5	1.274e5	0.842	1.21	1.24	2271.0	YES	NO	bd	bd	56.731
17	1234678-HpCDD	40.36	1.264e5	1.176e5	1.044	1.07	1.05	618.9	YES	NO	MM	bb	58.627
18	1234679-HPCDD	39.30	1.686e3	1.874e3	1.285	0.90	1.05	9.1	YES	NO	bb	bb	0.694
19	OCDD	45.12	1.393e5	1.801e5	0.963	0.77	0.89	514.3	YES	NO	bb	bd	106.800

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	22.99	6.400e5					10.6	YES		dd		
2	FUNCTION1 PFK	22.90	7.411e5					10.9	YES		dd		
3	FUNCTION1 PFK	22.80	7.110e5					12.1	YES		dd		
4	FUNCTION1 PFK	22.69	6.912e5					11.3	YES		dd		
5	FUNCTION1 PFK	22.55	8.259e5					12.1	YES		dd		
6	FUNCTION1 PFK	22.43	7.746e5					13.1	YES		dd		
7	FUNCTION1 PFK	22.36	5.817e5					13.7	YES		dd		
8	FUNCTION1 PFK	22.25	9.671e5					13.9	YES		dd		
9	FUNCTION1 PFK	22.12	9.832e5					14.6	YES		dd		
10	FUNCTION1 PFK	22.01	1.209e6					15.9	YES		dd		
11	FUNCTION1 PFK	21.78	2.283e6					17.0	YES		dd		
12	FUNCTION1 PFK	21.56	2.130e6					17.5	YES		dd		
13	FUNCTION1 PFK	21.44	1.105e6					18.0	YES		dd		
14	FUNCTION1 PFK	21.33	1.131e6					18.6	YES		dd		
15	FUNCTION1 PFK	21.24	1.454e6					18.6	YES		dd		
16	FUNCTION1 PFK	21.10	1.010e6					18.7	YES		bd		
17	FUNCTION1 PFK	24.81	1.465e5					2.8	NO		dd		
18	FUNCTION1 PFK	24.70	1.464e5					2.9	NO		dd		
19	FUNCTION1 PFK	24.58	1.009e5					2.7	NO		dd		
20	FUNCTION1 PFK	24.49	7.456e4					2.6	NO		dd		
21	FUNCTION1 PFK	24.35	3.320e5					4.2	YES		dd		
22	FUNCTION1 PFK	24.26	3.263e5					4.7	YES		dd		
23	FUNCTION1 PFK	24.03	5.096e5					5.2	YES		dd		
24	FUNCTION1 PFK	23.90	3.453e5					5.9	YES		dd		
25	FUNCTION1 PFK	23.79	3.737e5					6.9	YES		dd		
26	FUNCTION1 PFK	23.69	5.594e5					7.6	YES		dd		
27	FUNCTION1 PFK	23.57	4.114e5					8.1	YES		dd		
28	FUNCTION1 PFK	23.46	5.997e5					9.0	YES		dd		
29	FUNCTION1 PFK	23.35	3.786e5					9.0	YES		dd		
30	FUNCTION1 PFK	23.26	4.659e5					9.1	YES		dd		
31	FUNCTION1 PFK	23.22	2.211e5					8.8	YES		dd		
32	FUNCTION1 PFK	23.14	6.862e5					10.2	YES		dd		
33	FUNCTION1 PFK	27.16	4.534e4					1.3	NO		bd		
34	FUNCTION1 PFK	26.94	1.333e4					0.8	NO		db		
35	FUNCTION1 PFK	26.80	7.720e4					1.8	NO		bd		
36	FUNCTION1 PFK	26.69	8.371e4					1.6	NO		db		
37	FUNCTION1 PFK	26.57	6.397e4					1.8	NO		dd		

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	26.47	5.331e4					1.6	NO		dd		
39	FUNCTION1 PFK	26.36	7.666e4					2.0	NO		dd		
40	FUNCTION1 PFK	26.26	5.824e4					1.5	NO		dd		
41	FUNCTION1 PFK	26.10	6.505e4					1.6	NO		dd		
42	FUNCTION1 PFK	26.04	4.359e4					1.6	NO		bd		
43	FUNCTION1 PFK	25.92	5.594e4					1.7	NO		bb		
44	FUNCTION1 PFK	25.58	5.090e4					1.5	NO		bb		
45	FUNCTION1 PFK	25.47	3.685e4					1.2	NO		bb		
46	FUNCTION1 PFK	25.36	3.717e4					1.3	NO		bb		
47	FUNCTION1 PFK	25.26	3.498e4					1.3	NO		bb		
48	FUNCTION1 PFK	24.94	5.560e4					1.6	NO		db		
49	FUNCTION1 PFK	28.02	7.263e4					1.8	NO		bb		
50	FUNCTION1 PFK	27.71	4.813e4					1.3	NO		db		
51	FUNCTION1 PFK	27.59	2.314e4					0.8	NO		bd		
52	FUNCTION1 PFK	27.48	1.029e5					2.0	NO		bb		
53	FUNCTION1 PFK	27.37	1.146e5					2.0	NO		db		
54	FUNCTION1 PFK	27.24	4.755e4					1.5	NO		dd		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.41	1.815e4					1.3	NO		bd		0.000
2	FUNCTION2 PFK	29.06	3.240e4					2.0	NO		db		0.000
3	FUNCTION2 PFK	28.94	4.552e4					1.9	NO		dd		0.000
4	FUNCTION2 PFK	28.86	1.398e4					1.2	NO		bd		0.000
5	FUNCTION2 PFK	28.74	1.074e4					0.8	NO		db		0.000
6	FUNCTION2 PFK	28.66	1.155e4					1.1	NO		dd		0.000
7	FUNCTION2 PFK	28.59	4.556e4					2.8	NO		dd		0.000
8	FUNCTION2 PFK	28.47	7.806e4					3.2	YES		bd		0.000
9	FUNCTION2 PFK	28.38	4.781e4					2.3	NO		bb		0.000
10	FUNCTION2 PFK	31.84	4.287e4					2.3	NO		db		0.000
11	FUNCTION2 PFK	31.73	5.200e4					2.8	NO		bd		0.000
12	FUNCTION2 PFK	31.60	4.234e4					1.6	NO		bb		0.000
13	FUNCTION2 PFK	31.38	2.431e4					1.3	NO		bb		0.000
14	FUNCTION2 PFK	31.29	4.119e4					2.0	NO		bb		0.000
15	FUNCTION2 PFK	31.05	1.166e4					1.1	NO		bb		0.000
16	FUNCTION2 PFK	30.83	2.056e3					0.5	NO		bb		0.000
17	FUNCTION2 PFK	30.73	5.499e3					0.7	NO		bb		0.000
18	FUNCTION2 PFK	30.41	1.147e4					1.0	NO		bb		0.000
19	FUNCTION2 PFK	30.27	4.387e4					2.1	NO		bb		0.000
20	FUNCTION2 PFK	29.97	2.305e4					1.9	NO		db		0.000
21	FUNCTION2 PFK	29.94	2.904e4					2.0	NO		bd		0.000
22	FUNCTION2 PFK	29.85	2.272e4					1.4	NO		bb		0.000
23	FUNCTION2 PFK	29.71	1.886e4					1.6	NO		bb		0.000
24	FUNCTION2 PFK	29.61	4.475e4					2.0	NO		db		0.000
25	FUNCTION2 PFK	29.51	5.024e4					1.9	NO		dd		0.000
26	FUNCTION2 PFK	32.88	1.473e4					1.2	NO		bb		0.000
27	FUNCTION2 PFK	32.80	7.399e3					0.7	NO		bb		0.000
28	FUNCTION2 PFK	32.19	3.330e4					2.3	NO		bb		0.000
29	FUNCTION2 PFK	31.96	1.100e4					1.3	NO		db		0.000
30	FUNCTION2 PFK	31.92	1.392e4					1.3	NO		bd		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.78	2.181e4					1.1	NO		bb		0.000
2	FUNCTION3 PFK	34.64	5.115e4					1.7	NO		bb		0.000
3	FUNCTION3 PFK	34.53	2.495e4					1.3	NO		bb		0.000
4	FUNCTION3 PFK	34.43	5.364e4					2.0	NO		bb		0.000
5	FUNCTION3 PFK	34.20	4.098e4					1.6	NO		bb		0.000
6	FUNCTION3 PFK	33.87	1.973e4					1.2	NO		bb		0.000
7	FUNCTION3 PFK	33.41	3.538e4					1.8	NO		bb		0.000
8	FUNCTION3 PFK	33.34	2.662e4					1.0	NO		bb		0.000
9	FUNCTION3 PFK	33.21	3.237e4					1.3	NO		bb		0.000
10	FUNCTION3 PFK	33.12	2.767e3					0.5	NO		bb		0.000
11	FUNCTION3 PFK	37.44	5.909e4					2.1	NO		bd		0.000
12	FUNCTION3 PFK	37.33	2.046e4					1.6	NO		db		0.000
13	FUNCTION3 PFK	37.30	2.841e4					1.5	NO		dd		0.000
14	FUNCTION3 PFK	37.22	2.828e4					1.7	NO		bd		0.000
15	FUNCTION3 PFK	36.66	3.346e4					1.4	NO		db		0.000
16	FUNCTION3 PFK	36.57	7.778e3					0.7	NO		bd		0.000
17	FUNCTION3 PFK	36.53	3.728e4					1.4	NO		bb		0.000
18	FUNCTION3 PFK	36.41	9.949e3					0.8	NO		bb		0.000
19	FUNCTION3 PFK	36.12	3.230e4					1.1	NO		bb		0.000
20	FUNCTION3 PFK	35.87	3.402e4					1.6	NO		bb		0.000
21	FUNCTION3 PFK	35.65	3.838e4					1.5	NO		db		0.000
22	FUNCTION3 PFK	35.56	6.196e4					1.4	NO		dd		0.000
23	FUNCTION3 PFK	35.42	2.719e4					1.5	NO		bd		0.000
24	FUNCTION3 PFK	35.32	2.567e4					1.2	NO		bb		0.000
25	FUNCTION3 PFK	35.09	5.323e4					2.1	NO		bb		0.000
26	FUNCTION3 PFK	34.87	4.118e4					1.8	NO		bb		0.000
27	FUNCTION3 PFK	37.94	1.843e3					0.3	NO		bb		0.000
28	FUNCTION3 PFK	37.89	3.213e4					1.6	NO		bb		0.000
29	FUNCTION3 PFK	37.67	2.946e4					1.6	NO		bb		0.000
30	FUNCTION3 PFK	37.59	2.155e4					1.4	NO		db		0.000
31	FUNCTION3 PFK	37.54	4.168e4					1.6	NO		dd		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.99	5.326e4					1.9	NO		bd		
2	FUNCTION4 PFK	38.79	3.488e4					1.7	NO		bb		
3	FUNCTION4 PFK	38.67	3.499e4					1.5	NO		db		
4	FUNCTION4 PFK	38.54	2.434e4					1.6	NO		bd		
5	FUNCTION4 PFK	38.44	2.667e4					1.5	NO		bb		
6	FUNCTION4 PFK	38.29	1.170e4					0.9	NO		db		
7	FUNCTION4 PFK	38.24	1.811e4					1.4	NO		dd		
8	FUNCTION4 PFK	38.20	1.828e4					1.8	NO		dd		
9	FUNCTION4 PFK	38.17	5.520e3					1.1	NO		bd		
10	FUNCTION4 PFK	38.10	6.264e4					3.3	YES		bb		
11	FUNCTION4 PFK	40.66	2.456e4					1.0	NO		bb		
12	FUNCTION4 PFK	40.58	1.353e4					1.2	NO		bb		
13	FUNCTION4 PFK	40.40	2.389e3					0.4	NO		db		
14	FUNCTION4 PFK	40.36	3.623e4					1.7	NO		dd		
15	FUNCTION4 PFK	40.25	4.202e4					2.4	NO		bd		
16	FUNCTION4 PFK	40.11	5.344e4					2.2	NO		bb		
17	FUNCTION4 PFK	40.02	3.739e4					2.0	NO		bb		
18	FUNCTION4 PFK	39.79	3.692e4					1.7	NO		bb		
19	FUNCTION4 PFK	39.71	1.890e4					1.5	NO		db		
20	FUNCTION4 PFK	39.67	2.380e4					1.6	NO		bd		
21	FUNCTION4 PFK	39.56	5.137e4					2.3	NO		db		
22	FUNCTION4 PFK	39.46	7.929e4					2.5	NO		dd		
23	FUNCTION4 PFK	39.38	2.285e4					1.8	NO		dd		
24	FUNCTION4 PFK	39.35	5.218e4					1.9	NO		dd		
25	FUNCTION4 PFK	39.23	4.675e4					2.5	NO		dd		
26	FUNCTION4 PFK	39.11	5.505e4					2.4	NO		dd		
27	FUNCTION4 PFK	42.60	2.068e4					1.4	NO		db		
28	FUNCTION4 PFK	42.52	4.394e4					1.6	NO		bd		
29	FUNCTION4 PFK	42.34	1.717e3					0.4	NO		bb		
30	FUNCTION4 PFK	42.27	1.672e4					1.3	NO		bb		
31	FUNCTION4 PFK	42.06	1.979e4					1.4	NO		db		
32	FUNCTION4 PFK	41.95	3.542e4					2.1	NO		bd		
33	FUNCTION4 PFK	41.73	2.347e4					1.4	NO		db		
34	FUNCTION4 PFK	41.65	3.198e4					1.4	NO		bd		
35	FUNCTION4 PFK	41.52	1.683e4					0.8	NO		bb		
36	FUNCTION4 PFK	41.43	2.763e4					1.5	NO		bb		
37	FUNCTION4 PFK	41.29	3.658e4					1.5	NO		bb		

ID: BIK0510-BS1, Name: 20112305, Date: 23-Nov-2020, Time: 13:00:40, Conditions: AUTOSPEC01, User: pk

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION4 PFK	41.24	2.474e4					1.2	NO		bb		
39	FUNCTION4 PFK	41.09	3.928e4					2.2	NO		bb		
40	FUNCTION4 PFK	40.92	1.511e4					1.2	NO		db		
41	FUNCTION4 PFK	40.89	2.993e4					1.8	NO		dd		
42	FUNCTION4 PFK	40.79	2.443e4					1.6	NO		bd		
43	FUNCTION4 PFK	43.15	2.762e4					2.0	NO		bb		
44	FUNCTION4 PFK	43.07	4.594e4					2.1	NO		bb		
45	FUNCTION4 PFK	42.99	3.125e3					0.5	NO		bb		
46	FUNCTION4 PFK	42.91	1.262e3					0.3	NO		bb		
47	FUNCTION4 PFK	42.83	2.005e4					1.4	NO		bb		

ID: BIK0510-BS1, Name: 20112305, Date: 23-Nov-2020, Time: 13:00:40, Conditions: AUTOSPEC01, User: pk

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.16	1.136e4					2.0	NO		db		
2	FUNCTION5 PFK	44.12	9.983e3					1.9	NO		dd		
3	FUNCTION5 PFK	44.04	3.306e4					3.2	YES		bd		
4	FUNCTION5 PFK	43.93	2.316e3					0.8	NO		bb		
5	FUNCTION5 PFK	43.89	2.795e3					1.0	NO		db		
6	FUNCTION5 PFK	43.87	6.161e3					1.4	NO		bd		
7	FUNCTION5 PFK	43.73	7.637e3					1.5	NO		bb		
8	FUNCTION5 PFK	43.68	2.724e3					0.9	NO		db		
9	FUNCTION5 PFK	43.61	2.083e4					2.5	NO		bd		
10	FUNCTION5 PFK	43.40	1.531e4					1.7	NO		bb		
11	FUNCTION5 PFK	46.20	2.194e3					0.5	NO		bb		
12	FUNCTION5 PFK	46.13	2.648e4					2.4	NO		bb		
13	FUNCTION5 PFK	46.01	8.744e3					1.3	NO		bb		
14	FUNCTION5 PFK	45.83	6.010e3					1.7	NO		db		
15	FUNCTION5 PFK	45.80	2.083e4					2.9	NO		dd		
16	FUNCTION5 PFK	45.75	3.892e3					1.0	NO		bd		
17	FUNCTION5 PFK	45.66	2.401e4					1.8	NO		bb		
18	FUNCTION5 PFK	45.47	2.181e4					3.2	YES		bb		
19	FUNCTION5 PFK	45.41	6.682e3					1.2	NO		bb		
20	FUNCTION5 PFK	45.03	1.287e4					2.0	NO		bb		
21	FUNCTION5 PFK	44.94	1.350e4					1.7	NO		bb		
22	FUNCTION5 PFK	44.83	8.036e3					1.0	NO		bb		
23	FUNCTION5 PFK	44.62	6.796e2					0.4	NO		bb		
24	FUNCTION5 PFK	44.37	1.384e4					2.4	NO		bb		
25	FUNCTION5 PFK	44.28	4.633e3					1.0	NO		db		
26	FUNCTION5 PFK	44.24	1.194e4					2.2	NO		bd		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ID: BIK0510-BS1, Name: 20112305, Date: 23-Nov-2020, Time: 13:00:40, Conditions: AUTOSPEC01, User: pk

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	27.95	7.094e1					0.9	NO		bb		0.000
2	FUNCTION1 HPCD...	27.48	1.182e2					1.4	NO		bb		0.000
3	FUNCTION1 HPCD...	27.30	1.098e2					1.7	NO		bb		0.000
4	FUNCTION1 HPCD...	26.57	8.637e1					1.2	NO		bb		0.000
5	FUNCTION1 HPCD...	25.76	1.068e2					1.4	NO		bb		0.000
6	FUNCTION1 HPCD...	24.64	1.413e2					2.2	NO		db		0.000
7	FUNCTION1 HPCD...	24.58	1.790e2					1.9	NO		bd		0.000
8	FUNCTION1 HPCD...	23.67	1.326e2					1.5	NO		db		0.000
9	FUNCTION1 HPCD...	23.61	1.805e2					2.4	NO		dd		0.000
10	FUNCTION1 HPCD...	23.42	3.963e2					3.0	NO		dd		0.000
11	FUNCTION1 HPCD...	23.34	7.334e1					1.5	NO		bd		0.000
12	FUNCTION1 HPCD...	23.02	1.428e2					1.3	NO		bb		0.000
13	FUNCTION1 HPCD...	22.55	1.204e2					1.2	NO		bb		0.000
14	FUNCTION1 HPCD...	22.28	9.145e1					1.0	NO		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.77	8.867e1					1.7	NO		bb		0.000
2	FUNCTION2 HPCD...	32.52	1.862e2					2.4	NO		bb		0.000
3	FUNCTION2 HPCD...	32.33	1.013e2					2.0	NO		bb		0.000
4	FUNCTION2 HPCD...	31.25	2.485e2					4.6	YES		bb		0.000
5	FUNCTION2 HPCD...	30.05	9.869e1					2.3	NO		bb		0.000
6	FUNCTION2 HPCD...	29.85	7.682e1					1.8	NO		bb		0.000
7	FUNCTION2 HPCD...	28.86	8.012e1					2.1	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	42.13	1.080e2					9.3	YES		bb		0.000
2	FUNCTION4 NCDPE	39.78	7.622e1					5.3	YES		bb		0.000

ID: BIK0510-BS1, Name: 20112305, Date: 23-Nov-2020, Time: 13:00:40, Conditions: AUTOSPEC01, User: pk

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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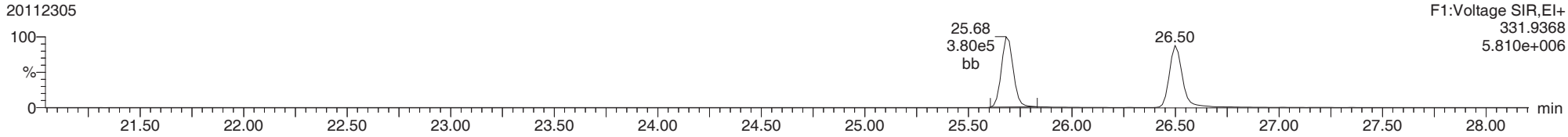
ID: BIK0510-BS1, Name: 20112305, Date: 23-Nov-2020, Time: 13:00:40, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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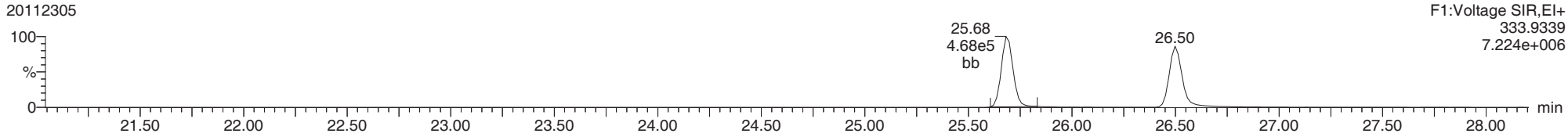
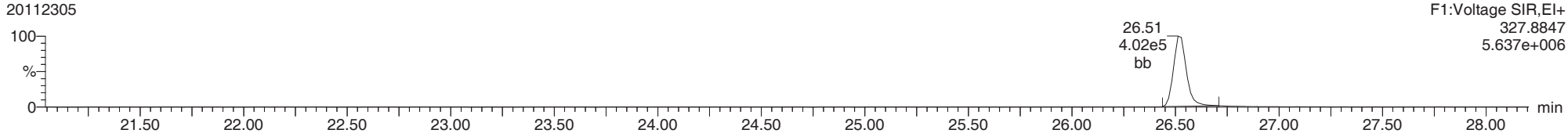


37CL-2378-TCDD



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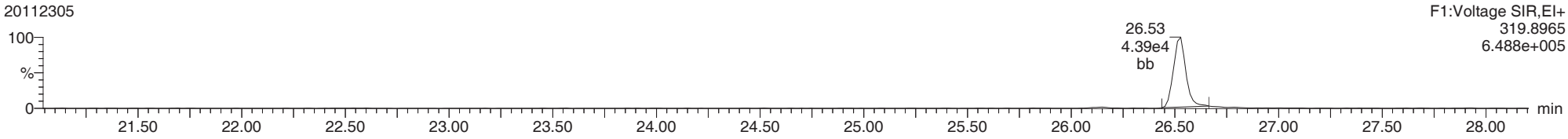

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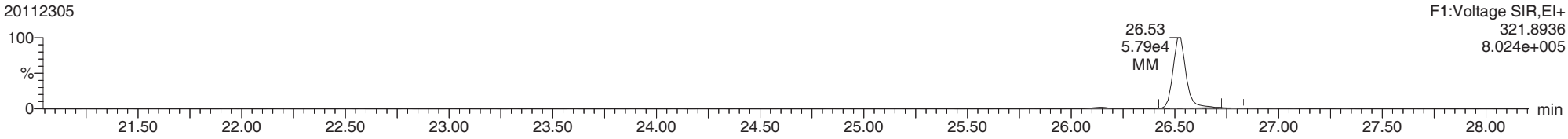

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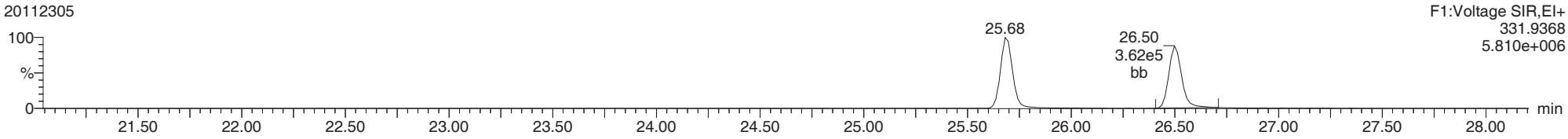

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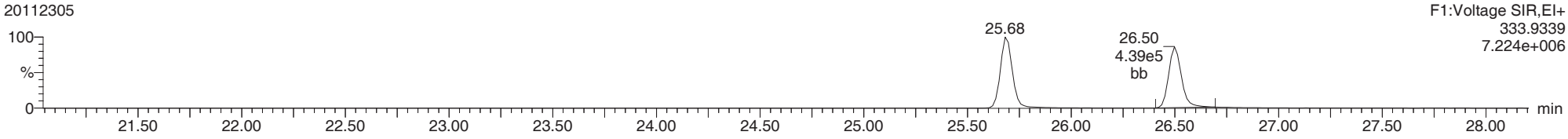

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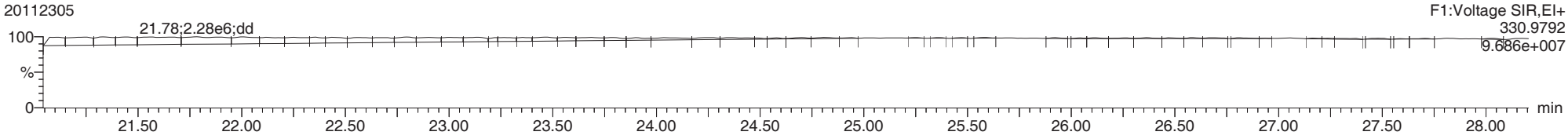

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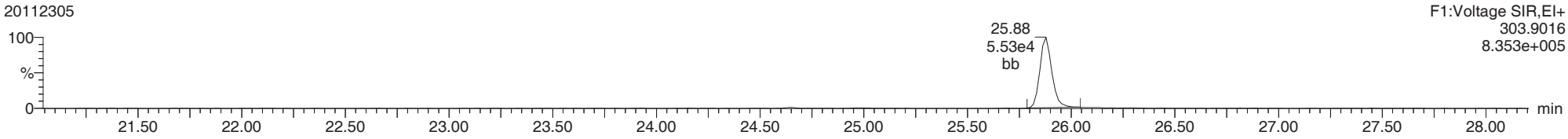
2378-TCDF



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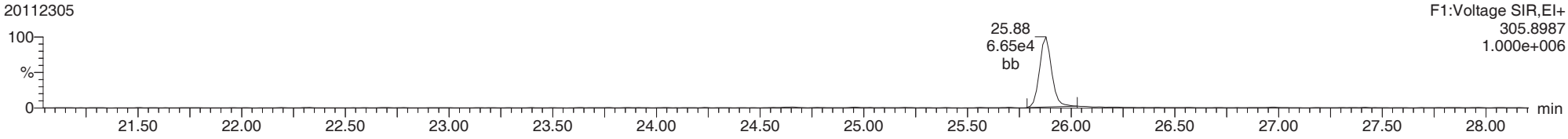

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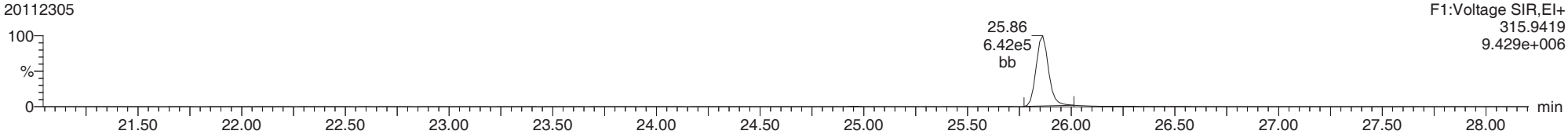

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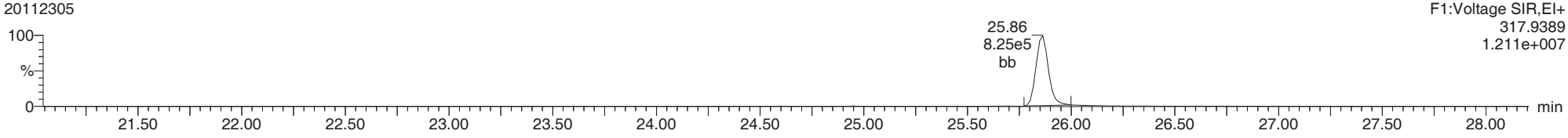

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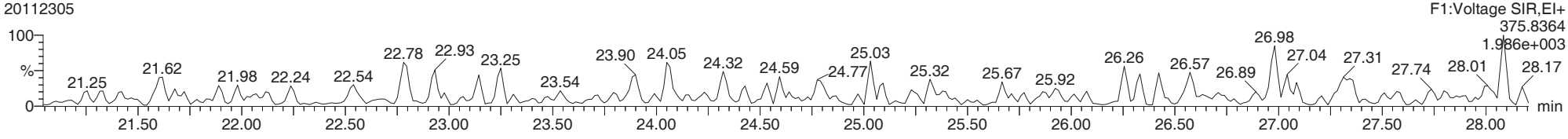

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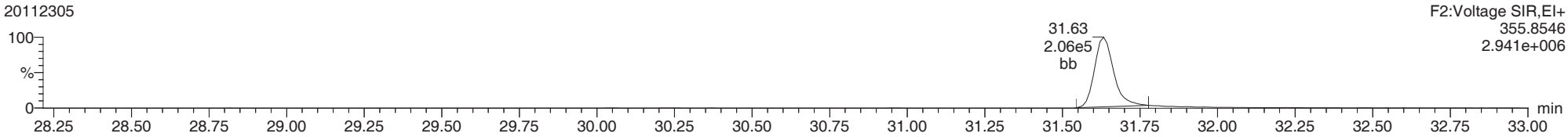
12378-PeCDD



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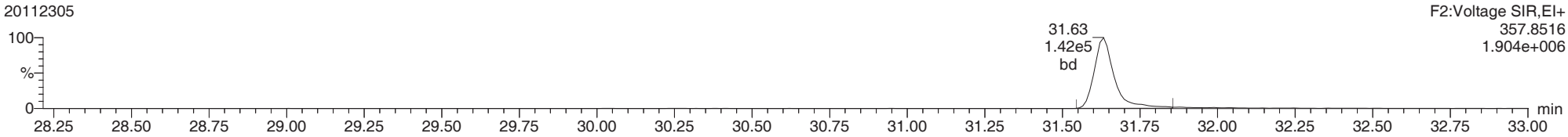

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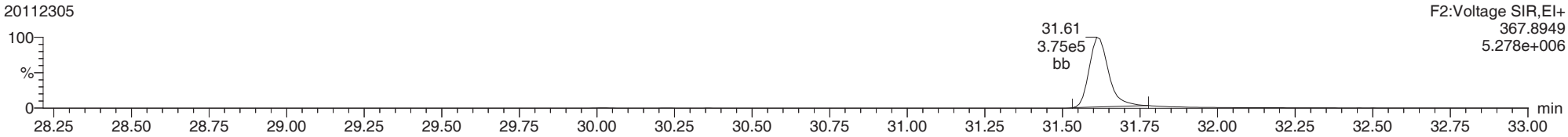

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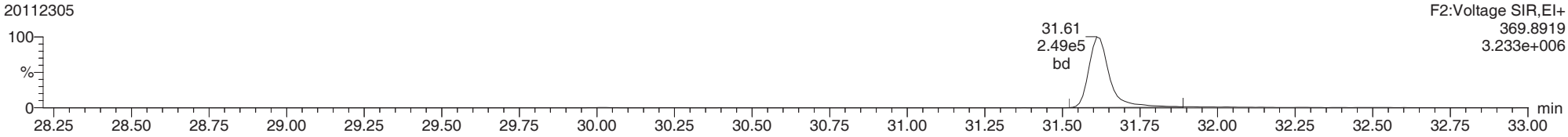

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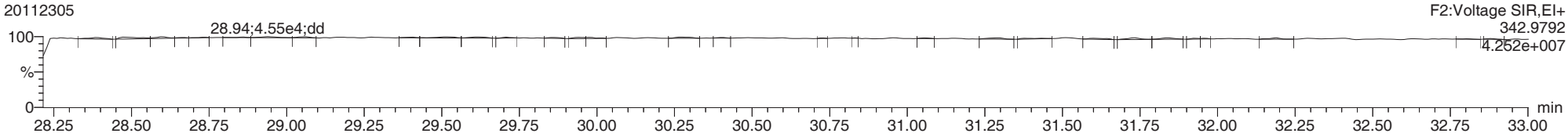

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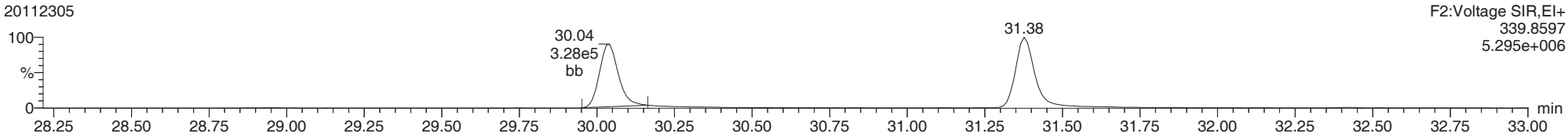
12378-PeCDF



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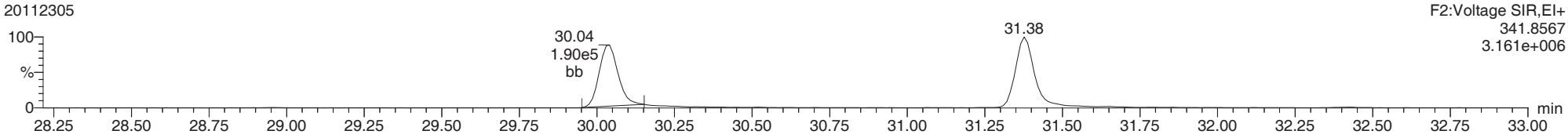

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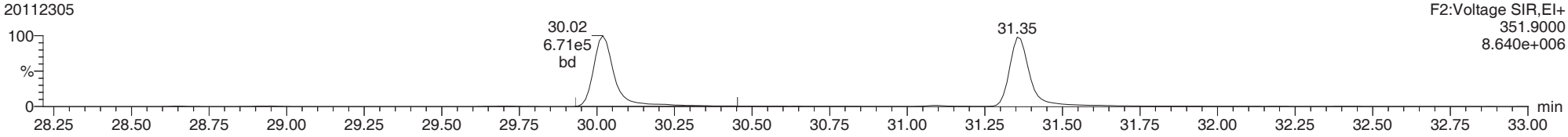

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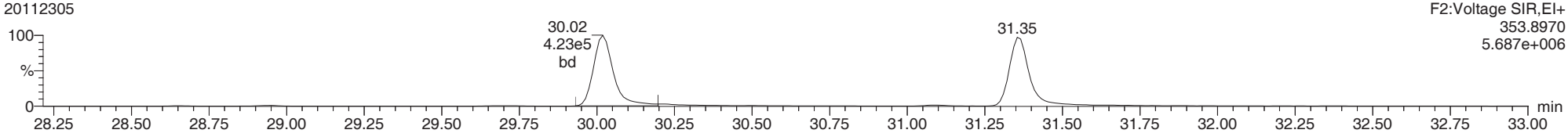
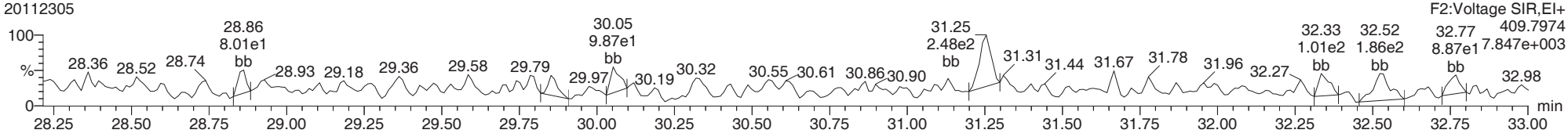


FUNCTION2 HPCDPE



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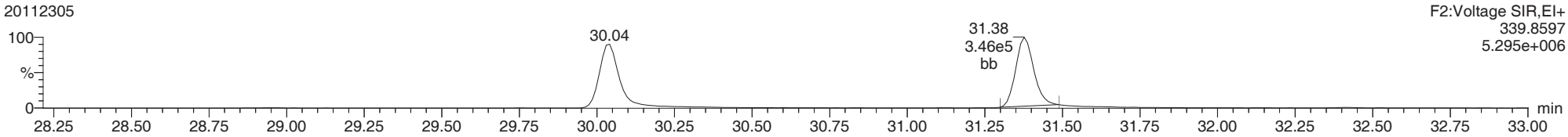
23478-PeCDF



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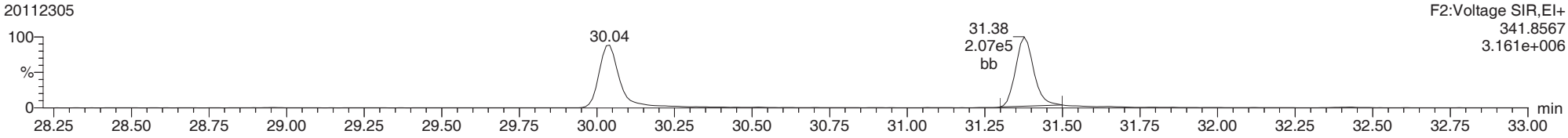

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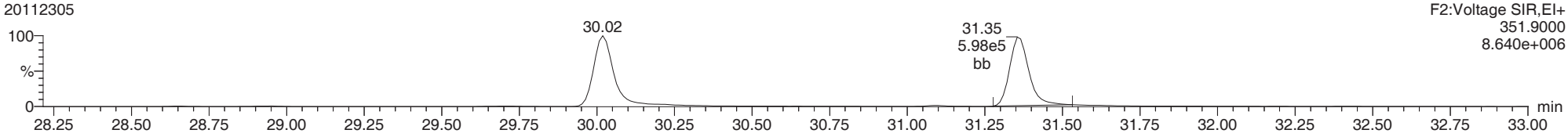

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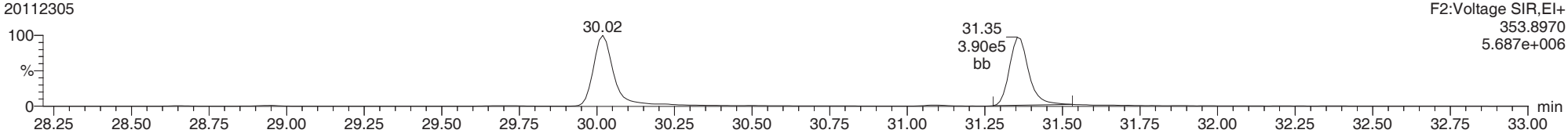

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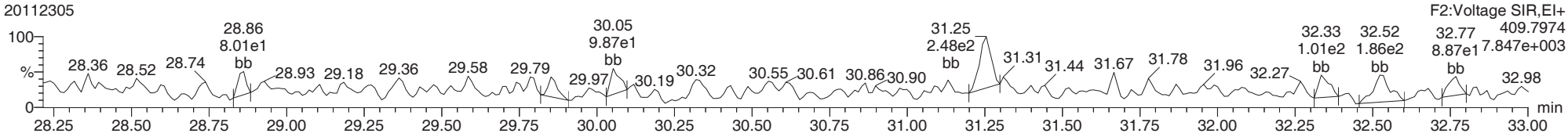

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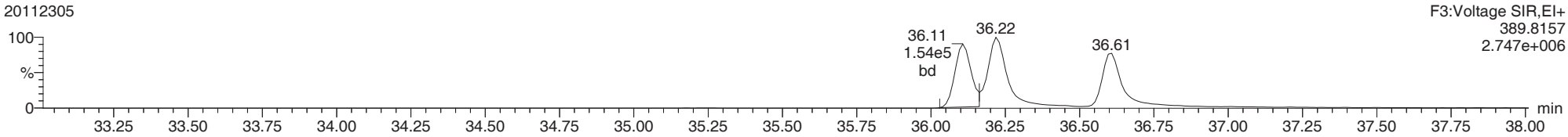
123478-HxCDD



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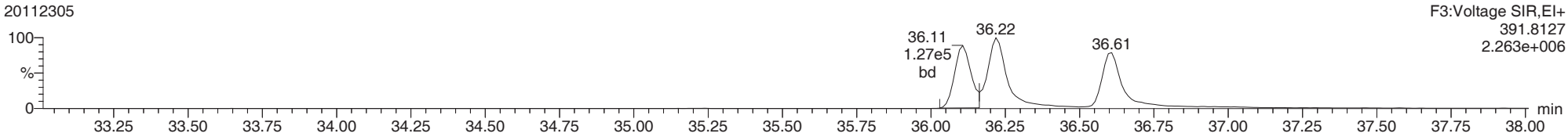

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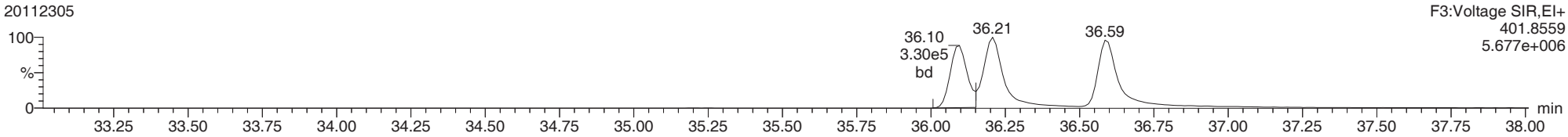

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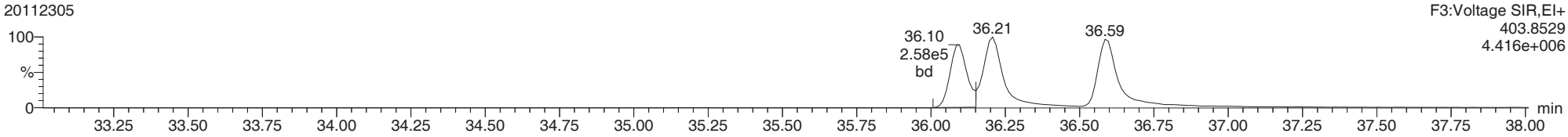
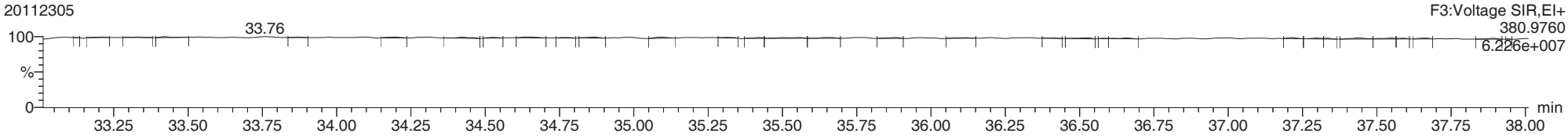


FUNCTION3 PFK



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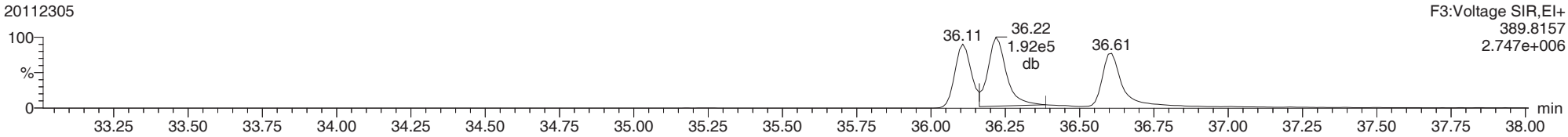

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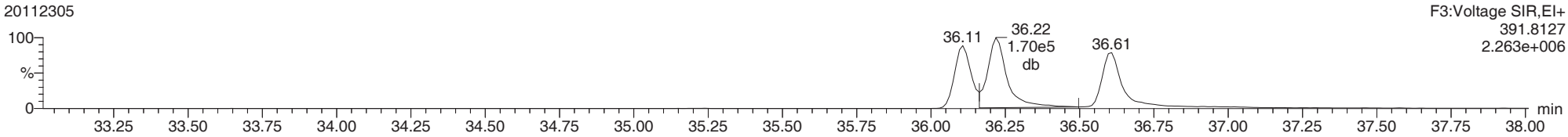

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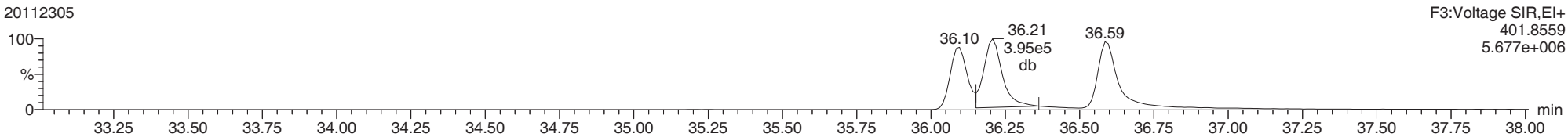

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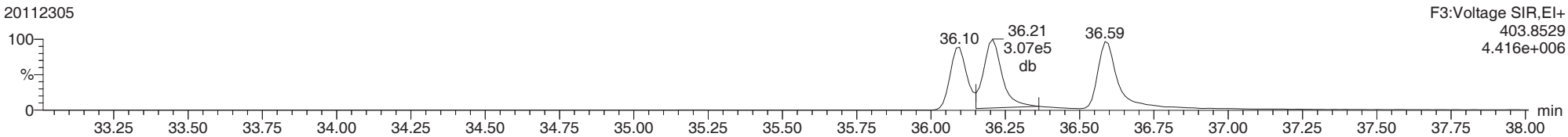

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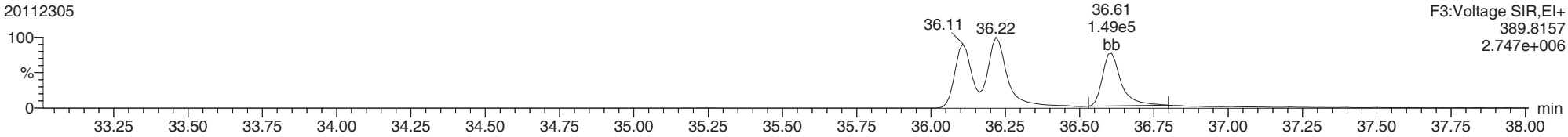

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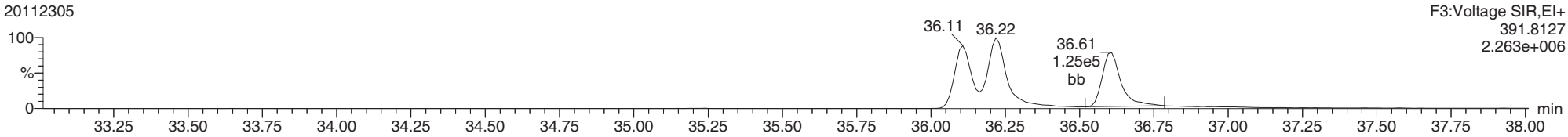

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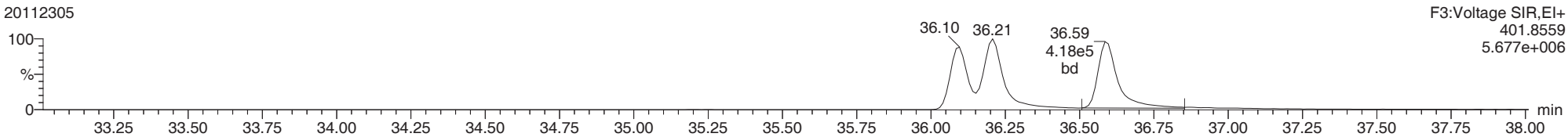

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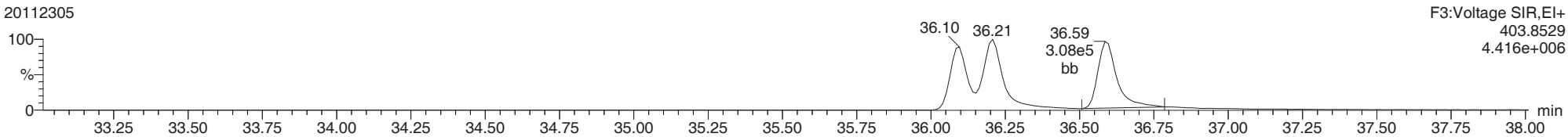

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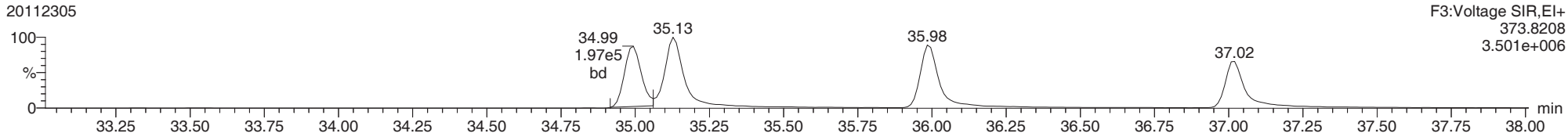

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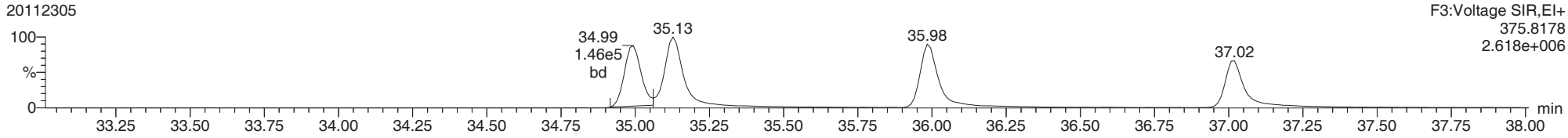

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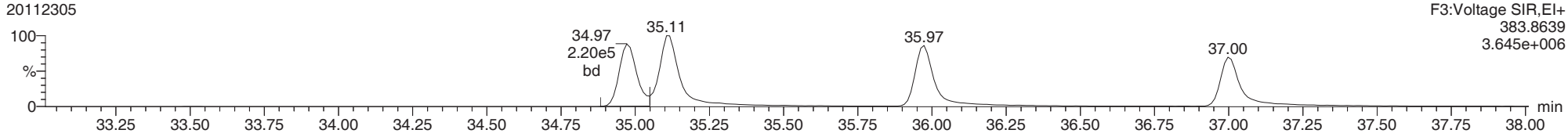

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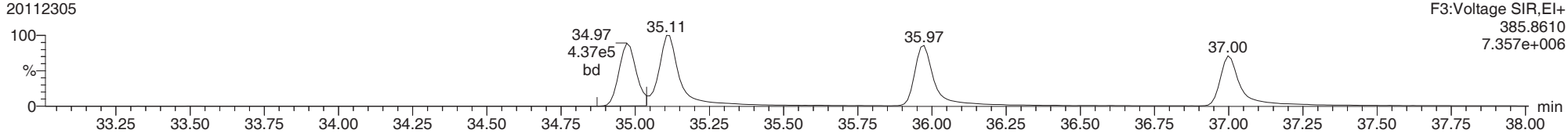

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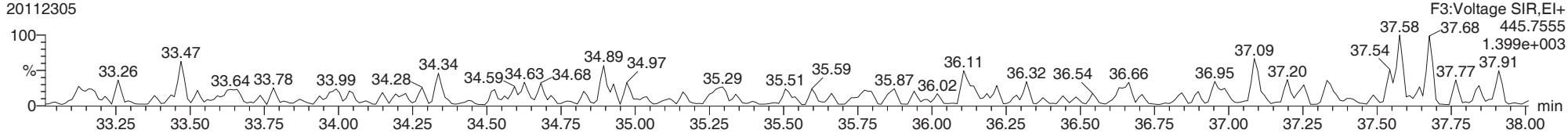

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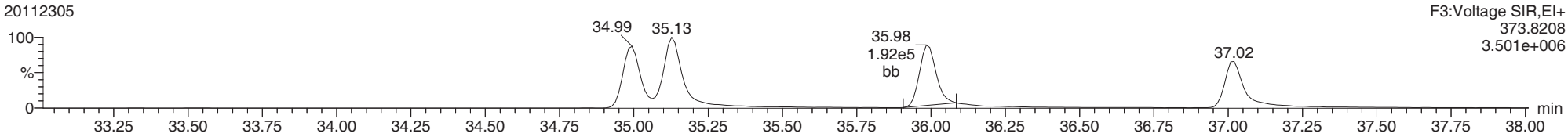

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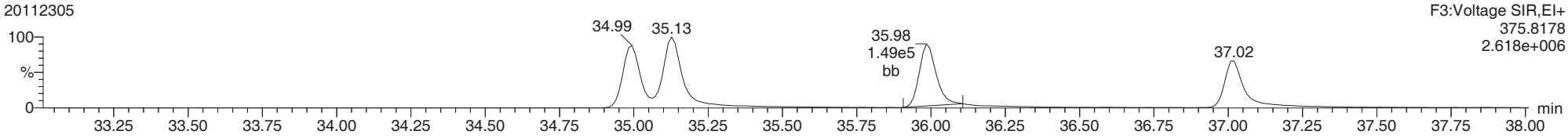

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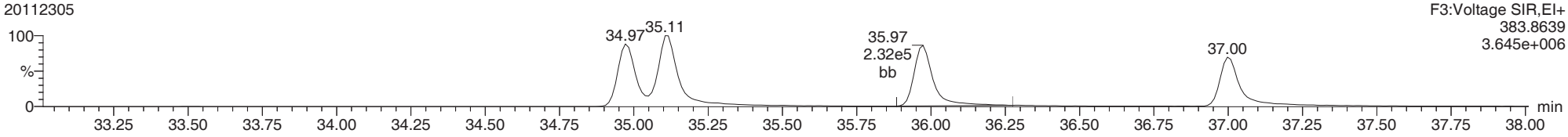

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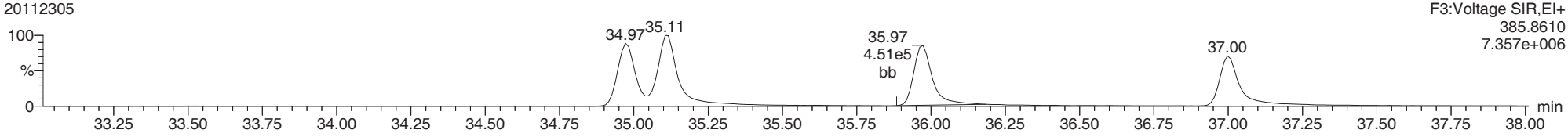

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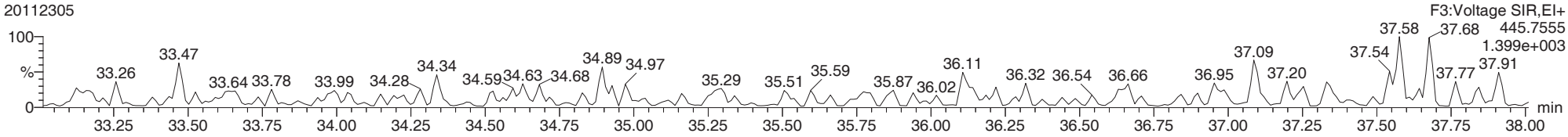

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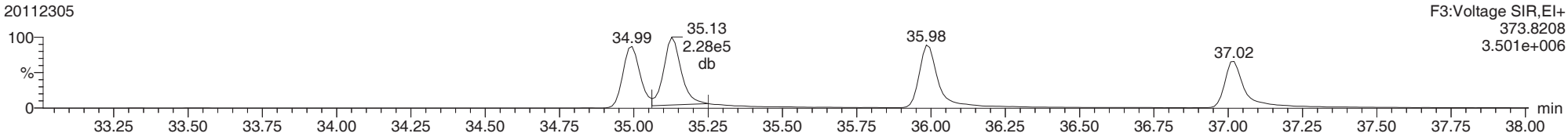

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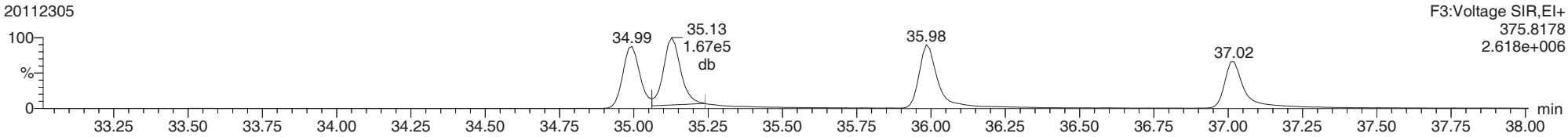

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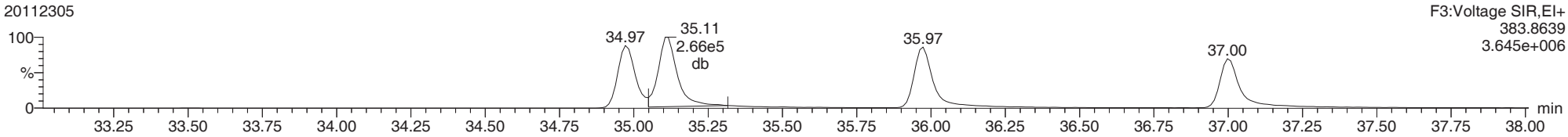

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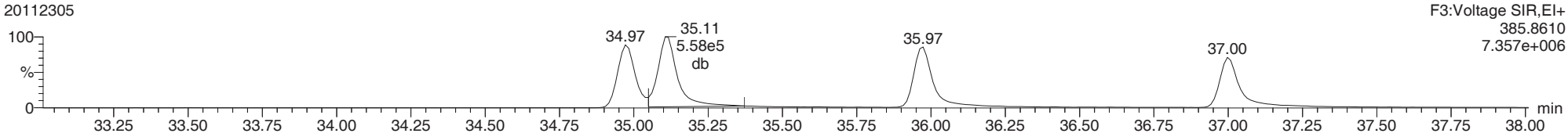

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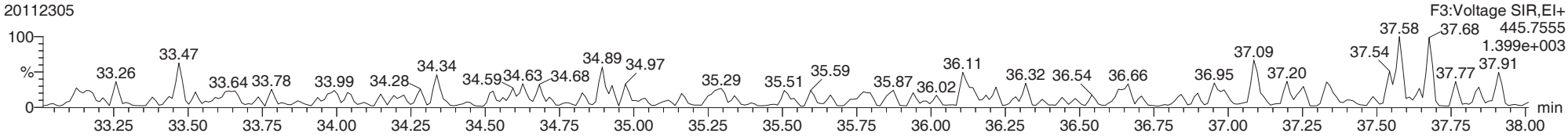

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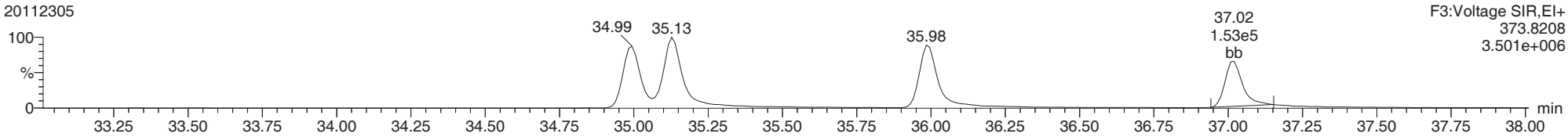

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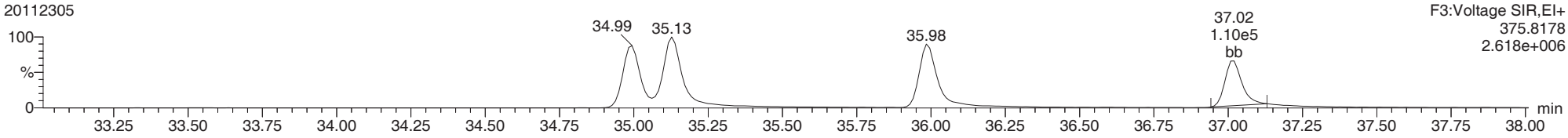

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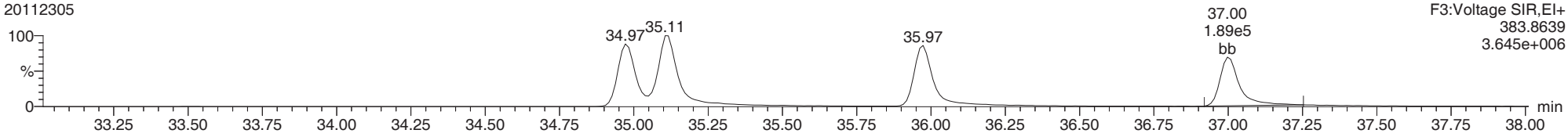

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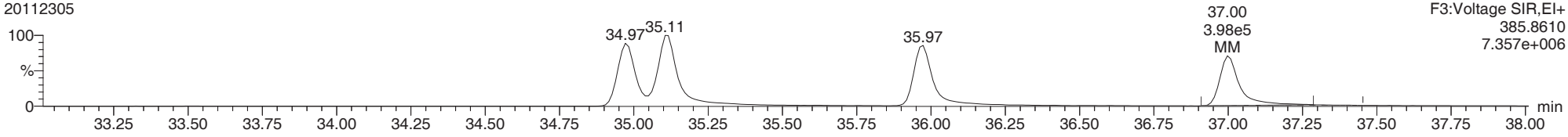

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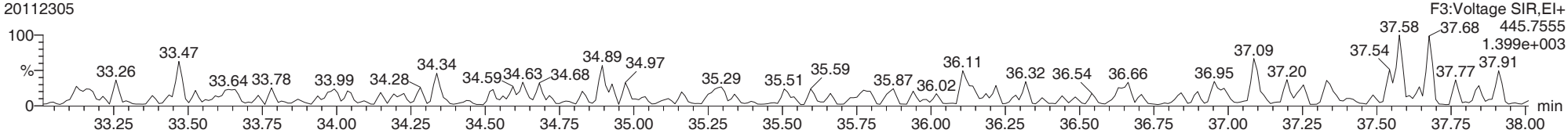

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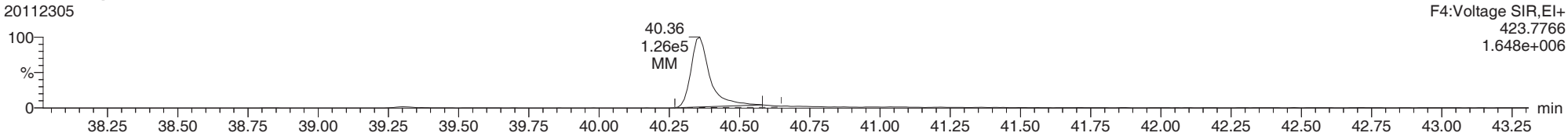

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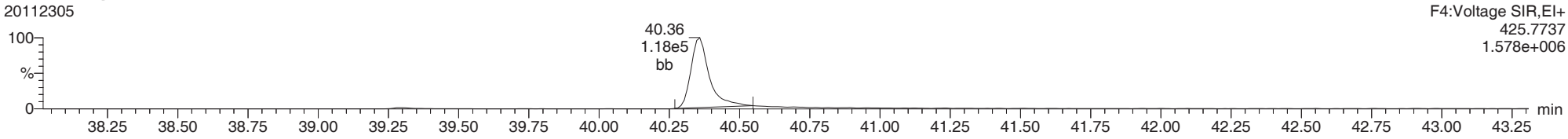

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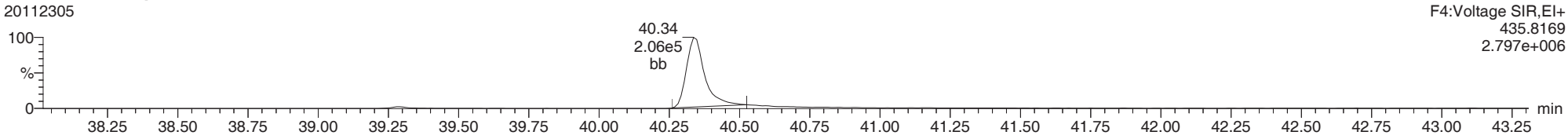

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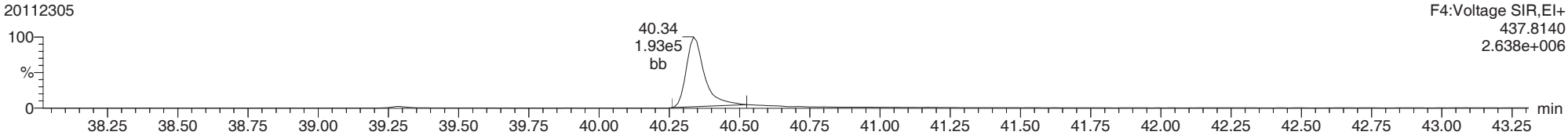

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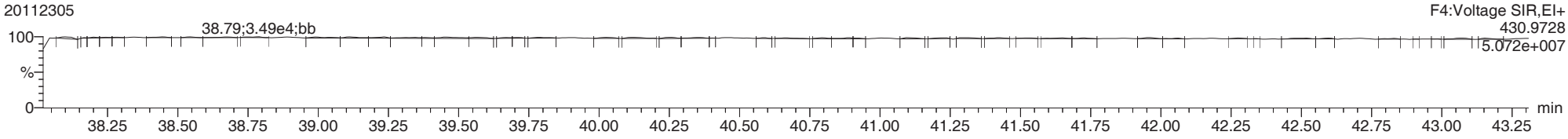

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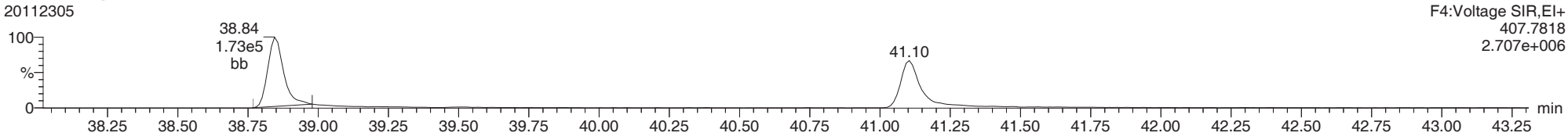
1234678-HpCDF



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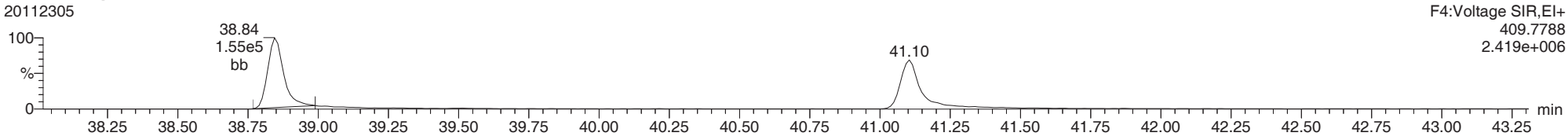

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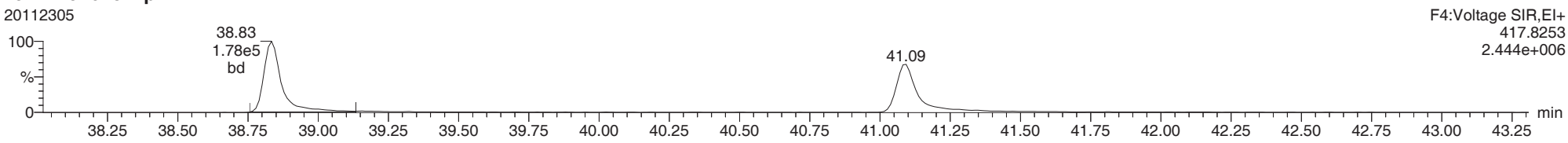

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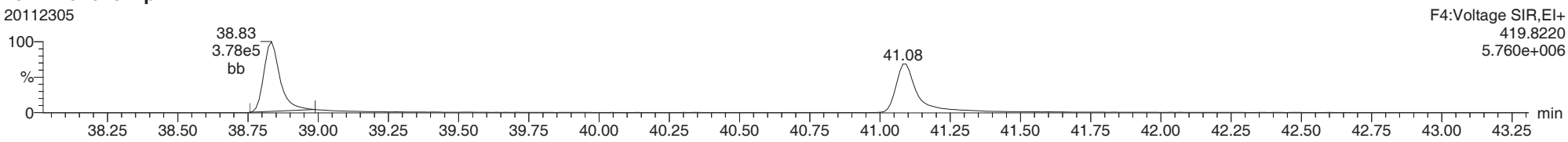

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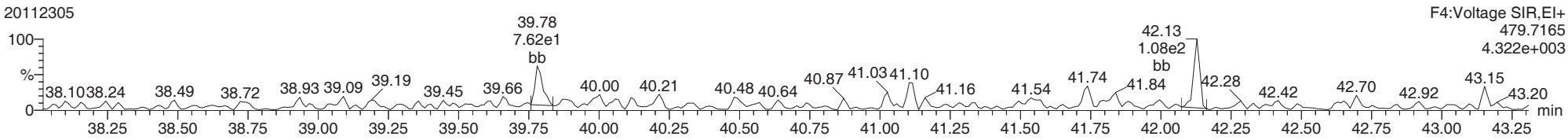

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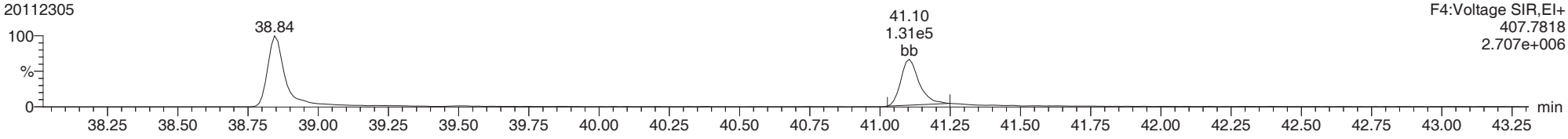

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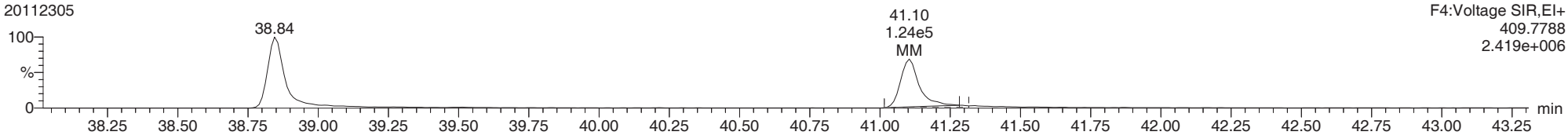

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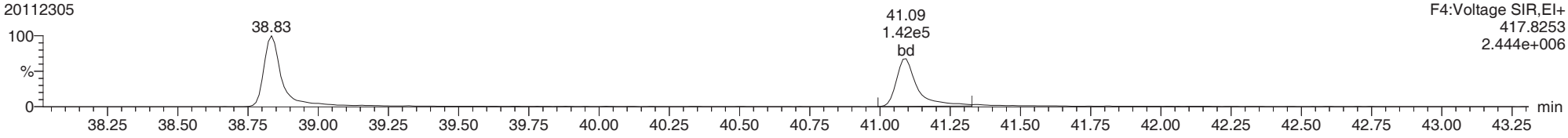

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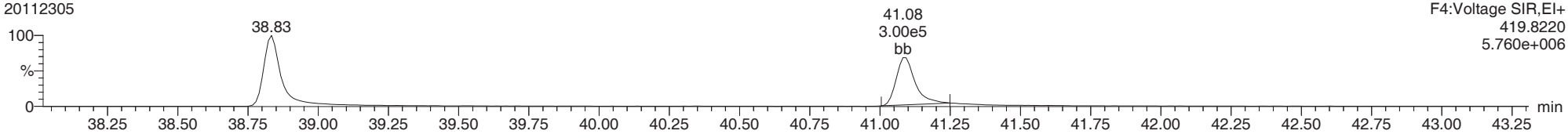

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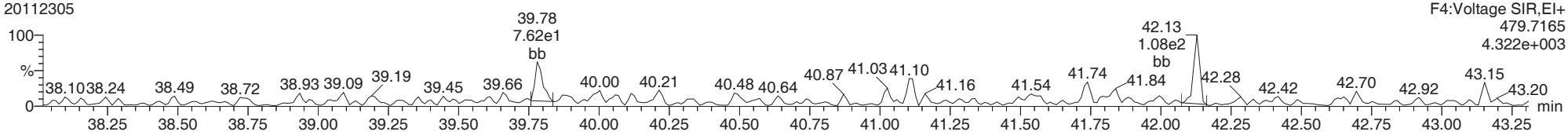
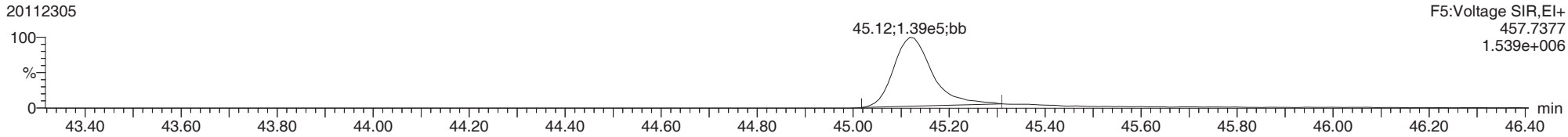


ID: BIK0510-BS1, Name: 20112305, Date: 23-Nov-2020, Time: 13:00:40, Conditions: AUTOSPEC01, User: pk

OCDD



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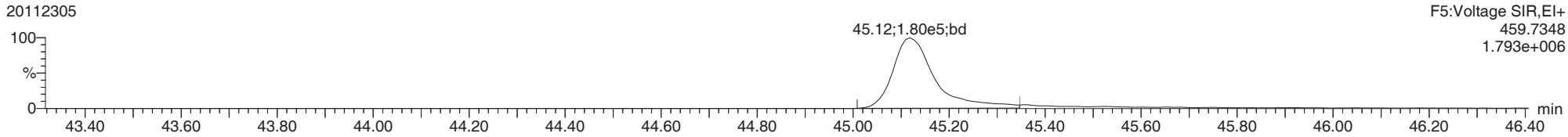

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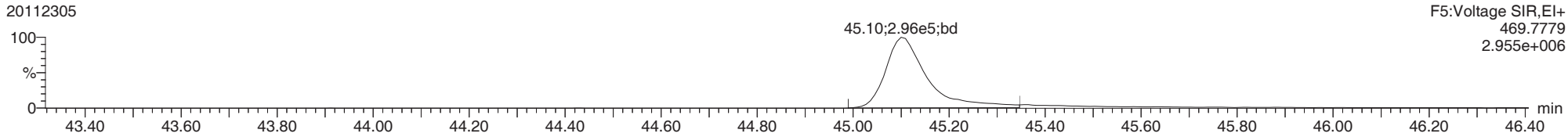
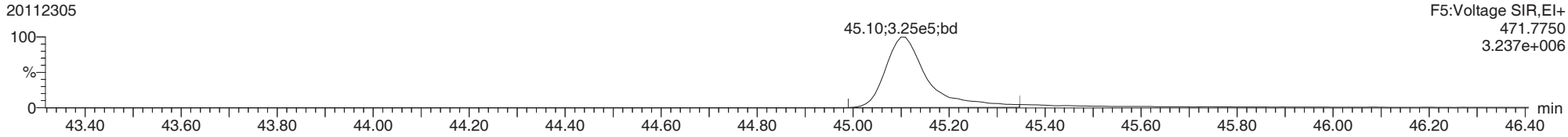
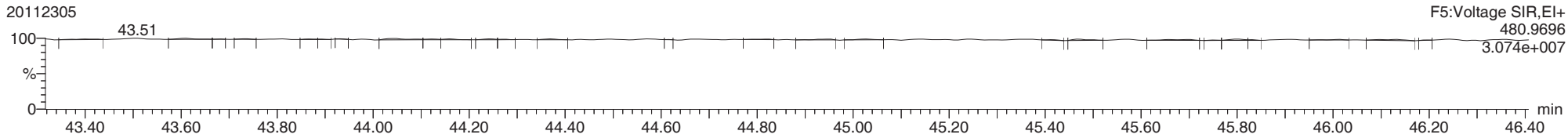


13C-OCDD

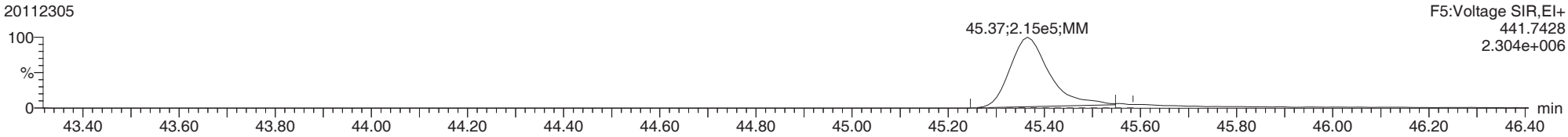


FUNCTION5 PFK

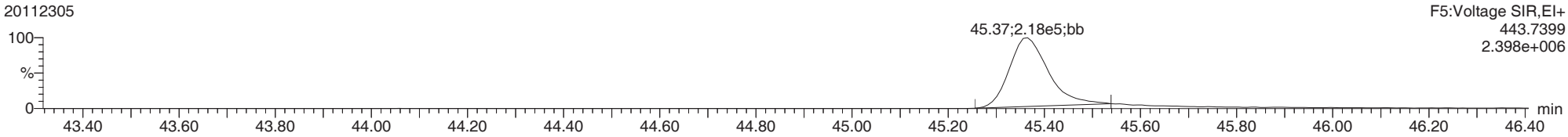


ID: BIK0510-BS1, Name: 20112305, Date: 23-Nov-2020, Time: 13:00:40, Conditions: AUTOSPEC01, User: pk

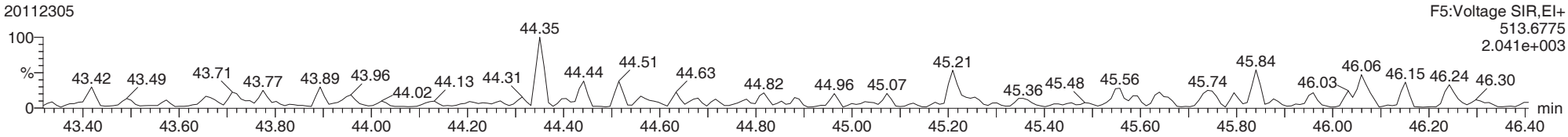
OCDF



OCDF



FUNCTION5 DCDPE



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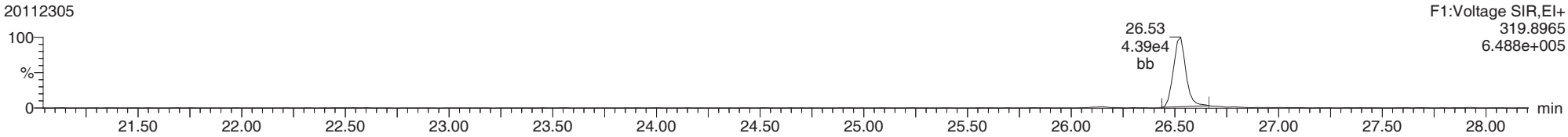
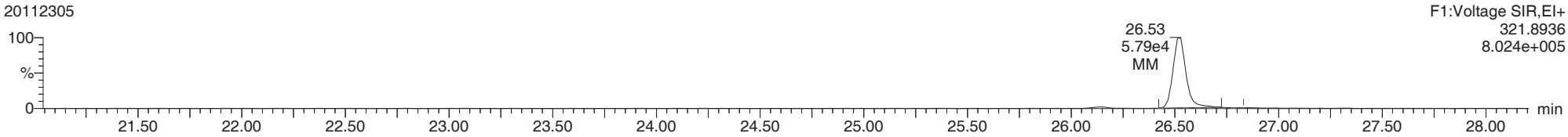
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:00:34 Pacific Standard Time

ID: BIK0510-BS1, Name: 20112305, Date: 23-Nov-2020, Time: 13:00:40, Conditions: AUTOSPEC01, User: pk

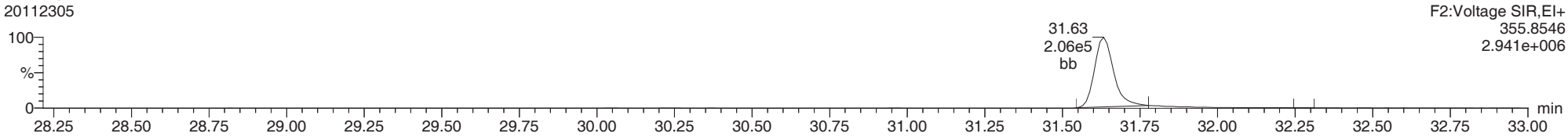
Total-tetradioxins



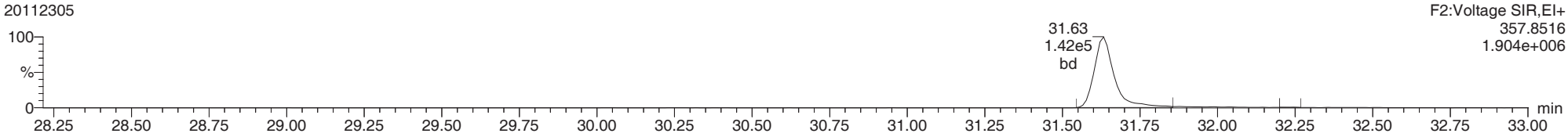
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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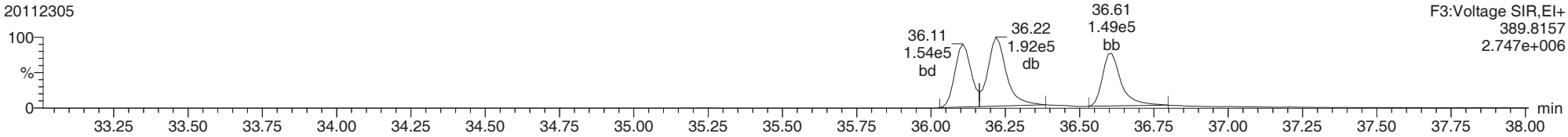
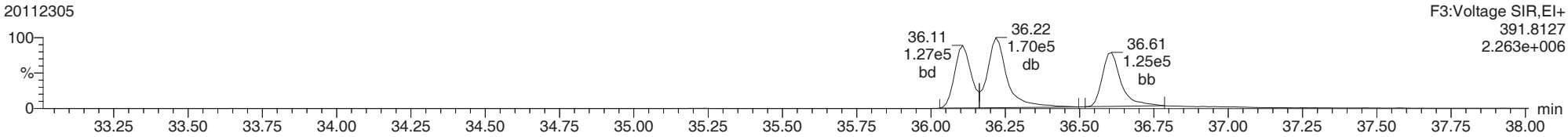
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:00:34 Pacific Standard Time

ID: BIK0510-BS1, Name: 20112305, Date: 23-Nov-2020, Time: 13:00:40, Conditions: AUTOSPEC01, User: pk

Total-hexadioxins



Total-hexadioxins



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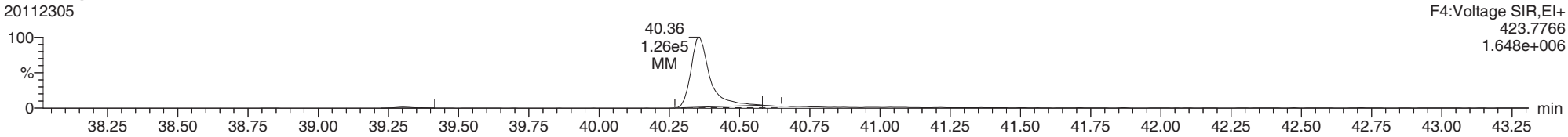
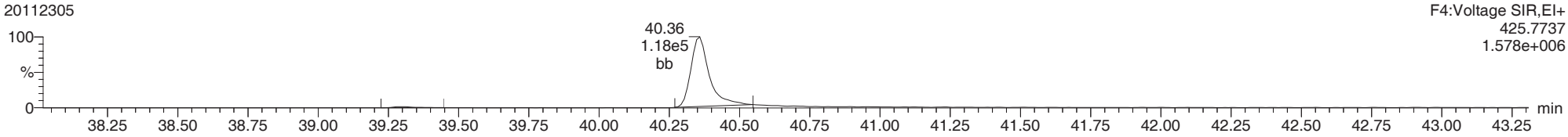


Total-heptadioxins



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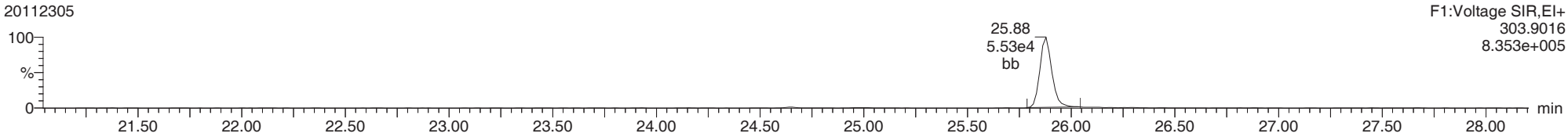
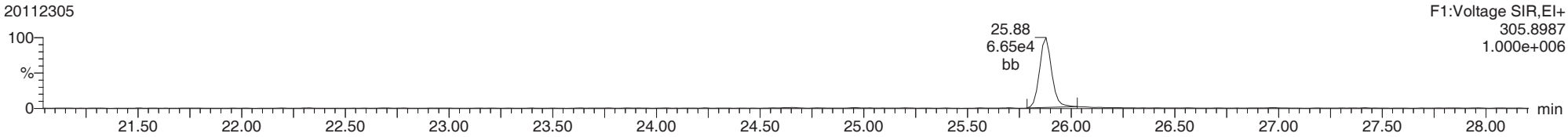
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:00:34 Pacific Standard Time

ID: BIK0510-BS1, Name: 20112305, Date: 23-Nov-2020, Time: 13:00:40, Conditions: AUTOSPEC01, User: pk

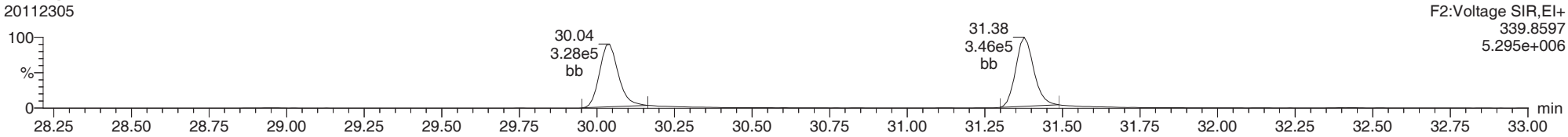
Total-tetrafurans



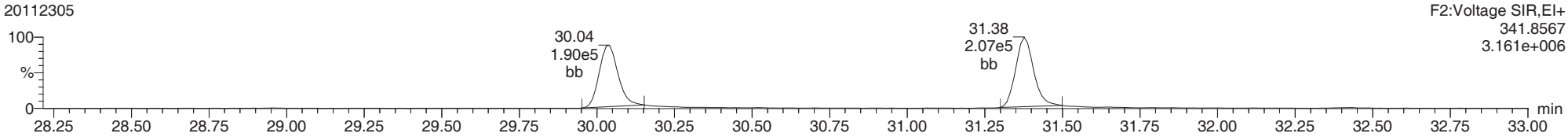
Total-tetrafurans



Total-pentafurans



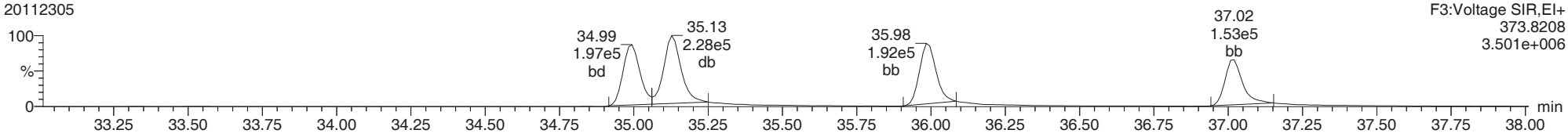
Total-pentafurans



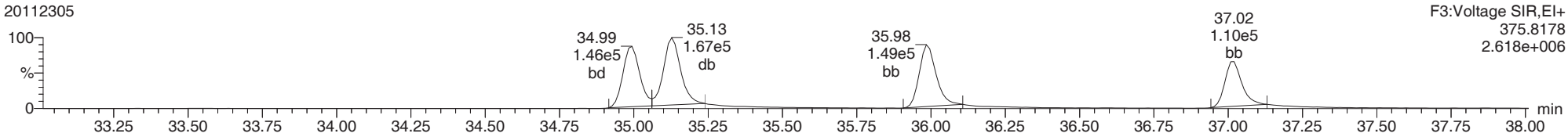
Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:00:34 Pacific Standard Time

ID: BIK0510-BS1, Name: 20112305, Date: 23-Nov-2020, Time: 13:00:40, Conditions: AUTOSPEC01, User: pk

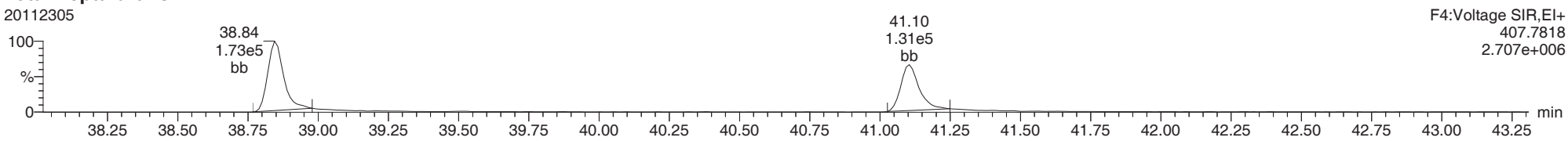
Total-hexafurans



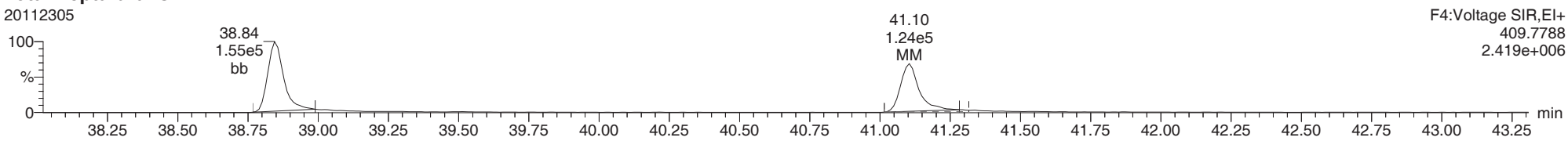
Total-hexafurans



Total-heptafurans



Total-heptafurans



Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:00:42 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: BIK0510-BSD1, Name: 20112306, Date: 23-Nov-2020, Time: 13:49:58, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.878	1.001	5.910e4	6.932e4	0.729	0.853	0.770	1066	2192	8.47e5	1.02e6	794.7	463.6	NO	bd	bb	11.223
12378-PeCDF	30.030	1.000	3.511e5	2.058e5	0.779	1.706	1.550	3964	3125	5.21e6	3.04e6	1313.6	973.7	NO	bb	bb	61.643
23478-PeCDF	31.377	1.001	3.769e5	2.282e5	0.880	1.652	1.550	3964	3125	5.58e6	3.31e6	1407.3	1058.5	NO	bb	bb	63.227
123478-HxCDF	34.994	1.001	2.234e5	1.674e5	0.880	1.335	1.240	3380	2656	3.37e6	2.52e6	997.0	947.1	NO	bd	bd	60.994
234678-HxCDF	35.985	1.001	2.364e5	1.729e5	0.863	1.368	1.240	3380	2656	3.48e6	2.59e6	1029.7	975.0	NO	MM	MM	60.962
123678-HxCDF	35.128	1.001	2.405e5	1.865e5	0.853	1.290	1.240	3380	2656	3.54e6	2.74e6	1046.3	1030.1	NO	db	db	51.971
123789-HxCDF	37.009	1.000	1.734e5	1.254e5	0.780	1.383	1.240	3380	2656	2.47e6	1.81e6	731.6	681.1	NO	bb	bb	59.255
1234678-HpCDF	38.846	1.000	1.969e5	1.726e5	1.001	1.141	1.050	3583	3628	3.10e6	2.73e6	863.9	752.4	NO	MM	bb	60.228
1234789-HpCDF	41.105	1.000	1.548e5	1.369e5	0.994	1.131	1.050	3583	3628	1.95e6	1.80e6	543.9	496.3	NO	bb	bb	57.668
OCDF	45.366	1.006	2.280e5	2.468e5	1.158	0.924	0.890	2403	2661	2.51e6	2.73e6	1043.1	1025.4	NO	MM	bb	132.507
2378-TCDD	26.528	1.001	4.890e4	6.471e4	1.238	0.756	0.770	1303	616	6.63e5	8.88e5	508.9	1441.7	NO	bb	bd	10.772
12378-PeCDD	31.633	1.001	2.202e5	1.431e5	0.988	1.538	1.550	1767	1439	3.12e6	1.97e6	1768.3	1369.7	NO	bb	MM	55.225
123478-HxCDD	36.108	1.001	1.716e5	1.434e5	0.842	1.197	1.240	1573	2325	2.74e6	2.23e6	1744.5	959.0	NO	bd	bd	55.730
123678-HxCDD	36.219	1.000	2.060e5	1.892e5	0.907	1.089	1.240	1573	2325	2.92e6	2.40e6	1853.8	1033.1	NO	db	dd	56.635
123789-HxCDD	36.597	1.011	1.723e5	1.484e5	0.784	1.161	1.240	1573	2325	2.44e6	2.03e6	1551.0	875.1	NO	MM	MM	56.817
1234678-HpCDD	40.348	1.000	1.506e5	1.272e5	1.044	1.184	1.050	2913	2802	1.87e6	1.71e6	643.1	611.1	NO	bd	bb	54.889
OCDD	45.119	1.000	1.525e5	1.835e5	0.963	0.831	0.890	2115	2023	1.66e6	1.98e6	784.6	976.3	NO	bb	MM	112.748
13C-2378-TCDF	25.863	1.007	6.860e5	8.845e5	2.203	0.776	0.770	3509	2472	9.86e6	1.26e7	2809.0	5109.3	NO	bb	bb	83.318
13C-12378-PeCDF	30.019	1.169	6.957e5	4.636e5	1.741	1.500	1.550	2895	3789	9.56e6	6.27e6	3303.1	1654.9	NO	bd	bd	77.818
13C-23478-PeCDF	31.355	1.221	6.543e5	4.327e5	1.669	1.512	1.550	2895	3789	9.32e6	6.19e6	3219.8	1634.3	NO	bb	bb	76.096
13C-123478-HxCDF	34.972	0.956	2.404e5	4.874e5	1.022	0.493	0.510	2124	2815	3.62e6	7.23e6	1703.6	2568.6	NO	bd	bd	92.895
13C-123678-HxCDF	35.106	0.960	3.325e5	6.301e5	1.200	0.528	0.510	2124	2815	3.96e6	7.95e6	1865.4	2823.0	NO	db	db	104.643
13C-234678-HxCDF	35.963	0.983	2.665e5	5.117e5	1.071	0.521	0.510	2124	2815	3.55e6	7.15e6	1669.4	2538.3	NO	bb	bb	94.782
13C-123789-HxCDF	36.998	1.011	2.111e5	4.354e5	0.919	0.485	0.510	2124	2815	2.76e6	5.67e6	1297.5	2013.1	NO	bb	bb	91.818
13C-1234678-HpCDF	38.835	1.061	1.815e5	4.315e5	0.909	0.421	0.440	2774	4826	2.80e6	6.42e6	1010.2	1329.6	NO	bb	bb	88.019
13C-1234789-HpCDF	41.083	1.123	1.489e5	3.599e5	0.724	0.414	0.440	2774	4826	1.90e6	4.57e6	683.9	947.8	NO	bb	bb	91.739
13C-1234-TCDD	25.682	0.000	3.868e5	4.688e5	1.000	0.825	0.770	2563	1395	5.81e6	7.15e6	2267.0	5128.1	NO	bb	bb	100.000
13C-2378-TCDD	26.497	1.032	3.849e5	4.669e5	1.181	0.824	0.770	2563	1395	5.51e6	6.73e6	2148.9	4822.9	NO	bb	bb	84.257
13C-12378-PeCDD	31.611	1.231	4.143e5	2.518e5	0.978	1.645	1.550	1658	1792	5.84e6	3.63e6	3520.8	2027.0	NO	bb	bb	79.621
13C-123478-HxCDD	36.085	0.986	3.781e5	2.932e5	0.965	1.290	1.240	2820	1640	5.80e6	4.42e6	2057.0	2694.3	NO	bd	bd	90.762
13C-123678-HxCDD	36.208	0.990	4.246e5	3.448e5	1.168	1.231	1.240	2820	1640	5.99e6	4.71e6	2124.8	2873.9	NO	db	db	85.938
13C-1234678-HpCDD	40.338	1.102	2.573e5	2.276e5	0.645	1.130	1.050	2653	2294	3.19e6	2.99e6	1201.8	1301.5	NO	bb	bb	98.023
13C-OCDD	45.101	1.233	2.959e5	3.230e5	0.678	0.916	0.890	3733	3750	3.24e6	3.58e6	868.5	954.5	NO	bb	bb	119.043
13C-123789-HxCDD	36.586	0.000	4.229e5	3.436e5	1.000	1.231	1.240	2820	1640	5.83e6	4.65e6	2066.2	2836.0	NO	bb	bb	100.000
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Dataset: T:\Autospec\Processed Data Batch\201123.qld
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ID: BIK0510-BSD1, Name: 20112306, Date: 23-Nov-2020, Time: 13:49:58, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	1066	2192								
1289-TCDF					0.688		0.770	1066	2192								
13468-PECDF					1.181		1.550	564	1291								
12389-PECDF	32.401	1.079	2.760e3	1.407e3	0.766	1.961	1.550	3964	3125	3.48e4	1.66e4	8.8	5.3	YES	bb	bb	0.469
123468-HXCDF					1.003		1.240	3380	2656								
1368-TCDD					1.179		0.770	1303	616								
1289-TCDD					1.042		0.770	1303	616								
12479-PECDD					1.810		1.550	1767	1439								
12389-PECDD					1.165		1.550	1767	1439								
124679-HXCDD	34.093	0.945	1.645e2	1.648e2	1.056	0.998	1.240	1573	2325	3.60e3	3.03e3	2.3	1.3	YES	bb	bb	0.046
1234679-HPCDD	39.302	0.974	1.503e3	1.729e3	1.285	0.869	1.050	2913	2802	2.72e4	2.74e4	9.3	9.8	YES	bb	bb	0.518
Total-tetrafurans			5.910e4		0.754			1066		8.47e5							11.223
Total-penta1			0.000e0					564		0.00e0							
Total-pentafurans			7.280e5		0.809			3964		1.08e7							124.870
Total-hexafurans			8.740e5		0.876			3380		1.29e7							233.263
Total-heptafurans			3.517e5		0.997			3583		5.04e6							117.896
Total-Furans			2.241e6		0.893			1066		3.21e7							619.759
Total-tetradioxins			4.890e4		1.153			1303		6.63e5							10.772
Total-pentadioxins			2.202e5		1.321			1767		3.12e6							55.225
Total-hexadioxins			5.499e5		0.897			1573		8.10e6							169.182
Total-heptadioxins			1.506e5		1.165			2913		1.87e6							54.889
Total-Dioxins			1.122e6		1.100			1303		1.54e7							402.817
Total-TEQ			3.363e6					1303		4.75e7							1022.575
FUNCTION1 PFK			2.867e6					578068		4.89e7							
FUNCTION2 PFK			1.172e6					278460		2.29e7							0.000
FUNCTION3 PFK			5.012e5					403766		1.27e7							0.000
FUNCTION4 PFK			5.149e4					343891		1.69e6							
FUNCTION5 PFK			1.911e5					214940		4.84e6							
FUNCTION1 HXCD...			7.531e1					604		2.21e3							0.000
FUNCTION1 HPCD...			3.333e3					1763		7.63e4							0.000
FUNCTION2 HPCD...			1.255e3					1426		3.39e4							0.000
FUNCTION3 OCDPE			9.120e1					369		2.09e3							0.000
FUNCTION4 NCDPE			0.000e0					426		0.00e0							
FUNCTION5 DCDPE			0.000e0					226		0.00e0							

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:00:42 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: BIK0510-BSD1, Name: 20112306, Date: 23-Nov-2020, Time: 13:49:58, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.88	5.910e4	6.932e4	0.729	0.85	0.77	794.7	YES	NO	bd	bb	11.223

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.38	3.769e5	2.282e5	0.880	1.65	1.55	1407.3	YES	NO	bb	bb	63.227
2	12378-PeCDF	30.03	3.511e5	2.058e5	0.779	1.71	1.55	1313.6	YES	NO	bb	bb	61.643

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	234678-HxCDF	35.99	2.364e5	1.729e5	0.863	1.37	1.24	1029.7	YES	NO	MM	MM	60.962
2	Total-hexafurans	35.41	1.227e2	1.054e2	0.876	1.16	1.24	1.7	NO	NO	bb	bb	0.033
3	123678-HxCDF	35.13	2.405e5	1.865e5	0.853	1.29	1.24	1046.3	YES	NO	db	db	51.971
4	123478-HxCDF	34.99	2.234e5	1.674e5	0.880	1.34	1.24	997.0	YES	NO	bd	bd	60.994
5	123789-HxCDF	37.01	1.734e5	1.254e5	0.780	1.38	1.24	731.6	YES	NO	bb	bb	59.255
6	Total-hexafurans	36.65	1.842e2	1.398e2	0.876	1.32	1.24	1.4	NO	NO	db	db	0.047

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.11	1.548e5	1.369e5	0.994	1.13	1.05	543.9	YES	NO	bb	bb	57.668
2	1234678-HpCDF	38.85	1.969e5	1.726e5	1.001	1.14	1.05	863.9	YES	NO	MM	bb	60.228

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.88	5.910e4	6.932e4	0.729	0.85	0.77	794.7	YES	NO	bd	bb	11.223
2	23478-PeCDF	31.38	3.769e5	2.282e5	0.880	1.65	1.55	1407.3	YES	NO	bb	bb	63.227
3	12378-PeCDF	30.03	3.511e5	2.058e5	0.779	1.71	1.55	1313.6	YES	NO	bb	bb	61.643
4	234678-HxCDF	35.99	2.364e5	1.729e5	0.863	1.37	1.24	1029.7	YES	NO	MM	MM	60.962
5	Total-hexafurans	35.41	1.227e2	1.054e2	0.876	1.16	1.24	1.7	NO	NO	bb	bb	0.033
6	123678-HxCDF	35.13	2.405e5	1.865e5	0.853	1.29	1.24	1046.3	YES	NO	db	db	51.971
7	123478-HxCDF	34.99	2.234e5	1.674e5	0.880	1.34	1.24	997.0	YES	NO	bd	bd	60.994
8	123789-HxCDF	37.01	1.734e5	1.254e5	0.780	1.38	1.24	731.6	YES	NO	bb	bb	59.255
9	Total-hexafurans	36.65	1.842e2	1.398e2	0.876	1.32	1.24	1.4	NO	NO	db	db	0.047
10	1234789-HpCDF	41.11	1.548e5	1.369e5	0.994	1.13	1.05	543.9	YES	NO	bb	bb	57.668
11	1234678-HpCDF	38.85	1.969e5	1.726e5	1.001	1.14	1.05	863.9	YES	NO	MM	bb	60.228
12	OCDF	45.37	2.280e5	2.468e5	1.158	0.92	0.89	1043.1	YES	NO	MM	bb	132.507

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.53	4.890e4	6.471e4	1.238	0.76	0.77	508.9	YES	NO	bb	bd	10.772

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.63	2.202e5	1.431e5	0.988	1.54	1.55	1768.3	YES	NO	bb	MM	55.225

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.60	1.723e5	1.484e5	0.784	1.16	1.24	1551.0	YES	NO	MM	MM	56.817
2	123678-HxCDD	36.22	2.060e5	1.892e5	0.907	1.09	1.24	1853.8	YES	NO	db	dd	56.635
3	123478-HxCDD	36.11	1.716e5	1.434e5	0.842	1.20	1.24	1744.5	YES	NO	bd	bd	55.730

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.35	1.506e5	1.272e5	1.044	1.18	1.05	643.1	YES	NO	bd	bb	54.889

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.53	4.890e4	6.471e4	1.238	0.76	0.77	508.9	YES	NO	bb	bd	10.772
2	12378-PeCDD	31.63	2.202e5	1.431e5	0.988	1.54	1.55	1768.3	YES	NO	bb	MM	55.225
3	123789-HxCDD	36.60	1.723e5	1.484e5	0.784	1.16	1.24	1551.0	YES	NO	MM	MM	56.817
4	123678-HxCDD	36.22	2.060e5	1.892e5	0.907	1.09	1.24	1853.8	YES	NO	db	dd	56.635
5	123478-HxCDD	36.11	1.716e5	1.434e5	0.842	1.20	1.24	1744.5	YES	NO	bd	bd	55.730
6	1234678-HpCDD	40.35	1.506e5	1.272e5	1.044	1.18	1.05	643.1	YES	NO	bd	bb	54.889
7	OCDD	45.12	1.525e5	1.835e5	0.963	0.83	0.89	784.6	YES	NO	bb	MM	112.748

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.88	5.910e4	6.932e4	0.729	0.85	0.77	794.7	YES	NO	bd	bb	11.223
2	23478-PeCDF	31.38	3.769e5	2.282e5	0.880	1.65	1.55	1407.3	YES	NO	bb	bb	63.227
3	12378-PeCDF	30.03	3.511e5	2.058e5	0.779	1.71	1.55	1313.6	YES	NO	bb	bb	61.643
4	234678-HxCDF	35.99	2.364e5	1.729e5	0.863	1.37	1.24	1029.7	YES	NO	MM	MM	60.962
5	Total-hexafurans	35.41	1.227e2	1.054e2	0.876	1.16	1.24	1.7	NO	NO	bb	bb	0.033
6	123678-HxCDF	35.13	2.405e5	1.865e5	0.853	1.29	1.24	1046.3	YES	NO	db	db	51.971
7	123478-HxCDF	34.99	2.234e5	1.674e5	0.880	1.34	1.24	997.0	YES	NO	bd	bd	60.994
8	123789-HxCDF	37.01	1.734e5	1.254e5	0.780	1.38	1.24	731.6	YES	NO	bb	bb	59.255
9	Total-hexafurans	36.65	1.842e2	1.398e2	0.876	1.32	1.24	1.4	NO	NO	db	db	0.047
10	1234789-HpCDF	41.11	1.548e5	1.369e5	0.994	1.13	1.05	543.9	YES	NO	bb	bb	57.668
11	1234678-HpCDF	38.85	1.969e5	1.726e5	1.001	1.14	1.05	863.9	YES	NO	MM	bb	60.228
12	OCDF	45.37	2.280e5	2.468e5	1.158	0.92	0.89	1043.1	YES	NO	MM	bb	132.507
13	2378-TCDD	26.53	4.890e4	6.471e4	1.238	0.76	0.77	508.9	YES	NO	bb	bd	10.772
14	12378-PeCDD	31.63	2.202e5	1.431e5	0.988	1.54	1.55	1768.3	YES	NO	bb	MM	55.225
15	123789-HxCDD	36.60	1.723e5	1.484e5	0.784	1.16	1.24	1551.0	YES	NO	MM	MM	56.817
16	123678-HxCDD	36.22	2.060e5	1.892e5	0.907	1.09	1.24	1853.8	YES	NO	db	dd	56.635
17	123478-HxCDD	36.11	1.716e5	1.434e5	0.842	1.20	1.24	1744.5	YES	NO	bd	bd	55.730
18	1234678-HpCDD	40.35	1.506e5	1.272e5	1.044	1.18	1.05	643.1	YES	NO	bd	bb	54.889
19	OCDD	45.12	1.525e5	1.835e5	0.963	0.83	0.89	784.6	YES	NO	bb	MM	112.748

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	22.75	5.425e4					1.4	NO		dd		
2	FUNCTION1 PFK	22.65	6.227e4					1.7	NO		dd		
3	FUNCTION1 PFK	22.51	6.315e4					1.7	NO		bd		
4	FUNCTION1 PFK	22.30	6.341e4					1.9	NO		db		
5	FUNCTION1 PFK	22.19	7.566e4					2.1	NO		dd		
6	FUNCTION1 PFK	22.07	1.274e5					2.4	NO		bd		
7	FUNCTION1 PFK	21.93	3.186e4					1.1	NO		bb		
8	FUNCTION1 PFK	21.83	5.525e4					1.8	NO		bb		
9	FUNCTION1 PFK	21.38	3.614e4					1.3	NO		db		
10	FUNCTION1 PFK	21.32	7.435e3					0.5	NO		bd		
11	FUNCTION1 PFK	21.25	4.140e4					1.7	NO		db		
12	FUNCTION1 PFK	21.16	6.999e4					1.9	NO		bd		
13	FUNCTION1 PFK	25.23	6.596e4					1.7	NO		db		
14	FUNCTION1 PFK	25.11	6.100e4					1.9	NO		bd		
15	FUNCTION1 PFK	24.90	6.685e4					2.2	NO		bb		
16	FUNCTION1 PFK	24.79	6.268e4					1.5	NO		db		
17	FUNCTION1 PFK	24.65	7.851e4					2.1	NO		dd		
18	FUNCTION1 PFK	24.55	7.594e4					1.8	NO		bd		
19	FUNCTION1 PFK	24.34	4.578e4					1.6	NO		bb		
20	FUNCTION1 PFK	24.11	4.409e4					1.6	NO		bb		
21	FUNCTION1 PFK	23.99	3.732e4					1.5	NO		bb		
22	FUNCTION1 PFK	23.87	5.505e4					1.7	NO		bb		
23	FUNCTION1 PFK	23.67	2.173e4					0.9	NO		bb		
24	FUNCTION1 PFK	23.43	5.780e4					1.8	NO		db		
25	FUNCTION1 PFK	23.31	6.404e4					1.6	NO		bd		
26	FUNCTION1 PFK	23.19	6.214e4					1.9	NO		bb		
27	FUNCTION1 PFK	23.08	3.778e4					1.5	NO		bb		
28	FUNCTION1 PFK	22.86	4.239e4					1.5	NO		db		
29	FUNCTION1 PFK	27.46	1.120e5					3.0	YES		bd		
30	FUNCTION1 PFK	27.33	5.855e4					1.8	NO		bb		
31	FUNCTION1 PFK	27.16	1.973e4					0.4	NO		bb		
32	FUNCTION1 PFK	27.03	9.074e4					2.3	NO		db		
33	FUNCTION1 PFK	26.89	5.963e4					1.8	NO		dd		
34	FUNCTION1 PFK	26.78	5.733e4					1.8	NO		bd		
35	FUNCTION1 PFK	26.69	6.331e4					1.3	NO		bb		
36	FUNCTION1 PFK	26.47	1.961e4					0.8	NO		bb		
37	FUNCTION1 PFK	26.33	6.372e4					2.1	NO		db		

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	26.24	5.744e4					1.8	NO		bd		
39	FUNCTION1 PFK	26.12	6.000e4					1.8	NO		db		
40	FUNCTION1 PFK	26.01	8.192e4					1.7	NO		dd		
41	FUNCTION1 PFK	25.91	8.819e4					2.3	NO		bd		
42	FUNCTION1 PFK	25.68	4.336e4					1.2	NO		db		
43	FUNCTION1 PFK	25.56	6.581e4					1.7	NO		bd		
44	FUNCTION1 PFK	25.42	1.762e4					1.0	NO		bb		
45	FUNCTION1 PFK	28.14	6.582e4					1.7	NO		bb		
46	FUNCTION1 PFK	28.01	5.801e4					1.9	NO		bb		
47	FUNCTION1 PFK	27.90	5.651e4					1.8	NO		db		
48	FUNCTION1 PFK	27.80	4.786e4					1.8	NO		bd		
49	FUNCTION1 PFK	27.69	2.396e4					1.1	NO		db		
50	FUNCTION1 PFK	27.65	6.127e3					0.6	NO		bd		
51	FUNCTION1 PFK	27.57	8.267e4					2.7	NO		db		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.26	3.611e4					2.6	NO		bd		0.000
2	FUNCTION2 PFK	29.16	1.997e4					1.7	NO		bb		0.000
3	FUNCTION2 PFK	28.84	1.159e3					0.4	NO		bb		0.000
4	FUNCTION2 PFK	28.72	1.191e4					1.3	NO		db		0.000
5	FUNCTION2 PFK	28.65	6.146e3					0.9	NO		bd		0.000
6	FUNCTION2 PFK	28.46	1.187e4					1.2	NO		bb		0.000
7	FUNCTION2 PFK	28.34	4.804e3					0.9	NO		bb		0.000
8	FUNCTION2 PFK	28.29	1.604e3					0.5	NO		bb		0.000
9	FUNCTION2 PFK	30.75	4.266e3					0.7	NO		bb		0.000
10	FUNCTION2 PFK	30.70	2.922e4					2.6	NO		bb		0.000
11	FUNCTION2 PFK	30.49	1.932e4					2.0	NO		db		0.000
12	FUNCTION2 PFK	30.39	5.190e4					2.8	NO		dd		0.000
13	FUNCTION2 PFK	30.35	3.125e4					2.5	NO		dd		0.000
14	FUNCTION2 PFK	30.29	2.125e4					1.8	NO		dd		0.000
15	FUNCTION2 PFK	30.23	2.727e4					2.3	NO		dd		0.000
16	FUNCTION2 PFK	30.14	5.401e4					3.0	NO		dd		0.000
17	FUNCTION2 PFK	30.04	6.253e4					3.1	YES		dd		0.000
18	FUNCTION2 PFK	29.90	5.735e4					2.7	NO		dd		0.000
19	FUNCTION2 PFK	29.82	5.091e4					2.7	NO		dd		0.000
20	FUNCTION2 PFK	29.70	4.609e4					3.1	YES		dd		0.000
21	FUNCTION2 PFK	29.57	8.594e4					3.3	YES		dd		0.000
22	FUNCTION2 PFK	29.46	4.755e4					2.9	NO		dd		0.000
23	FUNCTION2 PFK	29.38	2.402e4					2.6	NO		dd		0.000
24	FUNCTION2 PFK	29.35	3.907e4					3.0	YES		dd		0.000
25	FUNCTION2 PFK	32.67	2.543e4					2.0	NO		bb		0.000
26	FUNCTION2 PFK	32.49	5.550e3					1.0	NO		bb		0.000
27	FUNCTION2 PFK	32.37	1.259e4					1.3	NO		bb		0.000
28	FUNCTION2 PFK	32.03	3.225e4					2.0	NO		db		0.000
29	FUNCTION2 PFK	31.90	3.270e4					2.2	NO		dd		0.000
30	FUNCTION2 PFK	31.81	4.033e4					2.3	NO		bd		0.000
31	FUNCTION2 PFK	31.72	1.188e4					1.5	NO		db		0.000
32	FUNCTION2 PFK	31.66	1.491e4					1.0	NO		bd		0.000
33	FUNCTION2 PFK	31.48	3.220e4					2.5	NO		db		0.000
34	FUNCTION2 PFK	31.40	1.252e4					1.3	NO		dd		0.000
35	FUNCTION2 PFK	31.35	1.938e4					1.7	NO		bd		0.000
36	FUNCTION2 PFK	31.13	4.186e4					3.1	YES		bb		0.000
37	FUNCTION2 PFK	31.04	1.287e4					1.2	NO		db		0.000

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION2 PFK	31.00	2.327e4					1.7	NO		dd		0.000
39	FUNCTION2 PFK	30.92	2.183e4					1.9	NO		dd		0.000
40	FUNCTION2 PFK	30.82	4.872e4					2.6	NO		bd		0.000
41	FUNCTION2 PFK	32.91	1.087e4					0.8	NO		bb		0.000
42	FUNCTION2 PFK	32.79	2.718e4					1.8	NO		bb		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	35.87	2.393e4					1.5	NO		bb		0.000
2	FUNCTION3 PFK	35.46	4.391e4					2.2	NO		bb		0.000
3	FUNCTION3 PFK	35.16	2.106e4					1.7	NO		bb		0.000
4	FUNCTION3 PFK	34.74	3.368e4					2.1	NO		bb		0.000
5	FUNCTION3 PFK	34.63	4.391e4					2.2	NO		bb		0.000
6	FUNCTION3 PFK	34.29	2.957e4					1.4	NO		db		0.000
7	FUNCTION3 PFK	34.23	2.235e4					1.6	NO		bd		0.000
8	FUNCTION3 PFK	33.99	2.530e4					1.6	NO		bb		0.000
9	FUNCTION3 PFK	33.87	1.774e4					1.4	NO		bb		0.000
10	FUNCTION3 PFK	33.35	4.073e4					2.4	NO		bb		0.000
11	FUNCTION3 PFK	33.20	7.451e3					0.8	NO		bb		0.000
12	FUNCTION3 PFK	33.11	4.475e4					1.9	NO		bb		0.000
13	FUNCTION3 PFK	33.05	7.375e3					1.0	NO		bb		0.000
14	FUNCTION3 PFK	37.90	5.444e3					0.7	NO		bb		0.000
15	FUNCTION3 PFK	37.50	2.934e4					1.7	NO		bb		0.000
16	FUNCTION3 PFK	37.41	2.455e4					2.0	NO		db		0.000
17	FUNCTION3 PFK	37.37	4.911e3					0.8	NO		bd		0.000
18	FUNCTION3 PFK	37.32	2.078e3					0.5	NO		bb		0.000
19	FUNCTION3 PFK	36.96	3.127e4					1.5	NO		bb		0.000
20	FUNCTION3 PFK	36.83	9.792e3					1.0	NO		bb		0.000
21	FUNCTION3 PFK	36.29	3.205e4					1.5	NO		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	41.96	2.756e4					2.1	NO		bb		
2	FUNCTION4 PFK	41.52	6.593e3					1.0	NO		bb		
3	FUNCTION4 PFK	38.22	1.733e4					1.8	NO		bb		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.01	2.567e4					2.0	NO		bb		
2	FUNCTION5 PFK	43.79	2.393e4					2.0	NO		bb		
3	FUNCTION5 PFK	43.45	1.240e4					2.0	NO		bb		
4	FUNCTION5 PFK	46.38	1.571e4					2.0	NO		bb		
5	FUNCTION5 PFK	45.71	1.572e4					1.8	NO		db		
6	FUNCTION5 PFK	45.64	2.939e3					0.8	NO		bd		
7	FUNCTION5 PFK	45.26	1.575e4					2.0	NO		bb		
8	FUNCTION5 PFK	45.04	1.585e4					1.9	NO		bb		
9	FUNCTION5 PFK	44.78	2.394e4					1.8	NO		bb		
10	FUNCTION5 PFK	44.70	1.219e4					1.7	NO		bb		
11	FUNCTION5 PFK	44.51	7.498e2					0.4	NO		bb		
12	FUNCTION5 PFK	44.38	2.587e3					0.8	NO		bb		
13	FUNCTION5 PFK	44.31	7.629e2					0.4	NO		bb		
14	FUNCTION5 PFK	44.23	2.206e4					2.4	NO		bb		
15	FUNCTION5 PFK	44.08	8.863e2					0.5	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	23.10	7.531e1					3.7	YES		bb		0.000

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	21.50	8.366e1					1.0	NO		bb		0.000
2	FUNCTION1 HPCD...	24.35	1.493e2					2.1	NO		db		0.000
3	FUNCTION1 HPCD...	24.31	1.004e2					1.8	NO		bd		0.000
4	FUNCTION1 HPCD...	23.94	1.074e2					1.4	NO		bb		0.000
5	FUNCTION1 HPCD...	23.81	7.236e1					1.2	NO		bb		0.000
6	FUNCTION1 HPCD...	23.60	2.240e2					1.9	NO		bb		0.000
7	FUNCTION1 HPCD...	23.46	1.043e2					1.9	NO		db		0.000
8	FUNCTION1 HPCD...	23.42	2.010e2					2.5	NO		dd		0.000
9	FUNCTION1 HPCD...	23.34	7.286e1					1.2	NO		bd		0.000
10	FUNCTION1 HPCD...	23.07	8.484e1					1.0	NO		bb		0.000
11	FUNCTION1 HPCD...	22.93	1.043e2					1.8	NO		db		0.000
12	FUNCTION1 HPCD...	22.84	1.008e2					1.2	NO		bd		0.000
13	FUNCTION1 HPCD...	22.66	1.057e2					1.8	NO		bb		0.000
14	FUNCTION1 HPCD...	22.31	1.012e2					1.4	NO		db		0.000
15	FUNCTION1 HPCD...	22.27	1.195e2					1.7	NO		bd		0.000
16	FUNCTION1 HPCD...	22.03	1.584e2					1.1	NO		bb		0.000
17	FUNCTION1 HPCD...	21.66	1.285e2					1.0	NO		bb		0.000
18	FUNCTION1 HPCD...	27.71	7.217e1					1.1	NO		bb		0.000
19	FUNCTION1 HPCD...	27.39	1.670e2					1.6	NO		bb		0.000
20	FUNCTION1 HPCD...	27.16	1.682e2					2.1	NO		bb		0.000
21	FUNCTION1 HPCD...	27.01	8.500e1					1.6	NO		bb		0.000
22	FUNCTION1 HPCD...	26.86	1.090e2					1.2	NO		bb		0.000
23	FUNCTION1 HPCD...	25.74	1.066e2					1.4	NO		bb		0.000
24	FUNCTION1 HPCD...	25.65	9.064e1					1.4	NO		db		0.000
25	FUNCTION1 HPCD...	25.58	1.280e2					1.8	NO		bd		0.000
26	FUNCTION1 HPCD...	25.29	1.284e2					1.5	NO		db		0.000
27	FUNCTION1 HPCD...	25.20	9.248e1					1.1	NO		bd		0.000
28	FUNCTION1 HPCD...	24.99	8.817e1					1.3	NO		bb		0.000
29	FUNCTION1 HPCD...	24.73	7.864e1					1.1	NO		bb		0.000

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ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	28.58	7.962e1					2.3	NO		db		0.000
2	FUNCTION2 HPCD...	28.55	1.315e2					2.3	NO		bd		0.000
3	FUNCTION2 HPCD...	28.44	7.658e1					1.3	NO		bb		0.000
4	FUNCTION2 HPCD...	32.66	8.410e1					2.1	NO		bb		0.000
5	FUNCTION2 HPCD...	32.32	8.929e1					2.1	NO		bb		0.000
6	FUNCTION2 HPCD...	31.29	1.485e2					3.5	YES		db		0.000
7	FUNCTION2 HPCD...	31.24	1.692e2					2.9	NO		bd		0.000
8	FUNCTION2 HPCD...	30.66	8.034e1					1.3	NO		bb		0.000
9	FUNCTION2 HPCD...	30.00	1.018e2					1.4	NO		bb		0.000
10	FUNCTION2 HPCD...	29.56	9.305e1					1.8	NO		bb		0.000
11	FUNCTION2 HPCD...	29.15	7.319e1					1.4	NO		bb		0.000
12	FUNCTION2 HPCD...	28.92	1.281e2					1.5	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	34.08	9.120e1					5.6	YES		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

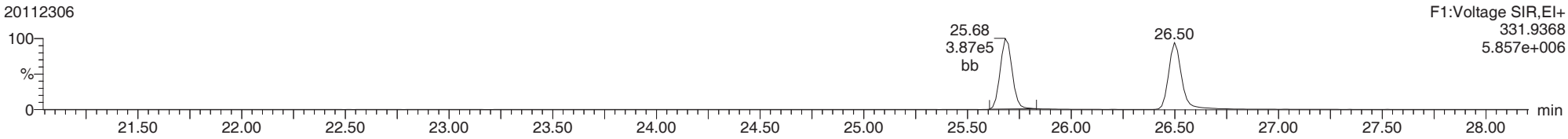
ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: BIK0510-BSD1, Name: 20112306, Date: 23-Nov-2020, Time: 13:49:58, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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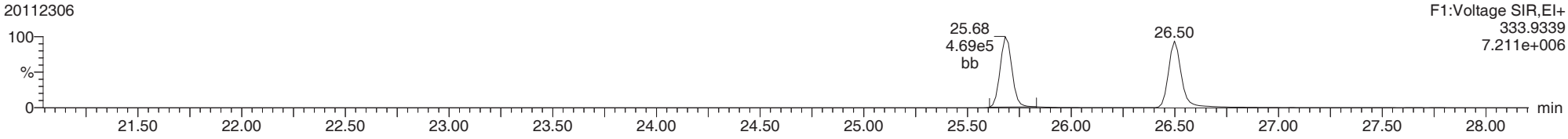
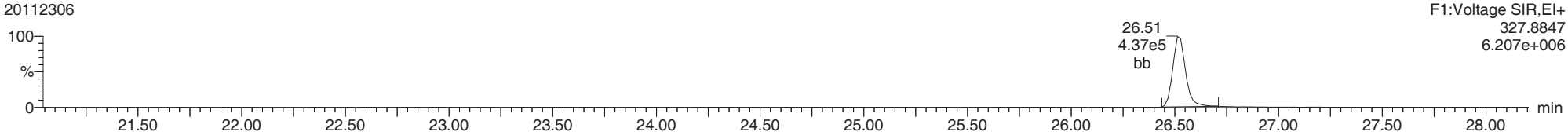


37CL-2378-TCDD



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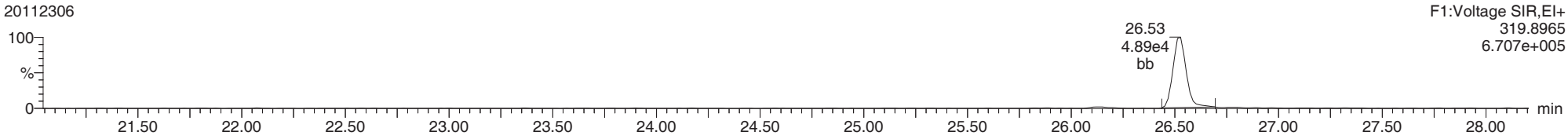
Printed: Tuesday, November 24, 2020 10:00:42 Pacific Standard Time

ID: BIK0510-BSD1, Name: 20112306, Date: 23-Nov-2020, Time: 13:49:58, Conditions: AUTOSPEC01, User: pk

2378-TCDD



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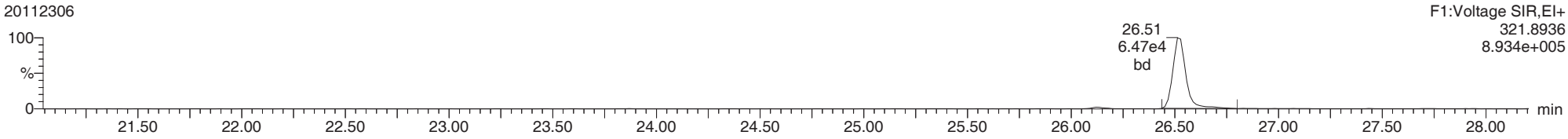

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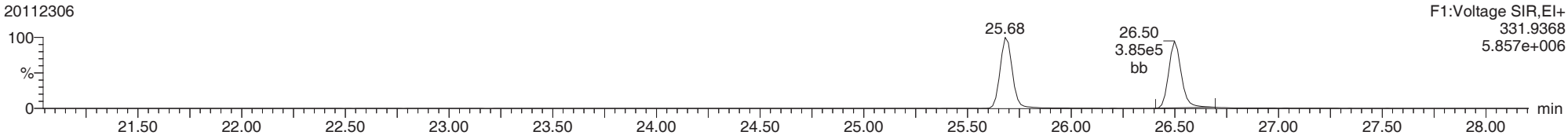

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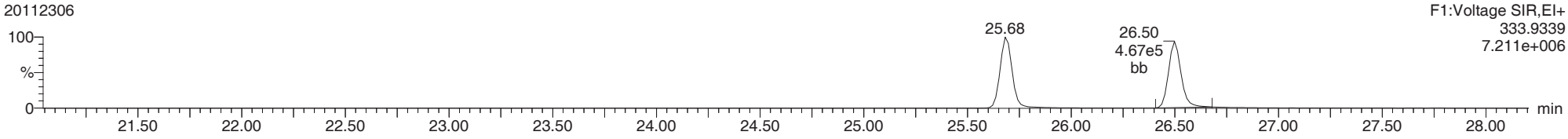

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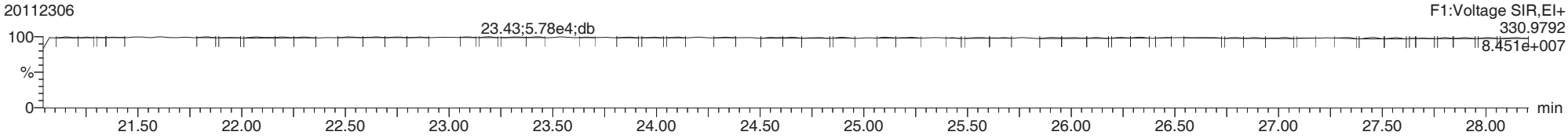

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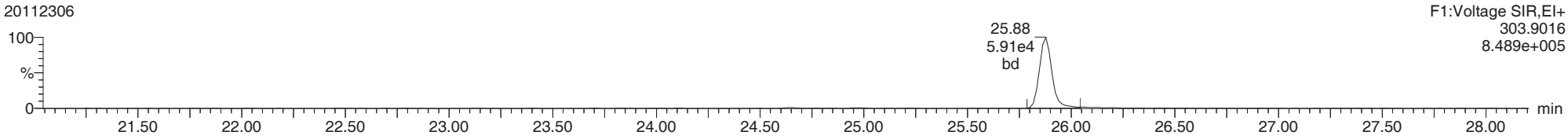
ID: BIK0510-BSD1, Name: 20112306, Date: 23-Nov-2020, Time: 13:49:58, Conditions: AUTOSPEC01, User: pk

2378-TCDF



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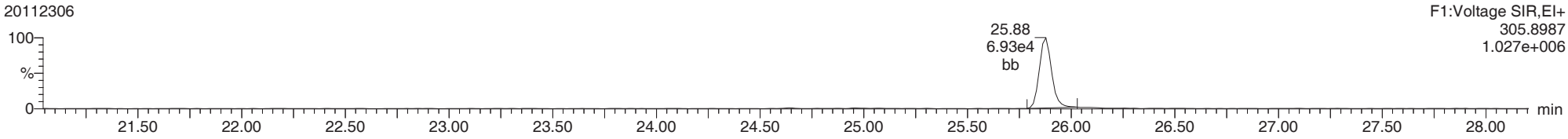

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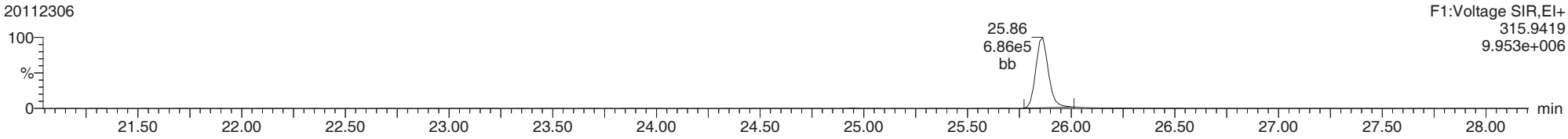

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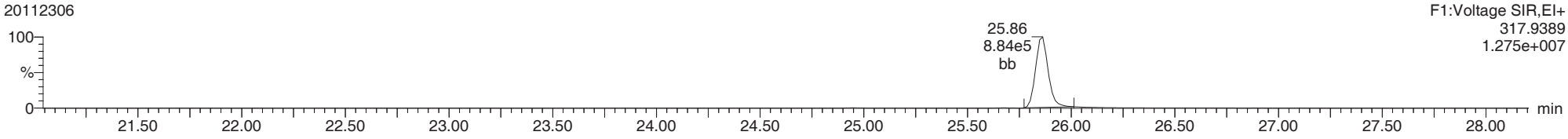
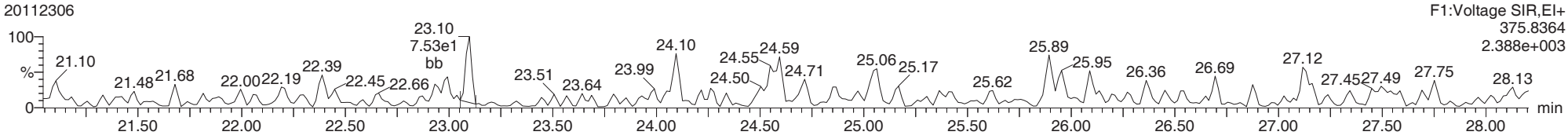


FUNCTION1 HXCDPE



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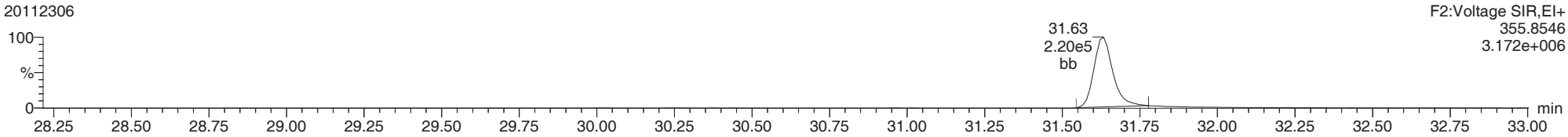
12378-PeCDD



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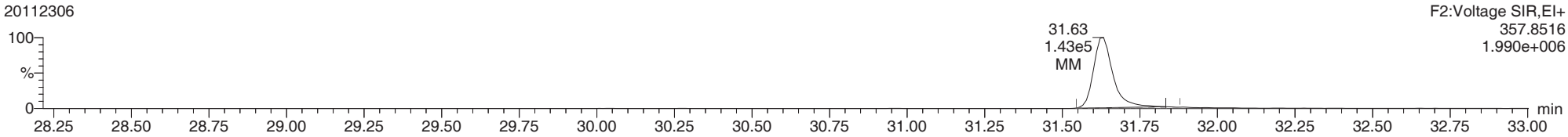

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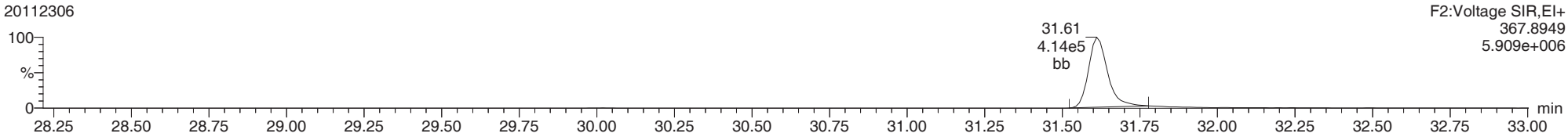

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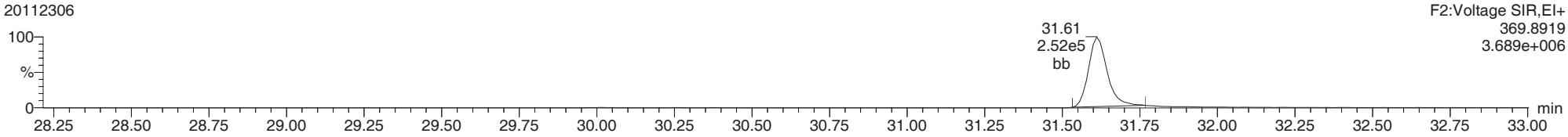
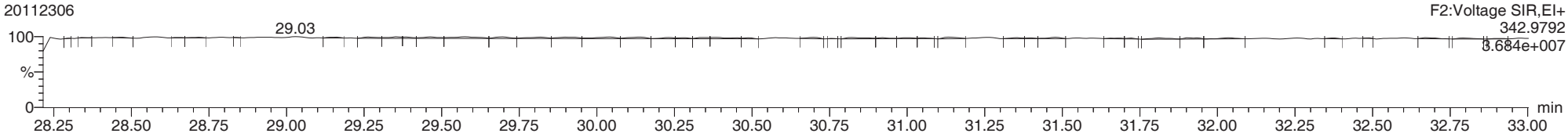


FUNCTION2 PFK



Dataset: T:\Autospec\Processed Data Batch\201123.qld
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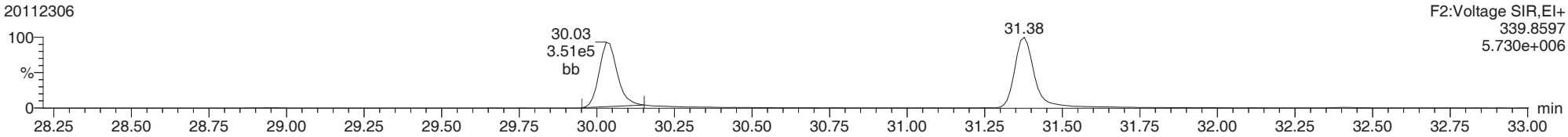
ID: BIK0510-BSD1, Name: 20112306, Date: 23-Nov-2020, Time: 13:49:58, Conditions: AUTOSPEC01, User: pk

12378-PeCDF



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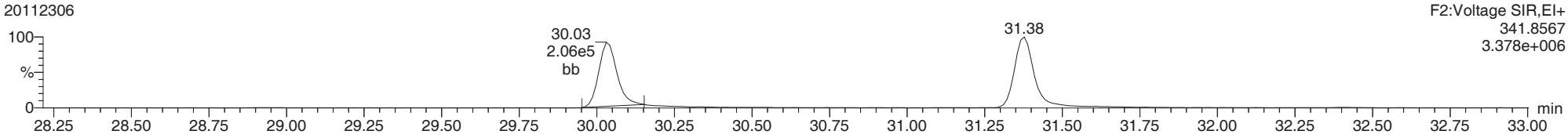

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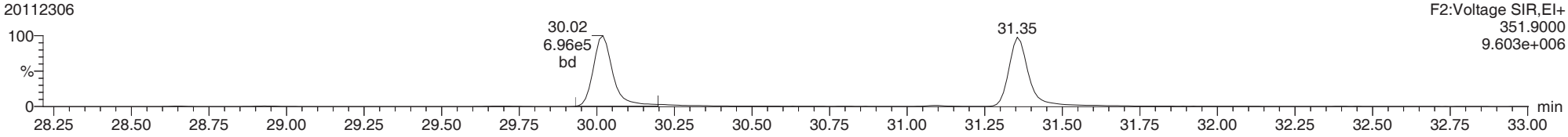

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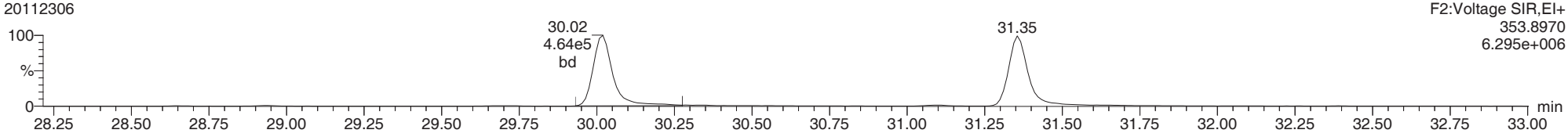
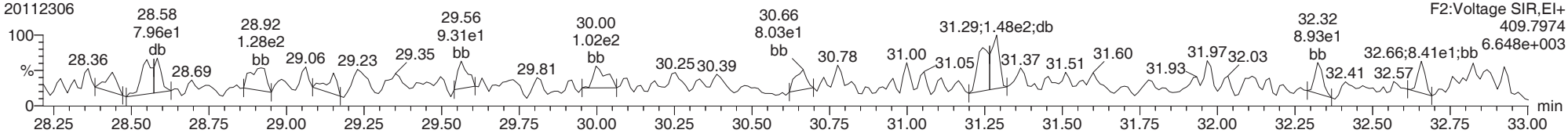


FUNCTION2 HPCDPE



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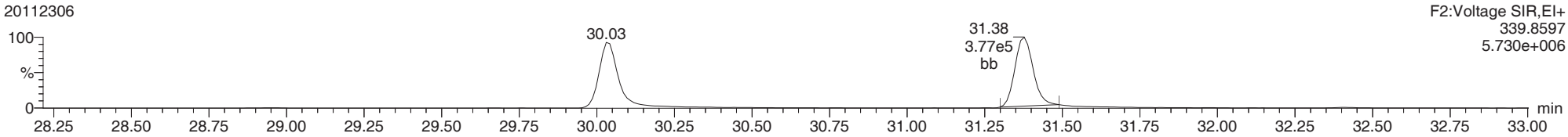
ID: BIK0510-BSD1, Name: 20112306, Date: 23-Nov-2020, Time: 13:49:58, Conditions: AUTOSPEC01, User: pk

23478-PeCDF



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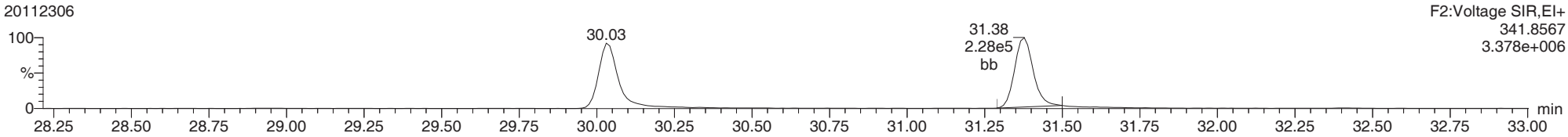

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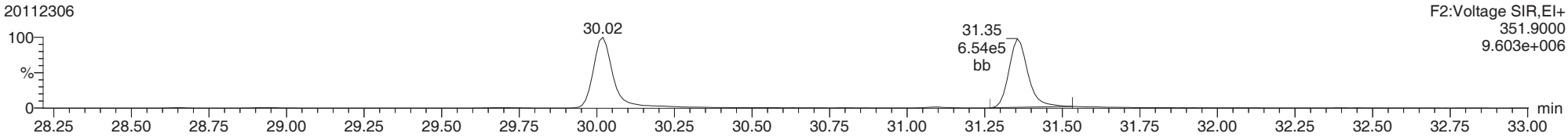

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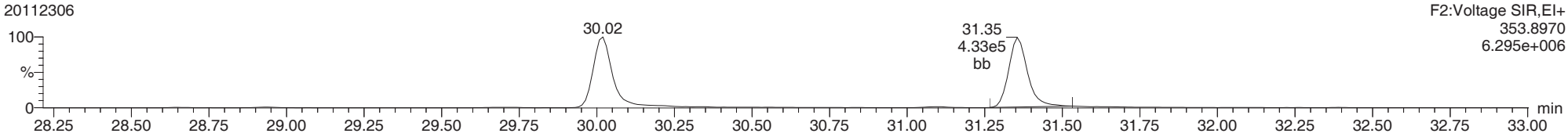
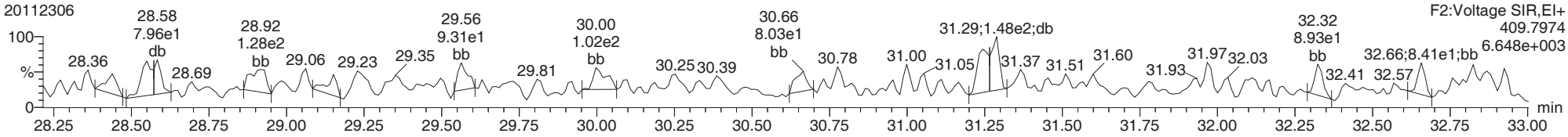
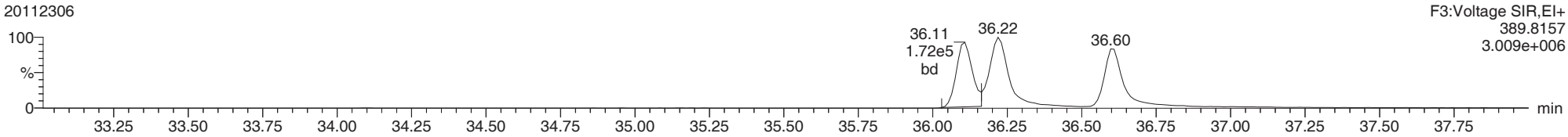


FUNCTION2 HPCDPE



ID: BIK0510-BSD1, Name: 20112306, Date: 23-Nov-2020, Time: 13:49:58, Conditions: AUTOSPEC01, User: pk

123478-HxCDD



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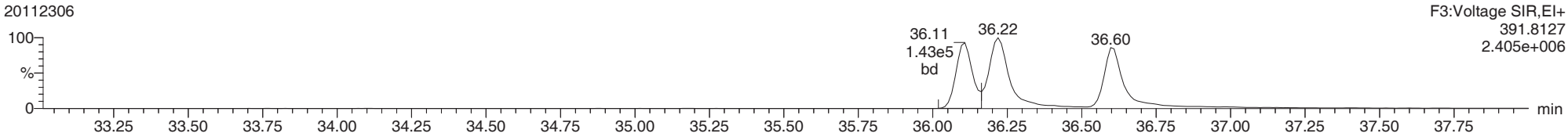

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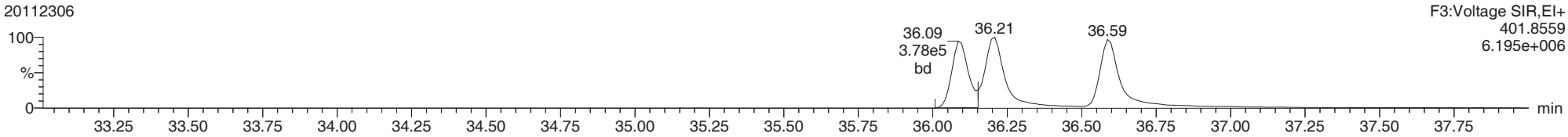

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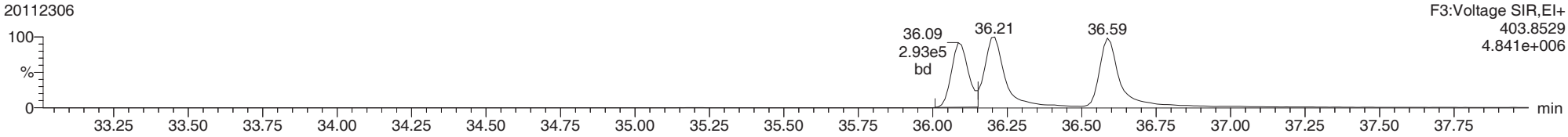

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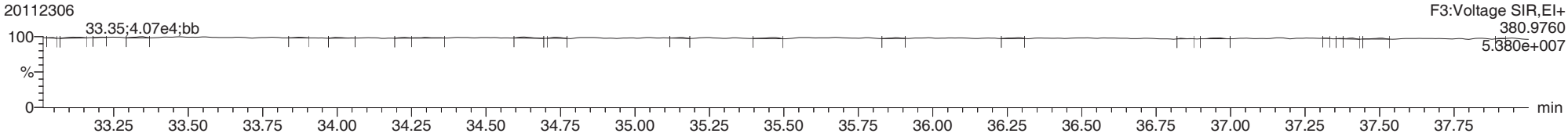

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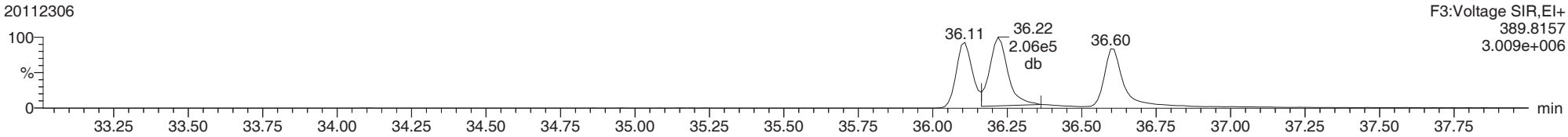
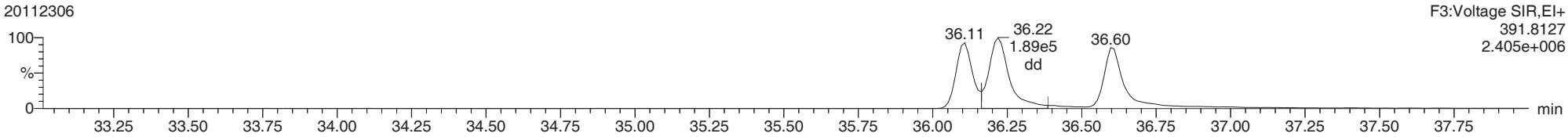
ID: BIK0510-BSD1, Name: 20112306, Date: 23-Nov-2020, Time: 13:49:58, Conditions: AUTOSPEC01, User: pk

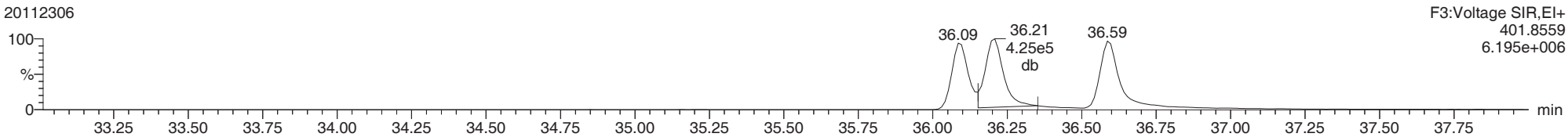
123678-HxCDD



123678-HxCDD



13C-123678-HxCDD



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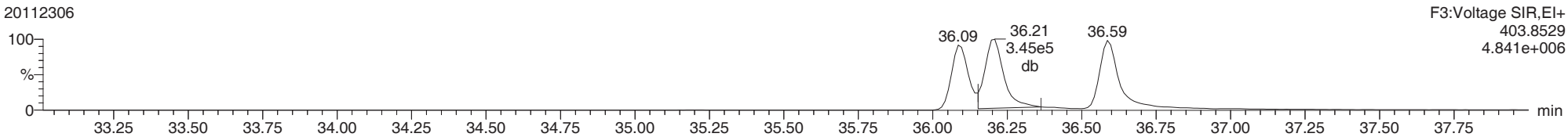

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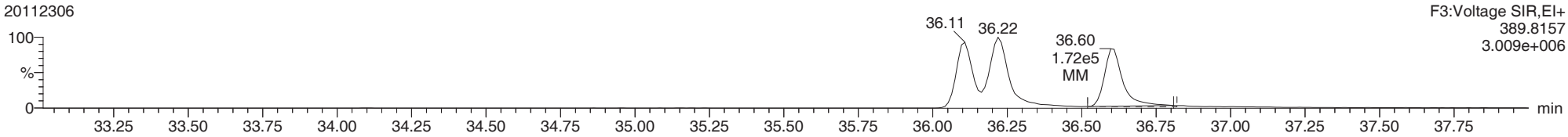
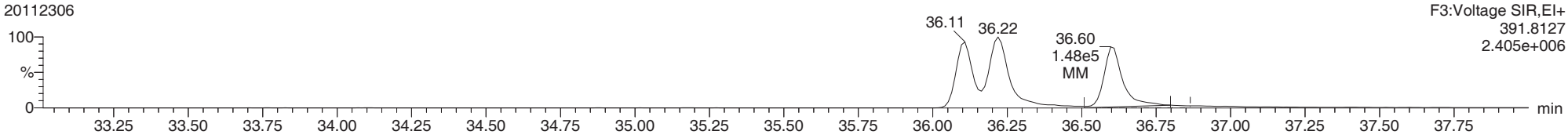
123789-HxCDD



123789-HxCDD



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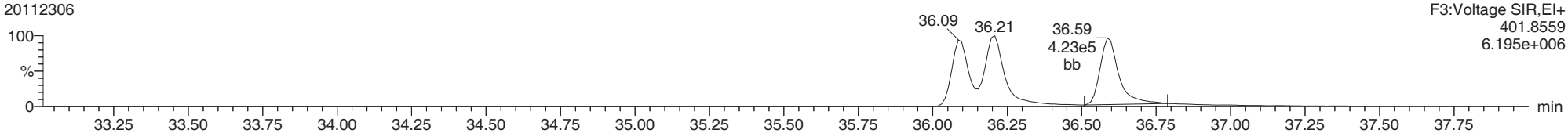

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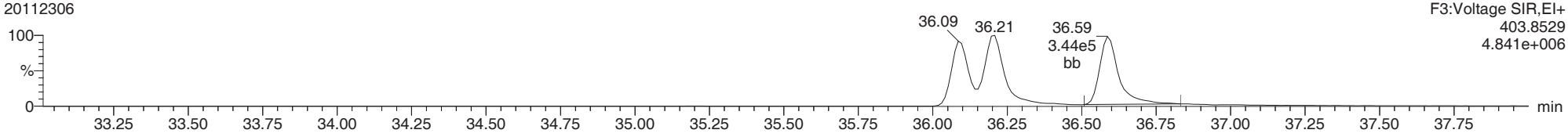

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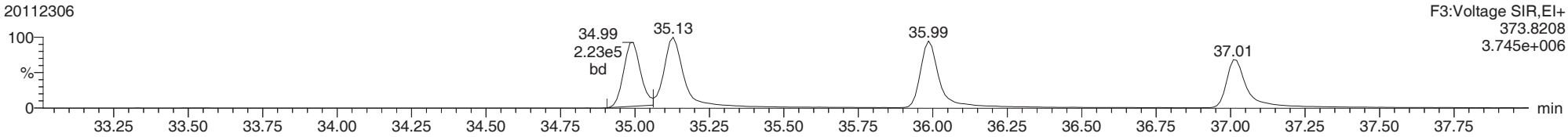

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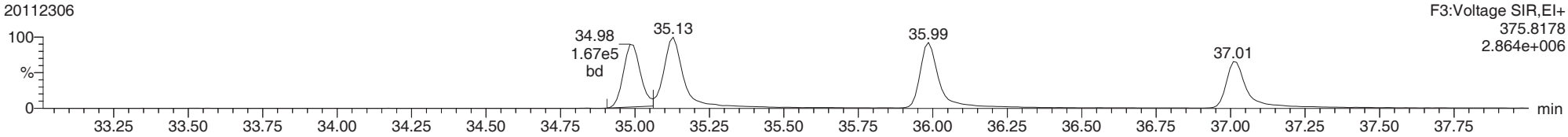

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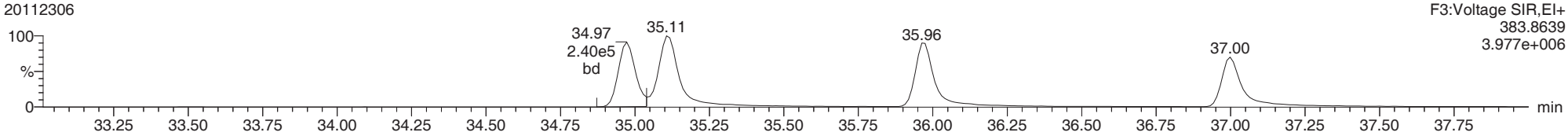

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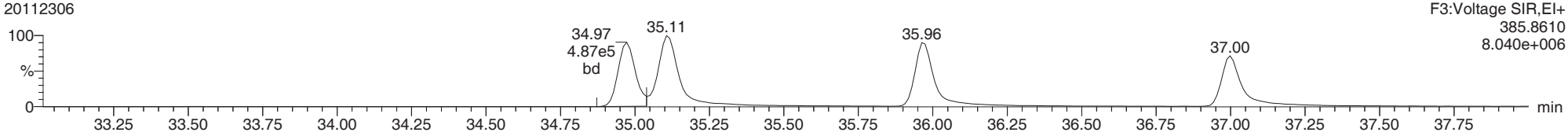
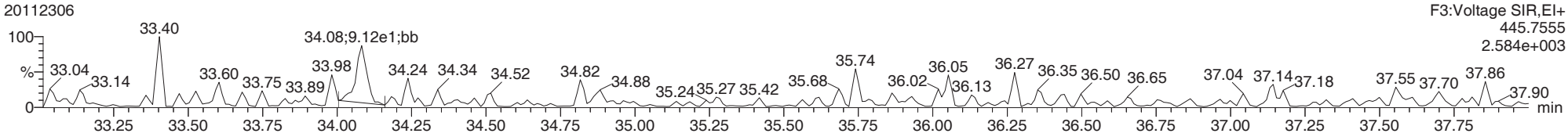


FUNCTION3 OCDPE



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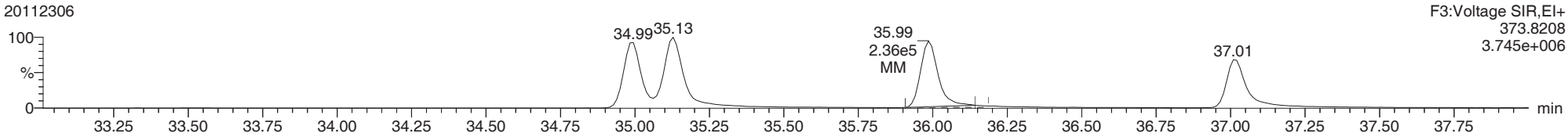
234678-HxCDF



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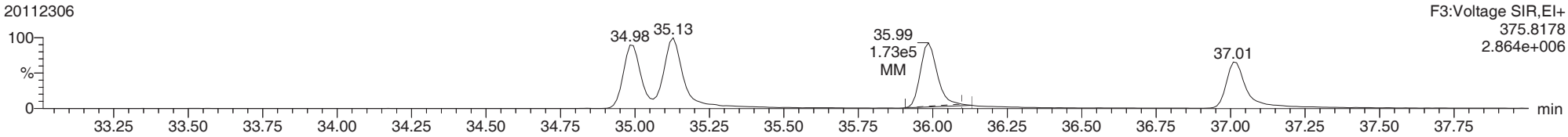

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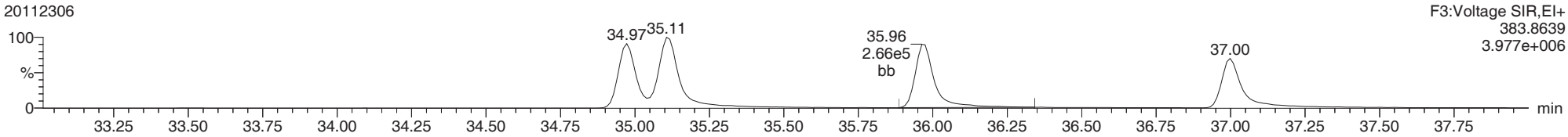

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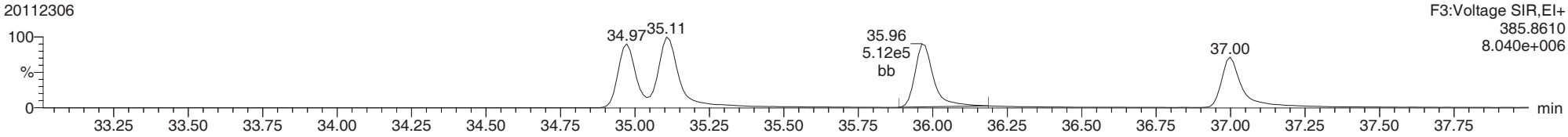

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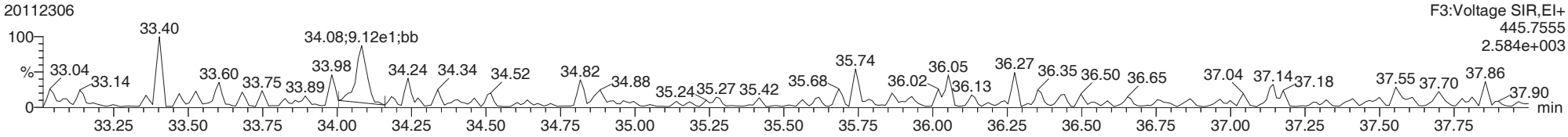

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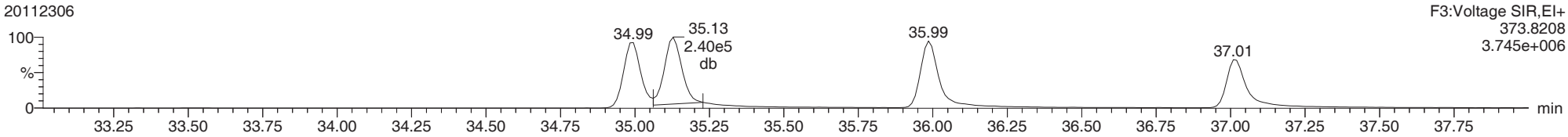

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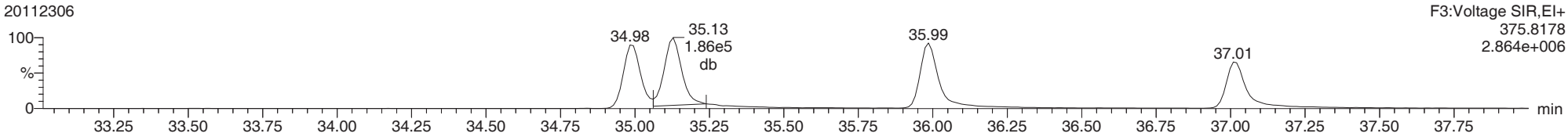

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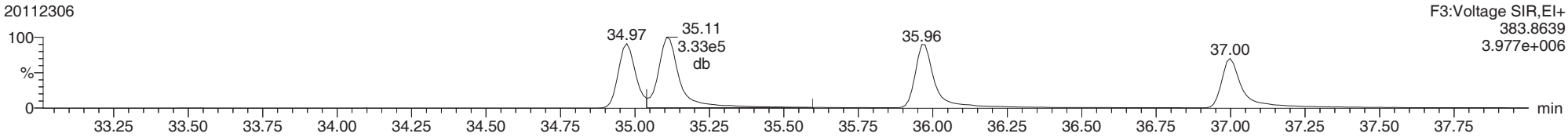

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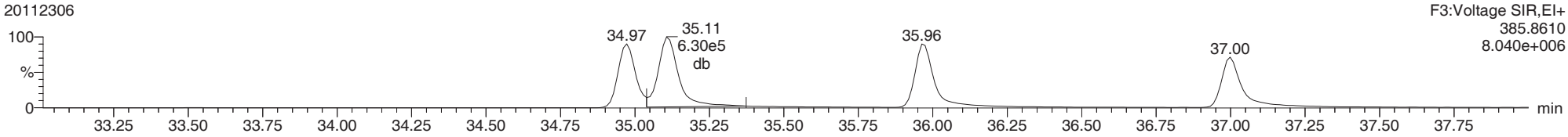

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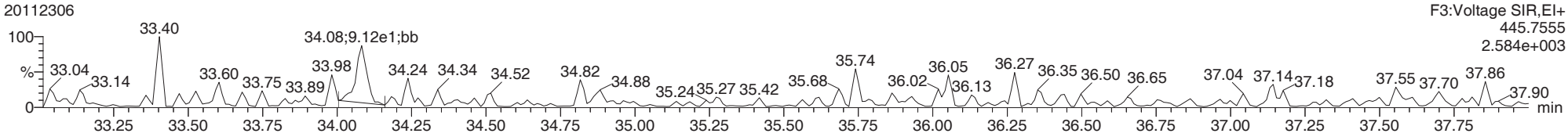

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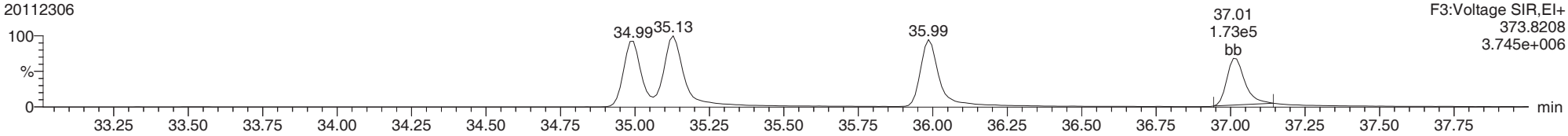

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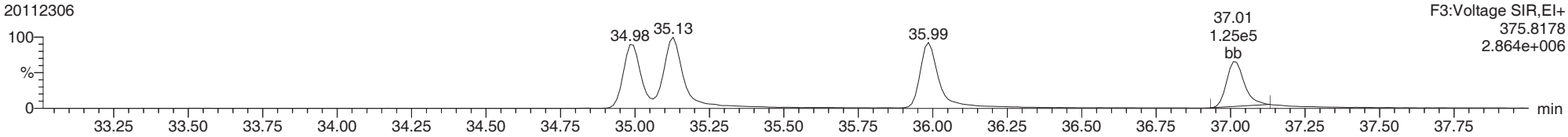

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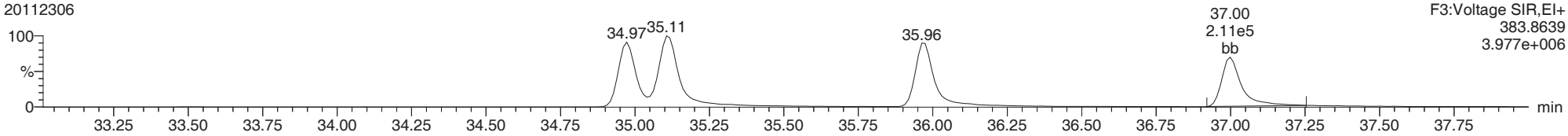

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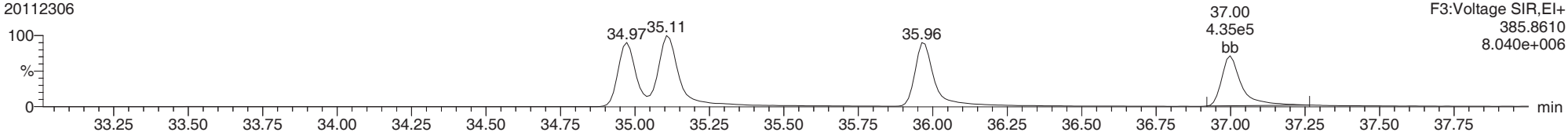

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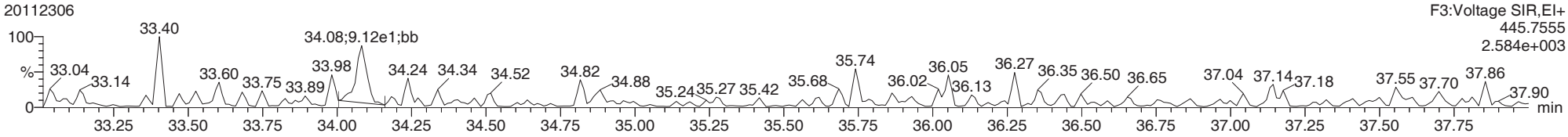

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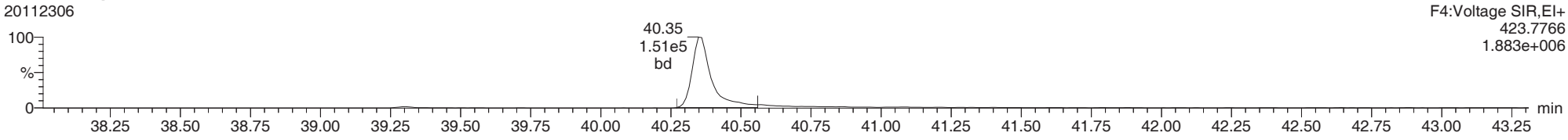

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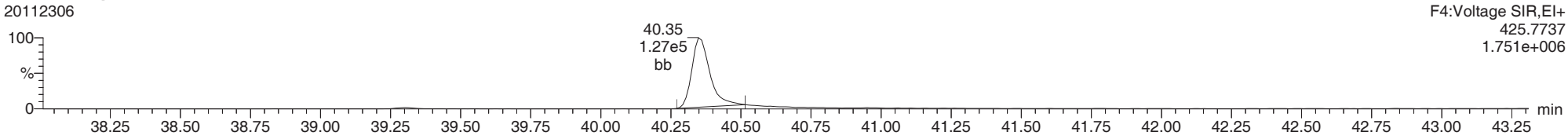

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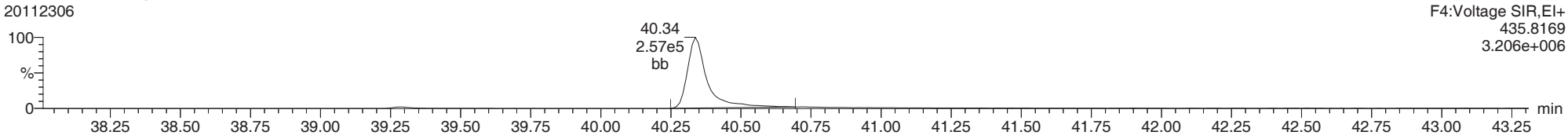

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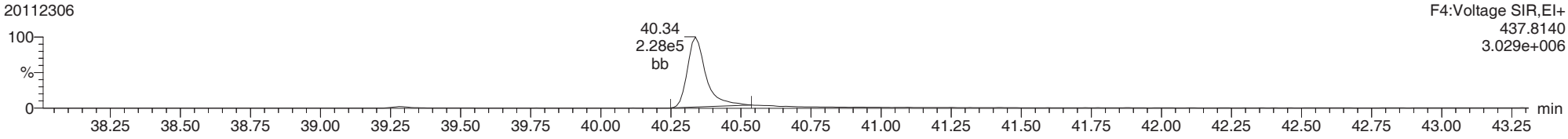
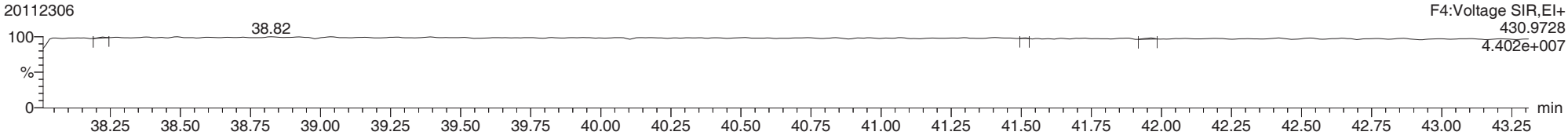


FUNCTION4 PFK



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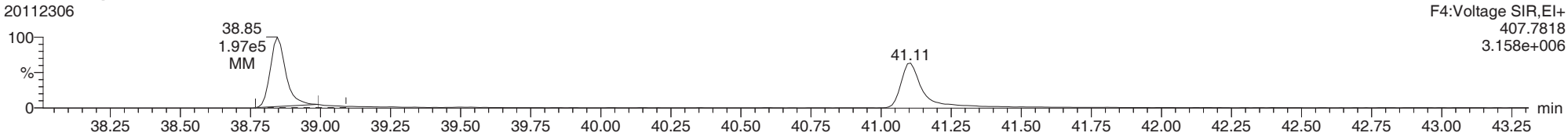

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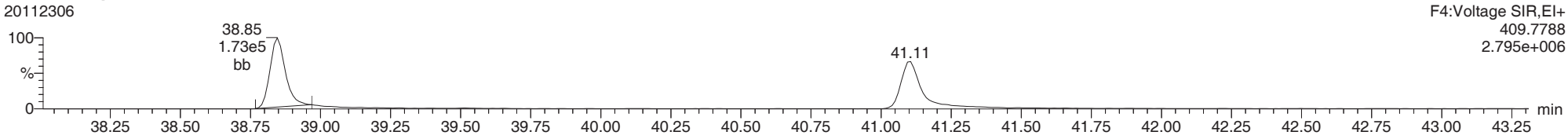

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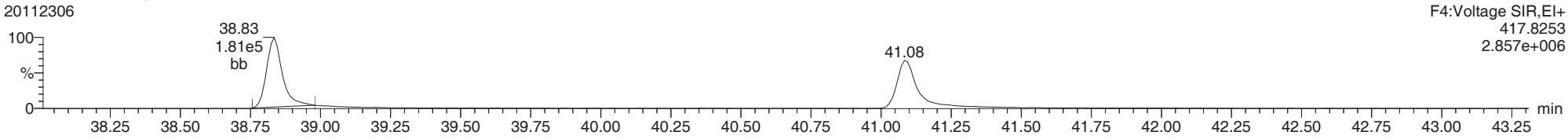

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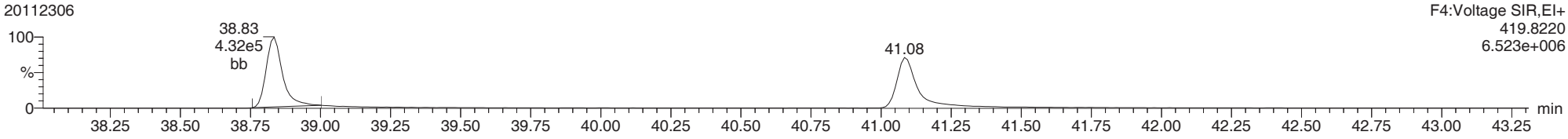

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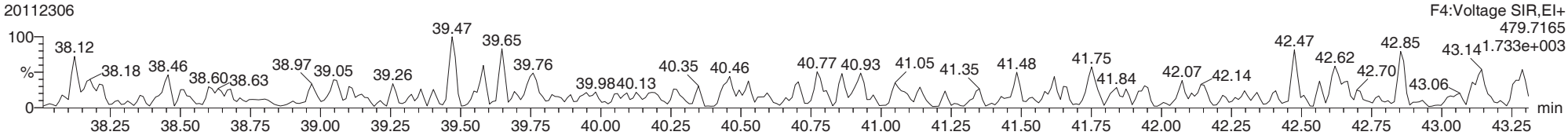

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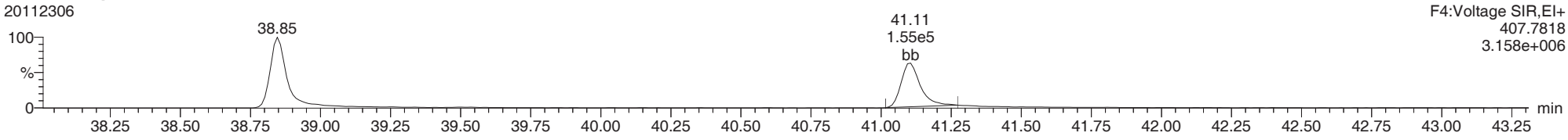

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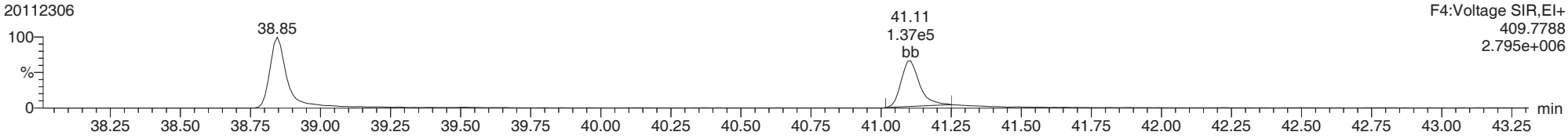

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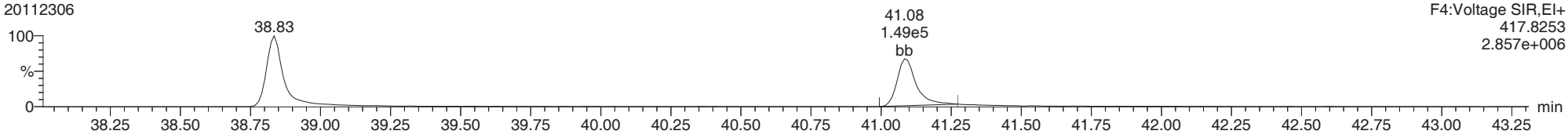

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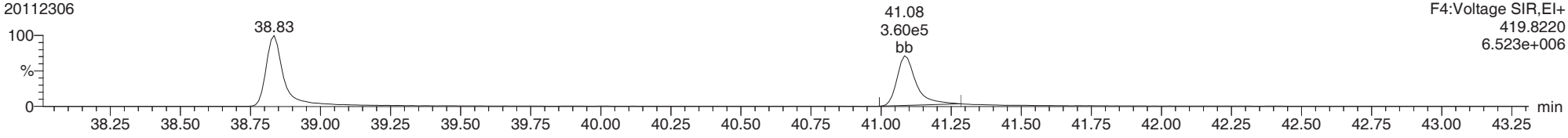

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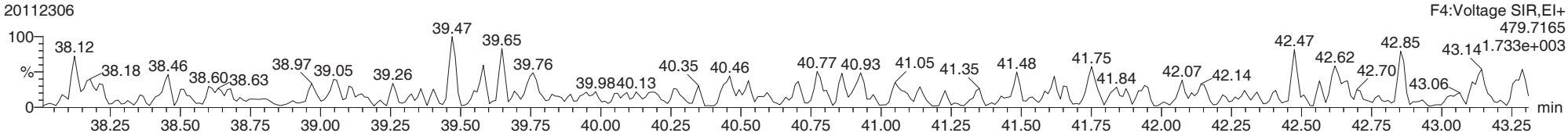

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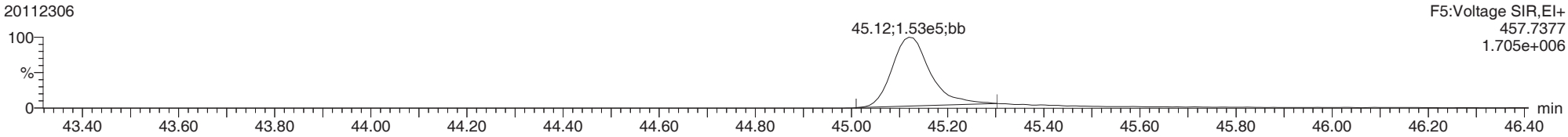
OCDD



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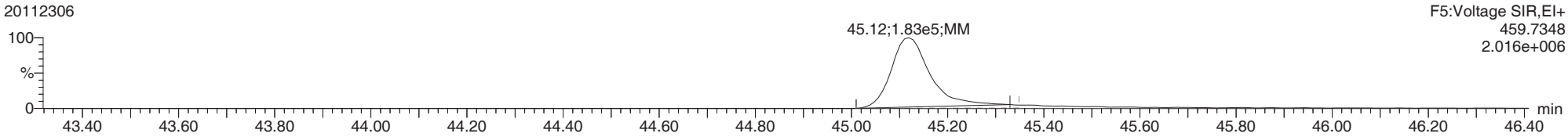

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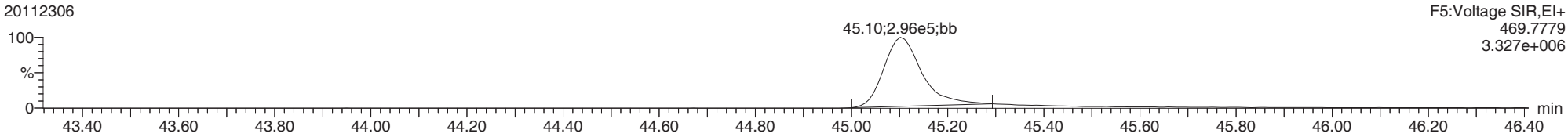

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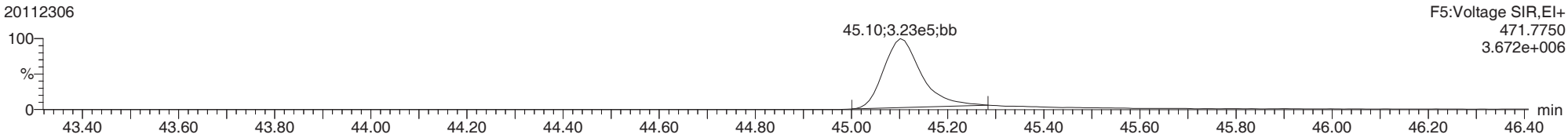
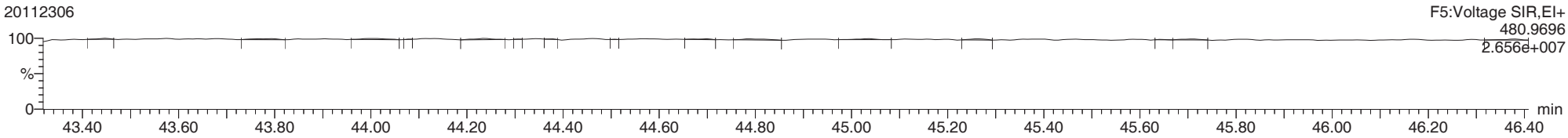


FUNCTION5 PFK



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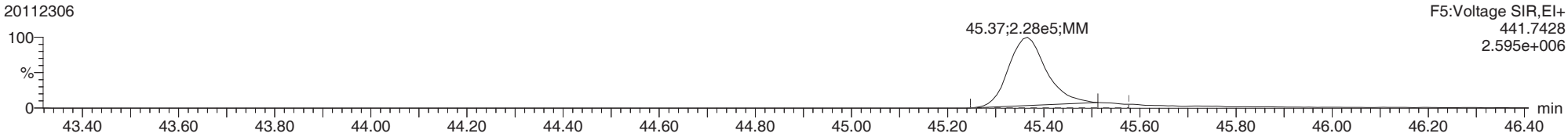
OCDF



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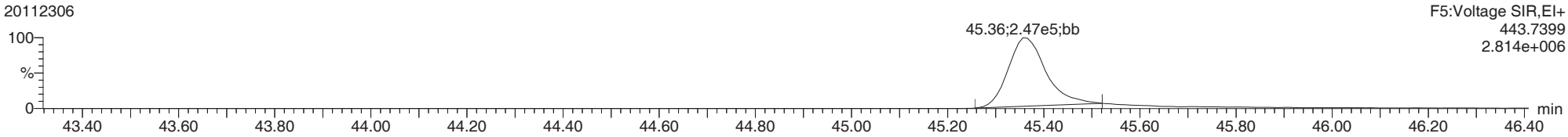

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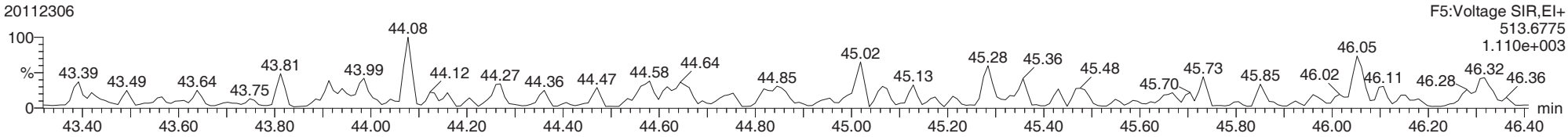

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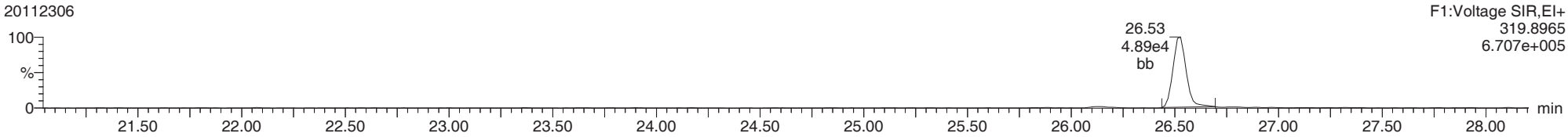
Total-tetradioxins



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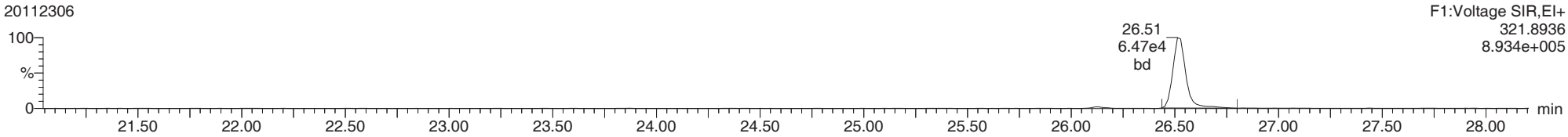

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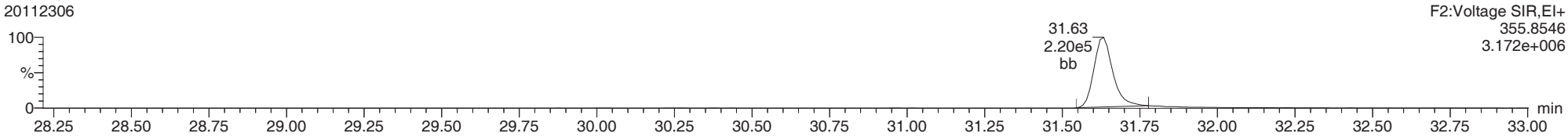

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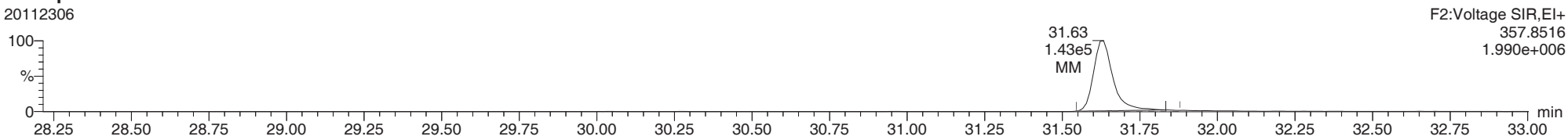

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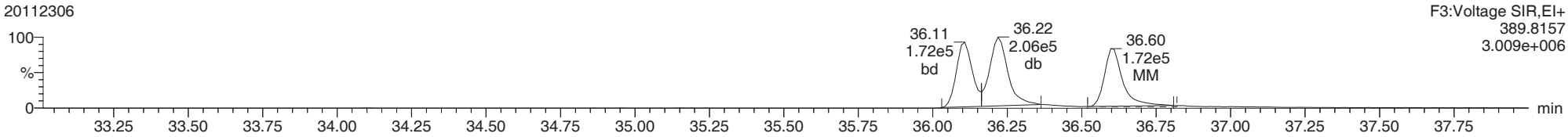
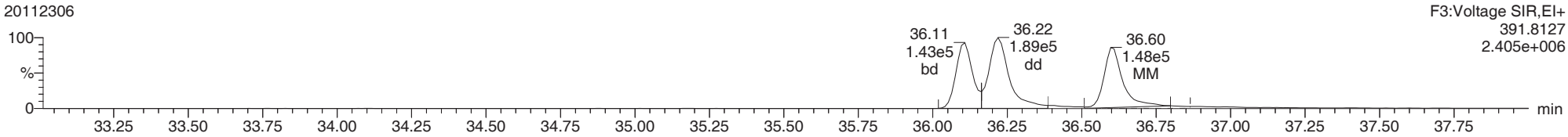
Total-hexadioxins



Total-hexadioxins



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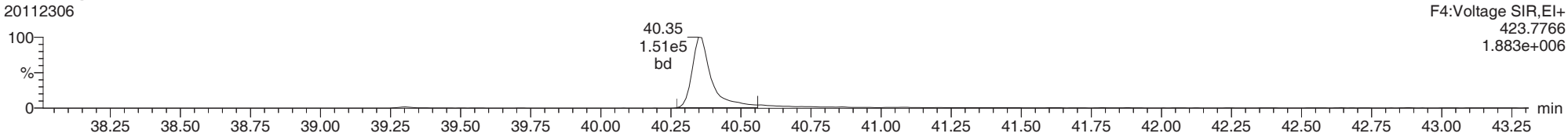

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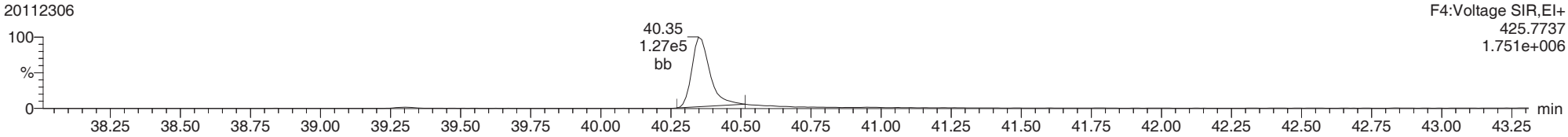

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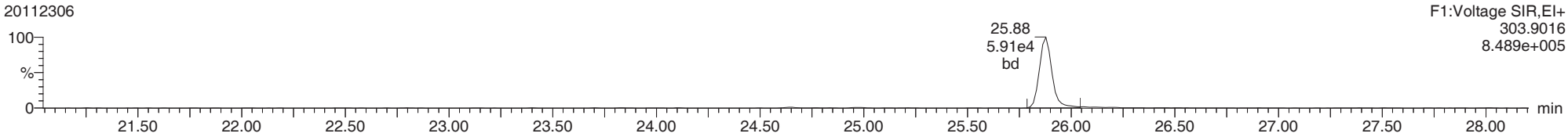
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:00:42 Pacific Standard Time

ID: BIK0510-BSD1, Name: 20112306, Date: 23-Nov-2020, Time: 13:49:58, Conditions: AUTOSPEC01, User: pk

Total-tetrafurans



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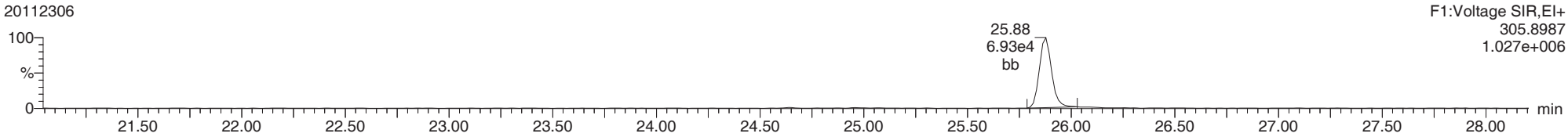

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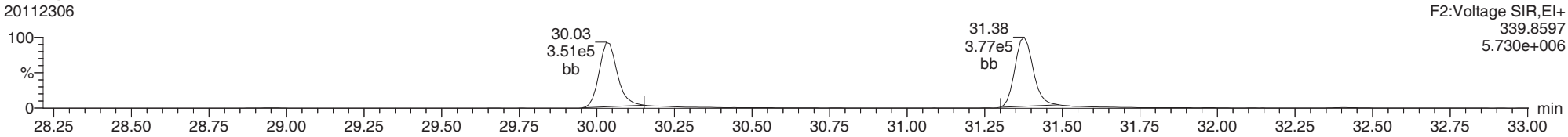

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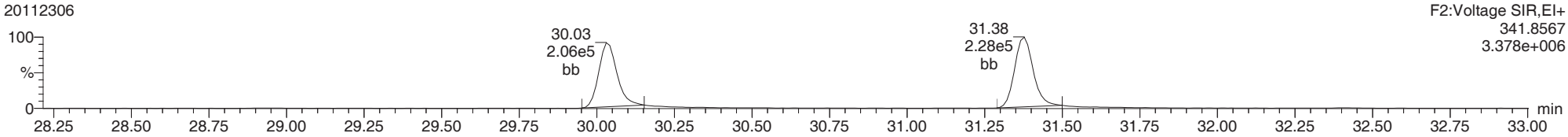
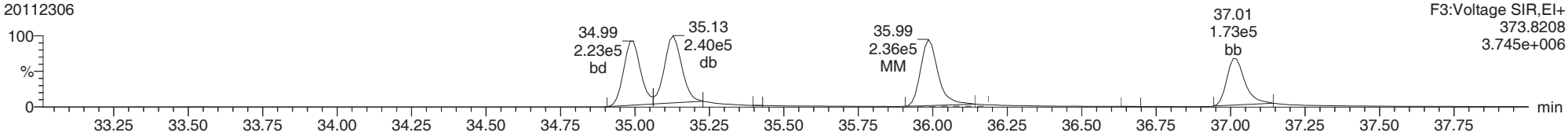


Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:00:42 Pacific Standard Time

ID: BIK0510-BSD1, Name: 20112306, Date: 23-Nov-2020, Time: 13:49:58, Conditions: AUTOSPEC01, User: pk

Total-hexafurans



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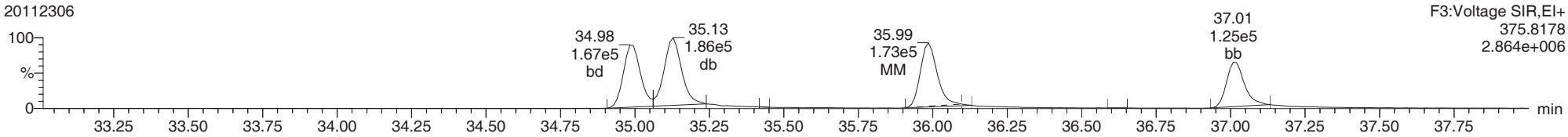
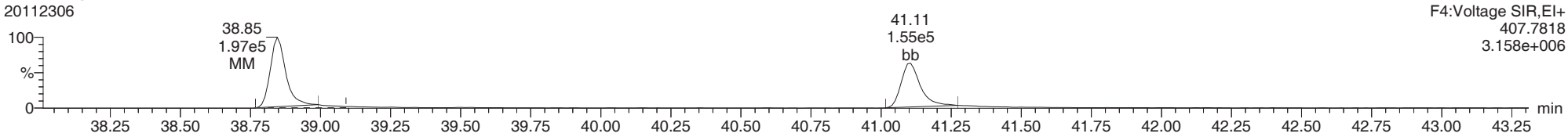
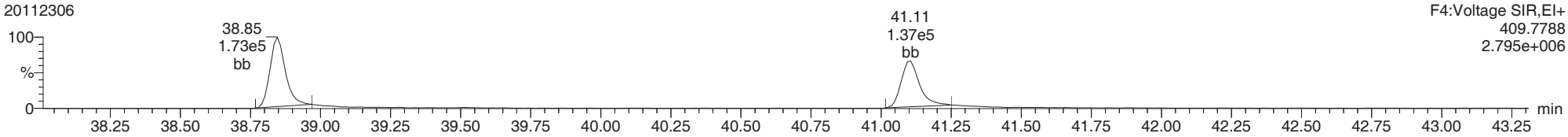


Total-heptafurans



Total-heptafurans



INITIAL CALIBRATION DATA
EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Calibration:	DJ00101	Instrument:	AUTOSPEC01
Calibration Date:	10/29/2020	Column (1):	RTX-Dioxin2

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RRF		**RRF**		**RRF**		**RRF**		**RRF**		**RRF**
2,3,7,8-TCDF			0.5	0.6646029	2	0.7067771	10	0.7074048	40	0.7541639	200	0.8103164
2,3,7,8-TCDD			0.5	1.267921	2	1.11625	10	1.175691	40	1.25823	200	1.373073
1,2,3,7,8-PeCDF	0.5	0.6635333	2.5	0.734586	10	0.7174073	50	0.8051853	200	0.8542547	1000	0.9010913
2,3,4,7,8-PeCDF	0.5	0.8057154	2.5	0.8310596	10	0.7957184	50	0.882567	200	0.9580098	1000	1.009748
1,2,3,7,8-PeCDD	0.5	0.9332011	2.5	0.9406241	10	0.9017671	50	0.9863222	200	1.069683	1000	1.094253
1,2,3,4,7,8-HxCDF	0.5	0.7812562	2.5	0.7846009	10	0.7809252	50	0.921652	200	0.9821481	1000	1.031031
1,2,3,6,7,8-HxCDF	0.5	0.6834704	2.5	0.7956637	10	0.8260816	50	0.8901929	200	0.946075	1000	0.9785716
2,3,4,6,7,8-HxCDF	0.5	0.8013981	2.5	0.7961702	10	0.7985001	50	0.8470814	200	0.9605112	1000	0.9730219
1,2,3,7,8,9-HxCDF	0.5	0.7196583	2.5	0.683668	10	0.6726369	50	0.8229644	200	0.8600758	1000	0.9214777
1,2,3,4,7,8-HxCDD	0.5	0.7761107	2.5	0.7776967	10	0.7703557	50	0.8692024	200	0.9227817	1000	0.9343998
1,2,3,6,7,8-HxCDD	0.5	0.8539134	2.5	0.8447678	10	0.8587154	50	0.9583207	200	0.9661591	1000	0.960664
1,2,3,7,8,9-HxCDD	0.5	0.7004759	2.5	0.6436152	10	0.7669478	50	0.854091	200	0.8458384	1000	0.8909949
1,2,3,4,6,7,8-HpCDF	0.5	0.8812082	2.5	0.9111567	10	0.9525341	50	1.075059	200	1.052445	1000	1.13289
1,2,3,4,7,8,9-HpCDF	0.5	0.9006581	2.5	0.9979244	10	0.8705492	50	1.051861	200	1.040133	1000	1.102404
1,2,3,4,6,7,8-HpCDD	0.5	0.8960331	2.5	0.8963355	10	0.9903364	50	1.08557	200	1.215895	1000	1.177946
OCDF	1	0.9669502	5	1.025198	20	1.066825	100	1.196334	400	1.333433	2000	1.35906
OCDD	1	0.9209167	5	0.811174	20	0.9107059	100	0.9542066	400	1.079606	2000	1.101375
13C12-2,3,7,8-TCDF	100	2.199177	100	2.201447	100	2.132434	100	2.217753	100	2.208091	100	2.258873
13C12-2,3,7,8-TCDD	100	1.145566	100	1.165987	100	1.170385	100	1.170522	100	1.202114	100	1.234376
13C12-1,2,3,7,8-PeCDF	100	1.745922	100	1.739395	100	1.560643	100	1.744465	100	1.774209	100	1.882196
13C12-2,3,4,7,8-PeCDF	100	1.649179	100	1.648011	100	1.575044	100	1.651951	100	1.691119	100	1.801682
13C12-1,2,3,7,8-PeCDD	100	0.9574593	100	0.9436432	100	0.8963427	100	0.9661443	100	1.0046	100	1.099117
13C12-1,2,3,4,7,8-HxCDF	100	1.035561	100	1.040238	100	0.9954783	100	1.03789	100	1.024976	100	0.9992196
13C12-1,2,3,6,7,8-HxCDF	100	1.213996	100	1.237132	100	1.172481	100	1.259898	100	1.192897	100	1.124236
13C12-2,3,4,6,7,8-HxCDF	100	1.053009	100	1.047594	100	1.051985	100	1.157994	100	1.067337	100	1.048651
13C12-1,2,3,7,8,9-HxCDF	100	0.940315	100	0.9266902	100	0.8771297	100	0.9274279	100	0.9372372	100	0.902813
13C12-1,2,3,4,7,8-HxCDD	100	0.9481406	100	0.9347565	100	0.9826954	100	0.966565	100	0.9747556	100	0.9829158
13C12-1,2,3,6,7,8-HxCDD	100	1.188034	100	1.186922	100	1.204402	100	1.213072	100	1.140682	100	1.075368

INITIAL CALIBRATION DATA

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Calibration:	DJ00101	Instrument:	AUTOSPEC01
Calibration Date:	10/29/2020	Column (1):	RTX-Dioxin2

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RRF		RRF		RRF		RRF		RRF		RRF
13C12-1,2,3,4,6,7,8-HpCDF	100	0.9162512	100	0.9319209	100	0.8245875	100	0.9690033	100	0.9332478	100	0.8765113
13C12-1,2,3,4,7,8,9-HpCDF	100	0.7720551	100	0.714768	100	0.6477806	100	0.7487679	100	0.7431033	100	0.7149986
13C12-1,2,3,4,6,7,8-HpCDD	100	0.6611992	100	0.6407546	100	0.5721938	100	0.665522	100	0.6718647	100	0.6605741
13C12-OCDD	200	0.6900703	200	0.6773034	200	0.5701668	200	0.7093635	200	0.7092439	200	0.7134539
37Cl4-2,3,7,8-TCDD	0.1	1.123868	0.5	1.266322	2	1.115068	10	1.214427	40	1.336777	200	1.53047
13C12-1,2,3,4-TCDD	100	1	100	1	100	1	100	1	100	1	100	1
13C12-1,2,3,7,8,9-HxCDD	100	1	100	1	100	1	100	1	100	1	100	1

INITIAL CALIBRATION DATA

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Calibration:	DJ00101	Instrument:	AUTOSPEC01
Calibration Date:	10/29/2020	Column (1):	RTX-Dioxin2

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
2,3,7,8-TCDF	0.728653	7.6			RSD ()	
2,3,7,8-TCDD	1.238233	7.9			RSD ()	
1,2,3,7,8-PeCDF	0.779343	11.5			RSD ()	
2,3,4,7,8-PeCDF	0.8804697	9.9			RSD ()	
1,2,3,7,8-PeCDD	0.9876417	7.9			RSD ()	
1,2,3,4,7,8-HxCDF	0.8802689	12.8			RSD ()	
1,2,3,6,7,8-HxCDF	0.8533425	12.7			RSD ()	
2,3,4,6,7,8-HxCDF	0.8627805	9.6			RSD ()	
1,2,3,7,8,9-HxCDF	0.7800802	13.2			RSD ()	
1,2,3,4,7,8-HxCDD	0.8417578	9.1			RSD ()	
1,2,3,6,7,8-HxCDD	0.9070901	6.6			RSD ()	
1,2,3,7,8,9-HxCDD	0.7836605	12.4			RSD ()	
1,2,3,4,6,7,8-HpCDF	1.000882	10.0			RSD ()	
1,2,3,4,7,8,9-HpCDF	0.9939216	9.1			RSD ()	
1,2,3,4,6,7,8-HpCDD	1.043686	13.3			RSD ()	
OCDF	1.157967	14.2			RSD ()	
OCDD	0.9629974	11.4			RSD ()	
13C12-2,3,7,8-TCDF	2.202962	1.9			RSD ()	
13C12-2,3,7,8-TCDD	1.181492	2.7			RSD ()	
13C12-1,2,3,7,8-PeCDF	1.741138	5.9			RSD ()	
13C12-2,3,4,7,8-PeCDF	1.669498	4.5			RSD ()	
13C12-1,2,3,7,8-PeCDD	0.9778844	7.1			RSD ()	
13C12-1,2,3,4,7,8-HxCDF	1.022227	2.0			RSD ()	
13C12-1,2,3,6,7,8-HxCDF	1.200107	4.0			RSD ()	
13C12-2,3,4,6,7,8-HxCDF	1.071095	4.0			RSD ()	
13C12-1,2,3,7,8,9-HxCDF	0.9186022	2.6			RSD ()	
13C12-1,2,3,4,7,8-HxCDD	0.9649715	2.0			RSD ()	
13C12-1,2,3,6,7,8-HxCDD	1.16808	4.4			RSD ()	
13C12-1,2,3,4,6,7,8-HpCDF	0.908587	5.6			RSD ()	
13C12-1,2,3,4,7,8,9-HpCDF	0.7235789	5.9			RSD ()	
13C12-1,2,3,4,6,7,8-HpCDD	0.6453514	5.8			RSD ()	

INITIAL CALIBRATION DATA

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Calibration:	DJ00101	Instrument:	AUTOSPEC01
Calibration Date:	10/29/2020	Column (1):	RTX-Dioxin2

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
13C12-OCDD	0.678267	8.1			RSD ()	
37Cl4-2,3,7,8-TCDD	1.264489	12.3			RSD ()	
13C12-1,2,3,4-TCDD	1	0.0			RSD ()	
13C12-1,2,3,7,8,9-HxCDD	1	0.0			RSD ()	

Printed: 10/30/2020 3:22:01PM

ANALYSIS SEQUENCE

SIJ0454

Instrument: AUTOSPEC01 Element Column ID: I0554
Calibration ID: DJ00101 Tune File: OCT1320_1-5
EM Voltage: 370 Resolution check times : 15:46, 00:54

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIJ0454-ICV1	CS3J1	QC		1	I005452		
SIJ0454-RES1	ISCJ1	QC		2	I008888		
SIJ0454-CAL1	CSLCJ	QC		3	I005460		
SIJ0454-CAL2	CS1CJ	QC		4	I005456		
SIJ0454-CAL3	CS2CJ	QC		5	I005457		
SIJ0454-CAL4	CS3CJ	QC		6	I005452		
SIJ0454-CAL5	CS4CJ	QC		7	I005458		
SIJ0454-CAL6	CS5CJ	QC		8	I005459		
SIJ0454-SCV1	ICVCJ	QC		9	G001361		
SIJ0454-CCV1	CS3J2	QC		10	I005452		
SIJ0454-RES2	ISCJ2	QC		11	I008888		

Dataset: Untitled
Last Altered: Friday, October 30, 2020 15:13:15 Pacific Daylight Time
Printed: Friday, October 30, 2020 15:13:26 Pacific Daylight Time

Method: T:\Autospec\Methods\Dioxin201016.mdb 28 Oct 2020 21:30:41
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 09:08:24

Compound name: 2378-TCDF

#	Acq.Date	Acq.Time	File	ID	Comments
1	29-Oct-20	15:55:05	20102902	CS3J1	
2	29-Oct-20	16:43:17	20102903	ISCJ1	
3	29-Oct-20	17:32:16	20102904	CSLCJ	
4	29-Oct-20	18:20:57	20102904A	CSLCJ	
5	29-Oct-20	19:09:26	20102905	CS1CJ	
6	29-Oct-20	19:58:08	20102906	CS2CJ	
7	29-Oct-20	20:46:44	20102907	CS3CJ	
8	29-Oct-20	21:35:25	20102908	CS4CJ	
9	29-Oct-20	22:23:54	20102909	CS5CJ	
10	29-Oct-20	23:12:33	20102910	ICVCJ	
11	30-Oct-20	00:01:03	20102911	CS3J2	
12	30-Oct-20	00:54:31	20102912	ISCJ2	

Dataset: T:\Autospec\Processed Data Batch\201029ICIH.qld
Last Altered: Friday, October 30, 2020 09:08:24 Pacific Daylight Time
Printed: Friday, October 30, 2020 09:09:56 Pacific Daylight Time

10/30/20 [redacted]

Event	Details	Sample ID
Process Extract		
Process Integrate		
Process Calibrate		
Process Quantify		
Dataset Created		
Pre modification peak	Sample:20102904A, Compound:OF, RT:44.031	1
Peak modified	Sample:20102904A, Compound:OF, RT:44.031	1
Pre modification peak	Sample:20102904A, Compound:OF, RT:44.041	1
Peak modified	Sample:20102904A, Compound:OF, RT:44.041	1
Peak modified	Sample:20102904A, Compound:OF, RT:44.031	1
Peak modified	Sample:20102904A, Compound:OF, RT:44.041	1
Peak modified	Sample:20102904A, Compound:OF, RT:44.031	1
Pre modification peak	Sample:20102904A, Compound:OD, RT:43.812	1
Peak modified	Sample:20102904A, Compound:OD, RT:43.812	1
Pre modification peak	Sample:20102904A, Compound:OD, RT:43.803	1
Peak modified	Sample:20102904A, Compound:OD, RT:43.803	1
Pre modification peak	Sample:20102905, Compound:PF, RT:28.935	2
Peak modified	Sample:20102905, Compound:PF, RT:28.935	2
Pre modification peak	Sample:20102906, Compound:PF, RT:28.924	3
Peak modified	Sample:20102906, Compound:PF, RT:28.924	3
Pre modification peak	Sample:20102905, Compound:HF, RT:36.025	2
Peak modified	Sample:20102905, Compound:HF, RT:36.025	2
Pre modification peak	Sample:20102906, Compound:HPF, RT:40.055	3
Peak modified	Sample:20102906, Compound:HPF, RT:40.055	3
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\201029ICIH.qld'	
Peak deleted	Sample:20102908, Compound:PF, RT:31.306	5
Peak deleted	Sample:20102909, Compound:PF, RT:31.307	6
Peak deleted	Sample:20102909, Compound:HF, RT:32.230	6
Peak deleted	Sample:20102909, Compound:TD, RT:26.058	6
Peak deleted	Sample:20102909, Compound:TD, RT:26.028	6
Peak deleted	Sample:20102908, Compound:PD, RT:30.972	5
Peak deleted	Sample:20102909, Compound:PD, RT:30.995	6
Peak deleted	Sample:20102908, Compound:HPD, RT:38.363	5
Peak deleted	Sample:20102909, Compound:HPD, RT:38.375	6
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\201029ICIH.qld'	
Pre modification peak	Sample:20102904A, Compound:PF, RT:28.924	1
Peak modified	Sample:20102904A, Compound:PF, RT:28.924	1
Pre modification peak	Sample:20102904A, Compound:PF, RT:30.259	1
Peak modified	Sample:20102904A, Compound:PF, RT:30.259	1
Pre modification peak	Sample:20102904A, Compound:HF, RT:36.014	1
Peak modified	Sample:20102904A, Compound:HF, RT:36.014	1
Pre modification peak	Sample:20102904A, Compound:HPF, RT:37.883	1
Peak modified	Sample:20102904A, Compound:HPF, RT:37.883	1
Peak modified	Sample:20102904A, Compound:HPF, RT:37.883	1
Peak modified	Sample:20102904A, Compound:HPF, RT:37.883	1
Pre modification peak	Sample:20102904A, Compound:HPF, RT:40.065	1
Peak modified	Sample:20102904A, Compound:HPF, RT:40.065	1
Peak deleted	Sample:20102904A, Compound:TD, RT:25.423	1
Peak deleted	Sample:20102904A, Compound:TF, RT:24.789	1
Peak modified	Sample:20102904A, Compound:OF, RT:44.031	1
Peak modified	Sample:20102904A, Compound:OF, RT:44.041	1
Pre modification peak	Sample:20102904A, Compound:HD, RT:35.591	1
Peak modified	Sample:20102904A, Compound:HD, RT:35.591	1
Pre modification peak	Sample:20102904A, Compound:HPD, RT:39.353	1
Peak modified	Sample:20102904A, Compound:HPD, RT:39.353	1

Dataset: T:\Autospec\Processed Data Batch\201029ICIH.qld
Last Altered: Friday, October 30, 2020 09:08:24 Pacific Daylight Time
Printed: Friday, October 30, 2020 09:09:56 Pacific Daylight Time

Event	Details	Sample ID
Pre modification peak	Sample:20102904A, Compound:HPD, RT:39.353	1
Peak modified	Sample:20102904A, Compound:HPD, RT:39.353	1
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\201029ICIH.qld'	

Quantify Audit Report MassLynx MassLynx V4.1 SCN909

Dataset: T:\Autospec\Processed Data Batch\201029ICVIH.qld
Last Altered: Friday, October 30, 2020 14:57:31 Pacific Daylight Time
Printed: Friday, October 30, 2020 14:58:06 Pacific Daylight Time

10/30/20 [redacted]

Event	Details	Sample ID
Process Extract		
Process Integrate		
Process Quantify		
Dataset Created		
Pre modification peak	Sample:20102910, Compound:13C-1234789-HpCDF, RT:40.043	1
Peak modified	Sample:20102910, Compound:13C-1234789-HpCDF, RT:40.043	1
Pre modification peak	Sample:20102910, Compound:13C-1234789-HpCDF, RT:40.043	1
Peak modified	Sample:20102910, Compound:13C-1234789-HpCDF, RT:40.043	1
Pre modification peak	Sample:20102911, Compound:HF, RT:36.036	2
Peak modified	Sample:20102911, Compound:HF, RT:36.036	2
Pre modification peak	Sample:20102911, Compound:HF, RT:36.036	2
Peak modified	Sample:20102911, Compound:HF, RT:36.036	2
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\201029ICVIH.qld'	
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\201029ICVIH.qld'	

Dataset: T:\Autospec\Processed Data Batch\201029OPIH.qld
Last Altered: Friday, October 30, 2020 14:35:51 Pacific Daylight Time
Printed: Friday, October 30, 2020 14:36:34 Pacific Daylight Time

Method: T:\Autospec\Methods\Dioxin201016.mdb 28 Oct 2020 21:30:41
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 09:08:24

ID: CS3J1, Name: 20102902, Date: 29-Oct-2020, Time: 15:55:05, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	24.804	1.001	4.183e4	5.463e4	0.729	0.766	0.770	1077	1906	5.84e5	7.69e5	542.4	403.6	NO	bb	bb	10.257
12378-PeCDF	28.924	1.000	2.700e5	1.616e5	0.779	1.671	1.550	3440	3252	4.04e6	2.41e6	1173.8	741.9	NO	bb	bb	54.185
23478-PeCDF	30.271	1.001	2.870e5	1.717e5	0.880	1.671	1.550	3440	3252	4.37e6	2.58e6	1270.9	792.3	NO	bb	bb	51.966
123478-HxCDF	33.921	1.000	1.922e5	1.488e5	0.880	1.292	1.240	2803	2308	2.84e6	2.19e6	1011.8	949.6	NO	bd	bd	52.466
234678-HxCDF	34.968	1.001	1.844e5	1.564e5	0.863	1.179	1.240	2803	2308	2.77e6	2.20e6	988.8	952.8	NO	bb	bd	53.036
123678-HxCDF	34.066	1.000	2.117e5	1.632e5	0.853	1.297	1.240	2803	2308	3.03e6	2.32e6	1080.1	1005.6	NO	db	db	52.358
123789-HxCDF	36.014	1.001	1.536e5	1.147e5	0.780	1.339	1.240	2803	2308	2.15e6	1.62e6	765.5	699.8	NO	bb	bb	50.858
1234678-HpCDF	37.895	1.000	1.801e5	1.678e5	1.001	1.073	1.050	3073	3162	2.76e6	2.58e6	897.5	816.3	NO	bb	bb	51.429
1234789-HpCDF	40.043	1.001	1.536e5	1.448e5	0.994	1.061	1.050	3073	3162	1.94e6	1.79e6	630.5	566.0	NO	bd	bd	53.437
OCDF	44.022	1.005	2.872e5	3.453e5	1.158	0.832	0.890	2226	2306	3.27e6	3.57e6	1467.9	1549.1	NO	bb	bd	108.971
2378-TCDD	25.438	1.001	3.720e4	4.587e4	1.238	0.811	0.770	2005	1256	5.44e5	6.81e5	271.6	542.2	NO	bb	bb	9.701
12378-PeCDD	30.527	1.000	1.811e5	1.137e5	0.988	1.593	1.550	3420	1779	2.74e6	1.70e6	801.8	954.9	NO	bb	bb	50.269
123478-HxCDD	35.090	1.000	1.640e5	1.358e5	0.842	1.207	1.240	2905	2910	2.62e6	2.15e6	901.7	738.3	NO	bd	bd	50.791
123678-HxCDD	35.213	1.001	1.964e5	1.620e5	0.907	1.213	1.240	2905	2910	2.71e6	2.21e6	933.3	760.4	NO	db	db	48.574
123789-HxCDD	35.602	1.012	1.638e5	1.410e5	0.784	1.162	1.240	2905	2910	2.38e6	1.99e6	820.1	684.6	NO	bb	bb	51.352
1234678-HpCDD	39.342	1.000	1.406e5	1.419e5	1.044	0.991	1.050	2465	1743	1.94e6	1.86e6	788.5	1068.5	NO	bb	bd	52.360
OCDD	43.803	1.000	2.547e5	2.958e5	0.963	0.861	0.890	2164	2986	2.76e6	3.16e6	1277.3	1059.1	NO	bd	bd	114.037
13C-2378-TCDF	24.774	1.007	5.654e5	7.251e5	2.203	0.780	0.770	5523	3453	7.93e6	1.03e7	1435.3	2996.4	NO	bb	bb	98.290
13C-12378-PeCDF	28.913	1.175	6.210e5	4.012e5	1.741	1.548	1.550	4649	3540	8.55e6	5.55e6	1838.8	1567.0	NO	bd	bd	98.497
13C-23478-PeCDF	30.248	1.229	6.090e5	3.935e5	1.669	1.548	1.550	4649	3540	8.28e6	5.38e6	1781.4	1519.3	NO	bb	bb	100.753
13C-123478-HxCDF	33.910	0.953	2.445e5	4.938e5	1.022	0.495	0.510	2077	2467	3.65e6	7.21e6	1756.3	2921.4	NO	bd	bd	101.197
13C-123678-HxCDF	34.055	0.957	2.775e5	5.615e5	1.200	0.494	0.510	2077	2467	3.78e6	7.51e6	1820.8	3045.0	NO	db	db	97.945
13C-234678-HxCDF	34.945	0.982	2.462e5	4.986e5	1.071	0.494	0.510	2077	2467	3.50e6	6.98e6	1683.4	2830.4	NO	bb	bb	97.415
13C-123789-HxCDF	35.992	1.012	2.331e5	4.432e5	0.919	0.526	0.510	2077	2467	2.93e6	5.83e6	1412.4	2363.7	NO	bd	bb	103.154
13C-1234678-HpCDF	37.884	1.065	2.061e5	4.697e5	0.909	0.439	0.440	2518	2796	3.01e6	6.90e6	1193.3	2469.1	NO	bb	bb	104.216
13C-1234789-HpCDF	40.021	1.125	1.598e5	4.020e5	0.724	0.398	0.440	2518	2796	2.09e6	4.76e6	829.3	1702.9	NO	bb	bd	108.772
13C-1234-TCDD	24.608	0.000	2.643e5	3.317e5	1.000	0.797	0.770	2642	1257	4.16e6	5.16e6	1574.1	4108.9	NO	bb	bb	100.000
13C-2378-TCDD	25.423	1.033	3.080e5	3.835e5	1.181	0.803	0.770	2642	1257	4.32e6	5.37e6	1635.1	4274.8	NO	bb	bb	98.199
13C-12378-PeCDD	30.515	1.240	3.735e5	2.205e5	0.978	1.694	1.550	2101	1308	5.25e6	3.14e6	2500.5	2400.6	NO	bb	bb	101.899
13C-123478-HxCDD	35.079	0.986	3.939e5	3.074e5	0.965	1.281	1.240	2013	2098	6.03e6	4.63e6	2996.9	2205.6	NO	bd	bd	101.810
13C-123678-HxCDD	35.190	0.989	4.570e5	3.563e5	1.168	1.283	1.240	2013	2098	6.18e6	4.93e6	3068.3	2348.5	NO	db	db	97.551
13C-1234678-HpCDD	39.331	1.105	2.547e5	2.624e5	0.645	0.971	1.050	1959	2010	3.50e6	3.27e6	1788.3	1627.1	NO	bb	bd	112.255
13C-OCDD	43.794	1.231	4.775e5	5.250e5	0.678	0.910	0.890	4135	2888	5.40e6	5.95e6	1306.8	2059.3	NO	bb	bb	207.069
13C-123789-HxCDD	35.580	0.000	3.989e5	3.148e5	1.000	1.267	1.240	2013	2098	5.64e6	4.46e6	2803.8	2123.2	NO	bb	bb	100.000
37CL-2378-TCDD	25.438	1.034	7.182e4		1.264			1691		1.07e6		632.1			bb		9.529

Dataset: T:\Autospec\Processed Data Batch\201029OPIH.qld
Last Altered: Friday, October 30, 2020 14:35:51 Pacific Daylight Time
Printed: Friday, October 30, 2020 14:36:34 Pacific Daylight Time

ID: CS3J1, Name: 20102902, Date: 29-Oct-2020, Time: 15:55:05, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	21.329	0.861	4.812e4	6.337e4	0.846	0.759	0.770	1077	1906	7.47e5	9.75e5	692.9	511.5	NO	bb	bb	10.208
1289-TCDF	26.284	1.061	4.253e4	5.074e4	0.688	0.838	0.770	1077	1906	5.51e5	6.73e5	511.6	352.9	NO	dd	bb	10.508
13468-PECDF	26.149	0.904	3.599e5	2.399e5	1.181	1.500	1.550	396	943	5.36e6	3.52e6	13554.0	3735.7	NO	bb	bb	49.670
12389-PECDF	31.295	1.082	2.728e5	1.612e5	0.766	1.692	1.550	3440	3252	3.78e6	2.23e6	1098.1	685.6	NO	bb	bb	55.419
123468-HXCDF	32.218	0.950	2.014e5	1.549e5	1.003	1.301	1.240	2803	2308	2.98e6	2.27e6	1064.0	984.8	NO	bb	bb	48.123
1368-TCDD	22.598	0.889	3.857e4	4.559e4	1.179	0.846	0.770	2005	1256	6.03e5	7.24e5	300.7	576.1	NO	bb	bb	10.325
1289-TCDD	26.028	1.024	3.195e4	4.180e4	1.042	0.764	0.770	2005	1256	4.55e5	5.80e5	226.9	461.8	NO	bb	bb	10.232
12479-PECDD	27.833	0.912	3.318e5	2.055e5	1.810	1.614	1.550	3420	1779	3.16e6	1.96e6	924.6	1101.9	NO	bb	bb	49.980
12389-PECDD	30.916	1.013	2.175e5	1.356e5	1.165	1.604	1.550	3420	1779	3.10e6	1.90e6	905.8	1070.3	NO	bb	bb	51.013
124679-HXCDD	33.020	0.941	1.917e5	1.585e5	1.056	1.210	1.240	2905	2910	2.74e6	2.26e6	941.8	777.3	NO	bb	bb	47.273
1234679-HPCDD	38.351	0.975	1.580e5	1.539e5	1.285	1.026	1.050	2465	1743	2.26e6	2.16e6	916.2	1239.6	NO	bb	bd	46.926
Total-tetrafurans			1.325e5		0.754			1077		1.88e6							30.974
Total-penta1			3.601e5					396		5.37e6							49.698
Total-pentafurans			8.746e5		0.809			3440		1.29e7							170.225
Total-hexafurans			9.433e5		0.876			2803		1.38e7							256.841
Total-heptafurans			3.337e5		0.997			3073		4.69e6							104.866
Total-Furans			2.931e6		0.893			1077		4.19e7							721.575
Total-tetradioxins			1.814e5		1.153			2005		2.44e6							51.102
Total-pentadioxins			7.304e5		1.321			3420		9.00e6							151.262
Total-hexadioxins			7.164e5		0.897			2905		1.05e7							198.148
Total-heptadioxins			2.986e5		1.165			2465		4.20e6							99.287
Total-Dioxins			2.182e6		1.100			2005		2.89e7							613.836
Total-TEQ			5.113e6					2005		7.07e7							1335.411
FUNCTION1 PFK			3.282e7					1169425		1.19e8							
FUNCTION2 PFK			2.238e6					682702		4.80e7							0.000
FUNCTION3 PFK			1.749e6					469176		4.09e7							0.000
FUNCTION4 PFK			2.143e6					518328		4.01e7							
FUNCTION5 PFK			5.112e5					476010		1.53e7							
FUNCTION1 HXCD...			2.362e2					648		3.86e3							0.000
FUNCTION1 HPCD...			4.031e2					790		9.32e3							0.000
FUNCTION2 HPCD...			2.599e2					820		4.13e3							0.000
FUNCTION3 OCDPE			0.000e0					455		0.00e0							
FUNCTION4 NCDPE			2.629e2					817		6.51e3							0.000
FUNCTION5 DCDPE			0.000e0					467		0.00e0							

Method: T:\Autospec\Methods\Dioxin201016.mdb 28 Oct 2020 21:30:41
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 09:08:24

ID: CS3J1, Name: 20102902, Date: 29-Oct-2020, Time: 15:55:05, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	26.28	4.253e4	5.074e4	0.688	0.84	0.77	511.6	YES	NO	dd	bb	10.508
2	2378-TCDF	24.80	4.183e4	5.463e4	0.729	0.77	0.77	542.4	YES	NO	bb	bb	10.257
3	1368-TCDF	21.33	4.812e4	6.337e4	0.846	0.76	0.77	692.9	YES	NO	bb	bb	10.208

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-penta1	26.80	1.619e2	1.059e2		1.53	1.55	7.5	NO	NO	bd	bd	0.029
2	13468-PECDF	26.15	3.599e5	2.399e5	1.181	1.50	1.55	13554.0	YES	NO	bb	bb	49.670

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	31.29	2.728e5	1.612e5	0.766	1.69	1.55	1098.1	YES	NO	bb	bb	55.419
2	23478-PeCDF	30.27	2.870e5	1.717e5	0.880	1.67	1.55	1270.9	YES	NO	bb	bb	51.966
3	12378-PeCDF	28.92	2.700e5	1.616e5	0.779	1.67	1.55	1173.8	YES	NO	bb	bb	54.185
4	Total-pentafurans	27.79	4.477e4	2.609e4	0.809	1.72	1.55	201.4	YES	NO	bb	bb	8.655

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.01	1.536e5	1.147e5	0.780	1.34	1.24	765.5	YES	NO	bb	bb	50.858
2	234678-HxCDF	34.97	1.844e5	1.564e5	0.863	1.18	1.24	988.8	YES	NO	bb	bd	53.036
3	123678-HxCDF	34.07	2.117e5	1.632e5	0.853	1.30	1.24	1080.1	YES	NO	db	db	52.358
4	123478-HxCDF	33.92	1.922e5	1.488e5	0.880	1.29	1.24	1011.8	YES	NO	bd	bd	52.466
5	123468-HXCDF	32.22	2.014e5	1.549e5	1.003	1.30	1.24	1064.0	YES	NO	bb	bb	48.123

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	37.90	1.801e5	1.678e5	1.001	1.07	1.05	897.5	YES	NO	bb	bb	51.429
2	1234789-HpCDF	40.04	1.536e5	1.448e5	0.994	1.06	1.05	630.5	YES	NO	bd	bd	53.437

ID: CS3J1, Name: 20102902, Date: 29-Oct-2020, Time: 15:55:05, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	26.28	4.253e4	5.074e4	0.688	0.84	0.77	511.6	YES	NO	dd	bb	10.508
2	2378-TCDF	24.80	4.183e4	5.463e4	0.729	0.77	0.77	542.4	YES	NO	bb	bb	10.257
3	1368-TCDF	21.33	4.812e4	6.337e4	0.846	0.76	0.77	692.9	YES	NO	bb	bb	10.208
4	12389-PECDF	31.29	2.728e5	1.612e5	0.766	1.69	1.55	1098.1	YES	NO	bb	bb	55.419
5	23478-PeCDF	30.27	2.870e5	1.717e5	0.880	1.67	1.55	1270.9	YES	NO	bb	bb	51.966
6	12378-PeCDF	28.92	2.700e5	1.616e5	0.779	1.67	1.55	1173.8	YES	NO	bb	bb	54.185
7	Total-pentafurans	27.79	4.477e4	2.609e4	0.809	1.72	1.55	201.4	YES	NO	bb	bb	8.655
8	123789-HxCDF	36.01	1.536e5	1.147e5	0.780	1.34	1.24	765.5	YES	NO	bb	bb	50.858
9	234678-HxCDF	34.97	1.844e5	1.564e5	0.863	1.18	1.24	988.8	YES	NO	bb	bd	53.036
10	123678-HxCDF	34.07	2.117e5	1.632e5	0.853	1.30	1.24	1080.1	YES	NO	db	db	52.358
11	123478-HxCDF	33.92	1.922e5	1.488e5	0.880	1.29	1.24	1011.8	YES	NO	bd	bd	52.466
12	123468-HXCDF	32.22	2.014e5	1.549e5	1.003	1.30	1.24	1064.0	YES	NO	bb	bb	48.123
13	1234678-HpCDF	37.90	1.801e5	1.678e5	1.001	1.07	1.05	897.5	YES	NO	bb	bb	51.429
14	1234789-HpCDF	40.04	1.536e5	1.448e5	0.994	1.06	1.05	630.5	YES	NO	bd	bd	53.437
15	OCDF	44.02	2.872e5	3.453e5	1.158	0.83	0.89	1467.9	YES	NO	bb	bd	108.971
16	Total-penta1	26.80	1.619e2	1.059e2		1.53	1.55	7.5	NO	NO	bd	bd	0.029
17	13468-PECDF	26.15	3.599e5	2.399e5	1.181	1.50	1.55	13554.0	YES	NO	bb	bb	49.670

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.11	5.624e4	7.084e4	1.153	0.79	0.77	285.7	YES	NO	bb	bb	15.938
2	Total-tetradioxins	24.62	1.746e4	2.165e4	1.153	0.81	0.77	130.5	YES	NO	bb	bb	4.905
3	1368-TCDD	22.60	3.857e4	4.559e4	1.179	0.85	0.77	300.7	YES	NO	bb	bb	10.325
4	1289-TCDD	26.03	3.195e4	4.180e4	1.042	0.76	0.77	226.9	YES	NO	bb	bb	10.232
5	2378-TCDD	25.44	3.720e4	4.587e4	1.238	0.81	0.77	271.6	YES	NO	bb	bb	9.701

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12479-PECDD	27.83	3.318e5	2.055e5	1.810	1.61	1.55	924.6	YES	NO	bb	bb	49.980
2	12389-PECDD	30.92	2.175e5	1.356e5	1.165	1.60	1.55	905.8	YES	NO	bb	bb	51.013
3	12378-PeCDD	30.53	1.811e5	1.137e5	0.988	1.59	1.55	801.8	YES	NO	bb	bb	50.269

ID: CS3J1, Name: 20102902, Date: 29-Oct-2020, Time: 15:55:05, Conditions: AUTOSPEC01, User: pk

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	35.60	1.638e5	1.410e5	0.784	1.16	1.24	820.1	YES	NO	bb	bb	51.352
2	123678-HxCDD	35.21	1.964e5	1.620e5	0.907	1.21	1.24	933.3	YES	NO	db	db	48.574
3	123478-HxCDD	35.09	1.640e5	1.358e5	0.842	1.21	1.24	901.7	YES	NO	bd	bd	50.791
4	Total-hexadioxins	34.18	3.931e2	3.612e2	0.897	1.09	1.24	3.2	NO	NO	db	bb	0.111
5	Total-hexadioxins	33.28	1.791e2	1.416e2	0.897	1.26	1.24	1.5	NO	NO	bb	bd	0.047
6	124679-HXCDD	33.02	1.917e5	1.585e5	1.056	1.21	1.24	941.8	YES	NO	bb	bb	47.273

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	39.34	1.406e5	1.419e5	1.044	0.99	1.05	788.5	YES	NO	bb	bd	52.360
2	1234679-HPCDD	38.35	1.580e5	1.539e5	1.285	1.03	1.05	916.2	YES	NO	bb	bd	46.926

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.11	5.624e4	7.084e4	1.153	0.79	0.77	285.7	YES	NO	bb	bb	15.938
2	Total-tetradioxins	24.62	1.746e4	2.165e4	1.153	0.81	0.77	130.5	YES	NO	bb	bb	4.905
3	1368-TCDD	22.60	3.857e4	4.559e4	1.179	0.85	0.77	300.7	YES	NO	bb	bb	10.325
4	12479-PECDD	27.83	3.318e5	2.055e5	1.810	1.61	1.55	924.6	YES	NO	bb	bb	49.980
5	1289-TCDD	26.03	3.195e4	4.180e4	1.042	0.76	0.77	226.9	YES	NO	bb	bb	10.232
6	2378-TCDD	25.44	3.720e4	4.587e4	1.238	0.81	0.77	271.6	YES	NO	bb	bb	9.701
7	12389-PECDD	30.92	2.175e5	1.356e5	1.165	1.60	1.55	905.8	YES	NO	bb	bb	51.013
8	12378-PeCDD	30.53	1.811e5	1.137e5	0.988	1.59	1.55	801.8	YES	NO	bb	bb	50.269
9	123789-HxCDD	35.60	1.638e5	1.410e5	0.784	1.16	1.24	820.1	YES	NO	bb	bb	51.352
10	123678-HxCDD	35.21	1.964e5	1.620e5	0.907	1.21	1.24	933.3	YES	NO	db	db	48.574
11	123478-HxCDD	35.09	1.640e5	1.358e5	0.842	1.21	1.24	901.7	YES	NO	bd	bd	50.791
12	Total-hexadioxins	34.18	3.931e2	3.612e2	0.897	1.09	1.24	3.2	NO	NO	db	bb	0.111
13	Total-hexadioxins	33.28	1.791e2	1.416e2	0.897	1.26	1.24	1.5	NO	NO	bb	bd	0.047
14	124679-HXCDD	33.02	1.917e5	1.585e5	1.056	1.21	1.24	941.8	YES	NO	bb	bb	47.273
15	1234678-HpCDD	39.34	1.406e5	1.419e5	1.044	0.99	1.05	788.5	YES	NO	bb	bd	52.360
16	1234679-HPCDD	38.35	1.580e5	1.539e5	1.285	1.03	1.05	916.2	YES	NO	bb	bd	46.926
17	OCDD	43.80	2.547e5	2.958e5	0.963	0.86	0.89	1277.3	YES	NO	bd	bd	114.037

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	26.28	4.253e4	5.074e4	0.688	0.84	0.77	511.6	YES	NO	dd	bb	10.508
2	2378-TCDF	24.80	4.183e4	5.463e4	0.729	0.77	0.77	542.4	YES	NO	bb	bb	10.257
3	1368-TCDF	21.33	4.812e4	6.337e4	0.846	0.76	0.77	692.9	YES	NO	bb	bb	10.208
4	12389-PECDF	31.29	2.728e5	1.612e5	0.766	1.69	1.55	1098.1	YES	NO	bb	bb	55.419
5	23478-PeCDF	30.27	2.870e5	1.717e5	0.880	1.67	1.55	1270.9	YES	NO	bb	bb	51.966
6	12378-PeCDF	28.92	2.700e5	1.616e5	0.779	1.67	1.55	1173.8	YES	NO	bb	bb	54.185
7	Total-pentafurans	27.79	4.477e4	2.609e4	0.809	1.72	1.55	201.4	YES	NO	bb	bb	8.655
8	123789-HxCDF	36.01	1.536e5	1.147e5	0.780	1.34	1.24	765.5	YES	NO	bb	bb	50.858
9	234678-HxCDF	34.97	1.844e5	1.564e5	0.863	1.18	1.24	988.8	YES	NO	bb	bd	53.036
10	123678-HxCDF	34.07	2.117e5	1.632e5	0.853	1.30	1.24	1080.1	YES	NO	db	db	52.358
11	123478-HxCDF	33.92	1.922e5	1.488e5	0.880	1.29	1.24	1011.8	YES	NO	bd	bd	52.466
12	123468-HXCDF	32.22	2.014e5	1.549e5	1.003	1.30	1.24	1064.0	YES	NO	bb	bb	48.123
13	1234678-HpCDF	37.90	1.801e5	1.678e5	1.001	1.07	1.05	897.5	YES	NO	bb	bb	51.429
14	1234789-HpCDF	40.04	1.536e5	1.448e5	0.994	1.06	1.05	630.5	YES	NO	bd	bd	53.437
15	OCDF	44.02	2.872e5	3.453e5	1.158	0.83	0.89	1467.9	YES	NO	bb	bd	108.971
16	Total-penta1	26.80	1.619e2	1.059e2		1.53	1.55	7.5	NO	NO	bd	bd	0.029
17	13468-PECDF	26.15	3.599e5	2.399e5	1.181	1.50	1.55	13554.0	YES	NO	bb	bb	49.670
18	Total-tetradioxins	25.11	5.624e4	7.084e4	1.153	0.79	0.77	285.7	YES	NO	bb	bb	15.938
19	Total-tetradioxins	24.62	1.746e4	2.165e4	1.153	0.81	0.77	130.5	YES	NO	bb	bb	4.905
20	1368-TCDD	22.60	3.857e4	4.559e4	1.179	0.85	0.77	300.7	YES	NO	bb	bb	10.325
21	12479-PECDD	27.83	3.318e5	2.055e5	1.810	1.61	1.55	924.6	YES	NO	bb	bb	49.980
22	1289-TCDD	26.03	3.195e4	4.180e4	1.042	0.76	0.77	226.9	YES	NO	bb	bb	10.232
23	2378-TCDD	25.44	3.720e4	4.587e4	1.238	0.81	0.77	271.6	YES	NO	bb	bb	9.701
24	12389-PECDD	30.92	2.175e5	1.356e5	1.165	1.60	1.55	905.8	YES	NO	bb	bb	51.013
25	12378-PeCDD	30.53	1.811e5	1.137e5	0.988	1.59	1.55	801.8	YES	NO	bb	bb	50.269
26	123789-HxCDD	35.60	1.638e5	1.410e5	0.784	1.16	1.24	820.1	YES	NO	bb	bb	51.352
27	123678-HxCDD	35.21	1.964e5	1.620e5	0.907	1.21	1.24	933.3	YES	NO	db	db	48.574
28	123478-HxCDD	35.09	1.640e5	1.358e5	0.842	1.21	1.24	901.7	YES	NO	bd	bd	50.791
29	Total-hexadioxins	34.18	3.931e2	3.612e2	0.897	1.09	1.24	3.2	NO	NO	db	bb	0.111
30	Total-hexadioxins	33.28	1.791e2	1.416e2	0.897	1.26	1.24	1.5	NO	NO	bb	bd	0.047
31	124679-HXCDD	33.02	1.917e5	1.585e5	1.056	1.21	1.24	941.8	YES	NO	bb	bb	47.273
32	1234678-HpCDD	39.34	1.406e5	1.419e5	1.044	0.99	1.05	788.5	YES	NO	bb	bd	52.360
33	1234679-HPCDD	38.35	1.580e5	1.539e5	1.285	1.03	1.05	916.2	YES	NO	bb	bd	46.926
34	OCDD	43.80	2.547e5	2.958e5	0.963	0.86	0.89	1277.3	YES	NO	bd	bd	114.037

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	20.85	1.981e7					39.6	YES		db		
2	FUNCTION1 PFK	20.60	1.234e7					50.6	YES		bd		
3	FUNCTION1 PFK	26.96	8.210e4					1.5	NO		bb		
4	FUNCTION1 PFK	25.60	1.804e5					1.4	NO		bb		
5	FUNCTION1 PFK	25.27	6.627e4					1.4	NO		bb		
6	FUNCTION1 PFK	24.94	8.188e4					1.4	NO		bb		
7	FUNCTION1 PFK	24.50	5.039e4					1.2	NO		bb		
8	FUNCTION1 PFK	23.58	5.102e4					1.2	NO		bb		
9	FUNCTION1 PFK	23.14	6.448e4					1.3	NO		bb		
10	FUNCTION1 PFK	22.34	4.958e4					1.1	NO		bb		
11	FUNCTION1 PFK	21.77	4.187e4					1.0	NO		bb		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	27.41	1.304e5					2.9	NO		dd		0.000
2	FUNCTION2 PFK	27.31	1.079e5					2.6	NO		dd		0.000
3	FUNCTION2 PFK	27.25	6.649e4					2.3	NO		dd		0.000
4	FUNCTION2 PFK	27.19	4.000e4					2.3	NO		dd		0.000
5	FUNCTION2 PFK	27.17	4.685e4					2.3	NO		bd		0.000
6	FUNCTION2 PFK	27.09	8.714e3					0.7	NO		bb		0.000
7	FUNCTION2 PFK	29.29	2.455e3					0.3	NO		bb		0.000
8	FUNCTION2 PFK	29.14	1.254e4					0.8	NO		db		0.000
9	FUNCTION2 PFK	29.09	2.753e4					1.2	NO		bd		0.000
10	FUNCTION2 PFK	28.90	8.773e4					1.5	NO		db		0.000
11	FUNCTION2 PFK	28.78	4.789e4					1.4	NO		dd		0.000
12	FUNCTION2 PFK	28.65	8.250e4					2.2	NO		bd		0.000
13	FUNCTION2 PFK	28.21	3.457e4					1.0	NO		bb		0.000
14	FUNCTION2 PFK	28.06	2.549e3					0.3	NO		bb		0.000
15	FUNCTION2 PFK	27.98	2.904e4					1.1	NO		db		0.000
16	FUNCTION2 PFK	27.87	4.287e4					1.3	NO		dd		0.000
17	FUNCTION2 PFK	27.76	3.170e4					1.3	NO		dd		0.000
18	FUNCTION2 PFK	27.71	4.604e4					1.8	NO		dd		0.000
19	FUNCTION2 PFK	27.64	5.762e4					2.0	NO		dd		0.000
20	FUNCTION2 PFK	27.59	2.041e4					1.1	NO		dd		0.000
21	FUNCTION2 PFK	27.54	8.117e4					2.3	NO		dd		0.000
22	FUNCTION2 PFK	27.47	4.372e4					1.7	NO		dd		0.000
23	FUNCTION2 PFK	31.32	2.717e4					1.7	NO		bd		0.000
24	FUNCTION2 PFK	31.24	4.755e4					1.9	NO		bb		0.000
25	FUNCTION2 PFK	30.91	5.776e4					2.1	NO		bb		0.000
26	FUNCTION2 PFK	30.78	2.966e4					1.0	NO		bb		0.000
27	FUNCTION2 PFK	30.58	9.528e4					1.9	NO		db		0.000
28	FUNCTION2 PFK	30.47	1.461e5					2.5	NO		dd		0.000
29	FUNCTION2 PFK	30.35	8.312e4					2.3	NO		bd		0.000
30	FUNCTION2 PFK	30.20	1.033e4					0.6	NO		bb		0.000
31	FUNCTION2 PFK	30.11	7.118e4					2.1	NO		bb		0.000
32	FUNCTION2 PFK	29.90	7.206e4					1.8	NO		bb		0.000
33	FUNCTION2 PFK	29.77	6.338e4					1.6	NO		db		0.000
34	FUNCTION2 PFK	29.68	5.873e4					1.9	NO		bd		0.000
35	FUNCTION2 PFK	29.63	1.575e4					1.0	NO		bb		0.000
36	FUNCTION2 PFK	29.54	7.388e3					0.6	NO		bb		0.000
37	FUNCTION2 PFK	29.46	1.069e5					2.0	NO		db		0.000

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION2 PFK	29.34	5.372e4					2.1	NO		bd		0.000
39	FUNCTION2 PFK	31.70	5.104e4					1.6	NO		bb		0.000
40	FUNCTION2 PFK	31.47	1.068e5					2.6	NO		db		0.000
41	FUNCTION2 PFK	31.37	3.660e4					2.3	NO		dd		0.000
42	FUNCTION2 PFK	31.35	4.671e4					2.4	NO		dd		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	32.82	4.508e4					2.2	NO		dd		0.000
2	FUNCTION3 PFK	32.73	6.214e4					3.5	YES		bd		0.000
3	FUNCTION3 PFK	32.49	3.478e4					1.9	NO		db		0.000
4	FUNCTION3 PFK	32.44	6.935e3					0.7	NO		bd		0.000
5	FUNCTION3 PFK	32.39	6.545e4					2.9	NO		bb		0.000
6	FUNCTION3 PFK	32.24	2.416e3					0.5	NO		bb		0.000
7	FUNCTION3 PFK	32.05	6.136e4					3.7	YES		db		0.000
8	FUNCTION3 PFK	32.02	6.252e4					3.9	YES		dd		0.000
9	FUNCTION3 PFK	31.95	8.340e4					3.0	YES		dd		0.000
10	FUNCTION3 PFK	31.91	2.444e4					2.2	NO		bd		0.000
11	FUNCTION3 PFK	31.83	2.341e3					0.5	NO		bb		0.000
12	FUNCTION3 PFK	35.26	2.106e4					1.7	NO		bd		0.000
13	FUNCTION3 PFK	35.17	9.261e4					3.9	YES		db		0.000
14	FUNCTION3 PFK	35.07	8.523e4					3.5	YES		dd		0.000
15	FUNCTION3 PFK	35.02	3.081e4					2.9	NO		bd		0.000
16	FUNCTION3 PFK	34.95	7.594e4					3.1	YES		db		0.000
17	FUNCTION3 PFK	34.90	1.013e4					1.3	NO		bd		0.000
18	FUNCTION3 PFK	34.62	6.253e4					2.9	NO		bb		0.000
19	FUNCTION3 PFK	34.47	8.683e3					1.0	NO		bb		0.000
20	FUNCTION3 PFK	34.40	5.901e4					2.5	NO		db		0.000
21	FUNCTION3 PFK	34.29	1.753e4					1.5	NO		bd		0.000
22	FUNCTION3 PFK	34.05	4.603e4					2.3	NO		db		0.000
23	FUNCTION3 PFK	34.02	7.363e3					0.9	NO		bd		0.000
24	FUNCTION3 PFK	33.62	8.125e4					2.7	NO		bb		0.000
25	FUNCTION3 PFK	33.16	6.287e4					2.7	NO		bb		0.000
26	FUNCTION3 PFK	32.95	3.700e4					2.0	NO		bb		0.000
27	FUNCTION3 PFK	32.85	2.176e4					1.1	NO		db		0.000
28	FUNCTION3 PFK	36.87	5.008e4					2.5	NO		db		0.000
29	FUNCTION3 PFK	36.76	6.302e4					3.1	YES		bd		0.000
30	FUNCTION3 PFK	36.66	4.144e4					2.4	NO		bb		0.000
31	FUNCTION3 PFK	36.55	5.066e4					2.6	NO		bb		0.000
32	FUNCTION3 PFK	36.43	1.351e5					3.5	YES		db		0.000
33	FUNCTION3 PFK	36.31	8.353e4					3.8	YES		bd		0.000
34	FUNCTION3 PFK	36.20	5.744e4					2.7	NO		bb		0.000
35	FUNCTION3 PFK	36.05	2.224e3					0.4	NO		bb		0.000
36	FUNCTION3 PFK	35.54	3.099e3					0.6	NO		bb		0.000
37	FUNCTION3 PFK	35.40	3.653e4					1.9	NO		bb		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION3 PFK	35.28	5.492e4					2.8	NO		db		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	37.13	2.329e5					5.5	YES		dd		
2	FUNCTION4 PFK	37.03	1.063e5					5.4	YES		dd		
3	FUNCTION4 PFK	36.99	1.304e5					6.1	YES		dd		
4	FUNCTION4 PFK	36.96	1.292e5					6.4	YES		bd		
5	FUNCTION4 PFK	39.23	1.528e4					1.2	NO		bd		
6	FUNCTION4 PFK	39.02	6.949e4					1.8	NO		db		
7	FUNCTION4 PFK	38.91	4.931e4					1.8	NO		bd		
8	FUNCTION4 PFK	38.59	2.770e4					1.7	NO		db		
9	FUNCTION4 PFK	38.55	3.528e4					1.7	NO		bd		
10	FUNCTION4 PFK	38.45	4.849e4					1.8	NO		bb		
11	FUNCTION4 PFK	38.00	6.971e4					2.2	NO		bb		
12	FUNCTION4 PFK	37.88	8.163e4					2.2	NO		db		
13	FUNCTION4 PFK	37.79	3.715e4					2.0	NO		dd		
14	FUNCTION4 PFK	37.75	7.376e4					2.4	NO		dd		
15	FUNCTION4 PFK	37.65	5.402e4					2.4	NO		bd		
16	FUNCTION4 PFK	37.52	1.488e4					1.1	NO		bb		
17	FUNCTION4 PFK	37.44	4.074e4					2.6	NO		db		
18	FUNCTION4 PFK	37.42	3.802e4					2.7	NO		dd		
19	FUNCTION4 PFK	37.32	1.713e5					4.4	YES		dd		
20	FUNCTION4 PFK	37.18	2.883e5					5.6	YES		dd		
21	FUNCTION4 PFK	41.59	4.210e4					1.5	NO		bb		
22	FUNCTION4 PFK	41.27	9.762e4					2.7	NO		bb		
23	FUNCTION4 PFK	40.82	5.433e3					0.6	NO		bb		
24	FUNCTION4 PFK	40.50	5.271e4					1.5	NO		db		
25	FUNCTION4 PFK	40.38	4.837e4					2.0	NO		bd		
26	FUNCTION4 PFK	40.00	1.017e4					0.8	NO		bb		
27	FUNCTION4 PFK	39.91	4.587e4					1.8	NO		bb		
28	FUNCTION4 PFK	39.78	2.031e3					0.4	NO		bb		
29	FUNCTION4 PFK	39.49	2.899e4					1.3	NO		bb		
30	FUNCTION4 PFK	39.38	5.617e4					2.1	NO		db		
31	FUNCTION4 PFK	39.26	4.000e4					1.8	NO		dd		

ID: CS3J1, Name: 20102902, Date: 29-Oct-2020, Time: 15:55:05, Conditions: AUTOSPEC01, User: pk

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	42.51	1.066e4					0.8	NO		db		
2	FUNCTION5 PFK	42.49	1.971e4					1.5	NO		bd		
3	FUNCTION5 PFK	42.30	7.058e3					0.7	NO		bb		
4	FUNCTION5 PFK	42.17	2.083e4					1.3	NO		bb		
5	FUNCTION5 PFK	43.74	3.775e4					2.1	NO		db		
6	FUNCTION5 PFK	43.70	1.801e4					1.5	NO		dd		
7	FUNCTION5 PFK	43.65	1.606e4					1.2	NO		bd		
8	FUNCTION5 PFK	43.51	6.371e3					0.8	NO		bb		
9	FUNCTION5 PFK	43.47	1.552e3					0.4	NO		bb		
10	FUNCTION5 PFK	43.39	1.222e3					0.3	NO		bb		
11	FUNCTION5 PFK	43.29	7.191e3					0.7	NO		bb		
12	FUNCTION5 PFK	43.14	7.324e3					0.7	NO		bb		
13	FUNCTION5 PFK	43.07	2.451e4					1.5	NO		db		
14	FUNCTION5 PFK	43.04	1.406e4					1.1	NO		bd		
15	FUNCTION5 PFK	42.98	1.846e4					1.4	NO		db		
16	FUNCTION5 PFK	42.93	2.108e4					1.3	NO		bd		
17	FUNCTION5 PFK	42.83	1.080e4					1.0	NO		db		
18	FUNCTION5 PFK	42.81	8.007e3					0.7	NO		bd		
19	FUNCTION5 PFK	42.71	3.806e4					1.6	NO		bb		
20	FUNCTION5 PFK	42.61	2.456e4					1.1	NO		bb		
21	FUNCTION5 PFK	44.95	1.851e3					0.4	NO		bb		
22	FUNCTION5 PFK	44.75	6.586e3					0.8	NO		db		
23	FUNCTION5 PFK	44.73	1.194e4					1.0	NO		bd		
24	FUNCTION5 PFK	44.54	4.763e4					1.4	NO		bb		
25	FUNCTION5 PFK	44.42	1.182e4					1.0	NO		db		
26	FUNCTION5 PFK	44.40	5.602e3					0.7	NO		bd		
27	FUNCTION5 PFK	44.29	1.079e3					0.2	NO		bb		
28	FUNCTION5 PFK	44.08	4.031e4					1.8	NO		bb		
29	FUNCTION5 PFK	43.98	3.000e4					1.3	NO		db		
30	FUNCTION5 PFK	43.84	3.431e4					1.4	NO		dd		
31	FUNCTION5 PFK	43.78	6.801e3					0.5	NO		bd		

ID: CS3J1, Name: 20102902, Date: 29-Oct-2020, Time: 15:55:05, Conditions: AUTOSPEC01, User: pk

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	25.24	7.859e1					2.1	NO		bb		0.000
2	FUNCTION1 HXCD...	22.92	8.487e1					2.7	NO		bb		0.000
3	FUNCTION1 HXCD...	21.96	7.271e1					1.2	NO		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	25.09	8.276e1					1.8	NO		bb		0.000
2	FUNCTION1 HPCD...	22.82	1.088e2					3.9	YES		bb		0.000
3	FUNCTION1 HPCD...	22.66	1.090e2					2.4	NO		bb		0.000
4	FUNCTION1 HPCD...	20.66	1.025e2					3.6	YES		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	30.17	2.599e2					5.0	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	41.70	7.014e1					1.7	NO		bb		0.000
2	FUNCTION4 NCDPE	41.41	7.772e1					3.2	YES		bb		0.000
3	FUNCTION4 NCDPE	37.74	1.150e2					3.0	YES		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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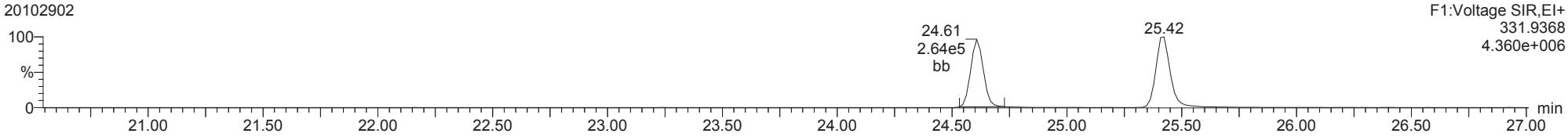
ID: CS3J1, Name: 20102902, Date: 29-Oct-2020, Time: 15:55:05, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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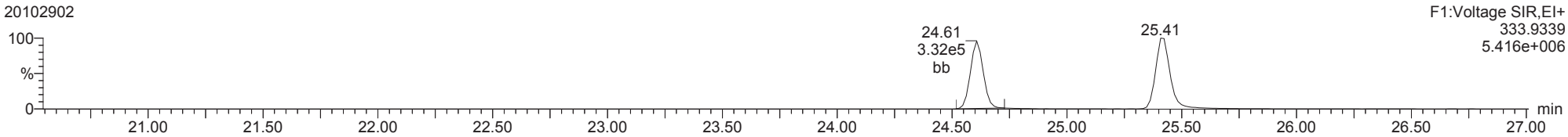

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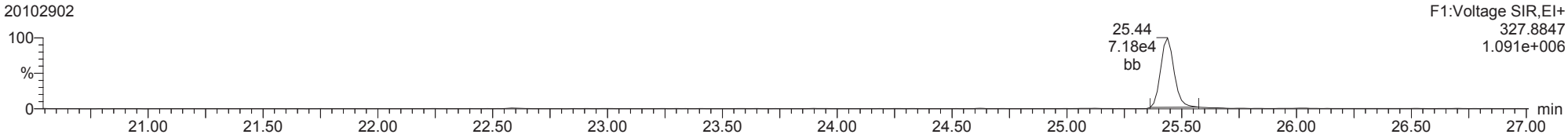

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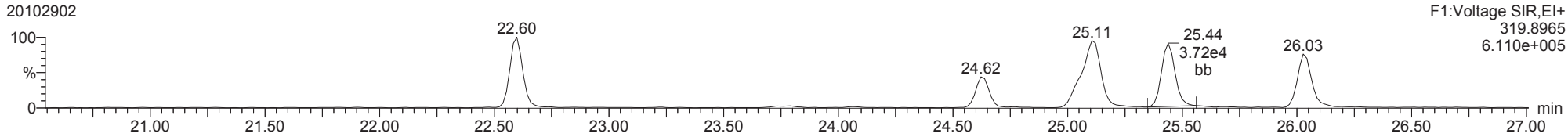
ID: CS3J1, Name: 20102902, Date: 29-Oct-2020, Time: 15:55:05, Conditions: AUTOSPEC01, User: pk

2378-TCDD



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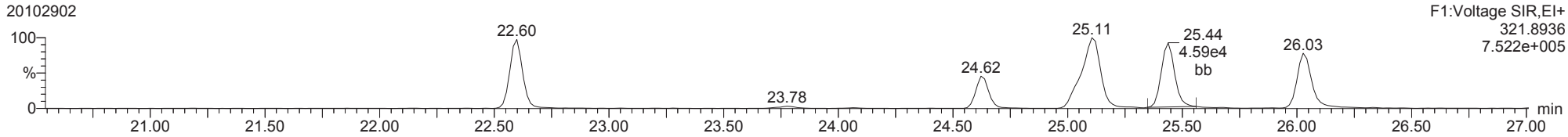

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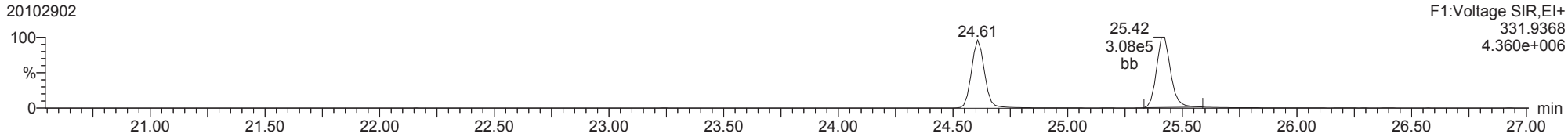

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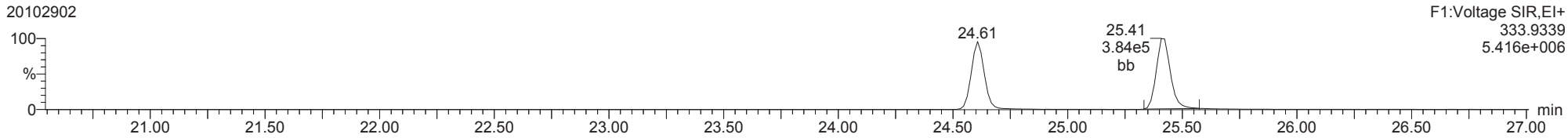

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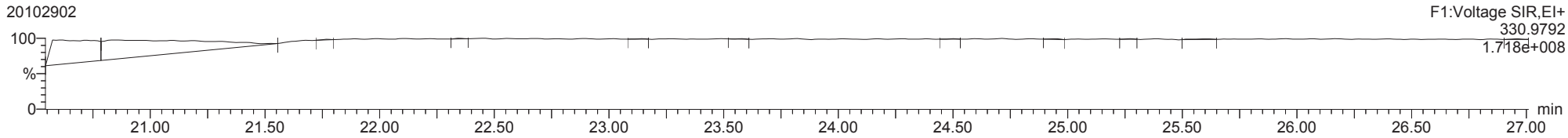

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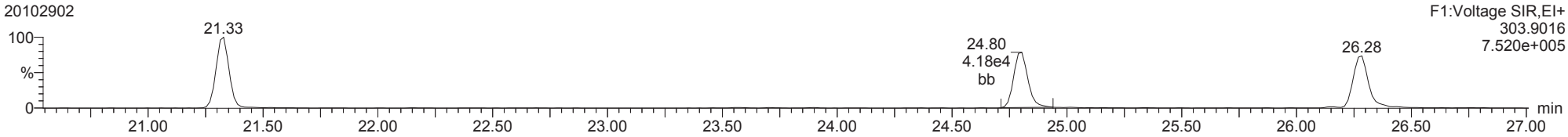

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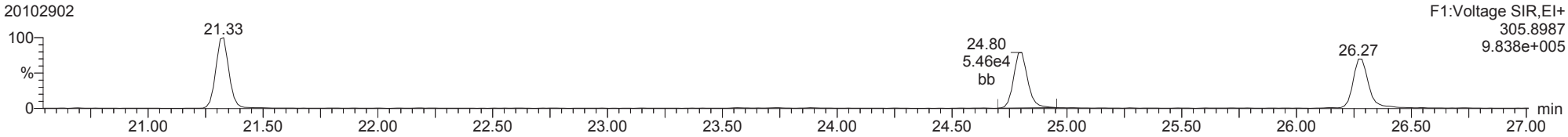

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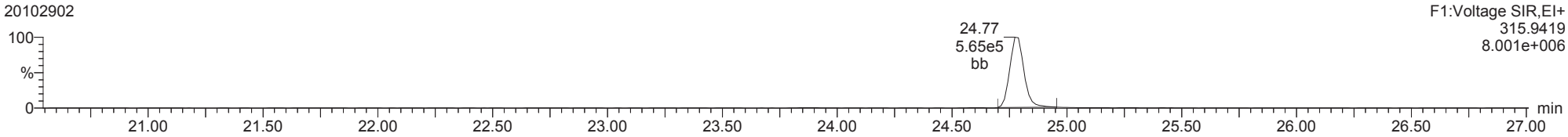

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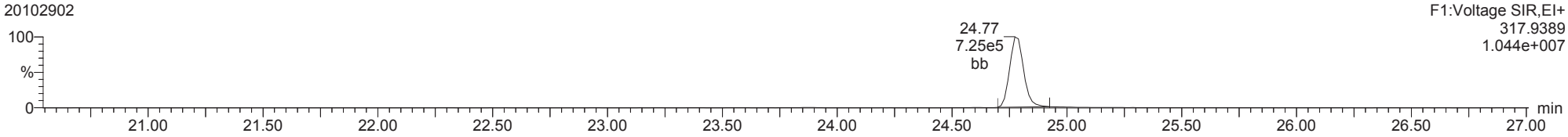

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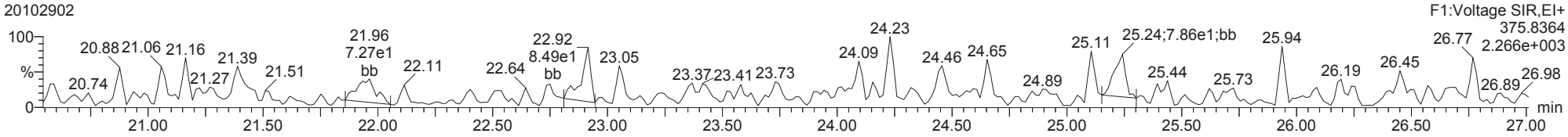
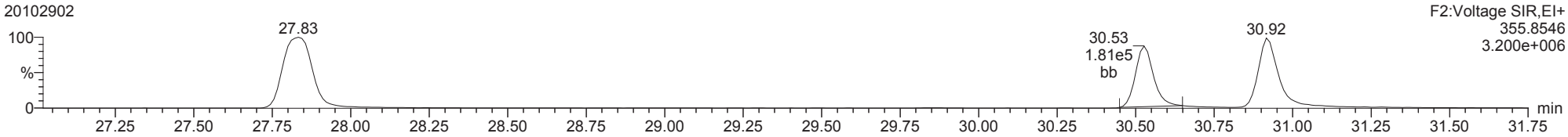


ID: CS3J1, Name: 20102902, Date: 29-Oct-2020, Time: 15:55:05, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



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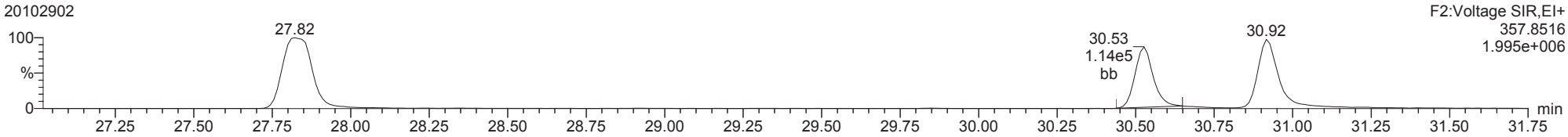

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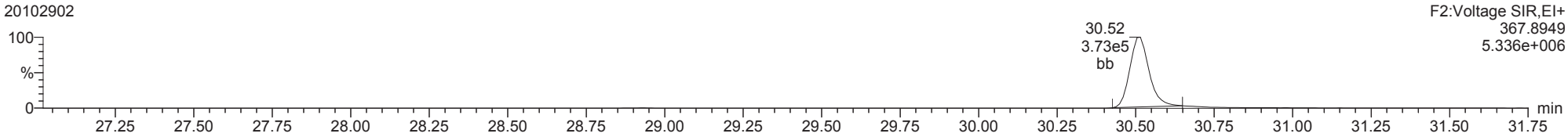

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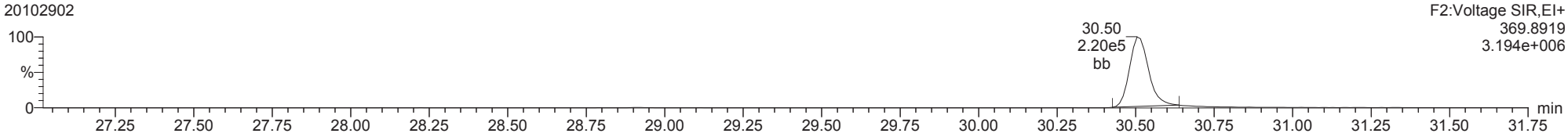
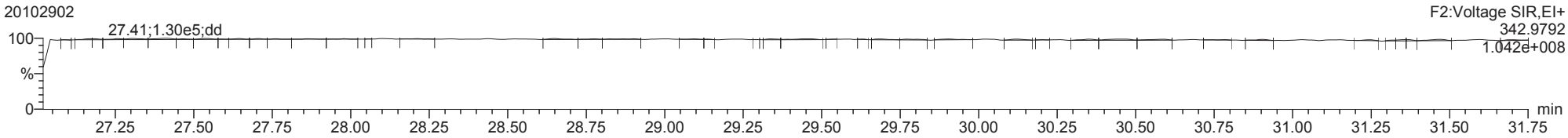


FUNCTION2 PFK



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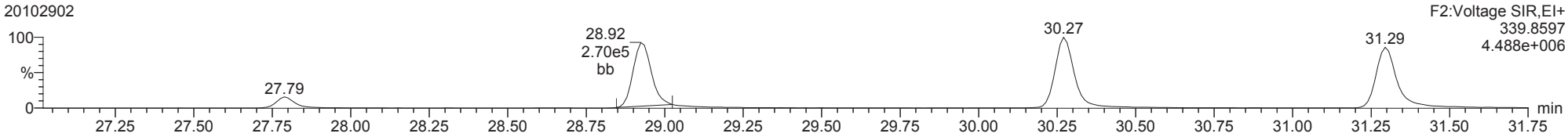

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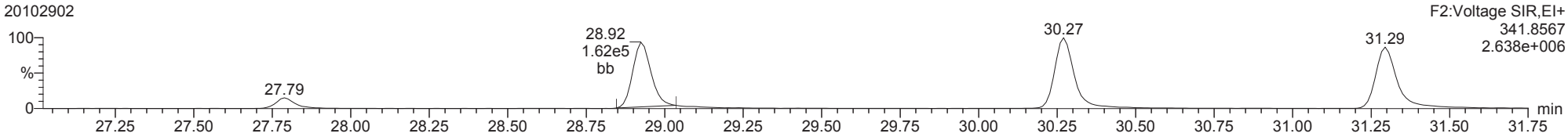

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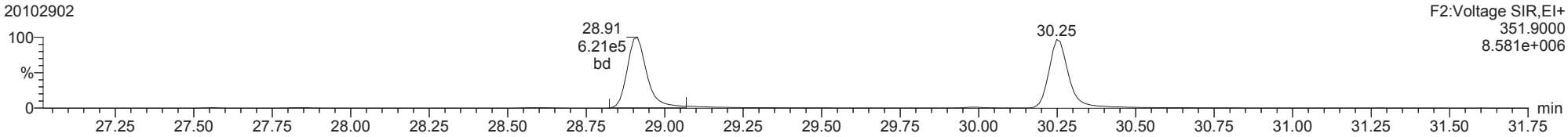

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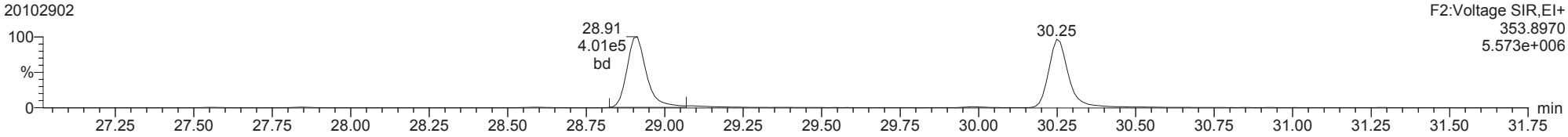
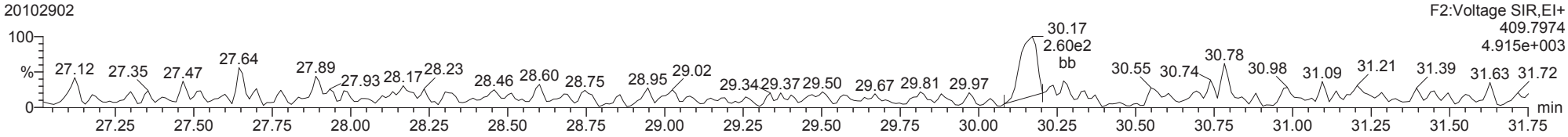


FUNCTION2 HPCDPE



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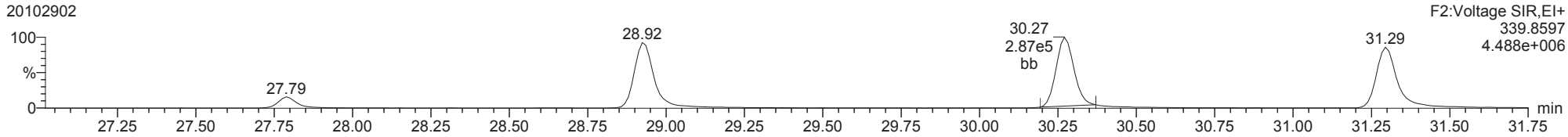
23478-PeCDF



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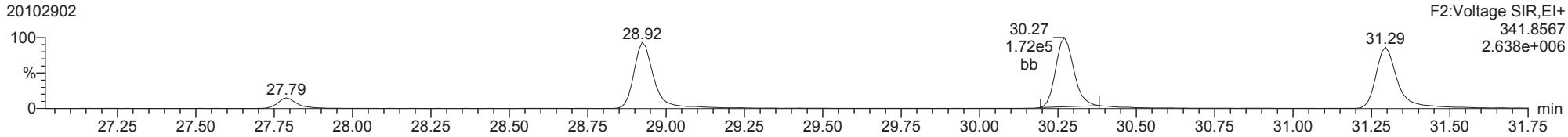

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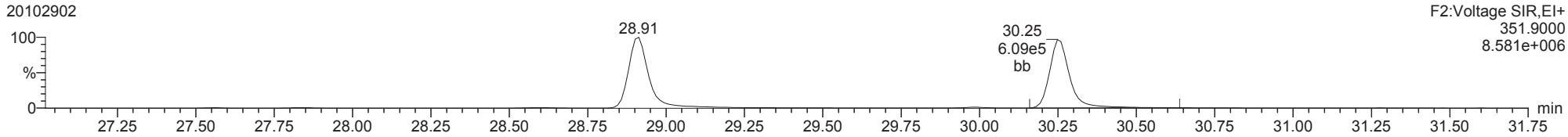

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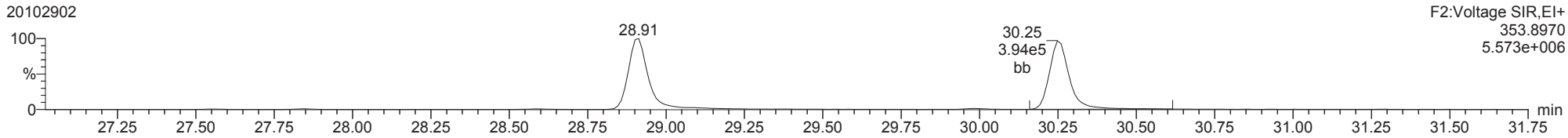
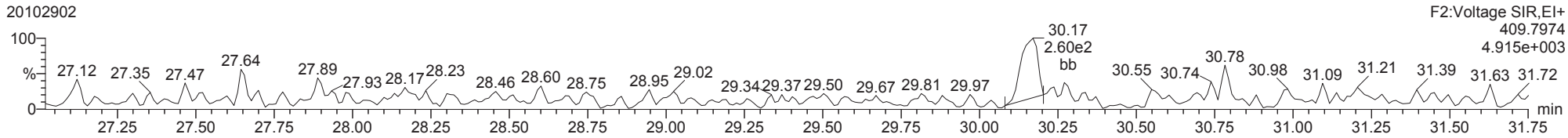


FUNCTION2 HPCDPE



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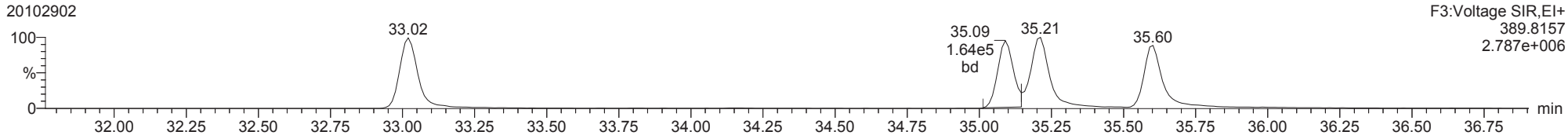
123478-HxCDD



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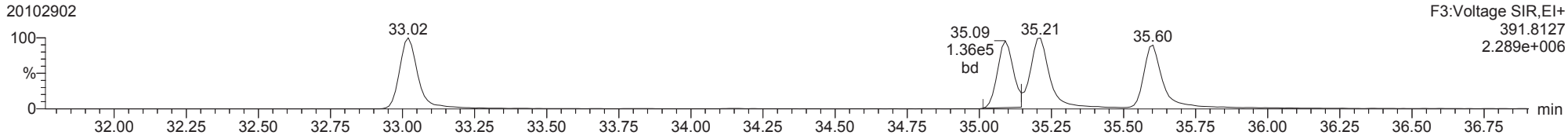

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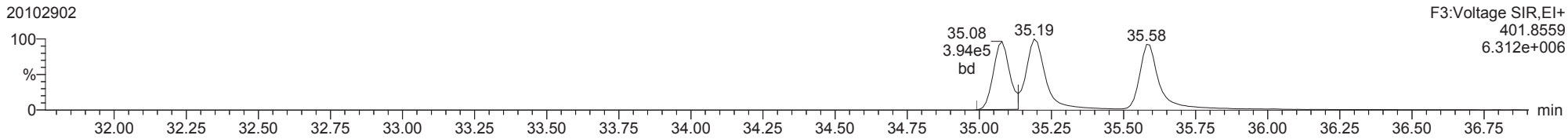

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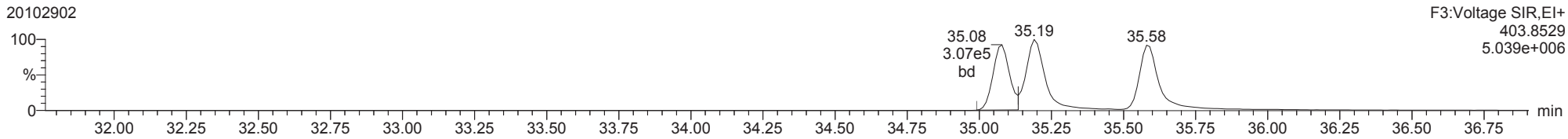

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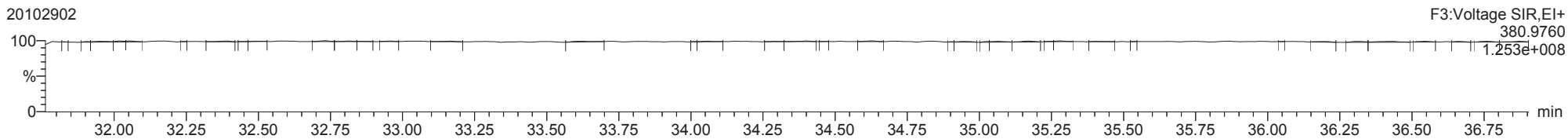

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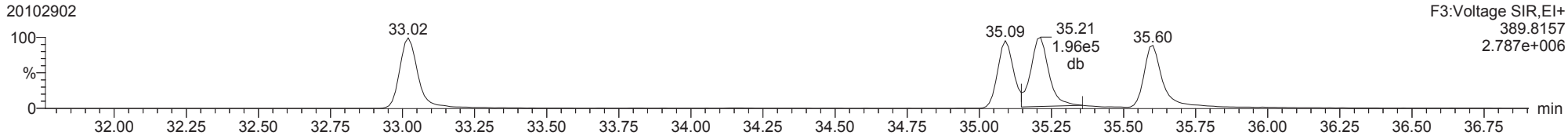
123678-HxCDD



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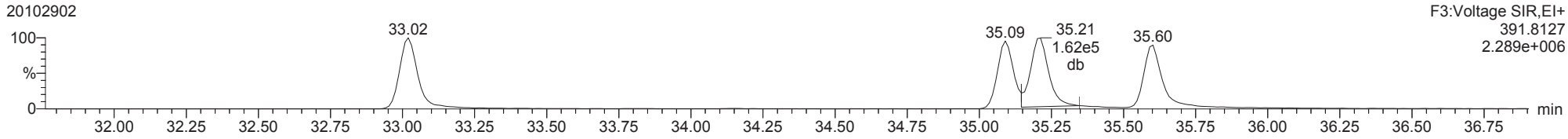

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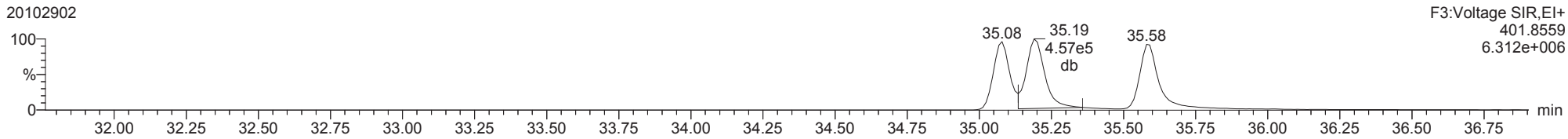

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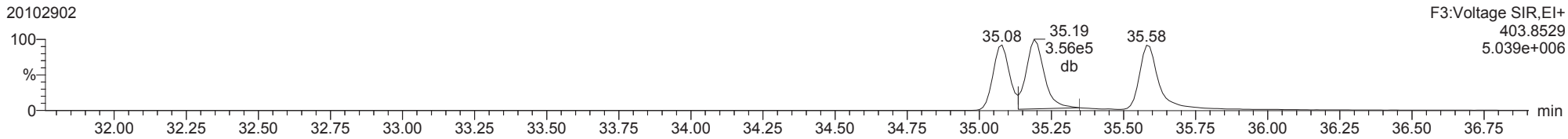

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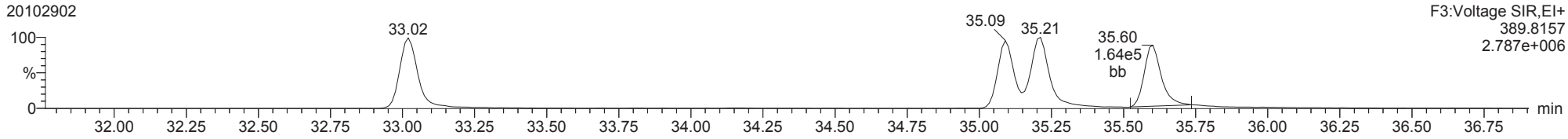

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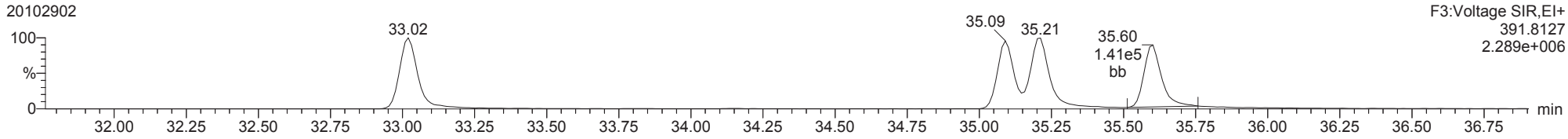

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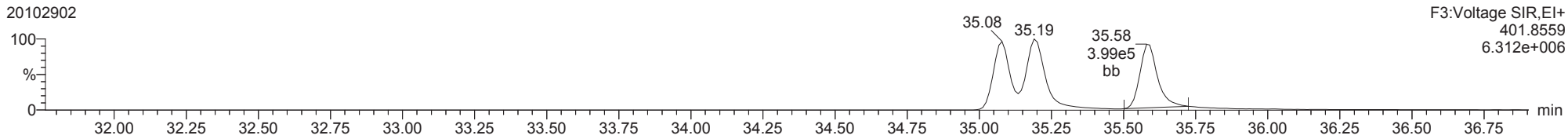

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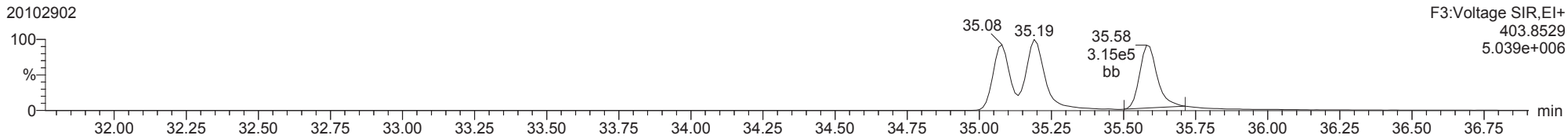

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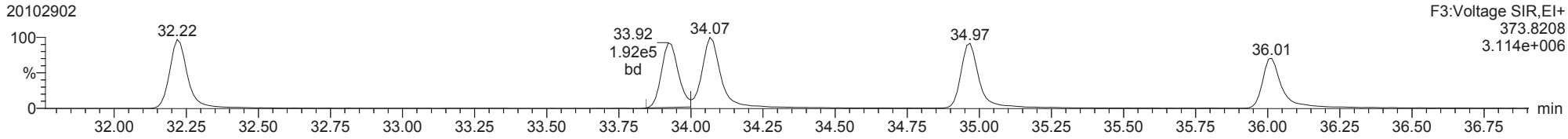

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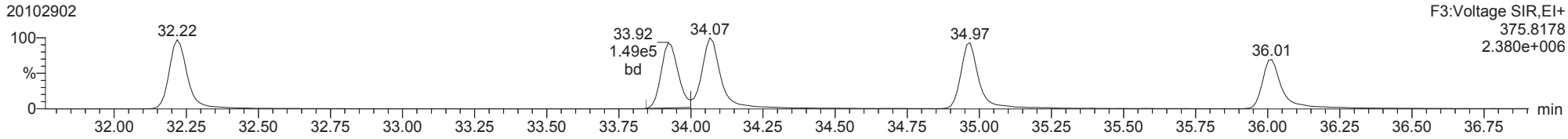

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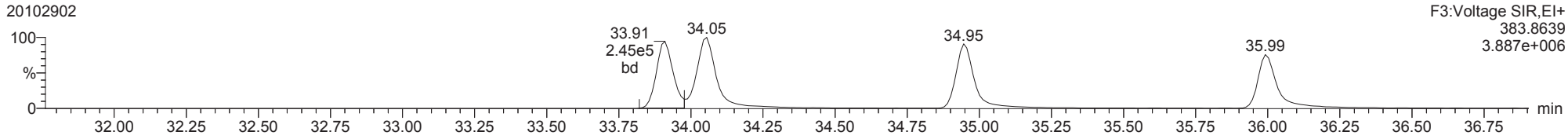

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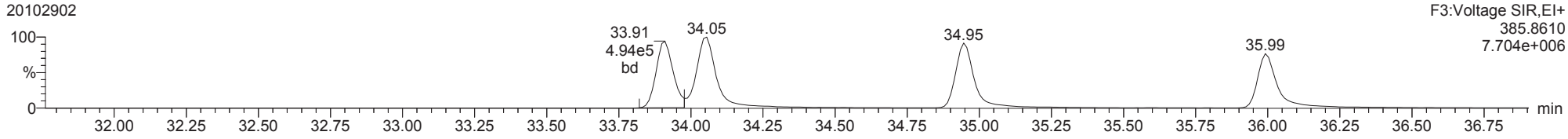

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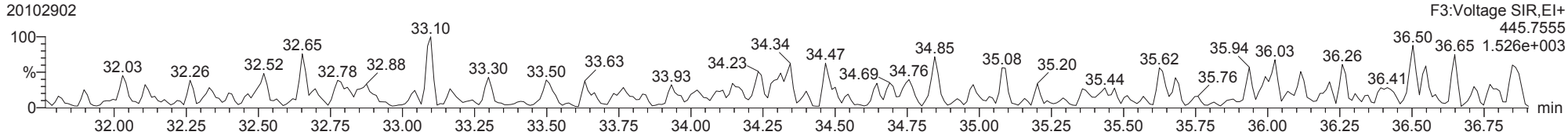

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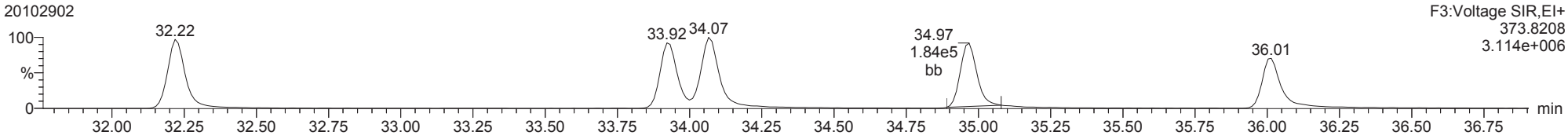

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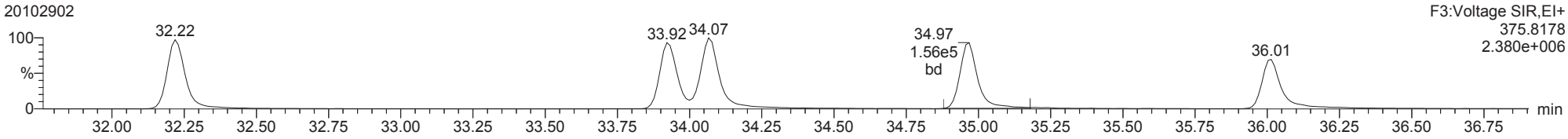

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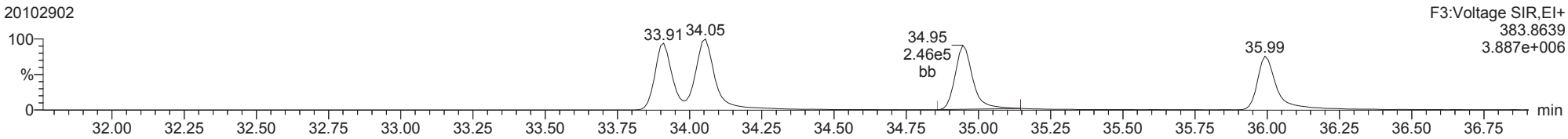

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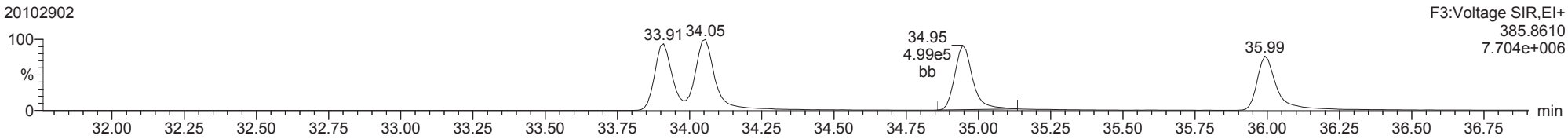

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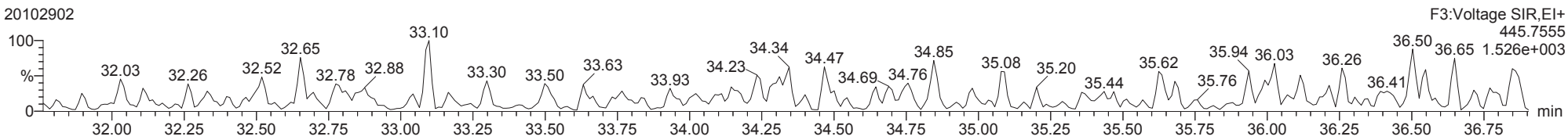

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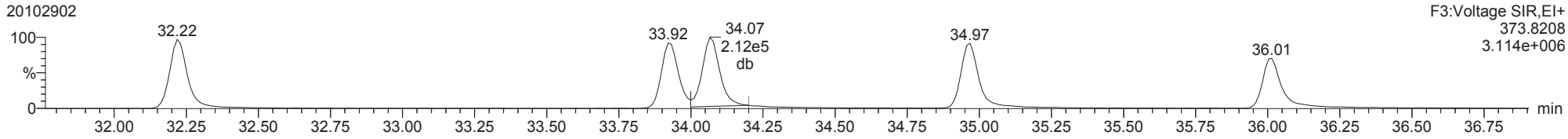

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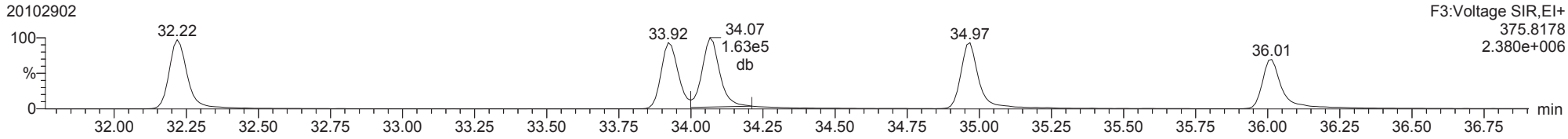

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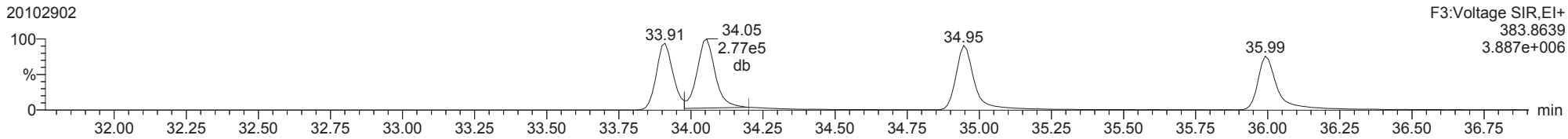

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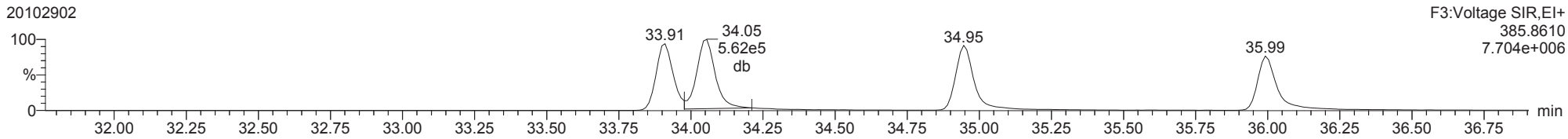
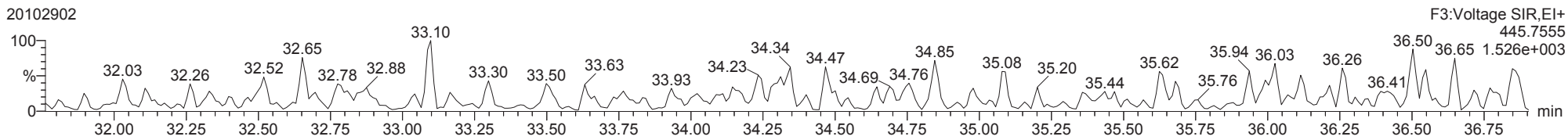


FUNCTION3 OCDPE



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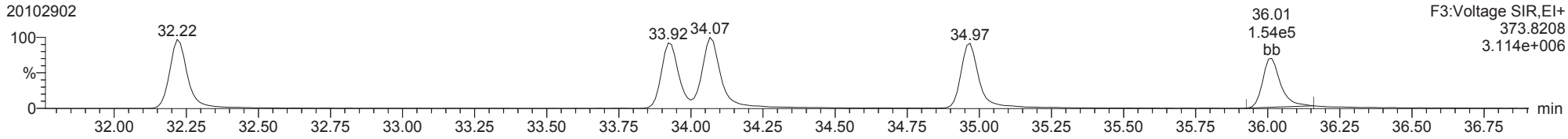

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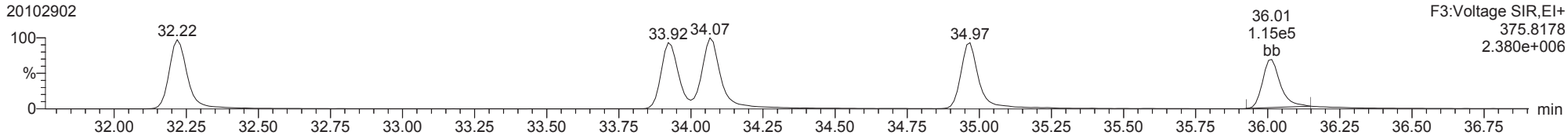

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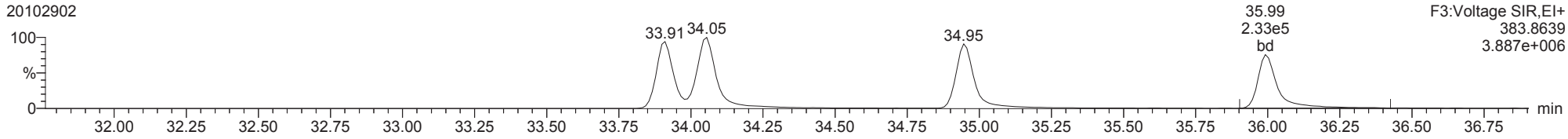

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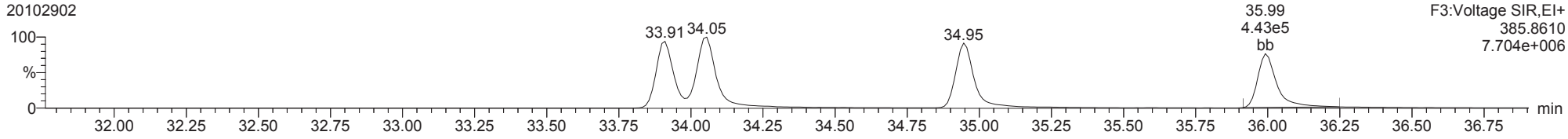

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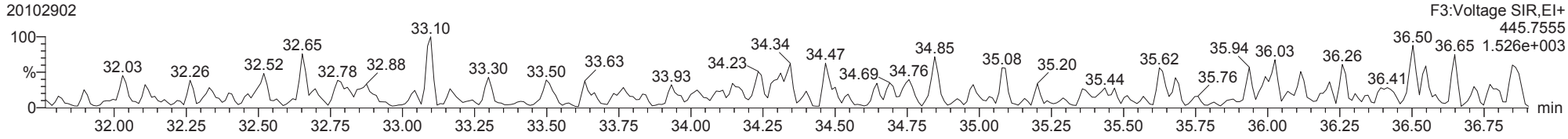

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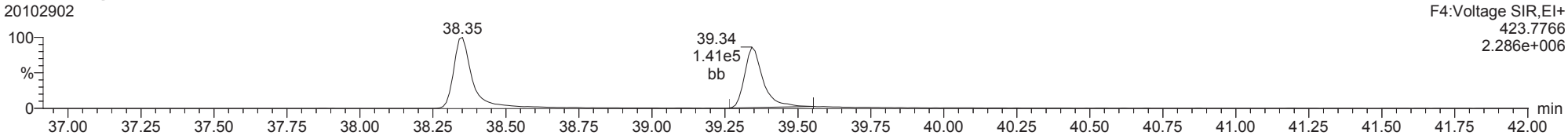

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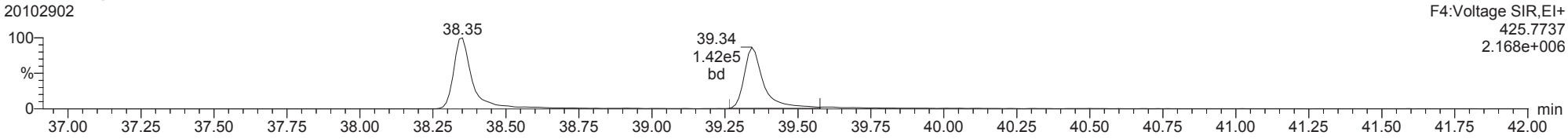

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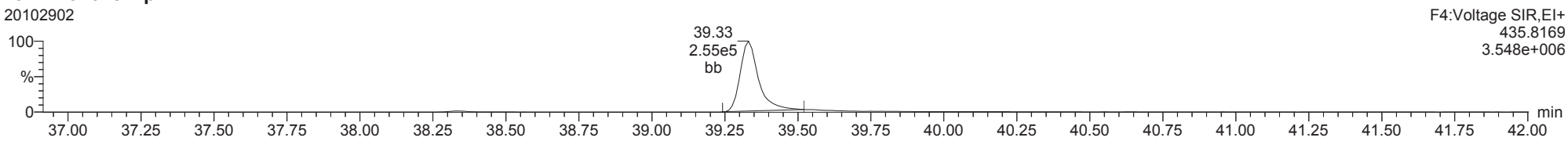

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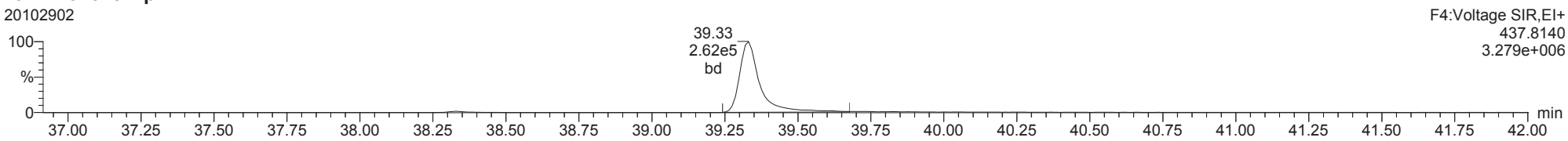

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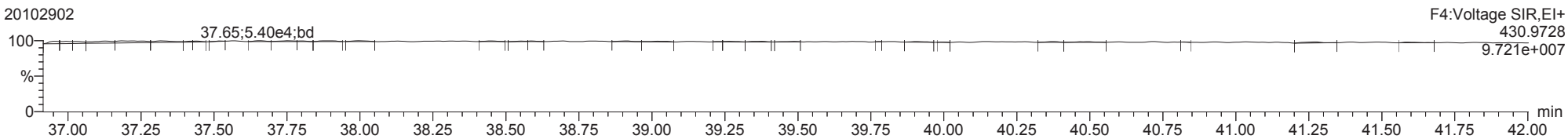

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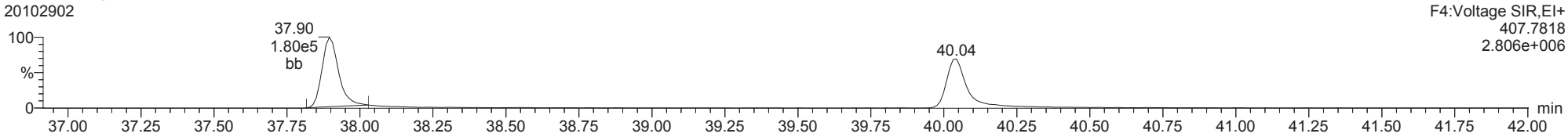

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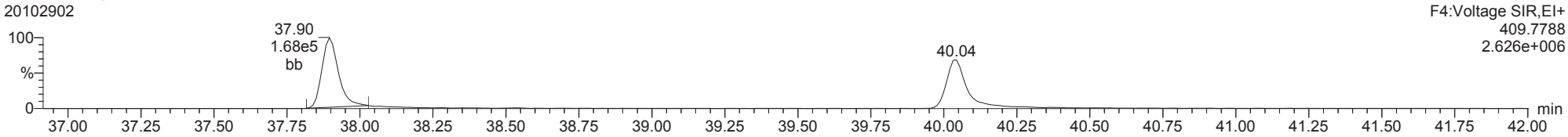

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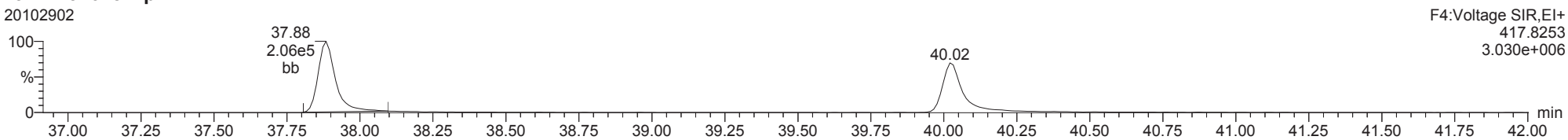

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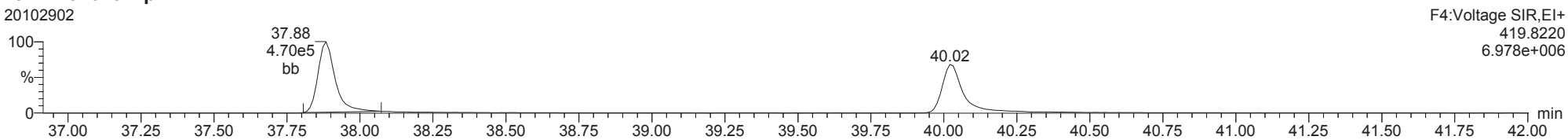
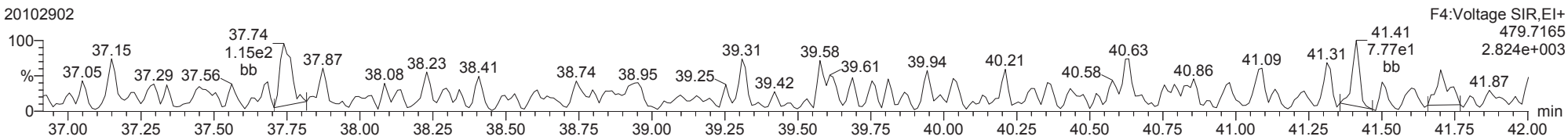


FUNCTION4 NCDPE



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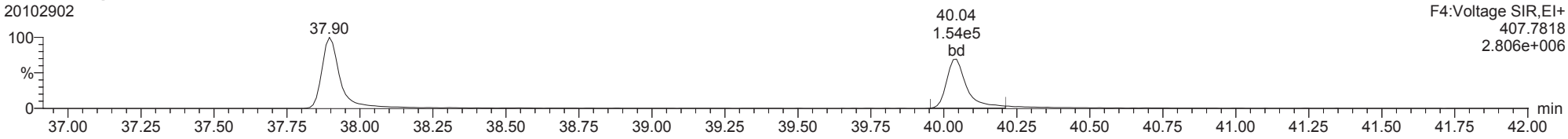

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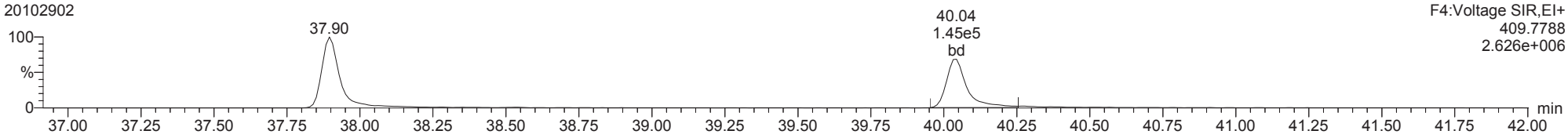

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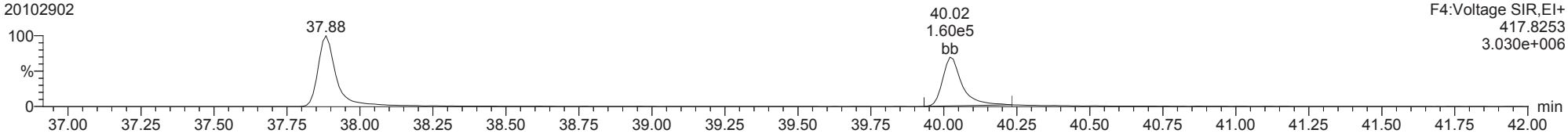

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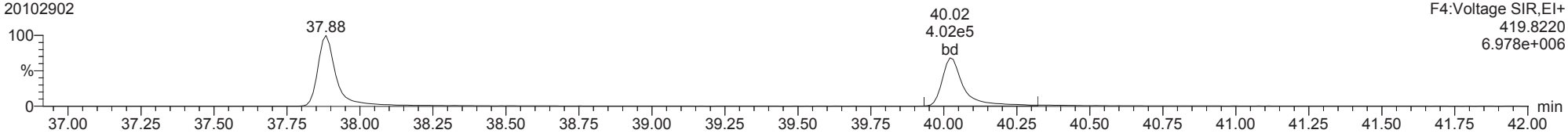

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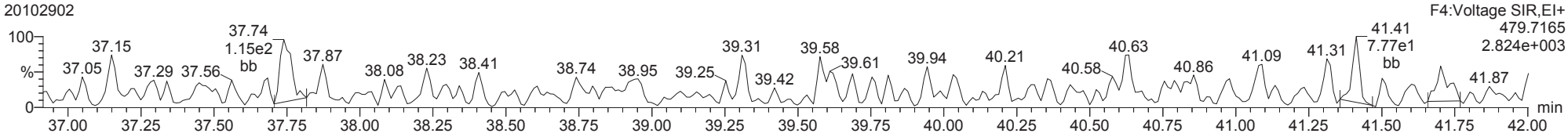

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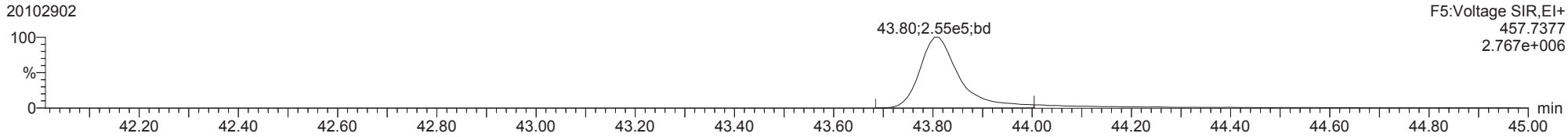
OCDD



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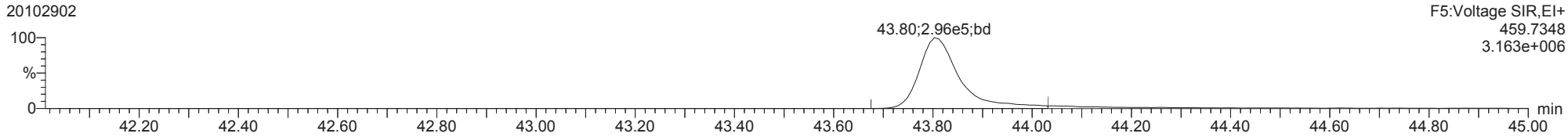

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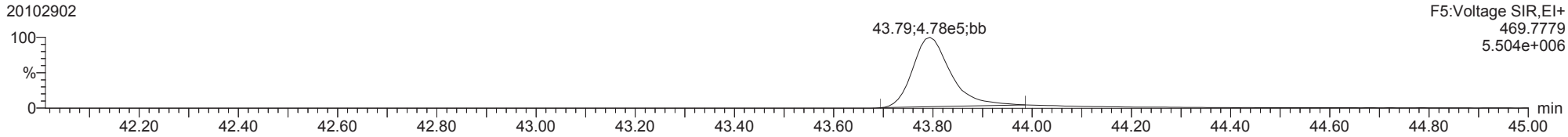

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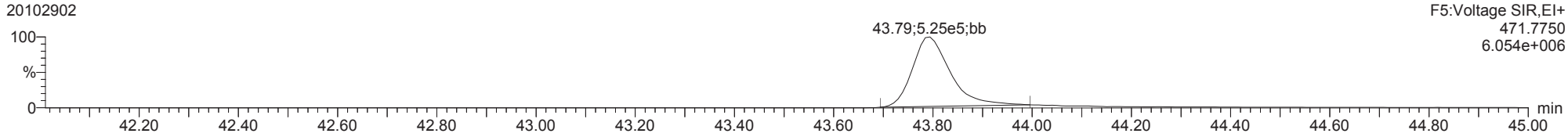
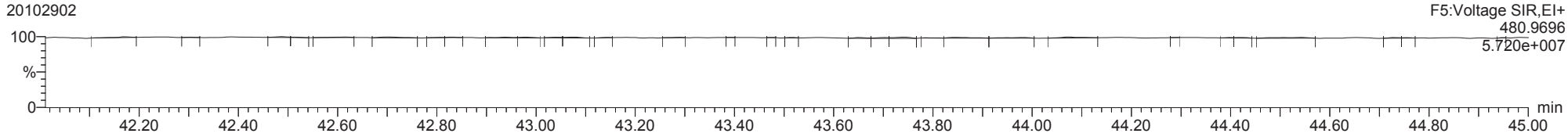


FUNCTION5 PFK



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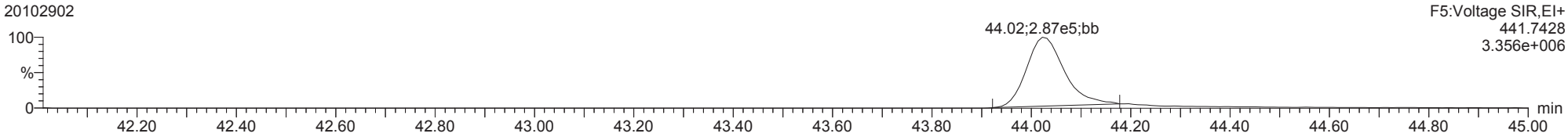
OCDF



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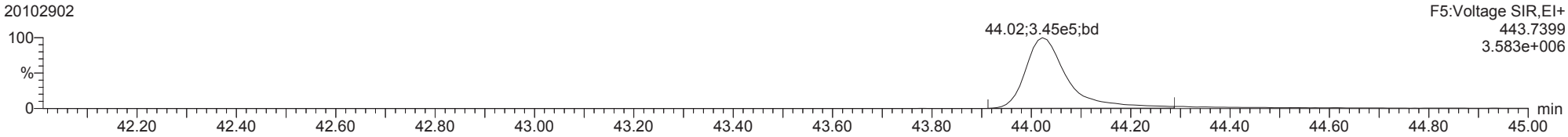
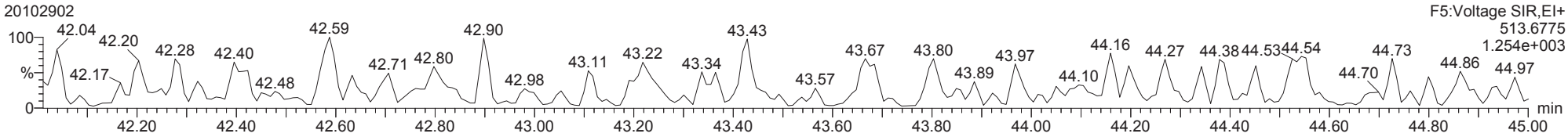


FUNCTION5 DCDPE



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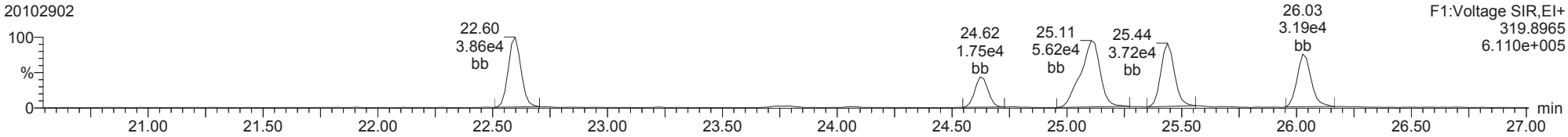
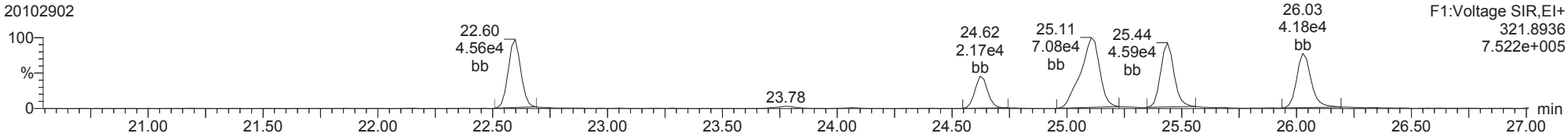
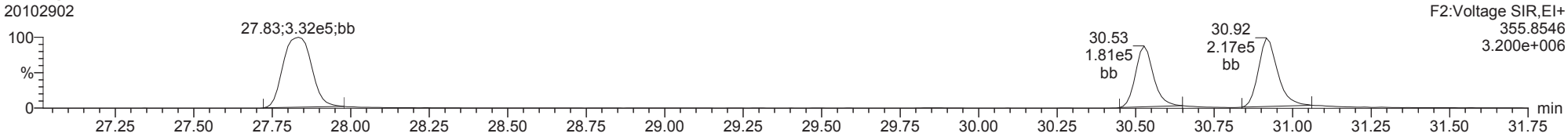
Total-tetradioxins



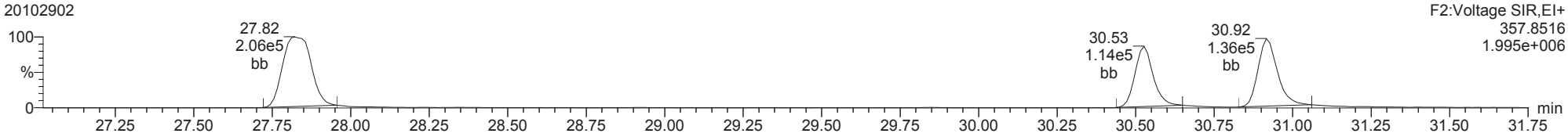
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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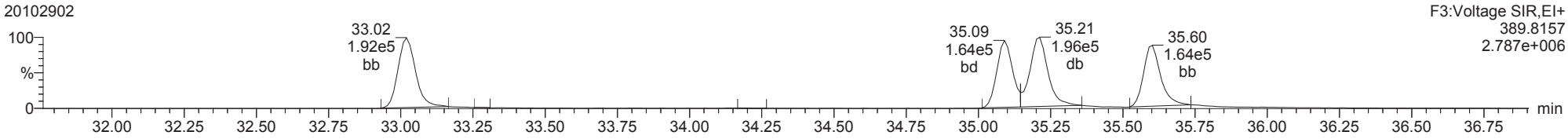
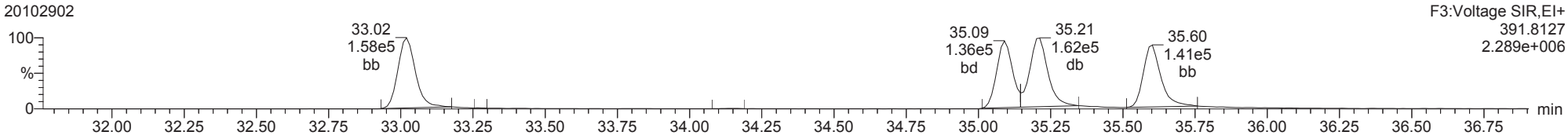
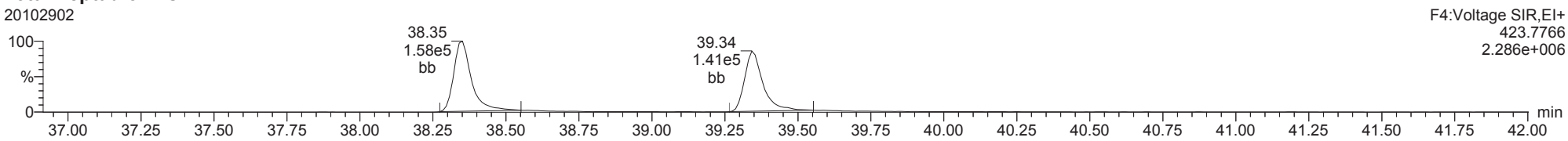
Total-hexadioxins



Total-hexadioxins



Total-heptadioxins



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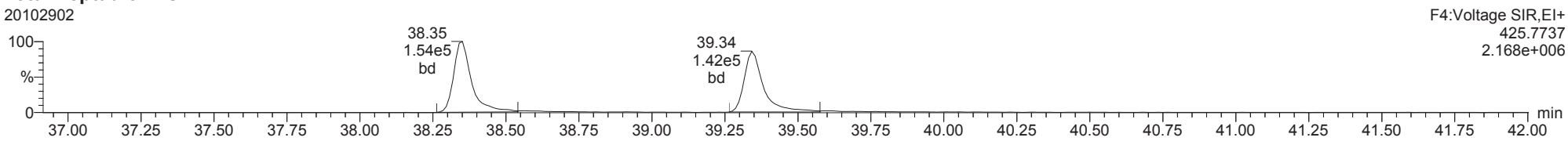

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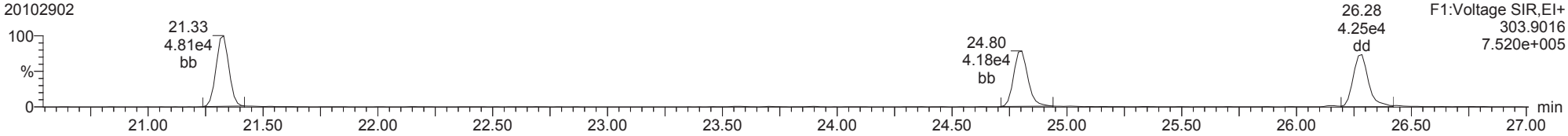
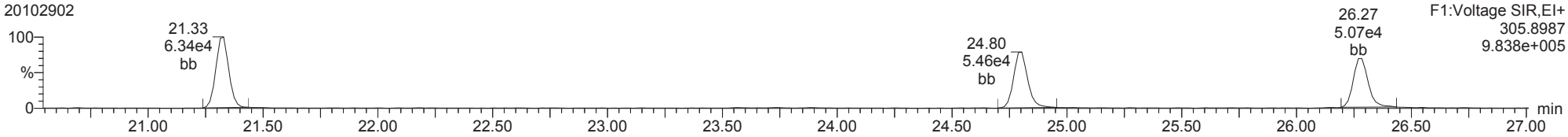
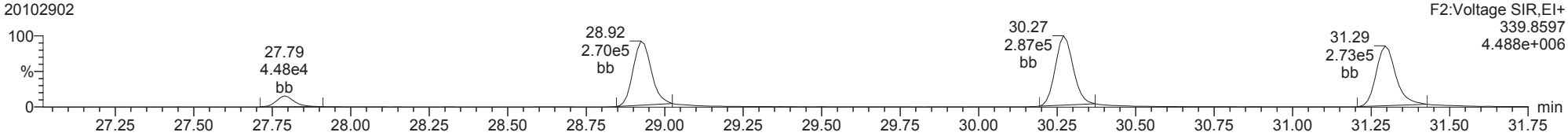
Total-tetrafurans



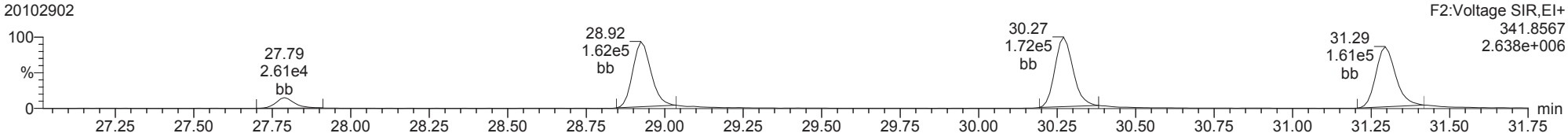
Total-tetrafurans



Total-pentafurans

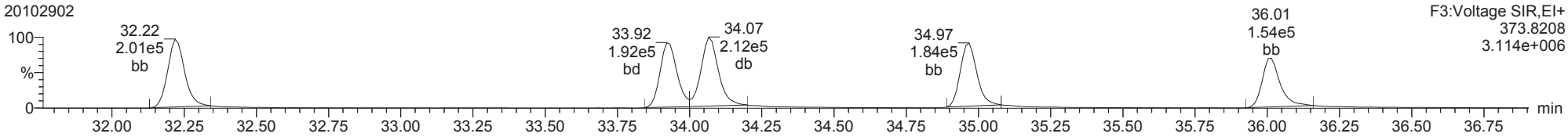


Total-pentafurans

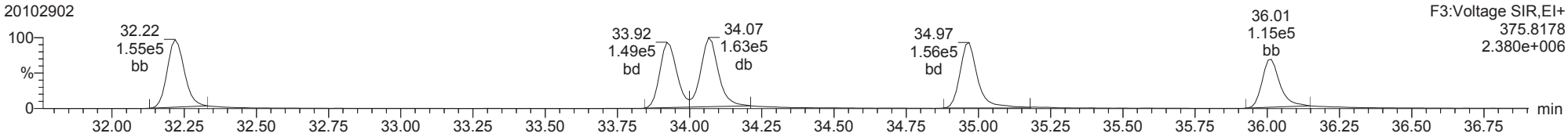


ID: CS3J1, Name: 20102902, Date: 29-Oct-2020, Time: 15:55:05, Conditions: AUTOSPEC01, User: pk

Total-hexafurans



Total-hexafurans



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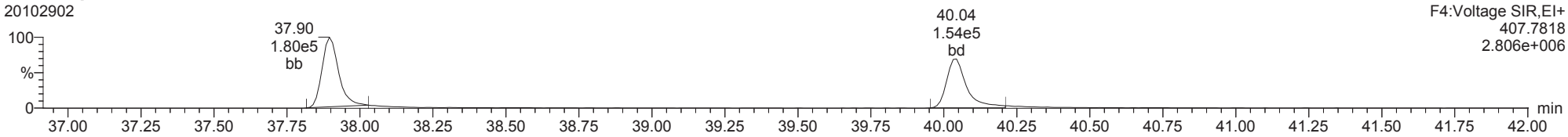
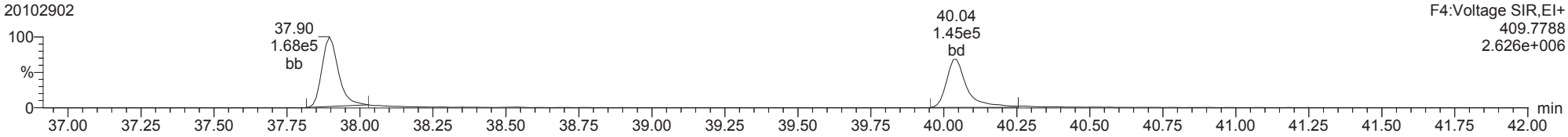


Total-heptafurans



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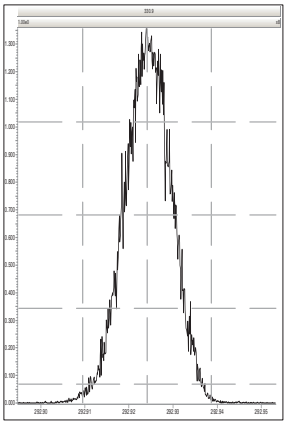
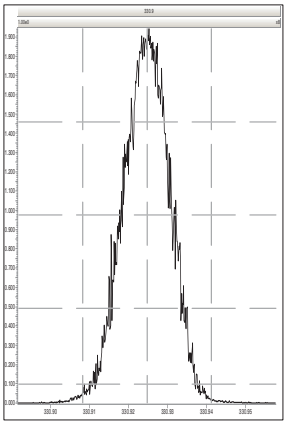
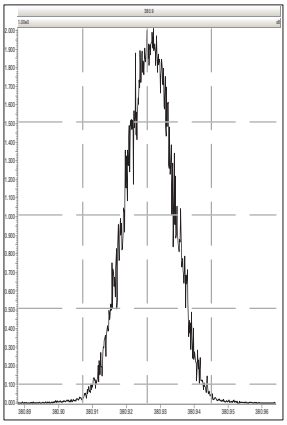
M 292.9824 R 12428



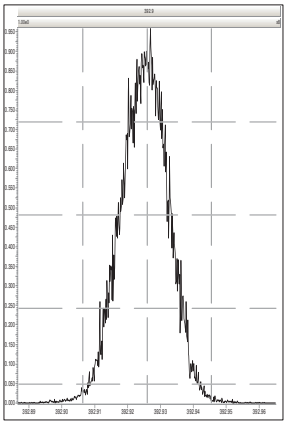
M 330.9792 R 12661



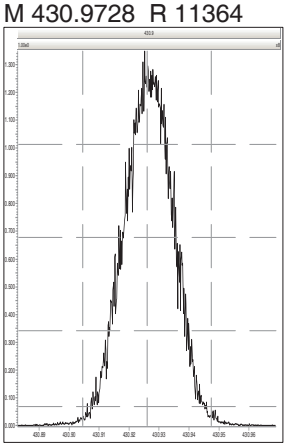
M 380.9760 R 12452



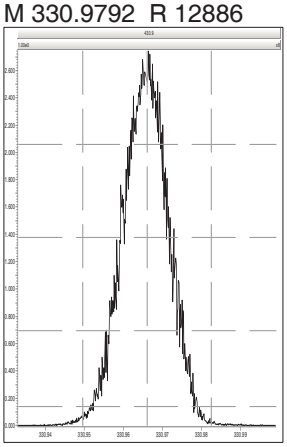
M 392.9760 R 12029



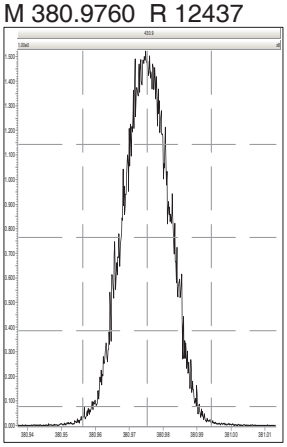
M 430.9728 R 11364



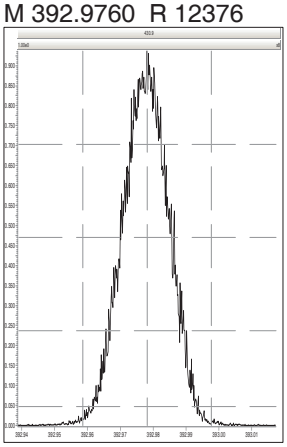
M 330.9792 R 12886



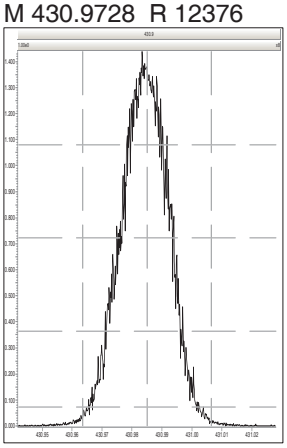
M 380.9760 R 12437



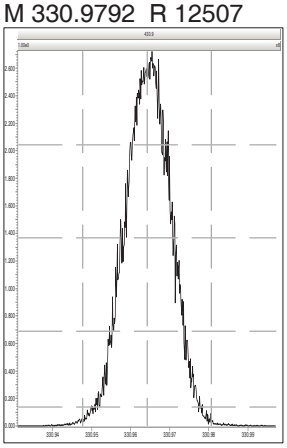
M 392.9760 R 12376



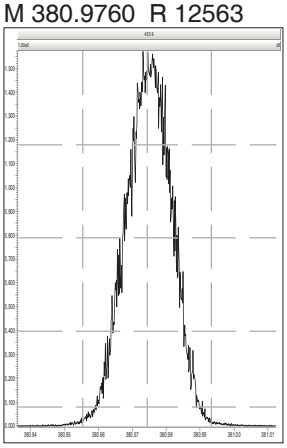
M 430.9728 R 12376



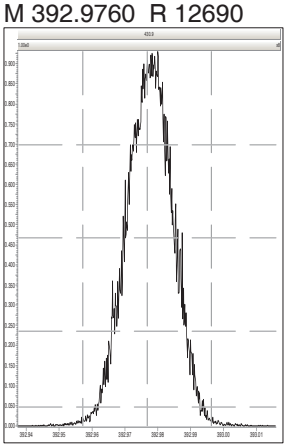
M 330.9792 R 12507



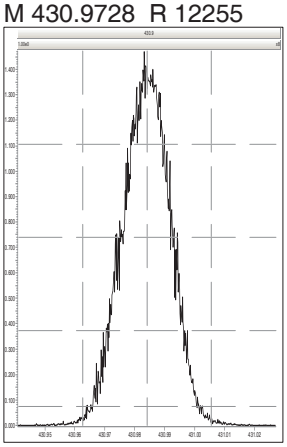
M 380.9760 R 12563



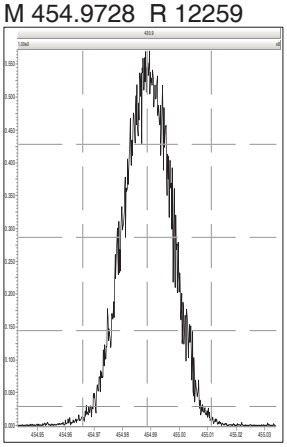
M 392.9760 R 12690



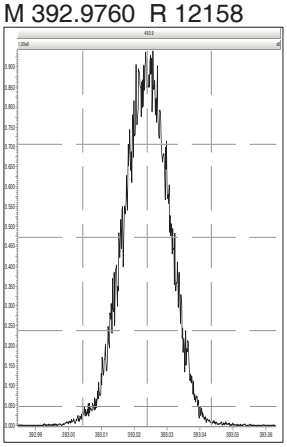
M 430.9728 R 12255



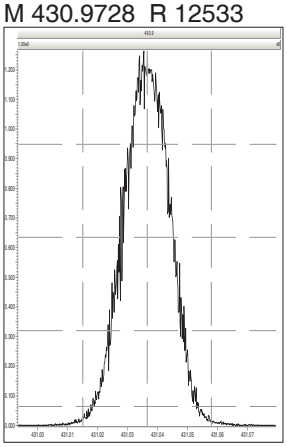
M 454.9728 R 12259



M 392.9760 R 12158



M 430.9728 R 12533



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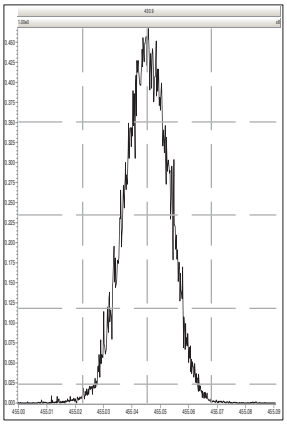
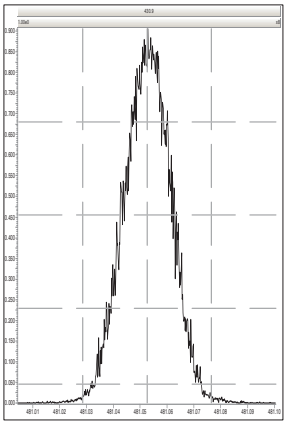
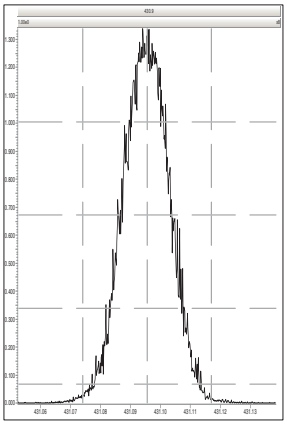
M 454.9728 R 12658



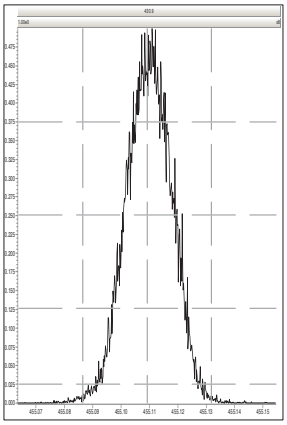
M 480.9696 R 12019



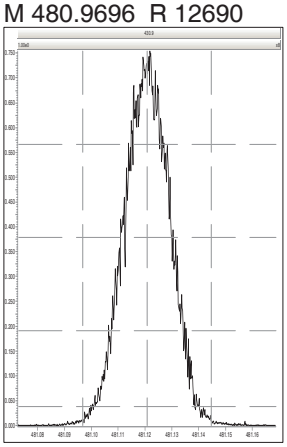
M 430.9728 R 12407



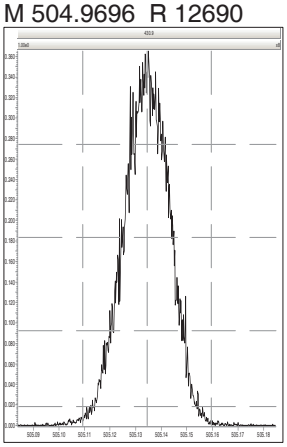
M 454.9728 R 12820



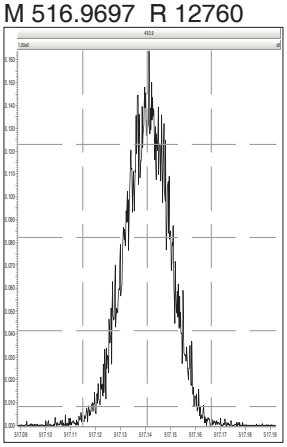
M 480.9696 R 12690

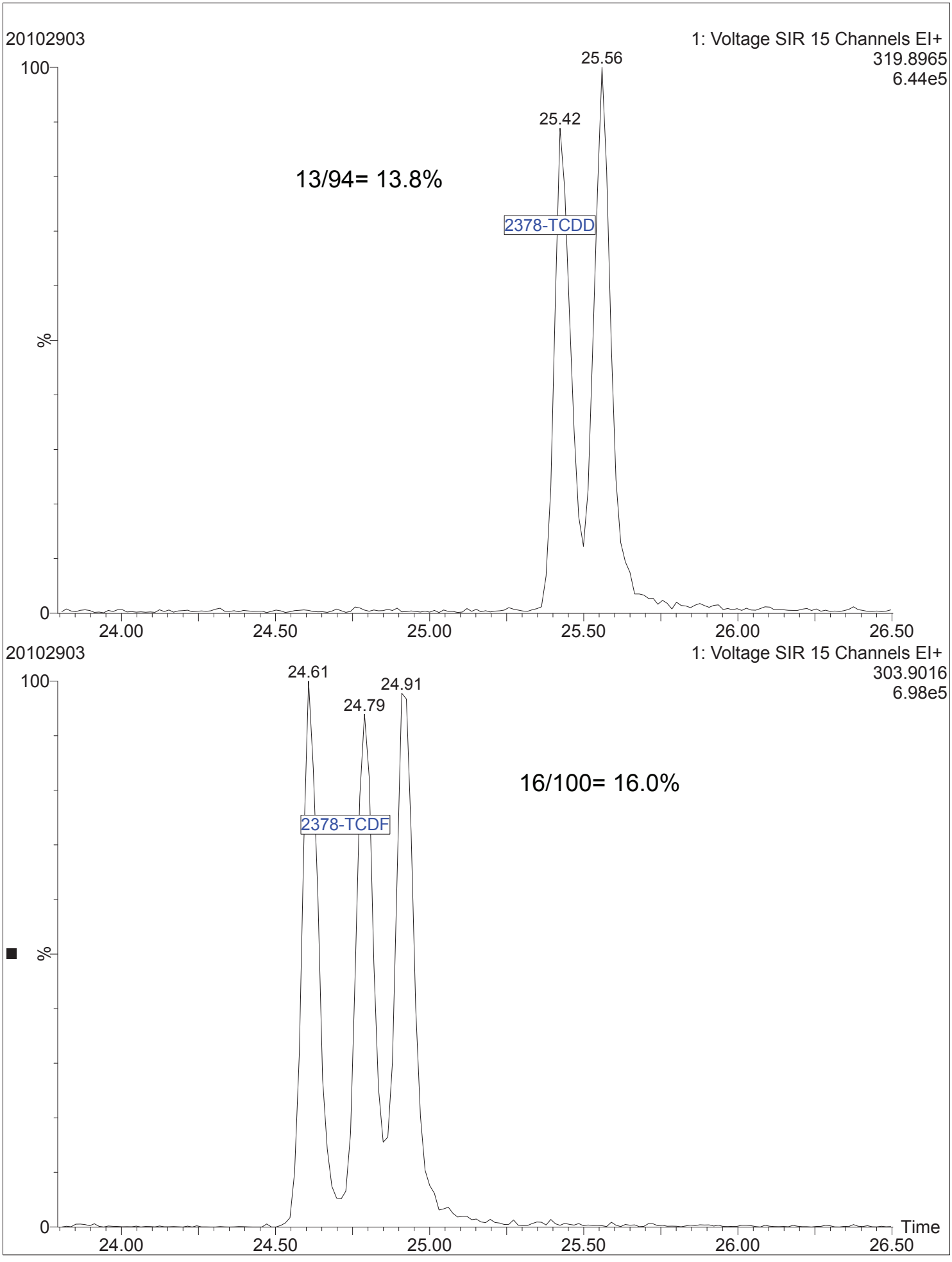


M 504.9696 R 12690



M 516.9697 R 12760

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1: Voltage SIR 15 Channels EI+
319.8965
6.44e5
25.56
25.42
13/94= 13.8%
2378-TCDD
100
%
0
24.00
24.50
25.00
25.50
26.00
26.50
20102903
1: Voltage SIR 15 Channels EI+
303.9016
6.98e5
24.61
24.91
24.79
16/100= 16.0%
2378-TCDF
100
%
0
Time
24.00
24.50
25.00
25.50
26.00
26.50

Dataset: T:\Autospec\Processed Data Batch\201029ICIH.qld
Last Altered: Friday, October 30, 2020 09:08:24 Pacific Daylight Time
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Method: T:\Autospec\Methods\Dioxin201016.mdb 28 Oct 2020 21:30:41
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 09:08:24

ID: CSLCJ, Name: 20102904A, Date: 29-Oct-2020, Time: 18:20:57, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF					0.729		0.770	487	1674								
12378-PeCDF	28.913	1.000	1.907e3	1.396e3	0.779	1.366	1.550	436	950	2.99e4	1.85e4	68.6	19.5	NO	bd	MM	0.426
23478-PeCDF	30.259	1.000	2.412e3	1.376e3	0.880	1.753	1.550	436	950	3.63e4	1.99e4	83.4	21.0	NO	MM	bb	0.458
123478-HxCDF	33.932	1.001	1.341e3	1.226e3	0.880	1.094	1.240	558	349	2.01e4	1.58e4	36.1	45.2	NO	bd	bd	0.444
234678-HxCDF	34.967	1.001	1.499e3	1.179e3	0.863	1.272	1.240	558	349	2.21e4	1.70e4	39.5	48.8	NO	bb	bb	0.464
123678-HxCDF	34.066	1.000	1.529e3	1.104e3	0.853	1.385	1.240	558	349	2.14e4	1.65e4	38.4	47.2	NO	db	db	0.400
123789-HxCDF	36.025	1.001	1.200e3	9.476e2	0.780	1.266	1.240	558	349	1.46e4	1.21e4	26.2	34.6	NO	bd	MM	0.461
1234678-HpCDF	37.883	1.000	1.216e3	1.346e3	1.001	0.903	1.050	744	362	1.60e4	2.22e4	21.4	61.4	NO	MM	bb	0.440
1234789-HpCDF	40.054	1.001	1.147e3	1.059e3	0.994	1.083	1.050	744	362	1.49e4	1.26e4	20.1	34.7	NO	bd	MM	0.453
OCDF	44.041	1.005	2.100e3	2.135e3	1.158	0.984	0.890	778	1234	2.37e4	2.00e4	30.5	16.2	NO	MM	MM	0.835
2378-TCDD					1.238		0.770	1367	708								
12378-PeCDD	30.527	1.001	1.617e3	9.301e2	0.988	1.739	1.550	1035	357	2.12e4	1.17e4	20.5	32.9	NO	bd	bb	0.472
123478-HxCDD	35.090	1.000	1.283e3	1.053e3	0.842	1.218	1.240	620	707	1.94e4	1.45e4	31.2	20.5	NO	bd	bd	0.461
123678-HxCDD	35.212	1.001	1.856e3	1.363e3	0.907	1.361	1.240	620	707	2.13e4	2.10e4	34.3	29.7	NO	db	db	0.471
123789-HxCDD	35.591	1.011	1.279e3	1.095e3	0.784	1.168	1.240	620	707	1.67e4	1.36e4	27.0	19.2	NO	MM	bb	0.447
1234678-HpCDD	39.353	1.001	9.181e2	9.620e2	1.044	0.955	1.050	796	361	1.21e4	1.58e4	15.2	43.8	NO	MM	MM	0.429
OCDD	43.803	1.000	1.833e3	2.201e3	0.963	0.833	0.890	734	619	2.08e4	2.35e4	28.4	38.0	NO	MM	MM	0.956
13C-2378-TCDF	24.774	1.007	5.498e5	7.042e5	2.203	0.781	0.770	5157	2251	7.57e6	9.58e6	1467.4	4254.5	NO	bb	bb	99.828
13C-12378-PeCDF	28.902	1.175	6.078e5	3.877e5	1.741	1.568	1.550	3693	3071	7.71e6	4.93e6	2088.6	1605.2	NO	bb	bb	100.275
13C-23478-PeCDF	30.248	1.230	5.730e5	3.674e5	1.669	1.560	1.550	3693	3071	7.58e6	4.85e6	2053.8	1579.0	NO	bb	bd	98.783
13C-123478-HxCDF	33.910	0.953	2.194e5	4.379e5	1.022	0.501	0.510	2527	3035	3.03e6	6.20e6	1201.1	2042.3	NO	bd	bd	101.304
13C-123678-HxCDF	34.055	0.957	2.520e5	5.185e5	1.200	0.486	0.510	2527	3035	3.23e6	6.50e6	1277.0	2141.7	NO	db	db	101.157
13C-234678-HxCDF	34.945	0.982	2.206e5	4.478e5	1.071	0.493	0.510	2527	3035	2.94e6	5.88e6	1165.3	1937.8	NO	bb	bb	98.311
13C-123789-HxCDF	36.003	1.012	1.878e5	4.090e5	0.919	0.459	0.510	2527	3035	2.28e6	4.70e6	901.6	1548.4	NO	bb	bb	102.364
13C-1234678-HpCDF	37.883	1.064	1.715e5	4.101e5	0.909	0.418	0.440	2751	3200	2.39e6	5.61e6	868.5	1753.4	NO	bb	bb	100.844
13C-1234789-HpCDF	40.032	1.125	1.401e5	3.499e5	0.724	0.401	0.440	2751	3200	1.66e6	3.83e6	603.1	1197.2	NO	bb	bd	106.699
13C-1234-TCDD	24.592	0.000	2.501e5	3.201e5	1.000	0.781	0.770	1967	1056	3.89e6	4.89e6	1979.2	4630.4	NO	bb	bb	100.000
13C-2378-TCDD	25.408	1.033	2.867e5	3.665e5	1.181	0.783	0.770	1967	1056	4.05e6	5.13e6	2057.5	4855.0	NO	bb	bb	96.959
13C-12378-PeCDD	30.504	1.240	3.425e5	2.034e5	0.978	1.684	1.550	880	1229	4.65e6	2.74e6	5281.9	2227.6	NO	bb	bb	97.911
13C-123478-HxCDD	35.079	0.986	3.354e5	2.664e5	0.965	1.259	1.240	2619	2548	4.90e6	3.91e6	1868.9	1534.9	NO	bd	bd	98.256
13C-123678-HxCDD	35.190	0.989	4.228e5	3.312e5	1.168	1.277	1.240	2619	2548	5.40e6	4.22e6	2061.2	1657.1	NO	db	db	101.708
13C-1234678-HpCDD	39.331	1.105	2.174e5	2.022e5	0.645	1.075	1.050	2515	2012	2.67e6	2.47e6	1063.3	1229.5	NO	bb	bb	102.456
13C-OCDD	43.803	1.231	4.369e5	4.390e5	0.678	0.995	0.890	2081	1603	4.11e6	4.52e6	1975.0	2823.0	NO	bd	bb	203.480
13C-123789-HxCDD	35.591	0.000	3.534e5	2.813e5	1.000	1.256	1.240	2619	2548	4.52e6	3.61e6	1724.6	1417.6	NO	bb	bb	100.000
37CL-2378-TCDD	25.423	1.034	6.409e2		1.264			1009		1.15e4		11.4			bb		0.089

Dataset: T:\Autospec\Processed Data Batch\201029ICIH.qld
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ID: CSLCJ, Name: 20102904A, Date: 29-Oct-2020, Time: 18:20:57, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	487	1674								
1289-TCDF					0.688		0.770	487	1674								
13468-PECDF					1.181		1.550	259	626								
12389-PECDF					0.766		1.550	436	950								
123468-HXCDF					1.003		1.240	558	349								
1368-TCDD					1.179		0.770	1367	708								
1289-TCDD					1.042		0.770	1367	708								
12479-PECDD					1.810		1.550	1035	357								
12389-PECDD					1.165		1.550	1035	357								
124679-HXCDD					1.056		1.240	620	707								
1234679-HPCDD					1.285		1.050	796	361								
Total-tetrafurans			0.000e0		0.754			487		0.00e0							
Total-penta1			0.000e0					259		0.00e0							
Total-pentafurans			4.319e3		0.809			436		6.62e4							0.883
Total-hexafurans			5.569e3		0.876			558		7.83e4							1.770
Total-heptafurans			2.363e3		0.997			744		3.09e4							0.893
Total-Furans			1.435e4		0.893			487		1.99e5							4.382
Total-tetradioxins			0.000e0		1.153			1367		0.00e0							
Total-pentadioxins			1.617e3		1.321			1035		2.12e4							0.472
Total-hexadioxins			4.417e3		0.897			620		5.74e4							1.379
Total-heptadioxins			9.181e2		1.165			796		1.21e4							0.429
Total-Dioxins			8.786e3		1.100			1367		1.12e5							3.237
Total-TEQ			2.314e4					1367		3.11e5							7.618
FUNCTION1 PFK			1.292e6					761213		2.83e7							
FUNCTION2 PFK			1.374e6					503503		3.17e7							0.000
FUNCTION3 PFK			1.012e5					456821		2.36e6							0.000
FUNCTION4 PFK			1.979e6					372219		3.75e7							
FUNCTION5 PFK			1.794e6					305922		3.45e6							
FUNCTION1 HXCD...			0.000e0					380		0.00e0							
FUNCTION1 HPCD...			3.630e2					718		7.60e3							0.000
FUNCTION2 HPCD...			1.715e2					659		4.70e3							0.000
FUNCTION3 OCDPE			7.321e1					358		3.15e3							0.000
FUNCTION4 NCDPE			0.000e0					737		0.00e0							
FUNCTION5 DCDPE			0.000e0					277		0.00e0							

Method: T:\Autospec\Methods\Dioxin201016.mdb 28 Oct 2020 21:30:41
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 09:08:24

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	30.26	2.412e3	1.376e3	0.880	1.75	1.55	83.4	YES	NO	MM	bb	0.458
2	12378-PeCDF	28.91	1.907e3	1.396e3	0.779	1.37	1.55	68.6	YES	NO	bd	MM	0.426

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.03	1.200e3	9.476e2	0.780	1.27	1.24	26.2	YES	NO	bd	MM	0.461
2	234678-HxCDF	34.97	1.499e3	1.179e3	0.863	1.27	1.24	39.5	YES	NO	bb	bb	0.464
3	123678-HxCDF	34.07	1.529e3	1.104e3	0.853	1.38	1.24	38.4	YES	NO	db	db	0.400
4	123478-HxCDF	33.93	1.341e3	1.226e3	0.880	1.09	1.24	36.1	YES	NO	bd	bd	0.444

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	40.05	1.147e3	1.059e3	0.994	1.08	1.05	20.1	YES	NO	bd	MM	0.453
2	1234678-HpCDF	37.88	1.216e3	1.346e3	1.001	0.90	1.05	21.4	YES	NO	MM	bb	0.440

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	30.26	2.412e3	1.376e3	0.880	1.75	1.55	83.4	YES	NO	MM	bb	0.458
2	12378-PeCDF	28.91	1.907e3	1.396e3	0.779	1.37	1.55	68.6	YES	NO	bd	MM	0.426
3	123789-HxCDF	36.03	1.200e3	9.476e2	0.780	1.27	1.24	26.2	YES	NO	bd	MM	0.461
4	234678-HxCDF	34.97	1.499e3	1.179e3	0.863	1.27	1.24	39.5	YES	NO	bb	bb	0.464
5	123678-HxCDF	34.07	1.529e3	1.104e3	0.853	1.38	1.24	38.4	YES	NO	db	db	0.400
6	123478-HxCDF	33.93	1.341e3	1.226e3	0.880	1.09	1.24	36.1	YES	NO	bd	bd	0.444
7	OCDF	44.04	2.100e3	2.135e3	1.158	0.98	0.89	30.5	YES	NO	MM	MM	0.835
8	1234789-HpCDF	40.05	1.147e3	1.059e3	0.994	1.08	1.05	20.1	YES	NO	bd	MM	0.453
9	1234678-HpCDF	37.88	1.216e3	1.346e3	1.001	0.90	1.05	21.4	YES	NO	MM	bb	0.440

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	30.53	1.617e3	9.301e2	0.988	1.74	1.55	20.5	YES	NO	bd	bb	0.472

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	35.59	1.279e3	1.095e3	0.784	1.17	1.24	27.0	YES	NO	MM	bb	0.447
2	123678-HxCDD	35.21	1.856e3	1.363e3	0.907	1.36	1.24	34.3	YES	NO	db	db	0.471
3	123478-HxCDD	35.09	1.283e3	1.053e3	0.842	1.22	1.24	31.2	YES	NO	bd	bd	0.461

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	39.35	9.181e2	9.620e2	1.044	0.95	1.05	15.2	YES	NO	MM	MM	0.429

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	35.59	1.279e3	1.095e3	0.784	1.17	1.24	27.0	YES	NO	MM	bb	0.447
2	123678-HxCDD	35.21	1.856e3	1.363e3	0.907	1.36	1.24	34.3	YES	NO	db	db	0.471
3	123478-HxCDD	35.09	1.283e3	1.053e3	0.842	1.22	1.24	31.2	YES	NO	bd	bd	0.461
4	12378-PeCDD	30.53	1.617e3	9.301e2	0.988	1.74	1.55	20.5	YES	NO	bd	bb	0.472
5	1234678-HpCDD	39.35	9.181e2	9.620e2	1.044	0.95	1.05	15.2	YES	NO	MM	MM	0.429
6	OCDD	43.80	1.833e3	2.201e3	0.963	0.83	0.89	28.4	YES	NO	MM	MM	0.956

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	30.26	2.412e3	1.376e3	0.880	1.75	1.55	83.4	YES	NO	MM	bb	0.458
2	12378-PeCDF	28.91	1.907e3	1.396e3	0.779	1.37	1.55	68.6	YES	NO	bd	MM	0.426
3	123789-HxCDF	36.03	1.200e3	9.476e2	0.780	1.27	1.24	26.2	YES	NO	bd	MM	0.461
4	234678-HxCDF	34.97	1.499e3	1.179e3	0.863	1.27	1.24	39.5	YES	NO	bb	bb	0.464
5	123678-HxCDF	34.07	1.529e3	1.104e3	0.853	1.38	1.24	38.4	YES	NO	db	db	0.400
6	123478-HxCDF	33.93	1.341e3	1.226e3	0.880	1.09	1.24	36.1	YES	NO	bd	bd	0.444
7	OCDF	44.04	2.100e3	2.135e3	1.158	0.98	0.89	30.5	YES	NO	MM	MM	0.835
8	1234789-HpCDF	40.05	1.147e3	1.059e3	0.994	1.08	1.05	20.1	YES	NO	bd	MM	0.453
9	1234678-HpCDF	37.88	1.216e3	1.346e3	1.001	0.90	1.05	21.4	YES	NO	MM	bb	0.440
10	123789-HxCDD	35.59	1.279e3	1.095e3	0.784	1.17	1.24	27.0	YES	NO	MM	bb	0.447
11	123678-HxCDD	35.21	1.856e3	1.363e3	0.907	1.36	1.24	34.3	YES	NO	db	db	0.471
12	123478-HxCDD	35.09	1.283e3	1.053e3	0.842	1.22	1.24	31.2	YES	NO	bd	bd	0.461
13	12378-PeCDD	30.53	1.617e3	9.301e2	0.988	1.74	1.55	20.5	YES	NO	bd	bb	0.472
14	1234678-HpCDD	39.35	9.181e2	9.620e2	1.044	0.95	1.05	15.2	YES	NO	MM	MM	0.429
15	OCDD	43.80	1.833e3	2.201e3	0.963	0.83	0.89	28.4	YES	NO	MM	MM	0.956

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	22.25	4.832e4					1.4	NO		bb		
2	FUNCTION1 PFK	22.02	4.764e4					1.2	NO		bb		
3	FUNCTION1 PFK	21.77	7.174e4					1.6	NO		bb		
4	FUNCTION1 PFK	21.69	1.450e4					0.7	NO		bb		
5	FUNCTION1 PFK	21.22	5.780e4					1.2	NO		bb		
6	FUNCTION1 PFK	21.12	6.095e4					1.5	NO		db		
7	FUNCTION1 PFK	21.01	6.080e4					1.2	NO		bd		
8	FUNCTION1 PFK	20.77	4.723e3					0.4	NO		bb		
9	FUNCTION1 PFK	20.69	3.415e4					1.2	NO		db		
10	FUNCTION1 PFK	20.65	6.129e4					1.9	NO		bd		
11	FUNCTION1 PFK	26.01	5.339e4					1.4	NO		dd		
12	FUNCTION1 PFK	25.97	2.920e4					1.0	NO		bd		
13	FUNCTION1 PFK	25.33	1.712e4					0.7	NO		bb		
14	FUNCTION1 PFK	25.20	2.891e4					0.9	NO		bb		
15	FUNCTION1 PFK	25.08	2.839e4					0.9	NO		bb		
16	FUNCTION1 PFK	24.85	5.071e4					1.4	NO		bb		
17	FUNCTION1 PFK	24.52	4.704e4					1.1	NO		bb		
18	FUNCTION1 PFK	24.41	5.697e4					1.3	NO		bb		
19	FUNCTION1 PFK	23.84	5.359e4					1.3	NO		db		
20	FUNCTION1 PFK	23.73	3.332e4					1.1	NO		bd		
21	FUNCTION1 PFK	23.60	2.802e4					0.9	NO		bb		
22	FUNCTION1 PFK	23.40	2.870e4					1.0	NO		db		
23	FUNCTION1 PFK	23.34	1.158e4					0.5	NO		bd		
24	FUNCTION1 PFK	23.05	2.058e4					0.7	NO		bb		
25	FUNCTION1 PFK	22.60	4.618e4					1.4	NO		bb		
26	FUNCTION1 PFK	22.48	6.533e4					1.4	NO		bb		
27	FUNCTION1 PFK	26.87	7.815e3					0.4	NO		bb		
28	FUNCTION1 PFK	26.80	4.327e4					1.4	NO		bb		
29	FUNCTION1 PFK	26.57	4.793e4					1.6	NO		bb		
30	FUNCTION1 PFK	26.42	4.366e3					0.4	NO		bb		
31	FUNCTION1 PFK	26.34	8.166e4					2.2	NO		bb		
32	FUNCTION1 PFK	26.27	4.305e3					0.4	NO		bb		
33	FUNCTION1 PFK	26.13	4.196e4					1.2	NO		db		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	27.87	6.225e3					0.7	NO		dd		0.000
2	FUNCTION2 PFK	27.82	3.709e4					1.6	NO		bd		0.000
3	FUNCTION2 PFK	27.50	4.561e4					1.9	NO		db		0.000
4	FUNCTION2 PFK	27.44	3.319e4					1.6	NO		dd		0.000
5	FUNCTION2 PFK	27.37	4.271e4					2.1	NO		dd		0.000
6	FUNCTION2 PFK	27.25	1.640e5					3.4	YES		dd		0.000
7	FUNCTION2 PFK	27.21	1.981e4					1.9	NO		dd		0.000
8	FUNCTION2 PFK	27.12	1.124e5					2.7	NO		bd		0.000
9	FUNCTION2 PFK	29.39	2.446e4					1.3	NO		bb		0.000
10	FUNCTION2 PFK	29.26	6.080e3					0.6	NO		bb		0.000
11	FUNCTION2 PFK	29.07	3.878e4					1.4	NO		bb		0.000
12	FUNCTION2 PFK	28.90	8.150e3					0.8	NO		bb		0.000
13	FUNCTION2 PFK	28.83	3.508e4					1.4	NO		db		0.000
14	FUNCTION2 PFK	28.75	6.824e4					1.8	NO		dd		0.000
15	FUNCTION2 PFK	28.65	1.482e4					1.2	NO		dd		0.000
16	FUNCTION2 PFK	28.61	2.153e4					1.3	NO		bd		0.000
17	FUNCTION2 PFK	28.56	8.081e3					0.9	NO		bb		0.000
18	FUNCTION2 PFK	28.38	4.725e4					1.5	NO		db		0.000
19	FUNCTION2 PFK	28.26	6.355e4					2.0	NO		bd		0.000
20	FUNCTION2 PFK	28.17	6.042e4					2.2	NO		db		0.000
21	FUNCTION2 PFK	28.06	2.427e4					1.2	NO		dd		0.000
22	FUNCTION2 PFK	28.02	3.958e3					0.5	NO		bd		0.000
23	FUNCTION2 PFK	27.93	2.637e4					1.7	NO		db		0.000
24	FUNCTION2 PFK	27.91	2.611e4					1.6	NO		dd		0.000
25	FUNCTION2 PFK	31.25	1.646e4					1.2	NO		dd		0.000
26	FUNCTION2 PFK	31.21	1.377e4					1.1	NO		bd		0.000
27	FUNCTION2 PFK	31.14	1.210e4					0.9	NO		db		0.000
28	FUNCTION2 PFK	31.07	2.282e4					1.1	NO		bd		0.000
29	FUNCTION2 PFK	30.89	1.769e4					1.4	NO		bb		0.000
30	FUNCTION2 PFK	30.65	4.858e4					1.5	NO		db		0.000
31	FUNCTION2 PFK	30.57	1.927e4					1.2	NO		dd		0.000
32	FUNCTION2 PFK	30.52	2.046e4					1.1	NO		bd		0.000
33	FUNCTION2 PFK	30.42	4.068e4					1.8	NO		bb		0.000
34	FUNCTION2 PFK	30.24	1.754e4					1.5	NO		db		0.000
35	FUNCTION2 PFK	30.19	3.874e4					2.0	NO		bd		0.000
36	FUNCTION2 PFK	29.87	1.525e4					1.2	NO		db		0.000
37	FUNCTION2 PFK	29.83	1.009e4					0.8	NO		bd		0.000

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION2 PFK	29.61	1.508e4					1.2	NO		db		0.000
39	FUNCTION2 PFK	29.55	1.266e4					0.8	NO		bd		0.000
40	FUNCTION2 PFK	29.48	9.594e3					0.9	NO		bb		0.000
41	FUNCTION2 PFK	31.67	8.346e3					0.8	NO		bb		0.000
42	FUNCTION2 PFK	31.58	1.246e4					0.9	NO		db		0.000
43	FUNCTION2 PFK	31.56	1.619e4					1.3	NO		bd		0.000
44	FUNCTION2 PFK	31.47	4.915e3					0.3	NO		db		0.000
45	FUNCTION2 PFK	31.46	5.875e3					0.6	NO		bd		0.000
46	FUNCTION2 PFK	31.34	5.716e4					2.0	NO		db		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	36.69	4.218e4					2.4	NO		bb		0.000
2	FUNCTION3 PFK	33.52	5.903e4					2.8	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	37.48	1.114e5					3.5	YES		dd		
2	FUNCTION4 PFK	37.36	1.331e5					4.5	YES		dd		
3	FUNCTION4 PFK	37.27	1.325e5					4.3	YES		dd		
4	FUNCTION4 PFK	37.15	7.723e4					4.4	YES		dd		
5	FUNCTION4 PFK	37.12	5.903e4					4.0	YES		dd		
6	FUNCTION4 PFK	37.03	1.101e5					4.0	YES		bd		
7	FUNCTION4 PFK	39.07	3.402e4					2.1	NO		bb		
8	FUNCTION4 PFK	38.86	2.287e4					2.1	NO		db		
9	FUNCTION4 PFK	38.82	1.531e4					1.5	NO		dd		
10	FUNCTION4 PFK	38.79	2.002e4					1.6	NO		dd		
11	FUNCTION4 PFK	38.74	1.607e4					1.3	NO		bd		
12	FUNCTION4 PFK	38.62	3.150e4					1.7	NO		bb		
13	FUNCTION4 PFK	38.52	3.757e4					2.3	NO		db		
14	FUNCTION4 PFK	38.46	3.273e4					1.8	NO		dd		
15	FUNCTION4 PFK	38.38	4.657e4					2.6	NO		bd		
16	FUNCTION4 PFK	38.17	1.126e4					1.0	NO		db		
17	FUNCTION4 PFK	38.13	1.533e4					1.3	NO		dd		
18	FUNCTION4 PFK	38.05	2.726e4					1.6	NO		bd		
19	FUNCTION4 PFK	37.84	2.999e4					1.9	NO		db		
20	FUNCTION4 PFK	37.81	1.480e4					1.8	NO		bd		
21	FUNCTION4 PFK	37.73	5.950e4					2.3	NO		db		
22	FUNCTION4 PFK	37.61	9.337e4					2.9	NO		dd		
23	FUNCTION4 PFK	40.90	1.591e4					1.1	NO		dd		
24	FUNCTION4 PFK	40.86	5.935e3					0.7	NO		bd		
25	FUNCTION4 PFK	40.67	4.249e4					2.1	NO		db		
26	FUNCTION4 PFK	40.61	1.140e4					1.0	NO		dd		
27	FUNCTION4 PFK	40.54	5.124e4					2.7	NO		bd		
28	FUNCTION4 PFK	40.44	7.882e4					2.4	NO		db		
29	FUNCTION4 PFK	40.30	5.124e4					2.3	NO		bd		
30	FUNCTION4 PFK	40.21	3.074e4					2.1	NO		bb		
31	FUNCTION4 PFK	40.00	2.664e3					0.6	NO		bb		
32	FUNCTION4 PFK	39.95	2.885e3					0.7	NO		bb		
33	FUNCTION4 PFK	39.88	2.767e4					1.8	NO		bb		
34	FUNCTION4 PFK	39.75	2.770e4					1.2	NO		bb		
35	FUNCTION4 PFK	39.65	4.625e4					2.3	NO		db		
36	FUNCTION4 PFK	39.51	4.469e4					1.7	NO		bd		
37	FUNCTION4 PFK	39.43	2.986e4					1.9	NO		bb		

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION4 PFK	39.19	3.305e4					1.7	NO		bb		
39	FUNCTION4 PFK	41.94	2.547e4					1.2	NO		db		
40	FUNCTION4 PFK	41.80	4.467e4					2.2	NO		bd		
41	FUNCTION4 PFK	41.57	4.101e4					2.0	NO		db		
42	FUNCTION4 PFK	41.52	1.376e4					1.3	NO		bd		
43	FUNCTION4 PFK	41.46	2.559e4					2.1	NO		db		
44	FUNCTION4 PFK	41.43	2.307e4					2.1	NO		dd		
45	FUNCTION4 PFK	41.37	3.133e4					1.9	NO		dd		
46	FUNCTION4 PFK	41.29	1.990e4					1.4	NO		dd		
47	FUNCTION4 PFK	41.23	4.430e4					2.1	NO		dd		
48	FUNCTION4 PFK	41.13	4.490e4					2.0	NO		bd		
49	FUNCTION4 PFK	41.01	3.110e4					1.5	NO		db		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.88	6.996e3					1.2	NO		bb		
2	FUNCTION5 PFK	44.30	1.874e4					1.3	NO		bb		
3	FUNCTION5 PFK	43.08	1.716e4					1.4	NO		bb		
4	FUNCTION5 PFK	42.36	1.751e6					7.4	YES		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	26.96	7.369e1					3.4	YES		bb		0.000
2	FUNCTION1 HPCD...	24.35	1.213e2					2.0	NO		bb		0.000
3	FUNCTION1 HPCD...	24.21	8.680e1					3.0	YES		db		0.000
4	FUNCTION1 HPCD...	24.17	8.126e1					2.1	NO		bd		0.000

ID: CSLCJ, Name: 20102904A, Date: 29-Oct-2020, Time: 18:20:57, Conditions: AUTOSPEC01, User: pk

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	30.69	9.128e1					4.8	YES		bb		0.000
2	FUNCTION2 HPCD...	28.98	8.023e1					2.4	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	35.45	7.321e1					8.8	YES		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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Printed: Friday, October 30, 2020 14:33:48 Pacific Daylight Time

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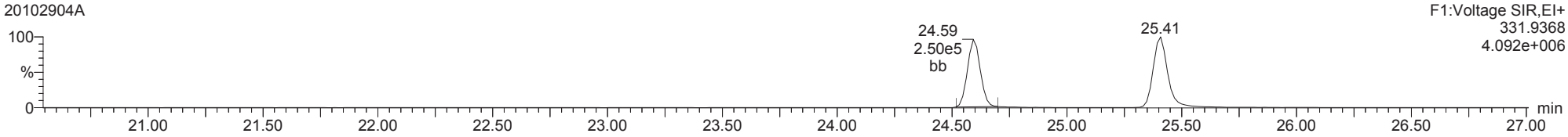
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 09:08:24

ID: CSLCJ, Name: 20102904A, Date: 29-Oct-2020, Time: 18:20:57, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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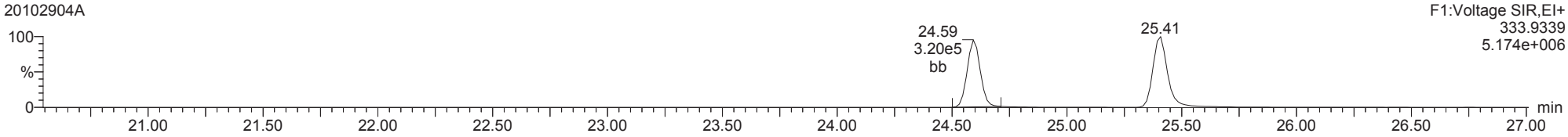
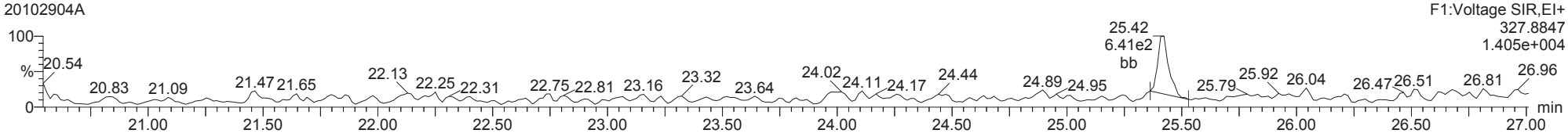


37CL-2378-TCDD



ID: CSLCJ, Name: 20102904A, Date: 29-Oct-2020, Time: 18:20:57, Conditions: AUTOSPEC01, User: pk

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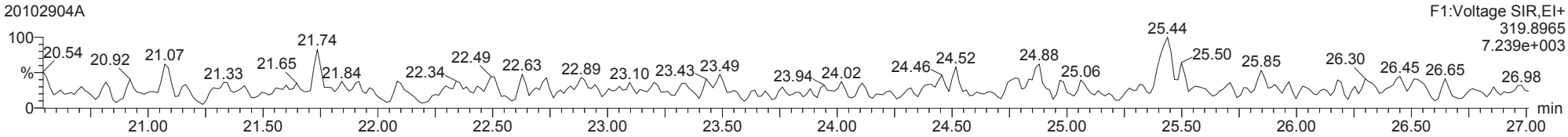

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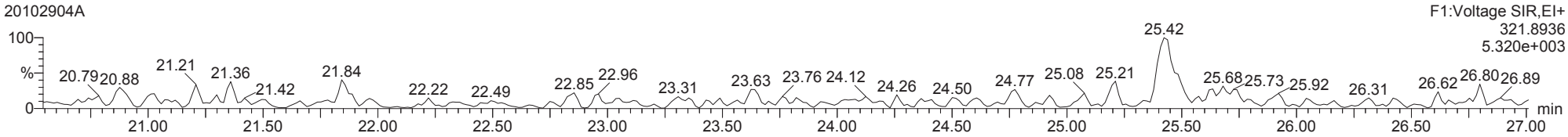

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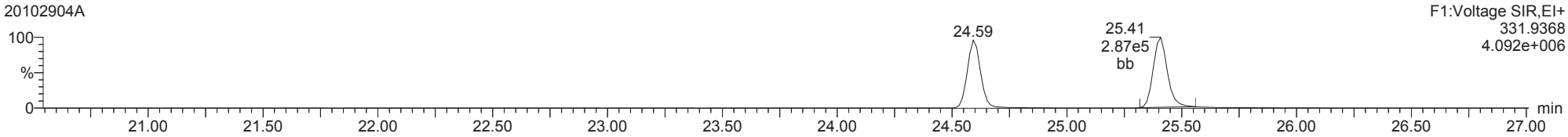

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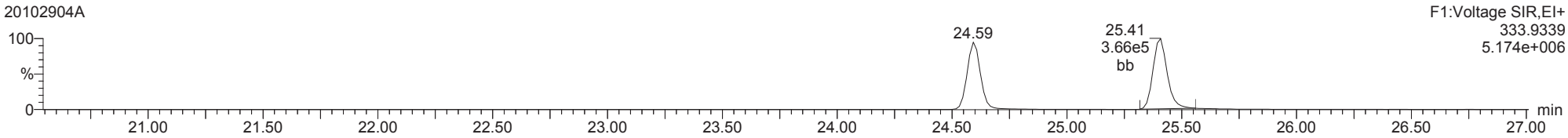

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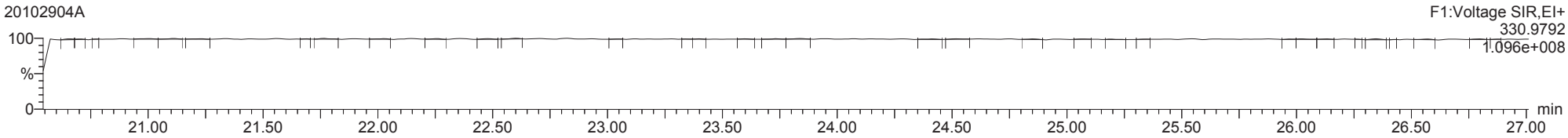

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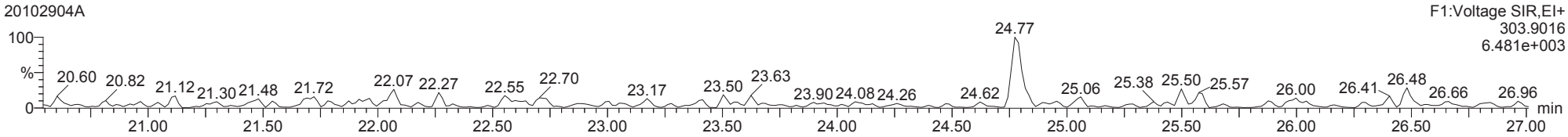
ID: CSLCJ, Name: 20102904A, Date: 29-Oct-2020, Time: 18:20:57, Conditions: AUTOSPEC01, User: pk

2378-TCDF



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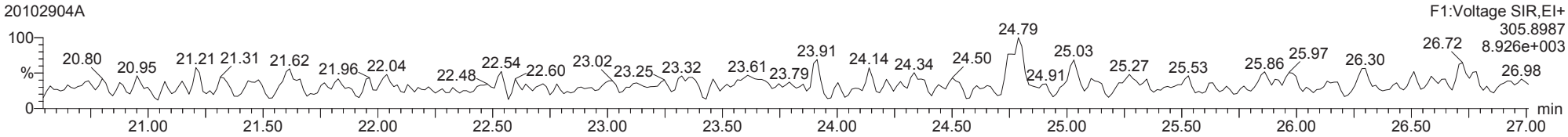

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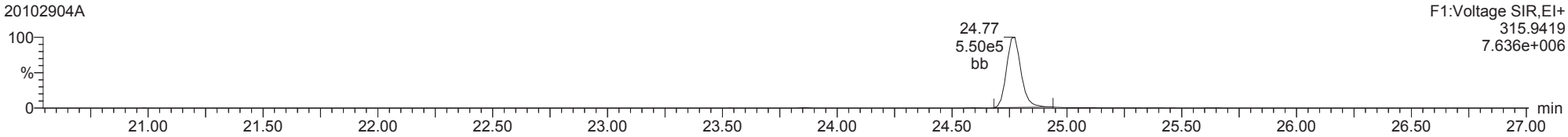

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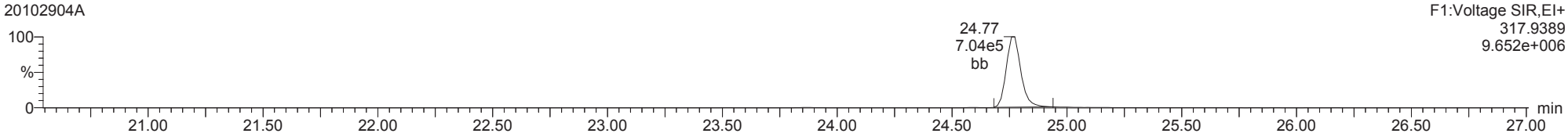
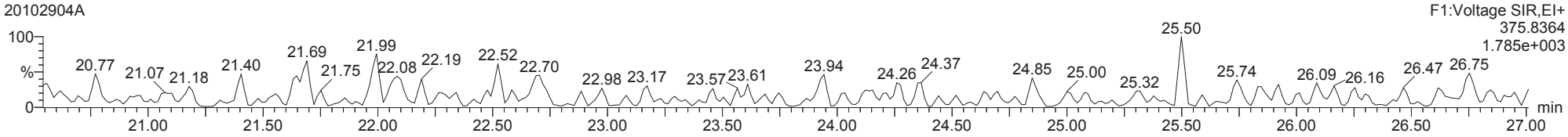


FUNCTION1 HXCDPE



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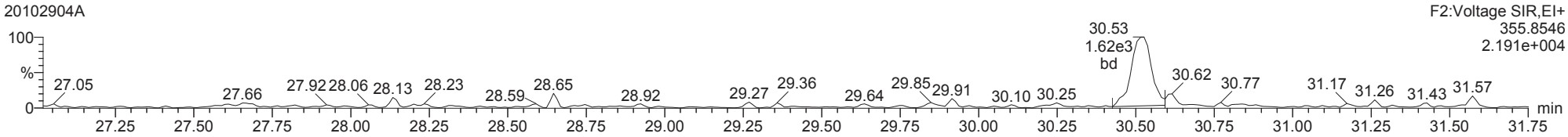
12378-PeCDD



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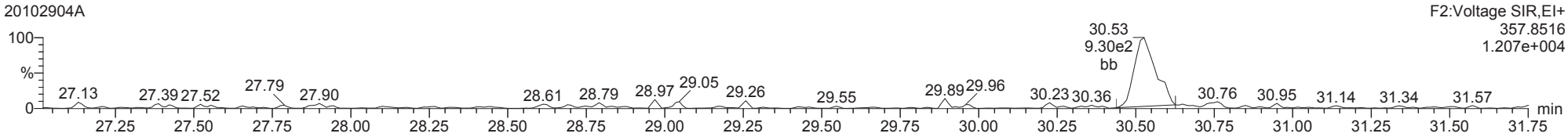

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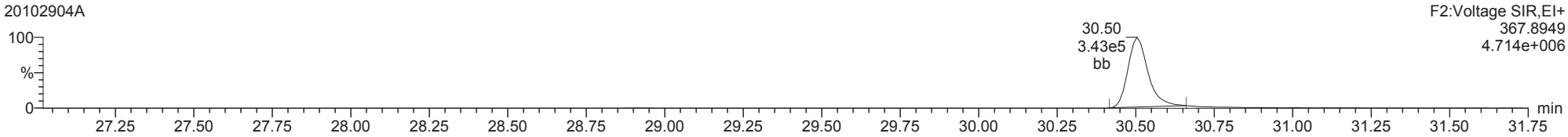

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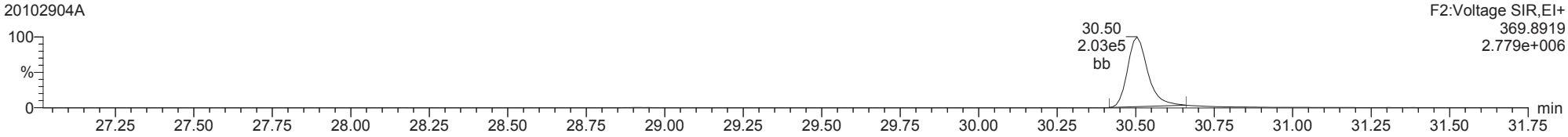
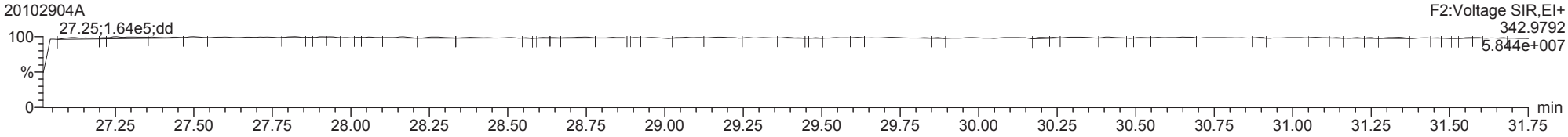


FUNCTION2 PFK



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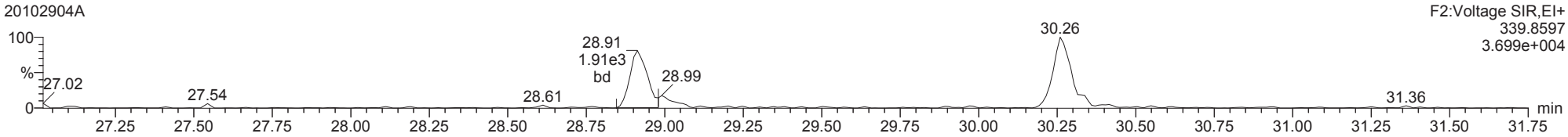

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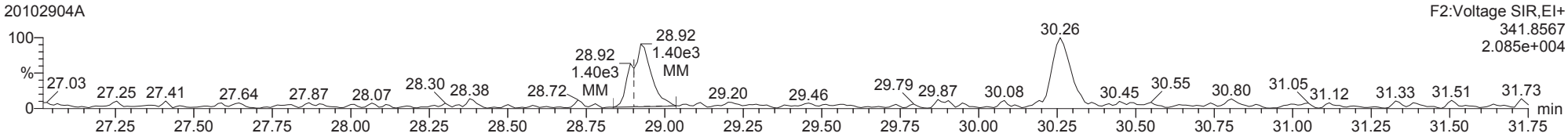

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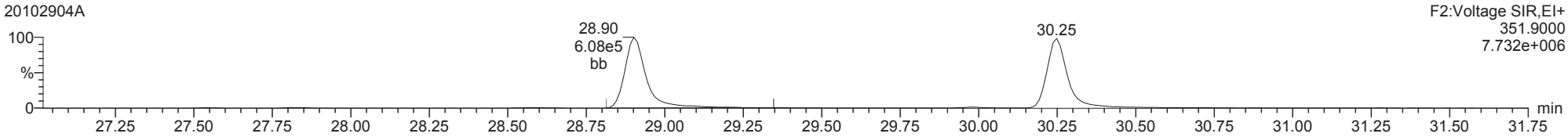

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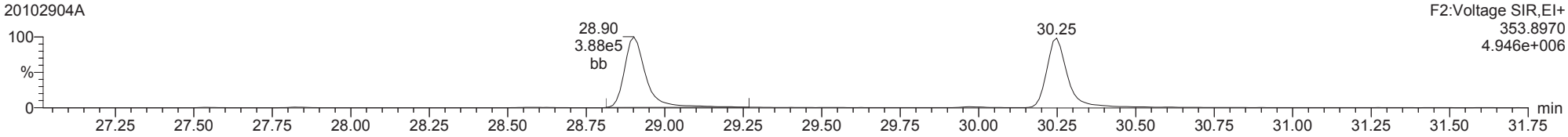
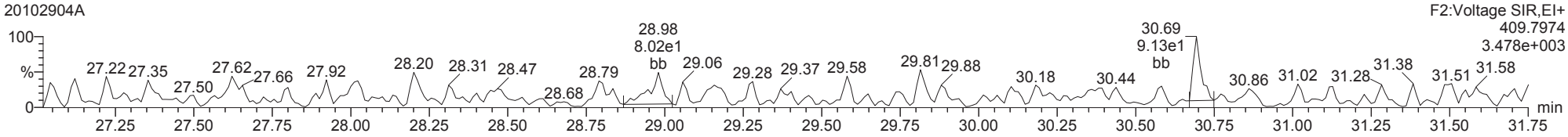


FUNCTION2 HPCDPE



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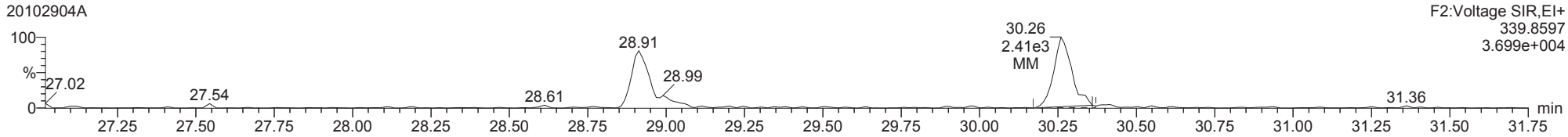
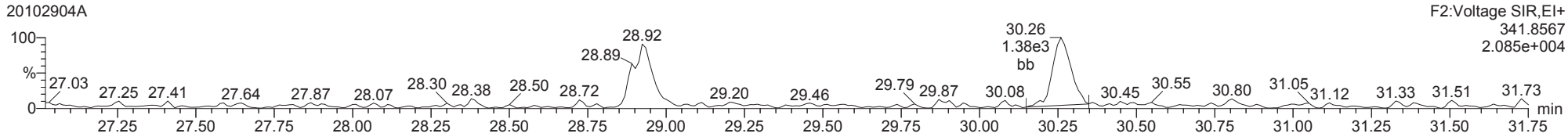
23478-PeCDF



23478-PeCDF



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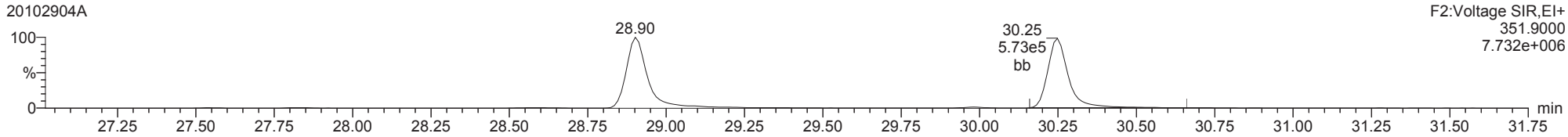

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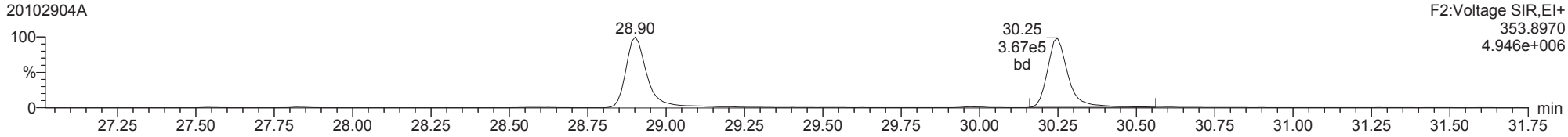
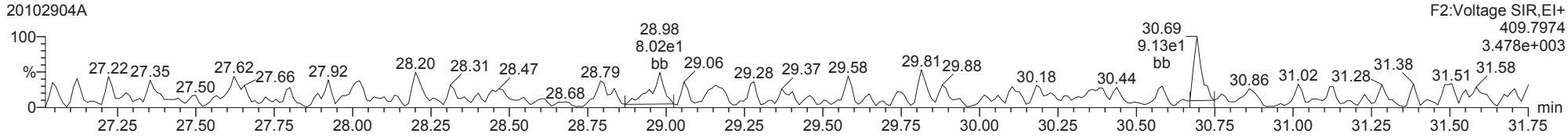
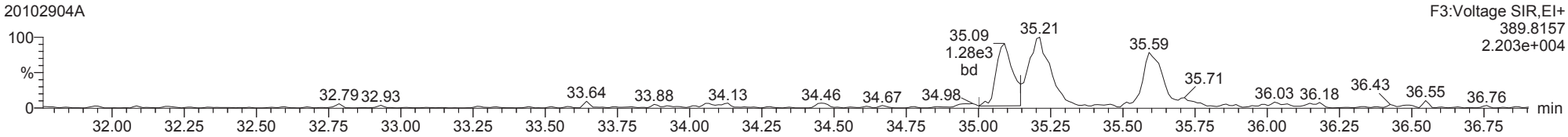


FUNCTION2 HPCDPE

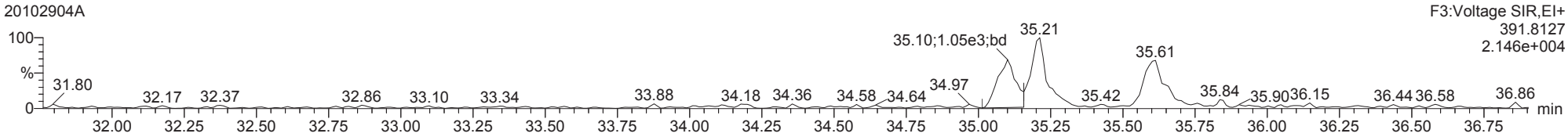


ID: CSLCJ, Name: 20102904A, Date: 29-Oct-2020, Time: 18:20:57, Conditions: AUTOSPEC01, User: pk

123478-HxCDD



123478-HxCDD



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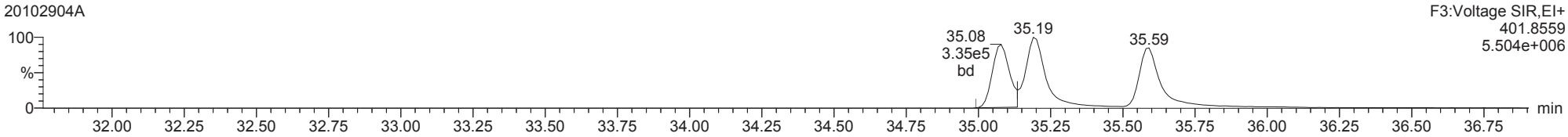

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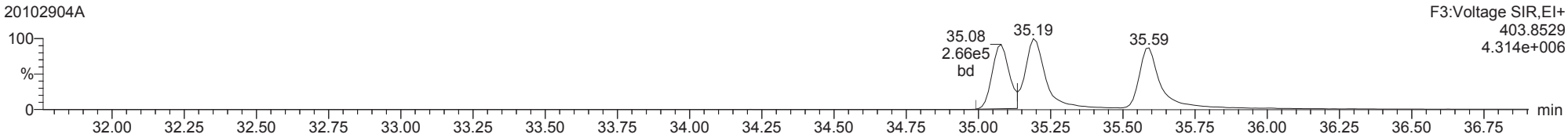
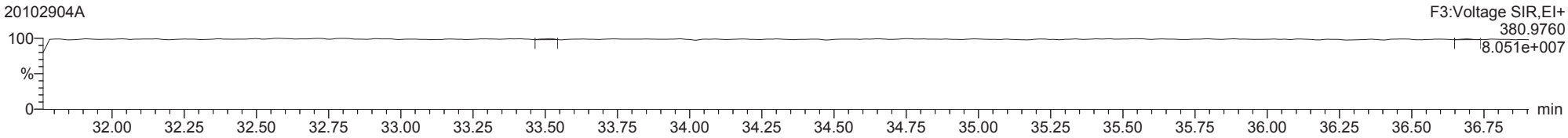


FUNCTION3 PFK



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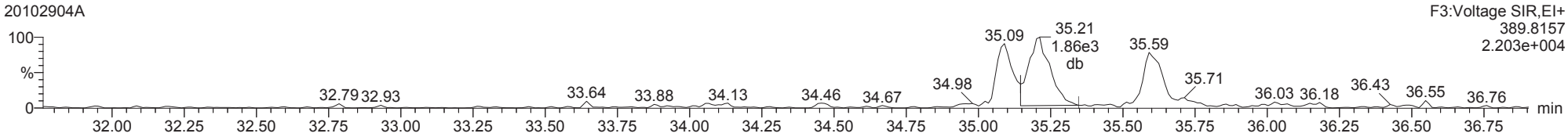
123678-HxCDD



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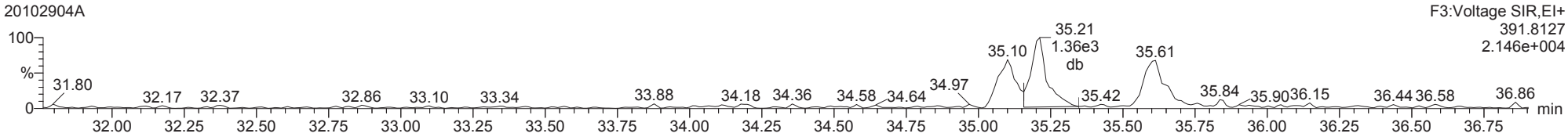

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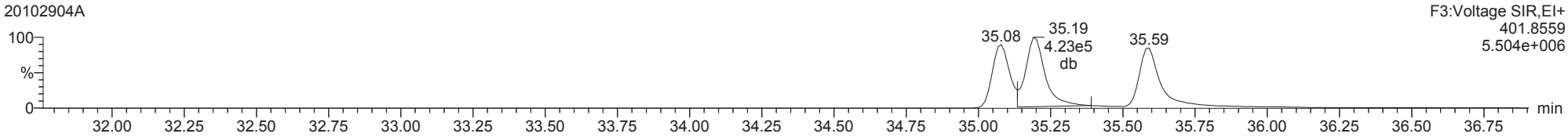

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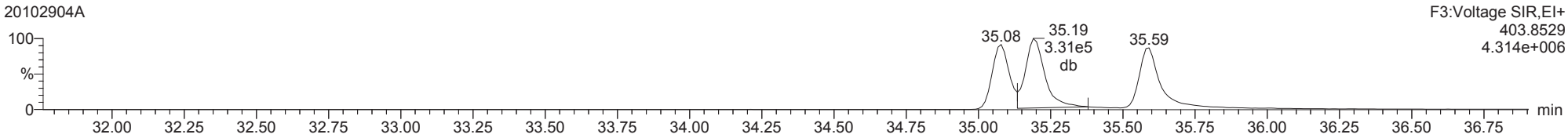

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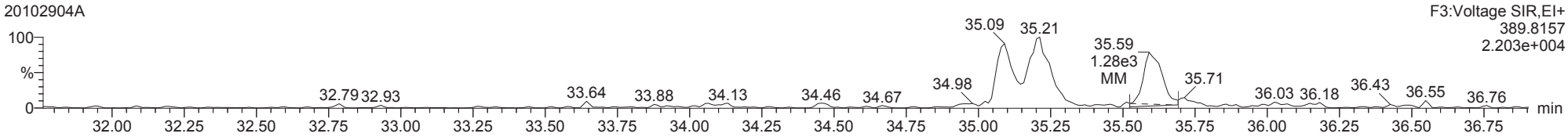

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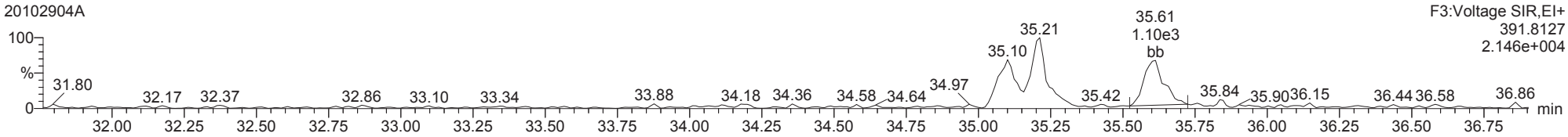

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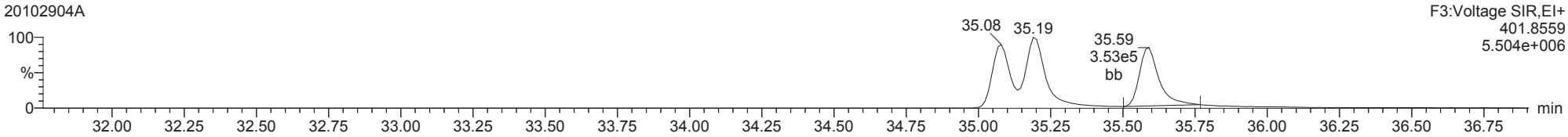

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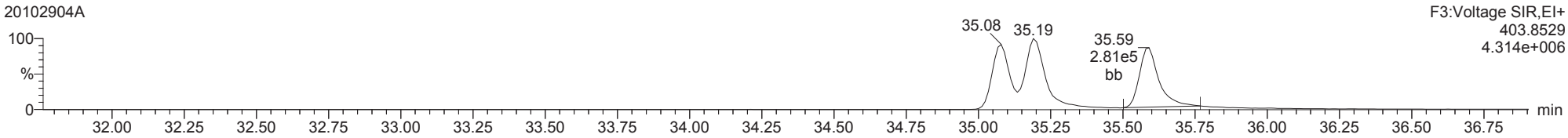

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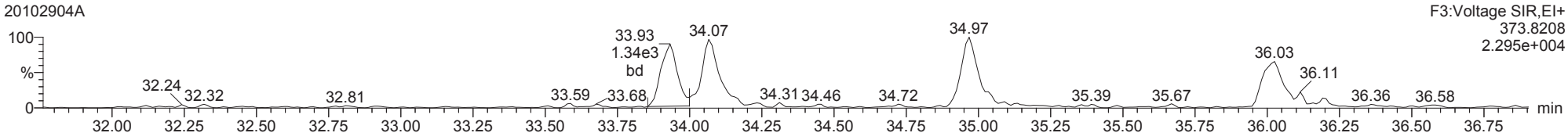

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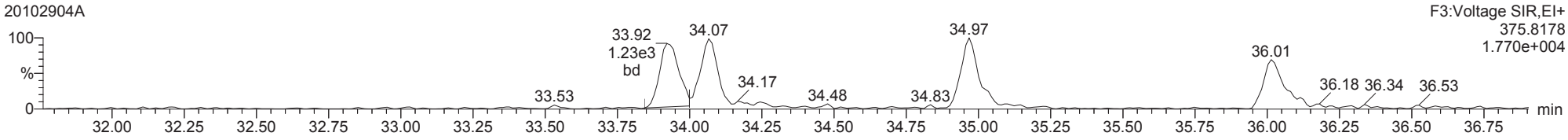

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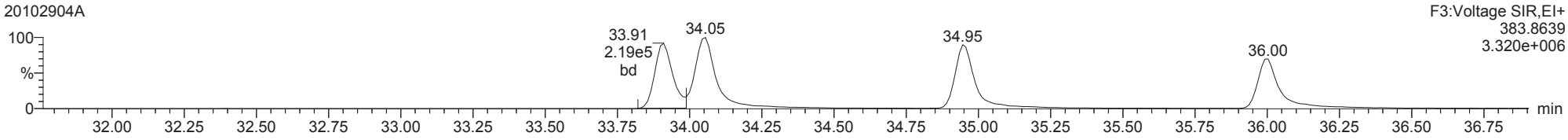

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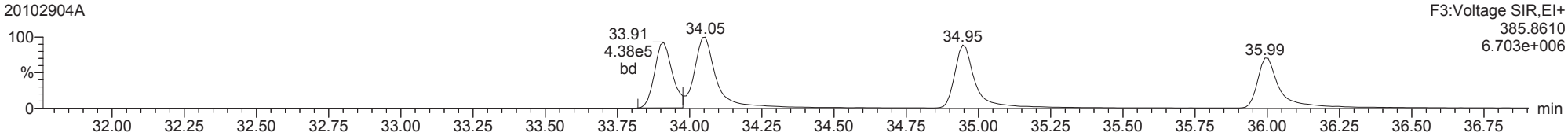
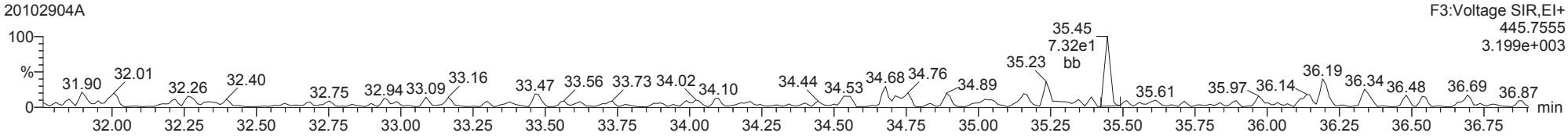


FUNCTION3 OCDPE



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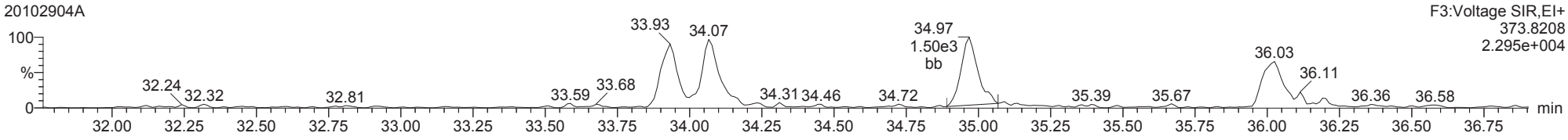

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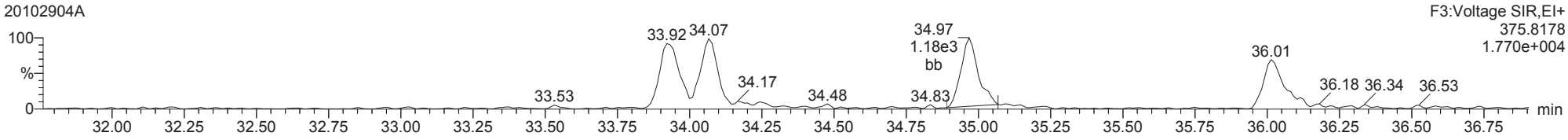

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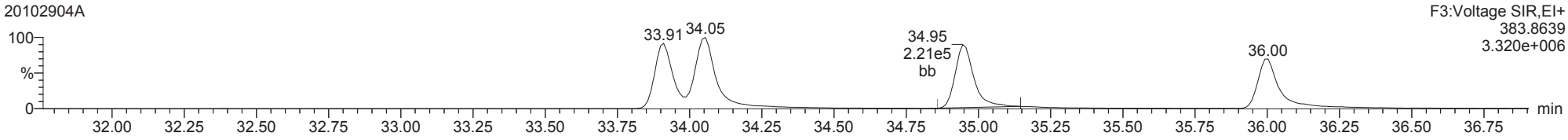

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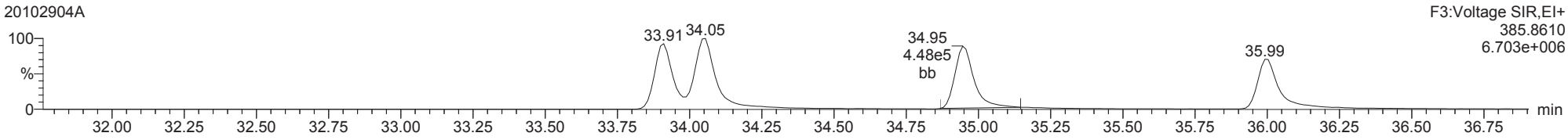

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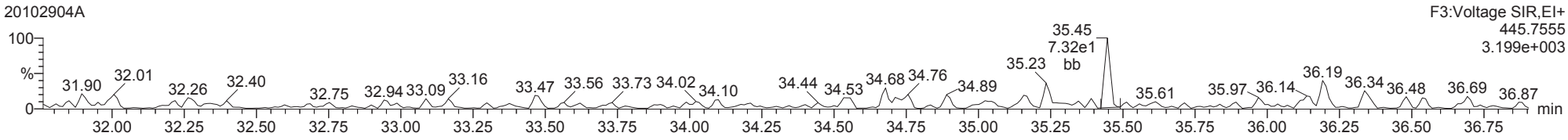

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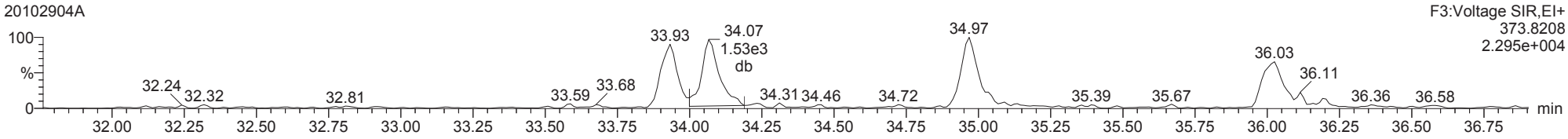

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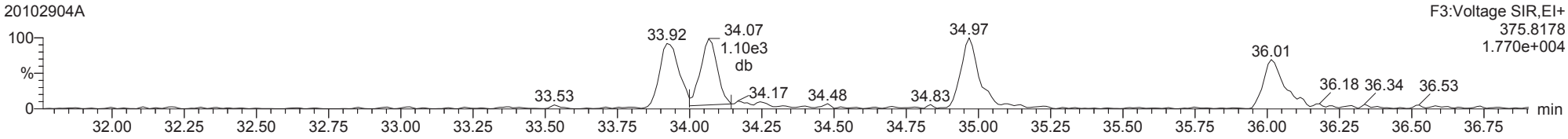

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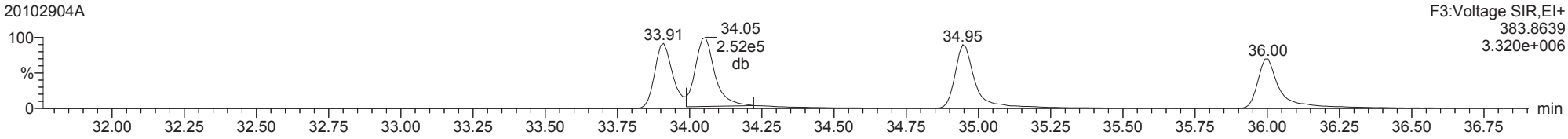

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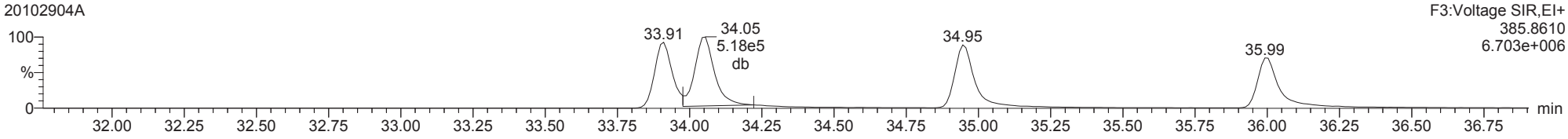

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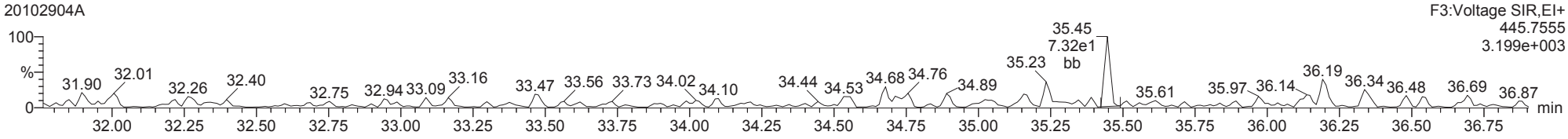

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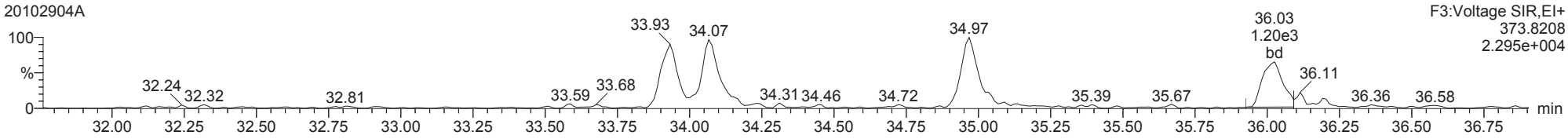

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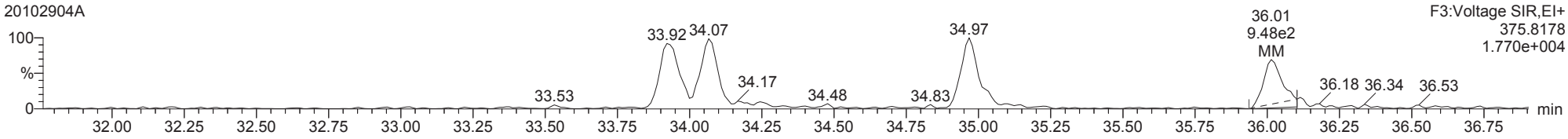

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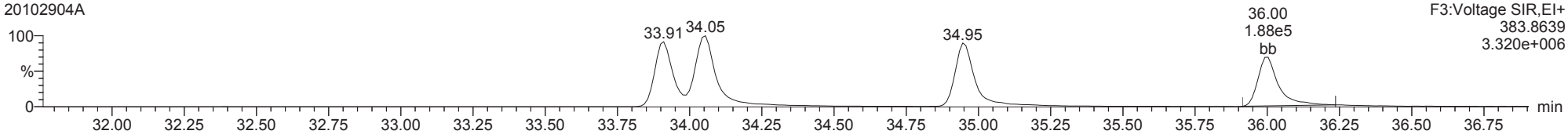

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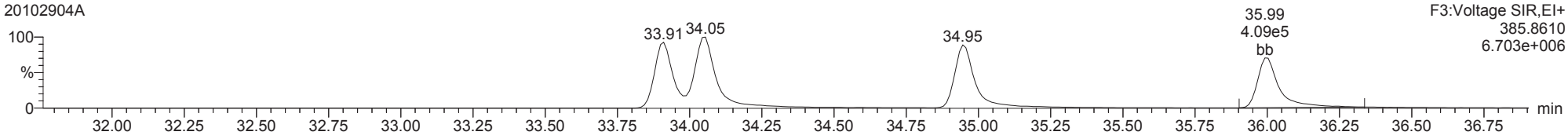

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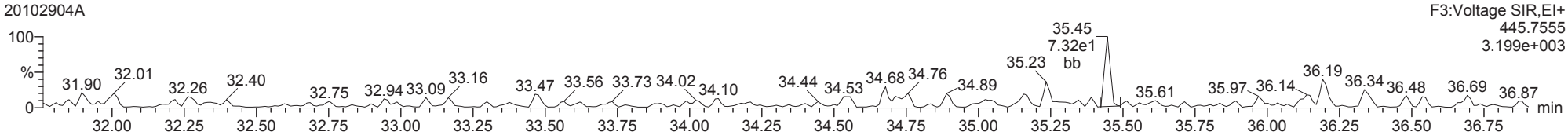

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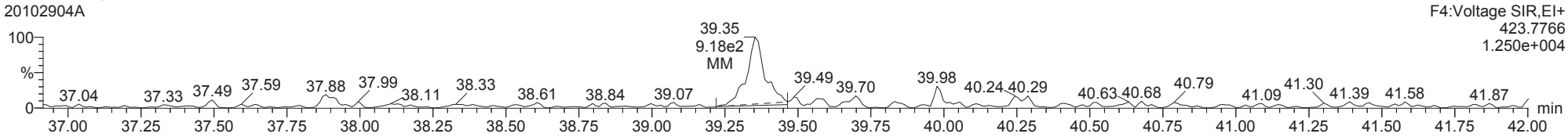

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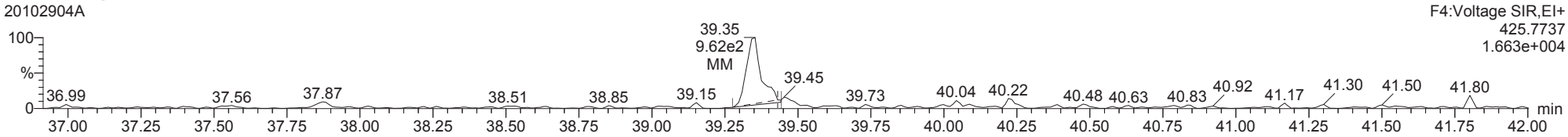

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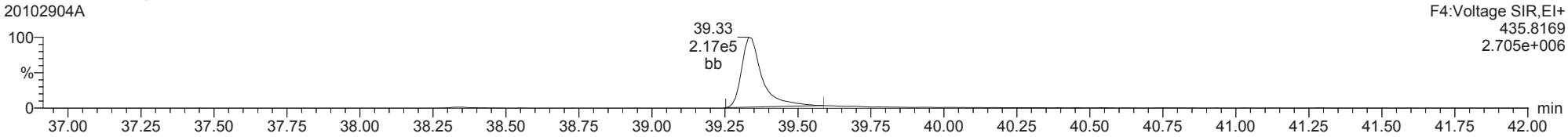

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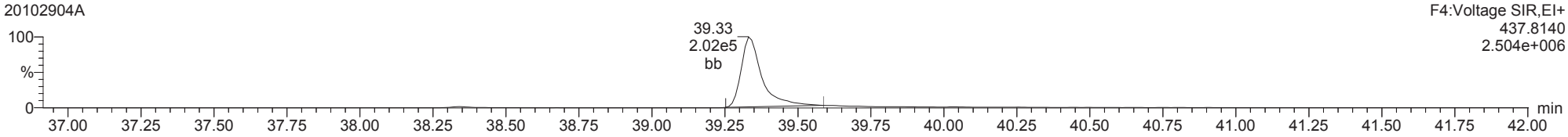
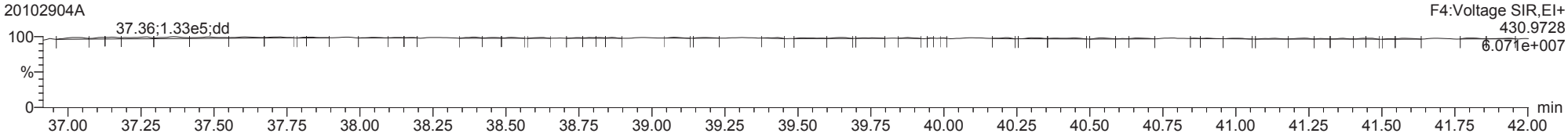


FUNCTION4 PFK



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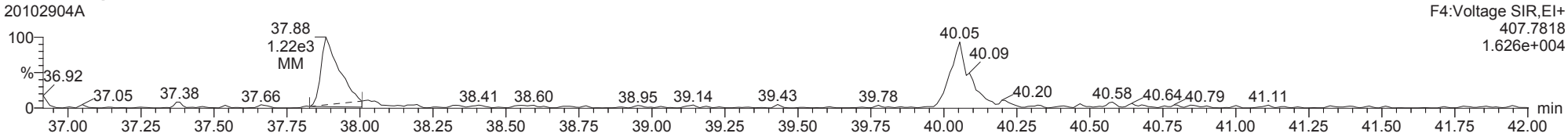

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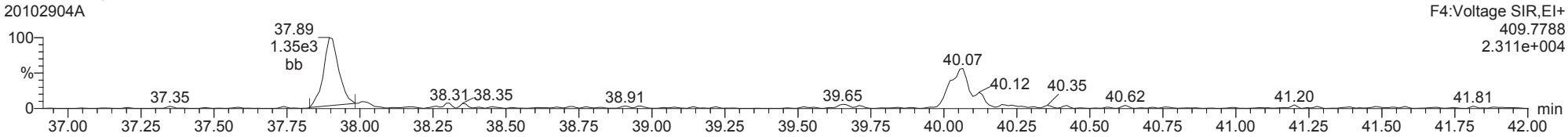

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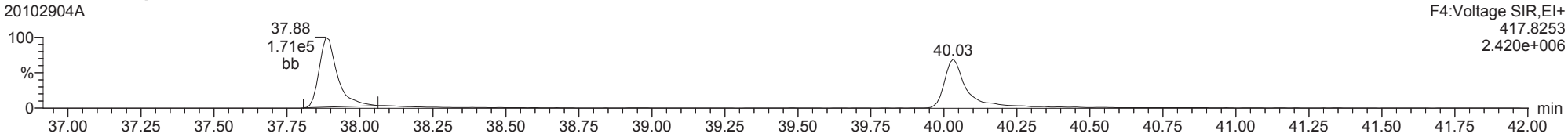

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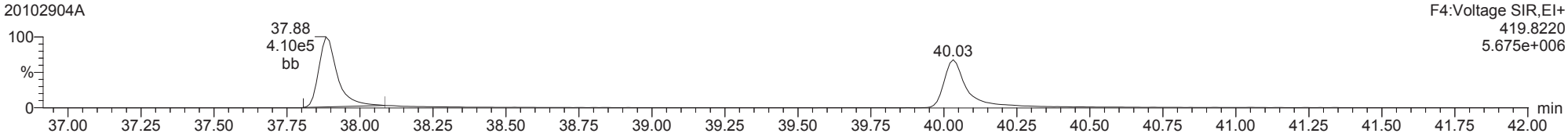
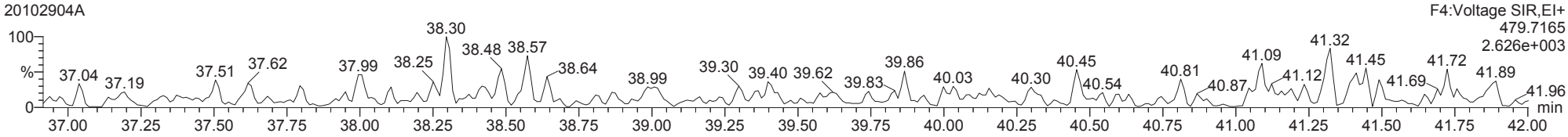


FUNCTION4 NCDPE



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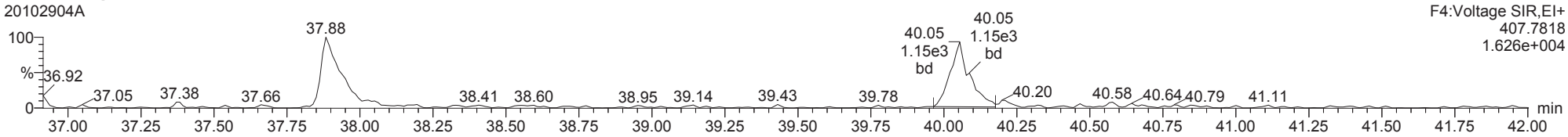

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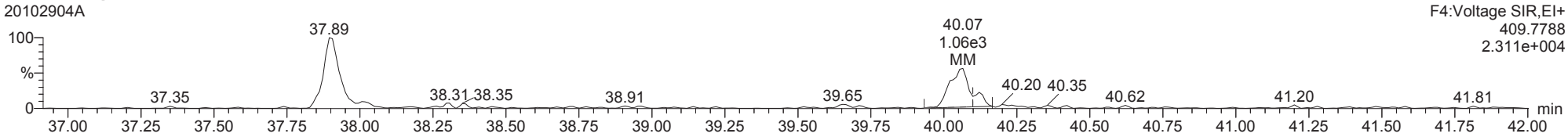

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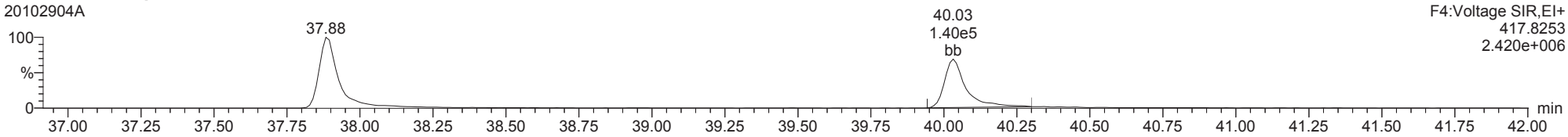

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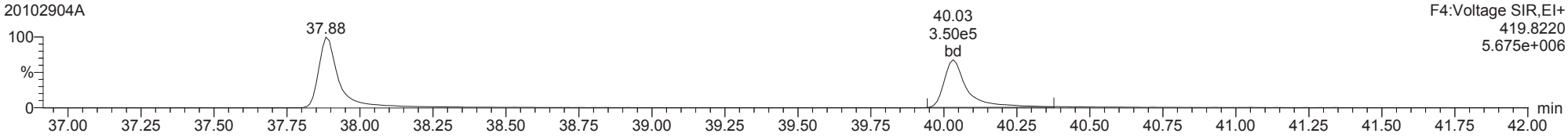

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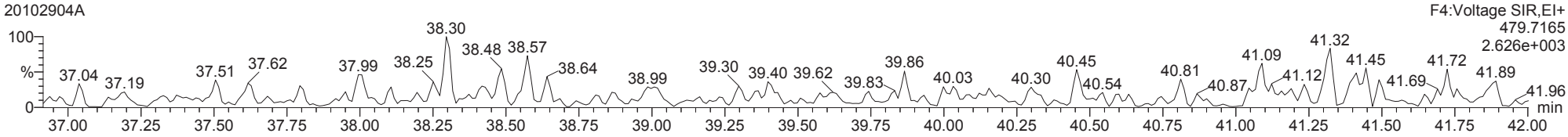

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ID: CSLCJ, Name: 20102904A, Date: 29-Oct-2020, Time: 18:20:57, Conditions: AUTOSPEC01, User: pk

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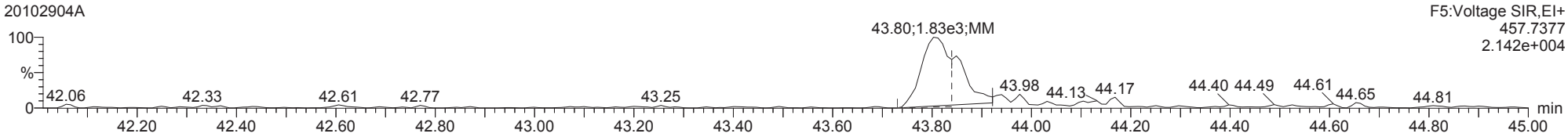

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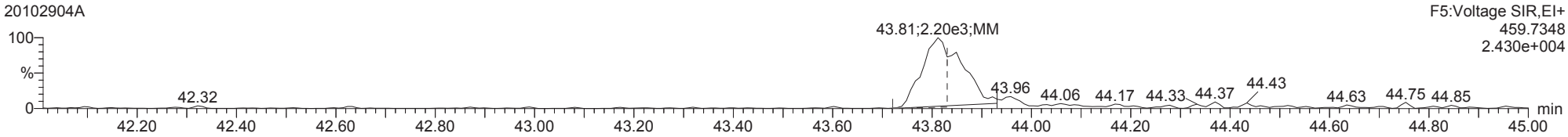

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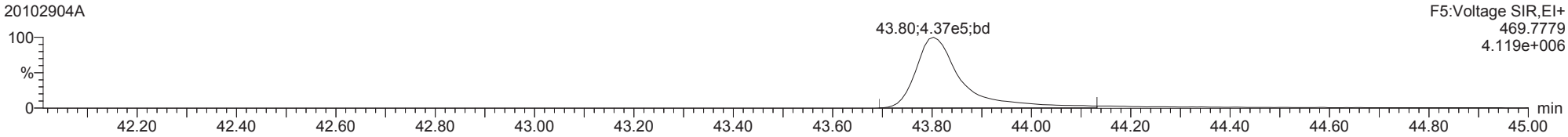

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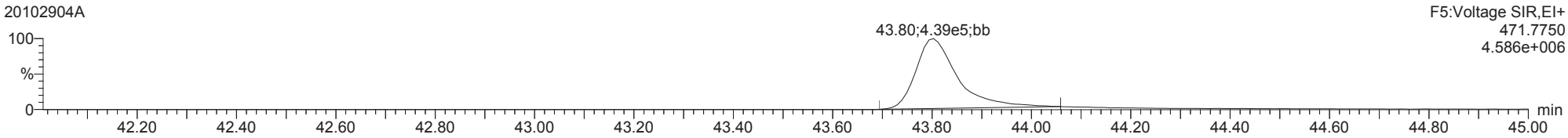
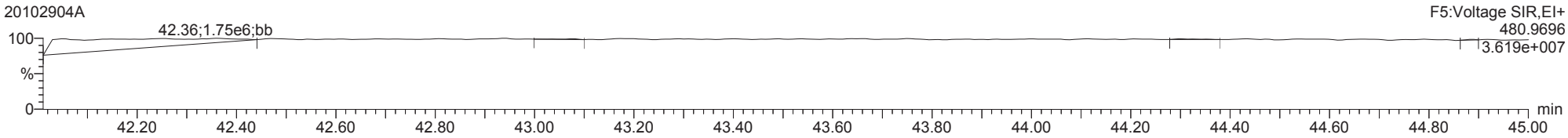


FUNCTION5 PFK



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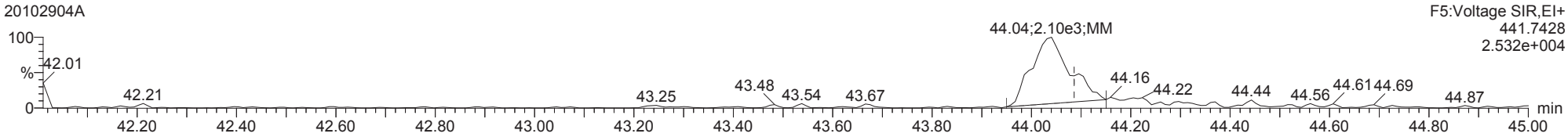

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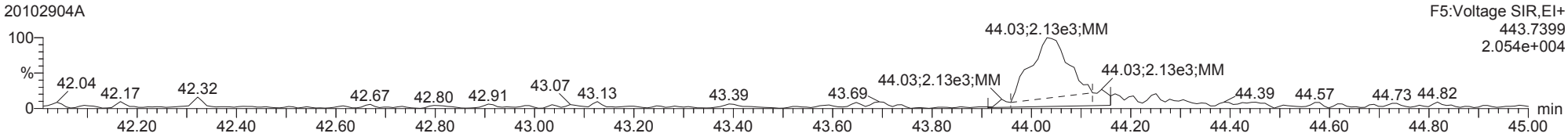

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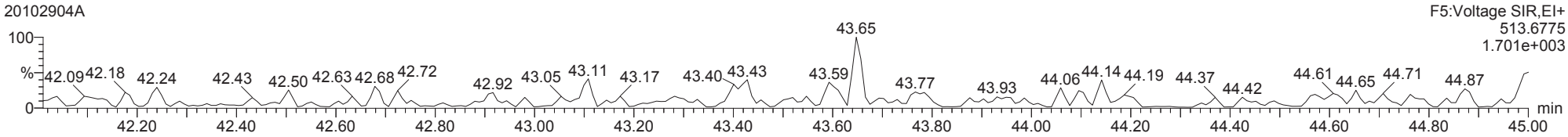

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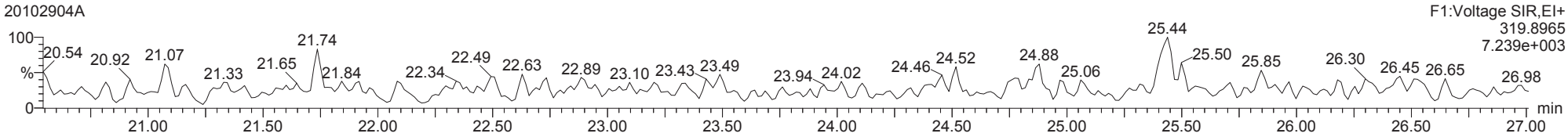
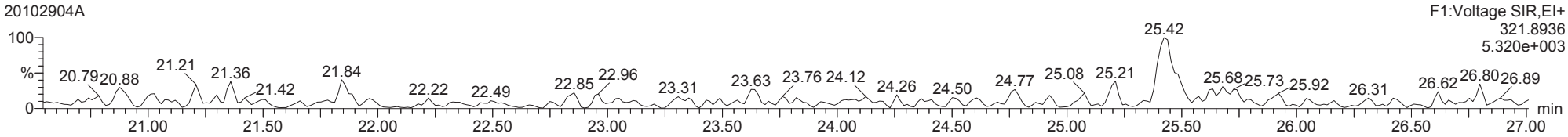


Total-tetradioxins



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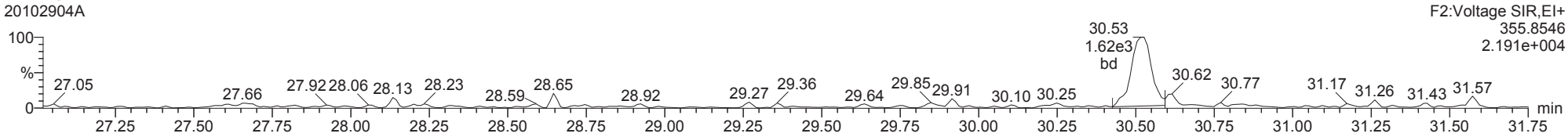

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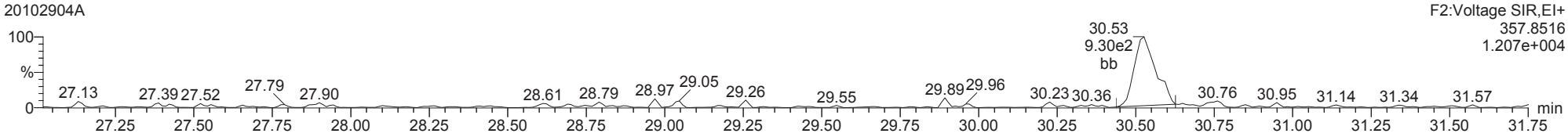

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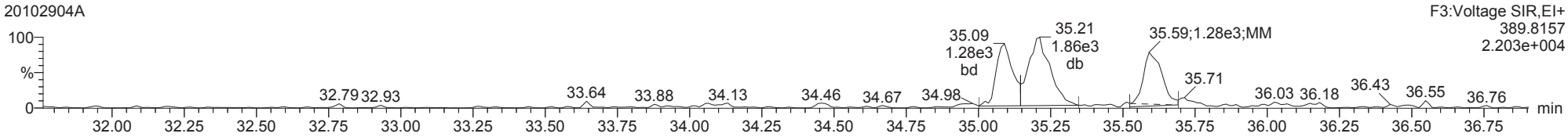

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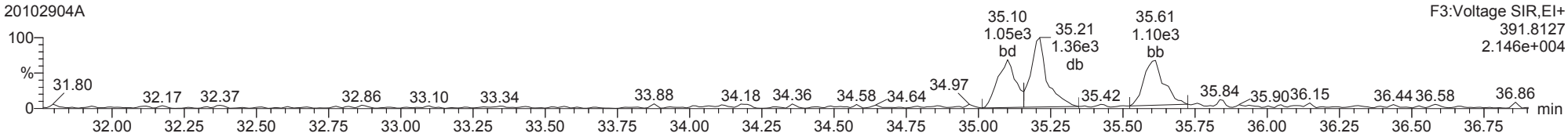

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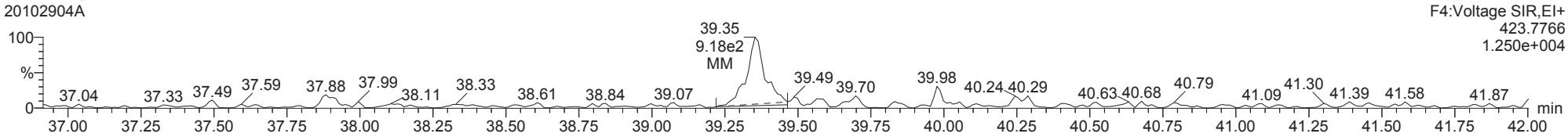

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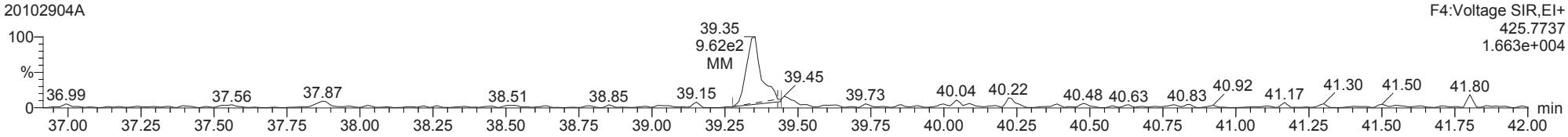

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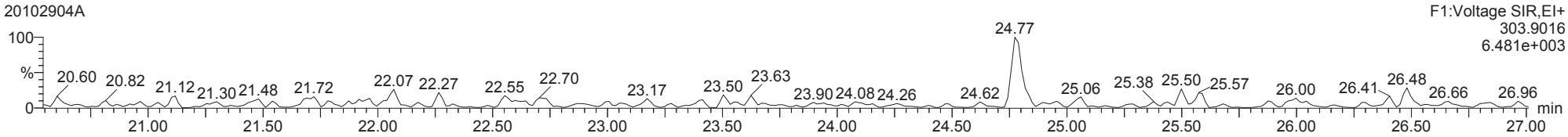
Total-tetrafurans



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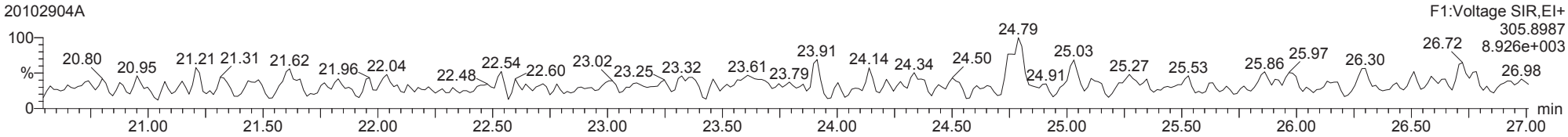

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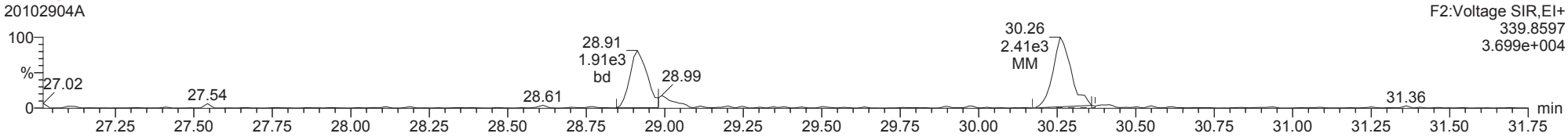

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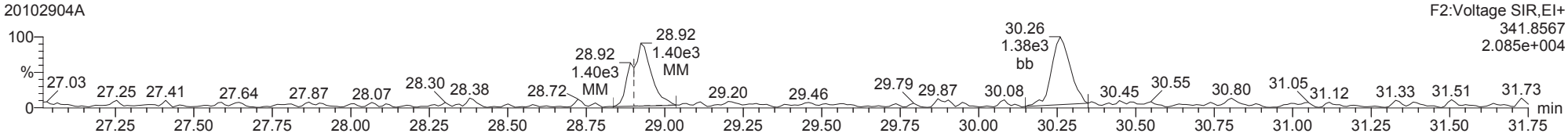

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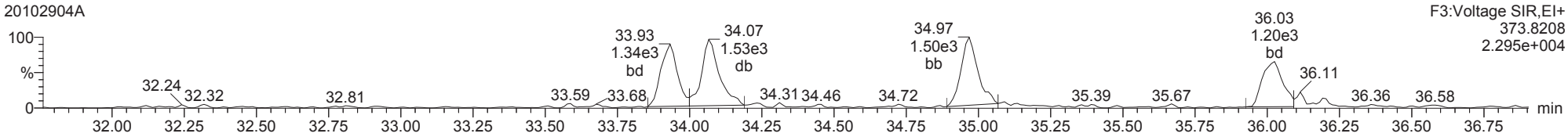

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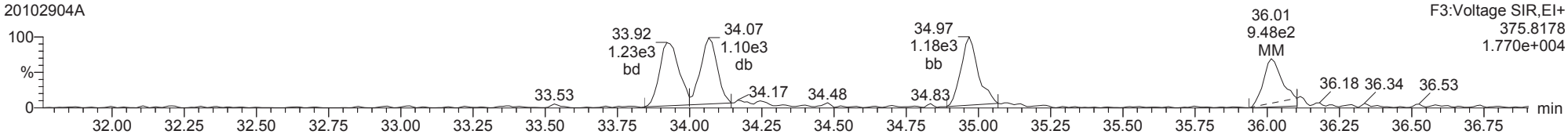
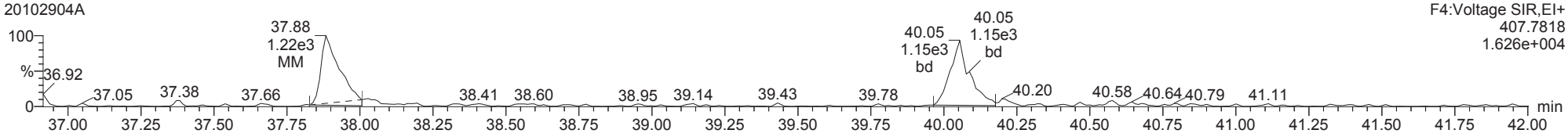
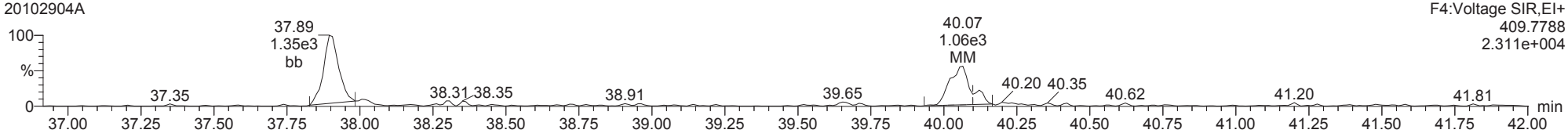


Total-heptafurans



Total-heptafurans



Dataset: T:\Autospec\Processed Data Batch\201029ICIH.qld
Last Altered: Friday, October 30, 2020 09:08:24 Pacific Daylight Time
Printed: Friday, October 30, 2020 14:33:54 Pacific Daylight Time

Method: T:\Autospec\Methods\Dioxin201016.mdb 28 Oct 2020 21:30:41
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 09:08:24

ID: CS1CJ, Name: 20102905, Date: 29-Oct-2020, Time: 19:09:26, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	24.789	1.001	1.985e3	2.554e3	0.729	0.777	0.770	600	1926	2.75e4	3.55e4	45.8	18.4	NO	bd	bd	0.456
12378-PeCDF	28.935	1.001	1.254e4	7.277e3	0.779	1.723	1.550	895	965	1.73e5	1.01e5	193.5	104.2	NO	MM	bb	2.356
23478-PeCDF	30.282	1.001	1.283e4	8.411e3	0.880	1.526	1.550	895	965	1.81e5	1.18e5	202.0	122.4	NO	bb	bb	2.360
123478-HxCDF	33.944	1.001	8.175e3	6.159e3	0.880	1.327	1.240	641	922	1.13e5	8.66e4	175.9	94.0	NO	bd	bd	2.228
234678-HxCDF	34.979	1.001	8.055e3	6.593e3	0.863	1.222	1.240	641	922	1.08e5	8.75e4	168.8	94.9	NO	bd	bb	2.307
123678-HxCDF	34.089	1.001	9.695e3	7.592e3	0.853	1.277	1.240	641	922	1.23e5	9.56e4	191.2	103.7	NO	db	dd	2.331
123789-HxCDF	36.025	1.001	6.329e3	4.798e3	0.780	1.319	1.240	641	922	8.13e4	6.39e4	126.8	69.4	NO	MM	bb	2.191
1234678-HpCDF	37.917	1.001	7.254e3	7.658e3	1.001	0.947	1.050	934	645	9.85e4	1.16e5	105.5	180.5	NO	bb	bd	2.276
1234789-HpCDF	40.055	1.000	6.338e3	6.189e3	0.994	1.024	1.050	934	645	8.27e4	6.60e4	88.6	102.4	NO	bd	bd	2.510
OCDF	44.041	1.005	1.162e4	1.277e4	1.158	0.910	0.890	973	1098	1.18e5	1.15e5	121.1	104.6	NO	bd	bd	4.427
2378-TCDD	25.438	1.001	1.901e3	2.685e3	1.238	0.708	0.770	1264	531	2.73e4	4.06e4	21.6	76.5	NO	bb	bb	0.512
12378-PeCDD	30.538	1.001	8.273e3	5.493e3	0.988	1.506	1.550	778	389	1.11e5	7.13e4	143.3	183.2	NO	bb	bd	2.381
123478-HxCDD	35.102	1.000	7.027e3	5.740e3	0.842	1.224	1.240	513	865	9.64e4	8.59e4	187.8	99.3	NO	bd	bd	2.310
123678-HxCDD	35.224	1.001	9.761e3	7.848e3	0.907	1.244	1.240	513	865	1.32e5	9.48e4	256.6	109.6	NO	dd	dd	2.328
123789-HxCDD	35.614	1.012	6.560e3	5.431e3	0.784	1.208	1.240	513	865	9.82e4	7.22e4	191.3	83.4	NO	dd	bd	2.053
1234678-HpCDD	39.364	1.000	5.321e3	4.765e3	1.044	1.117	1.050	929	677	6.82e4	6.79e4	73.5	100.3	NO	bd	bd	2.147
OCDD	43.840	1.000	9.111e3	1.019e4	0.963	0.895	0.890	1158	1070	9.93e4	1.10e5	85.8	103.3	NO	bd	bd	4.212
13C-2378-TCDF	24.774	1.007	5.935e5	7.722e5	2.203	0.768	0.770	4424	2549	8.23e6	1.07e7	1860.4	4196.5	NO	bb	bb	99.931
13C-12378-PeCDF	28.913	1.175	6.544e5	4.247e5	1.741	1.541	1.550	3492	2511	8.16e6	5.34e6	2336.3	2126.2	NO	bb	bb	99.900
13C-23478-PeCDF	30.260	1.230	6.239e5	3.985e5	1.669	1.566	1.550	3492	2511	8.19e6	5.38e6	2344.8	2143.7	NO	bb	bb	98.713
13C-123478-HxCDF	33.922	0.953	2.400e5	4.908e5	1.022	0.489	0.510	3175	3806	3.31e6	6.71e6	1041.7	1763.7	NO	bd	bd	101.762
13C-123678-HxCDF	34.067	0.957	2.866e5	5.825e5	1.200	0.492	0.510	3175	3806	3.58e6	7.18e6	1126.8	1887.3	NO	db	db	103.085
13C-234678-HxCDF	34.957	0.982	2.433e5	4.927e5	1.071	0.494	0.510	3175	3806	3.17e6	6.40e6	1000.0	1682.4	NO	bb	bb	97.806
13C-123789-HxCDF	36.003	1.011	2.128e5	4.382e5	0.919	0.486	0.510	3175	3806	2.49e6	5.13e6	785.3	1346.5	NO	bb	bb	100.880
13C-1234678-HpCDF	37.895	1.064	1.982e5	4.564e5	0.909	0.434	0.440	3147	4218	2.64e6	6.14e6	839.2	1456.9	NO	bb	bb	102.568
13C-1234789-HpCDF	40.043	1.125	1.519e5	3.502e5	0.724	0.434	0.440	3147	4218	1.77e6	4.13e6	561.5	979.6	NO	bb	bb	98.782
13C-1234-TCDD	24.608	0.000	2.737e5	3.467e5	1.000	0.789	0.770	2010	1252	4.21e6	5.30e6	2095.5	4234.7	NO	bb	bb	100.000
13C-2378-TCDD	25.423	1.033	3.173e5	4.060e5	1.181	0.782	0.770	2010	1252	4.38e6	5.61e6	2181.4	4480.6	NO	bb	bb	98.688
13C-12378-PeCDD	30.516	1.240	3.676e5	2.178e5	0.978	1.688	1.550	906	1255	5.03e6	3.03e6	5557.4	2411.0	NO	bb	bb	96.498
13C-123478-HxCDD	35.090	0.986	3.680e5	2.886e5	0.965	1.275	1.240	2562	3122	5.47e6	4.26e6	2134.4	1363.7	NO	bd	bd	96.869
13C-123678-HxCDD	35.202	0.989	4.622e5	3.716e5	1.168	1.244	1.240	2562	3122	5.79e6	4.70e6	2260.1	1507.0	NO	db	db	101.613
13C-1234678-HpCDD	39.353	1.105	2.338e5	2.163e5	0.645	1.081	1.050	2021	2606	2.81e6	2.63e6	1388.6	1008.7	NO	bb	bb	99.288
13C-OCDD	43.821	1.231	4.292e5	5.224e5	0.678	0.822	0.890	1462	3040	4.49e6	4.98e6	3070.5	1639.2	NO	bb	bd	199.716
13C-123789-HxCDD	35.603	0.000	3.940e5	3.085e5	1.000	1.277	1.240	2562	3122	4.95e6	3.89e6	1930.8	1244.5	NO	bb	bb	100.000
37CL-2378-TCDD	25.438	1.034	3.928e3		1.264			1196		5.58e4		46.6			bb		0.501

Dataset: T:\Autospec\Processed Data Batch\201029ICIH.qld
Last Altered: Friday, October 30, 2020 09:08:24 Pacific Daylight Time
Printed: Friday, October 30, 2020 14:33:54 Pacific Daylight Time

ID: CS1CJ, Name: 20102905, Date: 29-Oct-2020, Time: 19:09:26, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	600	1926								
1289-TCDF					0.688		0.770	600	1926								
13468-PECDF					1.181		1.550	208	669								
12389-PECDF					0.766		1.550	895	965								
123468-HXCDF					1.003		1.240	641	922								
1368-TCDD					1.179		0.770	1264	531								
1289-TCDD					1.042		0.770	1264	531								
12479-PECDD					1.810		1.550	778	389								
12389-PECDD					1.165		1.550	778	389								
124679-HXCDD					1.056		1.240	513	865								
1234679-HPCDD					1.285		1.050	929	677								
Total-tetrafurans			1.985e3		0.754			600		2.75e4							0.456
Total-penta1			0.000e0					208		0.00e0							
Total-pentafurans			2.537e4		0.809			895		3.54e5							4.716
Total-hexafurans			3.225e4		0.876			641		4.25e5							9.057
Total-heptafurans			1.359e4		0.997			934		1.81e5							4.786
Total-Furans			8.482e4		0.893			600		1.11e6							23.442
Total-tetradioxins			1.901e3		1.153			1264		2.73e4							0.512
Total-pentadioxins			8.273e3		1.321			778		1.11e5							2.381
Total-hexadioxins			2.335e4		0.897			513		3.26e5							6.691
Total-heptadioxins			5.321e3		1.165			929		6.82e4							2.147
Total-Dioxins			4.795e4		1.100			1264		6.33e5							15.943
Total-TEQ			1.328e5					1264		1.74e6							39.385
FUNCTION1 PFK			1.657e6					649945		3.13e7							
FUNCTION2 PFK			4.029e5					505000		1.24e7							0.000
FUNCTION3 PFK			1.720e7					385266		2.00e8							0.000
FUNCTION4 PFK			7.106e5					391371		1.78e7							
FUNCTION5 PFK			5.763e5					266627		1.51e7							
FUNCTION1 HXCD...			0.000e0					324		0.00e0							
FUNCTION1 HPCD...			7.215e1					563		1.66e3							0.000
FUNCTION2 HPCD...			7.085e1					479		2.94e3							0.000
FUNCTION3 OCDPE			0.000e0					214		0.00e0							
FUNCTION4 NCDPE			1.668e2					447		4.65e3							0.000
FUNCTION5 DCDPE			0.000e0					286		0.00e0							

Method: T:\Autospec\Methods\Dioxin201016.mdb 28 Oct 2020 21:30:41
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 09:08:24

ID: CS1CJ, Name: 20102905, Date: 29-Oct-2020, Time: 19:09:26, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	24.79	1.985e3	2.554e3	0.729	0.78	0.77	45.8	YES	NO	bd	bd	0.456

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	30.28	1.283e4	8.411e3	0.880	1.53	1.55	202.0	YES	NO	bb	bb	2.360
2	12378-PeCDF	28.94	1.254e4	7.277e3	0.779	1.72	1.55	193.5	YES	NO	MM	bb	2.356

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123678-HxCDF	34.09	9.695e3	7.592e3	0.853	1.28	1.24	191.2	YES	NO	db	dd	2.331
2	123478-HxCDF	33.94	8.175e3	6.159e3	0.880	1.33	1.24	175.9	YES	NO	bd	bd	2.228
3	123789-HxCDF	36.03	6.329e3	4.798e3	0.780	1.32	1.24	126.8	YES	NO	MM	bb	2.191
4	234678-HxCDF	34.98	8.055e3	6.593e3	0.863	1.22	1.24	168.8	YES	NO	bd	bb	2.307

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	40.05	6.338e3	6.189e3	0.994	1.02	1.05	88.6	YES	NO	bd	bd	2.510
2	1234678-HpCDF	37.92	7.254e3	7.658e3	1.001	0.95	1.05	105.5	YES	NO	bb	bd	2.276

ID: CS1CJ, Name: 20102905, Date: 29-Oct-2020, Time: 19:09:26, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	24.79	1.985e3	2.554e3	0.729	0.78	0.77	45.8	YES	NO	bd	bd	0.456
2	123678-HxCDF	34.09	9.695e3	7.592e3	0.853	1.28	1.24	191.2	YES	NO	db	dd	2.331
3	123478-HxCDF	33.94	8.175e3	6.159e3	0.880	1.33	1.24	175.9	YES	NO	bd	bd	2.228
4	23478-PeCDF	30.28	1.283e4	8.411e3	0.880	1.53	1.55	202.0	YES	NO	bb	bb	2.360
5	12378-PeCDF	28.94	1.254e4	7.277e3	0.779	1.72	1.55	193.5	YES	NO	MM	bb	2.356
6	123789-HxCDF	36.03	6.329e3	4.798e3	0.780	1.32	1.24	126.8	YES	NO	MM	bb	2.191
7	234678-HxCDF	34.98	8.055e3	6.593e3	0.863	1.22	1.24	168.8	YES	NO	bd	bb	2.307
8	1234789-HpCDF	40.05	6.338e3	6.189e3	0.994	1.02	1.05	88.6	YES	NO	bd	bd	2.510
9	1234678-HpCDF	37.92	7.254e3	7.658e3	1.001	0.95	1.05	105.5	YES	NO	bb	bd	2.276
10	OCDF	44.04	1.162e4	1.277e4	1.158	0.91	0.89	121.1	YES	NO	bd	bd	4.427

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	25.44	1.901e3	2.685e3	1.238	0.71	0.77	21.6	YES	NO	bb	bb	0.512

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	30.54	8.273e3	5.493e3	0.988	1.51	1.55	143.3	YES	NO	bb	bd	2.381

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	35.61	6.560e3	5.431e3	0.784	1.21	1.24	191.3	YES	NO	dd	bd	2.053
2	123678-HxCDD	35.22	9.761e3	7.848e3	0.907	1.24	1.24	256.6	YES	NO	dd	dd	2.328
3	123478-HxCDD	35.10	7.027e3	5.740e3	0.842	1.22	1.24	187.8	YES	NO	bd	bd	2.310

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	39.36	5.321e3	4.765e3	1.044	1.12	1.05	73.5	YES	NO	bd	bd	2.147

ID: CS1CJ, Name: 20102905, Date: 29-Oct-2020, Time: 19:09:26, Conditions: AUTOSPEC01, User: pk

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	30.54	8.273e3	5.493e3	0.988	1.51	1.55	143.3	YES	NO	bb	bd	2.381
2	2378-TCDD	25.44	1.901e3	2.685e3	1.238	0.71	0.77	21.6	YES	NO	bb	bb	0.512
3	123789-HxCDD	35.61	6.560e3	5.431e3	0.784	1.21	1.24	191.3	YES	NO	dd	bd	2.053
4	123678-HxCDD	35.22	9.761e3	7.848e3	0.907	1.24	1.24	256.6	YES	NO	dd	dd	2.328
5	123478-HxCDD	35.10	7.027e3	5.740e3	0.842	1.22	1.24	187.8	YES	NO	bd	bd	2.310
6	1234678-HpCDD	39.36	5.321e3	4.765e3	1.044	1.12	1.05	73.5	YES	NO	bd	bd	2.147
7	OCDD	43.84	9.111e3	1.019e4	0.963	0.89	0.89	85.8	YES	NO	bd	bd	4.212

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	24.79	1.985e3	2.554e3	0.729	0.78	0.77	45.8	YES	NO	bd	bd	0.456
2	123678-HxCDF	34.09	9.695e3	7.592e3	0.853	1.28	1.24	191.2	YES	NO	db	dd	2.331
3	123478-HxCDF	33.94	8.175e3	6.159e3	0.880	1.33	1.24	175.9	YES	NO	bd	bd	2.228
4	23478-PeCDF	30.28	1.283e4	8.411e3	0.880	1.53	1.55	202.0	YES	NO	bb	bb	2.360
5	12378-PeCDF	28.94	1.254e4	7.277e3	0.779	1.72	1.55	193.5	YES	NO	MM	bb	2.356
6	123789-HxCDF	36.03	6.329e3	4.798e3	0.780	1.32	1.24	126.8	YES	NO	MM	bb	2.191
7	234678-HxCDF	34.98	8.055e3	6.593e3	0.863	1.22	1.24	168.8	YES	NO	bd	bb	2.307
8	1234789-HpCDF	40.05	6.338e3	6.189e3	0.994	1.02	1.05	88.6	YES	NO	bd	bd	2.510
9	1234678-HpCDF	37.92	7.254e3	7.658e3	1.001	0.95	1.05	105.5	YES	NO	bb	bd	2.276
10	OCDF	44.04	1.162e4	1.277e4	1.158	0.91	0.89	121.1	YES	NO	bd	bd	4.427
11	12378-PeCDD	30.54	8.273e3	5.493e3	0.988	1.51	1.55	143.3	YES	NO	bb	bd	2.381
12	2378-TCDD	25.44	1.901e3	2.685e3	1.238	0.71	0.77	21.6	YES	NO	bb	bb	0.512
13	123789-HxCDD	35.61	6.560e3	5.431e3	0.784	1.21	1.24	191.3	YES	NO	dd	bd	2.053
14	123678-HxCDD	35.22	9.761e3	7.848e3	0.907	1.24	1.24	256.6	YES	NO	dd	dd	2.328
15	123478-HxCDD	35.10	7.027e3	5.740e3	0.842	1.22	1.24	187.8	YES	NO	bd	bd	2.310
16	1234678-HpCDD	39.36	5.321e3	4.765e3	1.044	1.12	1.05	73.5	YES	NO	bd	bd	2.147
17	OCDD	43.84	9.111e3	1.019e4	0.963	0.89	0.89	85.8	YES	NO	bd	bd	4.212

ID: CS1CJ, Name: 20102905, Date: 29-Oct-2020, Time: 19:09:26, Conditions: AUTOSPEC01, User: pk

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	22.19	6.491e4					1.8	NO		db		
2	FUNCTION1 PFK	22.07	5.677e4					1.6	NO		bd		
3	FUNCTION1 PFK	21.96	6.001e4					1.7	NO		bb		
4	FUNCTION1 PFK	21.72	5.223e4					1.9	NO		bb		
5	FUNCTION1 PFK	21.18	4.578e4					1.4	NO		bb		
6	FUNCTION1 PFK	21.06	4.930e4					1.4	NO		bb		
7	FUNCTION1 PFK	20.71	6.704e4					2.2	NO		bb		
8	FUNCTION1 PFK	25.51	7.061e4					2.0	NO		bb		
9	FUNCTION1 PFK	25.26	6.642e4					1.6	NO		bb		
10	FUNCTION1 PFK	25.02	2.956e4					1.2	NO		bb		
11	FUNCTION1 PFK	24.68	4.624e4					1.5	NO		db		
12	FUNCTION1 PFK	24.58	7.656e4					1.8	NO		dd		
13	FUNCTION1 PFK	24.47	2.158e4					0.9	NO		bd		
14	FUNCTION1 PFK	24.35	6.201e4					2.1	NO		bb		
15	FUNCTION1 PFK	24.25	4.782e4					1.7	NO		bb		
16	FUNCTION1 PFK	23.79	5.336e4					1.5	NO		bb		
17	FUNCTION1 PFK	23.55	6.355e4					2.2	NO		bb		
18	FUNCTION1 PFK	23.44	7.280e4					1.4	NO		db		
19	FUNCTION1 PFK	23.32	3.740e4					1.2	NO		dd		
20	FUNCTION1 PFK	23.20	6.146e4					1.4	NO		bd		
21	FUNCTION1 PFK	22.78	7.576e4					1.8	NO		bb		
22	FUNCTION1 PFK	22.64	6.048e4					1.2	NO		bb		
23	FUNCTION1 PFK	22.31	3.434e4					1.1	NO		bb		
24	FUNCTION1 PFK	26.75	2.895e4					1.1	NO		bb		
25	FUNCTION1 PFK	26.65	5.934e4					1.5	NO		db		
26	FUNCTION1 PFK	26.51	5.442e4					1.5	NO		bd		
27	FUNCTION1 PFK	26.41	5.949e4					1.6	NO		bb		
28	FUNCTION1 PFK	26.30	5.354e4					2.0	NO		bb		
29	FUNCTION1 PFK	26.16	4.012e4					1.4	NO		bb		
30	FUNCTION1 PFK	25.95	1.714e4					0.7	NO		bb		
31	FUNCTION1 PFK	25.59	6.754e4					1.9	NO		bb		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	27.77	3.115e4					1.5	NO		bb		0.000
2	FUNCTION2 PFK	27.33	2.319e4					1.4	NO		db		0.000
3	FUNCTION2 PFK	27.29	2.244e4					1.4	NO		dd		0.000
4	FUNCTION2 PFK	27.22	2.989e4					1.4	NO		dd		0.000
5	FUNCTION2 PFK	27.19	8.469e3					0.9	NO		dd		0.000
6	FUNCTION2 PFK	27.15	5.333e3					0.9	NO		bd		0.000
7	FUNCTION2 PFK	27.10	4.819e4					2.5	NO		bb		0.000
8	FUNCTION2 PFK	30.92	4.410e3					0.6	NO		bd		0.000
9	FUNCTION2 PFK	30.87	6.164e3					0.8	NO		bb		0.000
10	FUNCTION2 PFK	30.77	2.550e3					0.5	NO		bb		0.000
11	FUNCTION2 PFK	30.71	1.564e4					0.8	NO		bb		0.000
12	FUNCTION2 PFK	30.66	7.925e3					0.7	NO		bb		0.000
13	FUNCTION2 PFK	30.15	4.879e3					0.3	NO		bb		0.000
14	FUNCTION2 PFK	29.97	8.669e3					0.6	NO		db		0.000
15	FUNCTION2 PFK	29.90	1.382e4					0.9	NO		bd		0.000
16	FUNCTION2 PFK	29.14	2.618e4					1.0	NO		bb		0.000
17	FUNCTION2 PFK	28.89	2.090e4					0.9	NO		bb		0.000
18	FUNCTION2 PFK	28.85	7.780e3					0.6	NO		bb		0.000
19	FUNCTION2 PFK	28.78	1.608e4					1.1	NO		db		0.000
20	FUNCTION2 PFK	28.71	2.517e4					1.1	NO		bd		0.000
21	FUNCTION2 PFK	28.58	4.378e3					0.6	NO		db		0.000
22	FUNCTION2 PFK	28.55	2.339e4					1.3	NO		bd		0.000
23	FUNCTION2 PFK	28.46	3.551e4					2.1	NO		bb		0.000
24	FUNCTION2 PFK	30.94	1.081e4					0.7	NO		db		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.02	7.587e5					11.0	YES		dd		0.000
2	FUNCTION3 PFK	32.88	6.528e5					17.0	YES		dd		0.000
3	FUNCTION3 PFK	32.75	7.385e5					21.4	YES		dd		0.000
4	FUNCTION3 PFK	32.71	3.785e5					22.5	YES		dd		0.000
5	FUNCTION3 PFK	32.63	9.907e5					26.6	YES		dd		0.000
6	FUNCTION3 PFK	32.53	1.121e6					30.1	YES		dd		0.000
7	FUNCTION3 PFK	32.40	1.270e6					35.1	YES		dd		0.000
8	FUNCTION3 PFK	32.39	2.057e6					35.1	YES		dd		0.000
9	FUNCTION3 PFK	32.21	8.749e5					41.9	YES		dd		0.000
10	FUNCTION3 PFK	32.16	9.256e5					43.4	YES		dd		0.000
11	FUNCTION3 PFK	32.05	1.797e6					49.1	YES		dd		0.000
12	FUNCTION3 PFK	31.97	1.486e6					50.6	YES		dd		0.000
13	FUNCTION3 PFK	31.93	1.082e6					51.0	YES		dd		0.000
14	FUNCTION3 PFK	31.84	2.595e6					56.6	YES		bd		0.000
15	FUNCTION3 PFK	35.80	1.486e4					1.2	NO		bb		0.000
16	FUNCTION3 PFK	35.61	1.385e4					1.5	NO		bb		0.000
17	FUNCTION3 PFK	35.48	3.701e4					1.8	NO		bb		0.000
18	FUNCTION3 PFK	35.25	1.697e4					1.0	NO		bb		0.000
19	FUNCTION3 PFK	35.19	4.207e3					0.7	NO		bb		0.000
20	FUNCTION3 PFK	35.02	4.263e4					1.8	NO		bb		0.000
21	FUNCTION3 PFK	34.90	5.838e4					2.6	NO		db		0.000
22	FUNCTION3 PFK	34.79	3.634e4					2.2	NO		bd		0.000
23	FUNCTION3 PFK	34.46	3.307e4					1.5	NO		bb		0.000
24	FUNCTION3 PFK	34.06	2.569e3					0.6	NO		bb		0.000
25	FUNCTION3 PFK	33.99	3.020e4					2.4	NO		bb		0.000
26	FUNCTION3 PFK	33.94	1.432e3					0.3	NO		bb		0.000
27	FUNCTION3 PFK	33.89	1.997e4					1.5	NO		bb		0.000
28	FUNCTION3 PFK	33.75	3.338e4					2.1	NO		bb		0.000
29	FUNCTION3 PFK	33.52	2.379e4					1.3	NO		bb		0.000
30	FUNCTION3 PFK	33.21	8.339e4					3.7	YES		db		0.000
31	FUNCTION3 PFK	36.72	1.141e4					1.3	NO		bb		0.000
32	FUNCTION3 PFK	36.50	1.125e4					1.1	NO		bb		0.000
33	FUNCTION3 PFK	36.10	1.444e3					0.3	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.96	2.272e4					1.7	NO		dd		
2	FUNCTION4 PFK	38.86	3.048e4					1.6	NO		bd		
3	FUNCTION4 PFK	38.20	5.612e4					3.2	YES		bb		
4	FUNCTION4 PFK	38.06	3.211e4					1.3	NO		bb		
5	FUNCTION4 PFK	37.96	2.098e4					1.5	NO		bb		
6	FUNCTION4 PFK	37.75	2.528e4					1.3	NO		db		
7	FUNCTION4 PFK	37.63	4.129e4					1.8	NO		bd		
8	FUNCTION4 PFK	37.52	5.366e4					2.7	NO		bb		
9	FUNCTION4 PFK	37.15	9.534e3					1.0	NO		bb		
10	FUNCTION4 PFK	37.07	2.649e4					1.7	NO		db		
11	FUNCTION4 PFK	37.03	7.161e3					1.1	NO		bd		
12	FUNCTION4 PFK	36.98	5.865e3					0.7	NO		bb		
13	FUNCTION4 PFK	41.16	3.545e4					1.8	NO		db		
14	FUNCTION4 PFK	41.06	1.027e4					1.1	NO		dd		
15	FUNCTION4 PFK	41.02	2.204e4					1.3	NO		bd		
16	FUNCTION4 PFK	40.64	5.432e3					0.8	NO		bb		
17	FUNCTION4 PFK	40.59	2.158e4					1.4	NO		bb		
18	FUNCTION4 PFK	40.48	1.600e4					1.3	NO		db		
19	FUNCTION4 PFK	40.43	2.265e4					1.4	NO		bd		
20	FUNCTION4 PFK	40.13	2.551e4					1.3	NO		bb		
21	FUNCTION4 PFK	40.05	1.500e3					0.3	NO		bb		
22	FUNCTION4 PFK	40.01	9.596e3					1.0	NO		bb		
23	FUNCTION4 PFK	39.90	1.913e4					1.5	NO		bb		
24	FUNCTION4 PFK	39.78	1.464e4					0.9	NO		db		
25	FUNCTION4 PFK	39.68	4.085e4					2.0	NO		bd		
26	FUNCTION4 PFK	39.61	1.698e3					0.4	NO		bb		
27	FUNCTION4 PFK	39.40	1.392e3					0.3	NO		bb		
28	FUNCTION4 PFK	39.01	1.665e4					1.5	NO		db		
29	FUNCTION4 PFK	41.87	7.898e3					0.7	NO		bb		
30	FUNCTION4 PFK	41.82	3.286e3					0.5	NO		bb		
31	FUNCTION4 PFK	41.47	6.703e4					2.9	NO		bb		
32	FUNCTION4 PFK	41.40	1.889e4					1.7	NO		db		
33	FUNCTION4 PFK	41.36	1.745e4					1.5	NO		bd		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	42.74	4.117e4					2.5	NO		dd		
2	FUNCTION5 PFK	42.65	1.959e4					2.0	NO		dd		
3	FUNCTION5 PFK	42.61	1.521e4					2.3	NO		bd		
4	FUNCTION5 PFK	42.58	2.025e3					0.6	NO		db		
5	FUNCTION5 PFK	42.51	7.788e4					2.3	NO		bd		
6	FUNCTION5 PFK	42.29	3.017e4					2.3	NO		db		
7	FUNCTION5 PFK	42.23	8.976e3					1.3	NO		dd		
8	FUNCTION5 PFK	42.19	1.889e4					2.0	NO		dd		
9	FUNCTION5 PFK	42.15	7.590e3					1.3	NO		dd		
10	FUNCTION5 PFK	42.10	4.519e3					0.6	NO		bd		
11	FUNCTION5 PFK	44.12	2.142e4					1.6	NO		bb		
12	FUNCTION5 PFK	44.01	8.827e3					1.6	NO		db		
13	FUNCTION5 PFK	43.98	5.147e3					1.1	NO		bd		
14	FUNCTION5 PFK	43.91	1.285e4					0.9	NO		db		
15	FUNCTION5 PFK	43.86	1.353e3					0.4	NO		bd		
16	FUNCTION5 PFK	43.82	7.345e2					0.3	NO		bb		
17	FUNCTION5 PFK	43.68	7.083e3					1.4	NO		db		
18	FUNCTION5 PFK	43.66	1.461e4					1.9	NO		bd		
19	FUNCTION5 PFK	43.56	2.019e4					1.7	NO		bb		
20	FUNCTION5 PFK	43.45	8.914e3					1.3	NO		db		
21	FUNCTION5 PFK	43.42	4.874e3					0.9	NO		bd		
22	FUNCTION5 PFK	43.31	2.406e4					2.1	NO		bb		
23	FUNCTION5 PFK	43.17	3.175e3					0.4	NO		bb		
24	FUNCTION5 PFK	42.99	1.165e4					1.6	NO		db		
25	FUNCTION5 PFK	42.95	1.011e4					1.4	NO		bd		
26	FUNCTION5 PFK	42.86	4.195e4					2.1	NO		db		
27	FUNCTION5 PFK	44.96	1.072e3					0.4	NO		bb		
28	FUNCTION5 PFK	44.90	2.061e4					1.9	NO		db		
29	FUNCTION5 PFK	44.85	1.262e4					2.0	NO		dd		
30	FUNCTION5 PFK	44.80	1.427e4					1.4	NO		dd		
31	FUNCTION5 PFK	44.74	4.815e3					0.7	NO		bd		
32	FUNCTION5 PFK	44.67	1.687e4					1.8	NO		bb		
33	FUNCTION5 PFK	44.56	2.056e4					1.3	NO		db		
34	FUNCTION5 PFK	44.53	1.042e4					1.3	NO		dd		
35	FUNCTION5 PFK	44.48	9.984e3					1.6	NO		dd		
36	FUNCTION5 PFK	44.43	1.437e4					1.6	NO		bd		
37	FUNCTION5 PFK	44.33	6.825e3					1.4	NO		db		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION5 PFK	44.31	1.067e4					1.4	NO		bd		
39	FUNCTION5 PFK	44.24	1.028e4					1.8	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	22.25	7.215e1					3.0	NO		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	29.63	7.085e1					6.1	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	40.69	8.697e1					5.7	YES		bb		0.000
2	FUNCTION4 NCDPE	38.32	7.986e1					4.7	YES		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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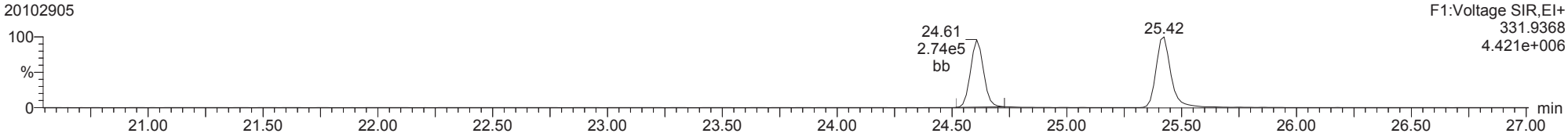

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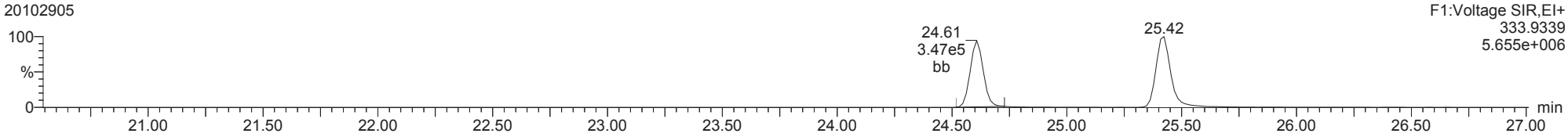

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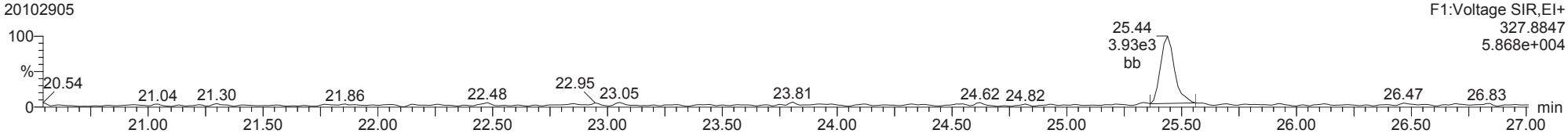

ID: CS1CJ, Name: 20102905, Date: 29-Oct-2020, Time: 19:09:26, Conditions: AUTOSPEC01, User: pk

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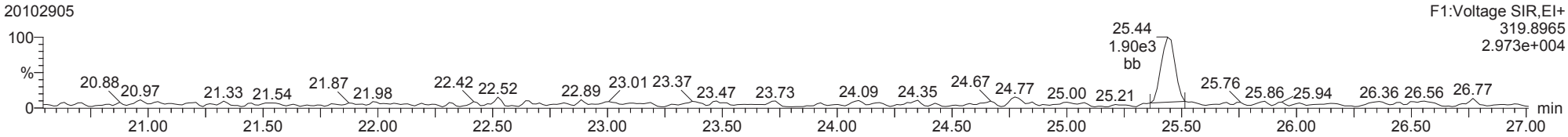

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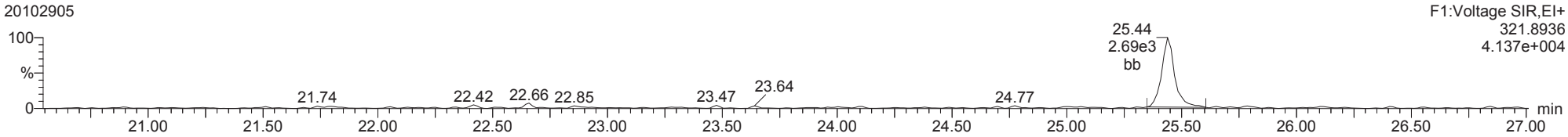

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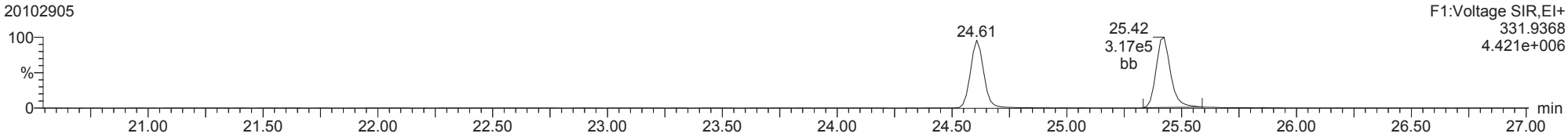

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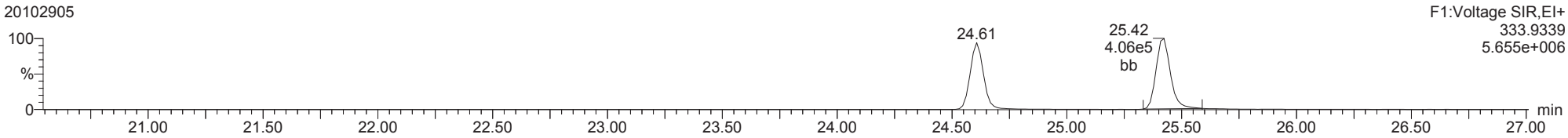

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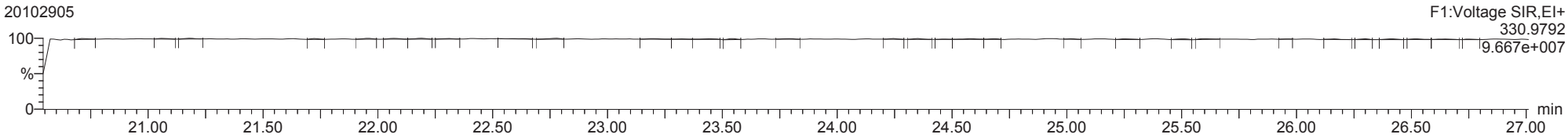

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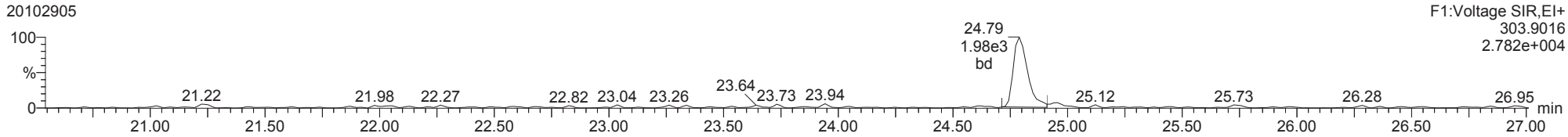
2378-TCDF



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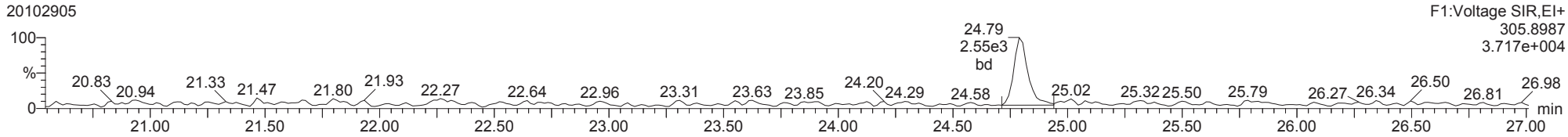

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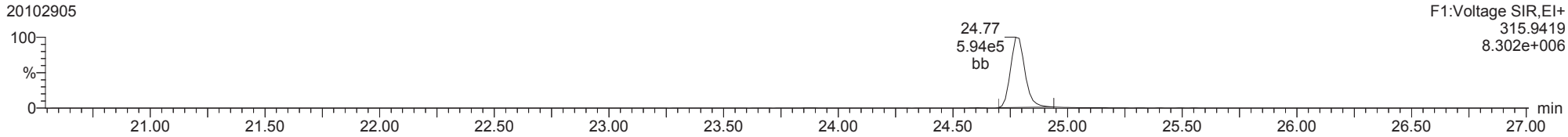

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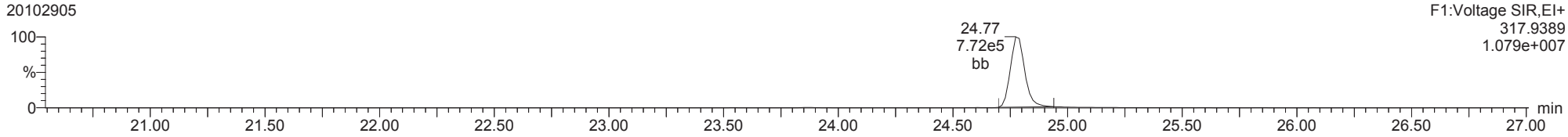

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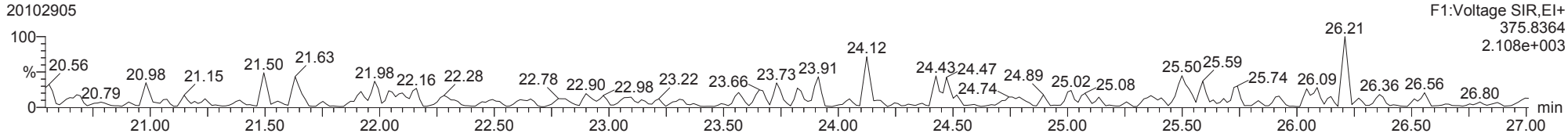

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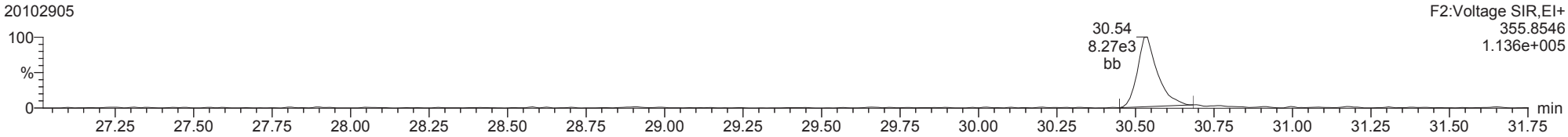
12378-PeCDD



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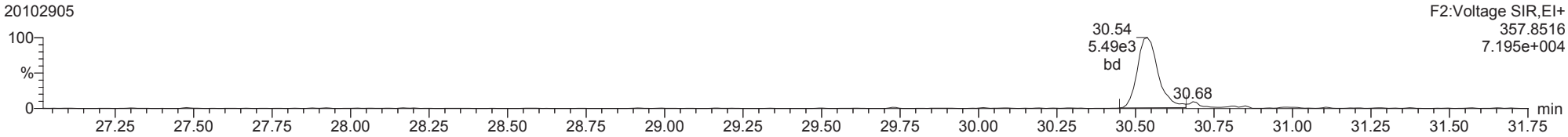

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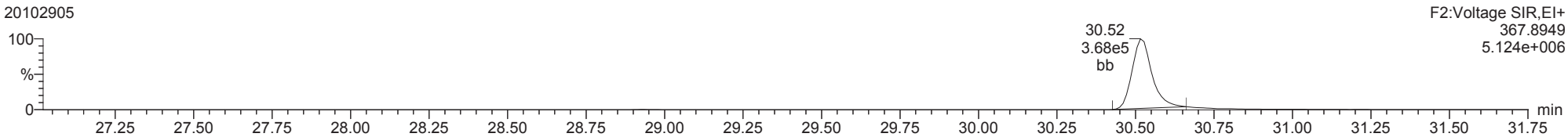

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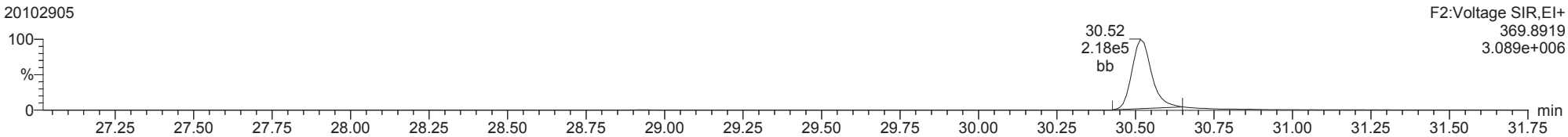
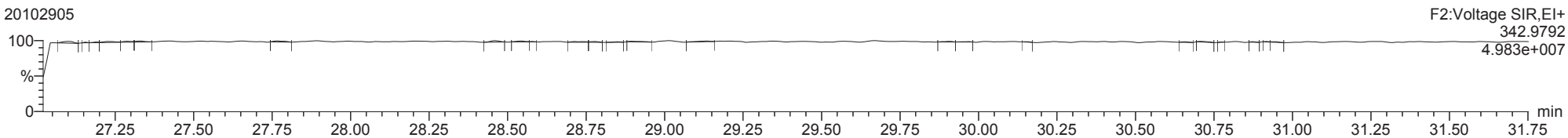
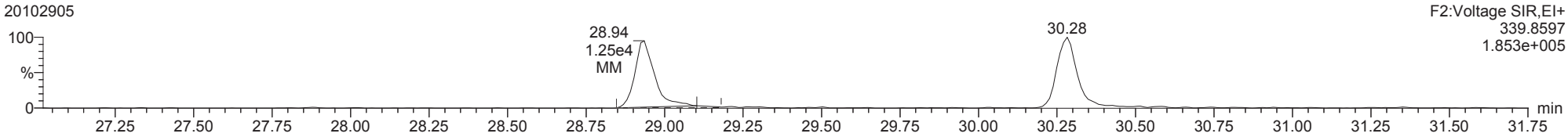


FUNCTION2 PFK



ID: CS1CJ, Name: 20102905, Date: 29-Oct-2020, Time: 19:09:26, Conditions: AUTOSPEC01, User: pk

12378-PeCDF



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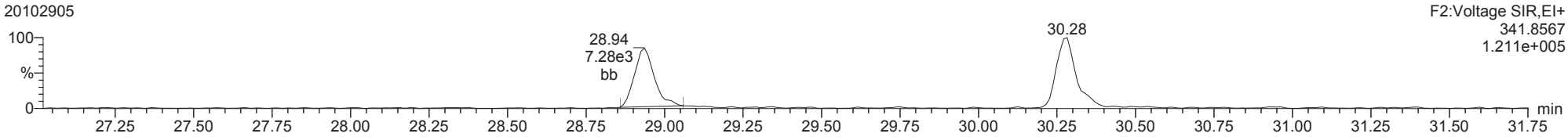

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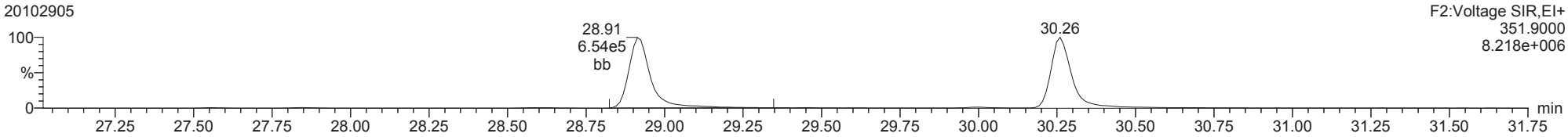

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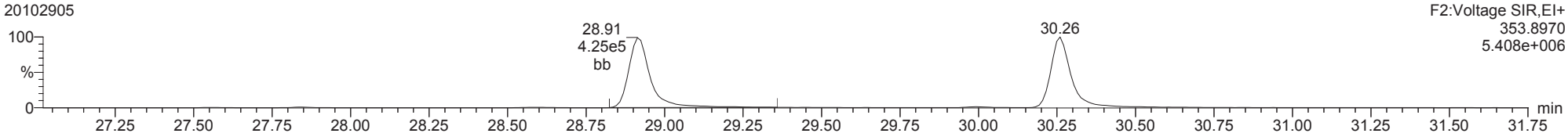
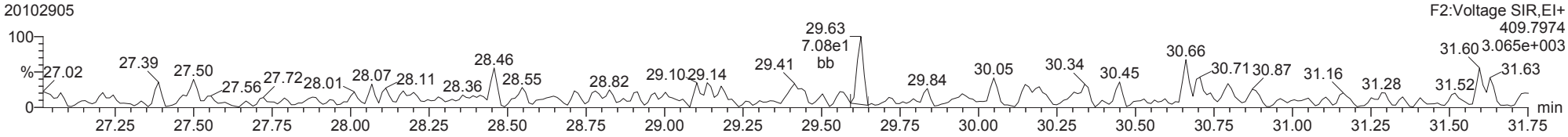


FUNCTION2 HPCDPE



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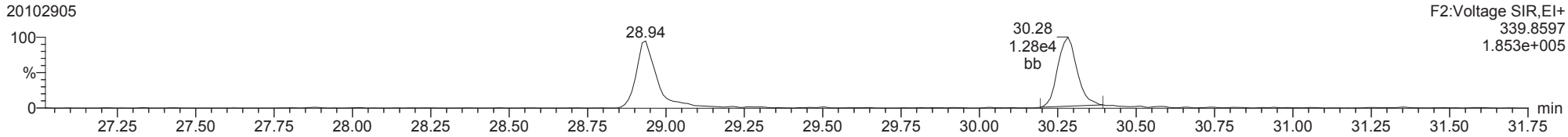
23478-PeCDF



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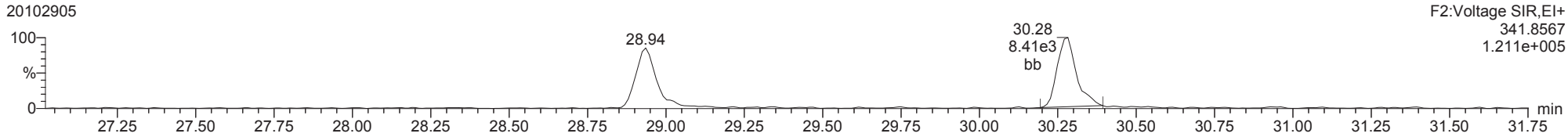

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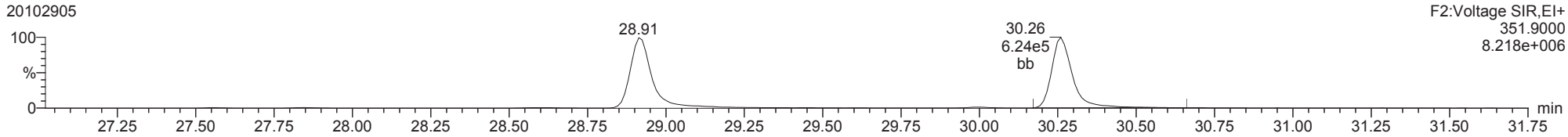

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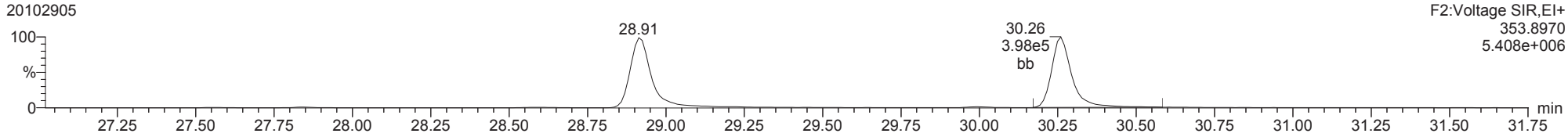

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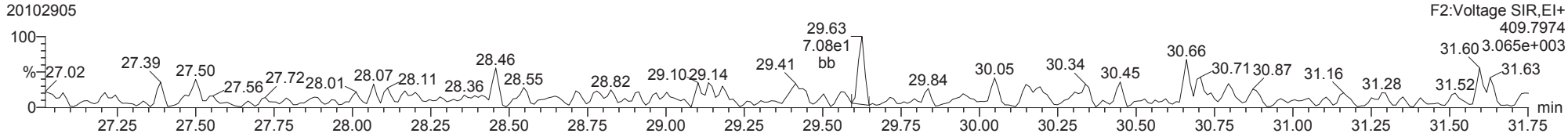

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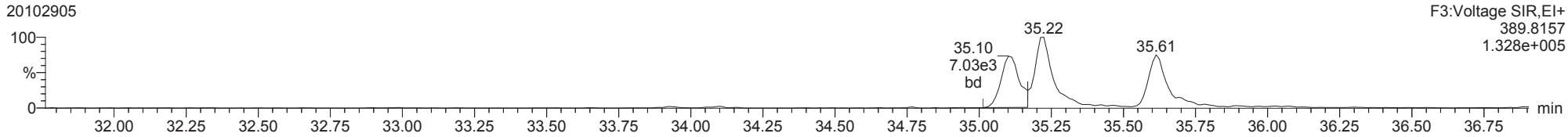
123478-HxCDD



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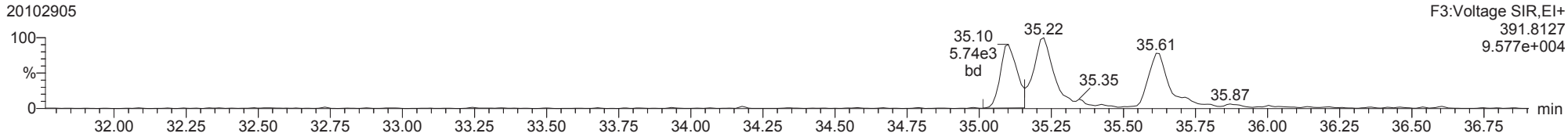

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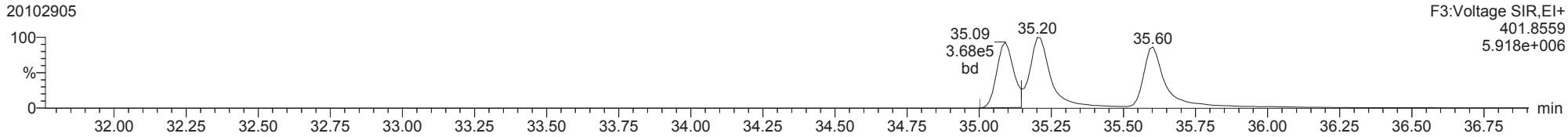

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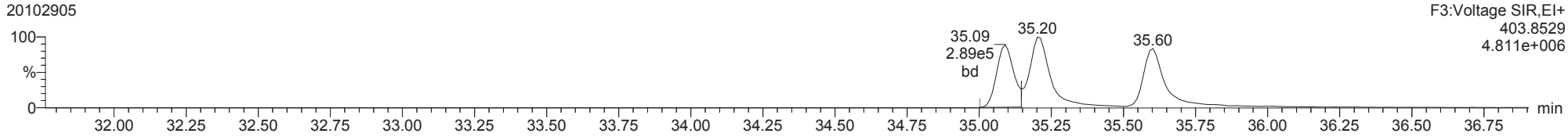
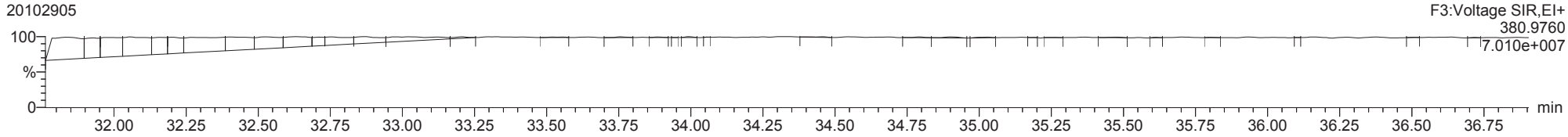


FUNCTION3 PFK



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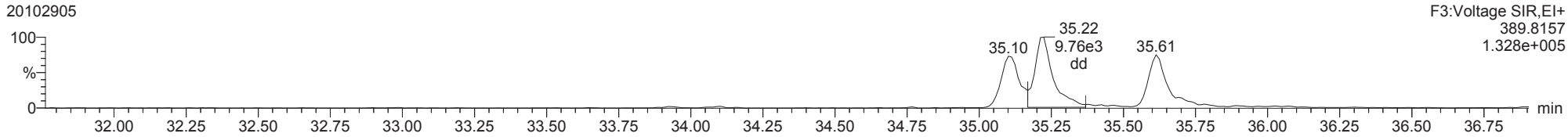
123678-HxCDD



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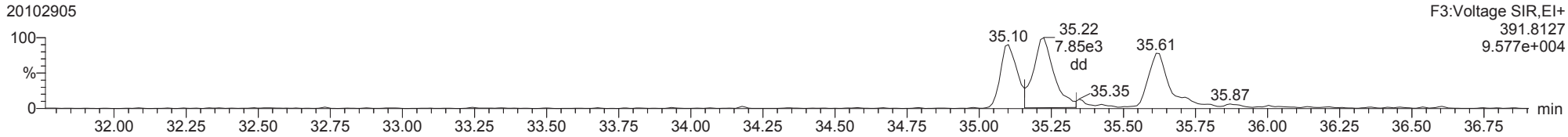

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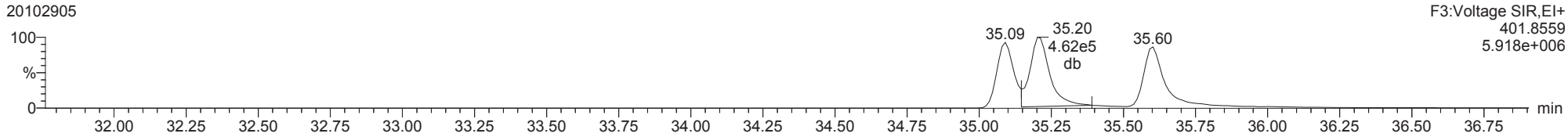

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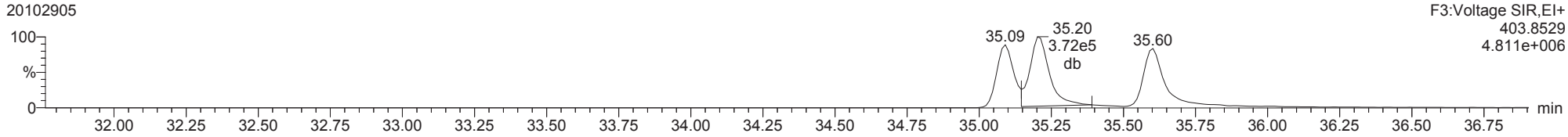

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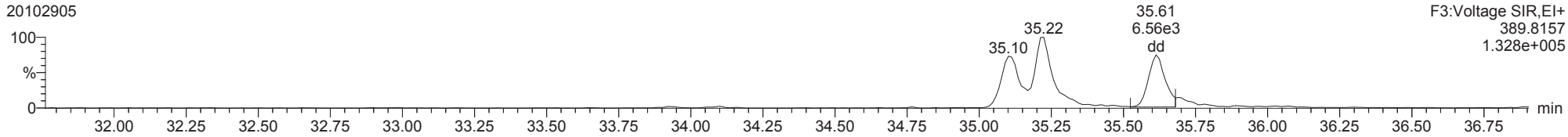

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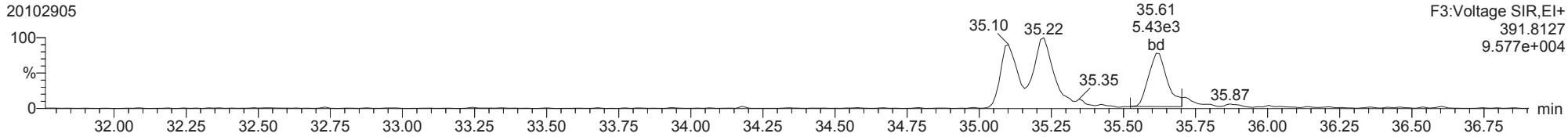

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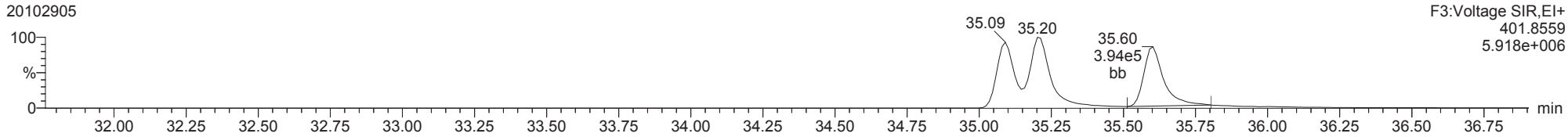

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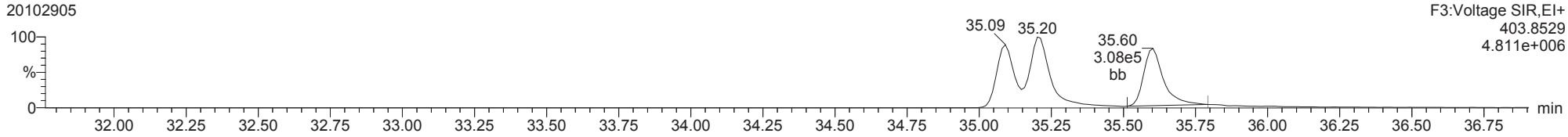

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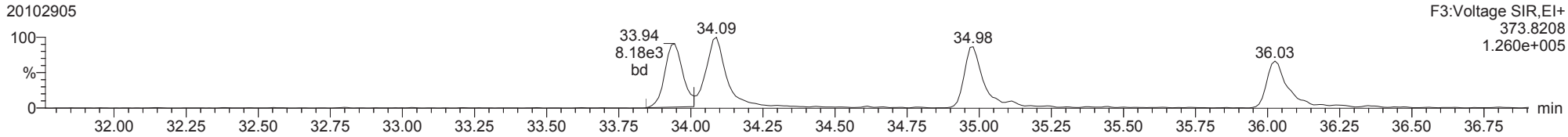
123478-HxCDF



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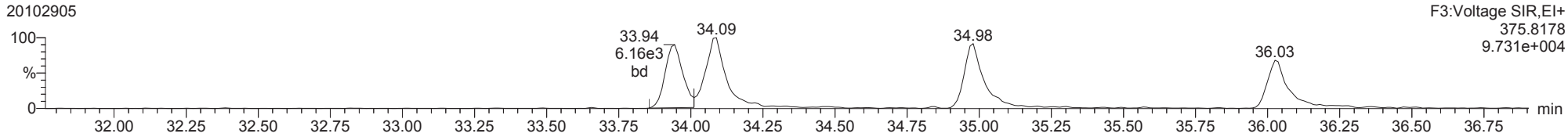

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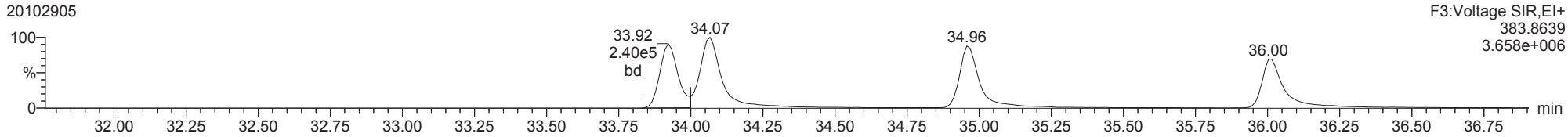

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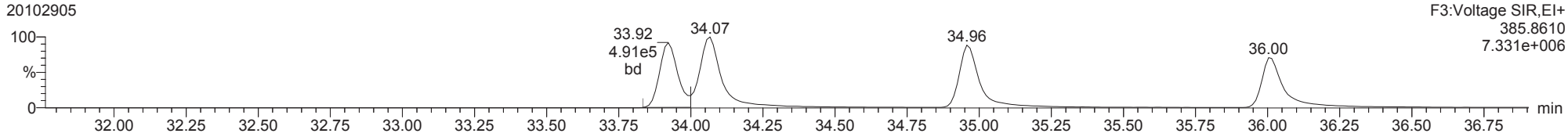
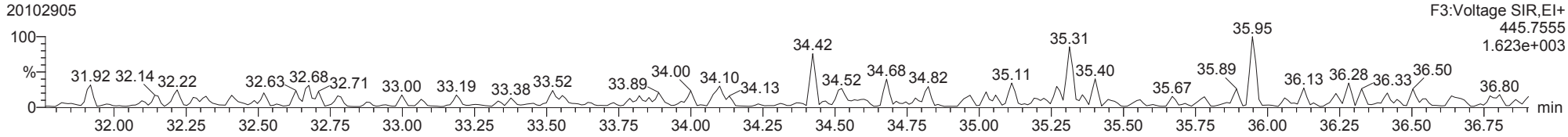


FUNCTION3 OCDPE



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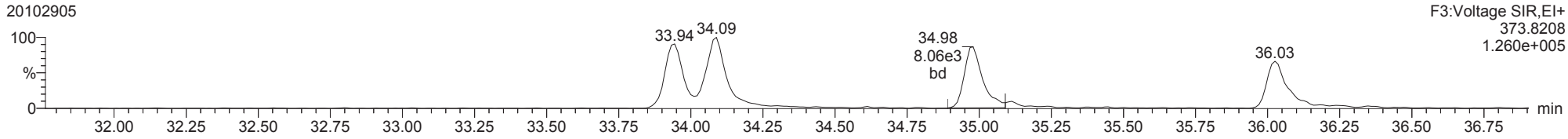
234678-HxCDF



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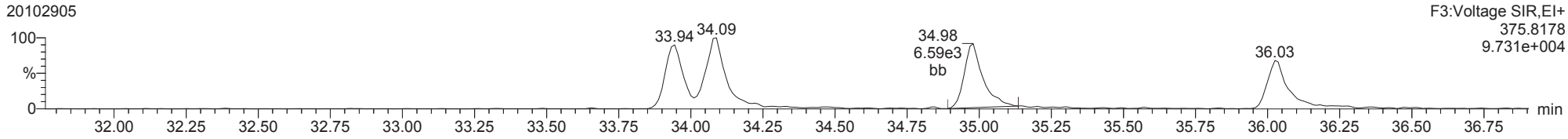

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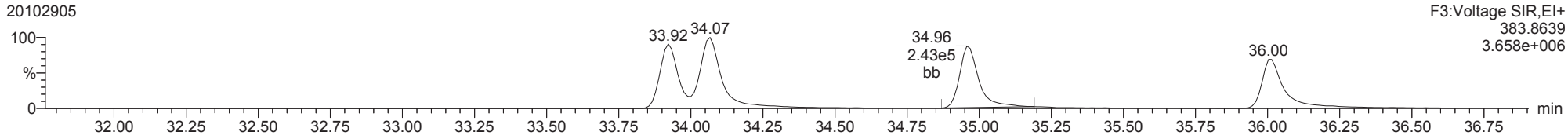

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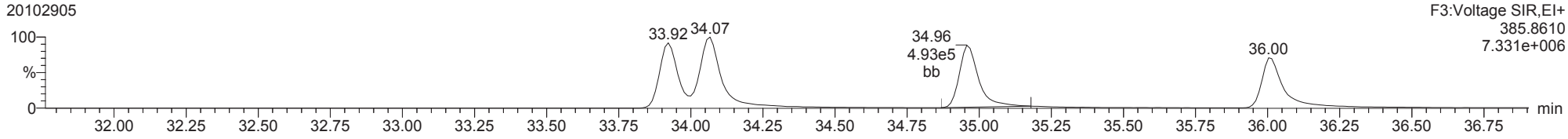

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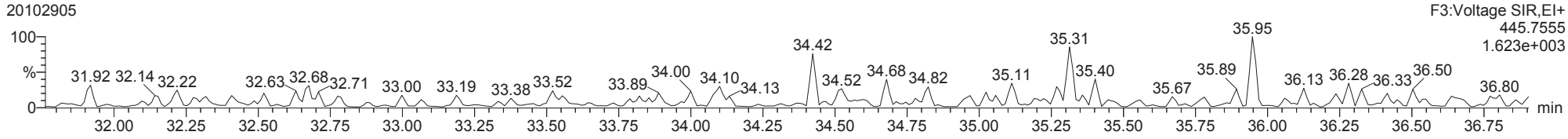

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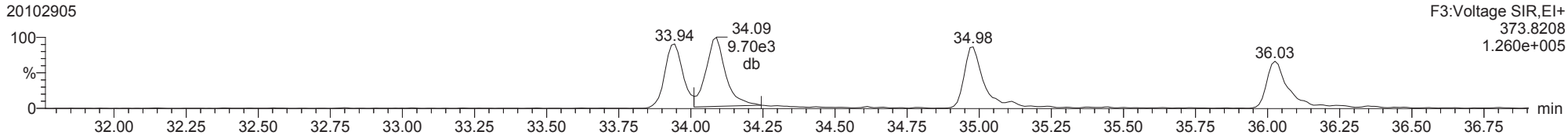
123678-HxCDF



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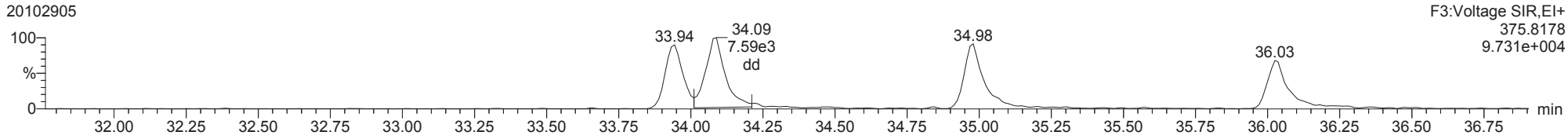

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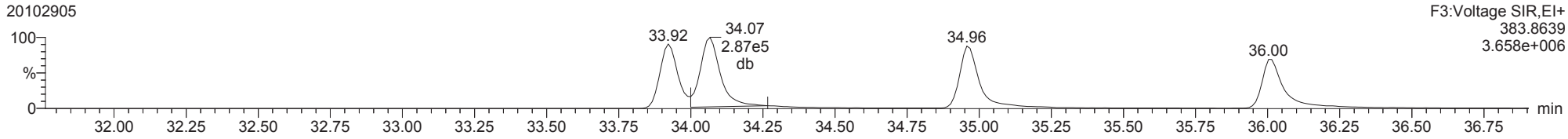

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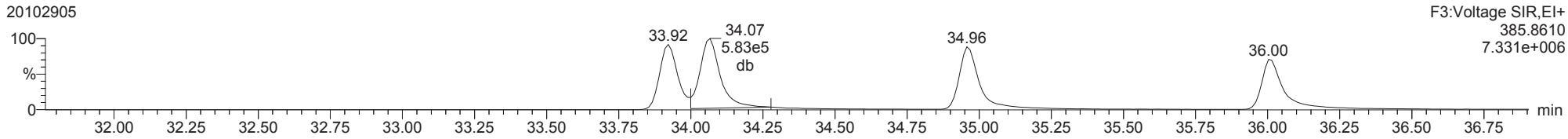

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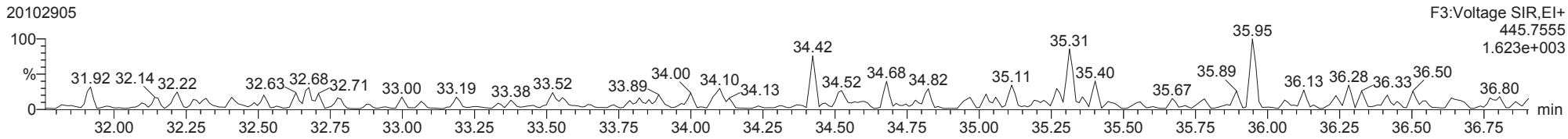

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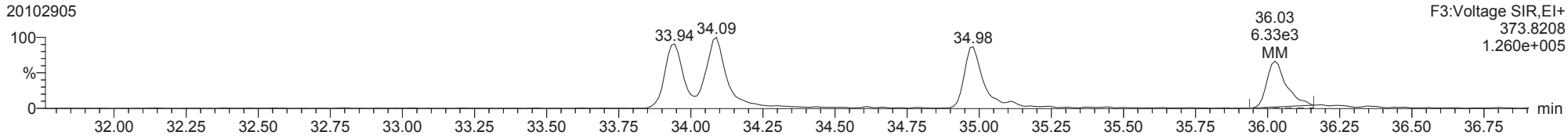
123789-HxCDF



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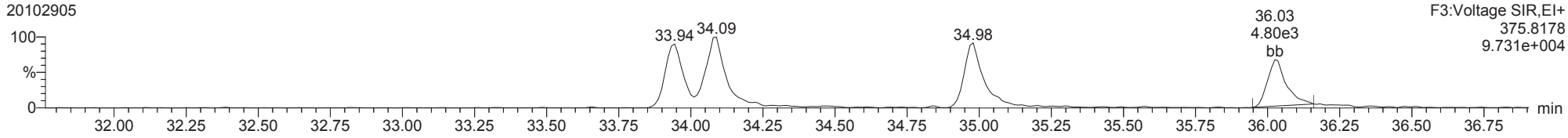

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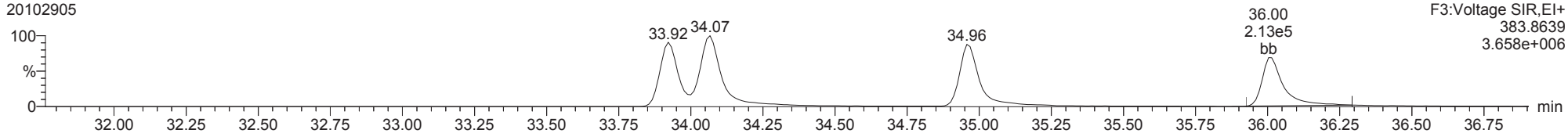

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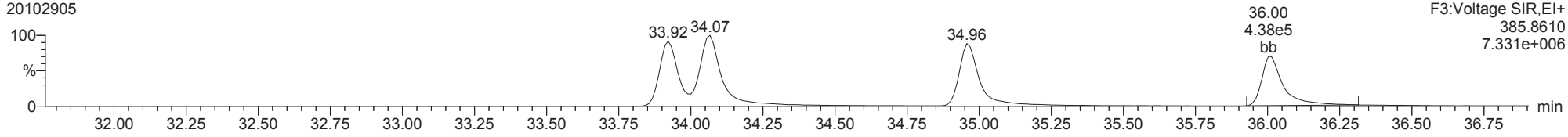
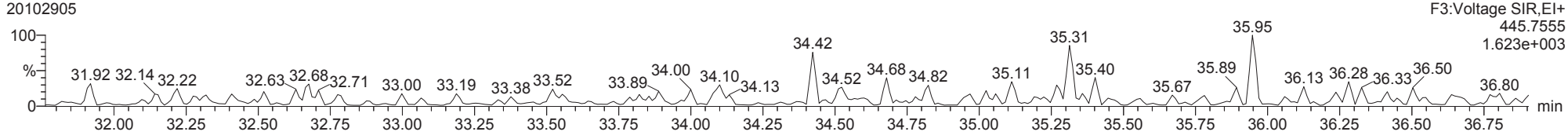


FUNCTION3 OCDPE



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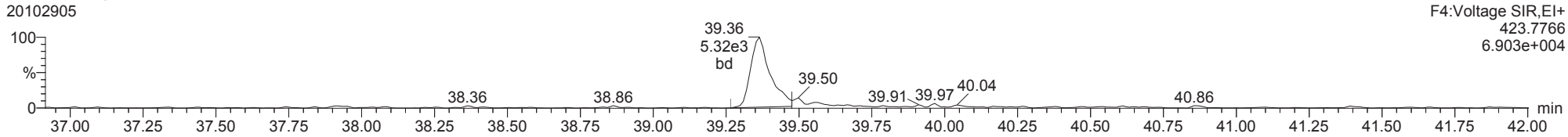
1234678-HpCDD



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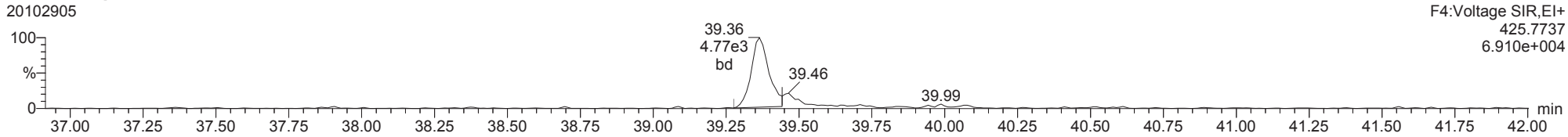

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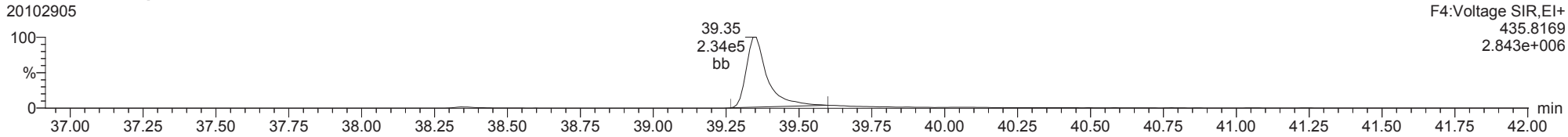

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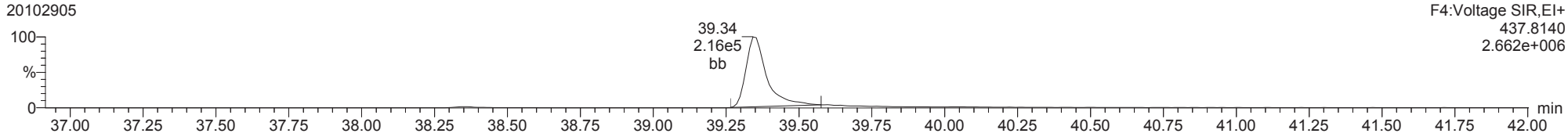
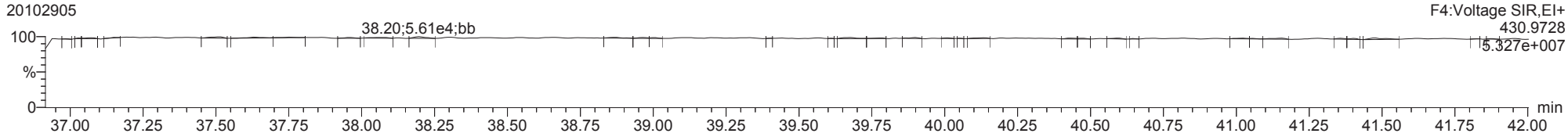
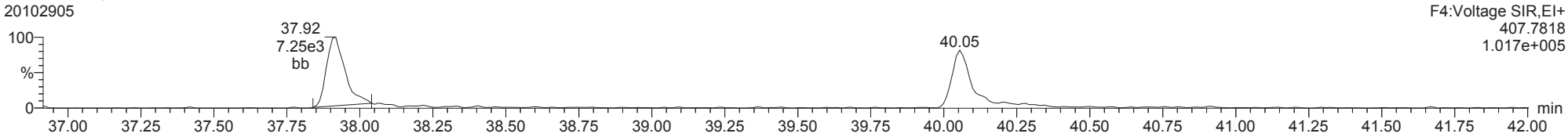


FUNCTION4 PFK



ID: CS1CJ, Name: 20102905, Date: 29-Oct-2020, Time: 19:09:26, Conditions: AUTOSPEC01, User: pk

1234678-HpCDF



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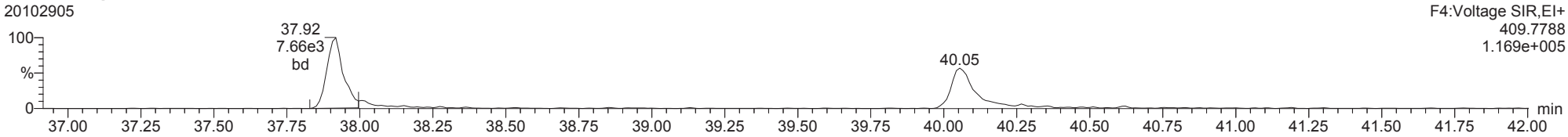

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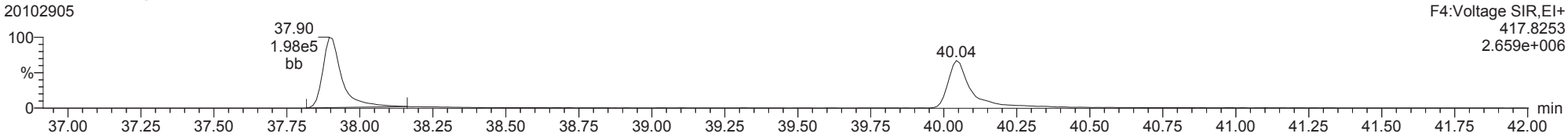

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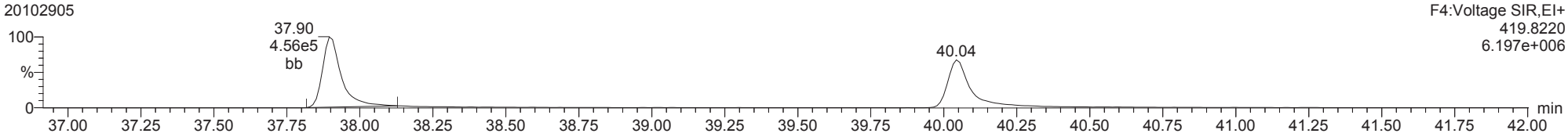
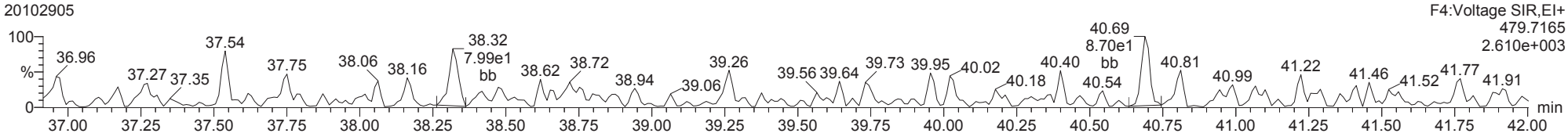


FUNCTION4 NCDPE



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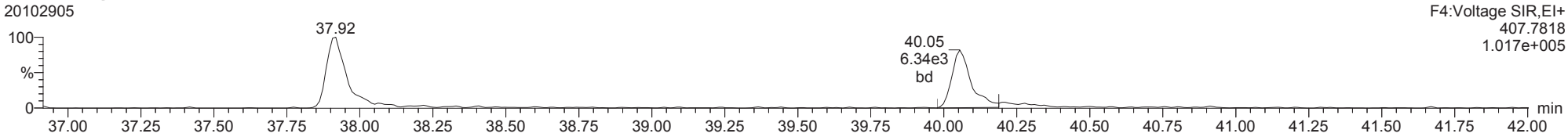
1234789-HpCDF



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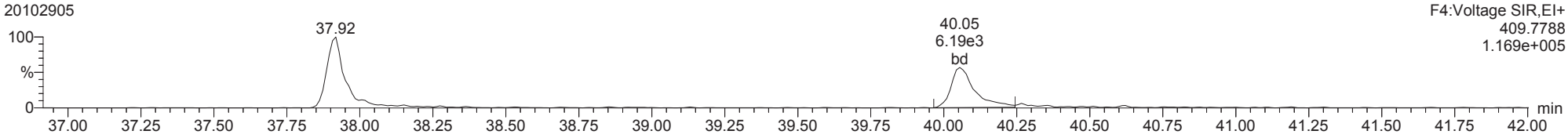

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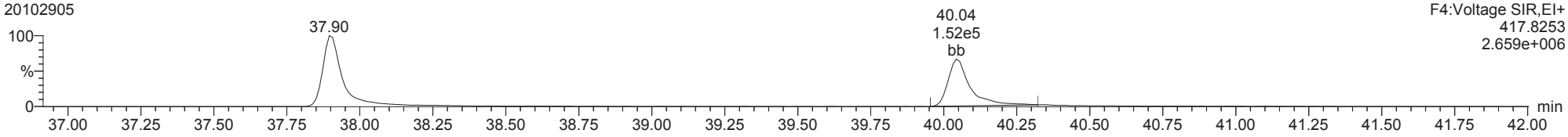

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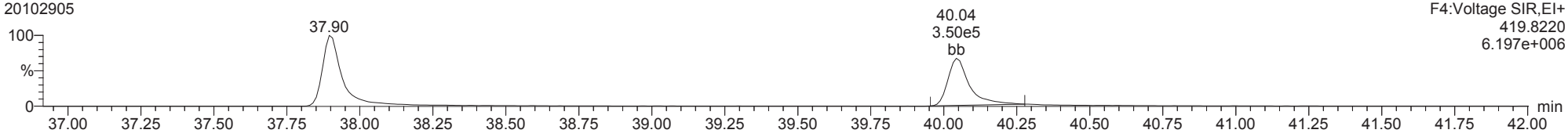
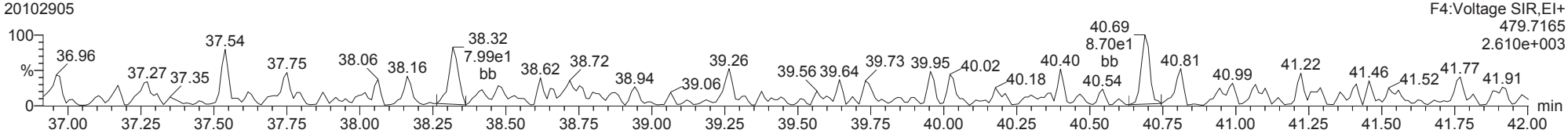


FUNCTION4 NCDPE



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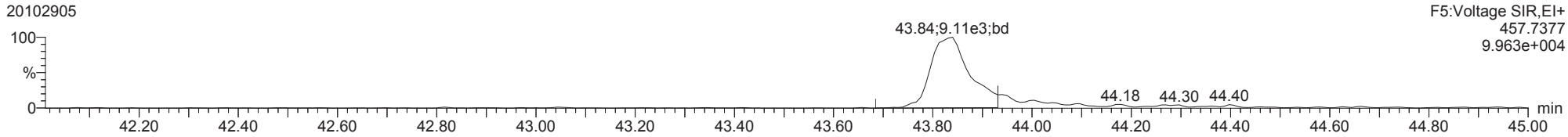
ID: CS1CJ, Name: 20102905, Date: 29-Oct-2020, Time: 19:09:26, Conditions: AUTOSPEC01, User: pk

OCDD



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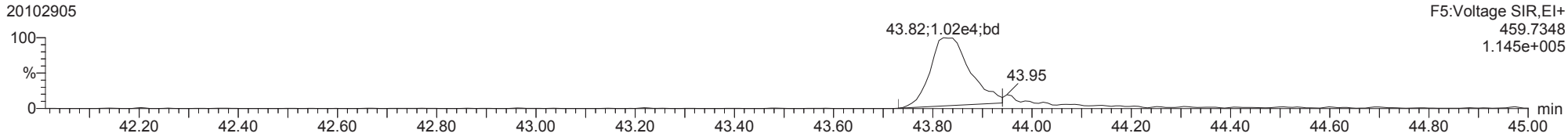

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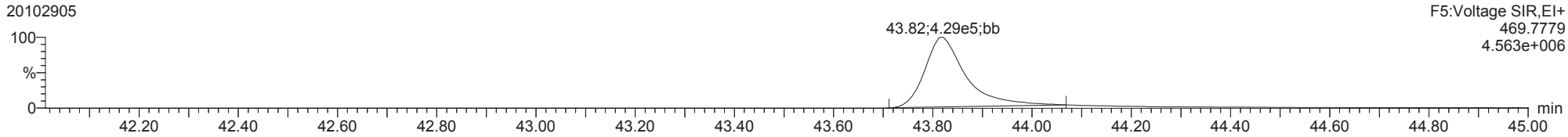

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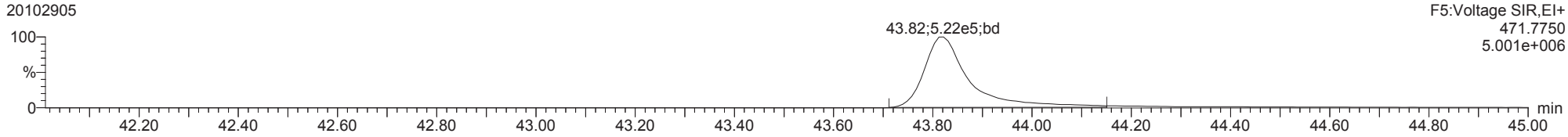
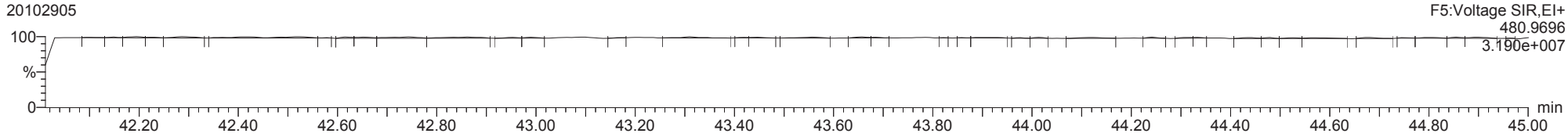


FUNCTION5 PFK



ID: CS1CJ, Name: 20102905, Date: 29-Oct-2020, Time: 19:09:26, Conditions: AUTOSPEC01, User: pk

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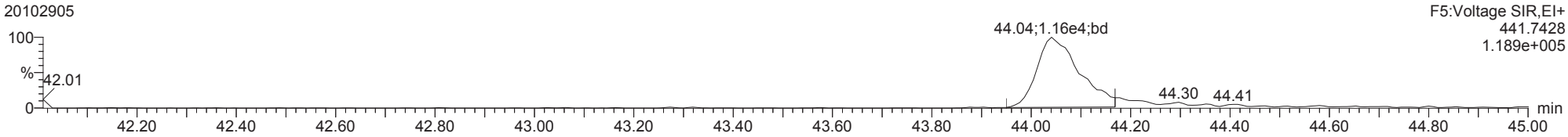

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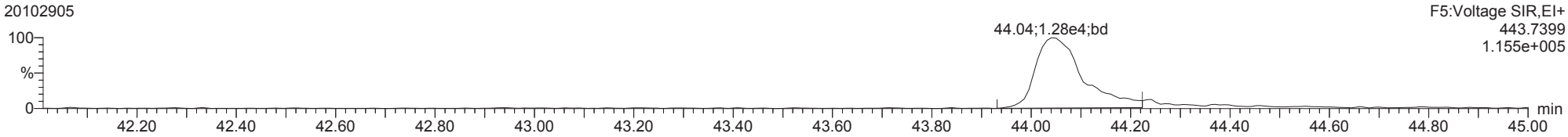
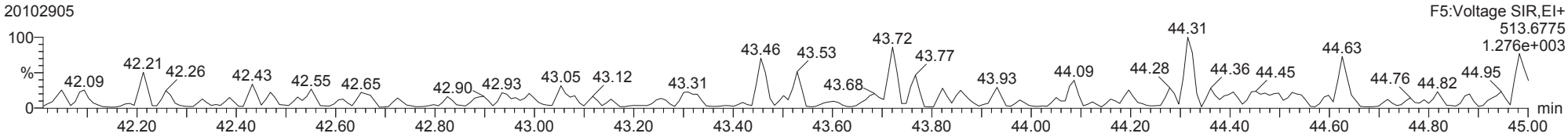


FUNCTION5 DCDPE



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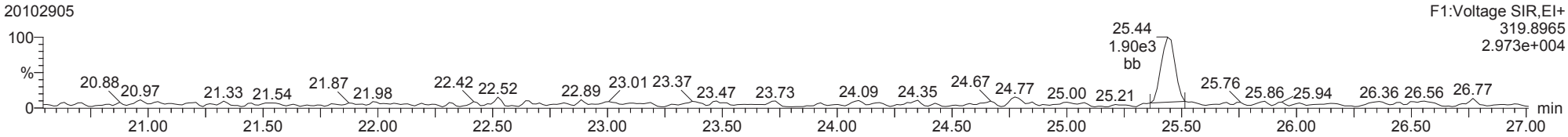
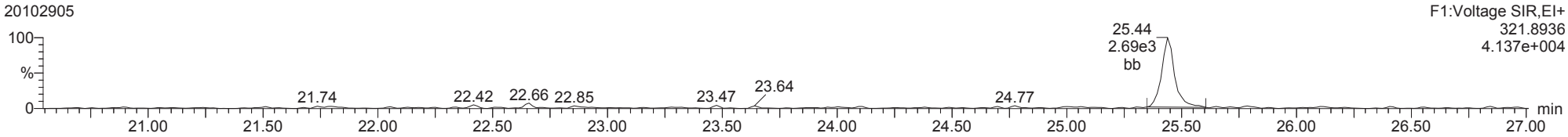
Total-tetradioxins



Total-tetradioxins



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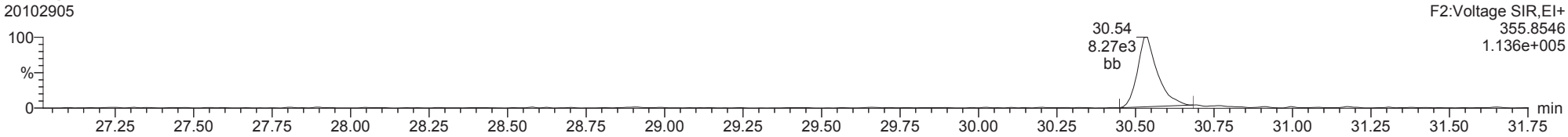
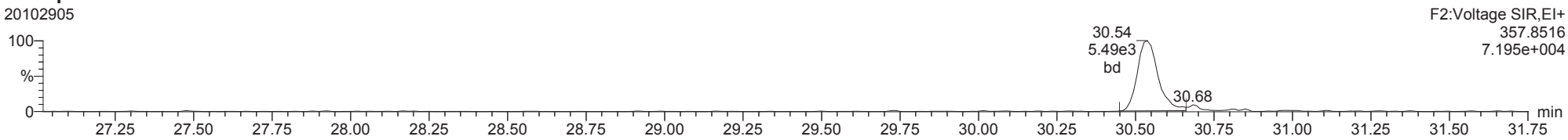


Total-pentadioxins



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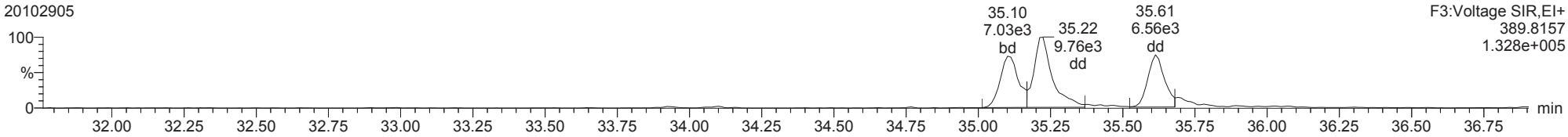
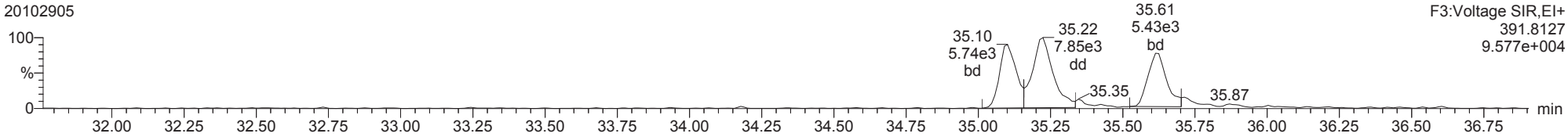
Total-hexadioxins



Total-hexadioxins



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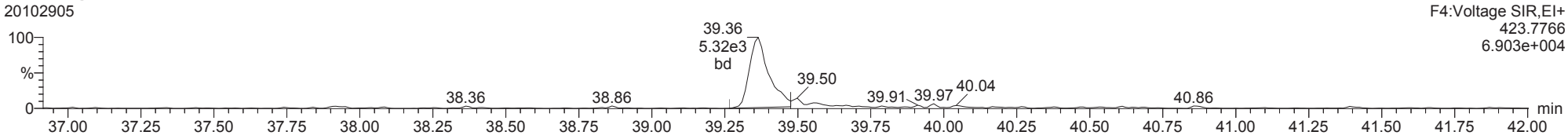

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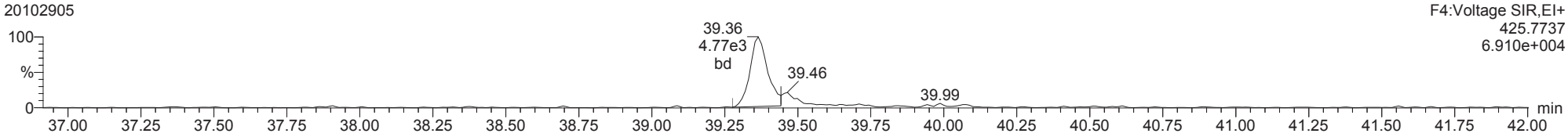

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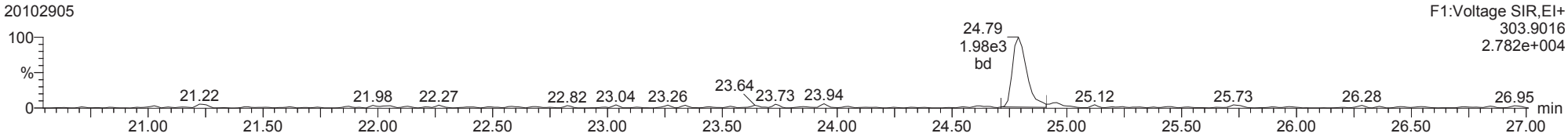
Total-tetrafurans



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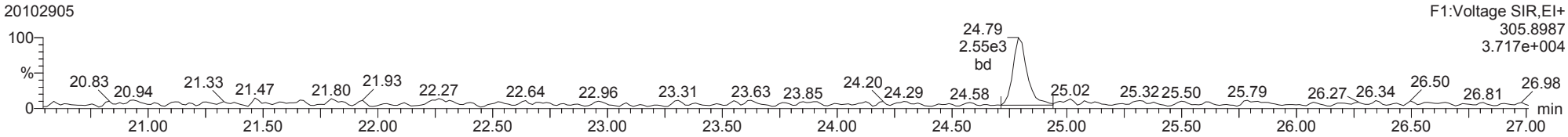

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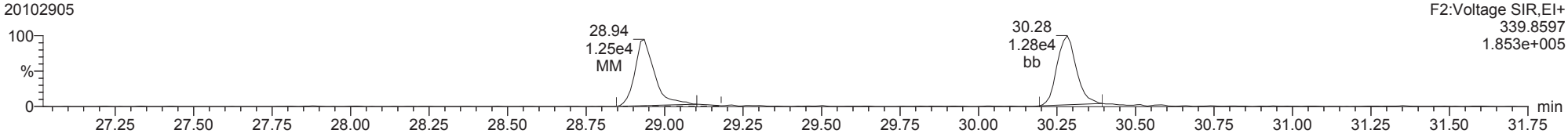

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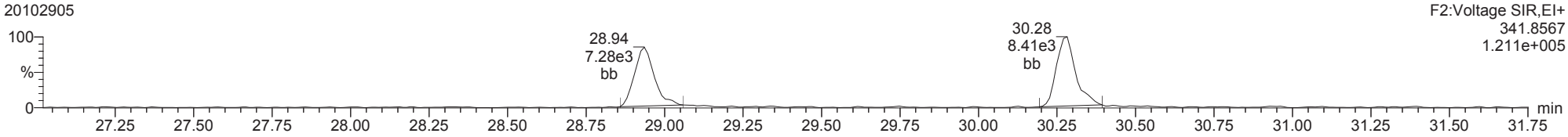

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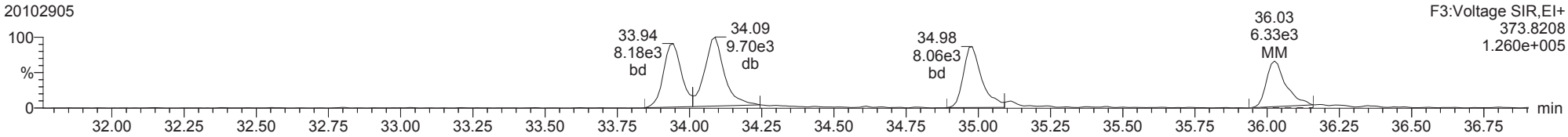
Total-hexafurans



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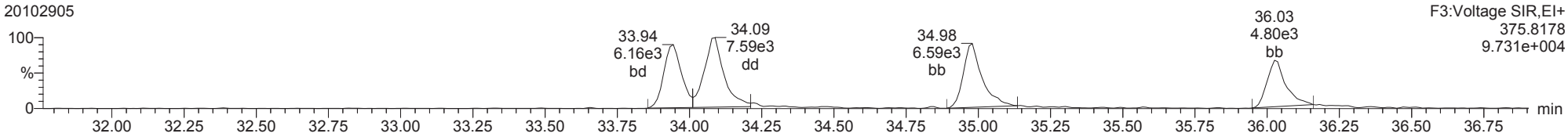
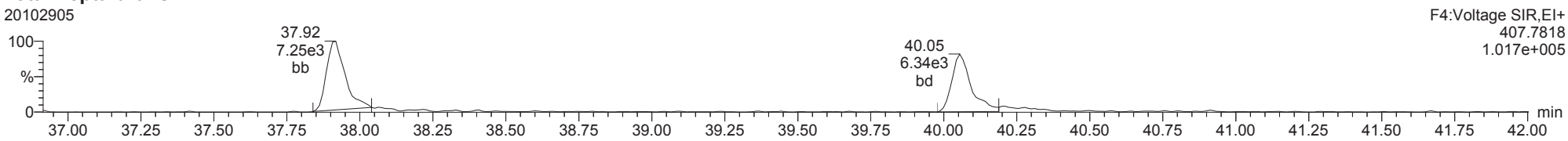


Total-heptafurans



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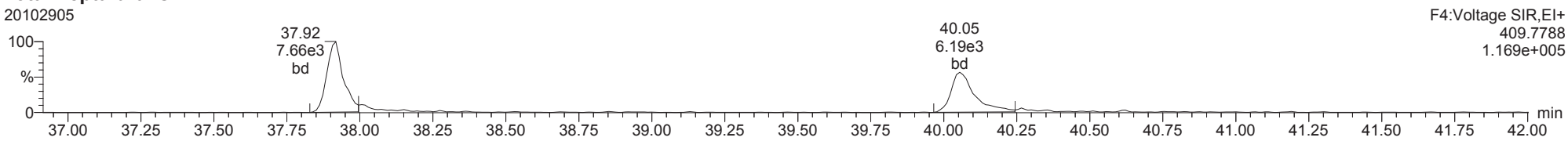

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Method: T:\Autospec\Methods\Dioxin201016.mdb 28 Oct 2020 21:30:41
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 09:08:24

ID: CS2CJ, Name: 20102906, Date: 29-Oct-2020, Time: 19:58:08, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	24.789	1.001	4.864e3	5.624e3	0.729	0.865	0.770	475	1096	7.05e4	8.10e4	148.4	73.8	NO	bd	bb	1.940
12378-PeCDF	28.924	1.000	2.490e4	1.405e4	0.779	1.772	1.550	1210	964	3.59e5	2.06e5	296.7	213.5	NO	MM	bb	9.205
23478-PeCDF	30.271	1.001	2.714e4	1.647e4	0.880	1.648	1.550	1210	964	3.73e5	2.36e5	308.1	245.3	NO	bd	bd	9.037
123478-HxCDF	33.933	1.001	1.727e4	1.477e4	0.880	1.169	1.240	788	858	2.28e5	2.03e5	288.9	236.2	NO	bd	bd	8.871
234678-HxCDF	34.968	1.000	1.918e4	1.544e4	0.863	1.242	1.240	788	858	2.50e5	2.12e5	317.1	246.6	NO	bd	bd	9.255
123678-HxCDF	34.078	1.001	2.262e4	1.730e4	0.853	1.307	1.240	788	858	2.70e5	2.14e5	342.1	249.7	NO	dd	dd	9.681
123789-HxCDF	36.015	1.000	1.322e4	1.110e4	0.780	1.191	1.240	788	858	1.80e5	1.39e5	229.0	161.4	NO	bb	bd	8.623
1234678-HpCDF	37.907	1.000	1.654e4	1.583e4	1.001	1.045	1.050	1024	1066	2.32e5	2.13e5	226.8	199.4	NO	bd	bd	9.517
1234789-HpCDF	40.055	1.001	1.143e4	1.181e4	0.994	0.967	1.050	1024	1066	1.59e5	1.46e5	154.8	137.2	NO	MM	bd	8.759
OCDF	44.042	1.005	2.490e4	2.523e4	1.158	0.987	0.890	1317	1465	2.44e5	2.24e5	185.1	152.7	NO	bd	bd	18.426
2378-TCDD	25.439	1.001	4.162e3	4.930e3	1.238	0.844	0.770	865	524	5.01e4	5.98e4	57.9	114.1	NO	bb	bb	1.803
12378-PeCDD	30.527	1.000	1.728e4	1.085e4	0.988	1.593	1.550	606	276	2.31e5	1.50e5	380.4	544.1	NO	bb	bb	9.131
123478-HxCDD	35.102	1.001	1.689e4	1.431e4	0.842	1.180	1.240	917	752	2.41e5	2.09e5	262.6	278.4	NO	bd	bd	9.152
123678-HxCDD	35.214	1.000	2.297e4	1.966e4	0.907	1.168	1.240	917	752	2.89e5	2.34e5	315.4	311.4	NO	dd	dd	9.467
123789-HxCDD	35.603	1.011	1.999e4	1.457e4	0.784	1.372	1.240	917	752	2.42e5	1.82e5	263.8	241.6	NO	dd	dd	9.787
1234678-HpCDD	39.365	1.001	1.125e4	1.211e4	1.044	0.929	1.050	1123	785	1.43e5	1.52e5	127.0	193.5	NO	bd	bd	9.489
OCDD	43.831	1.000	2.055e4	2.225e4	0.963	0.924	0.890	642	922	2.15e5	2.34e5	334.8	253.2	NO	bd	bd	18.914
13C-2378-TCDF	24.774	1.007	3.252e5	4.167e5	2.203	0.780	0.770	2091	1939	4.66e6	5.90e6	2227.6	3042.1	NO	bb	bb	96.798
13C-12378-PeCDF	28.913	1.175	3.325e5	2.105e5	1.741	1.579	1.550	4080	1745	4.34e6	2.76e6	1062.8	1580.7	NO	bd	bd	89.633
13C-23478-PeCDF	30.249	1.229	3.338e5	2.142e5	1.669	1.558	1.550	4080	1745	4.33e6	2.75e6	1061.7	1574.2	NO	bb	bb	94.342
13C-123478-HxCDF	33.911	0.953	1.346e5	2.756e5	1.022	0.488	0.510	2788	2694	1.85e6	3.79e6	662.8	1408.2	NO	bd	bd	97.383
13C-123678-HxCDF	34.056	0.957	1.585e5	3.247e5	1.200	0.488	0.510	2788	2694	2.04e6	4.21e6	730.2	1564.7	NO	db	db	97.698
13C-234678-HxCDF	34.957	0.982	1.338e5	2.997e5	1.071	0.446	0.510	2788	2694	1.75e6	3.69e6	628.4	1370.3	NO	bb	bd	98.216
13C-123789-HxCDF	36.004	1.012	1.156e5	2.459e5	0.919	0.470	0.510	2788	2694	1.39e6	2.93e6	498.8	1086.9	NO	bb	bb	95.485
13C-1234678-HpCDF	37.896	1.065	1.008e5	2.390e5	0.909	0.422	0.440	2758	2836	1.36e6	3.20e6	492.8	1128.0	NO	bd	bb	90.755
13C-1234789-HpCDF	40.033	1.125	7.556e4	1.914e5	0.724	0.395	0.440	2758	2836	8.92e5	2.13e6	323.4	751.9	NO	bb	bd	89.525
13C-1234-TCDD	24.608	0.000	1.514e5	1.965e5	1.000	0.770	0.770	1420	858	2.26e6	2.89e6	1588.6	3369.8	NO	bb	bb	100.000
13C-2378-TCDD	25.408	1.033	1.764e5	2.308e5	1.181	0.764	0.770	1420	858	2.51e6	3.20e6	1767.4	3733.8	NO	bb	bb	99.060
13C-12378-PeCDD	30.516	1.240	1.987e5	1.132e5	0.978	1.755	1.550	1024	1027	2.58e6	1.47e6	2523.5	1433.7	NO	bb	bb	91.661
13C-123478-HxCDD	35.080	0.986	2.254e5	1.795e5	0.965	1.256	1.240	2195	1076	3.21e6	2.59e6	1464.0	2411.1	NO	bd	bd	101.837
13C-123678-HxCDD	35.202	0.989	2.777e5	2.187e5	1.168	1.270	1.240	2195	1076	3.54e6	2.79e6	1610.5	2596.7	NO	db	db	103.110
13C-1234678-HpCDD	39.343	1.105	1.156e5	1.203e5	0.645	0.961	1.050	2416	1325	1.52e6	1.35e6	627.2	1022.2	NO	bb	bd	88.664
13C-OCDD	43.813	1.231	2.309e5	2.391e5	0.678	0.966	0.890	2596	2755	2.30e6	2.48e6	887.2	899.0	NO	bd	bb	168.125
13C-123789-HxCDD	35.592	0.000	2.304e5	1.817e5	1.000	1.268	1.240	2195	1076	3.03e6	2.35e6	1378.8	2180.0	NO	bb	bb	100.000
37CL-2378-TCDD	25.424	1.033	7.759e3		1.264			776		1.06e5		136.2			bb		1.764

Dataset: T:\Autospec\Processed Data Batch\201029ICIH.qld
Last Altered: Friday, October 30, 2020 09:08:24 Pacific Daylight Time
Printed: Friday, October 30, 2020 14:34:01 Pacific Daylight Time

ID: CS2CJ, Name: 20102906, Date: 29-Oct-2020, Time: 19:58:08, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	475	1096								
1289-TCDF					0.688		0.770	475	1096								
13468-PECDF					1.181		1.550	182	540								
12389-PECDF					0.766		1.550	1210	964								
123468-HXCDF					1.003		1.240	788	858								
1368-TCDD					1.179		0.770	865	524								
1289-TCDD					1.042		0.770	865	524								
12479-PECDD					1.810		1.550	606	276								
12389-PECDD					1.165		1.550	606	276								
124679-HXCDD					1.056		1.240	917	752								
1234679-HPCDD					1.285		1.050	1123	785								
Total-tetrafurans			4.864e3		0.754			475		7.05e4							1.940
Total-penta1			0.000e0					182		0.00e0							
Total-pentafurans			5.217e4		0.809			1210		7.36e5							18.293
Total-hexafurans			7.228e4		0.876			788		9.28e5							36.430
Total-heptafurans			2.797e4		0.997			1024		3.91e5							18.276
Total-Furans			1.822e5		0.893			475		2.37e6							93.364
Total-tetradioxins			4.162e3		1.153			865		5.01e4							1.803
Total-pentadioxins			1.728e4		1.321			606		2.31e5							9.131
Total-hexadioxins			6.049e4		0.897			917		7.89e5							28.686
Total-heptadioxins			1.125e4		1.165			1123		1.43e5							9.489
Total-Dioxins			1.137e5		1.100			865		1.43e6							68.022
Total-TEQ			2.959e5					865		3.80e6							161.386
FUNCTION1 PFK			2.555e5					660789		7.23e6							
FUNCTION2 PFK			4.765e4					302014		1.27e6							0.000
FUNCTION3 PFK			3.914e5					424533		1.05e7							0.000
FUNCTION4 PFK			1.528e6					285892		2.93e6							
FUNCTION5 PFK			1.420e5					243706		5.09e6							
FUNCTION1 HXCD...			7.159e1					309		9.61e2							0.000
FUNCTION1 HPCD...			7.235e1					611		1.25e3							0.000
FUNCTION2 HPCD...			0.000e0					435		0.00e0							
FUNCTION3 OCDPE			0.000e0					244		0.00e0							
FUNCTION4 NCDPE			7.238e1					468		2.43e3							0.000
FUNCTION5 DCDPE			0.000e0					186		0.00e0							

Method: T:\Autospec\Methods\Dioxin201016.mdb 28 Oct 2020 21:30:41
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 09:08:24

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	24.79	4.864e3	5.624e3	0.729	0.86	0.77	148.4	YES	NO	bd	bb	1.940

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	29.19	1.343e2	8.770e1	0.809	1.53	1.55	3.2	YES	NO	dd	bb	0.050
2	12378-PeCDF	28.92	2.490e4	1.405e4	0.779	1.77	1.55	296.7	YES	NO	MM	bb	9.205
3	23478-PeCDF	30.27	2.714e4	1.647e4	0.880	1.65	1.55	308.1	YES	NO	bd	bd	9.037

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123678-HxCDF	34.08	2.262e4	1.730e4	0.853	1.31	1.24	342.1	YES	NO	dd	dd	9.681
2	123478-HxCDF	33.93	1.727e4	1.477e4	0.880	1.17	1.24	288.9	YES	NO	bd	bd	8.871
3	123789-HxCDF	36.01	1.322e4	1.110e4	0.780	1.19	1.24	229.0	YES	NO	bb	bd	8.623
4	234678-HxCDF	34.97	1.918e4	1.544e4	0.863	1.24	1.24	317.1	YES	NO	bd	bd	9.255

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	40.06	1.143e4	1.181e4	0.994	0.97	1.05	154.8	YES	NO	MM	bd	8.759
2	1234678-HpCDF	37.91	1.654e4	1.583e4	1.001	1.04	1.05	226.8	YES	NO	bd	bd	9.517

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	29.19	1.343e2	8.770e1	0.809	1.53	1.55	3.2	YES	NO	dd	bb	0.050
2	12378-PeCDF	28.92	2.490e4	1.405e4	0.779	1.77	1.55	296.7	YES	NO	MM	bb	9.205
3	2378-TCDF	24.79	4.864e3	5.624e3	0.729	0.86	0.77	148.4	YES	NO	bd	bb	1.940
4	123678-HxCDF	34.08	2.262e4	1.730e4	0.853	1.31	1.24	342.1	YES	NO	dd	dd	9.681
5	123478-HxCDF	33.93	1.727e4	1.477e4	0.880	1.17	1.24	288.9	YES	NO	bd	bd	8.871
6	23478-PeCDF	30.27	2.714e4	1.647e4	0.880	1.65	1.55	308.1	YES	NO	bd	bd	9.037
7	123789-HxCDF	36.01	1.322e4	1.110e4	0.780	1.19	1.24	229.0	YES	NO	bb	bd	8.623
8	234678-HxCDF	34.97	1.918e4	1.544e4	0.863	1.24	1.24	317.1	YES	NO	bd	bd	9.255
9	1234789-HpCDF	40.06	1.143e4	1.181e4	0.994	0.97	1.05	154.8	YES	NO	MM	bd	8.759
10	1234678-HpCDF	37.91	1.654e4	1.583e4	1.001	1.04	1.05	226.8	YES	NO	bd	bd	9.517
11	OCDF	44.04	2.490e4	2.523e4	1.158	0.99	0.89	185.1	YES	NO	bd	bd	18.426

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	25.44	4.162e3	4.930e3	1.238	0.84	0.77	57.9	YES	NO	bb	bb	1.803

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	30.53	1.728e4	1.085e4	0.988	1.59	1.55	380.4	YES	NO	bb	bb	9.131

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-hexadioxins	36.03	1.547e2	1.376e2	0.897	1.12	1.24	5.0	YES	NO	dd	dd	0.072
2	Total-hexadioxins	35.87	4.917e2	3.505e2	0.897	1.40	1.24	14.2	YES	NO	dd	dd	0.208
3	123789-HxCDD	35.60	1.999e4	1.457e4	0.784	1.37	1.24	263.8	YES	NO	dd	dd	9.787
4	123678-HxCDD	35.21	2.297e4	1.966e4	0.907	1.17	1.24	315.4	YES	NO	dd	dd	9.467
5	123478-HxCDD	35.10	1.689e4	1.431e4	0.842	1.18	1.24	262.6	YES	NO	bd	bd	9.152

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	39.37	1.125e4	1.211e4	1.044	0.93	1.05	127.0	YES	NO	bd	bd	9.489

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	30.53	1.728e4	1.085e4	0.988	1.59	1.55	380.4	YES	NO	bb	bb	9.131
2	2378-TCDD	25.44	4.162e3	4.930e3	1.238	0.84	0.77	57.9	YES	NO	bb	bb	1.803
3	Total-hexadioxins	36.03	1.547e2	1.376e2	0.897	1.12	1.24	5.0	YES	NO	dd	dd	0.072
4	Total-hexadioxins	35.87	4.917e2	3.505e2	0.897	1.40	1.24	14.2	YES	NO	dd	dd	0.208
5	123789-HxCDD	35.60	1.999e4	1.457e4	0.784	1.37	1.24	263.8	YES	NO	dd	dd	9.787
6	123678-HxCDD	35.21	2.297e4	1.966e4	0.907	1.17	1.24	315.4	YES	NO	dd	dd	9.467
7	123478-HxCDD	35.10	1.689e4	1.431e4	0.842	1.18	1.24	262.6	YES	NO	bd	bd	9.152
8	1234678-HpCDD	39.37	1.125e4	1.211e4	1.044	0.93	1.05	127.0	YES	NO	bd	bd	9.489
9	OCDD	43.83	2.055e4	2.225e4	0.963	0.92	0.89	334.8	YES	NO	bd	bd	18.914

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	29.19	1.343e2	8.770e1	0.809	1.53	1.55	3.2	YES	NO	dd	bb	0.050
2	12378-PeCDF	28.92	2.490e4	1.405e4	0.779	1.77	1.55	296.7	YES	NO	MM	bb	9.205
3	2378-TCDF	24.79	4.864e3	5.624e3	0.729	0.86	0.77	148.4	YES	NO	bd	bb	1.940
4	123678-HxCDF	34.08	2.262e4	1.730e4	0.853	1.31	1.24	342.1	YES	NO	dd	dd	9.681
5	123478-HxCDF	33.93	1.727e4	1.477e4	0.880	1.17	1.24	288.9	YES	NO	bd	bd	8.871
6	23478-PeCDF	30.27	2.714e4	1.647e4	0.880	1.65	1.55	308.1	YES	NO	bd	bd	9.037
7	123789-HxCDF	36.01	1.322e4	1.110e4	0.780	1.19	1.24	229.0	YES	NO	bb	bd	8.623
8	234678-HxCDF	34.97	1.918e4	1.544e4	0.863	1.24	1.24	317.1	YES	NO	bd	bd	9.255
9	1234789-HpCDF	40.06	1.143e4	1.181e4	0.994	0.97	1.05	154.8	YES	NO	MM	bd	8.759
10	1234678-HpCDF	37.91	1.654e4	1.583e4	1.001	1.04	1.05	226.8	YES	NO	bd	bd	9.517
11	OCDF	44.04	2.490e4	2.523e4	1.158	0.99	0.89	185.1	YES	NO	bd	bd	18.426
12	12378-PeCDD	30.53	1.728e4	1.085e4	0.988	1.59	1.55	380.4	YES	NO	bb	bb	9.131
13	2378-TCDD	25.44	4.162e3	4.930e3	1.238	0.84	0.77	57.9	YES	NO	bb	bb	1.803
14	Total-hexadioxins	36.03	1.547e2	1.376e2	0.897	1.12	1.24	5.0	YES	NO	dd	dd	0.072
15	Total-hexadioxins	35.87	4.917e2	3.505e2	0.897	1.40	1.24	14.2	YES	NO	dd	dd	0.208
16	123789-HxCDD	35.60	1.999e4	1.457e4	0.784	1.37	1.24	263.8	YES	NO	dd	dd	9.787
17	123678-HxCDD	35.21	2.297e4	1.966e4	0.907	1.17	1.24	315.4	YES	NO	dd	dd	9.467
18	123478-HxCDD	35.10	1.689e4	1.431e4	0.842	1.18	1.24	262.6	YES	NO	bd	bd	9.152
19	1234678-HpCDD	39.37	1.125e4	1.211e4	1.044	0.93	1.05	127.0	YES	NO	bd	bd	9.489
20	OCDD	43.83	2.055e4	2.225e4	0.963	0.92	0.89	334.8	YES	NO	bd	bd	18.914

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	26.51	3.941e4					1.6	NO		bb		
2	FUNCTION1 PFK	25.44	4.190e3					0.4	NO		bb		
3	FUNCTION1 PFK	25.24	3.870e3					0.4	NO		bb		
4	FUNCTION1 PFK	24.80	3.358e4					1.3	NO		bb		
5	FUNCTION1 PFK	24.68	2.353e4					1.1	NO		bb		
6	FUNCTION1 PFK	23.90	2.532e4					1.1	NO		bb		
7	FUNCTION1 PFK	23.13	3.487e4					1.2	NO		bb		
8	FUNCTION1 PFK	22.45	1.858e4					0.8	NO		bb		
9	FUNCTION1 PFK	21.60	1.831e4					1.0	NO		bb		
10	FUNCTION1 PFK	20.72	5.388e4					2.0	NO		bb		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	30.16	3.628e4					2.6	NO		bb		0.000
2	FUNCTION2 PFK	29.12	1.137e4					1.6	NO		bb		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.83	4.034e4					1.9	NO		bb		0.000
2	FUNCTION3 PFK	34.59	2.403e3					0.5	NO		bb		0.000
3	FUNCTION3 PFK	34.29	2.448e4					1.2	NO		bb		0.000
4	FUNCTION3 PFK	33.96	4.414e4					1.8	NO		bb		0.000
5	FUNCTION3 PFK	33.39	8.944e3					1.0	NO		bb		0.000
6	FUNCTION3 PFK	33.20	2.178e3					0.5	NO		bb		0.000
7	FUNCTION3 PFK	32.75	1.509e4					0.8	NO		bb		0.000
8	FUNCTION3 PFK	32.36	2.425e3					0.5	NO		bb		0.000
9	FUNCTION3 PFK	32.12	4.388e4					1.9	NO		db		0.000
10	FUNCTION3 PFK	32.03	2.608e4					1.8	NO		dd		0.000
11	FUNCTION3 PFK	31.97	3.260e4					2.0	NO		bd		0.000
12	FUNCTION3 PFK	31.87	1.443e4					1.3	NO		bb		0.000
13	FUNCTION3 PFK	36.50	2.848e4					1.7	NO		bb		0.000
14	FUNCTION3 PFK	36.38	2.612e3					0.6	NO		bb		0.000
15	FUNCTION3 PFK	36.18	2.488e4					1.3	NO		bb		0.000
16	FUNCTION3 PFK	35.85	1.280e4					1.3	NO		bb		0.000
17	FUNCTION3 PFK	35.55	9.991e3					1.1	NO		db		0.000
18	FUNCTION3 PFK	35.51	1.510e4					1.3	NO		bd		0.000
19	FUNCTION3 PFK	35.06	4.059e4					1.9	NO		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	41.17	8.190e3					1.2	NO		bb		
2	FUNCTION4 PFK	40.38	8.527e3					0.9	NO		bb		
3	FUNCTION4 PFK	39.57	4.907e3					0.9	NO		bb		
4	FUNCTION4 PFK	39.40	1.679e3					0.5	NO		bb		
5	FUNCTION4 PFK	38.81	1.923e4					1.2	NO		bb		
6	FUNCTION4 PFK	38.11	3.000e4					1.8	NO		bb		
7	FUNCTION4 PFK	37.34	1.456e6					3.7	YES		bb		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.95	8.844e3					1.7	NO		bb		
2	FUNCTION5 PFK	43.89	4.196e3					0.8	NO		bb		
3	FUNCTION5 PFK	43.81	6.551e3					1.1	NO		bb		
4	FUNCTION5 PFK	43.69	8.200e3					1.3	NO		db		
5	FUNCTION5 PFK	43.65	5.255e3					0.8	NO		bd		
6	FUNCTION5 PFK	43.47	3.626e3					0.7	NO		bb		
7	FUNCTION5 PFK	43.36	2.175e4					2.1	NO		bb		
8	FUNCTION5 PFK	43.26	3.612e3					0.7	NO		db		
9	FUNCTION5 PFK	43.23	1.360e3					0.4	NO		bd		
10	FUNCTION5 PFK	43.15	2.838e3					0.6	NO		bb		
11	FUNCTION5 PFK	42.89	1.073e4					1.0	NO		bb		
12	FUNCTION5 PFK	42.83	1.562e3					0.3	NO		bb		
13	FUNCTION5 PFK	42.67	8.875e3					1.0	NO		bb		
14	FUNCTION5 PFK	42.36	2.373e3					0.6	NO		db		
15	FUNCTION5 PFK	42.33	6.198e3					1.2	NO		bd		
16	FUNCTION5 PFK	42.06	1.413e3					0.6	NO		bb		
17	FUNCTION5 PFK	44.94	3.783e3					0.7	NO		bb		
18	FUNCTION5 PFK	44.75	2.123e3					0.5	NO		bb		
19	FUNCTION5 PFK	44.57	7.727e2					0.3	NO		bb		
20	FUNCTION5 PFK	44.51	7.483e3					1.2	NO		db		
21	FUNCTION5 PFK	44.47	5.841e3					1.0	NO		bd		
22	FUNCTION5 PFK	44.37	1.153e4					1.4	NO		bb		
23	FUNCTION5 PFK	44.15	1.307e4					1.1	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	21.37	7.159e1					3.1	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	26.59	7.235e1					2.0	NO		bb		0.000

ID: CS2CJ, Name: 20102906, Date: 29-Oct-2020, Time: 19:58:08, Conditions: AUTOSPEC01, User: pk

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	41.40	7.238e1					5.2	YES		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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Printed: Friday, October 30, 2020 14:34:01 Pacific Daylight Time

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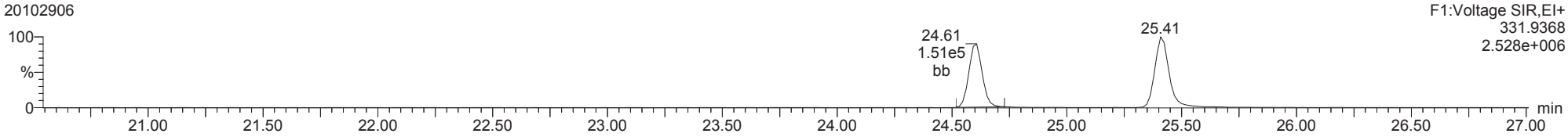
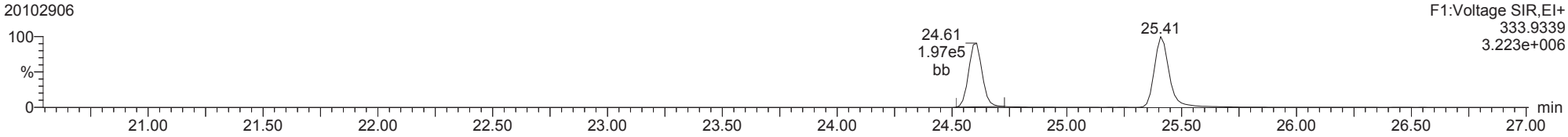
ID: CS2CJ, Name: 20102906, Date: 29-Oct-2020, Time: 19:58:08, Conditions: AUTOSPEC01, User: pk

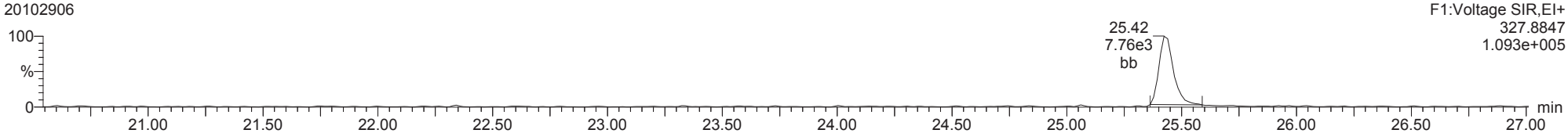
13C-1234-TCDD



13C-1234-TCDD



37CL-2378-TCDD



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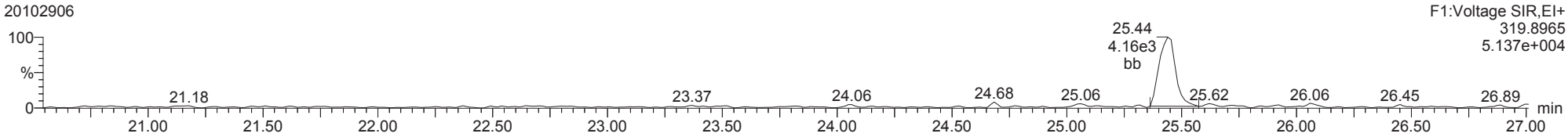

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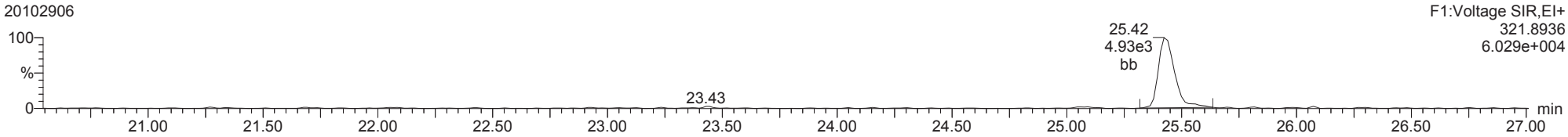

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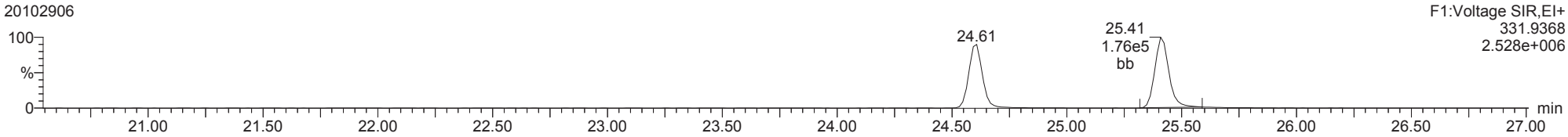

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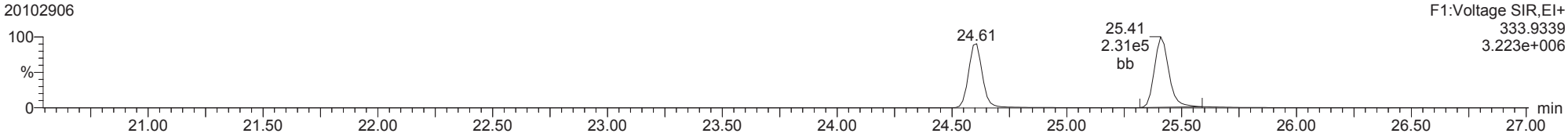

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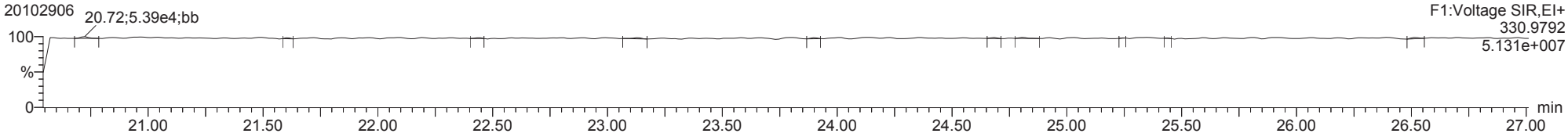

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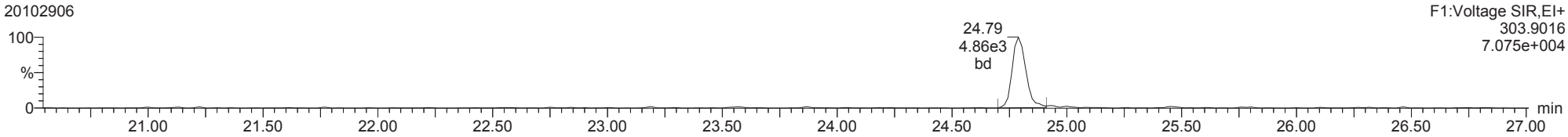

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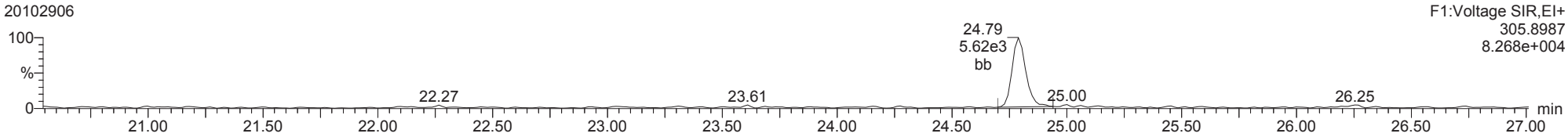

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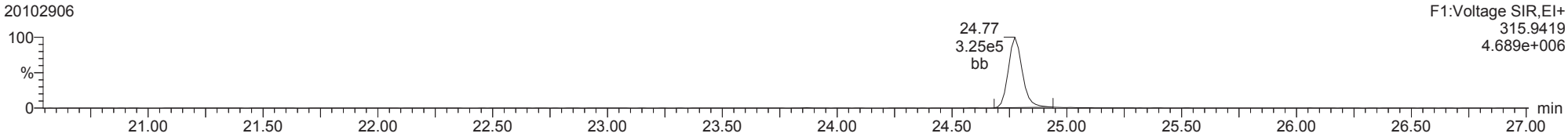

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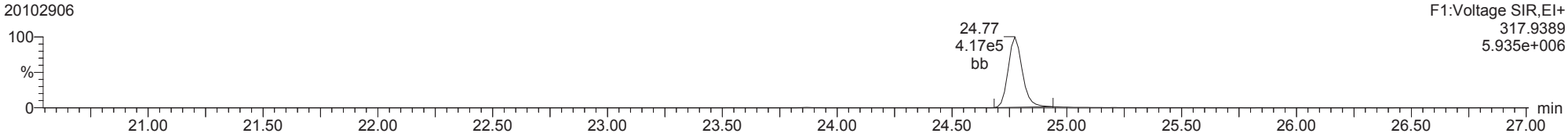
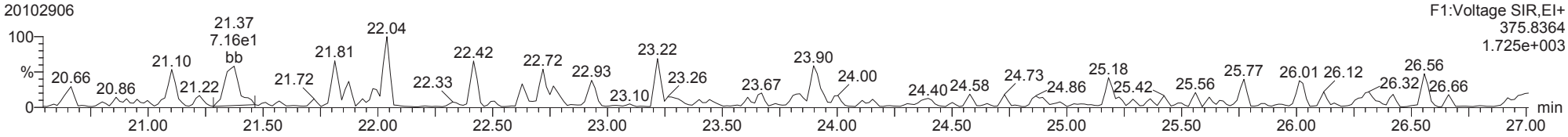


FUNCTION1 HXCDPE



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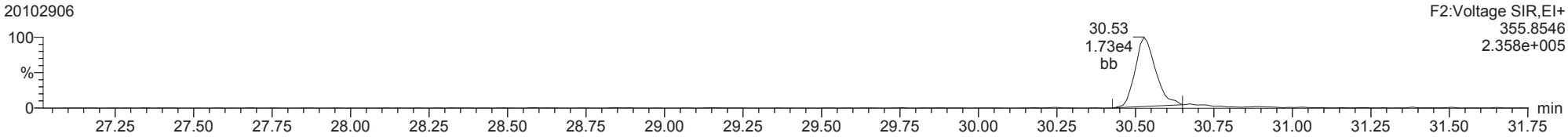
12378-PeCDD



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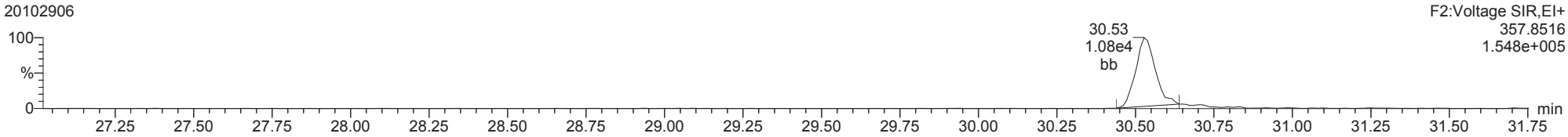

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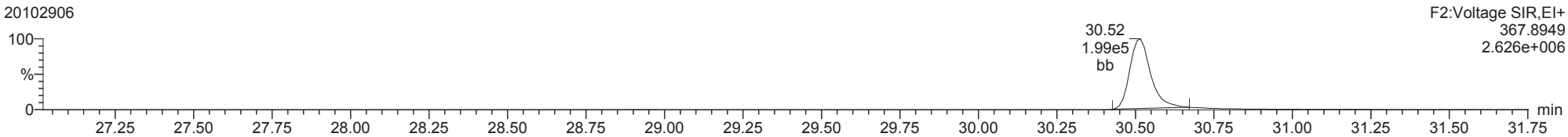

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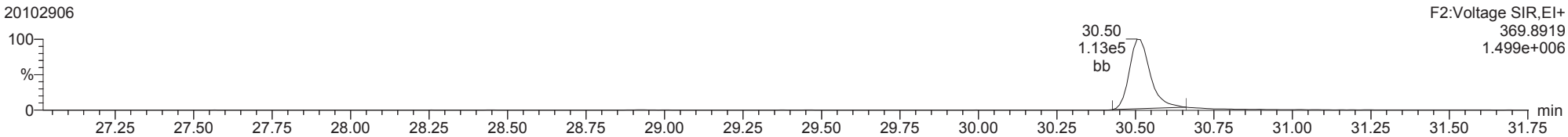
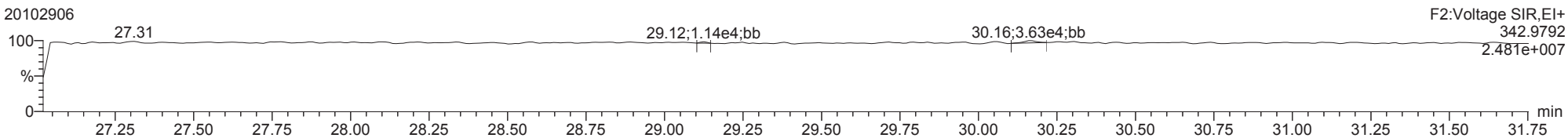


FUNCTION2 PFK



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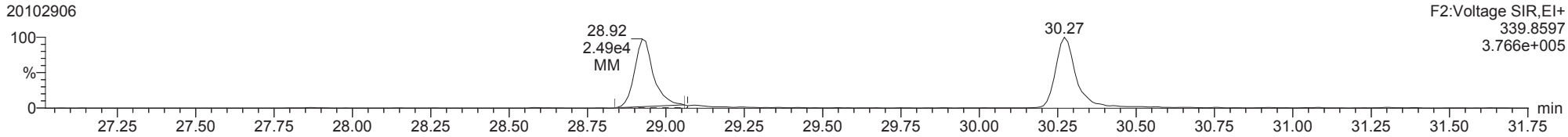

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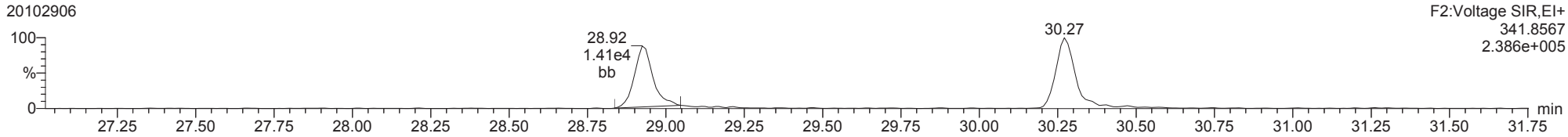

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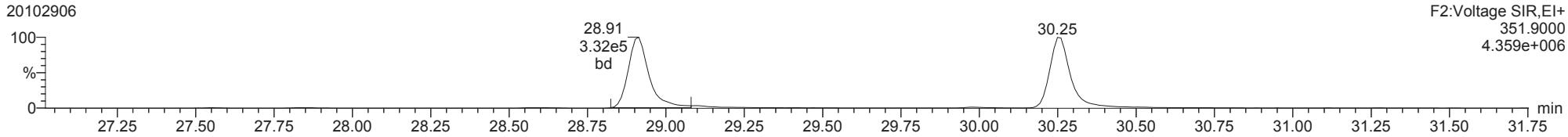

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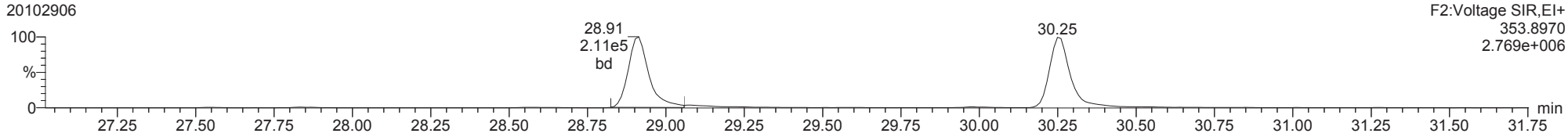
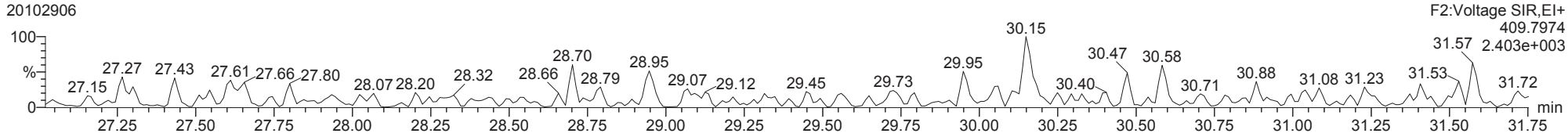


FUNCTION2 HPCDPE



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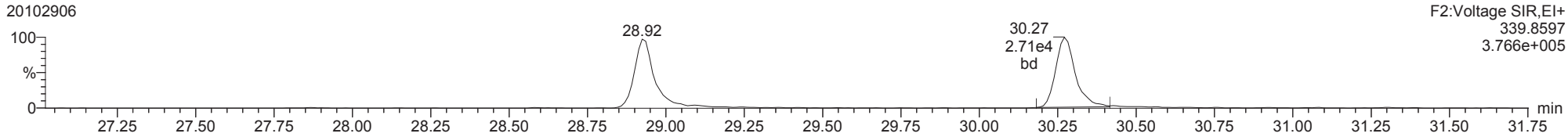
23478-PeCDF



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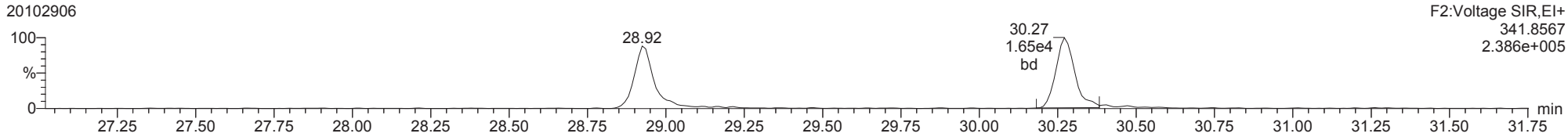

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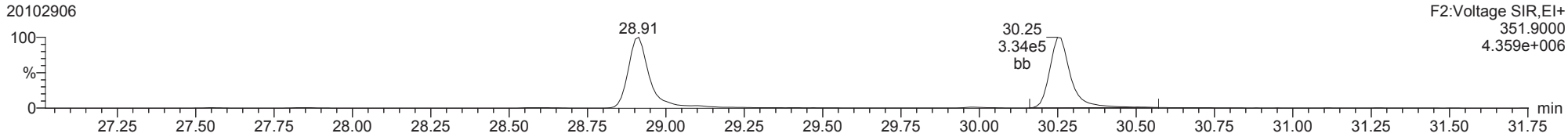

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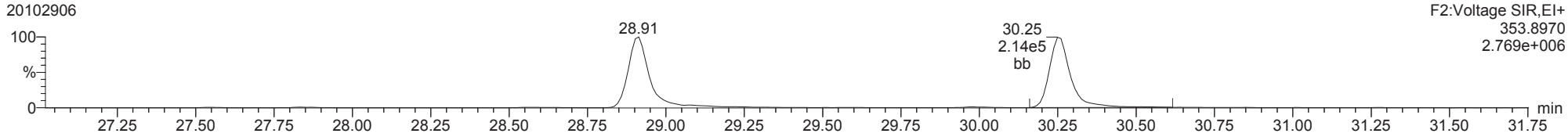
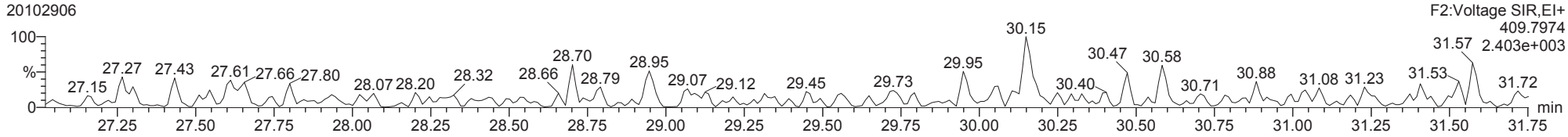


FUNCTION2 HPCDPE



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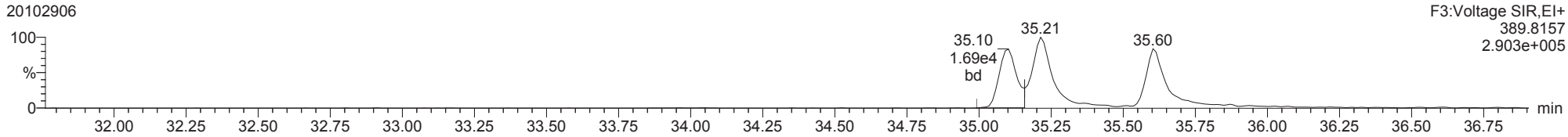
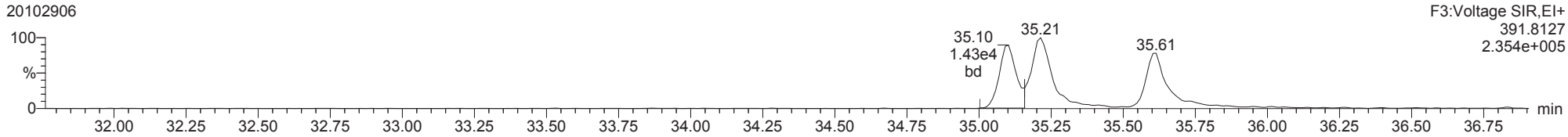
123478-HxCDD



123478-HxCDD



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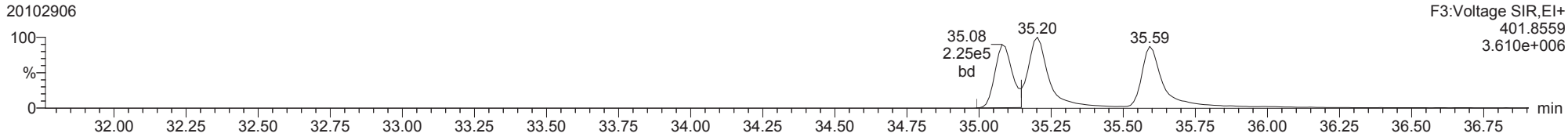

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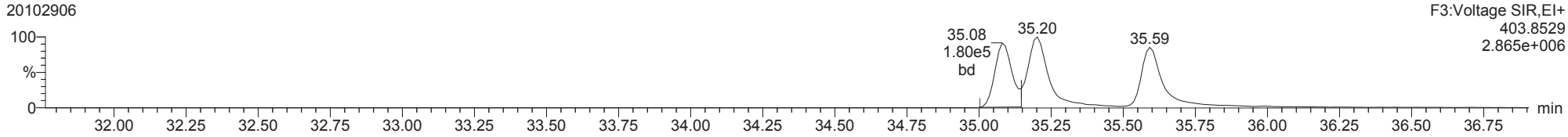

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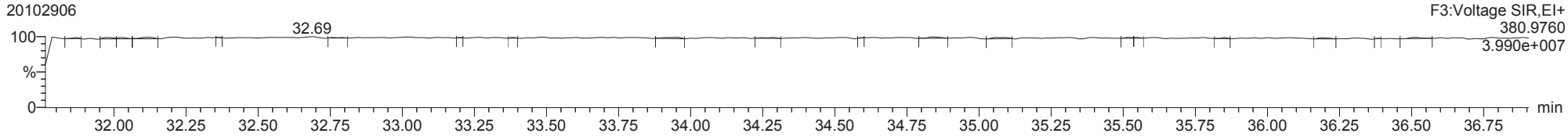

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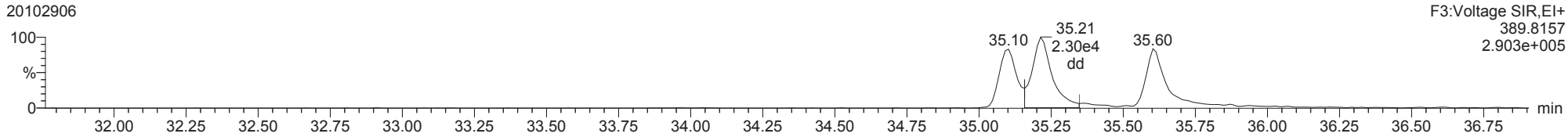

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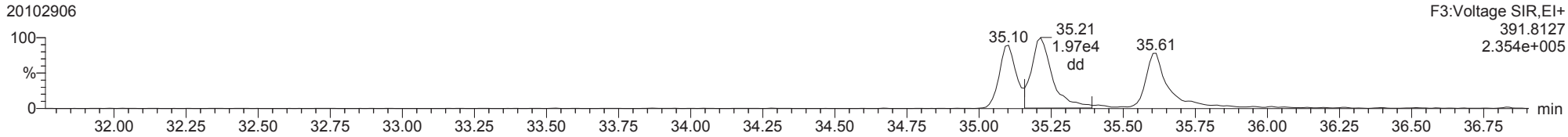

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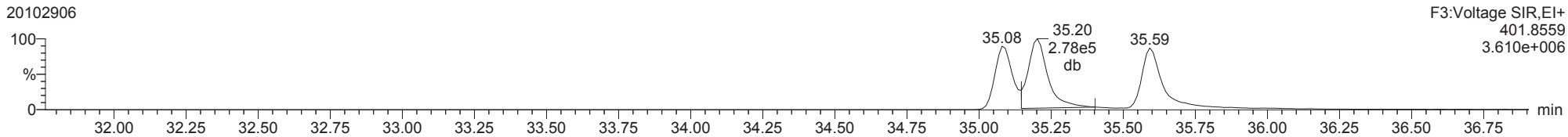

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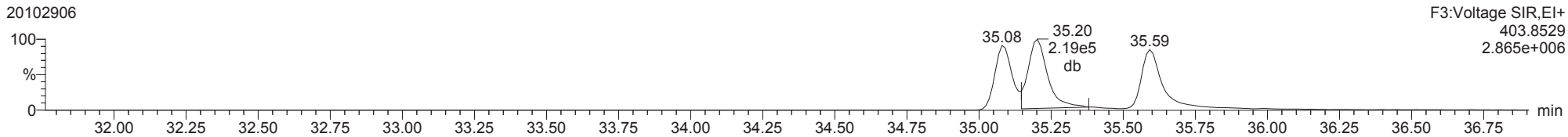

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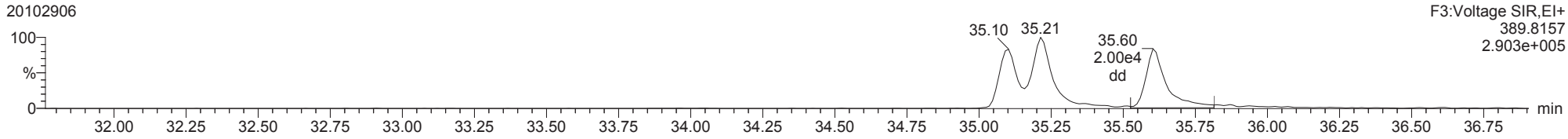

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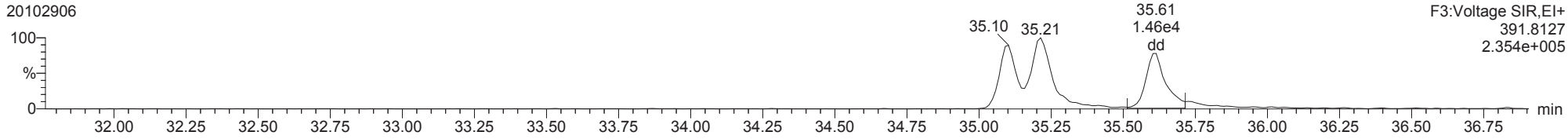

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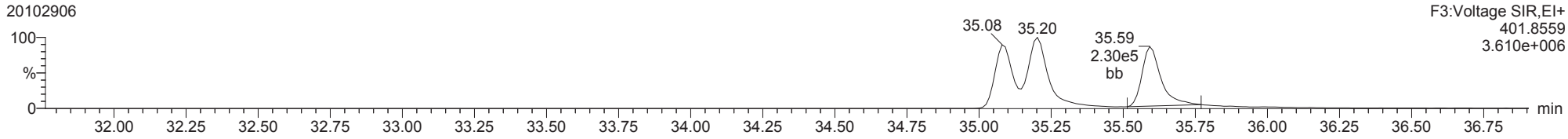

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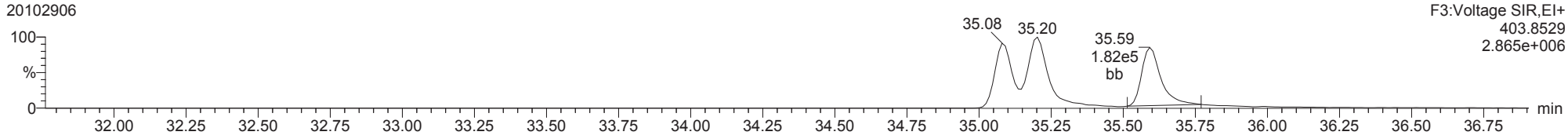

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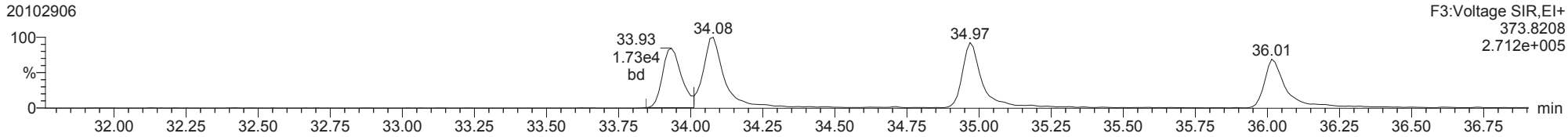

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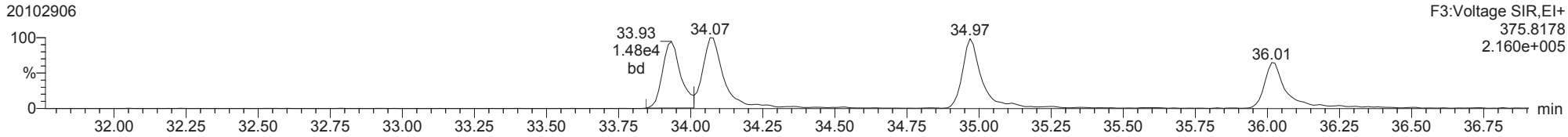

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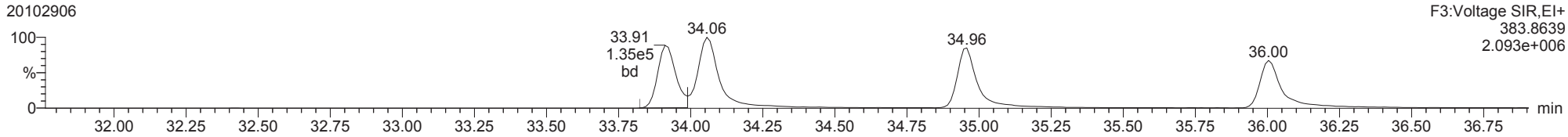

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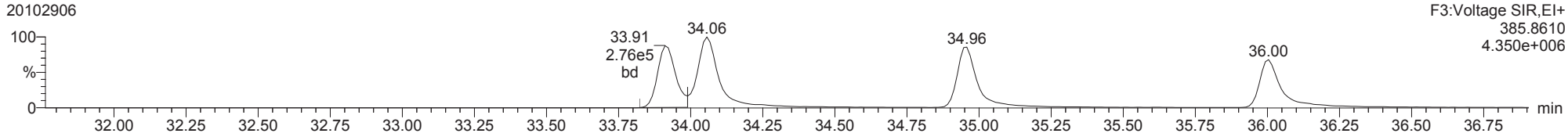
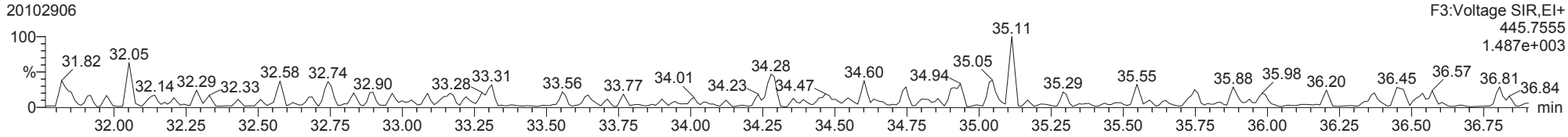


FUNCTION3 OCDPE



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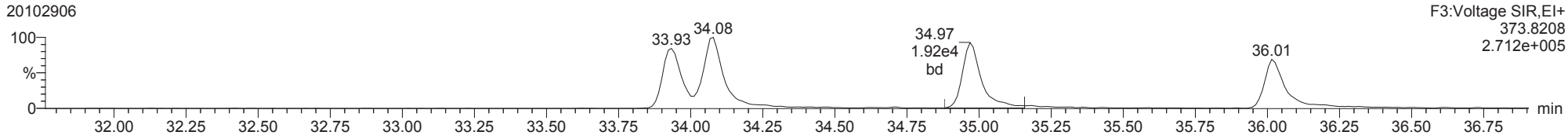
234678-HxCDF



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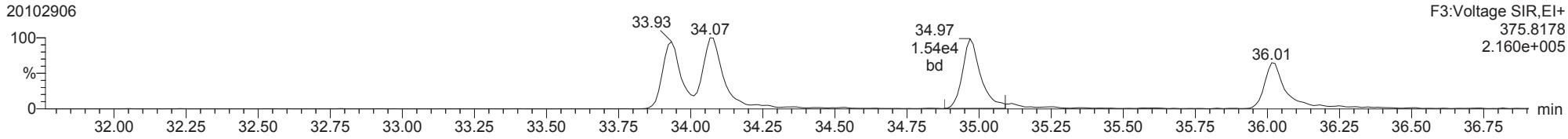

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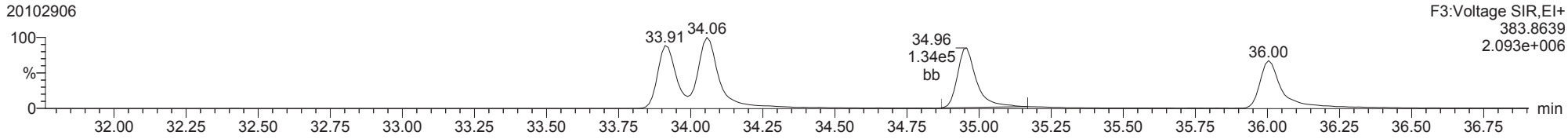

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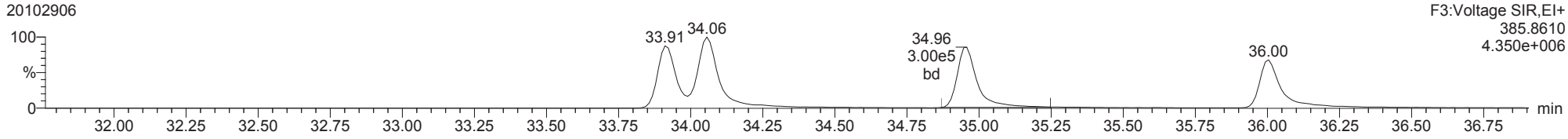
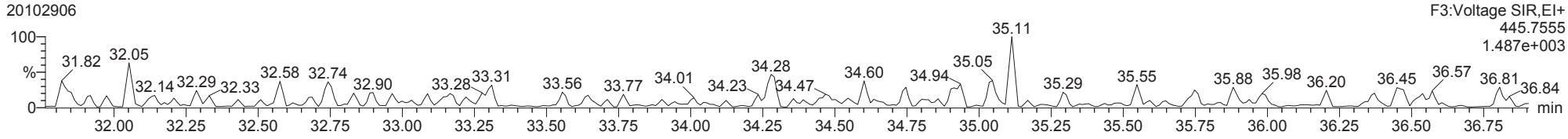
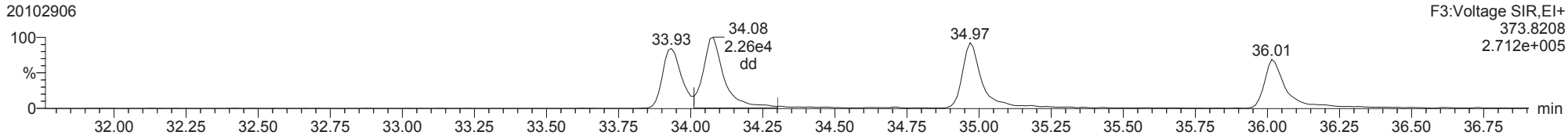


FUNCTION3 OCDPE



ID: CS2CJ, Name: 20102906, Date: 29-Oct-2020, Time: 19:58:08, Conditions: AUTOSPEC01, User: pk

123678-HxCDF



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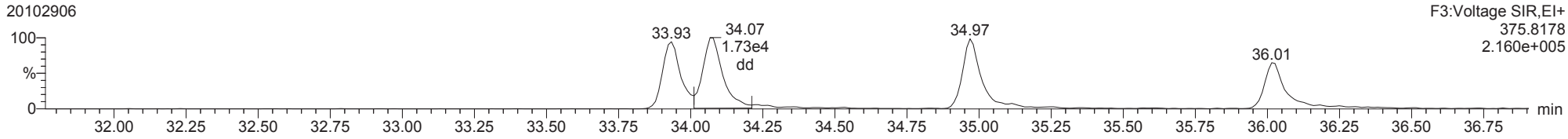

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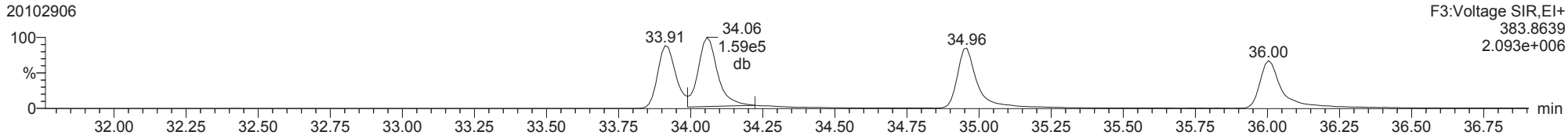

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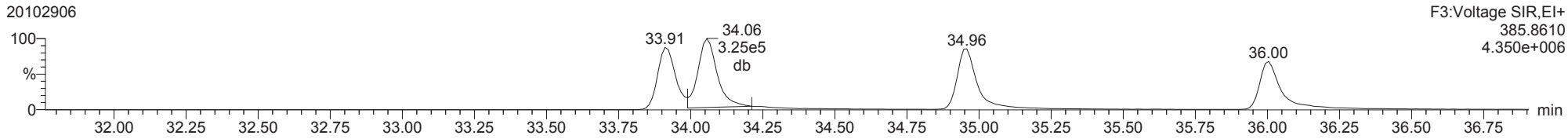

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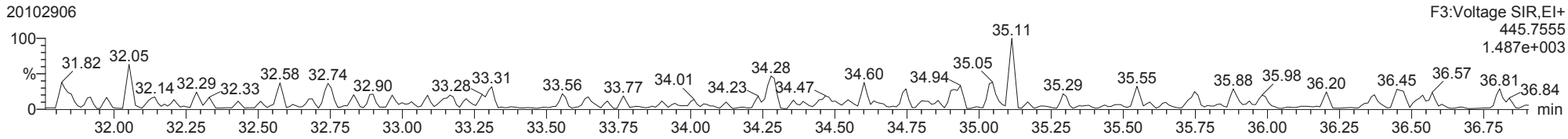

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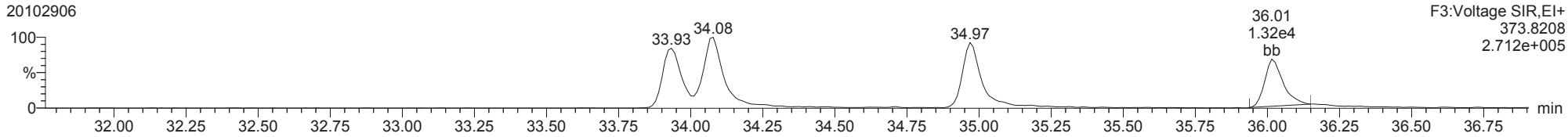

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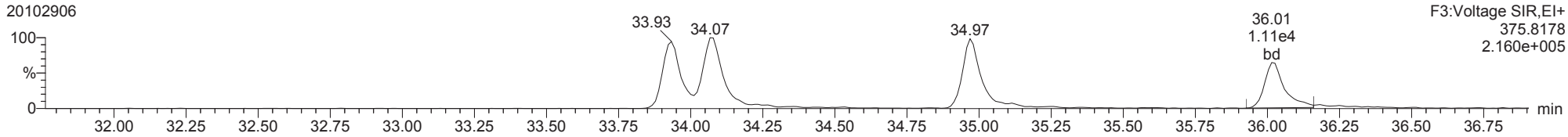

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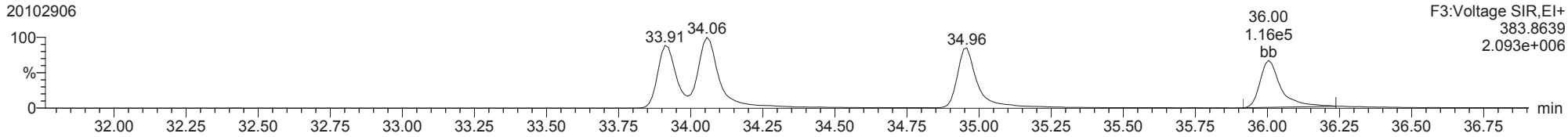

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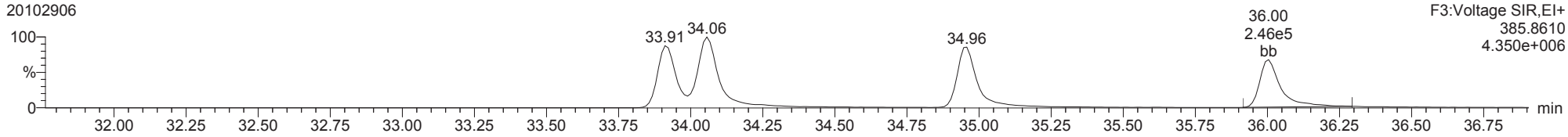
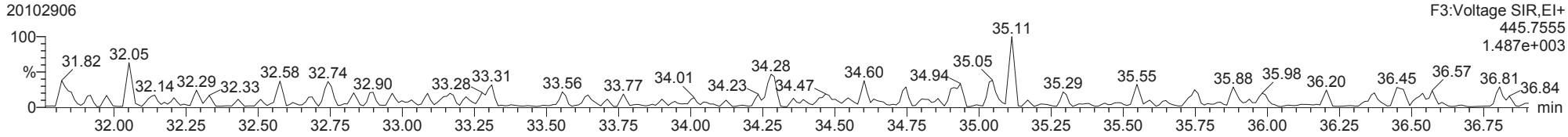


FUNCTION3 OCDPE



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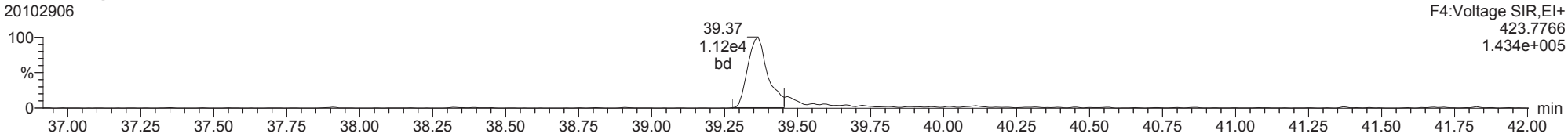

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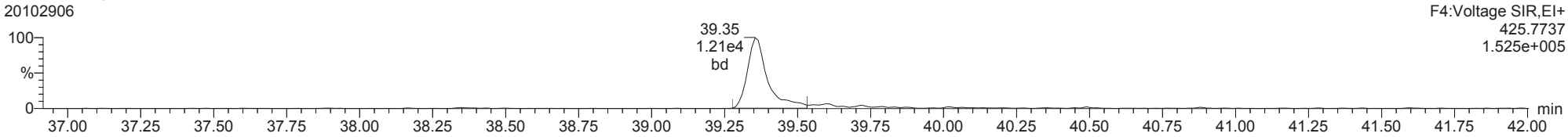

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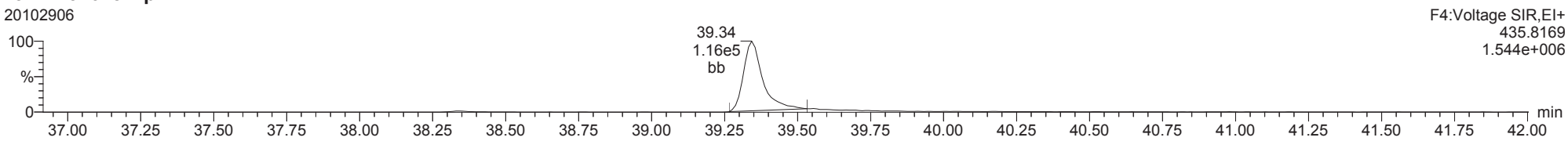

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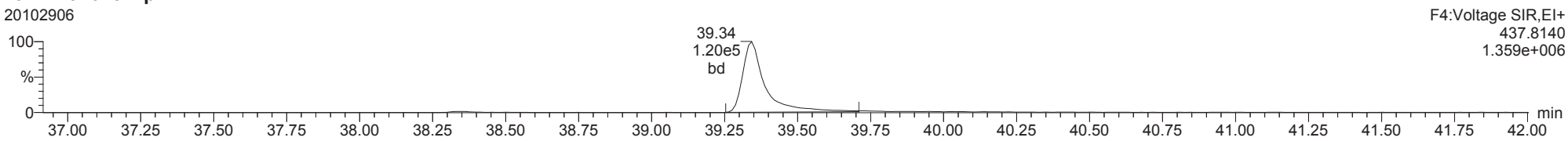
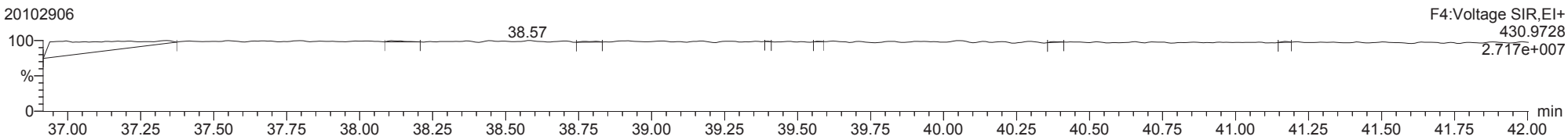


FUNCTION4 PFK



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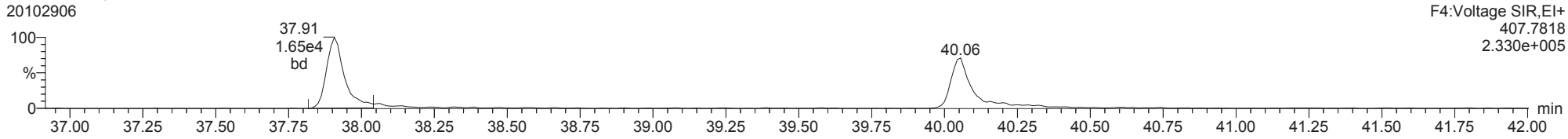
1234678-HpCDF



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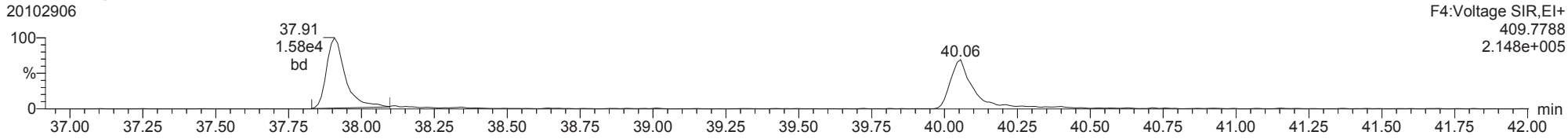

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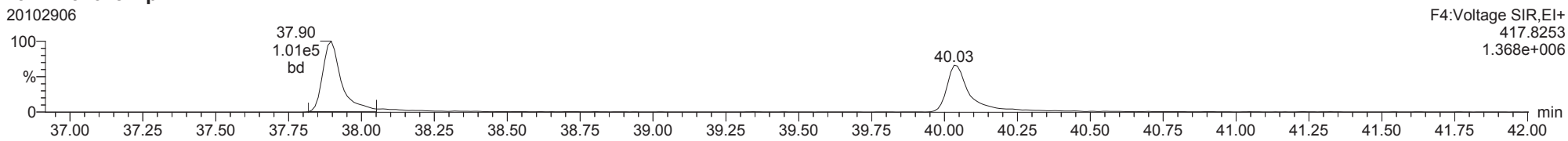

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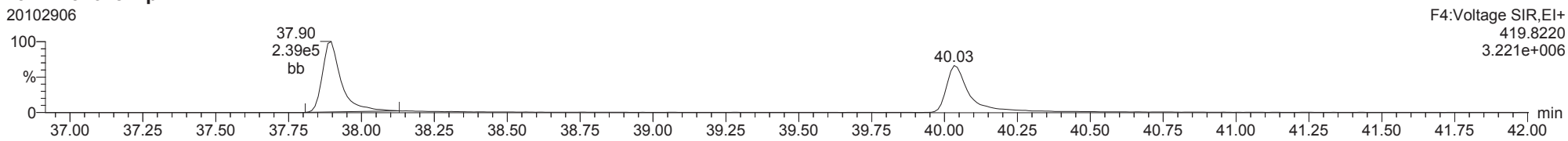
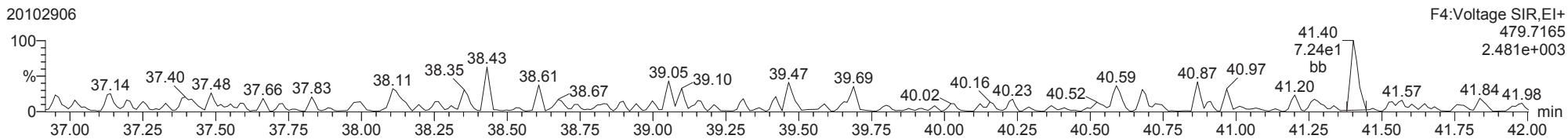


FUNCTION4 NCDPE



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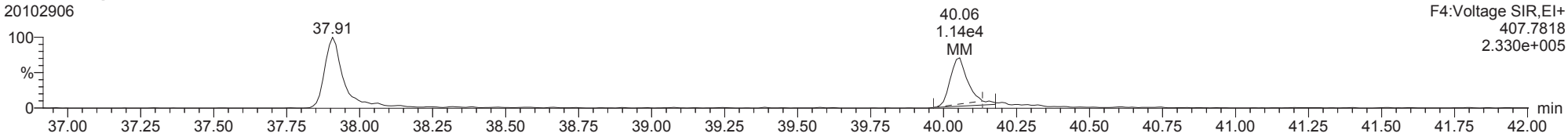

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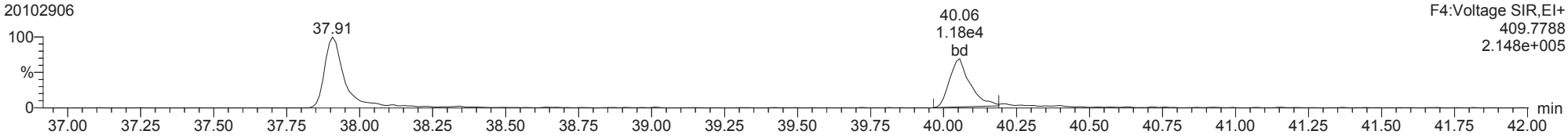

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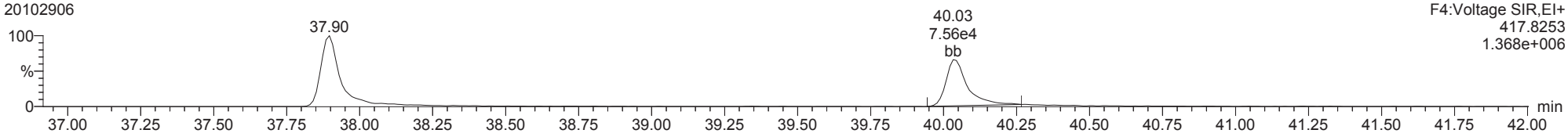

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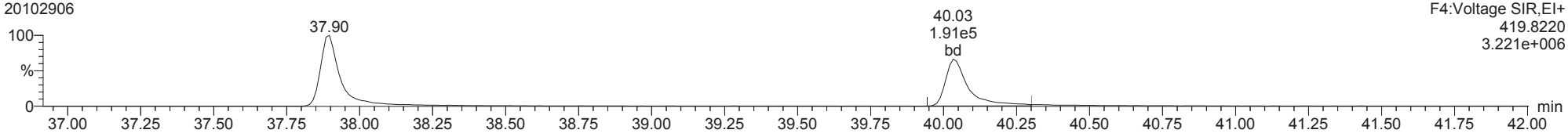
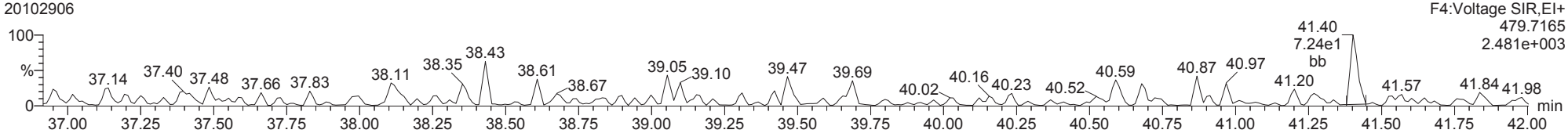


FUNCTION4 NCDPE



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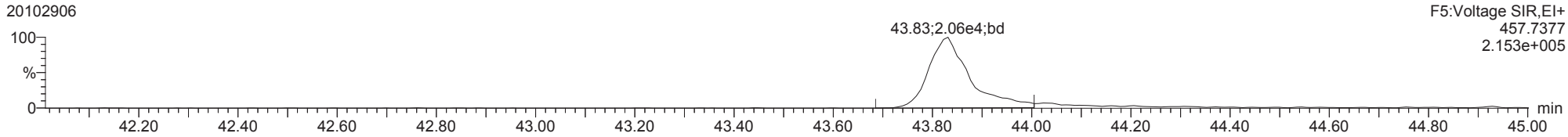
ID: CS2CJ, Name: 20102906, Date: 29-Oct-2020, Time: 19:58:08, Conditions: AUTOSPEC01, User: pk

OCDD



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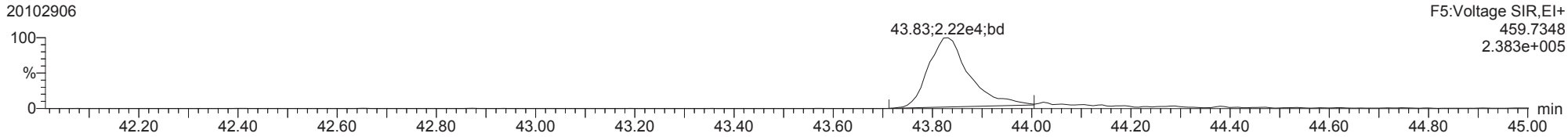

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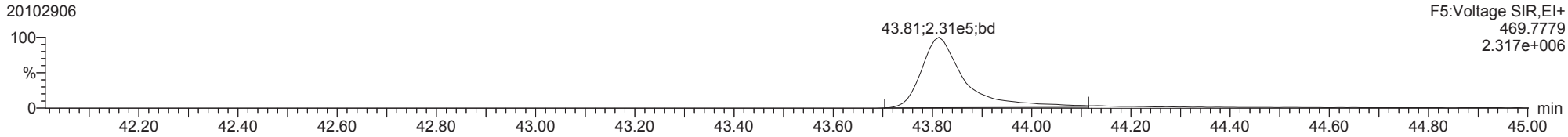

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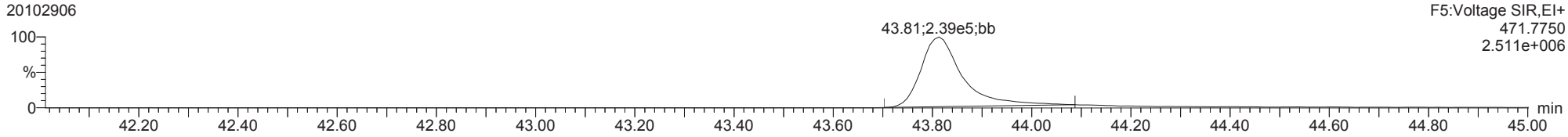
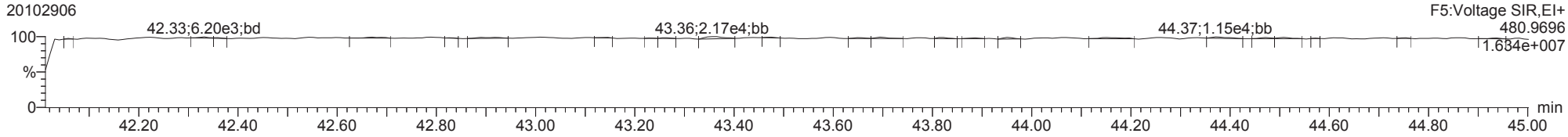


FUNCTION5 PFK



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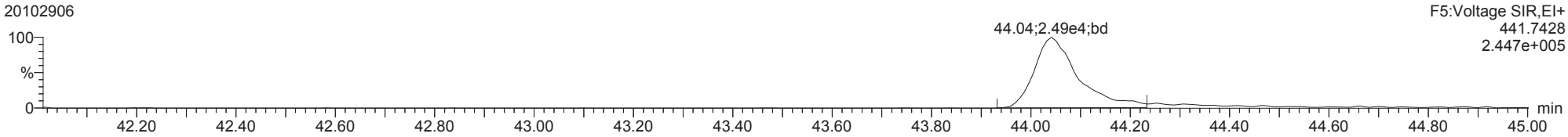
OCDF



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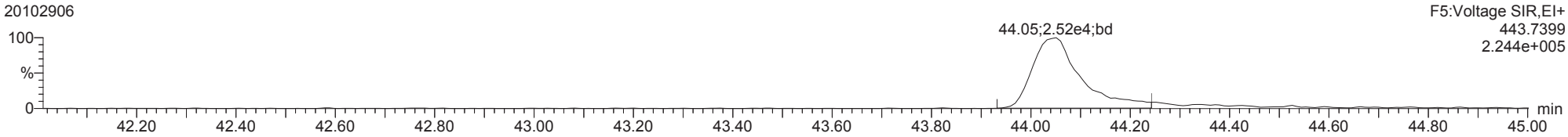
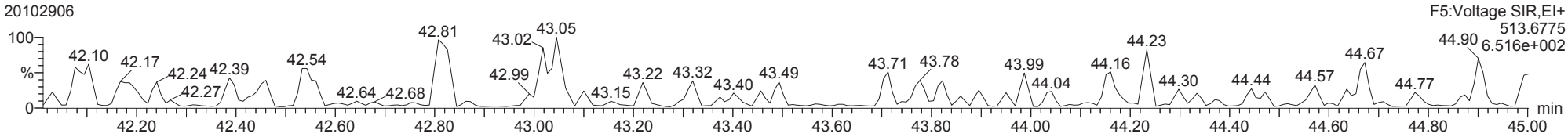


FUNCTION5 DCDPE



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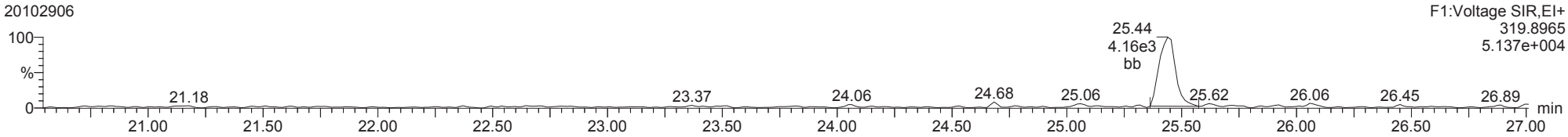
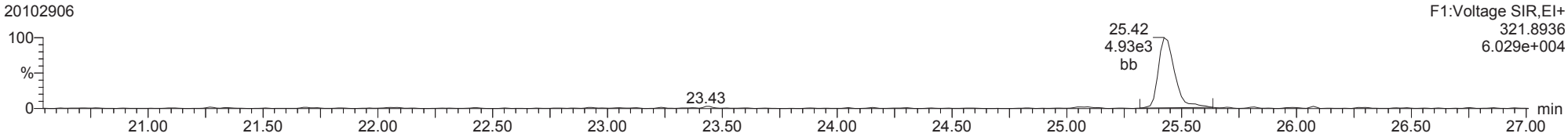
Total-tetradioxins



Total-tetradioxins



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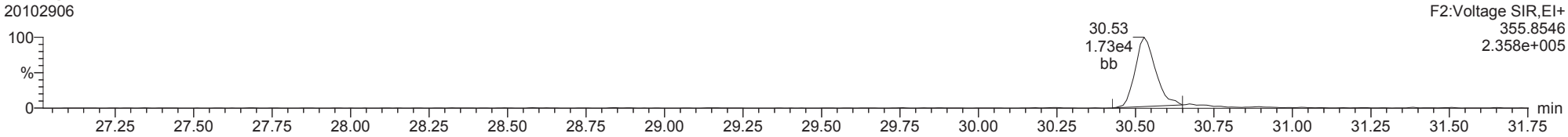

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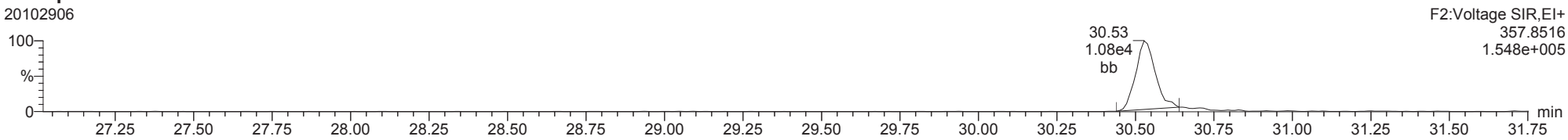

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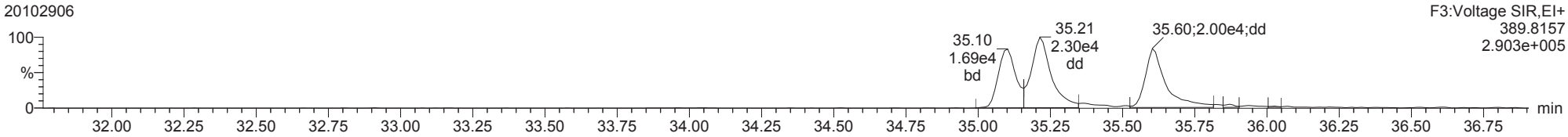
Total-hexadioxins



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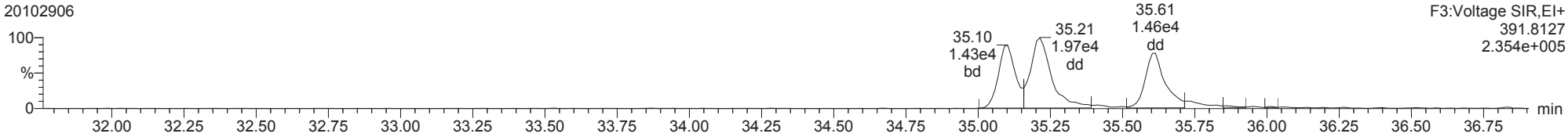
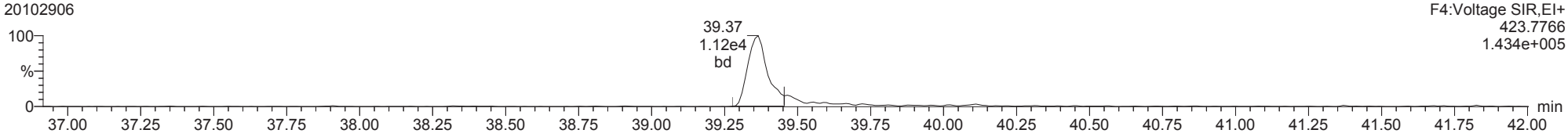
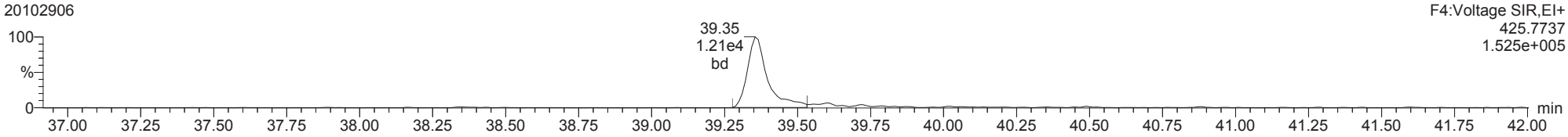


Total-heptadioxins



Total-heptadioxins



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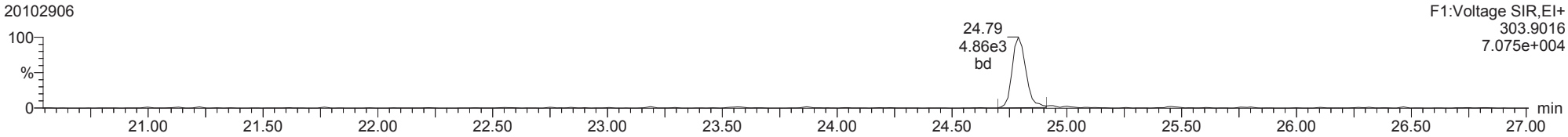
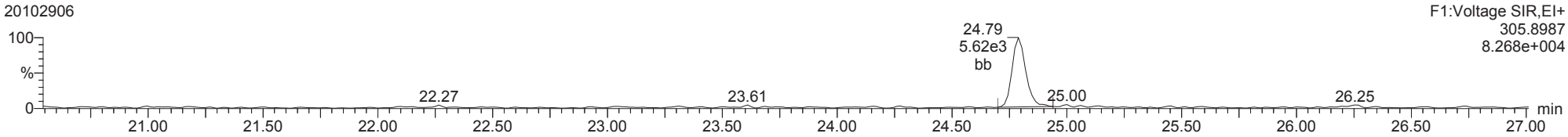
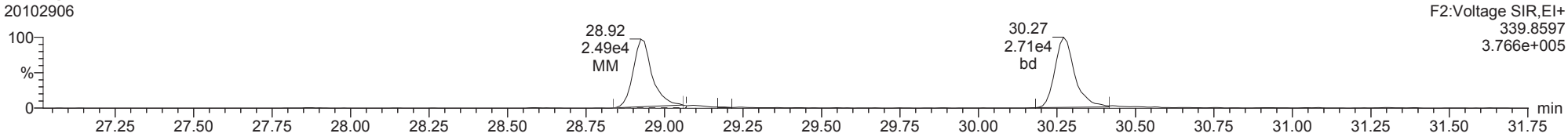
Total-tetrafurans



Total-tetrafurans



Total-pentafurans



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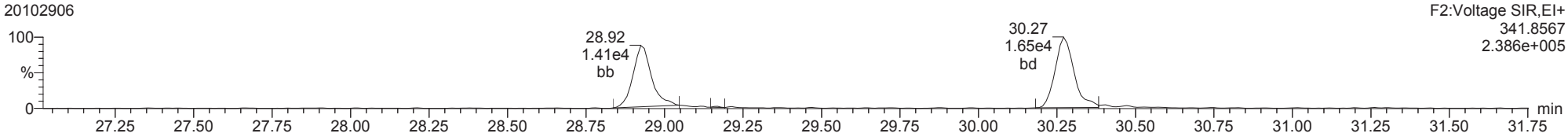

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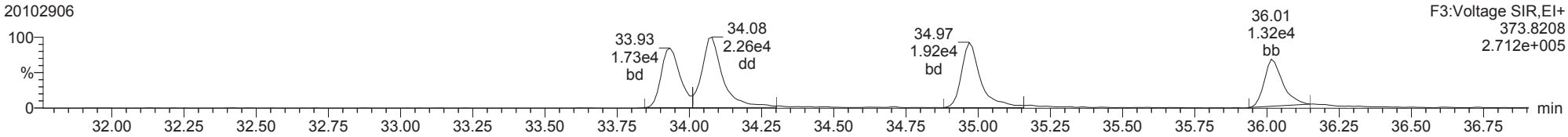
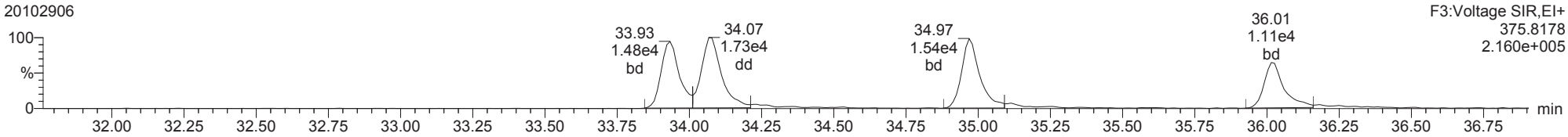
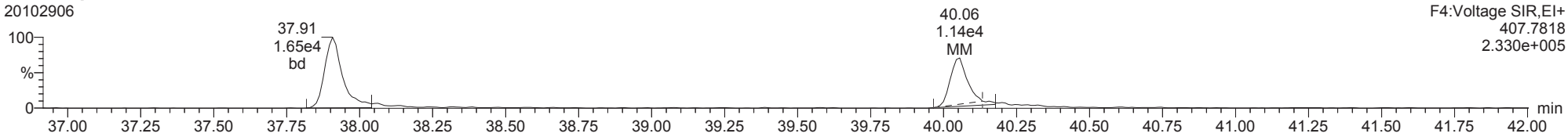
Total-hexafurans



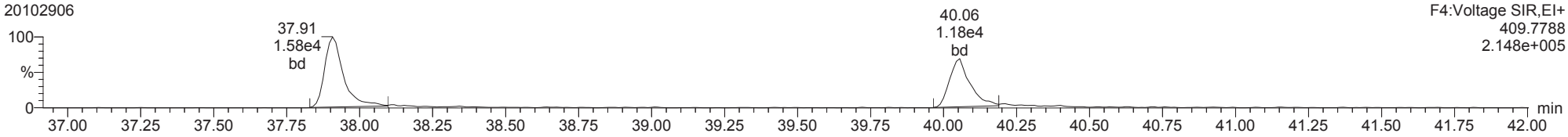
Total-hexafurans



Total-heptafurans



Total-heptafurans



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Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 09:08:24

ID: CS3CJ, Name: 20102907, Date: 29-Oct-2020, Time: 20:46:44, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	24.789	1.001	3.883e4	5.039e4	0.729	0.771	0.770	1118	1451	5.49e5	7.12e5	491.0	491.0	NO	bb	bb	9.708
12378-PeCDF	28.924	1.000	2.552e5	1.442e5	0.779	1.770	1.550	3753	3487	3.64e6	2.08e6	968.7	597.4	NO	bb	bb	51.658
23478-PeCDF	30.271	1.000	2.582e5	1.563e5	0.880	1.652	1.550	3753	3487	3.64e6	2.25e6	970.9	646.5	NO	bb	bb	50.119
123478-HxCDF	33.933	1.000	1.704e5	1.326e5	0.880	1.284	1.240	1898	1936	2.47e6	1.89e6	1302.4	976.3	NO	bd	bd	52.351
234678-HxCDF	34.979	1.001	1.754e5	1.353e5	0.863	1.296	1.240	1898	1936	2.41e6	1.86e6	1269.1	961.6	NO	bb	bb	49.090
123678-HxCDF	34.077	1.001	1.984e5	1.568e5	0.853	1.265	1.240	1898	1936	2.68e6	2.09e6	1411.7	1080.7	NO	db	db	52.159
123789-HxCDF	36.025	1.001	1.378e5	1.040e5	0.780	1.325	1.240	1898	1936	1.77e6	1.30e6	935.0	673.5	NO	bb	bb	52.749
1234678-HpCDF	37.907	1.000	1.718e5	1.582e5	1.001	1.086	1.050	2613	2785	2.27e6	2.08e6	867.0	747.3	NO	bd	bd	53.706
1234789-HpCDF	40.055	1.000	1.303e5	1.192e5	0.994	1.093	1.050	2613	2785	1.41e6	1.34e6	541.2	481.2	NO	bd	bd	52.915
OCDF	44.050	1.005	2.581e5	2.795e5	1.158	0.924	0.890	2604	3444	2.57e6	2.74e6	987.6	795.4	NO	bd	bd	103.313
2378-TCDD	25.438	1.001	3.495e4	4.331e4	1.238	0.807	0.770	1453	1260	5.00e5	5.88e5	344.2	466.4	NO	bb	bb	9.495
12378-PeCDD	30.538	1.001	1.656e5	1.054e5	0.988	1.572	1.550	2219	1460	2.24e6	1.44e6	1010.2	983.6	NO	bb	bb	49.933
123478-HxCDD	35.102	1.000	1.456e5	1.205e5	0.842	1.208	1.240	2272	2026	2.15e6	1.80e6	946.2	886.3	NO	bd	bd	51.630
123678-HxCDD	35.224	1.001	1.956e5	1.726e5	0.907	1.133	1.240	2272	2026	2.31e6	2.00e6	1015.8	986.4	NO	db	dd	52.824
123789-HxCDD	35.614	1.012	1.521e5	1.427e5	0.784	1.066	1.240	2272	2026	1.90e6	1.59e6	836.4	786.5	NO	bb	dd	54.494
1234678-HpCDD	39.364	1.001	1.193e5	1.096e5	1.044	1.088	1.050	2693	3305	1.43e6	1.39e6	532.4	420.3	NO	bd	bd	52.007
OCDD	43.831	1.000	1.992e5	2.296e5	0.963	0.868	0.890	2598	1891	2.03e6	2.38e6	780.4	1260.9	NO	bd	bd	99.087
13C-2378-TCDF	24.774	1.007	5.476e5	7.137e5	2.203	0.767	0.770	3218	1916	7.89e6	1.02e7	2451.1	5328.2	NO	bb	bb	100.671
13C-12378-PeCDF	28.913	1.175	6.009e5	3.912e5	1.741	1.536	1.550	4359	4176	7.70e6	4.99e6	1767.0	1193.7	NO	bb	bb	100.191
13C-23478-PeCDF	30.260	1.230	5.591e5	3.804e5	1.669	1.470	1.550	4359	4176	7.41e6	4.78e6	1700.1	1144.6	NO	bb	bd	98.949
13C-123478-HxCDF	33.922	0.953	2.143e5	4.432e5	1.022	0.484	0.510	1946	4859	3.05e6	6.16e6	1565.7	1267.4	NO	bd	bd	101.532
13C-123678-HxCDF	34.055	0.957	2.620e5	5.361e5	1.200	0.489	0.510	1946	4859	3.31e6	6.79e6	1701.8	1398.2	NO	db	db	104.982
13C-234678-HxCDF	34.957	0.982	2.433e5	4.903e5	1.071	0.496	0.510	1946	4859	3.03e6	6.01e6	1557.0	1236.7	NO	bd	bb	108.113
13C-123789-HxCDF	36.003	1.012	1.888e5	3.987e5	0.919	0.474	0.510	1946	4859	2.24e6	4.68e6	1150.4	962.8	NO	bb	bb	100.961
13C-1234678-HpCDF	37.895	1.065	1.699e5	4.439e5	0.909	0.383	0.440	3262	5415	2.35e6	5.67e6	719.4	1047.9	NO	bb	bd	106.649
13C-1234789-HpCDF	40.043	1.125	1.375e5	3.368e5	0.724	0.408	0.440	3262	5415	1.56e6	3.72e6	477.5	687.6	NO	bb	bb	103.481
13C-1234-TCDD	24.608	0.000	2.502e5	3.185e5	1.000	0.785	0.770	1830	966	3.83e6	4.78e6	2092.6	4953.9	NO	bb	bb	100.000
13C-2378-TCDD	25.408	1.033	2.921e5	3.736e5	1.181	0.782	0.770	1830	966	4.00e6	5.17e6	2184.1	5351.0	NO	bb	bb	99.072
13C-12378-PeCDD	30.516	1.240	3.418e5	2.076e5	0.978	1.647	1.550	1648	1383	4.62e6	2.82e6	2801.9	2036.0	NO	bb	bb	98.799
13C-123478-HxCDD	35.090	0.986	3.407e5	2.716e5	0.965	1.255	1.240	1243	1708	4.97e6	3.89e6	4000.5	2276.3	NO	bd	bd	100.165
13C-123678-HxCDD	35.202	0.989	4.297e5	3.388e5	1.168	1.268	1.240	1243	1708	5.40e6	4.37e6	4342.8	2561.6	NO	db	db	103.852
13C-1234678-HpCDD	39.342	1.105	2.180e5	2.036e5	0.645	1.071	1.050	2471	2604	2.71e6	2.51e6	1097.3	964.6	NO	bb	bd	103.126
13C-OCDD	43.813	1.231	4.232e5	4.755e5	0.678	0.890	0.890	2396	2761	4.16e6	4.57e6	1734.2	1655.4	NO	bd	bd	209.169
13C-123789-HxCDD	35.591	0.000	3.525e5	2.809e5	1.000	1.255	1.240	1243	1708	4.42e6	3.59e6	3553.2	2104.6	NO	bb	bb	100.000
37CL-2378-TCDD	25.438	1.034	6.906e4		1.264			1414		9.86e5		697.6			bb		9.604

Dataset: T:\Autospec\Processed Data Batch\201029ICIH.qld
Last Altered: Friday, October 30, 2020 09:08:24 Pacific Daylight Time
Printed: Friday, October 30, 2020 14:34:07 Pacific Daylight Time

ID: CS3CJ, Name: 20102907, Date: 29-Oct-2020, Time: 20:46:44, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	21.314	0.860	4.671e4	6.003e4	0.846	0.778	0.770	1118	1451	7.33e5	9.41e5	655.3	648.6	NO	bb	bb	10.000
1289-TCDF	26.270	1.060	3.792e4	4.882e4	0.688	0.777	0.770	1118	1451	5.11e5	6.49e5	456.7	447.2	NO	db	db	10.000
13468-PECDF	26.133	0.904	3.545e5	2.316e5	1.181	1.531	1.550	434	663	5.07e6	3.29e6	11677.3	4966.9	NO	bb	bb	50.000
12389-PECDF	31.306	1.083	2.417e5	1.383e5	0.766	1.747	1.550	3753	3487	3.16e6	1.85e6	842.0	529.2	NO	bb	bb	50.000
123468-HXCDF	32.230	0.950	1.846e5	1.450e5	1.003	1.273	1.240	1898	1936	2.56e6	1.99e6	1350.6	1025.4	NO	bb	bb	50.000
1368-TCDD	22.583	0.889	3.426e4	4.420e4	1.179	0.775	0.770	1453	1260	5.07e5	6.52e5	348.8	517.7	NO	bb	bb	10.000
1289-TCDD	26.028	1.024	3.131e4	3.807e4	1.042	0.823	0.770	1453	1260	3.99e5	5.11e5	274.4	406.0	NO	bd	bb	10.000
12479-PECDD	27.833	0.912	3.071e5	1.902e5	1.810	1.614	1.550	2219	1460	2.91e6	1.86e6	1313.3	1276.2	NO	bb	bb	50.000
12389-PECDD	30.928	1.013	1.998e5	1.204e5	1.165	1.660	1.550	2219	1460	2.58e6	1.58e6	1162.3	1083.1	NO	bb	bb	50.000
124679-HXCDD	33.031	0.941	1.749e5	1.485e5	1.056	1.179	1.240	2272	2026	2.33e6	1.92e6	1027.3	950.0	NO	bb	bd	50.000
1234679-HPCDD	38.363	0.975	1.352e5	1.357e5	1.285	0.996	1.050	2693	3305	1.67e6	1.64e6	619.8	496.6	NO	bb	bd	50.000
Total-tetrafurans			1.235e5		0.754			1118		1.79e6							29.708
Total-penta1			3.545e5					434		5.07e6							50.000
Total-pentafurans			7.945e5		0.809			3753		1.10e7							159.917
Total-hexafurans			8.665e5		0.876			1898		1.19e7							256.349
Total-heptafurans			3.020e5		0.997			2613		3.68e6							106.620
Total-Furans			2.699e6		0.893			1118		3.60e7							705.908
Total-tetradioxins			1.692e5		1.153			1453		2.20e6							49.600
Total-pentadioxins			6.725e5		1.321			2219		7.73e6							149.933
Total-hexadioxins			6.683e5		0.897			2272		8.69e6							208.948
Total-heptadioxins			2.545e5		1.165			2693		3.10e6							102.007
Total-Dioxins			1.964e6		1.100			1453		2.38e7							609.574
Total-TEQ			4.663e6					1453		5.97e7							1315.482
FUNCTION1 PFK			7.717e5					612943		1.61e7							
FUNCTION2 PFK			6.214e5					380597		1.50e7							0.000
FUNCTION3 PFK			6.297e5					435625		1.55e7							0.000
FUNCTION4 PFK			4.360e5					370689		1.11e7							
FUNCTION5 PFK			5.721e4					220707		1.20e6							
FUNCTION1 HXCD...			0.000e0					434		0.00e0							
FUNCTION1 HPCD...			3.438e2					553		8.23e3							0.000
FUNCTION2 HPCD...			3.356e2					526		4.81e3							0.000
FUNCTION3 OCDPE			0.000e0					157		0.00e0							
FUNCTION4 NCDPE			0.000e0					516		0.00e0							
FUNCTION5 DCDPE			0.000e0					216		0.00e0							

Method: T:\Autospec\Methods\Dioxin201016.mdb 28 Oct 2020 21:30:41
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 09:08:24

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	26.27	3.792e4	4.882e4	0.688	0.78	0.77	456.7	YES	NO	db	db	10.000
2	2378-TCDF	24.79	3.883e4	5.039e4	0.729	0.77	0.77	491.0	YES	NO	bb	bb	9.708
3	1368-TCDF	21.31	4.671e4	6.003e4	0.846	0.78	0.77	655.3	YES	NO	bb	bb	10.000

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	26.13	3.545e5	2.316e5	1.181	1.53	1.55	11677.3	YES	NO	bb	bb	50.000

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	31.31	2.417e5	1.383e5	0.766	1.75	1.55	842.0	YES	NO	bb	bb	50.000
2	23478-PeCDF	30.27	2.582e5	1.563e5	0.880	1.65	1.55	970.9	YES	NO	bb	bb	50.119
3	12378-PeCDF	28.92	2.552e5	1.442e5	0.779	1.77	1.55	968.7	YES	NO	bb	bb	51.658
4	Total-pentafurans	27.79	3.933e4	2.425e4	0.809	1.62	1.55	145.0	YES	NO	bb	bb	8.140

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	234678-HxCDF	34.98	1.754e5	1.353e5	0.863	1.30	1.24	1269.1	YES	NO	bb	bb	49.090
2	123678-HxCDF	34.08	1.984e5	1.568e5	0.853	1.27	1.24	1411.7	YES	NO	db	db	52.159
3	123478-HxCDF	33.93	1.704e5	1.326e5	0.880	1.28	1.24	1302.4	YES	NO	bd	bd	52.351
4	123468-HXCDF	32.23	1.846e5	1.450e5	1.003	1.27	1.24	1350.6	YES	NO	bb	bb	50.000
5	123789-HxCDF	36.03	1.378e5	1.040e5	0.780	1.33	1.24	935.0	YES	NO	bb	bb	52.749

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	40.05	1.303e5	1.192e5	0.994	1.09	1.05	541.2	YES	NO	bd	bd	52.915
2	1234678-HpCDF	37.91	1.718e5	1.582e5	1.001	1.09	1.05	867.0	YES	NO	bd	bd	53.706

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	26.27	3.792e4	4.882e4	0.688	0.78	0.77	456.7	YES	NO	db	db	10.000
2	2378-TCDF	24.79	3.883e4	5.039e4	0.729	0.77	0.77	491.0	YES	NO	bb	bb	9.708
3	1368-TCDF	21.31	4.671e4	6.003e4	0.846	0.78	0.77	655.3	YES	NO	bb	bb	10.000
4	12389-PECDF	31.31	2.417e5	1.383e5	0.766	1.75	1.55	842.0	YES	NO	bb	bb	50.000
5	23478-PeCDF	30.27	2.582e5	1.563e5	0.880	1.65	1.55	970.9	YES	NO	bb	bb	50.119
6	12378-PeCDF	28.92	2.552e5	1.442e5	0.779	1.77	1.55	968.7	YES	NO	bb	bb	51.658
7	Total-pentafurans	27.79	3.933e4	2.425e4	0.809	1.62	1.55	145.0	YES	NO	bb	bb	8.140
8	234678-HxCDF	34.98	1.754e5	1.353e5	0.863	1.30	1.24	1269.1	YES	NO	bb	bb	49.090
9	123678-HxCDF	34.08	1.984e5	1.568e5	0.853	1.27	1.24	1411.7	YES	NO	db	db	52.159
10	123478-HxCDF	33.93	1.704e5	1.326e5	0.880	1.28	1.24	1302.4	YES	NO	bd	bd	52.351
11	123468-HXCDF	32.23	1.846e5	1.450e5	1.003	1.27	1.24	1350.6	YES	NO	bb	bb	50.000
12	123789-HxCDF	36.03	1.378e5	1.040e5	0.780	1.33	1.24	935.0	YES	NO	bb	bb	52.749
13	1234789-HpCDF	40.05	1.303e5	1.192e5	0.994	1.09	1.05	541.2	YES	NO	bd	bd	52.915
14	1234678-HpCDF	37.91	1.718e5	1.582e5	1.001	1.09	1.05	867.0	YES	NO	bd	bd	53.706
15	OCDF	44.05	2.581e5	2.795e5	1.158	0.92	0.89	987.6	YES	NO	bd	bd	103.313
16	13468-PECDF	26.13	3.545e5	2.316e5	1.181	1.53	1.55	11677.3	YES	NO	bb	bb	50.000

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	22.58	3.426e4	4.420e4	1.179	0.78	0.77	348.8	YES	NO	bb	bb	10.000
2	1289-TCDD	26.03	3.131e4	3.807e4	1.042	0.82	0.77	274.4	YES	NO	bd	bb	10.000
3	2378-TCDD	25.44	3.495e4	4.331e4	1.238	0.81	0.77	344.2	YES	NO	bb	bb	9.495
4	Total-tetradioxins	25.11	5.283e4	6.499e4	1.153	0.81	0.77	380.9	YES	NO	bd	bb	15.351
5	Total-tetradioxins	24.62	1.582e4	2.067e4	1.153	0.77	0.77	166.5	YES	NO	bb	bb	4.754

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	30.93	1.998e5	1.204e5	1.165	1.66	1.55	1162.3	YES	NO	bb	bb	50.000
2	12378-PeCDD	30.54	1.656e5	1.054e5	0.988	1.57	1.55	1010.2	YES	NO	bb	bb	49.933
3	12479-PECDD	27.83	3.071e5	1.902e5	1.810	1.61	1.55	1313.3	YES	NO	bb	bb	50.000

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	35.61	1.521e5	1.427e5	0.784	1.07	1.24	836.4	YES	NO	bb	dd	54.494
2	123678-HxCDD	35.22	1.956e5	1.726e5	0.907	1.13	1.24	1015.8	YES	NO	db	dd	52.824
3	123478-HxCDD	35.10	1.456e5	1.205e5	0.842	1.21	1.24	946.2	YES	NO	bd	bd	51.630
4	124679-HXCDD	33.03	1.749e5	1.485e5	1.056	1.18	1.24	1027.3	YES	NO	bb	bd	50.000

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	39.36	1.193e5	1.096e5	1.044	1.09	1.05	532.4	YES	NO	bd	bd	52.007
2	1234679-HPCDD	38.36	1.352e5	1.357e5	1.285	1.00	1.05	619.8	YES	NO	bb	bd	50.000

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	22.58	3.426e4	4.420e4	1.179	0.78	0.77	348.8	YES	NO	bb	bb	10.000
2	1289-TCDD	26.03	3.131e4	3.807e4	1.042	0.82	0.77	274.4	YES	NO	bd	bb	10.000
3	2378-TCDD	25.44	3.495e4	4.331e4	1.238	0.81	0.77	344.2	YES	NO	bb	bb	9.495
4	Total-tetradioxins	25.11	5.283e4	6.499e4	1.153	0.81	0.77	380.9	YES	NO	bd	bb	15.351
5	Total-tetradioxins	24.62	1.582e4	2.067e4	1.153	0.77	0.77	166.5	YES	NO	bb	bb	4.754
6	12389-PECDD	30.93	1.998e5	1.204e5	1.165	1.66	1.55	1162.3	YES	NO	bb	bb	50.000
7	12378-PeCDD	30.54	1.656e5	1.054e5	0.988	1.57	1.55	1010.2	YES	NO	bb	bb	49.933
8	12479-PECDD	27.83	3.071e5	1.902e5	1.810	1.61	1.55	1313.3	YES	NO	bb	bb	50.000
9	123789-HxCDD	35.61	1.521e5	1.427e5	0.784	1.07	1.24	836.4	YES	NO	bb	dd	54.494
10	123678-HxCDD	35.22	1.956e5	1.726e5	0.907	1.13	1.24	1015.8	YES	NO	db	dd	52.824
11	123478-HxCDD	35.10	1.456e5	1.205e5	0.842	1.21	1.24	946.2	YES	NO	bd	bd	51.630
12	124679-HXCDD	33.03	1.749e5	1.485e5	1.056	1.18	1.24	1027.3	YES	NO	bb	bd	50.000
13	1234678-HpCDD	39.36	1.193e5	1.096e5	1.044	1.09	1.05	532.4	YES	NO	bd	bd	52.007
14	1234679-HPCDD	38.36	1.352e5	1.357e5	1.285	1.00	1.05	619.8	YES	NO	bb	bd	50.000
15	OCDD	43.83	1.992e5	2.296e5	0.963	0.87	0.89	780.4	YES	NO	bd	bd	99.087

Dataset: T:\Autospec\Processed Data Batch\201029ICIH.qld
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ID: CS3CJ, Name: 20102907, Date: 29-Oct-2020, Time: 20:46:44, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	26.27	3.792e4	4.882e4	0.688	0.78	0.77	456.7	YES	NO	db	db	10.000
2	2378-TCDF	24.79	3.883e4	5.039e4	0.729	0.77	0.77	491.0	YES	NO	bb	bb	9.708
3	1368-TCDF	21.31	4.671e4	6.003e4	0.846	0.78	0.77	655.3	YES	NO	bb	bb	10.000
4	12389-PECDF	31.31	2.417e5	1.383e5	0.766	1.75	1.55	842.0	YES	NO	bb	bb	50.000
5	23478-PeCDF	30.27	2.582e5	1.563e5	0.880	1.65	1.55	970.9	YES	NO	bb	bb	50.119
6	12378-PeCDF	28.92	2.552e5	1.442e5	0.779	1.77	1.55	968.7	YES	NO	bb	bb	51.658
7	Total-pentafurans	27.79	3.933e4	2.425e4	0.809	1.62	1.55	145.0	YES	NO	bb	bb	8.140
8	234678-HxCDF	34.98	1.754e5	1.353e5	0.863	1.30	1.24	1269.1	YES	NO	bb	bb	49.090
9	123678-HxCDF	34.08	1.984e5	1.568e5	0.853	1.27	1.24	1411.7	YES	NO	db	db	52.159
10	123478-HxCDF	33.93	1.704e5	1.326e5	0.880	1.28	1.24	1302.4	YES	NO	bd	bd	52.351
11	123468-HXCDF	32.23	1.846e5	1.450e5	1.003	1.27	1.24	1350.6	YES	NO	bb	bb	50.000
12	123789-HxCDF	36.03	1.378e5	1.040e5	0.780	1.33	1.24	935.0	YES	NO	bb	bb	52.749
13	1234789-HpCDF	40.05	1.303e5	1.192e5	0.994	1.09	1.05	541.2	YES	NO	bd	bd	52.915
14	1234678-HpCDF	37.91	1.718e5	1.582e5	1.001	1.09	1.05	867.0	YES	NO	bd	bd	53.706
15	OCDF	44.05	2.581e5	2.795e5	1.158	0.92	0.89	987.6	YES	NO	bd	bd	103.313
16	13468-PECDF	26.13	3.545e5	2.316e5	1.181	1.53	1.55	11677.3	YES	NO	bb	bb	50.000
17	1368-TCDD	22.58	3.426e4	4.420e4	1.179	0.78	0.77	348.8	YES	NO	bb	bb	10.000
18	1289-TCDD	26.03	3.131e4	3.807e4	1.042	0.82	0.77	274.4	YES	NO	bd	bb	10.000
19	2378-TCDD	25.44	3.495e4	4.331e4	1.238	0.81	0.77	344.2	YES	NO	bb	bb	9.495
20	Total-tetradioxins	25.11	5.283e4	6.499e4	1.153	0.81	0.77	380.9	YES	NO	bd	bb	15.351
21	Total-tetradioxins	24.62	1.582e4	2.067e4	1.153	0.77	0.77	166.5	YES	NO	bb	bb	4.754
22	12389-PECDD	30.93	1.998e5	1.204e5	1.165	1.66	1.55	1162.3	YES	NO	bb	bb	50.000
23	12378-PeCDD	30.54	1.656e5	1.054e5	0.988	1.57	1.55	1010.2	YES	NO	bb	bb	49.933
24	12479-PECDD	27.83	3.071e5	1.902e5	1.810	1.61	1.55	1313.3	YES	NO	bb	bb	50.000
25	123789-HxCDD	35.61	1.521e5	1.427e5	0.784	1.07	1.24	836.4	YES	NO	bb	dd	54.494
26	123678-HxCDD	35.22	1.956e5	1.726e5	0.907	1.13	1.24	1015.8	YES	NO	db	dd	52.824
27	123478-HxCDD	35.10	1.456e5	1.205e5	0.842	1.21	1.24	946.2	YES	NO	bd	bd	51.630
28	124679-HXCDD	33.03	1.749e5	1.485e5	1.056	1.18	1.24	1027.3	YES	NO	bb	bd	50.000
29	1234678-HpCDD	39.36	1.193e5	1.096e5	1.044	1.09	1.05	532.4	YES	NO	bd	bd	52.007
30	1234679-HPCDD	38.36	1.352e5	1.357e5	1.285	1.00	1.05	619.8	YES	NO	bb	bd	50.000
31	OCDD	43.83	1.992e5	2.296e5	0.963	0.87	0.89	780.4	YES	NO	bd	bd	99.087

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	24.95	1.774e4					0.8	NO		bb		
2	FUNCTION1 PFK	24.58	4.004e4					1.3	NO		bb		
3	FUNCTION1 PFK	24.37	1.289e4					0.7	NO		bb		
4	FUNCTION1 PFK	23.66	3.684e4					1.2	NO		bb		
5	FUNCTION1 PFK	23.57	3.204e4					1.4	NO		bb		
6	FUNCTION1 PFK	23.20	5.106e4					1.4	NO		bb		
7	FUNCTION1 PFK	22.78	3.391e4					0.9	NO		bb		
8	FUNCTION1 PFK	21.98	3.907e4					1.1	NO		bb		
9	FUNCTION1 PFK	21.86	2.931e4					1.1	NO		bb		
10	FUNCTION1 PFK	21.51	3.788e4					1.4	NO		bb		
11	FUNCTION1 PFK	21.40	2.537e4					1.2	NO		bb		
12	FUNCTION1 PFK	21.07	3.066e4					1.2	NO		bb		
13	FUNCTION1 PFK	20.72	4.097e4					1.3	NO		bb		
14	FUNCTION1 PFK	26.89	5.212e4					1.4	NO		bb		
15	FUNCTION1 PFK	26.54	5.495e4					1.7	NO		bb		
16	FUNCTION1 PFK	26.42	7.303e4					2.0	NO		bb		
17	FUNCTION1 PFK	26.30	3.045e4					1.3	NO		bb		
18	FUNCTION1 PFK	26.06	4.526e4					1.4	NO		bb		
19	FUNCTION1 PFK	25.86	2.668e4					1.1	NO		bb		
20	FUNCTION1 PFK	25.74	4.118e4					1.4	NO		bb		
21	FUNCTION1 PFK	25.05	2.022e4					1.0	NO		bb		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	27.91	2.510e4					1.5	NO		db		0.000
2	FUNCTION2 PFK	27.86	2.353e4					1.7	NO		bd		0.000
3	FUNCTION2 PFK	27.80	3.122e4					1.6	NO		bb		0.000
4	FUNCTION2 PFK	27.43	1.554e4					1.3	NO		bb		0.000
5	FUNCTION2 PFK	27.23	3.464e4					2.2	NO		db		0.000
6	FUNCTION2 PFK	27.19	1.117e4					1.2	NO		bd		0.000
7	FUNCTION2 PFK	27.09	3.358e4					2.3	NO		bb		0.000
8	FUNCTION2 PFK	30.52	1.598e3					0.4	NO		bb		0.000
9	FUNCTION2 PFK	30.44	1.188e4					1.1	NO		db		0.000
10	FUNCTION2 PFK	30.40	4.358e3					0.7	NO		bd		0.000
11	FUNCTION2 PFK	30.23	4.856e4					1.4	NO		bb		0.000
12	FUNCTION2 PFK	29.98	2.774e4					1.3	NO		bb		0.000
13	FUNCTION2 PFK	29.49	2.674e4					1.5	NO		bb		0.000
14	FUNCTION2 PFK	29.29	1.226e4					1.1	NO		bb		0.000
15	FUNCTION2 PFK	29.18	5.829e3					0.7	NO		bb		0.000
16	FUNCTION2 PFK	29.07	1.396e4					1.2	NO		db		0.000
17	FUNCTION2 PFK	28.94	7.534e4					2.2	NO		bd		0.000
18	FUNCTION2 PFK	28.85	2.145e4					1.5	NO		bb		0.000
19	FUNCTION2 PFK	28.77	9.001e3					1.3	NO		bb		0.000
20	FUNCTION2 PFK	28.70	3.428e4					1.8	NO		bb		0.000
21	FUNCTION2 PFK	28.47	2.328e4					1.6	NO		bb		0.000
22	FUNCTION2 PFK	28.36	2.218e3					0.5	NO		bb		0.000
23	FUNCTION2 PFK	28.15	3.080e4					1.8	NO		bb		0.000
24	FUNCTION2 PFK	31.46	2.412e4					1.2	NO		bb		0.000
25	FUNCTION2 PFK	31.35	1.415e3					0.3	NO		bb		0.000
26	FUNCTION2 PFK	31.22	2.151e4					1.5	NO		bb		0.000
27	FUNCTION2 PFK	31.14	1.125e4					1.0	NO		db		0.000
28	FUNCTION2 PFK	31.09	1.070e4					1.1	NO		bd		0.000
29	FUNCTION2 PFK	31.02	1.139e4					1.1	NO		db		0.000
30	FUNCTION2 PFK	30.97	5.935e3					0.7	NO		bd		0.000
31	FUNCTION2 PFK	30.67	1.100e4					0.9	NO		bb		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.31	2.696e4					1.4	NO		bb		0.000
2	FUNCTION3 PFK	32.79	6.516e3					0.8	NO		bb		0.000
3	FUNCTION3 PFK	32.72	9.732e3					0.7	NO		bb		0.000
4	FUNCTION3 PFK	32.61	3.354e4					1.1	NO		bb		0.000
5	FUNCTION3 PFK	32.36	1.529e4					1.0	NO		bb		0.000
6	FUNCTION3 PFK	32.16	5.727e4					2.2	NO		bb		0.000
7	FUNCTION3 PFK	31.97	1.265e4					1.2	NO		bb		0.000
8	FUNCTION3 PFK	36.27	1.349e4					1.3	NO		bb		0.000
9	FUNCTION3 PFK	36.16	3.241e4					1.8	NO		bb		0.000
10	FUNCTION3 PFK	35.80	1.978e4					1.3	NO		bb		0.000
11	FUNCTION3 PFK	35.71	3.902e3					0.5	NO		bb		0.000
12	FUNCTION3 PFK	35.57	2.035e4					1.5	NO		bb		0.000
13	FUNCTION3 PFK	35.38	1.125e4					1.0	NO		db		0.000
14	FUNCTION3 PFK	35.34	2.726e4					1.5	NO		bd		0.000
15	FUNCTION3 PFK	35.02	3.884e4					1.5	NO		bb		0.000
16	FUNCTION3 PFK	34.71	1.116e4					0.7	NO		db		0.000
17	FUNCTION3 PFK	34.65	1.145e4					0.9	NO		bd		0.000
18	FUNCTION3 PFK	34.41	7.083e4					2.5	NO		bb		0.000
19	FUNCTION3 PFK	34.33	2.879e4					1.9	NO		db		0.000
20	FUNCTION3 PFK	34.31	1.851e4					1.7	NO		bd		0.000
21	FUNCTION3 PFK	33.98	2.638e4					1.3	NO		db		0.000
22	FUNCTION3 PFK	33.88	4.540e4					1.6	NO		bd		0.000
23	FUNCTION3 PFK	33.78	3.462e4					1.5	NO		bb		0.000
24	FUNCTION3 PFK	36.85	5.447e3					0.6	NO		bb		0.000
25	FUNCTION3 PFK	36.75	2.039e3					0.4	NO		bb		0.000
26	FUNCTION3 PFK	36.63	7.887e3					0.9	NO		bb		0.000
27	FUNCTION3 PFK	36.52	1.230e4					1.1	NO		bb		0.000
28	FUNCTION3 PFK	36.39	2.562e4					1.3	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.90	2.828e4					1.2	NO		bb		
2	FUNCTION4 PFK	38.67	1.841e4					1.5	NO		db		
3	FUNCTION4 PFK	38.64	1.001e4					1.2	NO		bd		
4	FUNCTION4 PFK	38.21	3.904e4					1.8	NO		db		
5	FUNCTION4 PFK	38.11	3.317e4					1.7	NO		bd		
6	FUNCTION4 PFK	37.64	3.482e4					1.8	NO		db		
7	FUNCTION4 PFK	37.59	1.599e4					1.6	NO		bd		
8	FUNCTION4 PFK	37.48	2.457e4					1.3	NO		bb		
9	FUNCTION4 PFK	37.07	1.810e4					1.5	NO		db		
10	FUNCTION4 PFK	37.03	1.823e4					1.5	NO		bd		
11	FUNCTION4 PFK	41.49	5.480e3					0.7	NO		bb		
12	FUNCTION4 PFK	41.40	1.810e4					1.3	NO		bb		
13	FUNCTION4 PFK	41.16	3.924e4					2.0	NO		bb		
14	FUNCTION4 PFK	40.96	1.181e4					1.1	NO		bb		
15	FUNCTION4 PFK	40.84	1.279e4					1.2	NO		bb		
16	FUNCTION4 PFK	40.29	1.027e4					1.2	NO		bb		
17	FUNCTION4 PFK	40.04	1.964e4					1.2	NO		bb		
18	FUNCTION4 PFK	39.84	1.011e4					1.2	NO		db		
19	FUNCTION4 PFK	39.81	2.407e4					1.5	NO		dd		
20	FUNCTION4 PFK	39.71	2.186e4					1.4	NO		dd		
21	FUNCTION4 PFK	39.65	1.780e4					1.3	NO		bd		
22	FUNCTION4 PFK	39.01	4.233e3					0.6	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.85	2.026e4					2.7	NO		bb		
2	FUNCTION5 PFK	43.60	3.695e4					2.7	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	26.21	7.445e1					4.1	YES		bb		0.000
2	FUNCTION1 HPCD...	25.92	7.057e1					3.3	YES		bb		0.000
3	FUNCTION1 HPCD...	21.81	8.742e1					2.1	NO		bb		0.000
4	FUNCTION1 HPCD...	21.45	1.114e2					5.4	YES		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	30.17	3.356e2					9.1	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dataset: T:\Autospec\Processed Data Batch\201029ICIH.qld
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Method: T:\Autospec\Methods\Dioxin201016.mdb 28 Oct 2020 21:30:41
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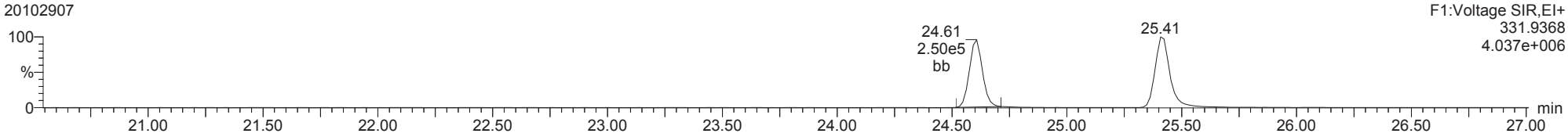
13C-1234-TCDD



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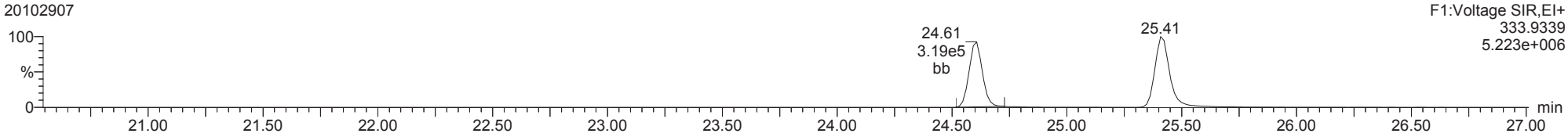

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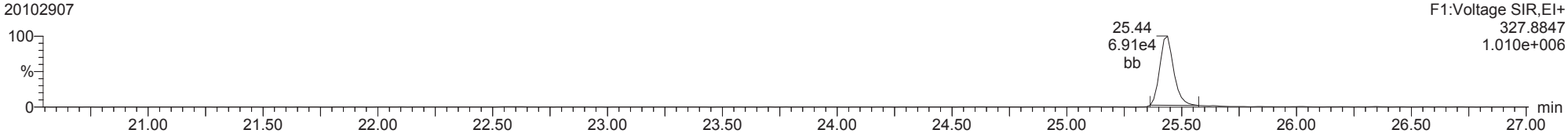

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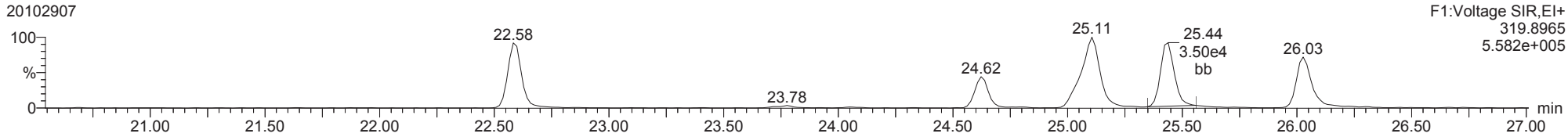

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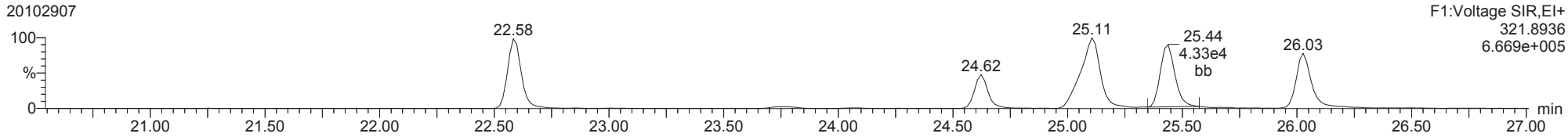

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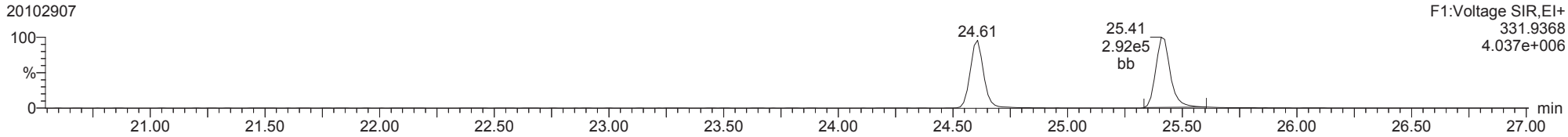

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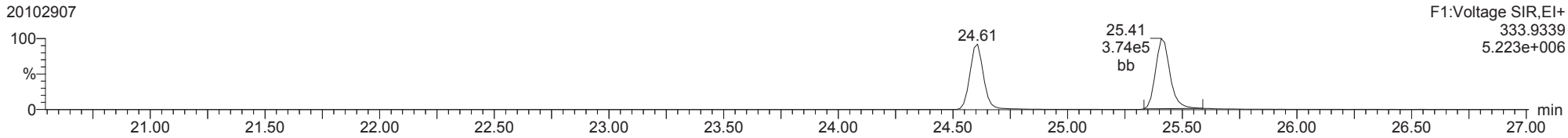

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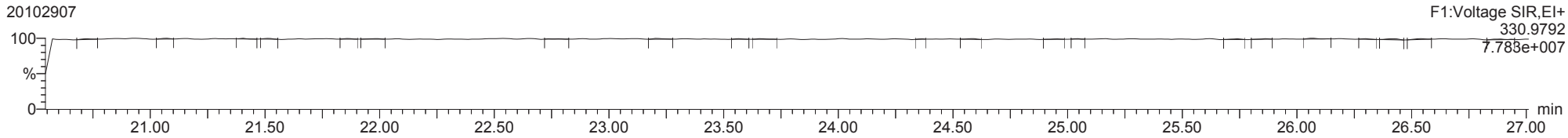

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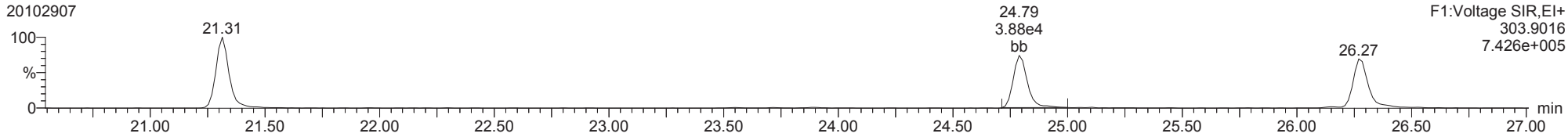
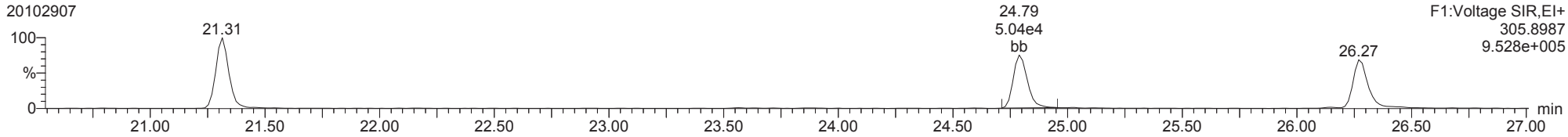
2378-TCDF



2378-TCDF



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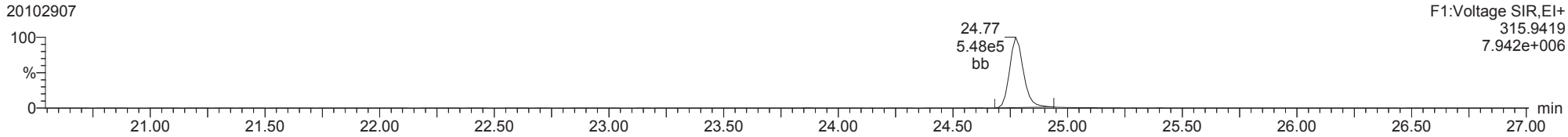

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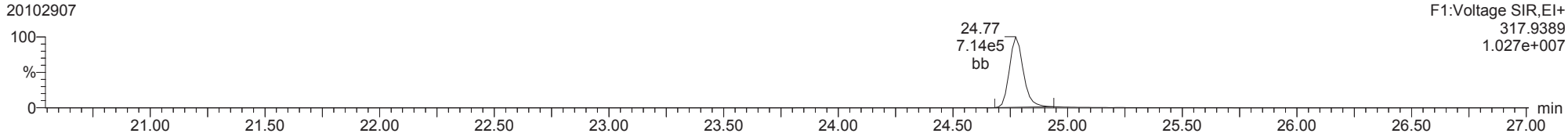
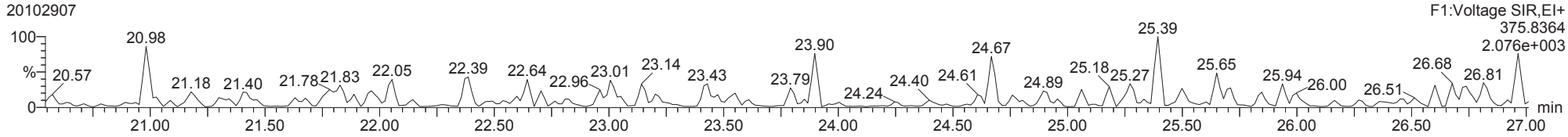


FUNCTION1 HXCDPE



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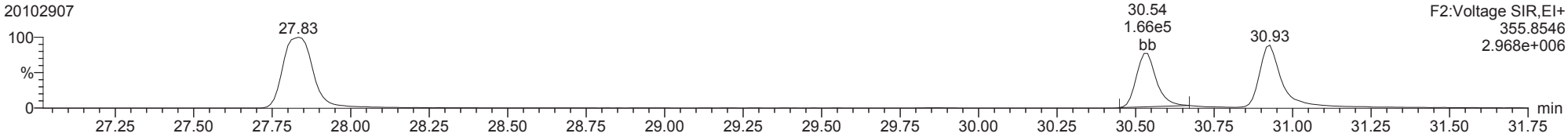
12378-PeCDD



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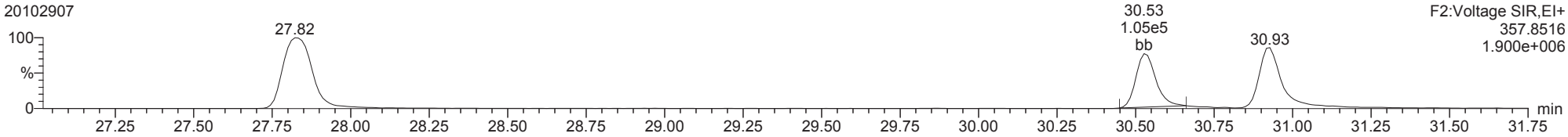

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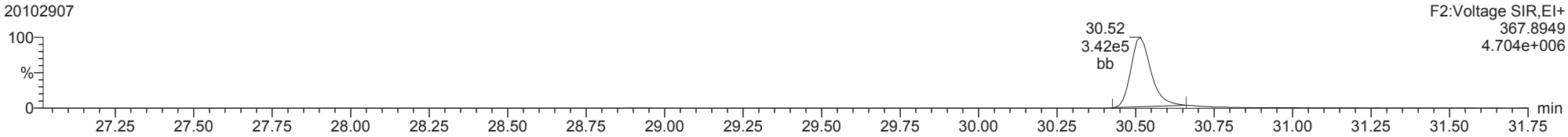

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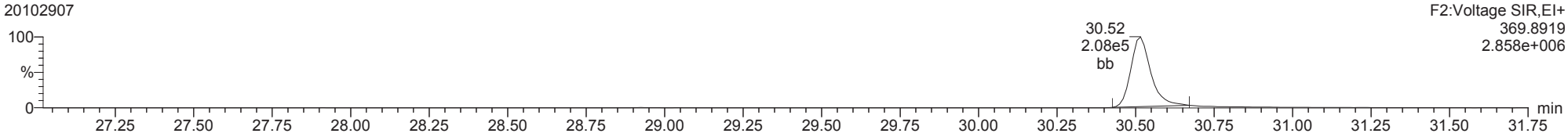
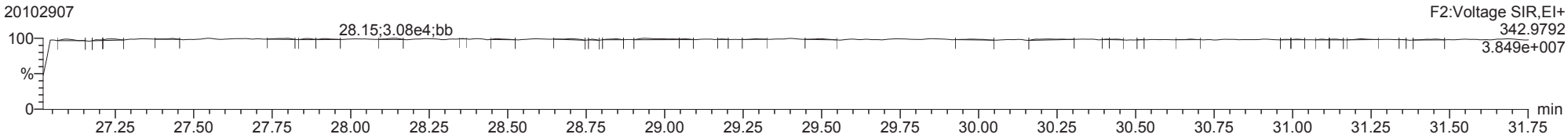
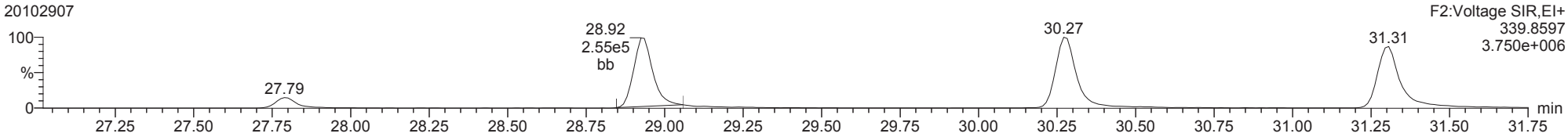


FUNCTION2 PFK



ID: CS3CJ, Name: 20102907, Date: 29-Oct-2020, Time: 20:46:44, Conditions: AUTOSPEC01, User: pk

12378-PeCDF



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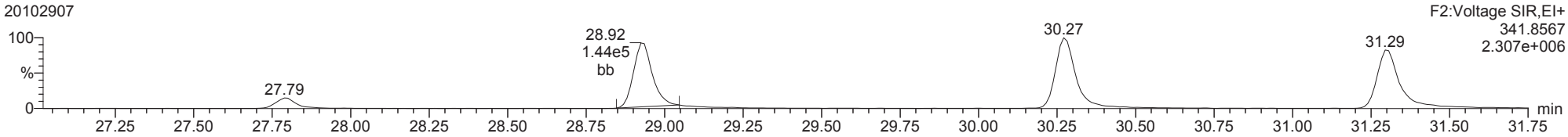

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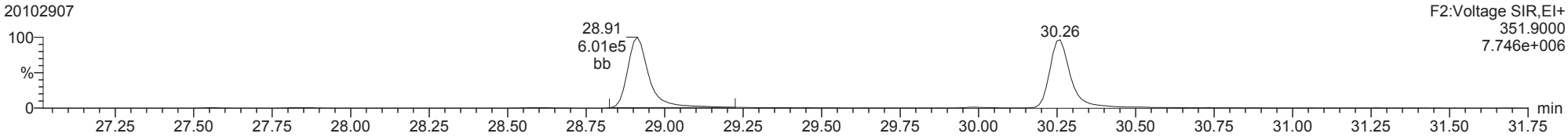

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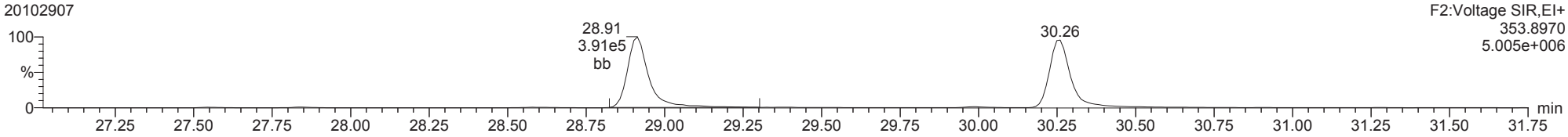
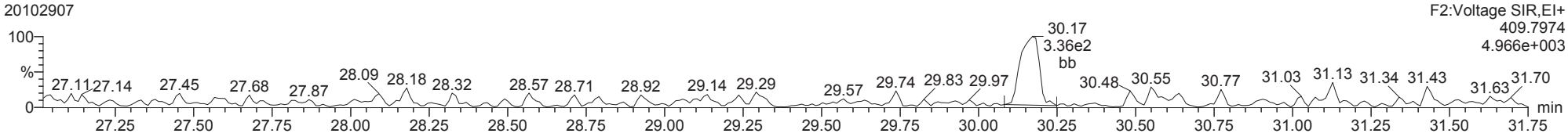


FUNCTION2 HPCDPE



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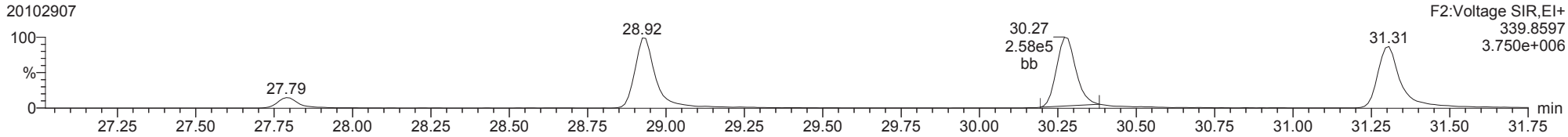
Printed: Friday, October 30, 2020 14:34:07 Pacific Daylight Time

ID: CS3CJ, Name: 20102907, Date: 29-Oct-2020, Time: 20:46:44, Conditions: AUTOSPEC01, User: pk

23478-PeCDF



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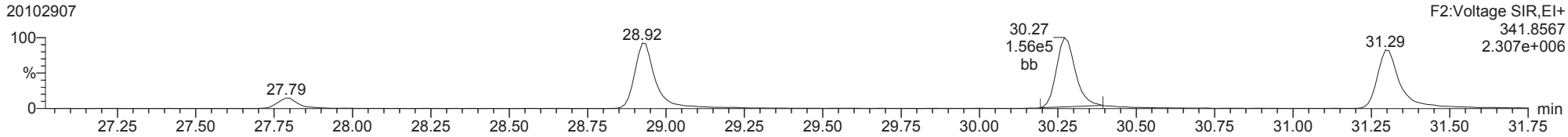

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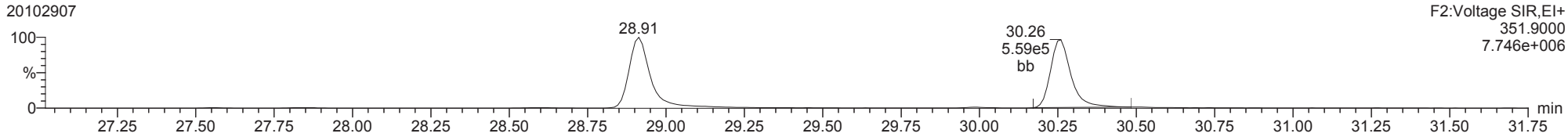

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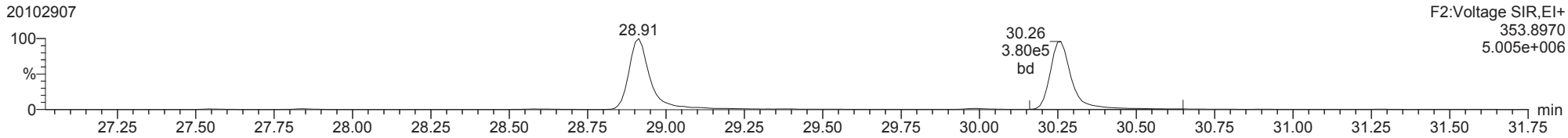
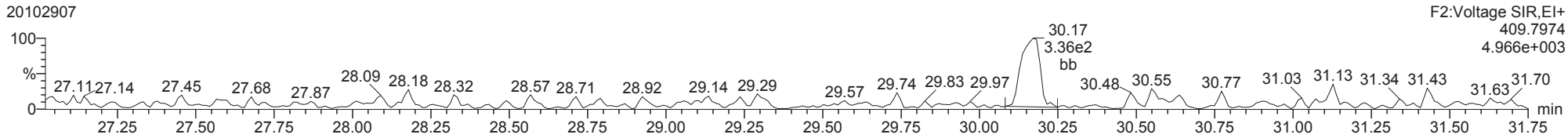


FUNCTION2 HPCDPE



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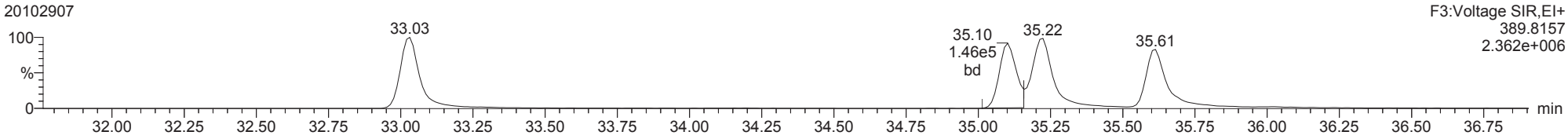
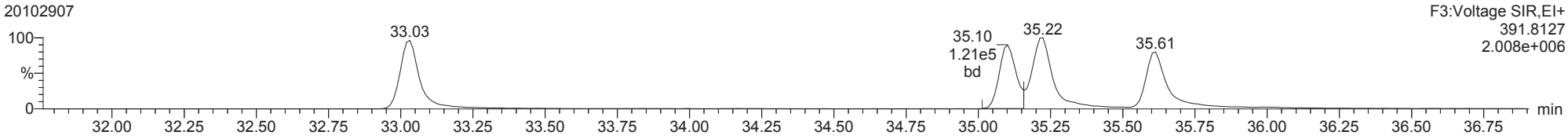
ID: CS3CJ, Name: 20102907, Date: 29-Oct-2020, Time: 20:46:44, Conditions: AUTOSPEC01, User: pk

123478-HxCDD



123478-HxCDD



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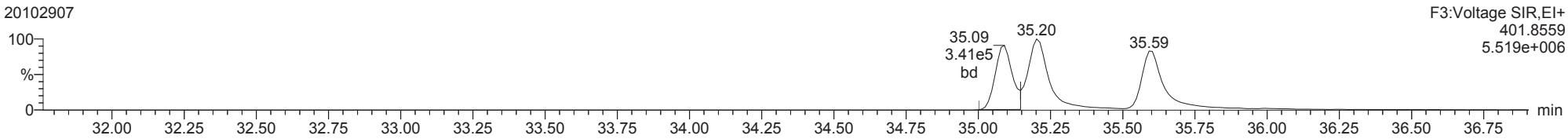

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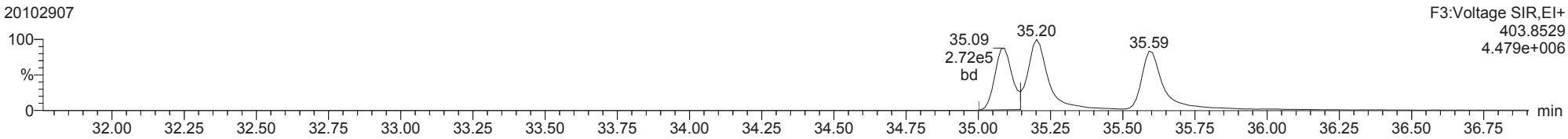
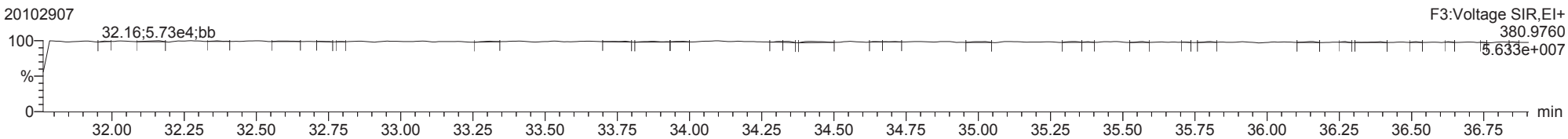


FUNCTION3 PFK



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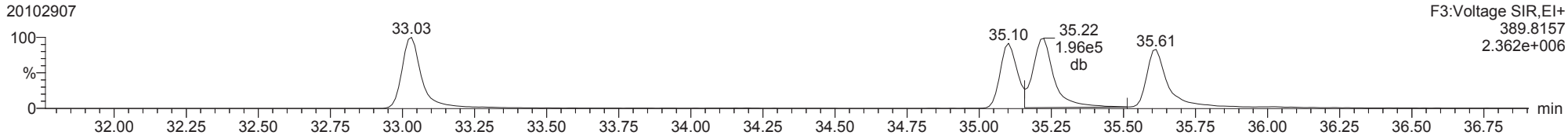
123678-HxCDD



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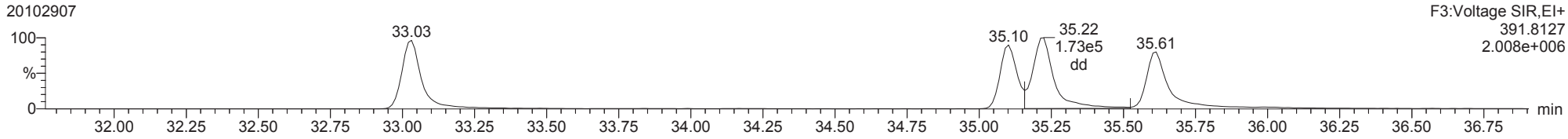

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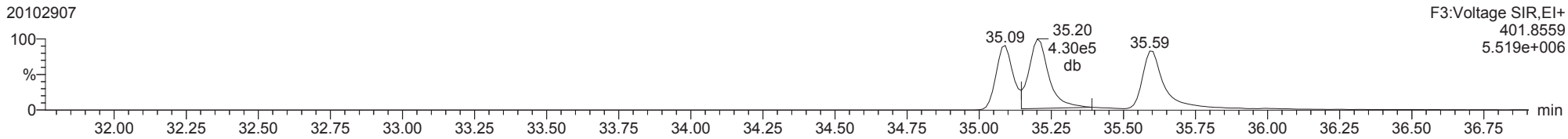

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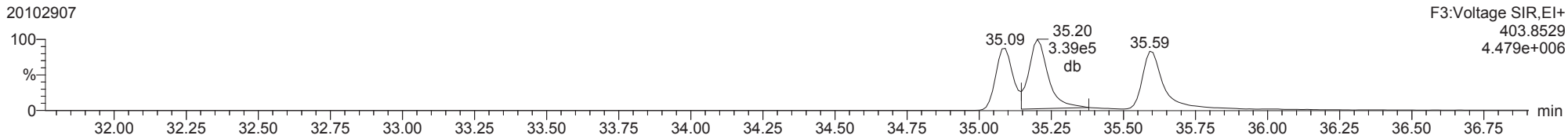

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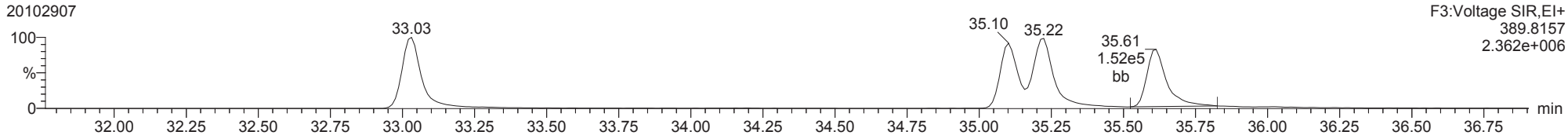
123789-HxCDD



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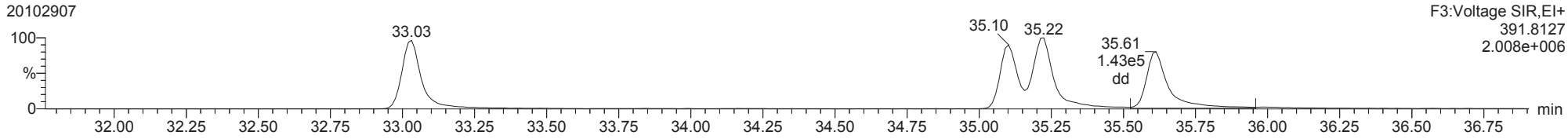

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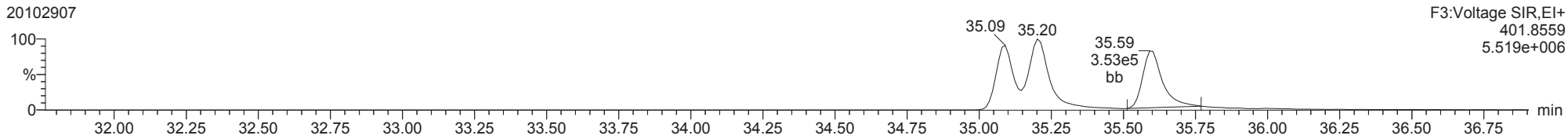

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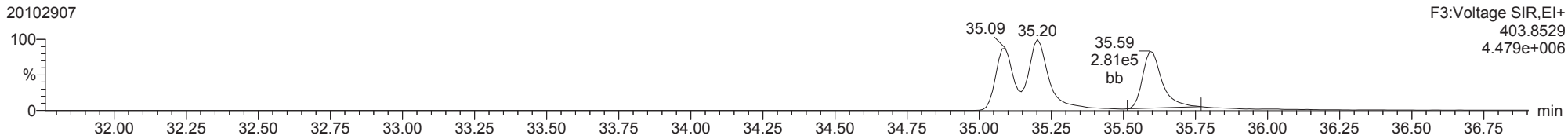

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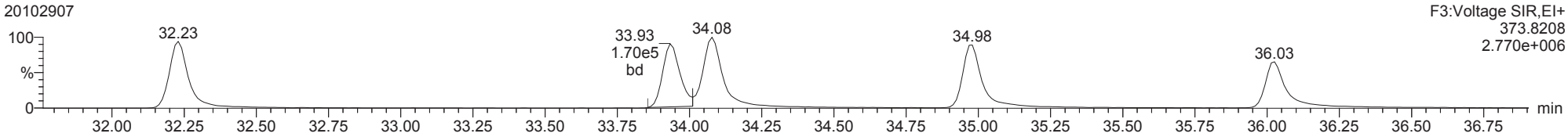
123478-HxCDF



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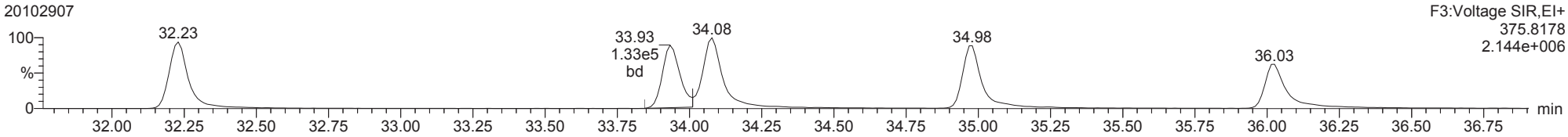

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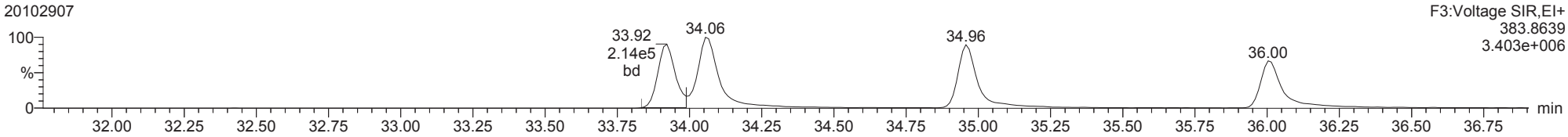

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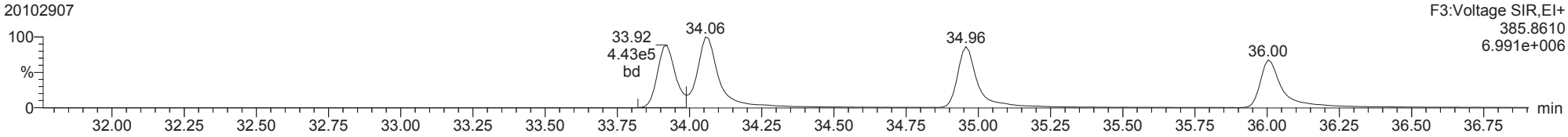
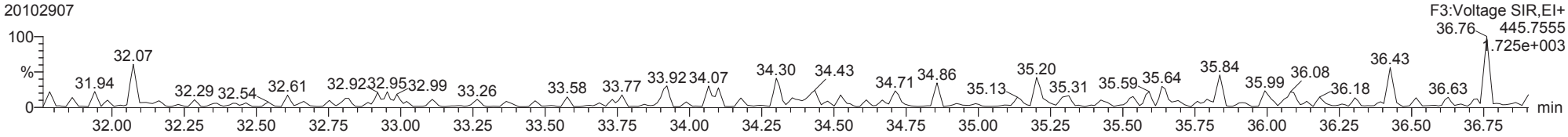


FUNCTION3 OCDPE



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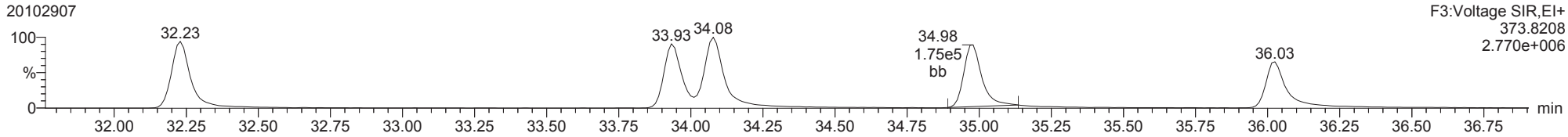
234678-HxCDF



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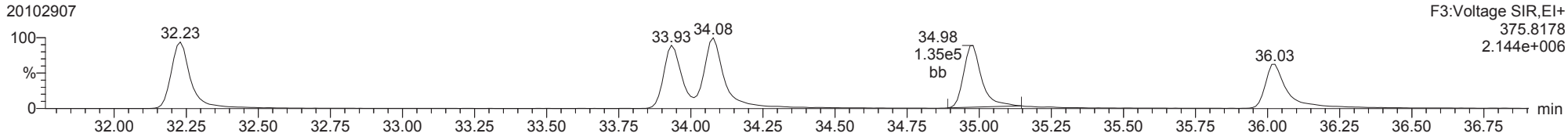

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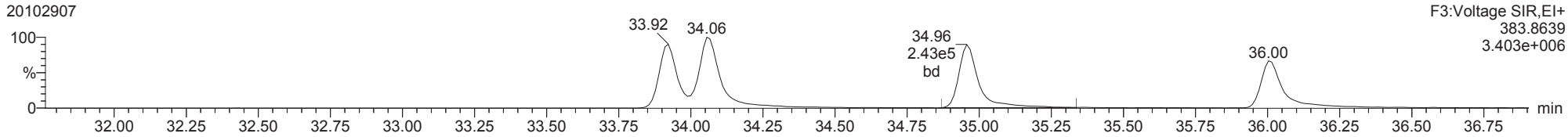

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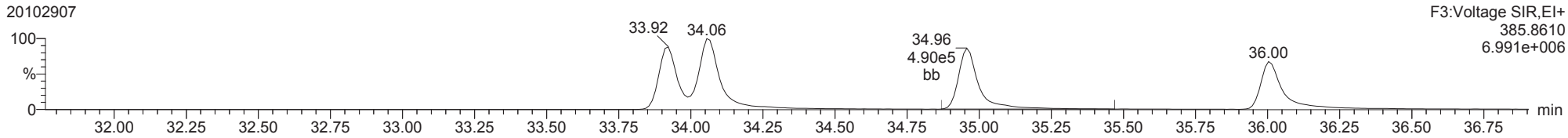
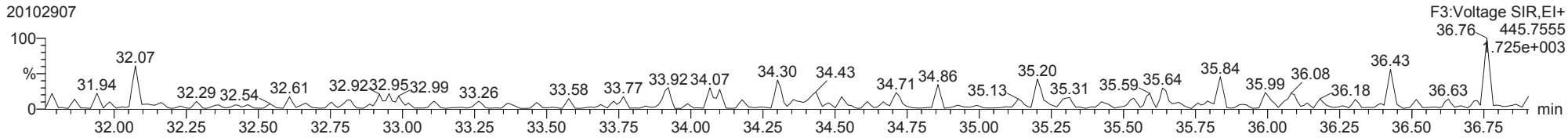


FUNCTION3 OCDPE



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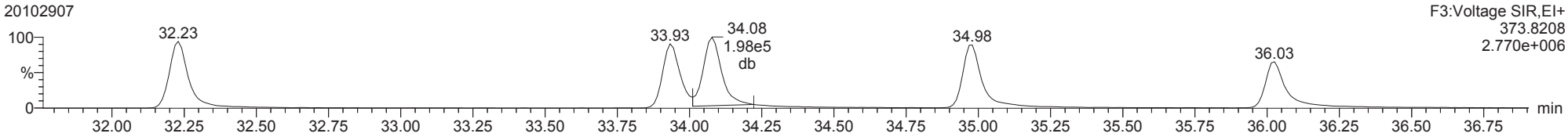
123678-HxCDF



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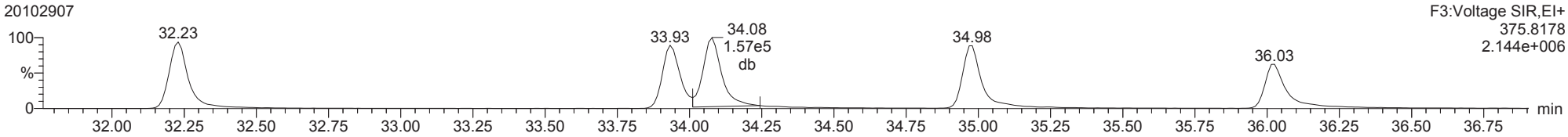

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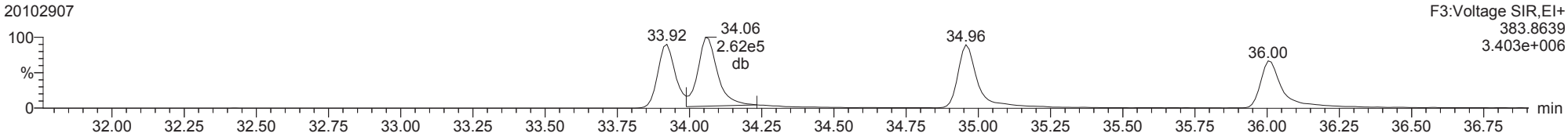

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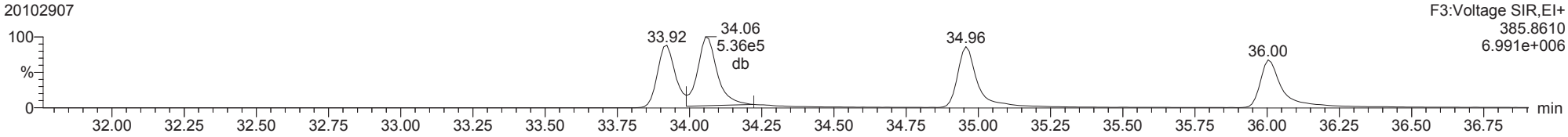
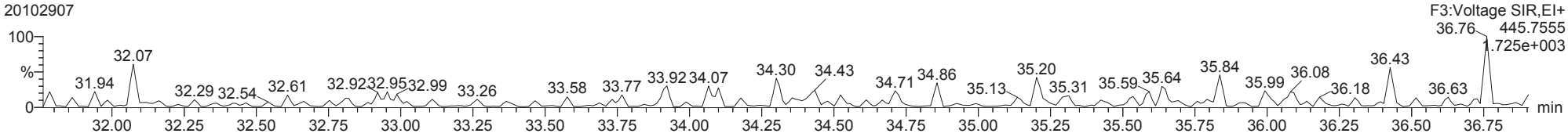


FUNCTION3 OCDPE



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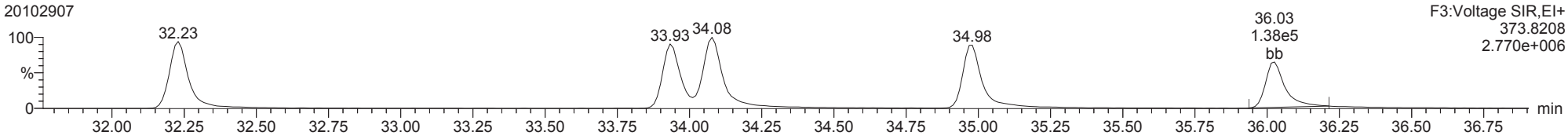
123789-HxCDF



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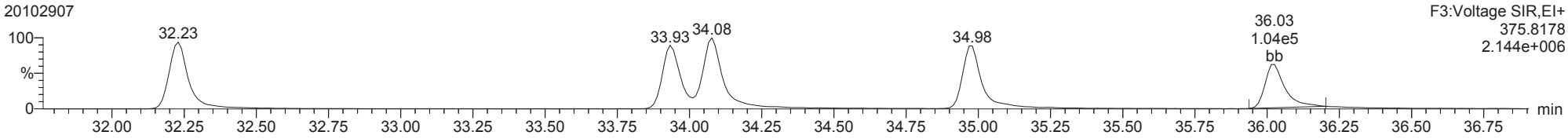

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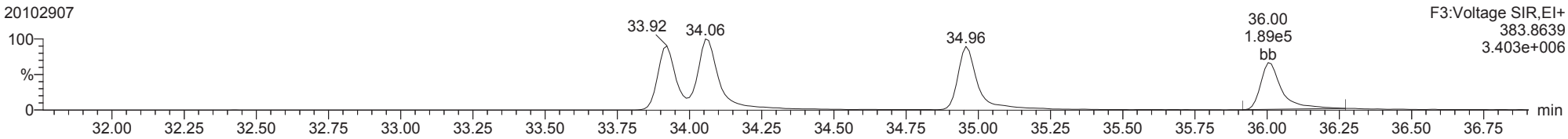

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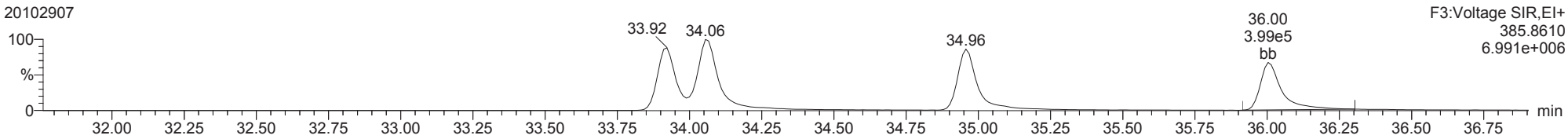
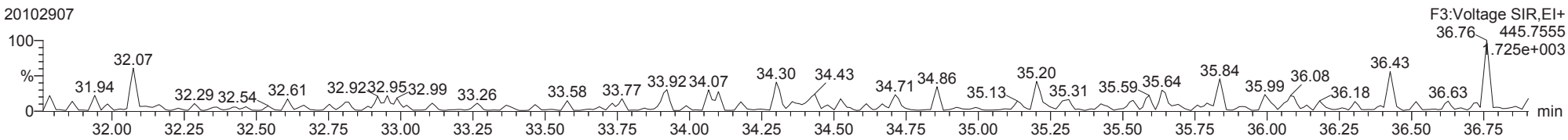
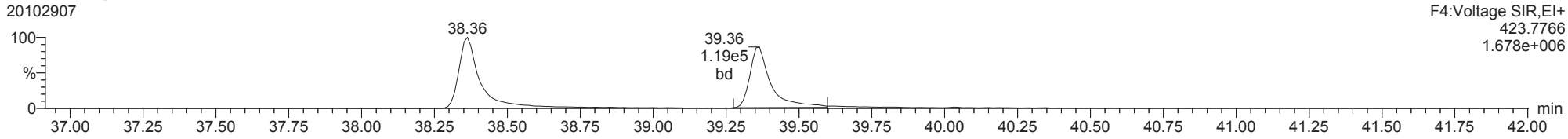


FUNCTION3 OCDPE

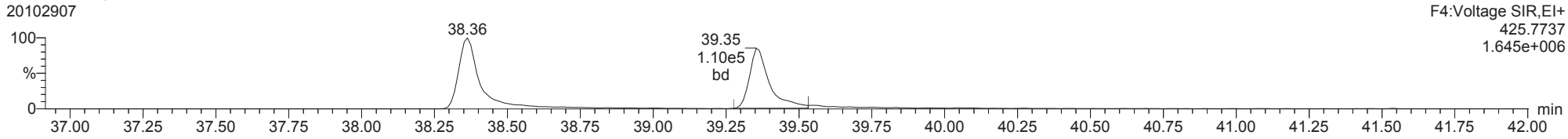


ID: CS3CJ, Name: 20102907, Date: 29-Oct-2020, Time: 20:46:44, Conditions: AUTOSPEC01, User: pk

1234678-HpCDD



1234678-HpCDD



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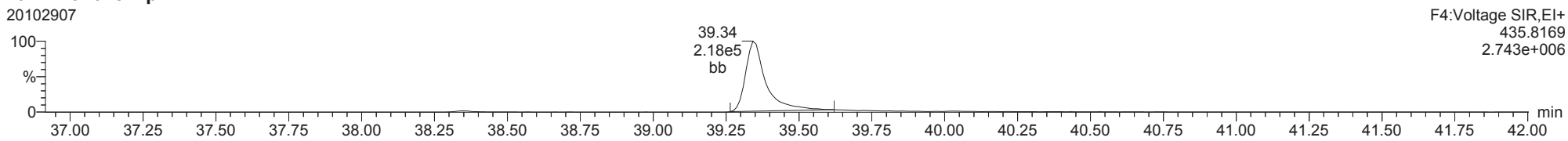

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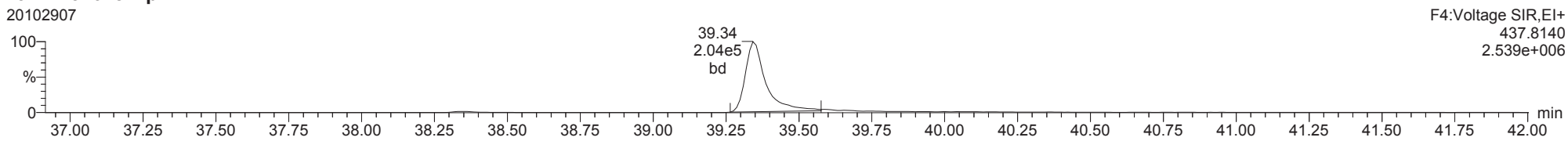
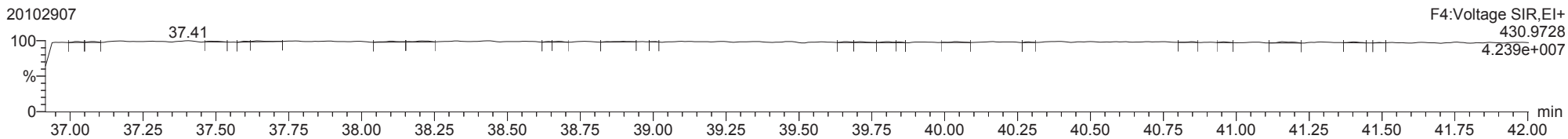


FUNCTION4 PFK



ID: CS3CJ, Name: 20102907, Date: 29-Oct-2020, Time: 20:46:44, Conditions: AUTOSPEC01, User: pk

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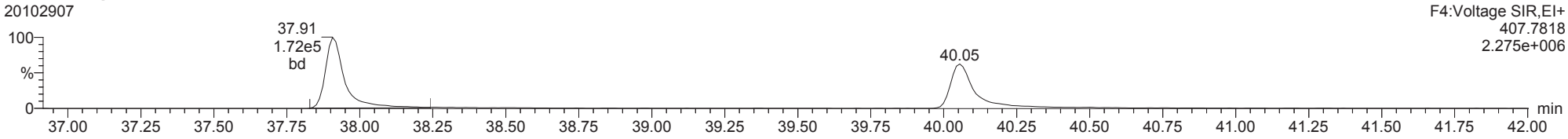

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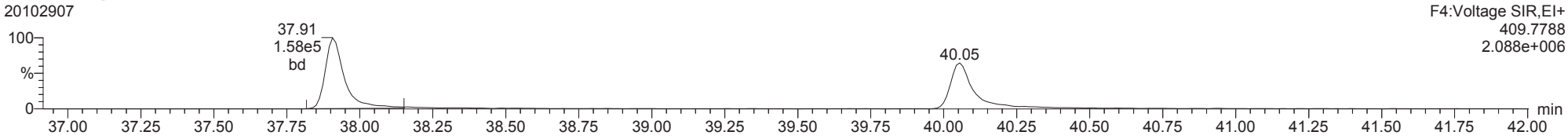

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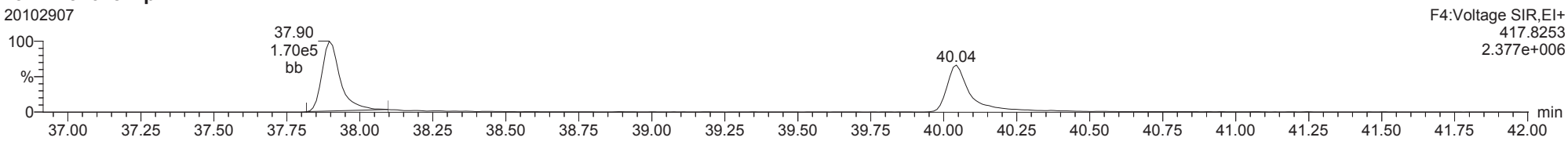

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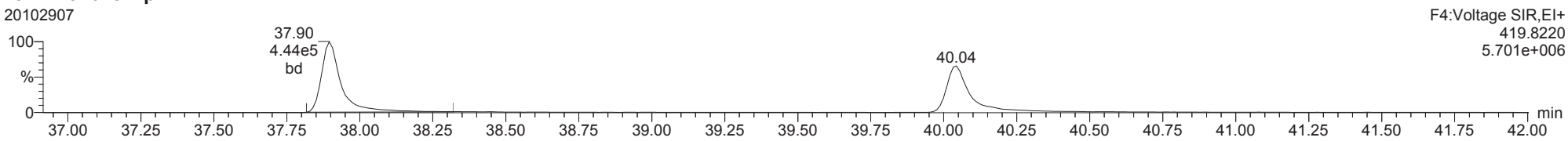
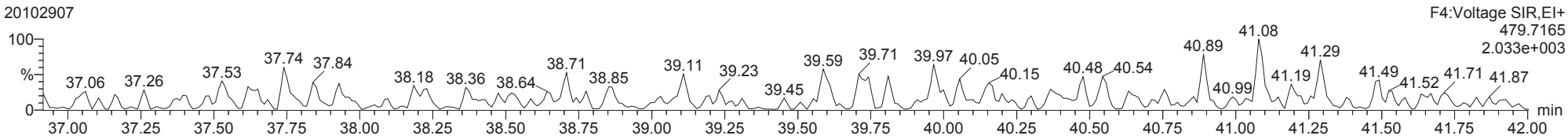
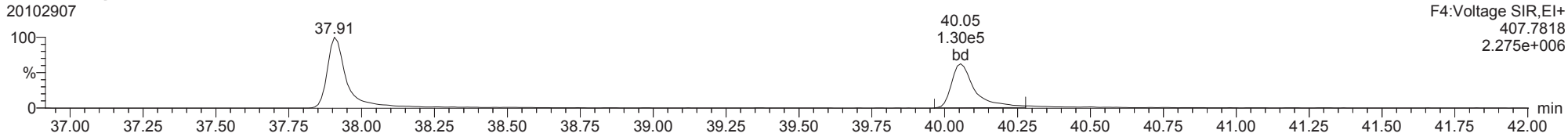


FUNCTION4 NCDPE

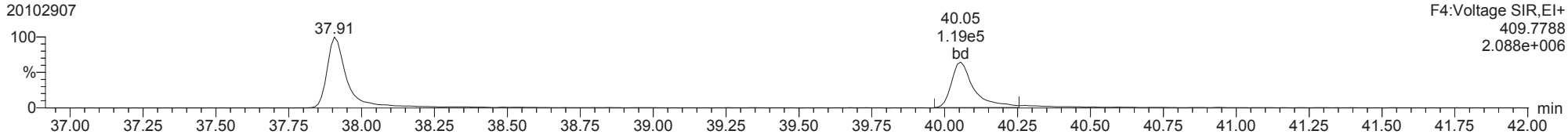


ID: CS3CJ, Name: 20102907, Date: 29-Oct-2020, Time: 20:46:44, Conditions: AUTOSPEC01, User: pk

1234789-HpCDF



1234789-HpCDF



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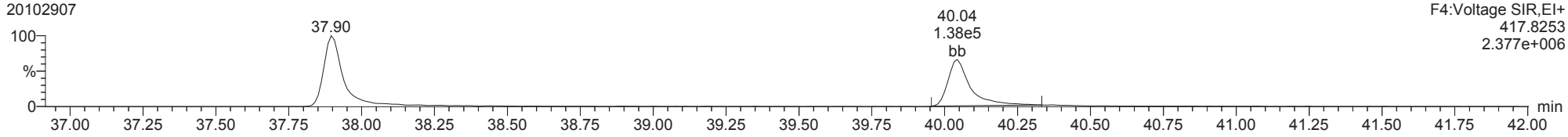

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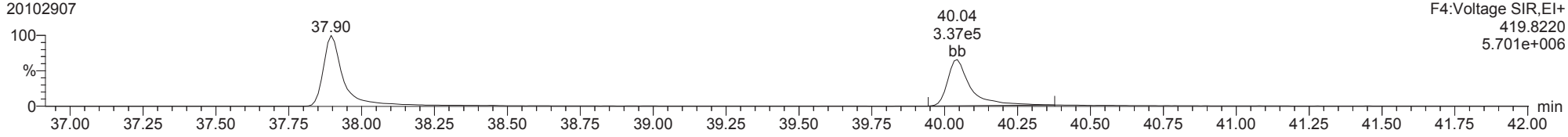
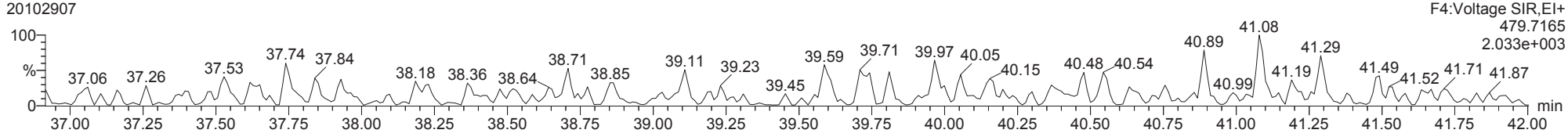
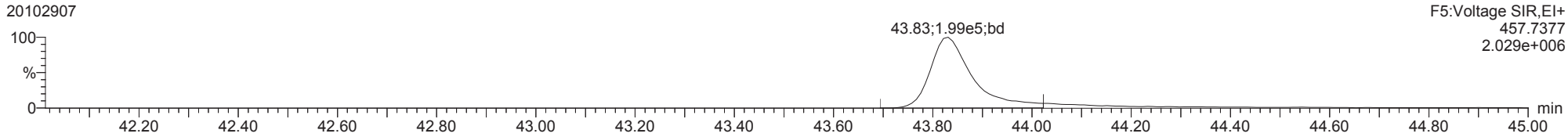


FUNCTION4 NCDPE

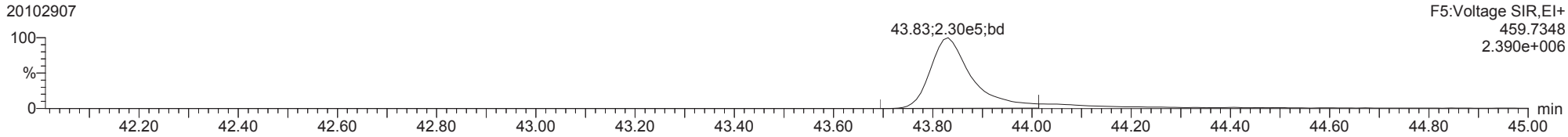


ID: CS3CJ, Name: 20102907, Date: 29-Oct-2020, Time: 20:46:44, Conditions: AUTOSPEC01, User: pk

OCDD



OCDD



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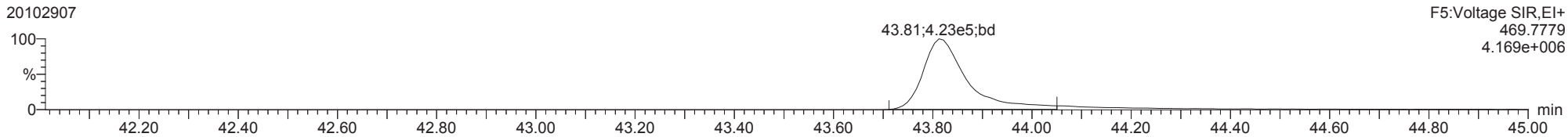
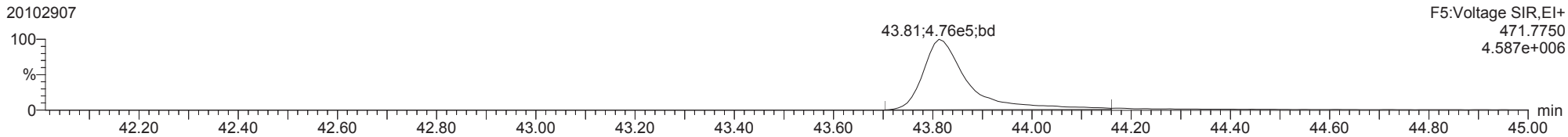
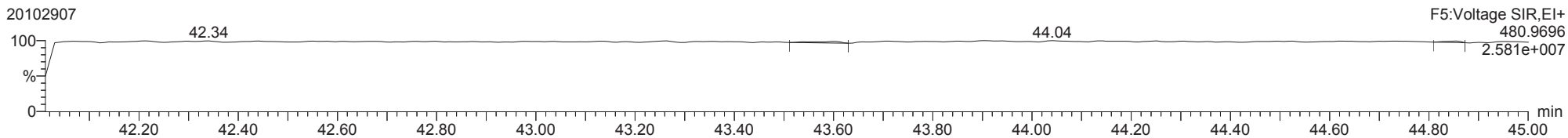


13C-OCDD

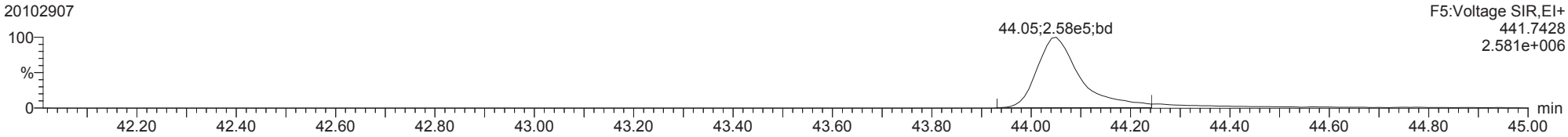


FUNCTION5 PFK

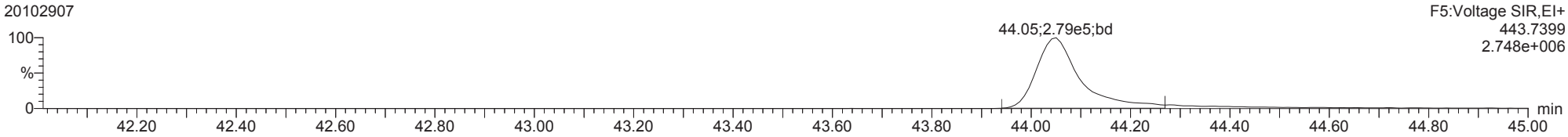


ID: CS3CJ, Name: 20102907, Date: 29-Oct-2020, Time: 20:46:44, Conditions: AUTOSPEC01, User: pk

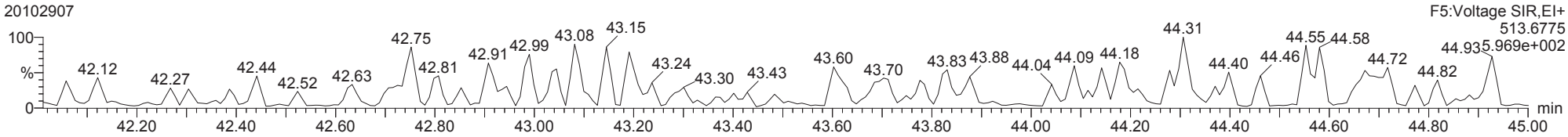
OCDF



OCDF

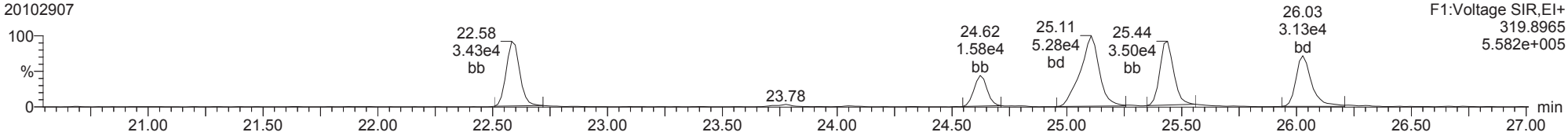


FUNCTION5 DCDPE

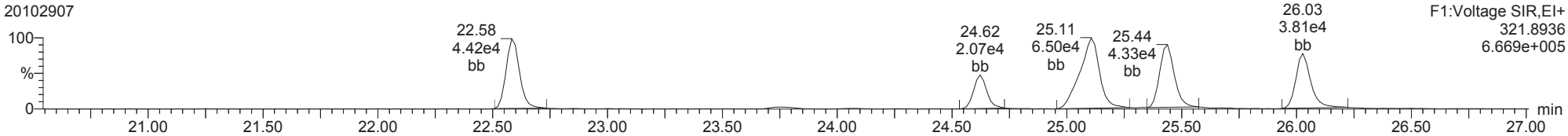


ID: CS3CJ, Name: 20102907, Date: 29-Oct-2020, Time: 20:46:44, Conditions: AUTOSPEC01, User: pk

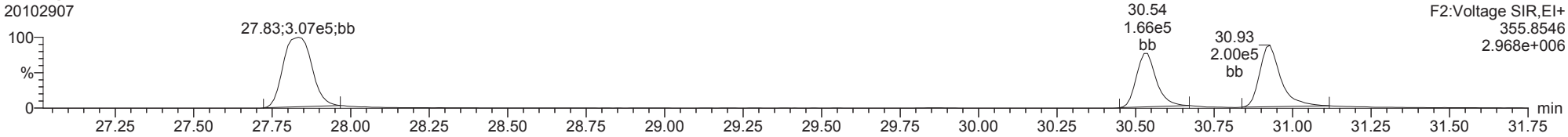
Total-tetradioxins



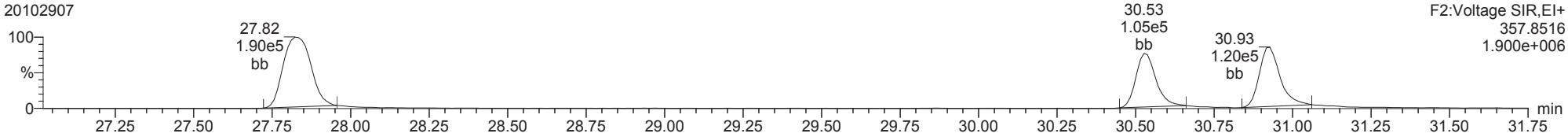
Total-tetradioxins



Total-pentadioxins

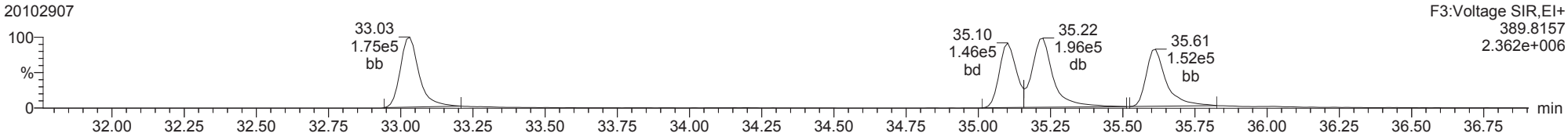


Total-pentadioxins

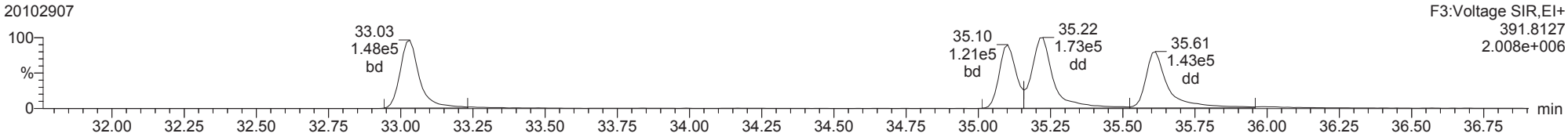


ID: CS3CJ, Name: 20102907, Date: 29-Oct-2020, Time: 20:46:44, Conditions: AUTOSPEC01, User: pk

Total-hexadioxins



Total-hexadioxins



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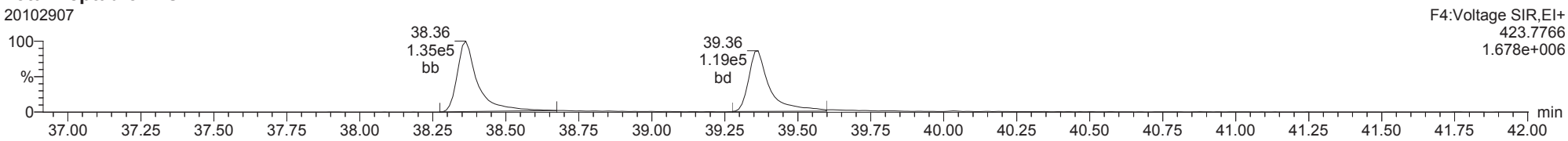
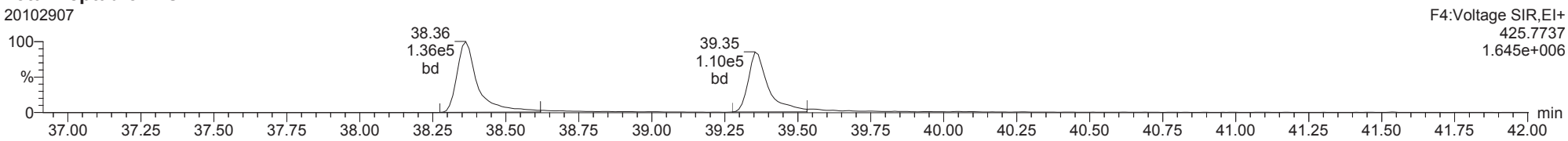
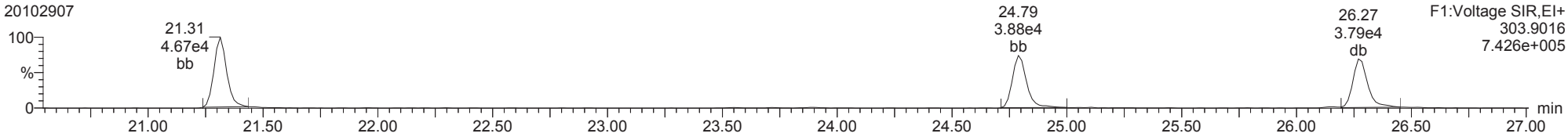


Total-heptadioxins

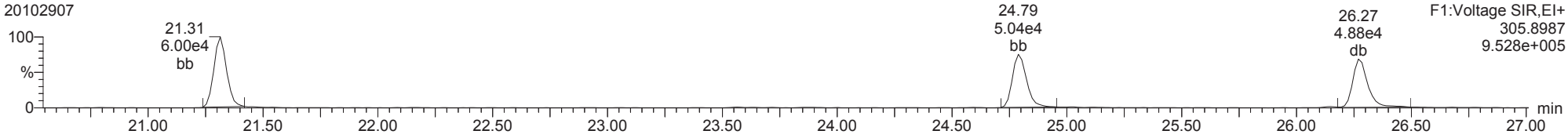


ID: CS3CJ, Name: 20102907, Date: 29-Oct-2020, Time: 20:46:44, Conditions: AUTOSPEC01, User: pk

Total-tetrafurans



Total-tetrafurans



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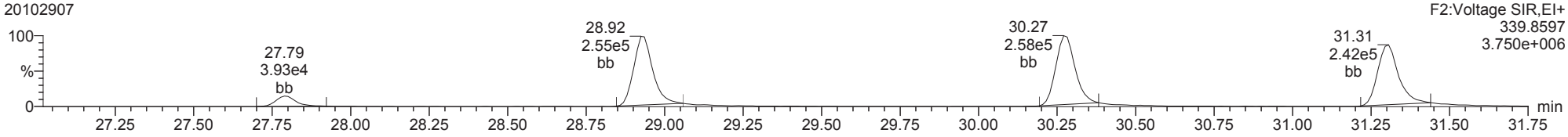
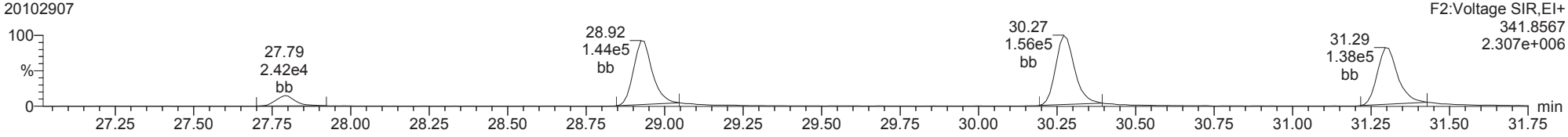


Total-pentafurans



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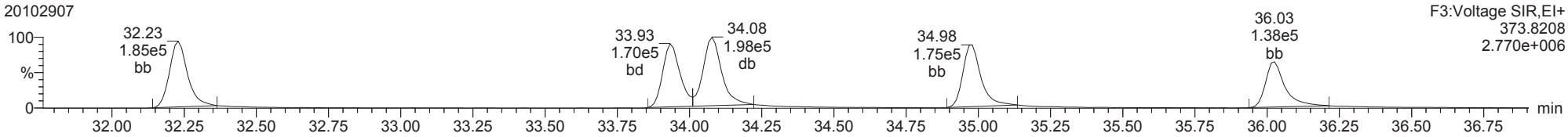
Total-hexafurans



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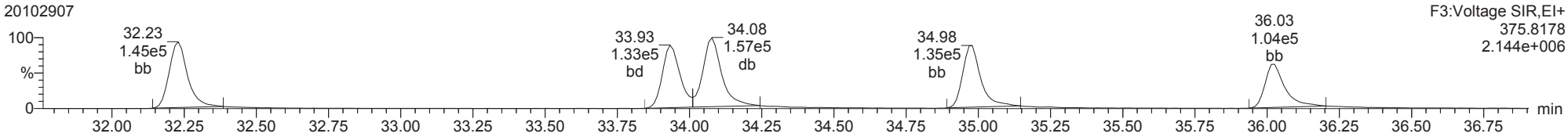

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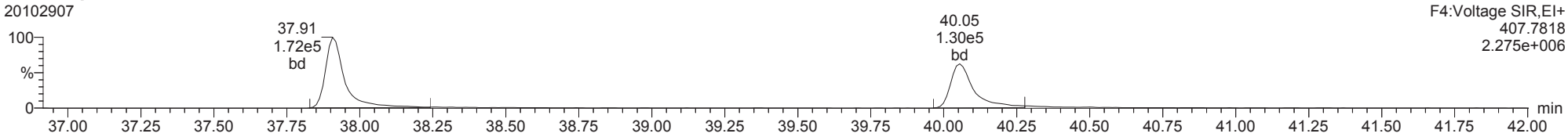
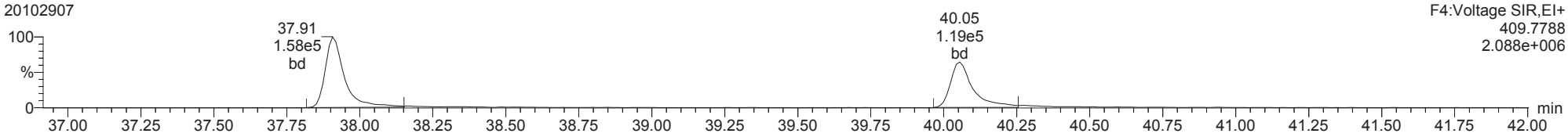


Total-heptafurans



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Last Altered: Friday, October 30, 2020 09:08:24 Pacific Daylight Time
Printed: Friday, October 30, 2020 14:34:13 Pacific Daylight Time

Method: T:\Autospec\Methods\Dioxin201016.mdb 28 Oct 2020 21:30:41
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 09:08:24

ID: CS4CJ, Name: 20102908, Date: 29-Oct-2020, Time: 21:35:25, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	24.789	1.001	1.923e5	2.397e5	0.729	0.802	0.770	745	1683	2.83e6	3.61e6	3792.8	2143.3	NO	bb	bb	41.400
12378-PeCDF	28.924	1.000	1.234e6	7.323e5	0.779	1.685	1.550	5230	2701	1.76e7	1.05e7	3364.1	3885.5	NO	bb	bb	219.224
23478-PeCDF	30.271	1.000	1.317e6	7.849e5	0.880	1.677	1.550	5230	2701	1.97e7	1.18e7	3758.3	4382.7	NO	bb	bb	217.613
123478-HxCDF	33.933	1.000	8.705e5	6.796e5	0.880	1.281	1.240	3325	2072	1.26e7	9.73e6	3788.2	4693.2	NO	bd	bd	223.147
234678-HxCDF	34.968	1.000	8.979e5	6.807e5	0.863	1.319	1.240	3325	2072	1.28e7	9.99e6	3844.2	4821.0	NO	bb	bb	222.655
123678-HxCDF	34.077	1.001	9.812e5	7.566e5	0.853	1.297	1.240	3325	2072	1.33e7	1.04e7	4011.5	5025.3	NO	db	db	221.734
123789-HxCDF	36.025	1.001	6.969e5	5.444e5	0.780	1.280	1.240	3325	2072	9.58e6	7.39e6	2880.1	3565.0	NO	bb	bb	220.510
1234678-HpCDF	37.906	1.000	7.737e5	7.388e5	1.001	1.047	1.050	4863	3175	1.16e7	1.12e7	2395.0	3530.1	NO	bb	bb	210.304
1234789-HpCDF	40.055	1.000	6.142e5	5.760e5	0.994	1.066	1.050	4863	3175	8.13e6	7.60e6	1671.0	2394.4	NO	bb	bb	209.299
OCDF	44.050	1.005	1.395e6	1.518e6	1.158	0.919	0.890	3646	3677	1.50e7	1.58e7	4108.9	4298.9	NO	bb	bd	460.612
2378-TCDD	25.438	1.001	1.757e5	2.167e5	1.238	0.811	0.770	2129	793	2.47e6	3.09e6	1158.4	3893.4	NO	bb	bb	40.646
12378-PeCDD	30.527	1.000	8.568e5	5.371e5	0.988	1.595	1.550	1033	2019	1.22e7	7.81e6	11787.3	3870.4	NO	bb	bb	216.613
123478-HxCDD	35.102	1.000	7.624e5	6.227e5	0.842	1.224	1.240	835	1976	1.18e7	9.63e6	14082.5	4870.7	NO	bd	bd	219.251
123678-HxCDD	35.213	1.000	9.328e5	7.643e5	0.907	1.220	1.240	835	1976	1.24e7	1.03e7	14865.9	5205.1	NO	db	db	213.024
123789-HxCDD	35.613	1.012	7.530e5	6.246e5	0.784	1.206	1.240	835	1976	1.02e7	8.57e6	12197.4	4338.4	NO	bb	bb	215.869
1234678-HpCDD	39.353	1.000	6.430e5	6.149e5	1.044	1.046	1.050	2234	2896	7.83e6	7.51e6	3502.4	2594.2	NO	bd	bd	233.000
OCDD	43.831	1.000	1.066e6	1.292e6	0.963	0.825	0.890	919	5046	1.17e7	1.36e7	12792.0	2695.7	NO	bd	bd	448.436
13C-2378-TCDF	24.774	1.007	6.235e5	8.086e5	2.203	0.771	0.770	3322	1685	9.13e6	1.18e7	2748.7	7015.2	NO	bb	bb	100.233
13C-12378-PeCDF	28.913	1.175	7.002e5	4.505e5	1.741	1.554	1.550	3666	3143	9.19e6	5.88e6	2506.7	1870.6	NO	bb	bb	101.899
13C-23478-PeCDF	30.260	1.230	6.644e5	4.324e5	1.669	1.537	1.550	3666	3143	9.12e6	5.80e6	2488.7	1845.7	NO	bd	bd	101.295
13C-123478-HxCDF	33.922	0.953	2.584e5	5.308e5	1.022	0.487	0.510	2877	1803	3.73e6	7.60e6	1297.3	4212.4	NO	bd	bd	100.269
13C-123678-HxCDF	34.055	0.957	3.099e5	6.085e5	1.200	0.509	0.510	2877	1803	4.05e6	8.13e6	1407.7	4510.9	NO	db	db	99.399
13C-234678-HxCDF	34.957	0.982	2.702e5	5.516e5	1.071	0.490	0.510	2877	1803	3.78e6	7.70e6	1312.3	4273.1	NO	bb	bb	99.649
13C-123789-HxCDF	36.003	1.012	2.327e5	4.889e5	0.919	0.476	0.510	2877	1803	3.00e6	5.97e6	1042.1	3312.2	NO	bb	bd	102.029
13C-1234678-HpCDF	37.895	1.065	2.094e5	5.091e5	0.909	0.411	0.440	3227	3356	3.00e6	6.99e6	929.4	2081.9	NO	bb	bd	102.714
13C-1234789-HpCDF	40.043	1.125	1.688e5	4.033e5	0.724	0.419	0.440	3227	3356	2.08e6	4.84e6	645.6	1441.9	NO	bb	bb	102.698
13C-1234-TCDD	24.608	0.000	2.837e5	3.649e5	1.000	0.777	0.770	1790	1070	4.19e6	5.34e6	2338.8	4995.2	NO	bb	bb	100.000
13C-2378-TCDD	25.408	1.033	3.449e5	4.348e5	1.181	0.793	0.770	1790	1070	4.83e6	6.12e6	2699.0	5720.5	NO	bb	bb	101.745
13C-12378-PeCDD	30.516	1.240	4.046e5	2.469e5	0.978	1.639	1.550	1192	780	5.85e6	3.54e6	4908.4	4541.8	NO	bb	bb	102.732
13C-123478-HxCDD	35.090	0.986	4.176e5	3.329e5	0.965	1.255	1.240	5624	1272	6.26e6	4.94e6	1113.2	3882.3	NO	bd	bd	101.014
13C-123678-HxCDD	35.202	0.989	4.893e5	3.889e5	1.168	1.258	1.240	5624	1272	6.64e6	5.43e6	1180.4	4269.0	NO	db	db	97.654
13C-1234678-HpCDD	39.342	1.105	2.606e5	2.567e5	0.645	1.015	1.050	1730	1335	3.43e6	3.18e6	1983.5	2386.5	NO	bb	bd	104.108
13C-OCDD	43.821	1.231	5.212e5	5.709e5	0.678	0.913	0.890	3001	2627	5.68e6	6.24e6	1892.1	2376.4	NO	bd	bd	209.134
13C-123789-HxCDD	35.591	0.000	4.360e5	3.340e5	1.000	1.305	1.240	5624	1272	5.87e6	4.70e6	1043.7	3692.4	NO	bb	bb	100.000
37CL-2378-TCDD	25.438	1.034	3.468e5		1.264			1158		4.93e6		4257.7			bb		42.287

Dataset: T:\Autospec\Processed Data Batch\201029ICIH.qld
Last Altered: Friday, October 30, 2020 09:08:24 Pacific Daylight Time
Printed: Friday, October 30, 2020 14:34:13 Pacific Daylight Time

ID: CS4CJ, Name: 20102908, Date: 29-Oct-2020, Time: 21:35:25, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	745	1683								
1289-TCDF					0.688		0.770	745	1683								
13468-PECDF					1.181		1.550	325	729								
12389-PECDF					0.766		1.550	5230	2701								
123468-HXCDF					1.003		1.240	3325	2072								
1368-TCDD					1.179		0.770	2129	793								
1289-TCDD					1.042		0.770	2129	793								
12479-PECDD					1.810		1.550	1033	2019								
12389-PECDD					1.165		1.550	1033	2019								
124679-HXCDD					1.056		1.240	835	1976								
1234679-HPCDD					1.285		1.050	2234	2896								
Total-tetrafurans			1.923e5		0.754			745		2.83e6							41.400
Total-penta1			0.000e0					325		0.00e0							
Total-pentafurans			2.550e6		0.809			5230		3.73e7							436.838
Total-hexafurans			3.448e6		0.876			3325		4.83e7							888.451
Total-heptafurans			1.388e6		0.997			4863		1.98e7							419.602
Total-Furans			8.973e6		0.893			745		1.23e8							2246.903
Total-tetradioxins			1.791e5		1.153			2129		2.51e6							41.490
Total-pentadioxins			8.568e5		1.321			1033		1.22e7							216.613
Total-hexadioxins			2.448e6		0.897			835		3.44e7							648.144
Total-heptadioxins			6.430e5		1.165			2234		7.83e6							233.000
Total-Dioxins			5.193e6		1.100			2129		6.86e7							1587.682
Total-TEQ			1.417e7					2129		1.92e8							3834.586
FUNCTION1 PFK			2.314e6					470668		3.89e7							
FUNCTION2 PFK			9.744e6					321634		5.76e7							0.000
FUNCTION3 PFK			4.233e7					399573		4.66e8							0.000
FUNCTION4 PFK			1.664e7					341052		1.40e8							
FUNCTION5 PFK			2.671e5					180144		7.08e6							
FUNCTION1 HXCD...			1.036e2					250		3.01e3							0.000
FUNCTION1 HPCD...			2.148e2					526		5.43e3							0.000
FUNCTION2 HPCD...			1.033e3					561		1.64e4							0.000
FUNCTION3 OCDPE			0.000e0					261		0.00e0							
FUNCTION4 NCDPE			7.258e1					355		2.25e3							0.000
FUNCTION5 DCDPE			0.000e0					239		0.00e0							

Method: T:\Autospec\Methods\Dioxin201016.mdb 28 Oct 2020 21:30:41
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 09:08:24

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	24.79	1.923e5	2.397e5	0.729	0.80	0.77	3792.8	YES	NO	bb	bb	41.400

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	30.27	1.317e6	7.849e5	0.880	1.68	1.55	3758.3	YES	NO	bb	bb	217.613
2	12378-PeCDF	28.92	1.234e6	7.323e5	0.779	1.68	1.55	3364.1	YES	NO	bb	bb	219.224

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.03	6.969e5	5.444e5	0.780	1.28	1.24	2880.1	YES	NO	bb	bb	220.510
2	Total-hexafurans	35.61	1.627e3	1.258e3	0.876	1.29	1.24	7.3	YES	NO	bd	bd	0.405
3	234678-HxCDF	34.97	8.979e5	6.807e5	0.863	1.32	1.24	3844.2	YES	NO	bb	bb	222.655
4	123678-HxCDF	34.08	9.812e5	7.566e5	0.853	1.30	1.24	4011.5	YES	NO	db	db	221.734
5	123478-HxCDF	33.93	8.705e5	6.796e5	0.880	1.28	1.24	3788.2	YES	NO	bd	bd	223.147

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	37.91	7.737e5	7.388e5	1.001	1.05	1.05	2395.0	YES	NO	bb	bb	210.304
2	1234789-HpCDF	40.05	6.142e5	5.760e5	0.994	1.07	1.05	1671.0	YES	NO	bb	bb	209.299

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	24.79	1.923e5	2.397e5	0.729	0.80	0.77	3792.8	YES	NO	bb	bb	41.400
2	23478-PeCDF	30.27	1.317e6	7.849e5	0.880	1.68	1.55	3758.3	YES	NO	bb	bb	217.613
3	12378-PeCDF	28.92	1.234e6	7.323e5	0.779	1.68	1.55	3364.1	YES	NO	bb	bb	219.224
4	123789-HxCDF	36.03	6.969e5	5.444e5	0.780	1.28	1.24	2880.1	YES	NO	bb	bb	220.510
5	Total-hexafurans	35.61	1.627e3	1.258e3	0.876	1.29	1.24	7.3	YES	NO	bd	bd	0.405
6	234678-HxCDF	34.97	8.979e5	6.807e5	0.863	1.32	1.24	3844.2	YES	NO	bb	bb	222.655
7	123678-HxCDF	34.08	9.812e5	7.566e5	0.853	1.30	1.24	4011.5	YES	NO	db	db	221.734
8	123478-HxCDF	33.93	8.705e5	6.796e5	0.880	1.28	1.24	3788.2	YES	NO	bd	bd	223.147
9	1234678-HpCDF	37.91	7.737e5	7.388e5	1.001	1.05	1.05	2395.0	YES	NO	bb	bb	210.304
10	1234789-HpCDF	40.05	6.142e5	5.760e5	0.994	1.07	1.05	1671.0	YES	NO	bb	bb	209.299
11	OCDF	44.05	1.395e6	1.518e6	1.158	0.92	0.89	4108.9	YES	NO	bb	bd	460.612

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	25.44	1.757e5	2.167e5	1.238	0.81	0.77	1158.4	YES	NO	bb	bb	40.646
2	Total-tetradioxins	25.06	3.408e3	4.175e3	1.153	0.82	0.77	18.7	YES	NO	bd	bd	0.844

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	30.53	8.568e5	5.371e5	0.988	1.60	1.55	11787.3	YES	NO	bb	bb	216.613

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	35.61	7.530e5	6.246e5	0.784	1.21	1.24	12197.4	YES	NO	bb	bb	215.869
2	123678-HxCDD	35.21	9.328e5	7.643e5	0.907	1.22	1.24	14865.9	YES	NO	db	db	213.024
3	123478-HxCDD	35.10	7.624e5	6.227e5	0.842	1.22	1.24	14082.5	YES	NO	bd	bd	219.251

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	39.35	6.430e5	6.149e5	1.044	1.05	1.05	3502.4	YES	NO	bd	bd	233.000

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	25.44	1.757e5	2.167e5	1.238	0.81	0.77	1158.4	YES	NO	bb	bb	40.646
2	Total-tetradioxins	25.06	3.408e3	4.175e3	1.153	0.82	0.77	18.7	YES	NO	bd	bd	0.844
3	12378-PeCDD	30.53	8.568e5	5.371e5	0.988	1.60	1.55	11787.3	YES	NO	bb	bb	216.613
4	123789-HxCDD	35.61	7.530e5	6.246e5	0.784	1.21	1.24	12197.4	YES	NO	bb	bb	215.869
5	123678-HxCDD	35.21	9.328e5	7.643e5	0.907	1.22	1.24	14865.9	YES	NO	db	db	213.024
6	123478-HxCDD	35.10	7.624e5	6.227e5	0.842	1.22	1.24	14082.5	YES	NO	bd	bd	219.251
7	1234678-HpCDD	39.35	6.430e5	6.149e5	1.044	1.05	1.05	3502.4	YES	NO	bd	bd	233.000
8	OCDD	43.83	1.066e6	1.292e6	0.963	0.83	0.89	12792.0	YES	NO	bd	bd	448.436

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	24.79	1.923e5	2.397e5	0.729	0.80	0.77	3792.8	YES	NO	bb	bb	41.400
2	23478-PeCDF	30.27	1.317e6	7.849e5	0.880	1.68	1.55	3758.3	YES	NO	bb	bb	217.613
3	12378-PeCDF	28.92	1.234e6	7.323e5	0.779	1.68	1.55	3364.1	YES	NO	bb	bb	219.224
4	123789-HxCDF	36.03	6.969e5	5.444e5	0.780	1.28	1.24	2880.1	YES	NO	bb	bb	220.510
5	Total-hexafurans	35.61	1.627e3	1.258e3	0.876	1.29	1.24	7.3	YES	NO	bd	bd	0.405
6	234678-HxCDF	34.97	8.979e5	6.807e5	0.863	1.32	1.24	3844.2	YES	NO	bb	bb	222.655
7	123678-HxCDF	34.08	9.812e5	7.566e5	0.853	1.30	1.24	4011.5	YES	NO	db	db	221.734
8	123478-HxCDF	33.93	8.705e5	6.796e5	0.880	1.28	1.24	3788.2	YES	NO	bd	bd	223.147
9	1234678-HpCDF	37.91	7.737e5	7.388e5	1.001	1.05	1.05	2395.0	YES	NO	bb	bb	210.304
10	1234789-HpCDF	40.05	6.142e5	5.760e5	0.994	1.07	1.05	1671.0	YES	NO	bb	bb	209.299
11	OCDF	44.05	1.395e6	1.518e6	1.158	0.92	0.89	4108.9	YES	NO	bb	bd	460.612
12	2378-TCDD	25.44	1.757e5	2.167e5	1.238	0.81	0.77	1158.4	YES	NO	bb	bb	40.646
13	Total-tetradioxins	25.06	3.408e3	4.175e3	1.153	0.82	0.77	18.7	YES	NO	bd	bd	0.844
14	12378-PeCDD	30.53	8.568e5	5.371e5	0.988	1.60	1.55	11787.3	YES	NO	bb	bb	216.613
15	123789-HxCDD	35.61	7.530e5	6.246e5	0.784	1.21	1.24	12197.4	YES	NO	bb	bb	215.869
16	123678-HxCDD	35.21	9.328e5	7.643e5	0.907	1.22	1.24	14865.9	YES	NO	db	db	213.024
17	123478-HxCDD	35.10	7.624e5	6.227e5	0.842	1.22	1.24	14082.5	YES	NO	bd	bd	219.251
18	1234678-HpCDD	39.35	6.430e5	6.149e5	1.044	1.05	1.05	3502.4	YES	NO	bd	bd	233.000
19	OCDD	43.83	1.066e6	1.292e6	0.963	0.83	0.89	12792.0	YES	NO	bd	bd	448.436

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	20.92	8.092e4					2.0	NO		dd		
2	FUNCTION1 PFK	20.82	6.960e4					2.6	NO		bd		
3	FUNCTION1 PFK	20.68	5.937e4					2.1	NO		bb		
4	FUNCTION1 PFK	23.08	4.101e4					1.5	NO		bb		
5	FUNCTION1 PFK	22.87	4.584e4					1.9	NO		bb		
6	FUNCTION1 PFK	22.63	4.309e4					2.2	NO		db		
7	FUNCTION1 PFK	22.54	1.036e5					2.5	NO		dd		
8	FUNCTION1 PFK	22.43	4.980e4					1.9	NO		bd		
9	FUNCTION1 PFK	22.31	5.698e4					2.0	NO		bb		
10	FUNCTION1 PFK	22.19	4.779e4					1.6	NO		bb		
11	FUNCTION1 PFK	22.07	3.042e4					1.6	NO		bb		
12	FUNCTION1 PFK	21.93	2.135e4					1.2	NO		bb		
13	FUNCTION1 PFK	21.83	4.325e4					1.3	NO		bb		
14	FUNCTION1 PFK	21.62	2.920e4					1.3	NO		db		
15	FUNCTION1 PFK	21.48	5.475e4					1.9	NO		dd		
16	FUNCTION1 PFK	21.37	8.420e4					2.1	NO		bd		
17	FUNCTION1 PFK	21.24	4.880e4					1.8	NO		db		
18	FUNCTION1 PFK	21.13	6.530e4					1.9	NO		bd		
19	FUNCTION1 PFK	21.03	3.999e4					2.0	NO		db		
20	FUNCTION1 PFK	25.27	2.243e4					1.2	NO		bb		
21	FUNCTION1 PFK	25.15	3.838e4					1.3	NO		bb		
22	FUNCTION1 PFK	25.06	6.733e4					2.0	NO		db		
23	FUNCTION1 PFK	24.94	7.220e4					2.0	NO		dd		
24	FUNCTION1 PFK	24.82	8.318e4					2.0	NO		dd		
25	FUNCTION1 PFK	24.70	5.059e4					1.8	NO		bd		
26	FUNCTION1 PFK	24.58	3.588e4					1.3	NO		bb		
27	FUNCTION1 PFK	24.50	3.460e3					0.5	NO		bb		
28	FUNCTION1 PFK	24.46	2.305e3					0.3	NO		bb		
29	FUNCTION1 PFK	24.37	4.573e4					1.9	NO		bb		
30	FUNCTION1 PFK	24.25	4.940e4					2.1	NO		db		
31	FUNCTION1 PFK	24.12	2.462e4					1.1	NO		bd		
32	FUNCTION1 PFK	23.69	2.389e4					1.5	NO		bb		
33	FUNCTION1 PFK	23.41	2.610e4					1.0	NO		bb		
34	FUNCTION1 PFK	23.32	4.066e4					1.8	NO		db		
35	FUNCTION1 PFK	23.20	4.934e4					1.7	NO		bd		
36	FUNCTION1 PFK	26.90	3.374e4					1.6	NO		db		
37	FUNCTION1 PFK	26.84	3.068e4					1.3	NO		dd		

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	26.72	7.037e4					1.6	NO		dd		
39	FUNCTION1 PFK	26.66	3.650e4					1.7	NO		dd		
40	FUNCTION1 PFK	26.60	2.855e4					1.6	NO		dd		
41	FUNCTION1 PFK	26.54	4.273e4					2.0	NO		dd		
42	FUNCTION1 PFK	26.44	7.308e4					2.1	NO		bd		
43	FUNCTION1 PFK	26.30	7.695e4					2.5	NO		db		
44	FUNCTION1 PFK	26.22	4.591e4					1.4	NO		bd		
45	FUNCTION1 PFK	26.10	3.425e4					1.5	NO		bb		
46	FUNCTION1 PFK	25.74	4.254e4					1.5	NO		bb		
47	FUNCTION1 PFK	25.62	6.231e4					1.9	NO		db		
48	FUNCTION1 PFK	25.51	4.448e4					1.3	NO		dd		
49	FUNCTION1 PFK	25.39	4.090e4					1.7	NO		bd		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	27.10	1.087e6					50.0	YES		bd		0.000
2	FUNCTION2 PFK	30.88	2.308e3					0.6	NO		bb		0.000
3	FUNCTION2 PFK	30.70	1.581e4					2.0	NO		bb		0.000
4	FUNCTION2 PFK	30.65	7.063e3					1.0	NO		bb		0.000
5	FUNCTION2 PFK	30.00	3.355e4					2.0	NO		bb		0.000
6	FUNCTION2 PFK	29.77	1.041e4					1.2	NO		db		0.000
7	FUNCTION2 PFK	29.73	1.093e4					1.3	NO		bd		0.000
8	FUNCTION2 PFK	28.40	1.803e4					2.1	NO		bb		0.000
9	FUNCTION2 PFK	28.18	7.154e3					1.1	NO		bb		0.000
10	FUNCTION2 PFK	27.90	5.646e5					12.5	YES		db		0.000
11	FUNCTION2 PFK	27.81	8.619e5					16.9	YES		dd		0.000
12	FUNCTION2 PFK	27.37	4.942e6					39.2	YES		dd		0.000
13	FUNCTION2 PFK	27.14	2.184e6					49.1	YES		dd		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	32.05	5.962e6					58.2	YES		dd		0.000
2	FUNCTION3 PFK	31.91	2.607e6					60.1	YES		dd		0.000
3	FUNCTION3 PFK	31.82	2.662e6					61.1	YES		bd		0.000
4	FUNCTION3 PFK	33.54	1.579e6					30.8	YES		dd		0.000
5	FUNCTION3 PFK	33.43	8.337e5					32.3	YES		dd		0.000
6	FUNCTION3 PFK	33.39	5.703e5					32.5	YES		dd		0.000
7	FUNCTION3 PFK	33.33	8.845e5					33.7	YES		dd		0.000
8	FUNCTION3 PFK	33.28	4.510e5					34.0	YES		dd		0.000
9	FUNCTION3 PFK	33.19	1.900e6					36.8	YES		dd		0.000
10	FUNCTION3 PFK	33.10	1.867e6					38.2	YES		dd		0.000
11	FUNCTION3 PFK	32.96	1.249e6					40.8	YES		dd		0.000
12	FUNCTION3 PFK	32.82	2.235e6					43.3	YES		dd		0.000
13	FUNCTION3 PFK	32.70	2.381e6					45.7	YES		dd		0.000
14	FUNCTION3 PFK	32.61	1.662e6					47.5	YES		dd		0.000
15	FUNCTION3 PFK	32.55	6.350e5					48.1	YES		dd		0.000
16	FUNCTION3 PFK	32.49	1.528e6					50.1	YES		dd		0.000
17	FUNCTION3 PFK	32.40	1.560e6					51.2	YES		dd		0.000
18	FUNCTION3 PFK	32.39	1.140e6					51.2	YES		dd		0.000
19	FUNCTION3 PFK	32.29	1.397e6					53.3	YES		dd		0.000
20	FUNCTION3 PFK	34.80	1.820e5					7.1	YES		dd		0.000
21	FUNCTION3 PFK	34.76	8.997e4					7.0	YES		dd		0.000
22	FUNCTION3 PFK	34.71	1.780e5					8.7	YES		dd		0.000
23	FUNCTION3 PFK	34.67	2.983e5					10.0	YES		dd		0.000
24	FUNCTION3 PFK	34.56	4.373e5					11.8	YES		dd		0.000
25	FUNCTION3 PFK	34.43	4.994e5					13.3	YES		dd		0.000
26	FUNCTION3 PFK	34.33	5.696e5					15.8	YES		dd		0.000
27	FUNCTION3 PFK	34.27	4.242e5					16.3	YES		dd		0.000
28	FUNCTION3 PFK	34.19	5.442e5					18.2	YES		dd		0.000
29	FUNCTION3 PFK	34.11	8.428e5					19.4	YES		dd		0.000
30	FUNCTION3 PFK	34.00	5.600e5					21.9	YES		dd		0.000
31	FUNCTION3 PFK	33.99	6.719e5					21.7	YES		dd		0.000
32	FUNCTION3 PFK	33.89	4.138e5					24.1	YES		dd		0.000
33	FUNCTION3 PFK	33.87	1.655e6					23.9	YES		dd		0.000
34	FUNCTION3 PFK	33.67	4.678e5					27.2	YES		dd		0.000
35	FUNCTION3 PFK	33.63	4.835e5					27.7	YES		dd		0.000
36	FUNCTION3 PFK	36.46	3.128e3					0.5	NO		bd		0.000
37	FUNCTION3 PFK	36.40	4.614e4					2.5	NO		bb		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION3 PFK	36.06	5.061e4					1.7	NO		db		0.000
39	FUNCTION3 PFK	35.98	3.855e4					2.2	NO		dd		0.000
40	FUNCTION3 PFK	35.93	5.281e4					2.2	NO		dd		0.000
41	FUNCTION3 PFK	35.86	8.556e3					1.0	NO		dd		0.000
42	FUNCTION3 PFK	35.81	5.483e4					2.3	NO		dd		0.000
43	FUNCTION3 PFK	35.71	3.189e4					2.0	NO		dd		0.000
44	FUNCTION3 PFK	35.67	3.119e4					2.3	NO		dd		0.000
45	FUNCTION3 PFK	35.61	5.639e4					2.2	NO		bd		0.000
46	FUNCTION3 PFK	35.49	1.280e4					1.5	NO		db		0.000
47	FUNCTION3 PFK	35.46	2.587e4					2.0	NO		dd		0.000
48	FUNCTION3 PFK	35.36	5.053e4					2.3	NO		bd		0.000
49	FUNCTION3 PFK	35.15	2.106e4					1.3	NO		bb		0.000
50	FUNCTION3 PFK	35.03	3.313e4					2.1	NO		db		0.000
51	FUNCTION3 PFK	34.89	2.592e5					6.1	YES		dd		0.000
52	FUNCTION3 PFK	36.85	2.194e4					1.4	NO		bb		0.000
53	FUNCTION3 PFK	36.72	1.279e4					1.0	NO		bb		0.000
54	FUNCTION3 PFK	36.64	3.719e4					2.5	NO		db		0.000
55	FUNCTION3 PFK	36.58	2.174e4					1.5	NO		dd		0.000
56	FUNCTION3 PFK	36.51	4.341e4					2.5	NO		dd		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.23	9.144e5					17.9	YES		dd		
2	FUNCTION4 PFK	38.10	6.705e5					20.7	YES		dd		
3	FUNCTION4 PFK	38.02	2.376e6					23.1	YES		dd		
4	FUNCTION4 PFK	37.65	1.401e6					30.3	YES		dd		
5	FUNCTION4 PFK	37.55	1.653e6					32.2	YES		dd		
6	FUNCTION4 PFK	37.32	1.930e6					36.3	YES		dd		
7	FUNCTION4 PFK	37.28	4.159e5					36.9	YES		dd		
8	FUNCTION4 PFK	37.17	1.874e6					39.3	YES		dd		
9	FUNCTION4 PFK	37.08	1.673e6					40.7	YES		dd		
10	FUNCTION4 PFK	36.98	1.088e6					41.2	YES		bd		
11	FUNCTION4 PFK	40.07	1.957e4					1.4	NO		bb		
12	FUNCTION4 PFK	39.83	2.248e4					1.7	NO		db		
13	FUNCTION4 PFK	39.80	1.658e4					1.6	NO		dd		
14	FUNCTION4 PFK	39.75	2.187e3					0.4	NO		dd		
15	FUNCTION4 PFK	39.69	2.690e4					1.5	NO		dd		
16	FUNCTION4 PFK	39.58	4.344e4					2.0	NO		bd		
17	FUNCTION4 PFK	39.49	1.821e4					1.5	NO		bb		
18	FUNCTION4 PFK	39.26	1.343e4					1.3	NO		db		
19	FUNCTION4 PFK	39.23	9.305e3					1.2	NO		bd		
20	FUNCTION4 PFK	39.02	9.321e4					3.2	YES		db		
21	FUNCTION4 PFK	38.92	9.844e4					5.4	YES		dd		
22	FUNCTION4 PFK	38.87	7.988e4					5.6	YES		dd		
23	FUNCTION4 PFK	38.79	2.544e5					7.4	YES		dd		
24	FUNCTION4 PFK	38.59	6.549e5					11.5	YES		dd		
25	FUNCTION4 PFK	38.46	4.842e5					14.4	YES		dd		
26	FUNCTION4 PFK	38.35	5.721e5					16.1	YES		dd		
27	FUNCTION4 PFK	41.87	2.730e4					1.7	NO		bb		
28	FUNCTION4 PFK	41.68	5.827e3					0.7	NO		db		
29	FUNCTION4 PFK	41.63	1.017e4					1.2	NO		bd		
30	FUNCTION4 PFK	41.56	2.527e4					1.8	NO		bb		
31	FUNCTION4 PFK	41.41	1.318e4					1.2	NO		bb		
32	FUNCTION4 PFK	41.30	3.633e4					1.9	NO		bb		
33	FUNCTION4 PFK	41.23	4.347e3					0.7	NO		bb		
34	FUNCTION4 PFK	41.10	2.501e4					1.4	NO		db		
35	FUNCTION4 PFK	40.97	3.318e4					1.7	NO		bd		
36	FUNCTION4 PFK	40.81	2.725e3					0.5	NO		bb		
37	FUNCTION4 PFK	40.62	1.698e4					1.4	NO		db		

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION4 PFK	40.52	2.065e4					1.3	NO		bd		
39	FUNCTION4 PFK	40.28	1.572e4					1.3	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	42.29	6.950e2					0.4	NO		bb		
2	FUNCTION5 PFK	42.08	2.356e4					3.2	YES		bb		
3	FUNCTION5 PFK	44.13	1.100e4					1.6	NO		bb		
4	FUNCTION5 PFK	44.06	3.027e4					3.1	YES		bb		
5	FUNCTION5 PFK	43.86	6.569e3					1.5	NO		db		
6	FUNCTION5 PFK	43.83	4.966e3					1.6	NO		bd		
7	FUNCTION5 PFK	43.73	3.808e3					1.1	NO		bb		
8	FUNCTION5 PFK	43.47	3.140e3					0.8	NO		bb		
9	FUNCTION5 PFK	43.39	1.209e4					1.9	NO		db		
10	FUNCTION5 PFK	43.36	8.544e3					1.8	NO		bd		
11	FUNCTION5 PFK	43.18	1.039e3					0.6	NO		bb		
12	FUNCTION5 PFK	43.04	2.465e4					2.1	NO		bb		
13	FUNCTION5 PFK	42.93	1.579e4					2.2	NO		db		
14	FUNCTION5 PFK	42.87	9.309e3					1.8	NO		bd		
15	FUNCTION5 PFK	42.81	1.329e4					1.8	NO		db		
16	FUNCTION5 PFK	42.75	9.088e3					2.1	NO		bd		
17	FUNCTION5 PFK	42.64	5.628e3					1.3	NO		bb		
18	FUNCTION5 PFK	42.45	1.934e4					2.2	NO		bb		
19	FUNCTION5 PFK	44.62	4.647e3					1.2	NO		db		
20	FUNCTION5 PFK	44.52	2.297e4					2.7	NO		bd		
21	FUNCTION5 PFK	44.42	1.257e4					2.1	NO		bb		
22	FUNCTION5 PFK	44.28	2.412e4					2.2	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	25.65	1.036e2					12.1	YES		bb		0.000

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	25.76	7.420e1					3.4	YES		db		0.000
2	FUNCTION1 HPCD...	25.64	7.000e1					2.8	NO		bd		0.000
3	FUNCTION1 HPCD...	25.32	7.060e1					4.1	YES		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	30.15	1.033e3					29.3	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	39.97	7.258e1					6.3	YES		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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Printed: Friday, October 30, 2020 14:34:13 Pacific Daylight Time

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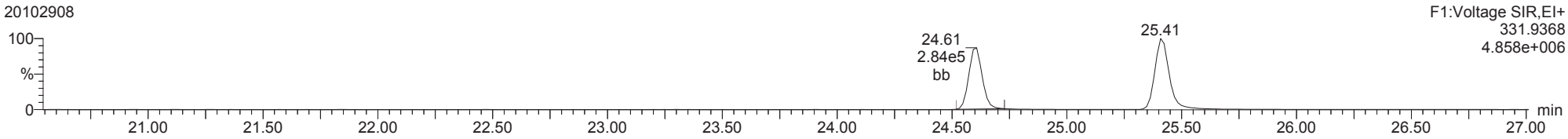
ID: CS4CJ, Name: 20102908, Date: 29-Oct-2020, Time: 21:35:25, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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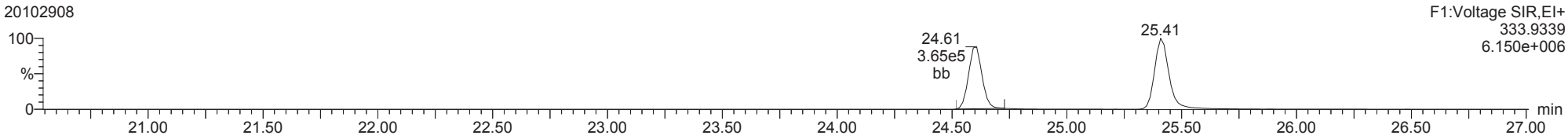

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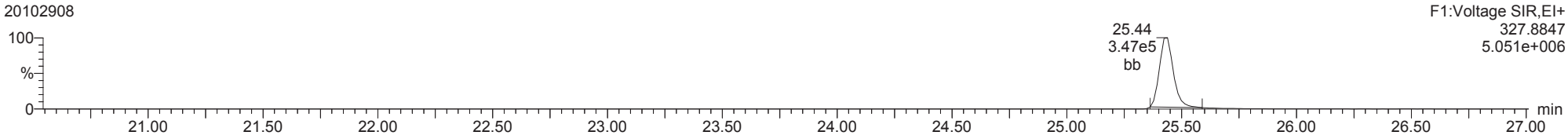

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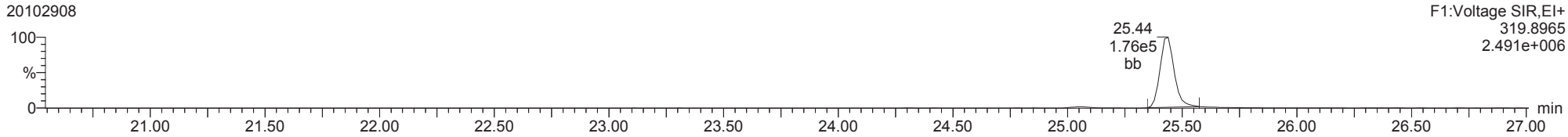

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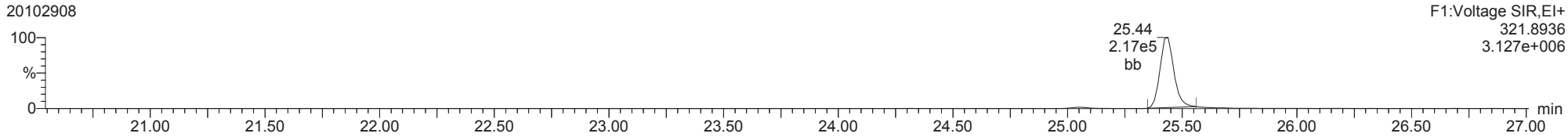

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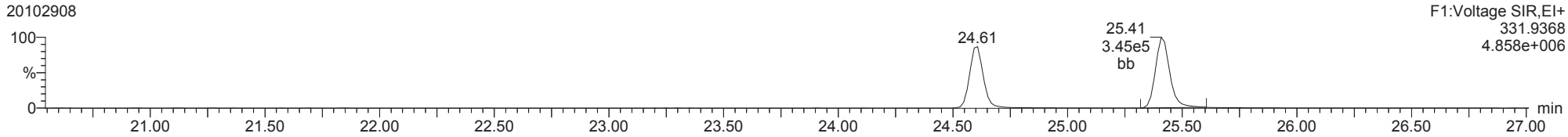

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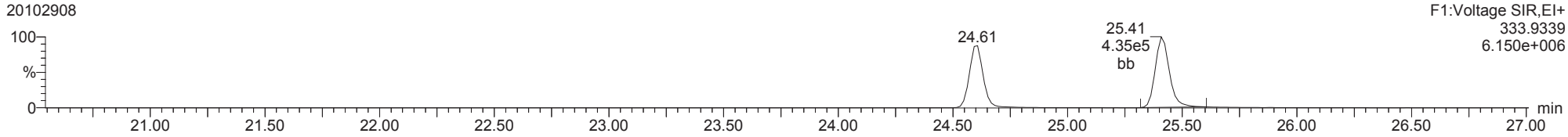
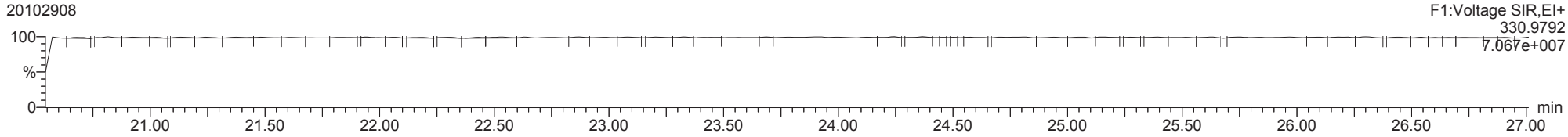


FUNCTION1 PFK



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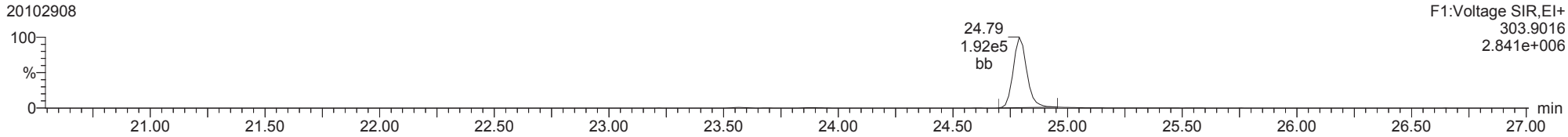
2378-TCDF



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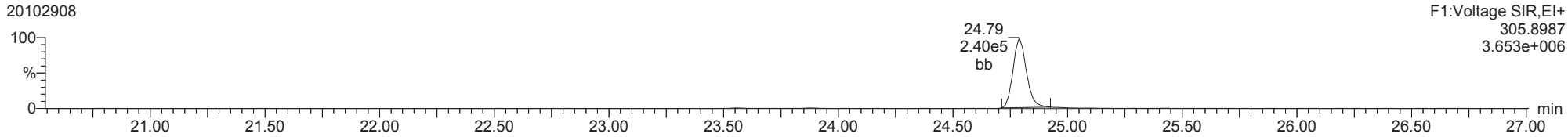

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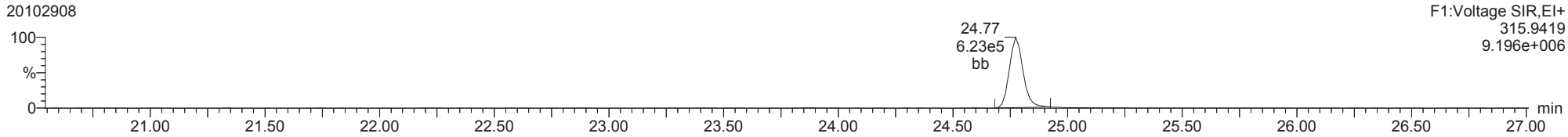

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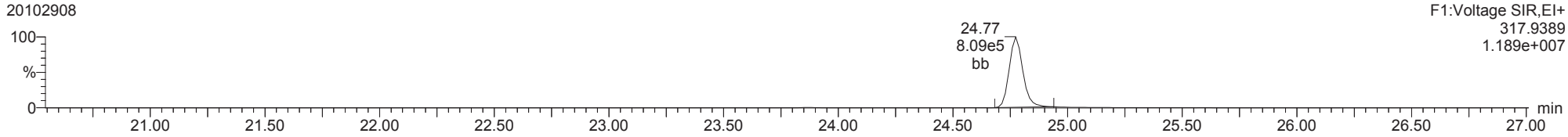
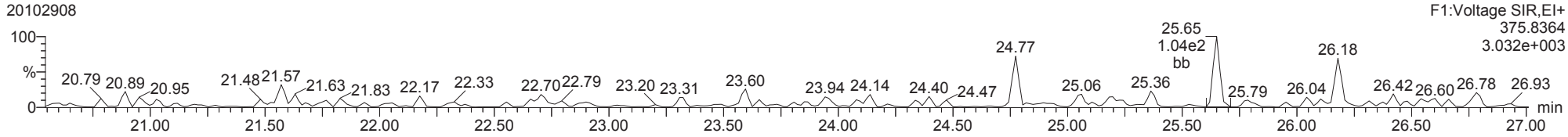
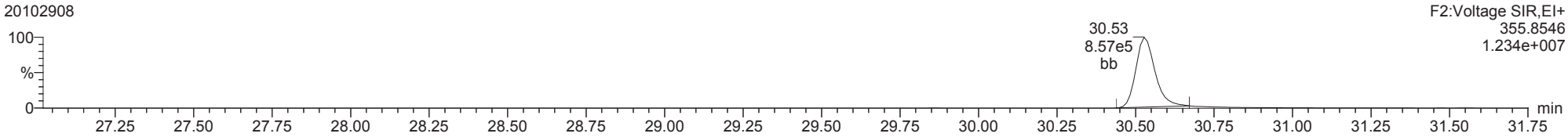


FUNCTION1 HXCDPE



ID: CS4CJ, Name: 20102908, Date: 29-Oct-2020, Time: 21:35:25, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



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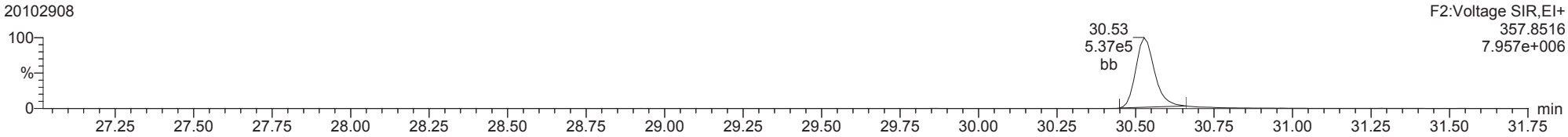

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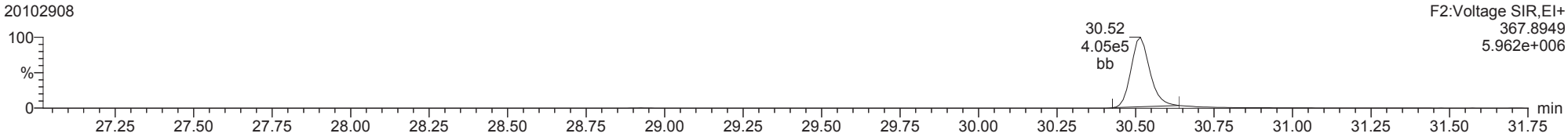

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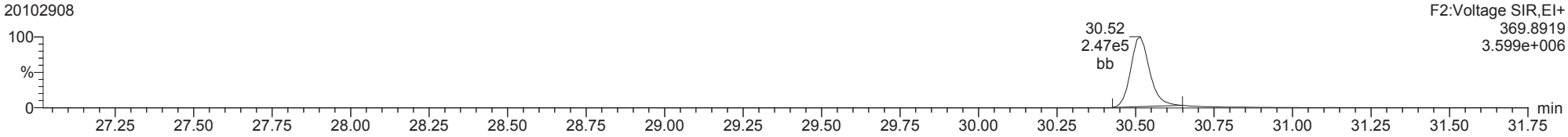
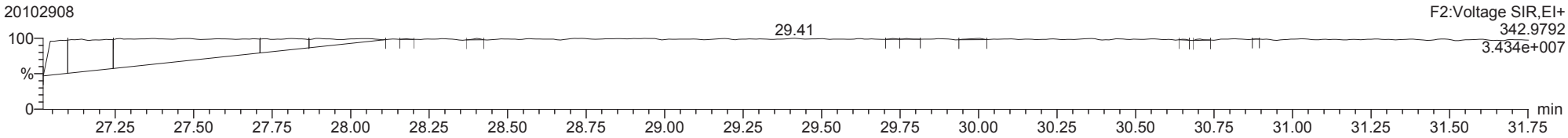


FUNCTION2 PFK



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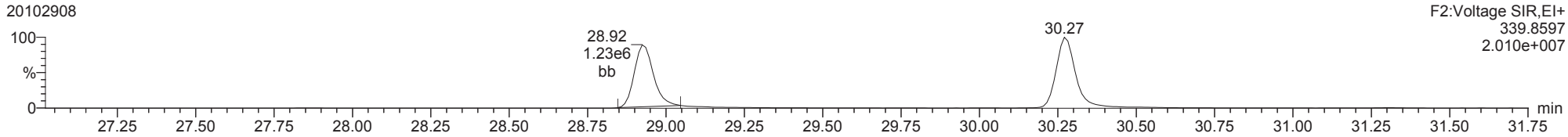
12378-PeCDF



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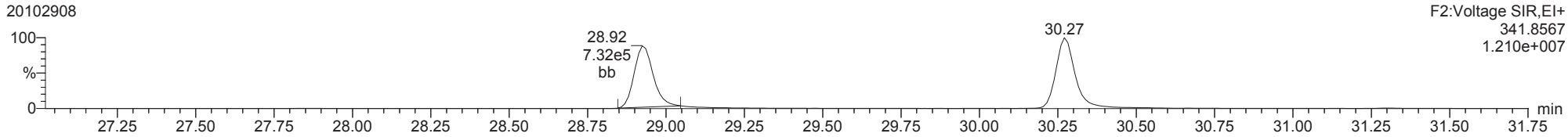

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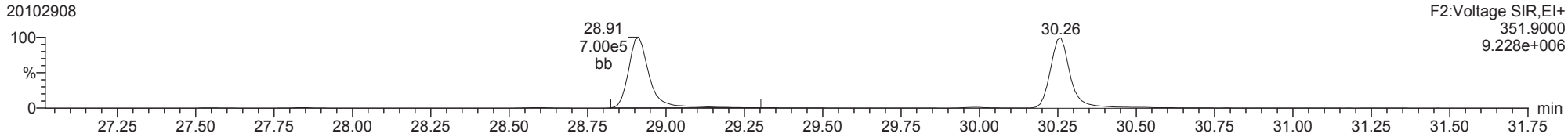

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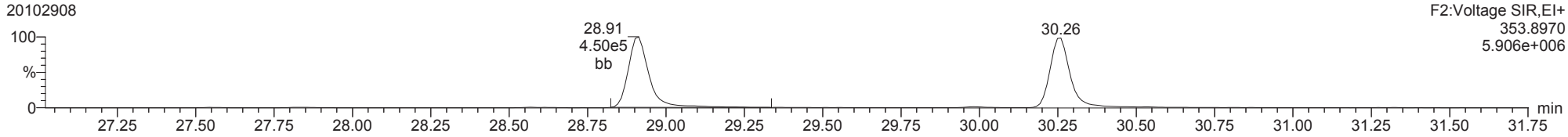
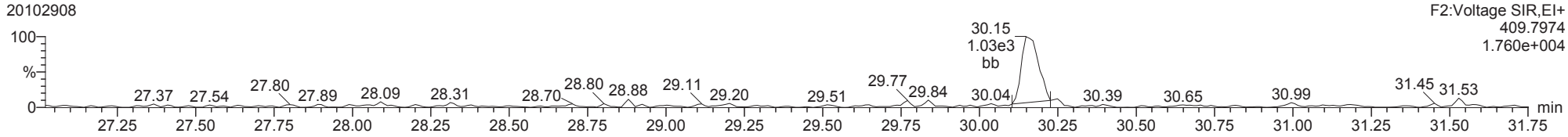


FUNCTION2 HPCDPE



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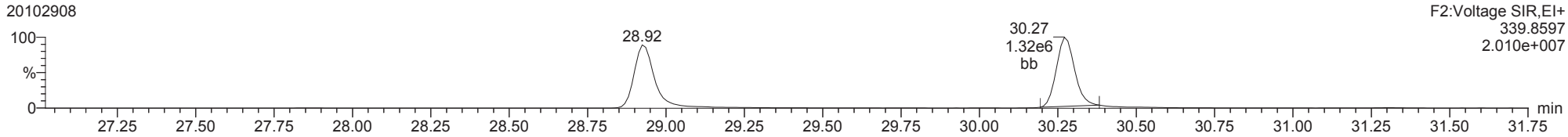

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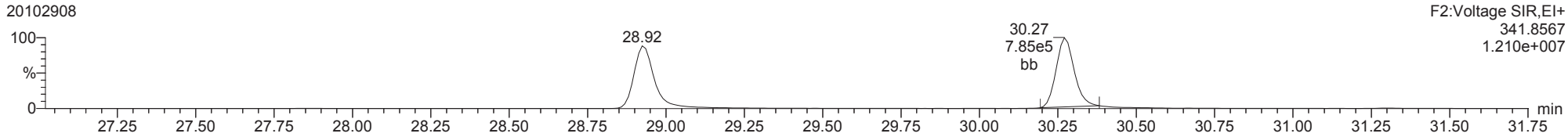

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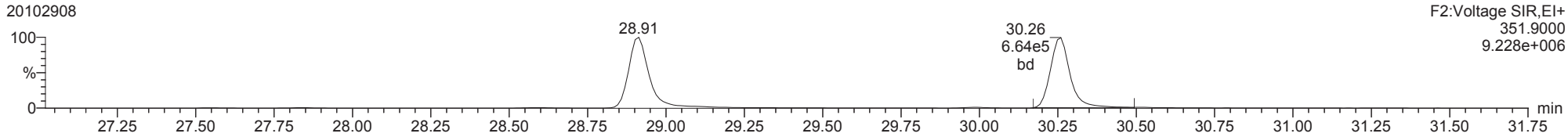

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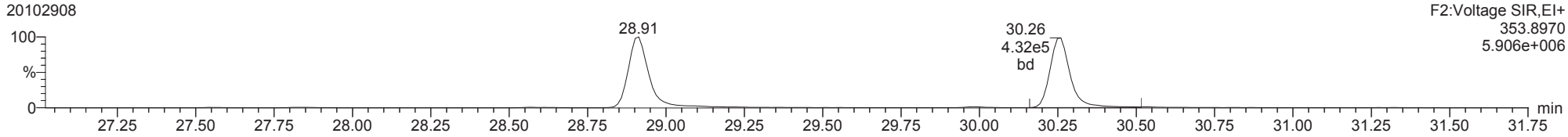

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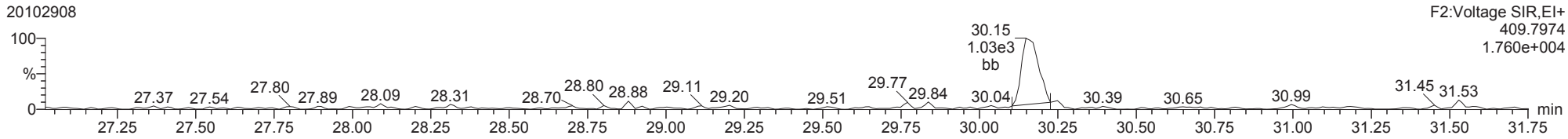

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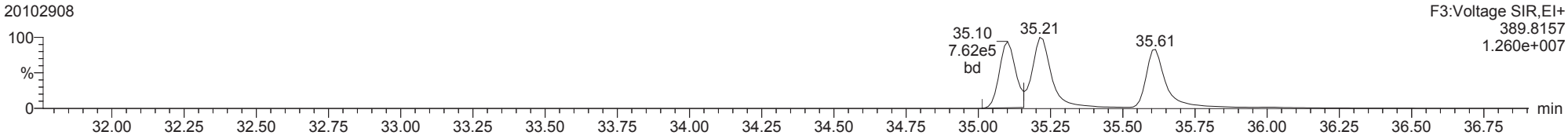

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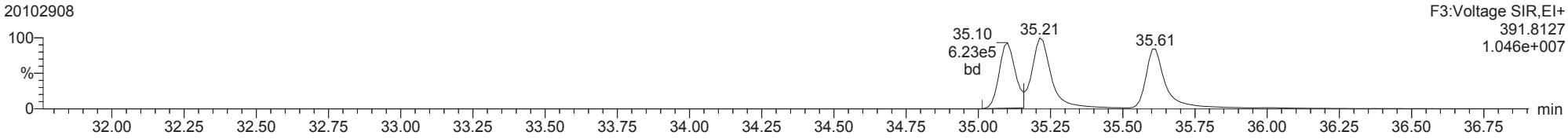

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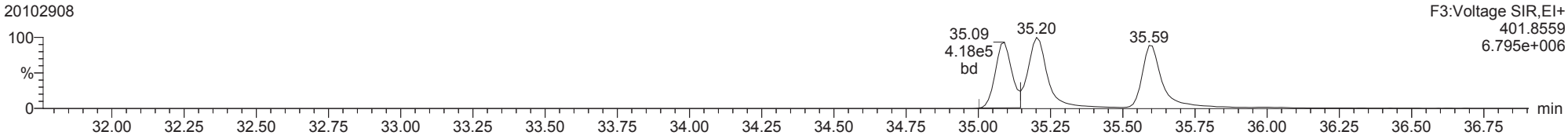

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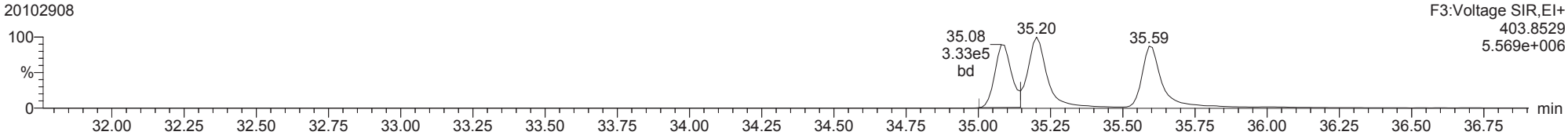

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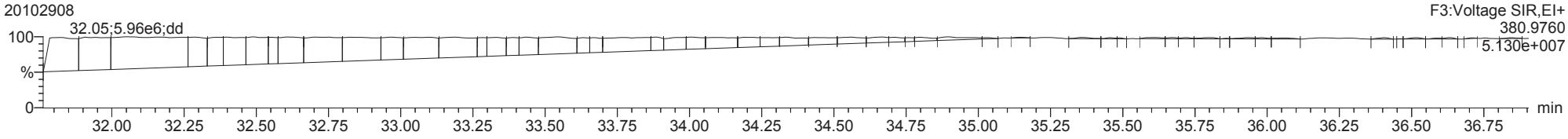

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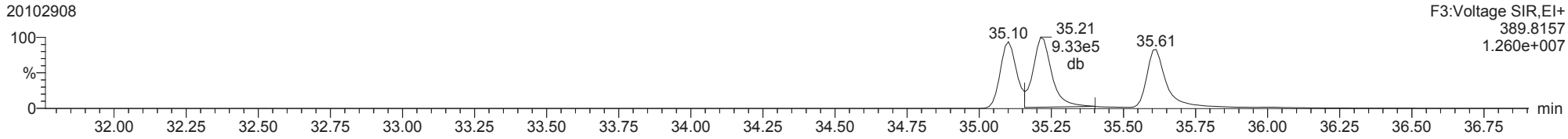

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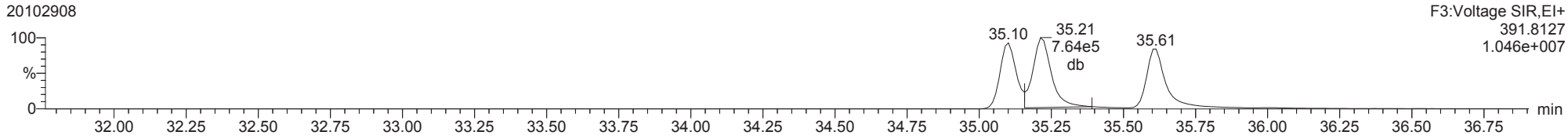

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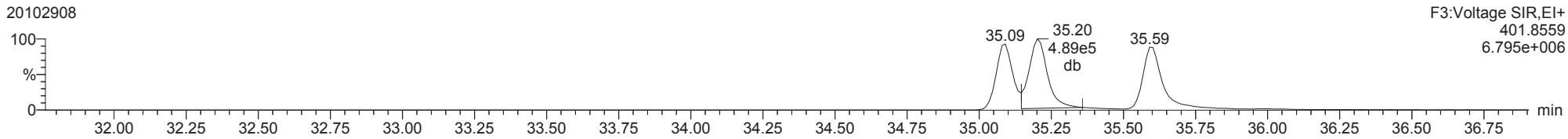

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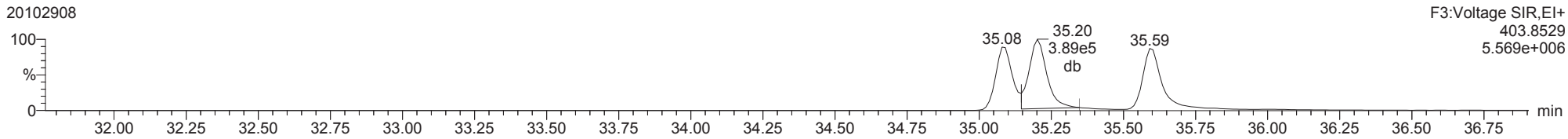

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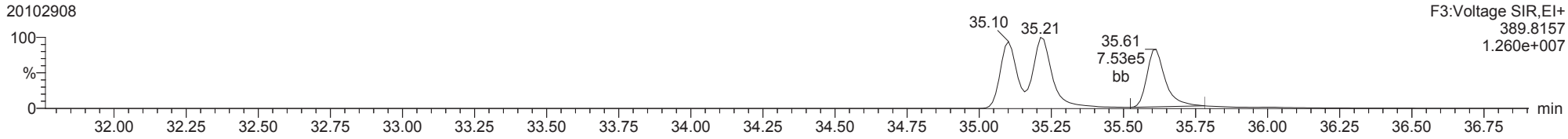

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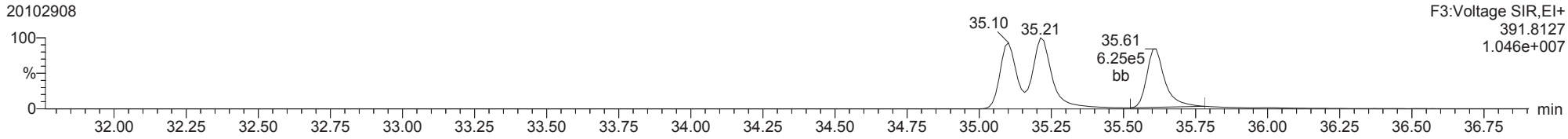

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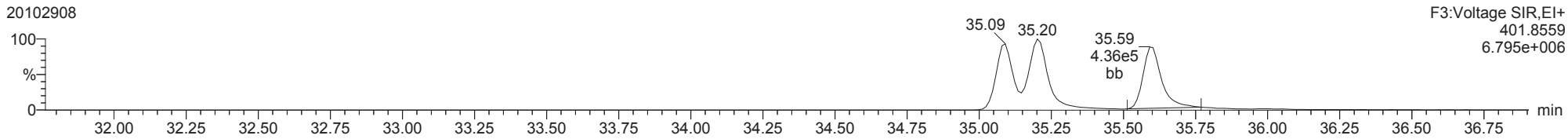

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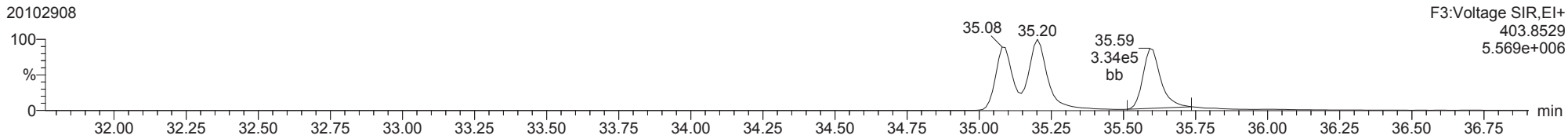

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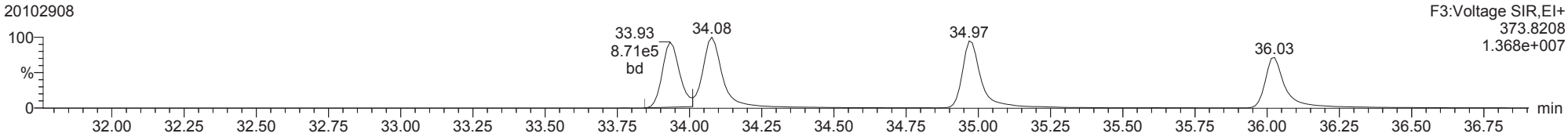

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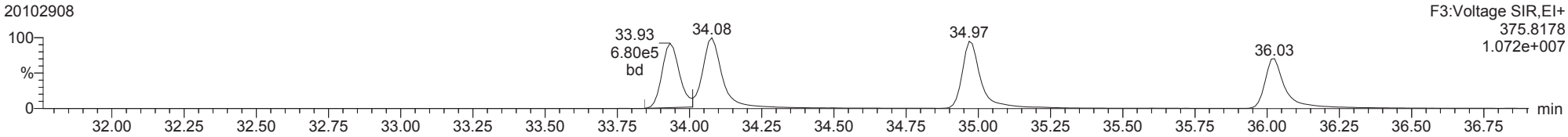

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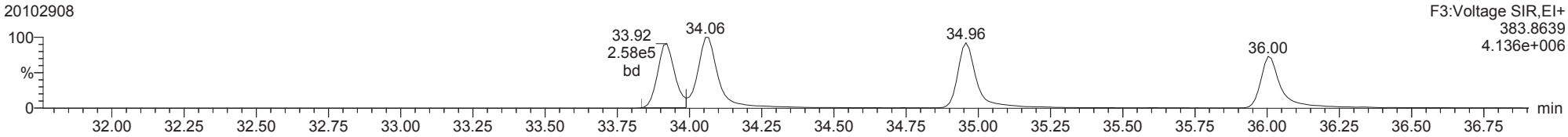

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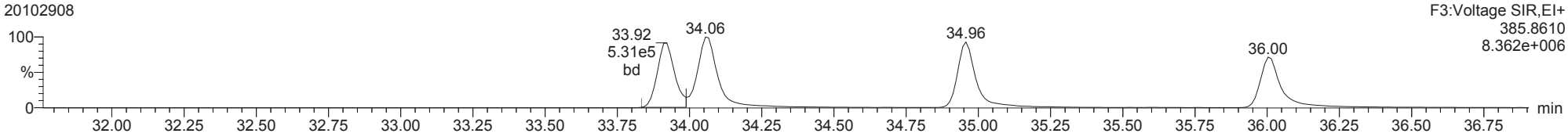
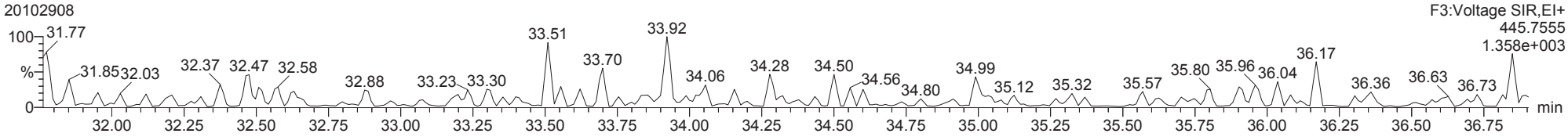


FUNCTION3 OCDPE



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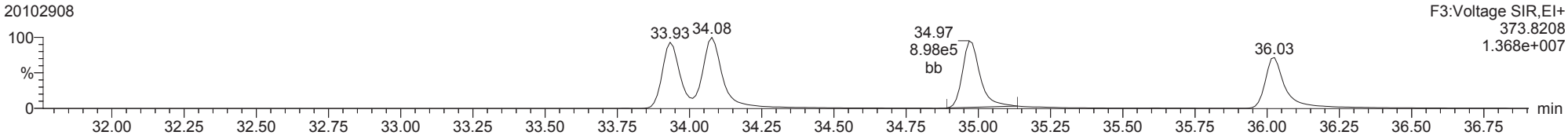
234678-HxCDF



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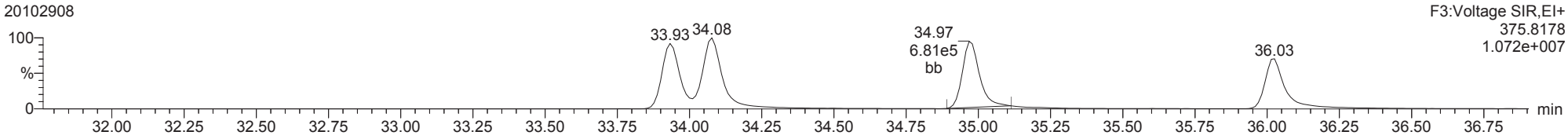

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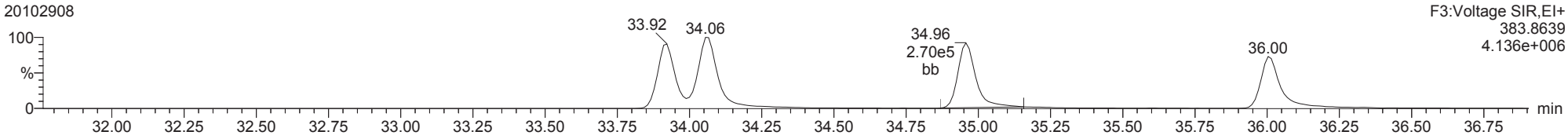

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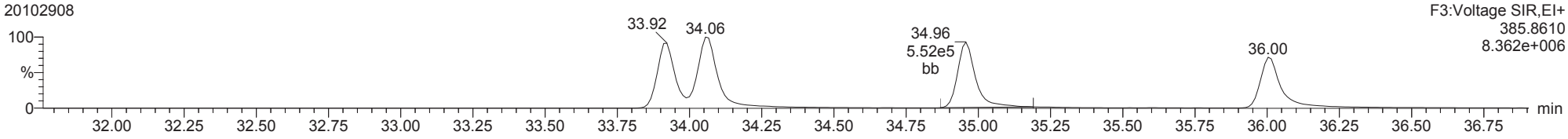

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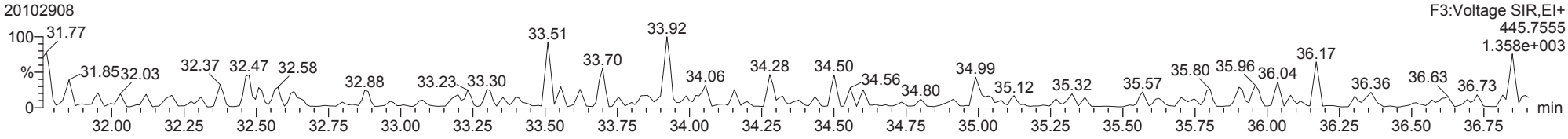

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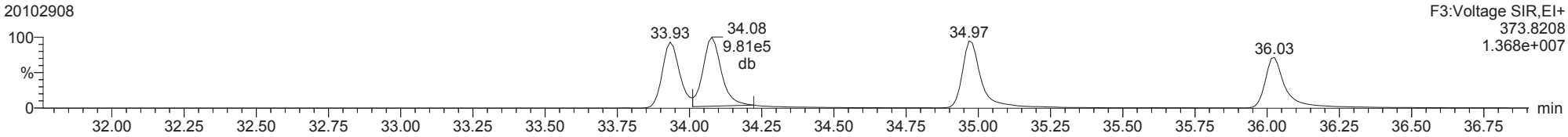

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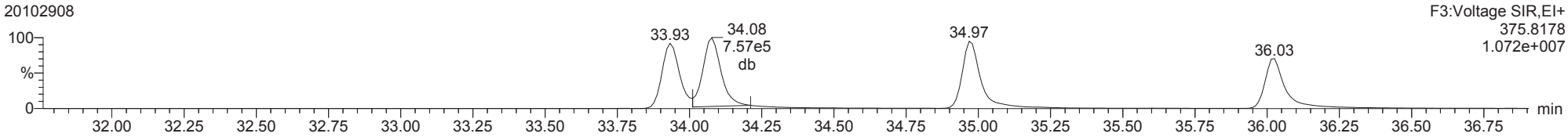

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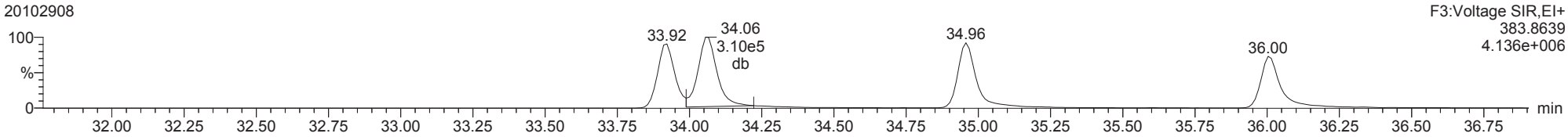

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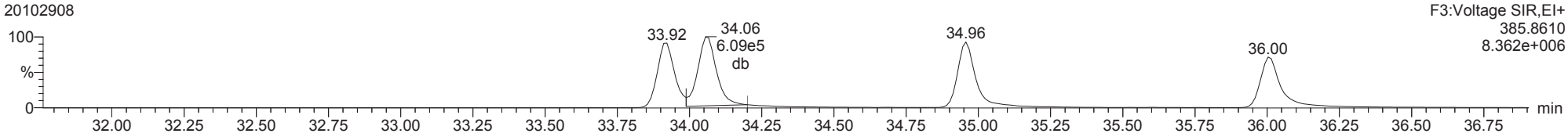
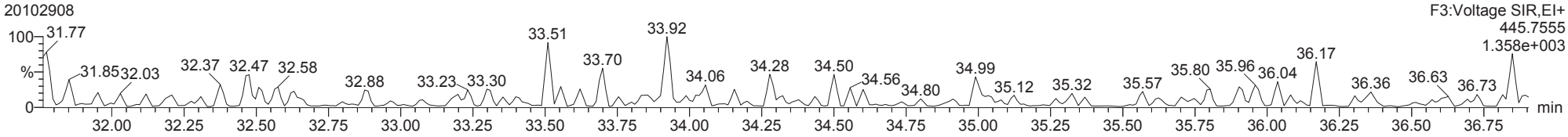


FUNCTION3 OCDPE



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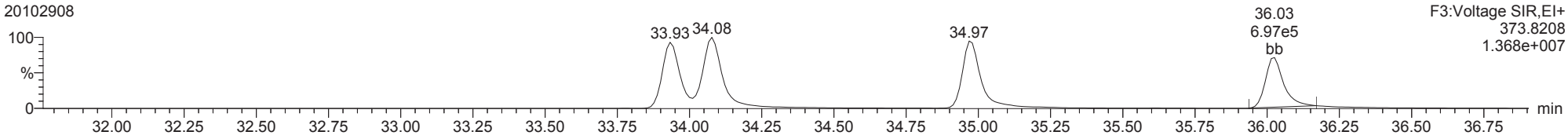
123789-HxCDF



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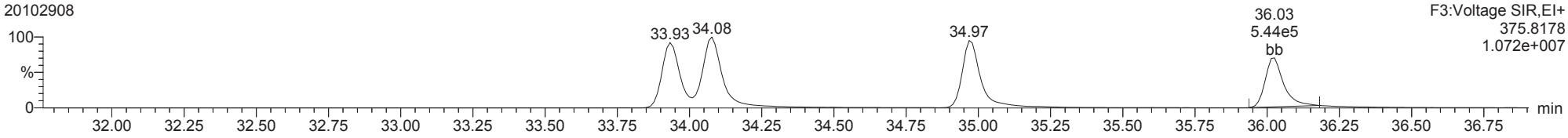

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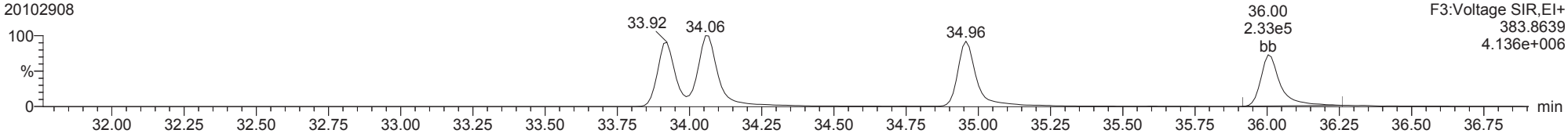

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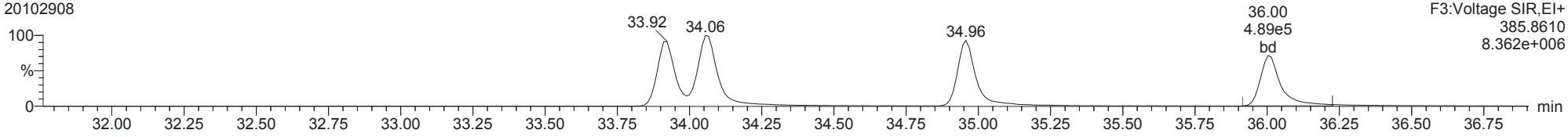
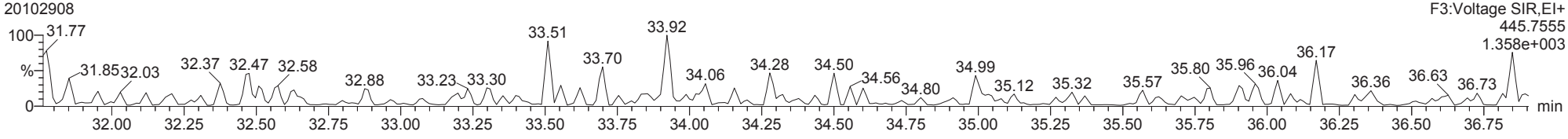


FUNCTION3 OCDPE



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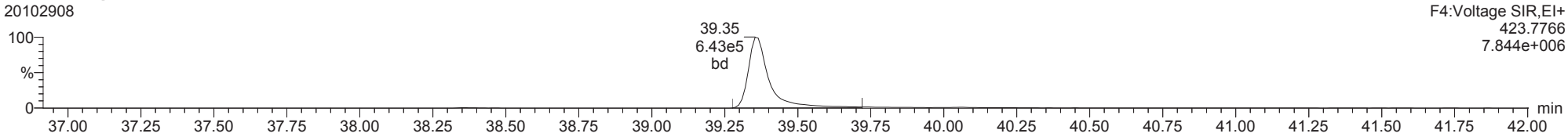
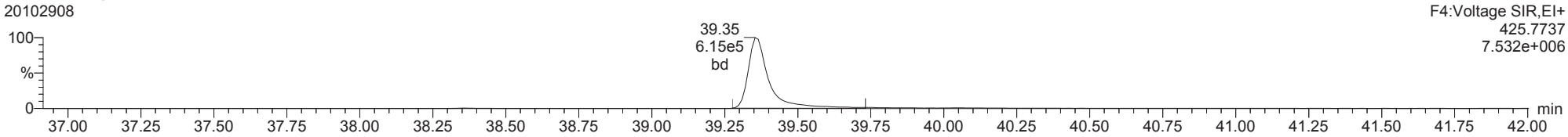
1234678-HpCDD



1234678-HpCDD



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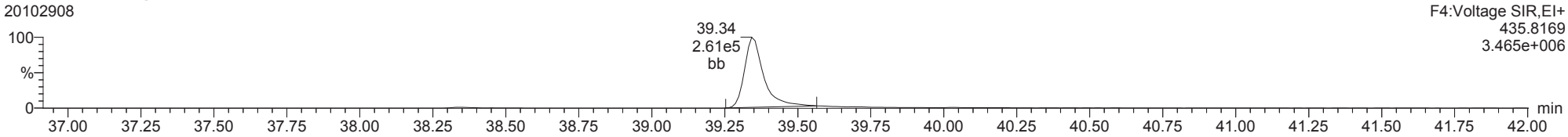

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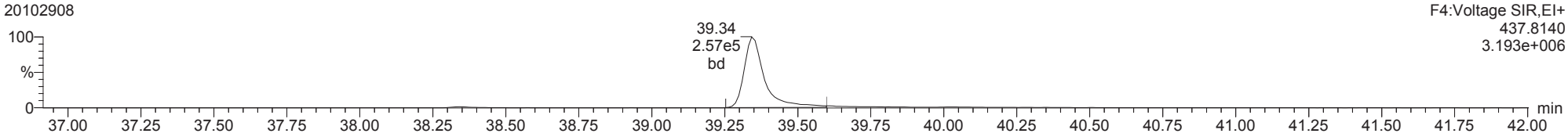
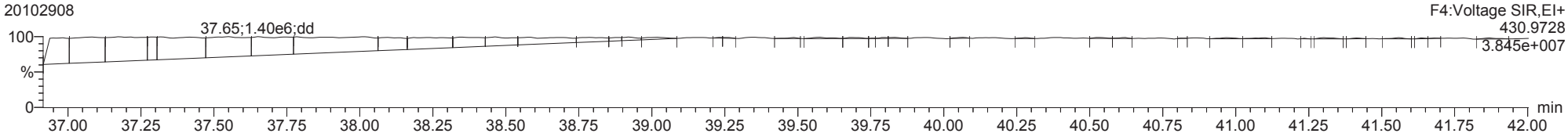


FUNCTION4 PFK



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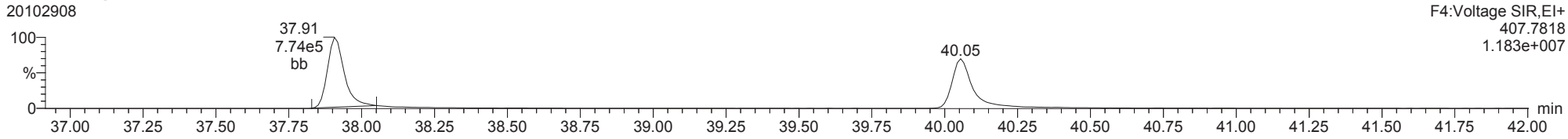
1234678-HpCDF



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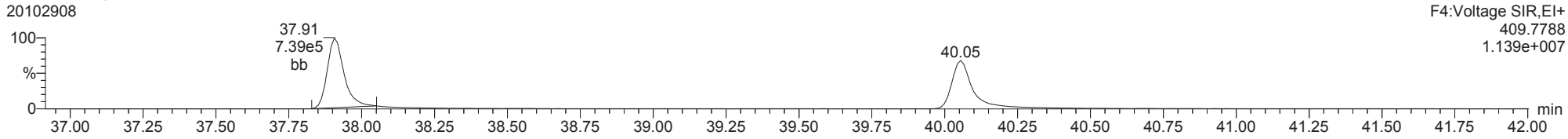

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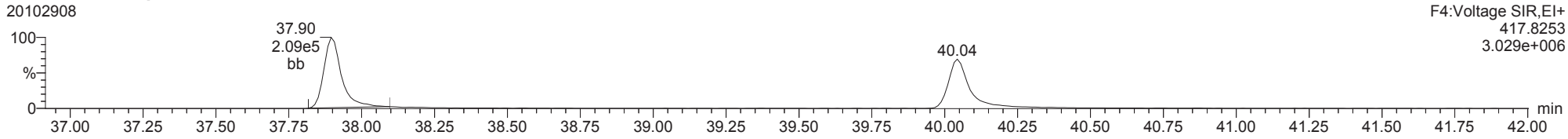

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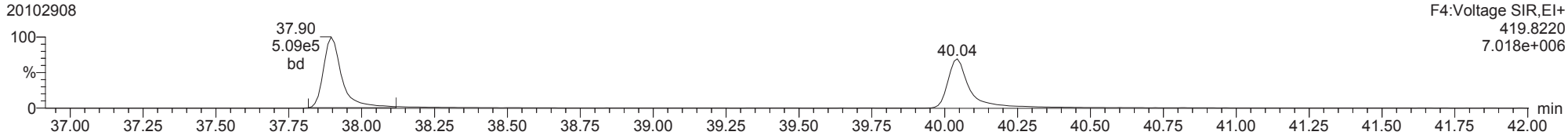

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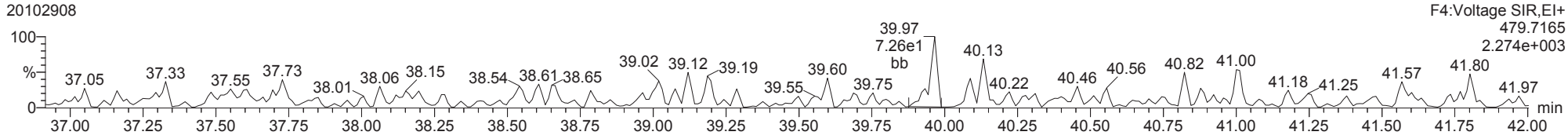

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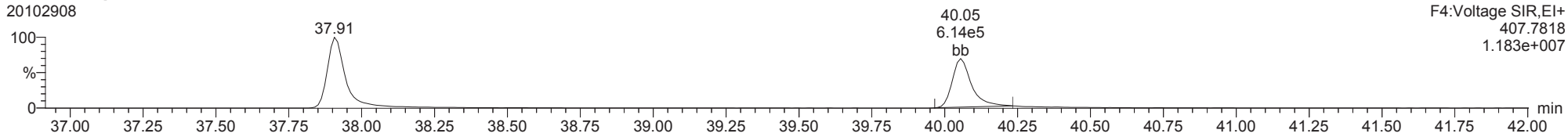
1234789-HpCDF



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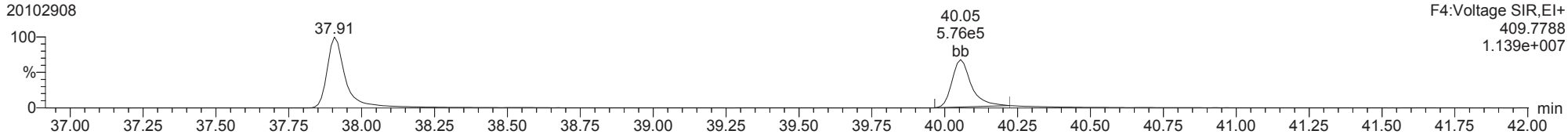

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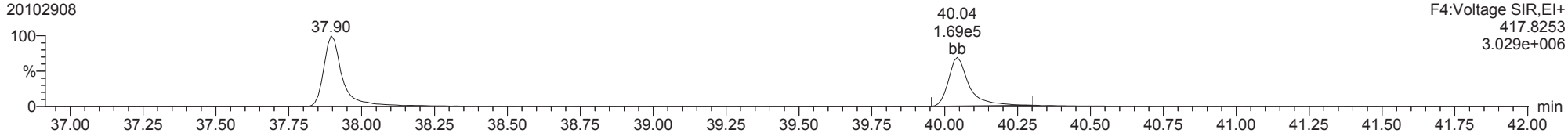

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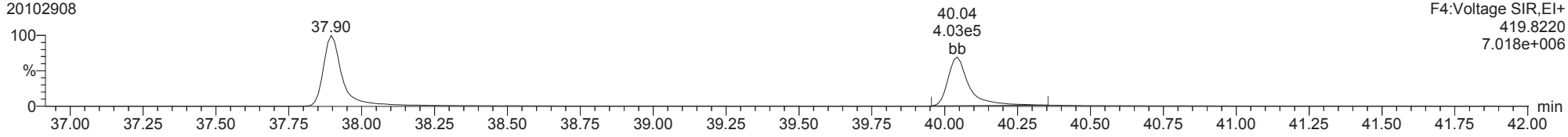

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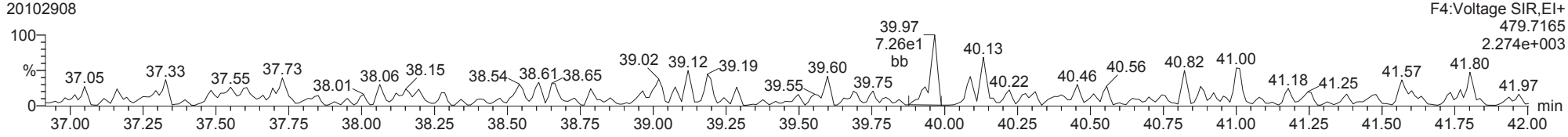

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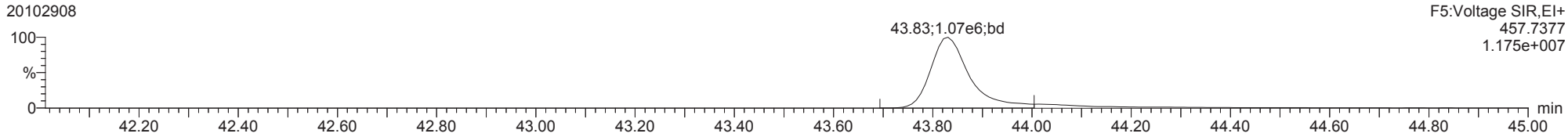
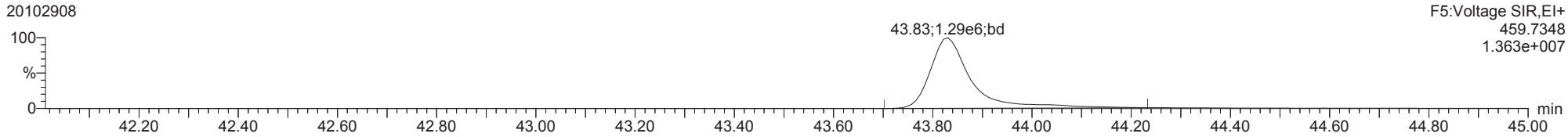
ID: CS4CJ, Name: 20102908, Date: 29-Oct-2020, Time: 21:35:25, Conditions: AUTOSPEC01, User: pk

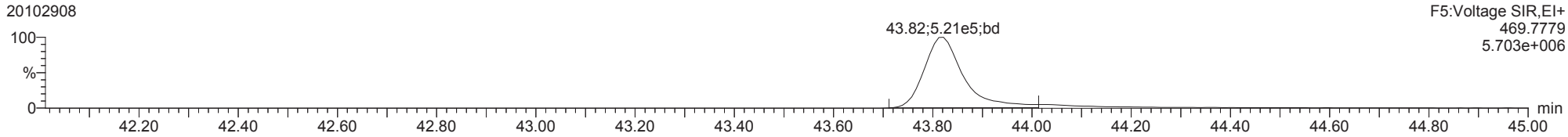
OCDD



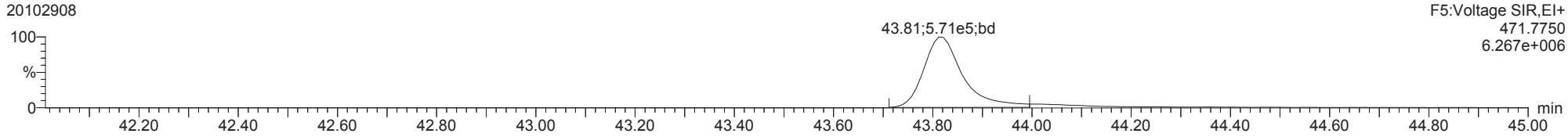
OCDD



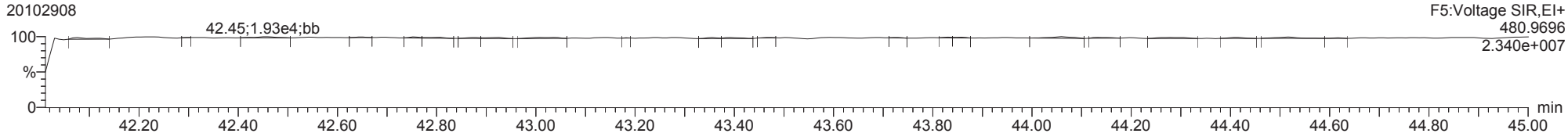
13C-OCDD



13C-OCDD



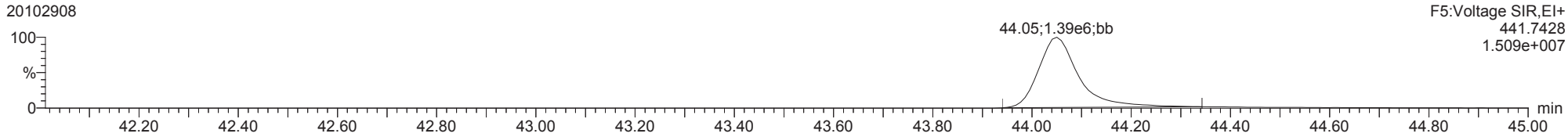
FUNCTION5 PFK



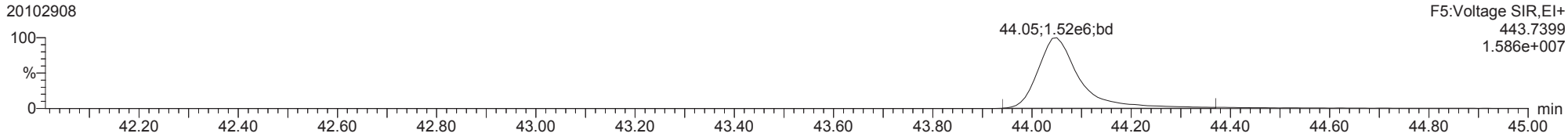
Dataset: T:\Autospec\Processed Data Batch\201029ICIH.qld
Last Altered: Friday, October 30, 2020 09:08:24 Pacific Daylight Time
Printed: Friday, October 30, 2020 14:34:13 Pacific Daylight Time

ID: CS4CJ, Name: 20102908, Date: 29-Oct-2020, Time: 21:35:25, Conditions: AUTOSPEC01, User: pk

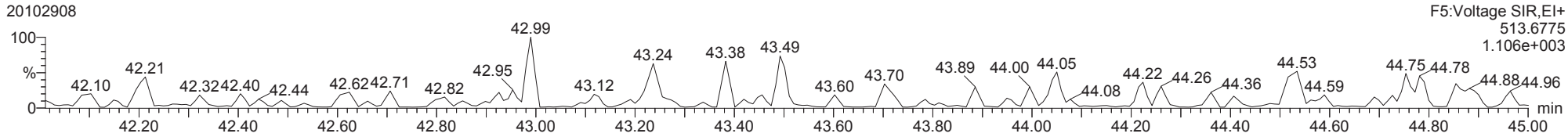
OCDF



OCDF

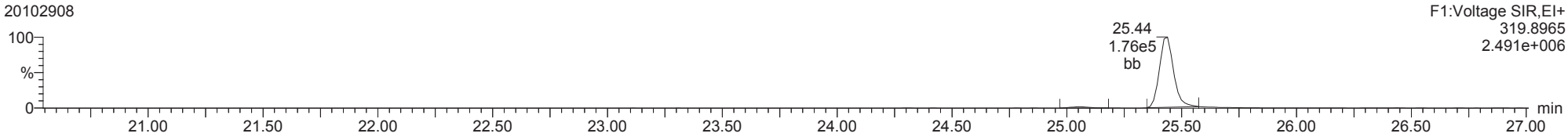


FUNCTION5 DCDPE

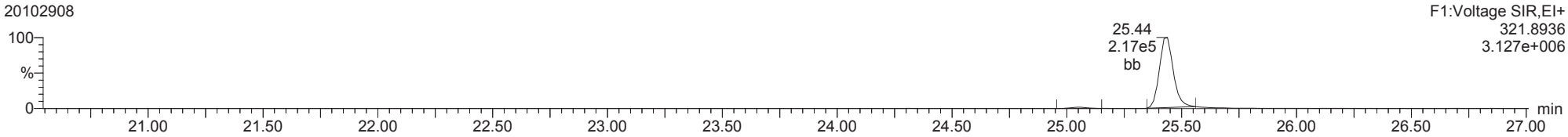


ID: CS4CJ, Name: 20102908, Date: 29-Oct-2020, Time: 21:35:25, Conditions: AUTOSPEC01, User: pk

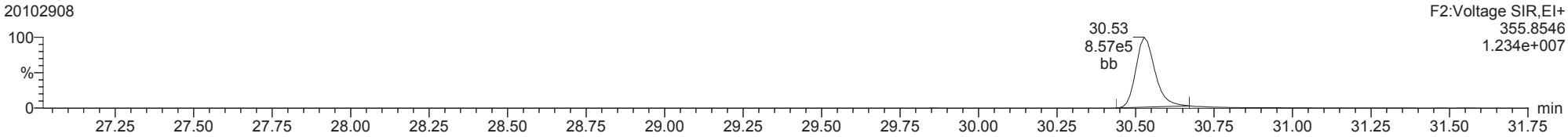
Total-tetradioxins



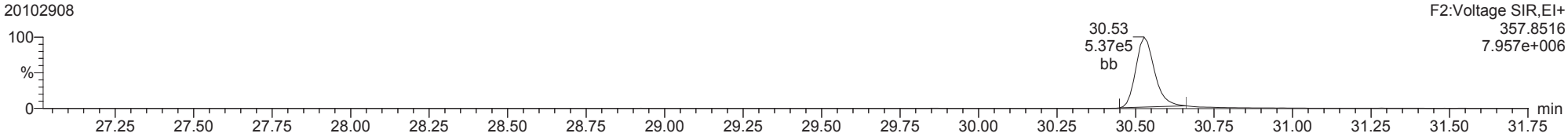
Total-tetradioxins



Total-pentadioxins

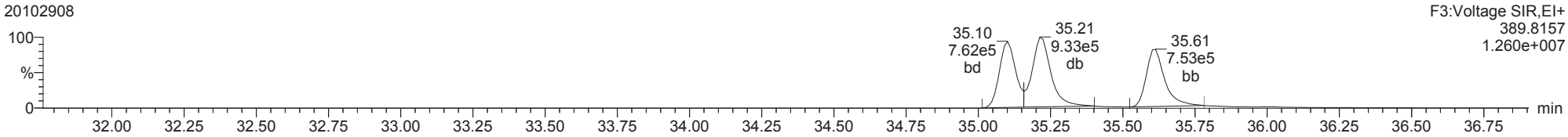


Total-pentadioxins

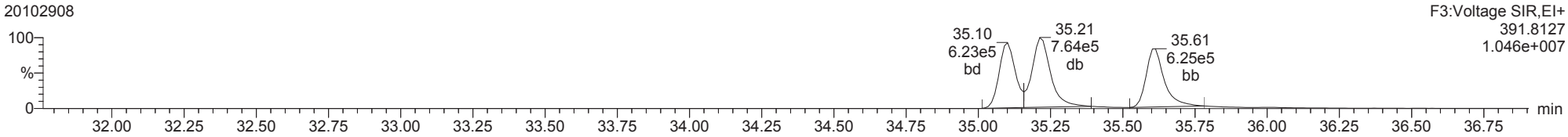


ID: CS4CJ, Name: 20102908, Date: 29-Oct-2020, Time: 21:35:25, Conditions: AUTOSPEC01, User: pk

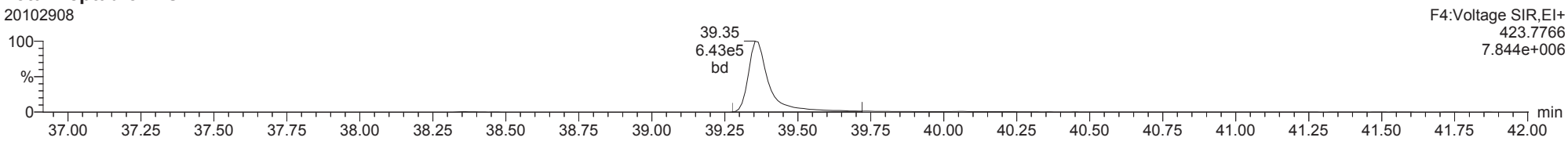
Total-hexadioxins



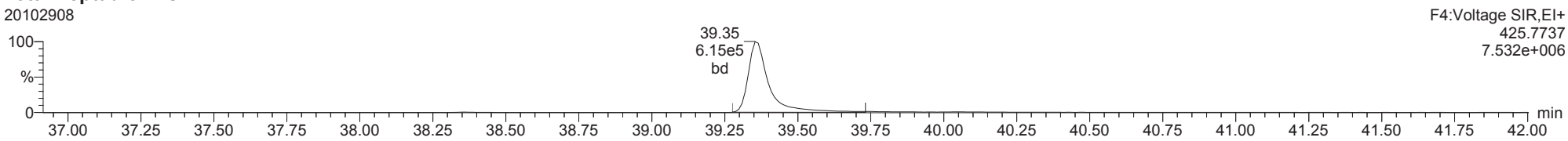
Total-hexadioxins



Total-heptadioxins



Total-heptadioxins



Dataset: T:\Autospec\Processed Data Batch\201029ICIH.qld
Last Altered: Friday, October 30, 2020 09:08:24 Pacific Daylight Time
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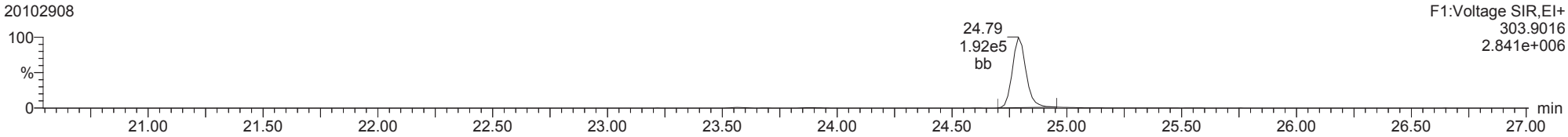
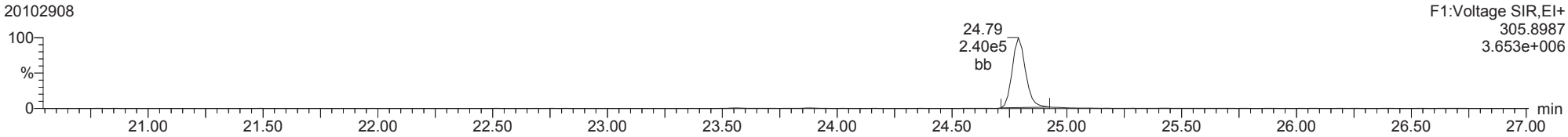
ID: CS4CJ, Name: 20102908, Date: 29-Oct-2020, Time: 21:35:25, Conditions: AUTOSPEC01, User: pk

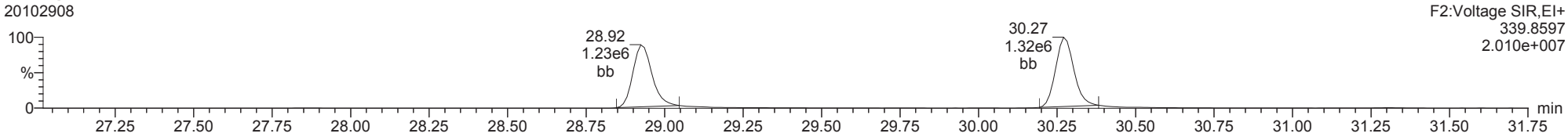
Total-tetrafurans



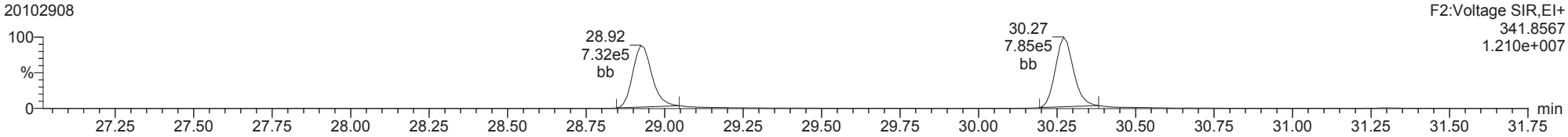
Total-tetrafurans



Total-pentafurans



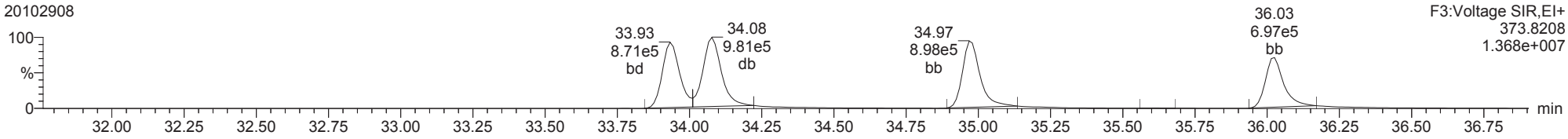
Total-pentafurans



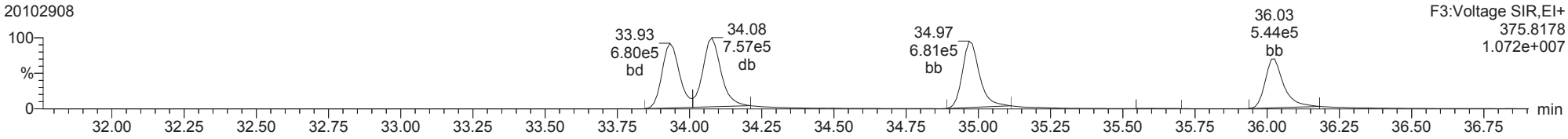
Dataset: T:\Autospec\Processed Data Batch\201029ICIH.qld
Last Altered: Friday, October 30, 2020 09:08:24 Pacific Daylight Time
Printed: Friday, October 30, 2020 14:34:13 Pacific Daylight Time

ID: CS4CJ, Name: 20102908, Date: 29-Oct-2020, Time: 21:35:25, Conditions: AUTOSPEC01, User: pk

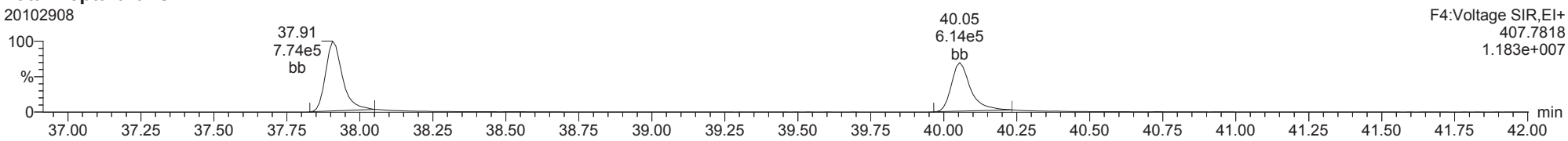
Total-hexafurans



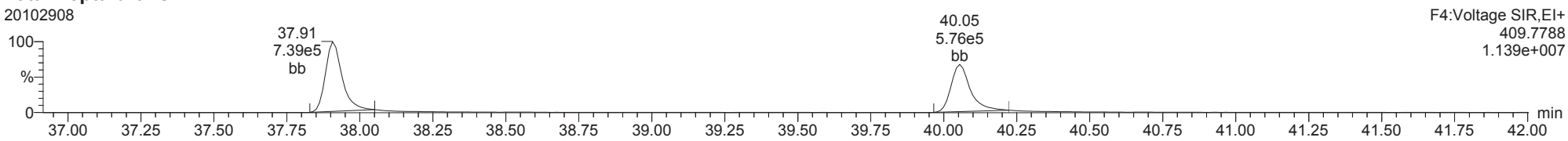
Total-hexafurans



Total-heptafurans



Total-heptafurans



Dataset: T:\Autospec\Processed Data Batch\201029ICIH.qld
Last Altered: Friday, October 30, 2020 09:08:24 Pacific Daylight Time
Printed: Friday, October 30, 2020 14:34:20 Pacific Daylight Time

Method: T:\Autospec\Methods\Dioxin201016.mdb 28 Oct 2020 21:30:41
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 09:08:24

ID: CS5CJ, Name: 20102909, Date: 29-Oct-2020, Time: 22:23:54, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	24.804	1.001	1.005e6	1.277e6	0.729	0.787	0.770	1095	3244	1.46e7	1.84e7	13310.7	5663.7	NO	bb	bb	222.415
12378-PeCDF	28.936	1.000	6.635e6	3.941e6	0.779	1.684	1.550	9478	4594	1.04e8	6.15e7	10951.3	13383.8	NO	bb	bb	1156.219
23478-PeCDF	30.282	1.001	7.100e6	4.244e6	0.880	1.673	1.550	9478	4594	1.12e8	6.66e7	11779.9	14497.5	NO	bb	bb	1146.828
123478-HxCDF	33.944	1.001	4.884e6	3.787e6	0.880	1.290	1.240	4032	2807	7.42e7	5.77e7	18407.8	20555.0	NO	bd	bd	1171.268
234678-HxCDF	34.980	1.000	4.882e6	3.706e6	0.863	1.317	1.240	4032	2807	7.66e7	5.88e7	19000.4	20935.0	NO	bb	bb	1127.775
123678-HxCDF	34.089	1.001	5.227e6	4.033e6	0.853	1.296	1.240	4032	2807	7.83e7	5.99e7	19410.9	21340.3	NO	db	db	1146.751
123789-HxCDF	36.026	1.000	3.935e6	3.067e6	0.780	1.283	1.240	4032	2807	5.89e7	4.59e7	14619.7	16335.4	NO	bb	bb	1181.260
1234678-HpCDF	37.918	1.000	4.294e6	4.064e6	1.001	1.057	1.050	7432	5967	7.02e7	6.60e7	9440.4	11060.2	NO	bb	bb	1131.891
1234789-HpCDF	40.066	1.000	3.408e6	3.226e6	0.994	1.056	1.050	7432	5967	4.93e7	4.65e7	6636.2	7790.8	NO	bb	bb	1109.146
OCDF	44.060	1.005	7.897e6	8.425e6	1.158	0.937	0.890	3558	2352	9.93e7	1.06e8	27921.7	44865.9	NO	bb	bb	2347.321
2378-TCDD	25.439	1.001	9.347e5	1.179e6	1.238	0.793	0.770	1314	1459	1.39e7	1.75e7	10545.5	12021.7	NO	bb	bb	221.779
12378-PeCDD	30.538	1.000	4.526e6	2.973e6	0.988	1.522	1.550	2107	1369	6.93e7	4.50e7	32903.6	32841.9	NO	bb	bb	1107.945
123478-HxCDD	35.113	1.001	4.233e6	3.498e6	0.842	1.210	1.240	2585	3681	6.63e7	5.45e7	25641.8	14798.2	NO	bd	bd	1110.058
123678-HxCDD	35.225	1.000	4.780e6	3.915e6	0.907	1.221	1.240	2585	3681	7.08e7	5.87e7	27369.3	15951.8	NO	db	db	1059.061
123789-HxCDD	35.614	1.011	4.210e6	3.508e6	0.784	1.200	1.240	2585	3681	6.37e7	5.35e7	24638.0	14541.3	NO	bb	bb	1136.966
1234678-HpCDD	39.365	1.000	3.329e6	3.221e6	1.044	1.034	1.050	4254	3594	4.97e7	4.81e7	11681.9	13380.8	NO	bb	bb	1128.640
OCDD	43.840	1.000	6.151e6	7.077e6	0.963	0.869	0.890	6474	11021	7.52e7	8.72e7	11620.4	7913.1	NO	bd	bd	2287.389
13C-2378-TCDF	24.789	1.007	6.140e5	7.945e5	2.203	0.773	0.770	2857	1789	8.75e6	1.13e7	3061.7	6298.5	NO	bb	bb	102.538
13C-12378-PeCDF	28.925	1.175	7.193e5	4.544e5	1.741	1.583	1.550	3136	2183	1.03e7	6.65e6	3277.6	3044.5	NO	bb	bd	108.101
13C-23478-PeCDF	30.260	1.230	6.813e5	4.422e5	1.669	1.541	1.550	3136	2183	1.01e7	6.68e6	3206.3	3059.6	NO	bd	bd	107.918
13C-123478-HxCDF	33.922	0.953	2.757e5	5.654e5	1.022	0.488	0.510	2062	2386	4.16e6	8.46e6	2017.3	3543.6	NO	bd	bd	97.749
13C-123678-HxCDF	34.067	0.957	3.126e5	6.337e5	1.200	0.493	0.510	2062	2386	4.66e6	9.38e6	2259.9	3932.0	NO	db	db	93.678
13C-234678-HxCDF	34.969	0.982	2.892e5	5.934e5	1.071	0.487	0.510	2062	2386	4.32e6	8.67e6	2095.1	3633.5	NO	bd	bb	97.905
13C-123789-HxCDF	36.015	1.012	2.475e5	5.123e5	0.919	0.483	0.510	2062	2386	3.63e6	7.48e6	1761.1	3133.8	NO	bb	bb	98.281
13C-1234678-HpCDF	37.907	1.065	2.211e5	5.166e5	0.909	0.428	0.440	2298	3193	3.57e6	8.10e6	1552.8	2537.2	NO	bb	bb	96.470
13C-1234789-HpCDF	40.055	1.125	1.792e5	4.226e5	0.724	0.424	0.440	2298	3193	2.55e6	5.88e6	1109.1	1841.1	NO	bb	bb	98.814
13C-1234-TCDD	24.608	0.000	2.749e5	3.487e5	1.000	0.788	0.770	1528	1104	4.18e6	5.28e6	2734.9	4782.7	NO	bb	bb	100.000
13C-2378-TCDD	25.424	1.033	3.406e5	4.291e5	1.181	0.794	0.770	1528	1104	5.02e6	6.32e6	3286.9	5726.6	NO	bb	bb	104.476
13C-12378-PeCDD	30.527	1.241	4.289e5	2.565e5	0.978	1.672	1.550	1233	1089	6.47e6	3.87e6	5246.8	3551.0	NO	bb	bb	112.397
13C-123478-HxCDD	35.091	0.986	4.661e5	3.612e5	0.965	1.291	1.240	1580	1391	7.25e6	5.69e6	4589.3	4088.2	NO	bd	bd	101.860
13C-123678-HxCDD	35.214	0.989	5.007e5	4.044e5	1.168	1.238	1.240	1580	1391	7.59e6	6.26e6	4805.5	4496.8	NO	db	db	92.063
13C-1234678-HpCDD	39.354	1.105	2.873e5	2.687e5	0.645	1.069	1.050	2165	1362	4.39e6	4.07e6	2030.1	2991.6	NO	bb	bb	102.359
13C-OCDD	43.831	1.231	5.532e5	6.478e5	0.678	0.854	0.890	2380	3198	7.31e6	8.05e6	3070.2	2517.6	NO	bb	bd	210.376
13C-123789-HxCDD	35.603	0.000	4.671e5	3.746e5	1.000	1.247	1.240	1580	1391	7.28e6	5.91e6	4606.5	4246.2	NO	bb	bb	100.000
37CL-2378-TCDD	25.439	1.034	1.909e6		1.264			1508		2.86e7		18944.8			bb		242.069

Dataset: T:\Autospec\Processed Data Batch\201029ICIH.qld
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ID: CS5CJ, Name: 20102909, Date: 29-Oct-2020, Time: 22:23:54, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.846		0.770	1095	3244								
1289-TCDF					0.688		0.770	1095	3244								
13468-PECDF					1.181		1.550	408	687								
12389-PECDF					0.766		1.550	9478	4594								
123468-HXCDF					1.003		1.240	4032	2807								
1368-TCDD					1.179		0.770	1314	1459								
1289-TCDD					1.042		0.770	1314	1459								
12479-PECDD					1.810		1.550	2107	1369								
12389-PECDD					1.165		1.550	2107	1369								
124679-HXCDD					1.056		1.240	2585	3681								
1234679-HPCDD					1.285		1.050	4254	3594								
Total-tetrafurans			1.011e6		0.754			1095		1.46e7							223.524
Total-penta1			0.000e0					408		0.00e0							
Total-pentafurans			1.376e7		0.809			9478		2.16e8							2306.996
Total-hexafurans			1.894e7		0.876			4032		2.88e8							4630.286
Total-heptafurans			7.706e6		0.997			7432		1.20e8							2242.309
Total-Furans			4.931e7		0.893			1095		7.38e8							11750.436
Total-tetradioxins			9.507e5		1.153			1314		1.40e7							226.059
Total-pentadioxins			4.531e6		1.321			2107		6.94e7							1108.793
Total-hexadioxins			1.322e7		0.897			2585		2.01e8							3306.209
Total-heptadioxins			3.329e6		1.165			4254		4.97e7							1128.640
Total-Dioxins			2.818e7		1.100			1314		4.09e8							8057.089
Total-TEQ			7.750e7					1314		1.15e9							19807.525
FUNCTION1 PFK			2.408e6					525807		4.17e7							
FUNCTION2 PFK			0.000e0					386739		0.00e0							
FUNCTION3 PFK			9.809e4					390500		2.19e6							0.000
FUNCTION4 PFK			8.375e4					327823		1.41e6							
FUNCTION5 PFK			0.000e0					159093		0.00e0							
FUNCTION1 HXCD...			0.000e0					284		0.00e0							
FUNCTION1 HPCD...			2.432e2					570		4.79e3							0.000
FUNCTION2 HPCD...			5.615e3					506		8.69e4							0.000
FUNCTION3 OCDPE			0.000e0					358		0.00e0							
FUNCTION4 NCDPE			0.000e0					403		0.00e0							
FUNCTION5 DCDPE			0.000e0					191		0.00e0							

Method: T:\Autospec\Methods\Dioxin201016.mdb 28 Oct 2020 21:30:41
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 09:08:24

ID: CS5CJ, Name: 20102909, Date: 29-Oct-2020, Time: 22:23:54, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	24.80	1.005e6	1.277e6	0.729	0.79	0.77	13310.7	YES	NO	bb	bb	222.415
2	Total-tetrafurans	23.90	5.416e3	6.368e3	0.754	0.85	0.77	65.4	YES	NO	dd	bb	1.109

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	30.02	4.659e3	3.498e3	0.809	1.33	1.55	7.6	YES	NO	bb	bb	0.878
2	Total-pentafurans	29.54	5.060e2	3.331e2	0.809	1.52	1.55	1.4	NO	NO	bb	bb	0.090
3	12378-PeCDF	28.94	6.635e6	3.941e6	0.779	1.68	1.55	10951.3	YES	NO	bb	bb	1156.2...
4	Total-pentafurans	27.86	1.639e4	1.013e4	0.809	1.62	1.55	19.1	YES	NO	bb	bb	2.856
5	Total-pentafurans	30.87	7.251e2	4.273e2	0.809	1.70	1.55	2.3	NO	NO	bb	bb	0.124
6	23478-PeCDF	30.28	7.100e6	4.244e6	0.880	1.67	1.55	11779.9	YES	NO	bb	bb	1146.8...

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123478-HxCDF	33.94	4.884e6	3.787e6	0.880	1.29	1.24	18407.8	YES	NO	bd	bd	1171.2...
2	Total-hexafurans	33.78	2.937e3	2.369e3	0.876	1.24	1.24	14.1	YES	NO	bb	bb	0.707
3	Total-hexafurans	32.45	2.396e3	1.845e3	0.876	1.30	1.24	6.2	YES	NO	db	dd	0.565
4	123789-HxCDF	36.03	3.935e6	3.067e6	0.780	1.28	1.24	14619.7	YES	NO	bb	bb	1181.2...
5	Total-hexafurans	35.61	8.038e3	6.682e3	0.876	1.20	1.24	26.6	YES	NO	bb	bb	1.960
6	234678-HxCDF	34.98	4.882e6	3.706e6	0.863	1.32	1.24	19000.4	YES	NO	bb	bb	1127.7...
7	123678-HxCDF	34.09	5.227e6	4.033e6	0.853	1.30	1.24	19410.9	YES	NO	db	db	1146.7...

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	37.92	4.294e6	4.064e6	1.001	1.06	1.05	9440.4	YES	NO	bb	bb	1131.8...
2	1234789-HpCDF	40.07	3.408e6	3.226e6	0.994	1.06	1.05	6636.2	YES	NO	bb	bb	1109.1...
3	Total-heptafurans	38.55	4.069e3	4.431e3	0.997	0.92	1.05	9.1	YES	NO	bb	bb	1.272

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	24.80	1.005e6	1.277e6	0.729	0.79	0.77	13310.7	YES	NO	bb	bb	222.415
2	Total-tetrafurans	23.90	5.416e3	6.368e3	0.754	0.85	0.77	65.4	YES	NO	dd	bb	1.109
3	Total-pentafurans	30.02	4.659e3	3.498e3	0.809	1.33	1.55	7.6	YES	NO	bb	bb	0.878
4	Total-pentafurans	29.54	5.060e2	3.331e2	0.809	1.52	1.55	1.4	NO	NO	bb	bb	0.090
5	12378-PeCDF	28.94	6.635e6	3.941e6	0.779	1.68	1.55	10951.3	YES	NO	bb	bb	1156.2...
6	Total-pentafurans	27.86	1.639e4	1.013e4	0.809	1.62	1.55	19.1	YES	NO	bb	bb	2.856
7	Total-pentafurans	30.87	7.251e2	4.273e2	0.809	1.70	1.55	2.3	NO	NO	bb	bb	0.124
8	23478-PeCDF	30.28	7.100e6	4.244e6	0.880	1.67	1.55	11779.9	YES	NO	bb	bb	1146.8...
9	123478-HxCDF	33.94	4.884e6	3.787e6	0.880	1.29	1.24	18407.8	YES	NO	bd	bd	1171.2...
10	Total-hexafurans	33.78	2.937e3	2.369e3	0.876	1.24	1.24	14.1	YES	NO	bb	bb	0.707
11	Total-hexafurans	32.45	2.396e3	1.845e3	0.876	1.30	1.24	6.2	YES	NO	db	dd	0.565
12	123789-HxCDF	36.03	3.935e6	3.067e6	0.780	1.28	1.24	14619.7	YES	NO	bb	bb	1181.2...
13	Total-hexafurans	35.61	8.038e3	6.682e3	0.876	1.20	1.24	26.6	YES	NO	bb	bb	1.960
14	234678-HxCDF	34.98	4.882e6	3.706e6	0.863	1.32	1.24	19000.4	YES	NO	bb	bb	1127.7...
15	123678-HxCDF	34.09	5.227e6	4.033e6	0.853	1.30	1.24	19410.9	YES	NO	db	db	1146.7...
16	1234678-HpCDF	37.92	4.294e6	4.064e6	1.001	1.06	1.05	9440.4	YES	NO	bb	bb	1131.8...
17	1234789-HpCDF	40.07	3.408e6	3.226e6	0.994	1.06	1.05	6636.2	YES	NO	bb	bb	1109.1...
18	Total-heptafurans	38.55	4.069e3	4.431e3	0.997	0.92	1.05	9.1	YES	NO	bb	bb	1.272
19	OCDF	44.06	7.897e6	8.425e6	1.158	0.94	0.89	27921.7	YES	NO	bb	bb	2347.3...

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	25.44	9.347e5	1.179e6	1.238	0.79	0.77	10545.5	YES	NO	bb	bb	221.779
2	Total-tetradioxins	25.06	1.598e4	2.200e4	1.153	0.73	0.77	143.9	YES	NO	bb	bb	4.279

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentadioxins	31.08	5.876e2	3.298e2	1.321	1.78	1.55	8.1	YES	NO	dd	bd	0.101
2	12378-PeCDD	30.54	4.526e6	2.973e6	0.988	1.52	1.55	32903.6	YES	NO	bb	bb	1107.9...
3	Total-pentadioxins	29.86	3.993e3	2.772e3	1.321	1.44	1.55	27.6	YES	NO	bb	bd	0.747

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	35.61	4.210e6	3.508e6	0.784	1.20	1.24	24638.0	YES	NO	bb	bb	1136.9...
2	123678-HxCDD	35.22	4.780e6	3.915e6	0.907	1.22	1.24	27369.3	YES	NO	db	db	1059.0...
3	123478-HxCDD	35.11	4.233e6	3.498e6	0.842	1.21	1.24	25641.8	YES	NO	bd	bd	1110.058
4	Total-hexadioxins	34.09	5.284e2	4.321e2	0.897	1.22	1.24	2.3	NO	NO	dd	db	0.124

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	39.37	3.329e6	3.221e6	1.044	1.03	1.05	11681.9	YES	NO	bb	bb	1128.6...

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	25.44	9.347e5	1.179e6	1.238	0.79	0.77	10545.5	YES	NO	bb	bb	221.779
2	Total-tetradioxins	25.06	1.598e4	2.200e4	1.153	0.73	0.77	143.9	YES	NO	bb	bb	4.279
3	Total-pentadioxins	31.08	5.876e2	3.298e2	1.321	1.78	1.55	8.1	YES	NO	dd	bd	0.101
4	12378-PeCDD	30.54	4.526e6	2.973e6	0.988	1.52	1.55	32903.6	YES	NO	bb	bb	1107.9...
5	Total-pentadioxins	29.86	3.993e3	2.772e3	1.321	1.44	1.55	27.6	YES	NO	bb	bd	0.747
6	123789-HxCDD	35.61	4.210e6	3.508e6	0.784	1.20	1.24	24638.0	YES	NO	bb	bb	1136.9...
7	123678-HxCDD	35.22	4.780e6	3.915e6	0.907	1.22	1.24	27369.3	YES	NO	db	db	1059.0...
8	123478-HxCDD	35.11	4.233e6	3.498e6	0.842	1.21	1.24	25641.8	YES	NO	bd	bd	1110.058
9	Total-hexadioxins	34.09	5.284e2	4.321e2	0.897	1.22	1.24	2.3	NO	NO	dd	db	0.124
10	1234678-HpCDD	39.37	3.329e6	3.221e6	1.044	1.03	1.05	11681.9	YES	NO	bb	bb	1128.6...
11	OCDD	43.84	6.151e6	7.077e6	0.963	0.87	0.89	11620.4	YES	NO	bd	bd	2287.3...

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	24.80	1.005e6	1.277e6	0.729	0.79	0.77	13310.7	YES	NO	bb	bb	222.415
2	Total-tetrafurans	23.90	5.416e3	6.368e3	0.754	0.85	0.77	65.4	YES	NO	dd	bb	1.109
3	Total-pentafurans	30.02	4.659e3	3.498e3	0.809	1.33	1.55	7.6	YES	NO	bb	bb	0.878
4	Total-pentafurans	29.54	5.060e2	3.331e2	0.809	1.52	1.55	1.4	NO	NO	bb	bb	0.090
5	12378-PeCDF	28.94	6.635e6	3.941e6	0.779	1.68	1.55	10951.3	YES	NO	bb	bb	1156.2...
6	Total-pentafurans	27.86	1.639e4	1.013e4	0.809	1.62	1.55	19.1	YES	NO	bb	bb	2.856
7	Total-pentafurans	30.87	7.251e2	4.273e2	0.809	1.70	1.55	2.3	NO	NO	bb	bb	0.124
8	23478-PeCDF	30.28	7.100e6	4.244e6	0.880	1.67	1.55	11779.9	YES	NO	bb	bb	1146.8...
9	123478-HxCDF	33.94	4.884e6	3.787e6	0.880	1.29	1.24	18407.8	YES	NO	bd	bd	1171.2...
10	Total-hexafurans	33.78	2.937e3	2.369e3	0.876	1.24	1.24	14.1	YES	NO	bb	bb	0.707
11	Total-hexafurans	32.45	2.396e3	1.845e3	0.876	1.30	1.24	6.2	YES	NO	db	dd	0.565
12	123789-HxCDF	36.03	3.935e6	3.067e6	0.780	1.28	1.24	14619.7	YES	NO	bb	bb	1181.2...
13	Total-hexafurans	35.61	8.038e3	6.682e3	0.876	1.20	1.24	26.6	YES	NO	bb	bb	1.960
14	234678-HxCDF	34.98	4.882e6	3.706e6	0.863	1.32	1.24	19000.4	YES	NO	bb	bb	1127.7...
15	123678-HxCDF	34.09	5.227e6	4.033e6	0.853	1.30	1.24	19410.9	YES	NO	db	db	1146.7...
16	1234678-HpCDF	37.92	4.294e6	4.064e6	1.001	1.06	1.05	9440.4	YES	NO	bb	bb	1131.8...
17	1234789-HpCDF	40.07	3.408e6	3.226e6	0.994	1.06	1.05	6636.2	YES	NO	bb	bb	1109.1...
18	Total-heptafurans	38.55	4.069e3	4.431e3	0.997	0.92	1.05	9.1	YES	NO	bb	bb	1.272
19	OCDF	44.06	7.897e6	8.425e6	1.158	0.94	0.89	27921.7	YES	NO	bb	bb	2347.3...
20	2378-TCDD	25.44	9.347e5	1.179e6	1.238	0.79	0.77	10545.5	YES	NO	bb	bb	221.779
21	Total-tetradioxins	25.06	1.598e4	2.200e4	1.153	0.73	0.77	143.9	YES	NO	bb	bb	4.279
22	Total-pentadioxins	31.08	5.876e2	3.298e2	1.321	1.78	1.55	8.1	YES	NO	dd	bd	0.101
23	12378-PeCDD	30.54	4.526e6	2.973e6	0.988	1.52	1.55	32903.6	YES	NO	bb	bb	1107.9...
24	Total-pentadioxins	29.86	3.993e3	2.772e3	1.321	1.44	1.55	27.6	YES	NO	bb	bd	0.747
25	123789-HxCDD	35.61	4.210e6	3.508e6	0.784	1.20	1.24	24638.0	YES	NO	bb	bb	1136.9...
26	123678-HxCDD	35.22	4.780e6	3.915e6	0.907	1.22	1.24	27369.3	YES	NO	db	db	1059.0...
27	123478-HxCDD	35.11	4.233e6	3.498e6	0.842	1.21	1.24	25641.8	YES	NO	bd	bd	1110.058
28	Total-hexadioxins	34.09	5.284e2	4.321e2	0.897	1.22	1.24	2.3	NO	NO	dd	db	0.124
29	1234678-HpCDD	39.37	3.329e6	3.221e6	1.044	1.03	1.05	11681.9	YES	NO	bb	bb	1128.6...
30	OCDD	43.84	6.151e6	7.077e6	0.963	0.87	0.89	11620.4	YES	NO	bd	bd	2287.3...

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.33	5.381e4					1.6	NO		bb		
2	FUNCTION1 PFK	21.21	4.405e4					1.1	NO		bb		
3	FUNCTION1 PFK	21.07	4.373e4					2.0	NO		db		
4	FUNCTION1 PFK	20.97	4.633e4					1.4	NO		dd		
5	FUNCTION1 PFK	20.92	2.193e4					1.1	NO		dd		
6	FUNCTION1 PFK	20.86	8.188e4					2.1	NO		dd		
7	FUNCTION1 PFK	20.74	6.326e4					1.6	NO		bd		
8	FUNCTION1 PFK	20.63	3.020e4					1.6	NO		bb		
9	FUNCTION1 PFK	22.70	2.485e4					1.0	NO		db		
10	FUNCTION1 PFK	22.66	2.057e4					1.1	NO		dd		
11	FUNCTION1 PFK	22.55	4.970e4					1.3	NO		bd		
12	FUNCTION1 PFK	22.46	2.571e4					0.8	NO		bb		
13	FUNCTION1 PFK	22.34	3.469e4					1.4	NO		bb		
14	FUNCTION1 PFK	22.24	3.778e4					1.3	NO		bb		
15	FUNCTION1 PFK	22.13	4.519e3					0.6	NO		bb		
16	FUNCTION1 PFK	22.07	2.442e4					1.3	NO		db		
17	FUNCTION1 PFK	22.02	9.384e3					0.8	NO		bd		
18	FUNCTION1 PFK	21.96	2.312e4					1.1	NO		db		
19	FUNCTION1 PFK	21.89	6.234e4					1.5	NO		bd		
20	FUNCTION1 PFK	21.77	3.828e4					1.2	NO		db		
21	FUNCTION1 PFK	21.68	4.971e4					2.0	NO		dd		
22	FUNCTION1 PFK	21.63	4.360e4					1.7	NO		dd		
23	FUNCTION1 PFK	21.54	4.902e4					2.1	NO		dd		
24	FUNCTION1 PFK	21.43	5.477e4					1.8	NO		bd		
25	FUNCTION1 PFK	24.59	4.323e4					1.8	NO		dd		
26	FUNCTION1 PFK	24.50	5.917e4					1.6	NO		dd		
27	FUNCTION1 PFK	24.38	5.538e4					1.7	NO		bd		
28	FUNCTION1 PFK	24.26	3.835e4					1.2	NO		db		
29	FUNCTION1 PFK	24.15	9.183e4					1.9	NO		dd		
30	FUNCTION1 PFK	24.05	5.479e4					1.7	NO		dd		
31	FUNCTION1 PFK	23.94	6.012e4					1.7	NO		bd		
32	FUNCTION1 PFK	23.84	2.890e4					1.6	NO		bb		
33	FUNCTION1 PFK	23.72	2.847e4					1.2	NO		bb		
34	FUNCTION1 PFK	23.58	5.078e4					1.2	NO		db		
35	FUNCTION1 PFK	23.47	4.891e4					1.4	NO		bd		
36	FUNCTION1 PFK	23.32	1.077e4					0.4	NO		bb		
37	FUNCTION1 PFK	23.25	1.290e4					0.7	NO		bb		

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	23.13	8.330e4					2.2	NO		db		
39	FUNCTION1 PFK	23.04	5.900e4					1.9	NO		bd		
40	FUNCTION1 PFK	22.92	1.591e4					0.7	NO		bb		
41	FUNCTION1 PFK	26.36	2.409e4					1.0	NO		db		
42	FUNCTION1 PFK	26.25	2.466e4					1.0	NO		dd		
43	FUNCTION1 PFK	26.12	7.138e4					1.5	NO		dd		
44	FUNCTION1 PFK	26.00	4.890e4					1.7	NO		dd		
45	FUNCTION1 PFK	25.89	5.001e4					1.4	NO		dd		
46	FUNCTION1 PFK	25.79	1.514e4					0.7	NO		bd		
47	FUNCTION1 PFK	25.65	4.989e4					1.5	NO		db		
48	FUNCTION1 PFK	25.57	1.280e4					0.8	NO		dd		
49	FUNCTION1 PFK	25.51	1.842e4					0.8	NO		dd		
50	FUNCTION1 PFK	25.45	4.735e4					1.2	NO		bd		
51	FUNCTION1 PFK	25.30	4.214e4					1.5	NO		bb		
52	FUNCTION1 PFK	25.09	3.985e4					1.2	NO		db		
53	FUNCTION1 PFK	24.97	3.580e4					1.3	NO		dd		
54	FUNCTION1 PFK	24.85	7.752e4					1.5	NO		dd		
55	FUNCTION1 PFK	24.76	7.104e4					1.6	NO		dd		
56	FUNCTION1 PFK	24.65	3.073e4					1.3	NO		dd		
57	FUNCTION1 PFK	26.84	1.646e4					0.8	NO		bb		
58	FUNCTION1 PFK	26.74	7.396e3					0.3	NO		db		
59	FUNCTION1 PFK	26.68	3.335e4					1.4	NO		bd		
60	FUNCTION1 PFK	26.47	1.134e4					0.5	NO		bb		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	36.39	1.745e4					1.5	NO		bb		0.000
2	FUNCTION3 PFK	36.06	4.218e4					2.0	NO		bb		0.000
3	FUNCTION3 PFK	35.11	3.846e4					2.1	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	40.24	2.467e4					1.6	NO		bb		
2	FUNCTION4 PFK	37.91	5.907e4					2.7	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	22.51	7.346e1					1.9	NO		bb		0.000
2	FUNCTION1 HPCD...	25.00	8.304e1					3.3	YES		bb		0.000
3	FUNCTION1 HPCD...	23.13	8.670e1					3.2	YES		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.58	1.012e2					4.0	YES		bb		0.000
2	FUNCTION2 HPCD...	30.52	7.059e1					3.3	YES		bb		0.000
3	FUNCTION2 HPCD...	30.17	5.443e3					164.3	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ID: CS5CJ, Name: 20102909, Date: 29-Oct-2020, Time: 22:23:54, Conditions: AUTOSPEC01, User: pk

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
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Printed: Friday, October 30, 2020 14:34:20 Pacific Daylight Time

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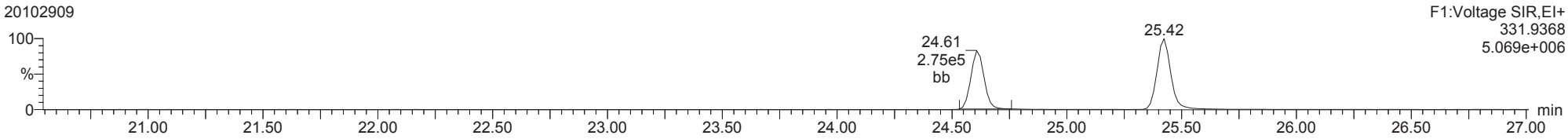
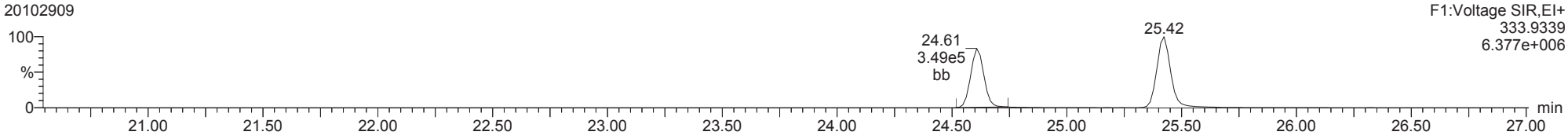
ID: CS5CJ, Name: 20102909, Date: 29-Oct-2020, Time: 22:23:54, Conditions: AUTOSPEC01, User: pk

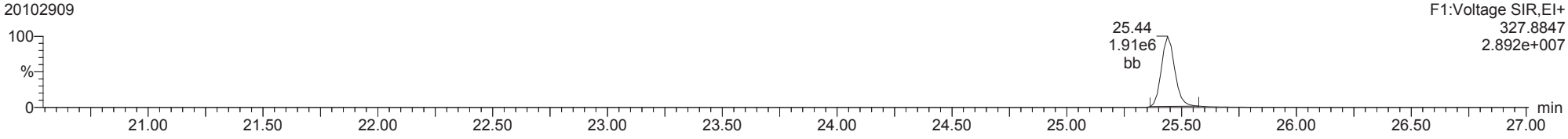
13C-1234-TCDD



13C-1234-TCDD



37CL-2378-TCDD



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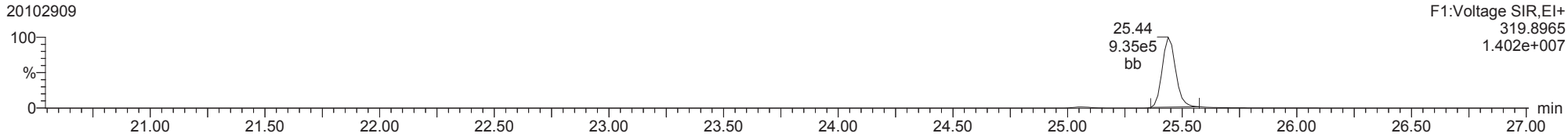

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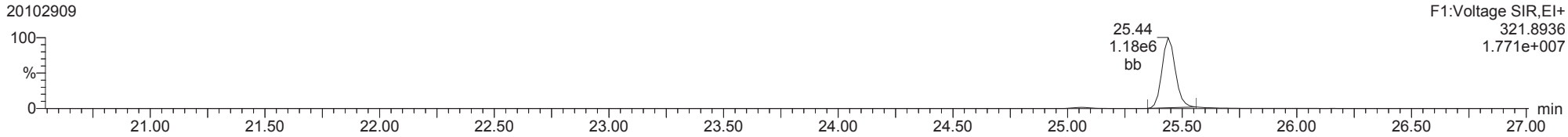

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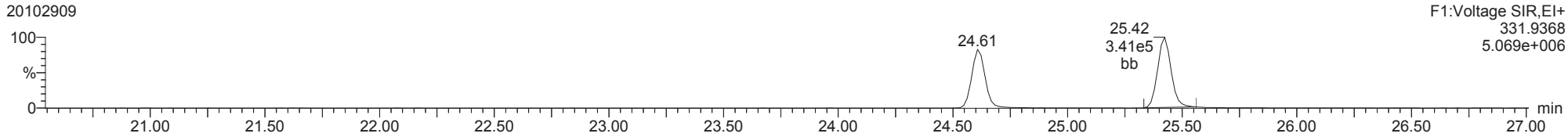

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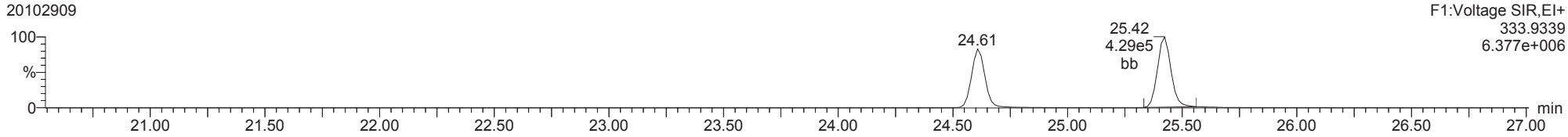

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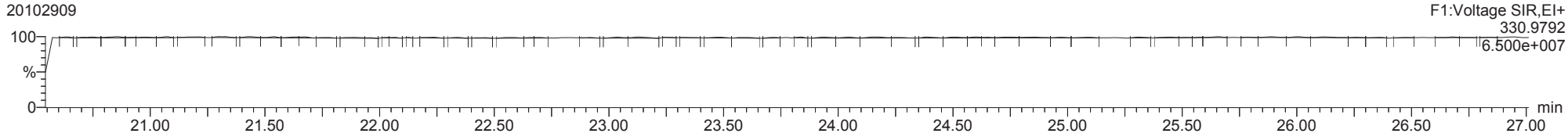

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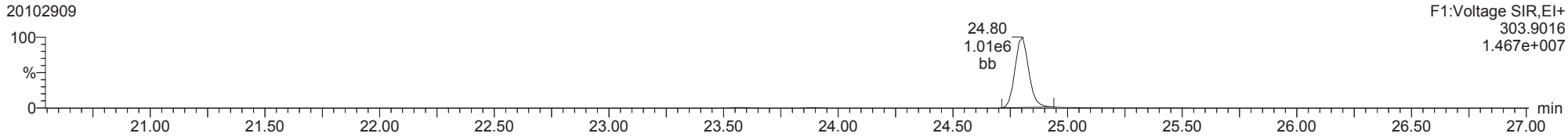

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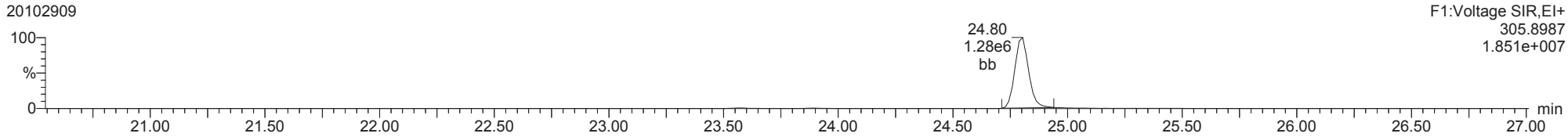

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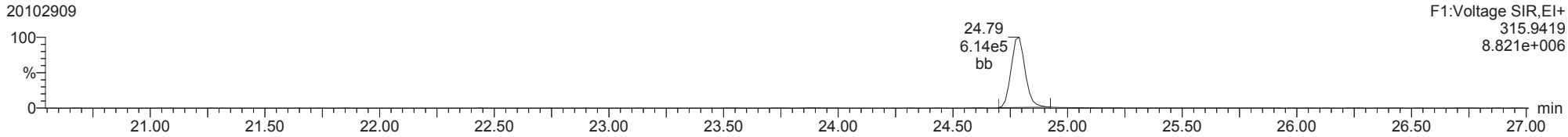

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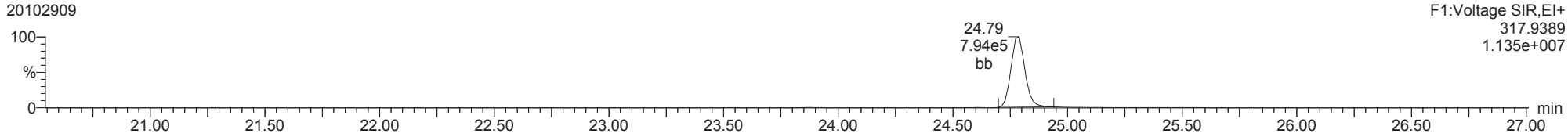
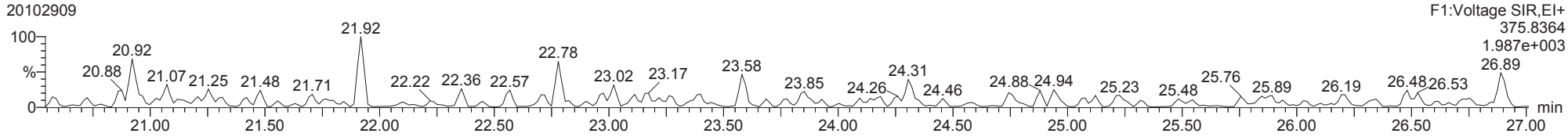
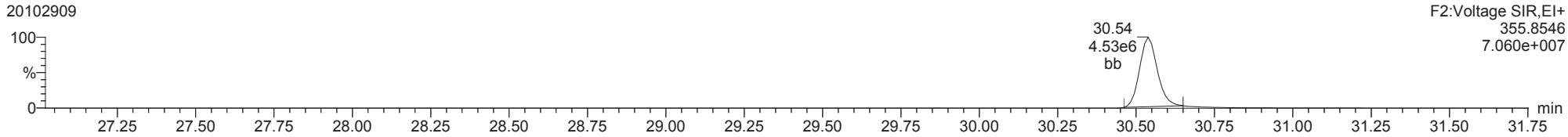


FUNCTION1 HXCDPE



ID: CS5CJ, Name: 20102909, Date: 29-Oct-2020, Time: 22:23:54, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



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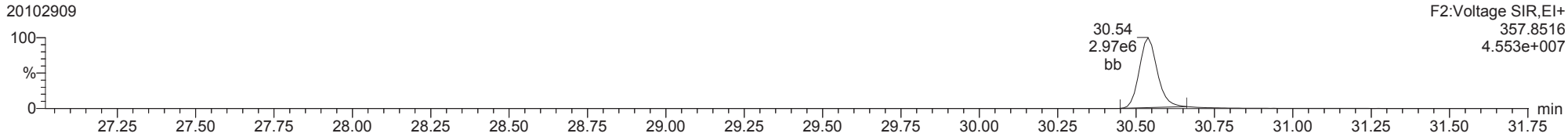

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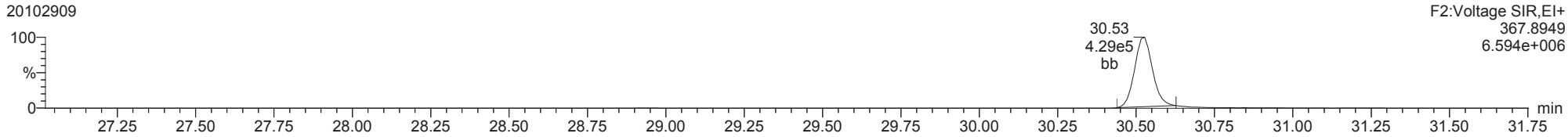

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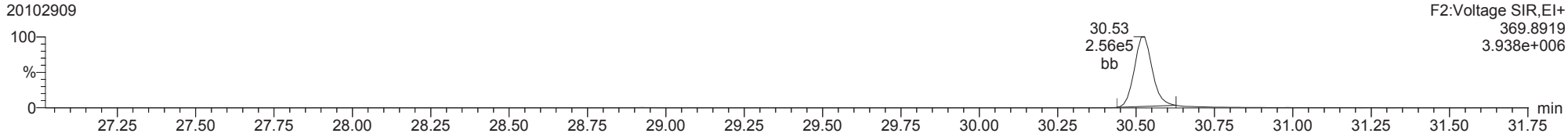
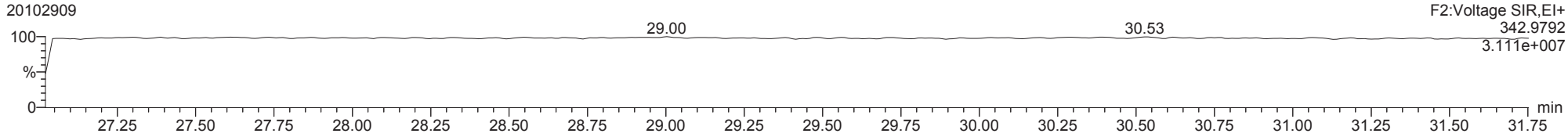


FUNCTION2 PFK



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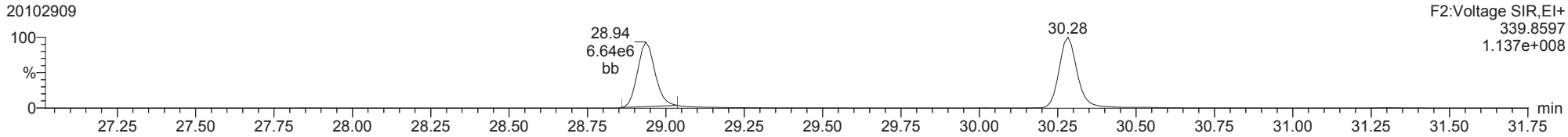

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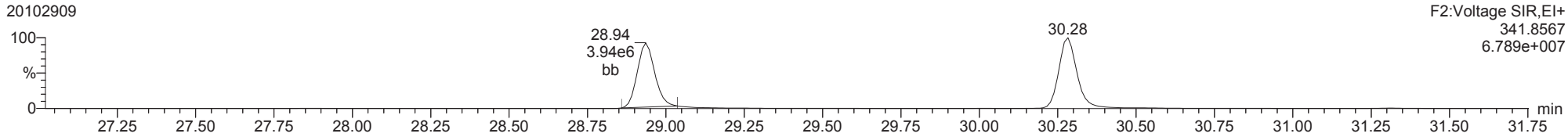

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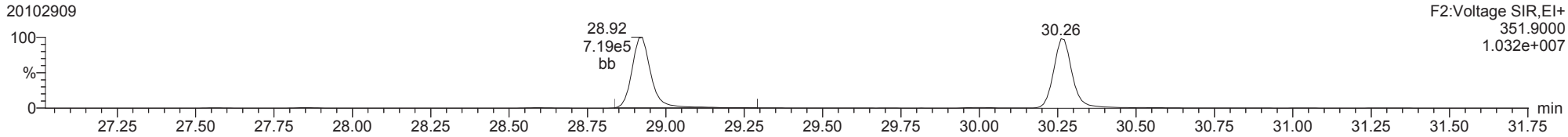

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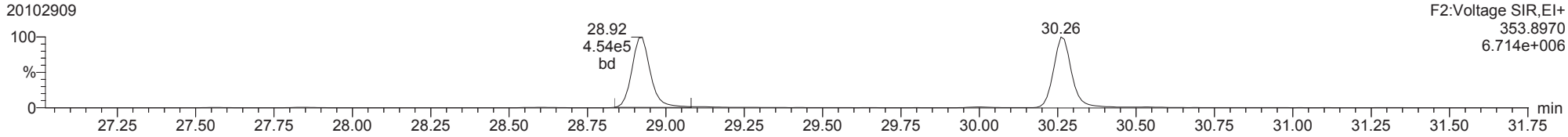
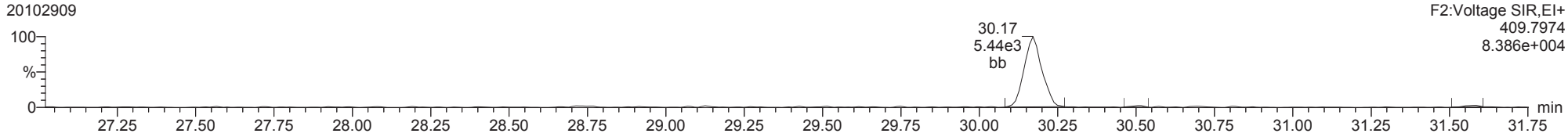


FUNCTION2 HPCDPE



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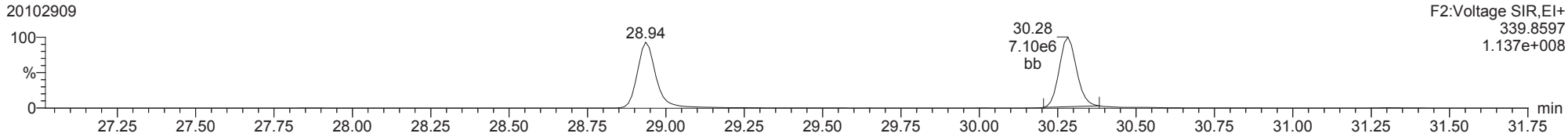
23478-PeCDF



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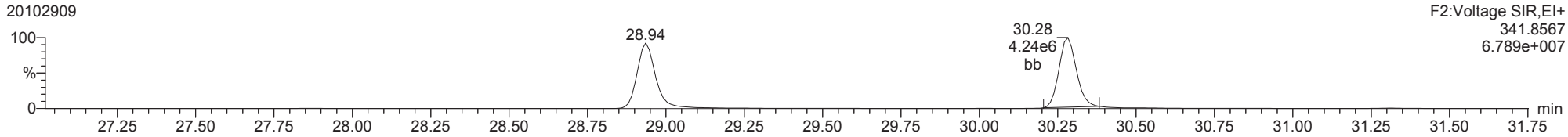

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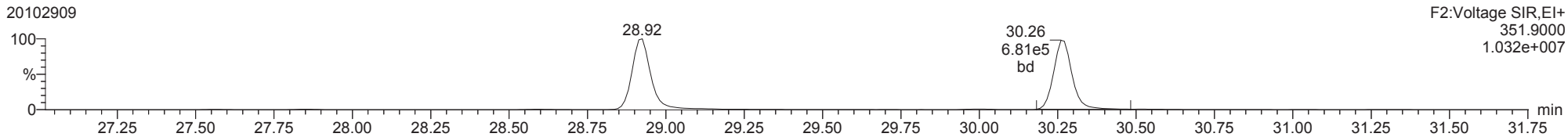

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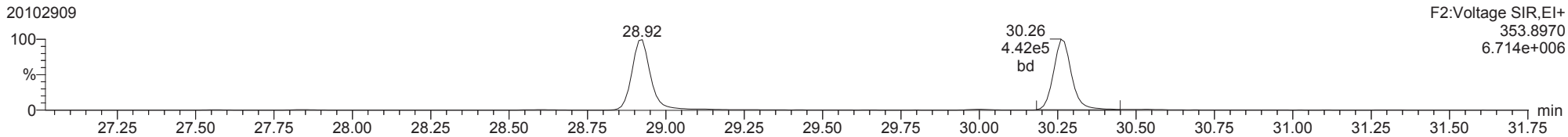

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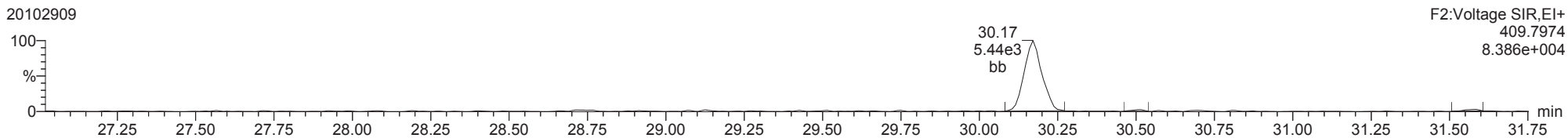

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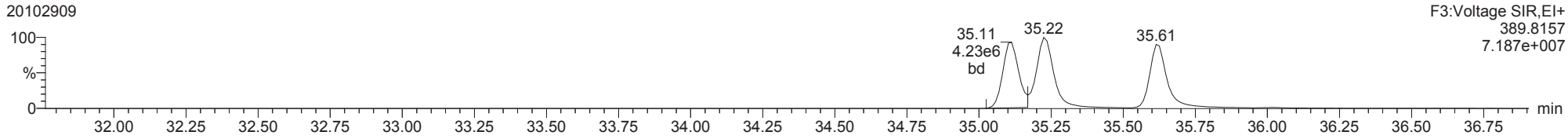
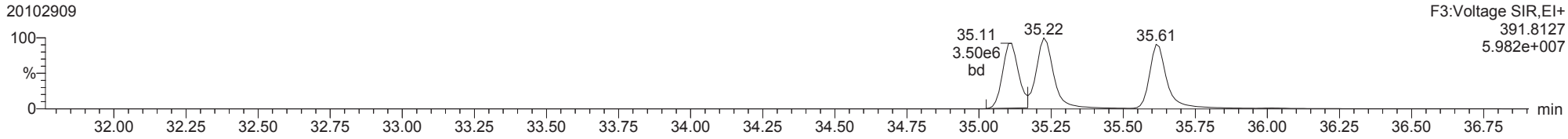
123478-HxCDD



123478-HxCDD



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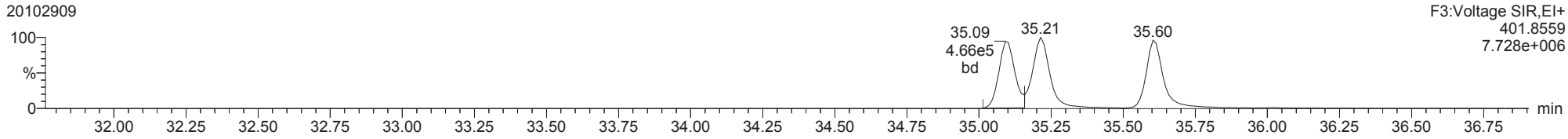

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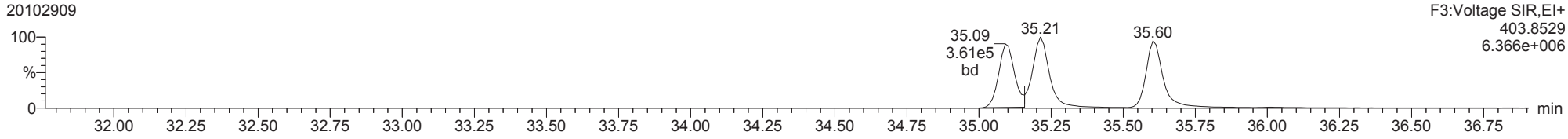

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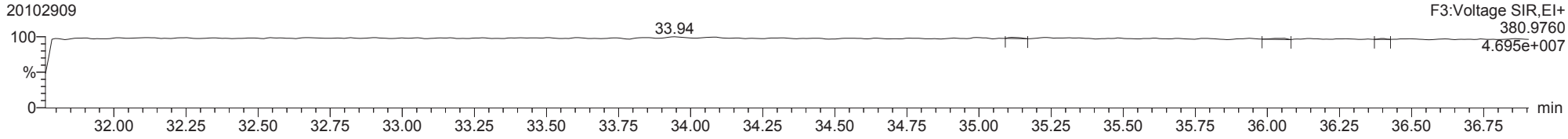

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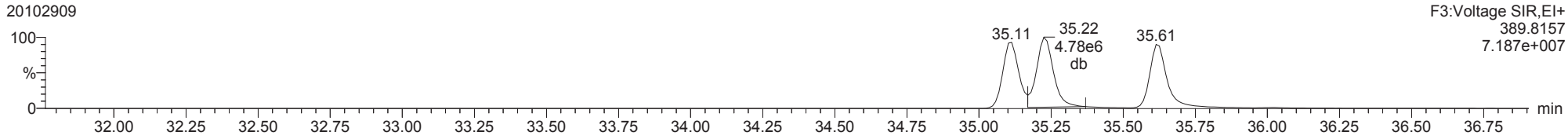
123678-HxCDD



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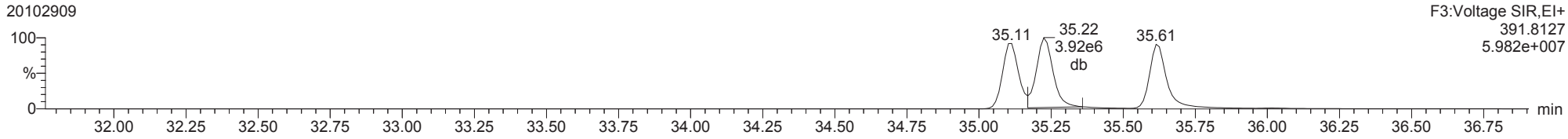

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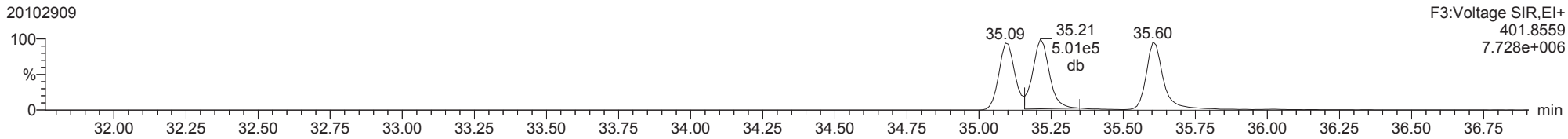

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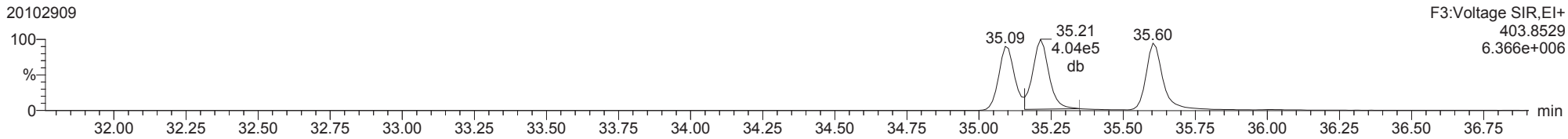

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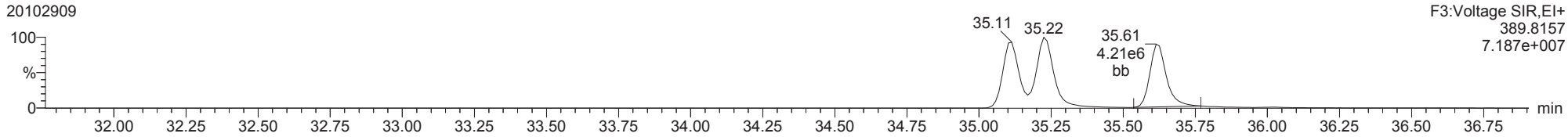

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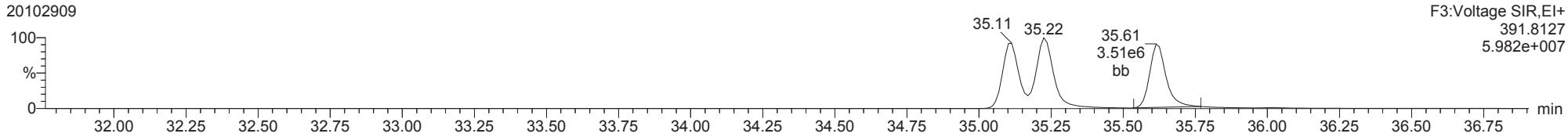

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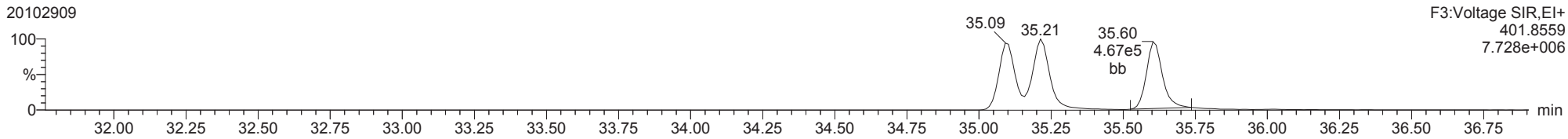

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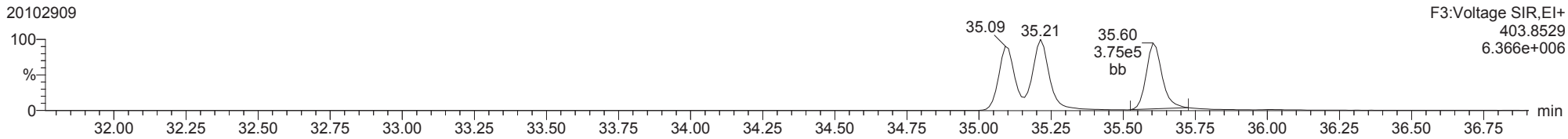

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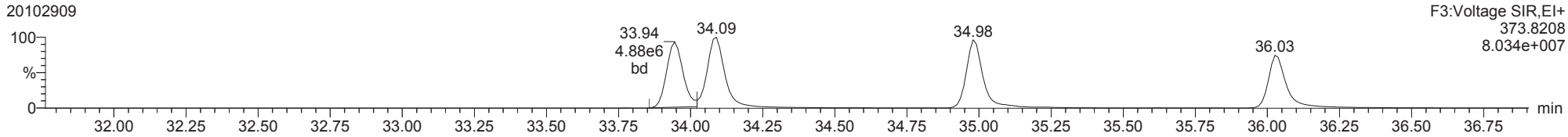

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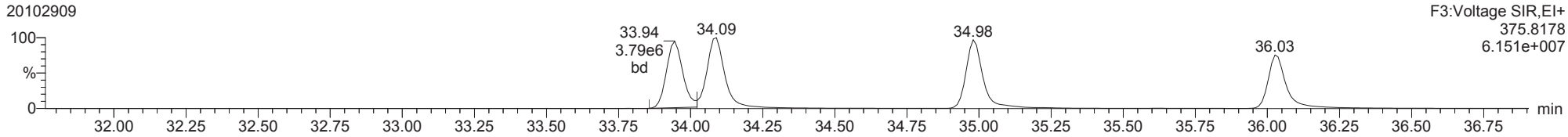

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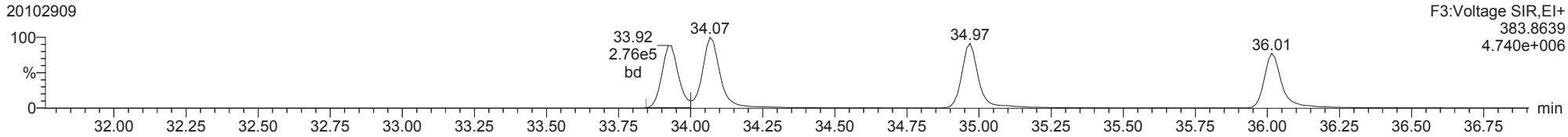

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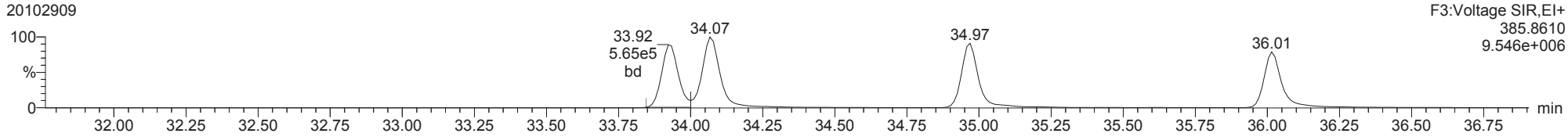
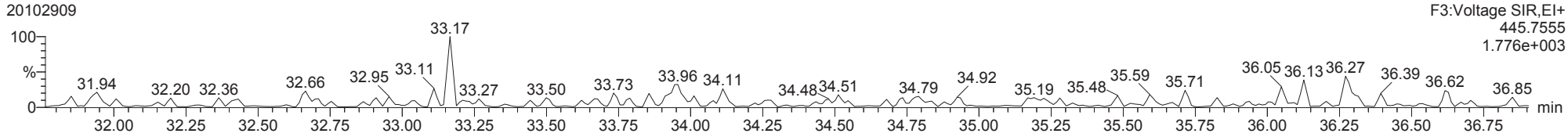


FUNCTION3 OCDPE



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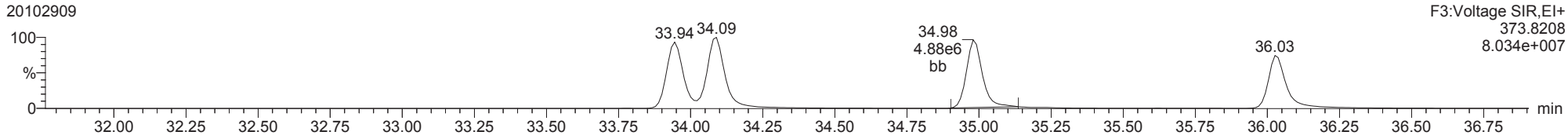
234678-HxCDF



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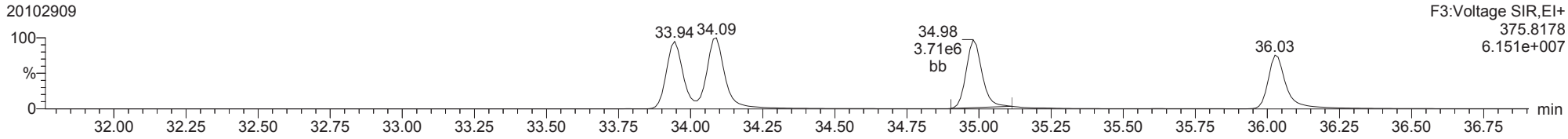

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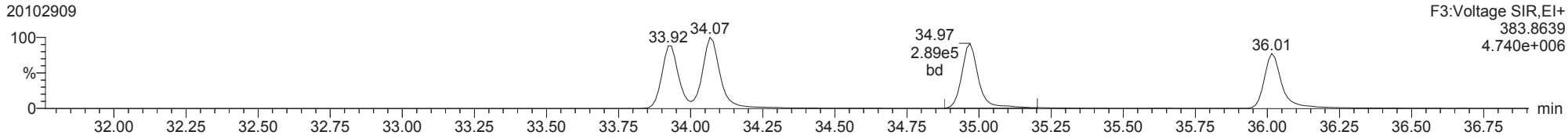

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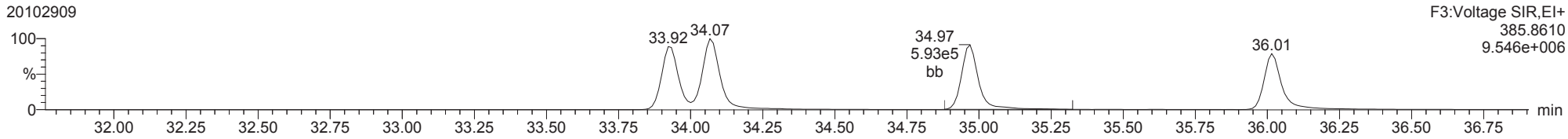

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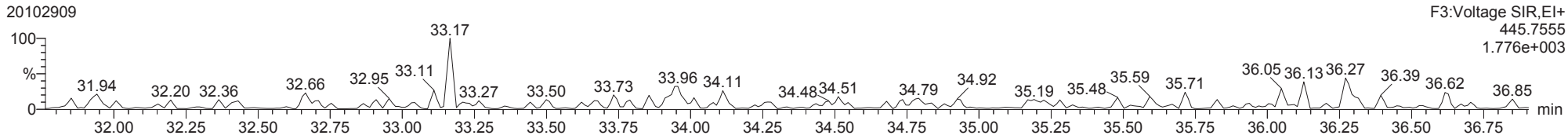

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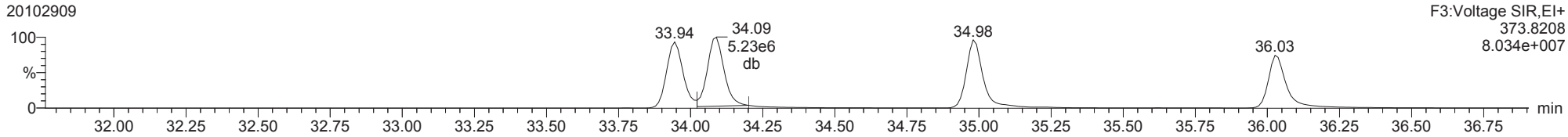
123678-HxCDF



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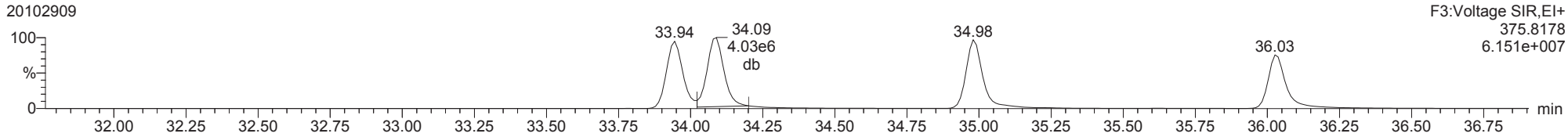

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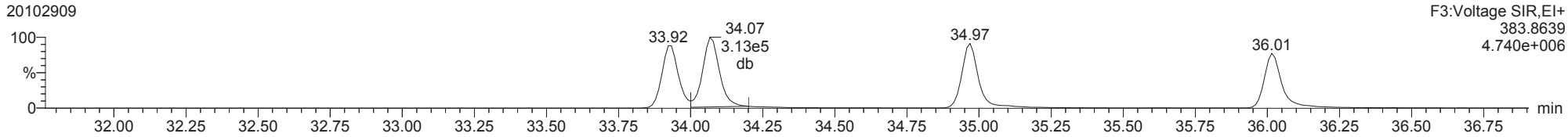

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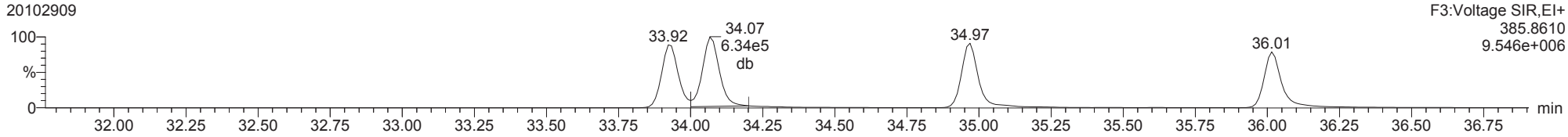

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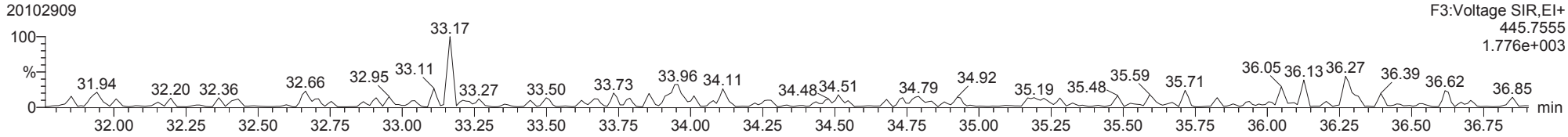

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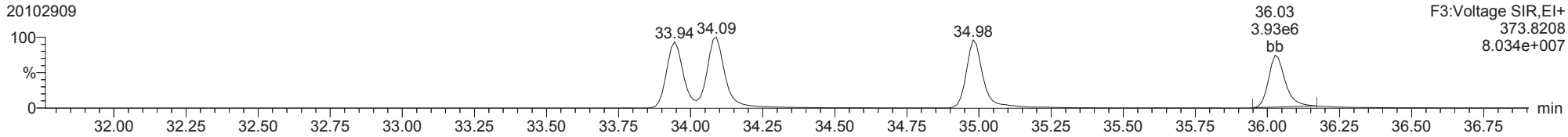

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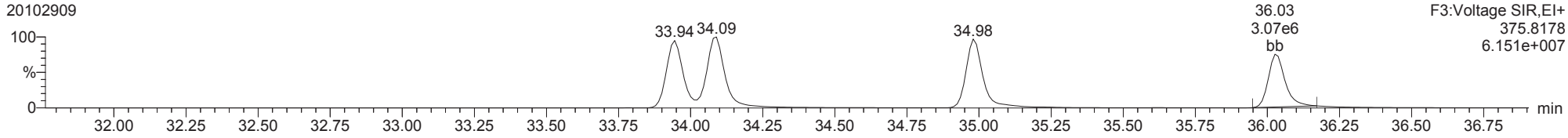

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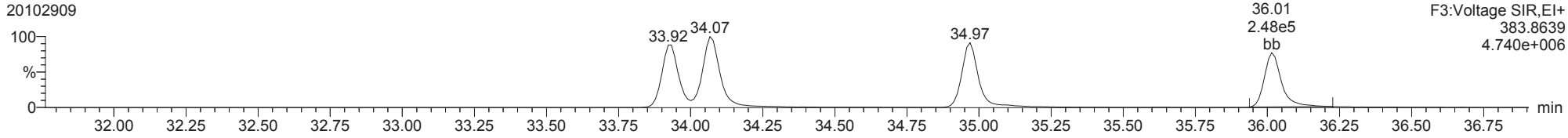

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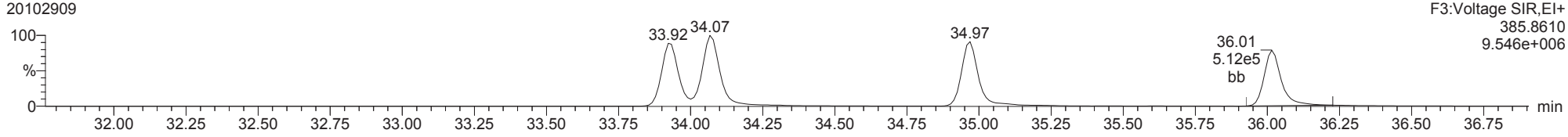
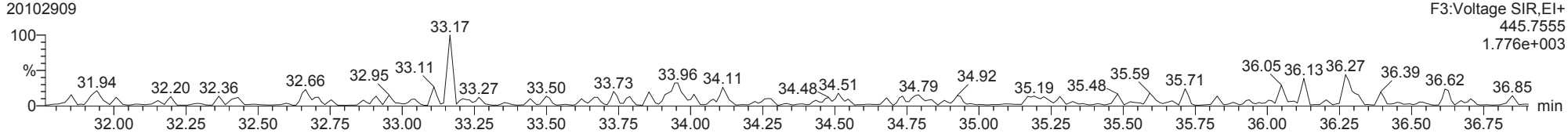


FUNCTION3 OCDPE



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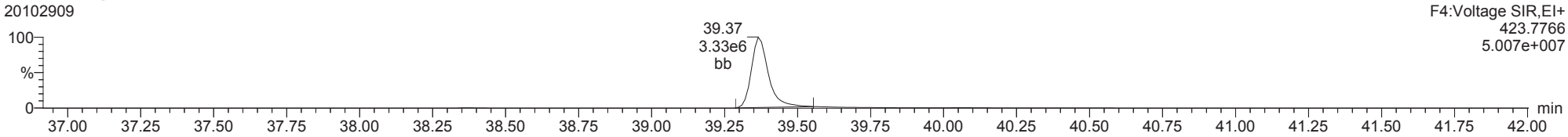

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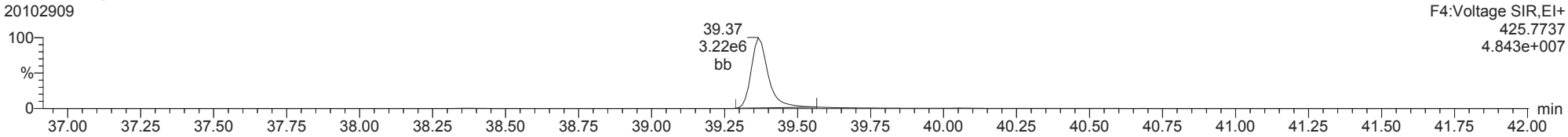

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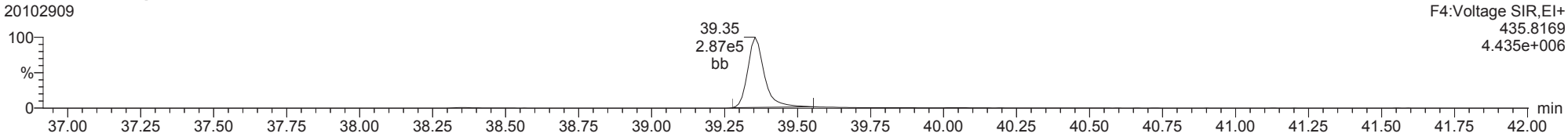

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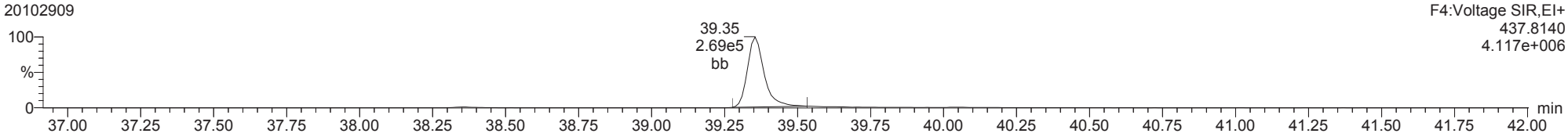
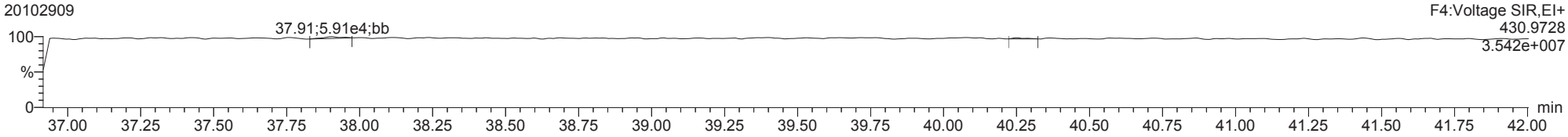


FUNCTION4 PFK



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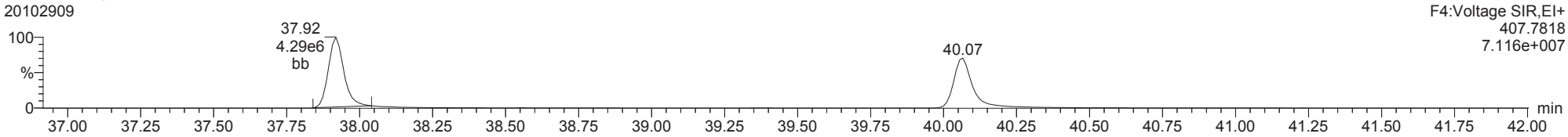

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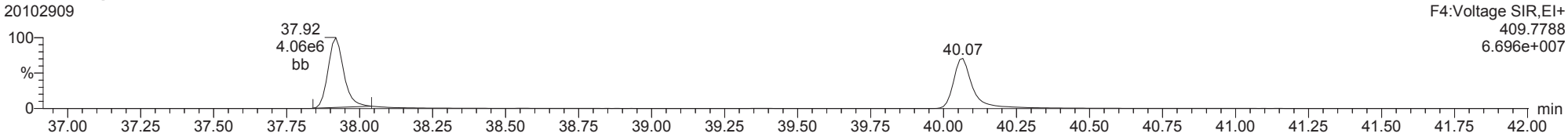

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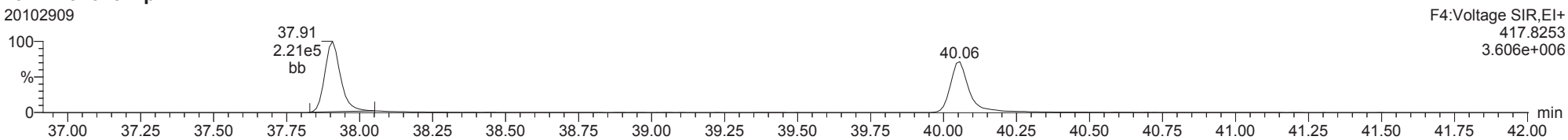

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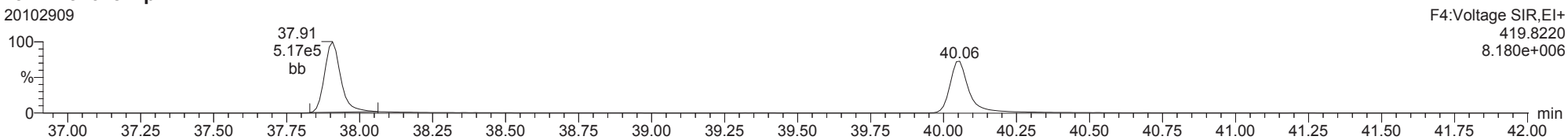
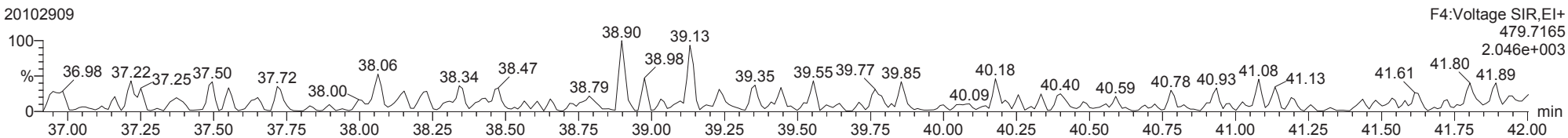


FUNCTION4 NCDPE



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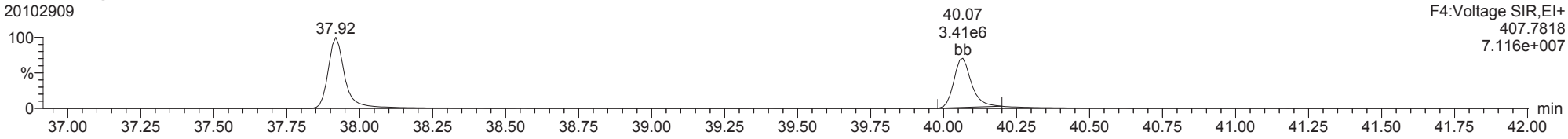

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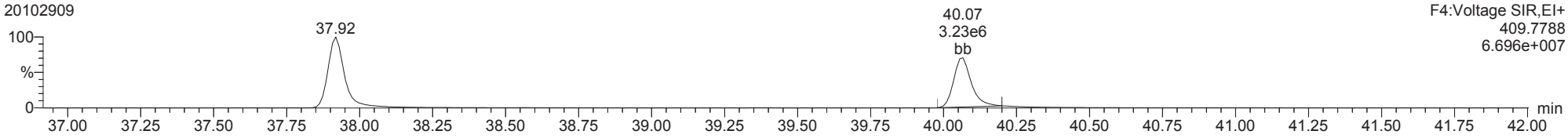

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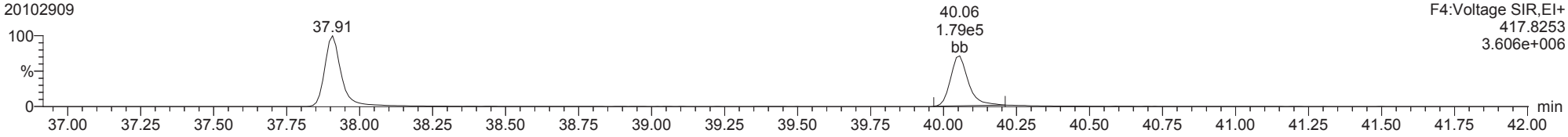

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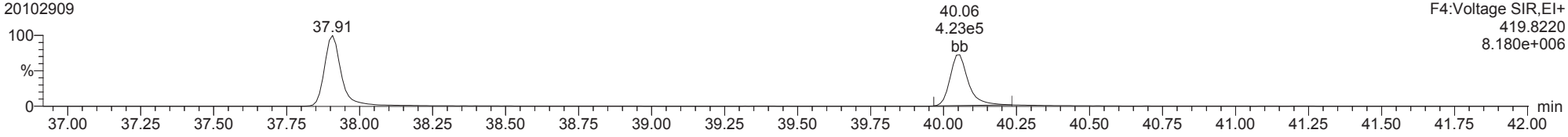
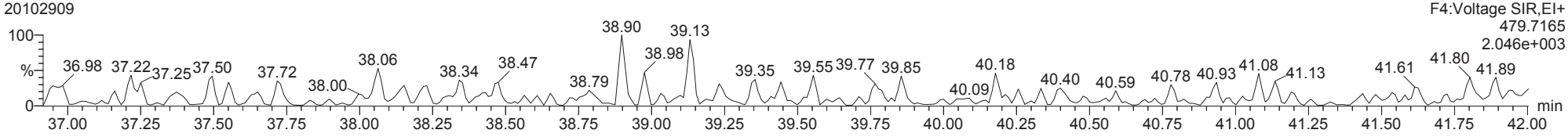


FUNCTION4 NCDPE



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ID: CS5CJ, Name: 20102909, Date: 29-Oct-2020, Time: 22:23:54, Conditions: AUTOSPEC01, User: pk

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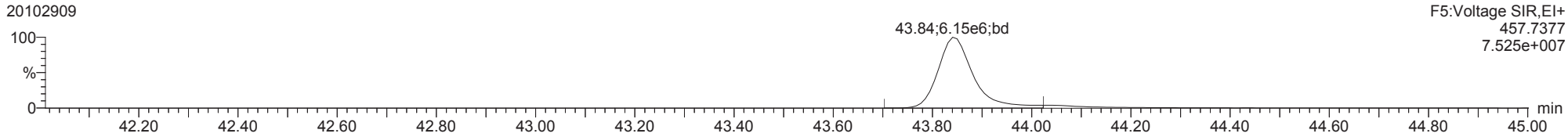

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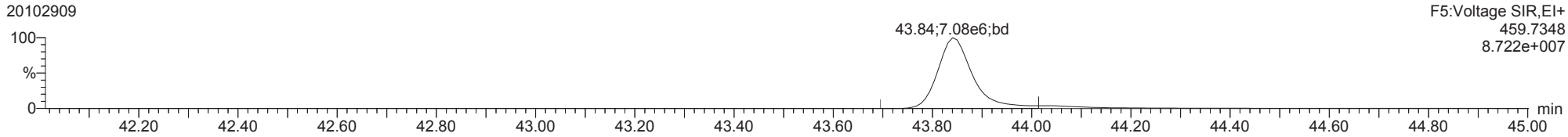
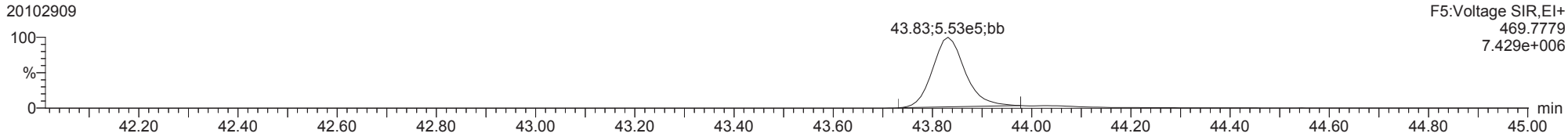
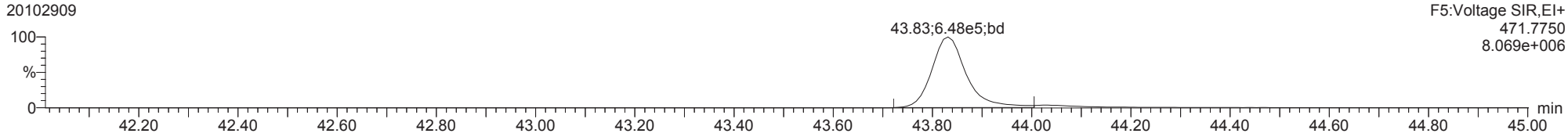


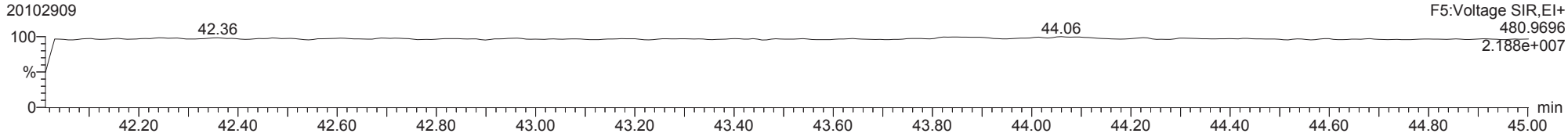
13C-OCDD



13C-OCDD



FUNCTION5 PFK



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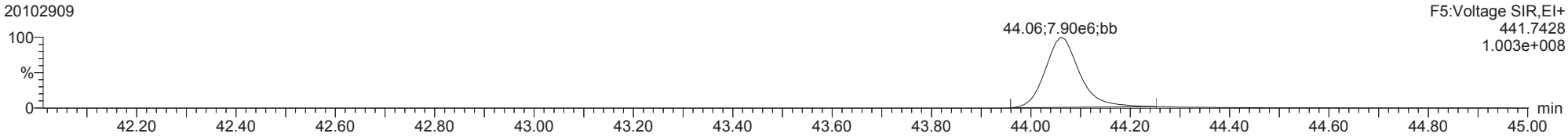
OCDF



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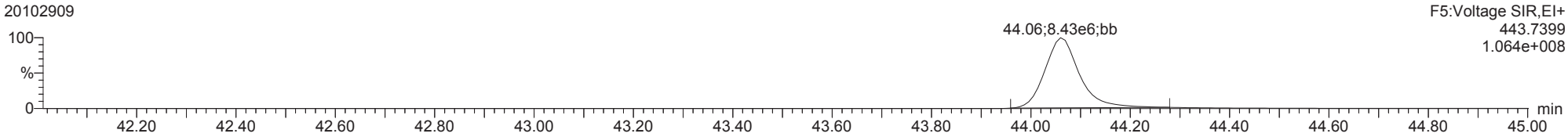
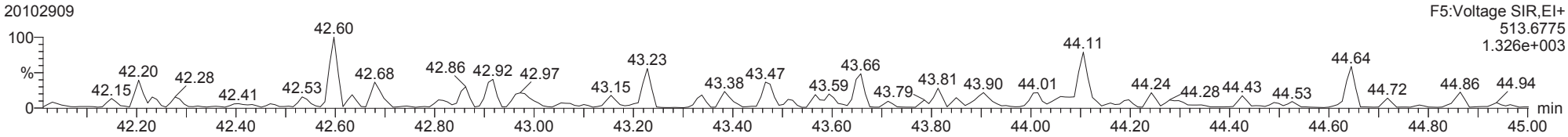


FUNCTION5 DCDPE



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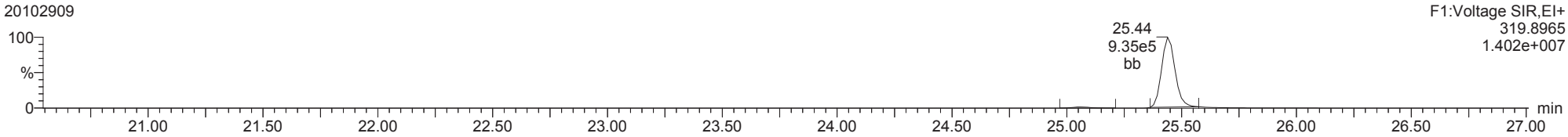
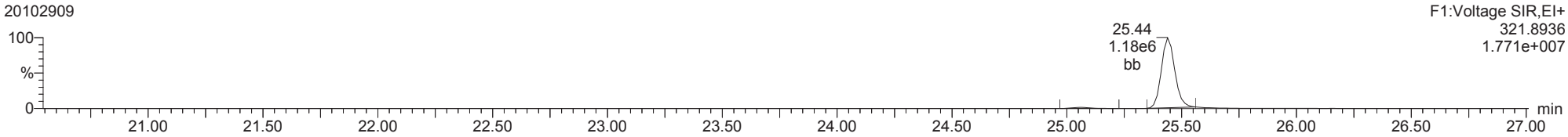
Total-tetradioxins



Total-tetradioxins



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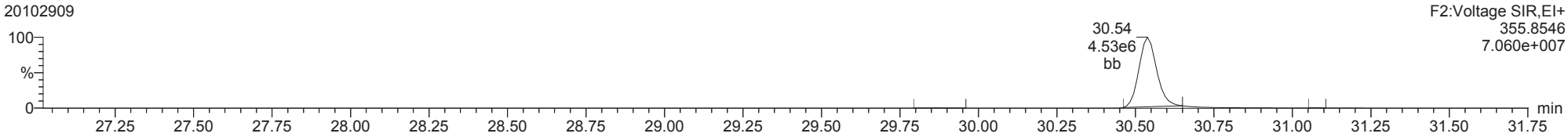

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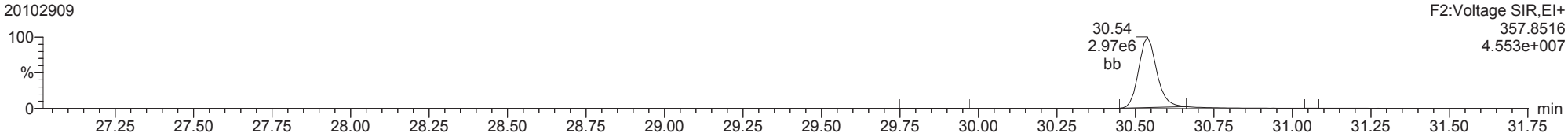

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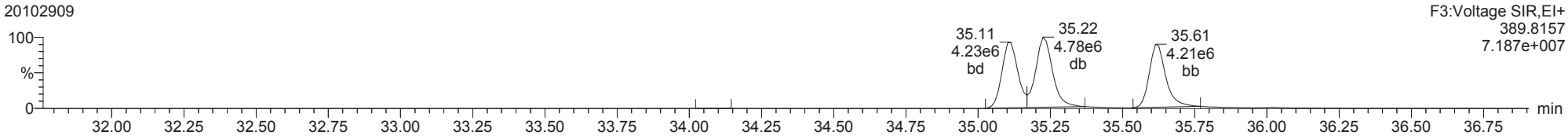

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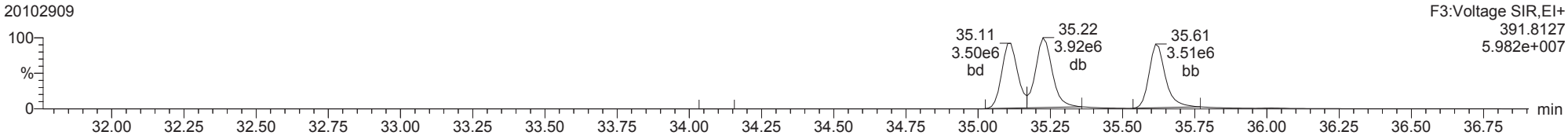

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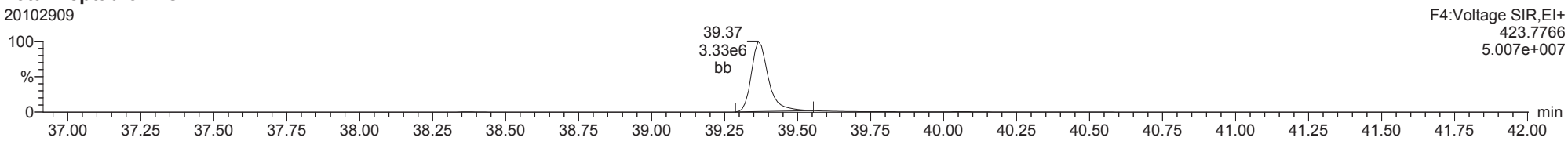
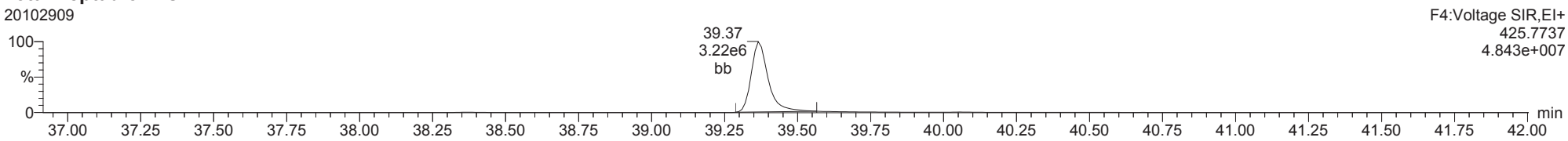


Total-heptadioxins



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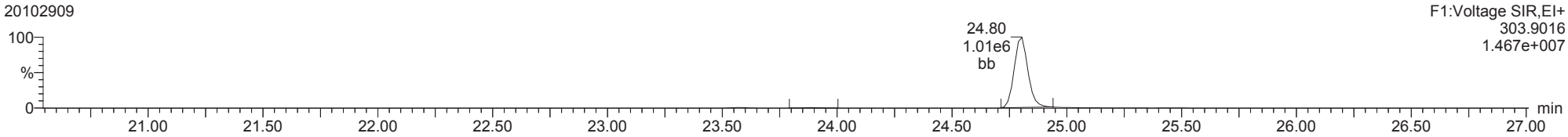
Total-tetrafurans



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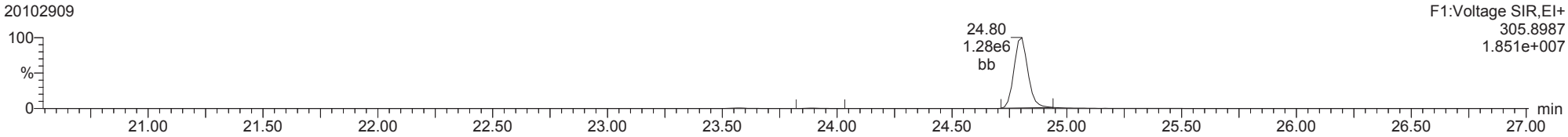

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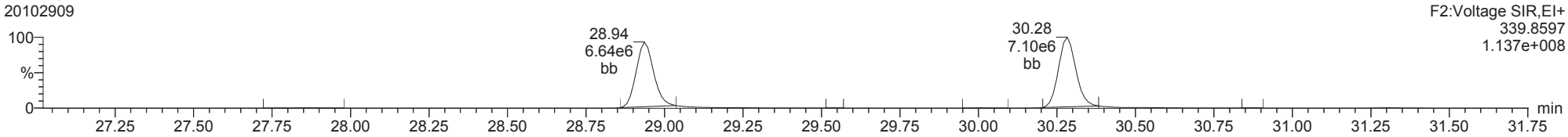

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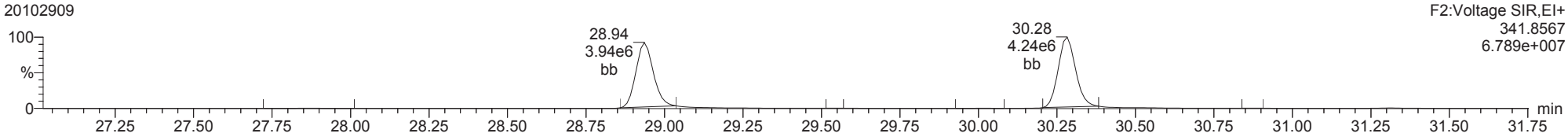

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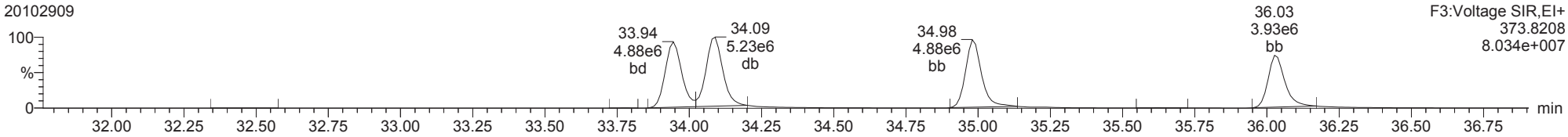
Total-hexafurans



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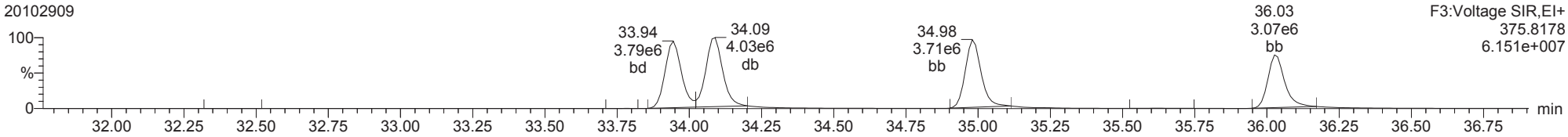
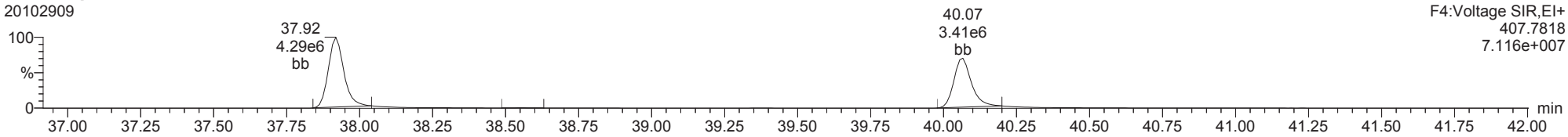


Total-heptafurans



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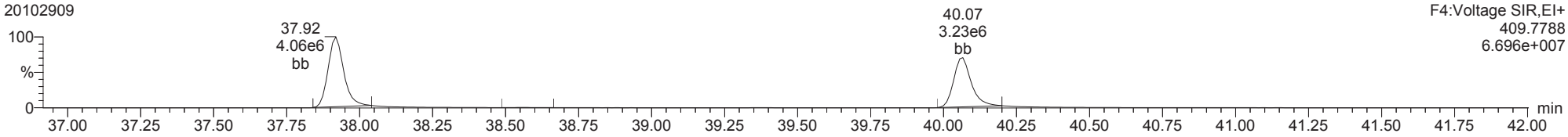

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ID: ICVCJ, Name: 20102910, Date: 29-Oct-2020, Time: 23:12:33, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	24.789	1.001	4.811e4	6.119e4	0.729	0.786	0.770	944	1804	6.57e5	8.51e5	695.7	471.9	NO	bb	bb	9.713
12378-PeCDF	28.935	1.001	3.178e5	1.813e5	0.779	1.753	1.550	3998	6702	4.47e6	2.58e6	1117.7	385.2	NO	bb	bb	50.153
23478-PeCDF	30.282	1.001	3.527e5	2.030e5	0.880	1.738	1.550	3998	6702	4.97e6	2.90e6	1243.3	433.2	NO	bb	bb	50.672
123478-HxCDF	33.944	1.001	2.117e5	1.645e5	0.880	1.287	1.240	3290	1803	3.07e6	2.39e6	933.7	1325.8	NO	bd	bd	52.441
234678-HxCDF	34.979	1.000	2.155e5	1.640e5	0.863	1.314	1.240	3290	1803	3.08e6	2.37e6	935.8	1311.4	NO	bb	bb	53.499
123678-HxCDF	34.078	1.000	2.455e5	1.909e5	0.853	1.286	1.240	3290	1803	3.27e6	2.55e6	992.8	1413.0	NO	db	db	51.921
123789-HxCDF	36.025	1.000	1.681e5	1.308e5	0.780	1.285	1.240	3290	1803	2.30e6	1.76e6	700.3	973.4	NO	bb	bb	52.913
1234678-HpCDF	37.917	1.000	1.886e5	1.767e5	1.001	1.067	1.050	2883	2341	2.70e6	2.54e6	935.9	1084.4	NO	bb	bb	50.336
1234789-HpCDF	40.055	1.000	1.400e5	1.470e5	0.994	0.953	1.050	2883	2341	1.80e6	1.75e6	625.1	749.1	NO	bb	bd	53.098
OCDF	44.050	1.005	3.210e5	3.194e5	1.158	1.005	0.890	2773	2842	3.09e6	3.25e6	1116.1	1143.1	NO	bd	bd	118.275
2378-TCDD	25.439	1.001	3.907e4	5.011e4	1.238	0.780	0.770	1244	1045	5.37e5	7.01e5	431.6	671.0	NO	bb	bb	8.762
12378-PeCDD	30.538	1.001	2.089e5	1.348e5	0.988	1.550	1.550	1735	1348	2.90e6	1.85e6	1669.8	1369.6	NO	bb	bb	52.125
123478-HxCDD	35.102	1.000	1.863e5	1.540e5	0.842	1.210	1.240	2427	2236	2.74e6	2.27e6	1128.2	1017.1	NO	bd	bd	53.829
123678-HxCDD	35.224	1.000	2.429e5	1.850e5	0.907	1.314	1.240	2427	2236	3.03e6	2.45e6	1247.0	1096.3	NO	dd	db	49.229
123789-HxCDD	35.613	1.011	2.011e5	1.419e5	0.784	1.418	1.240	2427	2236	2.47e6	1.92e6	1017.9	857.5	NO	dd	bb	51.207
1234678-HpCDD	39.364	1.000	1.451e5	1.394e5	1.044	1.041	1.050	2027	1995	1.75e6	1.71e6	864.8	856.9	NO	bd	bd	51.067
OCDD	43.840	1.000	2.402e5	2.897e5	0.963	0.829	0.890	3335	1757	2.53e6	2.92e6	758.6	1664.8	NO	bd	bd	117.681
13C-2378-TCDF	24.774	1.007	6.698e5	8.745e5	2.203	0.766	0.770	2440	2293	9.31e6	1.22e7	3815.0	5309.9	NO	bb	bb	98.317
13C-12378-PeCDF	28.913	1.175	7.826e5	4.942e5	1.741	1.584	1.550	3390	3437	9.89e6	6.41e6	2917.1	1865.3	NO	bb	bb	102.852
13C-23478-PeCDF	30.260	1.230	7.510e5	4.945e5	1.669	1.519	1.550	3390	3437	9.99e6	6.50e6	2948.1	1892.6	NO	bd	bb	104.632
13C-123478-HxCDF	33.922	0.953	2.671e5	5.480e5	1.022	0.488	0.510	2241	2548	3.76e6	7.64e6	1678.0	2999.5	NO	bd	bd	113.531
13C-123678-HxCDF	34.067	0.957	3.248e5	6.601e5	1.200	0.492	0.510	2241	2548	4.31e6	8.57e6	1922.0	3365.4	NO	db	db	116.852
13C-234678-HxCDF	34.968	0.982	2.772e5	5.449e5	1.071	0.509	0.510	2241	2548	3.58e6	7.19e6	1598.2	2822.3	NO	bd	bb	109.282
13C-123789-HxCDF	36.014	1.012	2.360e5	4.883e5	0.919	0.483	0.510	2241	2548	2.95e6	5.94e6	1316.2	2330.6	NO	bb	bb	112.256
13C-1234678-HpCDF	37.907	1.065	2.235e5	5.015e5	0.909	0.446	0.440	3777	4162	2.90e6	6.72e6	768.1	1614.1	NO	bd	bb	113.611
13C-1234789-HpCDF	40.043	1.125	1.609e5	3.829e5	0.724	0.420	0.440	3777	4162	1.89e6	4.50e6	501.1	1081.8	NO	MM	MM	107.007
13C-1234-TCDD	24.608	0.000	3.174e5	3.956e5	1.000	0.802	0.770	1882	1113	4.86e6	6.11e6	2584.5	5490.8	NO	bb	bb	100.000
13C-2378-TCDD	25.424	1.033	3.660e5	4.560e5	1.181	0.803	0.770	1882	1113	5.17e6	6.36e6	2746.9	5708.2	NO	bb	bb	97.576
13C-12378-PeCDD	30.516	1.240	4.124e5	2.550e5	0.978	1.617	1.550	1212	1269	5.85e6	3.59e6	4830.1	2832.1	NO	bb	bb	95.731
13C-123478-HxCDD	35.090	0.986	4.190e5	3.321e5	0.965	1.262	1.240	1903	1537	6.36e6	5.09e6	3344.0	3314.3	NO	bd	bd	110.836
13C-123678-HxCDD	35.213	0.989	5.338e5	4.245e5	1.168	1.257	1.240	1903	1537	6.78e6	5.50e6	3564.2	3577.0	NO	db	db	116.802
13C-1234678-HpCDD	39.353	1.105	2.682e5	2.657e5	0.645	1.010	1.050	1762	2941	3.20e6	3.05e6	1817.6	1036.0	NO	bb	bb	117.792
13C-OCDD	43.822	1.231	4.408e5	4.944e5	0.678	0.891	0.890	4715	4885	5.05e6	5.62e6	1070.9	1149.5	NO	bb	bb	196.308
13C-123789-HxCDD	35.603	0.000	3.902e5	3.121e5	1.000	1.250	1.240	1903	1537	5.12e6	4.07e6	2690.8	2645.7	NO	bb	bb	100.000
37CL-2378-TCDD	25.439	1.034	9.220e4		1.264			1124		1.31e6		1162.4			bb		10.226

Dataset: T:\Autospec\Processed Data Batch\201029ICVIH.qld
Last Altered: Friday, October 30, 2020 14:37:32 Pacific Daylight Time
Printed: Friday, October 30, 2020 14:39:09 Pacific Daylight Time

ID: ICVCJ, Name: 20102910, Date: 29-Oct-2020, Time: 23:12:33, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	21.314	0.860	5.968e4	7.694e4	0.846	0.776	0.770	944	1804	9.08e5	1.17e6	962.2	646.8	NO	bb	bb	10.453
1289-TCDF	26.285	1.061	4.697e4	5.623e4	0.688	0.835	0.770	944	1804	6.51e5	7.74e5	689.0	428.8	NO	db	db	9.717
13468-PECDF	26.149	0.904	4.378e5	2.910e5	1.181	1.505	1.550	662	697	6.36e6	4.23e6	9599.4	6070.5	NO	bb	bb	48.311
12389-PECDF	31.306	1.083	3.050e5	1.714e5	0.766	1.779	1.550	3998	6702	3.99e6	2.26e6	998.5	337.7	NO	bb	bb	48.696
123468-HXCDF	32.230	0.950	2.331e5	1.768e5	1.003	1.318	1.240	3290	1803	3.15e6	2.46e6	957.5	1362.6	NO	bb	bb	50.149
1368-TCDD	22.598	0.889	4.212e4	5.551e4	1.179	0.759	0.770	1244	1045	6.25e5	8.22e5	502.7	787.3	NO	bb	bb	10.077
1289-TCDD	26.028	1.024	3.775e4	5.030e4	1.042	0.750	0.770	1244	1045	4.79e5	6.47e5	384.8	619.4	NO	bb	bd	10.277
12479-PECDD	27.845	0.912	3.816e5	2.421e5	1.810	1.576	1.550	1735	1348	3.62e6	2.27e6	2084.4	1683.0	NO	bb	bb	51.615
12389-PECDD	30.928	1.013	2.401e5	1.521e5	1.165	1.579	1.550	1735	1348	3.07e6	1.99e6	1769.4	1474.4	NO	bb	bb	50.420
124679-HXCDD	33.031	0.941	2.145e5	1.769e5	1.056	1.213	1.240	2427	2236	2.94e6	2.39e6	1212.5	1070.0	NO	bb	bb	49.326
1234679-HPCDD	38.363	0.975	1.667e5	1.524e5	1.285	1.094	1.050	2027	1995	2.13e6	2.03e6	1052.6	1018.8	NO	bd	bd	46.493
Total-tetrafurans			1.548e5		0.754			944		2.22e6							29.884
Total-penta1			4.378e5					662		6.36e6							48.311
Total-pentafurans			1.025e6		0.809			3998		1.41e7							157.417
Total-hexafurans			1.074e6		0.876			3290		1.49e7							260.922
Total-heptafurans			3.288e5		0.997			2883		4.51e6							103.491
Total-Furans			3.341e6		0.893			944		4.52e7							718.300
Total-tetradioxins			2.055e5		1.153			1244		2.63e6							49.239
Total-pentadioxins			8.310e5		1.321			1735		9.59e6							154.243
Total-hexadioxins			8.449e5		0.897			2427		1.12e7							203.591
Total-heptadioxins			3.152e5		1.165			2027		3.94e6							98.611
Total-Dioxins			2.437e6		1.100			1244		2.99e7							623.365
Total-TEQ			5.778e6					1244		7.51e7							1341.665
FUNCTION1 PFK			3.059e5					418279		5.32e6							
FUNCTION2 PFK			4.143e5					244197		1.03e7							0.000
FUNCTION3 PFK			0.000e0					334492		0.00e0							
FUNCTION4 PFK			1.174e6					241028		2.54e7							
FUNCTION5 PFK			2.250e5					164433		6.58e6							
FUNCTION1 HXCD...			7.113e1					443		1.94e3							0.000
FUNCTION1 HPCD...			1.468e2					469		2.36e3							0.000
FUNCTION2 HPCD...			4.626e2					457		1.04e4							0.000
FUNCTION3 OCDPE			0.000e0					376		0.00e0							
FUNCTION4 NCDPE			0.000e0					346		0.00e0							
FUNCTION5 DCDPE			0.000e0					204		0.00e0							

Method: T:\Autospec\Methods\Dioxin201016.mdb 28 Oct 2020 21:30:41
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 09:08:24

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	26.28	4.697e4	5.623e4	0.688	0.84	0.77	689.0	YES	NO	db	db	9.717
2	2378-TCDF	24.79	4.811e4	6.119e4	0.729	0.79	0.77	695.7	YES	NO	bb	bb	9.713
3	1368-TCDF	21.31	5.968e4	7.694e4	0.846	0.78	0.77	962.2	YES	NO	bb	bb	10.453

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	26.15	4.378e5	2.910e5	1.181	1.50	1.55	9599.4	YES	NO	bb	bb	48.311

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	30.28	3.527e5	2.030e5	0.880	1.74	1.55	1243.3	YES	NO	bb	bb	50.672
2	12378-PeCDF	28.94	3.178e5	1.813e5	0.779	1.75	1.55	1117.7	YES	NO	bb	bb	50.153
3	Total-pentafurans	27.80	4.918e4	3.135e4	0.809	1.57	1.55	176.5	YES	NO	bb	bb	7.896
4	12389-PECDF	31.31	3.050e5	1.714e5	0.766	1.78	1.55	998.5	YES	NO	bb	bb	48.696

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.03	1.681e5	1.308e5	0.780	1.28	1.24	700.3	YES	NO	bb	bb	52.913
2	234678-HxCDF	34.98	2.155e5	1.640e5	0.863	1.31	1.24	935.8	YES	NO	bb	bb	53.499
3	123678-HxCDF	34.08	2.455e5	1.909e5	0.853	1.29	1.24	992.8	YES	NO	db	db	51.921
4	123478-HxCDF	33.94	2.117e5	1.645e5	0.880	1.29	1.24	933.7	YES	NO	bd	bd	52.441
5	123468-HXCDF	32.23	2.331e5	1.768e5	1.003	1.32	1.24	957.5	YES	NO	bb	bb	50.149

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	40.05	1.400e5	1.470e5	0.994	0.95	1.05	625.1	YES	NO	bb	bd	53.098
2	Total-heptafurans	38.24	1.879e2	1.716e2	0.997	1.10	1.05	2.3	NO	NO	bb	bb	0.057
3	1234678-HpCDF	37.92	1.886e5	1.767e5	1.001	1.07	1.05	935.9	YES	NO	bb	bb	50.336

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	26.28	4.697e4	5.623e4	0.688	0.84	0.77	689.0	YES	NO	db	db	9.717
2	2378-TCDF	24.79	4.811e4	6.119e4	0.729	0.79	0.77	695.7	YES	NO	bb	bb	9.713
3	1368-TCDF	21.31	5.968e4	7.694e4	0.846	0.78	0.77	962.2	YES	NO	bb	bb	10.453
4	23478-PeCDF	30.28	3.527e5	2.030e5	0.880	1.74	1.55	1243.3	YES	NO	bb	bb	50.672
5	12378-PeCDF	28.94	3.178e5	1.813e5	0.779	1.75	1.55	1117.7	YES	NO	bb	bb	50.153
6	Total-pentafurans	27.80	4.918e4	3.135e4	0.809	1.57	1.55	176.5	YES	NO	bb	bb	7.896
7	12389-PECDF	31.31	3.050e5	1.714e5	0.766	1.78	1.55	998.5	YES	NO	bb	bb	48.696
8	123789-HxCDF	36.03	1.681e5	1.308e5	0.780	1.28	1.24	700.3	YES	NO	bb	bb	52.913
9	234678-HxCDF	34.98	2.155e5	1.640e5	0.863	1.31	1.24	935.8	YES	NO	bb	bb	53.499
10	123678-HxCDF	34.08	2.455e5	1.909e5	0.853	1.29	1.24	992.8	YES	NO	db	db	51.921
11	123478-HxCDF	33.94	2.117e5	1.645e5	0.880	1.29	1.24	933.7	YES	NO	bd	bd	52.441
12	123468-HXCDF	32.23	2.331e5	1.768e5	1.003	1.32	1.24	957.5	YES	NO	bb	bb	50.149
13	1234789-HpCDF	40.05	1.400e5	1.470e5	0.994	0.95	1.05	625.1	YES	NO	bb	bd	53.098
14	Total-heptafurans	38.24	1.879e2	1.716e2	0.997	1.10	1.05	2.3	NO	NO	bb	bb	0.057
15	1234678-HpCDF	37.92	1.886e5	1.767e5	1.001	1.07	1.05	935.9	YES	NO	bb	bb	50.336
16	OCDF	44.05	3.210e5	3.194e5	1.158	1.01	0.89	1116.1	YES	NO	bd	bd	118.275
17	13468-PECDF	26.15	4.378e5	2.910e5	1.181	1.50	1.55	9599.4	YES	NO	bb	bb	48.311

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	25.44	3.907e4	5.011e4	1.238	0.78	0.77	431.6	YES	NO	bb	bb	8.762
2	Total-tetradioxins	25.11	6.663e4	7.871e4	1.153	0.85	0.77	549.8	YES	NO	bd	bb	15.335
3	Total-tetradioxins	24.62	1.998e4	2.541e4	1.153	0.79	0.77	242.5	YES	NO	bb	bd	4.789
4	1368-TCDD	22.60	4.212e4	5.551e4	1.179	0.76	0.77	502.7	YES	NO	bb	bb	10.077
5	1289-TCDD	26.03	3.775e4	5.030e4	1.042	0.75	0.77	384.8	YES	NO	bb	bd	10.277

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	30.93	2.401e5	1.521e5	1.165	1.58	1.55	1769.4	YES	NO	bb	bb	50.420
2	12378-PeCDD	30.54	2.089e5	1.348e5	0.988	1.55	1.55	1669.8	YES	NO	bb	bb	52.125
3	Total-pentadioxins	28.92	2.658e2	2.011e2	1.321	1.32	1.55	3.6	YES	NO	bd	bb	0.053
4	Total-pentadioxins	28.19	1.574e2	1.028e2	1.321	1.53	1.55	2.4	NO	NO	bb	bb	0.030
5	12479-PECDD	27.84	3.816e5	2.421e5	1.810	1.58	1.55	2084.4	YES	NO	bb	bb	51.615

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	124679-HXCDD	33.03	2.145e5	1.769e5	1.056	1.21	1.24	1212.5	YES	NO	bb	bb	49.326
2	123789-HxCDD	35.61	2.011e5	1.419e5	0.784	1.42	1.24	1017.9	YES	NO	dd	bb	51.207
3	123678-HxCDD	35.22	2.429e5	1.850e5	0.907	1.31	1.24	1247.0	YES	NO	dd	db	49.229
4	123478-HxCDD	35.10	1.863e5	1.540e5	0.842	1.21	1.24	1128.2	YES	NO	bd	bd	53.829

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-heptadioxins	39.61	3.427e3	3.112e3	1.165	1.10	1.05	25.1	YES	NO	dd	dd	1.052
2	1234678-HpCDD	39.36	1.451e5	1.394e5	1.044	1.04	1.05	864.8	YES	NO	bd	bd	51.067
3	1234679-HPCDD	38.36	1.667e5	1.524e5	1.285	1.09	1.05	1052.6	YES	NO	bd	bd	46.493

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	25.44	3.907e4	5.011e4	1.238	0.78	0.77	431.6	YES	NO	bb	bb	8.762
2	Total-tetradioxins	25.11	6.663e4	7.871e4	1.153	0.85	0.77	549.8	YES	NO	bd	bb	15.335
3	Total-tetradioxins	24.62	1.998e4	2.541e4	1.153	0.79	0.77	242.5	YES	NO	bb	bd	4.789
4	1368-TCDD	22.60	4.212e4	5.551e4	1.179	0.76	0.77	502.7	YES	NO	bb	bb	10.077
5	1289-TCDD	26.03	3.775e4	5.030e4	1.042	0.75	0.77	384.8	YES	NO	bb	bd	10.277
6	12389-PECDD	30.93	2.401e5	1.521e5	1.165	1.58	1.55	1769.4	YES	NO	bb	bb	50.420
7	12378-PeCDD	30.54	2.089e5	1.348e5	0.988	1.55	1.55	1669.8	YES	NO	bb	bb	52.125
8	Total-pentadioxins	28.92	2.658e2	2.011e2	1.321	1.32	1.55	3.6	YES	NO	bd	bb	0.053
9	Total-pentadioxins	28.19	1.574e2	1.028e2	1.321	1.53	1.55	2.4	NO	NO	bb	bb	0.030
10	12479-PECDD	27.84	3.816e5	2.421e5	1.810	1.58	1.55	2084.4	YES	NO	bb	bb	51.615
11	124679-HXCDD	33.03	2.145e5	1.769e5	1.056	1.21	1.24	1212.5	YES	NO	bb	bb	49.326
12	123789-HxCDD	35.61	2.011e5	1.419e5	0.784	1.42	1.24	1017.9	YES	NO	dd	bb	51.207
13	123678-HxCDD	35.22	2.429e5	1.850e5	0.907	1.31	1.24	1247.0	YES	NO	dd	db	49.229
14	123478-HxCDD	35.10	1.863e5	1.540e5	0.842	1.21	1.24	1128.2	YES	NO	bd	bd	53.829
15	Total-heptadioxins	39.61	3.427e3	3.112e3	1.165	1.10	1.05	25.1	YES	NO	dd	dd	1.052
16	1234678-HpCDD	39.36	1.451e5	1.394e5	1.044	1.04	1.05	864.8	YES	NO	bd	bd	51.067
17	1234679-HPCDD	38.36	1.667e5	1.524e5	1.285	1.09	1.05	1052.6	YES	NO	bd	bd	46.493
18	OCDD	43.84	2.402e5	2.897e5	0.963	0.83	0.89	758.6	YES	NO	bd	bd	117.681

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	26.28	4.697e4	5.623e4	0.688	0.84	0.77	689.0	YES	NO	db	db	9.717
2	2378-TCDF	24.79	4.811e4	6.119e4	0.729	0.79	0.77	695.7	YES	NO	bb	bb	9.713
3	1368-TCDF	21.31	5.968e4	7.694e4	0.846	0.78	0.77	962.2	YES	NO	bb	bb	10.453
4	23478-PeCDF	30.28	3.527e5	2.030e5	0.880	1.74	1.55	1243.3	YES	NO	bb	bb	50.672
5	12378-PeCDF	28.94	3.178e5	1.813e5	0.779	1.75	1.55	1117.7	YES	NO	bb	bb	50.153
6	Total-pentafurans	27.80	4.918e4	3.135e4	0.809	1.57	1.55	176.5	YES	NO	bb	bb	7.896
7	12389-PECDF	31.31	3.050e5	1.714e5	0.766	1.78	1.55	998.5	YES	NO	bb	bb	48.696
8	123789-HxCDF	36.03	1.681e5	1.308e5	0.780	1.28	1.24	700.3	YES	NO	bb	bb	52.913
9	234678-HxCDF	34.98	2.155e5	1.640e5	0.863	1.31	1.24	935.8	YES	NO	bb	bb	53.499
10	123678-HxCDF	34.08	2.455e5	1.909e5	0.853	1.29	1.24	992.8	YES	NO	db	db	51.921
11	123478-HxCDF	33.94	2.117e5	1.645e5	0.880	1.29	1.24	933.7	YES	NO	bd	bd	52.441
12	123468-HXCDF	32.23	2.331e5	1.768e5	1.003	1.32	1.24	957.5	YES	NO	bb	bb	50.149
13	1234789-HpCDF	40.05	1.400e5	1.470e5	0.994	0.95	1.05	625.1	YES	NO	bb	bd	53.098
14	Total-heptafurans	38.24	1.879e2	1.716e2	0.997	1.10	1.05	2.3	NO	NO	bb	bb	0.057
15	1234678-HpCDF	37.92	1.886e5	1.767e5	1.001	1.07	1.05	935.9	YES	NO	bb	bb	50.336
16	OCDF	44.05	3.210e5	3.194e5	1.158	1.01	0.89	1116.1	YES	NO	bd	bd	118.275
17	13468-PECDF	26.15	4.378e5	2.910e5	1.181	1.50	1.55	9599.4	YES	NO	bb	bb	48.311
18	2378-TCDD	25.44	3.907e4	5.011e4	1.238	0.78	0.77	431.6	YES	NO	bb	bb	8.762
19	Total-tetradioxins	25.11	6.663e4	7.871e4	1.153	0.85	0.77	549.8	YES	NO	bd	bb	15.335
20	Total-tetradioxins	24.62	1.998e4	2.541e4	1.153	0.79	0.77	242.5	YES	NO	bb	bd	4.789
21	1368-TCDD	22.60	4.212e4	5.551e4	1.179	0.76	0.77	502.7	YES	NO	bb	bb	10.077
22	1289-TCDD	26.03	3.775e4	5.030e4	1.042	0.75	0.77	384.8	YES	NO	bb	bd	10.277
23	12389-PECDD	30.93	2.401e5	1.521e5	1.165	1.58	1.55	1769.4	YES	NO	bb	bb	50.420
24	12378-PeCDD	30.54	2.089e5	1.348e5	0.988	1.55	1.55	1669.8	YES	NO	bb	bb	52.125
25	Total-pentadioxins	28.92	2.658e2	2.011e2	1.321	1.32	1.55	3.6	YES	NO	bd	bb	0.053
26	Total-pentadioxins	28.19	1.574e2	1.028e2	1.321	1.53	1.55	2.4	NO	NO	bb	bb	0.030
27	12479-PECDD	27.84	3.816e5	2.421e5	1.810	1.58	1.55	2084.4	YES	NO	bb	bb	51.615
28	124679-HXCDD	33.03	2.145e5	1.769e5	1.056	1.21	1.24	1212.5	YES	NO	bb	bb	49.326
29	123789-HxCDD	35.61	2.011e5	1.419e5	0.784	1.42	1.24	1017.9	YES	NO	dd	bb	51.207
30	123678-HxCDD	35.22	2.429e5	1.850e5	0.907	1.31	1.24	1247.0	YES	NO	dd	db	49.229
31	123478-HxCDD	35.10	1.863e5	1.540e5	0.842	1.21	1.24	1128.2	YES	NO	bd	bd	53.829
32	Total-heptadioxins	39.61	3.427e3	3.112e3	1.165	1.10	1.05	25.1	YES	NO	dd	dd	1.052
33	1234678-HpCDD	39.36	1.451e5	1.394e5	1.044	1.04	1.05	864.8	YES	NO	bd	bd	51.067
34	1234679-HPCDD	38.36	1.667e5	1.524e5	1.285	1.09	1.05	1052.6	YES	NO	bd	bd	46.493
35	OCDD	43.84	2.402e5	2.897e5	0.963	0.83	0.89	758.6	YES	NO	bd	bd	117.681

Dataset: T:\Autospec\Processed Data Batch\201029ICVIH.qld
Last Altered: Friday, October 30, 2020 14:37:32 Pacific Daylight Time
Printed: Friday, October 30, 2020 14:39:09 Pacific Daylight Time

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	23.88	5.989e4					2.1	NO		bb		
2	FUNCTION1 PFK	23.13	2.300e4					1.5	NO		bb		
3	FUNCTION1 PFK	22.61	4.873e4					1.9	NO		bb		
4	FUNCTION1 PFK	21.16	1.180e4					0.9	NO		bb		
5	FUNCTION1 PFK	26.83	4.753e4					2.1	NO		bb		
6	FUNCTION1 PFK	26.69	5.773e4					2.0	NO		bb		
7	FUNCTION1 PFK	26.04	5.722e4					2.2	NO		bb		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.14	9.601e3					1.6	NO		bd		0.000
2	FUNCTION2 PFK	29.08	7.407e3					1.0	NO		bb		0.000
3	FUNCTION2 PFK	28.92	1.138e3					0.4	NO		bb		0.000
4	FUNCTION2 PFK	28.88	9.903e2					0.4	NO		bb		0.000
5	FUNCTION2 PFK	28.68	2.996e4					1.9	NO		bb		0.000
6	FUNCTION2 PFK	28.57	1.566e3					0.0	NO		bb		0.000
7	FUNCTION2 PFK	28.25	2.242e4					1.9	NO		bb		0.000
8	FUNCTION2 PFK	28.02	1.385e3					0.5	NO		bb		0.000
9	FUNCTION2 PFK	27.67	7.413e3					1.2	NO		bb		0.000
10	FUNCTION2 PFK	27.23	3.633e3					0.6	NO		bb		0.000
11	FUNCTION2 PFK	27.17	1.081e4					1.2	NO		bb		0.000
12	FUNCTION2 PFK	27.09	9.019e3					1.5	NO		bb		0.000
13	FUNCTION2 PFK	31.24	1.646e4					1.8	NO		bd		0.000
14	FUNCTION2 PFK	30.89	2.401e4					2.2	NO		db		0.000
15	FUNCTION2 PFK	30.84	1.033e4					1.5	NO		bd		0.000
16	FUNCTION2 PFK	30.76	3.699e4					2.6	NO		bb		0.000
17	FUNCTION2 PFK	30.49	1.251e4					1.3	NO		db		0.000
18	FUNCTION2 PFK	30.45	1.594e4					1.6	NO		bd		0.000
19	FUNCTION2 PFK	30.35	1.708e4					1.7	NO		bb		0.000
20	FUNCTION2 PFK	30.10	1.899e4					1.5	NO		db		0.000
21	FUNCTION2 PFK	30.01	9.884e3					1.4	NO		dd		0.000
22	FUNCTION2 PFK	29.98	2.412e3					0.7	NO		bd		0.000
23	FUNCTION2 PFK	29.94	1.509e4					1.6	NO		bb		0.000
24	FUNCTION2 PFK	29.85	4.132e3					0.9	NO		bb		0.000
25	FUNCTION2 PFK	29.80	2.998e3					0.8	NO		bb		0.000
26	FUNCTION2 PFK	29.45	2.126e3					0.5	NO		bb		0.000
27	FUNCTION2 PFK	29.38	4.343e3					0.7	NO		bb		0.000
28	FUNCTION2 PFK	29.22	2.859e4					2.1	NO		db		0.000
29	FUNCTION2 PFK	31.72	1.659e4					1.8	NO		bb		0.000
30	FUNCTION2 PFK	31.58	1.601e3					0.6	NO		bb		0.000
31	FUNCTION2 PFK	31.55	9.971e2					0.4	NO		bb		0.000
32	FUNCTION2 PFK	31.50	2.093e4					1.6	NO		db		0.000
33	FUNCTION2 PFK	31.36	4.695e4					2.6	NO		dd		0.000

Dataset: T:\Autospec\Processed Data Batch\201029ICVIH.qld
Last Altered: Friday, October 30, 2020 14:37:32 Pacific Daylight Time
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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	37.53	7.370e3					0.9	NO		bb		
2	FUNCTION4 PFK	37.45	5.775e3					1.2	NO		db		
3	FUNCTION4 PFK	37.41	1.821e4					1.6	NO		dd		
4	FUNCTION4 PFK	37.35	6.248e3					1.1	NO		dd		
5	FUNCTION4 PFK	37.28	5.983e4					2.8	NO		dd		
6	FUNCTION4 PFK	37.17	2.164e4					1.9	NO		dd		
7	FUNCTION4 PFK	37.12	2.418e4					2.1	NO		dd		
8	FUNCTION4 PFK	37.05	1.077e4					1.7	NO		dd		
9	FUNCTION4 PFK	37.02	2.259e4					2.2	NO		bd		
10	FUNCTION4 PFK	38.77	2.002e4					1.9	NO		bd		
11	FUNCTION4 PFK	38.69	4.063e4					2.6	NO		db		
12	FUNCTION4 PFK	38.61	2.267e4					2.6	NO		dd		
13	FUNCTION4 PFK	38.54	4.763e4					3.3	YES		dd		
14	FUNCTION4 PFK	38.49	2.071e4					1.8	NO		bd		
15	FUNCTION4 PFK	38.34	5.085e3					0.7	NO		bb		
16	FUNCTION4 PFK	38.23	5.148e3					0.6	NO		bb		
17	FUNCTION4 PFK	38.13	1.991e4					1.7	NO		db		
18	FUNCTION4 PFK	38.07	6.838e3					1.1	NO		bd		
19	FUNCTION4 PFK	38.00	2.779e4					2.5	NO		db		
20	FUNCTION4 PFK	37.95	2.457e4					2.3	NO		bd		
21	FUNCTION4 PFK	37.86	1.083e4					1.3	NO		bb		
22	FUNCTION4 PFK	37.81	1.340e3					0.5	NO		bb		
23	FUNCTION4 PFK	37.76	8.117e2					0.3	NO		bb		
24	FUNCTION4 PFK	37.71	7.167e3					0.9	NO		db		
25	FUNCTION4 PFK	37.65	1.422e4					1.5	NO		bd		
26	FUNCTION4 PFK	40.07	3.213e4					2.4	NO		db		
27	FUNCTION4 PFK	39.93	3.240e4					2.8	NO		dd		
28	FUNCTION4 PFK	39.89	1.333e4					1.4	NO		dd		
29	FUNCTION4 PFK	39.83	1.258e4					1.7	NO		dd		
30	FUNCTION4 PFK	39.79	2.113e4					2.7	NO		dd		
31	FUNCTION4 PFK	39.69	5.206e4					2.4	NO		bd		
32	FUNCTION4 PFK	39.54	1.823e4					1.7	NO		bb		
33	FUNCTION4 PFK	39.49	3.821e3					0.6	NO		db		
34	FUNCTION4 PFK	39.45	1.451e4					1.8	NO		dd		
35	FUNCTION4 PFK	39.36	1.461e4					1.3	NO		bd		
36	FUNCTION4 PFK	39.25	2.314e3					0.4	NO		bb		
37	FUNCTION4 PFK	39.19	2.589e4					1.9	NO		db		

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION4 PFK	39.06	2.422e4					2.4	NO		bd		
39	FUNCTION4 PFK	38.95	1.056e4					1.7	NO		db		
40	FUNCTION4 PFK	38.91	3.545e4					2.3	NO		dd		
41	FUNCTION4 PFK	38.84	2.212e4					2.1	NO		dd		
42	FUNCTION4 PFK	41.58	7.868e3					1.1	NO		bd		
43	FUNCTION4 PFK	41.49	9.311e3					1.4	NO		bb		
44	FUNCTION4 PFK	41.30	1.331e4					1.2	NO		bb		
45	FUNCTION4 PFK	41.21	5.751e3					0.7	NO		db		
46	FUNCTION4 PFK	41.12	3.872e4					2.0	NO		dd		
47	FUNCTION4 PFK	41.03	2.110e4					2.3	NO		dd		
48	FUNCTION4 PFK	40.99	2.189e4					1.8	NO		dd		
49	FUNCTION4 PFK	40.92	8.300e3					1.3	NO		dd		
50	FUNCTION4 PFK	40.89	1.432e4					1.6	NO		dd		
51	FUNCTION4 PFK	40.84	1.122e4					1.2	NO		dd		
52	FUNCTION4 PFK	40.78	1.347e4					1.6	NO		dd		
53	FUNCTION4 PFK	40.72	1.503e4					1.7	NO		bd		
54	FUNCTION4 PFK	40.66	3.583e4					1.9	NO		db		
55	FUNCTION4 PFK	40.47	3.627e4					1.4	NO		bd		
56	FUNCTION4 PFK	40.23	1.108e4					1.4	NO		db		
57	FUNCTION4 PFK	40.18	2.053e4					1.8	NO		bd		
58	FUNCTION4 PFK	41.97	1.609e4					1.4	NO		db		
59	FUNCTION4 PFK	41.90	1.711e4					1.6	NO		bd		
60	FUNCTION4 PFK	41.85	6.232e3					0.9	NO		db		
61	FUNCTION4 PFK	41.79	1.422e4					1.6	NO		dd		
62	FUNCTION4 PFK	41.75	1.409e4					1.6	NO		dd		
63	FUNCTION4 PFK	41.69	2.804e4					2.2	NO		bd		
64	FUNCTION4 PFK	41.61	6.406e3					1.0	NO		db		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	42.62	6.683e3					1.3	NO		db		
2	FUNCTION5 PFK	42.56	1.081e3					0.6	NO		bd		
3	FUNCTION5 PFK	42.42	6.661e3					1.5	NO		db		
4	FUNCTION5 PFK	42.39	6.139e3					1.6	NO		bd		
5	FUNCTION5 PFK	42.30	4.776e3					1.2	NO		db		
6	FUNCTION5 PFK	42.25	1.339e4					2.4	NO		dd		
7	FUNCTION5 PFK	42.19	1.284e4					2.5	NO		bd		
8	FUNCTION5 PFK	42.10	1.211e4					1.6	NO		bb		
9	FUNCTION5 PFK	44.48	3.318e4					2.6	NO		bd		
10	FUNCTION5 PFK	44.39	3.052e3					1.1	NO		bb		
11	FUNCTION5 PFK	44.33	2.664e3					0.7	NO		bb		
12	FUNCTION5 PFK	44.06	1.141e4					2.3	NO		bb		
13	FUNCTION5 PFK	43.95	6.398e2					0.4	NO		bb		
14	FUNCTION5 PFK	43.84	1.286e4					1.6	NO		bb		
15	FUNCTION5 PFK	43.69	4.606e3					1.0	NO		bb		
16	FUNCTION5 PFK	43.66	8.021e2					0.5	NO		bb		
17	FUNCTION5 PFK	43.33	2.411e4					2.9	NO		db		
18	FUNCTION5 PFK	43.28	8.869e3					2.1	NO		bd		
19	FUNCTION5 PFK	43.09	5.751e3					1.4	NO		bb		
20	FUNCTION5 PFK	42.97	7.462e2					0.5	NO		bb		
21	FUNCTION5 PFK	42.94	1.786e3					0.6	NO		bb		
22	FUNCTION5 PFK	42.86	2.226e3					0.8	NO		bb		
23	FUNCTION5 PFK	42.77	1.548e4					1.8	NO		bb		
24	FUNCTION5 PFK	42.67	5.848e3					1.7	NO		bb		
25	FUNCTION5 PFK	44.72	6.893e3					2.0	NO		db		
26	FUNCTION5 PFK	44.66	1.309e4					1.9	NO		bd		
27	FUNCTION5 PFK	44.57	7.276e3					1.5	NO		db		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	25.79	7.113e1					4.4	YES		bb		0.000

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	26.90	7.420e1					2.4	NO		bb		0.000
2	FUNCTION1 HPCD...	23.97	7.260e1					2.6	NO		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	30.85	9.273e1					6.1	YES		bb		0.000
2	FUNCTION2 HPCD...	30.19	2.980e2					9.7	YES		bb		0.000
3	FUNCTION2 HPCD...	28.91	7.183e1					6.9	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
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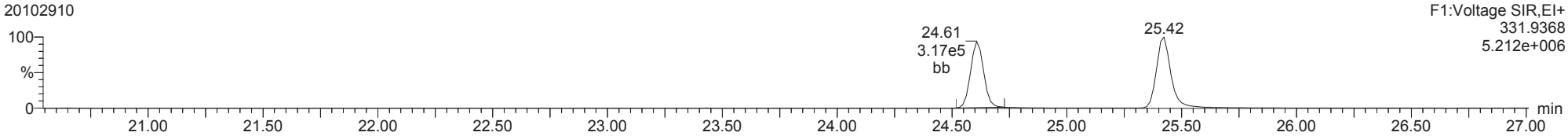
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 09:08:24

ID: ICVCJ, Name: 20102910, Date: 29-Oct-2020, Time: 23:12:33, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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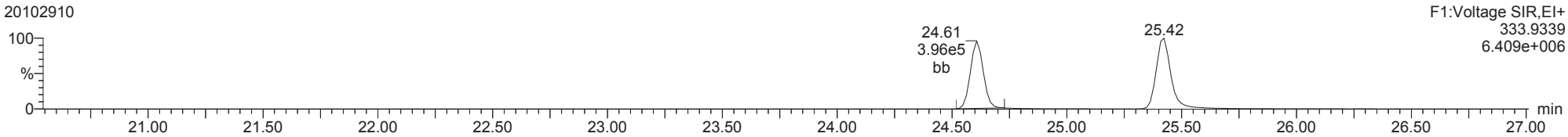
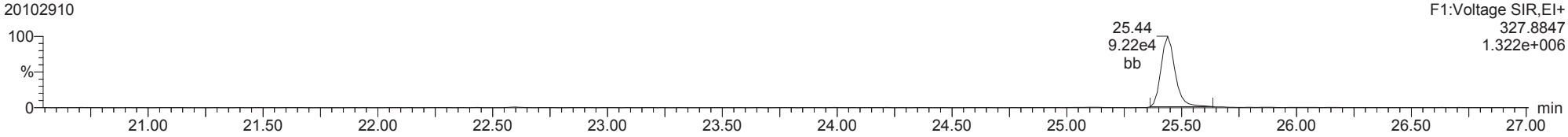


37CL-2378-TCDD



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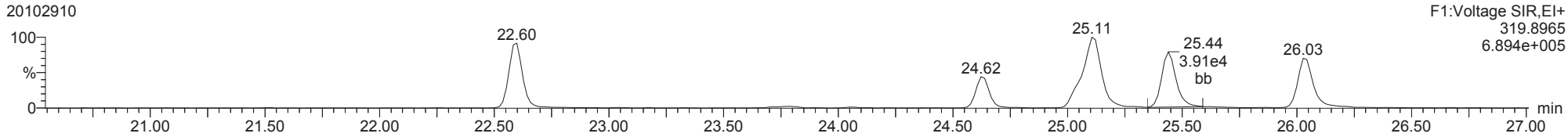

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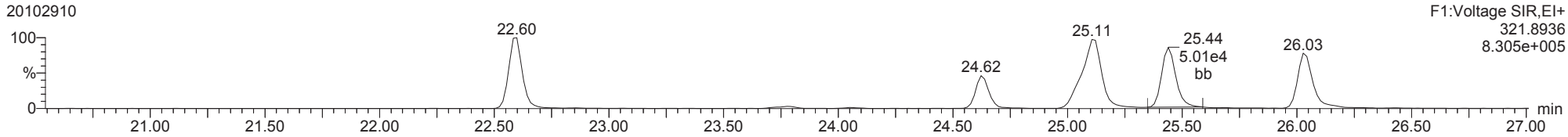

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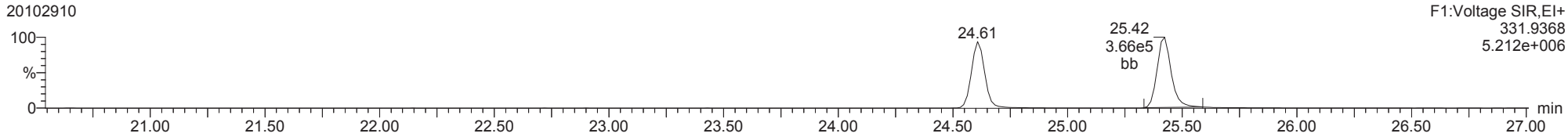

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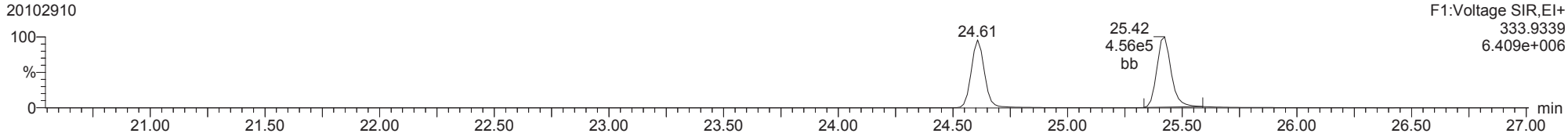

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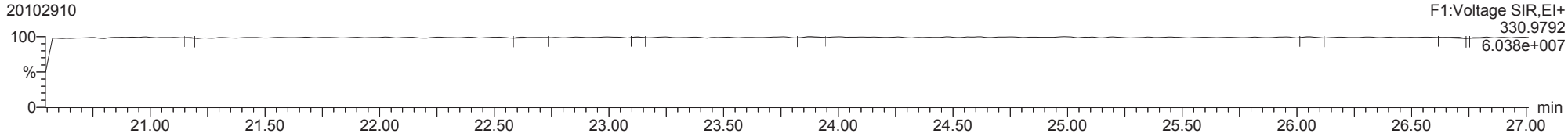

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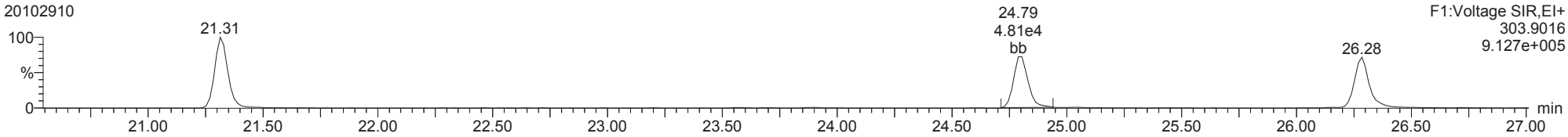
Printed: Friday, October 30, 2020 14:39:09 Pacific Daylight Time

ID: ICVCJ, Name: 20102910, Date: 29-Oct-2020, Time: 23:12:33, Conditions: AUTOSPEC01, User: pk

2378-TCDF



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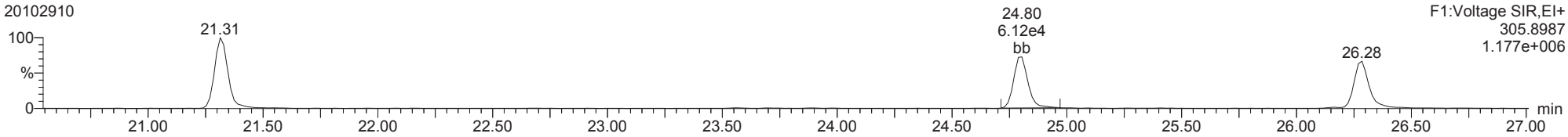

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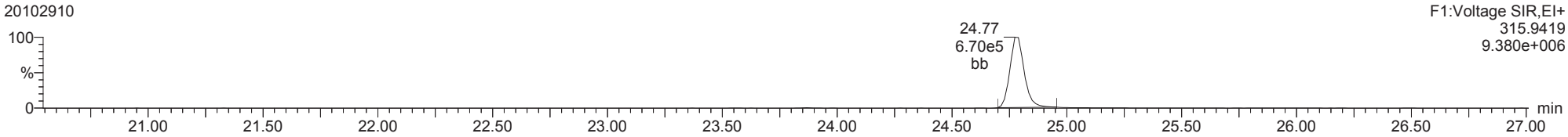

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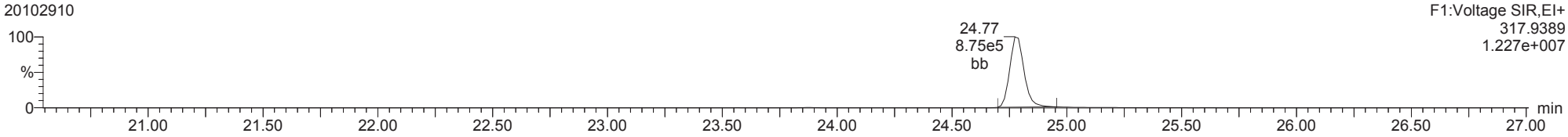
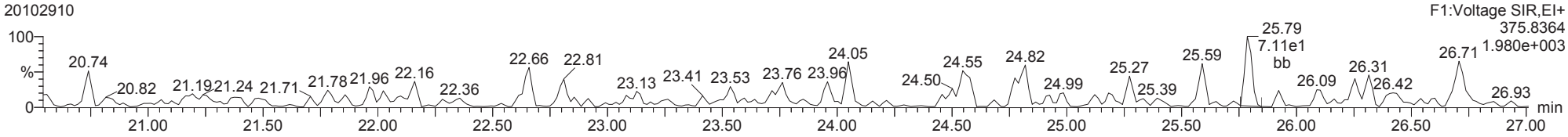


FUNCTION1 HXCDPE



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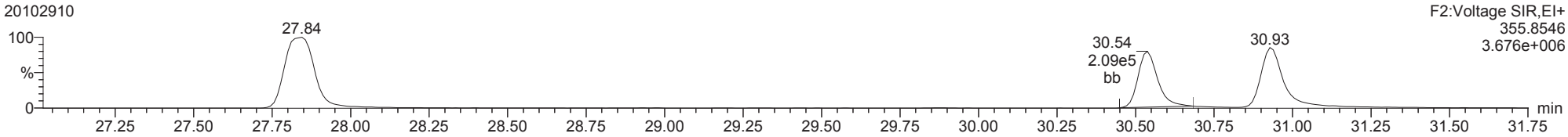
ID: ICVCJ, Name: 20102910, Date: 29-Oct-2020, Time: 23:12:33, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



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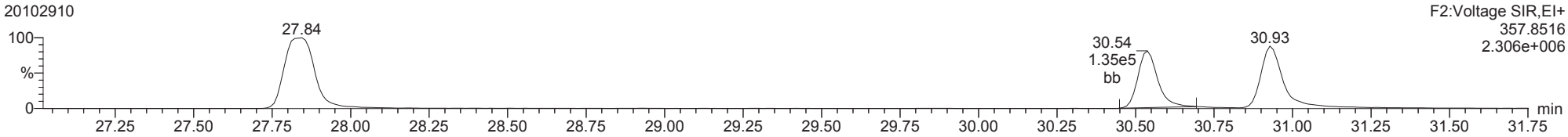

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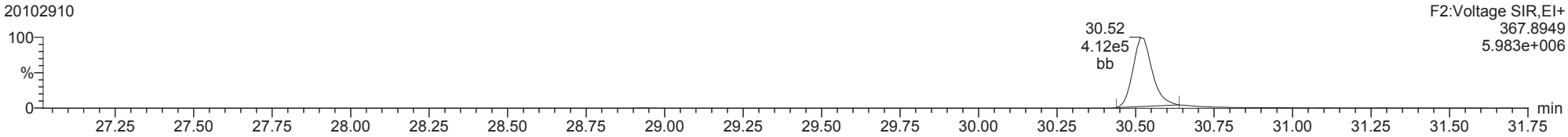

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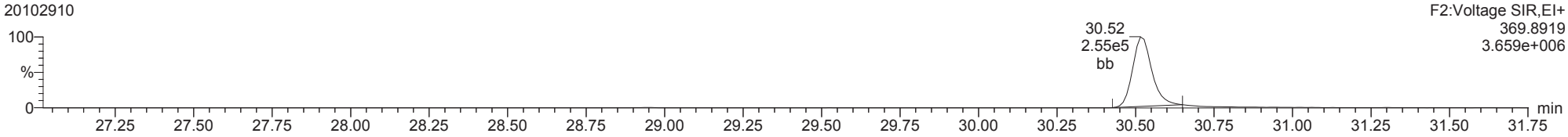

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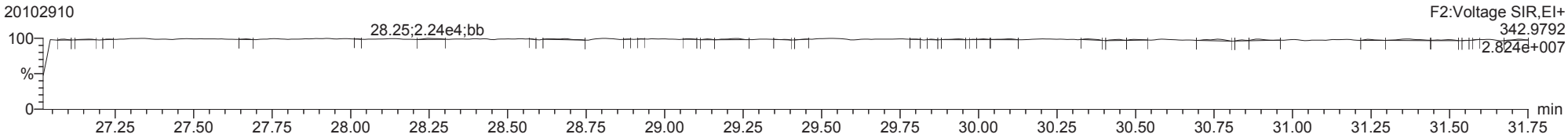

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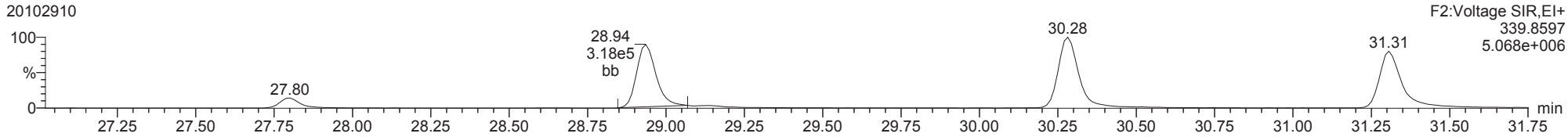

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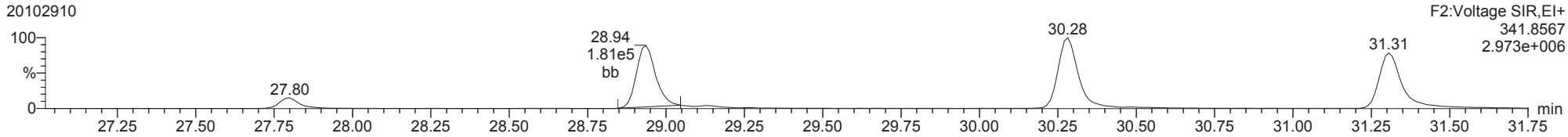

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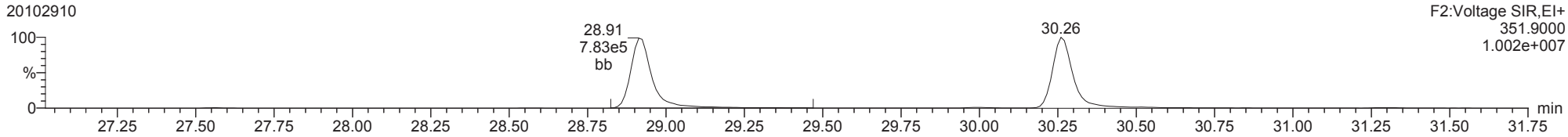

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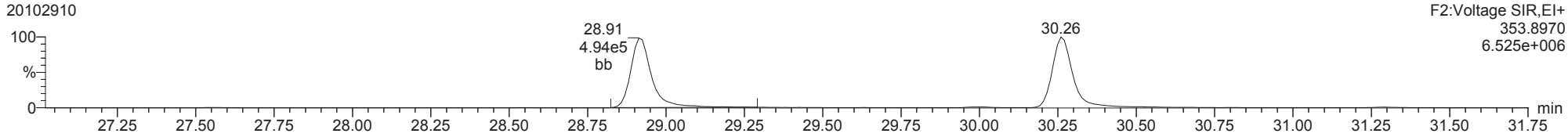
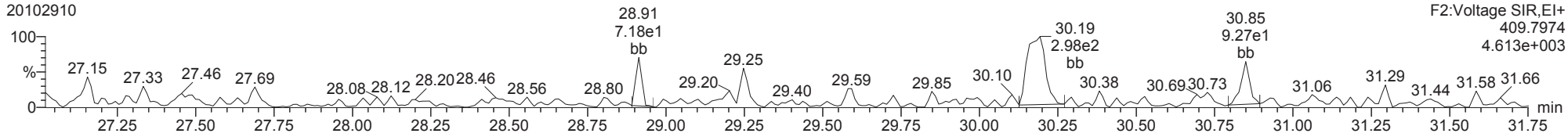


FUNCTION2 HPCDPE



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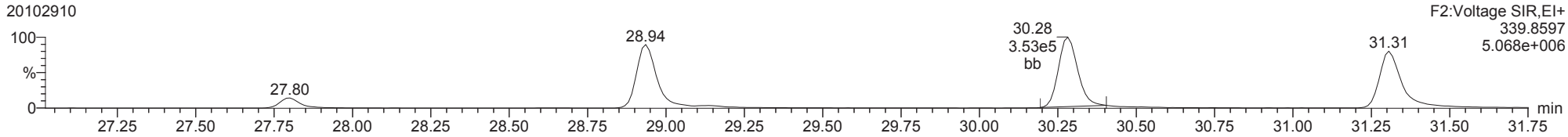
23478-PeCDF



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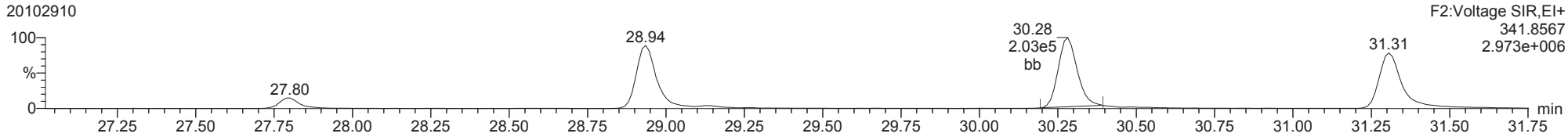

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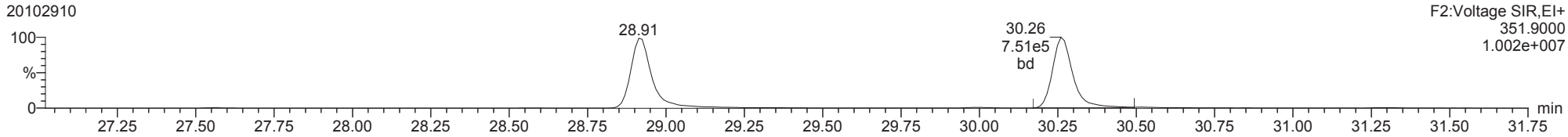

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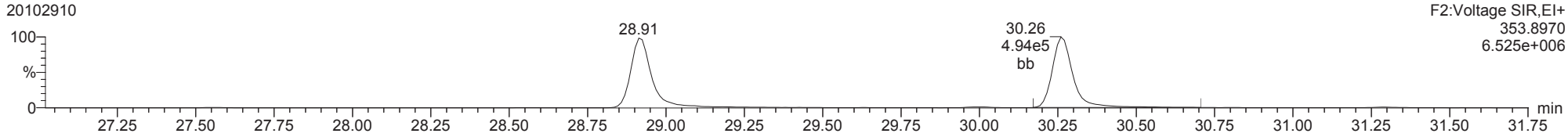

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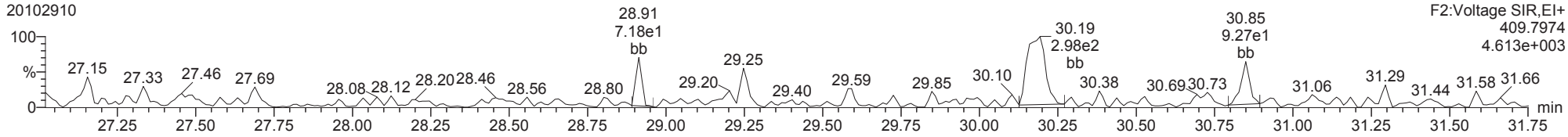

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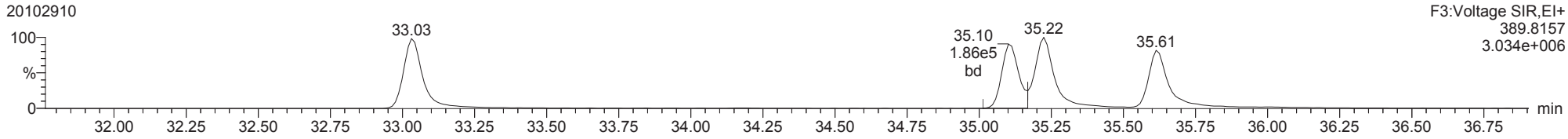
123478-HxCDD



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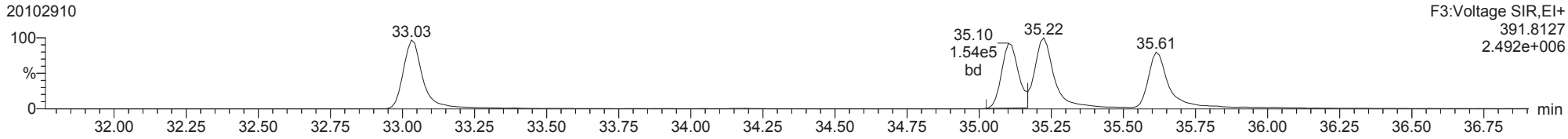

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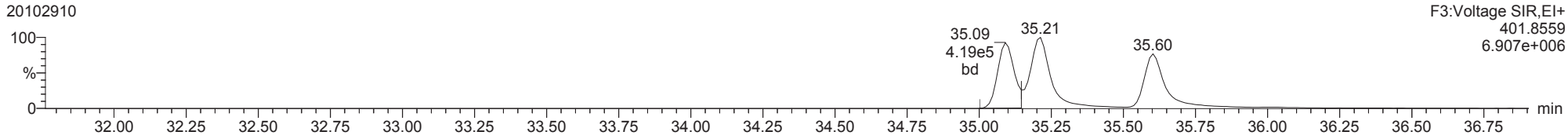

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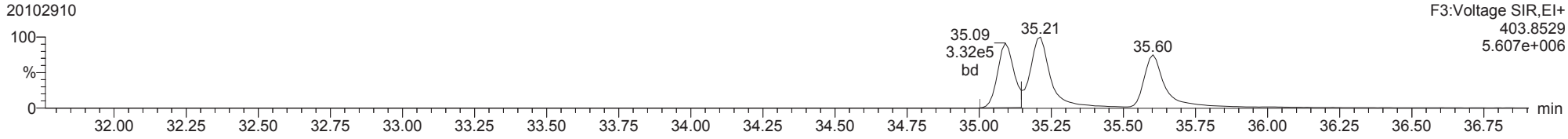

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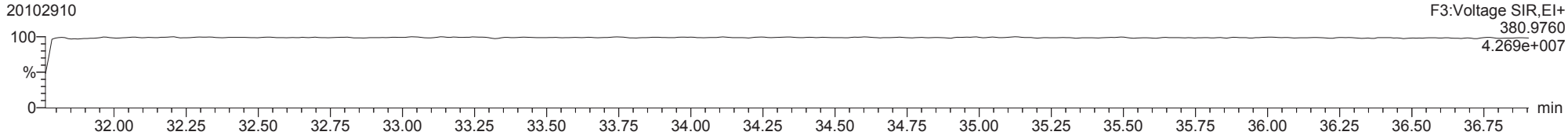

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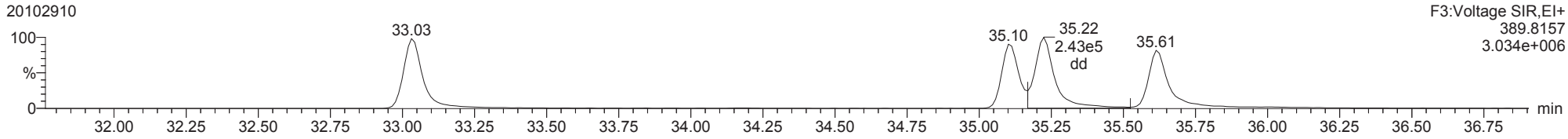

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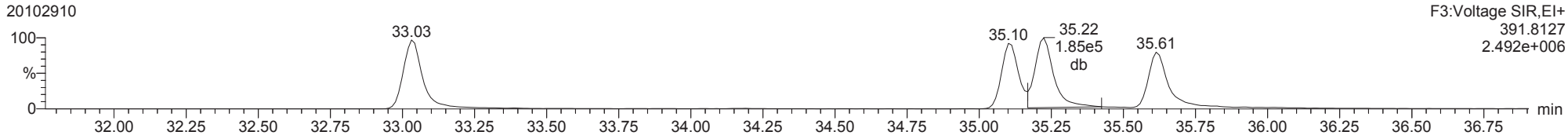

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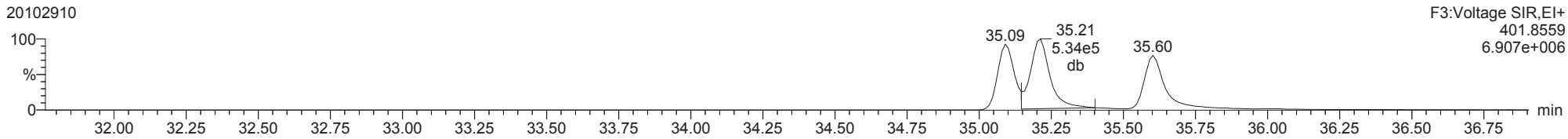

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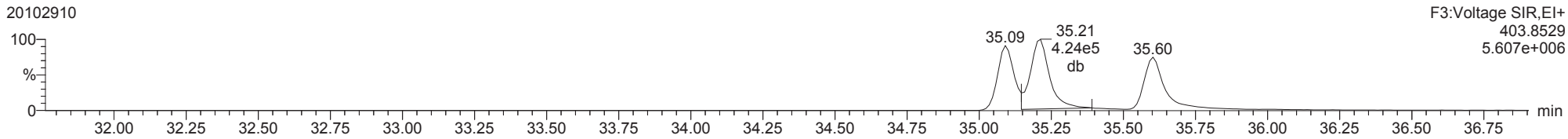

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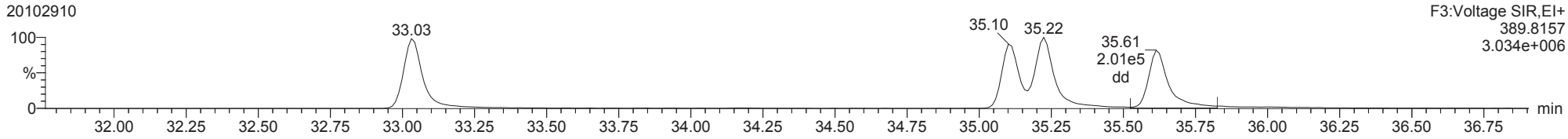
123789-HxCDD



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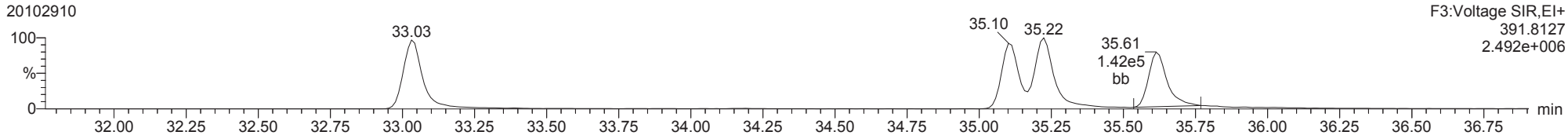

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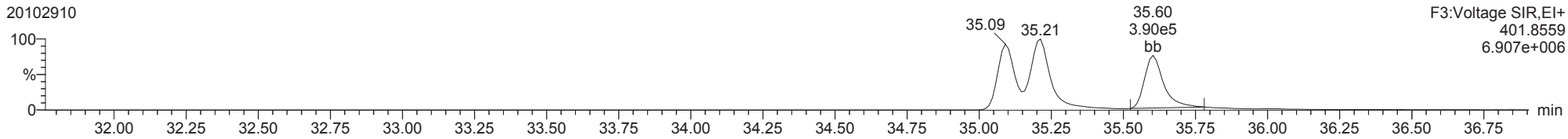

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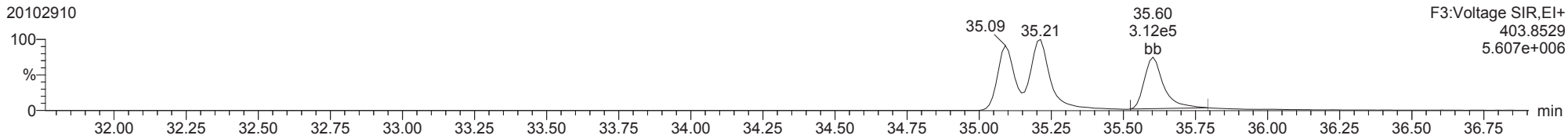

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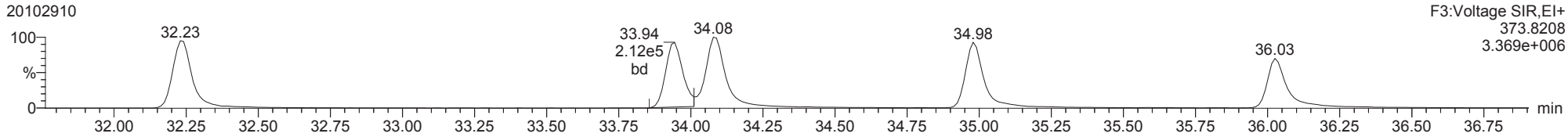

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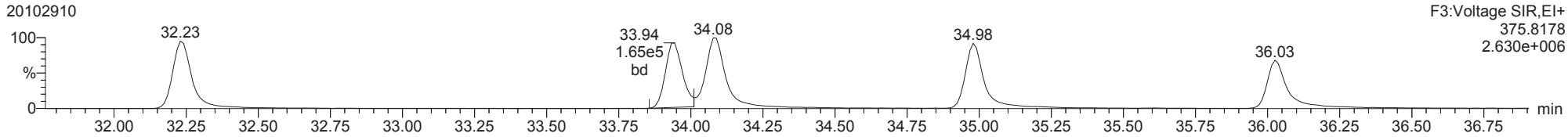

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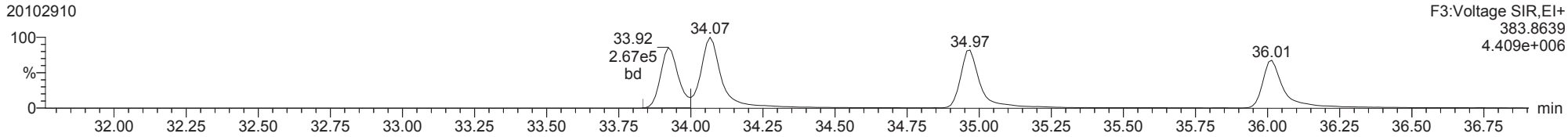

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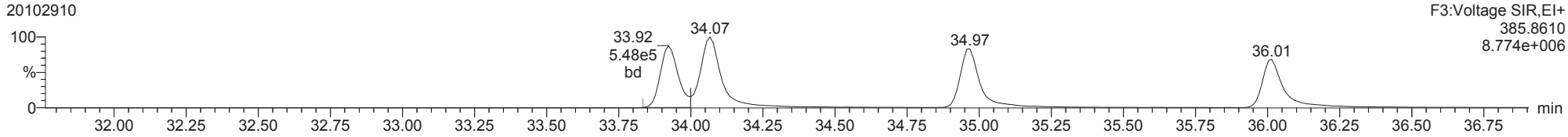
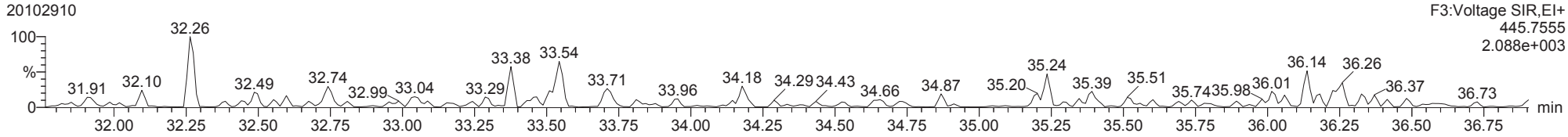


FUNCTION3 OCDPE



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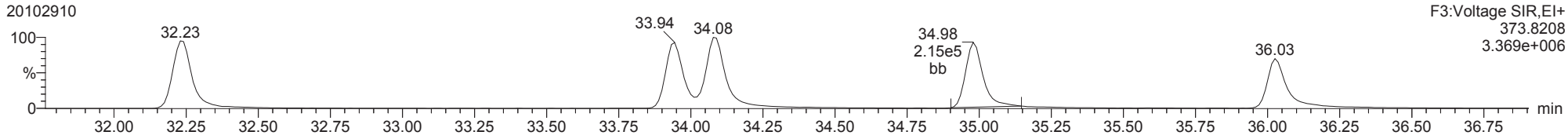
234678-HxCDF



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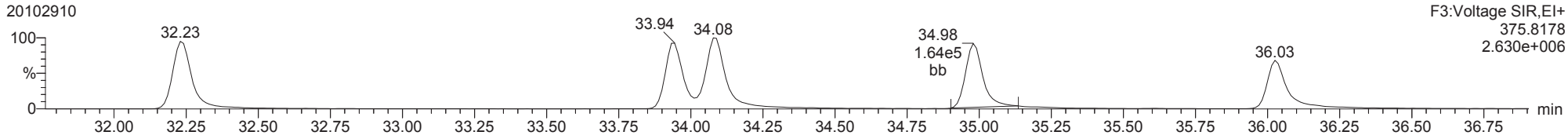

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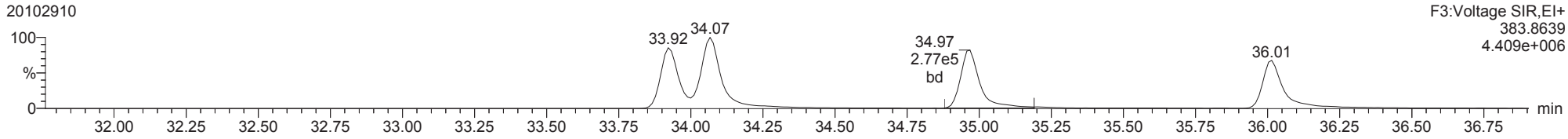

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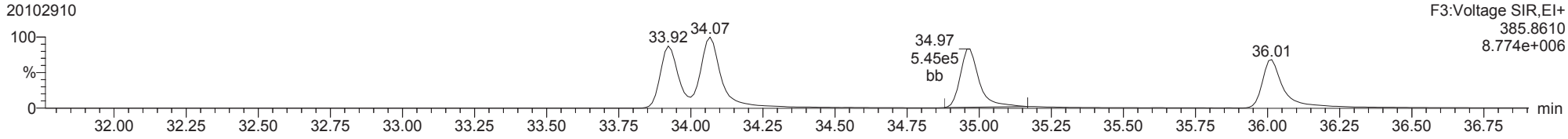
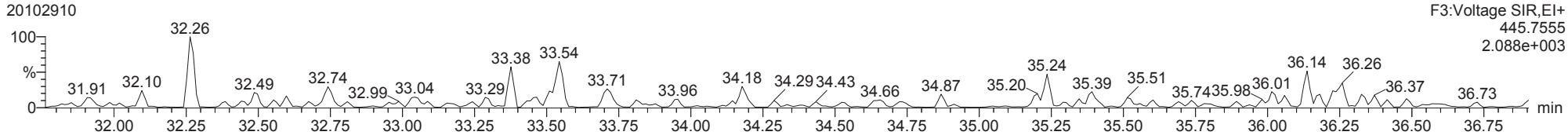


FUNCTION3 OCDPE



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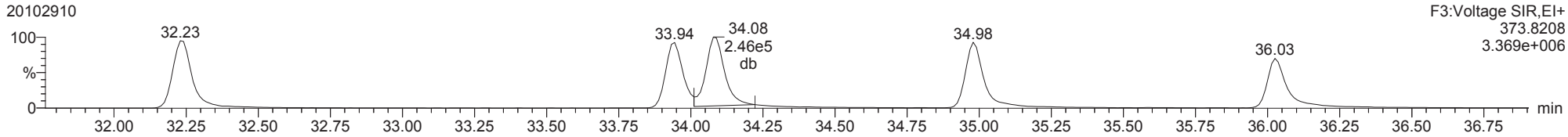
123678-HxCDF



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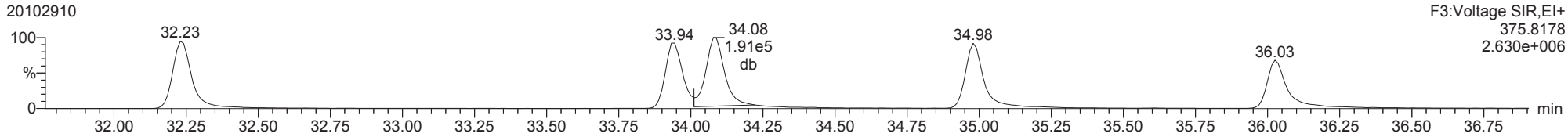

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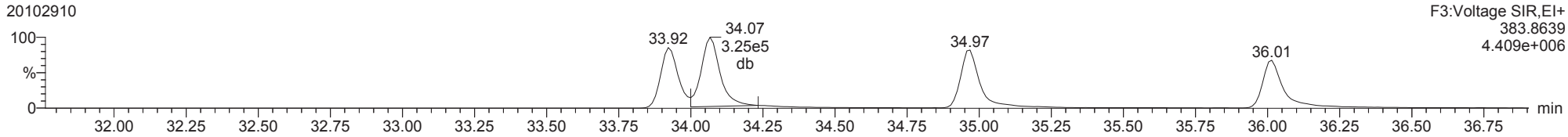

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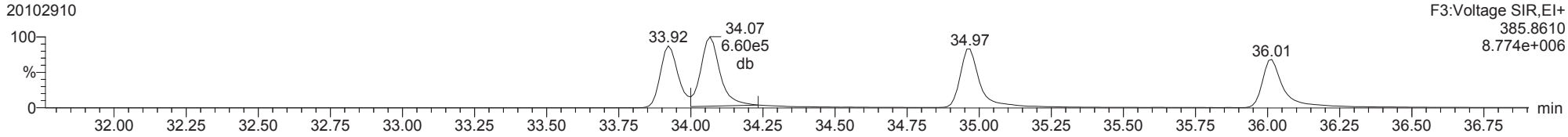
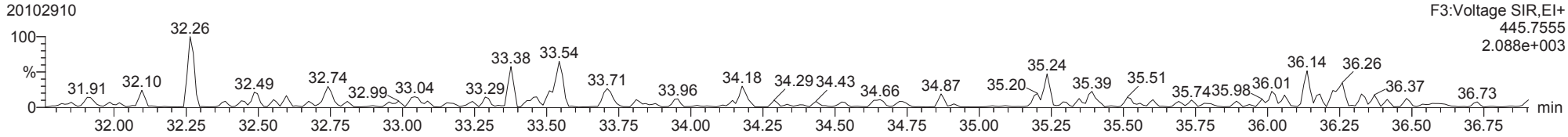


FUNCTION3 OCDPE



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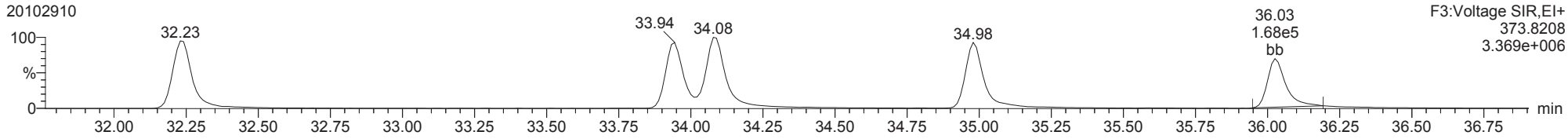

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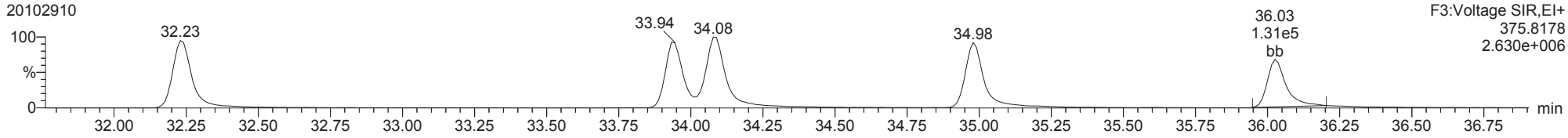

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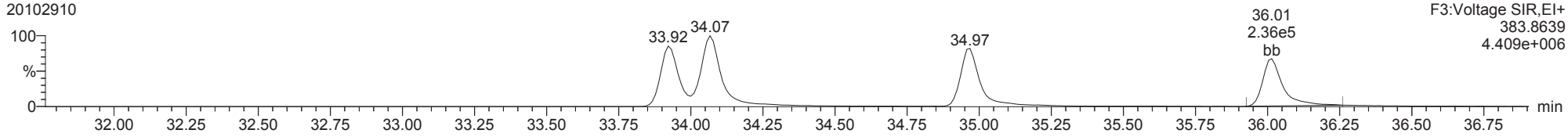

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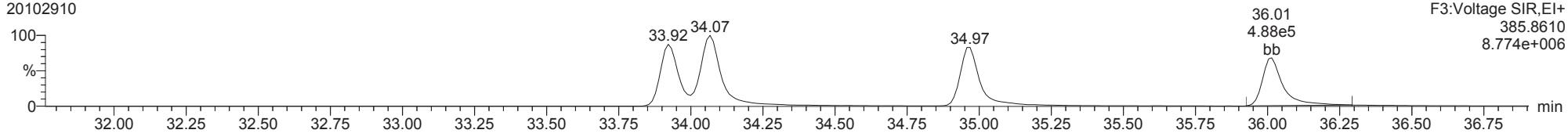
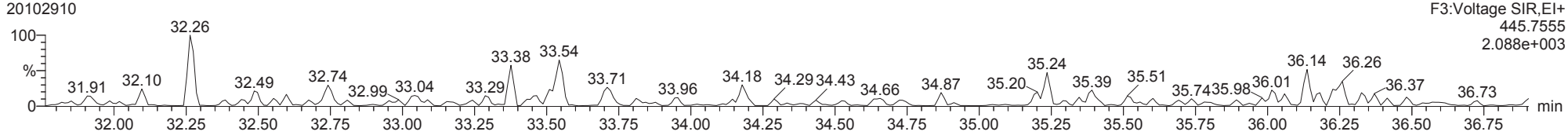


FUNCTION3 OCDPE



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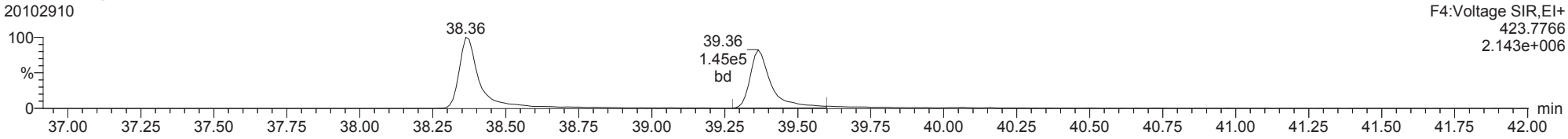

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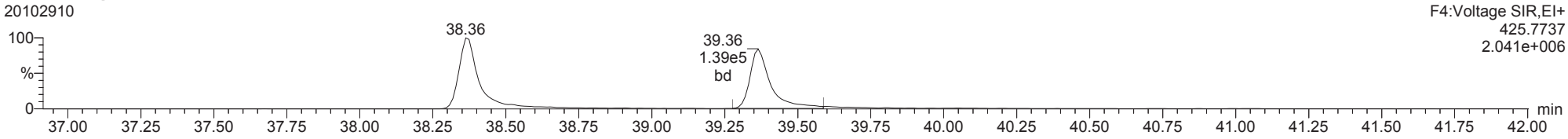

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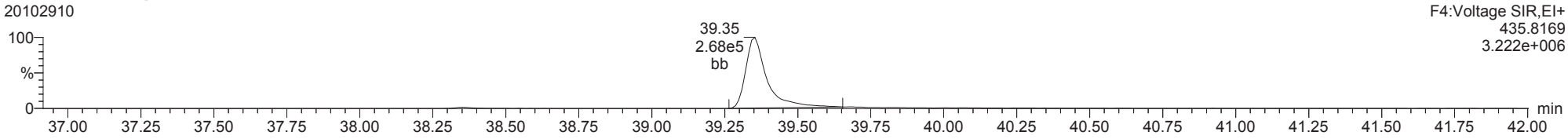

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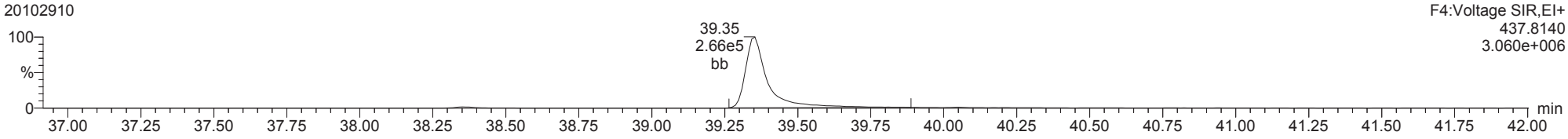
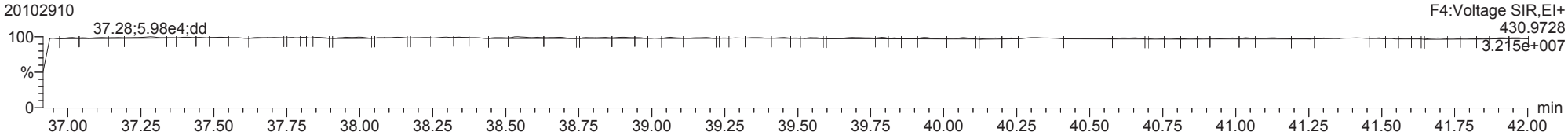


FUNCTION4 PFK



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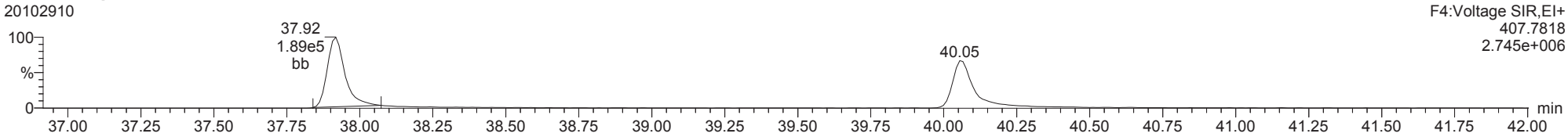

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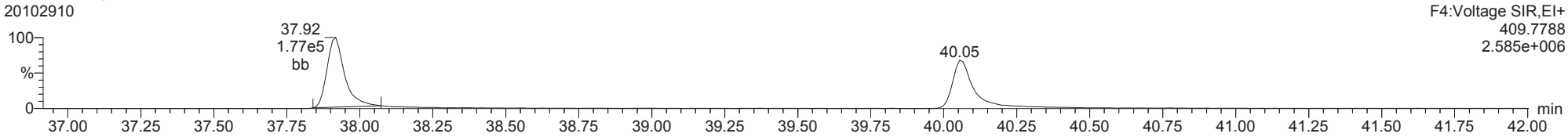

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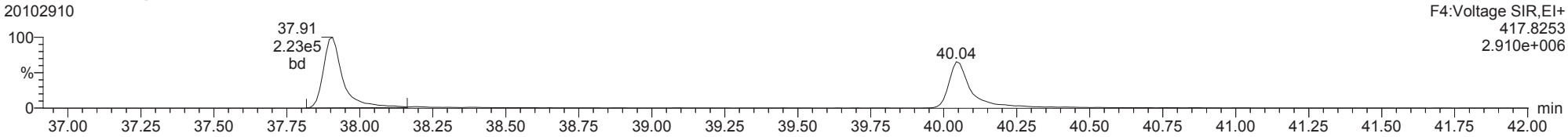

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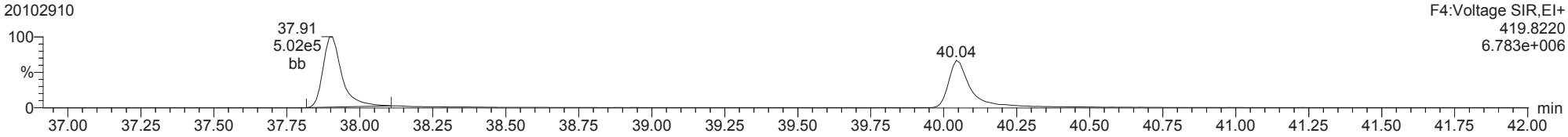
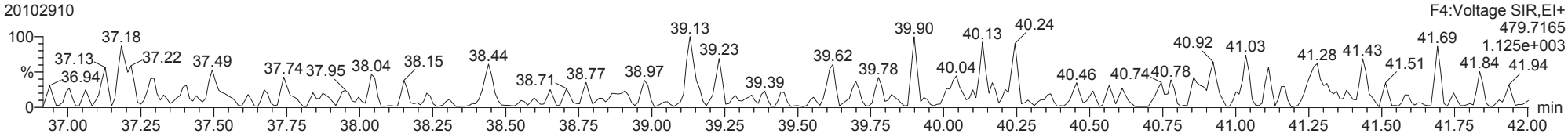


FUNCTION4 NCDPE



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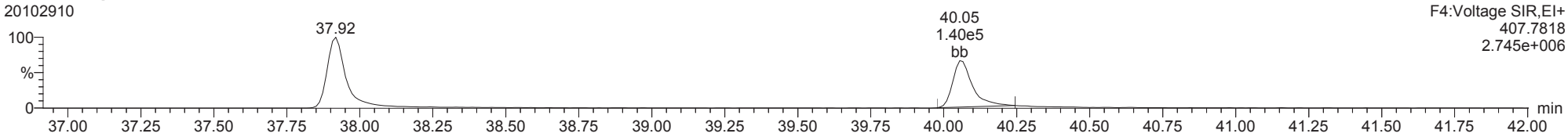

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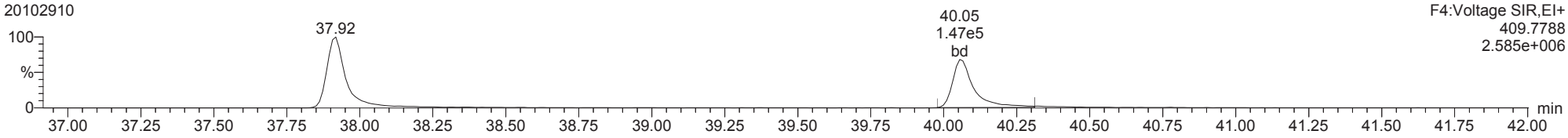

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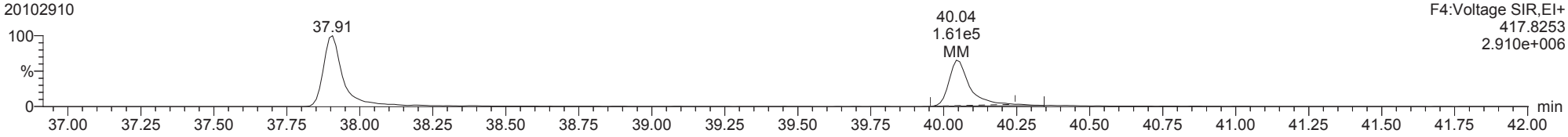

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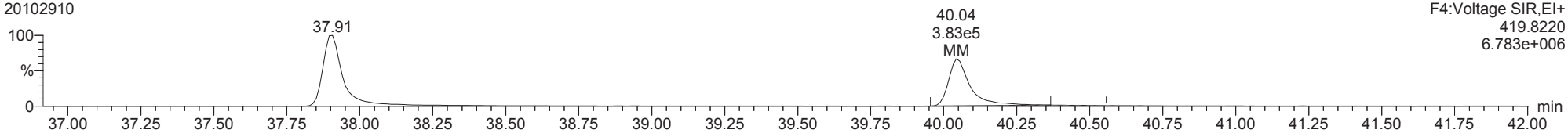
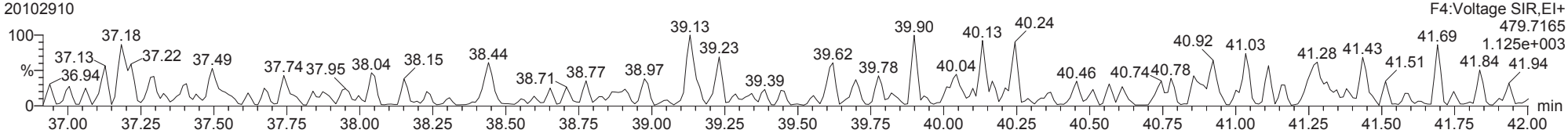


FUNCTION4 NCDPE



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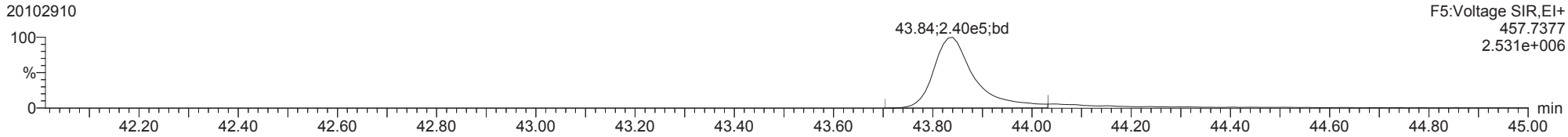
Printed: Friday, October 30, 2020 14:39:09 Pacific Daylight Time

ID: ICVCJ, Name: 20102910, Date: 29-Oct-2020, Time: 23:12:33, Conditions: AUTOSPEC01, User: pk

OCDD



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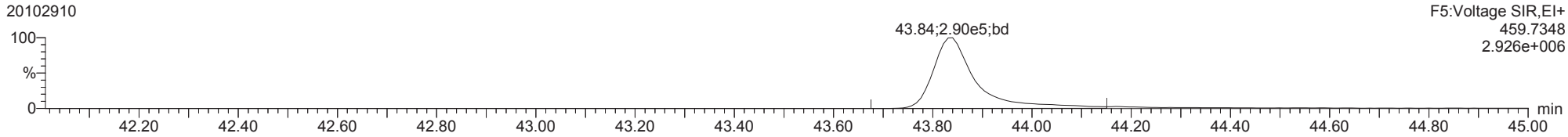

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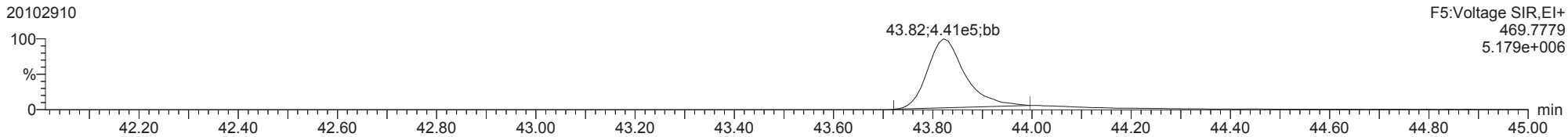

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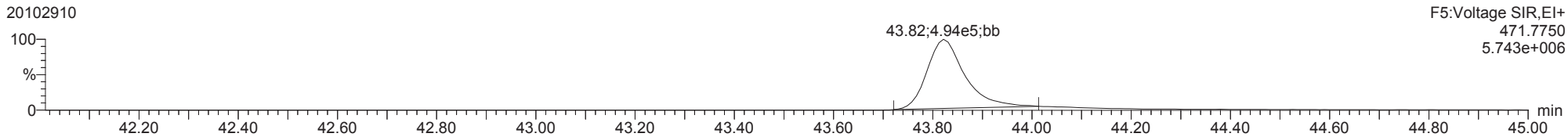
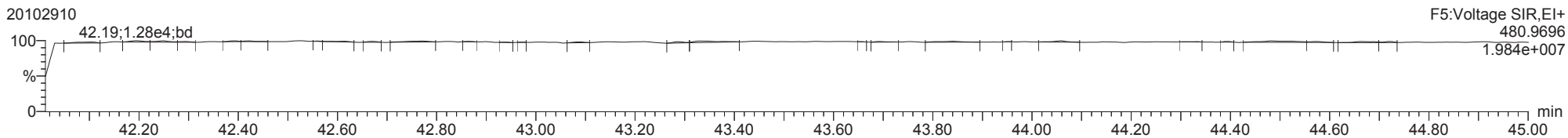


FUNCTION5 PFK



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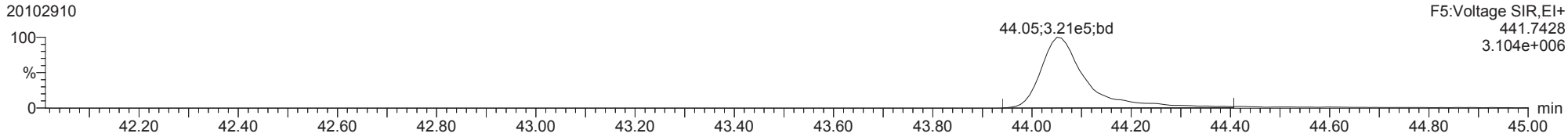
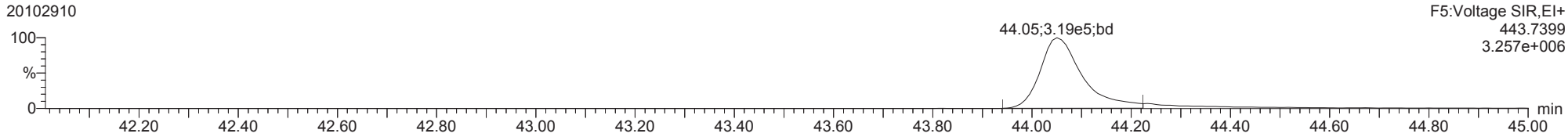
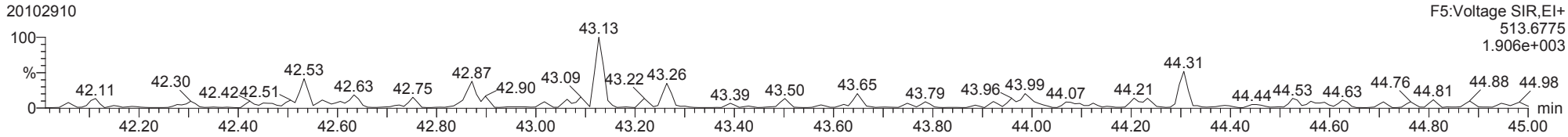
OCDF



OCDF



FUNCTION5 DCDPE



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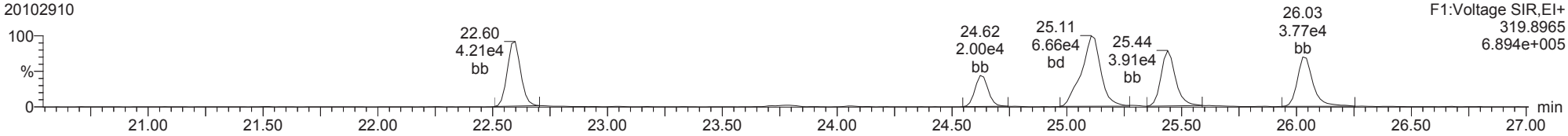
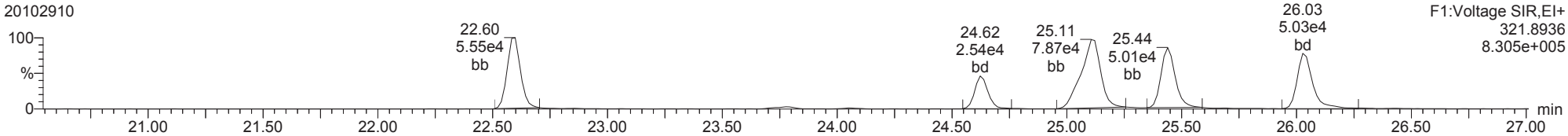
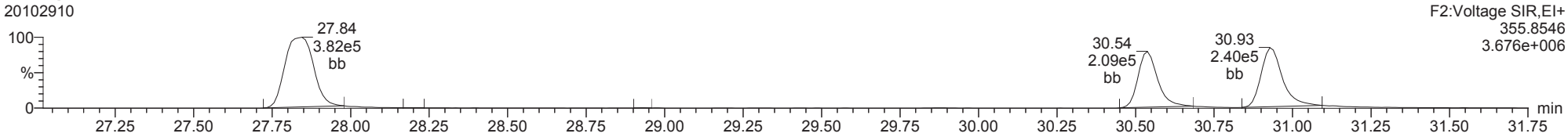
Total-tetradioxins



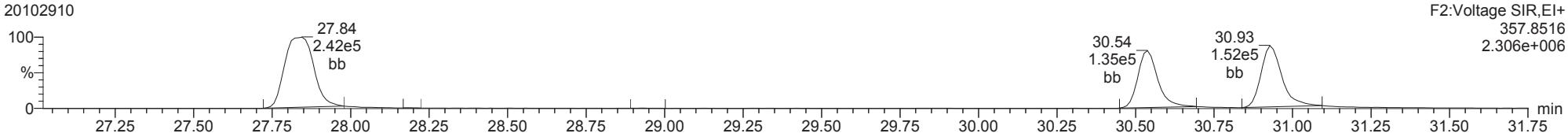
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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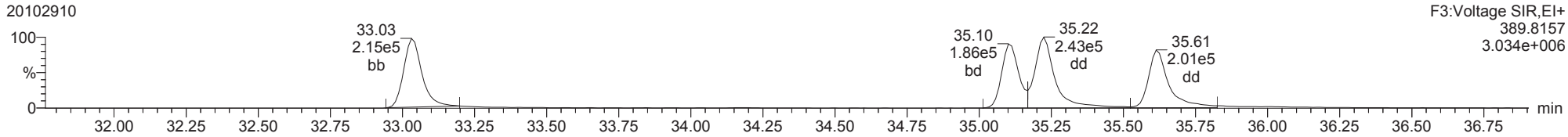
Total-hexadioxins



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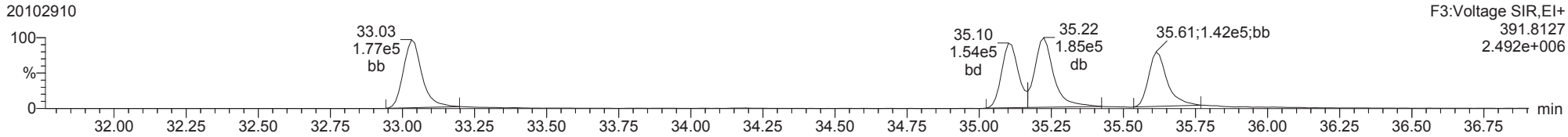
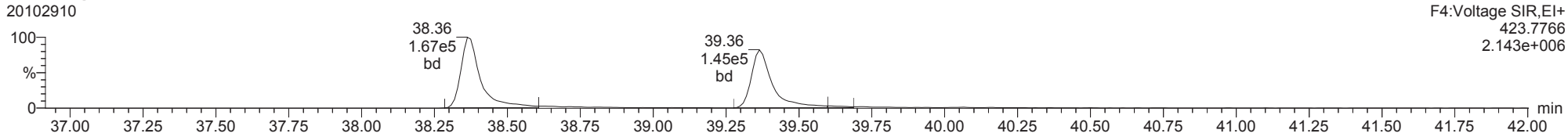


Total-heptadioxins



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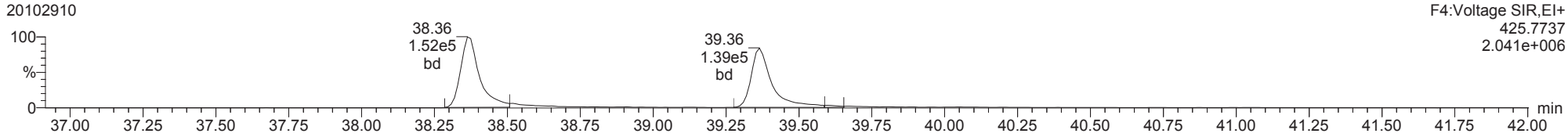

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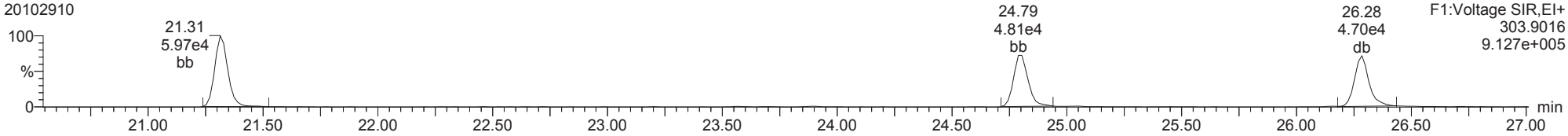
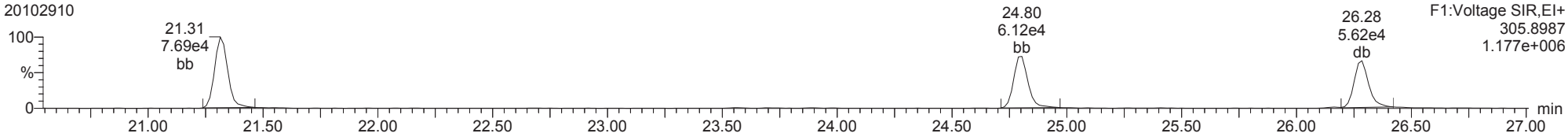
Total-tetrafurans



Total-tetrafurans



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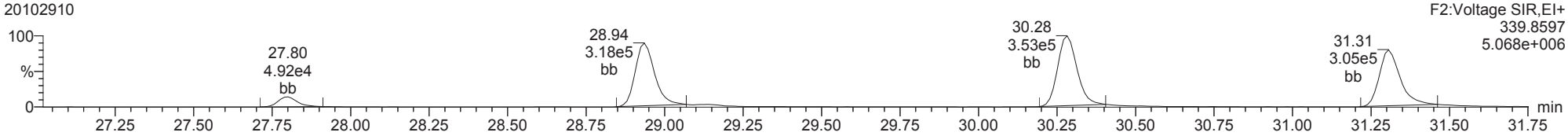

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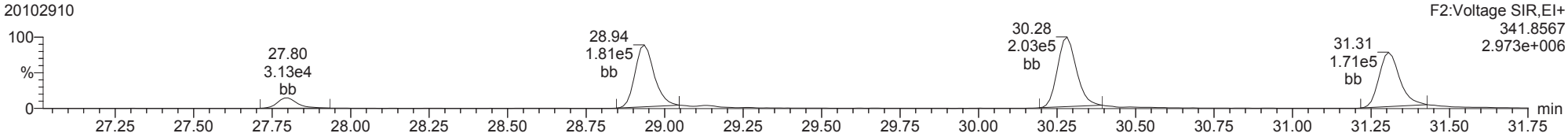

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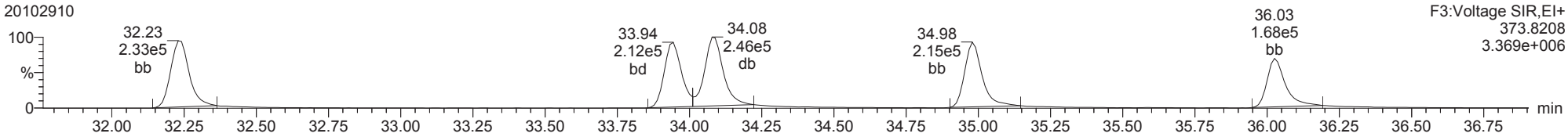
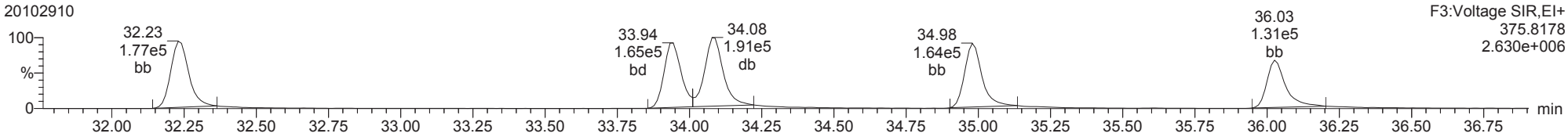
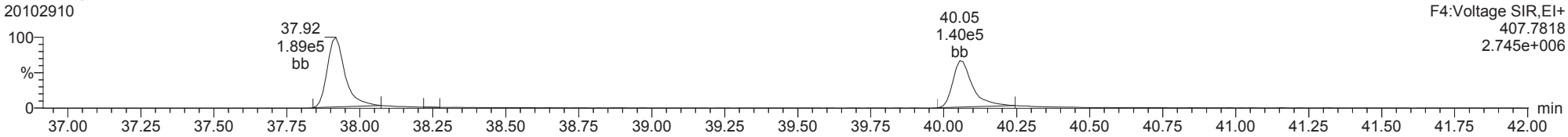
Total-hexafurans



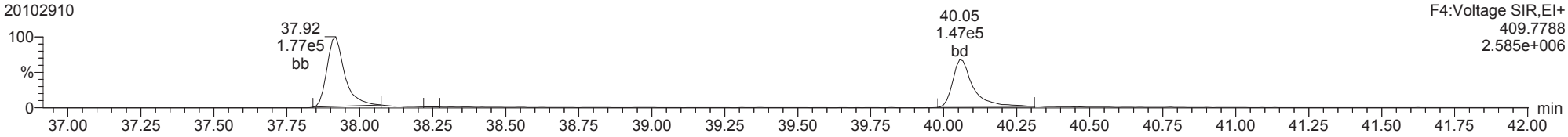
Total-hexafurans



Total-heptafurans



Total-heptafurans



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Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 09:08:24

ID: CS3J2, Name: 20102911, Date: 30-Oct-2020, Time: 00:01:03, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	24.804	1.001	3.304e4	4.285e4	0.729	0.771	0.770	725	2428	4.61e5	5.95e5	635.4	245.0	NO	bd	bb	9.570
12378-PeCDF	28.946	1.001	2.085e5	1.240e5	0.779	1.682	1.550	3321	3877	2.89e6	1.72e6	869.6	442.9	NO	bb	bb	50.158
23478-PeCDF	30.293	1.001	2.290e5	1.317e5	0.880	1.739	1.550	3321	3877	3.27e6	1.90e6	984.1	490.7	NO	bb	bb	50.633
123478-HxCDF	33.944	1.000	1.412e5	1.073e5	0.880	1.316	1.240	2441	2399	2.00e6	1.53e6	818.8	637.5	NO	bd	bd	50.473
234678-HxCDF	34.990	1.001	1.571e5	1.168e5	0.863	1.345	1.240	2441	2399	1.98e6	1.55e6	811.2	646.1	NO	bd	bb	55.763
123678-HxCDF	34.088	1.000	1.715e5	1.283e5	0.853	1.337	1.240	2441	2399	2.17e6	1.64e6	887.9	682.7	NO	db	db	51.513
123789-HxCDF	36.036	1.000	1.148e5	8.958e4	0.780	1.282	1.240	2441	2399	1.42e6	1.12e6	583.8	467.8	NO	MM	MM	54.112
1234678-HpCDF	37.928	1.000	1.228e5	1.345e5	1.001	0.914	1.050	3000	2284	1.75e6	1.74e6	582.2	762.8	NO	bb	bd	52.313
1234789-HpCDF	40.065	1.000	1.059e5	1.024e5	0.994	1.034	1.050	3000	2284	1.18e6	1.13e6	393.9	494.4	NO	bd	bd	54.832
OCDF	44.068	1.005	2.225e5	2.313e5	1.158	0.962	0.890	1531	3236	2.01e6	2.13e6	1312.0	658.1	NO	bd	bd	105.722
2378-TCDD	25.454	1.001	3.200e4	3.951e4	1.238	0.810	0.770	1257	1270	4.17e5	5.21e5	331.6	409.9	NO	bb	dd	10.121
12378-PeCDD	30.549	1.001	1.456e5	9.592e4	0.988	1.518	1.550	3270	1809	1.94e6	1.22e6	592.5	674.9	NO	bb	bb	53.260
123478-HxCDD	35.112	1.000	1.191e5	1.005e5	0.842	1.186	1.240	1636	1968	1.80e6	1.45e6	1100.2	735.0	NO	bd	bd	51.744
123678-HxCDD	35.235	1.000	1.716e5	1.278e5	0.907	1.342	1.240	1636	1968	2.04e6	1.65e6	1249.6	836.2	NO	db	db	49.677
123789-HxCDD	35.624	1.011	1.315e5	1.131e5	0.784	1.163	1.240	1636	1968	1.55e6	1.30e6	946.4	662.6	NO	bb	bd	53.432
1234678-HpCDD	39.375	1.000	1.044e5	9.816e4	1.044	1.063	1.050	2706	2557	1.21e6	1.14e6	447.3	445.2	NO	bd	bd	53.940
OCDD	43.848	1.000	1.680e5	1.868e5	0.963	0.900	0.890	2216	1242	1.63e6	1.93e6	737.8	1553.5	NO	bd	bd	99.391
13C-2378-TCDF	24.789	1.007	4.748e5	6.134e5	2.203	0.774	0.770	2788	2162	6.48e6	8.39e6	2325.6	3881.7	NO	bb	bb	101.302
13C-12378-PeCDF	28.924	1.175	5.201e5	3.304e5	1.741	1.574	1.550	3254	4241	6.26e6	4.01e6	1924.9	946.6	NO	bb	bb	100.169
13C-23478-PeCDF	30.271	1.229	4.935e5	3.156e5	1.669	1.564	1.550	3254	4241	6.30e6	4.10e6	1935.9	966.8	NO	bd	bb	99.381
13C-123478-HxCDF	33.932	0.953	1.823e5	3.769e5	1.022	0.484	0.510	2334	2737	2.50e6	5.15e6	1073.1	1881.6	NO	bd	bd	101.601
13C-123678-HxCDF	34.077	0.957	2.243e5	4.576e5	1.200	0.490	0.510	2334	2737	2.79e6	5.72e6	1194.0	2089.6	NO	db	db	105.533
13C-234678-HxCDF	34.968	0.982	1.850e5	3.845e5	1.071	0.481	0.510	2334	2737	2.32e6	4.82e6	994.6	1761.6	NO	bb	bb	98.737
13C-123789-HxCDF	36.025	1.012	1.580e5	3.263e5	0.919	0.484	0.510	2334	2737	1.86e6	3.79e6	798.6	1386.6	NO	bb	bb	97.916
13C-1234678-HpCDF	37.917	1.065	1.561e5	3.353e5	0.909	0.466	0.440	2862	3500	1.94e6	4.57e6	676.8	1305.6	NO	bd	bb	100.452
13C-1234789-HpCDF	40.054	1.125	1.186e5	2.636e5	0.724	0.450	0.440	2862	3500	1.30e6	3.02e6	455.9	862.1	NO	bd	bb	98.117
13C-1234-TCDD	24.622	0.000	2.157e5	2.719e5	1.000	0.794	0.770	1722	1459	3.19e6	4.08e6	1851.5	2796.3	NO	bb	bb	100.000
13C-2378-TCDD	25.423	1.033	2.531e5	3.175e5	1.181	0.797	0.770	1722	1459	3.34e6	4.27e6	1938.5	2929.3	NO	bb	bb	99.033
13C-12378-PeCDD	30.527	1.240	2.821e5	1.771e5	0.978	1.593	1.550	2012	1048	3.79e6	2.37e6	1882.0	2260.6	NO	bb	bb	96.301
13C-123478-HxCDD	35.101	0.986	2.832e5	2.210e5	0.965	1.282	1.240	1357	3570	4.18e6	3.28e6	3083.1	917.6	NO	bd	bd	97.034
13C-123678-HxCDD	35.224	0.989	3.731e5	2.914e5	1.168	1.280	1.240	1357	3570	4.54e6	3.61e6	3348.5	1010.0	NO	db	db	105.651
13C-1234678-HpCDD	39.364	1.105	1.835e5	1.762e5	0.645	1.041	1.050	1891	1862	2.11e6	1.98e6	1117.8	1061.0	NO	bb	bb	103.540
13C-OCDD	43.830	1.231	3.479e5	3.935e5	0.678	0.884	0.890	3063	2106	3.32e6	3.67e6	1083.2	1741.3	NO	bd	bb	203.009
13C-123789-HxCDD	35.613	0.000	3.024e5	2.361e5	1.000	1.281	1.240	1357	3570	3.73e6	2.92e6	2747.0	817.3	NO	bb	bb	100.000
37CL-2378-TCDD	25.454	1.034	5.860e4		1.264			1206		8.08e5		669.7			bb		9.503

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Last Altered: Friday, October 30, 2020 14:57:31 Pacific Daylight Time
Printed: Friday, October 30, 2020 14:59:35 Pacific Daylight Time

ID: CS3J2, Name: 20102911, Date: 30-Oct-2020, Time: 00:01:03, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	21.329	0.860	4.243e4	5.168e4	0.846	0.821	0.770	725	2428	6.22e5	7.60e5	857.5	313.1	NO	bb	bb	10.219
1289-TCDF	26.285	1.060	3.069e4	3.831e4	0.688	0.801	0.770	725	2428	3.62e5	5.04e5	498.7	207.6	NO	dd	bb	9.219
13468-PECDF	26.149	0.904	3.055e5	1.992e5	1.181	1.533	1.550	452	662	4.28e6	2.83e6	9477.8	4268.1	NO	bb	bb	50.226
12389-PECDF	31.317	1.083	2.024e5	1.157e5	0.766	1.749	1.550	3321	3877	2.54e6	1.49e6	763.8	385.1	NO	bb	bb	48.817
123468-HXCDF	32.241	0.950	1.495e5	1.214e5	1.003	1.231	1.240	2441	2399	2.06e6	1.64e6	842.7	684.9	NO	bb	bb	48.319
1368-TCDD	22.598	0.889	3.161e4	3.695e4	1.179	0.855	0.770	1257	1270	4.48e5	5.60e5	356.4	441.1	NO	bb	bb	10.195
1289-TCDD	26.043	1.024	2.561e4	3.244e4	1.042	0.789	0.770	1257	1270	3.21e5	4.19e5	255.6	330.3	NO	bb	bb	9.761
12479-PECDD	27.844	0.912	2.623e5	1.665e5	1.810	1.576	1.550	3270	1809	2.42e6	1.55e6	739.4	854.6	NO	bb	bb	51.589
12389-PECDD	30.938	1.013	1.642e5	1.007e5	1.165	1.631	1.550	3270	1809	2.04e6	1.26e6	622.7	698.6	NO	bb	bb	49.492
124679-HXCDD	33.042	0.941	1.568e5	1.248e5	1.056	1.256	1.240	1636	1968	1.95e6	1.56e6	1192.7	791.4	NO	bb	bd	52.878
1234679-HPCDD	38.374	0.975	1.128e5	1.070e5	1.285	1.054	1.050	2706	2557	1.34e6	1.30e6	493.6	509.1	NO	bd	bd	47.547
Total-tetrafurans			1.062e5		0.754			725		1.44e6							29.008
Total-penta1			3.055e5					452		4.28e6							50.226
Total-pentafurans			6.727e5		0.809			3321		9.14e6							157.312
Total-hexafurans			7.341e5		0.876			2441		9.63e6							260.181
Total-heptafurans			2.287e5		0.997			3000		2.93e6							107.145
Total-Furans			2.270e6		0.893			725		2.94e7							709.595
Total-tetradioxins			1.480e5		1.153			1257		1.84e6							50.796
Total-pentadioxins			5.722e5		1.321			3270		6.39e6							154.341
Total-hexadioxins			5.790e5		0.897			1636		7.34e6							207.731
Total-heptadioxins			2.172e5		1.165			2706		2.55e6							101.487
Total-Dioxins			1.684e6		1.100			1257		1.98e7							613.745
Total-TEQ			3.954e6					1257		4.92e7							1323.340
FUNCTION1 PFK			1.547e6					366119		2.95e7							
FUNCTION2 PFK			6.211e6					248084		1.23e7							0.000
FUNCTION3 PFK			9.335e6					343939		5.95e7							0.000
FUNCTION4 PFK			1.289e7					300714		1.28e8							
FUNCTION5 PFK			1.059e5					182780		2.96e6							
FUNCTION1 HXCD...			0.000e0					207		0.00e0							
FUNCTION1 HPCD...			0.000e0					463		0.00e0							
FUNCTION2 HPCD...			3.279e2					634		7.21e3							0.000
FUNCTION3 OCDPE			0.000e0					404		0.00e0							
FUNCTION4 NCDPE			0.000e0					423		0.00e0							
FUNCTION5 DCDPE			0.000e0					188		0.00e0							

Method: T:\Autospec\Methods\Dioxin201016.mdb 28 Oct 2020 21:30:41
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 09:08:24

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	26.28	3.069e4	3.831e4	0.688	0.80	0.77	498.7	YES	NO	dd	bb	9.219
2	2378-TCDF	24.80	3.304e4	4.285e4	0.729	0.77	0.77	635.4	YES	NO	bd	bb	9.570
3	1368-TCDF	21.33	4.243e4	5.168e4	0.846	0.82	0.77	857.5	YES	NO	bb	bb	10.219

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	26.15	3.055e5	1.992e5	1.181	1.53	1.55	9477.8	YES	NO	bb	bb	50.226

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	31.32	2.024e5	1.157e5	0.766	1.75	1.55	763.8	YES	NO	bb	bb	48.817
2	23478-PeCDF	30.29	2.290e5	1.317e5	0.880	1.74	1.55	984.1	YES	NO	bb	bb	50.633
3	12378-PeCDF	28.95	2.085e5	1.240e5	0.779	1.68	1.55	869.6	YES	NO	bb	bb	50.158
4	Total-pentafurans	27.80	3.281e4	1.889e4	0.809	1.74	1.55	135.6	YES	NO	bb	bb	7.705

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	234678-HxCDF	34.99	1.571e5	1.168e5	0.863	1.35	1.24	811.2	YES	NO	bd	bb	55.763
2	123678-HxCDF	34.09	1.715e5	1.283e5	0.853	1.34	1.24	887.9	YES	NO	db	db	51.513
3	123478-HxCDF	33.94	1.412e5	1.073e5	0.880	1.32	1.24	818.8	YES	NO	bd	bd	50.473
4	123468-HXCDF	32.24	1.495e5	1.214e5	1.003	1.23	1.24	842.7	YES	NO	bb	bb	48.319
5	123789-HxCDF	36.04	1.148e5	8.958e4	0.780	1.28	1.24	583.8	YES	NO	MM	MM	54.112

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	40.07	1.059e5	1.024e5	0.994	1.03	1.05	393.9	YES	NO	bd	bd	54.832
2	1234678-HpCDF	37.93	1.228e5	1.345e5	1.001	0.91	1.05	582.2	YES	NO	bb	bd	52.313

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	26.28	3.069e4	3.831e4	0.688	0.80	0.77	498.7	YES	NO	dd	bb	9.219
2	2378-TCDF	24.80	3.304e4	4.285e4	0.729	0.77	0.77	635.4	YES	NO	bd	bb	9.570
3	1368-TCDF	21.33	4.243e4	5.168e4	0.846	0.82	0.77	857.5	YES	NO	bb	bb	10.219
4	12389-PECDF	31.32	2.024e5	1.157e5	0.766	1.75	1.55	763.8	YES	NO	bb	bb	48.817
5	23478-PeCDF	30.29	2.290e5	1.317e5	0.880	1.74	1.55	984.1	YES	NO	bb	bb	50.633
6	12378-PeCDF	28.95	2.085e5	1.240e5	0.779	1.68	1.55	869.6	YES	NO	bb	bb	50.158
7	Total-pentafurans	27.80	3.281e4	1.889e4	0.809	1.74	1.55	135.6	YES	NO	bb	bb	7.705
8	234678-HxCDF	34.99	1.571e5	1.168e5	0.863	1.35	1.24	811.2	YES	NO	bd	bb	55.763
9	123678-HxCDF	34.09	1.715e5	1.283e5	0.853	1.34	1.24	887.9	YES	NO	db	db	51.513
10	123478-HxCDF	33.94	1.412e5	1.073e5	0.880	1.32	1.24	818.8	YES	NO	bd	bd	50.473
11	123468-HXCDF	32.24	1.495e5	1.214e5	1.003	1.23	1.24	842.7	YES	NO	bb	bb	48.319
12	123789-HxCDF	36.04	1.148e5	8.958e4	0.780	1.28	1.24	583.8	YES	NO	MM	MM	54.112
13	1234789-HpCDF	40.07	1.059e5	1.024e5	0.994	1.03	1.05	393.9	YES	NO	bd	bd	54.832
14	1234678-HpCDF	37.93	1.228e5	1.345e5	1.001	0.91	1.05	582.2	YES	NO	bb	bd	52.313
15	OCDF	44.07	2.225e5	2.313e5	1.158	0.96	0.89	1312.0	YES	NO	bd	bd	105.722
16	13468-PECDF	26.15	3.055e5	1.992e5	1.181	1.53	1.55	9477.8	YES	NO	bb	bb	50.226

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	26.04	2.561e4	3.244e4	1.042	0.79	0.77	255.6	YES	NO	bb	bb	9.761
2	2378-TCDD	25.45	3.200e4	3.951e4	1.238	0.81	0.77	331.6	YES	NO	bb	dd	10.121
3	Total-tetradioxins	25.12	4.395e4	5.771e4	1.153	0.76	0.77	348.6	YES	NO	bb	bd	15.453
4	Total-tetradioxins	24.64	1.396e4	1.883e4	1.153	0.74	0.77	162.5	YES	NO	bb	bd	4.984
5	Total-tetradioxins	24.06	2.815e2	3.856e2	1.153	0.73	0.77	3.7	YES	NO	bb	bb	0.101
6	Total-tetradioxins	23.75	5.388e2	6.456e2	1.153	0.83	0.77	8.4	YES	NO	bd	bd	0.180
7	1368-TCDD	22.60	3.161e4	3.695e4	1.179	0.86	0.77	356.4	YES	NO	bb	bb	10.195

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	30.55	1.456e5	9.592e4	0.988	1.52	1.55	592.5	YES	NO	bb	bb	53.260
2	12479-PECDD	27.84	2.623e5	1.665e5	1.810	1.58	1.55	739.4	YES	NO	bb	bb	51.589
3	12389-PECDD	30.94	1.642e5	1.007e5	1.165	1.63	1.55	622.7	YES	NO	bb	bb	49.492

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	35.62	1.315e5	1.131e5	0.784	1.16	1.24	946.4	YES	NO	bb	bd	53.432
2	123678-HxCDD	35.23	1.716e5	1.278e5	0.907	1.34	1.24	1249.6	YES	NO	db	db	49.677
3	123478-HxCDD	35.11	1.191e5	1.005e5	0.842	1.19	1.24	1100.2	YES	NO	bd	bd	51.744
4	124679-HXCDD	33.04	1.568e5	1.248e5	1.056	1.26	1.24	1192.7	YES	NO	bb	bd	52.878

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	39.38	1.044e5	9.816e4	1.044	1.06	1.05	447.3	YES	NO	bd	bd	53.940
2	1234679-HPCDD	38.37	1.128e5	1.070e5	1.285	1.05	1.05	493.6	YES	NO	bd	bd	47.547

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	26.04	2.561e4	3.244e4	1.042	0.79	0.77	255.6	YES	NO	bb	bb	9.761
2	2378-TCDD	25.45	3.200e4	3.951e4	1.238	0.81	0.77	331.6	YES	NO	bb	dd	10.121
3	Total-tetradioxins	25.12	4.395e4	5.771e4	1.153	0.76	0.77	348.6	YES	NO	bb	bd	15.453
4	Total-tetradioxins	24.64	1.396e4	1.883e4	1.153	0.74	0.77	162.5	YES	NO	bb	bd	4.984
5	Total-tetradioxins	24.06	2.815e2	3.856e2	1.153	0.73	0.77	3.7	YES	NO	bb	bb	0.101
6	Total-tetradioxins	23.75	5.388e2	6.456e2	1.153	0.83	0.77	8.4	YES	NO	bd	bd	0.180
7	1368-TCDD	22.60	3.161e4	3.695e4	1.179	0.86	0.77	356.4	YES	NO	bb	bb	10.195
8	12378-PeCDD	30.55	1.456e5	9.592e4	0.988	1.52	1.55	592.5	YES	NO	bb	bb	53.260
9	12479-PECDD	27.84	2.623e5	1.665e5	1.810	1.58	1.55	739.4	YES	NO	bb	bb	51.589
10	12389-PECDD	30.94	1.642e5	1.007e5	1.165	1.63	1.55	622.7	YES	NO	bb	bb	49.492
11	123789-HxCDD	35.62	1.315e5	1.131e5	0.784	1.16	1.24	946.4	YES	NO	bb	bd	53.432
12	123678-HxCDD	35.23	1.716e5	1.278e5	0.907	1.34	1.24	1249.6	YES	NO	db	db	49.677
13	123478-HxCDD	35.11	1.191e5	1.005e5	0.842	1.19	1.24	1100.2	YES	NO	bd	bd	51.744
14	124679-HXCDD	33.04	1.568e5	1.248e5	1.056	1.26	1.24	1192.7	YES	NO	bb	bd	52.878
15	1234678-HpCDD	39.38	1.044e5	9.816e4	1.044	1.06	1.05	447.3	YES	NO	bd	bd	53.940
16	1234679-HPCDD	38.37	1.128e5	1.070e5	1.285	1.05	1.05	493.6	YES	NO	bd	bd	47.547
17	OCDD	43.85	1.680e5	1.868e5	0.963	0.90	0.89	737.8	YES	NO	bd	bd	99.391

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	26.28	3.069e4	3.831e4	0.688	0.80	0.77	498.7	YES	NO	dd	bb	9.219
2	2378-TCDF	24.80	3.304e4	4.285e4	0.729	0.77	0.77	635.4	YES	NO	bd	bb	9.570
3	1368-TCDF	21.33	4.243e4	5.168e4	0.846	0.82	0.77	857.5	YES	NO	bb	bb	10.219
4	12389-PECDF	31.32	2.024e5	1.157e5	0.766	1.75	1.55	763.8	YES	NO	bb	bb	48.817
5	23478-PeCDF	30.29	2.290e5	1.317e5	0.880	1.74	1.55	984.1	YES	NO	bb	bb	50.633
6	12378-PeCDF	28.95	2.085e5	1.240e5	0.779	1.68	1.55	869.6	YES	NO	bb	bb	50.158
7	Total-pentafurans	27.80	3.281e4	1.889e4	0.809	1.74	1.55	135.6	YES	NO	bb	bb	7.705
8	234678-HxCDF	34.99	1.571e5	1.168e5	0.863	1.35	1.24	811.2	YES	NO	bd	bb	55.763
9	123678-HxCDF	34.09	1.715e5	1.283e5	0.853	1.34	1.24	887.9	YES	NO	db	db	51.513
10	123478-HxCDF	33.94	1.412e5	1.073e5	0.880	1.32	1.24	818.8	YES	NO	bd	bd	50.473
11	123468-HXCDF	32.24	1.495e5	1.214e5	1.003	1.23	1.24	842.7	YES	NO	bb	bb	48.319
12	123789-HxCDF	36.04	1.148e5	8.958e4	0.780	1.28	1.24	583.8	YES	NO	MM	MM	54.112
13	1234789-HpCDF	40.07	1.059e5	1.024e5	0.994	1.03	1.05	393.9	YES	NO	bd	bd	54.832
14	1234678-HpCDF	37.93	1.228e5	1.345e5	1.001	0.91	1.05	582.2	YES	NO	bb	bd	52.313
15	OCDF	44.07	2.225e5	2.313e5	1.158	0.96	0.89	1312.0	YES	NO	bd	bd	105.722
16	13468-PECDF	26.15	3.055e5	1.992e5	1.181	1.53	1.55	9477.8	YES	NO	bb	bb	50.226
17	1289-TCDD	26.04	2.561e4	3.244e4	1.042	0.79	0.77	255.6	YES	NO	bb	bb	9.761
18	2378-TCDD	25.45	3.200e4	3.951e4	1.238	0.81	0.77	331.6	YES	NO	bb	dd	10.121
19	Total-tetradioxins	25.12	4.395e4	5.771e4	1.153	0.76	0.77	348.6	YES	NO	bb	bd	15.453
20	Total-tetradioxins	24.64	1.396e4	1.883e4	1.153	0.74	0.77	162.5	YES	NO	bb	bd	4.984
21	Total-tetradioxins	24.06	2.815e2	3.856e2	1.153	0.73	0.77	3.7	YES	NO	bb	bb	0.101
22	Total-tetradioxins	23.75	5.388e2	6.456e2	1.153	0.83	0.77	8.4	YES	NO	bd	bd	0.180
23	1368-TCDD	22.60	3.161e4	3.695e4	1.179	0.86	0.77	356.4	YES	NO	bb	bb	10.195
24	12378-PeCDD	30.55	1.456e5	9.592e4	0.988	1.52	1.55	592.5	YES	NO	bb	bb	53.260
25	12479-PECDD	27.84	2.623e5	1.665e5	1.810	1.58	1.55	739.4	YES	NO	bb	bb	51.589
26	12389-PECDD	30.94	1.642e5	1.007e5	1.165	1.63	1.55	622.7	YES	NO	bb	bb	49.492
27	123789-HxCDD	35.62	1.315e5	1.131e5	0.784	1.16	1.24	946.4	YES	NO	bb	bd	53.432
28	123678-HxCDD	35.23	1.716e5	1.278e5	0.907	1.34	1.24	1249.6	YES	NO	db	db	49.677
29	123478-HxCDD	35.11	1.191e5	1.005e5	0.842	1.19	1.24	1100.2	YES	NO	bd	bd	51.744
30	124679-HXCDD	33.04	1.568e5	1.248e5	1.056	1.26	1.24	1192.7	YES	NO	bb	bd	52.878
31	1234678-HpCDD	39.38	1.044e5	9.816e4	1.044	1.06	1.05	447.3	YES	NO	bd	bd	53.940
32	1234679-HPCDD	38.37	1.128e5	1.070e5	1.285	1.05	1.05	493.6	YES	NO	bd	bd	47.547
33	OCDD	43.85	1.680e5	1.868e5	0.963	0.90	0.89	737.8	YES	NO	bd	bd	99.391

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.63	5.498e4					2.5	NO		dd		
2	FUNCTION1 PFK	21.59	4.120e4					2.1	NO		bd		
3	FUNCTION1 PFK	21.47	1.482e4					1.5	NO		bb		
4	FUNCTION1 PFK	21.31	9.272e4					3.0	NO		db		
5	FUNCTION1 PFK	21.27	2.687e4					2.0	NO		dd		
6	FUNCTION1 PFK	21.21	3.305e4					1.5	NO		dd		
7	FUNCTION1 PFK	21.13	3.357e4					2.2	NO		dd		
8	FUNCTION1 PFK	21.07	3.099e4					1.6	NO		dd		
9	FUNCTION1 PFK	20.97	3.237e4					1.5	NO		dd		
10	FUNCTION1 PFK	20.83	5.582e4					1.6	NO		bd		
11	FUNCTION1 PFK	20.71	1.155e4					0.7	NO		bb		
12	FUNCTION1 PFK	23.38	3.065e4					1.5	NO		bb		
13	FUNCTION1 PFK	23.29	1.884e4					1.4	NO		bb		
14	FUNCTION1 PFK	23.17	7.537e3					0.5	NO		bb		
15	FUNCTION1 PFK	23.10	5.274e3					0.5	NO		bb		
16	FUNCTION1 PFK	23.01	1.388e4					0.7	NO		bb		
17	FUNCTION1 PFK	22.78	3.806e4					1.4	NO		db		
18	FUNCTION1 PFK	22.69	2.008e4					1.4	NO		bd		
19	FUNCTION1 PFK	22.60	1.256e4					1.0	NO		bb		
20	FUNCTION1 PFK	22.36	4.777e4					1.7	NO		bb		
21	FUNCTION1 PFK	22.25	3.924e4					1.3	NO		db		
22	FUNCTION1 PFK	22.11	3.930e4					1.7	NO		dd		
23	FUNCTION1 PFK	22.04	2.213e4					1.4	NO		dd		
24	FUNCTION1 PFK	21.98	2.243e4					1.3	NO		bd		
25	FUNCTION1 PFK	21.87	1.113e4					0.7	NO		bb		
26	FUNCTION1 PFK	21.78	2.149e4					1.3	NO		db		
27	FUNCTION1 PFK	21.69	2.774e4					1.8	NO		dd		
28	FUNCTION1 PFK	25.15	1.148e4					0.9	NO		bb		
29	FUNCTION1 PFK	25.08	3.581e3					0.6	NO		bb		
30	FUNCTION1 PFK	24.97	1.437e3					0.3	NO		bb		
31	FUNCTION1 PFK	24.91	2.297e4					1.8	NO		db		
32	FUNCTION1 PFK	24.86	1.335e4					0.9	NO		bd		
33	FUNCTION1 PFK	24.77	7.891e3					0.6	NO		bb		
34	FUNCTION1 PFK	24.68	2.158e4					1.3	NO		bb		
35	FUNCTION1 PFK	24.43	3.591e4					1.5	NO		db		
36	FUNCTION1 PFK	24.31	1.778e4					1.4	NO		bd		
37	FUNCTION1 PFK	23.99	2.279e4					1.4	NO		bb		

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	23.91	5.170e3					0.6	NO		bb		
39	FUNCTION1 PFK	23.85	1.651e4					1.2	NO		db		
40	FUNCTION1 PFK	23.79	2.726e4					1.0	NO		dd		
41	FUNCTION1 PFK	23.69	3.803e4					1.9	NO		dd		
42	FUNCTION1 PFK	23.60	3.427e4					1.5	NO		dd		
43	FUNCTION1 PFK	23.53	1.448e4					1.1	NO		bd		
44	FUNCTION1 PFK	26.74	2.894e4					1.2	NO		bd		
45	FUNCTION1 PFK	26.59	6.223e4					2.1	NO		db		
46	FUNCTION1 PFK	26.48	2.873e4					1.1	NO		dd		
47	FUNCTION1 PFK	26.47	1.696e4					1.2	NO		bd		
48	FUNCTION1 PFK	26.21	1.254e4					0.9	NO		db		
49	FUNCTION1 PFK	26.12	1.594e4					1.0	NO		dd		
50	FUNCTION1 PFK	26.06	1.658e4					1.1	NO		bd		
51	FUNCTION1 PFK	25.97	1.520e4					1.0	NO		bb		
52	FUNCTION1 PFK	25.88	1.500e4					0.9	NO		db		
53	FUNCTION1 PFK	25.79	1.605e4					0.6	NO		bd		
54	FUNCTION1 PFK	25.70	2.862e4					1.4	NO		bb		
55	FUNCTION1 PFK	25.60	3.743e4					2.7	NO		bb		
56	FUNCTION1 PFK	25.50	4.257e4					1.9	NO		db		
57	FUNCTION1 PFK	25.42	2.848e4					1.6	NO		dd		
58	FUNCTION1 PFK	25.36	4.619e4					1.7	NO		dd		
59	FUNCTION1 PFK	25.29	1.797e4					1.2	NO		bd		
60	FUNCTION1 PFK	26.81	1.712e4					1.2	NO		db		

Dataset: T:\Autospec\Processed Data Batch\201029ICVIH.qld
Last Altered: Friday, October 30, 2020 14:57:31 Pacific Daylight Time
Printed: Friday, October 30, 2020 14:59:35 Pacific Daylight Time

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	30.91	6.272e3					1.1	NO		bb		0.000
2	FUNCTION2 PFK	30.83	6.141e3					1.1	NO		bb		0.000
3	FUNCTION2 PFK	30.29	3.615e3					0.8	NO		bb		0.000
4	FUNCTION2 PFK	30.24	7.071e3					1.1	NO		bb		0.000
5	FUNCTION2 PFK	30.15	1.409e4					1.6	NO		bb		0.000
6	FUNCTION2 PFK	29.85	2.901e4					2.7	NO		db		0.000
7	FUNCTION2 PFK	29.75	9.566e3					1.2	NO		dd		0.000
8	FUNCTION2 PFK	29.67	1.578e4					1.4	NO		bd		0.000
9	FUNCTION2 PFK	28.89	1.585e4					1.8	NO		db		0.000
10	FUNCTION2 PFK	28.86	1.652e4					2.0	NO		dd		0.000
11	FUNCTION2 PFK	28.80	2.125e4					1.7	NO		bd		0.000
12	FUNCTION2 PFK	28.45	5.504e3					1.0	NO		bb		0.000
13	FUNCTION2 PFK	27.94	5.390e5					4.7	YES		db		0.000
14	FUNCTION2 PFK	27.64	5.459e6					19.8	YES		bd		0.000
15	FUNCTION2 PFK	31.63	6.161e3					0.9	NO		bb		0.000
16	FUNCTION2 PFK	31.58	4.076e3					0.9	NO		bb		0.000
17	FUNCTION2 PFK	31.44	1.429e4					2.0	NO		bb		0.000
18	FUNCTION2 PFK	31.34	3.183e3					0.7	NO		bb		0.000
19	FUNCTION2 PFK	31.18	6.761e3					1.0	NO		db		0.000
20	FUNCTION2 PFK	31.14	2.770e4					2.1	NO		bd		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.40	1.571e4					1.4	NO		db		0.000
2	FUNCTION3 PFK	33.37	1.456e4					1.4	NO		bd		0.000
3	FUNCTION3 PFK	33.03	1.033e4					1.1	NO		db		0.000
4	FUNCTION3 PFK	32.99	1.323e4					1.6	NO		bd		0.000
5	FUNCTION3 PFK	32.89	1.412e4					1.1	NO		bb		0.000
6	FUNCTION3 PFK	32.61	1.090e6					5.2	YES		db		0.000
7	FUNCTION3 PFK	32.16	2.059e6					33.4	YES		dd		0.000
8	FUNCTION3 PFK	32.05	2.570e6					40.3	YES		dd		0.000
9	FUNCTION3 PFK	31.84	3.069e6					52.5	YES		bd		0.000
10	FUNCTION3 PFK	35.69	3.532e3					0.5	NO		bb		0.000
11	FUNCTION3 PFK	35.59	8.250e3					1.0	NO		bb		0.000
12	FUNCTION3 PFK	35.55	5.262e3					0.7	NO		bb		0.000
13	FUNCTION3 PFK	35.29	1.185e4					1.3	NO		db		0.000
14	FUNCTION3 PFK	35.22	1.762e4					1.2	NO		dd		0.000
15	FUNCTION3 PFK	35.18	1.252e4					1.2	NO		bd		0.000
16	FUNCTION3 PFK	34.96	1.639e4					1.6	NO		bb		0.000
17	FUNCTION3 PFK	34.78	2.005e4					1.1	NO		bb		0.000
18	FUNCTION3 PFK	34.67	1.655e4					1.5	NO		bb		0.000
19	FUNCTION3 PFK	34.60	2.840e4					1.9	NO		bb		0.000
20	FUNCTION3 PFK	34.50	2.752e4					1.7	NO		bb		0.000
21	FUNCTION3 PFK	33.99	2.702e4					1.8	NO		bb		0.000
22	FUNCTION3 PFK	33.89	2.271e4					1.7	NO		bb		0.000
23	FUNCTION3 PFK	33.65	2.986e4					1.6	NO		bb		0.000
24	FUNCTION3 PFK	33.60	1.641e3					0.4	NO		bb		0.000
25	FUNCTION3 PFK	33.47	5.800e3					0.6	NO		bb		0.000
26	FUNCTION3 PFK	36.87	2.214e4					2.0	NO		bb		0.000
27	FUNCTION3 PFK	36.80	2.888e4					1.3	NO		db		0.000
28	FUNCTION3 PFK	36.73	7.642e3					1.0	NO		dd		0.000
29	FUNCTION3 PFK	36.66	3.461e4					2.0	NO		bd		0.000
30	FUNCTION3 PFK	36.47	2.227e4					1.5	NO		bb		0.000
31	FUNCTION3 PFK	36.26	1.299e4					1.1	NO		bb		0.000
32	FUNCTION3 PFK	36.15	2.038e4					1.1	NO		bb		0.000
33	FUNCTION3 PFK	35.95	3.195e4					1.5	NO		bb		0.000
34	FUNCTION3 PFK	35.87	1.225e4					1.4	NO		bb		0.000
35	FUNCTION3 PFK	35.79	2.947e4					1.9	NO		bb		0.000
36	FUNCTION3 PFK	35.74	1.747e3					0.5	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	37.20	2.041e6					40.8	YES		dd		
2	FUNCTION4 PFK	37.08	8.776e5					44.1	YES		dd		
3	FUNCTION4 PFK	37.03	4.475e5					45.2	YES		dd		
4	FUNCTION4 PFK	36.97	1.248e6					47.2	YES		bd		
5	FUNCTION4 PFK	39.33	2.500e4					1.3	NO		bd		
6	FUNCTION4 PFK	39.24	1.674e4					1.2	NO		bb		
7	FUNCTION4 PFK	39.15	7.547e3					0.8	NO		bb		
8	FUNCTION4 PFK	39.03	8.622e3					0.6	NO		bb		
9	FUNCTION4 PFK	38.94	1.836e4					1.5	NO		bb		
10	FUNCTION4 PFK	38.84	1.244e4					1.3	NO		bb		
11	FUNCTION4 PFK	38.74	2.085e4					1.2	NO		bb		
12	FUNCTION4 PFK	38.54	3.195e4					2.6	NO		db		
13	FUNCTION4 PFK	38.45	4.324e5					5.3	YES		dd		
14	FUNCTION4 PFK	38.21	3.326e5					12.5	YES		dd		
15	FUNCTION4 PFK	38.12	2.327e6					15.0	YES		dd		
16	FUNCTION4 PFK	37.71	6.957e5					27.3	YES		dd		
17	FUNCTION4 PFK	37.57	1.152e6					31.0	YES		dd		
18	FUNCTION4 PFK	37.49	7.488e5					32.8	YES		dd		
19	FUNCTION4 PFK	37.38	1.054e6					36.9	YES		dd		
20	FUNCTION4 PFK	37.29	8.687e5					38.6	YES		dd		
21	FUNCTION4 PFK	40.86	1.220e4					1.5	NO		bb		
22	FUNCTION4 PFK	40.68	2.094e4					1.4	NO		bb		
23	FUNCTION4 PFK	40.58	3.140e4					1.8	NO		bb		
24	FUNCTION4 PFK	40.49	4.231e4					2.0	NO		db		
25	FUNCTION4 PFK	40.39	2.131e4					2.1	NO		dd		
26	FUNCTION4 PFK	40.35	3.226e4					2.4	NO		dd		
27	FUNCTION4 PFK	40.28	4.378e4					2.5	NO		dd		
28	FUNCTION4 PFK	40.15	2.365e4					1.6	NO		dd		
29	FUNCTION4 PFK	40.07	2.260e4					1.5	NO		bd		
30	FUNCTION4 PFK	39.97	1.801e4					1.3	NO		bb		
31	FUNCTION4 PFK	39.90	1.115e4					1.3	NO		db		
32	FUNCTION4 PFK	39.85	1.582e4					1.4	NO		dd		
33	FUNCTION4 PFK	39.78	6.161e3					0.8	NO		bd		
34	FUNCTION4 PFK	39.66	1.491e4					1.1	NO		db		
35	FUNCTION4 PFK	39.55	2.104e4					1.3	NO		bd		
36	FUNCTION4 PFK	39.44	1.286e4					1.2	NO		db		
37	FUNCTION4 PFK	41.95	4.201e3					0.5	NO		db		

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION4 PFK	41.90	1.181e4					1.3	NO		bd		
39	FUNCTION4 PFK	41.85	1.171e3					0.4	NO		bb		
40	FUNCTION4 PFK	41.70	3.443e4					1.5	NO		bb		
41	FUNCTION4 PFK	41.57	2.779e3					0.5	NO		bb		
42	FUNCTION4 PFK	41.51	6.099e3					0.9	NO		db		
43	FUNCTION4 PFK	41.47	2.065e4					1.3	NO		dd		
44	FUNCTION4 PFK	41.39	2.162e4					1.5	NO		bd		
45	FUNCTION4 PFK	41.29	1.893e4					1.6	NO		bb		
46	FUNCTION4 PFK	41.20	2.443e4					2.1	NO		bb		
47	FUNCTION4 PFK	41.10	1.324e4					1.2	NO		bb		
48	FUNCTION4 PFK	41.01	6.362e3					0.8	NO		db		
49	FUNCTION4 PFK	40.97	5.706e3					0.8	NO		bd		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	42.26	7.344e3					1.6	NO		bd		
2	FUNCTION5 PFK	42.08	1.925e4					2.7	NO		bb		
3	FUNCTION5 PFK	44.93	9.966e3					2.0	NO		bb		
4	FUNCTION5 PFK	44.73	9.438e3					1.6	NO		bb		
5	FUNCTION5 PFK	44.17	7.220e3					1.3	NO		bb		
6	FUNCTION5 PFK	43.98	1.503e4					1.8	NO		bb		
7	FUNCTION5 PFK	43.63	1.789e3					0.7	NO		bb		
8	FUNCTION5 PFK	43.41	2.118e4					2.7	NO		bb		
9	FUNCTION5 PFK	42.29	1.465e4					1.8	NO		db		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ID: CS3J2, Name: 20102911, Date: 30-Oct-2020, Time: 00:01:03, Conditions: AUTOSPEC01, User: pk

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	30.18	2.453e2					6.7	YES		db		0.000
2	FUNCTION2 HPCD...	30.14	8.269e1					4.7	YES		bd		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dataset: T:\Autospec\Processed Data Batch\201029ICVIH.qld
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Printed: Friday, October 30, 2020 14:59:35 Pacific Daylight Time

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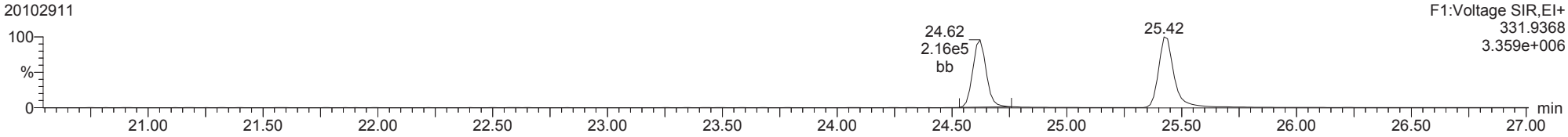
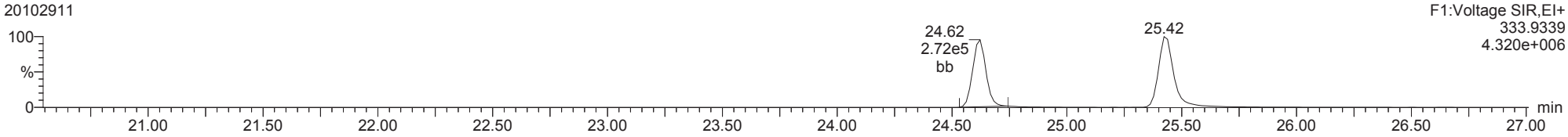
ID: CS3J2, Name: 20102911, Date: 30-Oct-2020, Time: 00:01:03, Conditions: AUTOSPEC01, User: pk

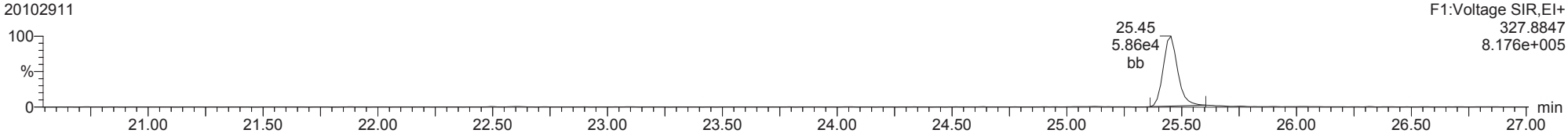
13C-1234-TCDD



13C-1234-TCDD



37CL-2378-TCDD



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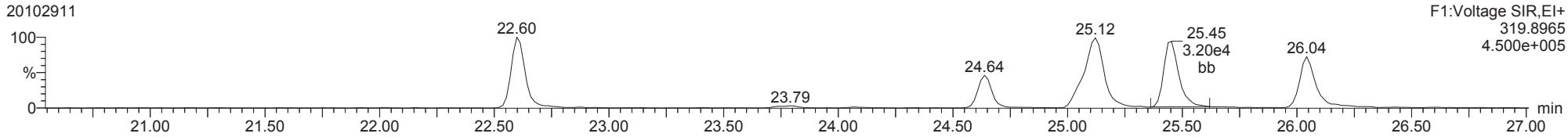
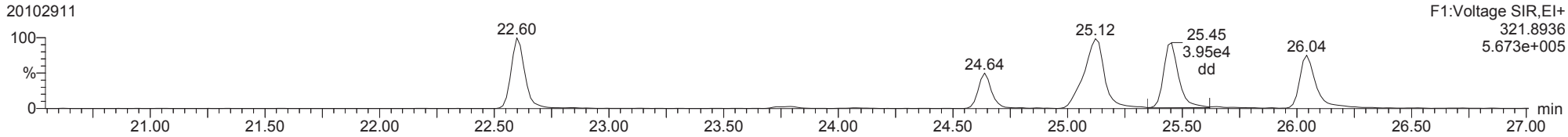
2378-TCDD



2378-TCDD



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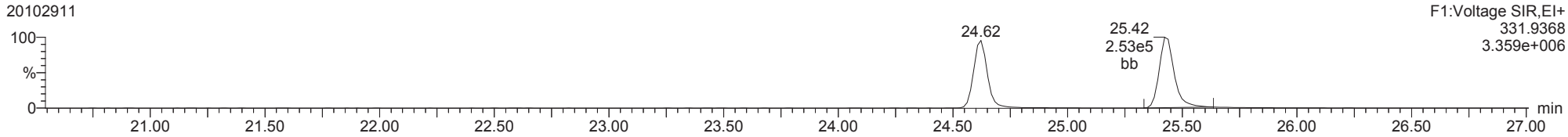

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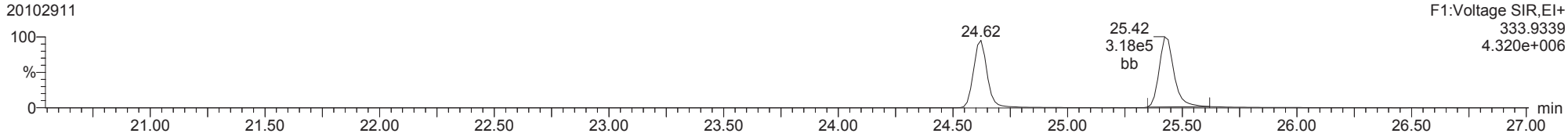

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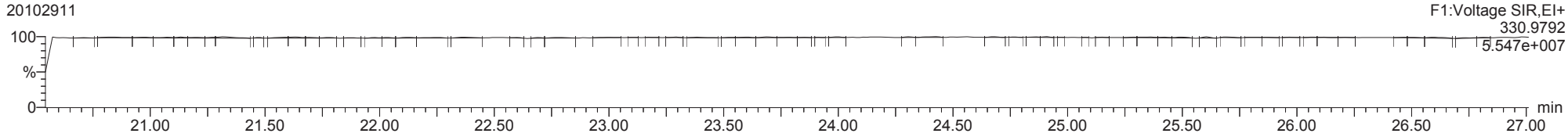

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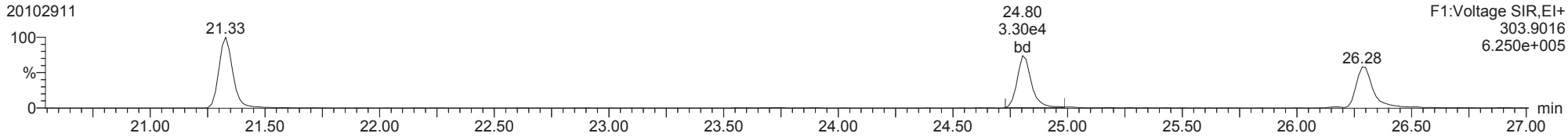
2378-TCDF



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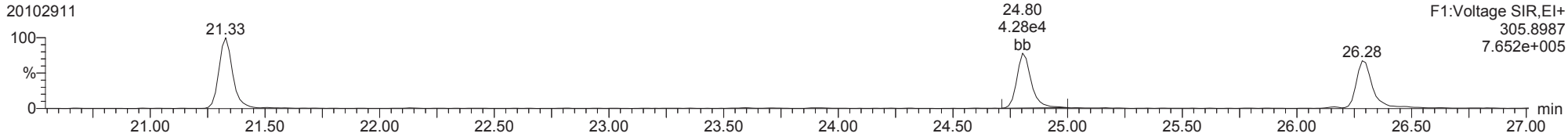

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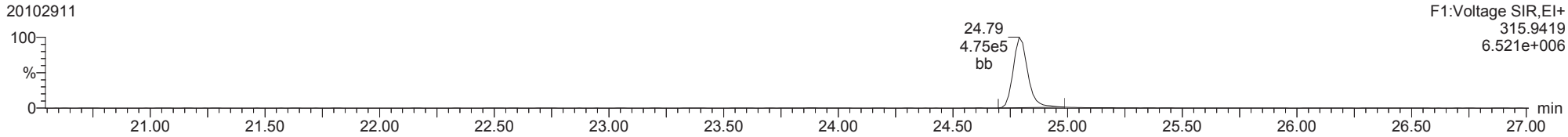

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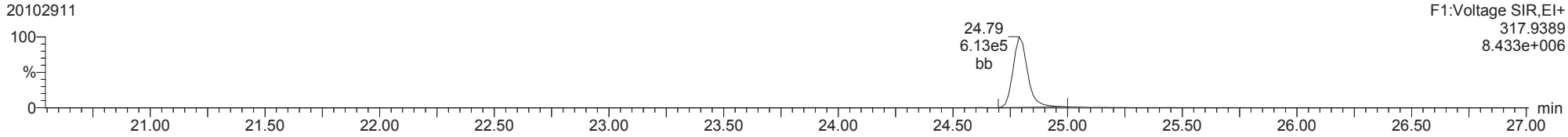
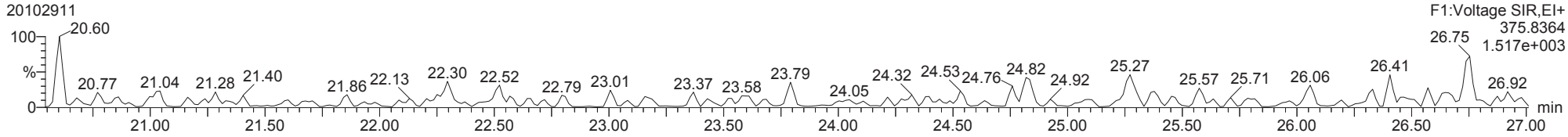
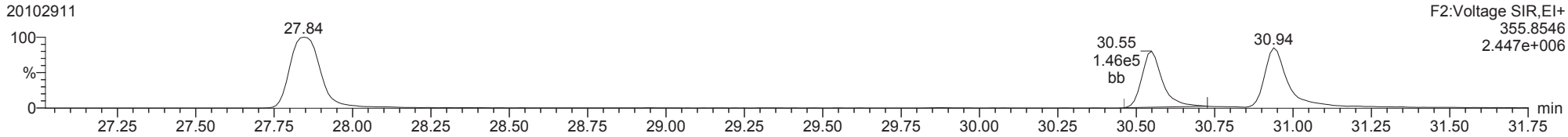


FUNCTION1 HXCDPE

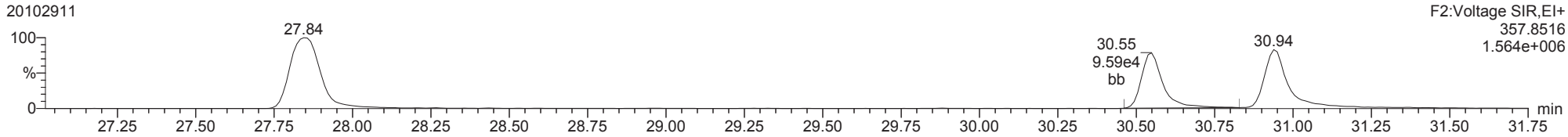


ID: CS3J2, Name: 20102911, Date: 30-Oct-2020, Time: 00:01:03, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



12378-PeCDD



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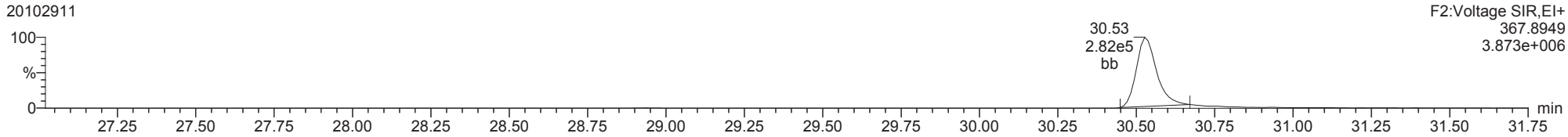

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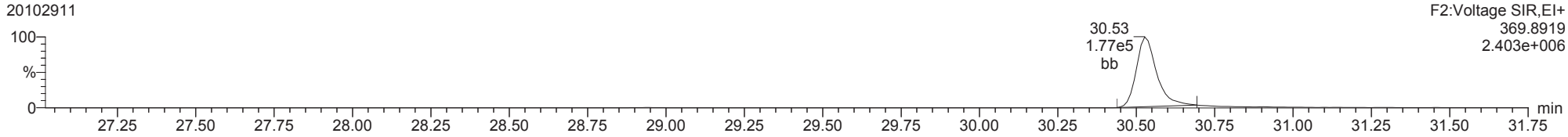
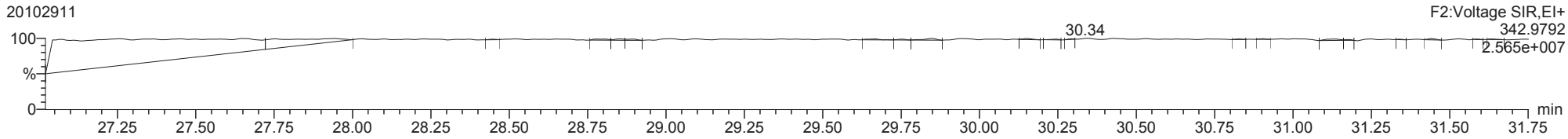


FUNCTION2 PFK



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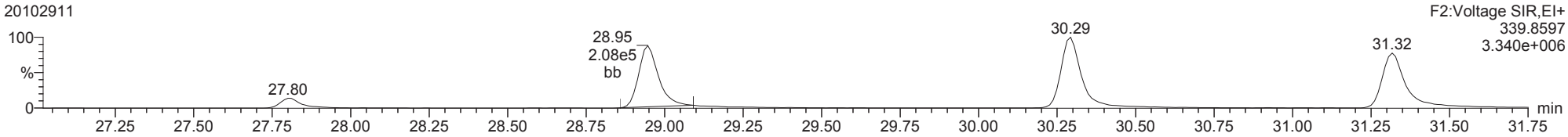

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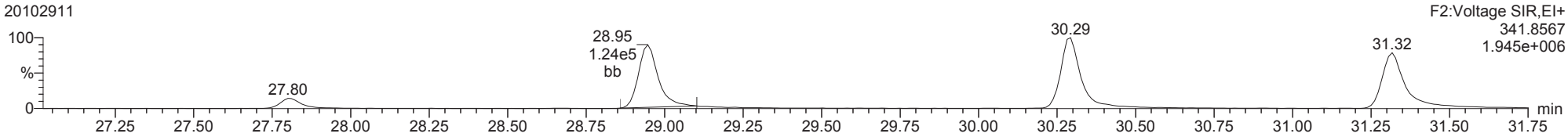

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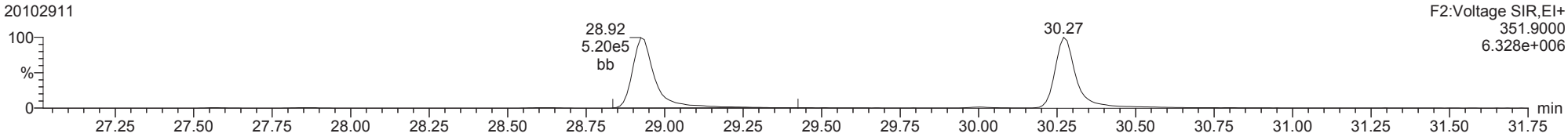

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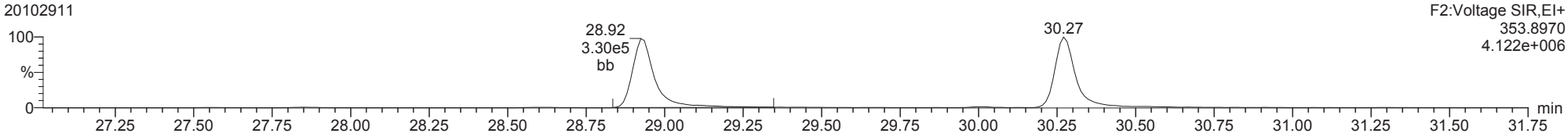
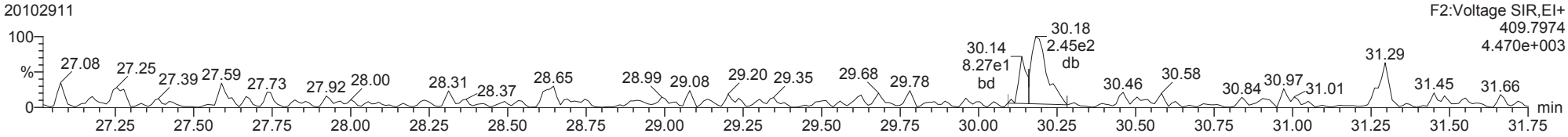


FUNCTION2 HPCDPE



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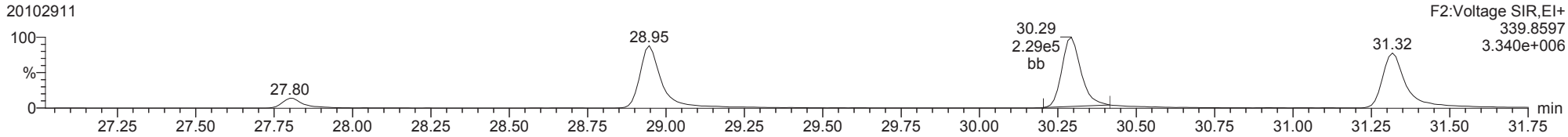
23478-PeCDF



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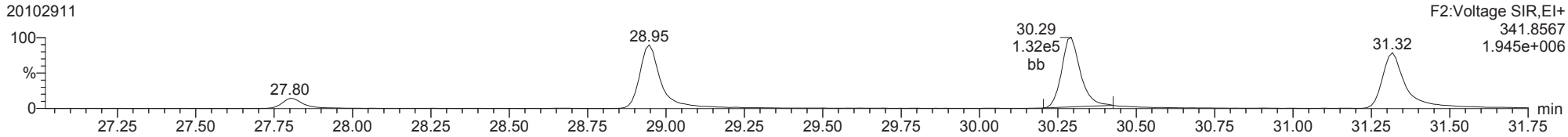

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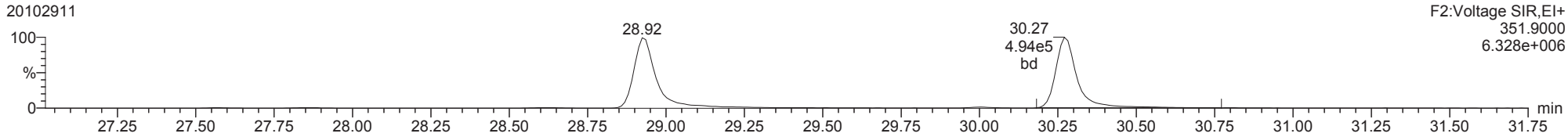

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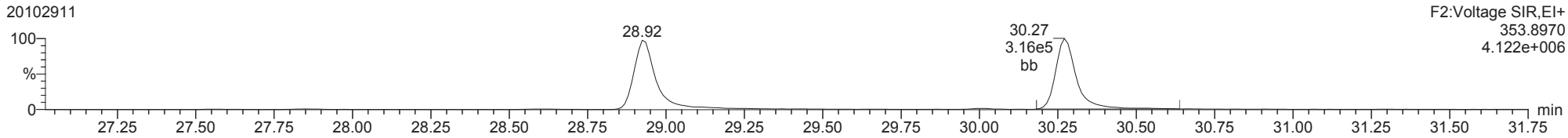
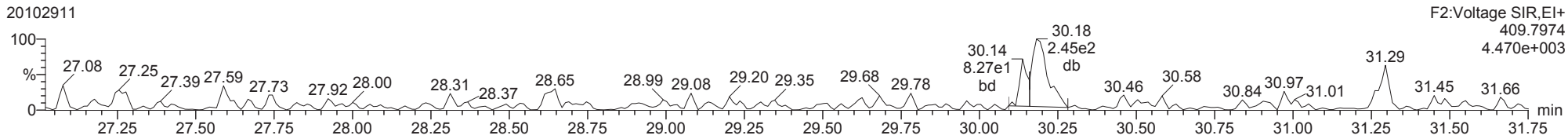


FUNCTION2 HPCDPE



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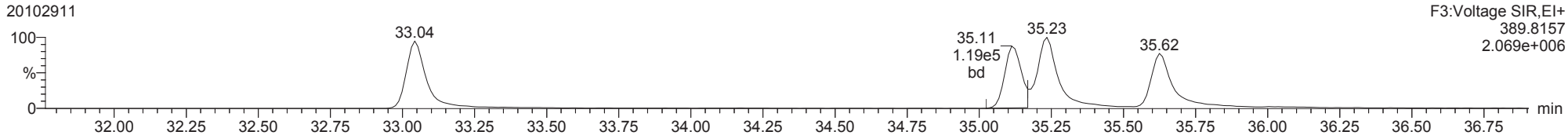
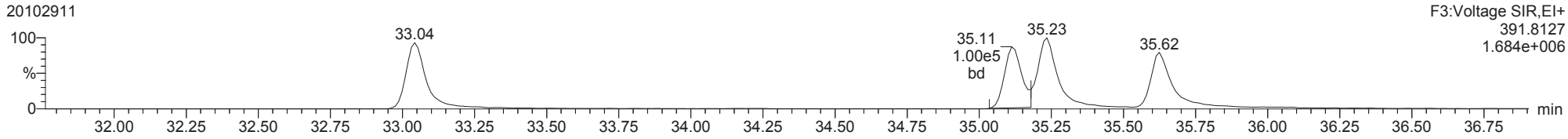
ID: CS3J2, Name: 20102911, Date: 30-Oct-2020, Time: 00:01:03, Conditions: AUTOSPEC01, User: pk

123478-HxCDD



123478-HxCDD



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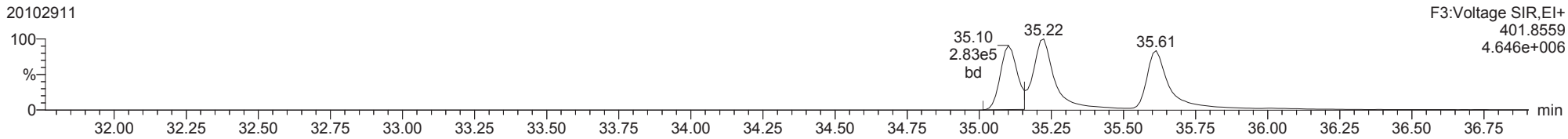

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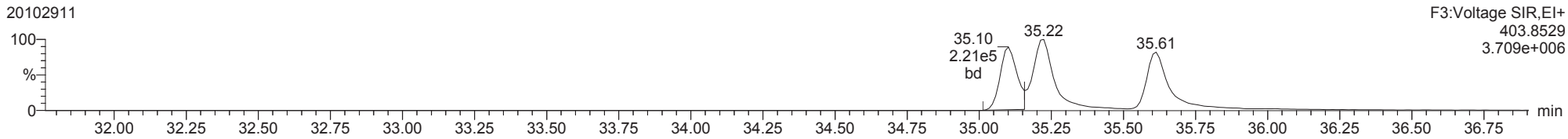

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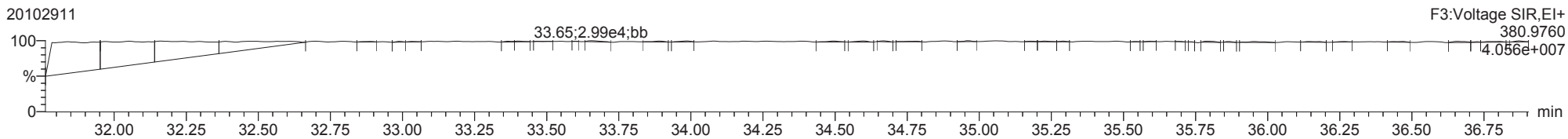

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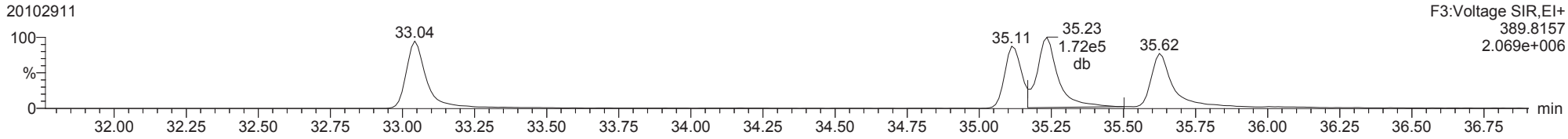
123678-HxCDD



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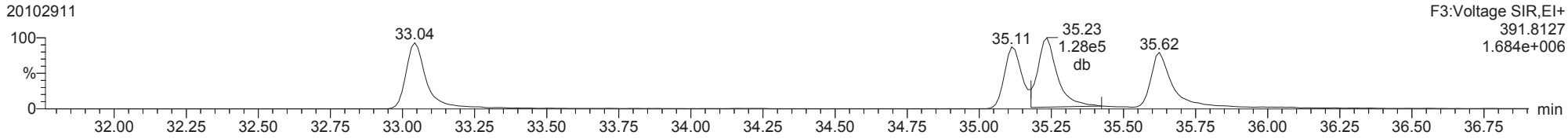

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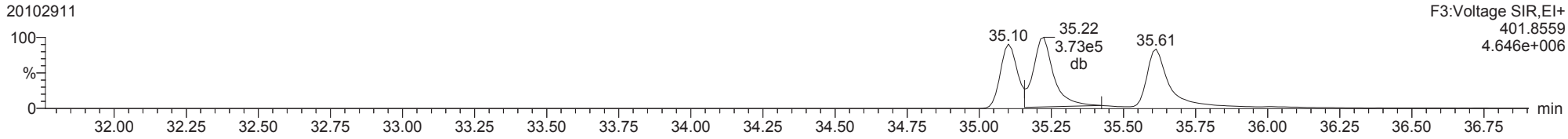

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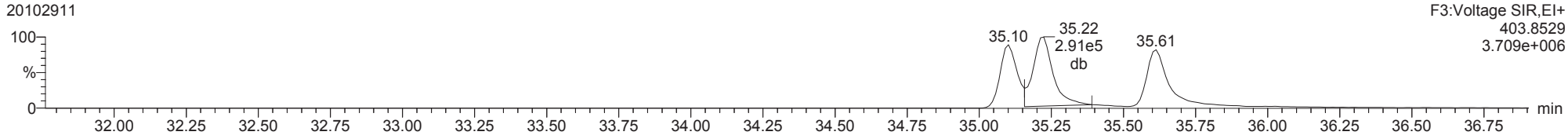

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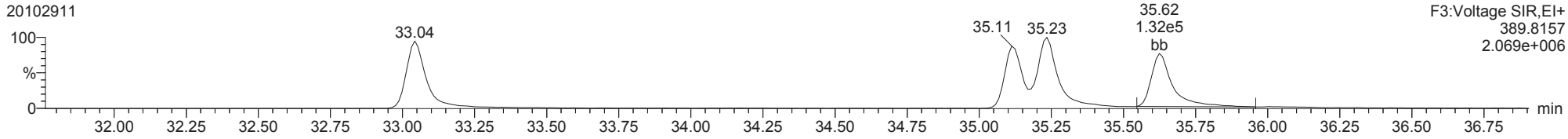

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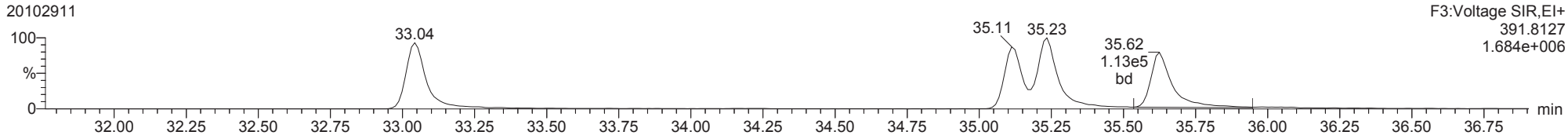

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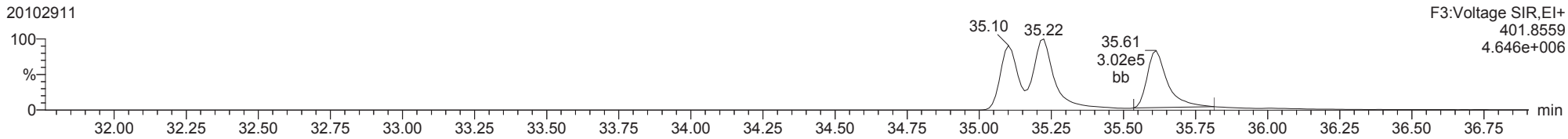

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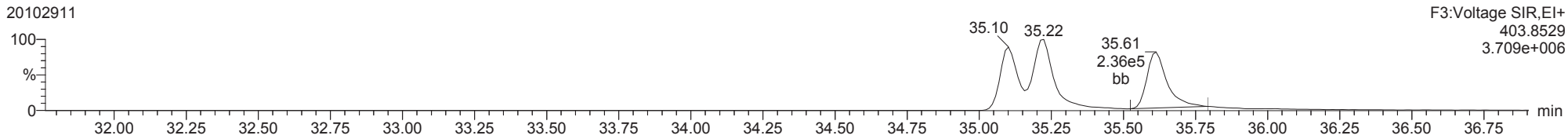

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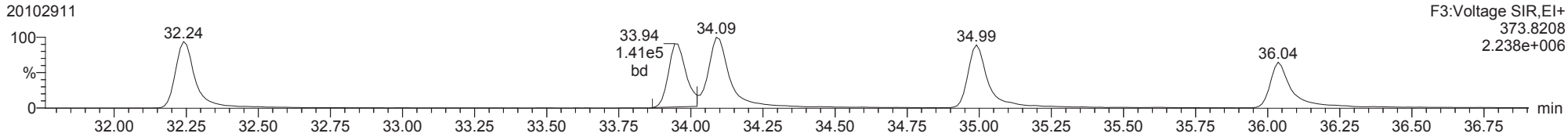
123478-HxCDF



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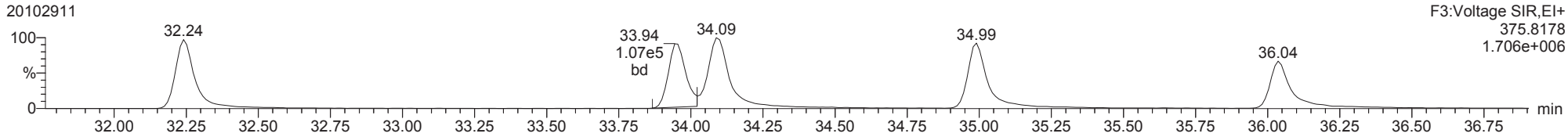

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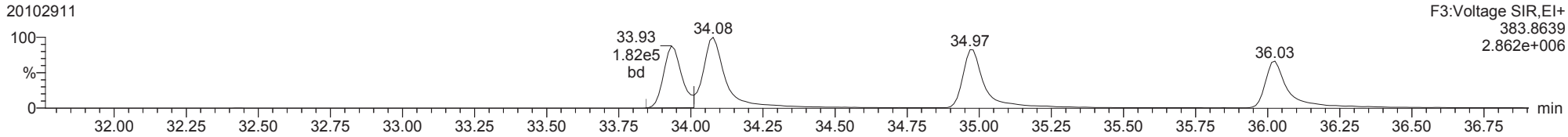

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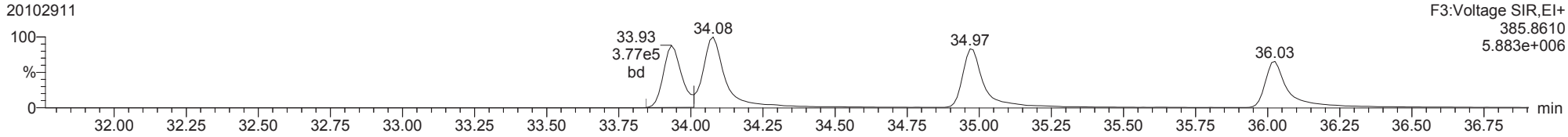
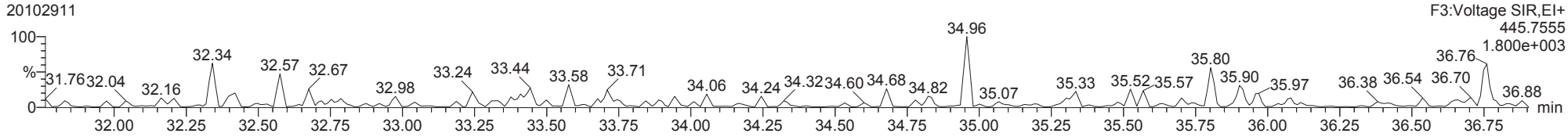


FUNCTION3 OCDPE



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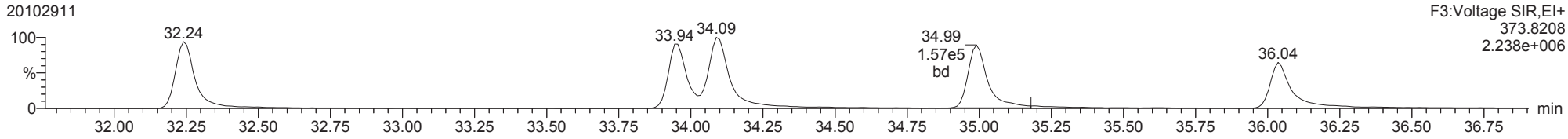
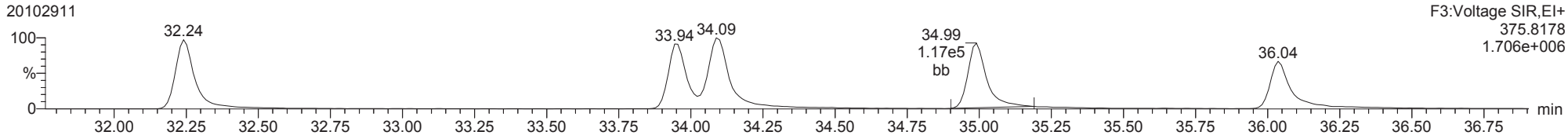
ID: CS3J2, Name: 20102911, Date: 30-Oct-2020, Time: 00:01:03, Conditions: AUTOSPEC01, User: pk

234678-HxCDF



234678-HxCDF



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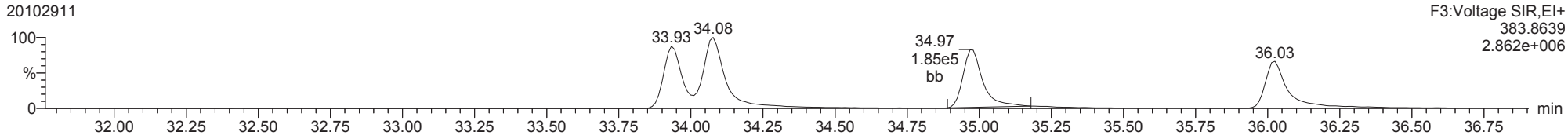

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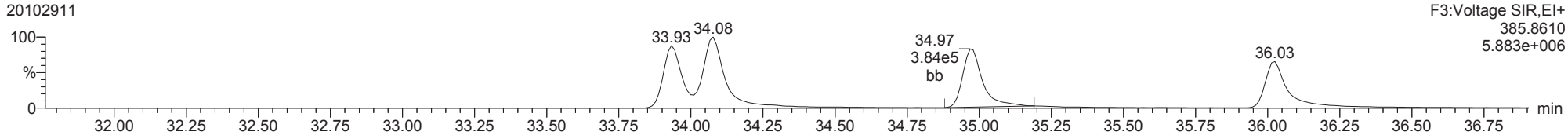

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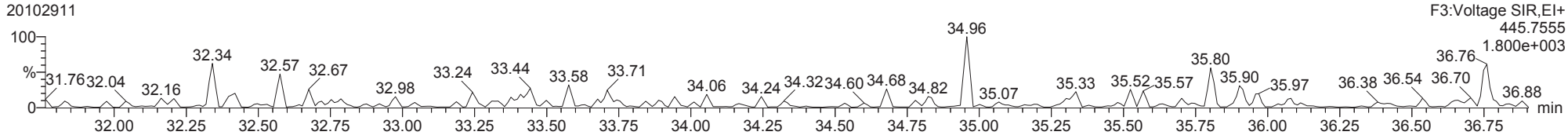

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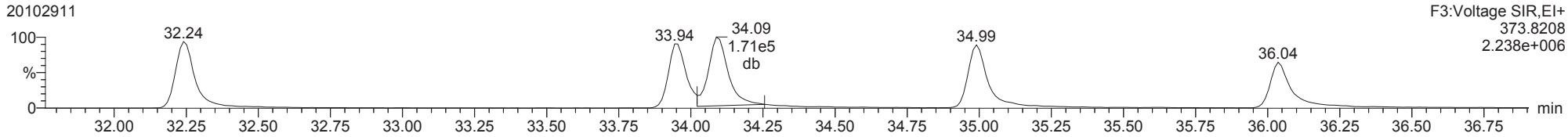

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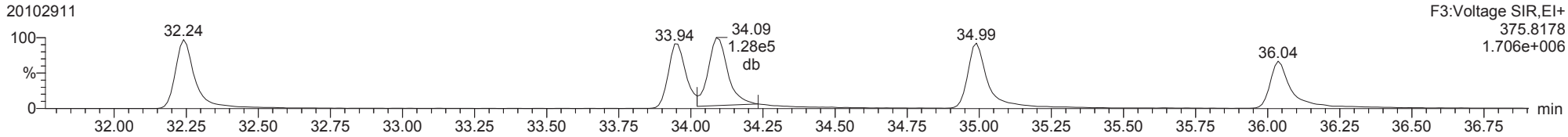

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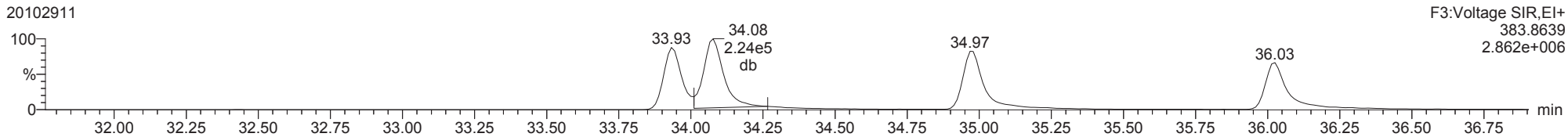

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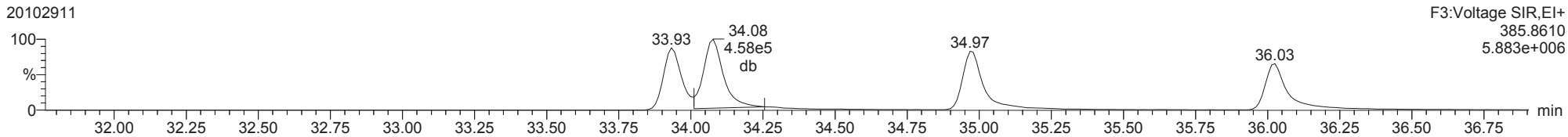

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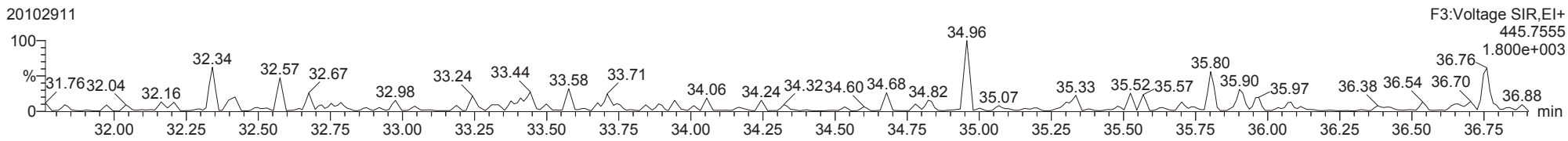

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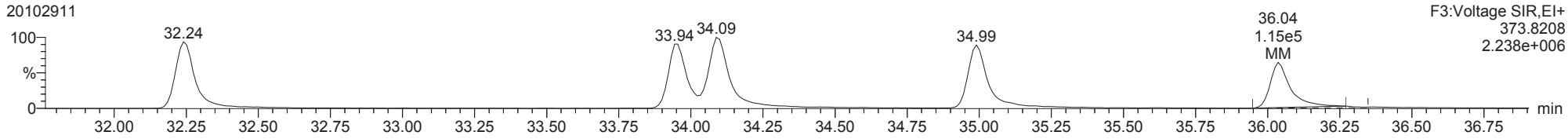

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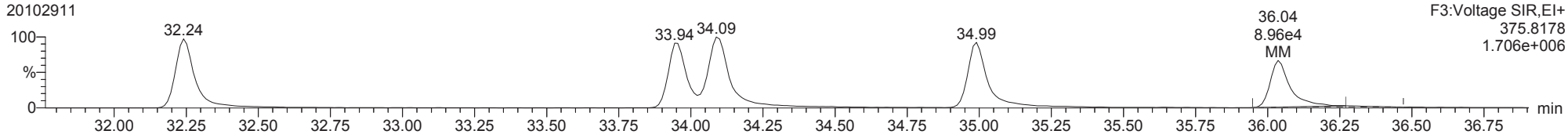

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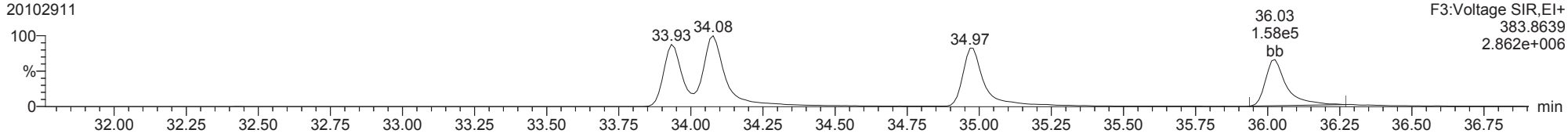

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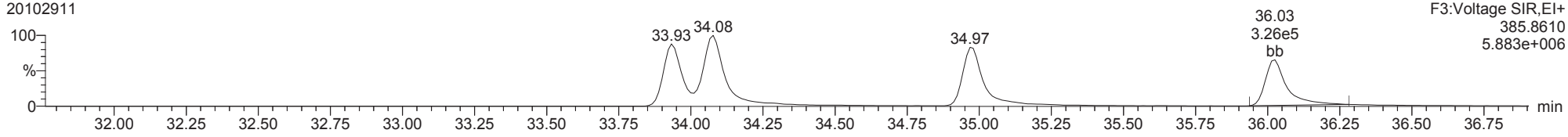

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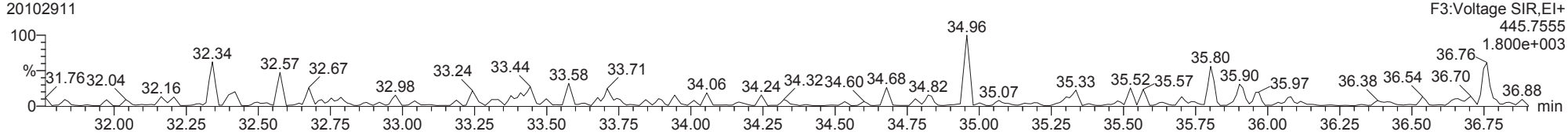

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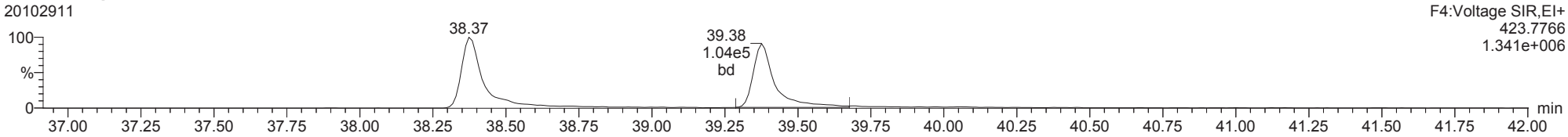

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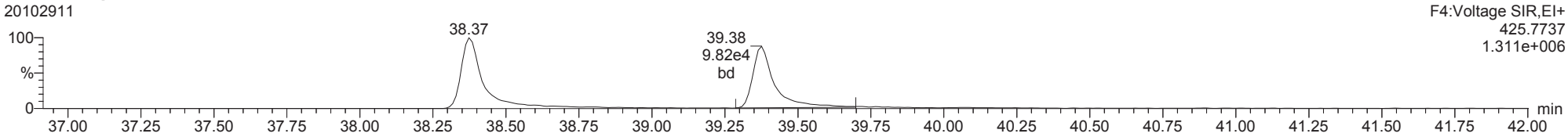

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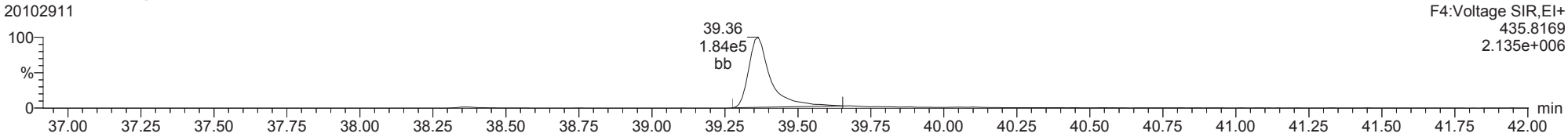

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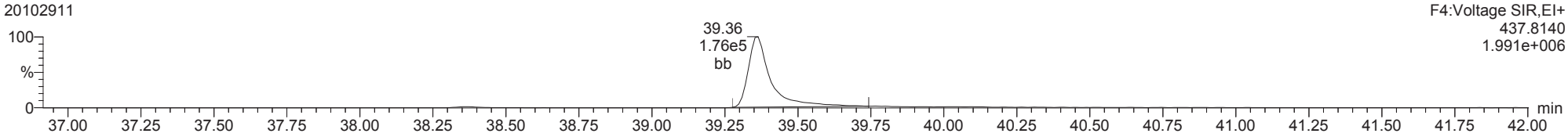
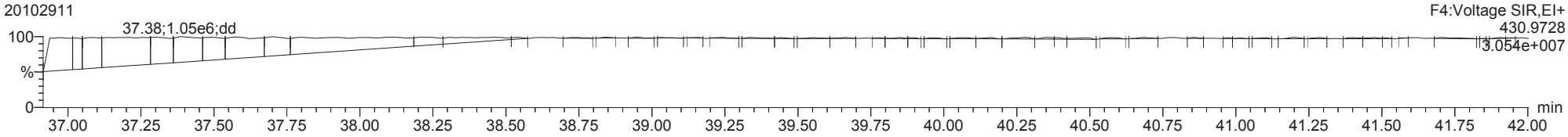


FUNCTION4 PFK



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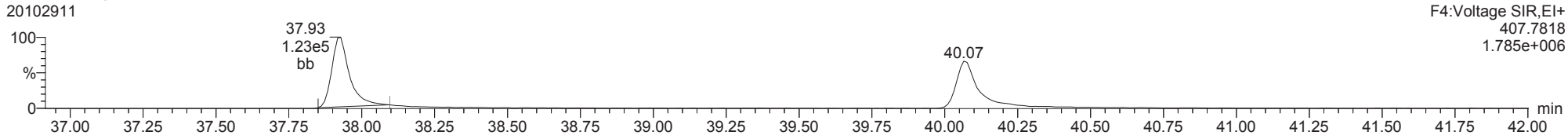

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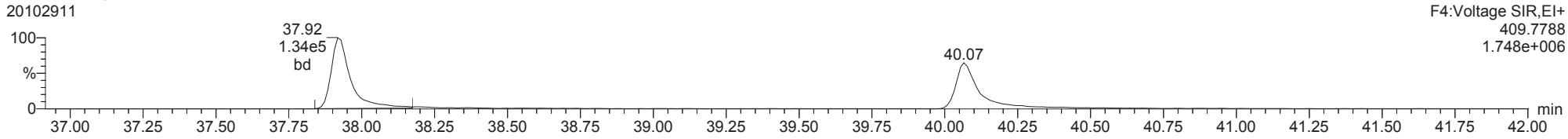

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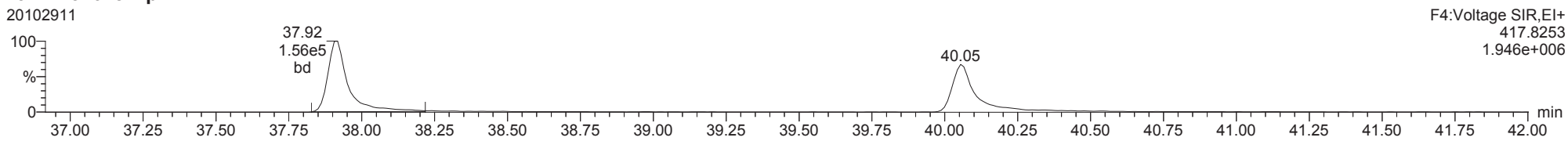

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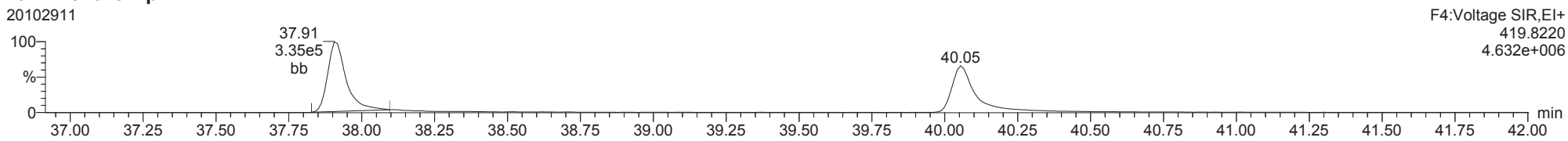
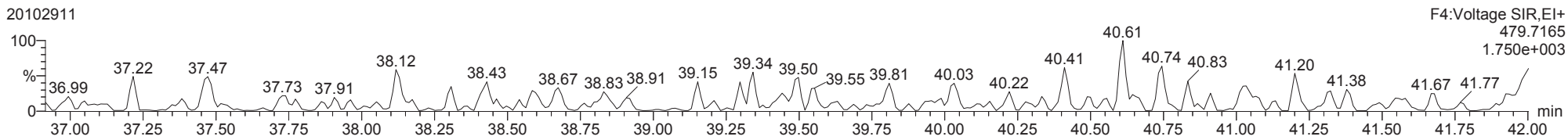


FUNCTION4 NCDPE



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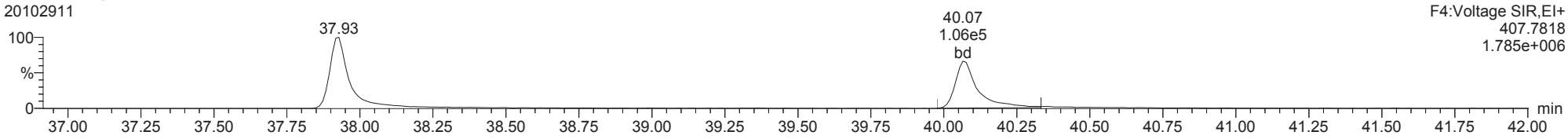

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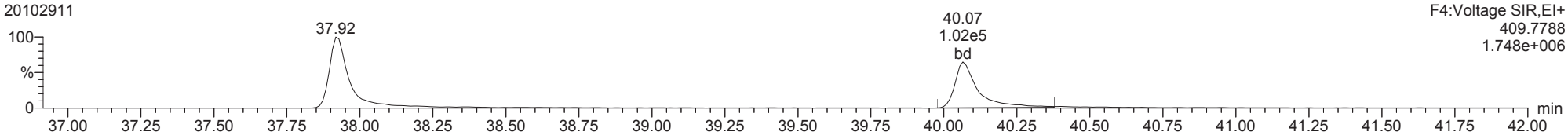

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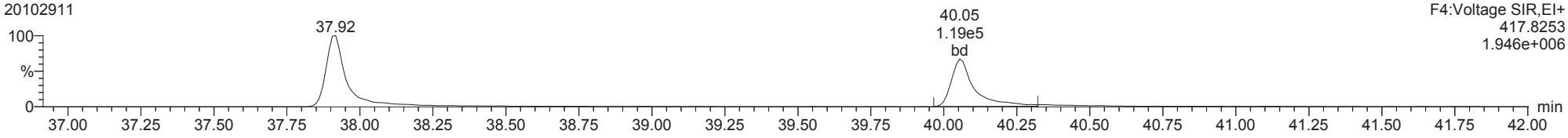

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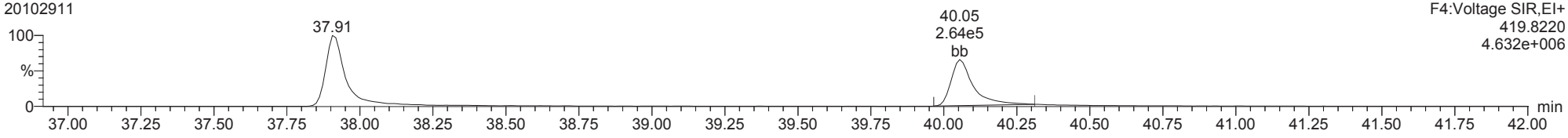
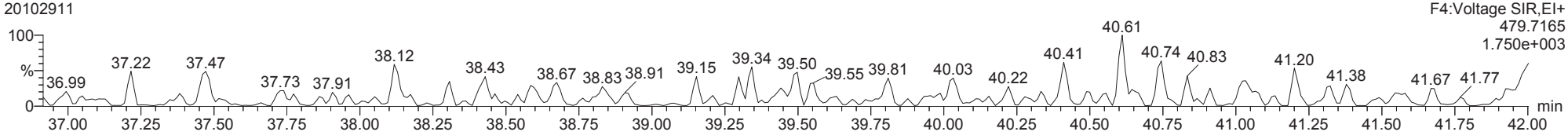


FUNCTION4 NCDPE



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ID: CS3J2, Name: 20102911, Date: 30-Oct-2020, Time: 00:01:03, Conditions: AUTOSPEC01, User: pk

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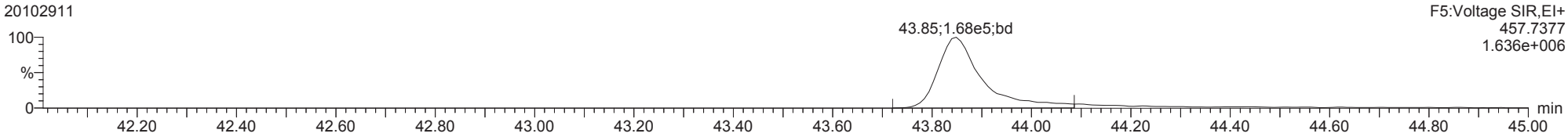

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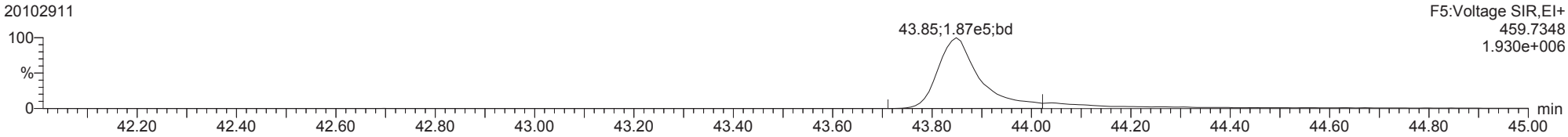

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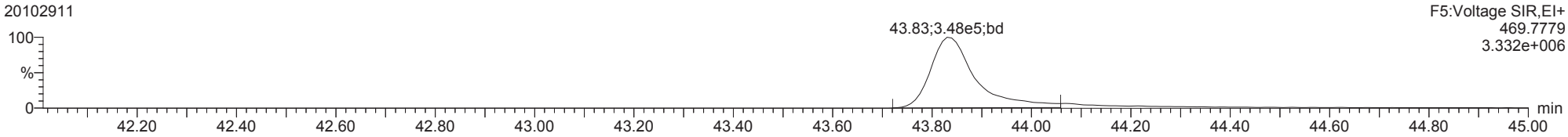

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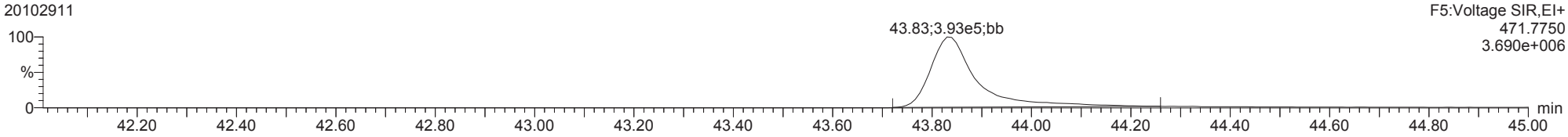
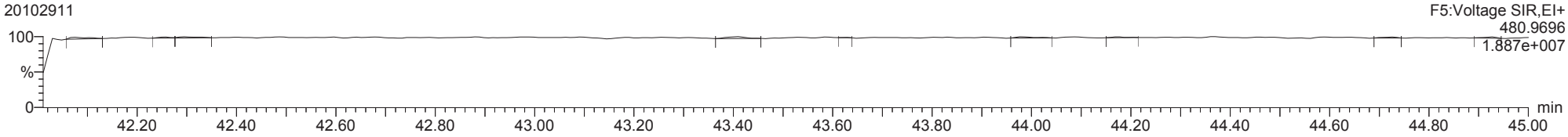


FUNCTION5 PFK



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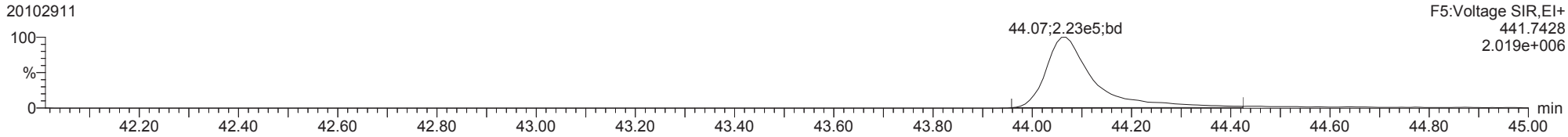
OCDF



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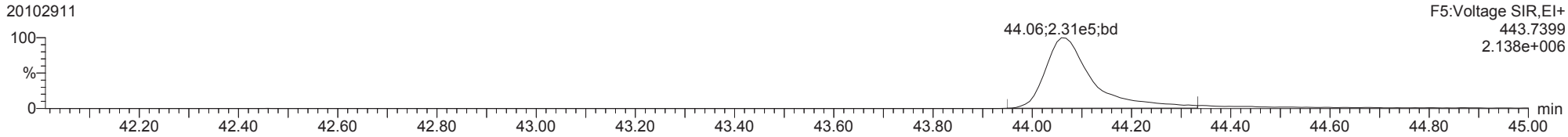
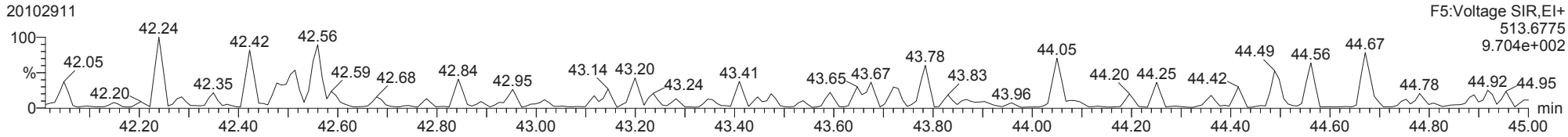


FUNCTION5 DCDPE



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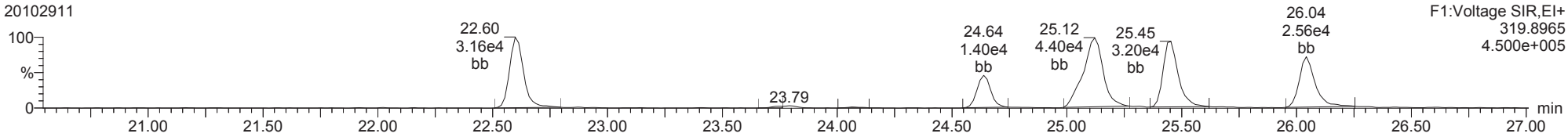
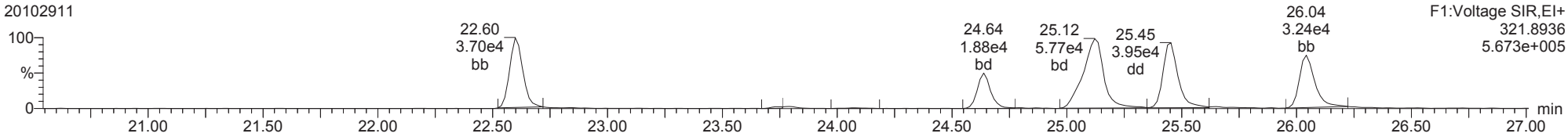
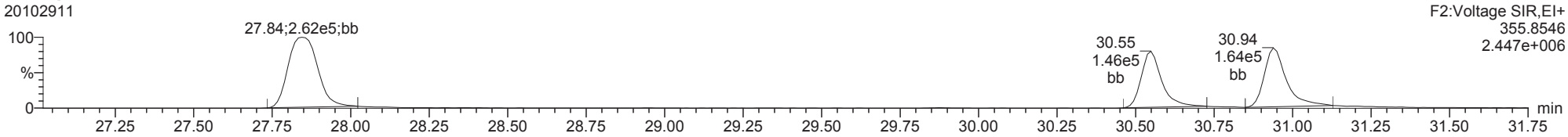


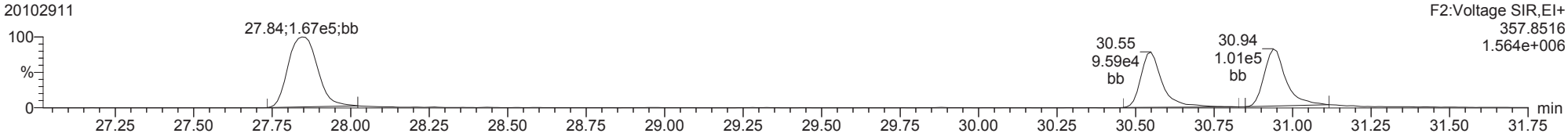
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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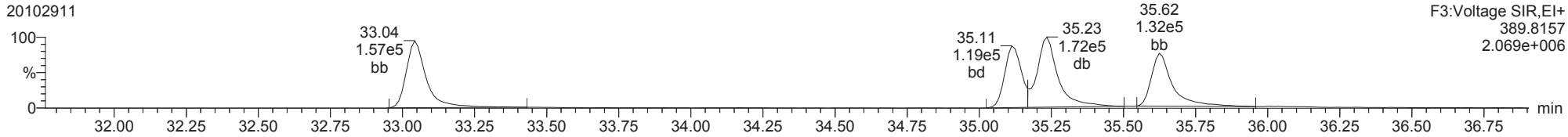

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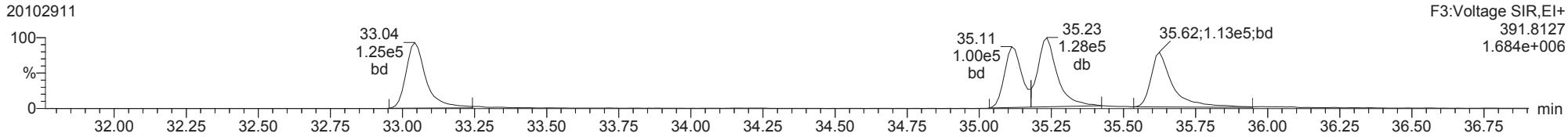
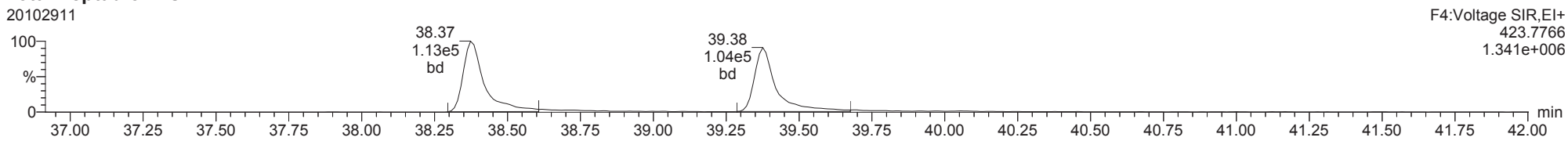
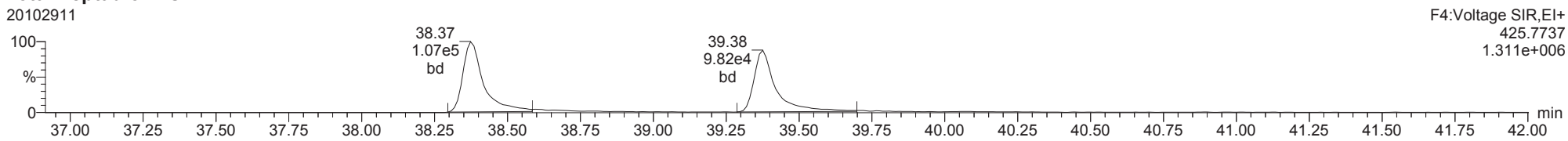


Total-heptadioxins



Total-heptadioxins



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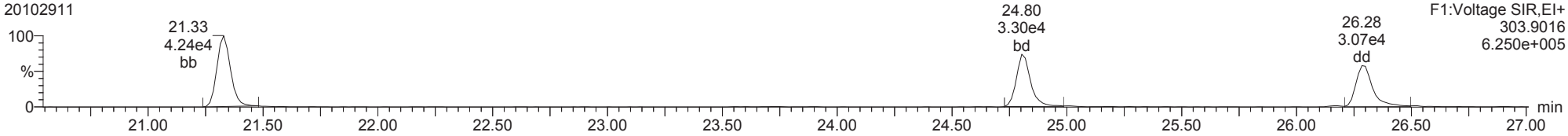
Total-tetrafurans



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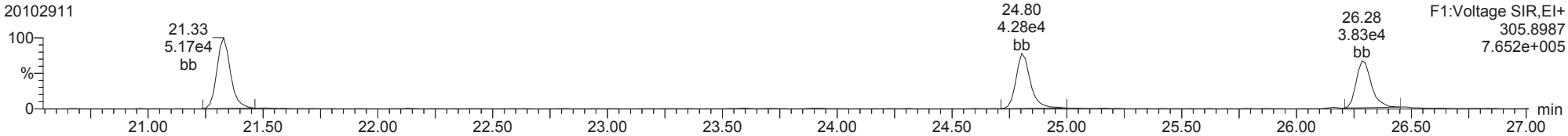

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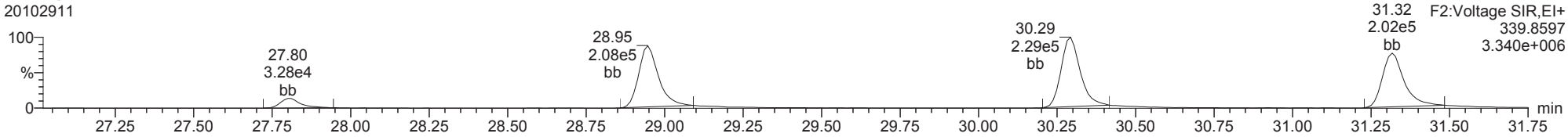

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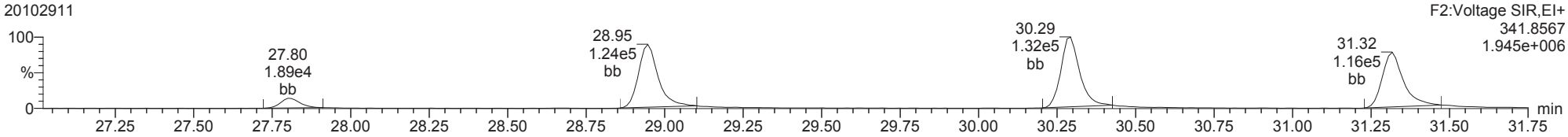

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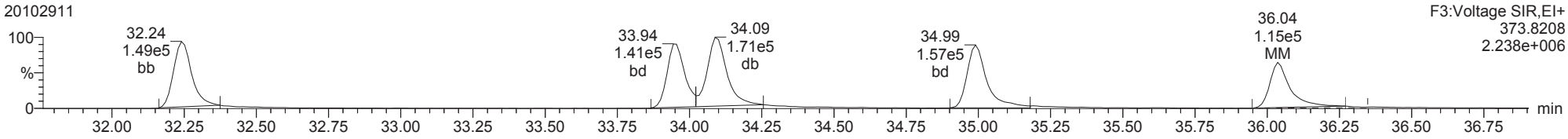
Total-hexafurans



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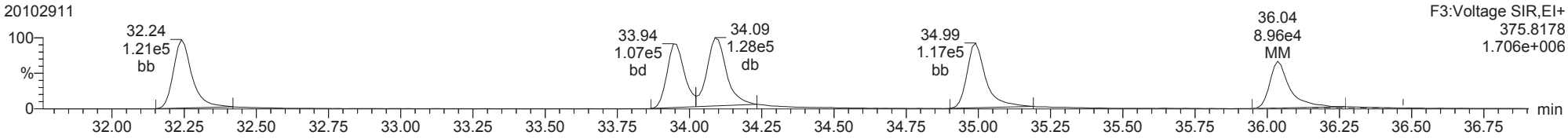

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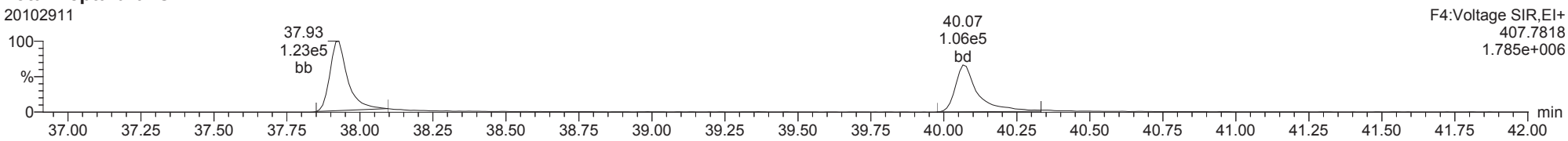

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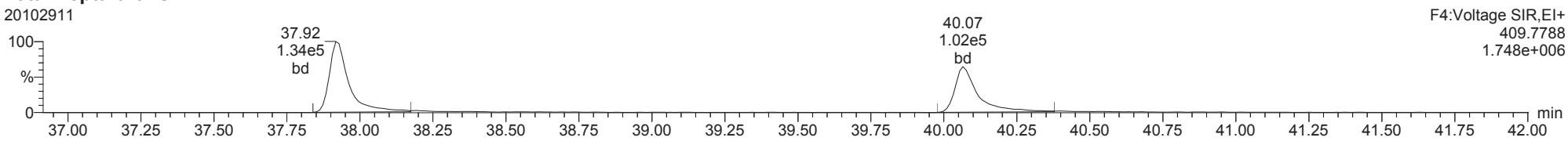

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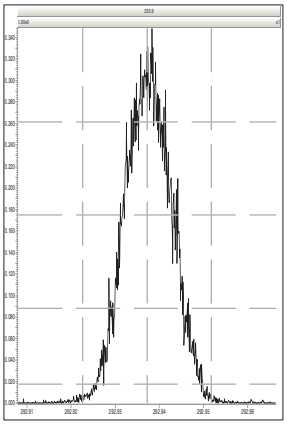
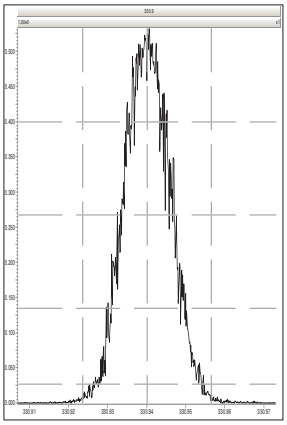
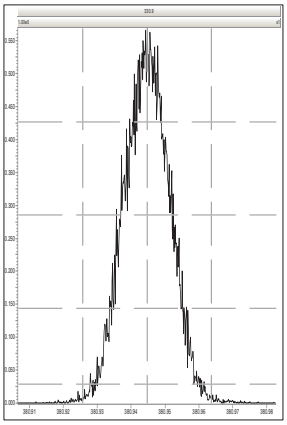
M 292.9824 R 12836



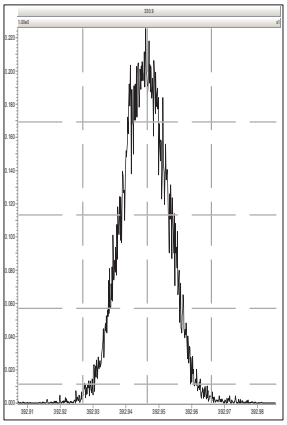
M 330.9792 R 12226



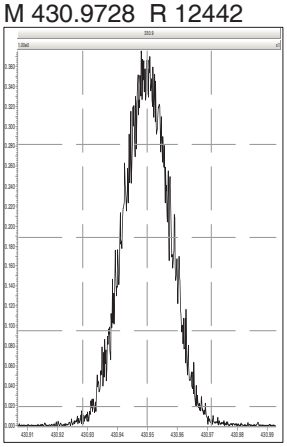
M 380.9760 R 12821



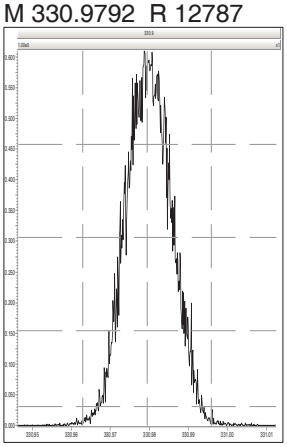
M 392.9760 R 12469



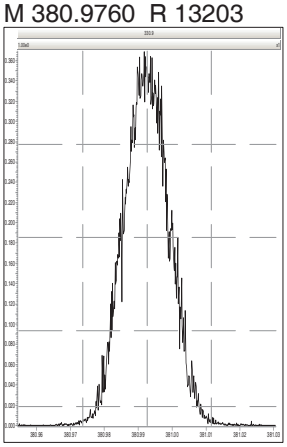
M 430.9728 R 12442



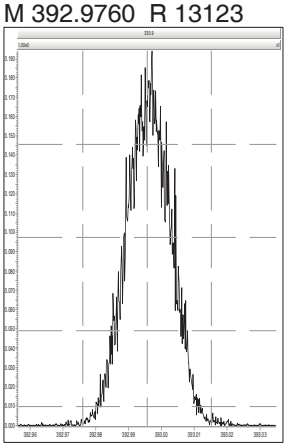
M 330.9792 R 12787



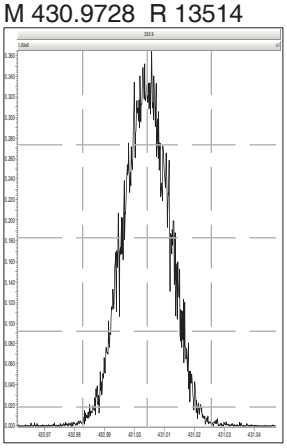
M 380.9760 R 13203



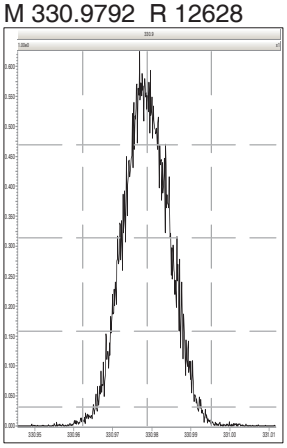
M 392.9760 R 13123



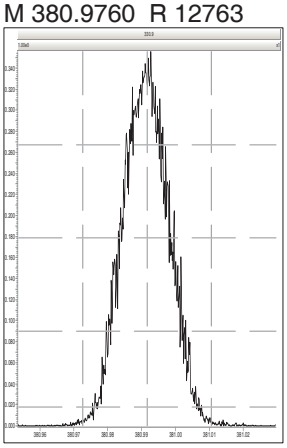
M 430.9728 R 13514



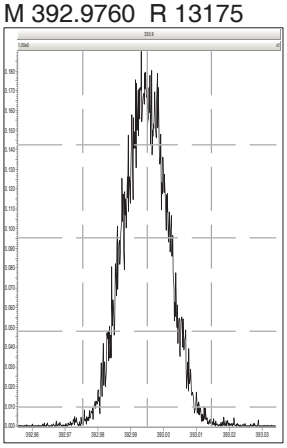
M 330.9792 R 12628



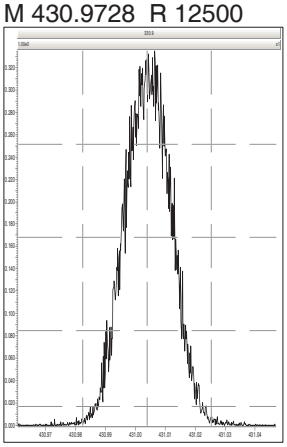
M 380.9760 R 12763



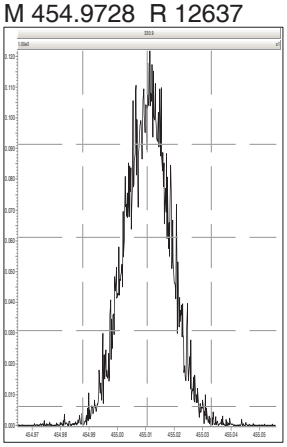
M 392.9760 R 13175



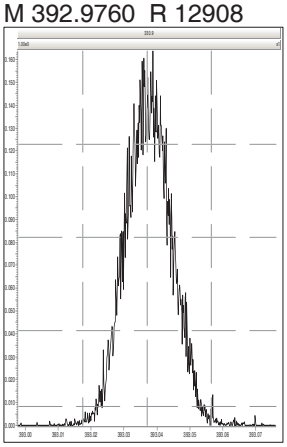
M 430.9728 R 12500



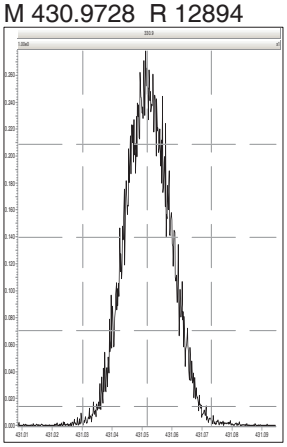
M 454.9728 R 12637



M 392.9760 R 12908

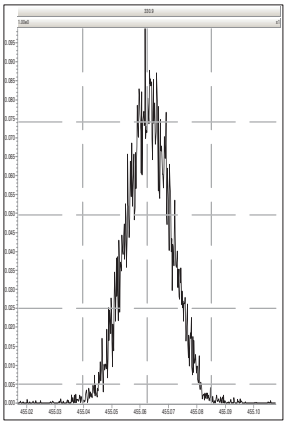


M 430.9728 R 12894

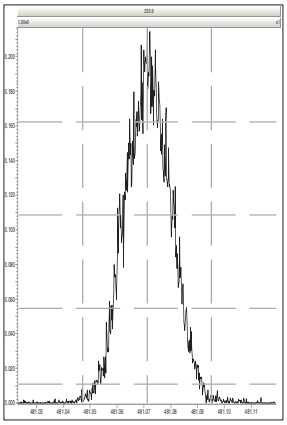


Printed: Friday, October 30, 2020 00:54:29 Pacific Daylight Time

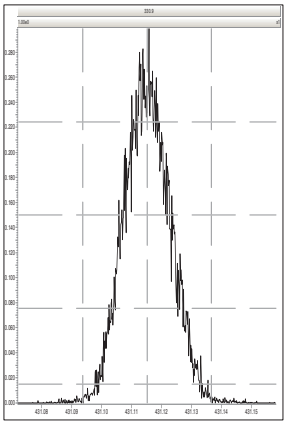
M 454.9728 R 13229



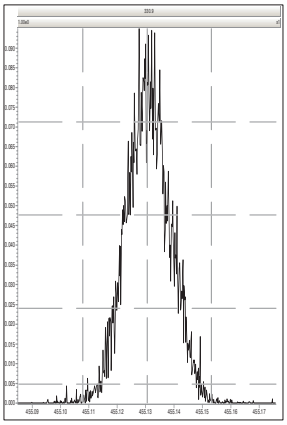
M 480.9696 R 12596



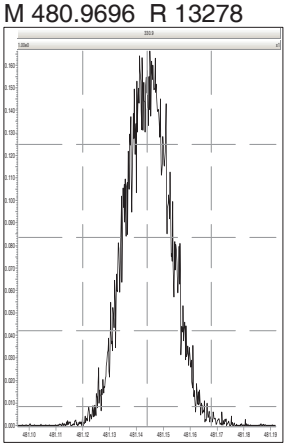
M 430.9728 R 12755



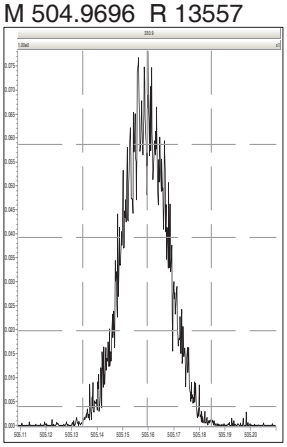
M 454.9728 R 13378



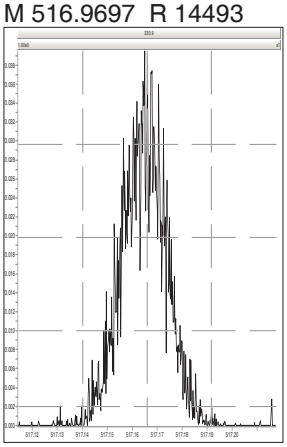
M 480.9696 R 13278

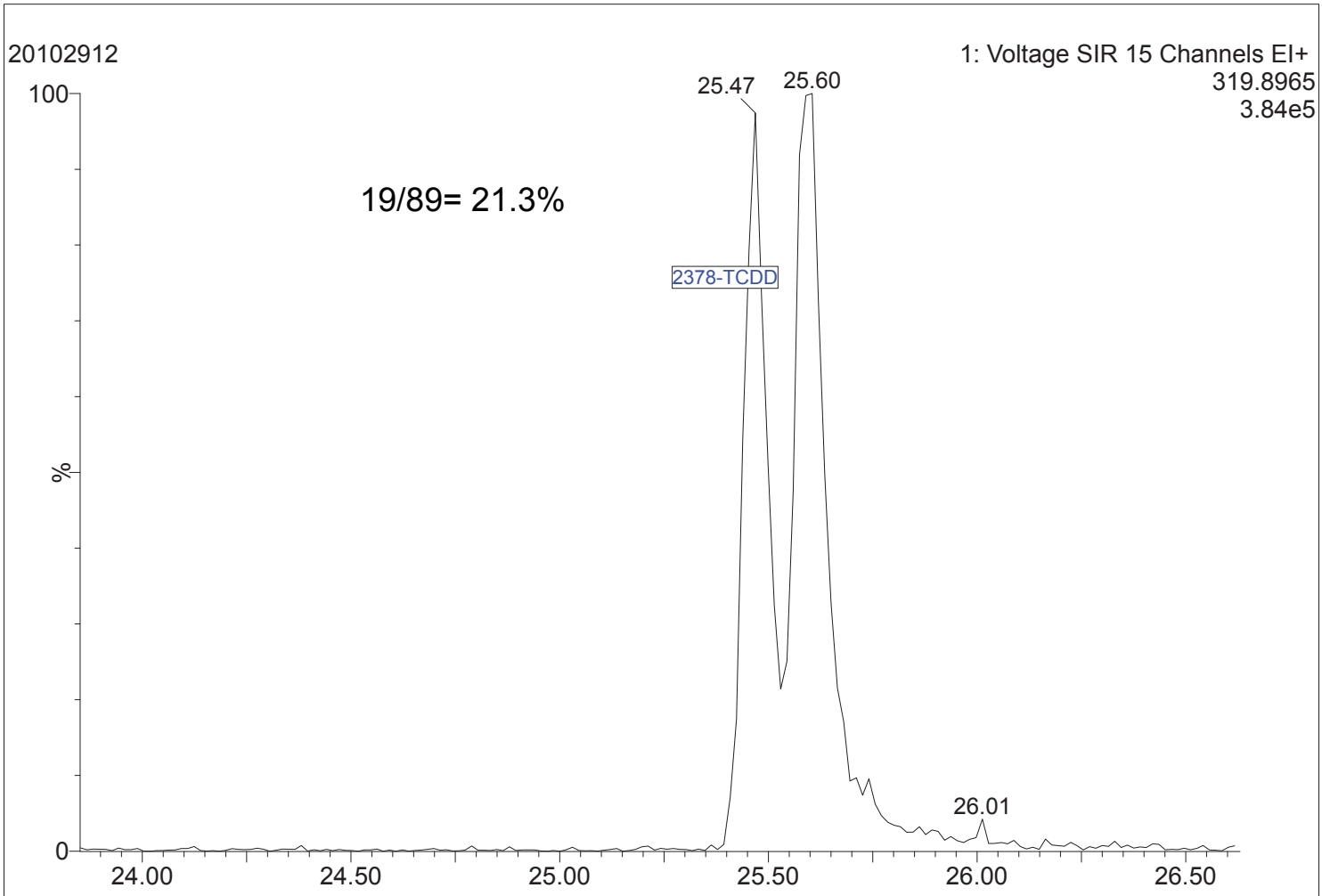


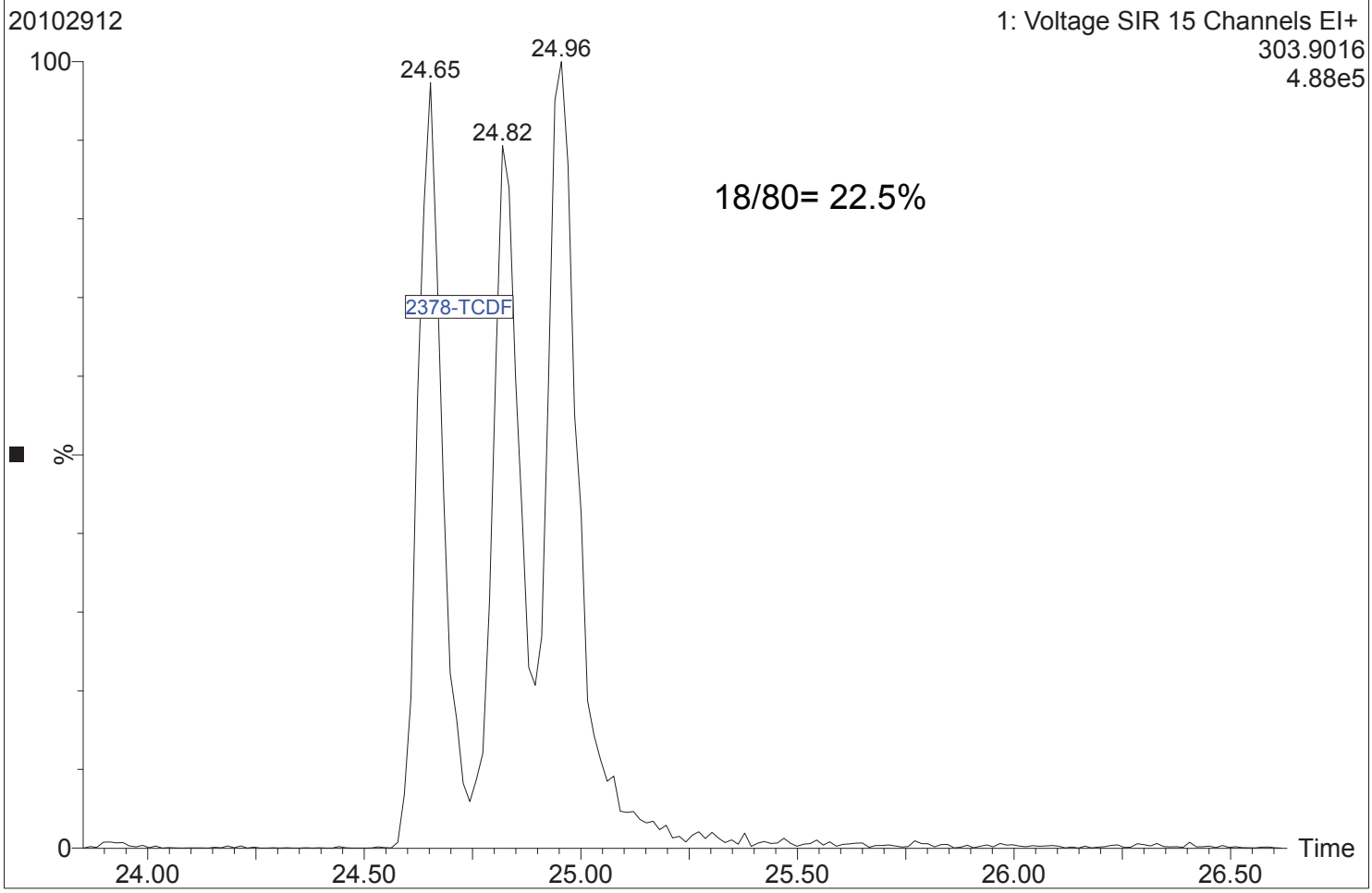
M 504.9696 R 13557



M 516.9697 R 14493




20102912
1: Voltage SIR 15 Channels EI+
319.8965
3.84e5
100
%
0
25.47
25.60
26.01
19/89= 21.3%
2378-TCDD
24.00
24.50
25.00
25.50
26.00
26.50


20102912
1: Voltage SIR 15 Channels EI+
303.9016
4.88e5
100
%
0
24.65
24.82
24.96
18/80= 22.5%
2378-TCDF
24.00
24.50
25.00
25.50
26.00
26.50
Time

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 1613B

Laboratory: Analytical Resources, Inc.
SDG: 20J0389
Client: Floyd - Snider
Project: Lora Lake Apartments
Calibration: DJ00101
Laboratory ID: SIJ0454-SCV1
Sequence: SIJ0454
Sequence Name: ICVCJ
Standard ID: G001361

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
2,3,7,8-TCDF	10.000	9.71	-2.9	
2,3,7,8-TCDD	10.000	8.76	-12.4	
1,2,3,7,8-PeCDF	50.000	50.2	0.3	
2,3,4,7,8-PeCDF	50.000	50.7	1.3	
1,2,3,7,8-PeCDD	50.000	52.1	4.2	
1,2,3,4,7,8-HxCDF	50.000	52.4	4.9	
1,2,3,6,7,8-HxCDF	50.000	51.9	3.8	
2,3,4,6,7,8-HxCDF	50.000	53.5	7.0	
1,2,3,7,8,9-HxCDF	50.000	52.9	5.8	
1,2,3,4,7,8-HxCDD	50.000	53.8	7.7	
1,2,3,6,7,8-HxCDD	50.000	49.2	-1.5	
1,2,3,7,8,9-HxCDD	50.000	51.2	2.4	
1,2,3,4,6,7,8-HpCDF	50.000	50.3	0.7	
1,2,3,4,7,8,9-HpCDF	50.000	53.1	6.2	
1,2,3,4,6,7,8-HpCDD	50.000	51.1	2.1	
OCDF	100.00	118	18.3	
OCDD	100.00	118	17.7	
13C12-2,3,7,8-TCDF	100.00	98.3	-1.7	
13C12-2,3,7,8-TCDD	100.00	97.6	-2.4	
13C12-1,2,3,7,8-PeCDF	100.00	103	2.9	
13C12-2,3,4,7,8-PeCDF	100.00	105	4.6	
13C12-1,2,3,7,8-PeCDD	100.00	95.7	-4.3	
13C12-1,2,3,4,7,8-HxCDF	100.00	114	13.5	
13C12-1,2,3,6,7,8-HxCDF	100.00	117	16.9	
13C12-2,3,4,6,7,8-HxCDF	100.00	109	9.3	
13C12-1,2,3,7,8,9-HxCDF	100.00	112	12.3	
13C12-1,2,3,4,7,8-HxCDD	100.00	111	10.8	
13C12-1,2,3,6,7,8-HxCDD	100.00	117	16.8	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	114	13.6	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	107	7.0	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	118	17.8	
13C12-OCDD	200.00	196	-1.8	
37Cl4-2,3,7,8-TCDD	10.000	10.2	2.3	

* Indicates values outside of QC limits

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 1613B

Laboratory: Analytical Resources, Inc.
SDG: 20J0389
Client: Floyd - Snider
Project: Lora Lake Apartments
Calibration: DJ00101
Laboratory ID: SIJ0454-SCV1
Sequence: SIJ0454
Standard ID: G001361

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
OCDF	100.00	118	18.3	
OCDD	100.00	118	17.7	
13C12-2,3,7,8-TCDF	100.00	98.3	-1.7	
13C12-2,3,7,8-TCDD	100.00	97.6	-2.4	
13C12-1,2,3,7,8-PeCDF	100.00	103	2.9	
13C12-2,3,4,7,8-PeCDF	100.00	105	4.6	
13C12-1,2,3,7,8-PeCDD	100.00	95.7	-4.3	
13C12-1,2,3,4,7,8-HxCDF	100.00	114	13.5	
13C12-1,2,3,6,7,8-HxCDF	100.00	117	16.9	
13C12-2,3,4,6,7,8-HxCDF	100.00	109	9.3	
13C12-1,2,3,7,8,9-HxCDF	100.00	112	12.3	
13C12-1,2,3,4,7,8-HxCDD	100.00	111	10.8	
13C12-1,2,3,6,7,8-HxCDD	100.00	117	16.8	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	114	13.6	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	107	7.0	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	118	17.8	
13C12-OCDD	200.00	196	-1.8	
37Cl4-2,3,7,8-TCDD	10.000	10.2	2.3	

* Values outside of QC limits

INITIAL CALIBRATION CHECK

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Instrument ID:	AUTOSPEC01	Calibration:	DJ00101
Lab File ID:	20102902	Calibration Date:	10/29/2020
Sequence:	SIJ0454	Injection Date:	10/29/20
Lab Sample ID:	SIJ0454-ICV1	Injection Time:	15:55
Sequence Name:	CS3J1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
2,3,7,8-TCDF	A	10.000	10.3	0.7286530	0.7474045		2.6	+/-16
2,3,7,8-TCDD	A	10.000	9.70	1.2382330	1.2012610		-3.0	+/-22
1,2,3,7,8-PeCDF	A	50.000	54.2	0.7793430	0.8445722		8.4	+/-18
2,3,4,7,8-PeCDF	A	50.000	52.0	0.8804697	0.9150973		3.9	+/-18
1,2,3,7,8-PeCDD	A	50.000	50.3	0.9876417	0.9929551		0.5	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	52.5	0.8802689	0.9236874		4.9	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	52.4	0.8533425	0.8935933		4.7	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	53.0	0.8627805	0.9151616		6.1	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	50.9	0.7800802	0.7934649		1.7	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	50.8	0.8417578	0.8550772		1.6	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	48.6	0.9070901	0.8812161		-2.9	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	51.4	0.7836605	0.8048558		2.7	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	51.4	1.0008820	1.0294860		2.9	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	53.4	0.9939216	1.0622480		6.9	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	52.4	1.0436860	1.0929570		4.7	+/-14
OCDF	A	100.00	109	1.1579670	1.2618500		9.0	+/-37
OCDD	A	100.00	114	0.9629974	1.0981770		14.0	+/-21
13C12-2,3,7,8-TCDF	A	100.00	98.3	2.2029620	2.1652852		-1.7	+/-29
13C12-2,3,7,8-TCDD	A	100.00	98.2	1.1814920	1.1602158		-1.8	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	98.5	1.7411380	1.7149660		-1.5	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	101	1.6694980	1.6820677		0.8	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	102	0.9778844	0.9964538		1.9	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	101	1.0222270	1.0344630		1.2	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	97.9	1.2001070	1.1754415		-2.1	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	97.4	1.0710950	1.0434070		-2.6	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	103	0.9186022	0.9475709		3.2	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	102	0.9649715	0.9824350		1.8	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	97.6	1.1680800	1.1394717		-2.4	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	104	0.9085870	0.9468940		4.2	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	109	0.7235789	0.7870531		8.8	+/-23
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	112	0.6453514	0.7244411		12.3	+/-28

* Values outside of QC limits

INITIAL CALIBRATION CHECK

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Instrument ID:	AUTOSPEC01	Calibration:	DJ00101
Lab File ID:	20102902	Calibration Date:	10/29/2020
Sequence:	SIJ0454	Injection Date:	10/29/20
Lab Sample ID:	SIJ0454-ICV1	Injection Time:	15:55
Sequence Name:	CS3J1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
13C12-OCDD	A	200.00	207	0.6782670	0.7022404		3.5	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	9.53	1.2644890	1.2049140		-4.7	

* Values outside of QC limits

INITIAL CALIBRATION CHECK

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Instrument ID:	AUTOSPEC01	Calibration:	DJ00101
Lab File ID:	20111802	Calibration Date:	10/29/2020
Sequence:	SIK0272	Injection Date:	11/18/20
Lab Sample ID:	SIK0272-ICV1	Injection Time:	11:32
Sequence Name:	CS3R1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
2,3,7,8-TCDF	A	10.000	10.5	0.7286530	0.7676494		5.4	+/-16	
2,3,7,8-TCDD	A	10.000	10.0	1.2382330	1.2422030		0.3	+/-22	
1,2,3,7,8-PeCDF	A	50.000	55.2	0.7793430	0.8831968		10.4	+/-18	
2,3,4,7,8-PeCDF	A	50.000	57.5	0.8804697	1.0288750		14.9	+/-18	
1,2,3,7,8-PeCDD	A	50.000	50.3	0.9876417	1.0046340		0.6	+/-22	
1,2,3,4,7,8-HxCDF	A	50.000	55.6	0.8802689	1.0003250		11.1	+/-10	
1,2,3,6,7,8-HxCDF	A	50.000	51.1	0.8533425	0.9065252		2.2	+/-12	
2,3,4,6,7,8-HxCDF	A	50.000	57.1	0.8627805	0.9985129		14.1	+/-12	
1,2,3,7,8,9-HxCDF	A	50.000	57.1	0.7800802	0.9021115		14.2	+/-10	*
1,2,3,4,7,8-HxCDD	A	50.000	52.9	0.8417578	0.9049860		5.9	+/-22	
1,2,3,6,7,8-HxCDD	A	50.000	53.2	0.9070901	0.9773658		6.5	+/-22	
1,2,3,7,8,9-HxCDD	A	50.000	55.3	0.7836605	0.8847387		10.6	+/-18	
1,2,3,4,6,7,8-HpCDF	A	50.000	52.3	1.0008820	1.0711960		4.5	+/-10	
1,2,3,4,7,8,9-HpCDF	A	50.000	50.0	0.9939216	1.0125540		0.09	+/-14	
1,2,3,4,6,7,8-HpCDD	A	50.000	54.2	1.0436860	1.1627400		8.3	+/-14	
OCDF	A	100.00	121	1.1579670	1.4526160		21.4	+/-37	
OCDD	A	100.00	109	0.9629974	1.0554180		8.6	+/-21	
13C12-2,3,7,8-TCDF	A	100.00	96.1	2.2029620	2.1174807		-3.9	+/-29	
13C12-2,3,7,8-TCDD	A	100.00	92.2	1.1814920	1.0958821		-7.8	+/-18	
13C12-1,2,3,7,8-PeCDF	A	100.00	94.9	1.7411380	1.6509798		-5.1	+/-24	
13C12-2,3,4,7,8-PeCDF	A	100.00	91.4	1.6694980	1.5296905		-8.6	+/-23	
13C12-1,2,3,7,8-PeCDD	A	100.00	95.1	0.9778844	0.9335499		-4.9	+/-38	
13C12-1,2,3,4,7,8-HxCDF	A	100.00	99.6	1.0222270	1.0158493		-0.4	+/-24	
13C12-1,2,3,6,7,8-HxCDF	A	100.00	105	1.2001070	1.2556150		4.9	+/-30	
13C12-2,3,4,6,7,8-HxCDF	A	100.00	97.1	1.0710950	1.0439689		-2.9	+/-27	
13C12-1,2,3,7,8,9-HxCDF	A	100.00	100	0.9186022	0.9152669		0.1	+/-26	
13C12-1,2,3,4,7,8-HxCDD	A	100.00	95.2	0.9649715	0.9221103		-4.8	+/-15	
13C12-1,2,3,6,7,8-HxCDD	A	100.00	89.0	1.1680800	1.0356668		-11.0	+/-15	
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	107	0.9085870	0.9686881		6.8	+/-22	
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	112	0.7235789	0.7998373		12.0	+/-23	
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	108	0.6453514	0.6956227		8.3	+/-28	

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Instrument ID:	AUTOSPEC01	Calibration:	DJ00101
Lab File ID:	20111802	Calibration Date:	10/29/2020
Sequence:	SIK0272	Injection Date:	11/18/20
Lab Sample ID:	SIK0272-ICV1	Injection Time:	11:32
Sequence Name:	CS3R1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
13C12-OCDD	A	200.00	190	0.6782670	0.6410136		-5.2	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	9.35	1.2644890	1.2085624		-6.5	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\201118OP.qld
Last Altered: Wednesday, November 18, 2020 14:37:46 Pacific Standard Time
Printed: Thursday, November 19, 2020 09:52:11 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 18 Nov 2020 14:35:19
Calibration: T:\Autospec\Curves\201029ICE.cdb 30 Oct 2020 07:13:12

ID: CS3R1, Name: 20111802, Date: 18-Nov-2020, Time: 11:32:50, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.969	1.001	7.840e4	9.893e4	0.729	0.793	0.770	1537	2615	1.17e6	1.47e6	761.5	563.5	NO	bb	bb	10.535
12378-PeCDF	30.130	1.001	5.000e5	2.954e5	0.800	1.693	1.550	4835	4605	7.63e6	4.49e6	1578.7	975.7	NO	bb	bb	55.201
23478-PeCDF	31.466	1.000	5.427e5	3.158e5	0.895	1.718	1.550	4835	4605	8.13e6	4.86e6	1682.4	1055.4	NO	bb	bb	57.452
123478-HxCDF	35.083	1.001	3.287e5	2.495e5	0.900	1.317	1.240	4202	3115	5.00e6	3.76e6	1189.8	1208.6	NO	bd	bd	55.569
234678-HxCDF	36.074	1.000	3.427e5	2.504e5	0.875	1.369	1.240	4202	3115	5.20e6	3.87e6	1238.3	1241.9	NO	bb	bb	57.054
123678-HxCDF	35.217	1.000	3.673e5	2.804e5	0.887	1.310	1.240	4202	3115	5.32e6	4.07e6	1265.3	1306.0	NO	db	db	51.082
123789-HxCDF	37.098	1.000	2.672e5	2.026e5	0.790	1.319	1.240	4202	3115	3.88e6	2.91e6	923.9	935.7	NO	bb	bb	57.105
1234678-HpCDF	38.935	1.000	3.146e5	2.759e5	1.025	1.140	1.050	4313	3989	4.85e6	4.40e6	1123.9	1103.1	NO	bb	bb	52.263
1234789-HpCDF	41.194	1.000	2.435e5	2.173e5	1.012	1.121	1.050	4313	3989	3.26e6	3.00e6	754.8	752.5	NO	bb	bb	50.047
OCDF	45.485	1.006	5.180e5	5.416e5	1.196	0.956	0.890	5158	2319	5.25e6	5.45e6	1018.5	2349.2	NO	MM	bb	121.439
2378-TCDD	26.618	1.001	6.653e4	8.199e4	1.238	0.811	0.770	1425	962	9.77e5	1.23e6	685.3	1281.4	NO	bb	bb	10.032
12378-PeCDD	31.722	1.000	3.153e5	1.963e5	0.999	1.606	1.550	3583	2509	4.59e6	2.90e6	1282.1	1156.0	NO	bb	bb	50.306
123478-HxCDD	36.196	1.001	2.624e5	2.124e5	0.855	1.235	1.240	2772	2980	4.12e6	3.32e6	1487.6	1115.1	NO	bd	bd	52.930
123678-HxCDD	36.308	1.000	3.205e5	2.555e5	0.918	1.254	1.240	2772	2980	4.49e6	3.64e6	1620.5	1220.7	NO	db	db	53.249
123789-HxCDD	36.686	1.011	2.724e5	2.204e5	0.800	1.236	1.240	2772	2980	3.80e6	3.15e6	1370.9	1056.2	NO	MM	MM	55.276
1234678-HpCDD	40.448	1.000	2.193e5	2.409e5	1.073	0.910	1.050	3652	2888	2.95e6	2.90e6	807.2	1005.2	NO	bb	bd	54.171
OCDD	45.247	1.000	3.669e5	4.030e5	0.971	0.910	0.890	2732	1362	3.96e6	4.42e6	1448.2	3246.3	NO	MM	bb	108.648
13C-2378-TCDF	25.953	1.007	1.016e6	1.294e6	2.204	0.786	0.770	3457	2217	1.50e7	1.90e7	4346.2	8586.0	NO	bb	bb	96.087
13C-12378-PeCDF	30.108	1.168	1.079e6	7.220e5	1.740	1.495	1.550	6603	4197	1.53e7	9.93e6	2321.1	2365.8	NO	bd	bb	94.874
13C-23478-PeCDF	31.455	1.220	1.009e6	6.594e5	1.674	1.531	1.550	6603	4197	1.43e7	9.33e6	2170.9	2222.1	NO	bb	bb	91.403
13C-123478-HxCDF	35.061	0.956	3.907e5	7.654e5	1.020	0.510	0.510	3567	3170	5.73e6	1.15e7	1605.9	3632.9	NO	bd	bd	99.636
13C-123678-HxCDF	35.206	0.960	4.640e5	9.649e5	1.197	0.481	0.510	3567	3170	6.13e6	1.23e7	1717.4	3866.5	NO	db	db	104.868
13C-234678-HxCDF	36.063	0.983	3.914e5	7.966e5	1.075	0.491	0.510	3567	3170	5.61e6	1.13e7	1572.2	3557.2	NO	bb	bb	97.139
13C-123789-HxCDF	37.087	1.011	3.359e5	7.057e5	0.914	0.476	0.510	3567	3170	4.65e6	9.24e6	1303.4	2916.4	NO	bb	bb	100.110
13C-1234678-HpCDF	38.924	1.061	3.300e5	7.724e5	0.907	0.427	0.440	3794	5182	4.76e6	1.12e7	1255.2	2163.1	NO	bb	bb	106.795
13C-1234789-HpCDF	41.183	1.123	2.690e5	6.413e5	0.714	0.419	0.440	3794	5182	3.32e6	8.00e6	875.0	1542.9	NO	MM	MM	112.040
13C-1234-TCDD	25.772	0.000	4.879e5	6.030e5	1.000	0.809	0.770	3564	1209	7.31e6	9.08e6	2051.5	7508.1	NO	bb	bb	100.000
13C-2378-TCDD	26.588	1.032	5.314e5	6.641e5	1.189	0.800	0.770	3564	1209	7.67e6	9.51e6	2153.3	7860.5	NO	bb	bb	92.193
13C-12378-PeCDD	31.711	1.230	6.321e5	3.864e5	0.982	1.636	1.550	1225	1178	8.93e6	5.42e6	7290.8	4602.9	NO	bb	bb	95.069
13C-123478-HxCDD	36.174	0.986	5.868e5	4.625e5	0.968	1.269	1.240	2474	2766	8.78e6	6.90e6	3549.2	2495.8	NO	bd	bd	95.226
13C-123678-HxCDD	36.297	0.990	6.631e5	5.155e5	1.164	1.286	1.240	2474	2766	9.48e6	7.47e6	3832.0	2700.2	NO	db	db	88.968
13C-1234678-HpCDD	40.437	1.103	4.010e5	3.907e5	0.642	1.026	1.050	3095	3098	5.11e6	4.85e6	1652.0	1566.6	NO	bb	bb	108.322
13C-OCDD	45.229	1.233	6.983e5	7.607e5	0.676	0.918	0.890	4115	3712	7.57e6	8.32e6	1839.4	2242.4	NO	bb	bb	189.675
13C-123789-HxCDD	36.675	0.000	6.399e5	4.981e5	1.000	1.285	1.240	2474	2766	8.82e6	7.03e6	3565.8	2540.1	NO	bb	bb	100.000
37CL-2378-TCDD	26.618	1.033	1.318e5		1.293			2296		1.91e6		830.0			bb		9.350

Dataset: T:\Autospec\Processed Data Batch\201118OP.qld
Last Altered: Wednesday, November 18, 2020 14:37:46 Pacific Standard Time
Printed: Thursday, November 19, 2020 09:52:11 Pacific Standard Time

ID: CS3R1, Name: 20111802, Date: 18-Nov-2020, Time: 11:32:50, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.448	0.865	1.052e5	1.284e5	0.846	0.819	0.770	1537	2615	1.64e6	1.98e6	1067.3	756.4	NO	bb	bb	11.950
1289-TCDF	27.464	1.058	7.855e4	9.429e4	0.688	0.833	0.770	1537	2615	1.15e6	1.37e6	748.2	524.0	NO	db	db	10.878
13468-PECDF	27.328	0.908	6.022e5	3.986e5	1.181	1.511	1.550	765	1706	8.88e6	5.84e6	11601.7	3425.4	NO	bb	bb	47.032
12389-PECDF	32.512	1.080	5.046e5	2.953e5	0.766	1.709	1.550	4835	4605	7.21e6	4.19e6	1490.4	909.5	NO	bb	bb	57.966
123468-HXCDF	33.425	0.953	3.504e5	2.680e5	1.003	1.307	1.240	4202	3115	5.45e6	4.07e6	1297.4	1305.4	NO	bb	bb	53.346
1368-TCDD	23.733	0.893	6.646e4	8.324e4	1.179	0.798	0.770	1425	962	1.09e6	1.35e6	762.5	1400.7	NO	bb	bb	10.623
1289-TCDD	27.207	1.023	5.643e4	7.010e4	1.042	0.805	0.770	1425	962	8.46e5	1.04e6	593.7	1085.7	NO	bb	bb	10.154
12479-PECDD	28.995	0.914	5.986e5	3.596e5	1.810	1.665	1.550	3583	2509	5.45e6	3.38e6	1522.0	1346.1	NO	bb	bb	51.970
12389-PECDD	32.123	1.013	3.733e5	2.329e5	1.165	1.603	1.550	3583	2509	5.33e6	3.31e6	1487.7	1317.3	NO	bb	bb	51.075
124679-HXCDD	34.193	0.945	2.921e5	2.579e5	1.056	1.133	1.240	2772	2980	4.47e6	3.75e6	1611.7	1257.1	NO	bb	bd	49.614
1234679-HPCDD	39.391	0.974	2.807e5	2.317e5	1.285	1.212	1.050	3652	2888	3.84e6	3.63e6	1051.4	1256.5	YES	bd	bb	50.348
Total-tetrafurans			2.622e5		0.754			1537		3.96e6							33.364
Total-penta1			6.022e5					765		8.88e6							47.032
Total-pentafurans			1.626e6		0.821			4835		2.42e7							179.528
Total-hexafurans			1.656e6		0.891			4202		2.49e7							274.157
Total-heptafurans			5.581e5		1.018			4313		8.10e6							102.310
Total-Furans			5.223e6		0.906			1537		7.53e7							757.830
Total-tetradioxins			3.210e5		1.153			1425		4.47e6							52.297
Total-pentadioxins			1.287e6		1.325			3583		1.54e7							153.350
Total-hexadioxins			1.147e6		0.907			2772		1.69e7							211.069
Total-heptadioxins			2.193e5		1.179			3652		2.95e6							54.171
Total-Dioxins			3.342e6		1.107			1425		4.36e7							579.534
Total-TEQ			8.565e6					1425		1.19e8							1337.364
FUNCTION1 PFK			1.059e6					500567		2.14e7							
FUNCTION2 PFK			4.512e5					343602		1.07e7							0.000
FUNCTION3 PFK			5.547e5					338759		1.12e7							0.000
FUNCTION4 PFK			7.823e5					279596		1.65e7							
FUNCTION5 PFK			6.355e5					206222		1.57e7							
FUNCTION1 HXCD...			0.000e0					278		0.00e0							
FUNCTION1 HPCD...			1.642e3					1495		3.44e4							0.000
FUNCTION2 HPCD...			1.549e3					1372		3.81e4							0.000
FUNCTION3 OCDPE			0.000e0					240		0.00e0							
FUNCTION4 NCDPE			0.000e0					385		0.00e0							
FUNCTION5 DCDPE			0.000e0					237		0.00e0							

Method: T:\Autospec\Methods\Dioxin201118.mdb 18 Nov 2020 14:35:19
Calibration: T:\Autospec\Curves\201029ICE.cdb 30 Oct 2020 07:13:12

ID: CS3R1, Name: 20111802, Date: 18-Nov-2020, Time: 11:32:50, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.46	7.855e4	9.429e4	0.688	0.83	0.77	748.2	YES	NO	db	db	10.878
2	2378-TCDF	25.97	7.840e4	9.893e4	0.729	0.79	0.77	761.5	YES	NO	bb	bb	10.535
3	1368-TCDF	22.45	1.052e5	1.284e5	0.846	0.82	0.77	1067.3	YES	NO	bb	bb	11.950

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.33	6.022e5	3.986e5	1.181	1.51	1.55	11601.7	YES	NO	bb	bb	47.032

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDF	30.13	5.000e5	2.954e5	0.800	1.69	1.55	1578.7	YES	NO	bb	bb	55.201
2	Total-pentafurans	28.98	7.915e4	4.768e4	0.821	1.66	1.55	258.0	YES	NO	bb	bb	8.909
3	12389-PECDF	32.51	5.046e5	2.953e5	0.766	1.71	1.55	1490.4	YES	NO	bb	bb	57.966
4	23478-PeCDF	31.47	5.427e5	3.158e5	0.895	1.72	1.55	1682.4	YES	NO	bb	bb	57.452

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.10	2.672e5	2.026e5	0.790	1.32	1.24	923.9	YES	NO	bb	bb	57.105
2	234678-HxCDF	36.07	3.427e5	2.504e5	0.875	1.37	1.24	1238.3	YES	NO	bb	bb	57.054
3	123678-HxCDF	35.22	3.673e5	2.804e5	0.887	1.31	1.24	1265.3	YES	NO	db	db	51.082
4	123478-HxCDF	35.08	3.287e5	2.495e5	0.900	1.32	1.24	1189.8	YES	NO	bd	bd	55.569
5	123468-HXCDF	33.42	3.504e5	2.680e5	1.003	1.31	1.24	1297.4	YES	NO	bb	bb	53.346

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	38.93	3.146e5	2.759e5	1.025	1.14	1.05	1123.9	YES	NO	bb	bb	52.263
2	1234789-HpCDF	41.19	2.435e5	2.173e5	1.012	1.12	1.05	754.8	YES	NO	bb	bb	50.047

ID: CS3R1, Name: 20111802, Date: 18-Nov-2020, Time: 11:32:50, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.46	7.855e4	9.429e4	0.688	0.83	0.77	748.2	YES	NO	db	db	10.878
2	2378-TCDF	25.97	7.840e4	9.893e4	0.729	0.79	0.77	761.5	YES	NO	bb	bb	10.535
3	1368-TCDF	22.45	1.052e5	1.284e5	0.846	0.82	0.77	1067.3	YES	NO	bb	bb	11.950
4	12378-PeCDF	30.13	5.000e5	2.954e5	0.800	1.69	1.55	1578.7	YES	NO	bb	bb	55.201
5	Total-pentafurans	28.98	7.915e4	4.768e4	0.821	1.66	1.55	258.0	YES	NO	bb	bb	8.909
6	12389-PECDF	32.51	5.046e5	2.953e5	0.766	1.71	1.55	1490.4	YES	NO	bb	bb	57.966
7	23478-PeCDF	31.47	5.427e5	3.158e5	0.895	1.72	1.55	1682.4	YES	NO	bb	bb	57.452
8	123789-HxCDF	37.10	2.672e5	2.026e5	0.790	1.32	1.24	923.9	YES	NO	bb	bb	57.105
9	234678-HxCDF	36.07	3.427e5	2.504e5	0.875	1.37	1.24	1238.3	YES	NO	bb	bb	57.054
10	123678-HxCDF	35.22	3.673e5	2.804e5	0.887	1.31	1.24	1265.3	YES	NO	db	db	51.082
11	123478-HxCDF	35.08	3.287e5	2.495e5	0.900	1.32	1.24	1189.8	YES	NO	bd	bd	55.569
12	123468-HXCDF	33.42	3.504e5	2.680e5	1.003	1.31	1.24	1297.4	YES	NO	bb	bb	53.346
13	1234678-HpCDF	38.93	3.146e5	2.759e5	1.025	1.14	1.05	1123.9	YES	NO	bb	bb	52.263
14	1234789-HpCDF	41.19	2.435e5	2.173e5	1.012	1.12	1.05	754.8	YES	NO	bb	bb	50.047
15	OCDF	45.48	5.180e5	5.416e5	1.196	0.96	0.89	1018.5	YES	NO	MM	bb	121.439
16	13468-PECDF	27.33	6.022e5	3.986e5	1.181	1.51	1.55	11601.7	YES	NO	bb	bb	47.032

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	27.21	5.643e4	7.010e4	1.042	0.80	0.77	593.7	YES	NO	bb	bb	10.154
2	2378-TCDD	26.62	6.653e4	8.199e4	1.238	0.81	0.77	685.3	YES	NO	bb	bb	10.032
3	Total-tetradioxins	26.29	9.972e4	1.250e5	1.153	0.80	0.77	752.1	YES	NO	bb	bb	16.301
4	Total-tetradioxins	25.80	3.109e4	3.877e4	1.153	0.80	0.77	334.8	YES	NO	bb	bb	5.068
5	Total-tetradioxins	25.21	7.614e2	8.892e2	1.153	0.86	0.77	6.5	YES	NO	bb	db	0.120
6	1368-TCDD	23.73	6.646e4	8.324e4	1.179	0.80	0.77	762.5	YES	NO	bb	bb	10.623

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	32.12	3.733e5	2.329e5	1.165	1.60	1.55	1487.7	YES	NO	bb	bb	51.075
2	12378-PeCDD	31.72	3.153e5	1.963e5	0.999	1.61	1.55	1282.1	YES	NO	bb	bb	50.306
3	12479-PECDD	28.99	5.986e5	3.596e5	1.810	1.66	1.55	1522.0	YES	NO	bb	bb	51.970

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	124679-HXCDD	34.19	2.921e5	2.579e5	1.056	1.13	1.24	1611.7	YES	NO	bb	bd	49.614
2	123789-HxCDD	36.69	2.724e5	2.204e5	0.800	1.24	1.24	1370.9	YES	NO	MM	MM	55.276
3	123678-HxCDD	36.31	3.205e5	2.555e5	0.918	1.25	1.24	1620.5	YES	NO	db	db	53.249
4	123478-HxCDD	36.20	2.624e5	2.124e5	0.855	1.24	1.24	1487.6	YES	NO	bd	bd	52.930

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.45	2.193e5	2.409e5	1.073	0.91	1.05	807.2	YES	NO	bb	bd	54.171

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	27.21	5.643e4	7.010e4	1.042	0.80	0.77	593.7	YES	NO	bb	bb	10.154
2	2378-TCDD	26.62	6.653e4	8.199e4	1.238	0.81	0.77	685.3	YES	NO	bb	bb	10.032
3	Total-tetradioxins	26.29	9.972e4	1.250e5	1.153	0.80	0.77	752.1	YES	NO	bb	bb	16.301
4	Total-tetradioxins	25.80	3.109e4	3.877e4	1.153	0.80	0.77	334.8	YES	NO	bb	bb	5.068
5	Total-tetradioxins	25.21	7.614e2	8.892e2	1.153	0.86	0.77	6.5	YES	NO	bb	db	0.120
6	1368-TCDD	23.73	6.646e4	8.324e4	1.179	0.80	0.77	762.5	YES	NO	bb	bb	10.623
7	12389-PECDD	32.12	3.733e5	2.329e5	1.165	1.60	1.55	1487.7	YES	NO	bb	bb	51.075
8	12378-PeCDD	31.72	3.153e5	1.963e5	0.999	1.61	1.55	1282.1	YES	NO	bb	bb	50.306
9	12479-PECDD	28.99	5.986e5	3.596e5	1.810	1.66	1.55	1522.0	YES	NO	bb	bb	51.970
10	124679-HXCDD	34.19	2.921e5	2.579e5	1.056	1.13	1.24	1611.7	YES	NO	bb	bd	49.614
11	123789-HxCDD	36.69	2.724e5	2.204e5	0.800	1.24	1.24	1370.9	YES	NO	MM	MM	55.276
12	123678-HxCDD	36.31	3.205e5	2.555e5	0.918	1.25	1.24	1620.5	YES	NO	db	db	53.249
13	123478-HxCDD	36.20	2.624e5	2.124e5	0.855	1.24	1.24	1487.6	YES	NO	bd	bd	52.930
14	1234678-HpCDD	40.45	2.193e5	2.409e5	1.073	0.91	1.05	807.2	YES	NO	bb	bd	54.171
15	OCDD	45.25	3.669e5	4.030e5	0.971	0.91	0.89	1448.2	YES	NO	MM	bb	108.648

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.46	7.855e4	9.429e4	0.688	0.83	0.77	748.2	YES	NO	db	db	10.878
2	2378-TCDF	25.97	7.840e4	9.893e4	0.729	0.79	0.77	761.5	YES	NO	bb	bb	10.535
3	1368-TCDF	22.45	1.052e5	1.284e5	0.846	0.82	0.77	1067.3	YES	NO	bb	bb	11.950
4	12378-PeCDF	30.13	5.000e5	2.954e5	0.800	1.69	1.55	1578.7	YES	NO	bb	bb	55.201
5	Total-pentafurans	28.98	7.915e4	4.768e4	0.821	1.66	1.55	258.0	YES	NO	bb	bb	8.909
6	12389-PECDF	32.51	5.046e5	2.953e5	0.766	1.71	1.55	1490.4	YES	NO	bb	bb	57.966
7	23478-PeCDF	31.47	5.427e5	3.158e5	0.895	1.72	1.55	1682.4	YES	NO	bb	bb	57.452
8	123789-HxCDF	37.10	2.672e5	2.026e5	0.790	1.32	1.24	923.9	YES	NO	bb	bb	57.105
9	234678-HxCDF	36.07	3.427e5	2.504e5	0.875	1.37	1.24	1238.3	YES	NO	bb	bb	57.054
10	123678-HxCDF	35.22	3.673e5	2.804e5	0.887	1.31	1.24	1265.3	YES	NO	db	db	51.082
11	123478-HxCDF	35.08	3.287e5	2.495e5	0.900	1.32	1.24	1189.8	YES	NO	bd	bd	55.569
12	123468-HXCDF	33.42	3.504e5	2.680e5	1.003	1.31	1.24	1297.4	YES	NO	bb	bb	53.346
13	1234678-HpCDF	38.93	3.146e5	2.759e5	1.025	1.14	1.05	1123.9	YES	NO	bb	bb	52.263
14	1234789-HpCDF	41.19	2.435e5	2.173e5	1.012	1.12	1.05	754.8	YES	NO	bb	bb	50.047
15	OCDF	45.48	5.180e5	5.416e5	1.196	0.96	0.89	1018.5	YES	NO	MM	bb	121.439
16	13468-PECDF	27.33	6.022e5	3.986e5	1.181	1.51	1.55	11601.7	YES	NO	bb	bb	47.032
17	1289-TCDD	27.21	5.643e4	7.010e4	1.042	0.80	0.77	593.7	YES	NO	bb	bb	10.154
18	2378-TCDD	26.62	6.653e4	8.199e4	1.238	0.81	0.77	685.3	YES	NO	bb	bb	10.032
19	Total-tetradioxins	26.29	9.972e4	1.250e5	1.153	0.80	0.77	752.1	YES	NO	bb	bb	16.301
20	Total-tetradioxins	25.80	3.109e4	3.877e4	1.153	0.80	0.77	334.8	YES	NO	bb	bb	5.068
21	Total-tetradioxins	25.21	7.614e2	8.892e2	1.153	0.86	0.77	6.5	YES	NO	bb	db	0.120
22	1368-TCDD	23.73	6.646e4	8.324e4	1.179	0.80	0.77	762.5	YES	NO	bb	bb	10.623
23	12389-PECDD	32.12	3.733e5	2.329e5	1.165	1.60	1.55	1487.7	YES	NO	bb	bb	51.075
24	12378-PeCDD	31.72	3.153e5	1.963e5	0.999	1.61	1.55	1282.1	YES	NO	bb	bb	50.306
25	12479-PECDD	28.99	5.986e5	3.596e5	1.810	1.66	1.55	1522.0	YES	NO	bb	bb	51.970
26	124679-HXCDD	34.19	2.921e5	2.579e5	1.056	1.13	1.24	1611.7	YES	NO	bb	bd	49.614
27	123789-HxCDD	36.69	2.724e5	2.204e5	0.800	1.24	1.24	1370.9	YES	NO	MM	MM	55.276
28	123678-HxCDD	36.31	3.205e5	2.555e5	0.918	1.25	1.24	1620.5	YES	NO	db	db	53.249
29	123478-HxCDD	36.20	2.624e5	2.124e5	0.855	1.24	1.24	1487.6	YES	NO	bd	bd	52.930
30	1234678-HpCDD	40.45	2.193e5	2.409e5	1.073	0.91	1.05	807.2	YES	NO	bb	bd	54.171
31	OCDD	45.25	3.669e5	4.030e5	0.971	0.91	0.89	1448.2	YES	NO	MM	bb	108.648

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	24.14	6.122e4					2.1	NO		bb		
2	FUNCTION1 PFK	23.93	3.958e4					1.6	NO		bb		
3	FUNCTION1 PFK	23.79	5.789e4					2.3	NO		bb		
4	FUNCTION1 PFK	23.48	2.928e4					1.4	NO		bb		
5	FUNCTION1 PFK	23.35	2.831e4					1.3	NO		bb		
6	FUNCTION1 PFK	23.25	3.756e4					1.7	NO		bb		
7	FUNCTION1 PFK	22.80	5.129e4					1.9	NO		bb		
8	FUNCTION1 PFK	22.69	4.187e4					1.8	NO		bb		
9	FUNCTION1 PFK	22.10	3.601e4					1.7	NO		bb		
10	FUNCTION1 PFK	21.78	6.860e4					2.5	NO		bb		
11	FUNCTION1 PFK	21.45	6.951e4					2.0	NO		db		
12	FUNCTION1 PFK	21.33	5.915e4					2.2	NO		bd		
13	FUNCTION1 PFK	28.10	6.071e4					2.4	NO		db		
14	FUNCTION1 PFK	27.99	6.075e4					2.3	NO		bd		
15	FUNCTION1 PFK	27.66	9.155e3					0.8	NO		bb		
16	FUNCTION1 PFK	26.53	2.163e4					1.4	NO		bb		
17	FUNCTION1 PFK	26.41	7.256e4					2.1	NO		bb		
18	FUNCTION1 PFK	26.30	4.679e4					1.8	NO		bb		
19	FUNCTION1 PFK	26.19	2.570e4					1.1	NO		bb		
20	FUNCTION1 PFK	26.06	3.194e4					1.5	NO		bb		
21	FUNCTION1 PFK	25.97	2.035e4					1.1	NO		bb		
22	FUNCTION1 PFK	25.29	3.909e4					1.5	NO		bb		
23	FUNCTION1 PFK	25.05	1.934e4					1.1	NO		bb		
24	FUNCTION1 PFK	24.61	4.346e4					1.9	NO		bb		
25	FUNCTION1 PFK	24.50	2.707e4					1.2	NO		bb		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.91	3.002e4					1.4	NO		bb		0.000
2	FUNCTION2 PFK	28.29	2.736e4					2.0	NO		bb		0.000
3	FUNCTION2 PFK	31.49	1.651e4					1.2	NO		bd		0.000
4	FUNCTION2 PFK	31.25	1.786e4					1.3	NO		bb		0.000
5	FUNCTION2 PFK	30.98	3.608e3					0.5	NO		bb		0.000
6	FUNCTION2 PFK	30.93	3.204e3					0.6	NO		db		0.000
7	FUNCTION2 PFK	30.90	9.812e3					1.1	NO		bd		0.000
8	FUNCTION2 PFK	30.69	2.175e4					1.5	NO		bb		0.000
9	FUNCTION2 PFK	30.35	2.323e4					1.4	NO		bb		0.000
10	FUNCTION2 PFK	30.24	1.901e4					1.3	NO		db		0.000
11	FUNCTION2 PFK	30.19	1.204e4					1.2	NO		dd		0.000
12	FUNCTION2 PFK	30.13	1.307e4					1.2	NO		bd		0.000
13	FUNCTION2 PFK	29.97	2.051e3					0.5	NO		bb		0.000
14	FUNCTION2 PFK	29.65	2.480e4					1.3	NO		bb		0.000
15	FUNCTION2 PFK	29.51	1.183e3					0.3	NO		bb		0.000
16	FUNCTION2 PFK	29.36	3.664e4					2.0	NO		bb		0.000
17	FUNCTION2 PFK	29.11	1.242e3					0.3	NO		bb		0.000
18	FUNCTION2 PFK	29.01	2.846e4					2.2	NO		bb		0.000
19	FUNCTION2 PFK	32.92	3.062e4					1.8	NO		bb		0.000
20	FUNCTION2 PFK	32.83	5.351e3					0.7	NO		bb		0.000
21	FUNCTION2 PFK	32.61	2.675e4					1.4	NO		bb		0.000
22	FUNCTION2 PFK	32.50	5.032e4					2.2	NO		bb		0.000
23	FUNCTION2 PFK	31.80	2.001e4					1.4	NO		bb		0.000
24	FUNCTION2 PFK	31.57	2.626e4					2.1	NO		db		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	35.18	5.434e4					2.2	NO		bb		0.000
2	FUNCTION3 PFK	35.07	5.857e4					2.9	NO		db		0.000
3	FUNCTION3 PFK	34.96	4.482e4					2.7	NO		bd		0.000
4	FUNCTION3 PFK	34.48	1.834e4					1.0	NO		bb		0.000
5	FUNCTION3 PFK	34.05	3.327e4					2.2	NO		bb		0.000
6	FUNCTION3 PFK	33.60	3.430e4					2.1	NO		bb		0.000
7	FUNCTION3 PFK	33.50	2.185e4					1.4	NO		bb		0.000
8	FUNCTION3 PFK	33.14	6.342e3					0.7	NO		bb		0.000
9	FUNCTION3 PFK	33.09	3.106e3					0.8	NO		bb		0.000
10	FUNCTION3 PFK	37.90	9.825e3					1.1	NO		bb		0.000
11	FUNCTION3 PFK	37.31	3.048e4					1.8	NO		bb		0.000
12	FUNCTION3 PFK	36.73	3.787e4					2.1	NO		bb		0.000
13	FUNCTION3 PFK	35.87	3.939e4					2.4	NO		bb		0.000
14	FUNCTION3 PFK	35.63	4.626e4					2.5	NO		bb		0.000
15	FUNCTION3 PFK	35.53	1.513e4					1.5	NO		db		0.000
16	FUNCTION3 PFK	35.49	4.915e4					2.7	NO		dd		0.000
17	FUNCTION3 PFK	35.41	5.168e4					3.0	NO		bd		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	39.36	3.349e4					1.9	NO		db		
2	FUNCTION4 PFK	39.25	3.473e4					2.0	NO		bd		
3	FUNCTION4 PFK	39.01	3.023e4					2.3	NO		bb		
4	FUNCTION4 PFK	38.73	1.611e3					0.5	NO		bb		
5	FUNCTION4 PFK	38.67	1.974e4					1.7	NO		bb		
6	FUNCTION4 PFK	38.60	1.595e3					0.5	NO		bb		
7	FUNCTION4 PFK	38.56	1.968e4					2.4	NO		bb		
8	FUNCTION4 PFK	41.63	2.844e3					0.6	NO		bb		
9	FUNCTION4 PFK	41.47	1.705e4					2.1	NO		bb		
10	FUNCTION4 PFK	41.36	5.166e4					2.8	NO		db		
11	FUNCTION4 PFK	41.25	3.397e4					2.1	NO		bd		
12	FUNCTION4 PFK	41.02	1.809e4					1.6	NO		bb		
13	FUNCTION4 PFK	40.77	3.275e3					0.7	NO		bb		
14	FUNCTION4 PFK	40.47	2.475e4					1.7	NO		bb		
15	FUNCTION4 PFK	40.25	1.683e4					1.9	NO		db		
16	FUNCTION4 PFK	40.21	9.026e3					1.4	NO		bd		
17	FUNCTION4 PFK	40.13	4.750e4					2.5	NO		db		
18	FUNCTION4 PFK	40.03	2.875e4					2.0	NO		dd		
19	FUNCTION4 PFK	39.91	2.379e4					1.5	NO		dd		
20	FUNCTION4 PFK	39.87	1.248e4					1.5	NO		bd		
21	FUNCTION4 PFK	39.80	1.323e4					1.2	NO		bb		
22	FUNCTION4 PFK	39.58	1.983e4					1.8	NO		bb		
23	FUNCTION4 PFK	39.46	3.025e4					1.9	NO		bb		
24	FUNCTION4 PFK	43.18	6.749e3					0.9	NO		bb		
25	FUNCTION4 PFK	43.03	1.976e4					1.8	NO		db		
26	FUNCTION4 PFK	42.94	4.768e4					2.5	NO		bd		
27	FUNCTION4 PFK	42.82	4.393e4					2.8	NO		db		
28	FUNCTION4 PFK	42.73	2.765e4					2.5	NO		dd		
29	FUNCTION4 PFK	42.69	2.749e4					2.1	NO		bd		
30	FUNCTION4 PFK	42.57	4.564e4					2.7	NO		bb		
31	FUNCTION4 PFK	42.50	3.876e4					2.5	NO		db		
32	FUNCTION4 PFK	42.36	2.172e4					1.6	NO		dd		
33	FUNCTION4 PFK	42.32	8.513e3					0.8	NO		bd		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.72	2.145e4					2.3	NO		dd		
2	FUNCTION5 PFK	43.62	1.479e4					1.8	NO		dd		
3	FUNCTION5 PFK	43.58	1.300e4					1.9	NO		dd		
4	FUNCTION5 PFK	43.51	2.610e4					1.9	NO		bd		
5	FUNCTION5 PFK	43.39	1.368e4					2.1	NO		bb		
6	FUNCTION5 PFK	44.66	1.917e4					1.6	NO		dd		
7	FUNCTION5 PFK	44.58	1.274e4					1.6	NO		dd		
8	FUNCTION5 PFK	44.52	1.856e4					2.2	NO		dd		
9	FUNCTION5 PFK	44.43	1.014e4					1.3	NO		dd		
10	FUNCTION5 PFK	44.41	1.050e4					1.8	NO		dd		
11	FUNCTION5 PFK	44.37	1.264e4					1.5	NO		dd		
12	FUNCTION5 PFK	44.29	2.641e4					2.5	NO		dd		
13	FUNCTION5 PFK	44.24	1.504e4					1.8	NO		dd		
14	FUNCTION5 PFK	44.19	8.878e3					1.3	NO		dd		
15	FUNCTION5 PFK	44.15	8.598e3					1.2	NO		bd		
16	FUNCTION5 PFK	44.08	2.795e4					1.8	NO		db		
17	FUNCTION5 PFK	43.96	2.384e4					2.0	NO		dd		
18	FUNCTION5 PFK	43.92	7.132e3					1.3	NO		dd		
19	FUNCTION5 PFK	43.86	2.574e4					2.7	NO		dd		
20	FUNCTION5 PFK	43.80	1.172e4					1.9	NO		dd		
21	FUNCTION5 PFK	43.76	1.283e4					1.9	NO		dd		
22	FUNCTION5 PFK	45.64	9.629e3					1.6	NO		dd		
23	FUNCTION5 PFK	45.59	5.187e3					0.7	NO		dd		
24	FUNCTION5 PFK	45.53	2.307e4					2.2	NO		dd		
25	FUNCTION5 PFK	45.43	1.545e4					2.3	NO		dd		
26	FUNCTION5 PFK	45.40	1.176e4					1.9	NO		bd		
27	FUNCTION5 PFK	45.30	2.702e4					2.5	NO		db		
28	FUNCTION5 PFK	45.27	8.857e3					1.6	NO		dd		
29	FUNCTION5 PFK	45.20	1.605e4					1.8	NO		dd		
30	FUNCTION5 PFK	45.16	7.003e3					1.2	NO		bd		
31	FUNCTION5 PFK	45.07	9.058e3					1.5	NO		db		
32	FUNCTION5 PFK	45.03	5.864e3					1.3	NO		bd		
33	FUNCTION5 PFK	44.96	8.220e3					0.8	NO		bb		
34	FUNCTION5 PFK	44.87	7.533e3					1.6	NO		db		
35	FUNCTION5 PFK	44.83	7.732e3					1.1	NO		dd		
36	FUNCTION5 PFK	44.80	1.133e3					0.4	NO		bd		
37	FUNCTION5 PFK	44.74	2.056e4					2.1	NO		db		

ID: CS3R1, Name: 20111802, Date: 18-Nov-2020, Time: 11:32:50, Conditions: AUTOSPEC01, User: pk

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION5 PFK	46.33	1.853e4					2.0	NO		db		
39	FUNCTION5 PFK	46.26	9.414e3					1.3	NO		dd		
40	FUNCTION5 PFK	46.20	1.726e4					1.8	NO		dd		
41	FUNCTION5 PFK	46.17	3.086e3					0.8	NO		bd		
42	FUNCTION5 PFK	46.02	1.017e3					0.3	NO		db		
43	FUNCTION5 PFK	45.98	1.476e4					1.8	NO		bd		
44	FUNCTION5 PFK	45.91	2.877e2					0.2	NO		bb		
45	FUNCTION5 PFK	45.87	1.732e4					1.4	NO		db		
46	FUNCTION5 PFK	45.77	1.381e4					1.7	NO		dd		
47	FUNCTION5 PFK	45.67	1.502e4					1.6	NO		dd		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	23.63	9.322e1					1.6	NO		bd		0.000
2	FUNCTION1 HPCD...	22.28	1.220e2					2.9	NO		bb		0.000
3	FUNCTION1 HPCD...	21.72	8.301e1					1.0	NO		bb		0.000
4	FUNCTION1 HPCD...	21.09	1.095e2					1.6	NO		bb		0.000
5	FUNCTION1 HPCD...	26.75	1.549e2					1.7	NO		bb		0.000
6	FUNCTION1 HPCD...	26.51	1.200e2					1.4	NO		bb		0.000
7	FUNCTION1 HPCD...	25.91	7.404e1					1.2	NO		db		0.000
8	FUNCTION1 HPCD...	25.80	1.585e2					2.3	NO		bd		0.000
9	FUNCTION1 HPCD...	25.42	7.655e1					1.3	NO		bb		0.000
10	FUNCTION1 HPCD...	25.20	1.059e2					1.4	NO		bb		0.000
11	FUNCTION1 HPCD...	25.05	1.228e2					1.1	NO		bb		0.000
12	FUNCTION1 HPCD...	24.81	1.437e2					1.9	NO		bb		0.000
13	FUNCTION1 HPCD...	24.00	1.541e2					1.9	NO		bb		0.000
14	FUNCTION1 HPCD...	23.72	1.236e2					1.6	NO		db		0.000

ID: CS3R1, Name: 20111802, Date: 18-Nov-2020, Time: 11:32:50, Conditions: AUTOSPEC01, User: pk

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	28.89	7.274e1					1.7	NO		bb		0.000
2	FUNCTION2 HPCD...	28.71	9.822e1					2.0	NO		db		0.000
3	FUNCTION2 HPCD...	28.58	1.235e2					1.4	NO		bd		0.000
4	FUNCTION2 HPCD...	28.39	1.317e2					2.7	NO		db		0.000
5	FUNCTION2 HPCD...	28.32	1.170e2					2.0	NO		bd		0.000
6	FUNCTION2 HPCD...	32.70	7.163e1					1.4	NO		bb		0.000
7	FUNCTION2 HPCD...	32.29	7.641e1					1.5	NO		bb		0.000
8	FUNCTION2 HPCD...	32.21	1.051e2					1.6	NO		db		0.000
9	FUNCTION2 HPCD...	32.16	8.260e1					1.4	NO		bd		0.000
10	FUNCTION2 HPCD...	31.34	4.204e2					6.4	YES		bb		0.000
11	FUNCTION2 HPCD...	31.15	9.469e1					2.5	NO		bb		0.000
12	FUNCTION2 HPCD...	30.43	8.019e1					1.8	NO		bb		0.000
13	FUNCTION2 HPCD...	29.42	7.532e1					1.3	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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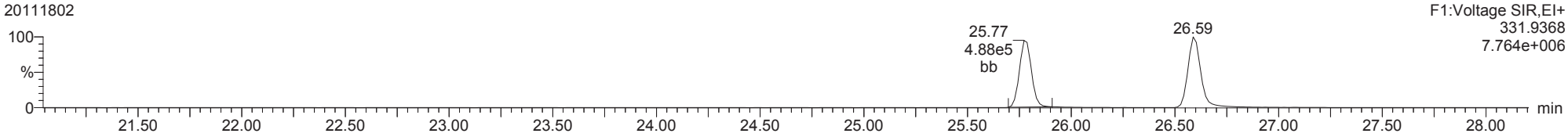
13C-1234-TCDD



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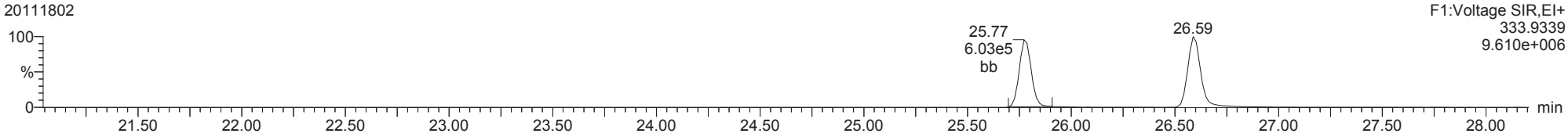
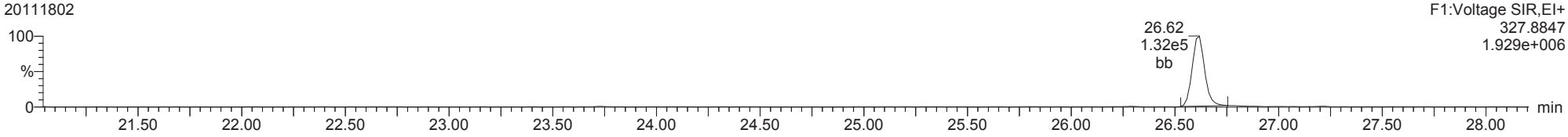


37CL-2378-TCDD



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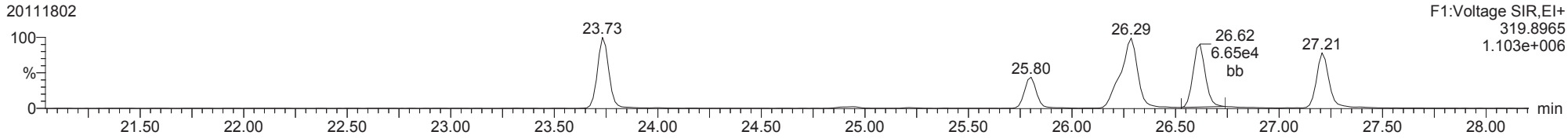
2378-TCDD



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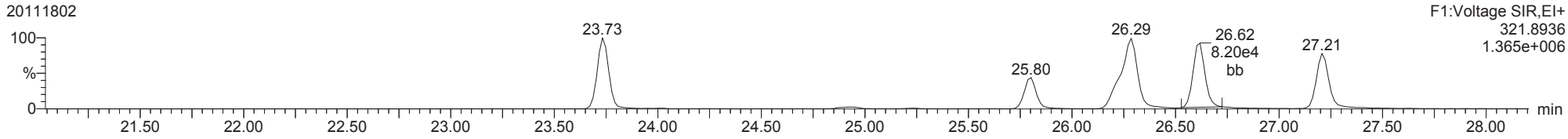

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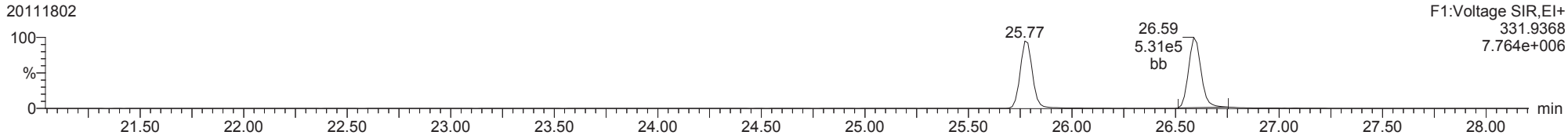

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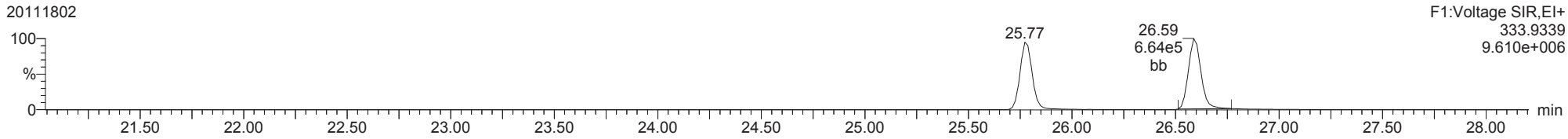

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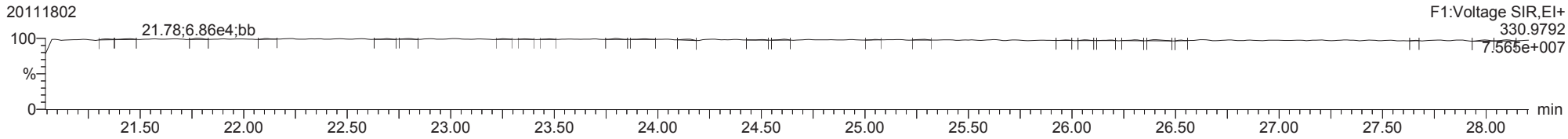

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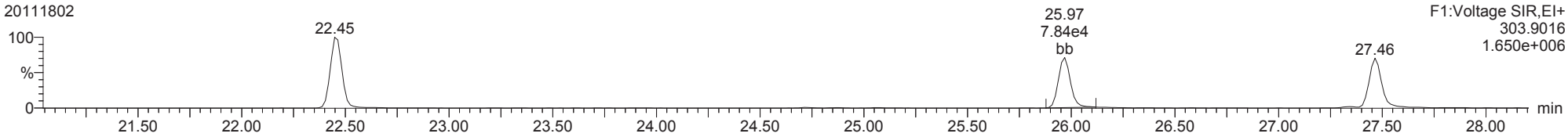

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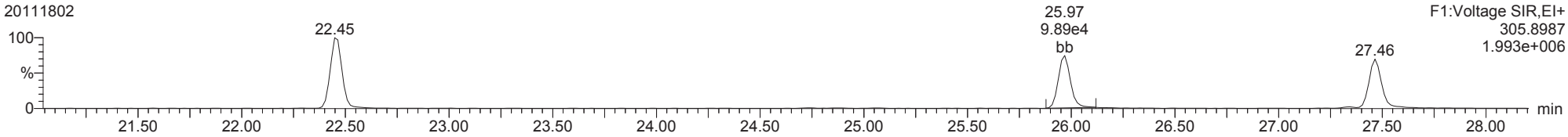

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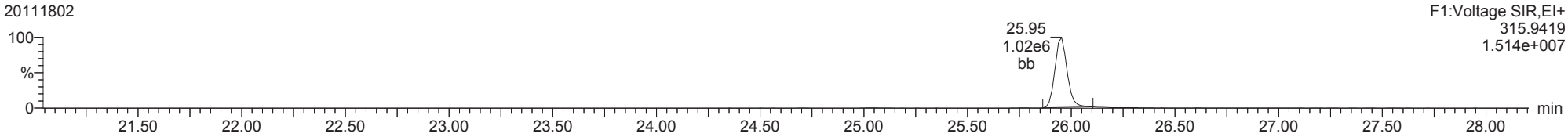

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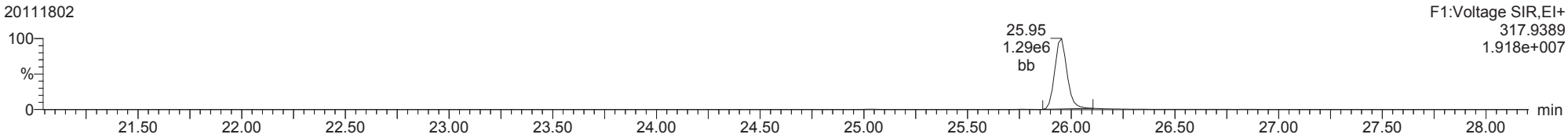
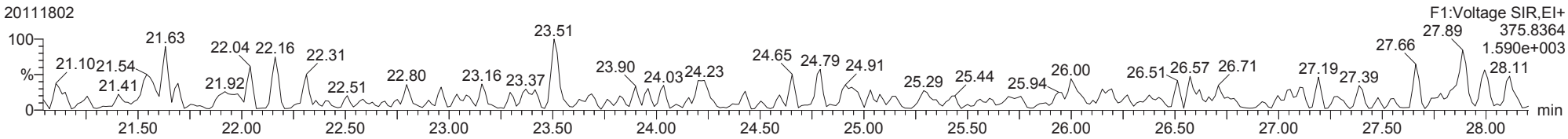


FUNCTION1 HXCDPE



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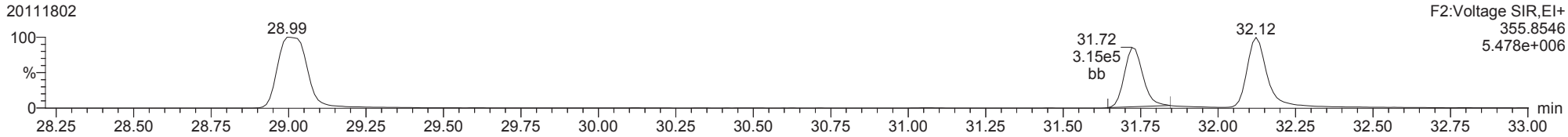
ID: CS3R1, Name: 20111802, Date: 18-Nov-2020, Time: 11:32:50, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



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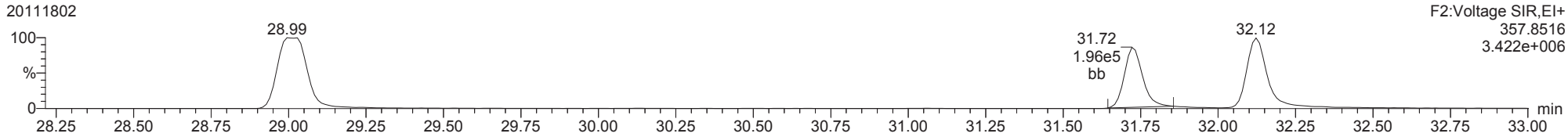

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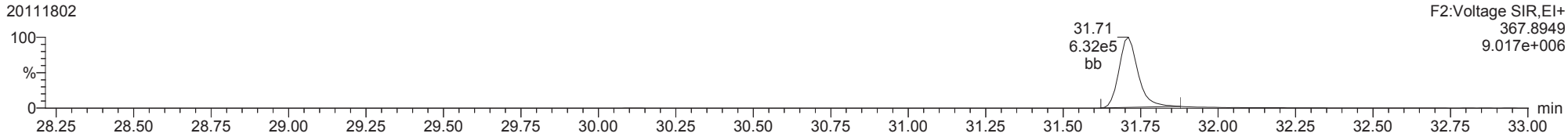

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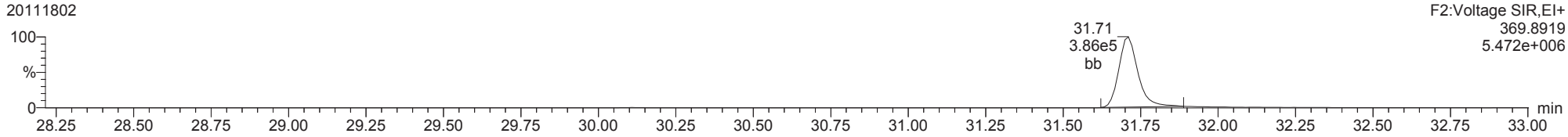
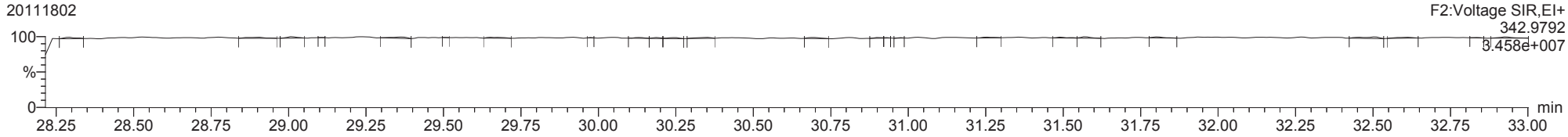


FUNCTION2 PFK



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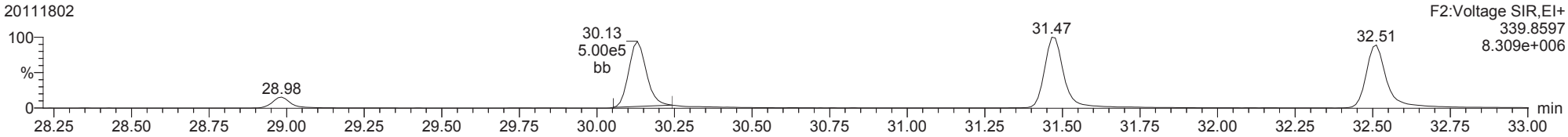

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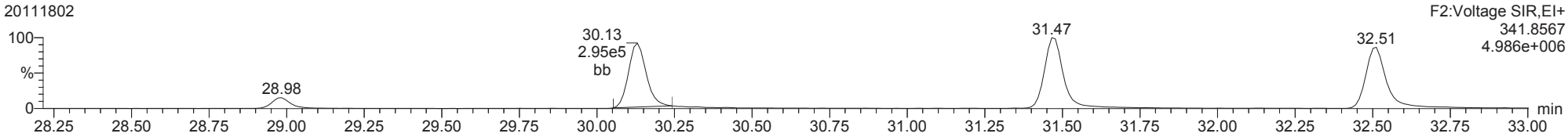

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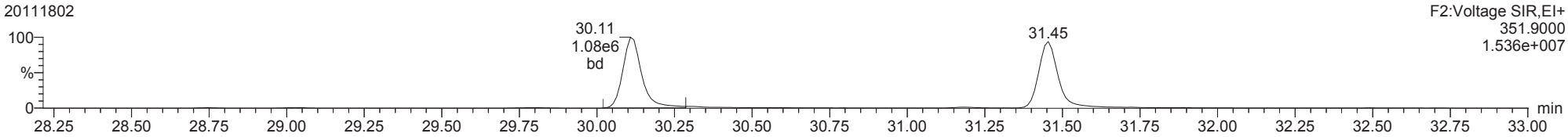

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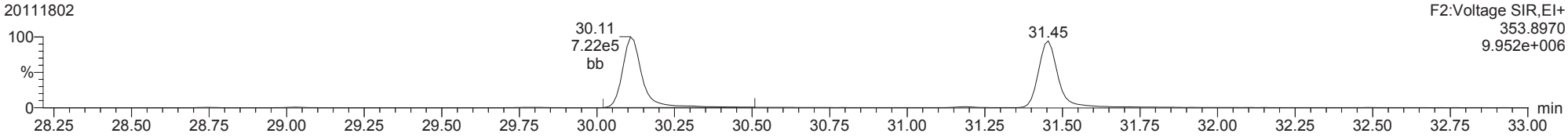
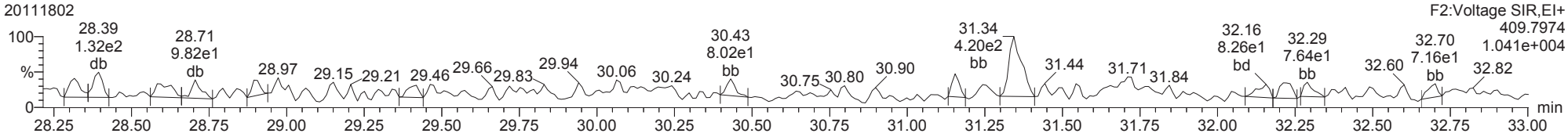


FUNCTION2 HPCDPE



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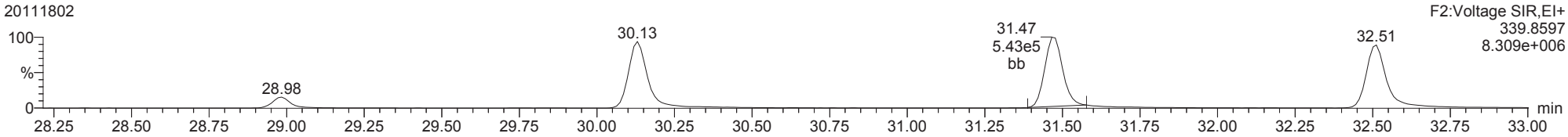
23478-PeCDF



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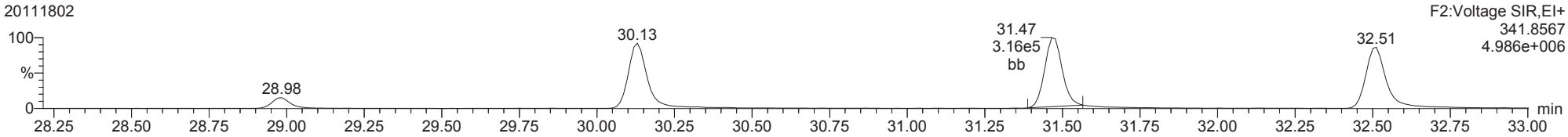

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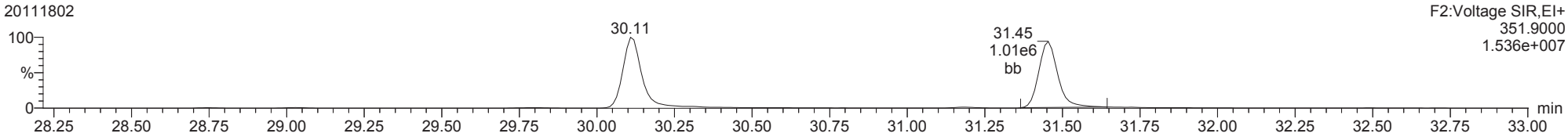

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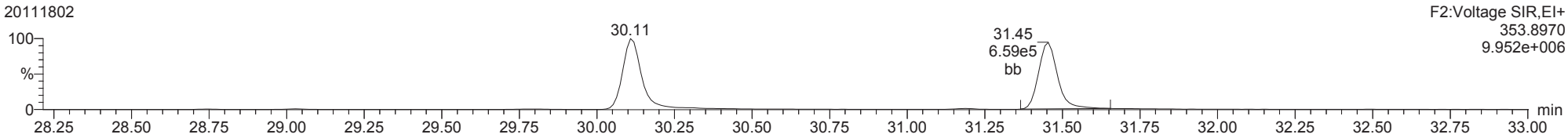

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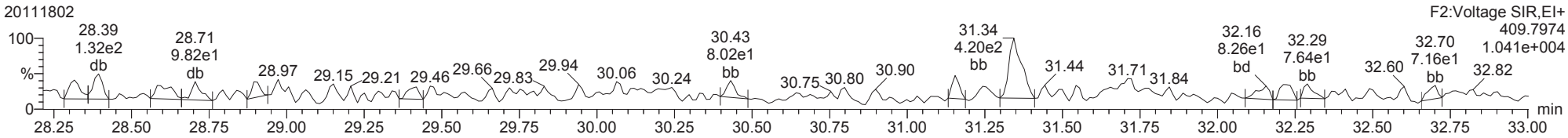

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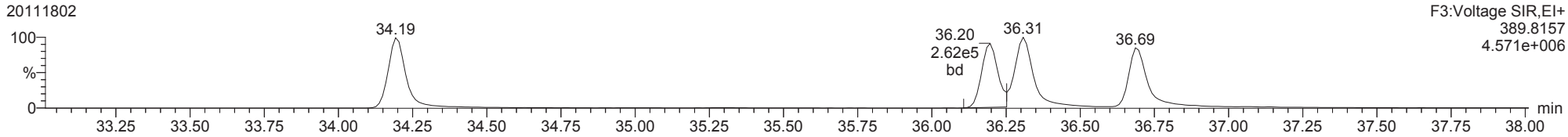
123478-HxCDD



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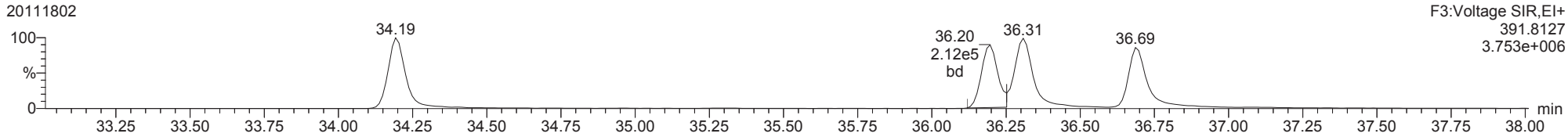

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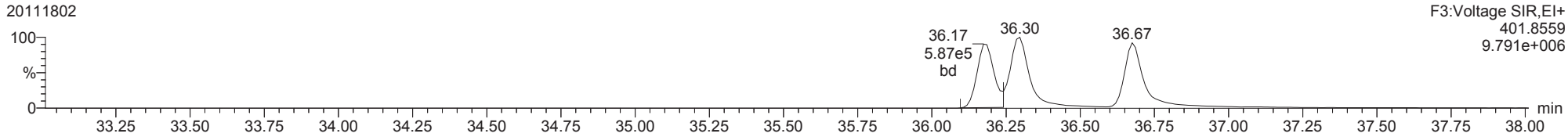

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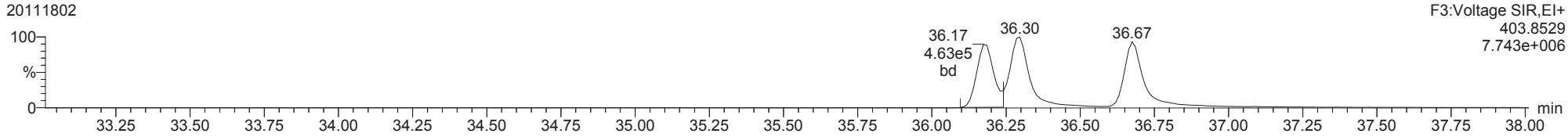

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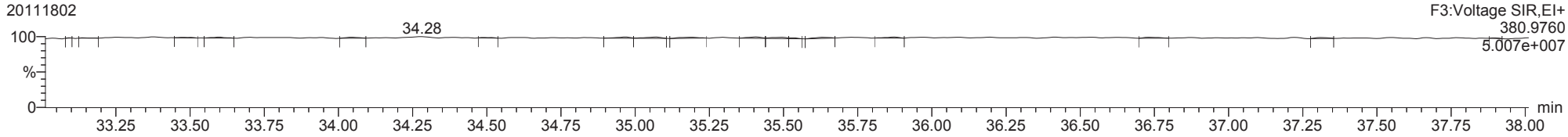

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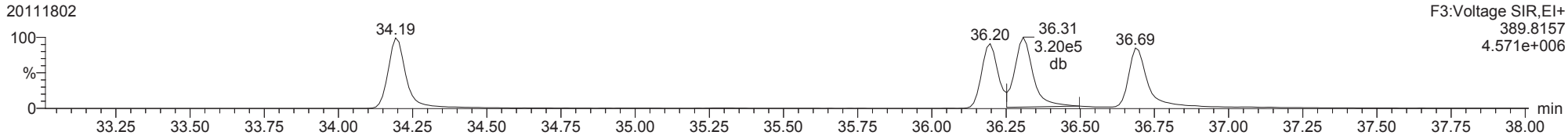

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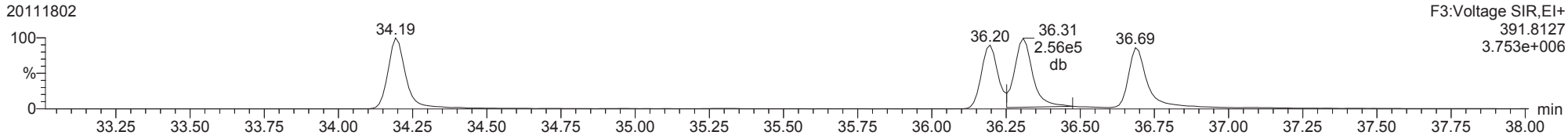

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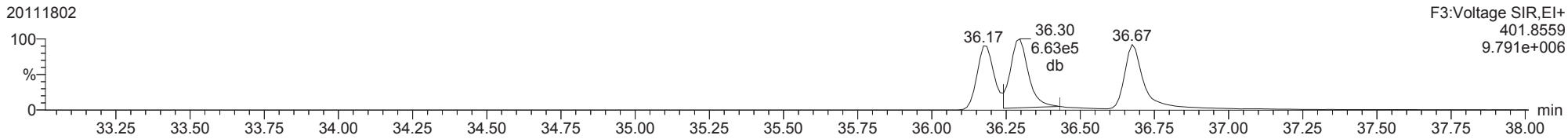

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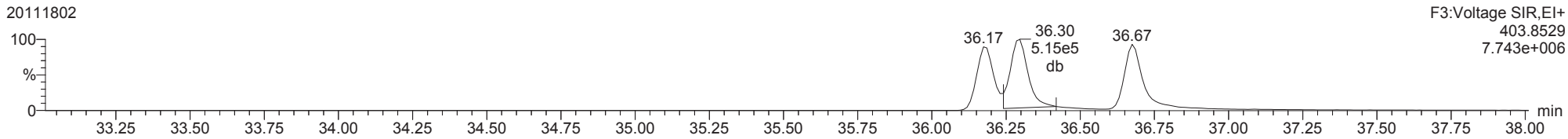

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ID: CS3R1, Name: 20111802, Date: 18-Nov-2020, Time: 11:32:50, Conditions: AUTOSPEC01, User: pk

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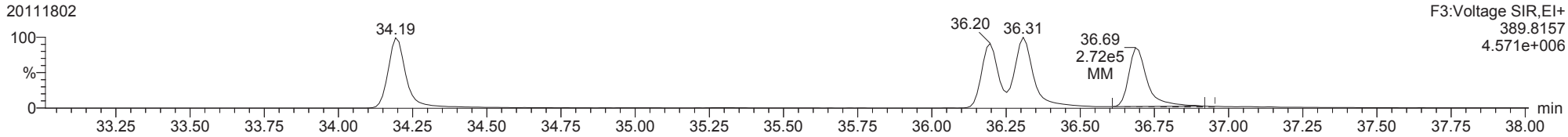

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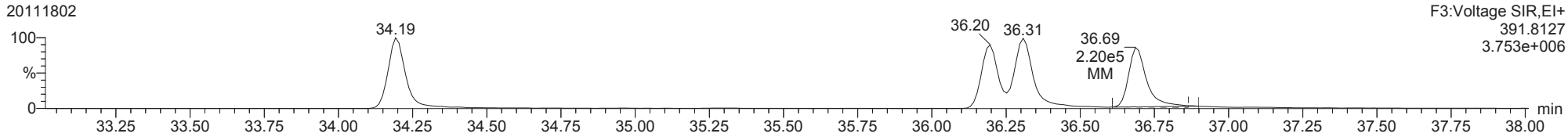

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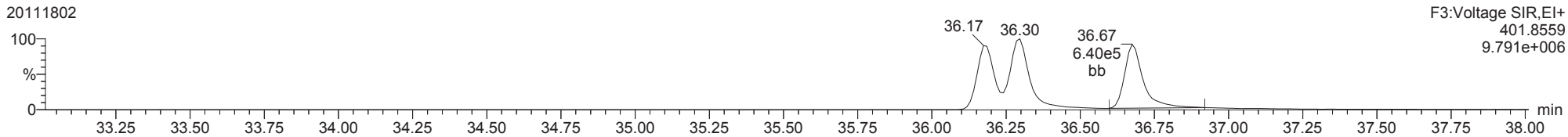

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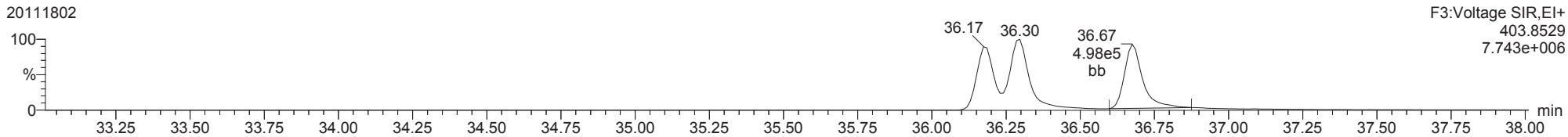

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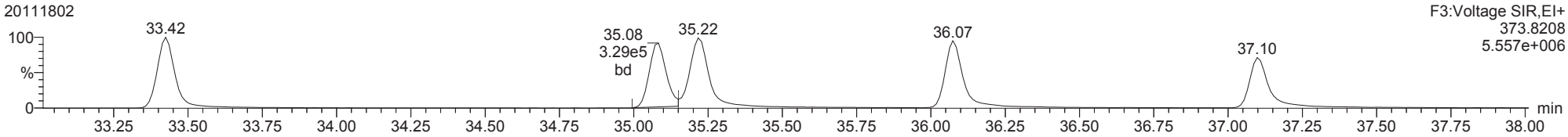
123478-HxCDF



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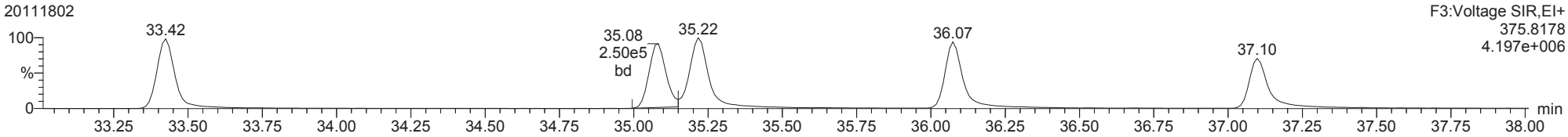

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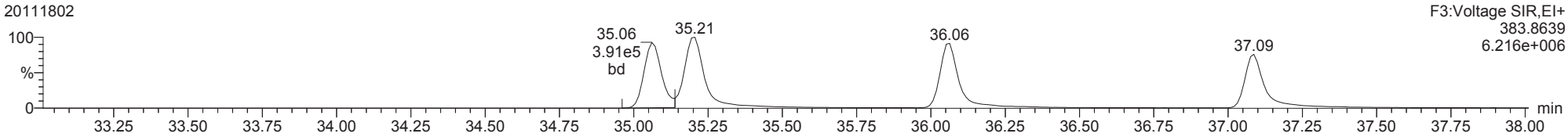

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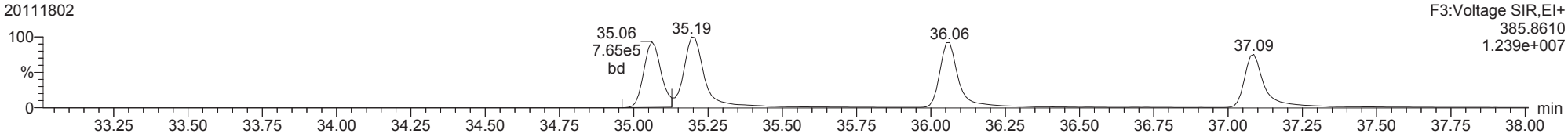

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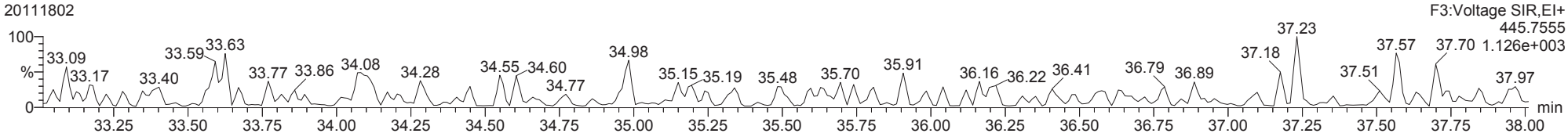

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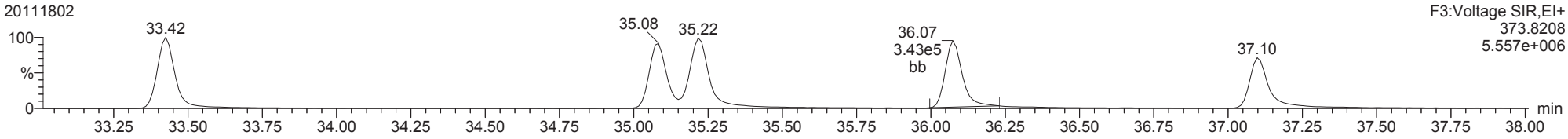
234678-HxCDF



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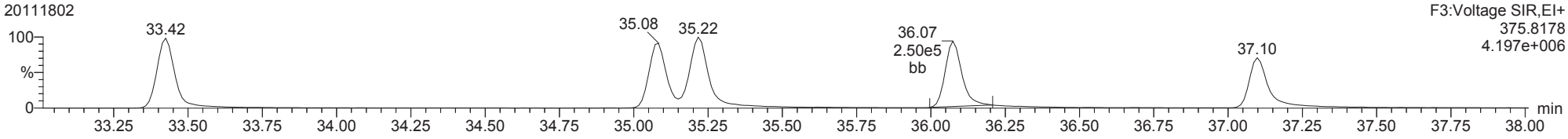

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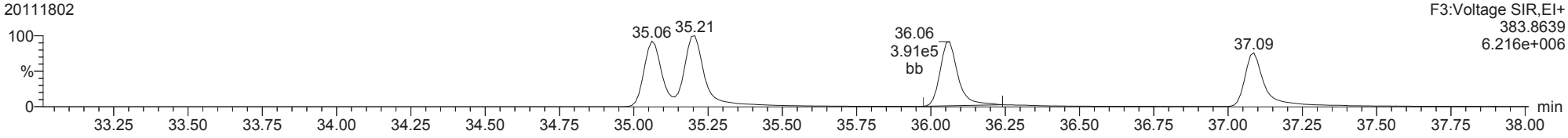

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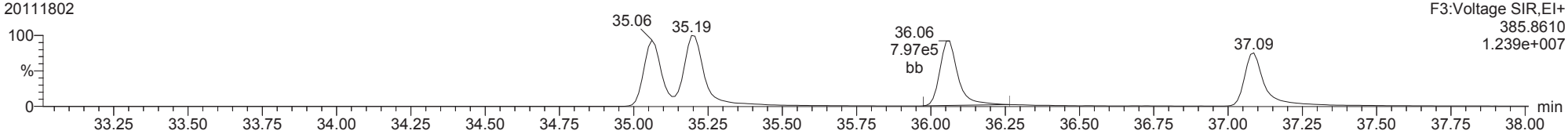

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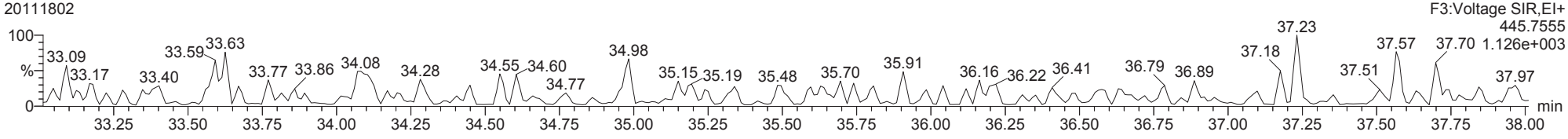

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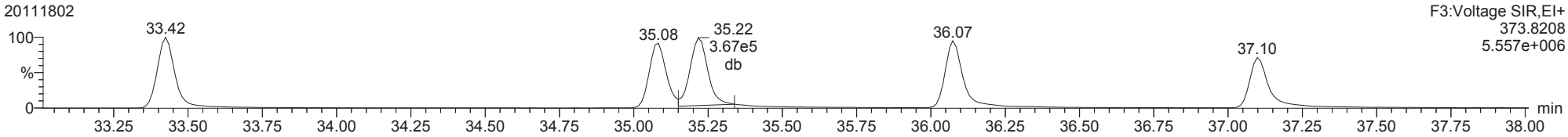

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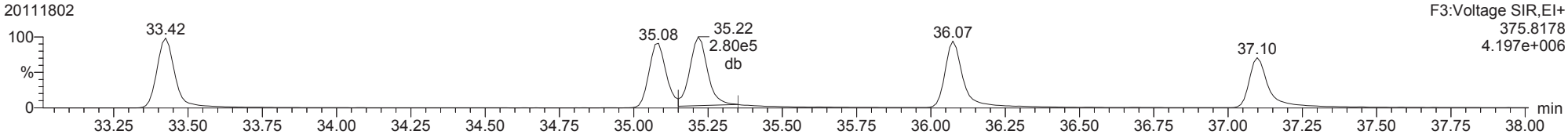

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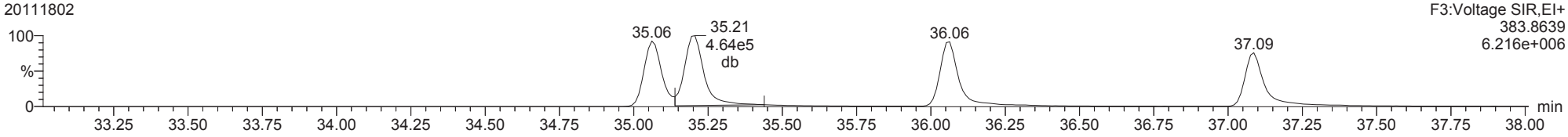

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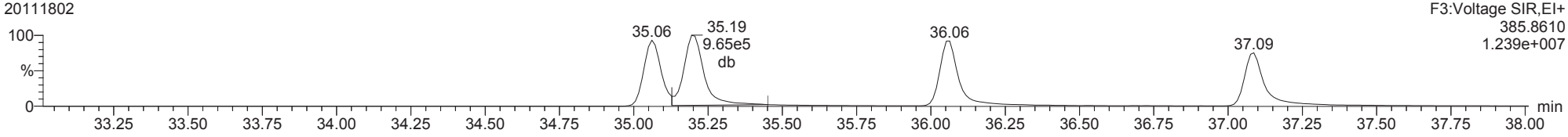

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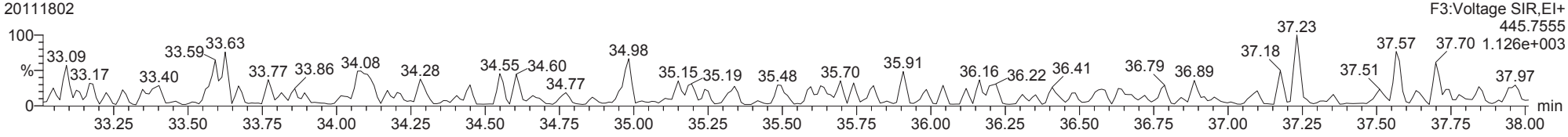

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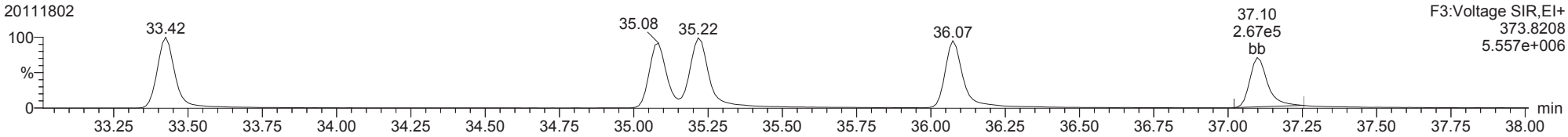

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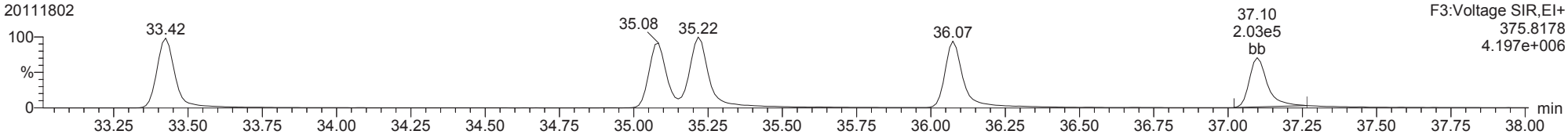

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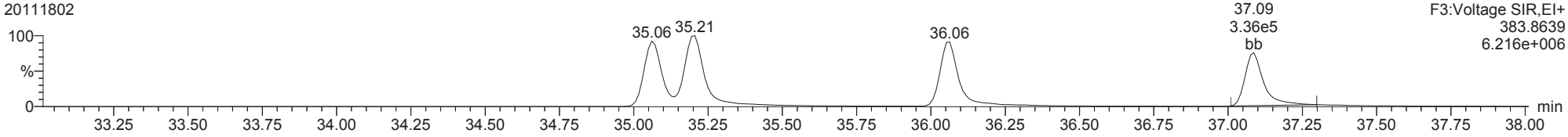

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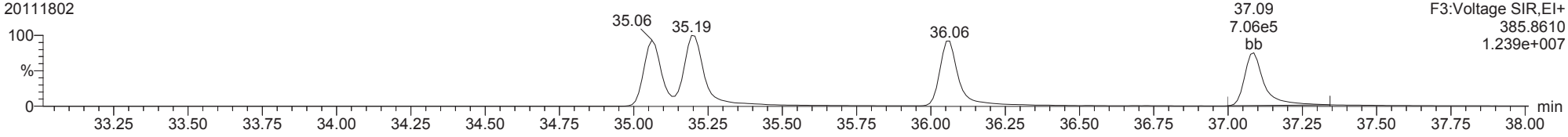

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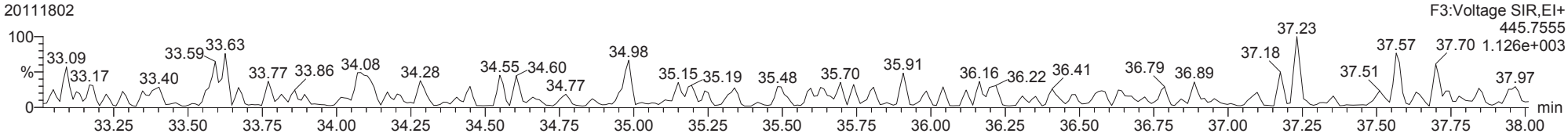

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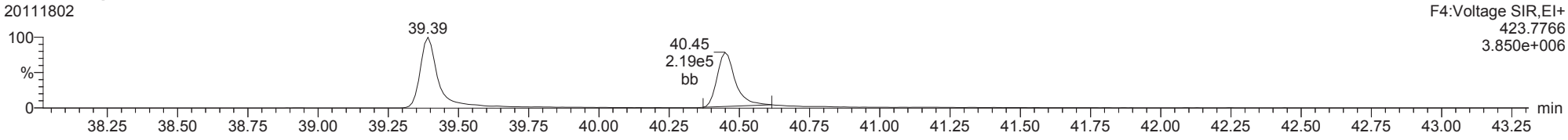

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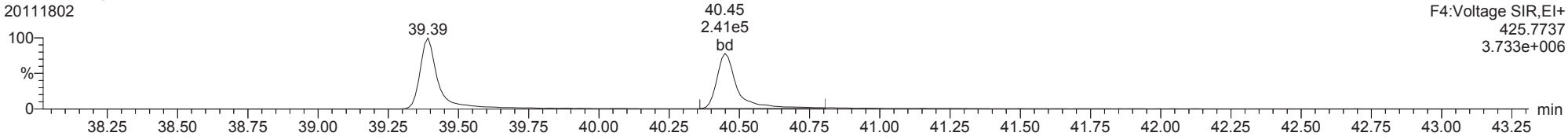

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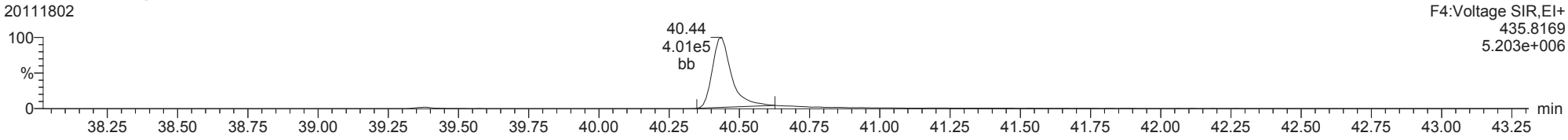

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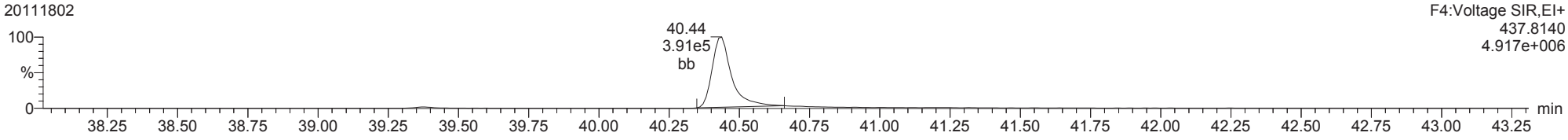
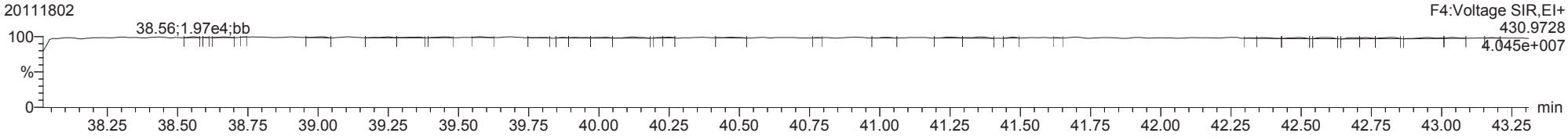


FUNCTION4 PFK



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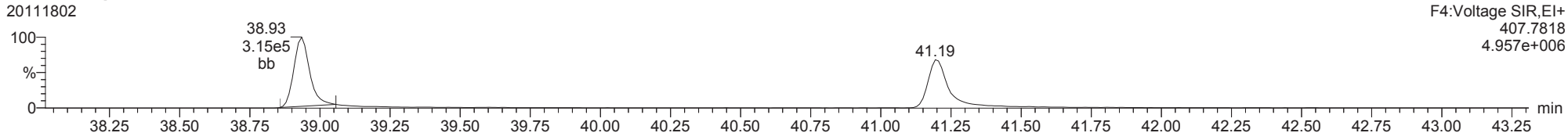
1234678-HpCDF



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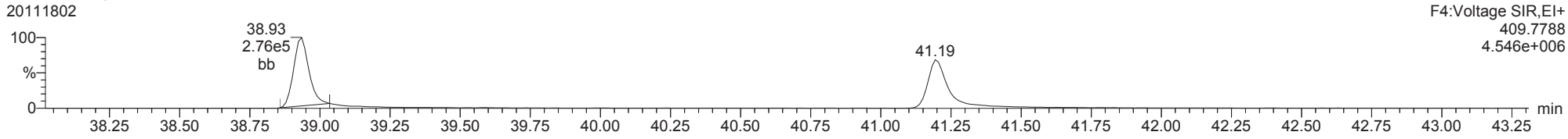

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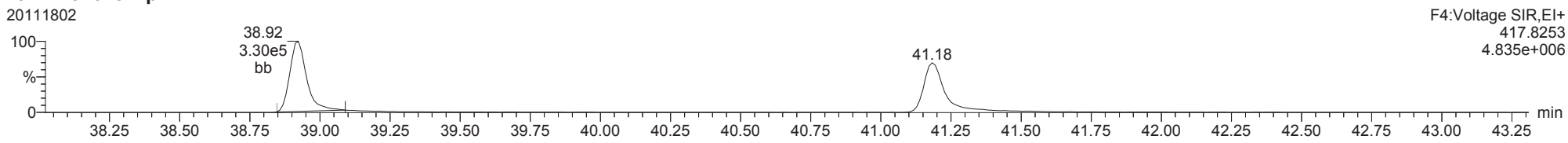

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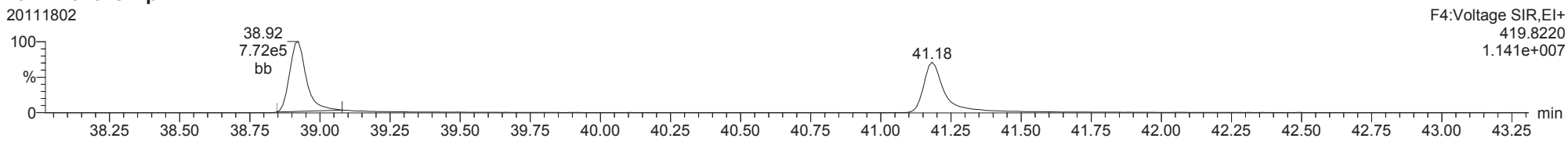
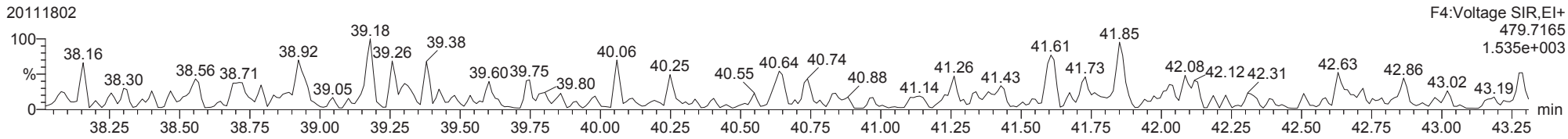


FUNCTION4 NCDPE



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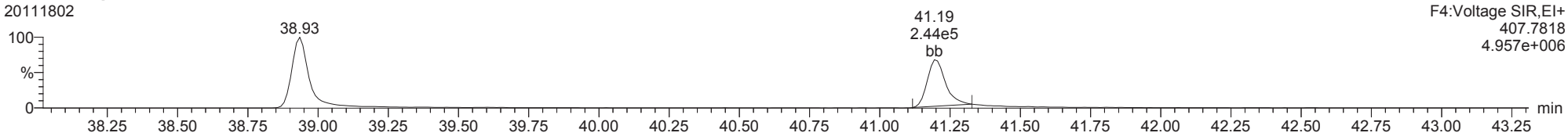
1234789-HpCDF



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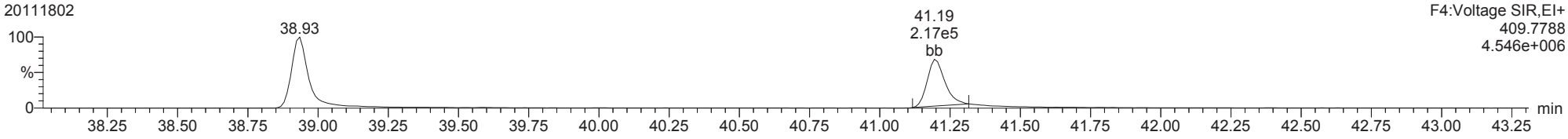

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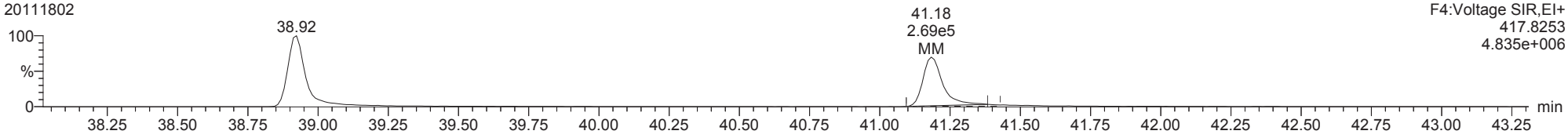

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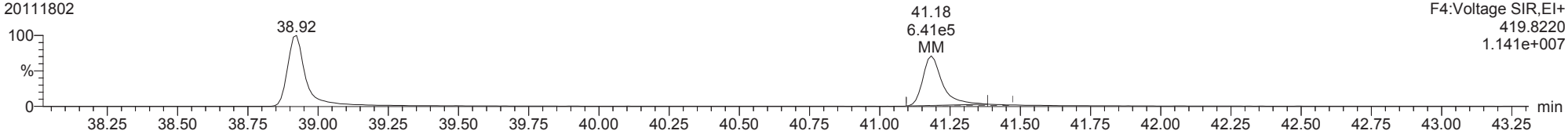

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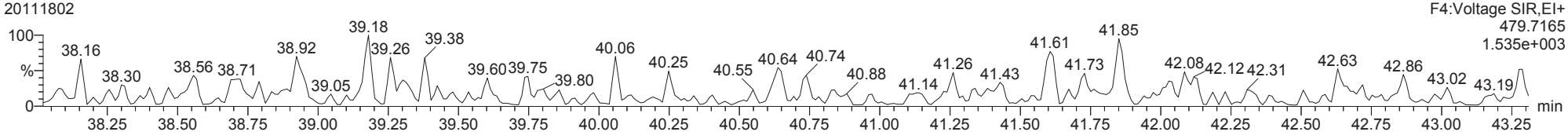

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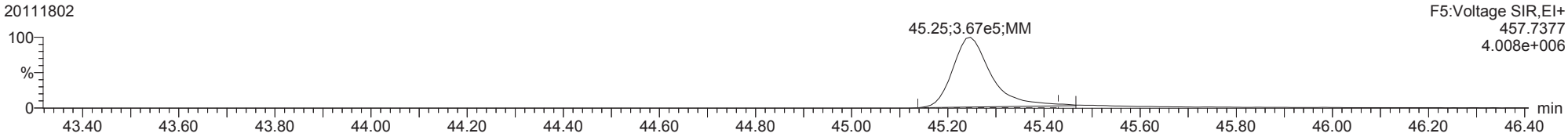
OCDD



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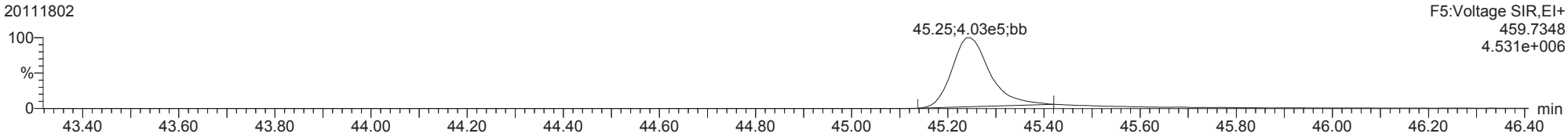

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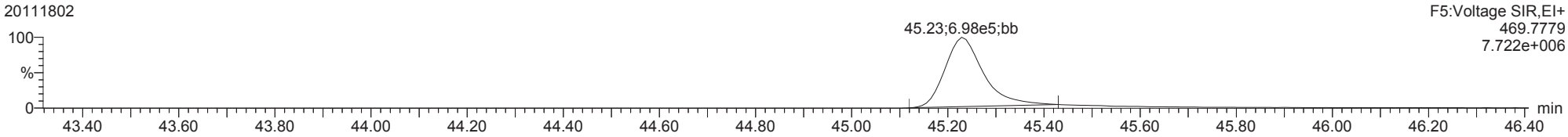

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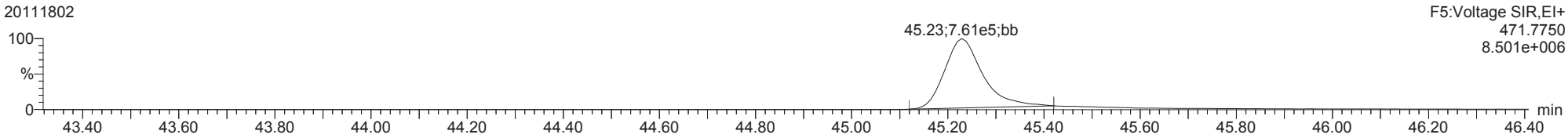
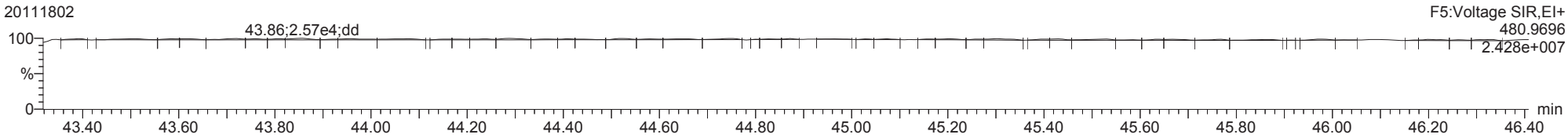


FUNCTION5 PFK



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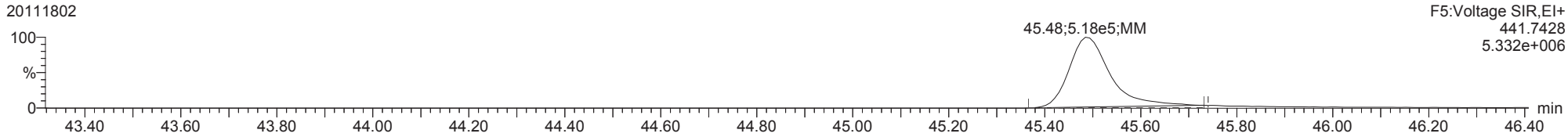
OCDF



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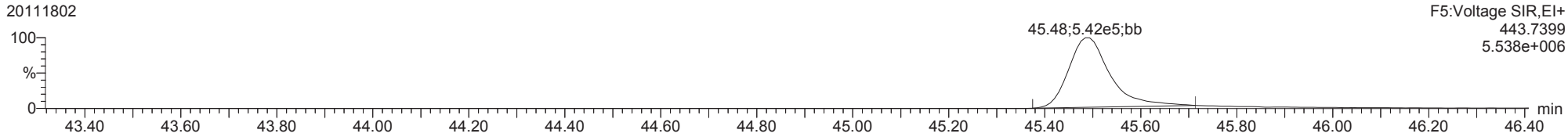

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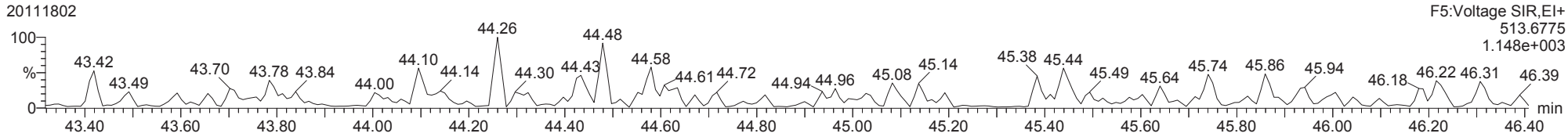

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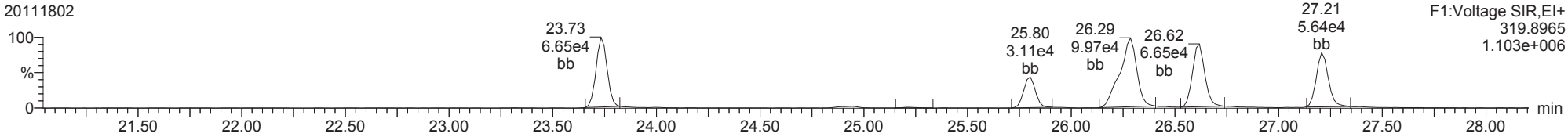
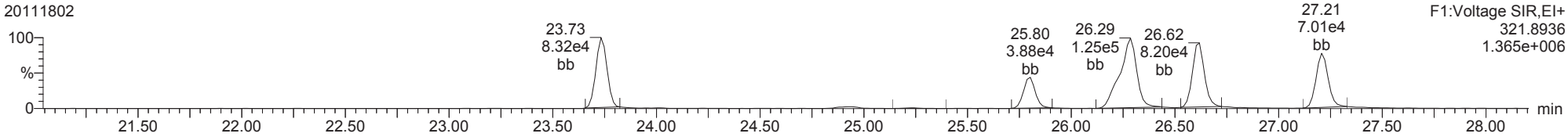
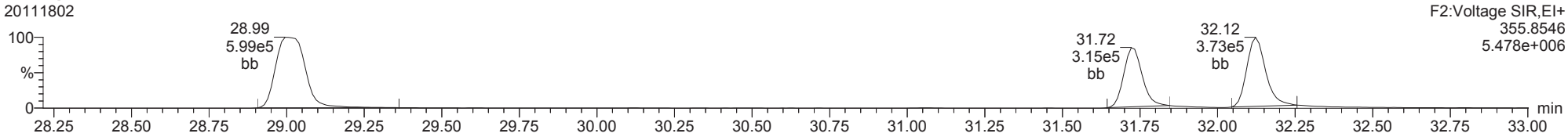
Total-tetradioxins



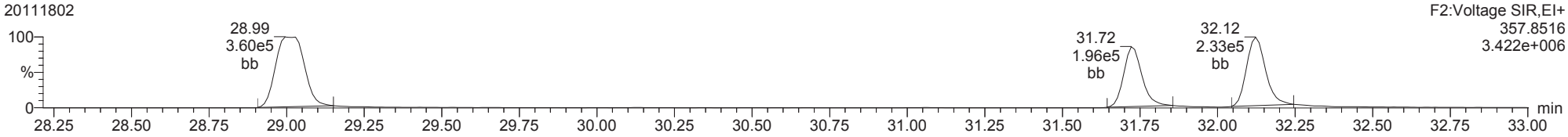
Total-tetradioxins



Total-pentadioxins



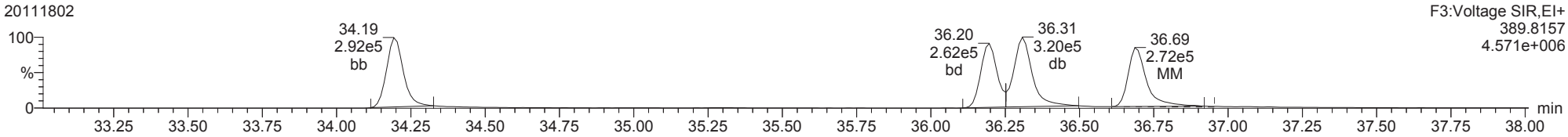
Total-pentadioxins



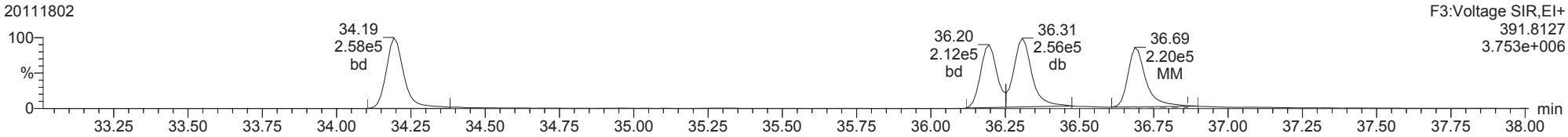
Dataset: T:\Autospec\Processed Data Batch\201118OP.qld
Last Altered: Wednesday, November 18, 2020 14:37:46 Pacific Standard Time
Printed: Thursday, November 19, 2020 09:52:11 Pacific Standard Time

ID: CS3R1, Name: 20111802, Date: 18-Nov-2020, Time: 11:32:50, Conditions: AUTOSPEC01, User: pk

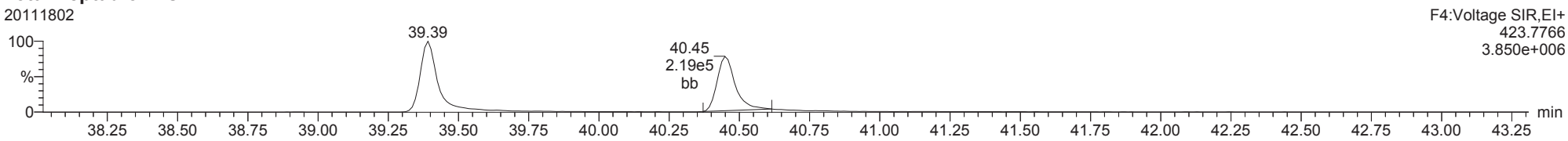
Total-hexadioxins



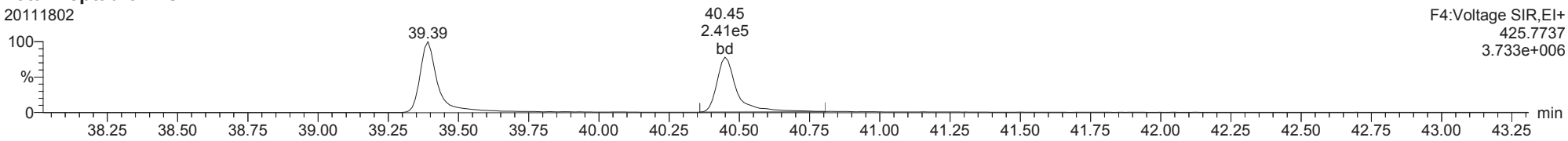
Total-hexadioxins



Total-heptadioxins



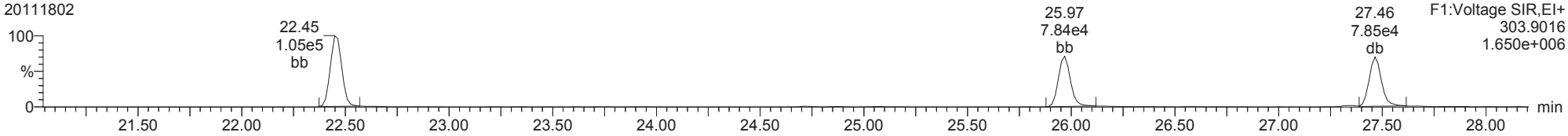
Total-heptadioxins



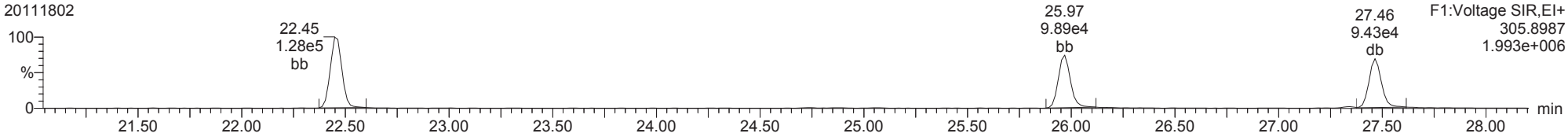
Dataset: T:\Autospec\Processed Data Batch\201118OP.qld
Last Altered: Wednesday, November 18, 2020 14:37:46 Pacific Standard Time
Printed: Thursday, November 19, 2020 09:52:11 Pacific Standard Time

ID: CS3R1, Name: 20111802, Date: 18-Nov-2020, Time: 11:32:50, Conditions: AUTOSPEC01, User: pk

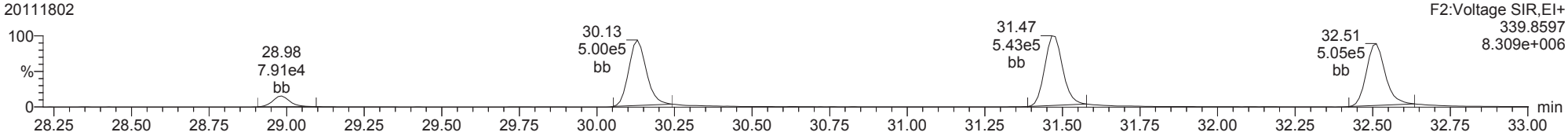
Total-tetrafurans



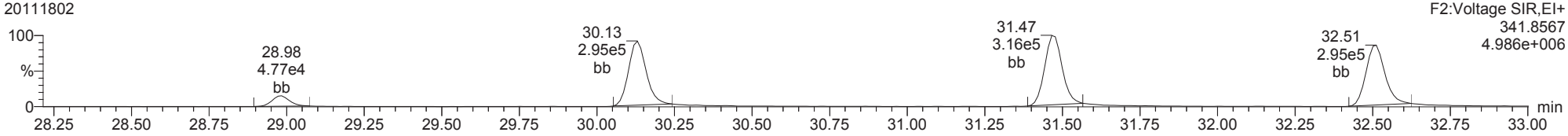
Total-tetrafurans



Total-pentafurans



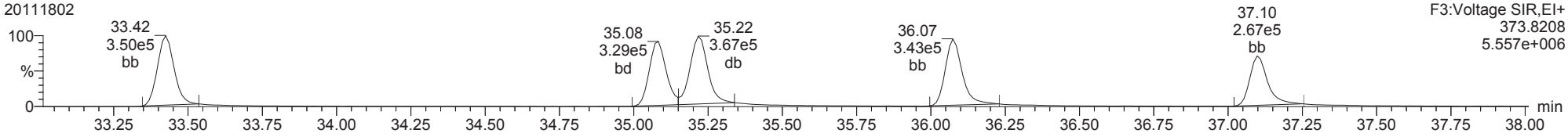
Total-pentafurans



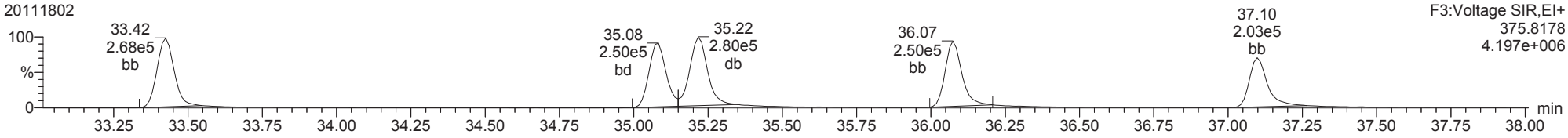
Dataset: T:\Autospec\Processed Data Batch\201118OP.qld
Last Altered: Wednesday, November 18, 2020 14:37:46 Pacific Standard Time
Printed: Thursday, November 19, 2020 09:52:11 Pacific Standard Time

ID: CS3R1, Name: 20111802, Date: 18-Nov-2020, Time: 11:32:50, Conditions: AUTOSPEC01, User: pk

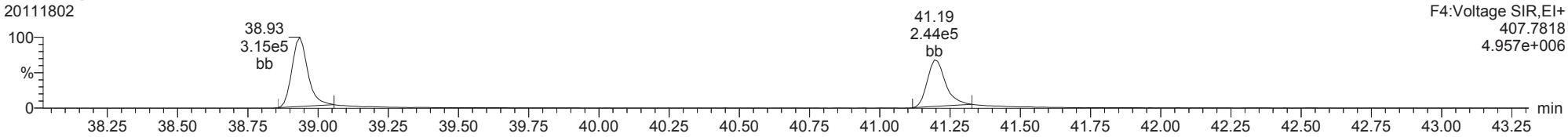
Total-hexafurans



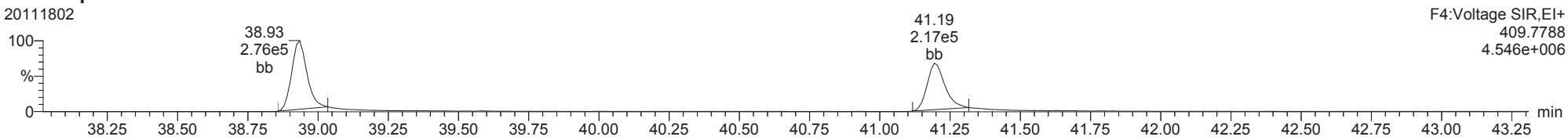
Total-hexafurans



Total-heptafurans

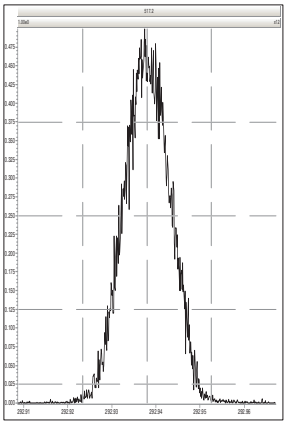


Total-heptafurans

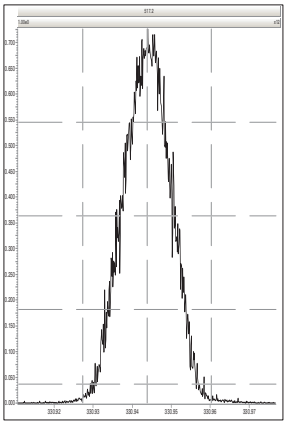


Printed: Wednesday, November 18, 2020 11:32:18 Pacific Standard Time

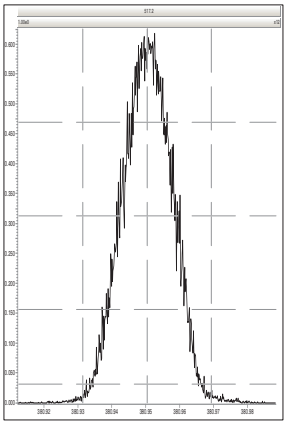
M 292.9824 R 13699



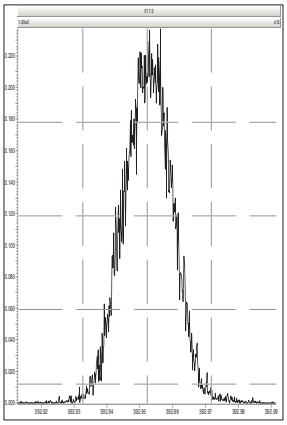
M 330.9792 R 12919



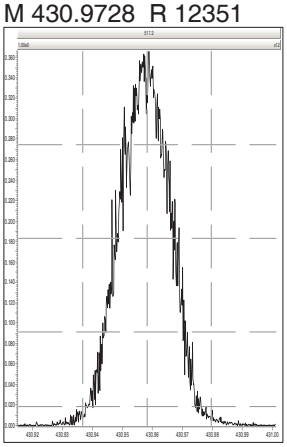
M 380.9760 R 12138



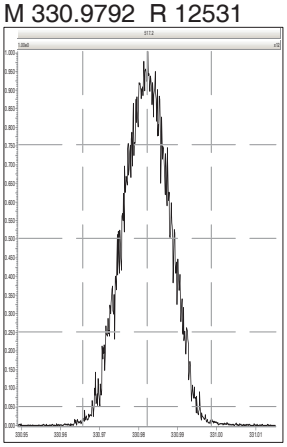
M 392.9760 R 12600



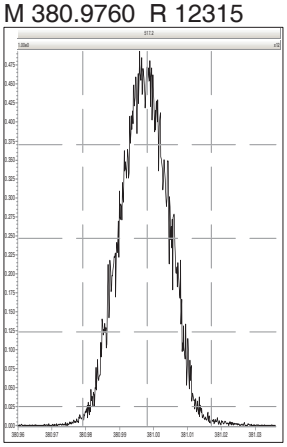
M 430.9728 R 12351



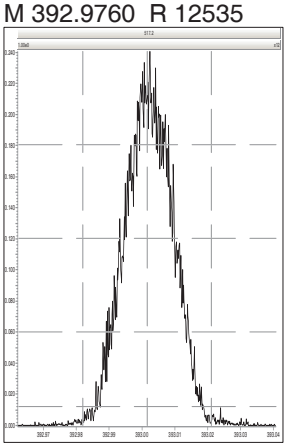
M 330.9792 R 12531



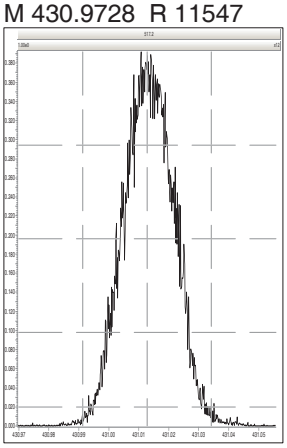
M 380.9760 R 12315



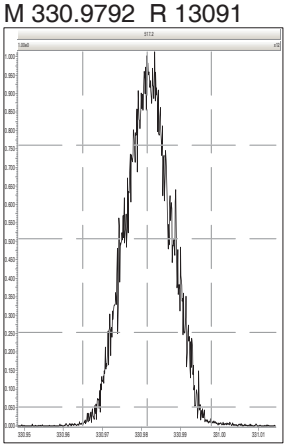
M 392.9760 R 12535



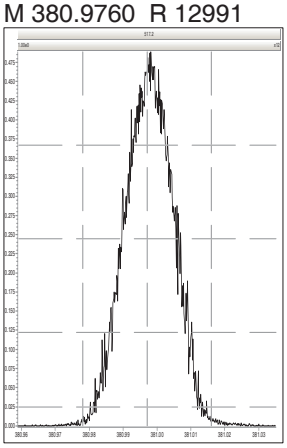
M 430.9728 R 11547



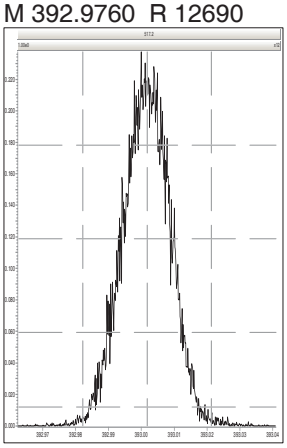
M 330.9792 R 13091



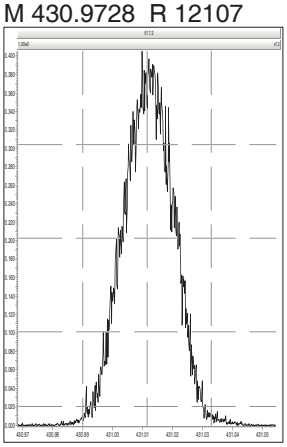
M 380.9760 R 12991



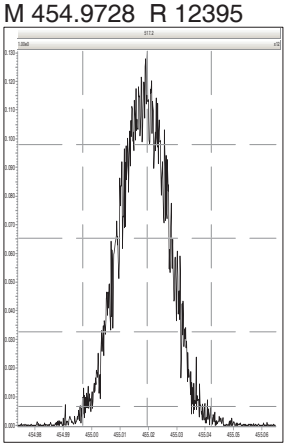
M 392.9760 R 12690



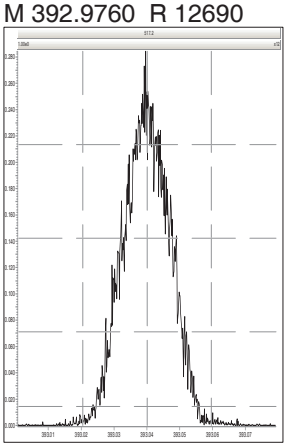
M 430.9728 R 12107



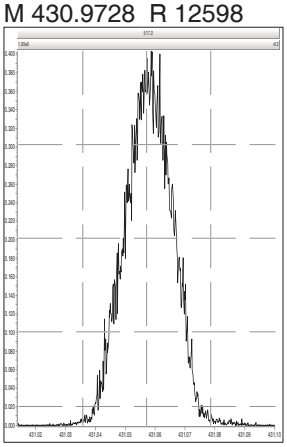
M 454.9728 R 12395



M 392.9760 R 12690

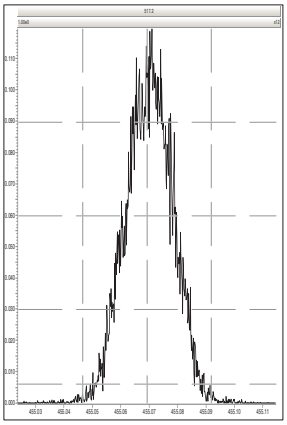


M 430.9728 R 12598

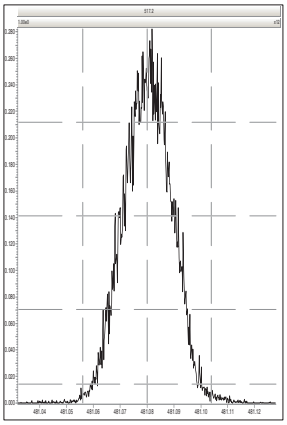


Printed: Wednesday, November 18, 2020 11:32:18 Pacific Standard Time

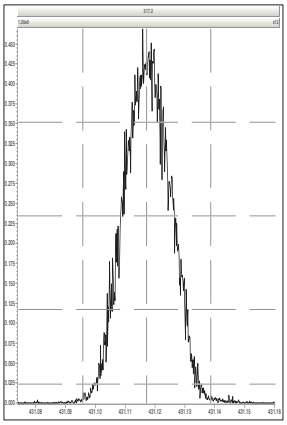
M 454.9728 R 13026



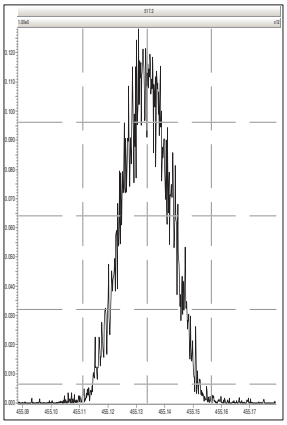
M 480.9696 R 11876



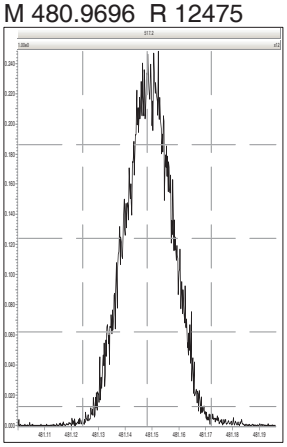
M 430.9728 R 13227



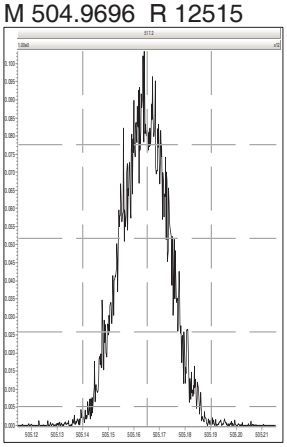
M 454.9728 R 12926



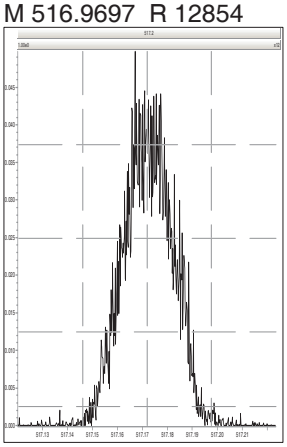
M 480.9696 R 12475

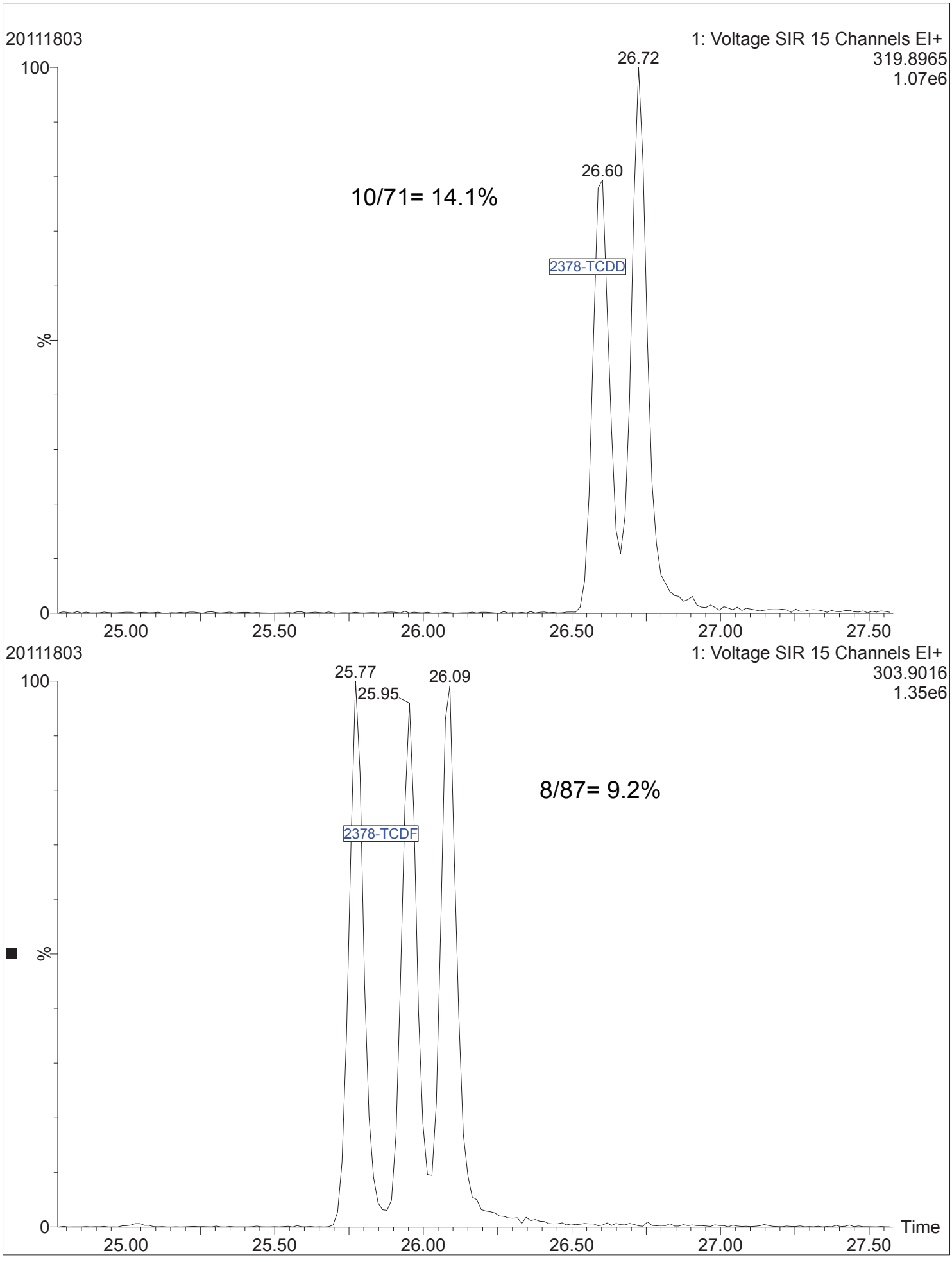


M 504.9696 R 12515



M 516.9697 R 12854




20111803
1: Voltage SIR 15 Channels EI+
319.8965
1.07e6
26.72
26.60
10/71= 14.1%
2378-TCDD
100
%
0
25.00
25.50
26.00
26.50
27.00
27.50
20111803
1: Voltage SIR 15 Channels EI+
303.9016
1.35e6
25.77
25.95
26.09
8/87= 9.2%
2378-TCDF
100
%
0
Time
25.00
25.50
26.00
26.50
27.00
27.50

INITIAL CALIBRATION CHECK

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Instrument ID:	AUTOSPEC01	Calibration:	DJ00101
Lab File ID:	20112302	Calibration Date:	10/29/2020
Sequence:	SIK0339	Injection Date:	11/23/20
Lab Sample ID:	SIK0339-ICV1	Injection Time:	10:28
Sequence Name:	CS3S1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
2,3,7,8-TCDF	A	10.000	10.3	0.7286530	0.7538999		3.5	+/-16	
2,3,7,8-TCDD	A	10.000	10.0	1.2382330	1.2396010		0.1	+/-22	
1,2,3,7,8-PeCDF	A	50.000	59.3	0.7793430	0.9242336		18.6	+/-18	
2,3,4,7,8-PeCDF	A	50.000	57.4	0.8804697	1.0101150		14.7	+/-18	
1,2,3,7,8-PeCDD	A	50.000	52.3	0.9876417	1.0322270		4.5	+/-22	
1,2,3,4,7,8-HxCDF	A	50.000	56.6	0.8802689	0.9956343		13.1	+/-10	*
1,2,3,6,7,8-HxCDF	A	50.000	49.1	0.8533425	0.8378127		-1.8	+/-12	
2,3,4,6,7,8-HxCDF	A	50.000	54.8	0.8627805	0.9462868		9.7	+/-12	
1,2,3,7,8,9-HxCDF	A	50.000	54.8	0.7800802	0.8556786		9.7	+/-10	
1,2,3,4,7,8-HxCDD	A	50.000	53.7	0.8417578	0.9035692		7.3	+/-22	
1,2,3,6,7,8-HxCDD	A	50.000	54.2	0.9070901	0.9835772		8.4	+/-22	
1,2,3,7,8,9-HxCDD	A	50.000	51.0	0.7836605	0.7997214		2.0	+/-18	
1,2,3,4,6,7,8-HpCDF	A	50.000	50.2	1.0008820	1.0054550		0.5	+/-10	
1,2,3,4,7,8,9-HpCDF	A	50.000	55.4	0.9939216	1.1008410		10.8	+/-14	
1,2,3,4,6,7,8-HpCDD	A	50.000	48.4	1.0436860	1.0097280		-3.3	+/-14	
OCDF	A	100.00	113	1.1579670	1.3105930		13.2	+/-37	
OCDD	A	100.00	104	0.9629974	1.0023730		4.1	+/-21	
13C12-2,3,7,8-TCDF	A	100.00	92.6	2.2029620	2.0396410		-7.4	+/-29	
13C12-2,3,7,8-TCDD	A	100.00	91.5	1.1814920	1.0811234		-8.5	+/-18	
13C12-1,2,3,7,8-PeCDF	A	100.00	86.3	1.7411380	1.5017931		-13.7	+/-24	
13C12-2,3,4,7,8-PeCDF	A	100.00	86.9	1.6694980	1.4507802		-13.1	+/-23	
13C12-1,2,3,7,8-PeCDD	A	100.00	89.8	0.9778844	0.8783130		-10.2	+/-38	
13C12-1,2,3,4,7,8-HxCDF	A	100.00	97.9	1.0222270	1.0006423		-2.1	+/-24	
13C12-1,2,3,6,7,8-HxCDF	A	100.00	111	1.2001070	1.3316467		11.0	+/-30	
13C12-2,3,4,6,7,8-HxCDF	A	100.00	94.1	1.0710950	1.0073983		-5.9	+/-27	
13C12-1,2,3,7,8,9-HxCDF	A	100.00	95.7	0.9186022	0.8793919		-4.3	+/-26	
13C12-1,2,3,4,7,8-HxCDD	A	100.00	93.7	0.9649715	0.9041873		-6.3	+/-15	
13C12-1,2,3,6,7,8-HxCDD	A	100.00	93.4	1.1680800	1.0912695		-6.6	+/-15	
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	112	0.9085870	1.0169701		11.9	+/-22	
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	99.6	0.7235789	0.7210384		-0.4	+/-23	
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	106	0.6453514	0.6835059		5.9	+/-18	

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Instrument ID:	AUTOSPEC01	Calibration:	DJ00101
Lab File ID:	20112302	Calibration Date:	10/29/2020
Sequence:	SIK0339	Injection Date:	11/23/20
Lab Sample ID:	SIK0339-ICV1	Injection Time:	10:28
Sequence Name:	CS3S1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
13C12-OCDD	A	200.00	192	0.6782670	0.6500249		-4.2	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	9.22	1.2644890	1.1659770		-7.8	+/-21

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 09:56:02 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: CS3S1, Name: 20112302, Date: 23-Nov-2020, Time: 10:28:28, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.908	1.001	7.008e4	8.591e4	0.729	0.816	0.770	1251	3215	1.03e6	1.24e6	820.0	385.1	NO	bb	bb	10.346
12378-PeCDF	30.063	1.001	4.479e5	2.561e5	0.779	1.749	1.550	4123	4613	6.55e6	3.88e6	1588.4	840.3	NO	bb	bb	59.296
23478-PeCDF	31.399	1.000	4.661e5	2.772e5	0.880	1.681	1.550	4123	4613	6.85e6	4.09e6	1662.6	887.1	NO	bb	bb	57.362
123478-HxCDF	35.016	1.001	2.858e5	2.214e5	0.880	1.291	1.240	3541	3186	4.41e6	3.38e6	1245.8	1061.4	NO	bd	bd	56.553
234678-HxCDF	36.007	1.000	2.788e5	2.066e5	0.863	1.350	1.240	3541	3186	4.23e6	3.21e6	1193.3	1007.4	NO	bb	bb	54.839
123678-HxCDF	35.150	1.001	3.202e5	2.478e5	0.853	1.292	1.240	3541	3186	4.75e6	3.61e6	1340.6	1131.8	NO	db	db	49.090
123789-HxCDF	37.031	1.000	2.177e5	1.654e5	0.780	1.316	1.240	3541	3186	3.19e6	2.42e6	901.0	758.2	NO	bb	bb	54.846
1234678-HpCDF	38.868	1.000	2.722e5	2.484e5	1.001	1.096	1.050	5327	3908	4.14e6	3.76e6	776.8	960.9	NO	bb	bb	50.228
1234789-HpCDF	41.127	1.000	2.089e5	1.952e5	0.994	1.071	1.050	5327	3908	2.70e6	2.46e6	506.2	628.5	NO	bb	bb	55.379
OCDF	45.393	1.006	4.210e5	4.465e5	1.158	0.943	0.890	4560	2039	4.50e6	4.82e6	987.8	2362.3	NO	bb	bb	113.181
2378-TCDD	26.543	1.001	5.975e4	7.620e4	1.238	0.784	0.770	1653	1507	8.48e5	1.08e6	513.3	718.9	NO	bb	bd	10.011
12378-PeCDD	31.655	1.000	2.788e5	1.811e5	0.988	1.540	1.550	3100	2280	4.06e6	2.57e6	1308.3	1128.2	NO	bb	bb	52.257
123478-HxCDD	36.130	1.000	2.284e5	1.875e5	0.842	1.218	1.240	2288	3987	3.66e6	2.94e6	1598.6	736.7	NO	bd	bd	53.672
123678-HxCDD	36.241	1.000	3.021e5	2.443e5	0.907	1.237	1.240	2288	3987	3.90e6	3.17e6	1702.9	796.0	NO	db	db	54.216
123789-HxCDD	36.619	1.011	2.243e5	1.819e5	0.784	1.233	1.240	2288	3987	3.09e6	2.54e6	1352.6	637.5	NO	bb	bb	51.025
1234678-HpCDD	40.381	1.000	1.835e5	1.679e5	1.044	1.093	1.050	3463	3987	2.44e6	2.24e6	704.7	560.7	NO	bb	bb	48.373
OCDD	45.146	1.000	3.073e5	3.561e5	0.963	0.863	0.890	4471	4161	3.31e6	3.89e6	741.0	934.1	NO	bb	bb	104.089
13C-2378-TCDF	25.893	1.007	9.021e5	1.167e6	2.203	0.773	0.770	5348	3493	1.26e7	1.60e7	2354.1	4580.1	NO	bb	bb	92.586
13C-12378-PeCDF	30.041	1.168	9.153e5	6.082e5	1.741	1.505	1.550	2960	3684	1.24e7	8.31e6	4187.9	2257.0	NO	bb	bd	86.254
13C-23478-PeCDF	31.388	1.221	8.897e5	5.820e5	1.669	1.529	1.550	2960	3684	1.20e7	7.87e6	4069.8	2135.1	NO	bb	bb	86.899
13C-123478-HxCDF	34.994	0.956	3.426e5	6.763e5	1.022	0.507	0.510	1720	3381	5.08e6	1.02e7	2951.9	3030.0	NO	bd	bd	97.888
13C-123678-HxCDF	35.128	0.960	4.223e5	9.335e5	1.200	0.452	0.510	1720	3381	5.42e6	1.09e7	3150.8	3226.5	NO	db	db	110.961
13C-234678-HxCDF	35.996	0.983	3.335e5	6.923e5	1.071	0.482	0.510	1720	3381	4.77e6	9.49e6	2776.3	2806.7	NO	bb	bb	94.053
13C-123789-HxCDF	37.020	1.011	2.943e5	6.011e5	0.919	0.490	0.510	1720	3381	3.89e6	7.89e6	2264.0	2332.9	NO	bb	bb	95.732
13C-1234678-HpCDF	38.856	1.061	2.919e5	7.436e5	0.909	0.393	0.440	3918	5425	4.13e6	9.60e6	1054.0	1769.1	NO	bb	bd	111.929
13C-1234789-HpCDF	41.105	1.123	2.112e5	5.230e5	0.724	0.404	0.440	3918	5425	2.68e6	6.36e6	685.2	1172.8	NO	bb	bb	99.649
13C-1234-TCDD	25.712	0.000	4.584e5	5.560e5	1.000	0.825	0.770	3985	1853	6.99e6	8.43e6	1754.7	4550.8	NO	bb	bb	100.000
13C-2378-TCDD	26.528	1.032	4.953e5	6.014e5	1.181	0.824	0.770	3985	1853	6.97e6	8.47e6	1749.2	4567.9	NO	bb	bb	91.505
13C-12378-PeCDD	31.644	1.231	5.492e5	3.418e5	0.978	1.607	1.550	2000	1779	7.53e6	4.67e6	3765.3	2626.7	NO	bb	bb	89.818
13C-123478-HxCDD	36.118	0.987	5.163e5	4.043e5	0.965	1.277	1.240	2873	2420	7.80e6	6.08e6	2714.1	2512.8	NO	bd	bd	93.701
13C-123678-HxCDD	36.230	0.990	6.136e5	4.975e5	1.168	1.233	1.240	2873	2420	8.39e6	6.72e6	2920.7	2777.4	NO	db	db	93.424
13C-1234678-HpCDD	40.359	1.102	3.491e5	3.469e5	0.645	1.006	1.050	2265	2889	4.42e6	4.14e6	1949.8	1433.5	NO	bb	bd	105.912
13C-OCDD	45.127	1.233	6.146e5	7.092e5	0.678	0.867	0.890	3574	4431	6.38e6	7.03e6	1785.4	1587.7	NO	bb	MM	191.672
13C-123789-HxCDD	36.608	0.000	5.777e5	4.405e5	1.000	1.311	1.240	2873	2420	7.31e6	5.76e6	2544.7	2379.4	NO	bb	bb	100.000
37CL-2378-TCDD	26.543	1.032	1.183e5		1.264			3323		1.61e6		483.9			bb		9.221

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 09:56:02 Pacific Standard Time

ID: CS3S1, Name: 20112302, Date: 23-Nov-2020, Time: 10:28:28, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.388	0.865	9.657e4	1.221e5	0.846	0.791	0.770	1251	3215	1.53e6	1.91e6	1225.9	593.2	NO	bb	bb	12.490
1289-TCDF	27.404	1.058	6.660e4	8.495e4	0.688	0.784	0.770	1251	3215	9.69e5	1.21e6	774.3	377.1	NO	bb	db	10.650
13468-PECDF	27.253	0.907	5.642e5	3.762e5	1.181	1.500	1.550	556	1419	8.36e6	5.63e6	15047.0	3971.2	NO	bb	bb	52.249
12389-PECDF	32.445	1.080	4.354e5	2.638e5	0.766	1.650	1.550	4123	4613	5.85e6	3.49e6	1419.2	756.9	NO	bb	bb	59.901
123468-HXCDF	33.358	0.953	3.122e5	2.293e5	1.003	1.362	1.240	3541	3186	4.69e6	3.44e6	1324.3	1079.1	NO	bb	bb	53.009
1368-TCDD	23.672	0.892	6.480e4	8.135e4	1.179	0.797	0.770	1653	1507	1.05e6	1.29e6	635.5	856.3	NO	bb	bb	11.306
1289-TCDD	27.147	1.023	5.605e4	6.359e4	1.042	0.881	0.770	1653	1507	7.79e5	8.89e5	471.1	590.1	NO	dd	bb	10.466
12479-PECDD	28.951	0.915	5.304e5	3.273e5	1.810	1.621	1.550	3100	2280	5.01e6	3.18e6	1616.4	1396.8	NO	bb	bb	53.177
12389-PECDD	32.056	1.013	3.273e5	2.038e5	1.165	1.605	1.550	3100	2280	4.38e6	2.74e6	1412.5	1203.7	NO	bb	bb	51.149
124679-HXCDD	34.126	0.945	2.872e5	2.178e5	1.056	1.319	1.240	2288	3987	3.87e6	3.09e6	1690.9	775.6	NO	bd	bb	51.922
1234679-HPCDD	39.324	0.974	2.402e5	2.145e5	1.285	1.120	1.050	3463	3987	3.14e6	2.95e6	907.5	740.1	NO	bd	bb	50.820
Total-tetrafurans			2.340e5		0.754			1251		3.54e6							33.591
Total-penta1			5.642e5					556		8.36e6							52.249
Total-pentafurans			1.423e6		0.809			4123		2.03e7							186.261
Total-hexafurans			1.415e6		0.876			3541		2.13e7							268.337
Total-heptafurans			4.811e5		0.997			5327		6.83e6							105.607
Total-Furans			4.538e6		0.893			1251		6.48e7							759.226
Total-tetradioxins			3.025e5		1.153			1653		4.06e6							53.444
Total-pentadioxins			1.136e6		1.321			3100		1.34e7							156.584
Total-hexadioxins			1.044e6		0.897			2288		1.46e7							211.188
Total-heptadioxins			4.237e5		1.165			3463		5.58e6							99.193
Total-Dioxins			3.214e6		1.100			1653		4.10e7							624.498
Total-TEQ			7.752e6					1653		1.06e8							1383.724
FUNCTION1 PFK			1.407e7					1088351		1.60e8							
FUNCTION2 PFK			2.197e6					499852		2.75e7							0.000
FUNCTION3 PFK			1.722e6					609432		3.08e7							0.000
FUNCTION4 PFK			2.098e6					556515		4.35e7							
FUNCTION5 PFK			1.864e6					469061		4.57e7							
FUNCTION1 HXCD...			2.866e2					544		4.89e3							0.000
FUNCTION1 HPCD...			9.671e2					1229		2.18e4							0.000
FUNCTION2 HPCD...			5.854e2					1304		1.16e4							0.000
FUNCTION3 OCDPE			0.000e0					377		0.00e0							
FUNCTION4 NCDPE			0.000e0					611		0.00e0							
FUNCTION5 DCDPE			0.000e0					425		0.00e0							

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: CS3S1, Name: 20112302, Date: 23-Nov-2020, Time: 10:28:28, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.40	6.660e4	8.495e4	0.688	0.78	0.77	774.3	YES	NO	bb	db	10.650
2	Total-tetrafurans	27.27	7.609e2	8.737e2	0.754	0.87	0.77	10.5	YES	NO	bb	bd	0.105
3	2378-TCDF	25.91	7.008e4	8.591e4	0.729	0.82	0.77	820.0	YES	NO	bb	bb	10.346
4	1368-TCDF	22.39	9.657e4	1.221e5	0.846	0.79	0.77	1225.9	YES	NO	bb	bb	12.490

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.25	5.642e5	3.762e5	1.181	1.50	1.55	15047.0	YES	NO	bb	bb	52.249

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.45	4.354e5	2.638e5	0.766	1.65	1.55	1419.2	YES	NO	bb	bb	59.901
2	23478-PeCDF	31.40	4.661e5	2.772e5	0.880	1.68	1.55	1662.6	YES	NO	bb	bb	57.362
3	12378-PeCDF	30.06	4.479e5	2.561e5	0.779	1.75	1.55	1588.4	YES	NO	bb	bb	59.296
4	Total-pentafurans	28.92	7.368e4	4.383e4	0.809	1.68	1.55	265.3	YES	NO	bb	bb	9.703

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.03	2.177e5	1.654e5	0.780	1.32	1.24	901.0	YES	NO	bb	bb	54.846
2	234678-HxCDF	36.01	2.788e5	2.066e5	0.863	1.35	1.24	1193.3	YES	NO	bb	bb	54.839
3	123678-HxCDF	35.15	3.202e5	2.478e5	0.853	1.29	1.24	1340.6	YES	NO	db	db	49.090
4	123478-HxCDF	35.02	2.858e5	2.214e5	0.880	1.29	1.24	1245.8	YES	NO	bd	bd	56.553
5	123468-HXCDF	33.36	3.122e5	2.293e5	1.003	1.36	1.24	1324.3	YES	NO	bb	bb	53.009

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.13	2.089e5	1.952e5	0.994	1.07	1.05	506.2	YES	NO	bb	bb	55.379
2	1234678-HpCDF	38.87	2.722e5	2.484e5	1.001	1.10	1.05	776.8	YES	NO	bb	bb	50.228

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.40	6.660e4	8.495e4	0.688	0.78	0.77	774.3	YES	NO	bb	db	10.650
2	Total-tetrafurans	27.27	7.609e2	8.737e2	0.754	0.87	0.77	10.5	YES	NO	bb	bd	0.105
3	2378-TCDF	25.91	7.008e4	8.591e4	0.729	0.82	0.77	820.0	YES	NO	bb	bb	10.346
4	1368-TCDF	22.39	9.657e4	1.221e5	0.846	0.79	0.77	1225.9	YES	NO	bb	bb	12.490
5	12389-PECDF	32.45	4.354e5	2.638e5	0.766	1.65	1.55	1419.2	YES	NO	bb	bb	59.901
6	23478-PeCDF	31.40	4.661e5	2.772e5	0.880	1.68	1.55	1662.6	YES	NO	bb	bb	57.362
7	12378-PeCDF	30.06	4.479e5	2.561e5	0.779	1.75	1.55	1588.4	YES	NO	bb	bb	59.296
8	Total-pentafurans	28.92	7.368e4	4.383e4	0.809	1.68	1.55	265.3	YES	NO	bb	bb	9.703
9	123789-HxCDF	37.03	2.177e5	1.654e5	0.780	1.32	1.24	901.0	YES	NO	bb	bb	54.846
10	234678-HxCDF	36.01	2.788e5	2.066e5	0.863	1.35	1.24	1193.3	YES	NO	bb	bb	54.839
11	123678-HxCDF	35.15	3.202e5	2.478e5	0.853	1.29	1.24	1340.6	YES	NO	db	db	49.090
12	123478-HxCDF	35.02	2.858e5	2.214e5	0.880	1.29	1.24	1245.8	YES	NO	bd	bd	56.553
13	123468-HXCDF	33.36	3.122e5	2.293e5	1.003	1.36	1.24	1324.3	YES	NO	bb	bb	53.009
14	1234789-HpCDF	41.13	2.089e5	1.952e5	0.994	1.07	1.05	506.2	YES	NO	bb	bb	55.379
15	1234678-HpCDF	38.87	2.722e5	2.484e5	1.001	1.10	1.05	776.8	YES	NO	bb	bb	50.228
16	OCDF	45.39	4.210e5	4.465e5	1.158	0.94	0.89	987.8	YES	NO	bb	bb	113.181
17	13468-PECDF	27.25	5.642e5	3.762e5	1.181	1.50	1.55	15047.0	YES	NO	bb	bb	52.249

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	27.15	5.605e4	6.359e4	1.042	0.88	0.77	471.1	YES	NO	dd	bb	10.466
2	2378-TCDD	26.54	5.975e4	7.620e4	1.238	0.78	0.77	513.3	YES	NO	bb	bd	10.011
3	Total-tetradioxins	26.23	9.015e4	1.121e5	1.153	0.80	0.77	567.3	YES	NO	bb	bb	15.991
4	Total-tetradioxins	25.73	2.905e4	3.659e4	1.153	0.79	0.77	254.6	YES	NO	bd	bd	5.190
5	Total-tetradioxins	24.87	2.684e3	3.385e3	1.153	0.79	0.77	17.1	YES	NO	bb	bb	0.480
6	1368-TCDD	23.67	6.480e4	8.135e4	1.179	0.80	0.77	635.5	YES	NO	bb	bb	11.306

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12479-PECDD	28.95	5.304e5	3.273e5	1.810	1.62	1.55	1616.4	YES	NO	bb	bb	53.177
2	12389-PECDD	32.06	3.273e5	2.038e5	1.165	1.61	1.55	1412.5	YES	NO	bb	bb	51.149
3	12378-PeCDD	31.66	2.788e5	1.811e5	0.988	1.54	1.55	1308.3	YES	NO	bb	bb	52.257

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	124679-HXCDD	34.13	2.872e5	2.178e5	1.056	1.32	1.24	1690.9	YES	NO	bd	bb	51.922
2	123789-HxCDD	36.62	2.243e5	1.819e5	0.784	1.23	1.24	1352.6	YES	NO	bb	bb	51.025
3	123678-HxCDD	36.24	3.021e5	2.443e5	0.907	1.24	1.24	1702.9	YES	NO	db	db	54.216
4	123478-HxCDD	36.13	2.284e5	1.875e5	0.842	1.22	1.24	1598.6	YES	NO	bd	bd	53.672
5	Total-hexadioxins	35.25	8.752e2	6.732e2	0.897	1.30	1.24	7.3	NO	NO	db	db	0.170
6	Total-hexadioxins	35.22	8.758e2	8.009e2	0.897	1.09	1.24	7.6	YES	NO	bd	dd	0.184

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.38	1.835e5	1.679e5	1.044	1.09	1.05	704.7	YES	NO	bb	bb	48.373
2	1234679-HPCDD	39.32	2.402e5	2.145e5	1.285	1.12	1.05	907.5	YES	NO	bd	bb	50.820

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	27.15	5.605e4	6.359e4	1.042	0.88	0.77	471.1	YES	NO	dd	bb	10.466
2	2378-TCDD	26.54	5.975e4	7.620e4	1.238	0.78	0.77	513.3	YES	NO	bb	bd	10.011
3	Total-tetradioxins	26.23	9.015e4	1.121e5	1.153	0.80	0.77	567.3	YES	NO	bb	bb	15.991
4	Total-tetradioxins	25.73	2.905e4	3.659e4	1.153	0.79	0.77	254.6	YES	NO	bd	bd	5.190
5	Total-tetradioxins	24.87	2.684e3	3.385e3	1.153	0.79	0.77	17.1	YES	NO	bb	bb	0.480
6	1368-TCDD	23.67	6.480e4	8.135e4	1.179	0.80	0.77	635.5	YES	NO	bb	bb	11.306
7	12479-PECDD	28.95	5.304e5	3.273e5	1.810	1.62	1.55	1616.4	YES	NO	bb	bb	53.177
8	124679-HXCDD	34.13	2.872e5	2.178e5	1.056	1.32	1.24	1690.9	YES	NO	bd	bb	51.922
9	12389-PECDD	32.06	3.273e5	2.038e5	1.165	1.61	1.55	1412.5	YES	NO	bb	bb	51.149
10	12378-PeCDD	31.66	2.788e5	1.811e5	0.988	1.54	1.55	1308.3	YES	NO	bb	bb	52.257
11	123789-HxCDD	36.62	2.243e5	1.819e5	0.784	1.23	1.24	1352.6	YES	NO	bb	bb	51.025
12	123678-HxCDD	36.24	3.021e5	2.443e5	0.907	1.24	1.24	1702.9	YES	NO	db	db	54.216
13	123478-HxCDD	36.13	2.284e5	1.875e5	0.842	1.22	1.24	1598.6	YES	NO	bd	bd	53.672
14	Total-hexadioxins	35.25	8.752e2	6.732e2	0.897	1.30	1.24	7.3	NO	NO	db	db	0.170
15	Total-hexadioxins	35.22	8.758e2	8.009e2	0.897	1.09	1.24	7.6	YES	NO	bd	dd	0.184
16	1234678-HpCDD	40.38	1.835e5	1.679e5	1.044	1.09	1.05	704.7	YES	NO	bb	bb	48.373
17	1234679-HPCDD	39.32	2.402e5	2.145e5	1.285	1.12	1.05	907.5	YES	NO	bd	bb	50.820
18	OCDD	45.15	3.073e5	3.561e5	0.963	0.86	0.89	741.0	YES	NO	bb	bb	104.089

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.40	6.660e4	8.495e4	0.688	0.78	0.77	774.3	YES	NO	bb	db	10.650
2	Total-tetrafurans	27.27	7.609e2	8.737e2	0.754	0.87	0.77	10.5	YES	NO	bb	bd	0.105
3	2378-TCDF	25.91	7.008e4	8.591e4	0.729	0.82	0.77	820.0	YES	NO	bb	bb	10.346
4	1368-TCDF	22.39	9.657e4	1.221e5	0.846	0.79	0.77	1225.9	YES	NO	bb	bb	12.490
5	12389-PECDF	32.45	4.354e5	2.638e5	0.766	1.65	1.55	1419.2	YES	NO	bb	bb	59.901
6	23478-PeCDF	31.40	4.661e5	2.772e5	0.880	1.68	1.55	1662.6	YES	NO	bb	bb	57.362
7	12378-PeCDF	30.06	4.479e5	2.561e5	0.779	1.75	1.55	1588.4	YES	NO	bb	bb	59.296
8	Total-pentafurans	28.92	7.368e4	4.383e4	0.809	1.68	1.55	265.3	YES	NO	bb	bb	9.703
9	123789-HxCDF	37.03	2.177e5	1.654e5	0.780	1.32	1.24	901.0	YES	NO	bb	bb	54.846
10	234678-HxCDF	36.01	2.788e5	2.066e5	0.863	1.35	1.24	1193.3	YES	NO	bb	bb	54.839
11	123678-HxCDF	35.15	3.202e5	2.478e5	0.853	1.29	1.24	1340.6	YES	NO	db	db	49.090
12	123478-HxCDF	35.02	2.858e5	2.214e5	0.880	1.29	1.24	1245.8	YES	NO	bd	bd	56.553
13	123468-HXCDF	33.36	3.122e5	2.293e5	1.003	1.36	1.24	1324.3	YES	NO	bb	bb	53.009
14	1234789-HpCDF	41.13	2.089e5	1.952e5	0.994	1.07	1.05	506.2	YES	NO	bb	bb	55.379
15	1234678-HpCDF	38.87	2.722e5	2.484e5	1.001	1.10	1.05	776.8	YES	NO	bb	bb	50.228
16	OCDF	45.39	4.210e5	4.465e5	1.158	0.94	0.89	987.8	YES	NO	bb	bb	113.181
17	13468-PECDF	27.25	5.642e5	3.762e5	1.181	1.50	1.55	15047.0	YES	NO	bb	bb	52.249
18	1289-TCDD	27.15	5.605e4	6.359e4	1.042	0.88	0.77	471.1	YES	NO	dd	bb	10.466
19	2378-TCDD	26.54	5.975e4	7.620e4	1.238	0.78	0.77	513.3	YES	NO	bb	bd	10.011
20	Total-tetradioxins	26.23	9.015e4	1.121e5	1.153	0.80	0.77	567.3	YES	NO	bb	bb	15.991
21	Total-tetradioxins	25.73	2.905e4	3.659e4	1.153	0.79	0.77	254.6	YES	NO	bd	bd	5.190
22	Total-tetradioxins	24.87	2.684e3	3.385e3	1.153	0.79	0.77	17.1	YES	NO	bb	bb	0.480
23	1368-TCDD	23.67	6.480e4	8.135e4	1.179	0.80	0.77	635.5	YES	NO	bb	bb	11.306
24	12479-PECDD	28.95	5.304e5	3.273e5	1.810	1.62	1.55	1616.4	YES	NO	bb	bb	53.177
25	124679-HXCDD	34.13	2.872e5	2.178e5	1.056	1.32	1.24	1690.9	YES	NO	bd	bb	51.922
26	12389-PECDD	32.06	3.273e5	2.038e5	1.165	1.61	1.55	1412.5	YES	NO	bb	bb	51.149
27	12378-PeCDD	31.66	2.788e5	1.811e5	0.988	1.54	1.55	1308.3	YES	NO	bb	bb	52.257
28	123789-HxCDD	36.62	2.243e5	1.819e5	0.784	1.23	1.24	1352.6	YES	NO	bb	bb	51.025
29	123678-HxCDD	36.24	3.021e5	2.443e5	0.907	1.24	1.24	1702.9	YES	NO	db	db	54.216
30	123478-HxCDD	36.13	2.284e5	1.875e5	0.842	1.22	1.24	1598.6	YES	NO	bd	bd	53.672
31	Total-hexadioxins	35.25	8.752e2	6.732e2	0.897	1.30	1.24	7.3	NO	NO	db	db	0.170
32	Total-hexadioxins	35.22	8.758e2	8.009e2	0.897	1.09	1.24	7.6	YES	NO	bd	dd	0.184
33	1234678-HpCDD	40.38	1.835e5	1.679e5	1.044	1.09	1.05	704.7	YES	NO	bb	bb	48.373
34	1234679-HPCDD	39.32	2.402e5	2.145e5	1.285	1.12	1.05	907.5	YES	NO	bd	bb	50.820
35	OCDD	45.15	3.073e5	3.561e5	0.963	0.86	0.89	741.0	YES	NO	bb	bb	104.089

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.30	1.461e6					14.0	YES		dd		
2	FUNCTION1 PFK	21.15	2.822e6					18.8	YES		bd		
3	FUNCTION1 PFK	23.07	4.897e4					1.2	NO		bb		
4	FUNCTION1 PFK	22.84	7.107e4					1.6	NO		bb		
5	FUNCTION1 PFK	22.74	4.082e4					1.0	NO		db		
6	FUNCTION1 PFK	22.69	7.320e4					1.3	NO		dd		
7	FUNCTION1 PFK	22.60	1.059e5					1.9	NO		dd		
8	FUNCTION1 PFK	22.54	4.510e4					1.0	NO		dd		
9	FUNCTION1 PFK	22.48	3.347e4					0.8	NO		bd		
10	FUNCTION1 PFK	22.37	1.527e5					1.8	NO		db		
11	FUNCTION1 PFK	22.27	1.556e5					2.3	NO		dd		
12	FUNCTION1 PFK	22.15	1.150e5					1.4	NO		dd		
13	FUNCTION1 PFK	22.04	1.663e5					2.1	NO		bd		
14	FUNCTION1 PFK	21.84	9.128e4					1.8	NO		db		
15	FUNCTION1 PFK	21.78	6.821e5					3.4	YES		dd		
16	FUNCTION1 PFK	21.59	9.373e5					8.2	YES		dd		
17	FUNCTION1 PFK	21.48	9.729e5					11.1	YES		dd		
18	FUNCTION1 PFK	21.35	2.127e6					14.5	YES		dd		
19	FUNCTION1 PFK	24.85	3.636e4					0.9	NO		bb		
20	FUNCTION1 PFK	24.76	9.225e4					1.1	NO		db		
21	FUNCTION1 PFK	24.64	6.410e4					1.1	NO		bd		
22	FUNCTION1 PFK	24.52	3.647e4					0.7	NO		db		
23	FUNCTION1 PFK	24.43	4.834e4					1.2	NO		bd		
24	FUNCTION1 PFK	24.32	4.473e4					0.8	NO		db		
25	FUNCTION1 PFK	24.20	6.968e4					1.0	NO		bd		
26	FUNCTION1 PFK	24.06	3.035e5					2.1	NO		db		
27	FUNCTION1 PFK	23.85	1.381e5					1.6	NO		dd		
28	FUNCTION1 PFK	23.73	1.878e5					2.0	NO		bd		
29	FUNCTION1 PFK	23.64	4.951e4					1.3	NO		db		
30	FUNCTION1 PFK	23.60	1.297e5					2.3	NO		dd		
31	FUNCTION1 PFK	23.49	1.476e5					1.7	NO		dd		
32	FUNCTION1 PFK	23.40	1.424e5					1.8	NO		bd		
33	FUNCTION1 PFK	23.28	3.289e4					0.8	NO		bb		
34	FUNCTION1 PFK	23.14	4.060e4					0.9	NO		bb		
35	FUNCTION1 PFK	26.89	8.634e4					1.7	NO		bd		
36	FUNCTION1 PFK	26.77	1.597e5					1.9	NO		db		
37	FUNCTION1 PFK	26.66	7.838e4					1.1	NO		dd		

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	26.54	1.130e5					1.8	NO		dd		
39	FUNCTION1 PFK	26.45	2.560e4					0.8	NO		bd		
40	FUNCTION1 PFK	26.39	2.516e4					0.7	NO		bb		
41	FUNCTION1 PFK	26.09	6.420e4					1.0	NO		db		
42	FUNCTION1 PFK	25.97	9.850e4					1.6	NO		dd		
43	FUNCTION1 PFK	25.86	1.153e5					1.8	NO		dd		
44	FUNCTION1 PFK	25.76	9.879e4					1.5	NO		bd		
45	FUNCTION1 PFK	25.65	1.297e5					1.6	NO		db		
46	FUNCTION1 PFK	25.55	6.935e4					1.1	NO		bd		
47	FUNCTION1 PFK	25.41	9.923e4					1.3	NO		db		
48	FUNCTION1 PFK	25.30	7.732e4					1.3	NO		bd		
49	FUNCTION1 PFK	25.20	5.813e4					1.1	NO		db		
50	FUNCTION1 PFK	25.08	1.221e5					1.3	NO		bd		
51	FUNCTION1 PFK	28.11	8.508e4					1.2	NO		bb		
52	FUNCTION1 PFK	27.98	7.113e4					1.2	NO		db		
53	FUNCTION1 PFK	27.87	6.700e4					1.2	NO		bd		
54	FUNCTION1 PFK	27.77	9.893e4					1.3	NO		db		
55	FUNCTION1 PFK	27.68	8.517e4					1.5	NO		dd		
56	FUNCTION1 PFK	27.62	2.943e4					0.9	NO		dd		
57	FUNCTION1 PFK	27.54	8.259e4					1.4	NO		bd		
58	FUNCTION1 PFK	27.33	1.129e5					1.5	NO		db		
59	FUNCTION1 PFK	27.21	9.520e4					1.6	NO		bd		
60	FUNCTION1 PFK	27.10	7.803e4					1.6	NO		db		
61	FUNCTION1 PFK	27.00	1.749e5					2.1	NO		dd		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.23	2.938e4					1.6	NO		bb		0.000
2	FUNCTION2 PFK	28.56	1.133e5					3.4	YES		db		0.000
3	FUNCTION2 PFK	28.45	5.452e4					3.0	YES		bd		0.000
4	FUNCTION2 PFK	28.35	6.792e4					2.3	NO		bb		0.000
5	FUNCTION2 PFK	32.59	3.652e4					1.5	NO		bb		0.000
6	FUNCTION2 PFK	32.55	4.065e3					0.7	NO		bb		0.000
7	FUNCTION2 PFK	31.69	2.330e4					1.6	NO		bb		0.000
8	FUNCTION2 PFK	31.61	1.159e5					2.2	NO		bb		0.000
9	FUNCTION2 PFK	31.35	4.304e4					1.4	NO		bb		0.000
10	FUNCTION2 PFK	31.28	4.280e4					2.1	NO		bb		0.000
11	FUNCTION2 PFK	30.91	8.100e4					1.8	NO		bb		0.000
12	FUNCTION2 PFK	30.82	2.573e4					1.8	NO		bb		0.000
13	FUNCTION2 PFK	30.60	7.552e4					2.4	NO		bb		0.000
14	FUNCTION2 PFK	30.41	1.153e4					0.8	NO		bb		0.000
15	FUNCTION2 PFK	30.35	1.657e4					1.3	NO		bb		0.000
16	FUNCTION2 PFK	30.15	2.576e5					3.0	NO		bb		0.000
17	FUNCTION2 PFK	30.00	5.995e4					3.3	YES		bb		0.000
18	FUNCTION2 PFK	29.77	2.061e5					6.1	YES		db		0.000
19	FUNCTION2 PFK	29.64	9.130e5					13.2	YES		bd		0.000
20	FUNCTION2 PFK	29.42	2.573e3					0.5	NO		bb		0.000
21	FUNCTION2 PFK	32.94	1.619e4					1.1	NO		bb		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	35.40	9.085e4					2.4	NO		bd		0.000
2	FUNCTION3 PFK	35.06	8.812e4					2.7	NO		bb		0.000
3	FUNCTION3 PFK	34.83	2.453e4					1.7	NO		bb		0.000
4	FUNCTION3 PFK	34.63	6.528e4					2.5	NO		bb		0.000
5	FUNCTION3 PFK	34.16	1.143e4					0.8	NO		bb		0.000
6	FUNCTION3 PFK	34.00	2.771e3					0.4	NO		bb		0.000
7	FUNCTION3 PFK	33.86	2.764e3					0.4	NO		bb		0.000
8	FUNCTION3 PFK	33.71	3.999e4					1.2	NO		bb		0.000
9	FUNCTION3 PFK	33.59	5.846e4					2.2	NO		bb		0.000
10	FUNCTION3 PFK	33.49	2.322e4					1.2	NO		bb		0.000
11	FUNCTION3 PFK	33.44	6.009e3					0.6	NO		bb		0.000
12	FUNCTION3 PFK	33.37	2.015e4					1.1	NO		bb		0.000
13	FUNCTION3 PFK	33.16	3.261e4					1.9	NO		db		0.000
14	FUNCTION3 PFK	33.12	4.392e4					1.4	NO		bd		0.000
15	FUNCTION3 PFK	37.87	9.267e3					0.6	NO		bb		0.000
16	FUNCTION3 PFK	37.75	3.085e4					1.4	NO		bb		0.000
17	FUNCTION3 PFK	37.64	4.111e4					2.4	NO		db		0.000
18	FUNCTION3 PFK	37.61	6.079e4					2.7	NO		bd		0.000
19	FUNCTION3 PFK	37.53	1.440e5					3.6	YES		db		0.000
20	FUNCTION3 PFK	37.40	1.018e5					1.9	NO		bd		0.000
21	FUNCTION3 PFK	37.21	6.198e4					2.2	NO		bb		0.000
22	FUNCTION3 PFK	36.86	2.406e4					1.4	NO		bb		0.000
23	FUNCTION3 PFK	36.54	1.581e4					1.0	NO		bb		0.000
24	FUNCTION3 PFK	36.05	3.999e5					3.1	YES		bb		0.000
25	FUNCTION3 PFK	35.84	1.531e5					3.1	YES		db		0.000
26	FUNCTION3 PFK	35.81	2.803e4					1.9	NO		bd		0.000
27	FUNCTION3 PFK	35.63	8.494e4					2.5	NO		db		0.000
28	FUNCTION3 PFK	35.52	5.613e4					2.0	NO		dd		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.16	3.728e4					1.5	NO		bb		
2	FUNCTION4 PFK	40.10	5.197e4					1.9	NO		bb		
3	FUNCTION4 PFK	40.01	4.323e4					1.5	NO		bb		
4	FUNCTION4 PFK	39.75	1.165e4					0.9	NO		bb		
5	FUNCTION4 PFK	39.68	4.578e4					1.3	NO		bb		
6	FUNCTION4 PFK	39.57	3.704e4					1.8	NO		db		
7	FUNCTION4 PFK	39.54	2.682e4					1.7	NO		bd		
8	FUNCTION4 PFK	39.33	3.623e4					1.3	NO		db		
9	FUNCTION4 PFK	39.21	6.696e4					1.8	NO		bd		
10	FUNCTION4 PFK	39.11	9.645e4					2.6	NO		db		
11	FUNCTION4 PFK	39.00	9.666e4					2.0	NO		dd		
12	FUNCTION4 PFK	38.89	4.633e4					2.1	NO		dd		
13	FUNCTION4 PFK	38.83	1.962e4					1.4	NO		bd		
14	FUNCTION4 PFK	38.77	4.982e4					2.0	NO		db		
15	FUNCTION4 PFK	38.71	2.597e4					1.2	NO		bd		
16	FUNCTION4 PFK	38.42	3.599e4					1.4	NO		db		
17	FUNCTION4 PFK	38.31	4.780e4					1.5	NO		bd		
18	FUNCTION4 PFK	41.97	4.094e4					1.9	NO		dd		
19	FUNCTION4 PFK	41.91	8.072e4					2.4	NO		dd		
20	FUNCTION4 PFK	41.77	8.536e4					2.0	NO		dd		
21	FUNCTION4 PFK	41.68	5.929e4					2.0	NO		bd		
22	FUNCTION4 PFK	41.57	3.784e4					1.5	NO		bb		
23	FUNCTION4 PFK	41.52	3.655e3					0.4	NO		bb		
24	FUNCTION4 PFK	41.25	3.620e4					1.1	NO		db		
25	FUNCTION4 PFK	41.14	5.096e4					1.9	NO		dd		
26	FUNCTION4 PFK	41.09	1.729e4					1.4	NO		bd		
27	FUNCTION4 PFK	41.03	5.623e4					2.1	NO		db		
28	FUNCTION4 PFK	40.92	1.845e4					1.0	NO		bd		
29	FUNCTION4 PFK	40.68	3.704e4					1.6	NO		bb		
30	FUNCTION4 PFK	40.57	2.152e4					1.0	NO		bb		
31	FUNCTION4 PFK	40.45	4.144e4					1.7	NO		db		
32	FUNCTION4 PFK	40.35	5.469e4					1.5	NO		dd		
33	FUNCTION4 PFK	40.23	3.077e4					1.4	NO		bd		
34	FUNCTION4 PFK	43.24	8.311e4					2.9	NO		db		
35	FUNCTION4 PFK	43.14	6.294e4					2.8	NO		bd		
36	FUNCTION4 PFK	42.92	2.237e4					1.3	NO		db		
37	FUNCTION4 PFK	42.87	2.218e4					1.2	NO		dd		

ID: CS3S1, Name: 20112302, Date: 23-Nov-2020, Time: 10:28:28, Conditions: AUTOSPEC01, User: pk

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION4 PFK	42.80	5.228e4					2.0	NO		bd		
39	FUNCTION4 PFK	42.59	4.013e4					1.7	NO		db		
40	FUNCTION4 PFK	42.54	2.224e4					1.8	NO		bd		
41	FUNCTION4 PFK	42.45	8.178e4					2.2	NO		db		
42	FUNCTION4 PFK	42.36	4.618e4					1.7	NO		dd		
43	FUNCTION4 PFK	42.23	9.610e4					2.3	NO		dd		
44	FUNCTION4 PFK	42.13	3.371e4					1.7	NO		dd		
45	FUNCTION4 PFK	42.07	3.533e4					1.5	NO		dd		
46	FUNCTION4 PFK	42.02	5.217e4					2.4	NO		dd		

ID: CS3S1, Name: 20112302, Date: 23-Nov-2020, Time: 10:28:28, Conditions: AUTOSPEC01, User: pk

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.38	8.015e3					1.3	NO		bd		
2	FUNCTION5 PFK	43.35	1.588e4					1.9	NO		bb		
3	FUNCTION5 PFK	44.34	2.023e4					2.0	NO		dd		
4	FUNCTION5 PFK	44.32	2.865e4					2.0	NO		dd		
5	FUNCTION5 PFK	44.26	3.053e4					2.1	NO		dd		
6	FUNCTION5 PFK	44.21	4.529e4					1.9	NO		dd		
7	FUNCTION5 PFK	44.14	8.079e4					2.9	NO		dd		
8	FUNCTION5 PFK	44.05	4.094e4					2.5	NO		dd		
9	FUNCTION5 PFK	44.01	2.806e4					2.7	NO		dd		
10	FUNCTION5 PFK	43.99	5.083e4					2.7	NO		dd		
11	FUNCTION5 PFK	43.92	2.658e4					2.4	NO		dd		
12	FUNCTION5 PFK	43.87	8.286e4					2.8	NO		dd		
13	FUNCTION5 PFK	43.80	1.384e5					3.7	YES		dd		
14	FUNCTION5 PFK	43.69	8.705e4					3.3	YES		dd		
15	FUNCTION5 PFK	43.57	1.426e5					3.6	YES		dd		
16	FUNCTION5 PFK	43.52	9.756e4					2.7	NO		dd		
17	FUNCTION5 PFK	43.45	3.683e4					2.4	NO		dd		
18	FUNCTION5 PFK	43.41	3.041e4					2.2	NO		dd		
19	FUNCTION5 PFK	45.29	4.350e3					0.7	NO		bd		
20	FUNCTION5 PFK	45.26	1.949e3					0.5	NO		bb		
21	FUNCTION5 PFK	45.15	2.825e4					1.4	NO		bb		
22	FUNCTION5 PFK	45.08	1.040e4					1.1	NO		db		
23	FUNCTION5 PFK	45.05	1.485e4					1.3	NO		dd		
24	FUNCTION5 PFK	45.01	2.854e4					1.4	NO		dd		
25	FUNCTION5 PFK	44.93	5.132e4					1.9	NO		bd		
26	FUNCTION5 PFK	44.82	5.632e4					2.4	NO		db		
27	FUNCTION5 PFK	44.70	6.870e4					1.7	NO		dd		
28	FUNCTION5 PFK	44.62	2.782e4					2.0	NO		dd		
29	FUNCTION5 PFK	44.60	3.770e4					2.7	NO		dd		
30	FUNCTION5 PFK	44.56	3.004e4					1.7	NO		dd		
31	FUNCTION5 PFK	44.51	3.270e4					2.1	NO		dd		
32	FUNCTION5 PFK	44.46	2.614e4					2.2	NO		dd		
33	FUNCTION5 PFK	44.43	1.950e4					1.8	NO		dd		
34	FUNCTION5 PFK	44.39	3.829e4					2.2	NO		dd		
35	FUNCTION5 PFK	46.07	1.656e4					0.8	NO		bb		
36	FUNCTION5 PFK	45.97	7.998e3					1.0	NO		db		
37	FUNCTION5 PFK	45.94	2.413e4					1.7	NO		dd		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION5 PFK	45.91	1.847e4					1.6	NO		dd		
39	FUNCTION5 PFK	45.90	1.044e4					1.0	NO		bd		
40	FUNCTION5 PFK	45.84	2.971e4					2.1	NO		db		
41	FUNCTION5 PFK	45.78	3.855e4					1.9	NO		dd		
42	FUNCTION5 PFK	45.73	3.097e4					1.9	NO		dd		
43	FUNCTION5 PFK	45.68	3.968e4					1.4	NO		dd		
44	FUNCTION5 PFK	45.61	2.221e4					2.1	NO		dd		
45	FUNCTION5 PFK	45.59	3.916e4					2.1	NO		dd		
46	FUNCTION5 PFK	45.53	1.395e4					1.2	NO		dd		
47	FUNCTION5 PFK	45.48	2.079e4					1.8	NO		dd		
48	FUNCTION5 PFK	45.44	2.899e4					1.3	NO		bd		
49	FUNCTION5 PFK	45.38	2.542e4					1.6	NO		db		
50	FUNCTION5 PFK	45.33	2.837e4					1.4	NO		dd		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.81	1.461e2					4.0	YES		bb		0.000
2	FUNCTION1 HXCD...	27.24	7.011e1					2.0	NO		bb		0.000
3	FUNCTION1 HXCD...	24.97	7.041e1					3.0	NO		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	27.68	1.041e2					1.4	NO		db		0.000
2	FUNCTION1 HPCD...	27.54	1.133e2					1.7	NO		bd		0.000
3	FUNCTION1 HPCD...	26.56	8.665e1					1.8	NO		bb		0.000
4	FUNCTION1 HPCD...	25.05	1.084e2					1.8	NO		bb		0.000
5	FUNCTION1 HPCD...	24.67	8.241e1					1.4	NO		bb		0.000
6	FUNCTION1 HPCD...	24.25	1.390e2					3.2	YES		bb		0.000
7	FUNCTION1 HPCD...	23.40	8.524e1					1.6	NO		bb		0.000
8	FUNCTION1 HPCD...	23.01	7.372e1					1.5	NO		bb		0.000
9	FUNCTION1 HPCD...	22.06	7.706e1					1.8	NO		bb		0.000
10	FUNCTION1 HPCD...	21.63	9.724e1					1.5	NO		bb		0.000

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ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.43	7.565e1					2.3	NO		bb		0.000
2	FUNCTION2 HPCD...	32.27	9.613e1					1.6	NO		bb		0.000
3	FUNCTION2 HPCD...	31.29	4.136e2					5.0	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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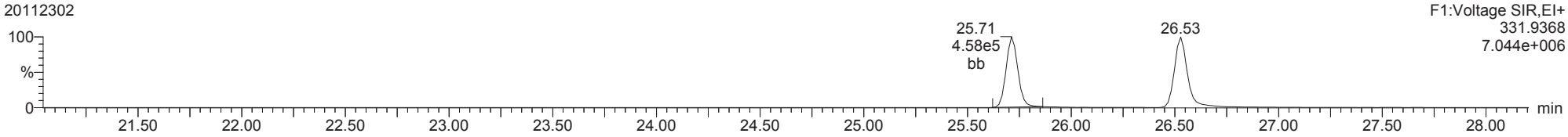
ID: CS3S1, Name: 20112302, Date: 23-Nov-2020, Time: 10:28:28, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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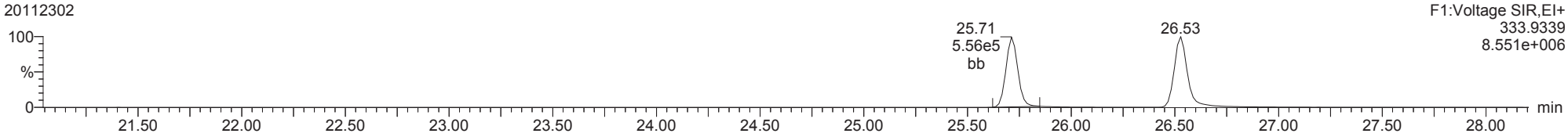
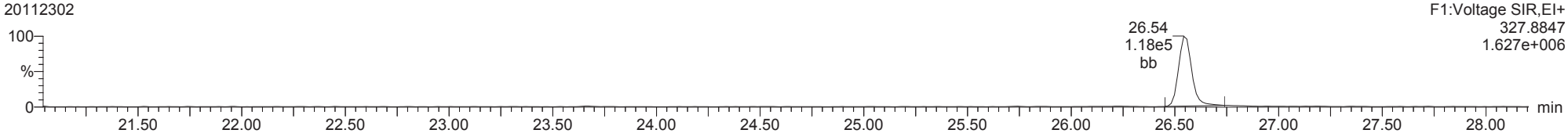


37CL-2378-TCDD



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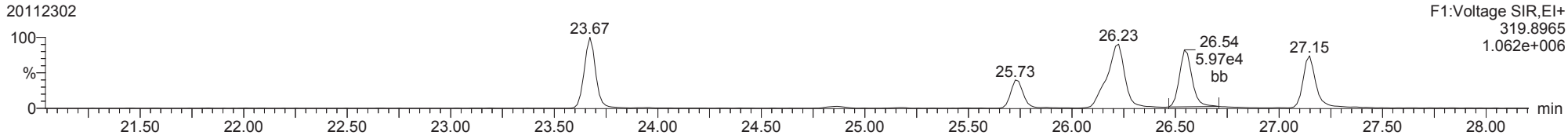
2378-TCDD



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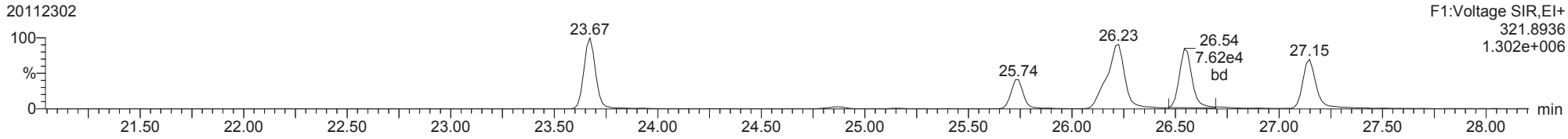

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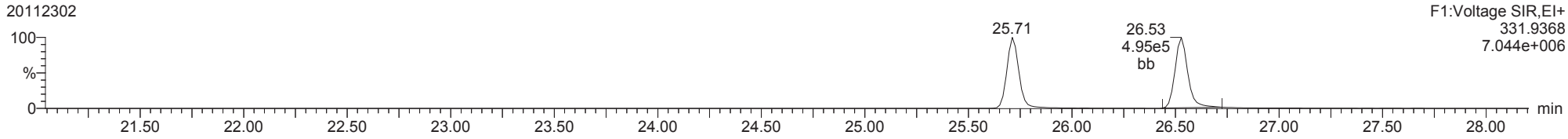

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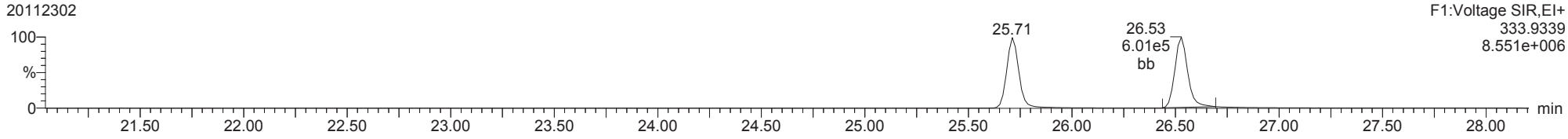

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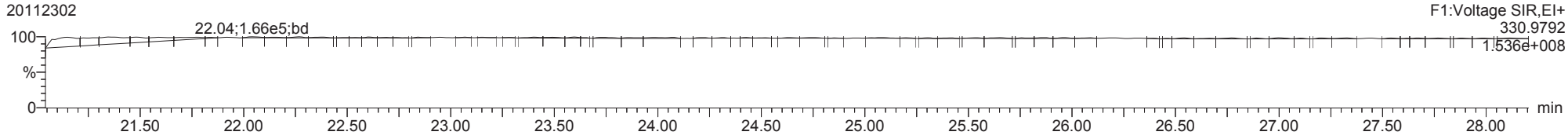

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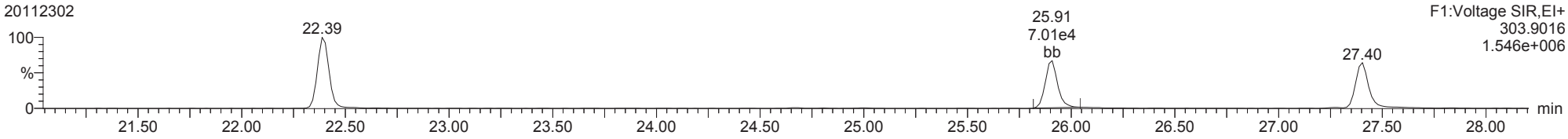
2378-TCDF



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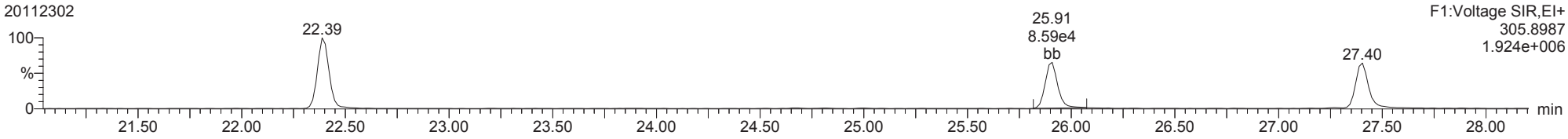

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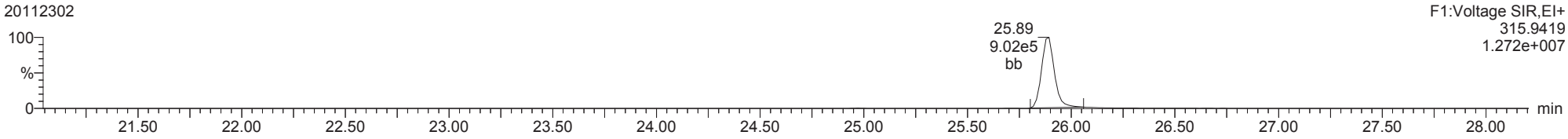

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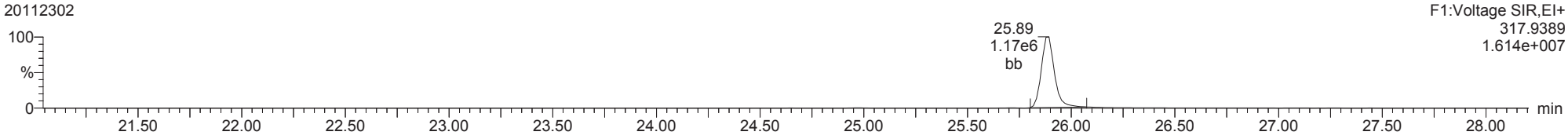
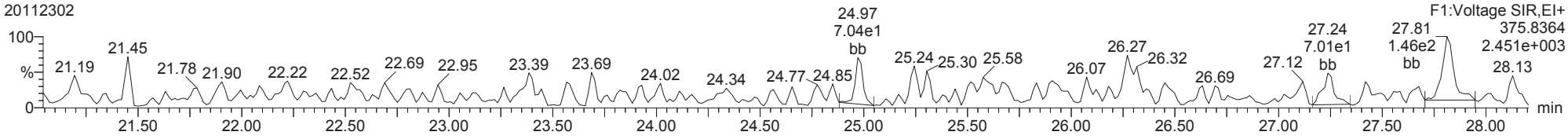


FUNCTION1 HXCDPE



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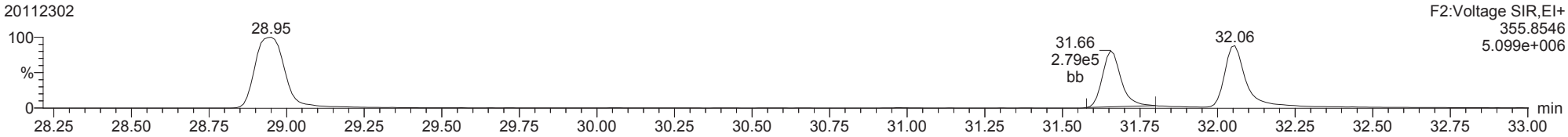
12378-PeCDD



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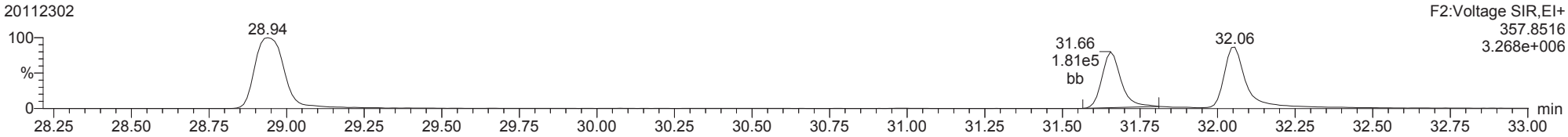

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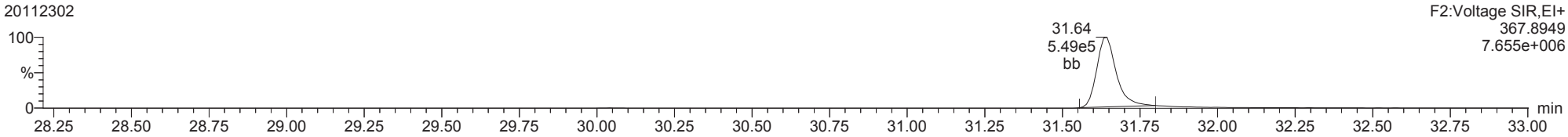

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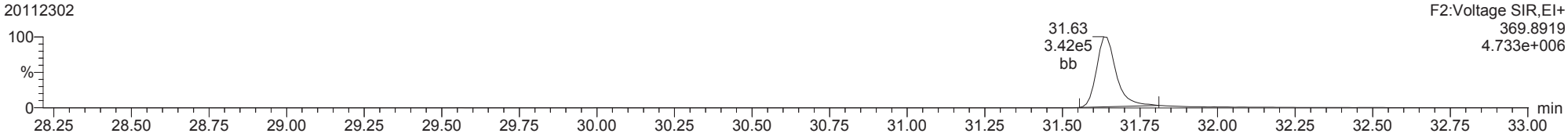
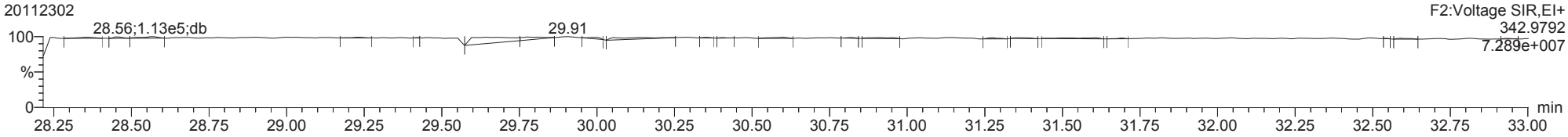


FUNCTION2 PFK



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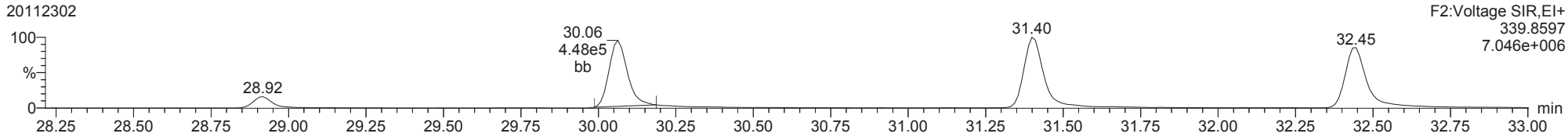

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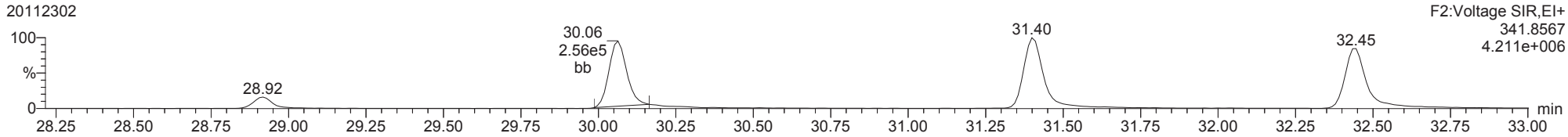

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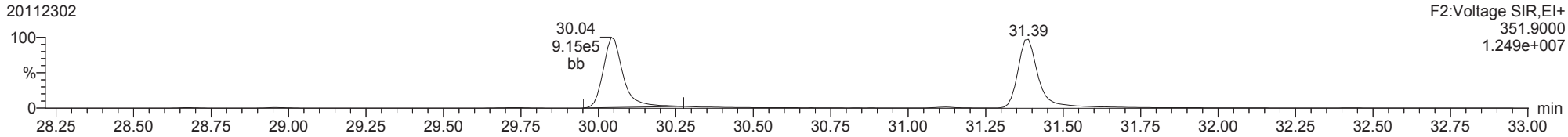

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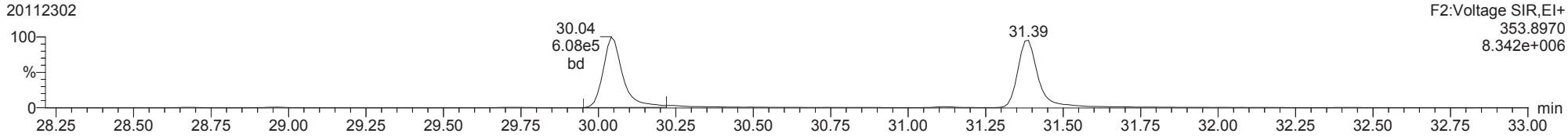

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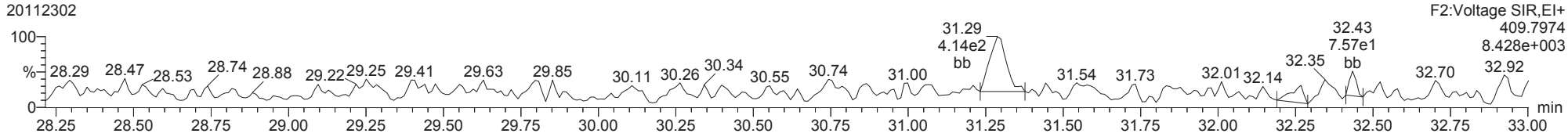

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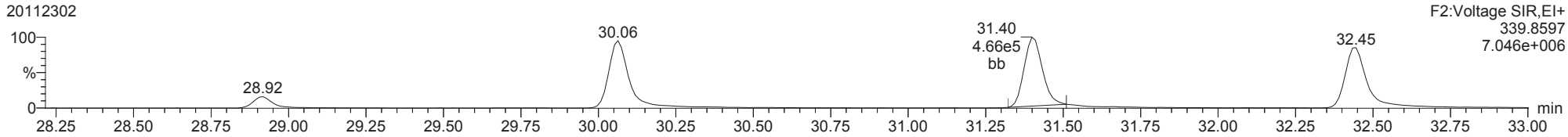
23478-PeCDF



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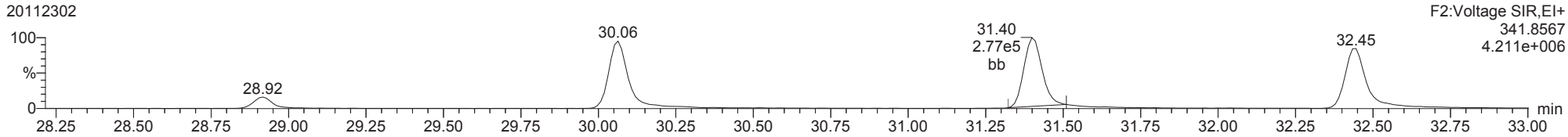

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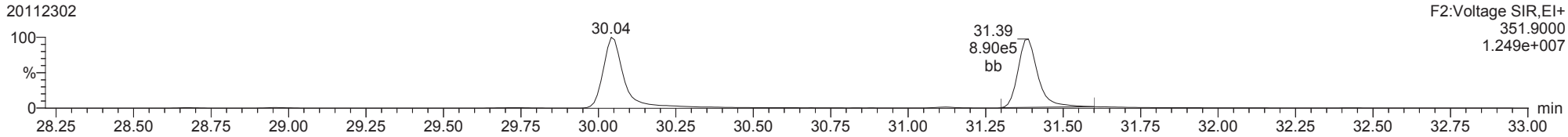

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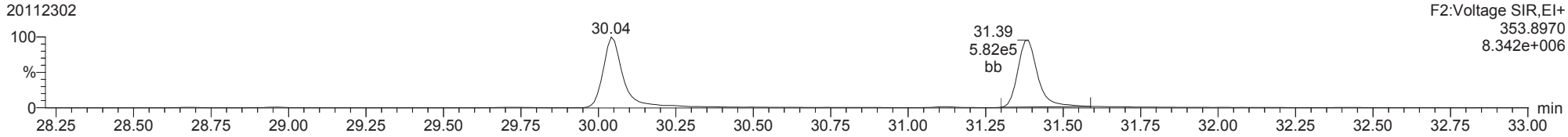
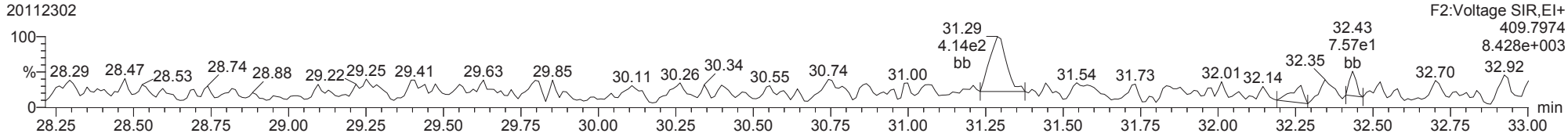


FUNCTION2 HPCDPE



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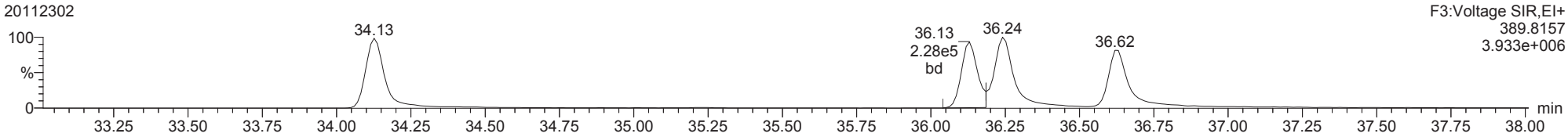
ID: CS3S1, Name: 20112302, Date: 23-Nov-2020, Time: 10:28:28, Conditions: AUTOSPEC01, User: pk

123478-HxCDD



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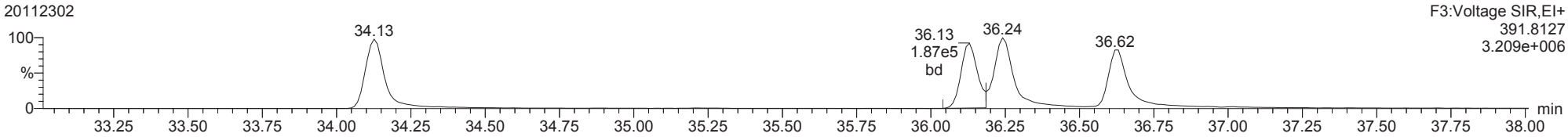

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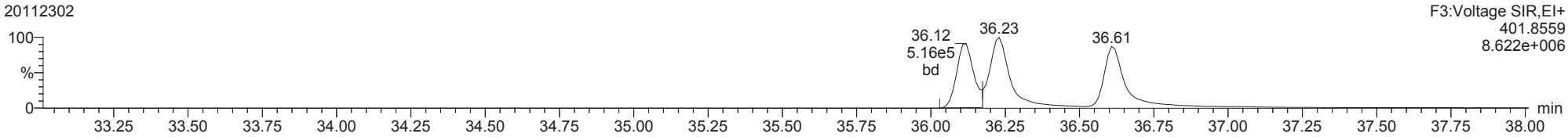

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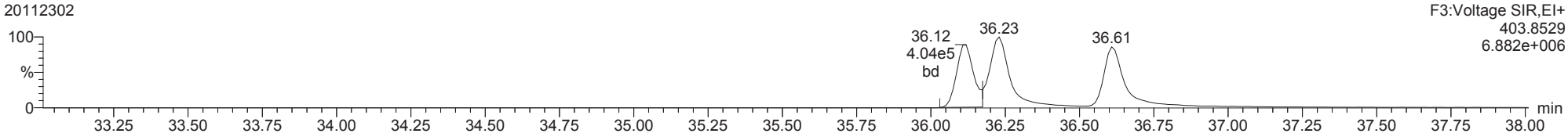

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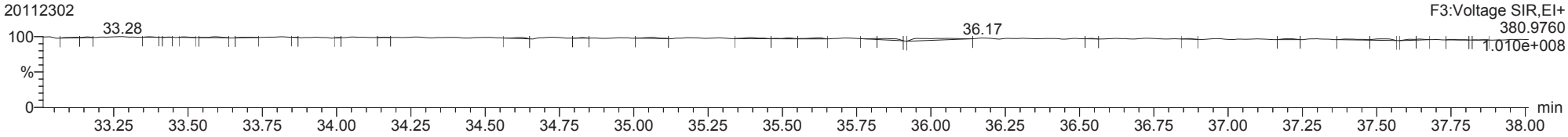

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ID: CS3S1, Name: 20112302, Date: 23-Nov-2020, Time: 10:28:28, Conditions: AUTOSPEC01, User: pk

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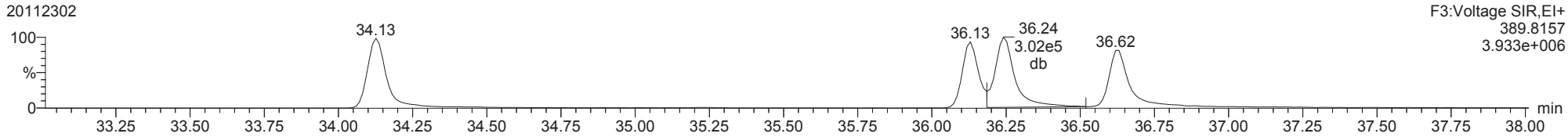

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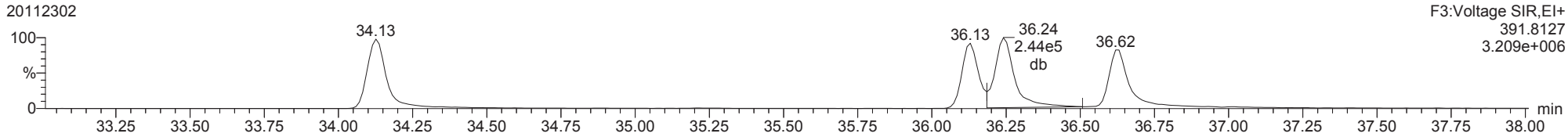

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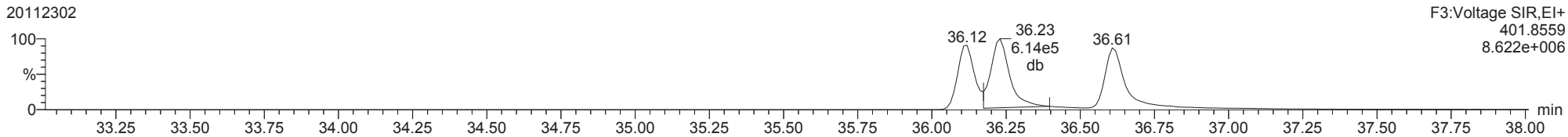

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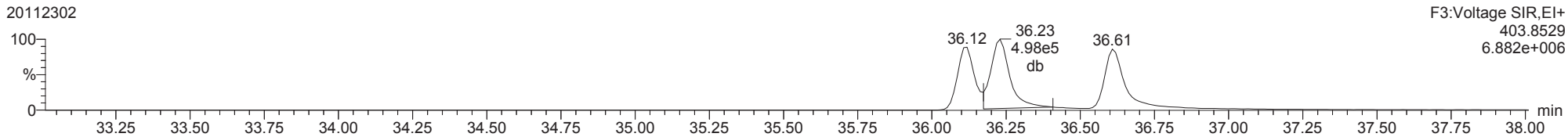

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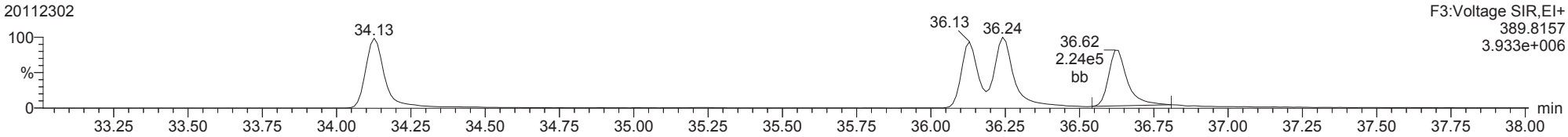

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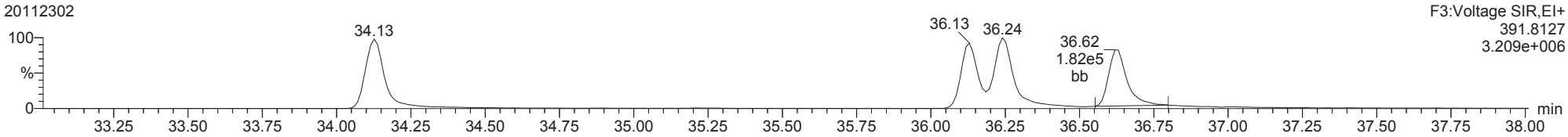

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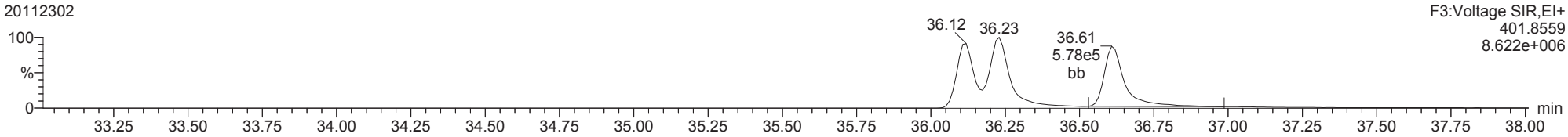

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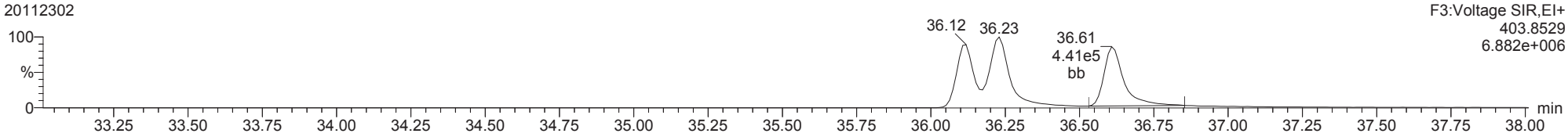

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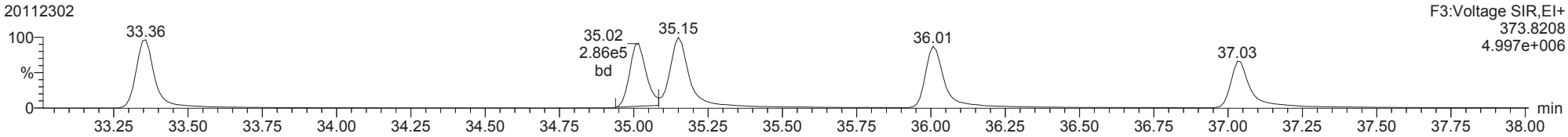

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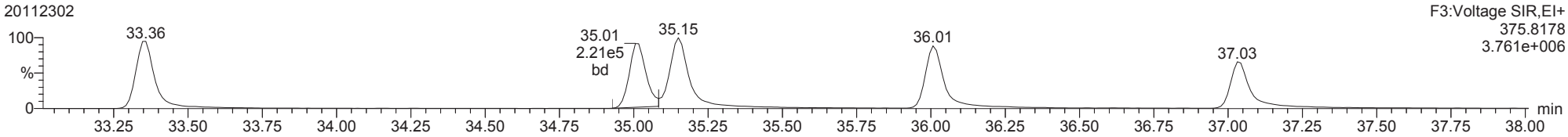

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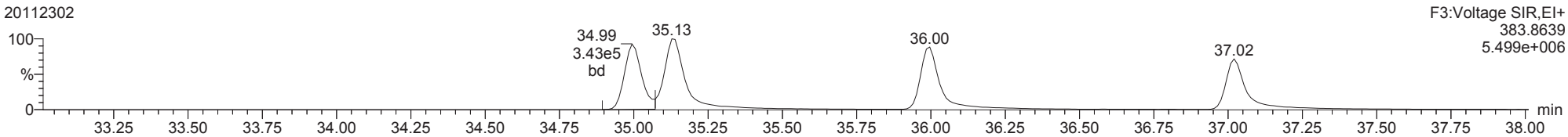

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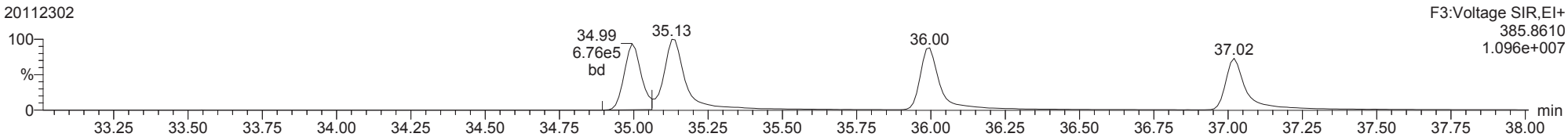

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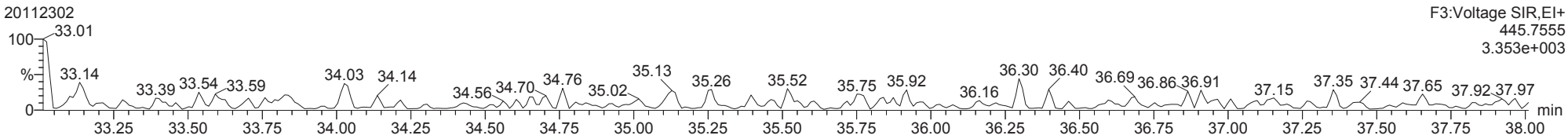

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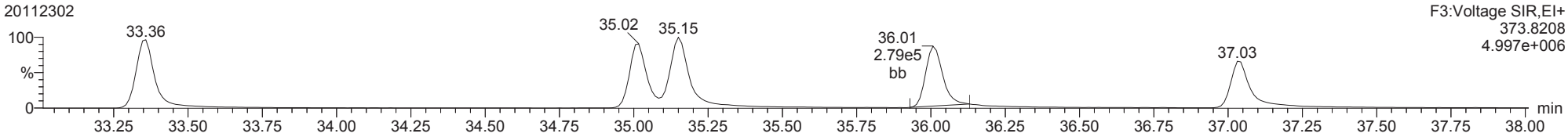
234678-HxCDF



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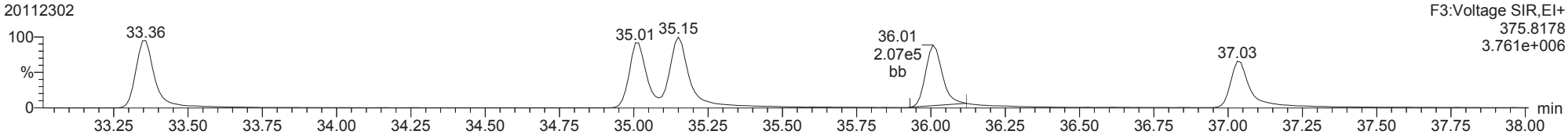

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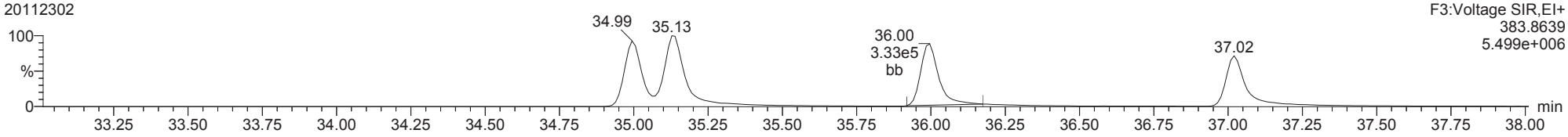

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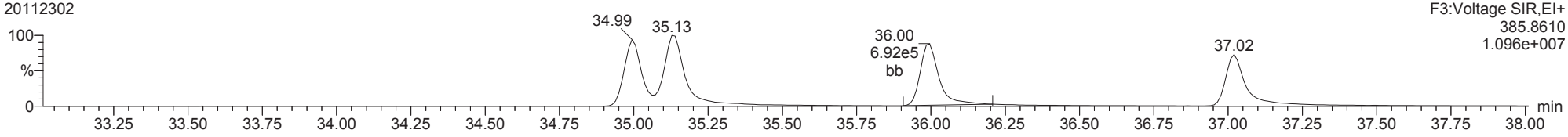

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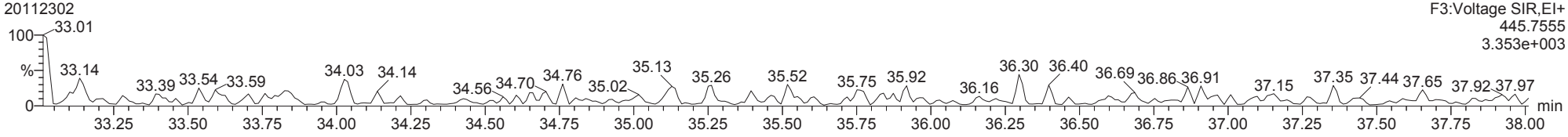

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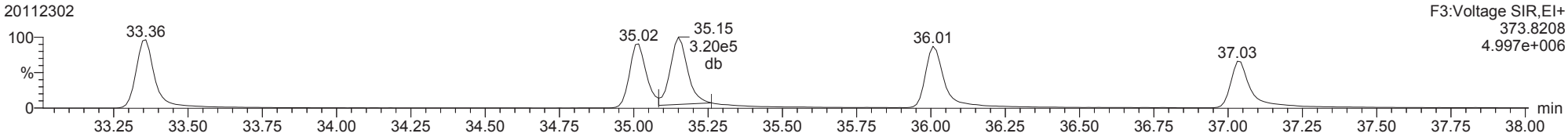

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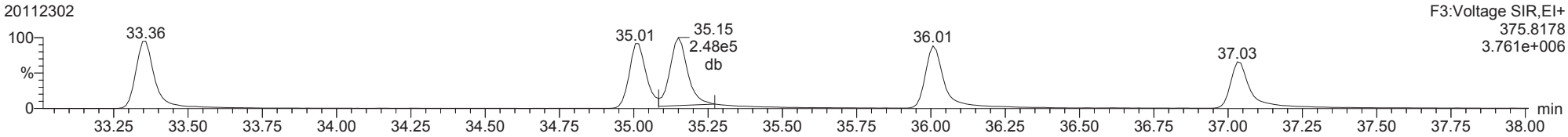

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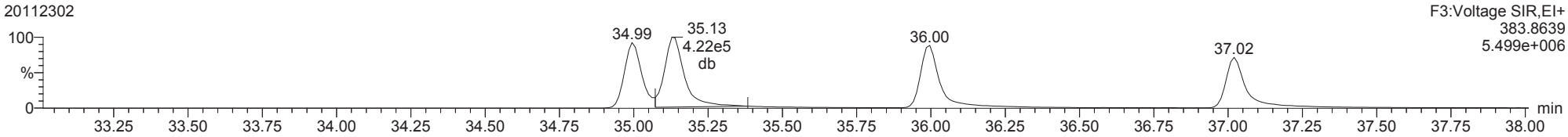

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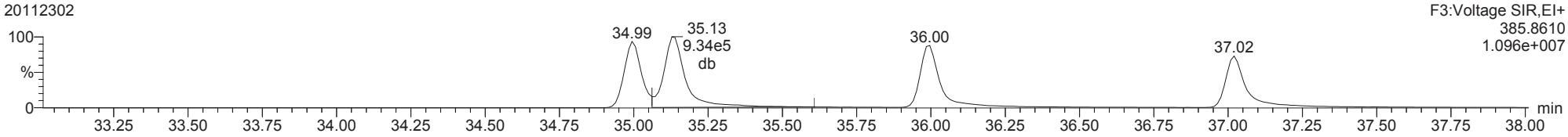

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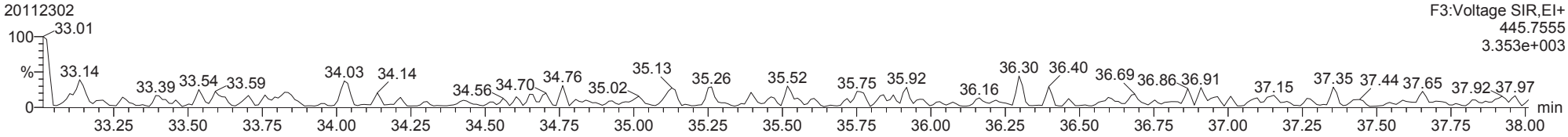

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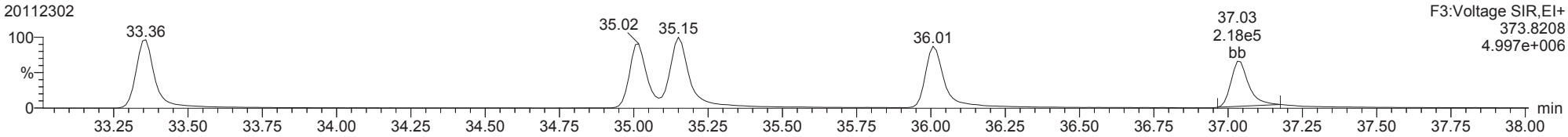

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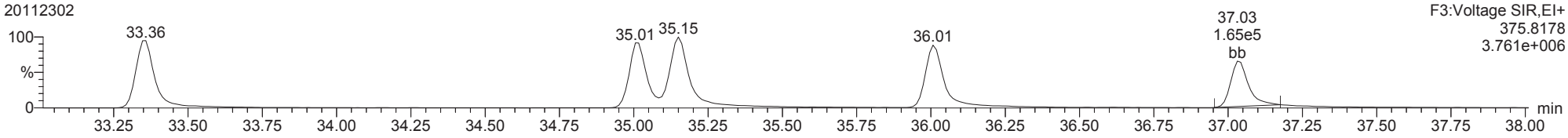

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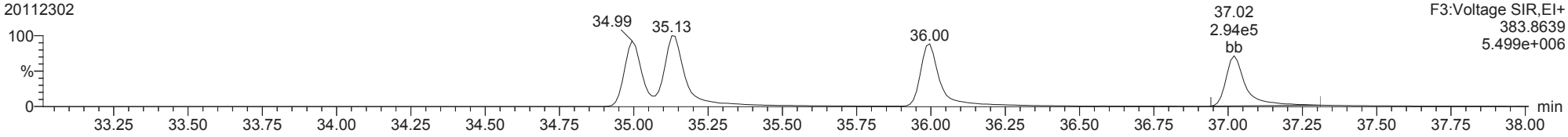

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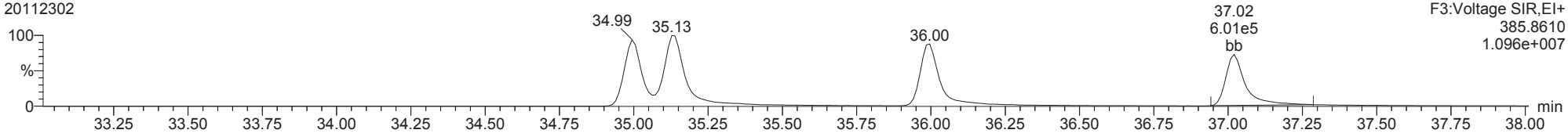

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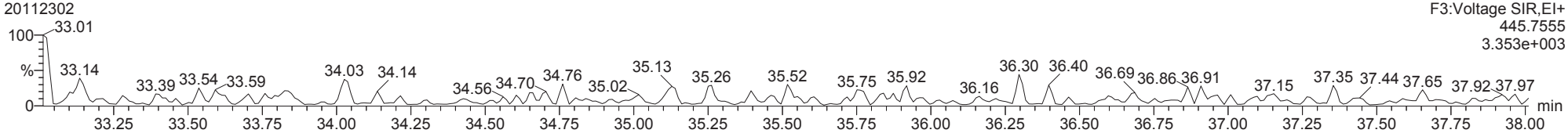

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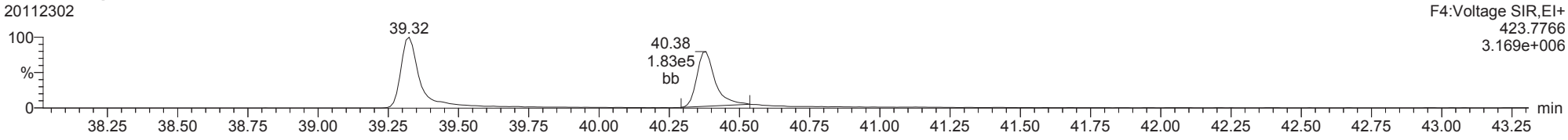

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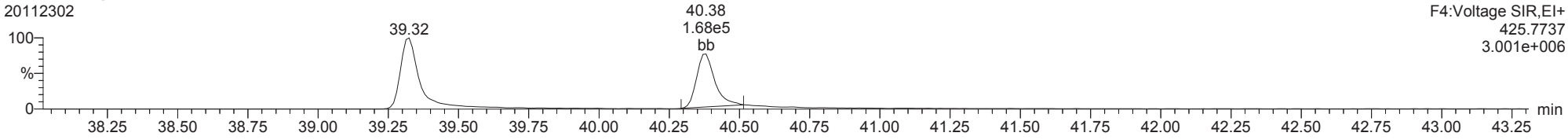

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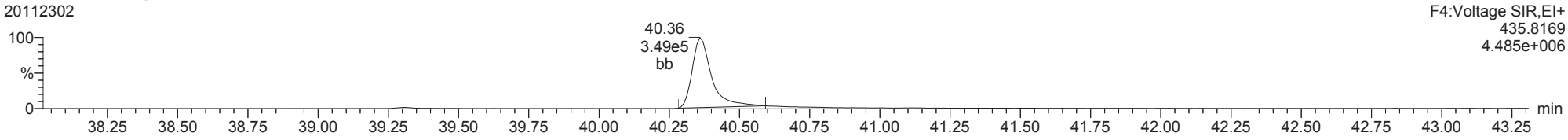

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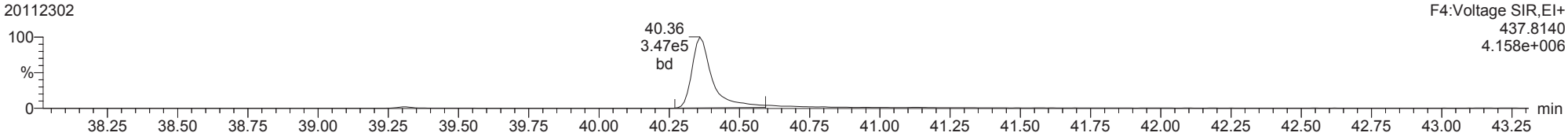

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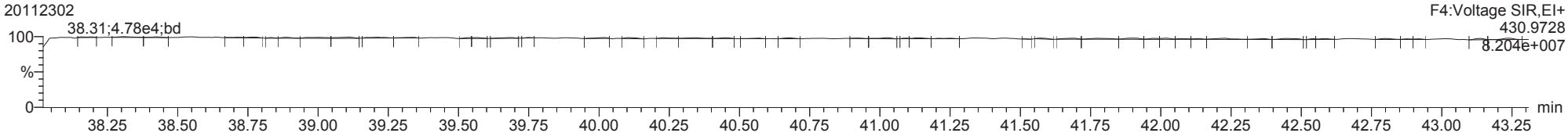

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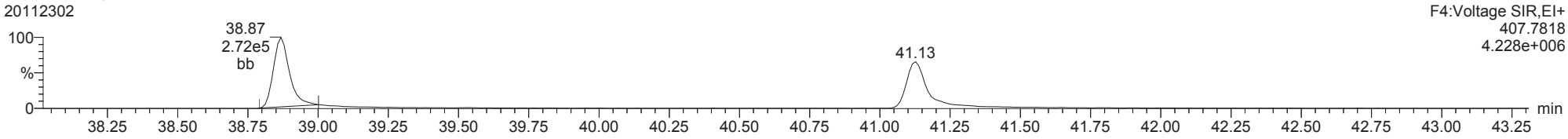

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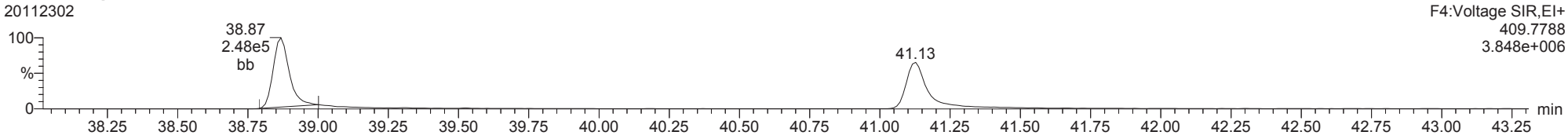

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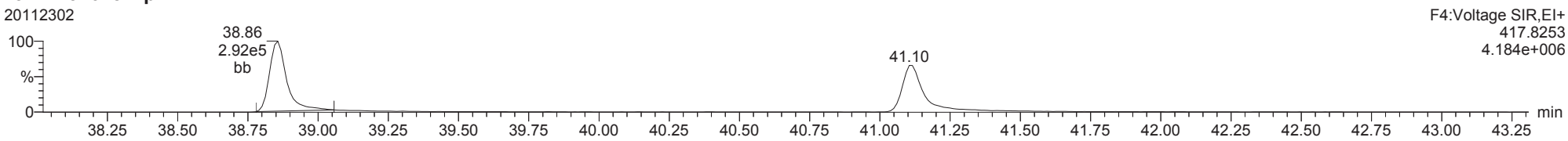

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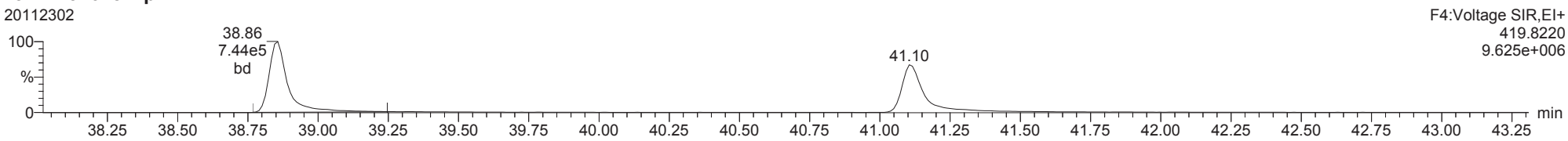

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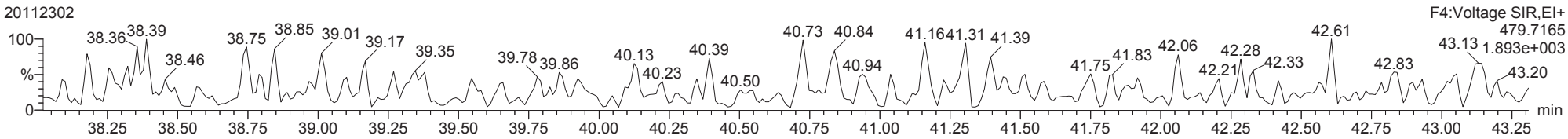

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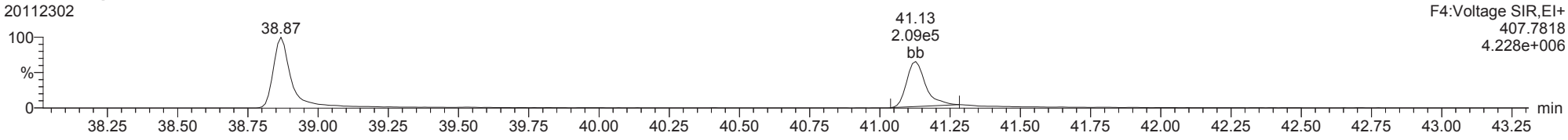

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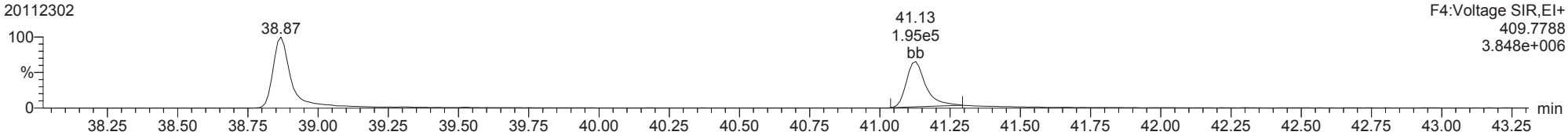

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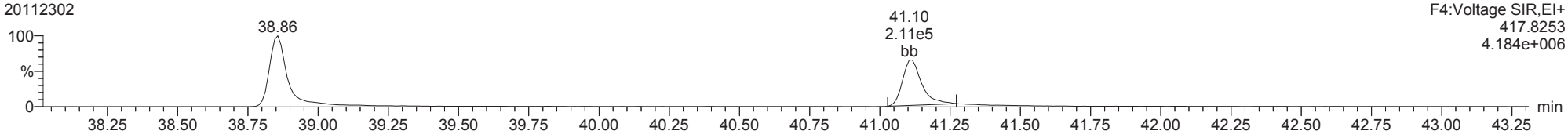

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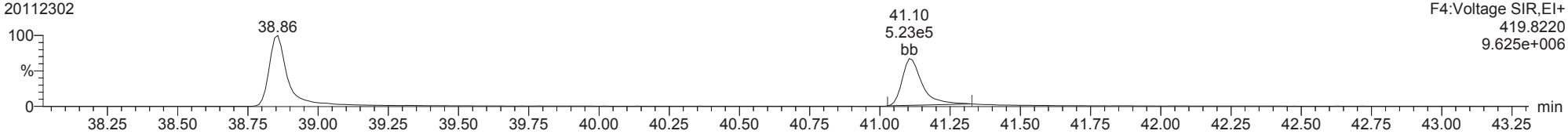

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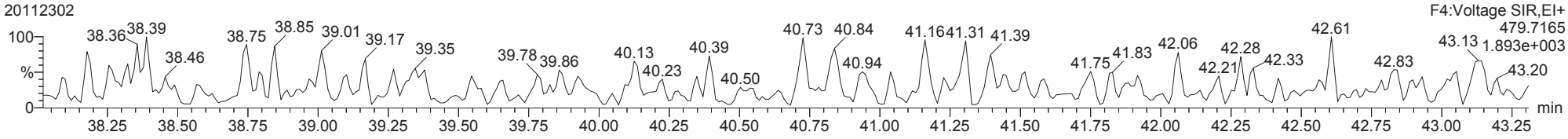

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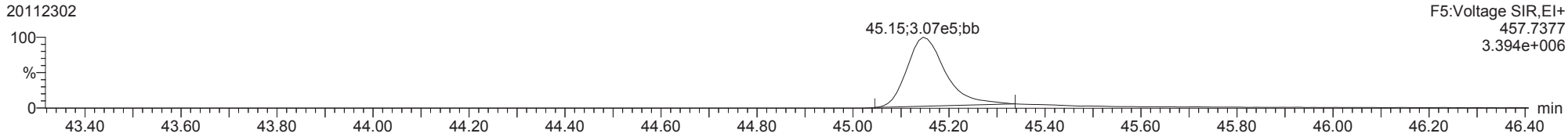
OCDD



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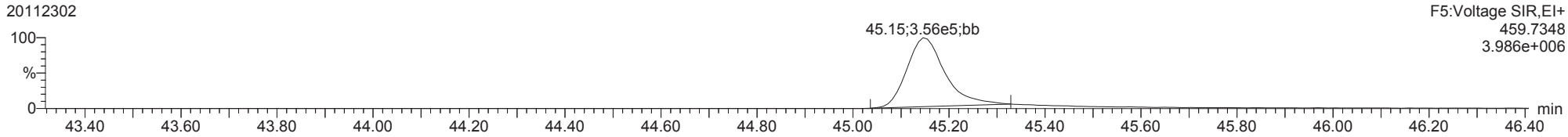

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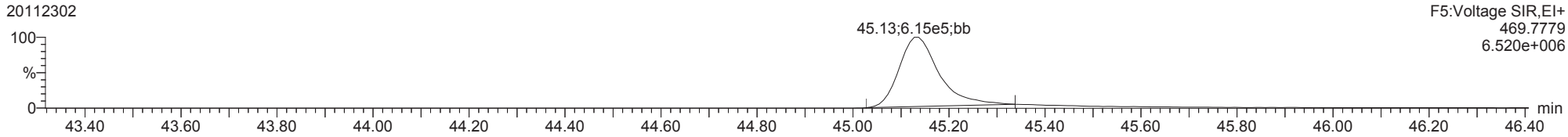

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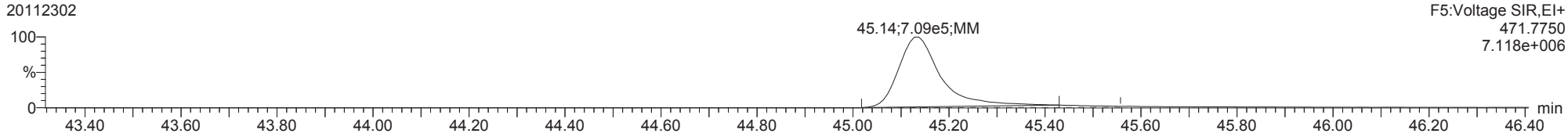

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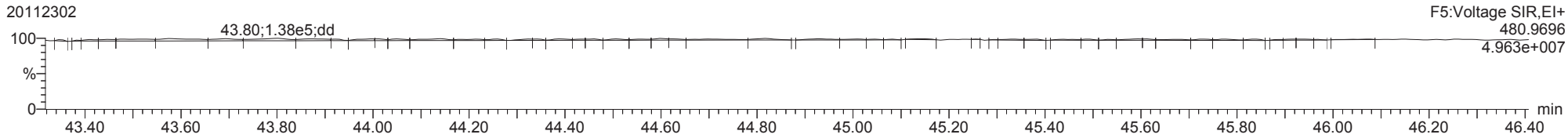

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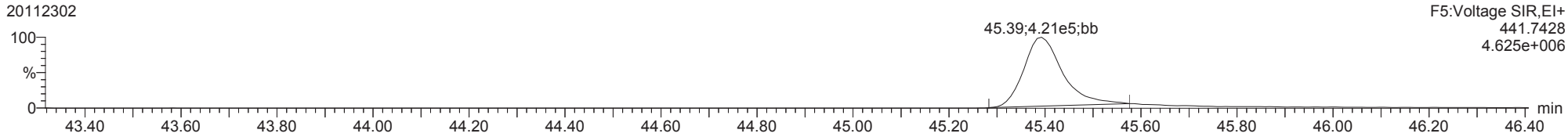
OCDF



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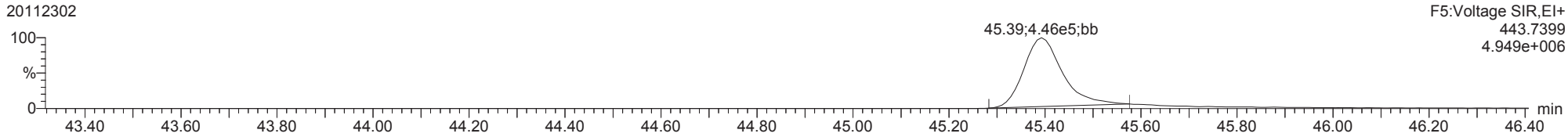
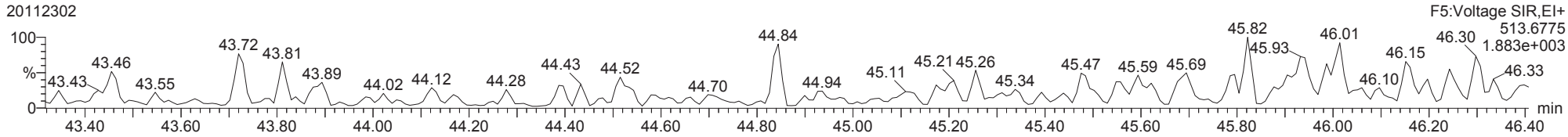


FUNCTION5 DCDPE



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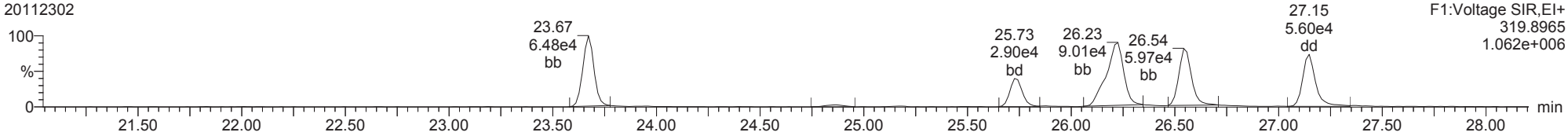
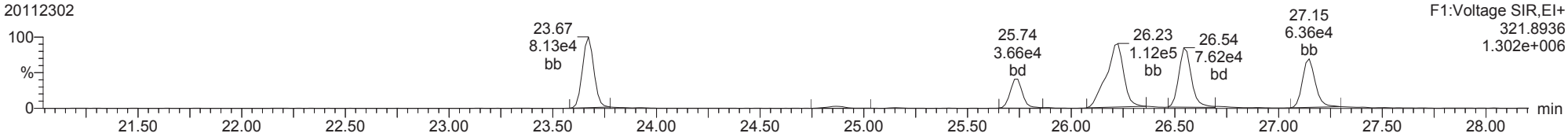
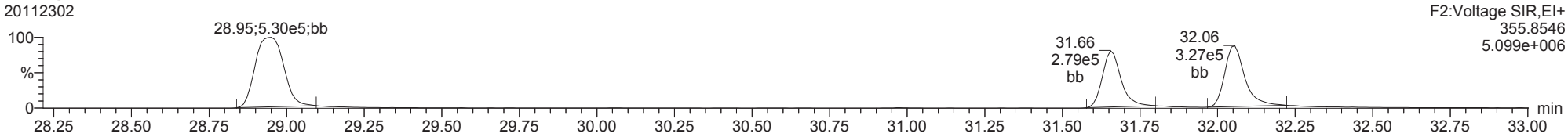
Total-tetradioxins



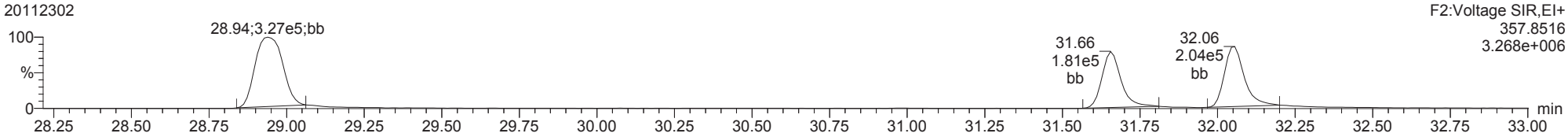
Total-tetradioxins



Total-pentadioxins



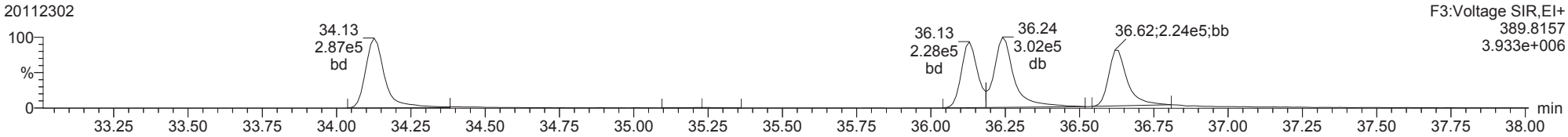
Total-pentadioxins



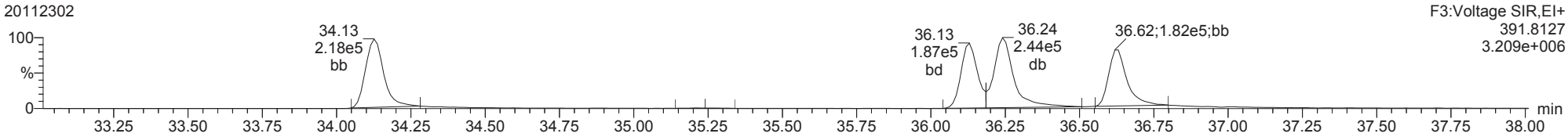
Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 09:56:02 Pacific Standard Time

ID: CS3S1, Name: 20112302, Date: 23-Nov-2020, Time: 10:28:28, Conditions: AUTOSPEC01, User: pk

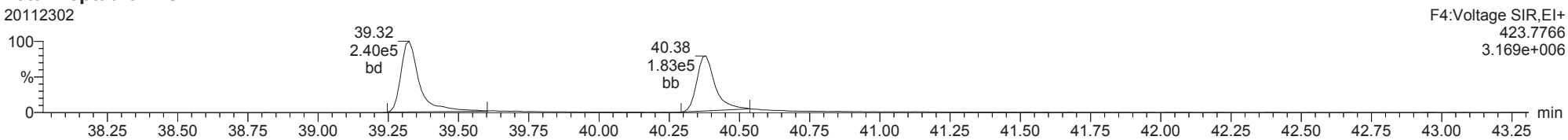
Total-hexadioxins



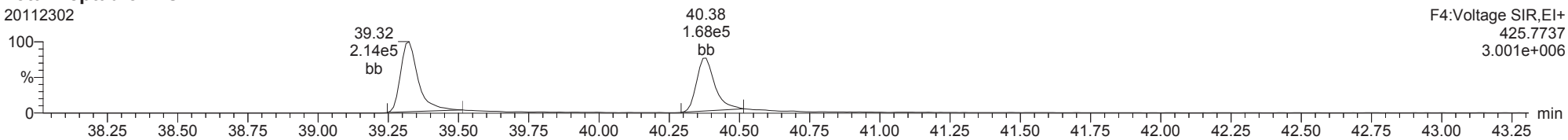
Total-hexadioxins



Total-heptadioxins

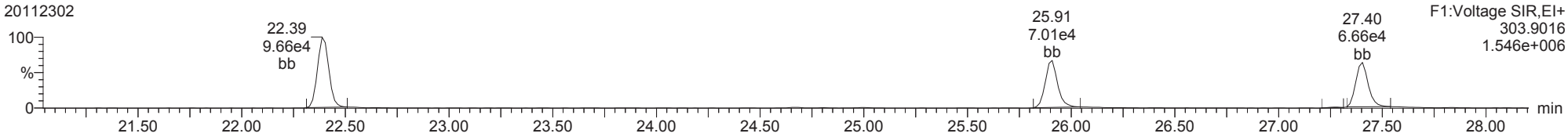


Total-heptadioxins

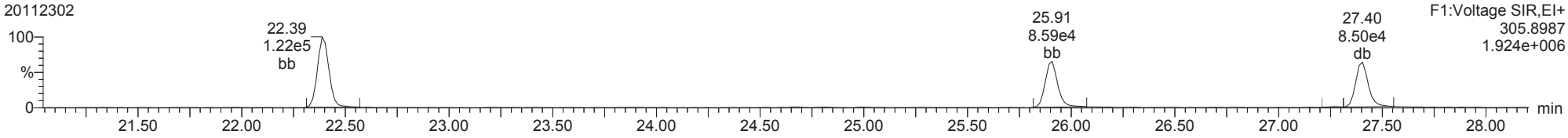


ID: CS3S1, Name: 20112302, Date: 23-Nov-2020, Time: 10:28:28, Conditions: AUTOSPEC01, User: pk

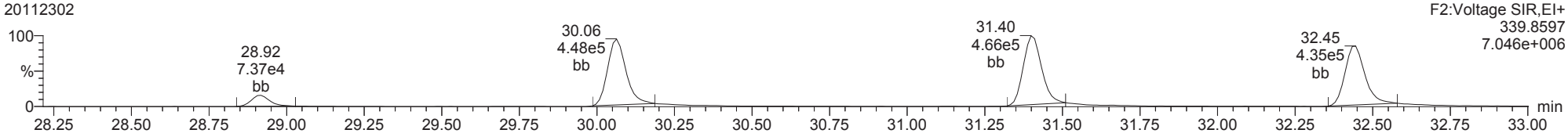
Total-tetrafurans



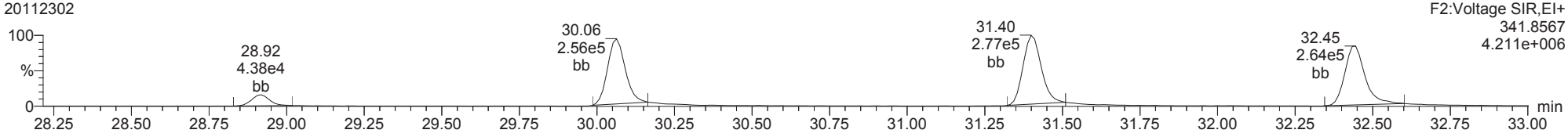
Total-tetrafurans



Total-pentafurans



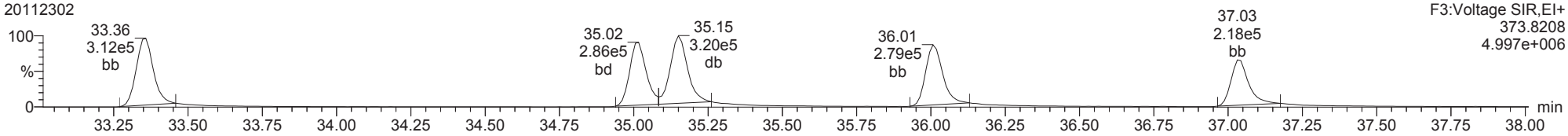
Total-pentafurans



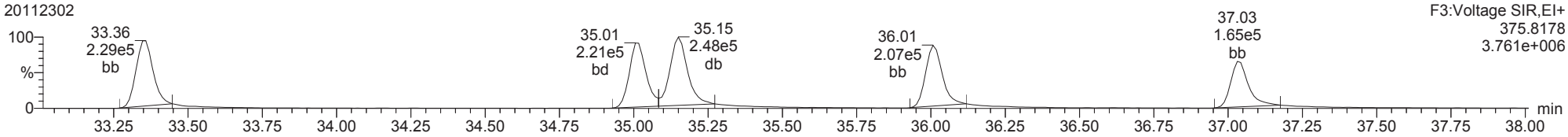
Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 09:56:02 Pacific Standard Time

ID: CS3S1, Name: 20112302, Date: 23-Nov-2020, Time: 10:28:28, Conditions: AUTOSPEC01, User: pk

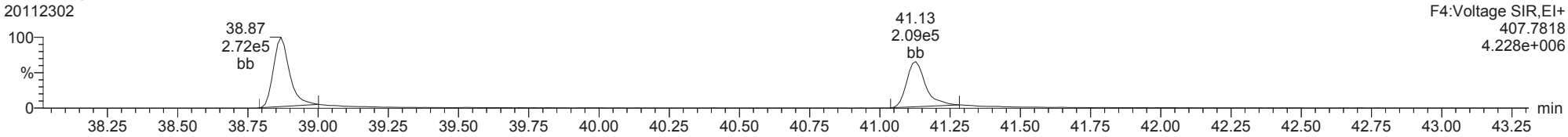
Total-hexafurans



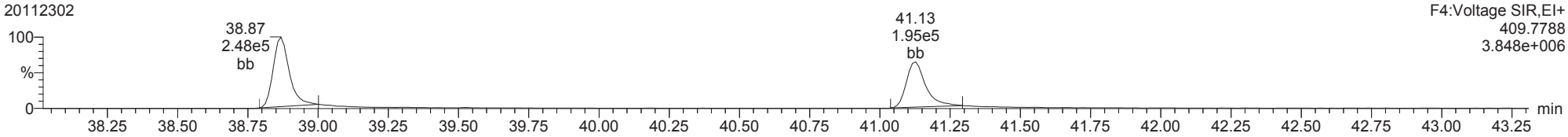
Total-hexafurans



Total-heptafurans

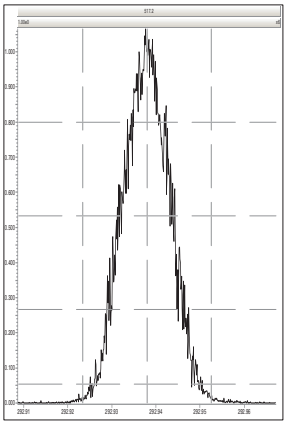


Total-heptafurans

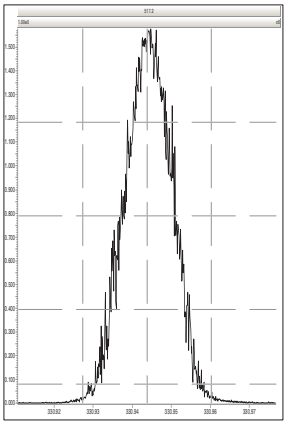


Printed: Monday, November 23, 2020 10:19:23 Pacific Standard Time

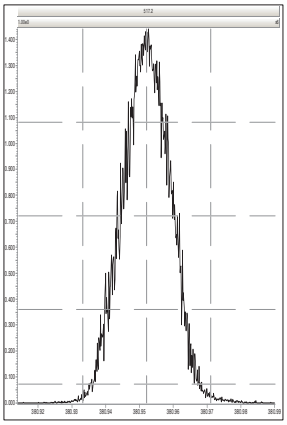
M 292.9824 R 13106



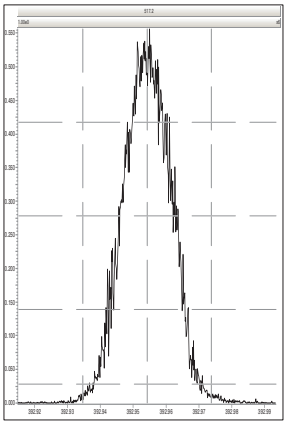
M 330.9792 R 12470



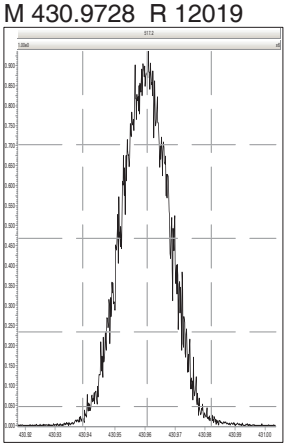
M 380.9760 R 12051



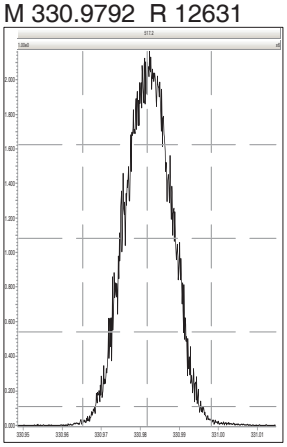
M 392.9760 R 12445



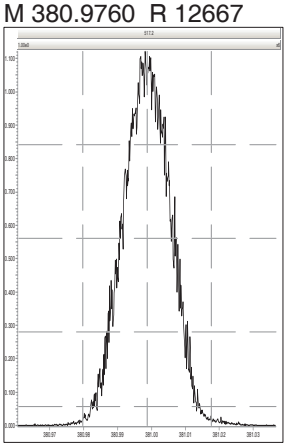
M 430.9728 R 12019



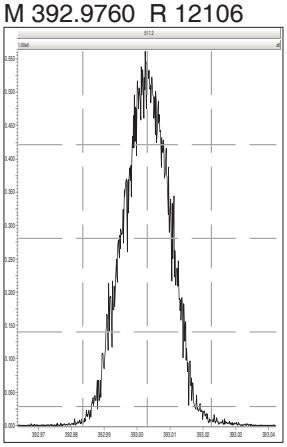
M 330.9792 R 12631



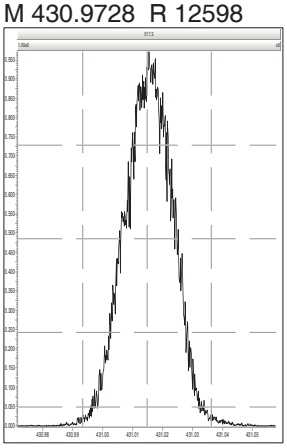
M 380.9760 R 12667



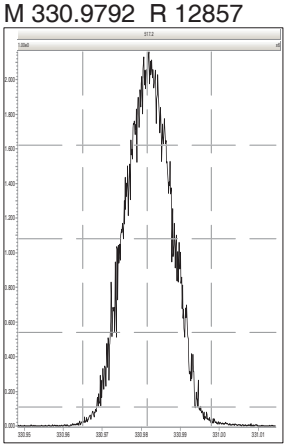
M 392.9760 R 12106



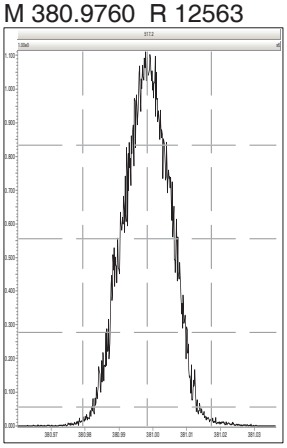
M 430.9728 R 12598



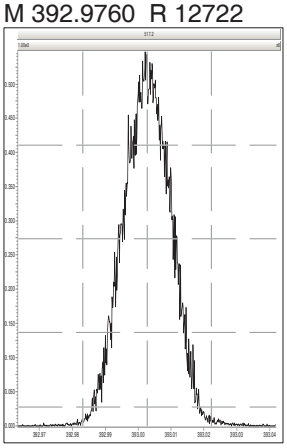
M 330.9792 R 12857



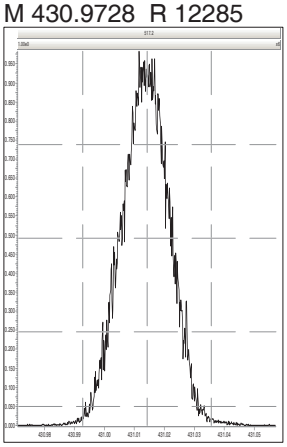
M 380.9760 R 12563



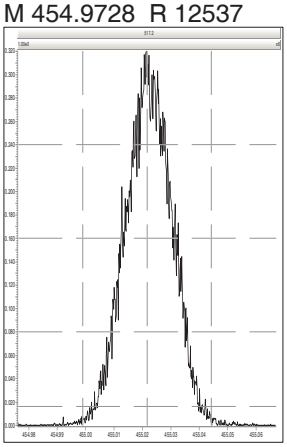
M 392.9760 R 12722



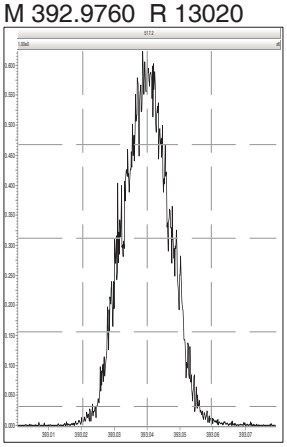
M 430.9728 R 12285



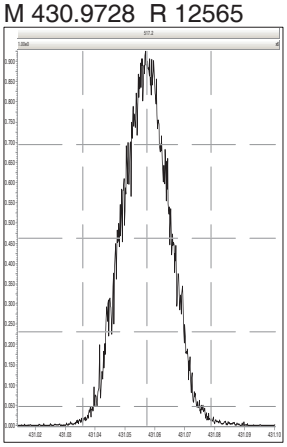
M 454.9728 R 12537



M 392.9760 R 13020

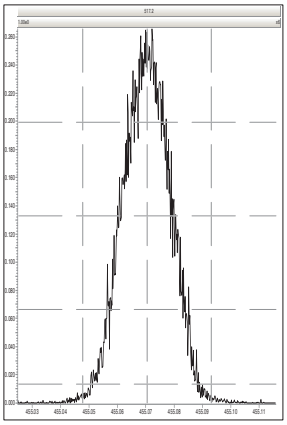


M 430.9728 R 12565

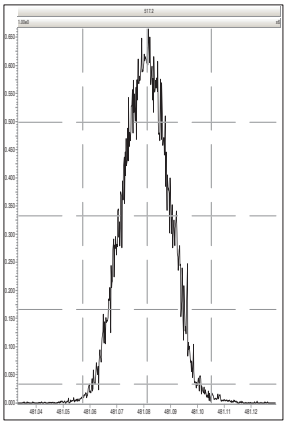


Printed: Monday, November 23, 2020 10:19:23 Pacific Standard Time

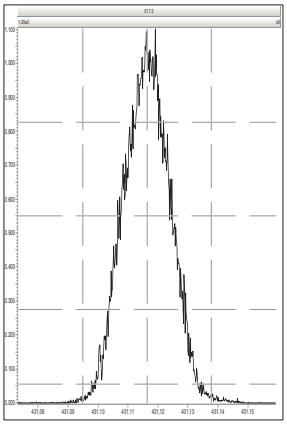
M 454.9728 R 12701



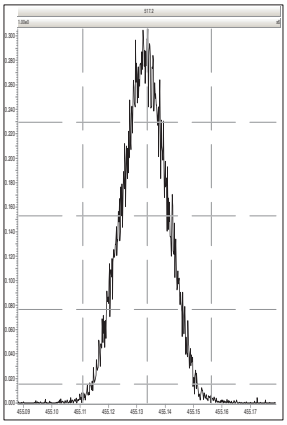
M 480.9696 R 12746



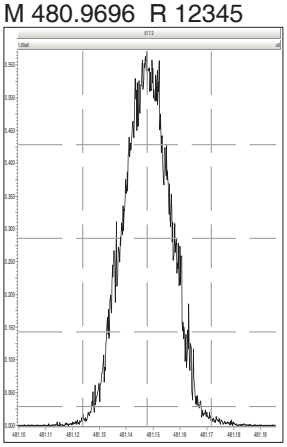
M 430.9728 R 12723



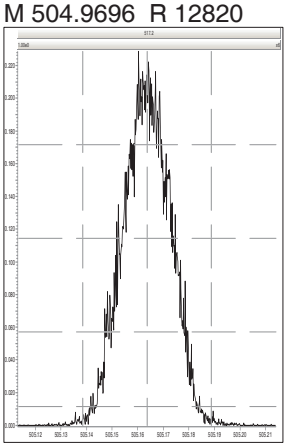
M 454.9728 R 12596



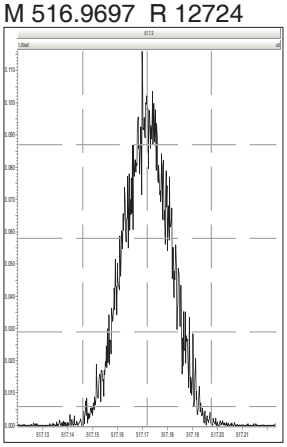
M 480.9696 R 12345

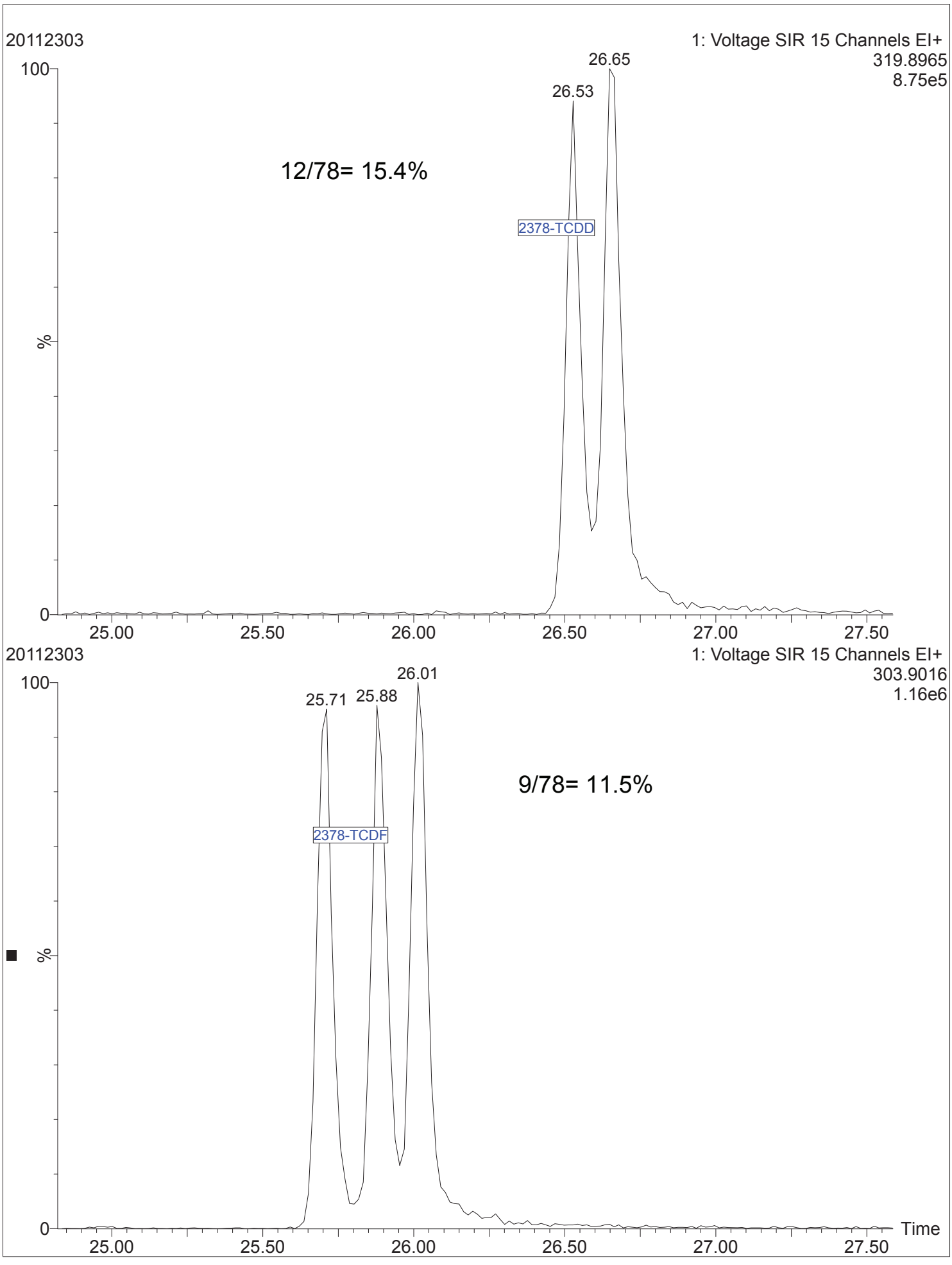


M 504.9696 R 12820



M 516.9697 R 12724




20112303
1: Voltage SIR 15 Channels EI+
319.8965
8.75e5
100
26.65
26.53
12/78= 15.4%
2378-TCDD
%
0
25.00
25.50
26.00
26.50
27.00
27.50
20112303
1: Voltage SIR 15 Channels EI+
303.9016
1.16e6
100
26.01
25.71
25.88
9/78= 11.5%
2378-TCDF
%
0
Time
25.00
25.50
26.00
26.50
27.00
27.50

CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Instrument ID:	AUTOSPEC01	Calibration:	DJ00101
Lab File ID:	20102911	Calibration Date:	10/29/2020
Sequence:	SIJ0454	Injection Date:	10/30/20
Lab Sample ID:	SIJ0454-CCV1	Injection Time:	00:01
Sequence Name:	CS3J2		

CO(POUND	Tg PE	CONC. M) /mLY		RESPONSE FACTOR M RFY			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	(IN	CCV	LI(IT
2,3,6,8-TCDF	A	10.000	9.56	0.6287530	0.7963422		-4.3	+/-17
2,3,6,8-TCDD	A	10.000	10.1	1.2382330	1.2532030		1.2	+/-22
1,2,3,6,8-PeCDF	A	50.000	50.2	0.6693430	0.6818049		0.3	+/-18
2,3,4,6,8-PeCDF	A	50.000	50.7	0.8804796	0.8917096		1.3	+/-18
1,2,3,6,8-PeCDD	A	50.000	53.3	0.9867416	1.0520430		7.5	+/-22
1,2,3,4,6,8-HxCDF	A	50.000	50.5	0.8802789	0.8885915		0.9	+/-10
1,2,3,7,6,8-HxCDF	A	50.000	51.5	0.8533425	0.8691792		3.0	+/-12
2,3,4,7,6,8-HxCDF	A	50.000	55.8	0.8726805	0.9722294		11.5	+/-12
1,2,3,6,8,9-HxCDF	A	50.000	54.1	0.6800802	0.9216174		8.2	+/-10
1,2,3,4,6,8-HxCDD	A	50.000	51.6	0.8416568	0.8611149		3.5	+/-22
1,2,3,7,6,8-HxCDD	A	50.000	49.6	0.9060901	0.9012343		-0.7	+/-22
1,2,3,6,8,9-HxCDD	A	50.000	53.4	0.6837705	0.8364484		7.9	+/-18
1,2,3,4,7,6,8-HpCDF	A	50.000	52.3	1.0008820	1.0461860		4.7	+/-10
1,2,3,4,6,8,9-HpCDF	A	50.000	54.8	0.9939217	1.0899650		9.6	+/-14
1,2,3,4,7,6,8-HpCDD	A	50.000	53.9	1.0437870	1.1259290		6.9	+/-14
OCDF	A	100.00	107	1.1569760	1.2242260		5.6	+/-36
OCDD	A	100.00	99.4	0.9729964	0.9561291		-0.7	+/-21
13C12-2,3,6,8-TCDF	A	100.00	101	2.2029720	2.2317508		1.3	+/-29
13C12-2,3,6,8-TCDD	A	100.00	99.0	1.1814920	1.1600752		-1.0	+/-18
13C12-1,2,3,6,8-PeCDF	A	100.00	100	1.6411380	1.6440883		0.2	+/-24
13C12-2,3,4,6,8-PeCDF	A	100.00	99.4	1.7794980	1.7591594		-0.7	+/-23
13C12-1,2,3,6,8-PeCDD	A	100.00	97.3	0.9668844	0.9416123		-3.6	+/-38
13C12-1,2,3,4,6,8-HxCDF	A	100.00	102	1.0222260	1.0385970		1.7	+/-24
13C12-1,2,3,7,6,8-HxCDF	A	100.00	107	1.2001060	1.2775105		5.5	+/-30
13C12-2,3,4,7,6,8-HxCDF	A	100.00	98.6	1.0610950	1.0565763		-1.3	+/-26
13C12-1,2,3,6,8,9-HxCDF	A	100.00	96.9	0.9187022	0.8994586		-2.1	+/-27
13C12-1,2,3,4,6,8-HxCDD	A	100.00	96.0	0.9749615	0.9373548		-3.0	+/-15
13C12-1,2,3,7,6,8-HxCDD	A	100.00	107	1.1780800	1.2340914		5.6	+/-15
13C12-1,2,3,4,7,6,8-HpCDF	A	100.00	100	0.9085860	0.9127917		0.5	+/-22
13C12-1,2,3,4,6,8,9-HpCDF	A	100.00	98.1	0.6235689	0.6099510		-1.9	+/-23
13C12-1,2,3,4,7,6,8-HpCDD	A	100.00	104	0.7453514	0.7781998		3.5	+/-28
13C12-OCDD	A	200.00	203	0.7682760	0.7884619		1.5	+/-52
36Cl4-2,3,6,8-TCDD	A	10.000	9.50	1.2744890	1.2016059		-5.0	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Instrument ID:	AUTOSPEC01	Calibration:	DJ00101
Lab File ID:	20102910	Calibration Date:	10/29/2020
Sequence:	SIJ0454	Injection Date:	10/29/20
Lab Sample ID:	SIJ0454-SCV1	Injection Time:	23:12
Sequence Name:	ICVCJ		

CO(POUND	Tg PE	CONC. M) /mLY		RESPONSE FACTOR	NRRFY		% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	(IN	CCV	LI(IT
2,3,6,8-TCDF	A	10.000	9.61	0.6287530	0.6066792		-2.9	
2,3,6,8-TCDD	A	10.000	8.67	1.2382330	1.0848880		-12.4	
1,2,3,6,8-PeCDF	A	50.000	50.2	0.6693430	0.6816328		0.3	
2,3,4,6,8-PeCDF	A	50.000	50.6	0.8804796	0.8922952		1.3	
1,2,3,6,8-PeCDD	A	50.000	52.1	0.9867416	1.0297120		4.2	
1,2,3,4,6,8-HxCDF	A	50.000	52.4	0.8802789	0.9232498		4.9	
1,2,3,7,6,8-HxCDF	A	50.000	51.9	0.8533425	0.8871228		3.8	
2,3,4,7,6,8-HxCDF	A	50.000	53.5	0.8726805	0.9231552		6.0	
1,2,3,6,8,9-HxCDF	A	50.000	52.9	0.6800802	0.8255206		5.8	
1,2,3,4,6,8-HxCDD	A	50.000	53.8	0.8416568	0.9072178		6.6	
1,2,3,7,6,8-HxCDD	A	50.000	49.2	0.9060901	0.8931074		-1.5	
1,2,3,6,8,9-HxCDD	A	50.000	51.2	0.6837705	7859.612		2.4	
1,2,3,4,7,6,8-HpCDF	A	50.000	50.3	1.0008820	1.0067120		0.6	
1,2,3,4,6,8,9-HpCDF	A	50.000	53.1	0.9939217	1.0555110		7.2	
1,2,3,4,7,6,8-HpCDD	A	50.000	51.1	1.0437870	1.0759510		2.1	
OCDF	A	100.00	118	1.1569760	1.3795880		18.3	
OCDD	A	100.00	118	0.9729964	1.1332760		16.6	
13C12-2,3,6,8-TCDF	A	100.00	98.3	2.2029720	2.1758938		-1.6	
13C12-2,3,6,8-TCDD	A	100.00	96.7	1.1814920	1.1528547		-2.4	
13C12-1,2,3,6,8-PeCDF	A	100.00	103	1.6411380	1.6906996		2.9	
13C12-2,3,4,6,8-PeCDF	A	100.00	105	1.7794980	1.6478318		4.7	
13C12-1,2,3,6,8-PeCDD	A	100.00	95.6	0.9668844	0.9371378		-4.3	
13C12-1,2,3,4,6,8-HxCDF	A	100.00	114	1.0222260	1.1705434		13.5	
13C12-1,2,3,7,6,8-HxCDF	A	100.00	116	1.2001060	1.4023490		17.9	
13C12-2,3,4,7,6,8-HxCDF	A	100.00	109	1.0610950	1.1605136		9.3	
13C12-1,2,3,6,8,9-HxCDF	A	100.00	112	0.9187022	1.0311819		12.3	
13C12-1,2,3,4,6,8-HxCDD	A	100.00	111	0.9749615	1.0795354		10.8	
13C12-1,2,3,7,6,8-HxCDD	A	100.00	116	1.1780800	1.3743383		17.8	
13C12-1,2,3,4,7,6,8-HpCDF	A	100.00	114	0.9085860	1.0322570		13.7	
13C12-1,2,3,4,6,8,9-HpCDF	A	100.00	106	0.6235689	0.6642824		6.0	
13C12-1,2,3,4,7,6,8-HpCDD	A	100.00	118	0.7453514	0.6701644		16.8	
13C12-OCDD	A	200.00	197	0.7682760	0.7756479		-1.8	
36Cl4-2,3,6,8-TCDD	A	10.000	10.2	1.2744890	1.2931034		2.3	

* Values outside of QC limits

CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Instrument ID:	AUTOSPEC01	Calibration:	DJ00101
Lab File ID:	20111808	Calibration Date:	10/29/2020
Sequence:	SIK0272	Injection Date:	11/18/20
Lab Sample ID:	SIK0272-CCV1	Injection Time:	16:32
Sequence Name:	CS3R2		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
2,3,7,8-TCDF	A	10.000	11.0	0.7286530	0.8039986		10.3	+/-16	
2,3,7,8-TCDD	A	10.000	10.1	1.2382330	1.2515020		1.1	+/-22	
1,2,3,7,8-PeCDF	A	50.000	62.9	0.7793430	0.9797896		25.7	+/-18	*
2,3,4,7,8-PeCDF	A	50.000	61.2	0.8804697	1.0777400		22.4	+/-18	*
1,2,3,7,8-PeCDD	A	50.000	52.6	0.9876417	1.0396980		5.3	+/-22	
1,2,3,4,7,8-HxCDF	A	50.000	58.1	0.8802689	1.0220930		16.1	+/-10	*
1,2,3,6,7,8-HxCDF	A	50.000	58.5	0.8533425	0.9976170		16.9	+/-12	*
2,3,4,6,7,8-HxCDF	A	50.000	58.9	0.8627805	1.0159820		17.8	+/-12	*
1,2,3,7,8,9-HxCDF	A	50.000	59.2	0.7800802	0.9237006		18.4	+/-10	*
1,2,3,4,7,8-HxCDD	A	50.000	53.8	0.8417578	0.9052778		7.5	+/-22	
1,2,3,6,7,8-HxCDD	A	50.000	51.9	0.9070901	0.9410677		3.7	+/-22	
1,2,3,7,8,9-HxCDD	A	50.000	57.2	0.7836605	0.8963925		14.4	+/-18	
1,2,3,4,6,7,8-HpCDF	A	50.000	55.4	1.0008820	1.1092670		10.8	+/-10	*
1,2,3,4,7,8,9-HpCDF	A	50.000	56.1	0.9939216	1.1151470		12.2	+/-14	
1,2,3,4,6,7,8-HpCDD	A	50.000	53.1	1.0436860	1.1078150		6.1	+/-14	
OCDF	A	100.00	114	1.1579670	1.3222130		14.2	+/-37	
OCDD	A	100.00	104	0.9629974	0.9968936		3.5	+/-21	
13C12-2,3,7,8-TCDF	A	100.00	92.4	2.2029620	2.0360145		-7.6	+/-29	
13C12-2,3,7,8-TCDD	A	100.00	91.5	1.1814920	1.0809073		-8.5	+/-18	
13C12-1,2,3,7,8-PeCDF	A	100.00	89.1	1.7411380	1.5518557		-10.9	+/-24	
13C12-2,3,4,7,8-PeCDF	A	100.00	91.4	1.6694980	1.5266197		-8.6	+/-23	
13C12-1,2,3,7,8-PeCDD	A	100.00	98.4	0.9778844	0.9618455		-1.6	+/-38	
13C12-1,2,3,4,7,8-HxCDF	A	100.00	98.3	1.0222270	1.0048620		-1.7	+/-24	
13C12-1,2,3,6,7,8-HxCDF	A	100.00	89.2	1.2001070	1.0700515		-10.8	+/-30	
13C12-2,3,4,6,7,8-HxCDF	A	100.00	92.7	1.0710950	0.9932550		-7.3	+/-27	
13C12-1,2,3,7,8,9-HxCDF	A	100.00	97.0	0.9186022	0.8906480		-3.0	+/-26	
13C12-1,2,3,4,7,8-HxCDD	A	100.00	96.4	0.9649715	0.9302826		-3.6	+/-15	
13C12-1,2,3,6,7,8-HxCDD	A	100.00	85.8	1.1680800	0.9682258		-14.2	+/-15	
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	105	0.9085870	0.9503945		4.6	+/-22	
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	107	0.7235789	0.7753871		7.2	+/-23	
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	110	0.6453514	0.7117385		10.3	+/-28	
13C12-OCDD	A	200.00	192	0.6782670	0.6498964		-4.2	+/-52	
37Cl4-2,3,7,8-TCDD	A	10.000	9.68	1.2644890	1.2234123		-3.2		

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\201118IH.qld
Last Altered: Thursday, November 19, 2020 10:02:55 Pacific Standard Time
Printed: Thursday, November 19, 2020 10:03:42 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 18 Nov 2020 14:35:19
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: CS3R2, Name: 20111808, Date: 18-Nov-2020, Time: 16:32:22, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.923	1.001	8.837e4	1.040e5	0.729	0.850	0.770	1339	2933	1.35e6	1.66e6	1009.6	564.4	NO	bb	bb	11.034
12378-PeCDF	30.086	1.000	5.608e5	3.327e5	0.779	1.686	1.550	3392	2890	8.68e6	5.17e6	2558.6	1788.5	NO	bb	bb	62.860
23478-PeCDF	31.432	1.001	6.065e5	3.603e5	0.880	1.683	1.550	3392	2890	9.52e6	5.65e6	2807.9	1955.6	NO	bb	bb	61.203
123478-HxCDF	35.039	1.000	4.069e5	3.063e5	0.880	1.328	1.240	2417	2607	6.83e6	5.15e6	2827.1	1973.9	NO	bd	bd	58.056
234678-HxCDF	36.040	1.001	3.985e5	3.022e5	0.863	1.318	1.240	2417	2607	6.61e6	5.08e6	2734.7	1948.7	NO	bb	bb	58.878
123678-HxCDF	35.183	1.001	4.233e5	3.179e5	0.853	1.332	1.240	2417	2607	6.74e6	5.04e6	2788.3	1934.3	NO	db	db	58.453
123789-HxCDF	37.064	1.001	3.276e5	2.436e5	0.780	1.345	1.240	2417	2607	5.34e6	3.96e6	2209.3	1520.6	NO	bb	bb	59.205
1234678-HpCDF	38.890	1.000	3.886e5	3.434e5	1.001	1.132	1.050	3317	3623	6.73e6	5.97e6	2028.7	1648.4	NO	bb	bb	55.414
1234789-HpCDF	41.149	1.000	3.139e5	2.865e5	0.994	1.096	1.050	3317	3623	4.68e6	4.29e6	1411.0	1184.1	NO	bb	bb	56.098
OCDF	45.429	1.006	5.805e5	6.129e5	1.158	0.947	0.890	2809	2707	6.91e6	7.45e6	2458.5	2752.1	NO	bb	bb	114.184
2378-TCDD	26.573	1.001	7.100e4	8.798e4	1.238	0.807	0.770	1688	1111	1.13e6	1.36e6	666.5	1220.4	NO	bb	bb	10.107
12378-PeCDD	31.688	1.001	3.599e5	2.278e5	0.988	1.580	1.550	2253	1928	5.51e6	3.53e6	2446.0	1831.7	NO	bb	bb	52.635
123478-HxCDD	36.152	1.000	3.201e5	2.647e5	0.842	1.209	1.240	3028	1984	5.49e6	4.55e6	1813.4	2294.0	NO	bd	bd	53.773
123678-HxCDD	36.263	1.000	3.460e5	2.867e5	0.907	1.207	1.240	3028	1984	5.43e6	4.55e6	1793.7	2293.3	NO	db	db	50.103
123789-HxCDD	36.653	1.011	3.220e5	2.691e5	0.784	1.197	1.240	3028	1984	5.29e6	4.32e6	1748.5	2179.8	NO	bb	bb	56.202
1234678-HpCDD	40.403	1.000	2.812e5	2.663e5	1.044	1.056	1.050	2958	2116	4.38e6	4.19e6	1482.1	1981.3	NO	bb	bb	53.072
OCDD	45.182	1.000	4.096e5	4.901e5	0.963	0.836	0.890	2490	2707	5.08e6	5.88e6	2040.2	2172.2	NO	bb	bb	103.520
13C-2378-TCDF	25.908	1.007	1.051e6	1.342e6	2.203	0.783	0.770	5243	2542	1.64e7	2.09e7	3125.1	8216.5	NO	bb	bb	92.422
13C-12378-PeCDF	30.074	1.168	1.105e6	7.193e5	1.741	1.536	1.550	2948	2692	1.65e7	1.08e7	5600.8	4016.2	NO	bb	bb	89.129
13C-23478-PeCDF	31.410	1.220	1.077e6	7.169e5	1.669	1.503	1.550	2948	2692	1.67e7	1.11e7	5674.2	4131.1	NO	bb	bb	91.442
13C-123478-HxCDF	35.027	0.956	4.616e5	9.339e5	1.022	0.494	0.510	2623	3146	7.33e6	1.47e7	2795.4	4684.0	NO	bd	bd	98.301
13C-123678-HxCDF	35.161	0.960	4.920e5	9.941e5	1.200	0.495	0.510	2623	3146	7.73e6	1.56e7	2945.0	4962.2	NO	db	db	89.163
13C-234678-HxCDF	36.018	0.983	4.568e5	9.226e5	1.071	0.495	0.510	2623	3146	7.53e6	1.52e7	2869.1	4819.8	NO	bb	bb	92.733
13C-123789-HxCDF	37.042	1.011	4.104e5	8.264e5	0.919	0.497	0.510	2623	3146	6.39e6	1.29e7	2436.3	4087.8	NO	bb	bb	96.957
13C-1234678-HpCDF	38.879	1.061	3.974e5	9.225e5	0.909	0.431	0.440	2368	2959	6.80e6	1.57e7	2873.4	5316.3	NO	bb	bb	104.601
13C-1234789-HpCDF	41.138	1.123	3.209e5	7.559e5	0.724	0.424	0.440	2368	2959	4.88e6	1.13e7	2061.3	3809.1	NO	bb	bb	107.160
13C-1234-TCDD	25.742	0.000	5.308e5	6.445e5	1.000	0.824	0.770	2675	1533	8.51e6	1.03e7	3179.0	6695.2	NO	bb	bb	100.000
13C-2378-TCDD	26.558	1.032	5.716e5	6.988e5	1.181	0.818	0.770	2675	1533	8.59e6	1.05e7	3209.5	6879.6	NO	bb	bb	91.487
13C-12378-PeCDD	31.666	1.230	6.993e5	4.311e5	0.978	1.622	1.550	1204	1318	1.11e7	6.82e6	9183.8	5169.5	NO	bb	bb	98.360
13C-123478-HxCDD	36.140	0.986	7.254e5	5.665e5	0.965	1.281	1.240	2078	2510	1.20e7	9.36e6	5758.7	3730.5	NO	bd	bd	96.405
13C-123678-HxCDD	36.252	0.989	7.682e5	6.239e5	1.168	1.231	1.240	2078	2510	1.22e7	9.96e6	5890.8	3968.8	NO	MM	MM	85.818
13C-1234678-HpCDD	40.392	1.102	5.091e5	4.793e5	0.645	1.062	1.050	2527	2597	7.79e6	7.26e6	3081.8	2796.4	NO	bb	bb	110.287
13C-OCDD	45.173	1.233	8.591e5	9.459e5	0.678	0.908	0.890	1471	3056	1.04e7	1.14e7	7091.1	3730.2	NO	bb	bb	191.634
13C-123789-HxCDD	36.641	0.000	7.713e5	6.174e5	1.000	1.249	1.240	2078	2510	1.22e7	9.65e6	5858.1	3843.5	NO	bb	bb	100.000
37CL-2378-TCDD	26.573	1.032	1.438e5		1.264			2338		2.21e6		945.2			bb		9.675

Dataset: T:\Autospec\Processed Data Batch\201118IH.qld
Last Altered: Thursday, November 19, 2020 10:02:55 Pacific Standard Time
Printed: Thursday, November 19, 2020 10:03:42 Pacific Standard Time

ID: CS3R2, Name: 20111808, Date: 18-Nov-2020, Time: 16:32:22, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.418	0.865	1.057e5	1.288e5	0.846	0.820	0.770	1339	2933	1.73e6	2.08e6	1289.3	710.4	NO	bb	bb	11.581
1289-TCDF	27.419	1.058	8.610e4	1.044e5	0.688	0.825	0.770	1339	2933	1.30e6	1.54e6	972.5	525.8	NO	db	db	11.575
13468-PECDF	27.283	0.907	6.212e5	4.155e5	1.181	1.495	1.550	1288	1151	9.89e6	6.54e6	7684.9	5686.6	NO	bb	bb	48.115
12389-PECDF	32.467	1.080	5.950e5	3.464e5	0.766	1.717	1.550	3392	2890	9.21e6	5.36e6	2715.2	1856.0	NO	bb	bb	67.372
123468-HXCDF	33.380	0.953	4.130e5	3.069e5	1.003	1.346	1.240	2417	2607	6.61e6	4.99e6	2735.8	1912.5	NO	bb	bb	51.450
1368-TCDD	23.687	0.892	7.361e4	8.944e4	1.179	0.823	0.770	1688	1111	1.19e6	1.46e6	703.0	1311.1	NO	bb	bb	10.889
1289-TCDD	27.162	1.023	6.312e4	8.001e4	1.042	0.789	0.770	1688	1111	9.54e5	1.22e6	565.3	1100.2	NO	bb	bb	10.811
12479-PECDD	28.961	0.915	6.273e5	3.912e5	1.810	1.604	1.550	2253	1928	6.24e6	3.96e6	2769.2	2054.6	NO	bb	bb	49.774
12389-PECDD	32.078	1.013	4.358e5	2.732e5	1.165	1.595	1.550	2253	1928	6.91e6	4.32e6	3066.6	2241.6	NO	bb	bb	53.825
124679-HXCDD	34.159	0.945	3.467e5	2.879e5	1.056	1.204	1.240	3028	1984	5.64e6	4.58e6	1862.1	2307.5	NO	bb	bb	46.499
1234679-HPCDD	39.346	0.974	3.115e5	2.968e5	1.285	1.049	1.050	2958	2116	5.16e6	4.93e6	1745.1	2331.3	NO	bb	bb	47.878
Total-tetrafurans			2.809e5		0.754			1339		4.39e6							34.277
Total-penta1			6.212e5					1288		9.89e6							48.115
Total-pentafurans			1.849e6		0.809			3392		2.88e7							200.941
Total-hexafurans			1.969e6		0.876			2417		3.21e7							286.043
Total-heptafurans			7.025e5		0.997			3317		1.14e7							111.513
Total-Furans			6.003e6		0.893			1339		9.36e7							795.074
Total-tetradioxins			3.540e5		1.153			1688		5.07e6							54.341
Total-pentadioxins			1.425e6		1.321			2253		1.87e7							156.474
Total-hexadioxins			1.335e6		0.897			3028		2.19e7							206.578
Total-heptadioxins			5.927e5		1.165			2958		9.55e6							100.950
Total-Dioxins			4.116e6		1.100			1688		6.02e7							621.862
Total-TEQ			1.012e7					1688		1.54e8							1416.936
FUNCTION1 PFK			5.005e6					888020		7.98e7							
FUNCTION2 PFK			4.433e6					599015		4.87e7							0.000
FUNCTION3 PFK			3.212e6					578192		5.85e7							0.000
FUNCTION4 PFK			1.967e7					538825		1.86e8							
FUNCTION5 PFK			6.743e5					420233		1.71e7							
FUNCTION1 HXCD...			8.122e1					591		1.75e3							0.000
FUNCTION1 HPCD...			1.646e3					1248		3.62e4							0.000
FUNCTION2 HPCD...			7.345e2					1415		1.23e4							0.000
FUNCTION3 OCDPE			1.037e2					464		3.10e3							0.000
FUNCTION4 NCDPE			0.000e0					658		0.00e0							
FUNCTION5 DCDPE			0.000e0					423		0.00e0							

Method: T:\Autospec\Methods\Dioxin201118.mdb 18 Nov 2020 14:35:19
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: CS3R2, Name: 20111808, Date: 18-Nov-2020, Time: 16:32:22, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.42	8.610e4	1.044e5	0.688	0.82	0.77	972.5	YES	NO	db	db	11.575
2	2378-TCDF	25.92	8.837e4	1.040e5	0.729	0.85	0.77	1009.6	YES	NO	bb	bb	11.034
3	Total-tetrafurans	25.00	7.081e2	8.622e2	0.754	0.82	0.77	6.2	YES	NO	db	bd	0.087
4	1368-TCDF	22.42	1.057e5	1.288e5	0.846	0.82	0.77	1289.3	YES	NO	bb	bb	11.581

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.28	6.212e5	4.155e5	1.181	1.50	1.55	7684.9	YES	NO	bb	bb	48.115

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDF	30.09	5.608e5	3.327e5	0.779	1.69	1.55	2558.6	YES	NO	bb	bb	62.860
2	Total-pentafurans	28.94	8.681e4	5.226e4	0.809	1.66	1.55	414.5	YES	NO	bb	bb	9.507
3	12389-PECDF	32.47	5.950e5	3.464e5	0.766	1.72	1.55	2715.2	YES	NO	bb	bb	67.372
4	23478-PeCDF	31.43	6.065e5	3.603e5	0.880	1.68	1.55	2807.9	YES	NO	bb	bb	61.203

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.06	3.276e5	2.436e5	0.780	1.34	1.24	2209.3	YES	NO	bb	bb	59.205
2	234678-HxCDF	36.04	3.985e5	3.022e5	0.863	1.32	1.24	2734.7	YES	NO	bb	bb	58.878
3	123678-HxCDF	35.18	4.233e5	3.179e5	0.853	1.33	1.24	2788.3	YES	NO	db	db	58.453
4	123478-HxCDF	35.04	4.069e5	3.063e5	0.880	1.33	1.24	2827.1	YES	NO	bd	bd	58.056
5	123468-HXCDF	33.38	4.130e5	3.069e5	1.003	1.35	1.24	2735.8	YES	NO	bb	bb	51.450

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.15	3.139e5	2.865e5	0.994	1.10	1.05	1411.0	YES	NO	bb	bb	56.098
2	1234678-HpCDF	38.89	3.886e5	3.434e5	1.001	1.13	1.05	2028.7	YES	NO	bb	bb	55.414

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.42	8.610e4	1.044e5	0.688	0.82	0.77	972.5	YES	NO	db	db	11.575
2	2378-TCDF	25.92	8.837e4	1.040e5	0.729	0.85	0.77	1009.6	YES	NO	bb	bb	11.034
3	Total-tetrafurans	25.00	7.081e2	8.622e2	0.754	0.82	0.77	6.2	YES	NO	db	bd	0.087
4	1368-TCDF	22.42	1.057e5	1.288e5	0.846	0.82	0.77	1289.3	YES	NO	bb	bb	11.581
5	12378-PeCDF	30.09	5.608e5	3.327e5	0.779	1.69	1.55	2558.6	YES	NO	bb	bb	62.860
6	Total-pentafurans	28.94	8.681e4	5.226e4	0.809	1.66	1.55	414.5	YES	NO	bb	bb	9.507
7	12389-PECDF	32.47	5.950e5	3.464e5	0.766	1.72	1.55	2715.2	YES	NO	bb	bb	67.372
8	23478-PeCDF	31.43	6.065e5	3.603e5	0.880	1.68	1.55	2807.9	YES	NO	bb	bb	61.203
9	123789-HxCDF	37.06	3.276e5	2.436e5	0.780	1.34	1.24	2209.3	YES	NO	bb	bb	59.205
10	234678-HxCDF	36.04	3.985e5	3.022e5	0.863	1.32	1.24	2734.7	YES	NO	bb	bb	58.878
11	123678-HxCDF	35.18	4.233e5	3.179e5	0.853	1.33	1.24	2788.3	YES	NO	db	db	58.453
12	123478-HxCDF	35.04	4.069e5	3.063e5	0.880	1.33	1.24	2827.1	YES	NO	bd	bd	58.056
13	123468-HXCDF	33.38	4.130e5	3.069e5	1.003	1.35	1.24	2735.8	YES	NO	bb	bb	51.450
14	1234789-HpCDF	41.15	3.139e5	2.865e5	0.994	1.10	1.05	1411.0	YES	NO	bb	bb	56.098
15	1234678-HpCDF	38.89	3.886e5	3.434e5	1.001	1.13	1.05	2028.7	YES	NO	bb	bb	55.414
16	OCDF	45.43	5.805e5	6.129e5	1.158	0.95	0.89	2458.5	YES	NO	bb	bb	114.184
17	13468-PECDF	27.28	6.212e5	4.155e5	1.181	1.50	1.55	7684.9	YES	NO	bb	bb	48.115

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	26.24	1.096e5	1.369e5	1.153	0.80	0.77	722.3	YES	NO	bb	bb	16.830
2	Total-tetradioxins	25.76	3.320e4	4.228e4	1.153	0.79	0.77	322.8	YES	NO	bb	bb	5.153
3	Total-tetradioxins	25.18	7.979e2	9.910e2	1.153	0.81	0.77	7.5	YES	NO	bb	bb	0.122
4	Total-tetradioxins	24.90	2.693e3	3.577e3	1.153	0.75	0.77	16.2	YES	NO	bb	bb	0.428
5	1368-TCDD	23.69	7.361e4	8.944e4	1.179	0.82	0.77	703.0	YES	NO	bb	bb	10.889
6	1289-TCDD	27.16	6.312e4	8.001e4	1.042	0.79	0.77	565.3	YES	NO	bb	bb	10.811
7	2378-TCDD	26.57	7.100e4	8.798e4	1.238	0.81	0.77	666.5	YES	NO	bb	bb	10.107

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	32.08	4.358e5	2.732e5	1.165	1.60	1.55	3066.6	YES	NO	bb	bb	53.825
2	12378-PeCDD	31.69	3.599e5	2.278e5	0.988	1.58	1.55	2446.0	YES	NO	bb	bb	52.635
3	Total-pentadioxins	31.01	1.491e3	8.603e2	1.321	1.73	1.55	9.6	YES	NO	bb	dd	0.157
4	Total-pentadioxins	30.09	7.531e2	4.745e2	1.321	1.59	1.55	6.7	YES	NO	bb	bb	0.082
5	12479-PECDD	28.96	6.273e5	3.912e5	1.810	1.60	1.55	2769.2	YES	NO	bb	bb	49.774

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	124679-HXCDD	34.16	3.467e5	2.879e5	1.056	1.20	1.24	1862.1	YES	NO	bb	bb	46.499
2	123789-HxCDD	36.65	3.220e5	2.691e5	0.784	1.20	1.24	1748.5	YES	NO	bb	bb	56.202
3	123678-HxCDD	36.26	3.460e5	2.867e5	0.907	1.21	1.24	1793.7	YES	NO	db	db	50.103
4	123478-HxCDD	36.15	3.201e5	2.647e5	0.842	1.21	1.24	1813.4	YES	NO	bd	bd	53.773

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.40	2.812e5	2.663e5	1.044	1.06	1.05	1482.1	YES	NO	bb	bb	53.072
2	1234679-HPCDD	39.35	3.115e5	2.968e5	1.285	1.05	1.05	1745.1	YES	NO	bb	bb	47.878

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	26.24	1.096e5	1.369e5	1.153	0.80	0.77	722.3	YES	NO	bb	bb	16.830
2	Total-tetradioxins	25.76	3.320e4	4.228e4	1.153	0.79	0.77	322.8	YES	NO	bb	bb	5.153
3	Total-tetradioxins	25.18	7.979e2	9.910e2	1.153	0.81	0.77	7.5	YES	NO	bb	bb	0.122
4	Total-tetradioxins	24.90	2.693e3	3.577e3	1.153	0.75	0.77	16.2	YES	NO	bb	bb	0.428
5	1368-TCDD	23.69	7.361e4	8.944e4	1.179	0.82	0.77	703.0	YES	NO	bb	bb	10.889
6	1289-TCDD	27.16	6.312e4	8.001e4	1.042	0.79	0.77	565.3	YES	NO	bb	bb	10.811
7	2378-TCDD	26.57	7.100e4	8.798e4	1.238	0.81	0.77	666.5	YES	NO	bb	bb	10.107
8	12389-PECDD	32.08	4.358e5	2.732e5	1.165	1.60	1.55	3066.6	YES	NO	bb	bb	53.825
9	12378-PeCDD	31.69	3.599e5	2.278e5	0.988	1.58	1.55	2446.0	YES	NO	bb	bb	52.635
10	Total-pentadioxins	31.01	1.491e3	8.603e2	1.321	1.73	1.55	9.6	YES	NO	bb	dd	0.157
11	Total-pentadioxins	30.09	7.531e2	4.745e2	1.321	1.59	1.55	6.7	YES	NO	bb	bb	0.082
12	12479-PECDD	28.96	6.273e5	3.912e5	1.810	1.60	1.55	2769.2	YES	NO	bb	bb	49.774
13	124679-HXCDD	34.16	3.467e5	2.879e5	1.056	1.20	1.24	1862.1	YES	NO	bb	bb	46.499
14	123789-HxCDD	36.65	3.220e5	2.691e5	0.784	1.20	1.24	1748.5	YES	NO	bb	bb	56.202
15	123678-HxCDD	36.26	3.460e5	2.867e5	0.907	1.21	1.24	1793.7	YES	NO	db	db	50.103
16	123478-HxCDD	36.15	3.201e5	2.647e5	0.842	1.21	1.24	1813.4	YES	NO	bd	bd	53.773
17	1234678-HpCDD	40.40	2.812e5	2.663e5	1.044	1.06	1.05	1482.1	YES	NO	bb	bb	53.072
18	1234679-HPCDD	39.35	3.115e5	2.968e5	1.285	1.05	1.05	1745.1	YES	NO	bb	bb	47.878
19	OCDD	45.18	4.096e5	4.901e5	0.963	0.84	0.89	2040.2	YES	NO	bb	bb	103.520

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.42	8.610e4	1.044e5	0.688	0.82	0.77	972.5	YES	NO	db	db	11.575
2	2378-TCDF	25.92	8.837e4	1.040e5	0.729	0.85	0.77	1009.6	YES	NO	bb	bb	11.034
3	Total-tetrafurans	25.00	7.081e2	8.622e2	0.754	0.82	0.77	6.2	YES	NO	db	bd	0.087
4	1368-TCDF	22.42	1.057e5	1.288e5	0.846	0.82	0.77	1289.3	YES	NO	bb	bb	11.581
5	12378-PeCDF	30.09	5.608e5	3.327e5	0.779	1.69	1.55	2558.6	YES	NO	bb	bb	62.860
6	Total-pentafurans	28.94	8.681e4	5.226e4	0.809	1.66	1.55	414.5	YES	NO	bb	bb	9.507
7	12389-PECDF	32.47	5.950e5	3.464e5	0.766	1.72	1.55	2715.2	YES	NO	bb	bb	67.372
8	23478-PeCDF	31.43	6.065e5	3.603e5	0.880	1.68	1.55	2807.9	YES	NO	bb	bb	61.203
9	123789-HxCDF	37.06	3.276e5	2.436e5	0.780	1.34	1.24	2209.3	YES	NO	bb	bb	59.205
10	234678-HxCDF	36.04	3.985e5	3.022e5	0.863	1.32	1.24	2734.7	YES	NO	bb	bb	58.878
11	123678-HxCDF	35.18	4.233e5	3.179e5	0.853	1.33	1.24	2788.3	YES	NO	db	db	58.453
12	123478-HxCDF	35.04	4.069e5	3.063e5	0.880	1.33	1.24	2827.1	YES	NO	bd	bd	58.056
13	123468-HXCDF	33.38	4.130e5	3.069e5	1.003	1.35	1.24	2735.8	YES	NO	bb	bb	51.450
14	1234789-HpCDF	41.15	3.139e5	2.865e5	0.994	1.10	1.05	1411.0	YES	NO	bb	bb	56.098
15	1234678-HpCDF	38.89	3.886e5	3.434e5	1.001	1.13	1.05	2028.7	YES	NO	bb	bb	55.414
16	OCDF	45.43	5.805e5	6.129e5	1.158	0.95	0.89	2458.5	YES	NO	bb	bb	114.184
17	13468-PECDF	27.28	6.212e5	4.155e5	1.181	1.50	1.55	7684.9	YES	NO	bb	bb	48.115
18	Total-tetradioxins	26.24	1.096e5	1.369e5	1.153	0.80	0.77	722.3	YES	NO	bb	bb	16.830
19	Total-tetradioxins	25.76	3.320e4	4.228e4	1.153	0.79	0.77	322.8	YES	NO	bb	bb	5.153
20	Total-tetradioxins	25.18	7.979e2	9.910e2	1.153	0.81	0.77	7.5	YES	NO	bb	bb	0.122
21	Total-tetradioxins	24.90	2.693e3	3.577e3	1.153	0.75	0.77	16.2	YES	NO	bb	bb	0.428
22	1368-TCDD	23.69	7.361e4	8.944e4	1.179	0.82	0.77	703.0	YES	NO	bb	bb	10.889
23	1289-TCDD	27.16	6.312e4	8.001e4	1.042	0.79	0.77	565.3	YES	NO	bb	bb	10.811
24	2378-TCDD	26.57	7.100e4	8.798e4	1.238	0.81	0.77	666.5	YES	NO	bb	bb	10.107
25	12389-PECDD	32.08	4.358e5	2.732e5	1.165	1.60	1.55	3066.6	YES	NO	bb	bb	53.825
26	12378-PeCDD	31.69	3.599e5	2.278e5	0.988	1.58	1.55	2446.0	YES	NO	bb	bb	52.635
27	Total-pentadioxins	31.01	1.491e3	8.603e2	1.321	1.73	1.55	9.6	YES	NO	bb	dd	0.157
28	Total-pentadioxins	30.09	7.531e2	4.745e2	1.321	1.59	1.55	6.7	YES	NO	bb	bb	0.082
29	12479-PECDD	28.96	6.273e5	3.912e5	1.810	1.60	1.55	2769.2	YES	NO	bb	bb	49.774
30	124679-HXCDD	34.16	3.467e5	2.879e5	1.056	1.20	1.24	1862.1	YES	NO	bb	bb	46.499
31	123789-HxCDD	36.65	3.220e5	2.691e5	0.784	1.20	1.24	1748.5	YES	NO	bb	bb	56.202
32	123678-HxCDD	36.26	3.460e5	2.867e5	0.907	1.21	1.24	1793.7	YES	NO	db	db	50.103
33	123478-HxCDD	36.15	3.201e5	2.647e5	0.842	1.21	1.24	1813.4	YES	NO	bd	bd	53.773
34	1234678-HpCDD	40.40	2.812e5	2.663e5	1.044	1.06	1.05	1482.1	YES	NO	bb	bb	53.072
35	1234679-HPCDD	39.35	3.115e5	2.968e5	1.285	1.05	1.05	1745.1	YES	NO	bb	bb	47.878
36	OCDD	45.18	4.096e5	4.901e5	0.963	0.84	0.89	2040.2	YES	NO	bb	bb	103.520

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	22.80	4.295e4					1.3	NO		bb		
2	FUNCTION1 PFK	22.67	1.060e5					1.6	NO		bb		
3	FUNCTION1 PFK	22.58	9.538e4					1.8	NO		db		
4	FUNCTION1 PFK	22.46	1.667e5					2.2	NO		dd		
5	FUNCTION1 PFK	22.36	2.070e5					2.7	NO		dd		
6	FUNCTION1 PFK	22.24	1.356e5					2.3	NO		dd		
7	FUNCTION1 PFK	22.13	1.627e5					2.7	NO		bd		
8	FUNCTION1 PFK	22.01	5.931e4					1.5	NO		db		
9	FUNCTION1 PFK	21.90	1.088e5					1.6	NO		bd		
10	FUNCTION1 PFK	21.68	4.964e4					1.3	NO		bb		
11	FUNCTION1 PFK	21.57	4.877e4					1.0	NO		bb		
12	FUNCTION1 PFK	21.35	1.427e5					2.4	NO		db		
13	FUNCTION1 PFK	21.22	1.313e5					2.0	NO		bd		
14	FUNCTION1 PFK	21.12	4.137e4					1.6	NO		bb		
15	FUNCTION1 PFK	24.50	1.038e5					2.4	NO		db		
16	FUNCTION1 PFK	24.37	1.264e5					1.9	NO		dd		
17	FUNCTION1 PFK	24.26	1.092e5					1.9	NO		dd		
18	FUNCTION1 PFK	24.14	1.585e5					2.2	NO		bd		
19	FUNCTION1 PFK	24.03	9.037e4					2.5	NO		db		
20	FUNCTION1 PFK	23.93	1.380e5					1.9	NO		dd		
21	FUNCTION1 PFK	23.82	1.022e5					1.8	NO		dd		
22	FUNCTION1 PFK	23.70	8.550e4					1.7	NO		bd		
23	FUNCTION1 PFK	23.60	7.909e4					1.9	NO		db		
24	FUNCTION1 PFK	23.48	1.019e5					1.4	NO		bd		
25	FUNCTION1 PFK	23.37	1.041e5					1.8	NO		db		
26	FUNCTION1 PFK	23.25	7.384e4					1.7	NO		bd		
27	FUNCTION1 PFK	23.16	1.149e4					0.5	NO		bb		
28	FUNCTION1 PFK	23.10	6.055e3					0.5	NO		bb		
29	FUNCTION1 PFK	23.02	2.876e4					0.7	NO		bb		
30	FUNCTION1 PFK	22.93	7.428e4					1.3	NO		bb		
31	FUNCTION1 PFK	26.95	1.075e5					2.0	NO		dd		
32	FUNCTION1 PFK	26.83	1.608e5					2.2	NO		dd		
33	FUNCTION1 PFK	26.72	6.330e4					1.4	NO		bd		
34	FUNCTION1 PFK	26.48	5.145e4					1.2	NO		bb		
35	FUNCTION1 PFK	26.29	1.106e5					1.9	NO		db		
36	FUNCTION1 PFK	26.15	7.592e4					1.7	NO		bd		
37	FUNCTION1 PFK	25.94	4.482e4					1.2	NO		bb		

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	25.83	6.930e4					1.4	NO		db		
39	FUNCTION1 PFK	25.71	4.616e4					0.9	NO		bd		
40	FUNCTION1 PFK	25.45	1.862e4					0.7	NO		db		
41	FUNCTION1 PFK	25.39	8.826e4					1.7	NO		bd		
42	FUNCTION1 PFK	25.27	1.031e5					2.0	NO		bb		
43	FUNCTION1 PFK	25.03	8.517e4					1.2	NO		db		
44	FUNCTION1 PFK	24.91	7.665e4					1.3	NO		bd		
45	FUNCTION1 PFK	24.82	7.928e4					1.4	NO		bb		
46	FUNCTION1 PFK	24.71	7.743e4					1.3	NO		bb		
47	FUNCTION1 PFK	28.05	1.359e5					2.4	NO		db		
48	FUNCTION1 PFK	27.96	1.215e5					1.8	NO		bd		
49	FUNCTION1 PFK	27.74	3.464e4					0.9	NO		bb		
50	FUNCTION1 PFK	27.63	7.164e4					1.6	NO		bb		
51	FUNCTION1 PFK	27.48	4.010e4					0.5	NO		bb		
52	FUNCTION1 PFK	27.27	1.525e5					2.7	NO		db		
53	FUNCTION1 PFK	27.16	1.558e5					2.4	NO		dd		
54	FUNCTION1 PFK	27.06	1.426e5					2.1	NO		dd		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.06	8.484e4					2.5	NO		db		0.000
2	FUNCTION2 PFK	28.97	1.308e5					3.2	YES		dd		0.000
3	FUNCTION2 PFK	28.85	3.521e5					6.1	YES		dd		0.000
4	FUNCTION2 PFK	28.73	3.511e5					7.8	YES		dd		0.000
5	FUNCTION2 PFK	28.62	6.272e5					8.9	YES		dd		0.000
6	FUNCTION2 PFK	28.51	1.425e6					10.8	YES		dd		0.000
7	FUNCTION2 PFK	28.28	7.538e5					12.8	YES		bd		0.000
8	FUNCTION2 PFK	32.00	5.000e4					1.8	NO		bb		0.000
9	FUNCTION2 PFK	31.87	5.334e4					1.5	NO		bb		0.000
10	FUNCTION2 PFK	31.54	3.768e4					1.4	NO		bb		0.000
11	FUNCTION2 PFK	31.35	2.307e3					0.3	NO		bb		0.000
12	FUNCTION2 PFK	31.31	3.292e4					1.7	NO		db		0.000
13	FUNCTION2 PFK	31.21	3.317e4					1.4	NO		bd		0.000
14	FUNCTION2 PFK	30.64	2.656e4					1.1	NO		bb		0.000
15	FUNCTION2 PFK	30.43	9.458e3					0.6	NO		db		0.000
16	FUNCTION2 PFK	30.39	1.906e4					1.2	NO		bd		0.000
17	FUNCTION2 PFK	30.32	4.844e4					1.6	NO		bb		0.000
18	FUNCTION2 PFK	30.14	2.416e3					0.4	NO		bb		0.000
19	FUNCTION2 PFK	30.10	4.918e4					1.8	NO		bb		0.000
20	FUNCTION2 PFK	29.86	4.026e4					1.6	NO		bb		0.000
21	FUNCTION2 PFK	29.73	4.370e4					1.8	NO		bb		0.000
22	FUNCTION2 PFK	29.52	4.129e4					1.6	NO		bb		0.000
23	FUNCTION2 PFK	29.28	6.786e4					2.7	NO		bb		0.000
24	FUNCTION2 PFK	32.87	4.793e4					1.6	NO		db		0.000
25	FUNCTION2 PFK	32.78	4.256e4					1.6	NO		bd		0.000
26	FUNCTION2 PFK	32.53	1.479e4					0.9	NO		bb		0.000
27	FUNCTION2 PFK	32.43	2.624e4					1.2	NO		bb		0.000
28	FUNCTION2 PFK	32.33	1.034e4					0.7	NO		bb		0.000
29	FUNCTION2 PFK	32.04	8.798e3					0.7	NO		bb		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.79	8.233e4					2.3	NO		dd		0.000
2	FUNCTION3 PFK	33.68	1.505e5					2.9	NO		dd		0.000
3	FUNCTION3 PFK	33.55	8.256e4					2.5	NO		dd		0.000
4	FUNCTION3 PFK	33.44	1.031e5					2.7	NO		dd		0.000
5	FUNCTION3 PFK	33.37	5.110e4					2.3	NO		dd		0.000
6	FUNCTION3 PFK	33.32	1.133e5					3.1	YES		dd		0.000
7	FUNCTION3 PFK	33.22	9.241e4					2.9	NO		dd		0.000
8	FUNCTION3 PFK	33.15	1.196e4					0.7	NO		dd		0.000
9	FUNCTION3 PFK	33.10	5.073e4					2.7	NO		bd		0.000
10	FUNCTION3 PFK	35.38	8.122e4					2.5	NO		db		0.000
11	FUNCTION3 PFK	35.26	4.448e4					1.5	NO		bd		0.000
12	FUNCTION3 PFK	35.16	3.597e4					2.0	NO		db		0.000
13	FUNCTION3 PFK	35.14	4.902e4					2.1	NO		dd		0.000
14	FUNCTION3 PFK	35.04	6.366e4					2.3	NO		bd		0.000
15	FUNCTION3 PFK	34.92	9.094e4					2.6	NO		bb		0.000
16	FUNCTION3 PFK	34.80	8.884e4					2.4	NO		db		0.000
17	FUNCTION3 PFK	34.70	7.674e4					2.0	NO		dd		0.000
18	FUNCTION3 PFK	34.58	6.923e4					2.6	NO		bd		0.000
19	FUNCTION3 PFK	34.48	3.437e4					1.6	NO		db		0.000
20	FUNCTION3 PFK	34.44	2.725e4					1.2	NO		dd		0.000
21	FUNCTION3 PFK	34.36	5.360e4					1.8	NO		bd		0.000
22	FUNCTION3 PFK	34.23	2.180e3					0.3	NO		bb		0.000
23	FUNCTION3 PFK	34.13	6.722e4					1.8	NO		bb		0.000
24	FUNCTION3 PFK	34.03	7.220e4					1.7	NO		db		0.000
25	FUNCTION3 PFK	33.90	1.090e5					2.6	NO		dd		0.000
26	FUNCTION3 PFK	37.31	7.597e4					2.7	NO		bb		0.000
27	FUNCTION3 PFK	37.19	7.951e4					2.1	NO		db		0.000
28	FUNCTION3 PFK	37.06	5.474e4					1.4	NO		bd		0.000
29	FUNCTION3 PFK	36.74	5.252e4					1.6	NO		db		0.000
30	FUNCTION3 PFK	36.60	8.741e4					2.3	NO		dd		0.000
31	FUNCTION3 PFK	36.53	6.974e4					2.8	NO		dd		0.000
32	FUNCTION3 PFK	36.50	7.209e4					2.5	NO		dd		0.000
33	FUNCTION3 PFK	36.39	9.647e4					2.6	NO		dd		0.000
34	FUNCTION3 PFK	36.29	6.338e4					2.4	NO		bd		0.000
35	FUNCTION3 PFK	36.18	7.109e4					2.8	NO		bb		0.000
36	FUNCTION3 PFK	35.96	7.110e4					2.3	NO		bb		0.000
37	FUNCTION3 PFK	35.83	1.096e5					2.8	NO		db		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION3 PFK	35.74	4.023e4					1.5	NO		dd		0.000
39	FUNCTION3 PFK	35.67	2.531e4					1.3	NO		dd		0.000
40	FUNCTION3 PFK	35.62	8.102e4					2.9	NO		bd		0.000
41	FUNCTION3 PFK	35.52	7.629e4					2.0	NO		bb		0.000
42	FUNCTION3 PFK	37.99	6.332e4					1.9	NO		bb		0.000
43	FUNCTION3 PFK	37.87	3.516e4					2.0	NO		db		0.000
44	FUNCTION3 PFK	37.85	3.774e4					2.3	NO		dd		0.000
45	FUNCTION3 PFK	37.74	1.319e5					2.3	NO		dd		0.000
46	FUNCTION3 PFK	37.65	7.110e4					2.3	NO		bd		0.000
47	FUNCTION3 PFK	37.51	4.258e4					1.4	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.98	2.430e6					18.7	YES		dd		
2	FUNCTION4 PFK	38.86	9.816e5					21.4	YES		dd		
3	FUNCTION4 PFK	38.77	1.649e6					23.5	YES		dd		
4	FUNCTION4 PFK	38.66	7.666e5					26.2	YES		dd		
5	FUNCTION4 PFK	38.54	1.645e6					29.0	YES		dd		
6	FUNCTION4 PFK	38.44	1.412e6					31.2	YES		dd		
7	FUNCTION4 PFK	38.33	2.765e6					34.1	YES		dd		
8	FUNCTION4 PFK	38.21	2.969e6					35.6	YES		dd		
9	FUNCTION4 PFK	38.09	1.801e6					38.1	YES		bd		
10	FUNCTION4 PFK	40.92	7.999e4					2.4	NO		dd		
11	FUNCTION4 PFK	40.79	6.444e4					1.9	NO		dd		
12	FUNCTION4 PFK	40.69	7.559e4					2.2	NO		dd		
13	FUNCTION4 PFK	40.57	7.560e4					2.4	NO		dd		
14	FUNCTION4 PFK	40.45	6.679e4					1.7	NO		dd		
15	FUNCTION4 PFK	40.34	5.929e4					2.0	NO		dd		
16	FUNCTION4 PFK	40.29	1.681e4					1.2	NO		dd		
17	FUNCTION4 PFK	40.21	5.908e4					1.6	NO		bd		
18	FUNCTION4 PFK	40.11	5.725e4					1.9	NO		db		
19	FUNCTION4 PFK	40.03	1.421e4					1.1	NO		dd		
20	FUNCTION4 PFK	40.00	5.031e4					1.6	NO		bd		
21	FUNCTION4 PFK	39.66	8.185e4					3.1	YES		db		
22	FUNCTION4 PFK	39.57	7.619e5					5.1	YES		dd		
23	FUNCTION4 PFK	39.35	3.271e5					10.2	YES		dd		
24	FUNCTION4 PFK	39.32	3.730e5					10.0	YES		dd		
25	FUNCTION4 PFK	39.21	4.387e5					13.3	YES		dd		
26	FUNCTION4 PFK	43.03	3.550e4					1.5	NO		bb		
27	FUNCTION4 PFK	42.93	4.609e4					2.1	NO		bb		
28	FUNCTION4 PFK	42.71	5.072e4					1.8	NO		bb		
29	FUNCTION4 PFK	42.50	1.385e4					0.9	NO		bb		
30	FUNCTION4 PFK	42.34	6.972e4					1.7	NO		bb		
31	FUNCTION4 PFK	42.24	1.943e4					0.9	NO		bb		
32	FUNCTION4 PFK	42.11	3.277e3					0.4	NO		db		
33	FUNCTION4 PFK	42.04	4.402e4					2.2	NO		dd		
34	FUNCTION4 PFK	42.02	2.117e4					1.1	NO		bd		
35	FUNCTION4 PFK	41.92	4.765e4					1.7	NO		bb		
36	FUNCTION4 PFK	41.71	4.151e4					1.4	NO		bb		
37	FUNCTION4 PFK	41.58	4.120e4					1.7	NO		bb		

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION4 PFK	41.35	2.522e4					1.4	NO		bb		
39	FUNCTION4 PFK	41.25	4.871e4					1.4	NO		db		
40	FUNCTION4 PFK	41.13	6.476e4					2.7	NO		bd		
41	FUNCTION4 PFK	41.02	7.458e4					2.3	NO		db		
42	FUNCTION4 PFK	43.11	2.136e3					0.4	NO		bb		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.59	8.727e3					1.0	NO		bb		
2	FUNCTION5 PFK	44.52	3.287e4					1.3	NO		bb		
3	FUNCTION5 PFK	44.41	7.267e3					0.6	NO		bb		
4	FUNCTION5 PFK	44.33	2.909e3					0.4	NO		bb		
5	FUNCTION5 PFK	44.05	3.777e4					1.6	NO		bb		
6	FUNCTION5 PFK	43.94	1.332e4					1.0	NO		db		
7	FUNCTION5 PFK	43.90	1.147e4					1.4	NO		bd		
8	FUNCTION5 PFK	43.77	1.050e3					0.3	NO		bb		
9	FUNCTION5 PFK	43.73	5.186e3					0.7	NO		bb		
10	FUNCTION5 PFK	43.68	2.445e3					0.4	NO		bb		
11	FUNCTION5 PFK	43.59	7.351e4					3.0	NO		db		
12	FUNCTION5 PFK	43.50	8.675e4					3.4	YES		dd		
13	FUNCTION5 PFK	43.46	2.917e4					2.8	NO		bd		
14	FUNCTION5 PFK	43.39	1.395e4					1.6	NO		bb		
15	FUNCTION5 PFK	46.09	3.604e4					1.8	NO		db		
16	FUNCTION5 PFK	46.05	1.250e4					1.2	NO		dd		
17	FUNCTION5 PFK	45.99	6.502e4					2.1	NO		bd		
18	FUNCTION5 PFK	45.89	1.546e4					1.5	NO		db		
19	FUNCTION5 PFK	45.85	3.151e4					2.0	NO		bd		
20	FUNCTION5 PFK	45.79	2.438e3					0.4	NO		bb		
21	FUNCTION5 PFK	45.73	1.258e4					1.1	NO		bb		
22	FUNCTION5 PFK	45.53	2.389e4					1.3	NO		db		
23	FUNCTION5 PFK	45.41	2.079e4					1.2	NO		dd		
24	FUNCTION5 PFK	45.37	3.377e3					0.5	NO		bd		
25	FUNCTION5 PFK	45.24	6.664e3					0.8	NO		db		
26	FUNCTION5 PFK	45.16	3.370e4					1.6	NO		bd		
27	FUNCTION5 PFK	44.97	2.406e4					1.1	NO		bb		
28	FUNCTION5 PFK	44.80	1.141e3					0.3	NO		bb		
29	FUNCTION5 PFK	44.73	2.560e4					1.7	NO		db		
30	FUNCTION5 PFK	44.71	8.665e3					0.8	NO		bd		
31	FUNCTION5 PFK	46.20	2.182e4					1.6	NO		db		
32	FUNCTION5 PFK	46.16	2.664e3					0.5	NO		bd		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	26.94	8.122e1					3.0	NO		bb		0.000

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	26.88	1.471e2					2.6	NO		bb		0.000
2	FUNCTION1 HPCD...	26.42	1.292e2					2.8	NO		bb		0.000
3	FUNCTION1 HPCD...	25.88	1.213e2					1.2	NO		bb		0.000
4	FUNCTION1 HPCD...	25.45	9.949e1					1.6	NO		bb		0.000
5	FUNCTION1 HPCD...	25.30	1.246e2					2.0	NO		bb		0.000
6	FUNCTION1 HPCD...	24.94	8.551e1					1.5	NO		bb		0.000
7	FUNCTION1 HPCD...	24.67	1.255e2					1.9	NO		bb		0.000
8	FUNCTION1 HPCD...	24.13	8.155e1					2.0	NO		bb		0.000
9	FUNCTION1 HPCD...	22.84	1.326e2					2.5	NO		bb		0.000
10	FUNCTION1 HPCD...	22.01	7.974e1					1.5	NO		bb		0.000
11	FUNCTION1 HPCD...	21.35	7.925e1					2.1	NO		bb		0.000
12	FUNCTION1 HPCD...	28.10	8.683e1					1.9	NO		db		0.000
13	FUNCTION1 HPCD...	28.02	1.158e2					1.8	NO		bd		0.000
14	FUNCTION1 HPCD...	27.45	7.467e1					1.3	NO		bb		0.000
15	FUNCTION1 HPCD...	27.25	1.623e2					2.3	NO		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.69	1.614e2					2.6	NO		bb		0.000
2	FUNCTION2 HPCD...	31.30	5.731e2					6.1	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	33.73	1.037e2					6.7	YES		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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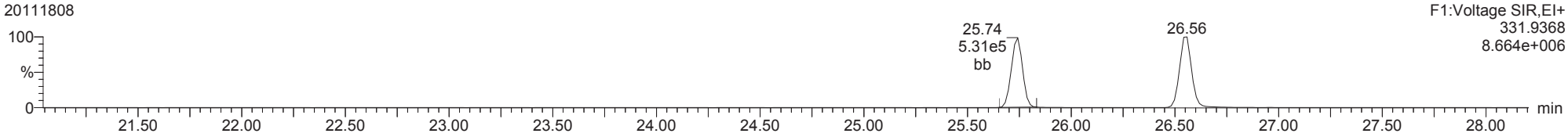

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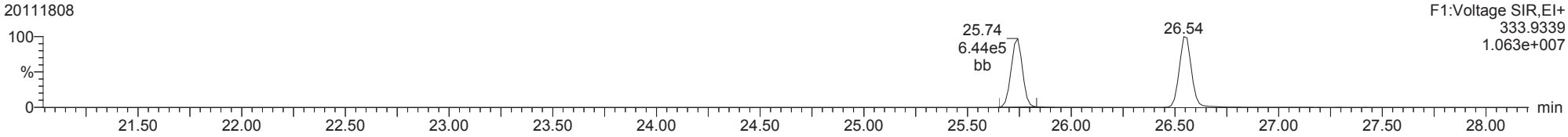

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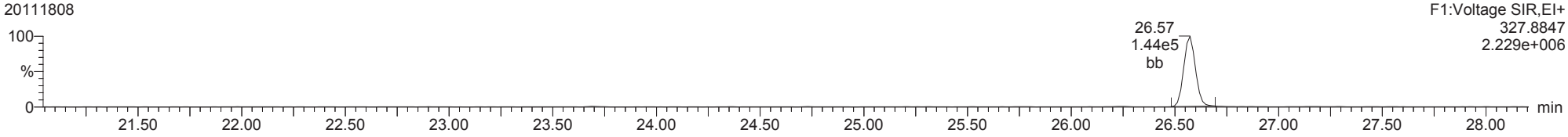

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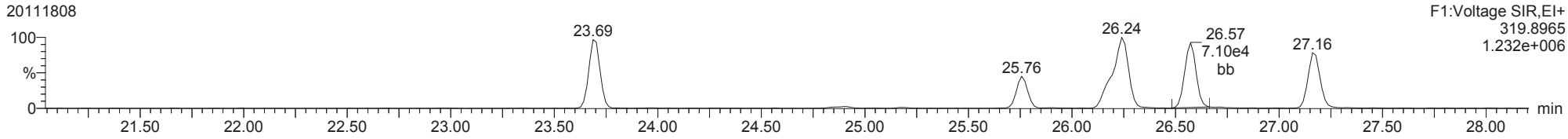
2378-TCDD



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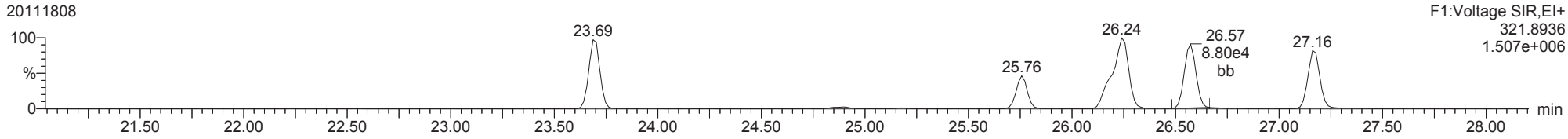

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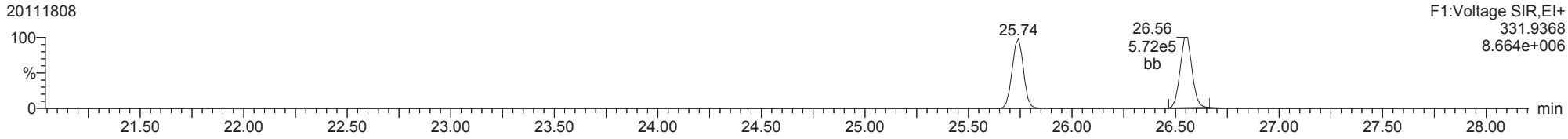

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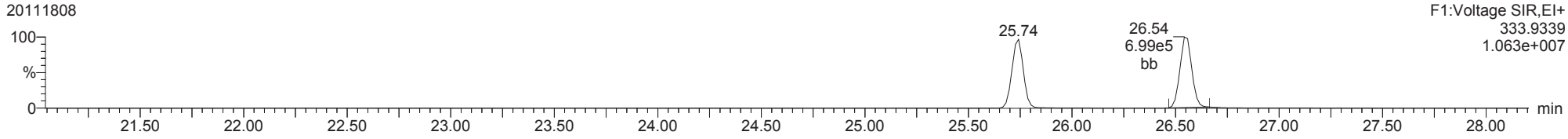
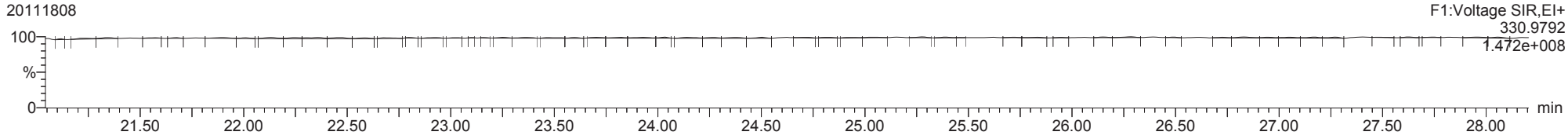


FUNCTION1 PFK



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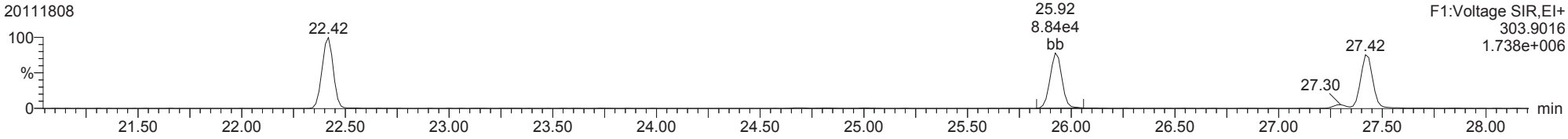
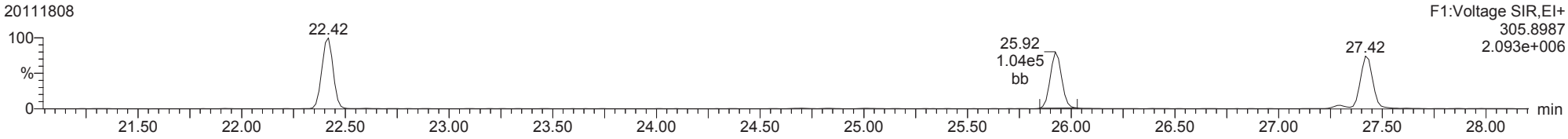
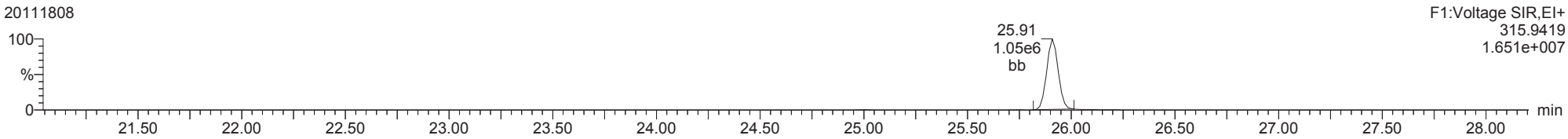
2378-TCDF



2378-TCDF



13C-2378-TCDF



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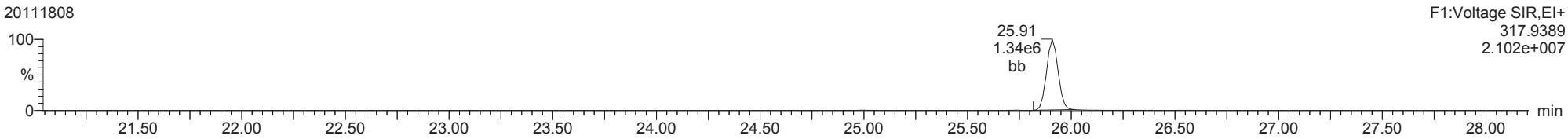
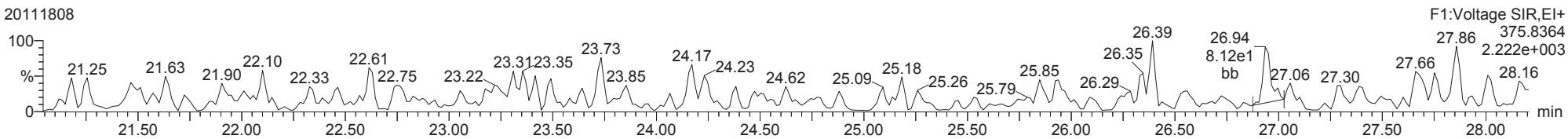


FUNCTION1 HXCDPE



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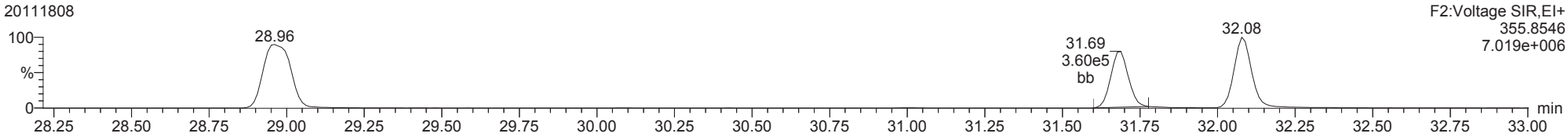
ID: CS3R2, Name: 20111808, Date: 18-Nov-2020, Time: 16:32:22, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



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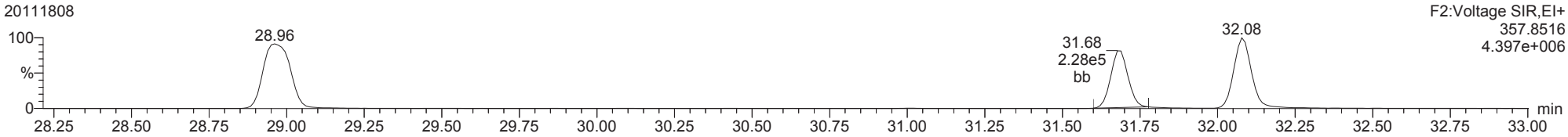

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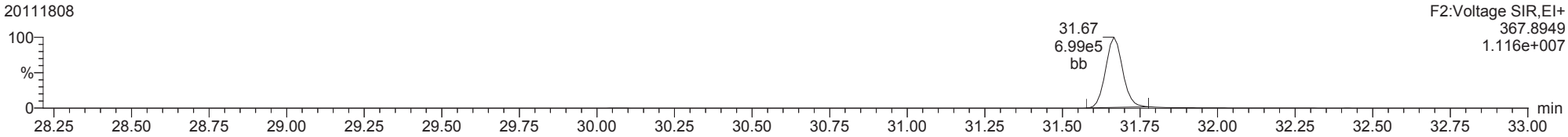

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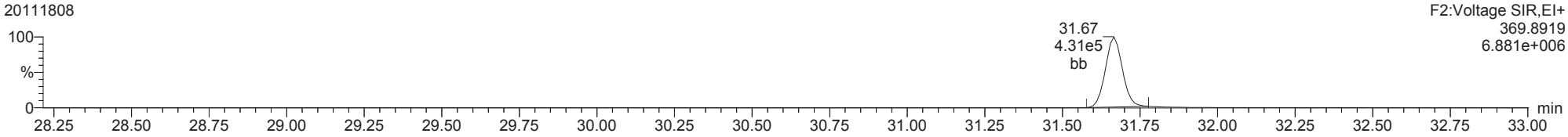
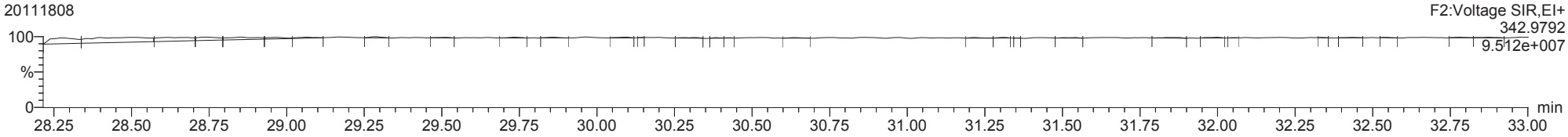


FUNCTION2 PFK



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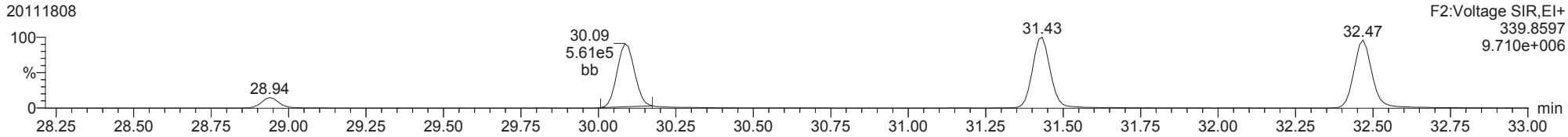
12378-PeCDF



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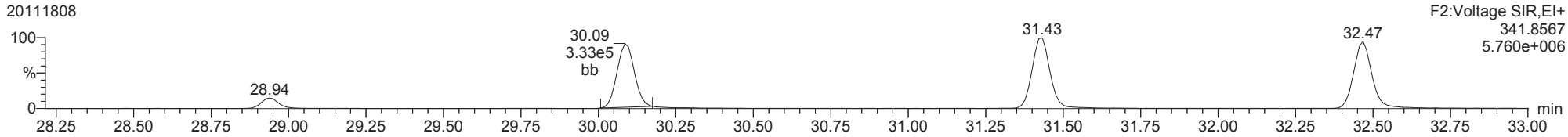

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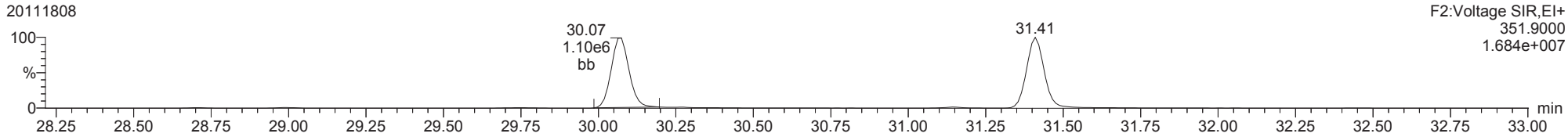

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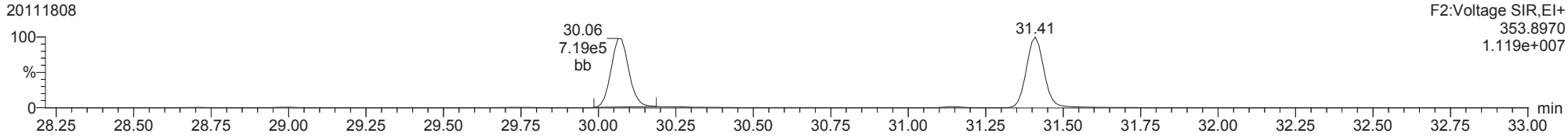
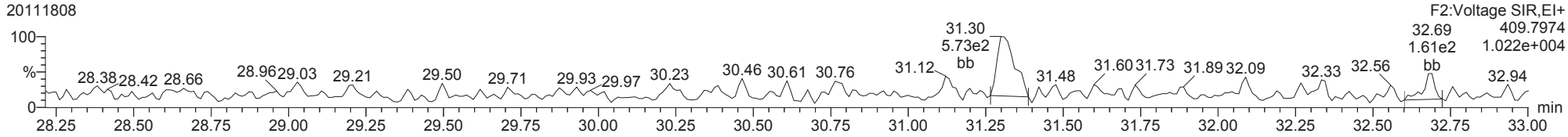


FUNCTION2 HPCDPE



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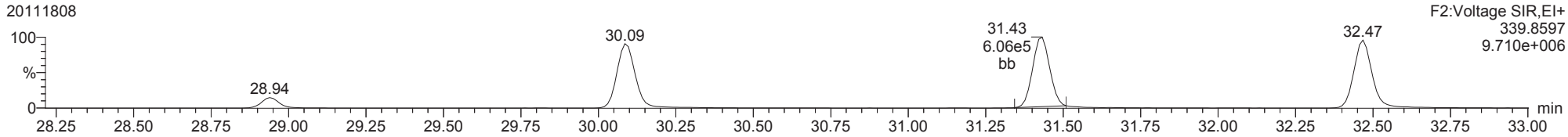
23478-PeCDF



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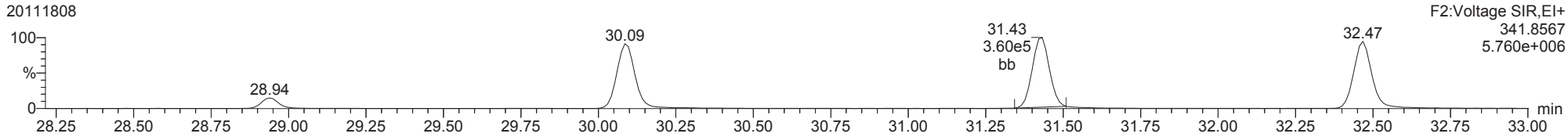

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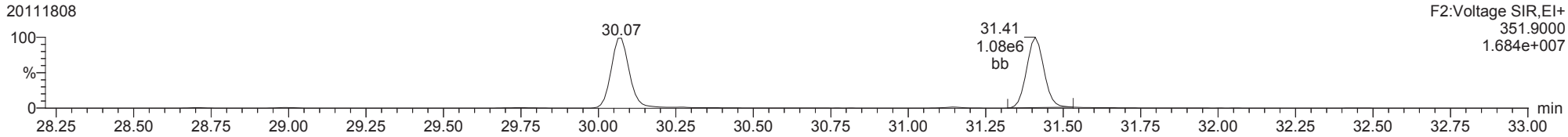

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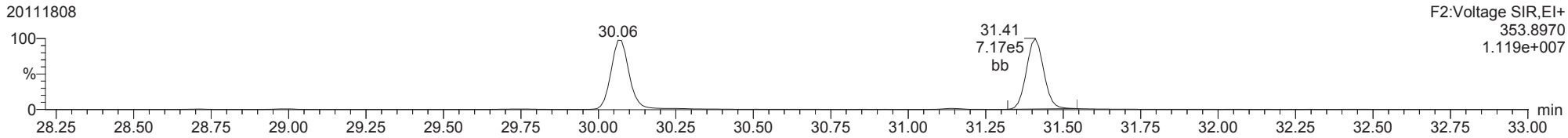
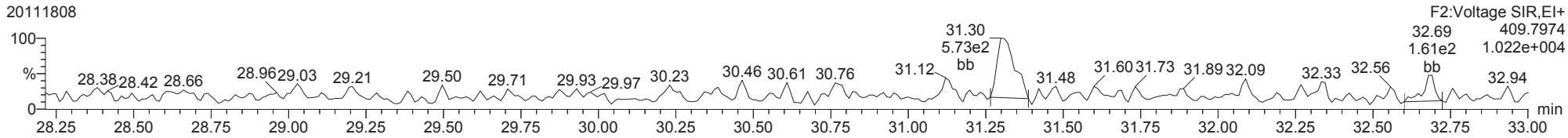


FUNCTION2 HPCDPE



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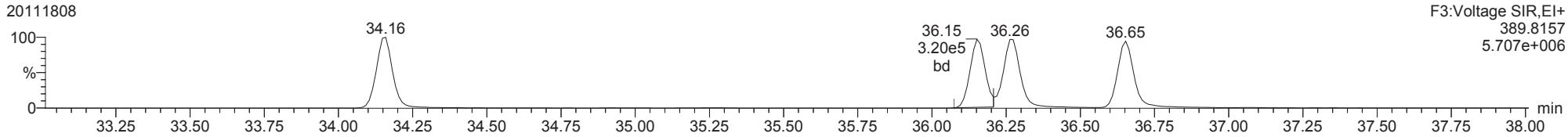
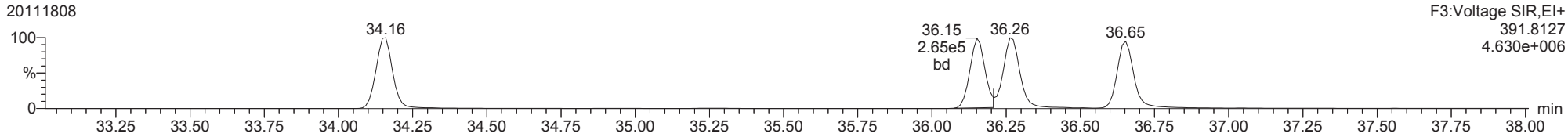
123478-HxCDD



123478-HxCDD



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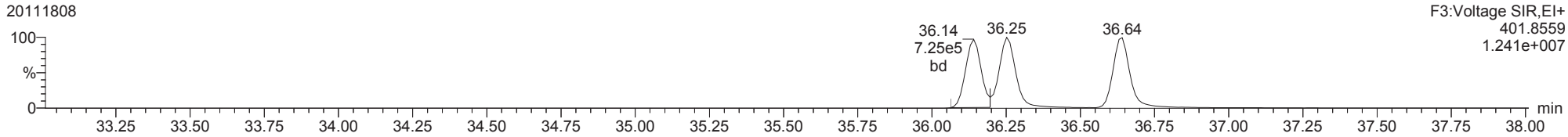

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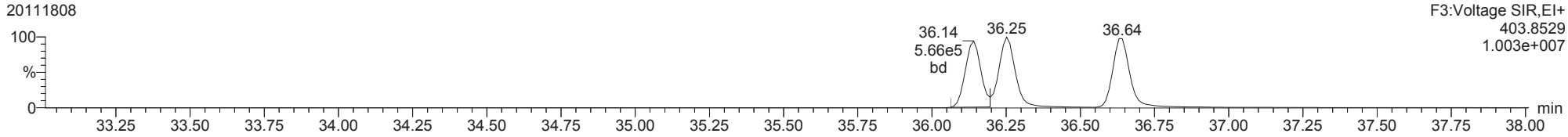
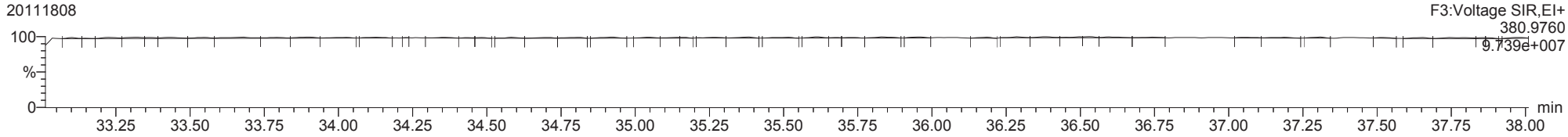


FUNCTION3 PFK



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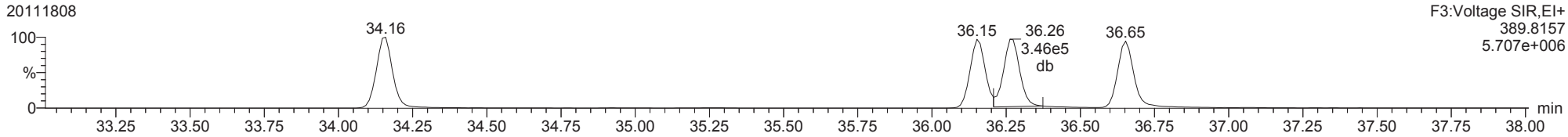
123678-HxCDD



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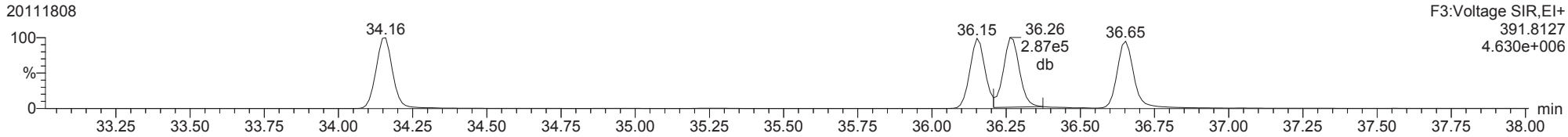

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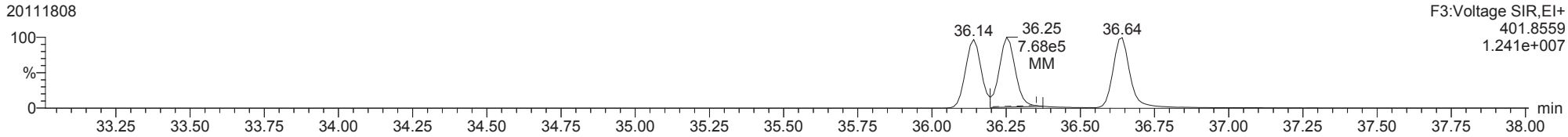

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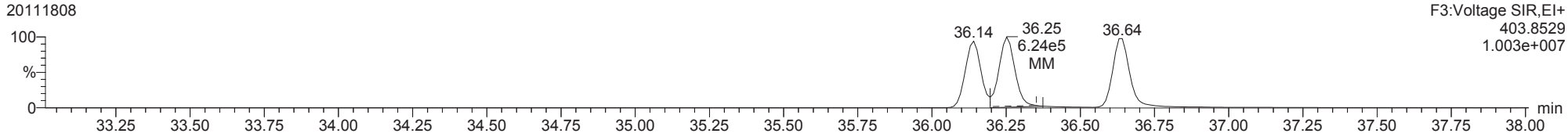

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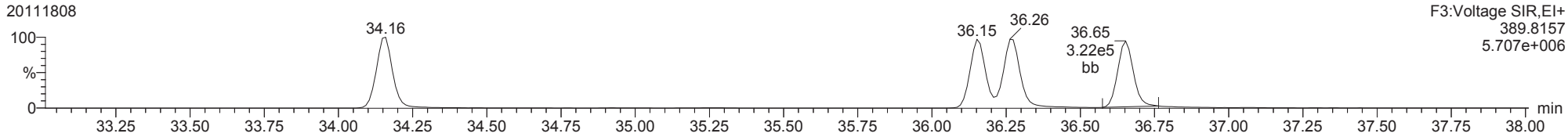
123789-HxCDD



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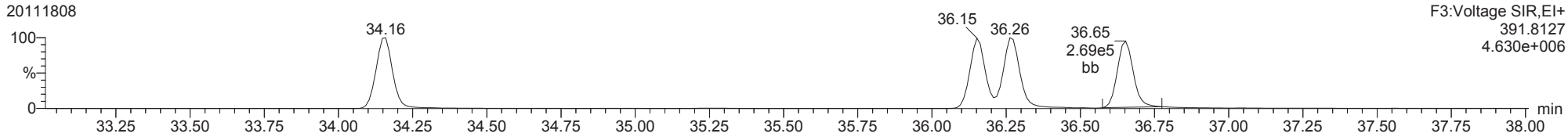

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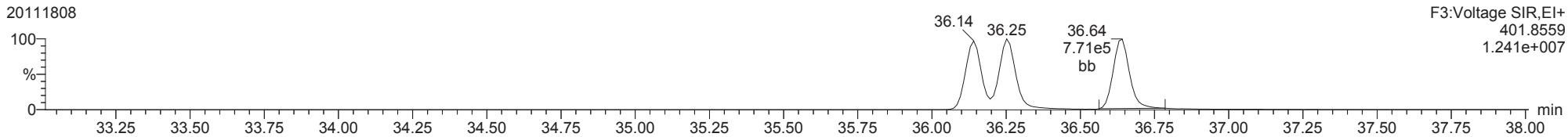

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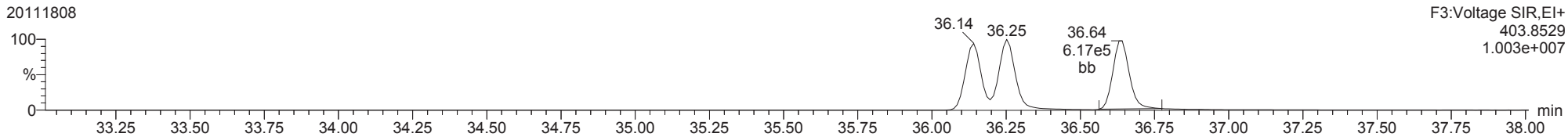

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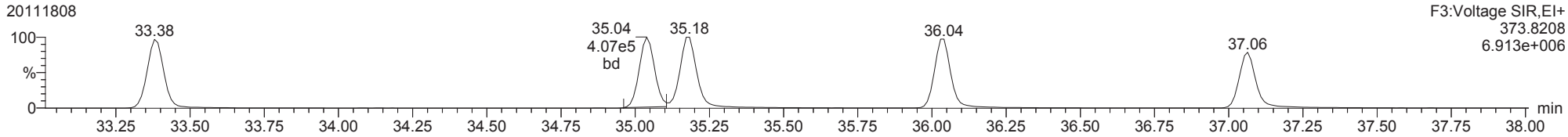
123478-HxCDF



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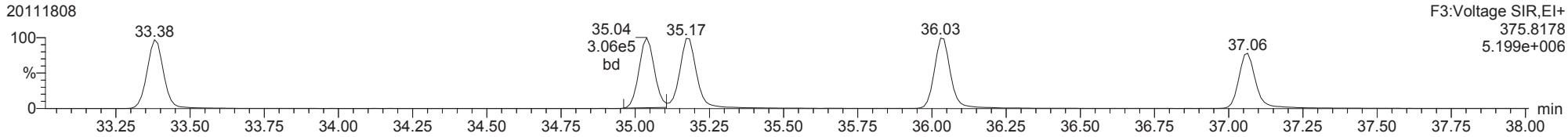

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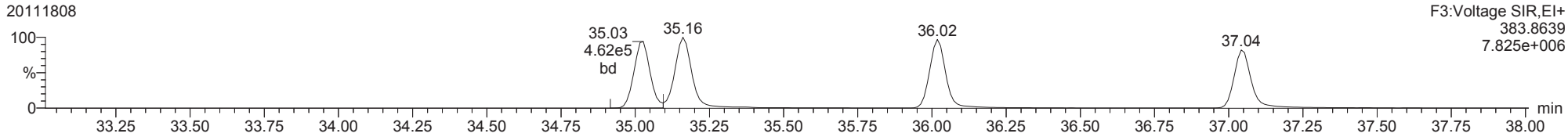

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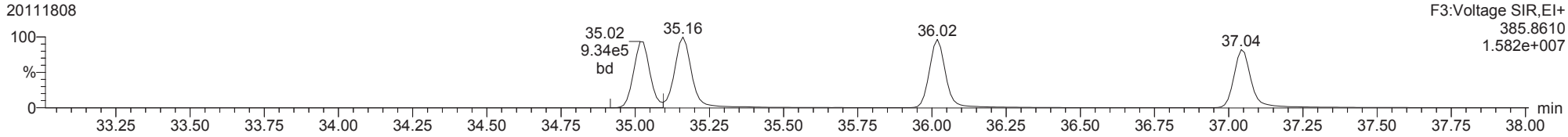
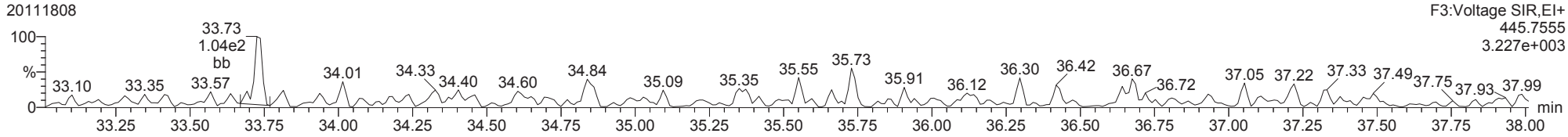


FUNCTION3 OCDPE



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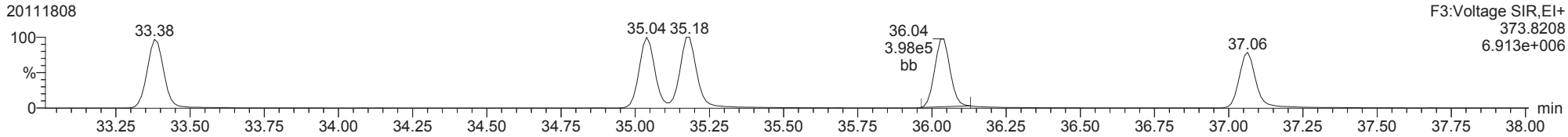
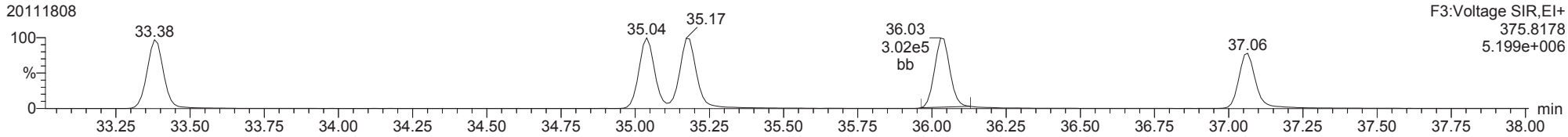
234678-HxCDF



234678-HxCDF



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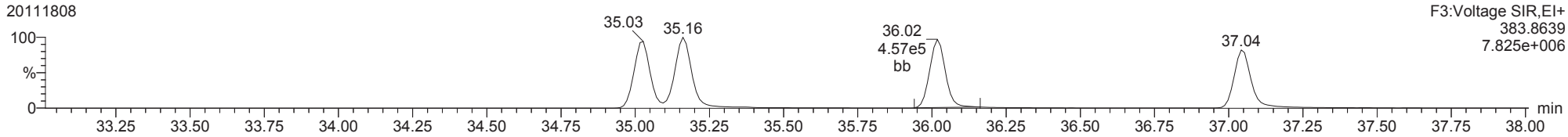

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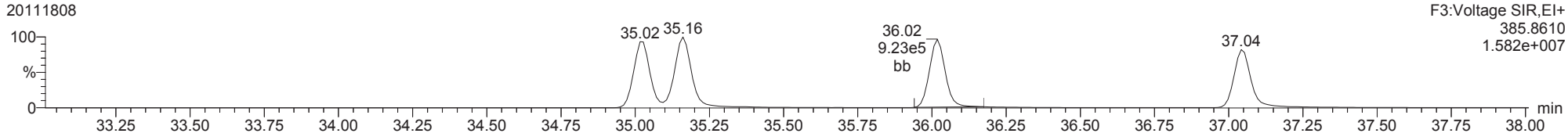
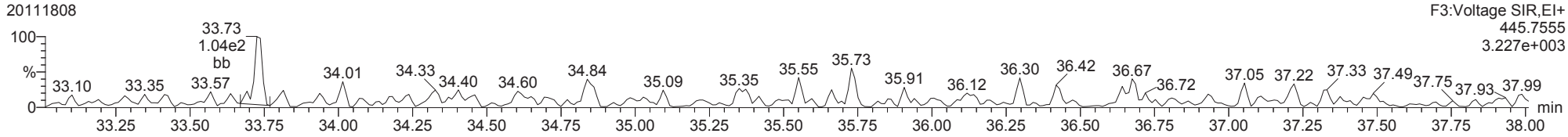


FUNCTION3 OCDPE



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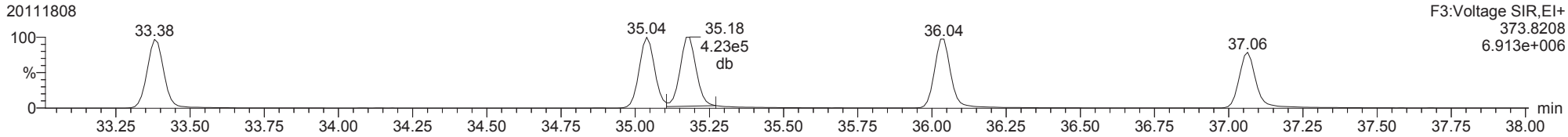
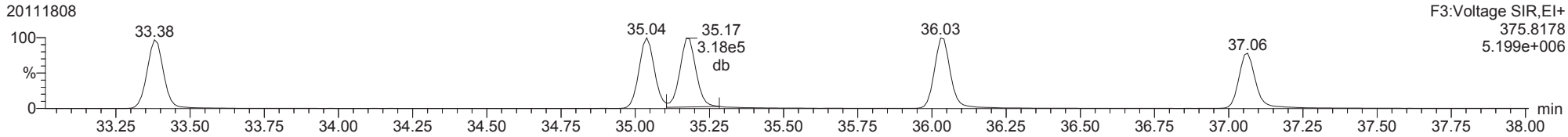
123678-HxCDF



123678-HxCDF



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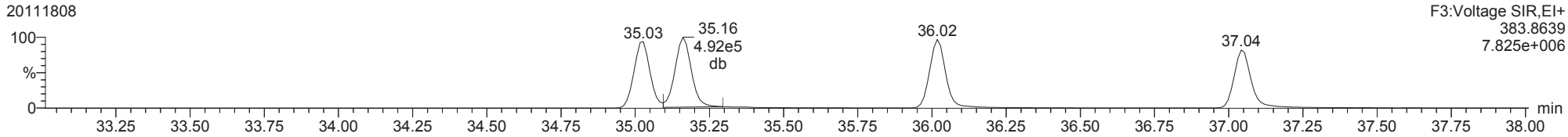

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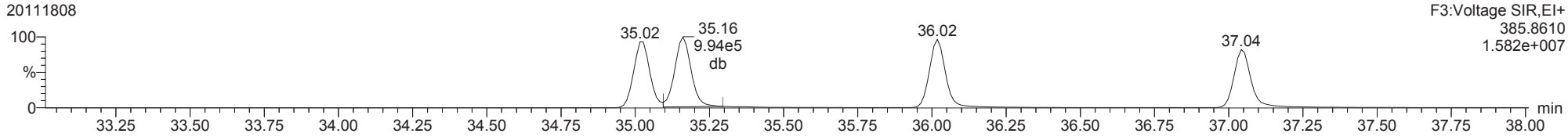
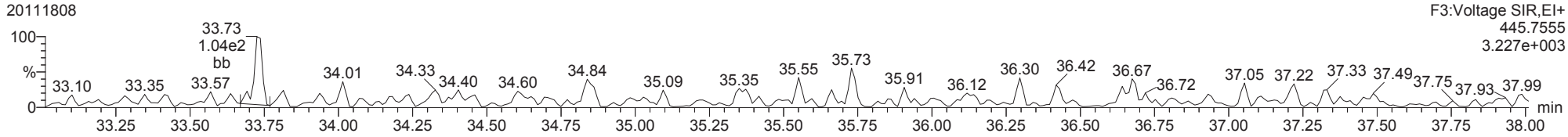


FUNCTION3 OCDPE



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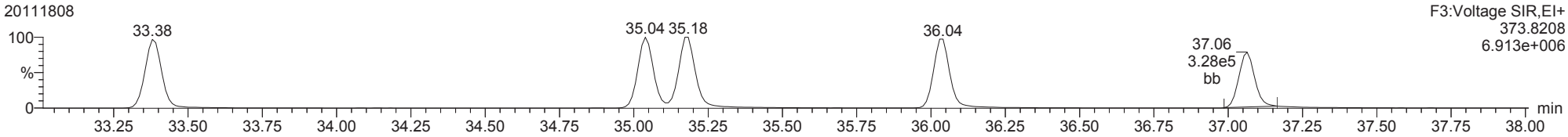
123789-HxCDF



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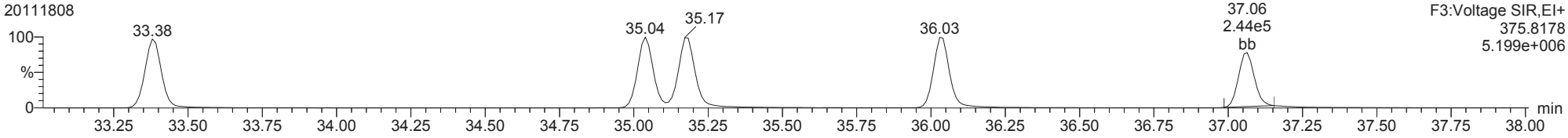

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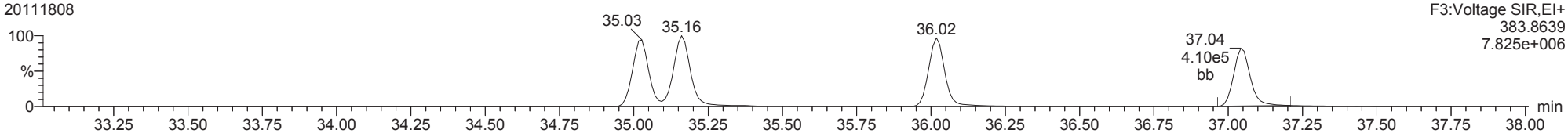

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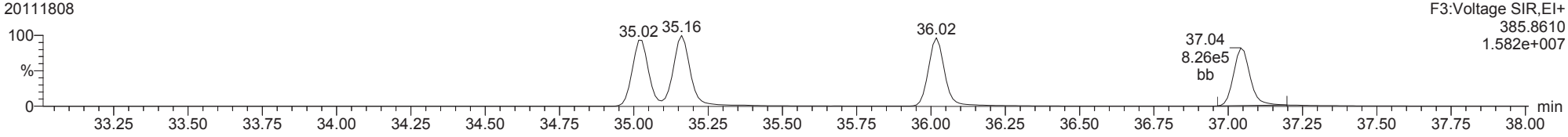
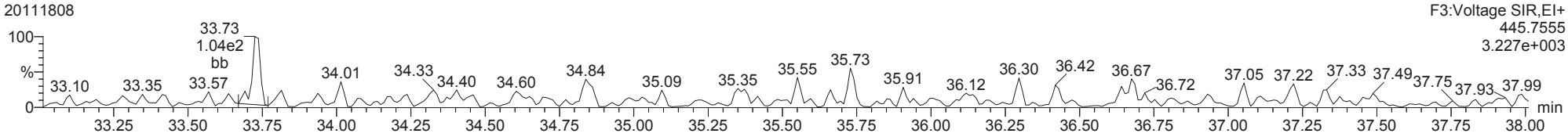


FUNCTION3 OCDPE



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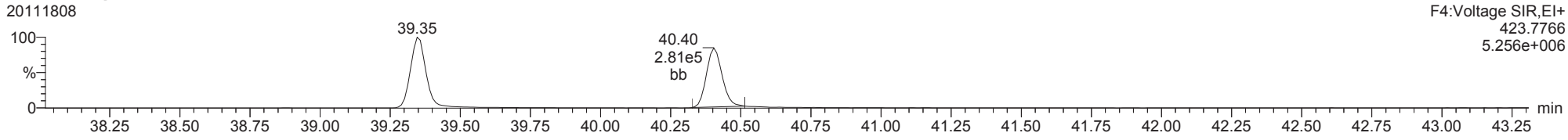
Printed: Thursday, November 19, 2020 10:03:42 Pacific Standard Time

ID: CS3R2, Name: 20111808, Date: 18-Nov-2020, Time: 16:32:22, Conditions: AUTOSPEC01, User: pk

1234678-HpCDD



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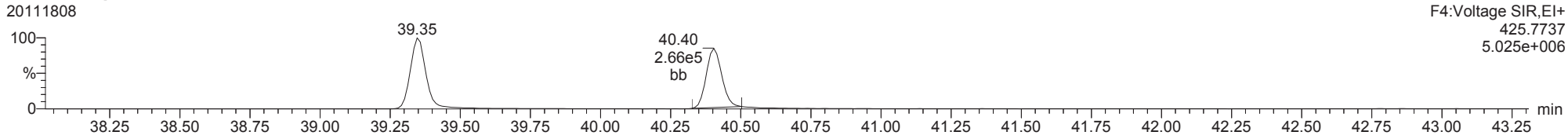

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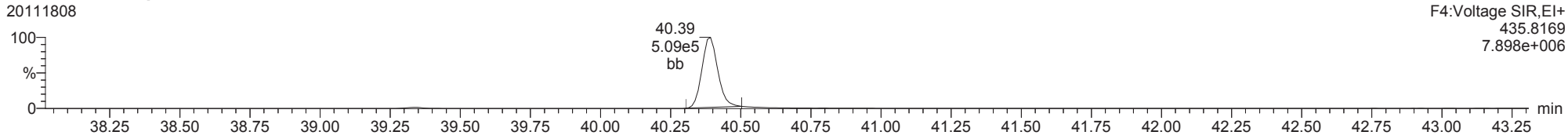

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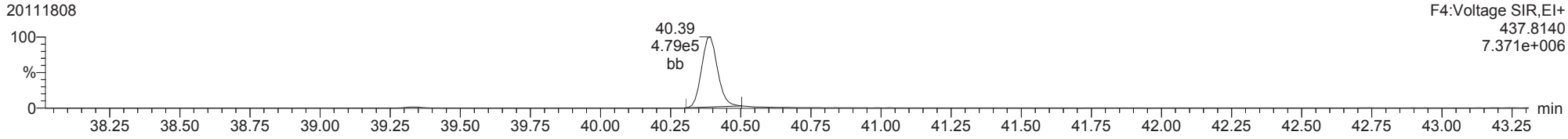
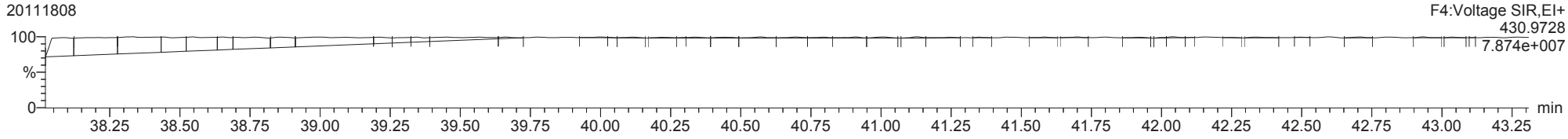


FUNCTION4 PFK



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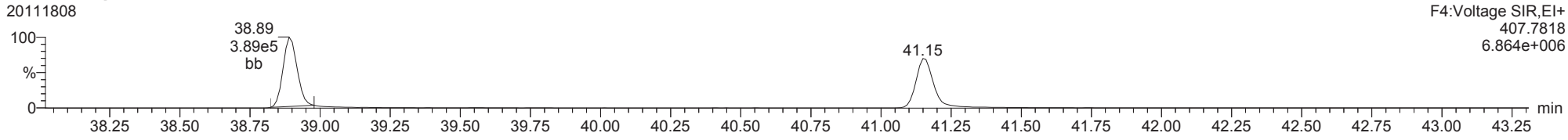

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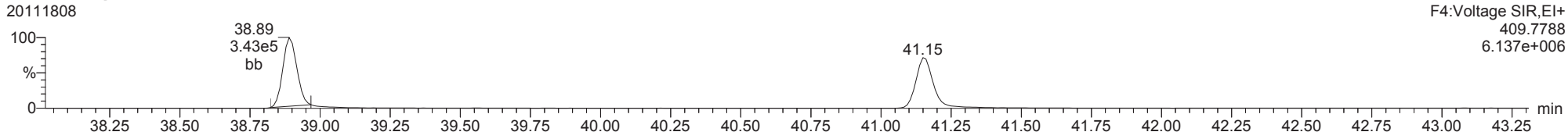

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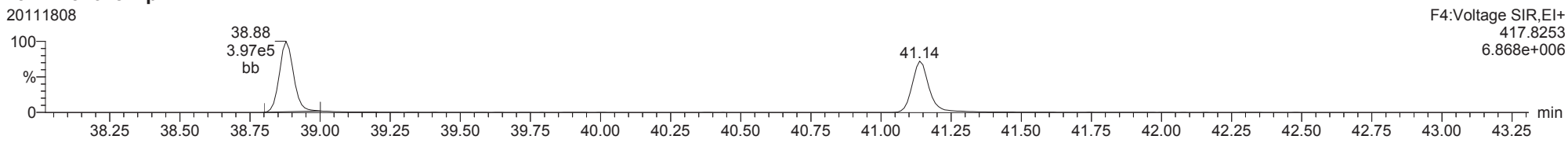

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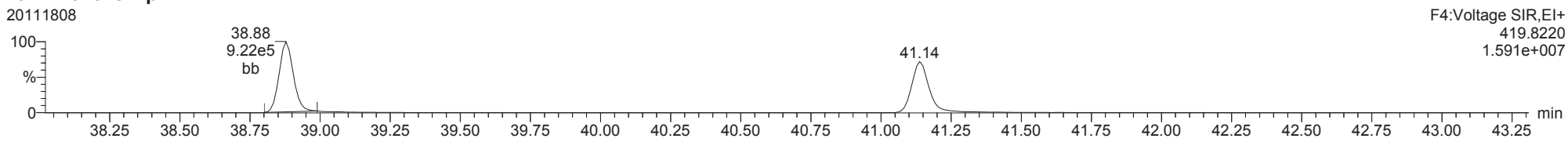
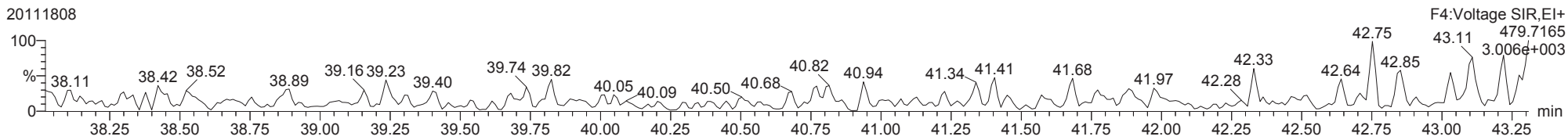


FUNCTION4 NCDPE



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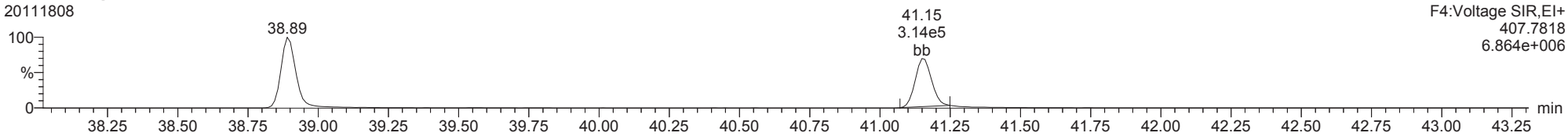
ID: CS3R2, Name: 20111808, Date: 18-Nov-2020, Time: 16:32:22, Conditions: AUTOSPEC01, User: pk

1234789-HpCDF



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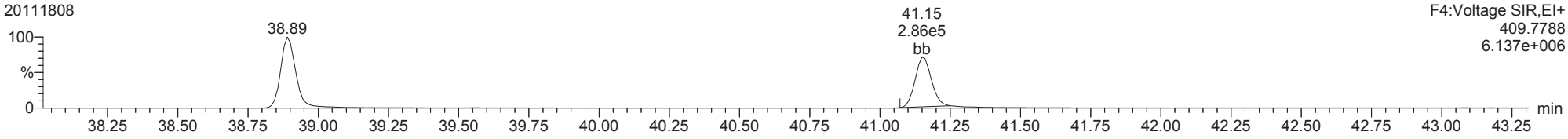

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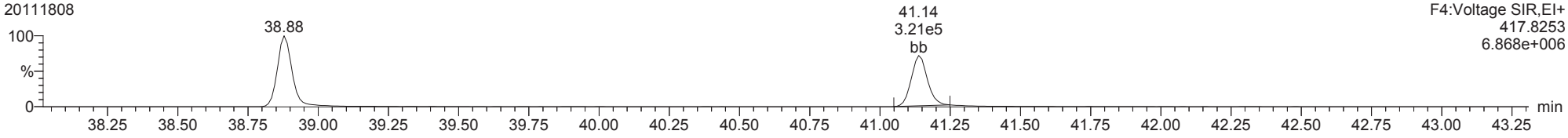

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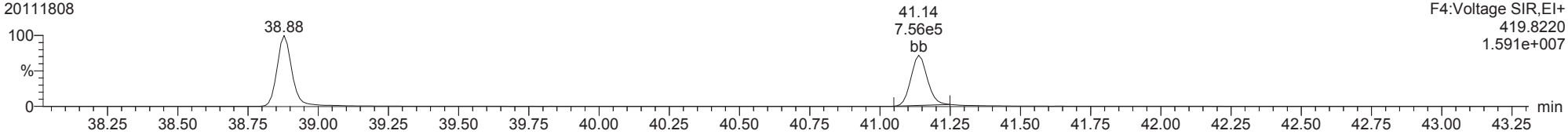
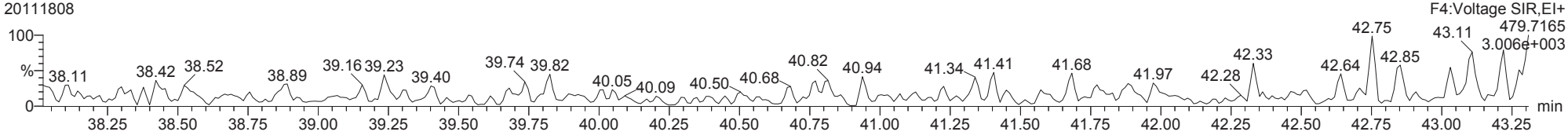


FUNCTION4 NCDPE



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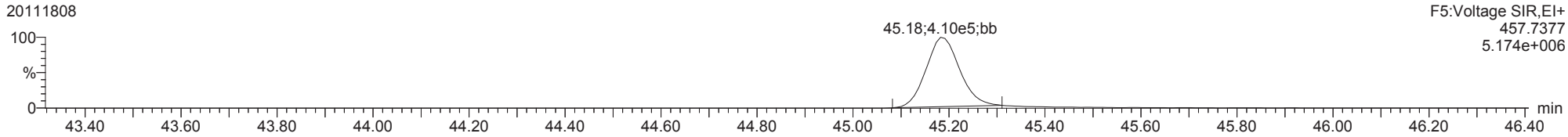
ID: CS3R2, Name: 20111808, Date: 18-Nov-2020, Time: 16:32:22, Conditions: AUTOSPEC01, User: pk

OCDD



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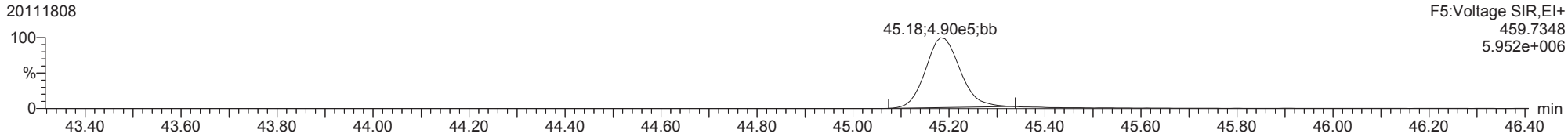

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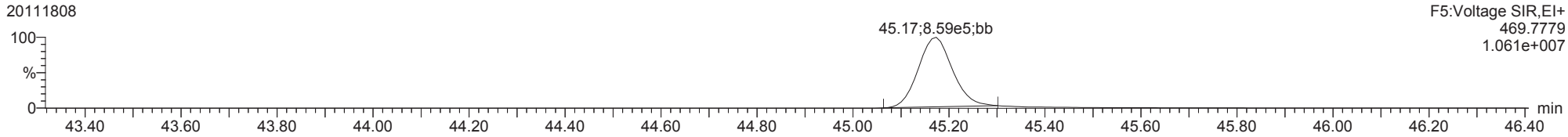

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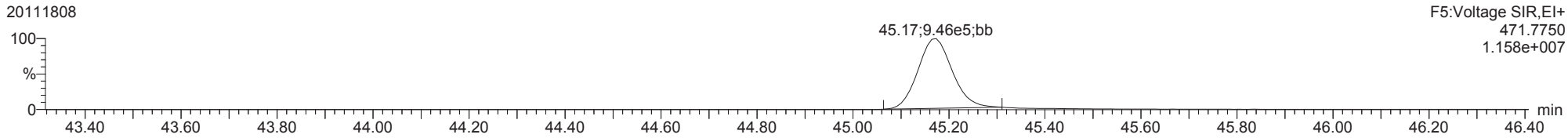
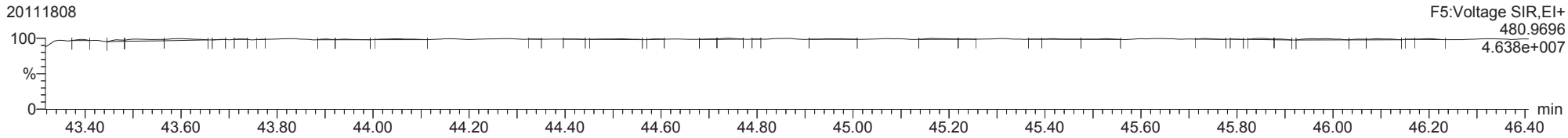


FUNCTION5 PFK



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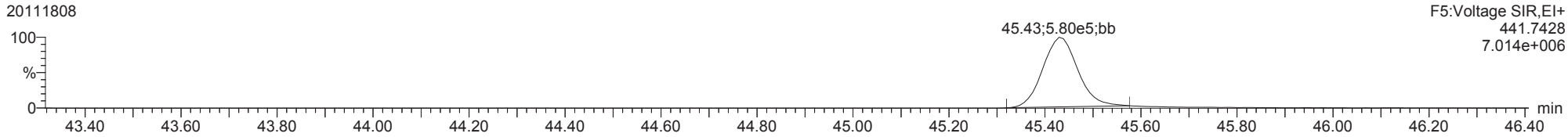
ID: CS3R2, Name: 20111808, Date: 18-Nov-2020, Time: 16:32:22, Conditions: AUTOSPEC01, User: pk

OCDF



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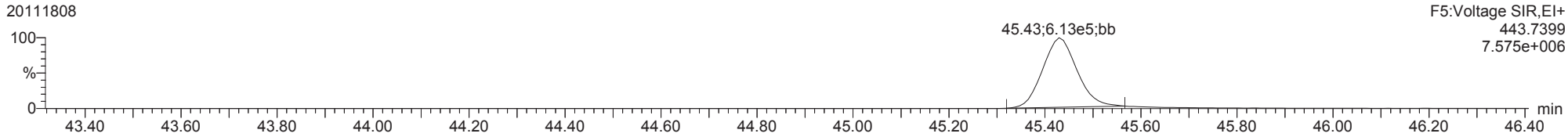
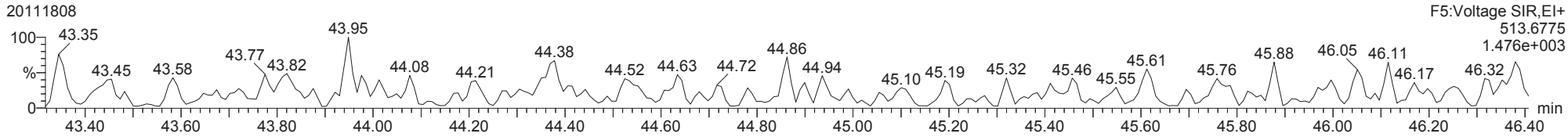
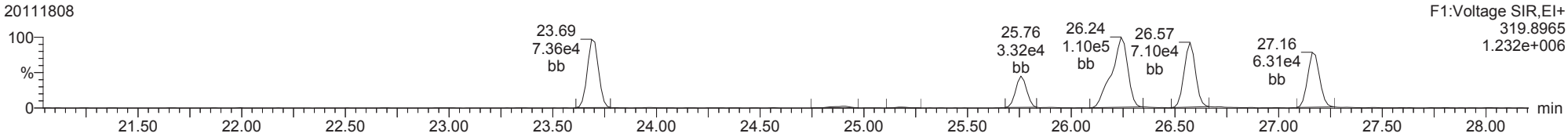


FUNCTION5 DCDPE

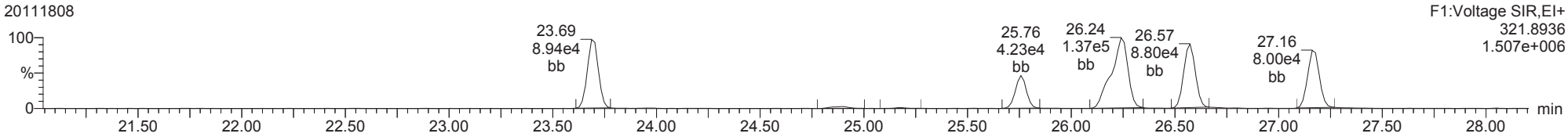


ID: CS3R2, Name: 20111808, Date: 18-Nov-2020, Time: 16:32:22, Conditions: AUTOSPEC01, User: pk

Total-tetradioxins



Total-tetradioxins



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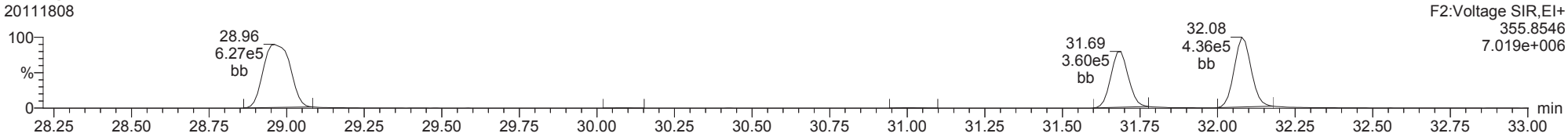

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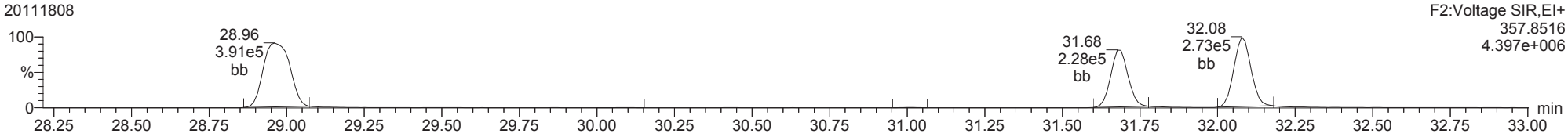

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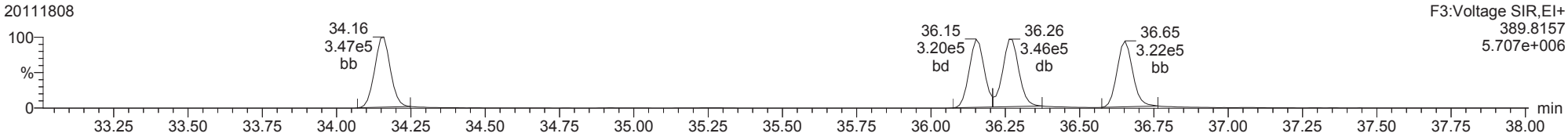
Total-hexadioxins



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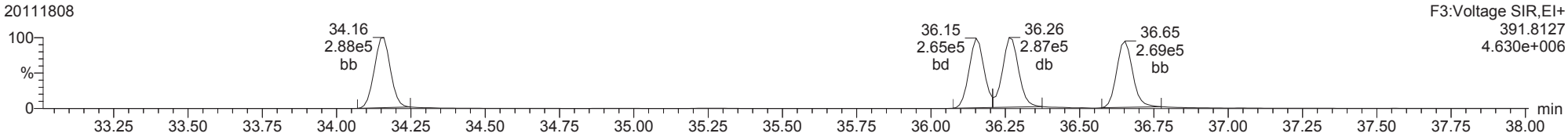
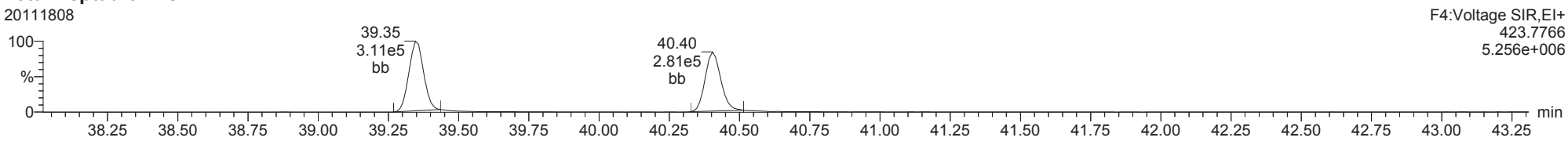


Total-heptadioxins



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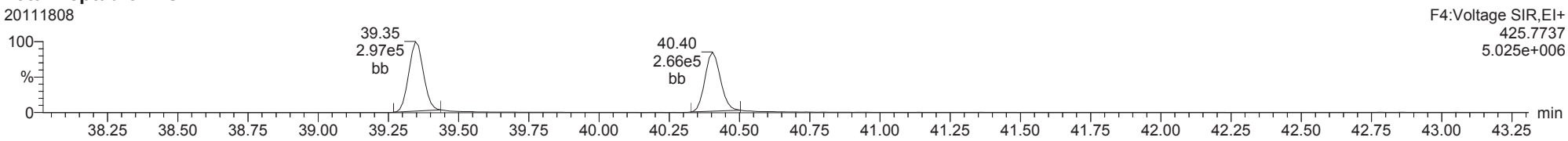

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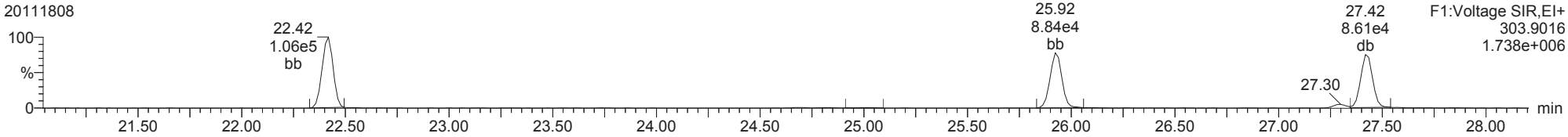
ID: CS3R2, Name: 20111808, Date: 18-Nov-2020, Time: 16:32:22, Conditions: AUTOSPEC01, User: pk

Total-tetrafurans



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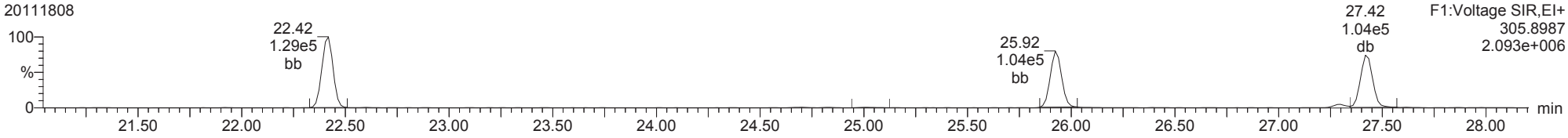

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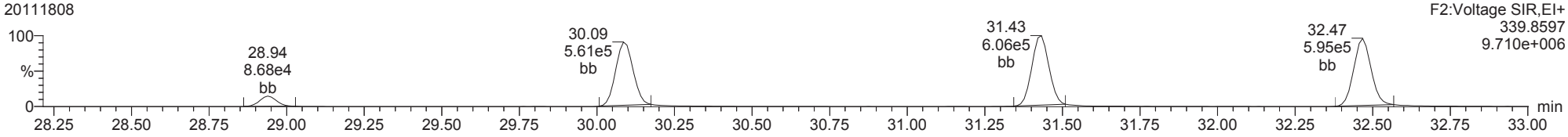

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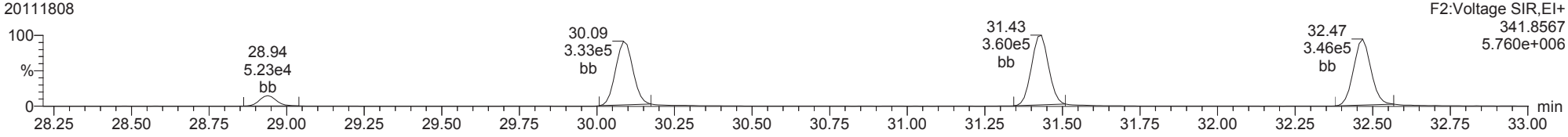

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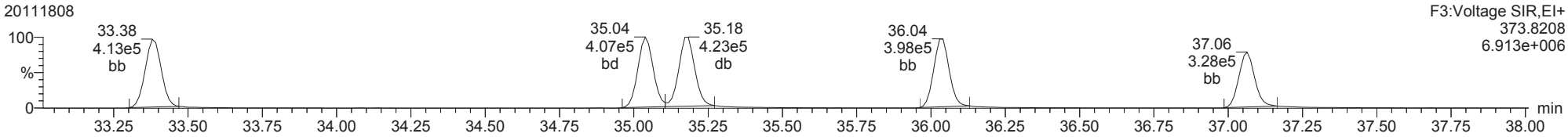
Total-hexafurans



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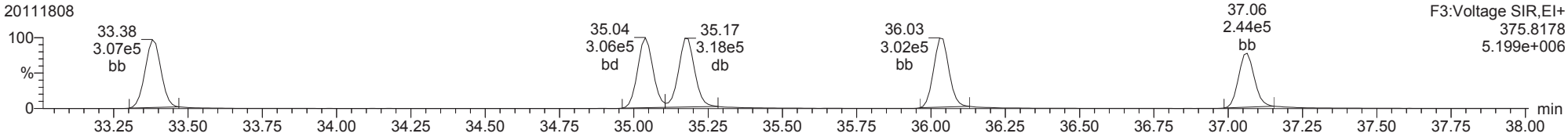

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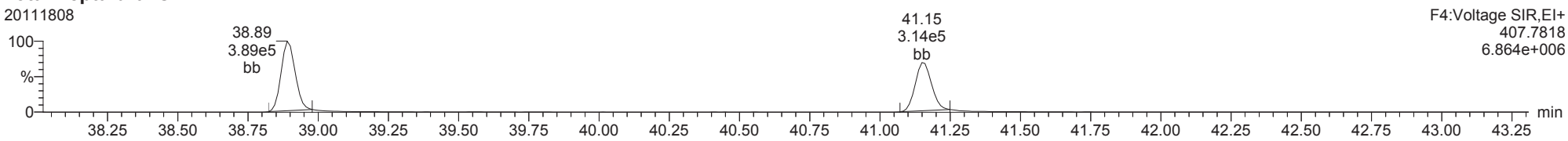

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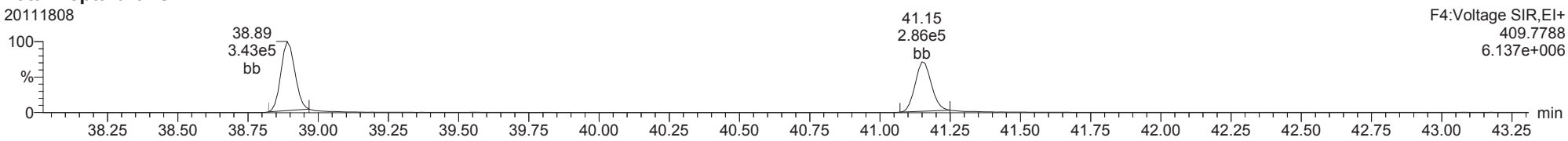

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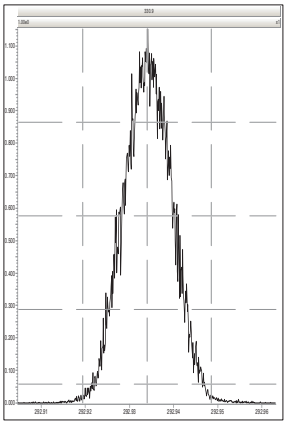
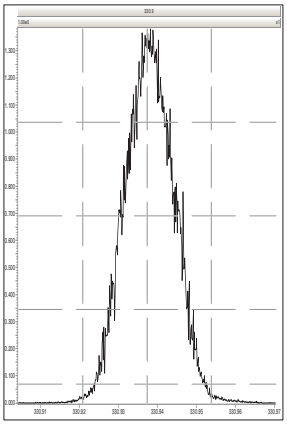
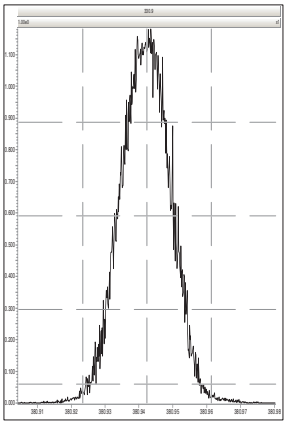
M 292.9824 R 11990



M 330.9792 R 11968



M 380.9760 R 11603



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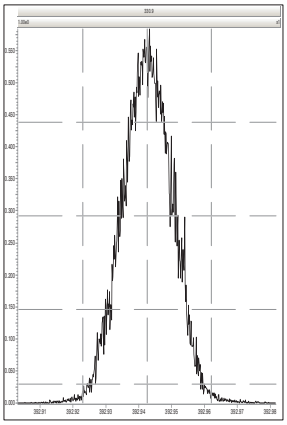
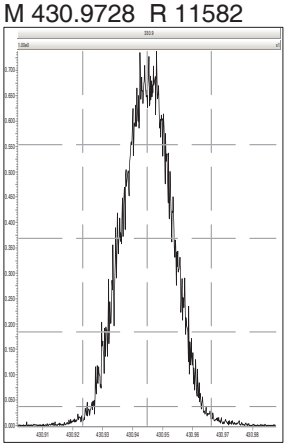


M 430.9728 R 11582



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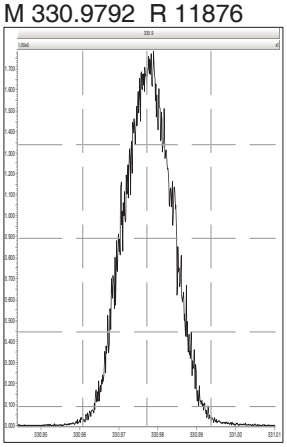
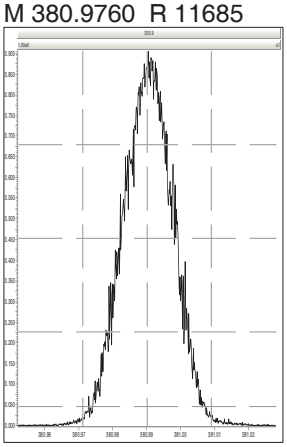
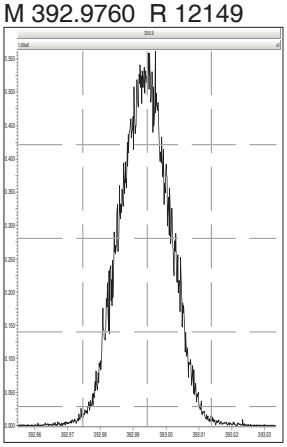


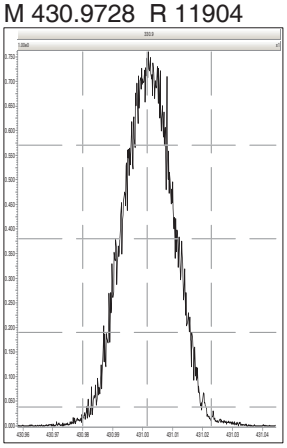
M 380.9760 R 11685



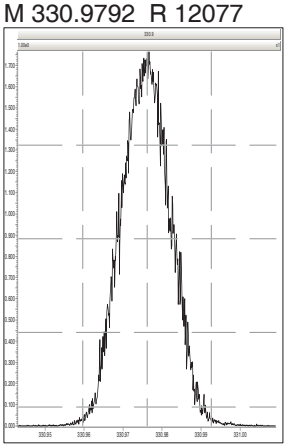
M 392.9760 R 12149



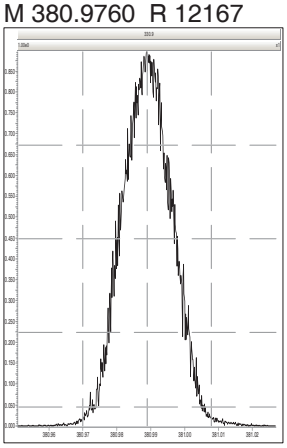
M 430.9728 R 11904



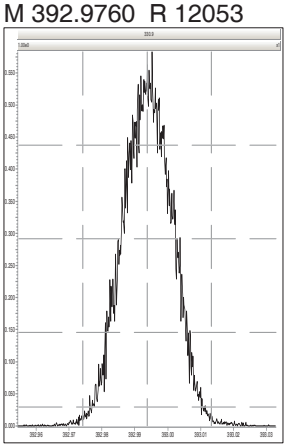
M 330.9792 R 12077



M 380.9760 R 12167



M 392.9760 R 12053



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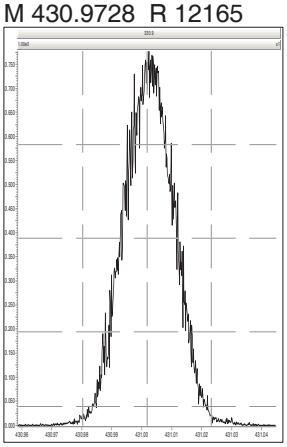
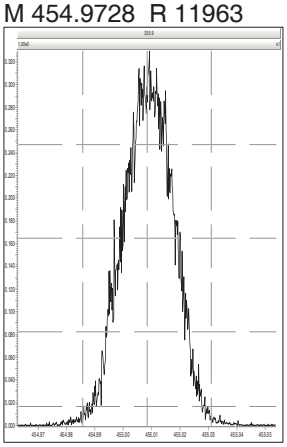
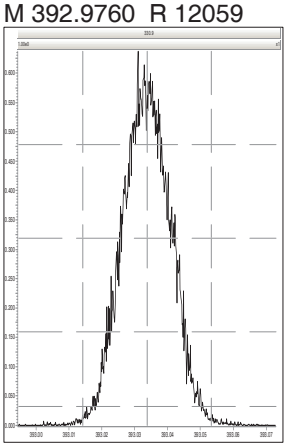


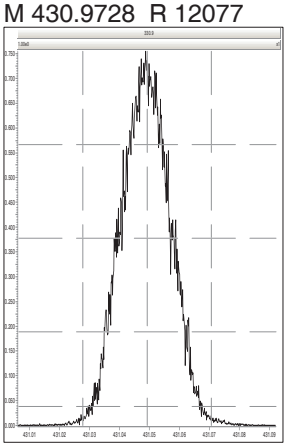
M 454.9728 R 11963



M 392.9760 R 12059

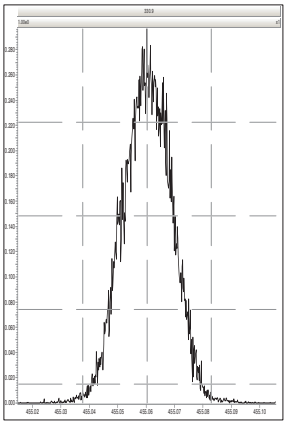


M 430.9728 R 12077

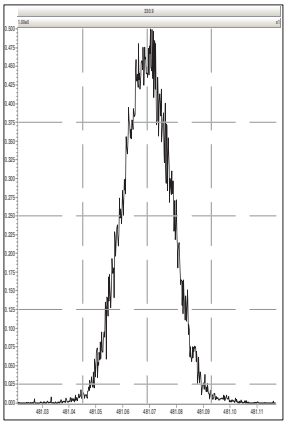


Printed: Wednesday, November 18, 2020 17:26:11 Pacific Standard Time

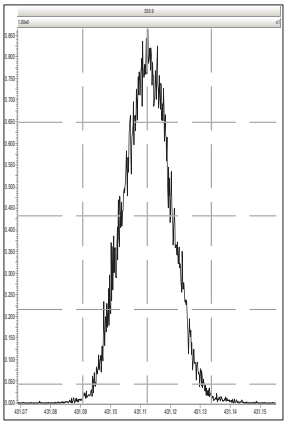
M 454.9728 R 12205



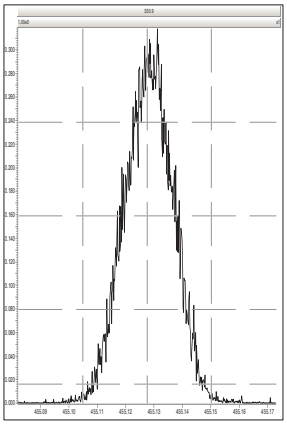
M 480.9696 R 11934



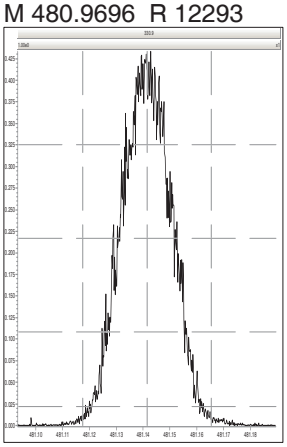
M 430.9728 R 11904



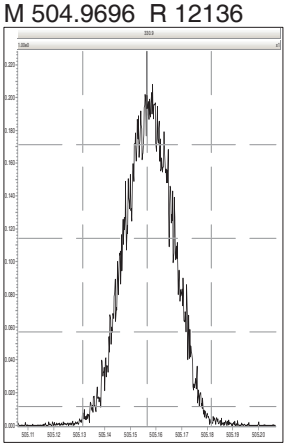
M 454.9728 R 12255



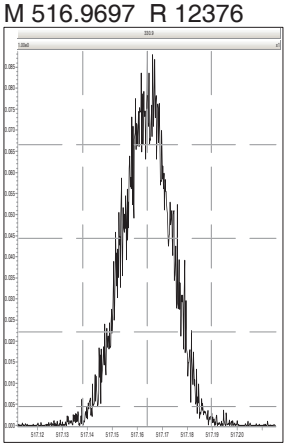
M 480.9696 R 12293

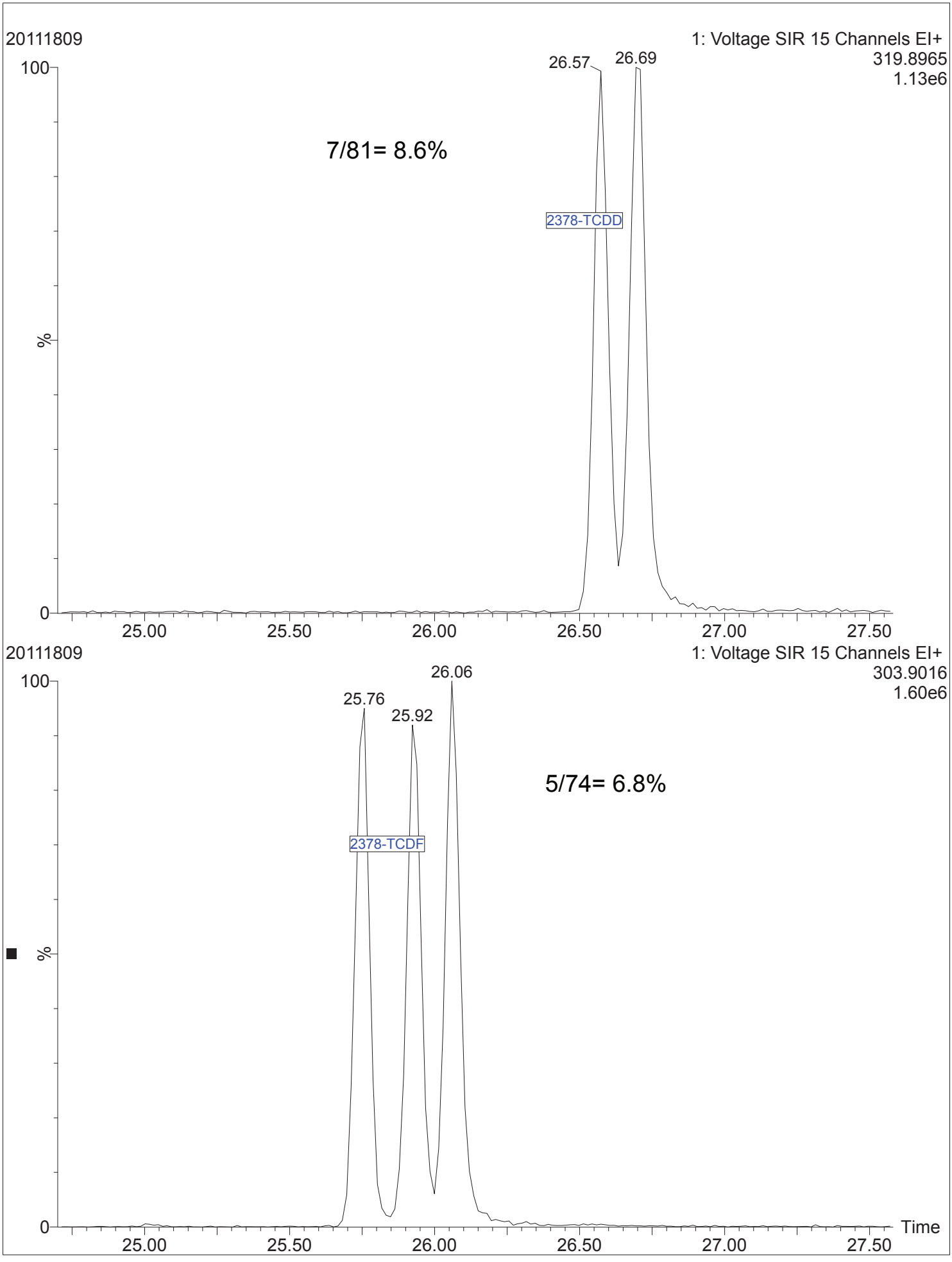


M 504.9696 R 12136



M 516.9697 R 12376




20111809
1: Voltage SIR 15 Channels EI+
319.8965
1.13e6
100
26.57
26.69
7/81= 8.6%
2378-TCDD
%
0
25.00
25.50
26.00
26.50
27.00
27.50
20111809
1: Voltage SIR 15 Channels EI+
303.9016
1.60e6
100
26.06
25.76
25.92
5/74= 6.8%
2378-TCDF
%
0
Time
25.00
25.50
26.00
26.50
27.00
27.50

CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Instrument ID:	AUTOSPEC01	Calibration:	DJ00101
Lab File ID:	20112311	Calibration Date:	10/29/2020
Sequence:	SIK0339	Injection Date:	11/23/20
Lab Sample ID:	SIK0339-CCV1	Injection Time:	17:57
Sequence Name:	CS3S2		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
2,3,7,8-TCDF	A	10.000	10.7	0.7286530	0.7798900		7.0	+/-16
2,3,7,8-TCDD	A	10.000	9.91	1.2382330	1.2266020		-0.9	+/-22
1,2,3,7,8-PeCDF	A	50.000	60.0	0.7793430	0.9344483		19.9	+/-18
2,3,4,7,8-PeCDF	A	50.000	58.4	0.8804697	1.0284310		16.8	+/-18
1,2,3,7,8-PeCDD	A	50.000	53.0	0.9876417	1.0468720		6.0	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	55.6	0.8802689	0.9783467		11.1	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	51.6	0.8533425	0.8807814		3.2	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	49.1	0.8627805	0.8477070		-1.7	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	53.3	0.7800802	0.8310745		6.5	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	54.2	0.8417578	0.9131776		8.5	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	55.2	0.9070901	1.0007260		10.3	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	54.1	0.7836605	0.8476059		8.2	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	53.2	1.0008820	1.0656300		6.5	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	55.4	0.9939216	1.1010570		10.8	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	49.0	1.0436860	1.0230460		-2.0	+/-14
OCDF	A	100.00	121	1.1579670	1.3959580		20.6	+/-37
OCDD	A	100.00	110	0.9629974	1.0576710		9.8	+/-21
13C12-2,3,7,8-TCDF	A	100.00	96.5	2.2029620	2.1266452		-3.5	+/-29
13C12-2,3,7,8-TCDD	A	100.00	93.6	1.1814920	1.1059677		-6.4	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	88.1	1.7411380	1.5330872		-11.9	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	87.6	1.6694980	1.4622699		-12.4	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	89.9	0.9778844	0.8789421		-10.1	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	103	1.0222270	1.0508333		2.8	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	113	1.2001070	1.3597818		13.3	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	110	1.0710950	1.1740028		9.6	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	104	0.9186022	0.9581772		4.3	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	95.3	0.9649715	0.9194209		-4.7	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	98.6	1.1680800	1.1518485		-1.4	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	112	0.9085870	1.0194959		12.2	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	108	0.7235789	0.7805903		7.9	+/-23
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	114	0.6453514	0.7362484		14.1	+/-18
13C12-OCDD	A	200.00	192	0.6782670	0.6498830		-4.2	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	9.51	1.2644890	1.2022229		-4.9	+/-21

* Values outside of QC limits

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:01:13 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: CS3S2, Name: 20112311, Date: 23-Nov-2020, Time: 17:57:07, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.863	1.001	7.834e4	9.380e4	0.729	0.835	0.770	1880	3800	1.09e6	1.37e6	581.0	361.7	NO	bb	bb	10.703
12378-PeCDF	30.030	1.001	4.674e5	2.761e5	0.779	1.693	1.550	4097	4537	6.71e6	3.95e6	1636.7	870.9	NO	bb	bb	59.951
23478-PeCDF	31.366	1.000	4.867e5	2.937e5	0.880	1.657	1.550	4097	4537	7.08e6	4.36e6	1729.1	960.6	NO	bb	bb	58.402
123478-HxCDF	34.983	1.001	2.939e5	2.168e5	0.880	1.356	1.240	4299	2896	4.52e6	3.34e6	1050.7	1152.7	NO	bd	bd	55.571
234678-HxCDF	35.985	1.001	2.835e5	2.109e5	0.863	1.344	1.240	4299	2896	4.33e6	3.24e6	1008.0	1117.9	NO	bb	bb	49.126
123678-HxCDF	35.117	1.000	3.419e5	2.531e5	0.853	1.351	1.240	4299	2896	4.76e6	3.59e6	1106.9	1238.5	NO	db	db	51.608
123789-HxCDF	37.009	1.000	2.250e5	1.706e5	0.780	1.319	1.240	4299	2896	3.24e6	2.44e6	754.0	841.5	NO	bb	bb	53.269
1234678-HpCDF	38.834	1.000	2.794e5	2.603e5	1.001	1.074	1.050	3647	3413	4.18e6	3.83e6	1145.7	1120.9	NO	bb	bb	53.235
1234789-HpCDF	41.093	1.000	2.317e5	1.953e5	0.994	1.186	1.050	3647	3413	2.83e6	2.54e6	775.3	743.1	NO	MM	bb	55.389
OCDF	45.356	1.006	4.340e5	4.674e5	1.158	0.928	0.890	6037	2757	4.60e6	4.91e6	762.4	1780.1	NO	bb	MM	120.552
2378-TCDD	26.513	1.001	6.306e4	7.774e4	1.238	0.811	0.770	2038	1732	9.30e5	1.14e6	456.4	658.5	NO	bb	bb	9.906
12378-PeCDD	31.622	1.000	2.935e5	1.840e5	0.988	1.595	1.550	3595	2804	4.09e6	2.54e6	1138.7	905.9	NO	bb	bb	52.999
123478-HxCDD	36.096	1.000	2.303e5	1.868e5	0.842	1.233	1.240	3390	4463	3.71e6	3.00e6	1095.9	671.7	NO	bd	bd	54.242
123678-HxCDD	36.208	1.000	3.242e5	2.485e5	0.907	1.305	1.240	3390	4463	4.06e6	3.31e6	1196.9	741.7	NO	db	db	55.161
123789-HxCDD	36.597	1.011	2.456e5	1.905e5	0.784	1.289	1.240	3390	4463	3.17e6	2.58e6	936.1	578.2	NO	bd	bb	54.080
1234678-HpCDD	40.348	1.001	1.960e5	1.782e5	1.044	1.100	1.050	4030	3359	2.56e6	2.39e6	635.2	710.8	NO	MM	bb	49.011
OCDD	45.109	1.000	3.193e5	3.636e5	0.963	0.878	0.890	3572	3008	3.37e6	3.93e6	944.5	1307.4	NO	MM	MM	109.831
13C-2378-TCDF	25.848	1.007	9.652e5	1.242e6	2.203	0.777	0.770	4941	2857	1.37e7	1.76e7	2782.7	6157.1	NO	bb	bb	96.536
13C-12378-PeCDF	30.008	1.168	9.662e5	6.251e5	1.741	1.546	1.550	6024	5133	1.29e7	8.38e6	2133.9	1633.4	NO	bb	MM	88.051
13C-23478-PeCDF	31.355	1.221	9.198e5	5.979e5	1.669	1.538	1.550	6024	5133	1.23e7	8.09e6	2045.5	1577.1	NO	bb	bb	87.587
13C-123478-HxCDF	34.961	0.956	3.455e5	6.985e5	1.022	0.495	0.510	2672	5183	4.92e6	9.93e6	1839.5	1915.5	NO	MM	MM	102.798
13C-123678-HxCDF	35.106	0.960	4.450e5	9.060e5	1.200	0.491	0.510	2672	5183	5.69e6	1.12e7	2130.1	2163.1	NO	MM	MM	113.305
13C-234678-HxCDF	35.963	0.983	3.874e5	7.791e5	1.071	0.497	0.510	2672	5183	4.95e6	9.86e6	1851.0	1902.6	NO	bb	bb	109.608
13C-123789-HxCDF	36.998	1.011	3.142e5	6.378e5	0.919	0.493	0.510	2672	5183	3.85e6	7.78e6	1440.4	1500.9	NO	bb	bb	104.308
13C-1234678-HpCDF	38.823	1.061	3.029e5	7.100e5	0.909	0.427	0.440	4011	4996	4.24e6	9.83e6	1056.4	1968.2	NO	bb	bb	112.207
13C-1234789-HpCDF	41.082	1.123	2.255e5	5.501e5	0.724	0.410	0.440	4011	4996	2.86e6	6.75e6	712.9	1351.8	NO	bb	bb	107.879
13C-1234-TCDD	25.682	0.000	4.681e5	5.699e5	1.000	0.821	0.770	2042	1201	7.06e6	8.54e6	3459.2	7107.3	NO	bb	bb	100.000
13C-2378-TCDD	26.498	1.032	5.138e5	6.342e5	1.181	0.810	0.770	2042	1201	7.09e6	8.67e6	3474.5	7216.2	NO	bb	bb	93.608
13C-12378-PeCDD	31.611	1.231	5.756e5	3.367e5	0.978	1.709	1.550	2119	1686	7.64e6	4.61e6	3606.8	2734.5	NO	bb	bb	89.882
13C-123478-HxCDD	36.085	0.986	5.112e5	4.023e5	0.965	1.270	1.240	3468	2141	7.99e6	6.37e6	2305.6	2976.6	NO	bd	bd	95.280
13C-123678-HxCDD	36.196	0.989	6.306e5	5.138e5	1.168	1.227	1.240	3468	2141	8.62e6	6.88e6	2487.0	3213.5	NO	db	db	98.610
13C-1234678-HpCDD	40.326	1.102	3.567e5	3.748e5	0.645	0.952	1.050	3061	3121	4.48e6	4.32e6	1462.9	1384.9	NO	bb	bd	114.085
13C-OCDD	45.091	1.232	6.176e5	6.738e5	0.678	0.917	0.890	1842	3984	6.54e6	7.14e6	3547.7	1792.5	NO	bb	bb	191.631
13C-123789-HxCDD	36.586	0.000	5.513e5	4.422e5	1.000	1.247	1.240	3468	2141	7.18e6	5.64e6	2069.7	2635.4	NO	bb	bb	100.000
37CL-2378-TCDD	26.513	1.032	1.248e5		1.264			3008		1.77e6		588.6			bb		9.508

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:01:13 Pacific Standard Time

ID: CS3S2, Name: 20112311, Date: 23-Nov-2020, Time: 17:57:07, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.358	0.865	1.017e5	1.259e5	0.846	0.808	0.770	1880	3800	1.64e6	2.00e6	870.2	526.9	NO	bb	bb	12.182
1289-TCDF	27.374	1.059	7.462e4	8.964e4	0.688	0.832	0.770	1880	3800	1.03e6	1.21e6	547.1	318.8	NO	db	db	10.820
13468-PECDF	27.223	0.907	5.809e5	3.781e5	1.181	1.536	1.550	474	1467	8.55e6	5.59e6	18046.3	3809.4	NO	bb	bb	51.013
12389-PECDF	32.401	1.080	4.497e5	2.699e5	0.766	1.666	1.550	4097	4537	6.01e6	3.54e6	1466.2	780.7	NO	bb	bb	59.027
123468-HXCDF	33.325	0.953	3.291e5	2.397e5	1.003	1.373	1.240	4299	2896	4.69e6	3.48e6	1091.7	1201.5	NO	bb	bb	54.329
1368-TCDD	23.642	0.892	6.560e4	8.406e4	1.179	0.780	0.770	2038	1732	1.00e6	1.27e6	492.1	732.4	NO	bb	bb	11.061
1289-TCDD	27.102	1.023	5.432e4	6.501e4	1.042	0.836	0.770	2038	1732	7.33e5	9.03e5	359.6	521.2	NO	bb	bb	9.973
12479-PECDD	28.895	0.914	5.297e5	3.344e5	1.810	1.584	1.550	3595	2804	5.04e6	3.18e6	1402.7	1135.1	NO	bb	bb	52.321
12389-PECDD	32.022	1.013	3.317e5	2.097e5	1.165	1.582	1.550	3595	2804	4.61e6	2.81e6	1283.7	1001.7	NO	bb	bb	50.924
124679-HXCDD	34.093	0.945	2.716e5	2.409e5	1.056	1.127	1.240	3390	4463	3.94e6	3.27e6	1162.6	733.4	NO	bb	bd	53.109
1234679-HPCDD	39.291	0.974	2.511e5	2.387e5	1.285	1.052	1.050	4030	3359	3.27e6	3.15e6	812.6	936.8	NO	bd	bd	52.091
Total-tetrafurans			2.560e5		0.754			1880		3.78e6							33.894
Total-penta1			5.809e5					474		8.55e6							51.013
Total-pentafurans			1.480e6		0.809			4097		2.09e7							186.857
Total-hexafurans			1.473e6		0.876			4299		2.15e7							263.903
Total-heptafurans			5.111e5		0.997			3647		7.01e6							108.624
Total-Furans			4.735e6		0.893			1880		6.64e7							764.842
Total-tetradioxins			3.051e5		1.153			2038		4.09e6							52.125
Total-pentadioxins			1.155e6		1.321			3595		1.38e7							156.244
Total-hexadioxins			1.073e6		0.897			3390		1.49e7							216.788
Total-heptadioxins			4.471e5		1.165			4030		5.83e6							101.102
Total-Dioxins			3.299e6		1.100			2038		4.20e7							636.090
Total-TEQ			8.034e6					2038		1.08e8							1400.932
FUNCTION1 PFK			4.863e6					665324		7.45e7							
FUNCTION2 PFK			5.697e5					430504		1.17e7							0.000
FUNCTION3 PFK			2.911e6					502658		5.32e7							0.000
FUNCTION4 PFK			9.914e5					379804		2.12e7							
FUNCTION5 PFK			0.000e0					239881		0.00e0							
FUNCTION1 HXCD...			1.303e2					494		2.18e3							0.000
FUNCTION1 HPCD...			1.506e3					1546		3.40e4							0.000
FUNCTION2 HPCD...			8.864e2					1445		2.45e4							0.000
FUNCTION3 OCDPE			1.818e2					452		3.31e3							0.000
FUNCTION4 NCDPE			2.379e2					654		4.53e3							0.000
FUNCTION5 DCDPE			0.000e0					388		0.00e0							

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.37	7.462e4	8.964e4	0.688	0.83	0.77	547.1	YES	NO	db	db	10.820
2	Total-tetrafurans	27.24	1.352e3	1.789e3	0.754	0.76	0.77	11.0	YES	NO	bd	bd	0.189
3	2378-TCDF	25.86	7.834e4	9.380e4	0.729	0.84	0.77	581.0	YES	NO	bb	bb	10.703
4	1368-TCDF	22.36	1.017e5	1.259e5	0.846	0.81	0.77	870.2	YES	NO	bb	bb	12.182

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.22	5.809e5	3.781e5	1.181	1.54	1.55	18046.3	YES	NO	bb	bb	51.013

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.40	4.497e5	2.699e5	0.766	1.67	1.55	1466.2	YES	NO	bb	bb	59.027
2	23478-PeCDF	31.37	4.867e5	2.937e5	0.880	1.66	1.55	1729.1	YES	NO	bb	bb	58.402
3	12378-PeCDF	30.03	4.674e5	2.761e5	0.779	1.69	1.55	1636.7	YES	NO	bb	bb	59.951
4	Total-pentafurans	28.88	7.626e4	4.286e4	0.809	1.78	1.55	269.2	YES	NO	bb	bb	9.476

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123678-HxCDF	35.12	3.419e5	2.531e5	0.853	1.35	1.24	1106.9	YES	NO	db	db	51.608
2	123478-HxCDF	34.98	2.939e5	2.168e5	0.880	1.36	1.24	1050.7	YES	NO	bd	bd	55.571
3	123468-HXCDF	33.32	3.291e5	2.397e5	1.003	1.37	1.24	1091.7	YES	NO	bb	bb	54.329
4	123789-HxCDF	37.01	2.250e5	1.706e5	0.780	1.32	1.24	754.0	YES	NO	bb	bb	53.269
5	234678-HxCDF	35.99	2.835e5	2.109e5	0.863	1.34	1.24	1008.0	YES	NO	bb	bb	49.126

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.09	2.317e5	1.953e5	0.994	1.19	1.05	775.3	YES	NO	MM	bb	55.389
2	1234678-HpCDF	38.83	2.794e5	2.603e5	1.001	1.07	1.05	1145.7	YES	NO	bb	bb	53.235

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.37	7.462e4	8.964e4	0.688	0.83	0.77	547.1	YES	NO	db	db	10.820
2	Total-tetrafurans	27.24	1.352e3	1.789e3	0.754	0.76	0.77	11.0	YES	NO	bd	bd	0.189
3	2378-TCDF	25.86	7.834e4	9.380e4	0.729	0.84	0.77	581.0	YES	NO	bb	bb	10.703
4	1368-TCDF	22.36	1.017e5	1.259e5	0.846	0.81	0.77	870.2	YES	NO	bb	bb	12.182
5	12389-PECDF	32.40	4.497e5	2.699e5	0.766	1.67	1.55	1466.2	YES	NO	bb	bb	59.027
6	23478-PeCDF	31.37	4.867e5	2.937e5	0.880	1.66	1.55	1729.1	YES	NO	bb	bb	58.402
7	12378-PeCDF	30.03	4.674e5	2.761e5	0.779	1.69	1.55	1636.7	YES	NO	bb	bb	59.951
8	Total-pentafurans	28.88	7.626e4	4.286e4	0.809	1.78	1.55	269.2	YES	NO	bb	bb	9.476
9	123678-HxCDF	35.12	3.419e5	2.531e5	0.853	1.35	1.24	1106.9	YES	NO	db	db	51.608
10	123478-HxCDF	34.98	2.939e5	2.168e5	0.880	1.36	1.24	1050.7	YES	NO	bd	bd	55.571
11	123468-HXCDF	33.32	3.291e5	2.397e5	1.003	1.37	1.24	1091.7	YES	NO	bb	bb	54.329
12	123789-HxCDF	37.01	2.250e5	1.706e5	0.780	1.32	1.24	754.0	YES	NO	bb	bb	53.269
13	234678-HxCDF	35.99	2.835e5	2.109e5	0.863	1.34	1.24	1008.0	YES	NO	bb	bb	49.126
14	1234789-HpCDF	41.09	2.317e5	1.953e5	0.994	1.19	1.05	775.3	YES	NO	MM	bb	55.389
15	1234678-HpCDF	38.83	2.794e5	2.603e5	1.001	1.07	1.05	1145.7	YES	NO	bb	bb	53.235
16	OCDF	45.36	4.340e5	4.674e5	1.158	0.93	0.89	762.4	YES	NO	bb	MM	120.552
17	13468-PECDF	27.22	5.809e5	3.781e5	1.181	1.54	1.55	18046.3	YES	NO	bb	bb	51.013

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.64	6.560e4	8.406e4	1.179	0.78	0.77	492.1	YES	NO	bb	bb	11.061
2	1289-TCDD	27.10	5.432e4	6.501e4	1.042	0.84	0.77	359.6	YES	NO	bb	bb	9.973
3	2378-TCDD	26.51	6.306e4	7.774e4	1.238	0.81	0.77	456.4	YES	NO	bb	bb	9.906
4	Total-tetradioxins	26.18	9.194e4	1.221e5	1.153	0.75	0.77	472.1	YES	NO	bb	bb	16.171
5	Total-tetradioxins	25.70	3.021e4	3.616e4	1.153	0.84	0.77	226.7	YES	NO	bb	bb	5.014

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	32.02	3.317e5	2.097e5	1.165	1.58	1.55	1283.7	YES	NO	bb	bb	50.924
2	12378-PeCDD	31.62	2.935e5	1.840e5	0.988	1.59	1.55	1138.7	YES	NO	bb	bb	52.999
3	12479-PECDD	28.90	5.297e5	3.344e5	1.810	1.58	1.55	1402.7	YES	NO	bb	bb	52.321

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	124679-HXCDD	34.09	2.716e5	2.409e5	1.056	1.13	1.24	1162.6	YES	NO	bb	bd	53.109
2	Total-hexadioxins	36.99	9.288e2	8.725e2	0.897	1.06	1.24	9.1	NO	NO	dd	bd	0.195
3	123789-HxCDD	36.60	2.456e5	1.905e5	0.784	1.29	1.24	936.1	YES	NO	bd	bb	54.080
4	123678-HxCDD	36.21	3.242e5	2.485e5	0.907	1.30	1.24	1196.9	YES	NO	db	db	55.161
5	123478-HxCDD	36.10	2.303e5	1.868e5	0.842	1.23	1.24	1095.9	YES	NO	bd	bd	54.242

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.35	1.960e5	1.782e5	1.044	1.10	1.05	635.2	YES	NO	MM	bb	49.011
2	1234679-HPCDD	39.29	2.511e5	2.387e5	1.285	1.05	1.05	812.6	YES	NO	bd	bd	52.091

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.64	6.560e4	8.406e4	1.179	0.78	0.77	492.1	YES	NO	bb	bb	11.061
2	1289-TCDD	27.10	5.432e4	6.501e4	1.042	0.84	0.77	359.6	YES	NO	bb	bb	9.973
3	2378-TCDD	26.51	6.306e4	7.774e4	1.238	0.81	0.77	456.4	YES	NO	bb	bb	9.906
4	Total-tetradioxins	26.18	9.194e4	1.221e5	1.153	0.75	0.77	472.1	YES	NO	bb	bb	16.171
5	Total-tetradioxins	25.70	3.021e4	3.616e4	1.153	0.84	0.77	226.7	YES	NO	bb	bb	5.014
6	12389-PECDD	32.02	3.317e5	2.097e5	1.165	1.58	1.55	1283.7	YES	NO	bb	bb	50.924
7	12378-PeCDD	31.62	2.935e5	1.840e5	0.988	1.59	1.55	1138.7	YES	NO	bb	bb	52.999
8	12479-PECDD	28.90	5.297e5	3.344e5	1.810	1.58	1.55	1402.7	YES	NO	bb	bb	52.321
9	124679-HXCDD	34.09	2.716e5	2.409e5	1.056	1.13	1.24	1162.6	YES	NO	bb	bd	53.109
10	Total-hexadioxins	36.99	9.288e2	8.725e2	0.897	1.06	1.24	9.1	NO	NO	dd	bd	0.195
11	123789-HxCDD	36.60	2.456e5	1.905e5	0.784	1.29	1.24	936.1	YES	NO	bd	bb	54.080
12	123678-HxCDD	36.21	3.242e5	2.485e5	0.907	1.30	1.24	1196.9	YES	NO	db	db	55.161
13	123478-HxCDD	36.10	2.303e5	1.868e5	0.842	1.23	1.24	1095.9	YES	NO	bd	bd	54.242
14	1234678-HpCDD	40.35	1.960e5	1.782e5	1.044	1.10	1.05	635.2	YES	NO	MM	bb	49.011
15	1234679-HPCDD	39.29	2.511e5	2.387e5	1.285	1.05	1.05	812.6	YES	NO	bd	bd	52.091
16	OCDD	45.11	3.193e5	3.636e5	0.963	0.88	0.89	944.5	YES	NO	MM	MM	109.831

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.37	7.462e4	8.964e4	0.688	0.83	0.77	547.1	YES	NO	db	db	10.820
2	Total-tetrafurans	27.24	1.352e3	1.789e3	0.754	0.76	0.77	11.0	YES	NO	bd	bd	0.189
3	2378-TCDF	25.86	7.834e4	9.380e4	0.729	0.84	0.77	581.0	YES	NO	bb	bb	10.703
4	1368-TCDF	22.36	1.017e5	1.259e5	0.846	0.81	0.77	870.2	YES	NO	bb	bb	12.182
5	12389-PECDF	32.40	4.497e5	2.699e5	0.766	1.67	1.55	1466.2	YES	NO	bb	bb	59.027
6	23478-PeCDF	31.37	4.867e5	2.937e5	0.880	1.66	1.55	1729.1	YES	NO	bb	bb	58.402
7	12378-PeCDF	30.03	4.674e5	2.761e5	0.779	1.69	1.55	1636.7	YES	NO	bb	bb	59.951
8	Total-pentafurans	28.88	7.626e4	4.286e4	0.809	1.78	1.55	269.2	YES	NO	bb	bb	9.476
9	123678-HxCDF	35.12	3.419e5	2.531e5	0.853	1.35	1.24	1106.9	YES	NO	db	db	51.608
10	123478-HxCDF	34.98	2.939e5	2.168e5	0.880	1.36	1.24	1050.7	YES	NO	bd	bd	55.571
11	123468-HXCDF	33.32	3.291e5	2.397e5	1.003	1.37	1.24	1091.7	YES	NO	bb	bb	54.329
12	123789-HxCDF	37.01	2.250e5	1.706e5	0.780	1.32	1.24	754.0	YES	NO	bb	bb	53.269
13	234678-HxCDF	35.99	2.835e5	2.109e5	0.863	1.34	1.24	1008.0	YES	NO	bb	bb	49.126
14	1234789-HpCDF	41.09	2.317e5	1.953e5	0.994	1.19	1.05	775.3	YES	NO	MM	bb	55.389
15	1234678-HpCDF	38.83	2.794e5	2.603e5	1.001	1.07	1.05	1145.7	YES	NO	bb	bb	53.235
16	OCDF	45.36	4.340e5	4.674e5	1.158	0.93	0.89	762.4	YES	NO	bb	MM	120.552
17	13468-PECDF	27.22	5.809e5	3.781e5	1.181	1.54	1.55	18046.3	YES	NO	bb	bb	51.013
18	1368-TCDD	23.64	6.560e4	8.406e4	1.179	0.78	0.77	492.1	YES	NO	bb	bb	11.061
19	1289-TCDD	27.10	5.432e4	6.501e4	1.042	0.84	0.77	359.6	YES	NO	bb	bb	9.973
20	2378-TCDD	26.51	6.306e4	7.774e4	1.238	0.81	0.77	456.4	YES	NO	bb	bb	9.906
21	Total-tetradioxins	26.18	9.194e4	1.221e5	1.153	0.75	0.77	472.1	YES	NO	bb	bb	16.171
22	Total-tetradioxins	25.70	3.021e4	3.616e4	1.153	0.84	0.77	226.7	YES	NO	bb	bb	5.014
23	12389-PECDD	32.02	3.317e5	2.097e5	1.165	1.58	1.55	1283.7	YES	NO	bb	bb	50.924
24	12378-PeCDD	31.62	2.935e5	1.840e5	0.988	1.59	1.55	1138.7	YES	NO	bb	bb	52.999
25	12479-PECDD	28.90	5.297e5	3.344e5	1.810	1.58	1.55	1402.7	YES	NO	bb	bb	52.321
26	124679-HXCDD	34.09	2.716e5	2.409e5	1.056	1.13	1.24	1162.6	YES	NO	bb	bd	53.109
27	Total-hexadioxins	36.99	9.288e2	8.725e2	0.897	1.06	1.24	9.1	NO	NO	dd	bd	0.195
28	123789-HxCDD	36.60	2.456e5	1.905e5	0.784	1.29	1.24	936.1	YES	NO	bd	bb	54.080
29	123678-HxCDD	36.21	3.242e5	2.485e5	0.907	1.30	1.24	1196.9	YES	NO	db	db	55.161
30	123478-HxCDD	36.10	2.303e5	1.868e5	0.842	1.23	1.24	1095.9	YES	NO	bd	bd	54.242
31	1234678-HpCDD	40.35	1.960e5	1.782e5	1.044	1.10	1.05	635.2	YES	NO	MM	bb	49.011
32	1234679-HPCDD	39.29	2.511e5	2.387e5	1.285	1.05	1.05	812.6	YES	NO	bd	bd	52.091
33	OCDD	45.11	3.193e5	3.636e5	0.963	0.88	0.89	944.5	YES	NO	MM	MM	109.831

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Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:01:13 Pacific Standard Time

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	22.21	4.452e3					0.3	NO		bb		
2	FUNCTION1 PFK	22.15	3.861e3					0.4	NO		bb		
3	FUNCTION1 PFK	22.07	3.479e4					1.1	NO		db		
4	FUNCTION1 PFK	21.97	3.909e4					1.3	NO		dd		
5	FUNCTION1 PFK	21.86	3.275e4					0.8	NO		bd		
6	FUNCTION1 PFK	21.75	6.557e4					1.7	NO		db		
7	FUNCTION1 PFK	21.65	1.523e5					2.9	NO		dd		
8	FUNCTION1 PFK	21.51	1.061e5					2.6	NO		dd		
9	FUNCTION1 PFK	21.41	1.948e5					3.0	YES		dd		
10	FUNCTION1 PFK	21.29	6.031e4					2.1	NO		bd		
11	FUNCTION1 PFK	21.21	3.832e4					1.5	NO		db		
12	FUNCTION1 PFK	21.13	4.356e3					0.4	NO		bd		
13	FUNCTION1 PFK	23.88	1.341e5					3.0	YES		dd		
14	FUNCTION1 PFK	23.76	1.461e5					3.0	NO		dd		
15	FUNCTION1 PFK	23.64	1.083e5					2.1	NO		dd		
16	FUNCTION1 PFK	23.52	1.153e5					1.9	NO		dd		
17	FUNCTION1 PFK	23.43	1.076e5					2.5	NO		dd		
18	FUNCTION1 PFK	23.34	3.360e4					1.1	NO		dd		
19	FUNCTION1 PFK	23.28	4.446e4					1.5	NO		dd		
20	FUNCTION1 PFK	23.22	9.834e4					2.1	NO		dd		
21	FUNCTION1 PFK	23.13	6.918e4					1.7	NO		dd		
22	FUNCTION1 PFK	22.98	1.182e5					1.9	NO		dd		
23	FUNCTION1 PFK	22.87	5.577e4					1.2	NO		dd		
24	FUNCTION1 PFK	22.75	8.035e4					1.8	NO		dd		
25	FUNCTION1 PFK	22.63	9.694e4					2.3	NO		dd		
26	FUNCTION1 PFK	22.52	1.215e5					2.1	NO		dd		
27	FUNCTION1 PFK	22.42	9.382e4					2.0	NO		dd		
28	FUNCTION1 PFK	22.33	3.944e4					1.0	NO		bd		
29	FUNCTION1 PFK	25.89	7.608e4					1.7	NO		bd		
30	FUNCTION1 PFK	25.70	3.142e4					1.1	NO		bb		
31	FUNCTION1 PFK	25.58	5.087e4					1.5	NO		bb		
32	FUNCTION1 PFK	25.47	6.614e4					1.9	NO		bb		
33	FUNCTION1 PFK	25.32	1.348e4					0.8	NO		bb		
34	FUNCTION1 PFK	25.24	3.296e4					1.0	NO		bb		
35	FUNCTION1 PFK	25.12	4.448e4					1.3	NO		bb		
36	FUNCTION1 PFK	24.90	4.638e4					1.4	NO		bb		
37	FUNCTION1 PFK	24.79	1.027e5					1.9	NO		db		

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	24.68	6.916e4					1.5	NO		dd		
39	FUNCTION1 PFK	24.56	8.274e4					1.5	NO		dd		
40	FUNCTION1 PFK	24.46	8.291e4					1.7	NO		dd		
41	FUNCTION1 PFK	24.35	1.192e5					2.4	NO		dd		
42	FUNCTION1 PFK	24.22	1.618e5					2.9	NO		dd		
43	FUNCTION1 PFK	24.10	6.073e4					1.5	NO		dd		
44	FUNCTION1 PFK	23.99	1.026e5					2.3	NO		dd		
45	FUNCTION1 PFK	27.68	2.798e4					1.2	NO		dd		
46	FUNCTION1 PFK	27.60	1.081e5					2.1	NO		dd		
47	FUNCTION1 PFK	27.48	8.213e4					2.1	NO		bd		
48	FUNCTION1 PFK	27.27	1.254e4					0.6	NO		db		
49	FUNCTION1 PFK	27.15	1.461e5					2.4	NO		dd		
50	FUNCTION1 PFK	27.04	5.267e4					1.3	NO		bd		
51	FUNCTION1 PFK	26.92	4.718e4					1.8	NO		db		
52	FUNCTION1 PFK	26.83	9.088e4					1.3	NO		bd		
53	FUNCTION1 PFK	26.69	6.821e4					2.0	NO		db		
54	FUNCTION1 PFK	26.62	2.671e4					1.1	NO		dd		
55	FUNCTION1 PFK	26.57	4.716e4					1.3	NO		bd		
56	FUNCTION1 PFK	26.47	5.956e4					1.4	NO		db		
57	FUNCTION1 PFK	26.35	1.370e5					2.9	NO		dd		
58	FUNCTION1 PFK	26.27	8.924e4					1.6	NO		dd		
59	FUNCTION1 PFK	26.14	1.365e5					2.3	NO		dd		
60	FUNCTION1 PFK	26.03	7.938e4					2.5	NO		dd		
61	FUNCTION1 PFK	28.13	2.830e4					0.9	NO		bb		
62	FUNCTION1 PFK	28.05	7.669e4					2.0	NO		db		
63	FUNCTION1 PFK	27.96	4.784e4					1.2	NO		bd		
64	FUNCTION1 PFK	27.83	1.122e5					2.7	NO		bb		
65	FUNCTION1 PFK	27.72	4.299e4					1.6	NO		db		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	31.66	6.316e4					3.0	NO		bb		0.000
2	FUNCTION2 PFK	31.12	4.750e4					2.6	NO		bb		0.000
3	FUNCTION2 PFK	30.21	6.550e4					2.8	NO		db		0.000
4	FUNCTION2 PFK	30.09	8.966e4					3.0	NO		bd		0.000
5	FUNCTION2 PFK	30.00	5.627e4					2.4	NO		bb		0.000
6	FUNCTION2 PFK	29.91	2.735e3					0.6	NO		bb		0.000
7	FUNCTION2 PFK	29.44	8.263e3					1.0	NO		bb		0.000
8	FUNCTION2 PFK	29.07	2.464e4					1.5	NO		bb		0.000
9	FUNCTION2 PFK	28.47	3.080e4					1.7	NO		bb		0.000
10	FUNCTION2 PFK	28.32	4.342e3					0.9	NO		bb		0.000
11	FUNCTION2 PFK	32.57	1.257e5					4.0	YES		bb		0.000
12	FUNCTION2 PFK	32.13	2.752e4					2.0	NO		bb		0.000
13	FUNCTION2 PFK	32.01	2.357e4					1.8	NO		bb		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.06	9.678e4					2.3	NO		dd		0.000
2	FUNCTION3 PFK	33.94	1.098e5					3.0	NO		dd		0.000
3	FUNCTION3 PFK	33.80	9.958e4					2.3	NO		dd		0.000
4	FUNCTION3 PFK	33.71	5.363e4					3.0	YES		dd		0.000
5	FUNCTION3 PFK	33.69	4.835e4					3.0	YES		dd		0.000
6	FUNCTION3 PFK	33.60	3.113e4					1.6	NO		dd		0.000
7	FUNCTION3 PFK	33.55	4.434e4					2.0	NO		dd		0.000
8	FUNCTION3 PFK	33.48	1.003e5					3.1	YES		dd		0.000
9	FUNCTION3 PFK	33.36	1.251e5					3.0	NO		dd		0.000
10	FUNCTION3 PFK	33.26	7.237e4					3.0	NO		dd		0.000
11	FUNCTION3 PFK	33.15	7.142e4					2.0	NO		dd		0.000
12	FUNCTION3 PFK	33.11	1.812e4					1.7	NO		bd		0.000
13	FUNCTION3 PFK	35.63	5.895e4					1.9	NO		dd		0.000
14	FUNCTION3 PFK	35.57	1.625e4					1.2	NO		dd		0.000
15	FUNCTION3 PFK	35.53	4.174e4					2.1	NO		dd		0.000
16	FUNCTION3 PFK	35.42	1.497e5					3.1	YES		dd		0.000
17	FUNCTION3 PFK	35.29	4.227e4					1.6	NO		bd		0.000
18	FUNCTION3 PFK	35.16	5.068e4					1.5	NO		bb		0.000
19	FUNCTION3 PFK	34.95	7.042e4					2.6	NO		bb		0.000
20	FUNCTION3 PFK	34.84	4.356e4					1.7	NO		bb		0.000
21	FUNCTION3 PFK	34.72	1.799e4					1.1	NO		db		0.000
22	FUNCTION3 PFK	34.66	1.508e4					1.0	NO		dd		0.000
23	FUNCTION3 PFK	34.62	6.345e4					2.3	NO		dd		0.000
24	FUNCTION3 PFK	34.48	8.062e4					2.1	NO		bd		0.000
25	FUNCTION3 PFK	34.39	3.593e4					1.9	NO		db		0.000
26	FUNCTION3 PFK	34.35	4.107e4					2.0	NO		dd		0.000
27	FUNCTION3 PFK	34.26	7.005e4					2.7	NO		dd		0.000
28	FUNCTION3 PFK	34.14	9.694e4					2.6	NO		dd		0.000
29	FUNCTION3 PFK	37.00	8.986e4					2.4	NO		dd		0.000
30	FUNCTION3 PFK	36.89	3.285e4					1.8	NO		dd		0.000
31	FUNCTION3 PFK	36.86	3.245e4					1.7	NO		bd		0.000
32	FUNCTION3 PFK	36.76	7.378e4					2.3	NO		db		0.000
33	FUNCTION3 PFK	36.67	6.718e4					2.2	NO		dd		0.000
34	FUNCTION3 PFK	36.61	1.917e4					1.4	NO		dd		0.000
35	FUNCTION3 PFK	36.54	7.657e4					2.8	NO		bd		0.000
36	FUNCTION3 PFK	36.43	4.813e4					2.1	NO		db		0.000
37	FUNCTION3 PFK	36.32	3.388e4					1.2	NO		bd		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION3 PFK	36.21	3.514e4					1.7	NO		bb		0.000
39	FUNCTION3 PFK	36.11	1.776e4					1.1	NO		bb		0.000
40	FUNCTION3 PFK	35.99	1.305e4					0.8	NO		db		0.000
41	FUNCTION3 PFK	35.95	2.007e4					1.0	NO		dd		0.000
42	FUNCTION3 PFK	35.87	3.599e4					2.4	NO		dd		0.000
43	FUNCTION3 PFK	35.83	4.321e4					2.3	NO		bd		0.000
44	FUNCTION3 PFK	35.73	3.526e4					1.6	NO		db		0.000
45	FUNCTION3 PFK	37.97	3.008e3					0.2	NO		bb		0.000
46	FUNCTION3 PFK	37.89	2.803e4					1.2	NO		bb		0.000
47	FUNCTION3 PFK	37.64	2.797e4					1.2	NO		bb		0.000
48	FUNCTION3 PFK	37.55	3.749e4					1.7	NO		db		0.000
49	FUNCTION3 PFK	37.45	4.656e4					1.6	NO		bd		0.000
50	FUNCTION3 PFK	37.31	7.541e4					2.1	NO		db		0.000
51	FUNCTION3 PFK	37.23	5.849e4					2.3	NO		dd		0.000
52	FUNCTION3 PFK	37.18	4.994e4					2.1	NO		dd		0.000
53	FUNCTION3 PFK	37.10	1.438e5					3.8	YES		dd		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.91	2.798e4					1.6	NO		bb		
2	FUNCTION4 PFK	38.80	3.891e4					2.4	NO		bb		
3	FUNCTION4 PFK	38.34	3.049e4					2.2	NO		db		
4	FUNCTION4 PFK	38.27	6.095e4					1.8	NO		dd		
5	FUNCTION4 PFK	38.12	6.072e4					2.8	NO		dd		
6	FUNCTION4 PFK	38.10	2.191e4					2.2	NO		bd		
7	FUNCTION4 PFK	41.63	3.107e4					1.8	NO		bb		
8	FUNCTION4 PFK	41.52	2.043e3					0.5	NO		bb		
9	FUNCTION4 PFK	41.35	1.183e4					1.4	NO		bb		
10	FUNCTION4 PFK	41.27	2.677e4					2.0	NO		bb		
11	FUNCTION4 PFK	41.13	3.107e4					1.4	NO		bb		
12	FUNCTION4 PFK	40.93	2.873e4					1.6	NO		bb		
13	FUNCTION4 PFK	40.83	2.839e4					1.5	NO		bb		
14	FUNCTION4 PFK	40.68	4.888e3					0.7	NO		bb		
15	FUNCTION4 PFK	40.60	3.165e4					1.9	NO		bb		
16	FUNCTION4 PFK	40.37	3.782e4					2.0	NO		bb		
17	FUNCTION4 PFK	40.26	3.460e4					1.9	NO		bb		
18	FUNCTION4 PFK	39.92	1.473e4					0.9	NO		bb		
19	FUNCTION4 PFK	39.59	3.318e4					1.8	NO		db		
20	FUNCTION4 PFK	39.55	1.092e4					1.3	NO		bd		
21	FUNCTION4 PFK	39.35	3.518e4					2.0	NO		bb		
22	FUNCTION4 PFK	39.13	2.982e4					2.0	NO		bb		
23	FUNCTION4 PFK	43.21	6.233e4					2.2	NO		db		
24	FUNCTION4 PFK	43.09	2.140e4					1.4	NO		dd		
25	FUNCTION4 PFK	43.03	9.429e3					0.9	NO		bd		
26	FUNCTION4 PFK	42.97	1.968e4					1.8	NO		db		
27	FUNCTION4 PFK	42.95	1.868e4					1.5	NO		bd		
28	FUNCTION4 PFK	42.75	4.345e4					2.2	NO		bb		
29	FUNCTION4 PFK	42.62	7.794e4					2.8	NO		bb		
30	FUNCTION4 PFK	42.52	2.754e4					1.8	NO		bb		
31	FUNCTION4 PFK	42.28	5.297e4					1.9	NO		bb		
32	FUNCTION4 PFK	42.06	2.431e4					1.5	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.75	1.303e2					4.4	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	21.32	1.091e2					1.9	NO		db		0.000
2	FUNCTION1 HPCD...	21.27	7.014e1					1.4	NO		bd		0.000
3	FUNCTION1 HPCD...	27.36	7.971e1					1.1	NO		db		0.000
4	FUNCTION1 HPCD...	27.25	7.370e1					1.0	NO		bd		0.000
5	FUNCTION1 HPCD...	26.80	1.007e2					1.2	NO		bb		0.000
6	FUNCTION1 HPCD...	26.65	9.530e1					1.6	NO		bb		0.000
7	FUNCTION1 HPCD...	24.85	2.022e2					2.9	NO		db		0.000
8	FUNCTION1 HPCD...	24.79	9.095e1					1.4	NO		bd		0.000
9	FUNCTION1 HPCD...	24.61	7.723e1					1.5	NO		bb		0.000
10	FUNCTION1 HPCD...	24.34	1.055e2					1.4	NO		bb		0.000
11	FUNCTION1 HPCD...	24.14	1.154e2					1.4	NO		bb		0.000
12	FUNCTION1 HPCD...	22.81	1.122e2					1.8	NO		bb		0.000
13	FUNCTION1 HPCD...	22.68	1.452e2					2.2	NO		bb		0.000
14	FUNCTION1 HPCD...	21.90	1.284e2					1.0	NO		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	30.91	7.070e1					1.2	NO		bb		0.000
2	FUNCTION2 HPCD...	29.94	9.172e1					2.6	NO		bb		0.000
3	FUNCTION2 HPCD...	29.50	7.363e1					1.2	NO		bb		0.000
4	FUNCTION2 HPCD...	32.69	8.864e1					1.9	NO		db		0.000
5	FUNCTION2 HPCD...	32.61	1.543e2					2.3	NO		bd		0.000
6	FUNCTION2 HPCD...	32.42	7.631e1					2.4	NO		bb		0.000
7	FUNCTION2 HPCD...	32.18	1.273e2					1.5	NO		bb		0.000
8	FUNCTION2 HPCD...	31.76	1.148e2					2.1	NO		bb		0.000
9	FUNCTION2 HPCD...	31.13	8.891e1					1.7	NO		bb		0.000

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ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	37.50	1.064e2					4.3	YES		db		0.000
2	FUNCTION3 OCDPE	37.39	7.534e1					3.0	YES		bd		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	38.85	7.923e1					3.3	YES		bb		0.000
2	FUNCTION4 NCDPE	38.51	8.736e1					1.8	NO		bb		0.000
3	FUNCTION4 NCDPE	38.37	7.134e1					1.9	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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Printed: Tuesday, November 24, 2020 10:01:13 Pacific Standard Time

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ID: CS3S2, Name: 20112311, Date: 23-Nov-2020, Time: 17:57:07, Conditions: AUTOSPEC01, User: pk

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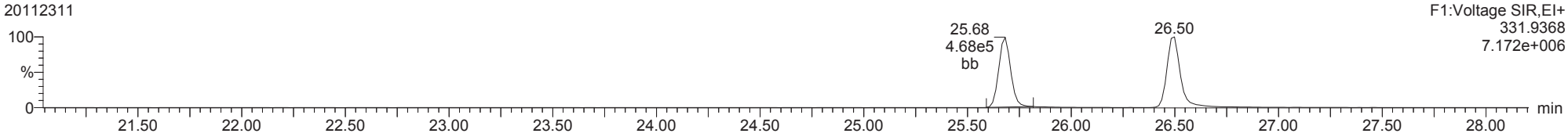

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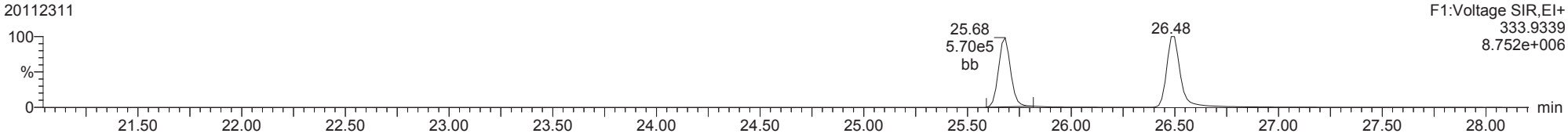

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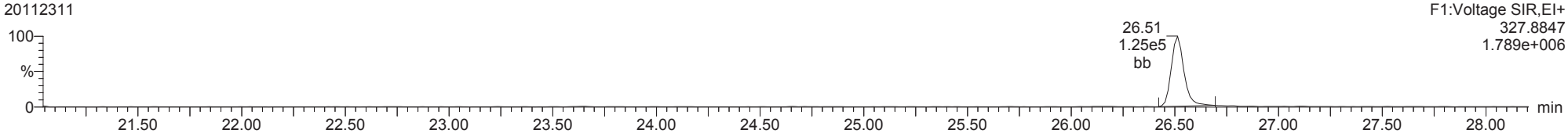

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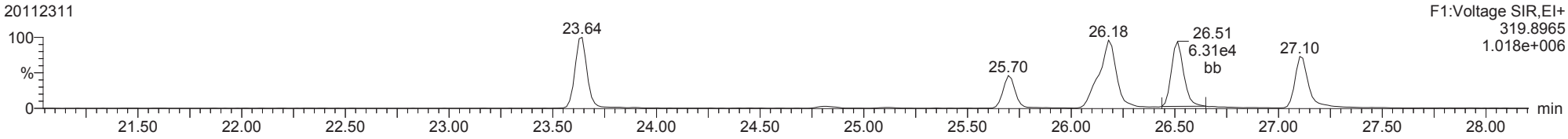
2378-TCDD



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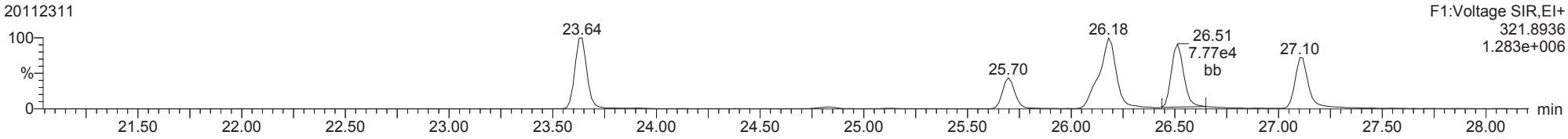

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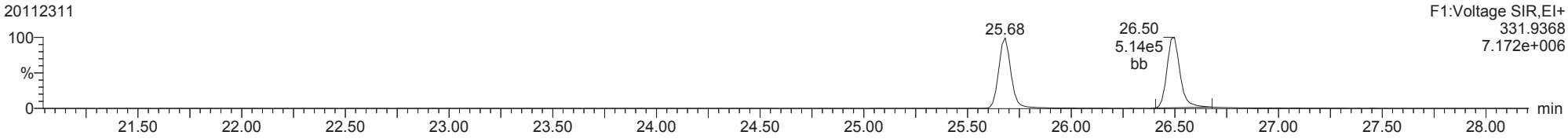

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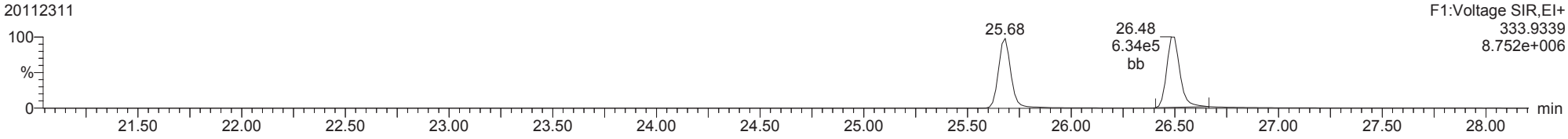

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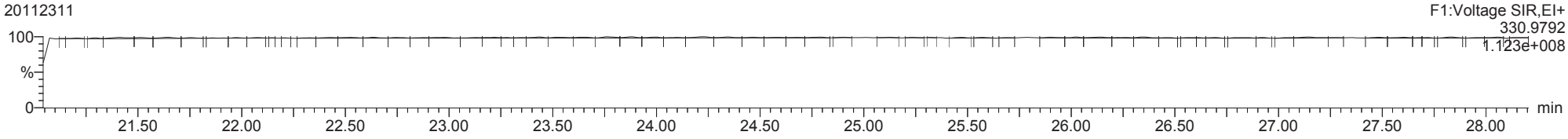

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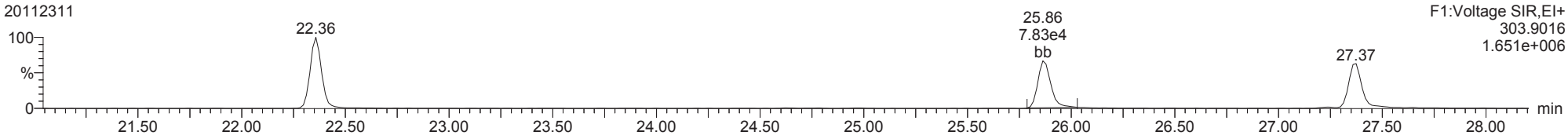
2378-TCDF



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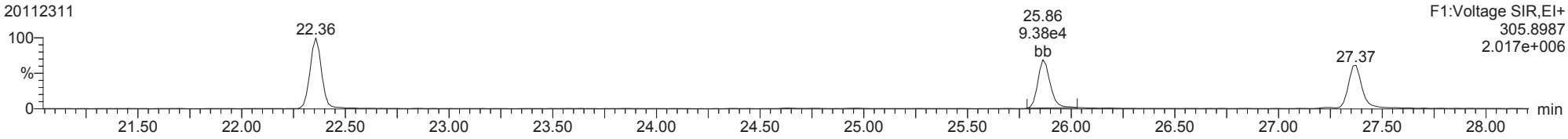

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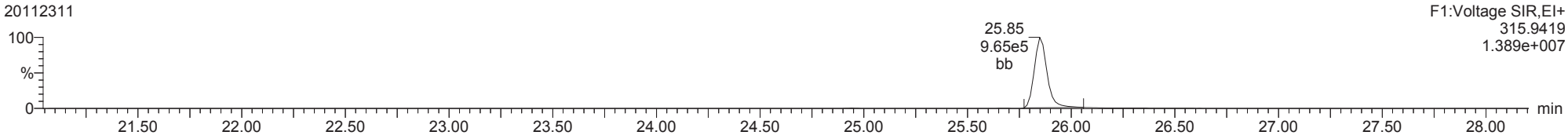

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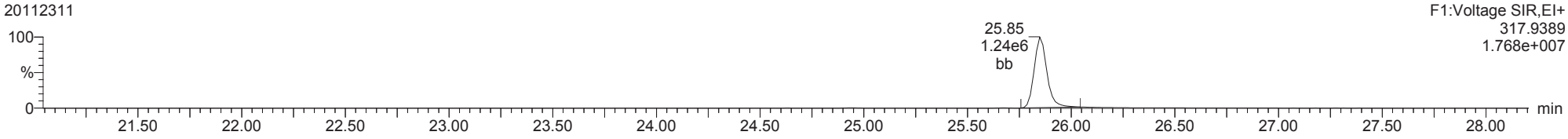

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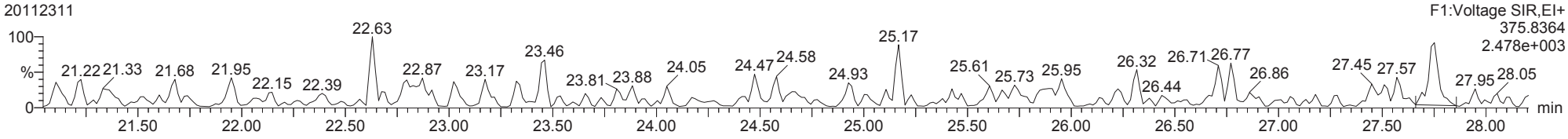

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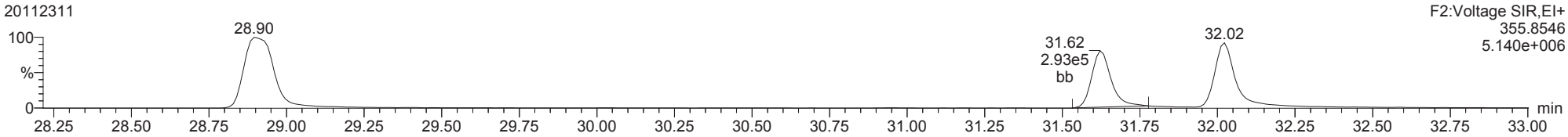

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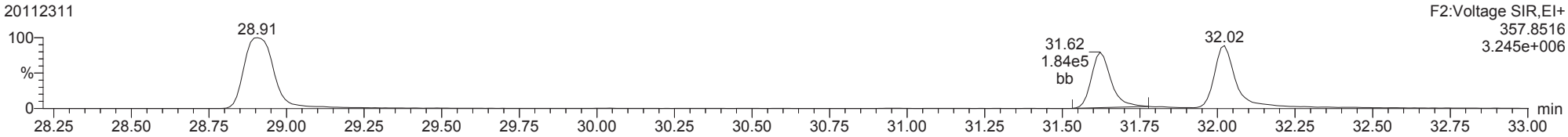

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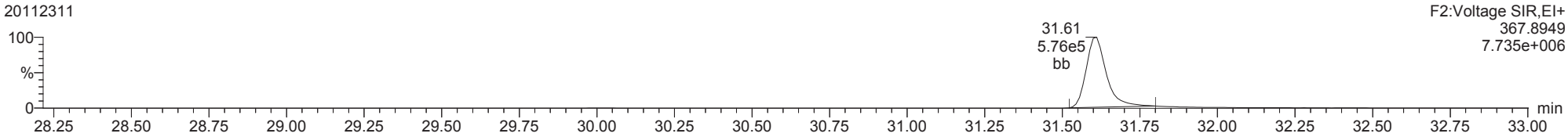

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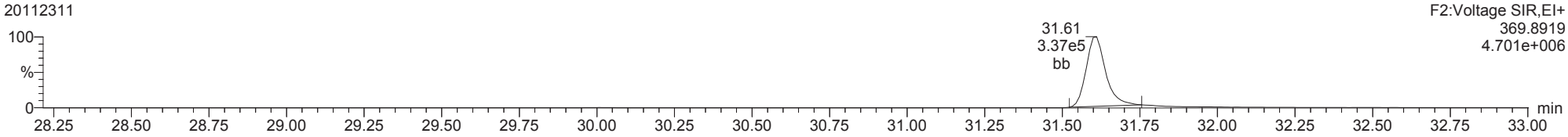

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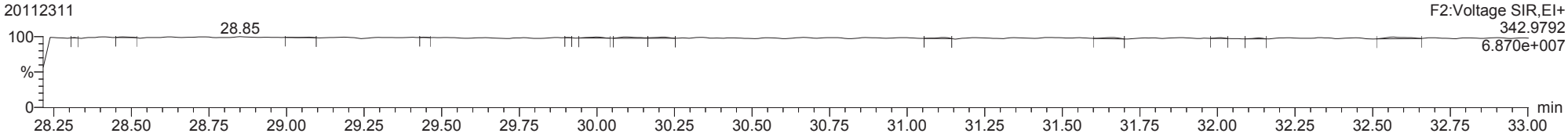

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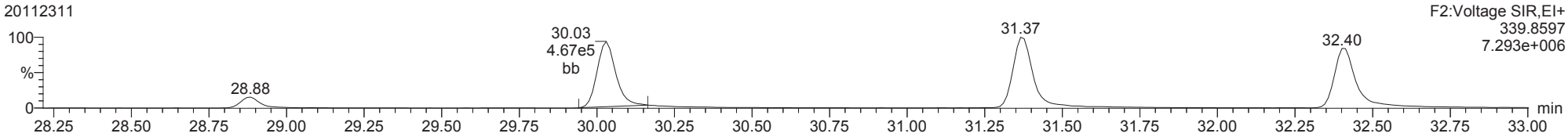
12378-PeCDF



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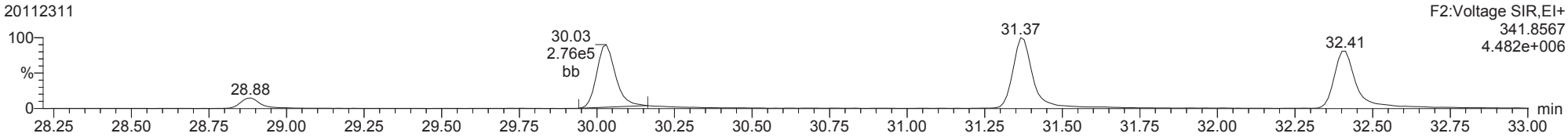

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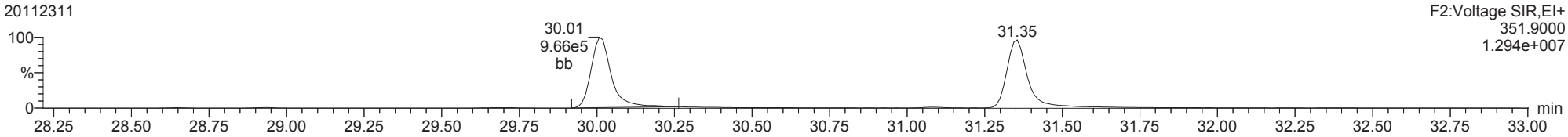

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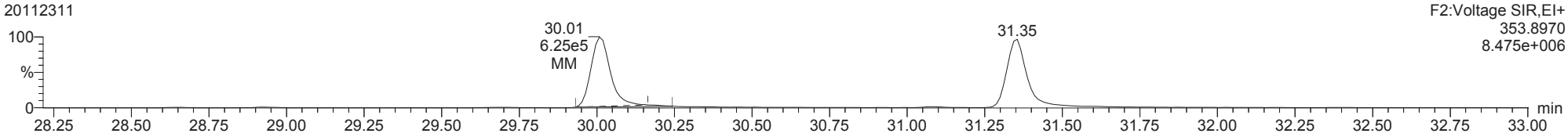

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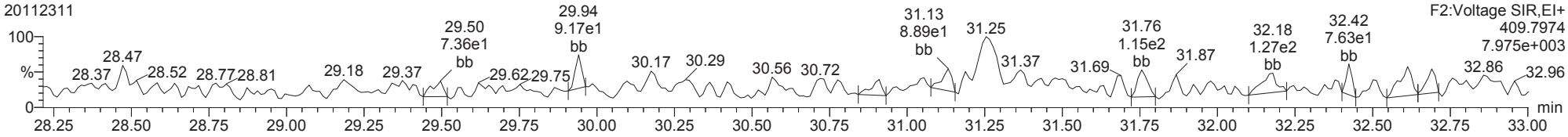

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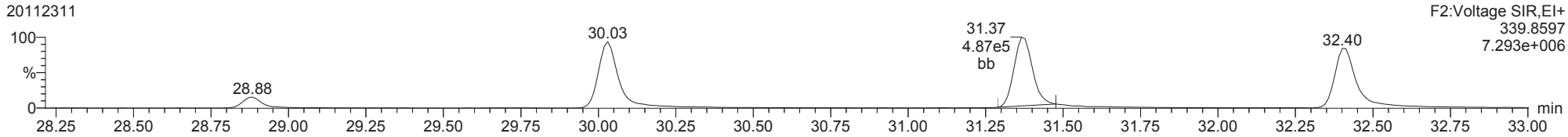

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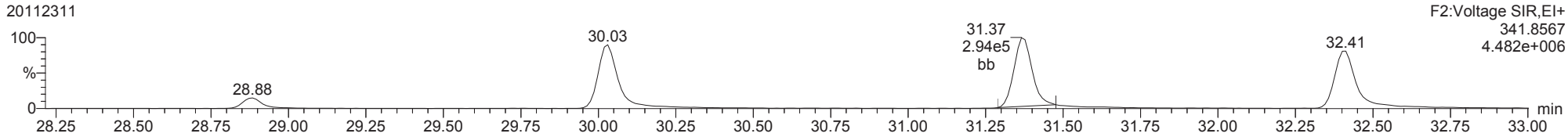

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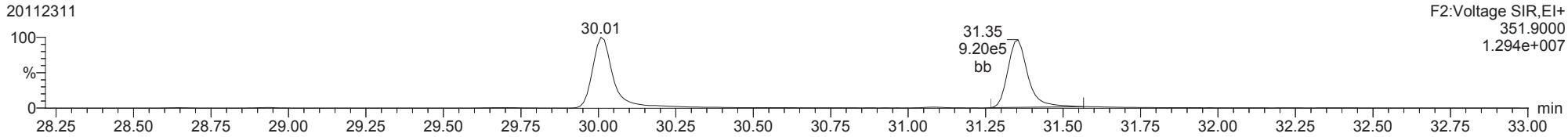

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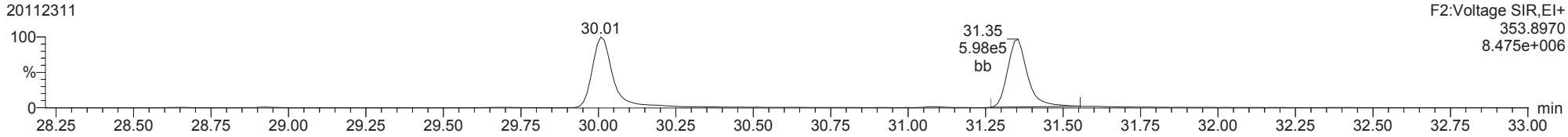

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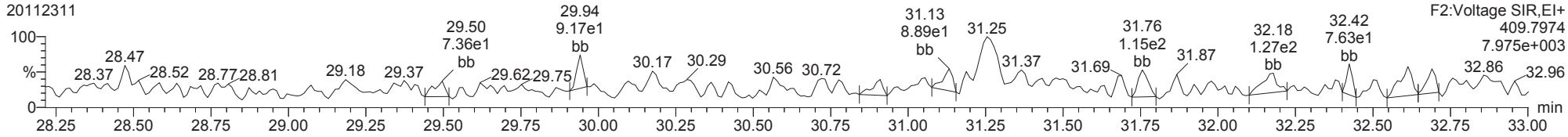

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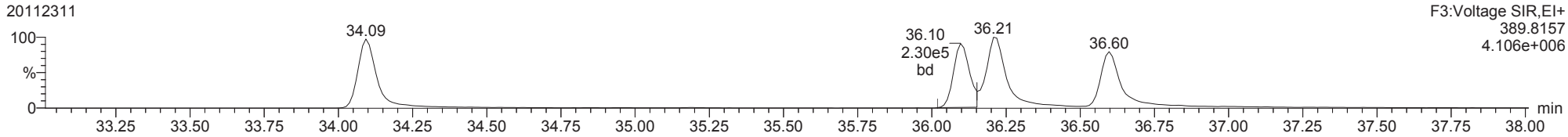

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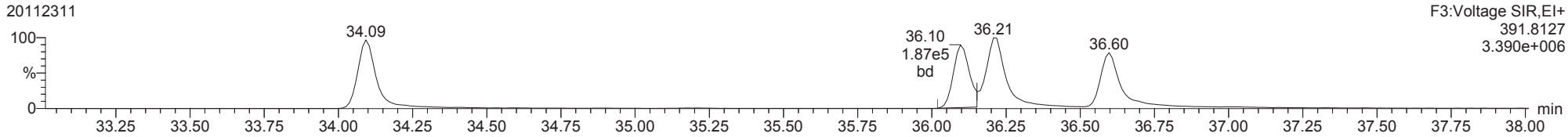

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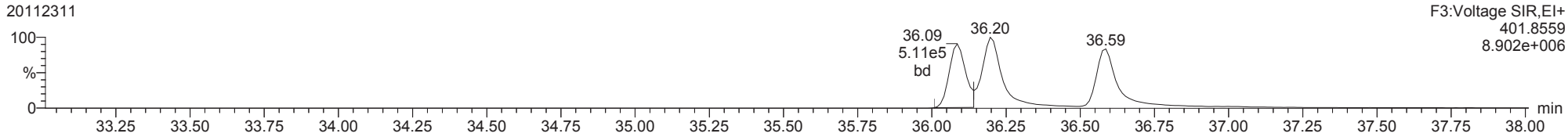

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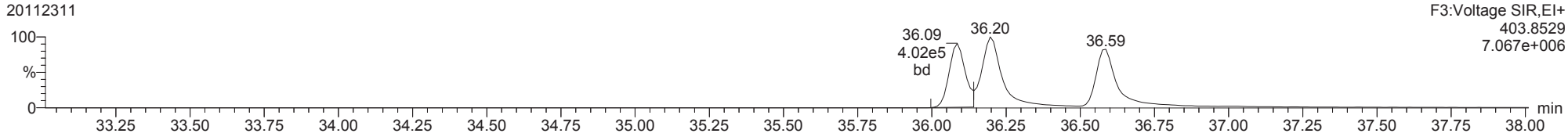

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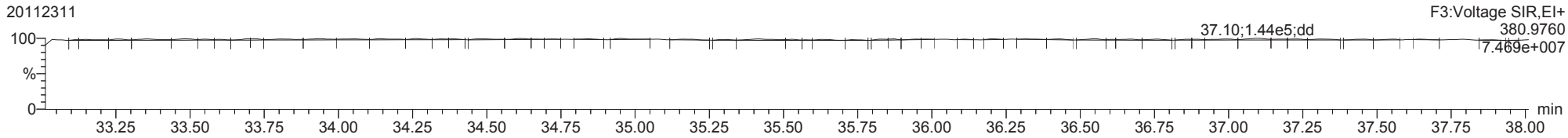

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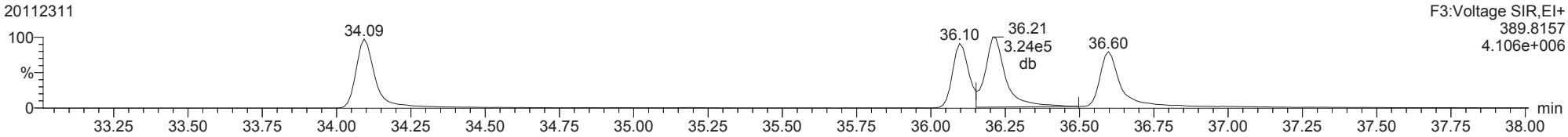

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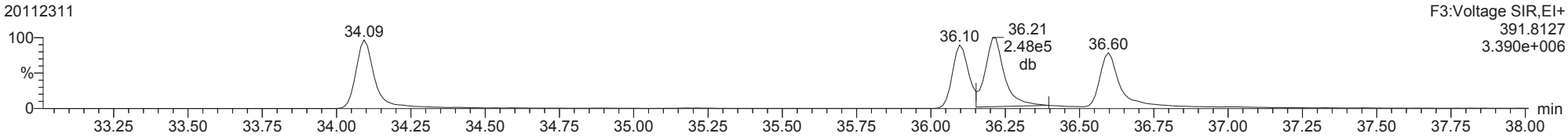

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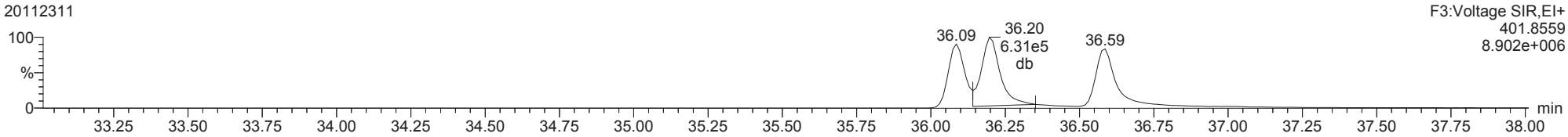

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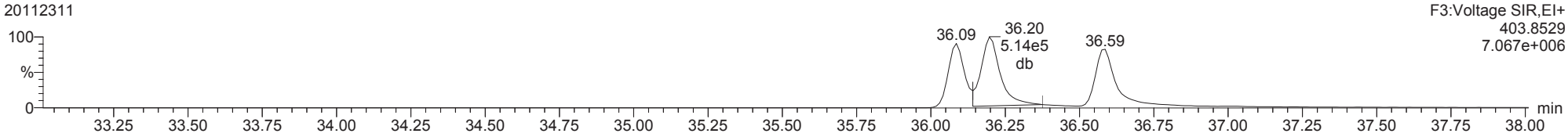

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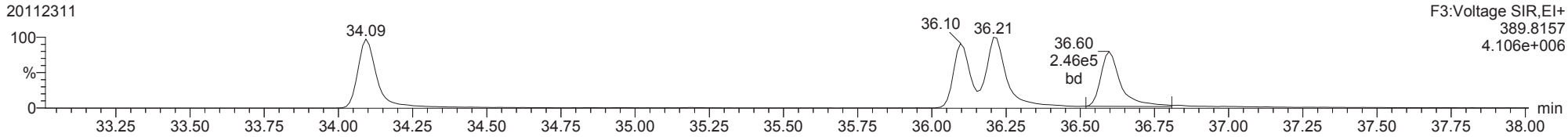

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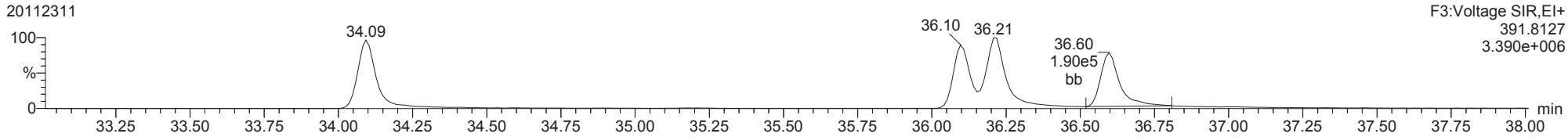

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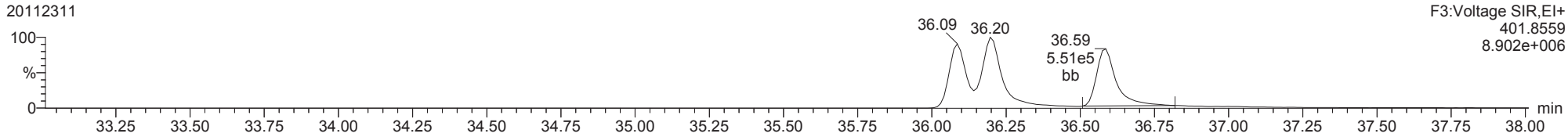

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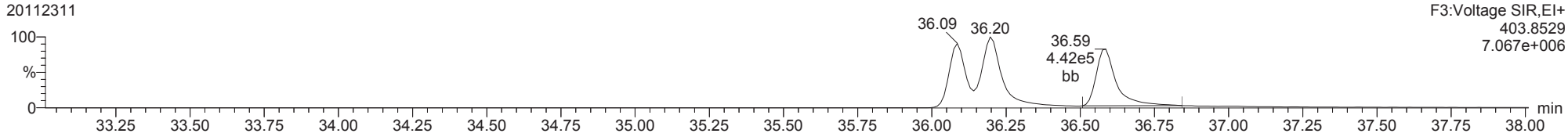

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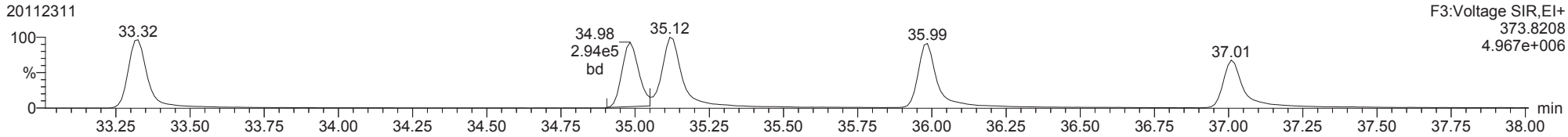

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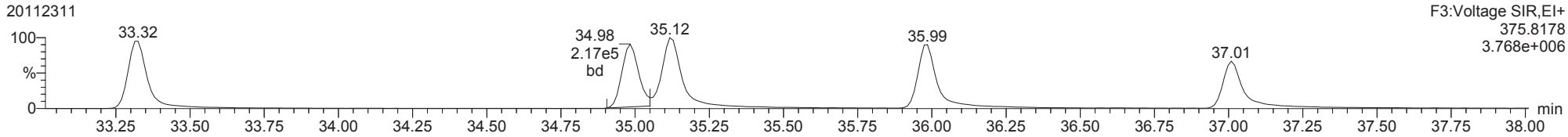

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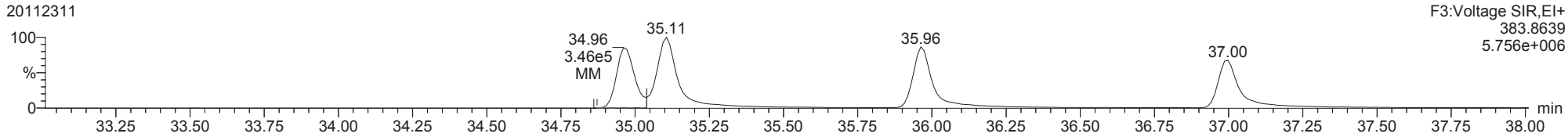

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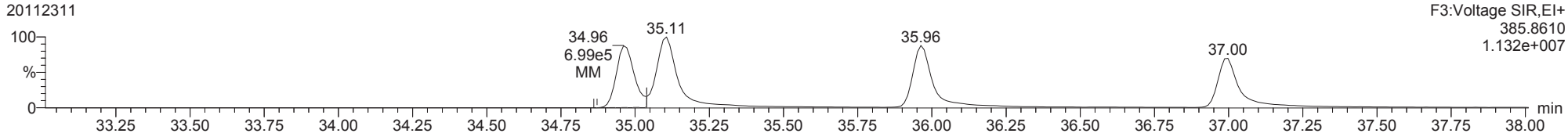

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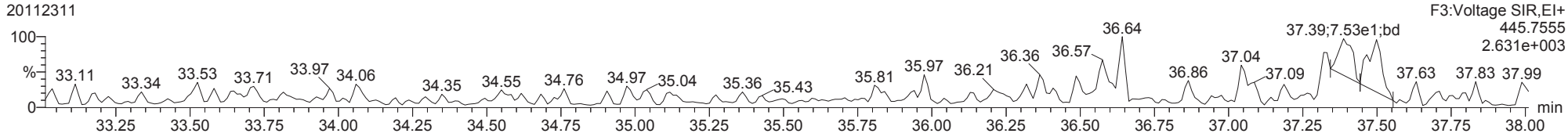

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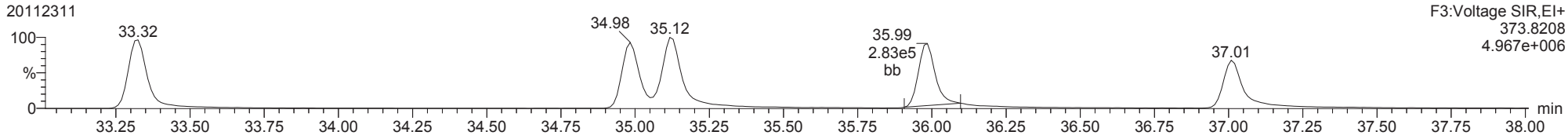
234678-HxCDF



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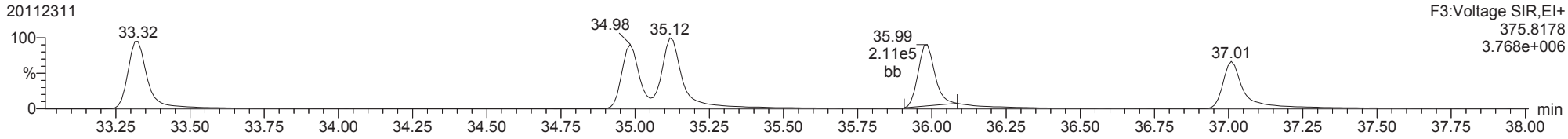

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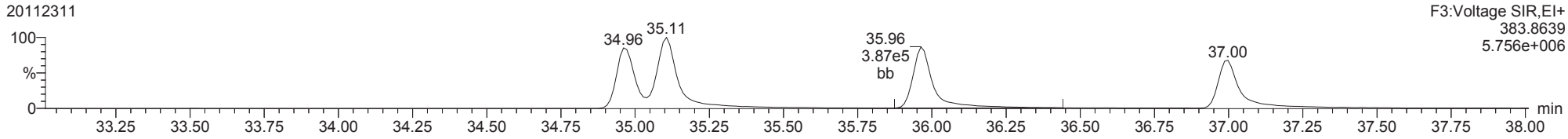

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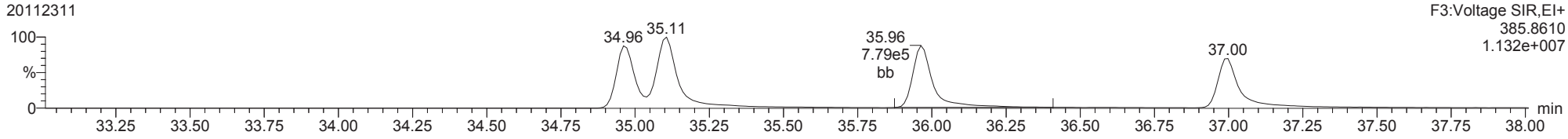

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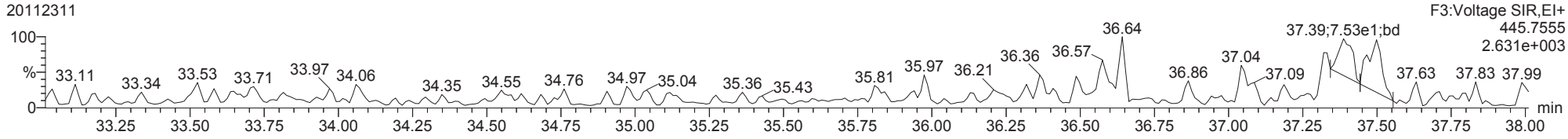

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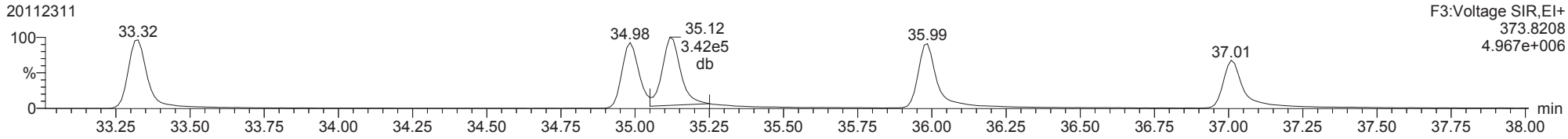

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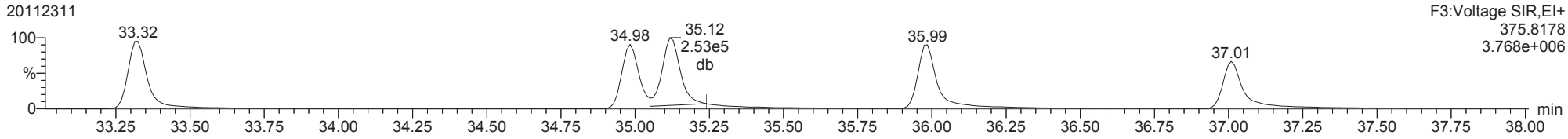

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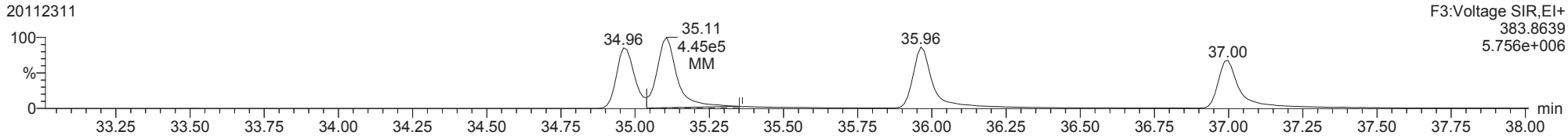

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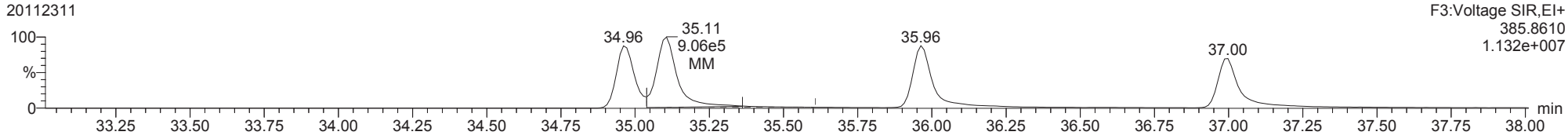

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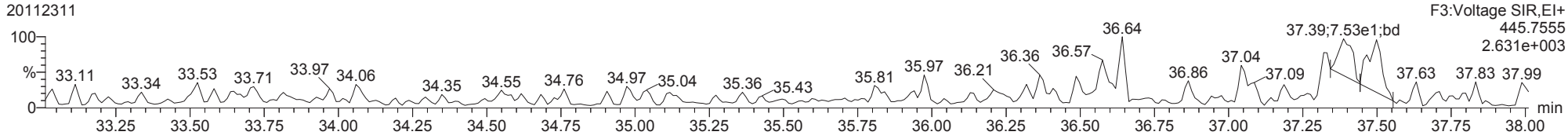

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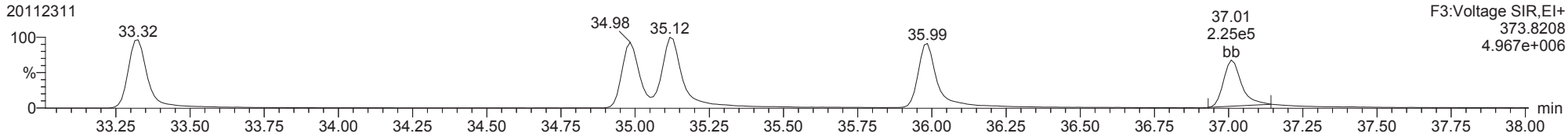

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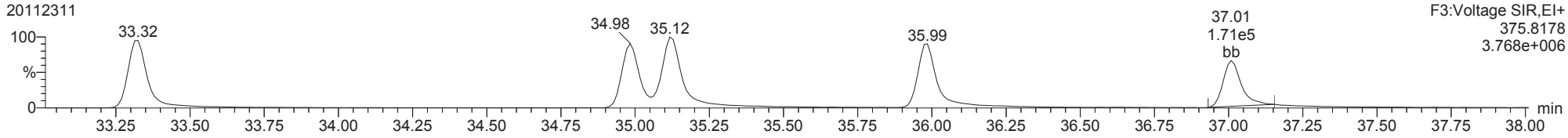

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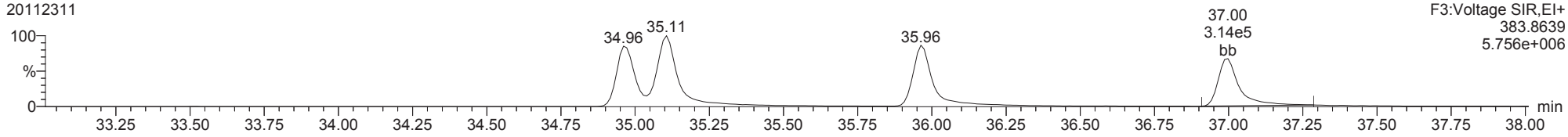

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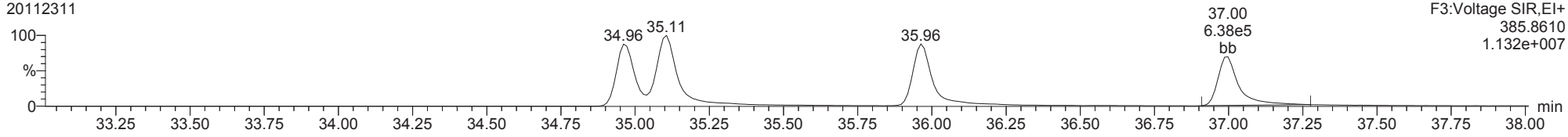
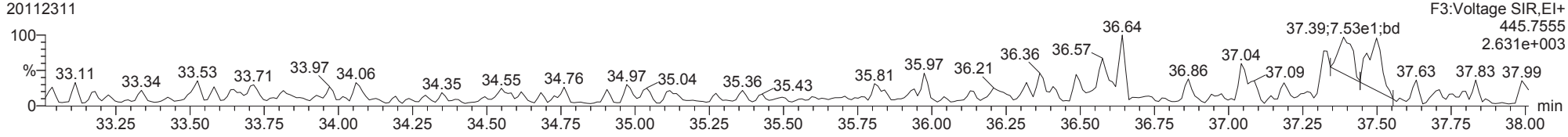


FUNCTION3 OCDPE



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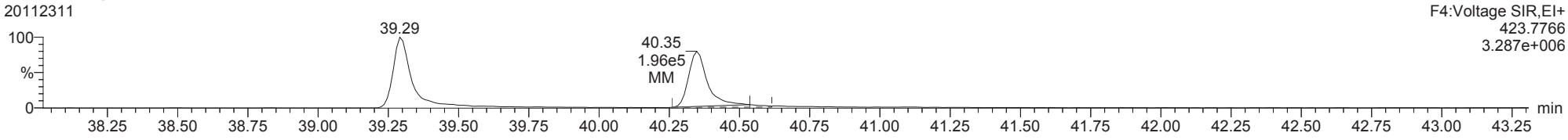
1234678-HpCDD



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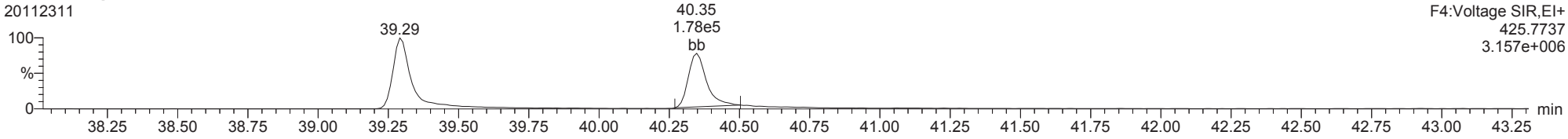

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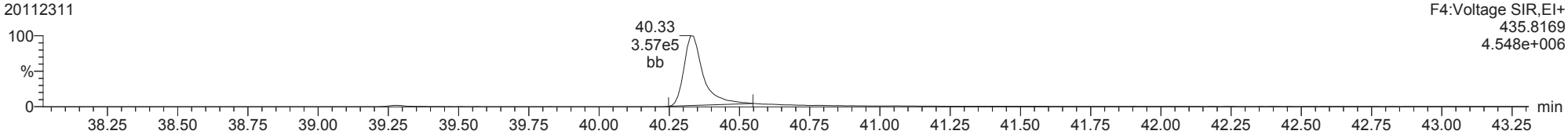

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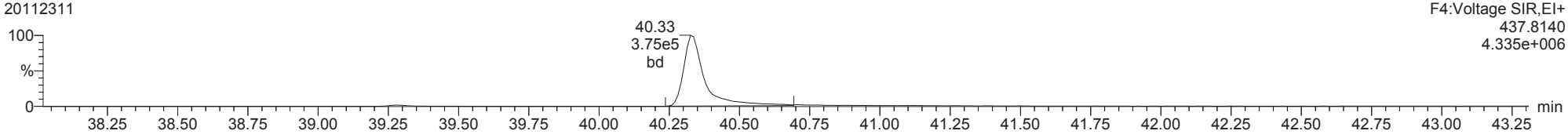
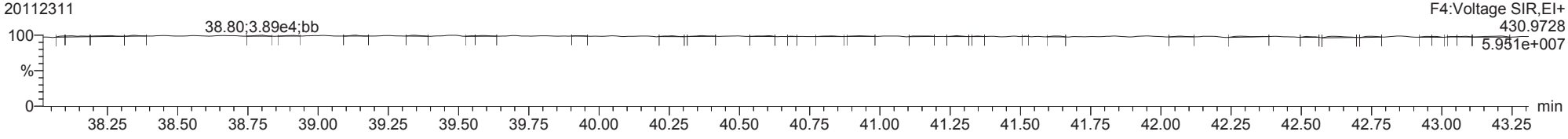


FUNCTION4 PFK



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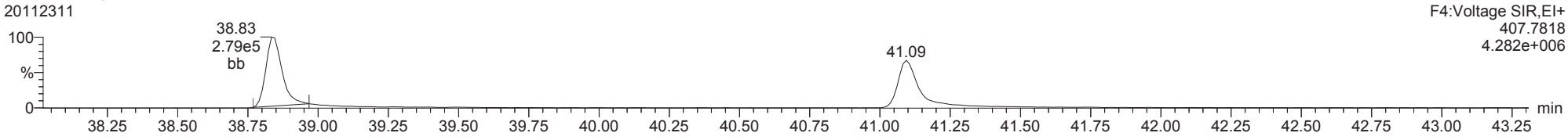
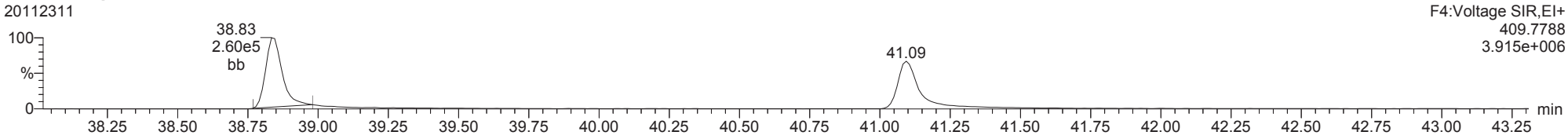


1234678-HpCDF



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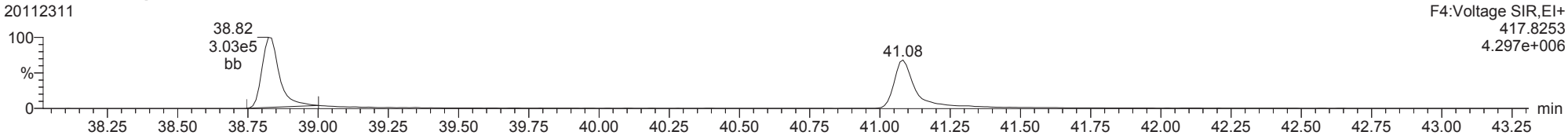

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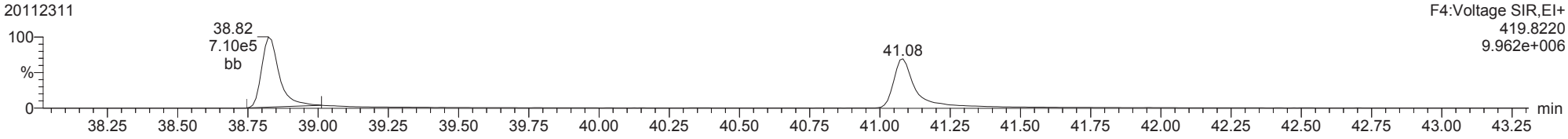

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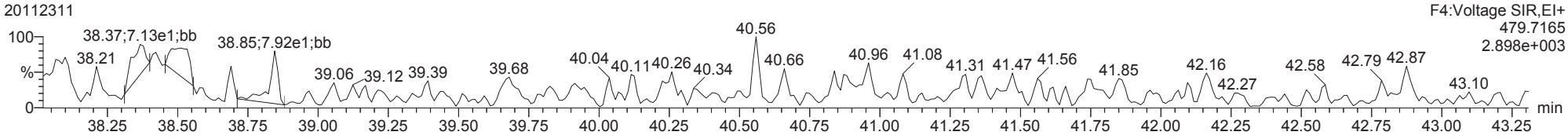

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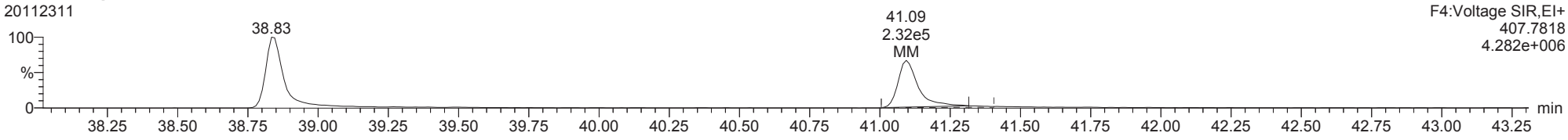
1234789-HpCDF



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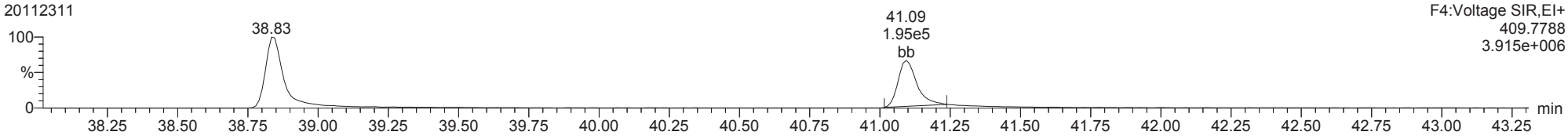

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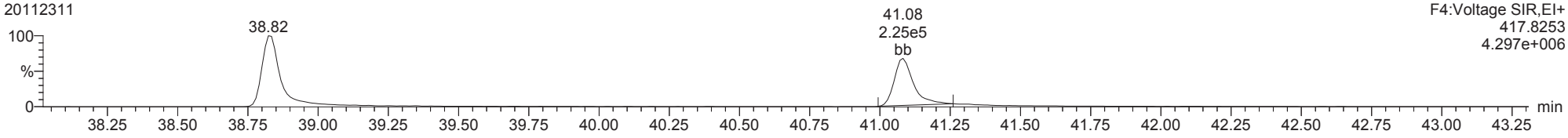

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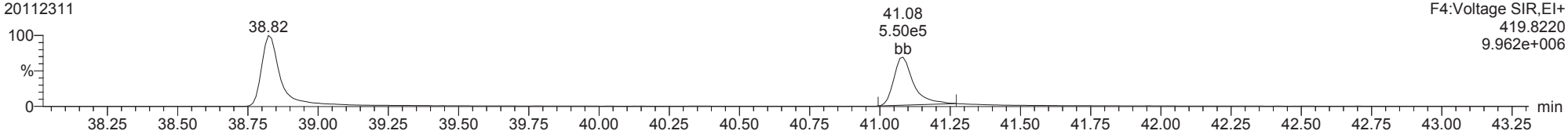
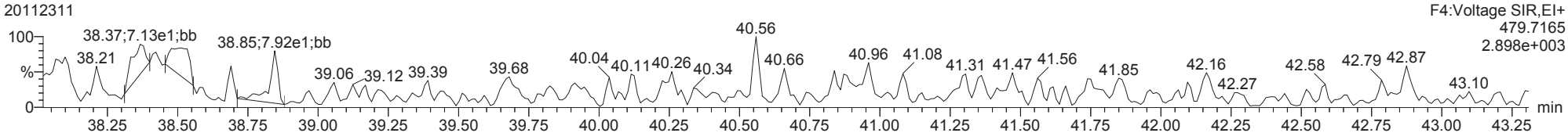


FUNCTION4 NCDPE



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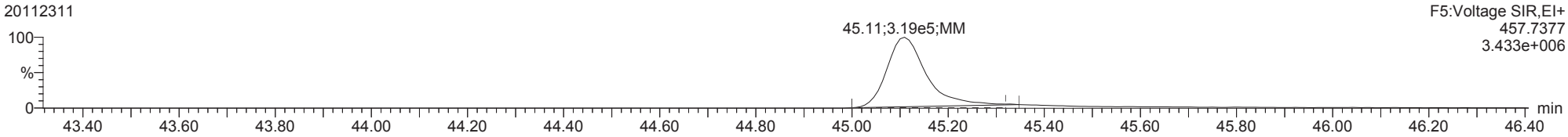
OCDD



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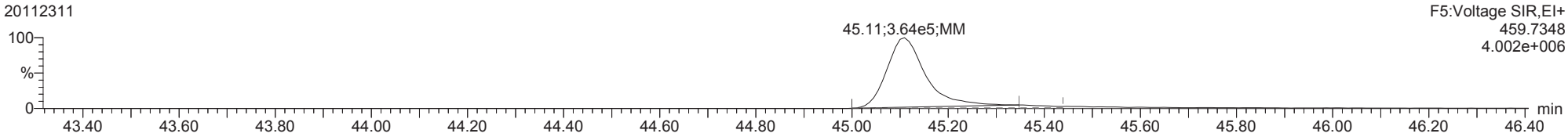

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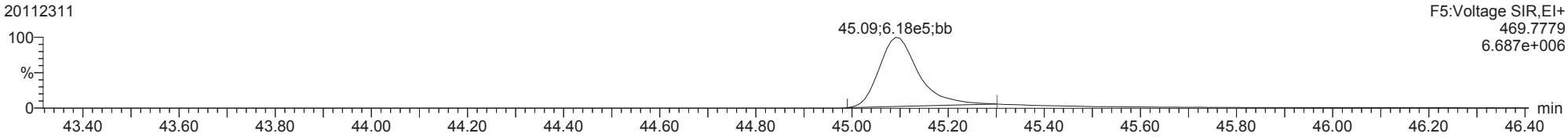

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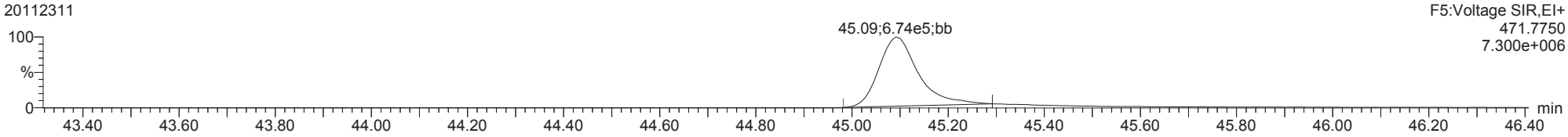
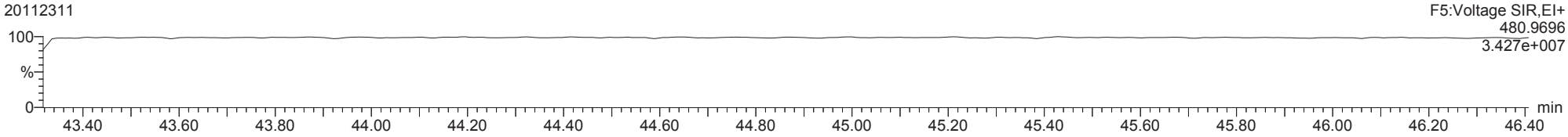


FUNCTION5 PFK



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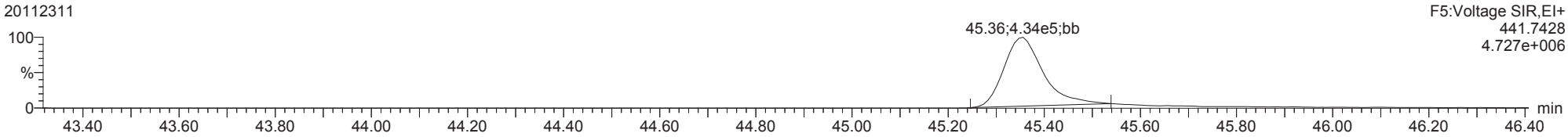

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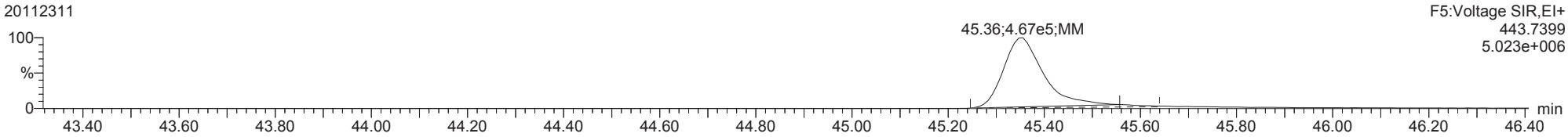
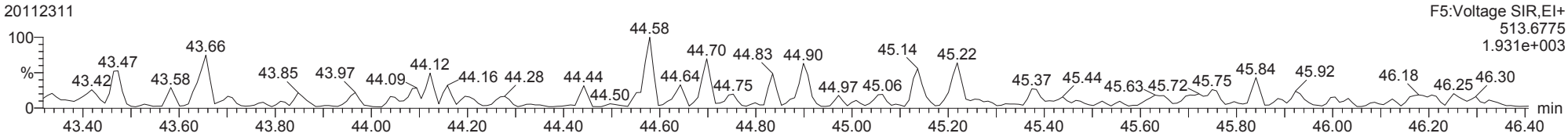


FUNCTION5 DCDPE



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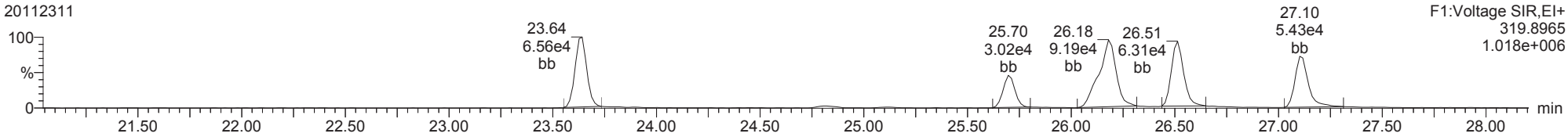
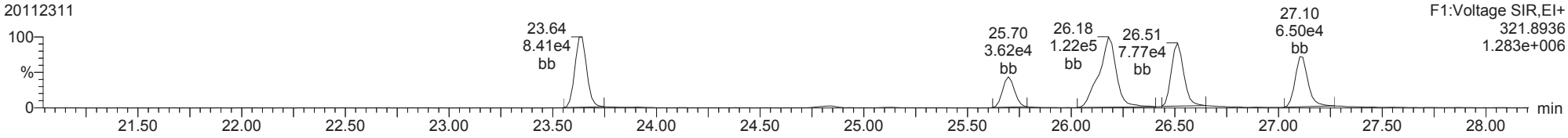
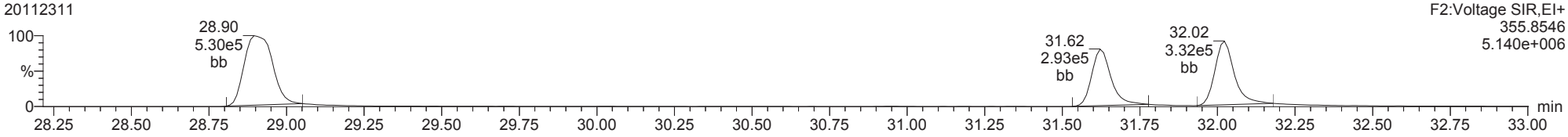
Total-tetradioxins



Total-tetradioxins



Total-pentadioxins



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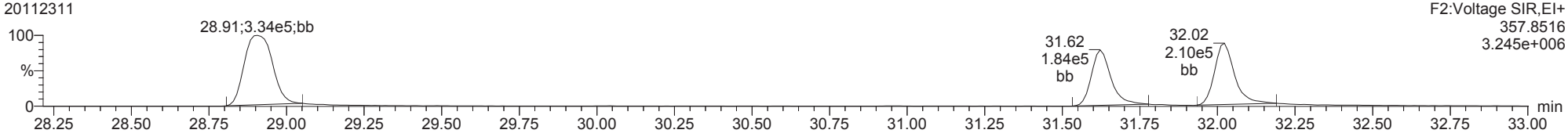

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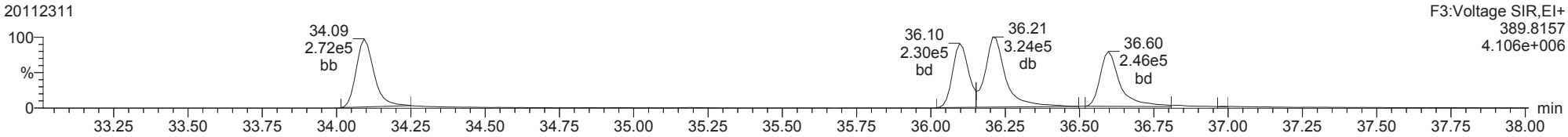

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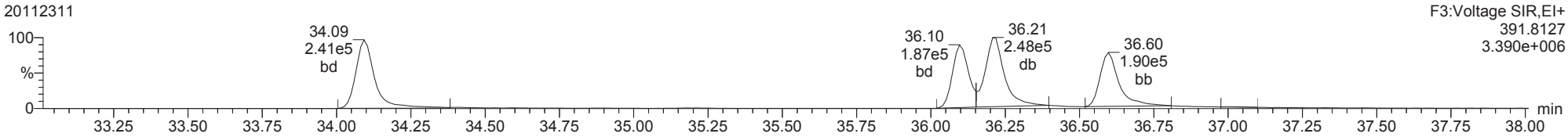

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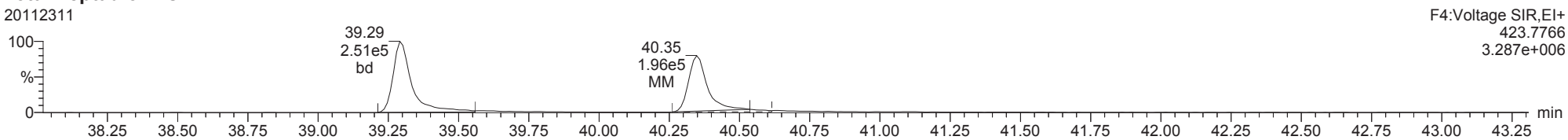

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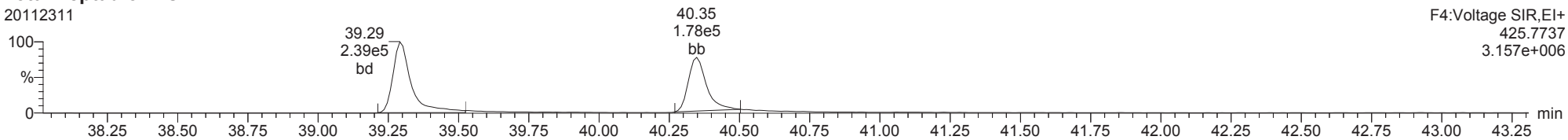

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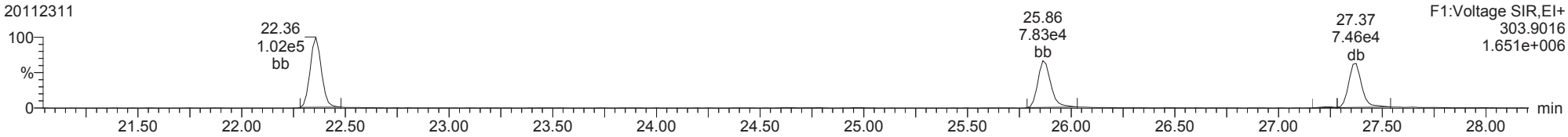
Total-tetrafurans



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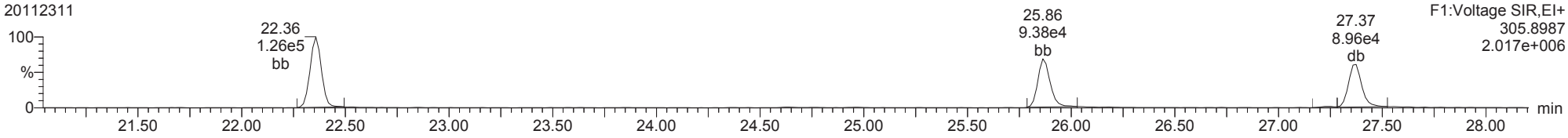

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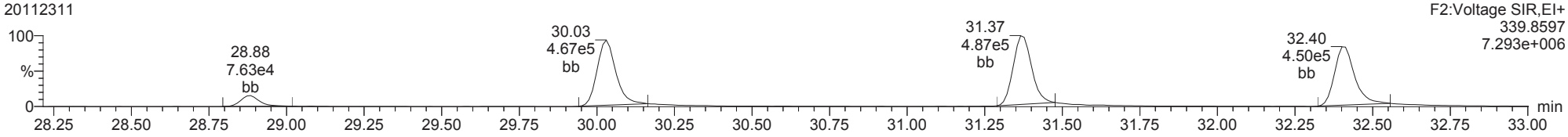

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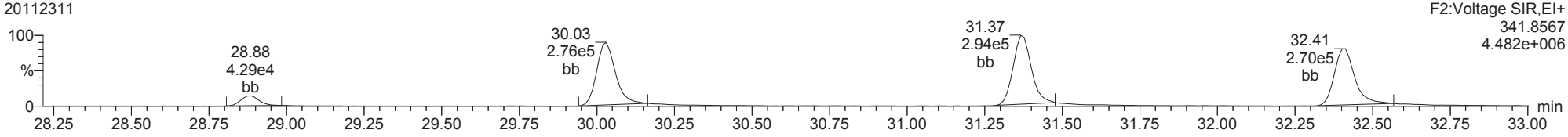

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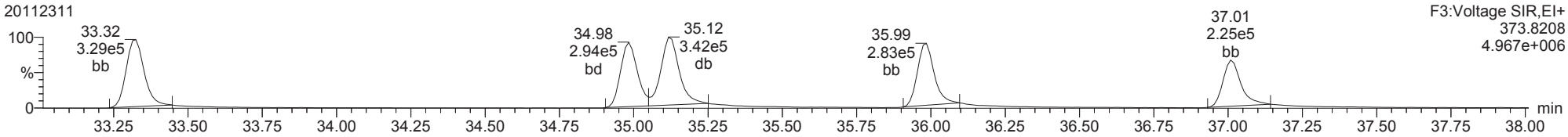

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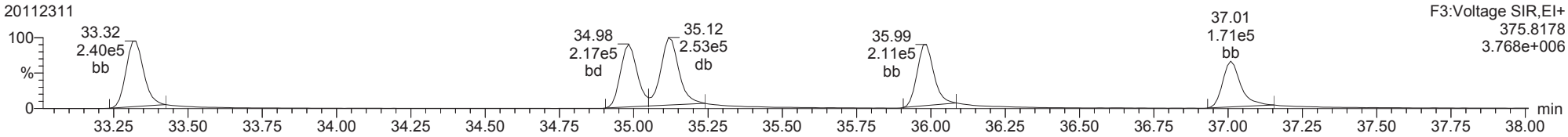

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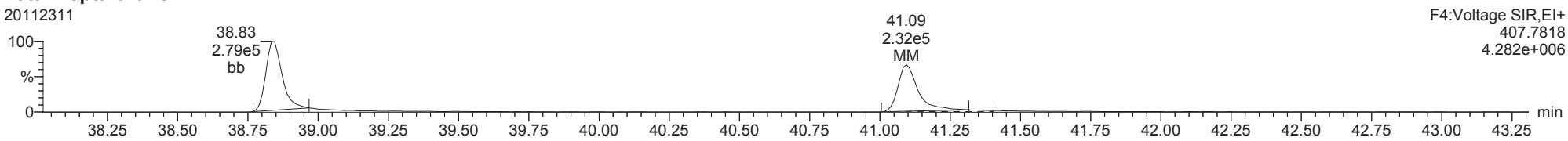

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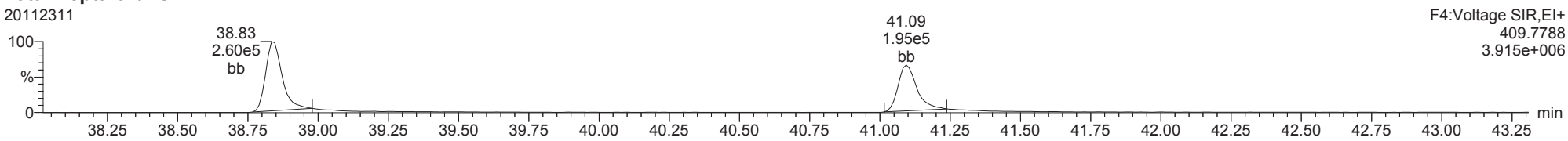

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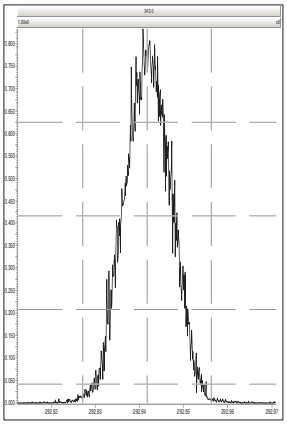
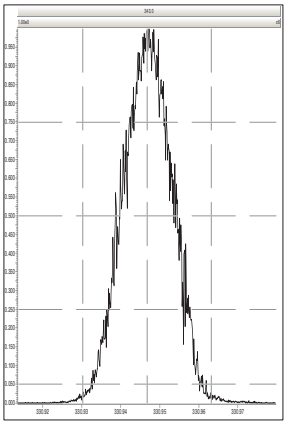
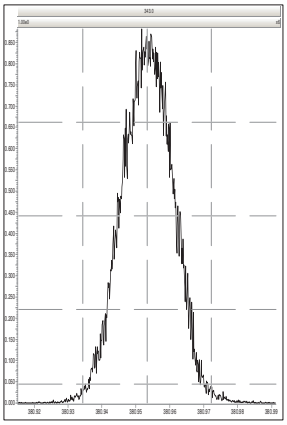
M 292.9824 R 12855



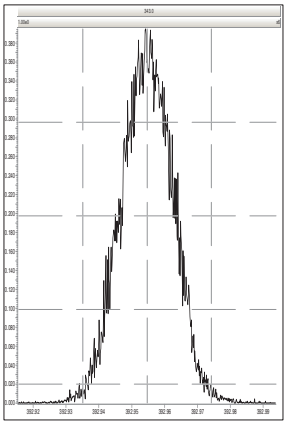
M 330.9792 R 12136



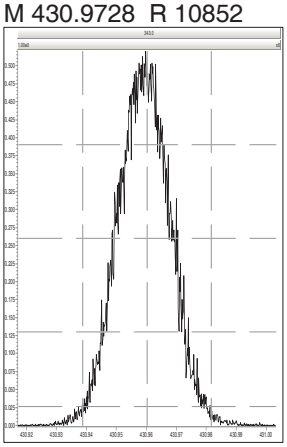
M 380.9760 R 11389



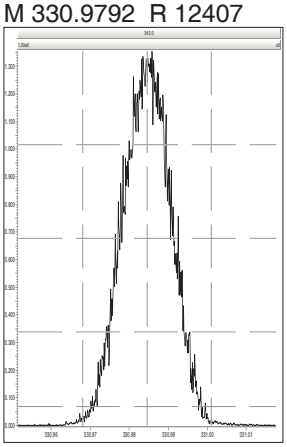
M 392.9760 R 11235



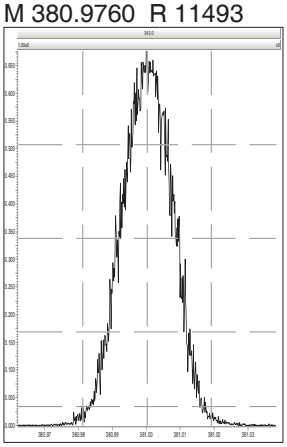
M 430.9728 R 10852



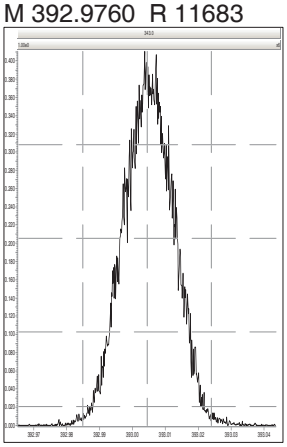
M 330.9792 R 12407



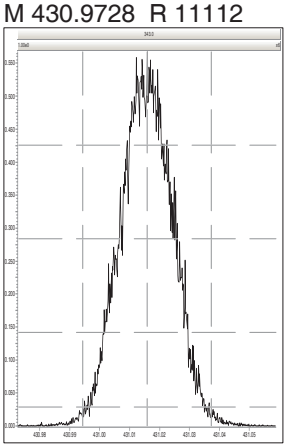
M 380.9760 R 11493



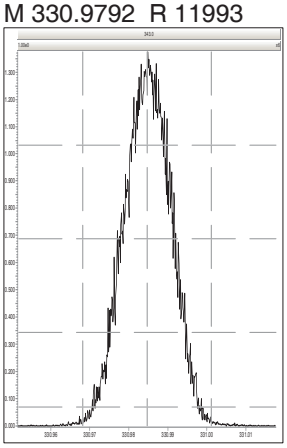
M 392.9760 R 11683



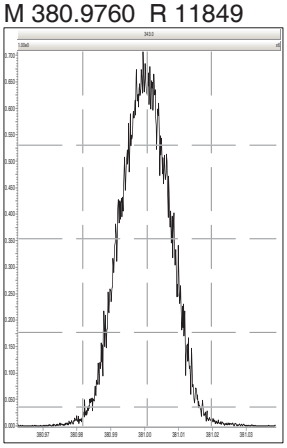
M 430.9728 R 11112



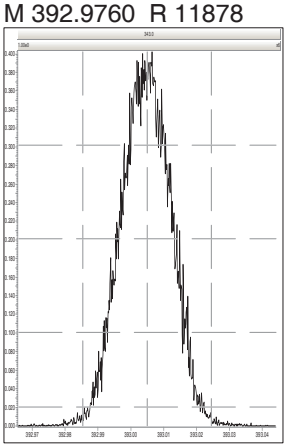
M 330.9792 R 11993



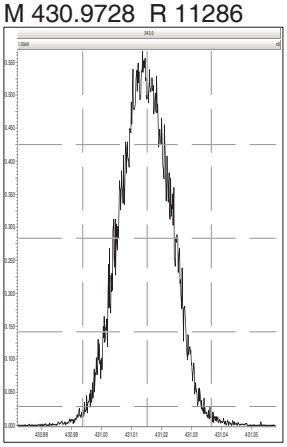
M 380.9760 R 11849



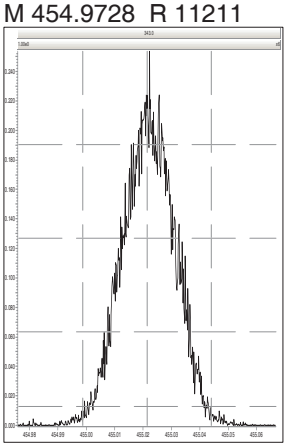
M 392.9760 R 11878



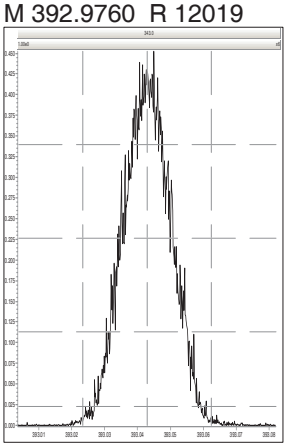
M 430.9728 R 11286



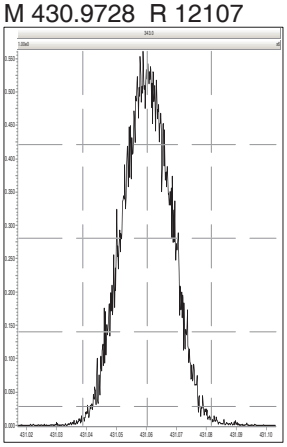
M 454.9728 R 11211



M 392.9760 R 12019



M 430.9728 R 12107



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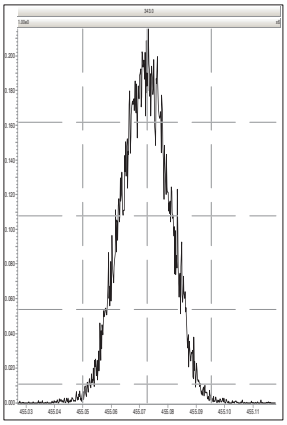
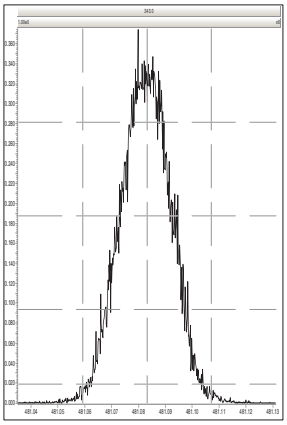
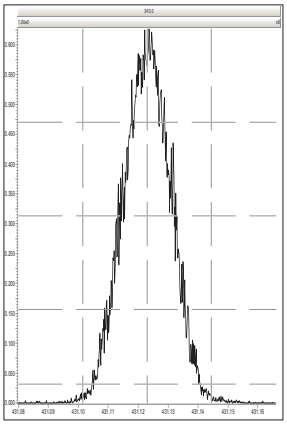
M 454.9728 R 12416



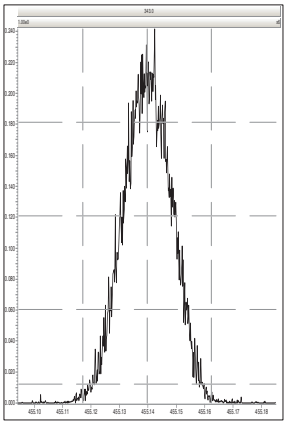
M 480.9696 R 11749



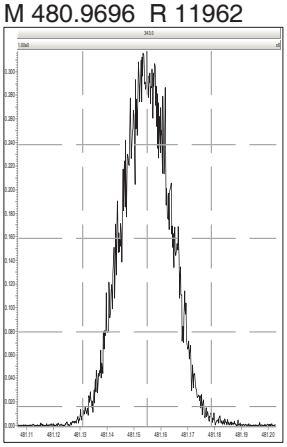
M 430.9728 R 11990



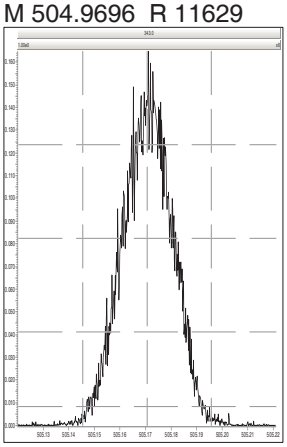
M 454.9728 R 11746



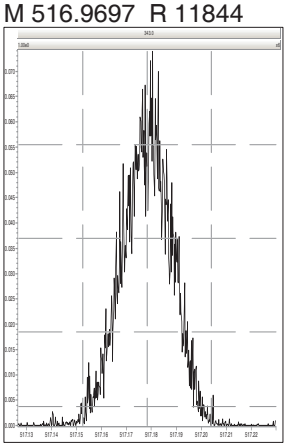
M 480.9696 R 11962

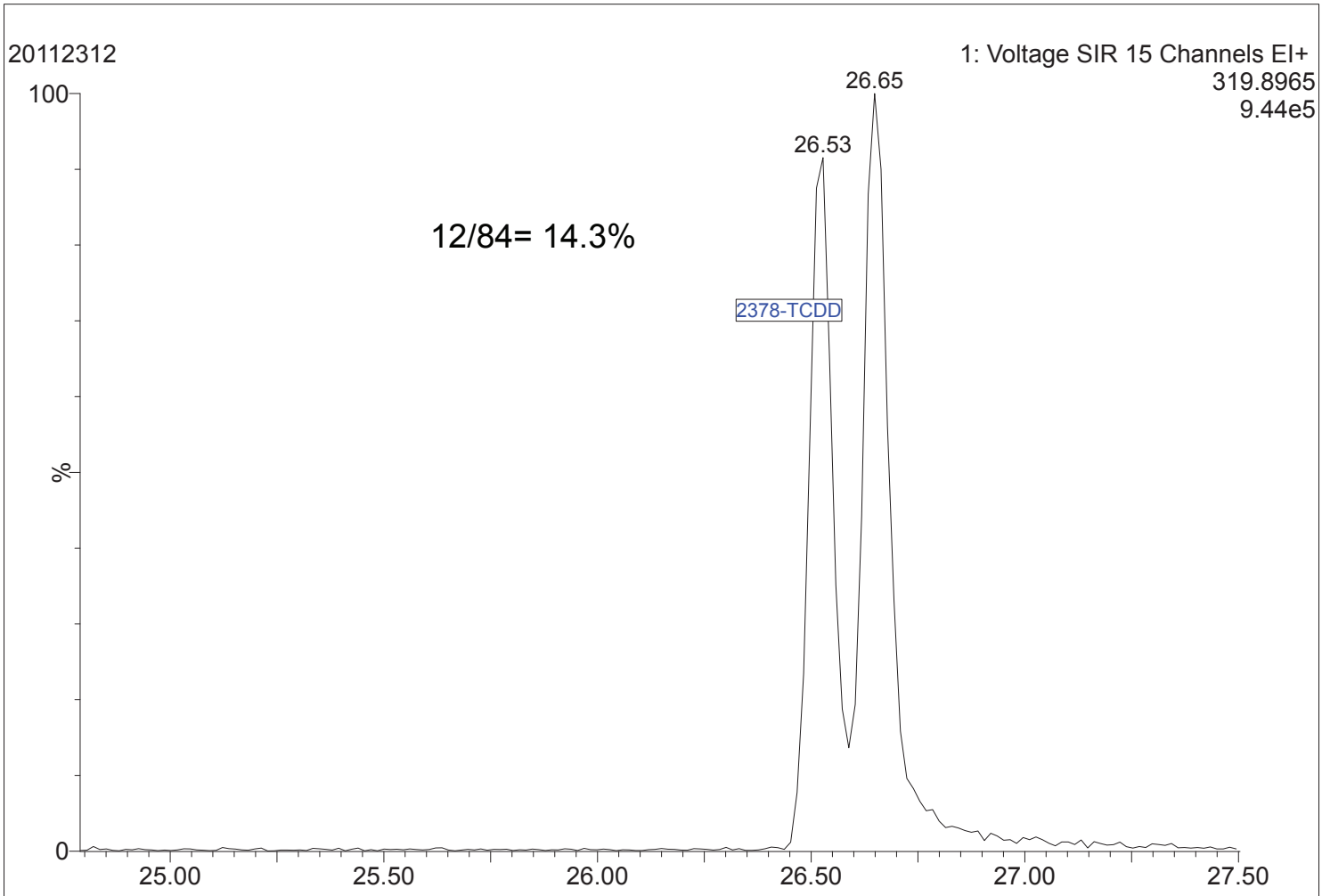


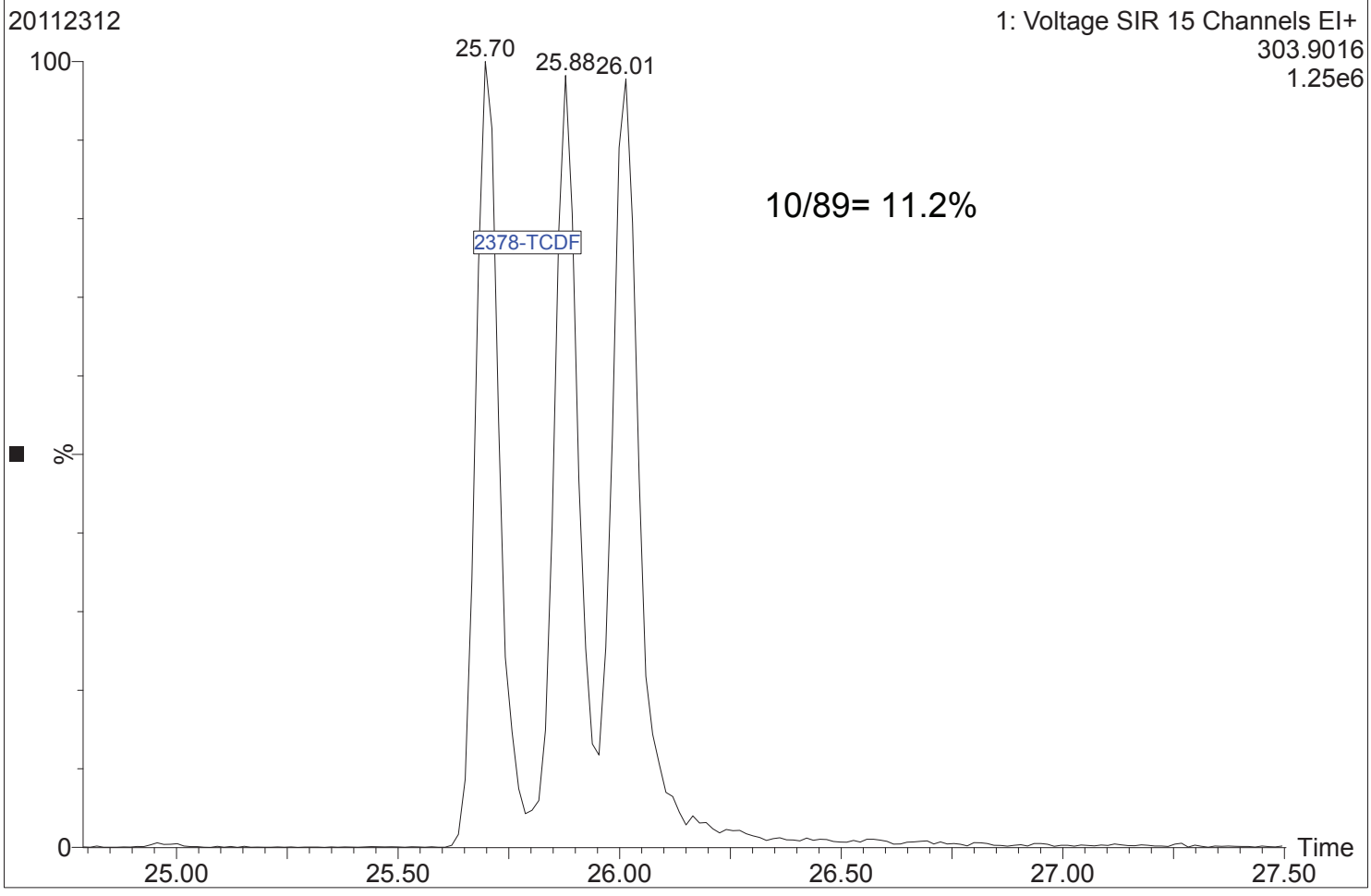
M 504.9696 R 11629



M 516.9697 R 11844




20112312
1: Voltage SIR 15 Channels EI+
319.8965
9.44e5
26.65
26.53
12/84= 14.3%
2378-TCDD
100
%
0
25.00
25.50
26.00
26.50
27.00
27.50


20112312
1: Voltage SIR 15 Channels EI+
303.9016
1.25e6
25.70
25.88
26.01
10/89= 11.2%
2378-TCDF
100
%
0
Time
25.00
25.50
26.00
26.50
27.00
27.50

CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Instrument ID:	AUTOSPEC01	Calibration:	DJ00101
Lab File ID:	20112320	Calibration Date:	10/29/2020
Sequence:	SIK0339	Injection Date:	11/24/20
Lab Sample ID:	SIK0339-CCV2	Injection Time:	01:27
Sequence Name:	CS3S3		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
2,3,7,8-TCDF	A	10.000	10.6	0.7286530	0.7727932		6.1	+/-16
2,3,7,8-TCDD	A	10.000	10.1	1.2382330	1.2449310		0.5	+/-22
1,2,3,7,8-PeCDF	A	50.000	54.9	0.7793430	0.8551912		9.7	+/-18
2,3,4,7,8-PeCDF	A	50.000	56.3	0.8804697	0.9913746		12.6	+/-18
1,2,3,7,8-PeCDD	A	50.000	52.5	0.9876417	1.0369240		5.0	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	55.7	0.8802689	0.9802060		11.4	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	50.9	0.8533425	0.8690638		1.8	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	52.6	0.8627805	0.9079478		5.2	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	54.7	0.7800802	0.8532554		9.4	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	56.3	0.8417578	0.9477811		12.6	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	51.6	0.9070901	0.9363245		3.2	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	53.5	0.7836605	0.8381103		6.9	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	51.4	1.0008820	1.0297090		2.9	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	53.3	0.9939216	1.0595110		6.6	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	55.0	1.0436860	1.1483210		10.0	+/-14
OCDF	A	100.00	118	1.1579670	1.3681510		18.2	+/-37
OCDD	A	100.00	112	0.9629974	1.0763950		11.8	+/-21
13C12-2,3,7,8-TCDF	A	100.00	96.7	2.2029620	2.1302179		-3.3	+/-29
13C12-2,3,7,8-TCDD	A	100.00	94.1	1.1814920	1.1121500		-5.9	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	92.2	1.7411380	1.6060718		-7.8	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	88.1	1.6694980	1.4709114		-11.9	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	88.3	0.9778844	0.8637454		-11.7	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	103	1.0222270	1.0573514		3.4	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	108	1.2001070	1.2943221		7.9	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	102	1.0710950	1.0978486		2.5	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	103	0.9186022	0.9428218		2.6	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	93.7	0.9649715	0.9037683		-6.3	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	97.1	1.1680800	1.1337684		-2.9	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	108	0.9085870	0.9810608		8.0	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	106	0.7235789	0.7671265		6.0	+/-23
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	107	0.6453514	0.6886553		6.7	+/-18
13C12-OCDD	A	200.00	175	0.6782670	0.5935114		-12.5	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	9.46	1.2644890	1.1964992		-5.4	+/-21

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:10:18 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: CS3S3, Name: 20112320, Date: 24-Nov-2020, Time: 01:27:56, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.863	1.001	6.864e4	8.993e4	0.729	0.763	0.770	1522	2375	1.00e6	1.31e6	659.9	552.8	NO	bb	bd	10.606
12378-PeCDF	30.019	1.001	4.181e5	2.434e5	0.779	1.718	1.550	6177	4513	6.38e6	3.70e6	1033.0	819.0	NO	bb	bb	54.866
23478-PeCDF	31.354	1.000	4.454e5	2.569e5	0.880	1.734	1.550	6177	4513	6.73e6	3.87e6	1090.0	858.2	NO	bb	bb	56.298
123478-HxCDF	34.972	1.001	2.757e5	2.054e5	0.880	1.343	1.240	3461	3292	4.22e6	3.22e6	1219.6	979.6	NO	bd	bd	55.677
234678-HxCDF	35.973	1.001	2.599e5	2.028e5	0.863	1.282	1.240	3461	3292	4.02e6	3.11e6	1161.4	943.5	NO	bb	bb	52.618
123678-HxCDF	35.105	1.000	2.955e5	2.266e5	0.853	1.304	1.240	3461	3292	4.33e6	3.38e6	1252.2	1027.9	NO	db	db	50.921
123789-HxCDF	36.997	1.000	2.133e5	1.601e5	0.780	1.332	1.240	3461	3292	3.23e6	2.44e6	932.8	741.5	NO	bb	bb	54.690
1234678-HpCDF	38.834	1.001	2.434e5	2.256e5	1.001	1.079	1.050	3194	4385	3.88e6	3.52e6	1214.0	803.6	NO	bb	bb	51.440
1234789-HpCDF	41.082	1.000	2.013e5	1.759e5	0.994	1.144	1.050	3194	4385	2.68e6	2.45e6	837.7	559.0	NO	bb	bb	53.300
OCDF	45.337	1.006	3.649e5	3.890e5	1.158	0.938	0.890	3805	2259	3.98e6	4.29e6	1046.4	1898.2	NO	bb	bb	118.151
2378-TCDD	26.497	1.001	6.033e4	7.304e4	1.238	0.826	0.770	1653	1393	8.63e5	1.07e6	522.1	771.3	NO	bb	bb	10.054
12378-PeCDD	31.610	1.000	2.640e5	1.673e5	0.988	1.578	1.550	3595	3104	3.97e6	2.50e6	1103.7	804.7	NO	bb	bb	52.495
123478-HxCDD	36.084	1.000	2.249e5	1.728e5	0.842	1.302	1.240	3725	2779	3.47e6	2.77e6	930.4	997.0	NO	bd	bd	56.298
123678-HxCDD	36.207	1.001	2.751e5	2.177e5	0.907	1.264	1.240	3725	2779	3.75e6	3.06e6	1007.8	1100.7	NO	db	db	51.611
123789-HxCDD	36.585	1.011	2.168e5	1.795e5	0.784	1.208	1.240	3725	2779	3.17e6	2.58e6	850.9	927.7	NO	bb	bb	53.474
1234678-HpCDD	40.336	1.001	1.762e5	1.909e5	1.044	0.923	1.050	4062	2611	2.48e6	2.37e6	611.3	909.7	NO	bb	bb	55.013
OCDD	45.090	1.000	2.763e5	3.167e5	0.963	0.873	0.890	3055	3778	2.92e6	3.37e6	954.8	891.9	NO	MM	bb	111.775
13C-2378-TCDF	25.848	1.007	8.995e5	1.152e6	2.203	0.780	0.770	3275	2063	1.30e7	1.65e7	3978.7	7978.3	NO	bb	bb	96.698
13C-12378-PeCDF	29.997	1.169	9.290e5	6.180e5	1.741	1.503	1.550	3425	2986	1.25e7	8.41e6	3663.0	2815.2	NO	bd	bd	92.243
13C-23478-PeCDF	31.343	1.221	8.615e5	5.553e5	1.669	1.551	1.550	3425	2986	1.21e7	7.83e6	3522.2	2621.5	NO	bb	bb	88.105
13C-123478-HxCDF	34.949	0.956	3.245e5	6.571e5	1.022	0.494	0.510	4008	3127	4.74e6	9.62e6	1183.9	3075.5	NO	bd	bd	103.436
13C-123678-HxCDF	35.094	0.960	3.894e5	8.122e5	1.200	0.479	0.510	4008	3127	5.47e6	1.09e7	1365.8	3483.4	NO	db	db	107.851
13C-234678-HxCDF	35.951	0.983	3.323e5	6.869e5	1.071	0.484	0.510	4008	3127	4.64e6	9.46e6	1157.1	3026.1	NO	bb	MM	102.498
13C-123789-HxCDF	36.986	1.011	2.838e5	5.915e5	0.919	0.480	0.510	4008	3127	3.86e6	7.77e6	964.2	2486.1	NO	bb	bb	102.637
13C-1234678-HpCDF	38.812	1.061	2.674e5	6.434e5	0.909	0.416	0.440	4494	5009	4.05e6	9.49e6	901.4	1894.6	NO	bb	bb	107.977
13C-1234789-HpCDF	41.071	1.123	2.135e5	4.987e5	0.724	0.428	0.440	4494	5009	2.77e6	6.40e6	616.1	1278.3	NO	bb	bb	106.018
13C-1234-TCDD	25.666	0.000	4.288e5	5.345e5	1.000	0.802	0.770	2177	1656	6.48e6	8.25e6	2974.4	4979.6	NO	bb	bb	100.000
13C-2378-TCDD	26.482	1.032	4.763e5	5.949e5	1.181	0.801	0.770	2177	1656	6.95e6	8.64e6	3194.4	5217.5	NO	bb	bb	94.131
13C-12378-PeCDD	31.599	1.231	5.207e5	3.113e5	0.978	1.672	1.550	1439	1397	7.30e6	4.44e6	5073.6	3181.0	NO	bb	bb	88.328
13C-123478-HxCDD	36.074	0.986	4.714e5	3.677e5	0.965	1.282	1.240	3006	3572	7.30e6	5.71e6	2428.7	1598.0	NO	bd	bd	93.658
13C-123678-HxCDD	36.185	0.989	5.640e5	4.885e5	1.168	1.155	1.240	3006	3572	7.87e6	6.41e6	2619.3	1795.5	NO	db	db	97.063
13C-1234678-HpCDD	40.314	1.102	3.373e5	3.020e5	0.645	1.117	1.050	2975	2885	4.31e6	3.99e6	1447.9	1381.1	NO	MM	bb	106.710
13C-OCDD	45.072	1.232	5.330e5	5.690e5	0.678	0.937	0.890	3399	2785	5.63e6	6.10e6	1656.4	2191.3	NO	bb	bb	175.008
13C-123789-HxCDD	36.574	0.000	5.180e5	4.103e5	1.000	1.262	1.240	3006	3572	7.18e6	5.69e6	2388.5	1592.3	NO	bb	bb	100.000
37CL-2378-TCDD	26.497	1.032	1.153e5		1.264			2181		1.64e6		750.8			bb		9.462

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:10:18 Pacific Standard Time

ID: CS3S3, Name: 20112320, Date: 24-Nov-2020, Time: 01:27:56, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.343	0.864	8.846e4	1.154e5	0.846	0.767	0.770	1522	2375	1.45e6	1.86e6	949.9	783.8	NO	bb	bb	11.738
1289-TCDF	27.358	1.059	6.979e4	8.981e4	0.688	0.777	0.770	1522	2375	9.78e5	1.22e6	642.7	512.8	NO	db	dd	11.309
13468-PECDF	27.208	0.907	5.344e5	3.537e5	1.181	1.511	1.550	698	1152	8.08e6	5.33e6	11578.3	4630.2	NO	bb	bb	48.590
12389-PECDF	32.401	1.080	4.218e5	2.428e5	0.766	1.737	1.550	6177	4513	5.88e6	3.40e6	951.5	752.8	NO	bb	bb	56.073
123468-HXCDF	33.313	0.953	2.852e5	2.182e5	1.003	1.307	1.240	3461	3292	4.43e6	3.37e6	1279.0	1024.7	NO	bb	bb	51.143
1368-TCDD	23.627	0.892	5.979e4	7.592e4	1.179	0.788	0.770	1653	1393	9.85e5	1.22e6	595.8	877.1	NO	bb	bb	10.748
1289-TCDD	27.102	1.023	5.056e4	6.734e4	1.042	0.751	0.770	1653	1393	7.28e5	9.07e5	440.5	650.8	NO	bb	bd	10.559
12479-PECDD	28.895	0.914	4.894e5	3.018e5	1.810	1.622	1.550	3595	3104	4.64e6	2.92e6	1291.4	942.3	NO	bb	bb	52.533
12389-PECDD	32.011	1.013	3.103e5	1.985e5	1.165	1.564	1.550	3595	3104	4.42e6	2.81e6	1228.5	906.1	NO	bb	bb	52.470
124679-HXCDD	34.081	0.945	2.511e5	2.051e5	1.056	1.224	1.240	3725	2779	3.69e6	3.10e6	991.3	1115.6	NO	bb	bb	51.476
1234679-HPCDD	39.279	0.974	2.022e5	1.911e5	1.285	1.058	1.050	4062	2611	2.98e6	2.81e6	734.3	1075.0	NO	bb	bb	47.858
Total-tetrafurans			2.275e5		0.754			1522		3.44e6							33.739
Total-penta1			5.348e5					698		8.09e6							48.634
Total-pentafurans			1.353e6		0.809			6177		2.00e7							176.079
Total-hexafurans			1.330e6		0.876			3461		2.02e7							265.048
Total-heptafurans			4.447e5		0.997			3194		6.55e6							104.740
Total-Furans			4.254e6		0.893			1522		6.23e7							746.391
Total-tetradioxins			2.875e5		1.153			1653		3.91e6							52.870
Total-pentadioxins			1.065e6		1.321			3595		1.30e7							157.703
Total-hexadioxins			9.685e5		0.897			3725		1.41e7							212.983
Total-heptadioxins			3.784e5		1.165			4062		5.47e6							102.871
Total-Dioxins			2.976e6		1.100			1653		3.94e7							638.202
Total-TEQ			7.230e6					1653		1.02e8							1384.593
FUNCTION1 PFK			7.471e4					463702		1.88e6							
FUNCTION2 PFK			8.677e5					358667		1.88e7							0.000
FUNCTION3 PFK			8.395e5					281350		1.91e7							0.000
FUNCTION4 PFK			1.475e6					241159		1.88e7							
FUNCTION5 PFK			2.261e5					168493		5.36e6							
FUNCTION1 HXCD...			1.036e2					324		1.29e3							0.000
FUNCTION1 HPCD...			1.379e3					1003		2.23e4							0.000
FUNCTION2 HPCD...			9.373e2					1111		2.26e4							0.000
FUNCTION3 OCDPE			0.000e0					342		0.00e0							
FUNCTION4 NCDPE			0.000e0					570		0.00e0							
FUNCTION5 DCDPE			0.000e0					209		0.00e0							

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

ID: CS3S3, Name: 20112320, Date: 24-Nov-2020, Time: 01:27:56, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	26.53	1.482e2	1.684e2	0.754	0.88	0.77	1.6	NO	NO	bd	bb	0.020
2	2378-TCDF	25.86	6.864e4	8.993e4	0.729	0.76	0.77	659.9	YES	NO	bb	bd	10.606
3	Total-tetrafurans	25.68	1.290e2	1.462e2	0.754	0.88	0.77	1.2	NO	NO	db	db	0.018
4	Total-tetrafurans	23.66	1.636e2	2.330e2	0.754	0.70	0.77	1.7	NO	NO	bb	bb	0.026
5	Total-tetrafurans	22.84	1.470e2	1.925e2	0.754	0.76	0.77	1.9	NO	NO	db	dd	0.022
6	1368-TCDF	22.34	8.846e4	1.154e5	0.846	0.77	0.77	949.9	YES	NO	bb	bb	11.738
7	1289-TCDF	27.36	6.979e4	8.981e4	0.688	0.78	0.77	642.7	YES	NO	db	dd	11.309

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-penta1	27.62	3.965e2	2.271e2		1.75	1.55	10.2	YES	NO	bd	bd	0.044
2	13468-PECDF	27.21	5.344e5	3.537e5	1.181	1.51	1.55	11578.3	YES	NO	bb	bb	48.590

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	28.87	6.731e4	3.865e4	0.809	1.74	1.55	163.3	YES	NO	bb	bb	8.842
2	12389-PECDF	32.40	4.218e5	2.428e5	0.766	1.74	1.55	951.5	YES	NO	bb	bb	56.073
3	23478-PeCDF	31.35	4.454e5	2.569e5	0.880	1.73	1.55	1090.0	YES	NO	bb	bb	56.298
4	12378-PeCDF	30.02	4.181e5	2.434e5	0.779	1.72	1.55	1033.0	YES	NO	bb	bb	54.866

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.00	2.133e5	1.601e5	0.780	1.33	1.24	932.8	YES	NO	bb	bb	54.690
2	234678-HxCDF	35.97	2.599e5	2.028e5	0.863	1.28	1.24	1161.4	YES	NO	bb	bb	52.618
3	123678-HxCDF	35.10	2.955e5	2.266e5	0.853	1.30	1.24	1252.2	YES	NO	db	db	50.921
4	123478-HxCDF	34.97	2.757e5	2.054e5	0.880	1.34	1.24	1219.6	YES	NO	bd	bd	55.677
5	123468-HXCDF	33.31	2.852e5	2.182e5	1.003	1.31	1.24	1279.0	YES	NO	bb	bb	51.143

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HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.08	2.013e5	1.759e5	0.994	1.14	1.05	837.7	YES	NO	bb	bb	53.300
2	1234678-HpCDF	38.83	2.434e5	2.256e5	1.001	1.08	1.05	1214.0	YES	NO	bb	bb	51.440

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	26.53	1.482e2	1.684e2	0.754	0.88	0.77	1.6	NO	NO	bd	bb	0.020
2	2378-TCDF	25.86	6.864e4	8.993e4	0.729	0.76	0.77	659.9	YES	NO	bb	bd	10.606
3	Total-tetrafurans	25.68	1.290e2	1.462e2	0.754	0.88	0.77	1.2	NO	NO	db	db	0.018
4	Total-tetrafurans	23.66	1.636e2	2.330e2	0.754	0.70	0.77	1.7	NO	NO	bb	bb	0.026
5	Total-tetrafurans	22.84	1.470e2	1.925e2	0.754	0.76	0.77	1.9	NO	NO	db	dd	0.022
6	1368-TCDF	22.34	8.846e4	1.154e5	0.846	0.77	0.77	949.9	YES	NO	bb	bb	11.738
7	1289-TCDF	27.36	6.979e4	8.981e4	0.688	0.78	0.77	642.7	YES	NO	db	dd	11.309
8	Total-pentafurans	28.87	6.731e4	3.865e4	0.809	1.74	1.55	163.3	YES	NO	bb	bb	8.842
9	12389-PECDF	32.40	4.218e5	2.428e5	0.766	1.74	1.55	951.5	YES	NO	bb	bb	56.073
10	23478-PeCDF	31.35	4.454e5	2.569e5	0.880	1.73	1.55	1090.0	YES	NO	bb	bb	56.298
11	12378-PeCDF	30.02	4.181e5	2.434e5	0.779	1.72	1.55	1033.0	YES	NO	bb	bb	54.866
12	123789-HxCDF	37.00	2.133e5	1.601e5	0.780	1.33	1.24	932.8	YES	NO	bb	bb	54.690
13	234678-HxCDF	35.97	2.599e5	2.028e5	0.863	1.28	1.24	1161.4	YES	NO	bb	bb	52.618
14	123678-HxCDF	35.10	2.955e5	2.266e5	0.853	1.30	1.24	1252.2	YES	NO	db	db	50.921
15	123478-HxCDF	34.97	2.757e5	2.054e5	0.880	1.34	1.24	1219.6	YES	NO	bd	bd	55.677
16	123468-HXCDF	33.31	2.852e5	2.182e5	1.003	1.31	1.24	1279.0	YES	NO	bb	bb	51.143
17	1234789-HpCDF	41.08	2.013e5	1.759e5	0.994	1.14	1.05	837.7	YES	NO	bb	bb	53.300
18	1234678-HpCDF	38.83	2.434e5	2.256e5	1.001	1.08	1.05	1214.0	YES	NO	bb	bb	51.440
19	OCDF	45.34	3.649e5	3.890e5	1.158	0.94	0.89	1046.4	YES	NO	bb	bb	118.151
20	Total-penta1	27.62	3.965e2	2.271e2		1.75	1.55	10.2	YES	NO	bd	bd	0.044
21	13468-PECDF	27.21	5.344e5	3.537e5	1.181	1.51	1.55	11578.3	YES	NO	bb	bb	48.590

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.50	6.033e4	7.304e4	1.238	0.83	0.77	522.1	YES	NO	bb	bb	10.054
2	Total-tetradioxins	26.18	8.651e4	1.123e5	1.153	0.77	0.77	540.4	YES	NO	bb	bb	16.093
3	Total-tetradioxins	25.70	2.804e4	3.394e4	1.153	0.83	0.77	254.1	YES	NO	bd	bb	5.018
4	Total-tetradioxins	24.84	2.305e3	2.621e3	1.153	0.88	0.77	14.1	YES	NO	bb	bb	0.399
5	1368-TCDD	23.63	5.979e4	7.592e4	1.179	0.79	0.77	595.8	YES	NO	bb	bb	10.748
6	1289-TCDD	27.10	5.056e4	6.734e4	1.042	0.75	0.77	440.5	YES	NO	bb	bd	10.559

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PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.61	2.640e5	1.673e5	0.988	1.58	1.55	1103.7	YES	NO	bb	bb	52.495
2	Total-pentadioxins	30.93	9.665e2	6.109e2	1.321	1.58	1.55	4.4	YES	NO	bb	bb	0.144
3	12479-PECDD	28.89	4.894e5	3.018e5	1.810	1.62	1.55	1291.4	YES	NO	bb	bb	52.533
4	Total-pentadioxins	32.29	4.142e2	2.625e2	1.321	1.58	1.55	1.7	NO	NO	bb	bb	0.062
5	12389-PECDD	32.01	3.103e5	1.985e5	1.165	1.56	1.55	1228.5	YES	NO	bb	bb	52.470

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.59	2.168e5	1.795e5	0.784	1.21	1.24	850.9	YES	NO	bb	bb	53.474
2	123678-HxCDD	36.21	2.751e5	2.177e5	0.907	1.26	1.24	1007.8	YES	NO	db	db	51.611
3	123478-HxCDD	36.08	2.249e5	1.728e5	0.842	1.30	1.24	930.4	YES	NO	bd	bd	56.298
4	Total-hexadioxins	34.85	5.417e2	5.048e2	0.897	1.07	1.24	2.9	NO	NO	bb	bb	0.123
5	124679-HXCDD	34.08	2.511e5	2.051e5	1.056	1.22	1.24	991.3	YES	NO	bb	bb	51.476

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.34	1.762e5	1.909e5	1.044	0.92	1.05	611.3	YES	NO	bb	bb	55.013
2	1234679-HPCDD	39.28	2.022e5	1.911e5	1.285	1.06	1.05	734.3	YES	NO	bb	bb	47.858

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.50	6.033e4	7.304e4	1.238	0.83	0.77	522.1	YES	NO	bb	bb	10.054
2	Total-tetradioxins	26.18	8.651e4	1.123e5	1.153	0.77	0.77	540.4	YES	NO	bb	bb	16.093
3	Total-tetradioxins	25.70	2.804e4	3.394e4	1.153	0.83	0.77	254.1	YES	NO	bd	bb	5.018
4	Total-tetradioxins	24.84	2.305e3	2.621e3	1.153	0.88	0.77	14.1	YES	NO	bb	bb	0.399
5	1368-TCDD	23.63	5.979e4	7.592e4	1.179	0.79	0.77	595.8	YES	NO	bb	bb	10.748
6	1289-TCDD	27.10	5.056e4	6.734e4	1.042	0.75	0.77	440.5	YES	NO	bb	bd	10.559
7	12378-PeCDD	31.61	2.640e5	1.673e5	0.988	1.58	1.55	1103.7	YES	NO	bb	bb	52.495
8	Total-pentadioxins	30.93	9.665e2	6.109e2	1.321	1.58	1.55	4.4	YES	NO	bb	bb	0.144
9	12479-PECDD	28.89	4.894e5	3.018e5	1.810	1.62	1.55	1291.4	YES	NO	bb	bb	52.533
10	Total-pentadioxins	32.29	4.142e2	2.625e2	1.321	1.58	1.55	1.7	NO	NO	bb	bb	0.062
11	12389-PECDD	32.01	3.103e5	1.985e5	1.165	1.56	1.55	1228.5	YES	NO	bb	bb	52.470
12	123789-HxCDD	36.59	2.168e5	1.795e5	0.784	1.21	1.24	850.9	YES	NO	bb	bb	53.474
13	123678-HxCDD	36.21	2.751e5	2.177e5	0.907	1.26	1.24	1007.8	YES	NO	db	db	51.611
14	123478-HxCDD	36.08	2.249e5	1.728e5	0.842	1.30	1.24	930.4	YES	NO	bd	bd	56.298
15	Total-hexadioxins	34.85	5.417e2	5.048e2	0.897	1.07	1.24	2.9	NO	NO	bb	bb	0.123
16	124679-HXCDD	34.08	2.511e5	2.051e5	1.056	1.22	1.24	991.3	YES	NO	bb	bb	51.476
17	1234678-HpCDD	40.34	1.762e5	1.909e5	1.044	0.92	1.05	611.3	YES	NO	bb	bb	55.013
18	1234679-HPCDD	39.28	2.022e5	1.911e5	1.285	1.06	1.05	734.3	YES	NO	bb	bb	47.858
19	OCDD	45.09	2.763e5	3.167e5	0.963	0.87	0.89	954.8	YES	NO	MM	bb	111.775

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	26.53	1.482e2	1.684e2	0.754	0.88	0.77	1.6	NO	NO	bd	bb	0.020
2	2378-TCDF	25.86	6.864e4	8.993e4	0.729	0.76	0.77	659.9	YES	NO	bb	bd	10.606
3	Total-tetrafurans	25.68	1.290e2	1.462e2	0.754	0.88	0.77	1.2	NO	NO	db	db	0.018
4	Total-tetrafurans	23.66	1.636e2	2.330e2	0.754	0.70	0.77	1.7	NO	NO	bb	bb	0.026
5	Total-tetrafurans	22.84	1.470e2	1.925e2	0.754	0.76	0.77	1.9	NO	NO	db	dd	0.022
6	1368-TCDF	22.34	8.846e4	1.154e5	0.846	0.77	0.77	949.9	YES	NO	bb	bb	11.738
7	1289-TCDF	27.36	6.979e4	8.981e4	0.688	0.78	0.77	642.7	YES	NO	db	dd	11.309
8	Total-pentafurans	28.87	6.731e4	3.865e4	0.809	1.74	1.55	163.3	YES	NO	bb	bb	8.842
9	12389-PECDF	32.40	4.218e5	2.428e5	0.766	1.74	1.55	951.5	YES	NO	bb	bb	56.073
10	23478-PeCDF	31.35	4.454e5	2.569e5	0.880	1.73	1.55	1090.0	YES	NO	bb	bb	56.298
11	12378-PeCDF	30.02	4.181e5	2.434e5	0.779	1.72	1.55	1033.0	YES	NO	bb	bb	54.866
12	123789-HxCDF	37.00	2.133e5	1.601e5	0.780	1.33	1.24	932.8	YES	NO	bb	bb	54.690
13	234678-HxCDF	35.97	2.599e5	2.028e5	0.863	1.28	1.24	1161.4	YES	NO	bb	bb	52.618
14	123678-HxCDF	35.10	2.955e5	2.266e5	0.853	1.30	1.24	1252.2	YES	NO	db	db	50.921
15	123478-HxCDF	34.97	2.757e5	2.054e5	0.880	1.34	1.24	1219.6	YES	NO	bd	bd	55.677
16	123468-HXCDF	33.31	2.852e5	2.182e5	1.003	1.31	1.24	1279.0	YES	NO	bb	bb	51.143
17	1234789-HpCDF	41.08	2.013e5	1.759e5	0.994	1.14	1.05	837.7	YES	NO	bb	bb	53.300
18	1234678-HpCDF	38.83	2.434e5	2.256e5	1.001	1.08	1.05	1214.0	YES	NO	bb	bb	51.440
19	OCDF	45.34	3.649e5	3.890e5	1.158	0.94	0.89	1046.4	YES	NO	bb	bb	118.151
20	Total-penta1	27.62	3.965e2	2.271e2		1.75	1.55	10.2	YES	NO	bd	bd	0.044
21	13468-PECDF	27.21	5.344e5	3.537e5	1.181	1.51	1.55	11578.3	YES	NO	bb	bb	48.590
22	2378-TCDD	26.50	6.033e4	7.304e4	1.238	0.83	0.77	522.1	YES	NO	bb	bb	10.054
23	Total-tetradioxins	26.18	8.651e4	1.123e5	1.153	0.77	0.77	540.4	YES	NO	bb	bb	16.093
24	Total-tetradioxins	25.70	2.804e4	3.394e4	1.153	0.83	0.77	254.1	YES	NO	bd	bb	5.018
25	Total-tetradioxins	24.84	2.305e3	2.621e3	1.153	0.88	0.77	14.1	YES	NO	bb	bb	0.399
26	1368-TCDD	23.63	5.979e4	7.592e4	1.179	0.79	0.77	595.8	YES	NO	bb	bb	10.748
27	1289-TCDD	27.10	5.056e4	6.734e4	1.042	0.75	0.77	440.5	YES	NO	bb	bd	10.559
28	12378-PeCDD	31.61	2.640e5	1.673e5	0.988	1.58	1.55	1103.7	YES	NO	bb	bb	52.495
29	Total-pentadioxins	30.93	9.665e2	6.109e2	1.321	1.58	1.55	4.4	YES	NO	bb	bb	0.144
30	12479-PECDD	28.89	4.894e5	3.018e5	1.810	1.62	1.55	1291.4	YES	NO	bb	bb	52.533
31	Total-pentadioxins	32.29	4.142e2	2.625e2	1.321	1.58	1.55	1.7	NO	NO	bb	bb	0.062
32	12389-PECDD	32.01	3.103e5	1.985e5	1.165	1.56	1.55	1228.5	YES	NO	bb	bb	52.470
33	123789-HxCDD	36.59	2.168e5	1.795e5	0.784	1.21	1.24	850.9	YES	NO	bb	bb	53.474
34	123678-HxCDD	36.21	2.751e5	2.177e5	0.907	1.26	1.24	1007.8	YES	NO	db	db	51.611
35	123478-HxCDD	36.08	2.249e5	1.728e5	0.842	1.30	1.24	930.4	YES	NO	bd	bd	56.298
36	Total-hexadioxins	34.85	5.417e2	5.048e2	0.897	1.07	1.24	2.9	NO	NO	bb	bb	0.123
37	124679-HXCDD	34.08	2.511e5	2.051e5	1.056	1.22	1.24	991.3	YES	NO	bb	bb	51.476

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	1234678-HpCDD	40.34	1.762e5	1.909e5	1.044	0.92	1.05	611.3	YES	NO	bb	bb	55.013
39	1234679-HPCDD	39.28	2.022e5	1.911e5	1.285	1.06	1.05	734.3	YES	NO	bb	bb	47.858
40	OCDD	45.09	2.763e5	3.167e5	0.963	0.87	0.89	954.8	YES	NO	MM	bb	111.775

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.27	5.767e4					2.7	NO		bb		
2	FUNCTION1 PFK	21.16	1.704e4					1.4	NO		bb		

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 10:10:18 Pacific Standard Time

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.56	1.538e4					0.9	NO		bb		0.000
2	FUNCTION2 PFK	29.46	2.604e4					1.7	NO		db		0.000
3	FUNCTION2 PFK	29.41	3.892e3					0.5	NO		bd		0.000
4	FUNCTION2 PFK	29.28	3.312e3					0.4	NO		bb		0.000
5	FUNCTION2 PFK	29.22	1.488e4					1.2	NO		db		0.000
6	FUNCTION2 PFK	29.12	3.281e4					1.3	NO		bd		0.000
7	FUNCTION2 PFK	29.02	1.437e4					1.2	NO		bb		0.000
8	FUNCTION2 PFK	28.85	4.820e3					0.6	NO		bb		0.000
9	FUNCTION2 PFK	28.67	9.010e3					0.9	NO		db		0.000
10	FUNCTION2 PFK	28.63	1.449e4					1.5	NO		bd		0.000
11	FUNCTION2 PFK	28.43	2.102e4					2.0	NO		bb		0.000
12	FUNCTION2 PFK	28.30	3.009e4					2.0	NO		bb		0.000
13	FUNCTION2 PFK	31.37	2.899e4					1.7	NO		bd		0.000
14	FUNCTION2 PFK	31.27	4.580e4					1.7	NO		db		0.000
15	FUNCTION2 PFK	31.13	3.693e4					1.7	NO		bd		0.000
16	FUNCTION2 PFK	30.84	1.804e4					1.0	NO		db		0.000
17	FUNCTION2 PFK	30.78	2.550e3					0.5	NO		bd		0.000
18	FUNCTION2 PFK	30.73	1.363e4					1.2	NO		db		0.000
19	FUNCTION2 PFK	30.69	1.829e4					1.2	NO		bd		0.000
20	FUNCTION2 PFK	30.60	1.723e4					0.8	NO		bb		0.000
21	FUNCTION2 PFK	30.48	2.574e4					1.5	NO		bb		0.000
22	FUNCTION2 PFK	30.36	2.260e4					1.5	NO		bb		0.000
23	FUNCTION2 PFK	30.23	4.157e4					1.5	NO		db		0.000
24	FUNCTION2 PFK	30.20	9.859e3					1.2	NO		bd		0.000
25	FUNCTION2 PFK	29.91	1.576e4					0.8	NO		bb		0.000
26	FUNCTION2 PFK	29.82	2.465e4					1.9	NO		db		0.000
27	FUNCTION2 PFK	29.77	2.111e4					1.7	NO		bd		0.000
28	FUNCTION2 PFK	29.66	2.145e4					1.4	NO		bb		0.000
29	FUNCTION2 PFK	32.85	1.448e4					1.1	NO		db		0.000
30	FUNCTION2 PFK	32.80	5.776e3					0.7	NO		bd		0.000
31	FUNCTION2 PFK	32.75	2.072e4					1.4	NO		bb		0.000
32	FUNCTION2 PFK	32.61	1.391e4					0.8	NO		bb		0.000
33	FUNCTION2 PFK	32.56	1.288e3					0.3	NO		bb		0.000
34	FUNCTION2 PFK	32.41	1.163e4					0.7	NO		db		0.000
35	FUNCTION2 PFK	32.30	2.545e4					1.4	NO		bd		0.000
36	FUNCTION2 PFK	32.08	6.016e4					1.9	NO		db		0.000
37	FUNCTION2 PFK	31.97	2.984e4					1.6	NO		bd		0.000

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION2 PFK	31.73	1.774e4					1.3	NO		db		0.000
39	FUNCTION2 PFK	31.67	6.823e3					0.6	NO		dd		0.000
40	FUNCTION2 PFK	31.62	2.511e4					1.2	NO		dd		0.000
41	FUNCTION2 PFK	31.50	5.663e4					1.8	NO		dd		0.000
42	FUNCTION2 PFK	31.42	2.382e4					1.9	NO		dd		0.000

Dataset: T:\Autospec\Processed Data Batch\201123.qld
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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.12	2.926e4					2.1	NO		bb		0.000
2	FUNCTION3 PFK	35.17	6.001e3					0.9	NO		bb		0.000
3	FUNCTION3 PFK	35.00	1.311e4					1.5	NO		bb		0.000
4	FUNCTION3 PFK	34.90	6.610e4					3.8	YES		db		0.000
5	FUNCTION3 PFK	34.79	4.268e4					2.2	NO		dd		0.000
6	FUNCTION3 PFK	34.69	2.851e4					2.3	NO		dd		0.000
7	FUNCTION3 PFK	34.65	1.842e4					1.6	NO		bd		0.000
8	FUNCTION3 PFK	34.58	1.908e4					1.7	NO		bb		0.000
9	FUNCTION3 PFK	34.35	2.643e3					0.8	NO		bb		0.000
10	FUNCTION3 PFK	34.30	2.930e3					0.5	NO		bb		0.000
11	FUNCTION3 PFK	34.13	3.817e4					2.5	NO		db		0.000
12	FUNCTION3 PFK	34.03	2.944e4					1.6	NO		bd		0.000
13	FUNCTION3 PFK	33.88	3.096e4					2.6	NO		bb		0.000
14	FUNCTION3 PFK	33.65	2.729e4					2.5	NO		bb		0.000
15	FUNCTION3 PFK	33.42	2.937e4					2.1	NO		bb		0.000
16	FUNCTION3 PFK	33.28	3.920e3					0.8	NO		bb		0.000
17	FUNCTION3 PFK	33.22	2.350e4					2.9	NO		bb		0.000
18	FUNCTION3 PFK	36.59	1.180e3					0.4	NO		bb		0.000
19	FUNCTION3 PFK	36.54	4.911e3					0.9	NO		bb		0.000
20	FUNCTION3 PFK	36.50	5.259e3					0.6	NO		bb		0.000
21	FUNCTION3 PFK	36.40	1.871e4					1.6	NO		db		0.000
22	FUNCTION3 PFK	36.36	6.632e3					1.2	NO		bd		0.000
23	FUNCTION3 PFK	36.28	4.624e3					0.7	NO		bb		0.000
24	FUNCTION3 PFK	36.15	3.130e4					2.1	NO		db		0.000
25	FUNCTION3 PFK	36.08	7.699e3					1.1	NO		dd		0.000
26	FUNCTION3 PFK	36.04	3.724e4					2.1	NO		dd		0.000
27	FUNCTION3 PFK	35.94	1.128e4					1.6	NO		dd		0.000
28	FUNCTION3 PFK	35.91	1.694e4					1.7	NO		bd		0.000
29	FUNCTION3 PFK	35.61	2.122e4					1.7	NO		db		0.000
30	FUNCTION3 PFK	35.54	1.028e4					1.2	NO		dd		0.000
31	FUNCTION3 PFK	35.48	3.420e4					2.4	NO		bd		0.000
32	FUNCTION3 PFK	35.39	5.640e4					2.3	NO		db		0.000
33	FUNCTION3 PFK	35.26	1.057e4					1.5	NO		bd		0.000
34	FUNCTION3 PFK	37.94	1.033e3					0.3	NO		bb		0.000
35	FUNCTION3 PFK	37.85	1.200e4					0.8	NO		bb		0.000
36	FUNCTION3 PFK	37.78	1.213e4					1.2	NO		bb		0.000
37	FUNCTION3 PFK	37.64	9.942e3					0.8	NO		bb		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION3 PFK	37.54	2.365e4					1.6	NO		bb		0.000
39	FUNCTION3 PFK	37.32	2.748e4					2.0	NO		bb		0.000
40	FUNCTION3 PFK	37.08	1.815e4					1.7	NO		bb		0.000
41	FUNCTION3 PFK	36.99	8.405e3					1.2	NO		bb		0.000
42	FUNCTION3 PFK	36.86	3.684e4					2.5	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.78	4.133e3					0.7	NO		bb		
2	FUNCTION4 PFK	38.67	1.019e4					1.1	NO		bb		
3	FUNCTION4 PFK	38.56	8.213e3					1.3	NO		db		
4	FUNCTION4 PFK	38.51	1.157e4					1.3	NO		bd		
5	FUNCTION4 PFK	38.32	2.619e5					5.9	YES		db		
6	FUNCTION4 PFK	38.10	5.897e5					17.0	YES		bd		
7	FUNCTION4 PFK	40.53	8.699e3					1.5	NO		dd		
8	FUNCTION4 PFK	40.47	2.189e4					1.8	NO		bd		
9	FUNCTION4 PFK	40.39	4.845e4					2.8	NO		db		
10	FUNCTION4 PFK	40.27	1.572e4					1.9	NO		dd		
11	FUNCTION4 PFK	40.24	1.973e4					2.0	NO		dd		
12	FUNCTION4 PFK	40.15	1.865e4					1.5	NO		dd		
13	FUNCTION4 PFK	40.11	1.054e4					1.6	NO		bd		
14	FUNCTION4 PFK	40.04	1.167e3					0.4	NO		bb		
15	FUNCTION4 PFK	39.90	6.506e3					0.6	NO		bb		
16	FUNCTION4 PFK	39.81	3.048e4					1.9	NO		bb		
17	FUNCTION4 PFK	39.58	1.190e4					1.2	NO		bb		
18	FUNCTION4 PFK	39.40	1.667e3					0.6	NO		bb		
19	FUNCTION4 PFK	39.32	2.030e4					1.9	NO		bb		
20	FUNCTION4 PFK	39.10	2.452e4					1.9	NO		bb		
21	FUNCTION4 PFK	39.02	1.306e4					1.6	NO		db		
22	FUNCTION4 PFK	38.99	9.863e3					1.4	NO		bd		
23	FUNCTION4 PFK	43.10	1.494e4					1.1	NO		bb		
24	FUNCTION4 PFK	42.85	1.138e4					1.5	NO		bb		
25	FUNCTION4 PFK	42.63	1.941e4					1.3	NO		db		
26	FUNCTION4 PFK	42.48	3.134e4					1.7	NO		bd		
27	FUNCTION4 PFK	42.36	8.460e2					0.3	NO		bb		
28	FUNCTION4 PFK	42.07	2.508e4					2.0	NO		db		
29	FUNCTION4 PFK	42.01	3.906e3					0.7	NO		bd		
30	FUNCTION4 PFK	41.93	2.532e4					1.6	NO		bb		
31	FUNCTION4 PFK	41.60	2.380e4					2.7	NO		bb		
32	FUNCTION4 PFK	41.52	9.483e3					1.1	NO		db		
33	FUNCTION4 PFK	41.48	6.427e3					1.0	NO		bd		
34	FUNCTION4 PFK	41.27	2.141e4					1.9	NO		bb		
35	FUNCTION4 PFK	40.92	2.256e4					1.8	NO		db		
36	FUNCTION4 PFK	40.83	3.277e4					2.2	NO		bd		
37	FUNCTION4 PFK	40.71	4.526e4					2.4	NO		db		

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION4 PFK	40.60	3.019e4					2.1	NO		dd		
39	FUNCTION4 PFK	43.14	2.067e3					0.5	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	45.36	1.568e4					2.6	NO		db		
2	FUNCTION5 PFK	45.31	5.746e3					1.4	NO		bd		
3	FUNCTION5 PFK	45.01	5.754e3					1.6	NO		bb		
4	FUNCTION5 PFK	44.93	4.820e3					1.1	NO		db		
5	FUNCTION5 PFK	44.88	3.817e3					1.0	NO		bd		
6	FUNCTION5 PFK	44.83	3.098e3					0.8	NO		bb		
7	FUNCTION5 PFK	44.30	2.947e4					2.5	NO		bb		
8	FUNCTION5 PFK	44.23	1.950e4					2.7	NO		db		
9	FUNCTION5 PFK	44.18	1.137e4					2.2	NO		bd		
10	FUNCTION5 PFK	43.98	1.563e4					2.2	NO		bb		
11	FUNCTION5 PFK	43.90	7.508e2					0.5	NO		bb		
12	FUNCTION5 PFK	43.77	1.616e4					1.8	NO		bb		
13	FUNCTION5 PFK	43.65	1.670e4					1.4	NO		bb		
14	FUNCTION5 PFK	43.43	2.667e4					2.3	NO		bb		
15	FUNCTION5 PFK	46.38	7.019e3					1.5	NO		db		
16	FUNCTION5 PFK	46.34	3.914e3					1.0	NO		bd		
17	FUNCTION5 PFK	46.19	5.301e2					0.3	NO		bb		
18	FUNCTION5 PFK	46.03	1.669e4					1.7	NO		bb		
19	FUNCTION5 PFK	45.71	1.451e4					1.7	NO		bb		
20	FUNCTION5 PFK	45.47	8.301e3					1.5	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.75	1.036e2					4.0	YES		bb		0.000

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	24.81	7.233e1					1.8	NO		db		0.000
2	FUNCTION1 HPCD...	24.74	7.779e1					1.7	NO		dd		0.000
3	FUNCTION1 HPCD...	24.67	9.255e1					1.4	NO		bd		0.000
4	FUNCTION1 HPCD...	22.83	1.096e2					1.5	NO		bb		0.000
5	FUNCTION1 HPCD...	22.04	1.557e2					1.9	NO		bb		0.000
6	FUNCTION1 HPCD...	21.60	1.444e2					2.0	NO		bb		0.000
7	FUNCTION1 HPCD...	21.41	1.449e2					1.6	NO		bb		0.000
8	FUNCTION1 HPCD...	27.09	2.295e2					4.0	YES		bb		0.000
9	FUNCTION1 HPCD...	26.81	8.660e1					1.7	NO		bb		0.000
10	FUNCTION1 HPCD...	26.41	1.075e2					1.6	NO		bb		0.000
11	FUNCTION1 HPCD...	25.76	8.295e1					1.2	NO		bb		0.000
12	FUNCTION1 HPCD...	25.36	7.573e1					1.7	NO		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.49	9.068e1					2.3	NO		bb		0.000
2	FUNCTION2 HPCD...	32.14	8.340e1					2.4	NO		bb		0.000
3	FUNCTION2 HPCD...	31.84	1.225e2					2.0	NO		bb		0.000
4	FUNCTION2 HPCD...	31.47	7.023e1					1.8	NO		bb		0.000
5	FUNCTION2 HPCD...	31.22	2.325e2					4.0	YES		bb		0.000
6	FUNCTION2 HPCD...	30.38	1.081e2					1.8	NO		bb		0.000
7	FUNCTION2 HPCD...	29.82	1.047e2					2.5	NO		bb		0.000
8	FUNCTION2 HPCD...	28.49	1.252e2					3.6	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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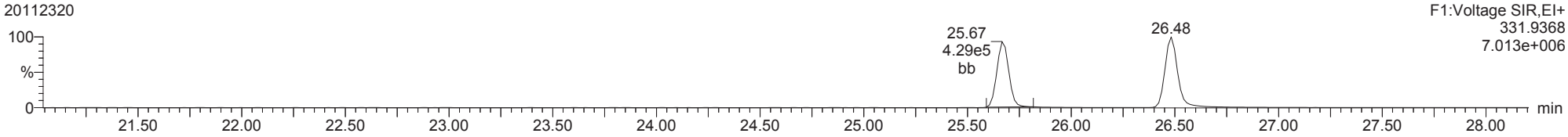

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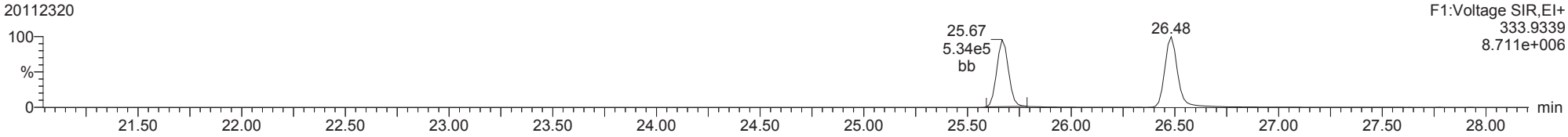

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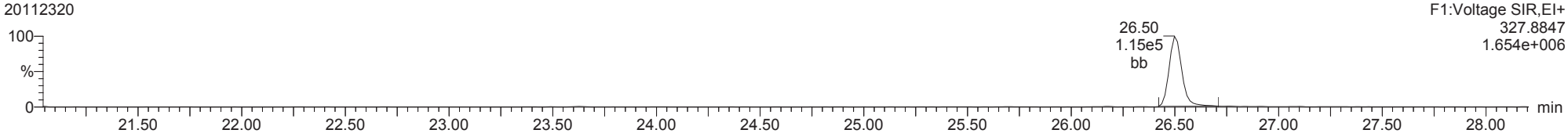

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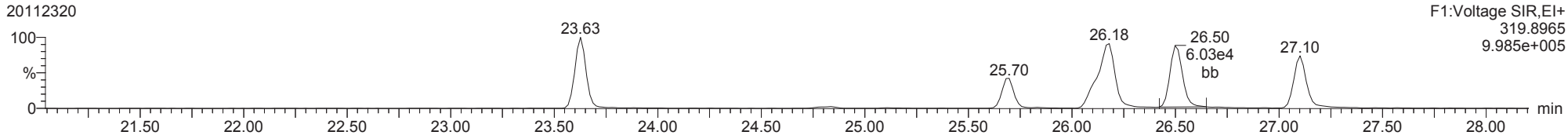

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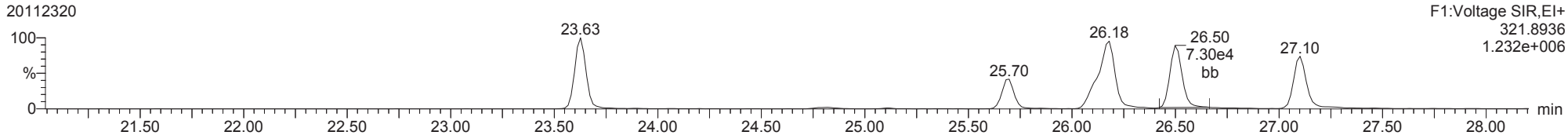

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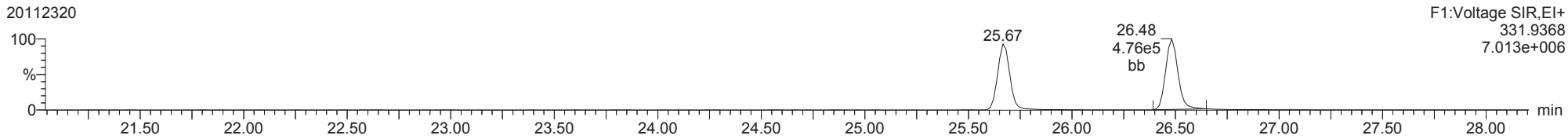

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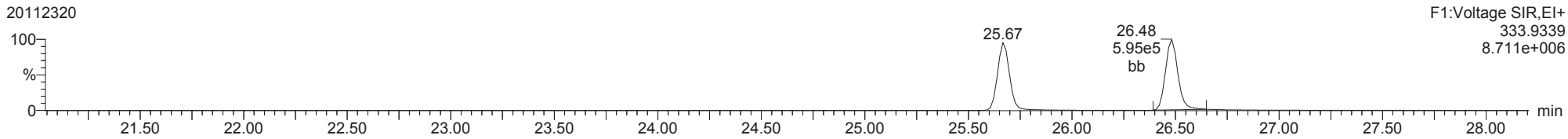

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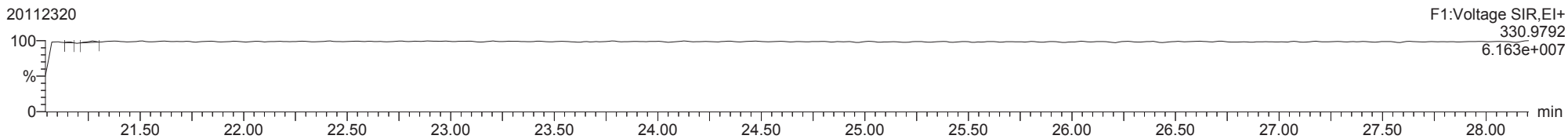

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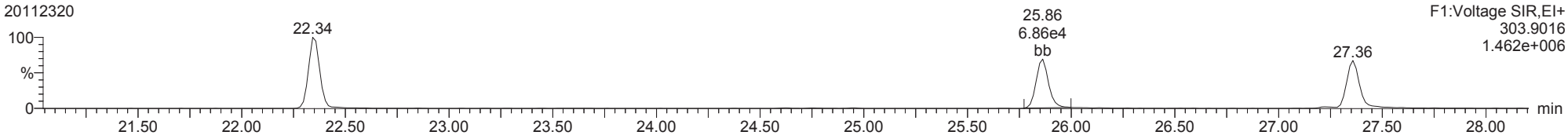

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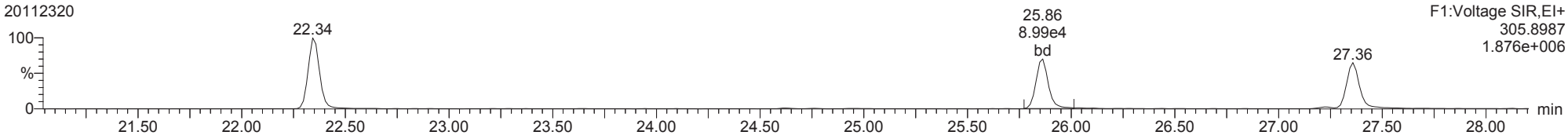

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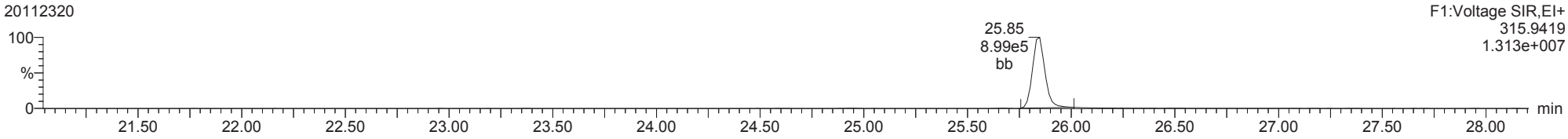

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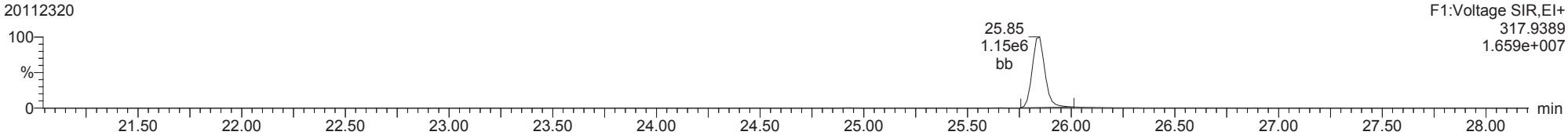

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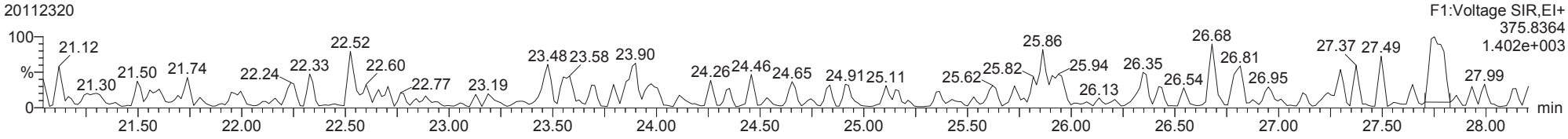

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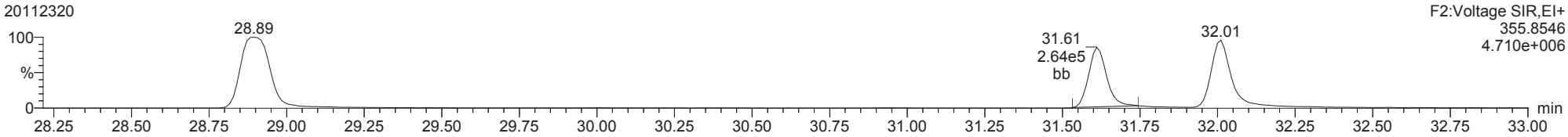
12378-PeCDD



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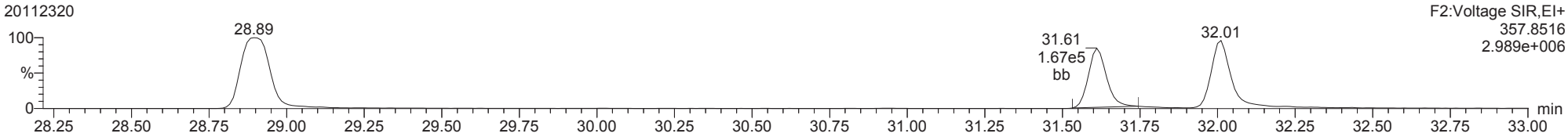

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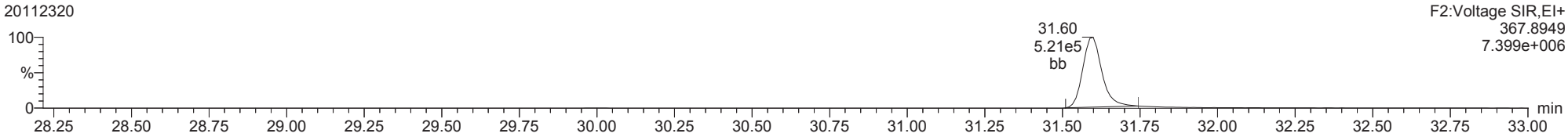

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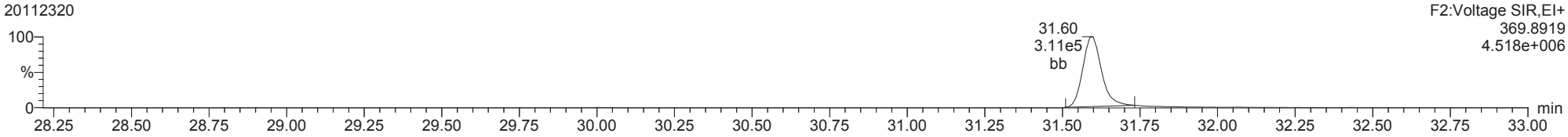
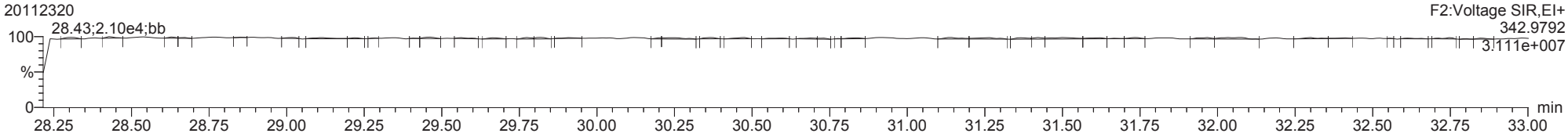


FUNCTION2 PFK



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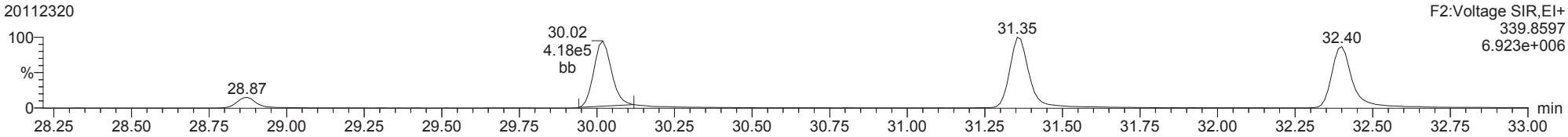
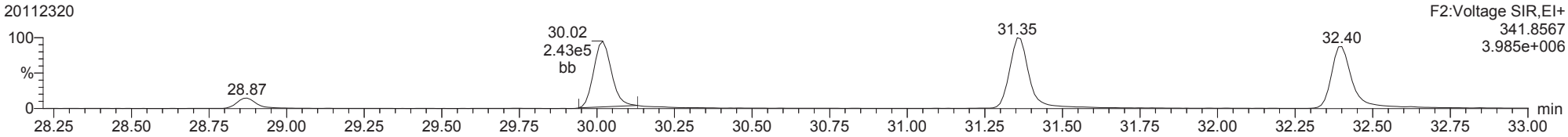
12378-PeCDF



12378-PeCDF



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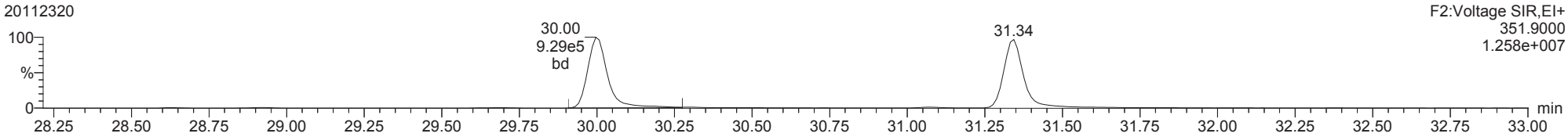

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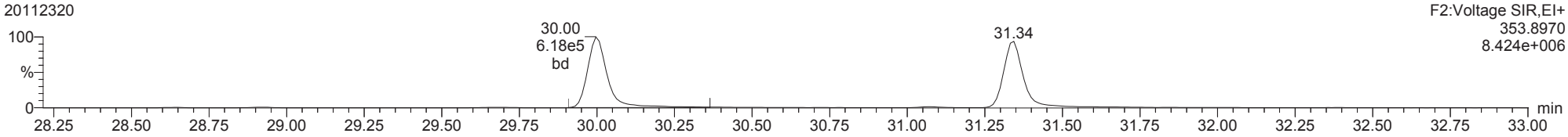

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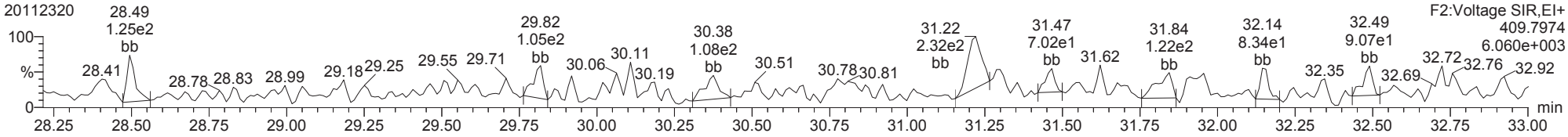

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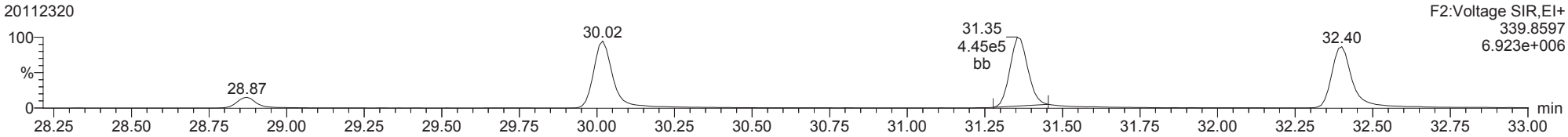

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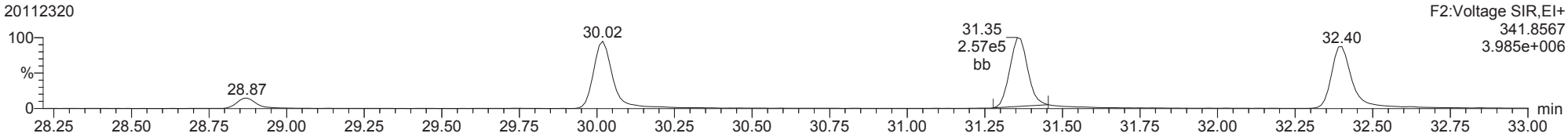

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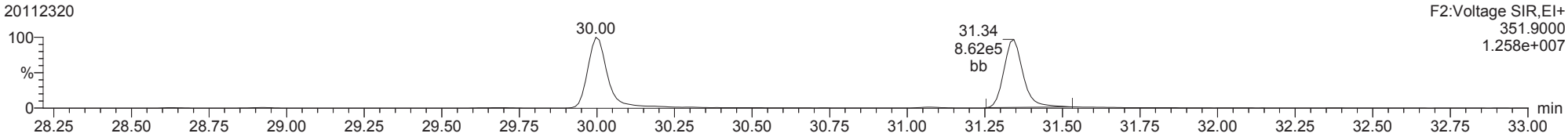

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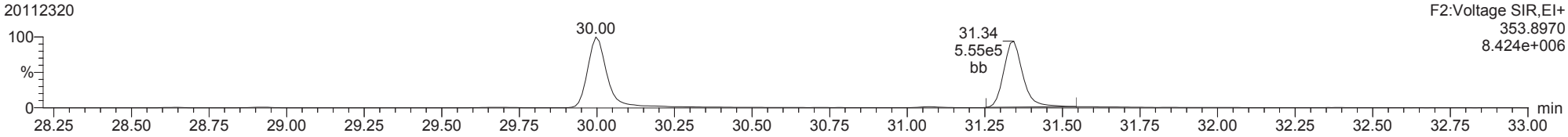

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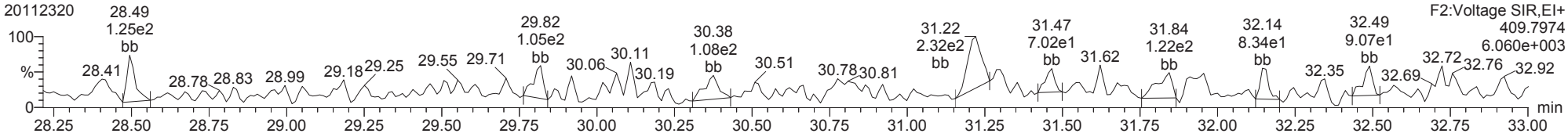

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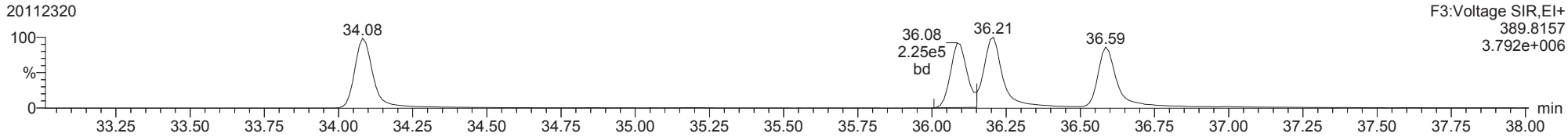

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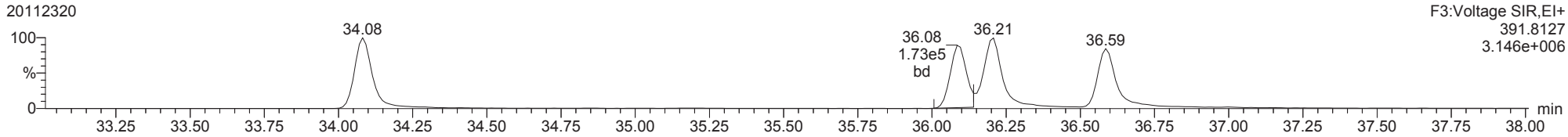

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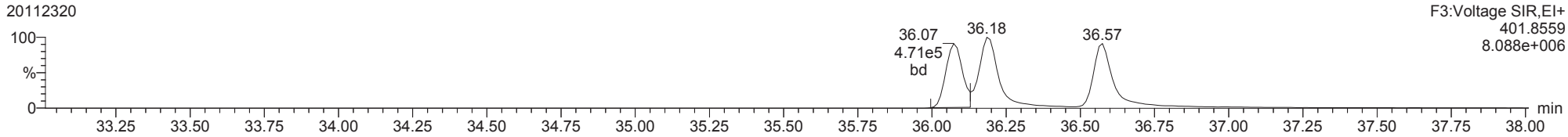

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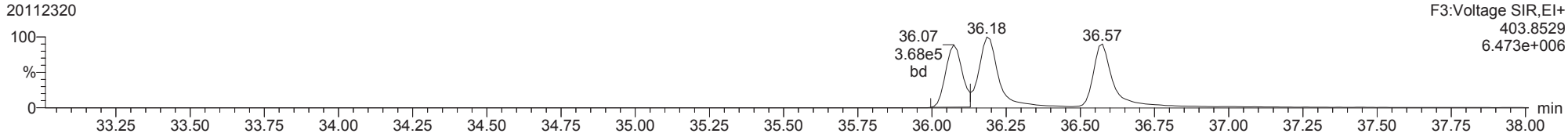

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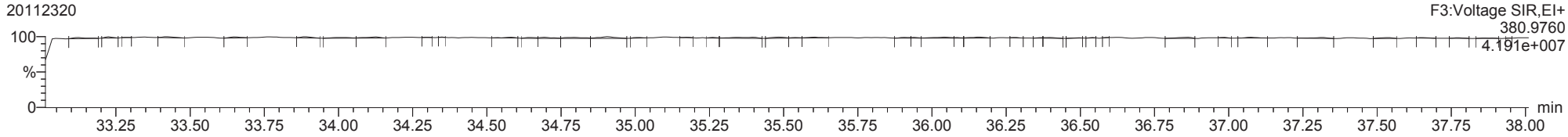

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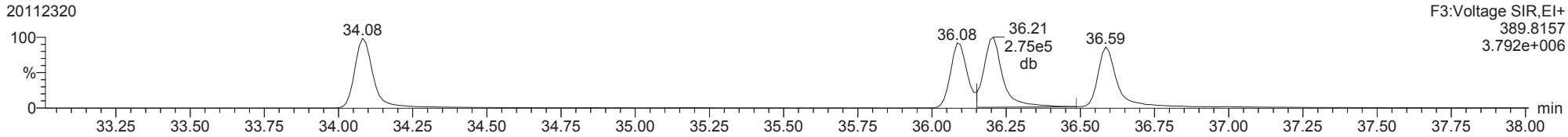

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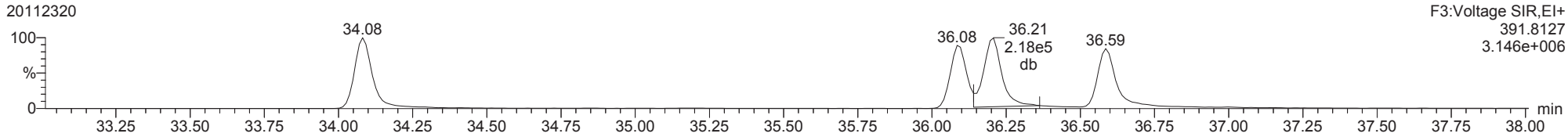

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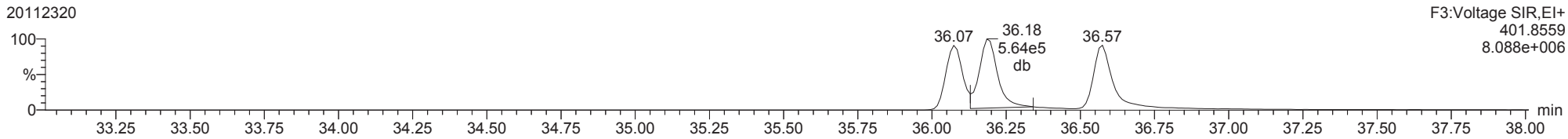

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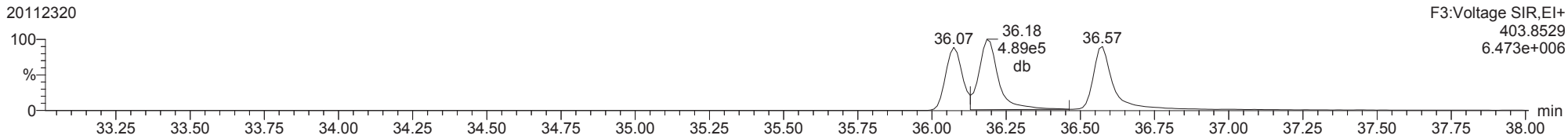

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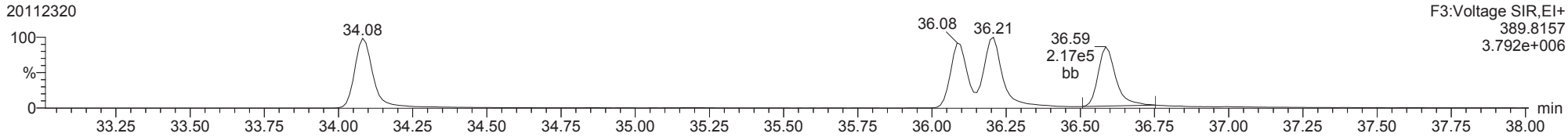

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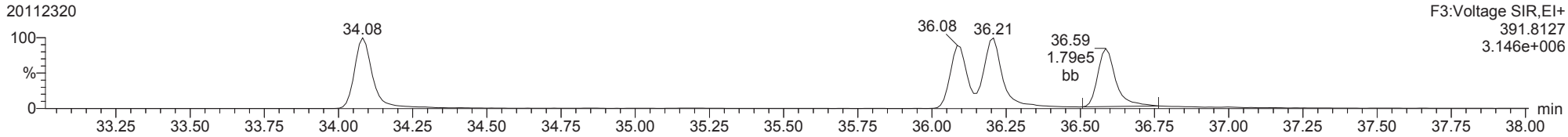

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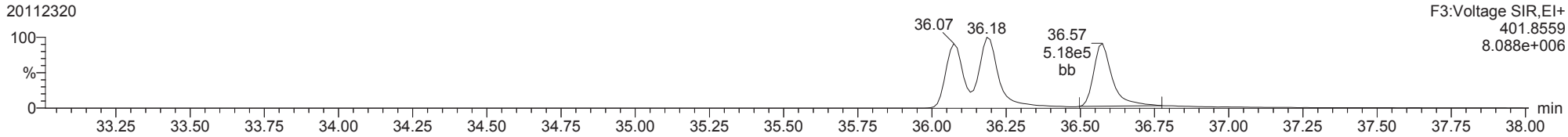

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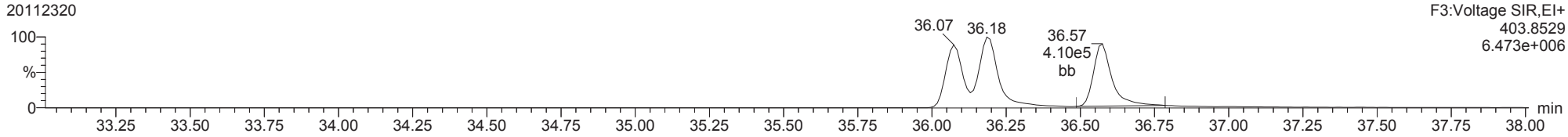

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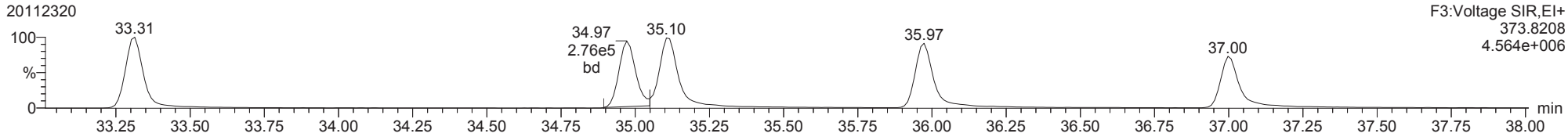

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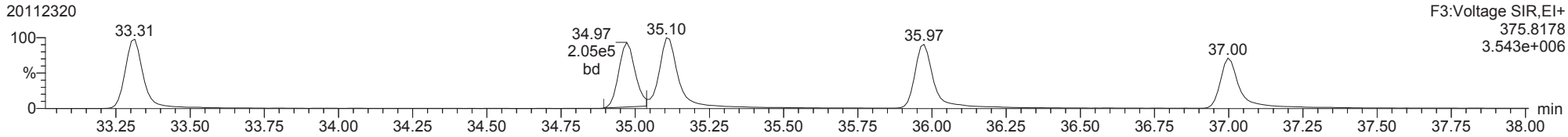

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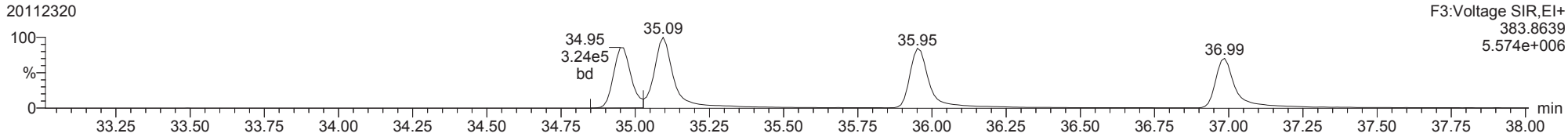

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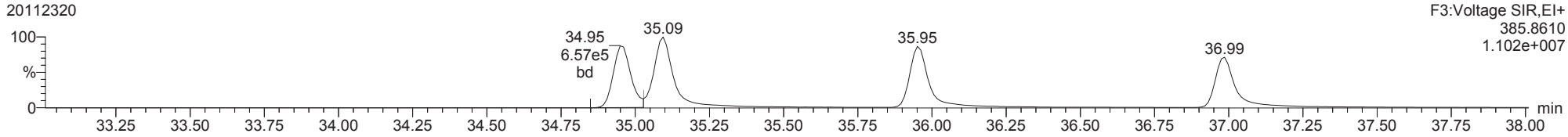

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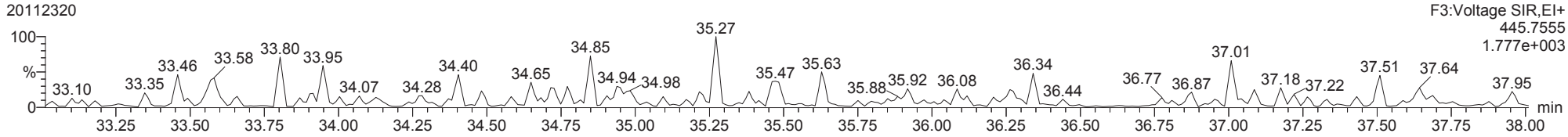

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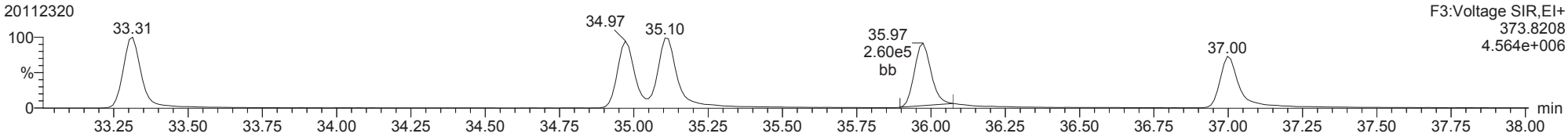
234678-HxCDF



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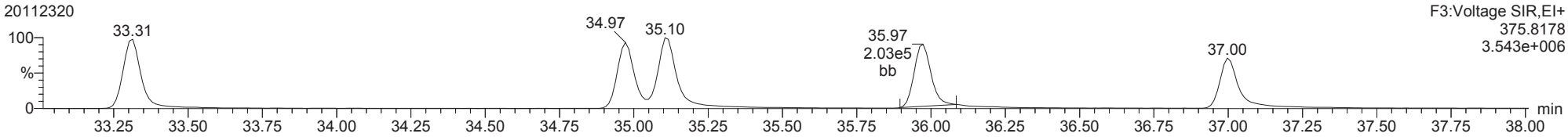

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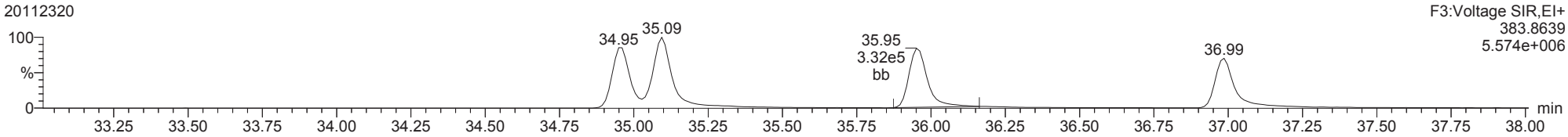

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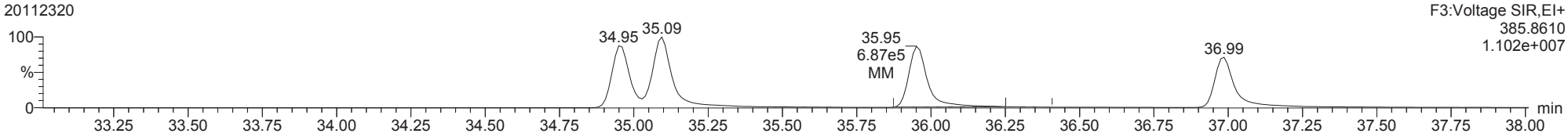

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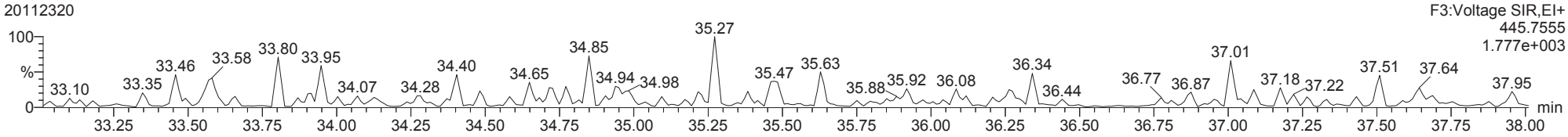

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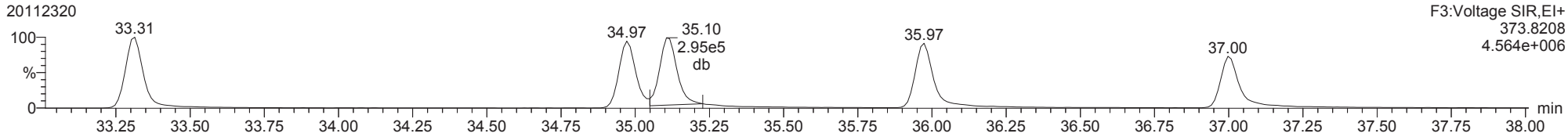

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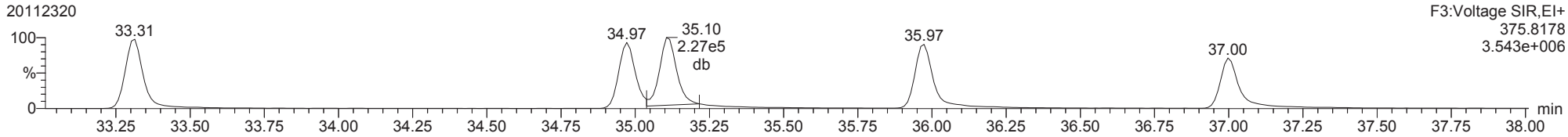

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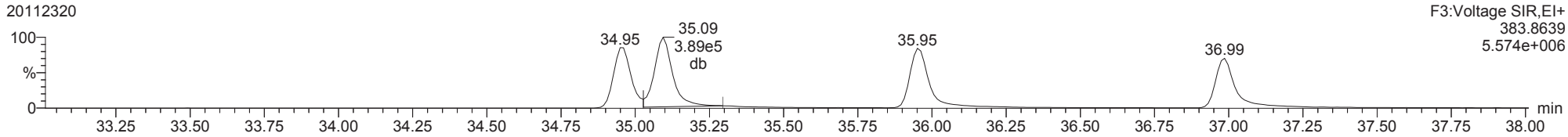

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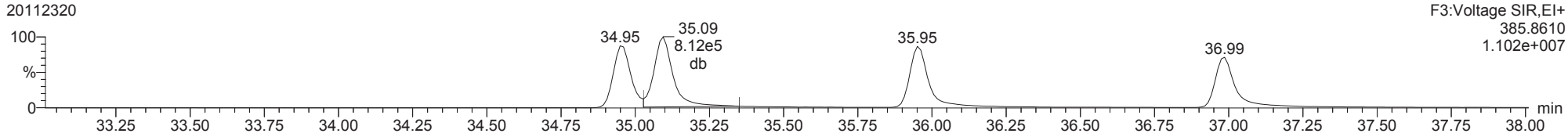

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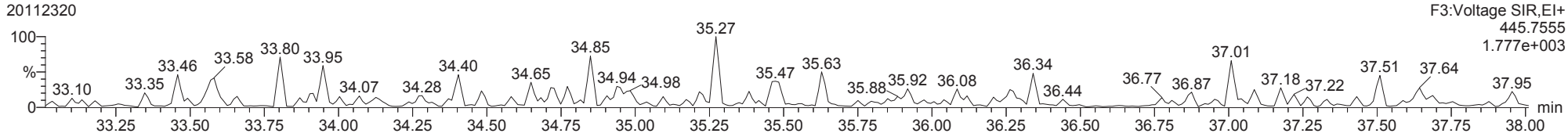

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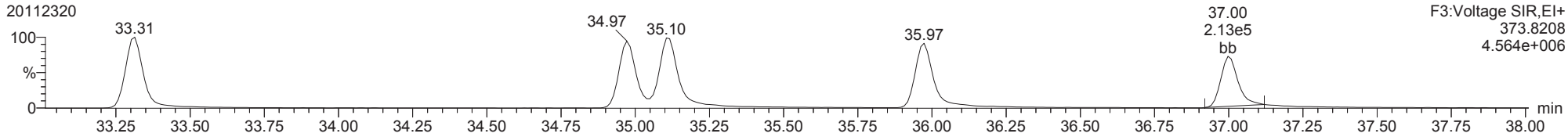
123789-HxCDF



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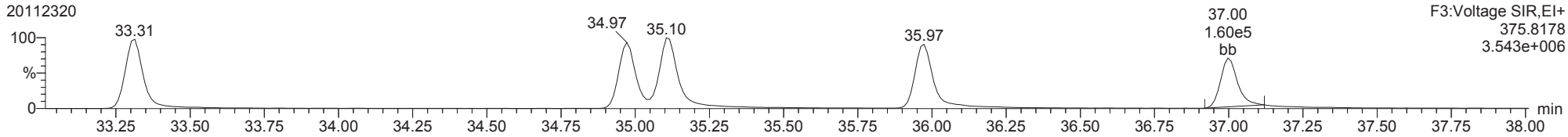

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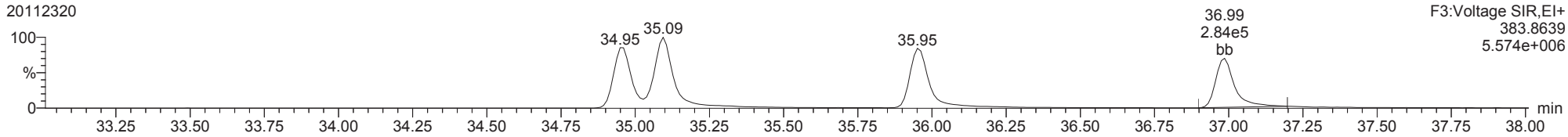

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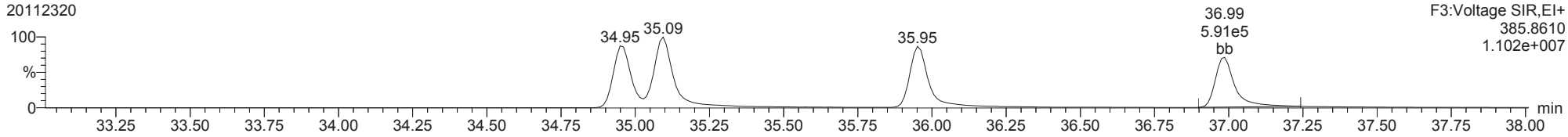
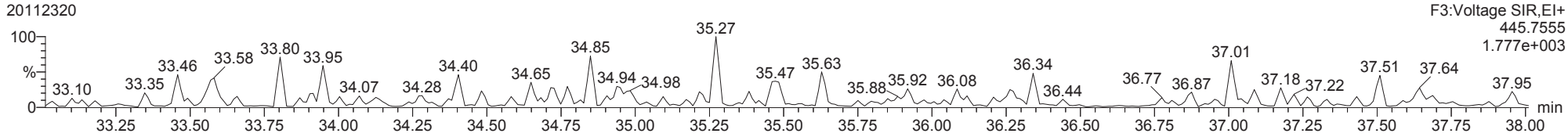


FUNCTION3 OCDPE



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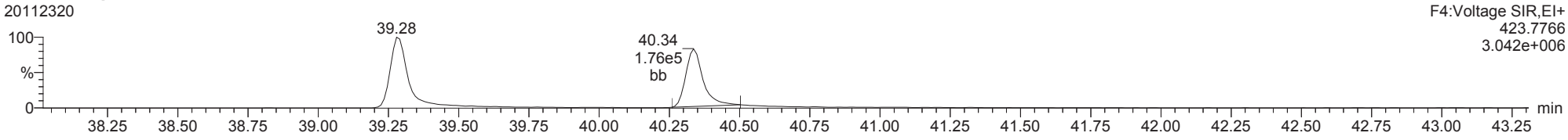
1234678-HpCDD



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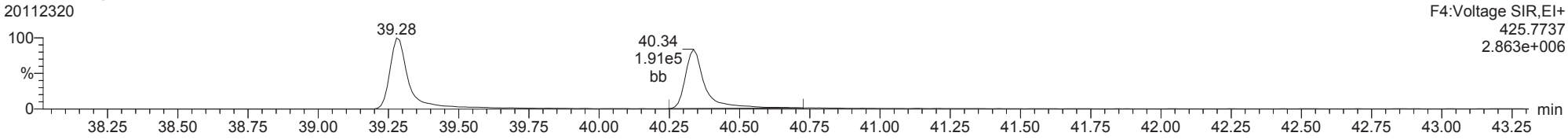

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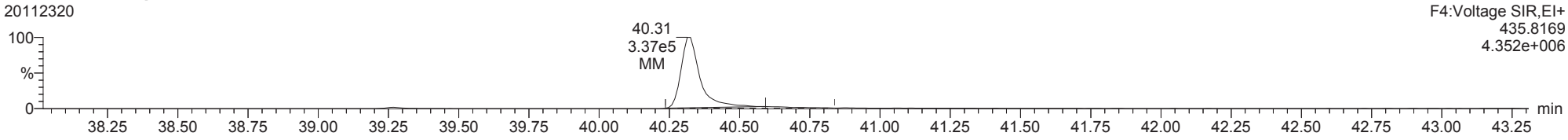

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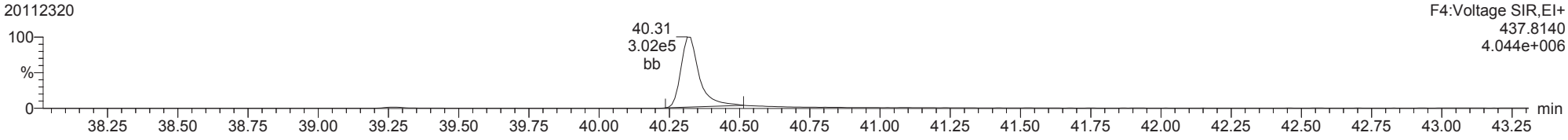
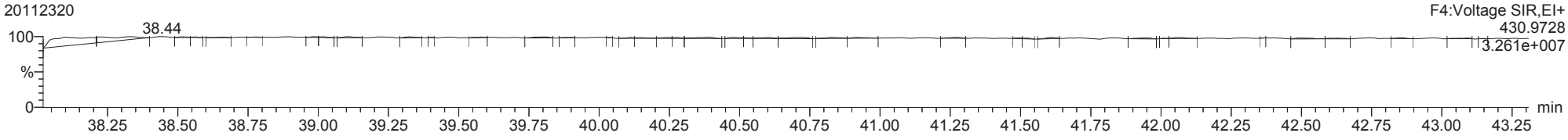


FUNCTION4 PFK



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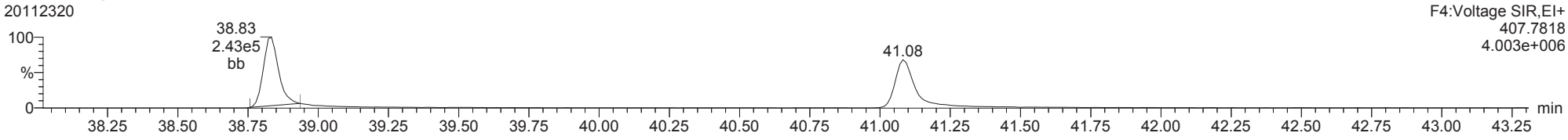

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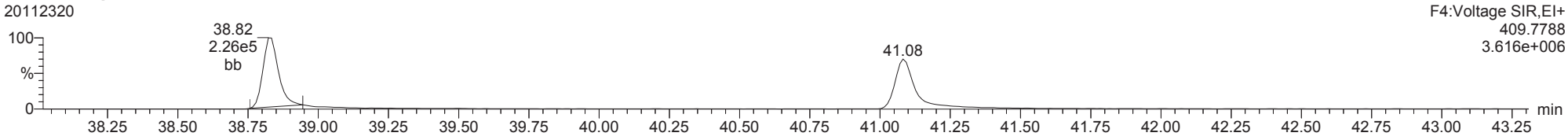

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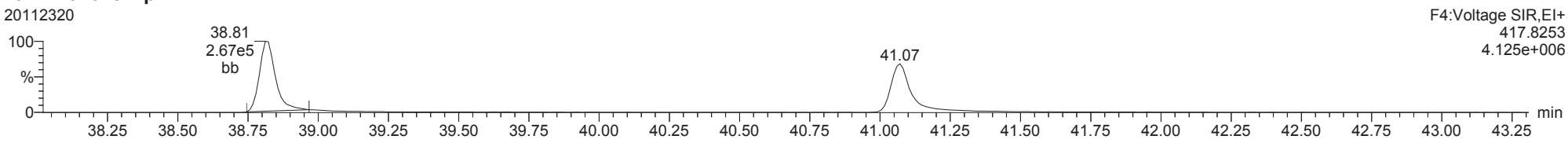

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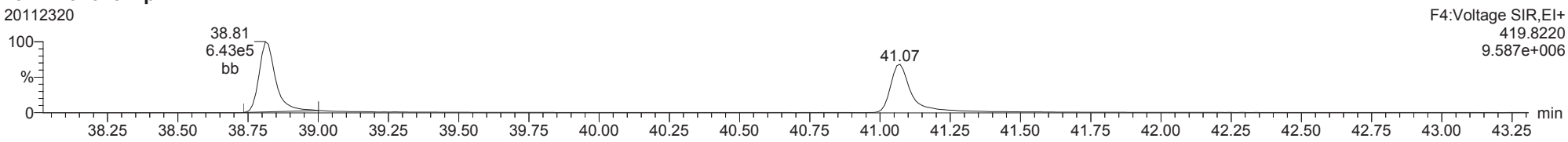
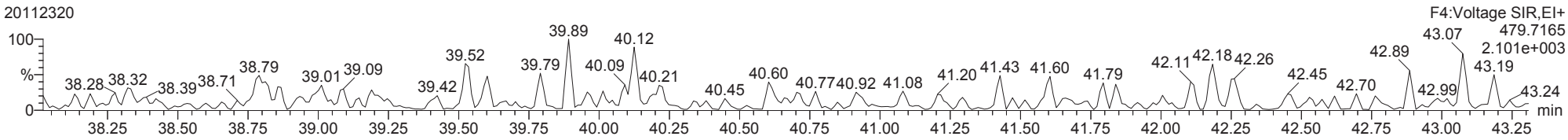


FUNCTION4 NCDPE



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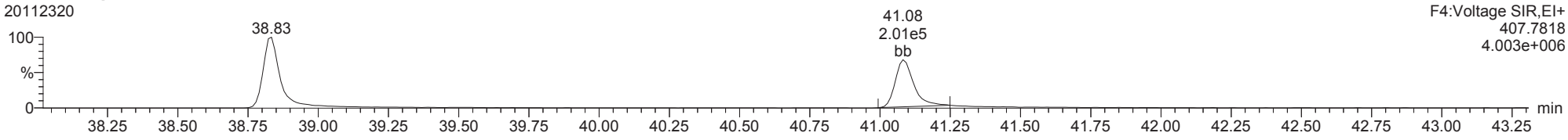
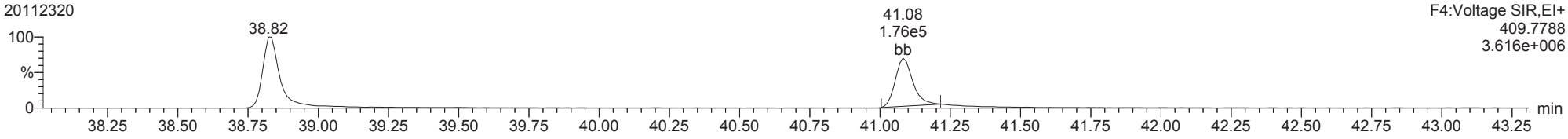
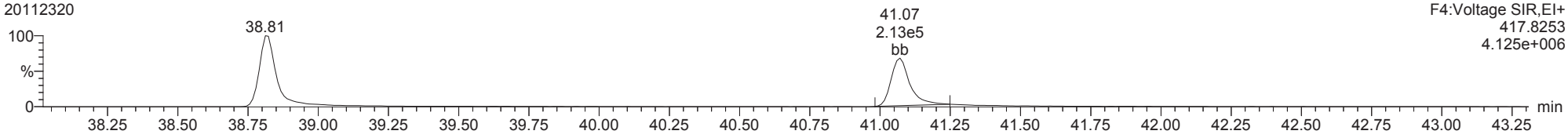
1234789-HpCDF



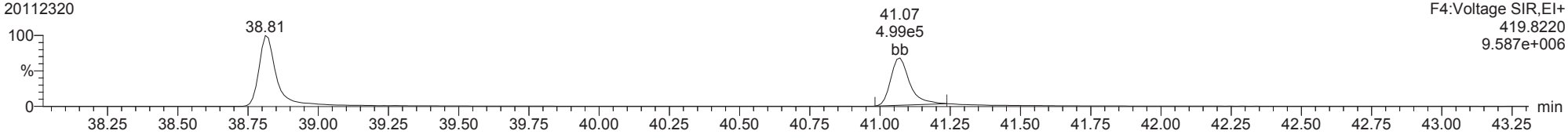
1234789-HpCDF



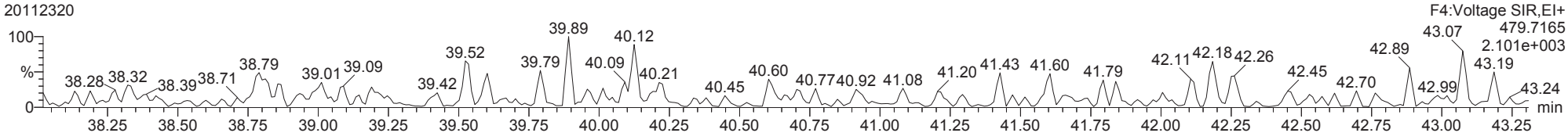
13C-1234789-HpCDF



13C-1234789-HpCDF

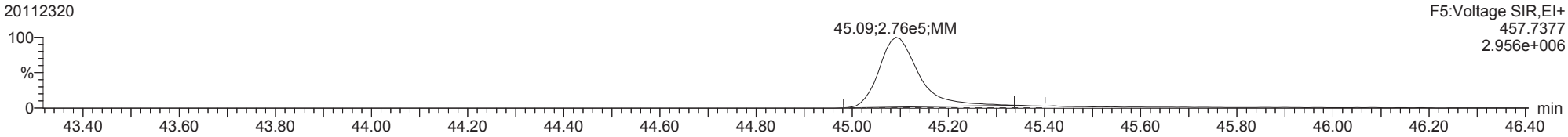


FUNCTION4 NCDPE



ID: CS3S3, Name: 20112320, Date: 24-Nov-2020, Time: 01:27:56, Conditions: AUTOSPEC01, User: pk

OCDD



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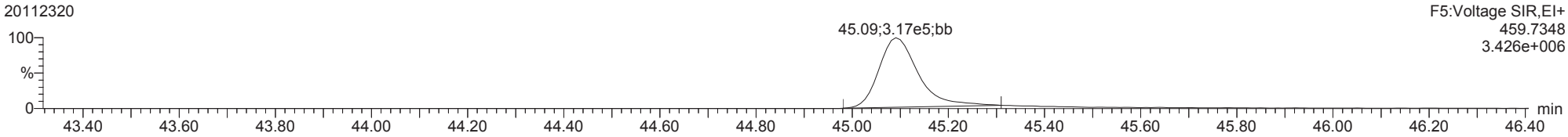

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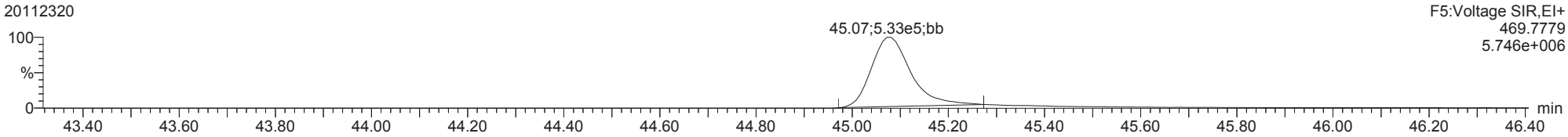

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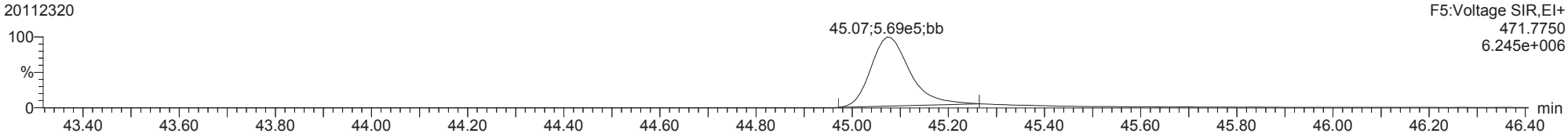
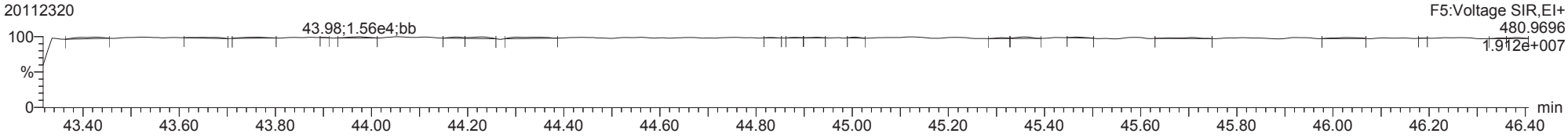
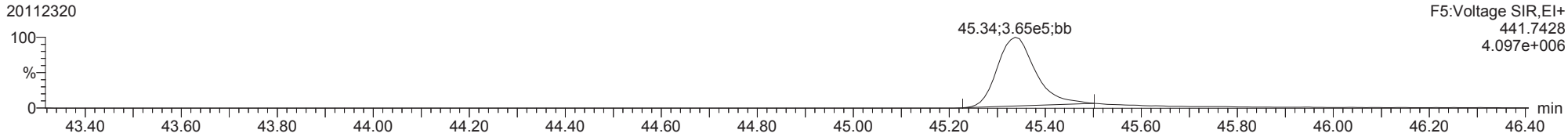


FUNCTION5 PFK

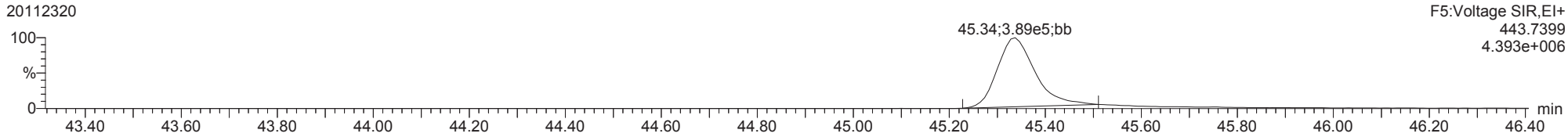


ID: CS3S3, Name: 20112320, Date: 24-Nov-2020, Time: 01:27:56, Conditions: AUTOSPEC01, User: pk

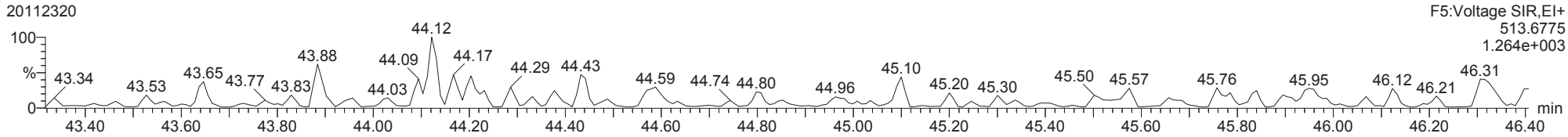
OCDF



OCDF

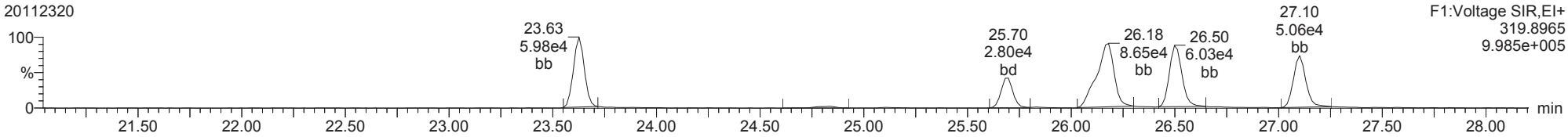


FUNCTION5 DCDPE

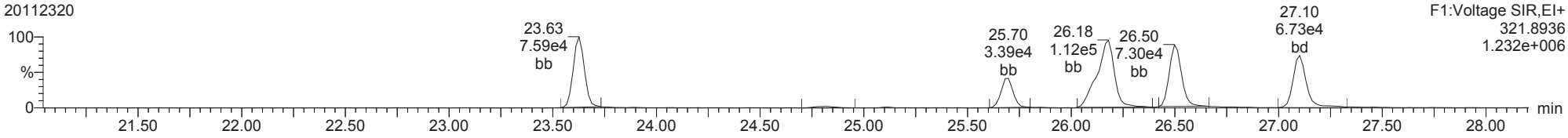


ID: CS3S3, Name: 20112320, Date: 24-Nov-2020, Time: 01:27:56, Conditions: AUTOSPEC01, User: pk

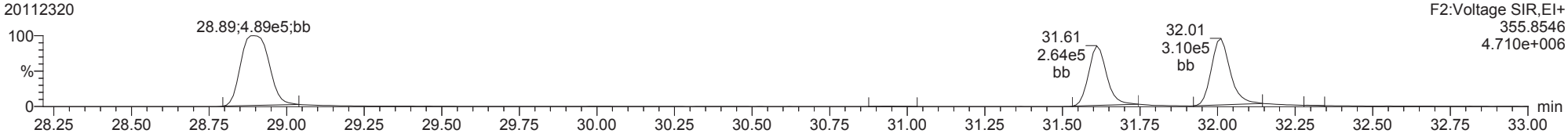
Total-tetradioxins



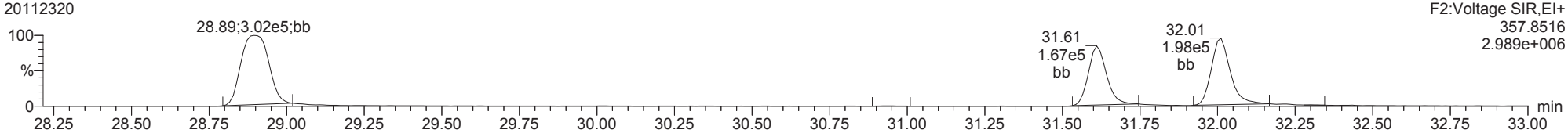
Total-tetradioxins



Total-pentadioxins

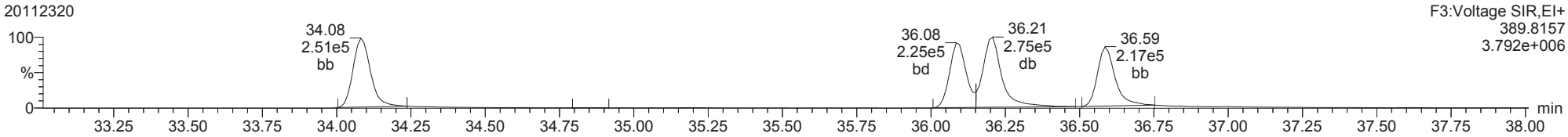


Total-pentadioxins

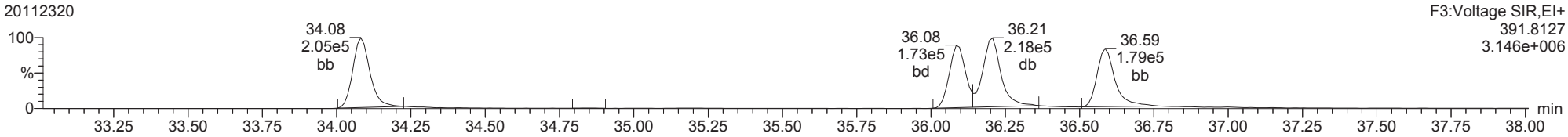


ID: CS3S3, Name: 20112320, Date: 24-Nov-2020, Time: 01:27:56, Conditions: AUTOSPEC01, User: pk

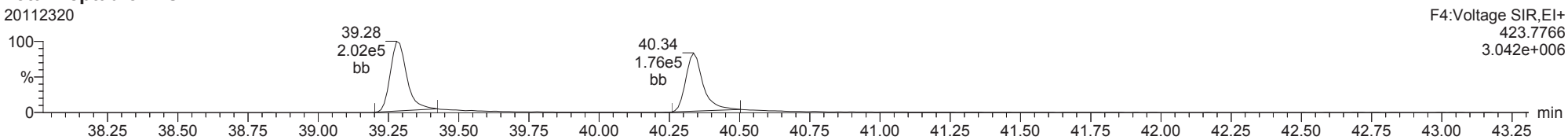
Total-hexadioxins



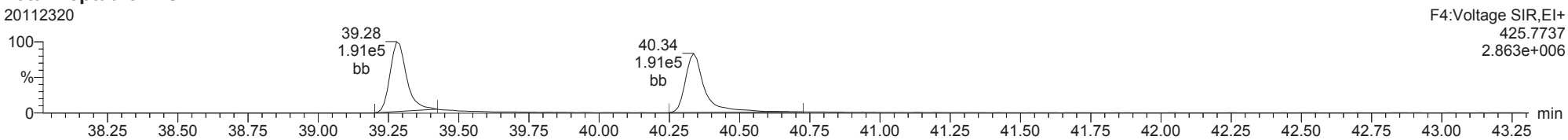
Total-hexadioxins



Total-heptadioxins

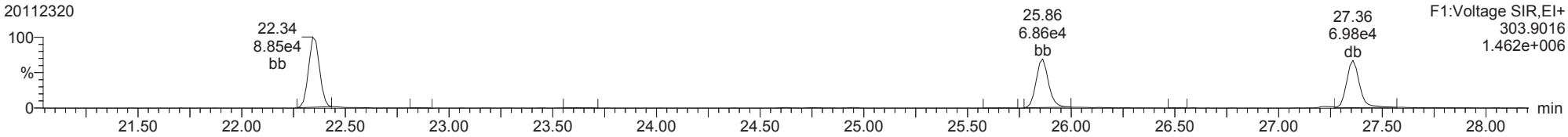


Total-heptadioxins



ID: CS3S3, Name: 20112320, Date: 24-Nov-2020, Time: 01:27:56, Conditions: AUTOSPEC01, User: pk

Total-tetrafurans



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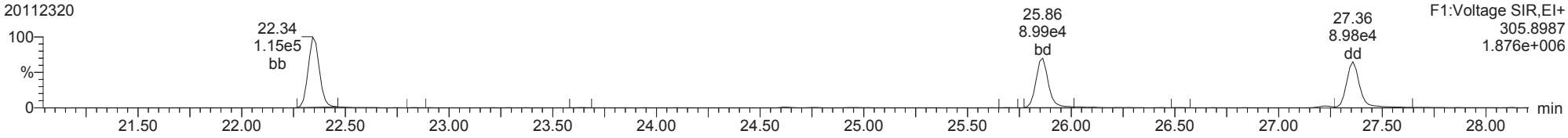

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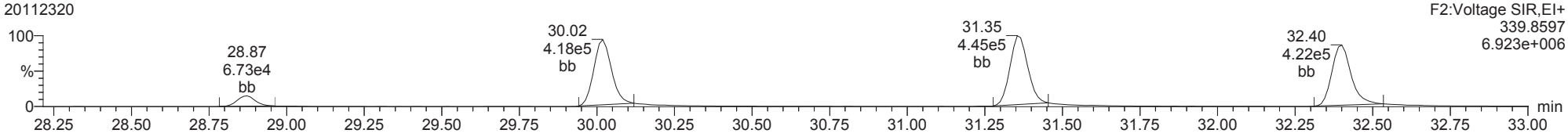

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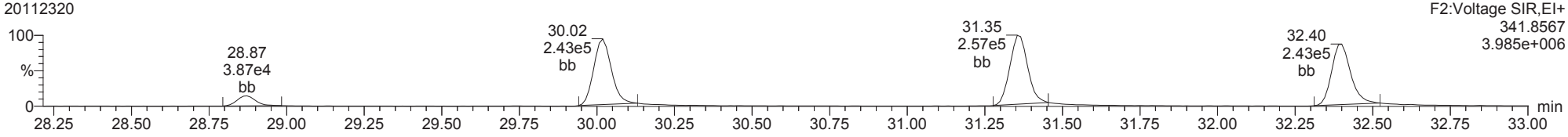

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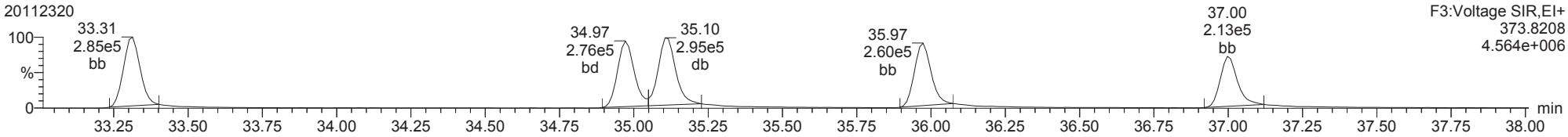

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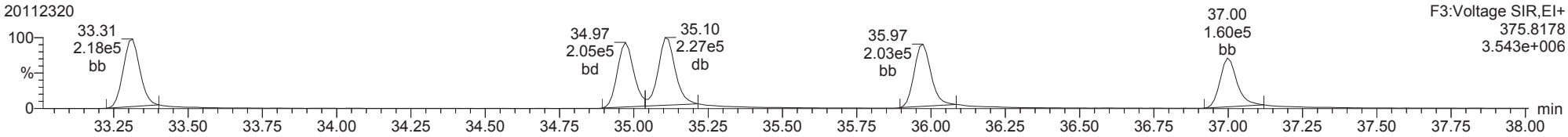

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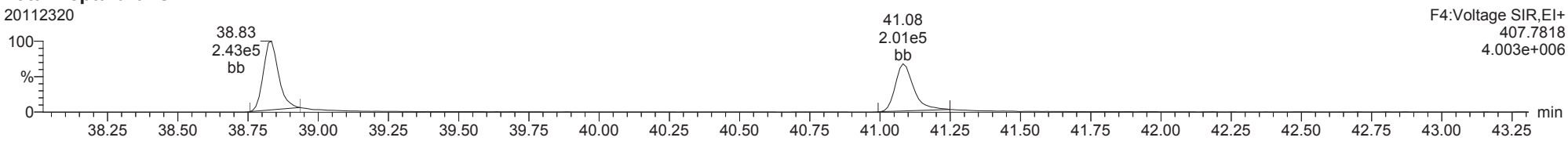

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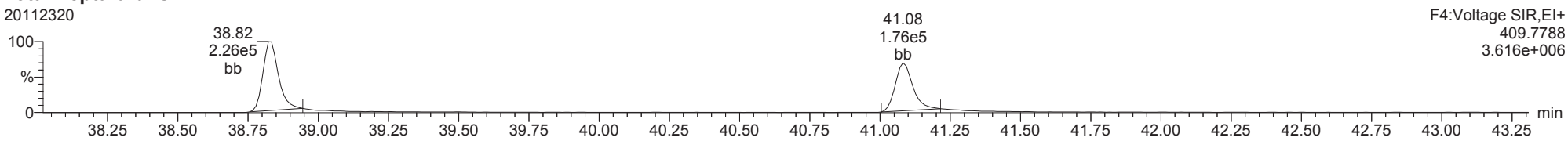

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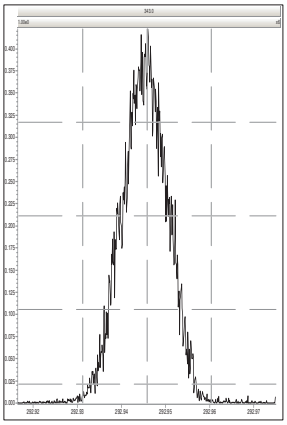
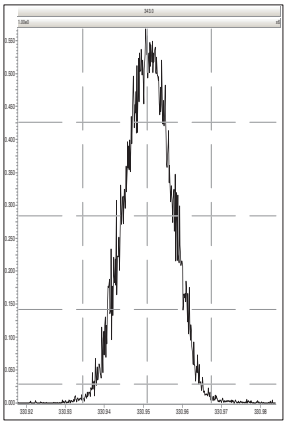
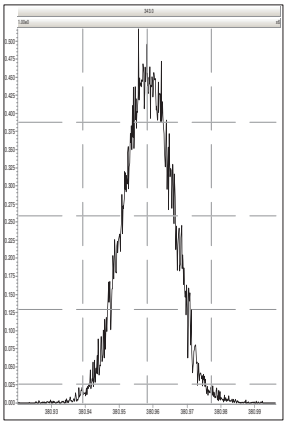
M 292.9824 R 13054



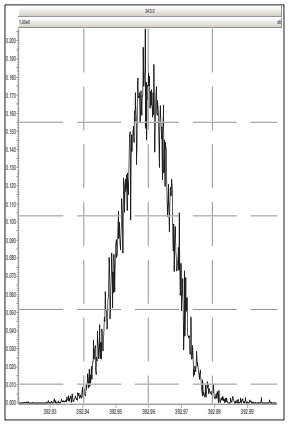
M 330.9792 R 12317



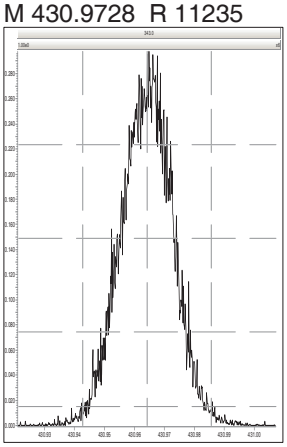
M 380.9760 R 11471



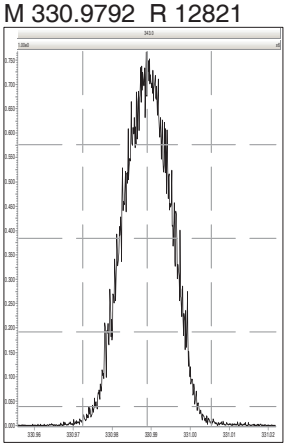
M 392.9760 R 11494



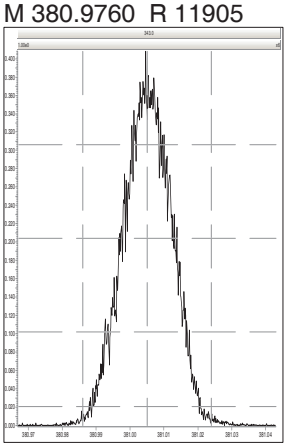
M 430.9728 R 11235



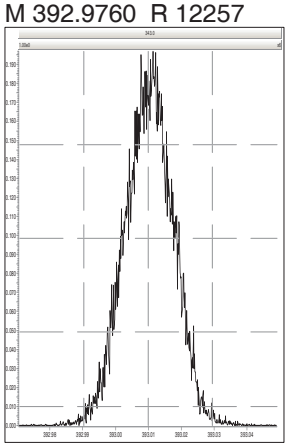
M 330.9792 R 12821



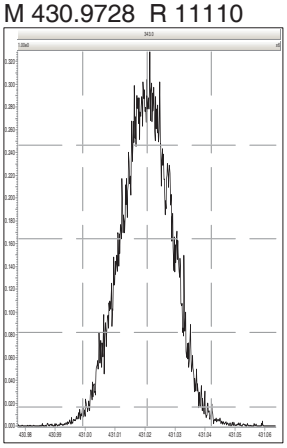
M 380.9760 R 11905



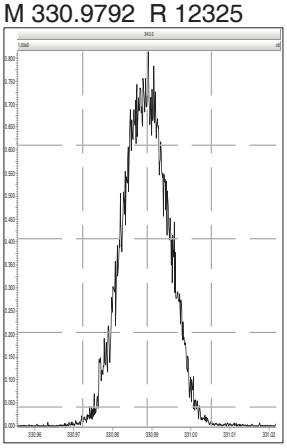
M 392.9760 R 12257



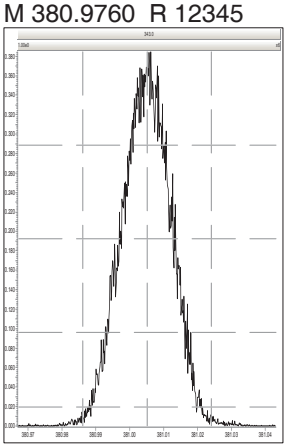
M 430.9728 R 11110



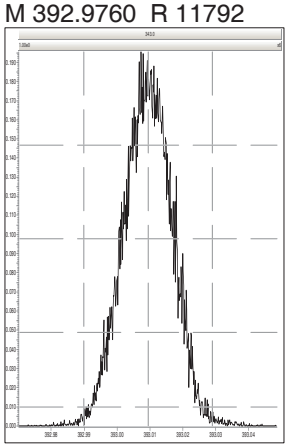
M 330.9792 R 12325



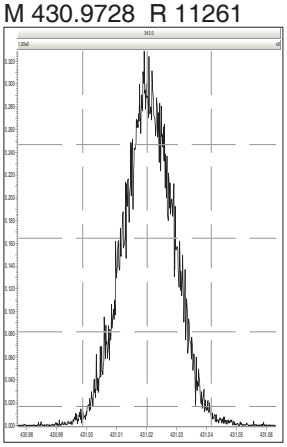
M 380.9760 R 12345



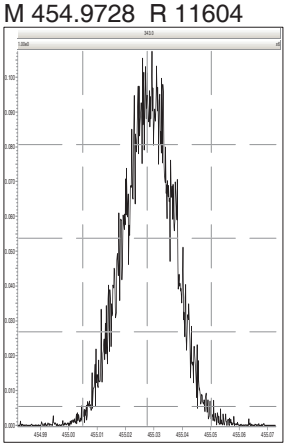
M 392.9760 R 11792



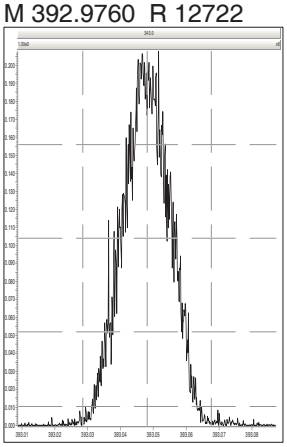
M 430.9728 R 11261



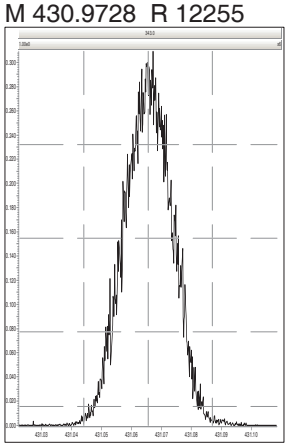
M 454.9728 R 11604



M 392.9760 R 12722



M 430.9728 R 12255



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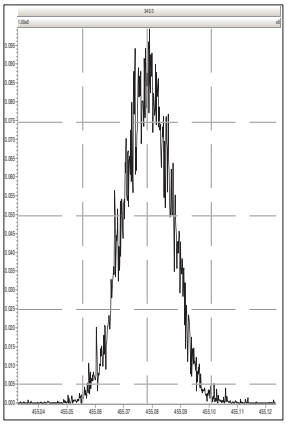
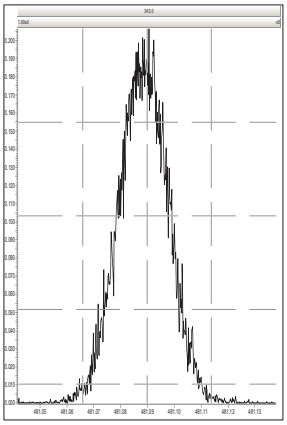
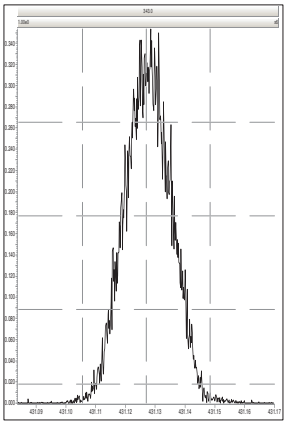
M 454.9728 R 12702



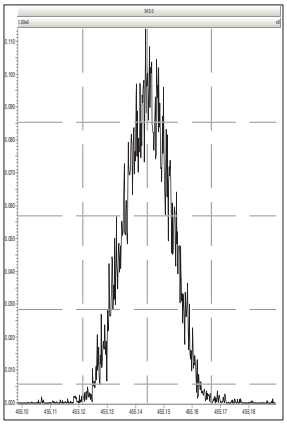
M 480.9696 R 11823



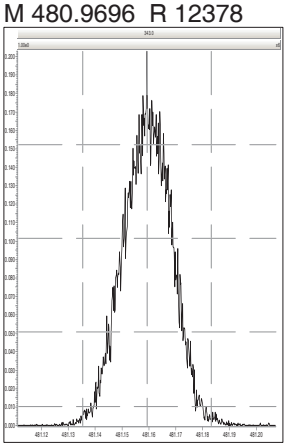
M 430.9728 R 12894



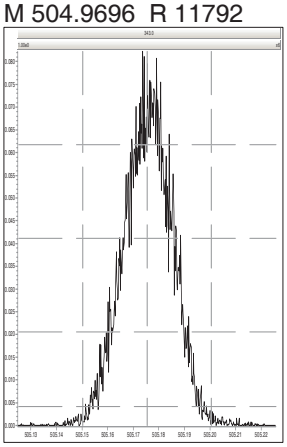
M 454.9728 R 12376



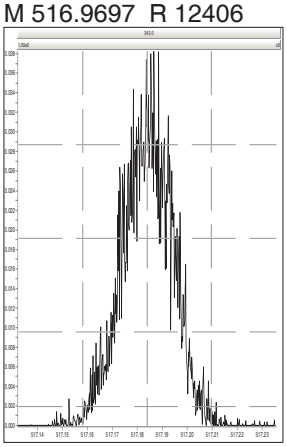
M 480.9696 R 12378

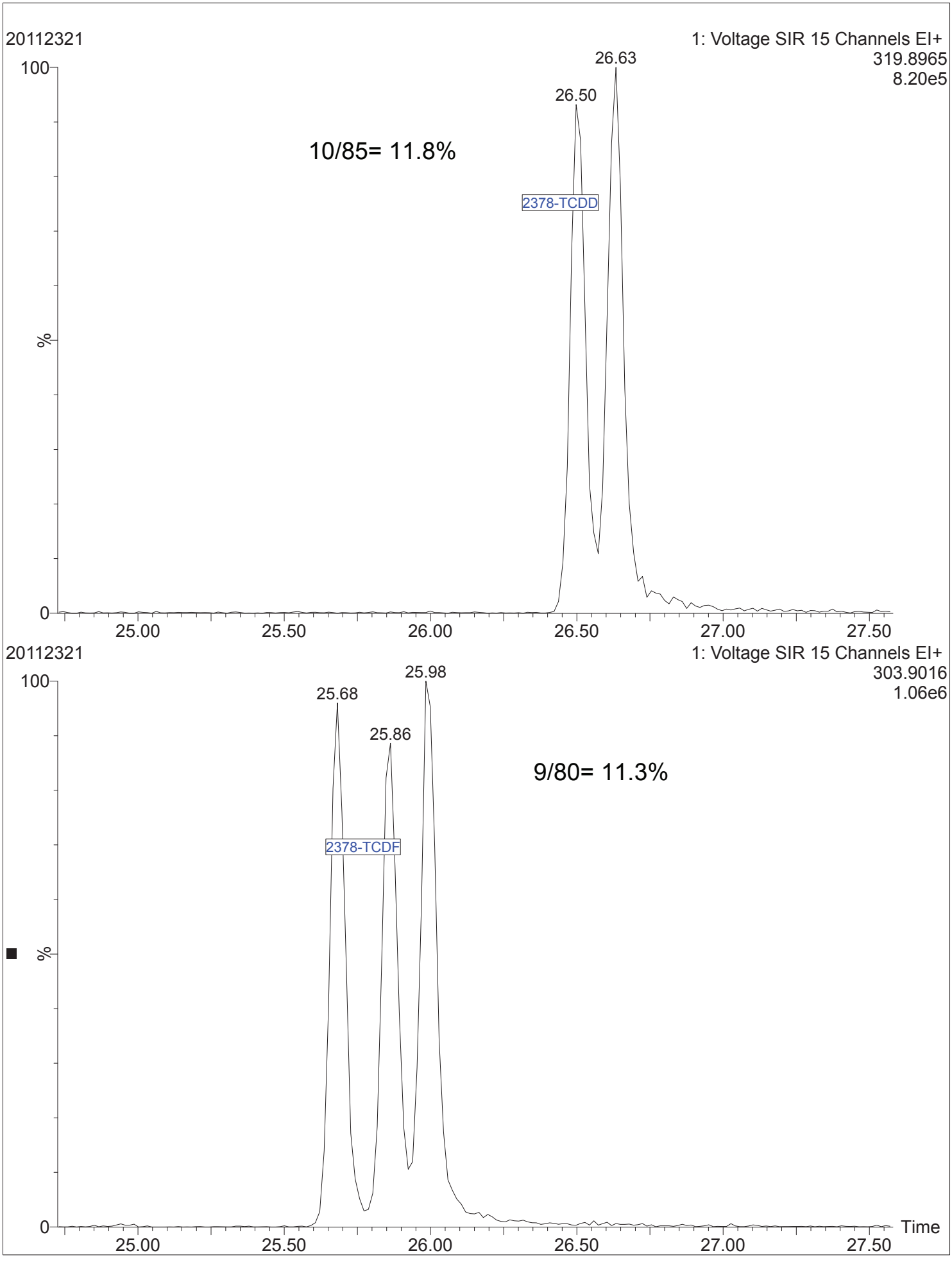


M 504.9696 R 11792



M 516.9697 R 12406




20112321
1: Voltage SIR 15 Channels EI+
319.8965
8.20e5
100
26.63
26.50
10/85= 11.8%
2378-TCDD
%
0
25.00
25.50
26.00
26.50
27.00
27.50
20112321
1: Voltage SIR 15 Channels EI+
303.9016
1.06e6
100
25.98
25.68
25.86
9/80= 11.3%
2378-TCDF
%
0
Time
25.00
25.50
26.00
26.50
27.00
27.50

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY
EPA 1613B

Lab Name: Analytical Resources, Inc. SDG: 20J0389

Instrument .ID: AUTOSPEC01 Lab File ID: 20102903

Date Analyzed: 10/29/20 Time Analyzed: 16:43

Lab Sample ID: SIJ0454-RES1 Sequence: SIJ0454

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 13.8

3467-TCDF/2378-TCDF: 16

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SIJ0454-ICV1	CS3J1	20102902	10/29/2020	15:55
SIJ0454-RES1	ISCJ1	20102903	10/29/2020	16:43
SIJ0454-CAL1	CSLCJ	20102904A	10/29/2020	18:20
SIJ0454-CAL2	CS1CJ	20102905	10/29/2020	19:09
SIJ0454-CAL3	CS2CJ	20102906	10/29/2020	19:58
SIJ0454-CAL4	CS3CJ	20102907	10/29/2020	20:46
SIJ0454-CAL5	CS4CJ	20102908	10/29/2020	21:35
SIJ0454-CAL6	CS5CJ	20102909	10/29/2020	22:23
SIJ0454-SCV1	ICVCJ	20102910	10/29/2020	23:12
SIJ0454-CCV1	CS3J2	20102911	10/30/2020	00:01
SIJ0454-RES2	ISCJ2	20102912	10/30/2020	00:54

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY
EPA 1613B

Lab Name: Analytical Resources, Inc. SDG: 20J0389

Instrument .ID: AUTOSPEC01 Lab File ID: 20102912

Date Analyzed: 10/30/20 Time Analyzed: 00:54

Lab Sample ID: SIJ0454-RES2 Sequence: SIJ0454

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 21.3

3467-TCDF/2378-TCDF: 22.5

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SIJ0454-ICV1	CS3J1	20102902	10/29/2020	15:55
SIJ0454-RES1	ISCJ1	20102903	10/29/2020	16:43
SIJ0454-CAL1	CSLCJ	20102904A	10/29/2020	18:20
SIJ0454-CAL2	CS1CJ	20102905	10/29/2020	19:09
SIJ0454-CAL3	CS2CJ	20102906	10/29/2020	19:58
SIJ0454-CAL4	CS3CJ	20102907	10/29/2020	20:46
SIJ0454-CAL5	CS4CJ	20102908	10/29/2020	21:35
SIJ0454-CAL6	CS5CJ	20102909	10/29/2020	22:23
SIJ0454-SCV1	ICVCJ	20102910	10/29/2020	23:12
SIJ0454-CCV1	CS3J2	20102911	10/30/2020	00:01
SIJ0454-RES2	ISCJ2	20102912	10/30/2020	00:54

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY
EPA 1613B

Lab Name: Analytical Resources, Inc. SDG: 20J0389

Instrument .ID: AUTOSPEC01 Lab File ID: 20111803

Date Analyzed: 11/18/20 Time Analyzed: 12:24

Lab Sample ID: SIK0272-RES1 Sequence: SIK0272

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 14.1

3467-TCDF/2378-TCDF: 9.2

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SIK0272-ICV1	CS3R1	20111802	11/18/2020	11:32
SIK0272-RES1	ISCR1	20111803	11/18/2020	12:24
20J0389-06	MW-CP5-102720	20111806	11/18/2020	14:52
SIK0272-CCV1	CS3R2	20111808	11/18/2020	16:32
SIK0272-RES2	ISCR2	20111809	11/18/2020	17:26
BIK0278-BLK2	Blank	20111810	11/18/2020	18:17
BIK0278-BS2	LCS	20111811	11/18/2020	19:07

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY
EPA 1613B

Lab Name: Analytical Resources, Inc. SDG: 20J0389

Instrument .ID: AUTOSPEC01 Lab File ID: 20111809

Date Analyzed: 11/18/20 Time Analyzed: 17:26

Lab Sample ID: SIK0272-RES2 Sequence: SIK0272

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 8.6

3467-TCDF/2378-TCDF: 6.8

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SIK0272-ICV1	CS3R1	20111802	11/18/2020	11:32
SIK0272-RES1	ISCR1	20111803	11/18/2020	12:24
20J0389-06	MW-CP5-102720	20111806	11/18/2020	14:52
SIK0272-CCV1	CS3R2	20111808	11/18/2020	16:32
SIK0272-RES2	ISCR2	20111809	11/18/2020	17:26
BIK0278-BLK2	Blank	20111810	11/18/2020	18:17
BIK0278-BS2	LCS	20111811	11/18/2020	19:07

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY
EPA 1613B

Lab Name: Analytical Resources, Inc. SDG: 20J0389

Instrument .ID: AUTOSPEC01 Lab File ID: 20112303

Date Analyzed: 11/23/20 Time Analyzed: 11:19

Lab Sample ID: SIK0339-RES1 Sequence: SIK0339

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 15.4

3467-TCDF/2378-TCDF: 11.5

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SIK0339-ICV1	CS3S1	20112302	11/23/2020	10:28
SIK0339-RES1	ISCS1	20112303	11/23/2020	11:19
BIK0510-BLK1	DBLK19	20112304	11/23/2020	12:11
BIK0510-BS1	DLCS19	20112305	11/23/2020	13:00
BIK0510-BSD1	DLCSD19	20112306	11/23/2020	13:49
20J0389-01	MW-VB3-102720	20112307	11/23/2020	14:39
20J0389-02	MW-CP1-102720	20112308	11/23/2020	15:28
20J0389-03	MW-CP2-102720	20112309	11/23/2020	16:18
20J0389-04	MW-CP3-102720	20112310	11/23/2020	17:07
SIK0339-CCV1	CS3S2	20112311	11/23/2020	17:57
SIK0339-RES2	ISCS2	20112312	11/23/2020	18:50
20J0389-05	MW-CP4-102720	20112313	11/23/2020	19:42
20J0389-07	MW-CP6-102720	20112314	11/23/2020	20:31
20J0389-08	MW-CP7-102720	20112315	11/23/2020	21:20
20J0389-09	MW-CP2-102720-D	20112316	11/23/2020	22:10
20J0389-10	MW-C1/VB1-102820	20112317	11/23/2020	22:59
20J0389-11	MW-C101-102820	20112318	11/23/2020	23:49
20J0389-14	HCOO-B312-102820	20112319	11/24/2020	00:38
SIK0339-CCV2	CS3S3	20112320	11/24/2020	01:27
SIK0339-RES3	ISCS3	20112321	11/24/2020	02:21

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY
EPA 1613B

Lab Name: Analytical Resources, Inc. SDG: 20J0389

Instrument .ID: AUTOSPEC01 Lab File ID: 20112312

Date Analyzed: 11/23/20 Time Analyzed: 18:50

Lab Sample ID: SIK0339-RES2 Sequence: SIK0339

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 14.3

3467-TCDF/2378-TCDF: 11.2

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SIK0339-ICV1	CS3S1	20112302	11/23/2020	10:28
SIK0339-RES1	ISCS1	20112303	11/23/2020	11:19
BIK0510-BLK1	DBLK19	20112304	11/23/2020	12:11
BIK0510-BS1	DLCS19	20112305	11/23/2020	13:00
BIK0510-BSD1	DLCSD19	20112306	11/23/2020	13:49
20J0389-01	MW-VB3-102720	20112307	11/23/2020	14:39
20J0389-02	MW-CP1-102720	20112308	11/23/2020	15:28
20J0389-03	MW-CP2-102720	20112309	11/23/2020	16:18
20J0389-04	MW-CP3-102720	20112310	11/23/2020	17:07
SIK0339-CCV1	CS3S2	20112311	11/23/2020	17:57
SIK0339-RES2	ISCS2	20112312	11/23/2020	18:50
20J0389-05	MW-CP4-102720	20112313	11/23/2020	19:42
20J0389-07	MW-CP6-102720	20112314	11/23/2020	20:31
20J0389-08	MW-CP7-102720	20112315	11/23/2020	21:20
20J0389-09	MW-CP2-102720-D	20112316	11/23/2020	22:10
20J0389-10	MW-C1/VB1-102820	20112317	11/23/2020	22:59
20J0389-11	MW-C101-102820	20112318	11/23/2020	23:49
20J0389-14	HCOO-B312-102820	20112319	11/24/2020	00:38
SIK0339-CCV2	CS3S3	20112320	11/24/2020	01:27
SIK0339-RES3	ISCS3	20112321	11/24/2020	02:21

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY
EPA 1613B

Lab Name: Analytical Resources, Inc. SDG: 20J0389

Instrument .ID: AUTOSPEC01 Lab File ID: 20112321

Date Analyzed: 11/24/20 Time Analyzed: 02:21

Lab Sample ID: SIK0339-RES3 Sequence: SIK0339

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 11.8

3467-TCDF/2378-TCDF: 11.3

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SIK0339-ICV1	CS3S1	20112302	11/23/2020	10:28
SIK0339-RES1	ISCS1	20112303	11/23/2020	11:19
BIK0510-BLK1	DBLK19	20112304	11/23/2020	12:11
BIK0510-BS1	DLCS19	20112305	11/23/2020	13:00
BIK0510-BSD1	DLCSD19	20112306	11/23/2020	13:49
20J0389-01	MW-VB3-102720	20112307	11/23/2020	14:39
20J0389-02	MW-CP1-102720	20112308	11/23/2020	15:28
20J0389-03	MW-CP2-102720	20112309	11/23/2020	16:18
20J0389-04	MW-CP3-102720	20112310	11/23/2020	17:07
SIK0339-CCV1	CS3S2	20112311	11/23/2020	17:57
SIK0339-RES2	ISCS2	20112312	11/23/2020	18:50
20J0389-05	MW-CP4-102720	20112313	11/23/2020	19:42
20J0389-07	MW-CP6-102720	20112314	11/23/2020	20:31
20J0389-08	MW-CP7-102720	20112315	11/23/2020	21:20
20J0389-09	MW-CP2-102720-D	20112316	11/23/2020	22:10
20J0389-10	MW-C1/VB1-102820	20112317	11/23/2020	22:59
20J0389-11	MW-C101-102820	20112318	11/23/2020	23:49
20J0389-14	HCOO-B312-102820	20112319	11/24/2020	00:38
SIK0339-CCV2	CS3S3	20112320	11/24/2020	01:27
SIK0339-RES3	ISCS3	20112321	11/24/2020	02:21

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIJ0454	Instrument:	AUTOSPEC01
		Calibration:	DJ00101

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CS3J1	SIJ0454-ICV1	20102902	NA	10/29/20 15:55
ISCJ1	SIJ0454-RES1	20102903	NA	10/29/20 16:43
CSLCJ	SIJ0454-CAL1	20102904A	NA	10/29/20 18:20
CS1CJ	SIJ0454-CAL2	20102905	NA	10/29/20 19:09
CS2CJ	SIJ0454-CAL3	20102906	NA	10/29/20 19:58
CS3CJ	SIJ0454-CAL4	20102907	NA	10/29/20 20:46
CS4CJ	SIJ0454-CAL5	20102908	NA	10/29/20 21:35
CS5CJ	SIJ0454-CAL6	20102909	NA	10/29/20 22:23
ICVCJ	SIJ0454-SCV1	20102910	NA	10/29/20 23:12
CS3J2	SIJ0454-CCV1	20102911	NA	10/30/20 00:01
ISCJ2	SIJ0454-RES2	20102912	NA	10/30/20 00:54

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0272	Instrument:	AUTOSPEC01
		Calibration:	DJ00101

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CS3R1	SIK0272-ICV1	20111802	NA	11/18/20 11:32
ISCR1	SIK0272-RES1	20111803	NA	11/18/20 12:24
MW-CP5-102720	20J0389-06	20111806	Water	11/18/20 14:52
CS3R2	SIK0272-CCV1	20111808	NA	11/18/20 16:32
ISCR2	SIK0272-RES2	20111809	NA	11/18/20 17:26
Blank	BIK0278-BLK2	20111810	Water	11/18/20 18:17
LCS	BIK0278-BS2	20111811	Water	11/18/20 19:07

Printed: 11/19/2020 10:55:08AM

ANALYSIS SEQUENCE

SIK0272

Instrument: AUTOSPEC01 Element Column ID: I10582
Calibration ID: DJ00101 Tune File: OCT1320_1-5
EM Voltage: 370 Resolution check times : 11:32, 17:26

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIK0272-ICV1	CS3R1	QC		1	I005452		
SIK0272-RES1	ISCR1	QC		2	I008888		
20J0340-01RE1	SPE016-10G	8290 Dioxin	A	3		I005453	Added 11/18/2020 by PK
20K0090-01RE1	WC-06-SS-0-7-200910	1613B Dioxin	A 01	4		I005453	Added 11/18/2020 by PK
20J0389-06	MW-CP5-102720	1613B Dioxin	A 01	5		I005453	
20J0423-01	WTS-Dioxin 10-28-20	1613B Dioxin	B 01	6		I005453	
BIK0278-BLK2	Blank	QC		7		I005453	
BIK0278-BS2	LCS	QC		8		I005453	
SIK0272-CCV1	CS3R2	QC		9	I005452		
SIK0272-RES2	ISCR2	QC		10	I008888		

Dataset: Untitled
Last Altered: Thursday, November 19, 2020 10:57:41 Pacific Standard Time
Printed: Thursday, November 19, 2020 10:57:55 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 18 Nov 2020 14:35:19
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

Compound name: 2378-TCDF

#	Acq.Date	Acq.Time	File	ID	Comments
1	18-Nov-20	11:32:50	20111802	CS3R1	
2	18-Nov-20	12:24:23	20111803	ISCR1	
3	18-Nov-20	13:13:41	20111804	20J0340-01RE1	
4	18-Nov-20	14:02:25	20111805	20K0090-01RE1	
5	18-Nov-20	14:52:06	20111806	20J0389-06	
6	18-Nov-20	15:43:54	20111807	20J0423-01	
7	18-Nov-20	16:32:22	20111808	CS3R2	
8	18-Nov-20	17:26:13	20111809	ISCR2	
9	18-Nov-20	18:17:49	20111810	DBLK11	
10	18-Nov-20	19:07:19	20111811	DLCS11	
11	18-Nov-20	19:56:35	20111812	DLCSD11	
12	18-Nov-20	20:46:04	20111813	PC0AA5	
13	18-Nov-20	21:35:20	20111814	PC0AA9	
14	18-Nov-20	22:24:57	20111815	CS3R3	
15	18-Nov-20	23:18:39	20111816	ISCR3	

Dataset: T:\Autospec\Processed Data Batch\201118IH.qld
Last Altered: Thursday, November 19, 2020 10:02:55 Pacific Standard Time
Printed: Thursday, November 19, 2020 10:04:07 Pacific Standard Time 11/19/20 [redacted]

Event	Details	Sample ID
Process Extract		
Process Integrate		
Process Quantify		
Dataset Created		
Pre modification peak	Sample:20111804, Compound:HF, RT:36.063	1
Peak modified	Sample:20111804, Compound:HF, RT:36.063	1
Pre modification peak	Sample:20111804, Compound:HPD, RT:40.425	1
Peak modified	Sample:20111804, Compound:HPD, RT:40.425	1
Peak deleted	Sample:20111806, Compound:TF, RT:25.938	3
Peak deleted	Sample:20111806, Compound:PF, RT:30.086	3
Peak deleted	Sample:20111806, Compound:HF, RT:35.039	3
Peak deleted	Sample:20111806, Compound:HF, RT:36.040	3
Pre modification peak	Sample:20111806, Compound:OF, RT:45.447	3
Peak modified	Sample:20111806, Compound:OF, RT:45.447	3
Pre modification peak	Sample:20111806, Compound:OF, RT:45.438	3
Peak modified	Sample:20111806, Compound:OF, RT:45.438	3
Peak deleted	Sample:20111806, Compound:TD, RT:26.573	3
Peak added	Sample:20111806, Compound:TD, RT:26.573	3
Peak added	Sample:20111806, Compound:TD, RT:26.573	3
Pre modification peak	Sample:20111806, Compound:TD, RT:26.573	3
Peak modified	Sample:20111806, Compound:TD, RT:26.573	3
Peak deleted	Sample:20111806, Compound:PD, RT:31.699	3
Peak deleted	Sample:20111806, Compound:TD, RT:26.573	3
Peak deleted	Sample:20111807, Compound:PF, RT:30.130	4
Peak deleted	Sample:20111807, Compound:PD, RT:31.722	4
Pre modification peak	Sample:20111807, Compound:OD, RT:45.201	4
Peak modified	Sample:20111807, Compound:OD, RT:45.201	4
Peak modified	Sample:20111806, Compound:OF, RT:45.447	3
Peak deleted	Sample:20111809, Compound:13C-123789-HxCDD, RT:36.620	6
Peak deleted	Sample:20111809, Compound:13C-123789-HxCDD, RT:36.787	6
Pre modification peak	Sample:20111805, Compound:13C-12378-PeCDD, RT:31.689	2
Peak modified	Sample:20111805, Compound:13C-12378-PeCDD, RT:31.689	2
Pre modification peak	Sample:20111804, Compound:OF, RT:45.456	1
Peak modified	Sample:20111804, Compound:OF, RT:45.456	1
Pre modification peak	Sample:20111804, Compound:OF, RT:45.465	1
Peak modified	Sample:20111804, Compound:OF, RT:45.465	1
Pre modification peak	Sample:20111804, Compound:13C-OCDD, RT:45.209	1
Peak modified	Sample:20111804, Compound:13C-OCDD, RT:45.209	1
Pre modification peak	Sample:20111804, Compound:13C-123678-HxCDD, RT:36.274	1
Peak modified	Sample:20111804, Compound:13C-123678-HxCDD, RT:36.274	1
Pre modification peak	Sample:20111804, Compound:13C-1234678-HpCDD, RT:40.414	1
Peak modified	Sample:20111804, Compound:13C-1234678-HpCDD, RT:40.414	1
Peak deleted	Sample:20111804, Compound:HF, RT:36.675	1
Peak deleted	Sample:20111804, Compound:HPF, RT:39.179	1
Pre modification peak	Sample:20111804, Compound:HPF, RT:38.912	1
Peak modified	Sample:20111804, Compound:HPF, RT:38.912	1
Peak deleted	Sample:20111804, Compound:PD, RT:32.000	1
Peak deleted	Sample:20111804, Compound:PD, RT:32.267	1
Peak deleted	Sample:20111804, Compound:PD, RT:32.222	1
Pre modification peak	Sample:20111804, Compound:HD, RT:36.296	1
Peak modified	Sample:20111804, Compound:HD, RT:36.296	1
Pre modification peak	Sample:20111805, Compound:13C-1234678-HpCDD, RT:40.426	2
Peak modified	Sample:20111805, Compound:13C-1234678-HpCDD, RT:40.426	2
Pre modification peak	Sample:20111805, Compound:13C-1234678-HpCDD, RT:40.426	2
Peak modified	Sample:20111805, Compound:13C-1234678-HpCDD, RT:40.426	2

Dataset: T:\Autospec\Processed Data Batch\201118IH.qld
Last Altered: Thursday, November 19, 2020 10:02:55 Pacific Standard Time
Printed: Thursday, November 19, 2020 10:04:07 Pacific Standard Time

Event	Details	Sample ID
Peak deleted	Sample:20111805, Compound:HPF, RT:38.512	2
Pre modification peak	Sample:20111805, Compound:TD, RT:26.211	2
Peak modified	Sample:20111805, Compound:TD, RT:26.211	2
Peak added	Sample:20111805, Compound:PD, RT:30.642	2
Peak added	Sample:20111805, Compound:PD, RT:30.642	2
Peak modified	Sample:20111805, Compound:PD, RT:30.642	2
Peak modified	Sample:20111805, Compound:PD, RT:30.642	2
Pre modification peak	Sample:20111805, Compound:HD, RT:35.317	2
Peak modified	Sample:20111805, Compound:HD, RT:35.317	2
Peak deleted	Sample:20111806, Compound:TF, RT:22.403	3
Peak deleted	Sample:20111806, Compound:PF, RT:28.717	3
Peak deleted	Sample:20111806, Compound:PF, RT:32.601	3
Peak deleted	Sample:20111806, Compound:HF, RT:33.992	3
Pre modification peak	Sample:20111806, Compound:HPF, RT:39.569	3
Peak modified	Sample:20111806, Compound:HPF, RT:39.569	3
Peak deleted	Sample:20111806, Compound:TD, RT:26.724	3
Pre modification peak	Sample:20111807, Compound:OF, RT:45.457	4
Peak modified	Sample:20111807, Compound:OF, RT:45.457	4
Peak deleted	Sample:20111807, Compound:TF, RT:23.295	4
Peak deleted	Sample:20111807, Compound:TF, RT:25.938	4
Peak deleted	Sample:20111807, Compound:TF, RT:25.032	4
Peak deleted	Sample:20111807, Compound:TF, RT:27.479	4
Peak deleted	Sample:20111807, Compound:TF, RT:26.890	4
Peak deleted	Sample:20111807, Compound:PF, RT:32.713	4
Peak deleted	Sample:20111807, Compound:HD, RT:36.953	4
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\201118IH.qld'	
Pre modification peak	Sample:20111808, Compound:13C-123678-HxCDD, RT:36.252	5
Peak modified	Sample:20111808, Compound:13C-123678-HxCDD, RT:36.252	5
Pre modification peak	Sample:20111808, Compound:13C-123678-HxCDD, RT:36.252	5
Peak modified	Sample:20111808, Compound:13C-123678-HxCDD, RT:36.252	5
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\201118IH.qld'	

Quantify Audit Report MassLynx MassLynx V4.1 SCN909
Dataset: T:\Autospec\Processed Data Batch\201118IHQC.qld
Last Altered: Thursday, November 19, 2020 10:22:14 Pacific Standard Time
Printed: Thursday, November 19, 2020 10:23:14 Pacific Standard Time

11/19/20 [redacted]

Event	Details	Sample ID
Process Extract		
Process Integrate		
Process Quantify		
Dataset Created		
Pre modification peak	Sample:20111810, Compound:OF, RT:45.420	1
Peak modified	Sample:20111810, Compound:OF, RT:45.420	1
Pre modification peak	Sample:20111810, Compound:OF, RT:45.430	1
Peak modified	Sample:20111810, Compound:OF, RT:45.430	1
Peak deleted	Sample:20111810, Compound:TD, RT:26.558	1
Peak deleted	Sample:20111810, Compound:HD, RT:36.631	1
Pre modification peak	Sample:20111811, Compound:OF, RT:45.410	2
Peak modified	Sample:20111811, Compound:OF, RT:45.410	2
Pre modification peak	Sample:20111811, Compound:13C-123789-HxCDF, RT:37.031	2
Peak modified	Sample:20111811, Compound:13C-123789-HxCDF, RT:37.031	2
Pre modification peak	Sample:20111811, Compound:13C-1234789-HpCDF, RT:41.127	2
Peak modified	Sample:20111811, Compound:13C-1234789-HpCDF, RT:41.127	2
Pre modification peak	Sample:20111811, Compound:HD, RT:36.641	2
Peak modified	Sample:20111811, Compound:HD, RT:36.641	2
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\201118IHQC.qld'	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0339	Instrument:	AUTOSPEC01
		Calibration:	DJ00101

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CS3S1	SIK0339-ICV1	20112302	NA	11/23/20 10:28
ISCS1	SIK0339-RES1	20112303	NA	11/23/20 11:19
Blank	BIK0510-BLK1	20112304	Water	11/23/20 12:11
LCS	BIK0510-BS1	20112305	Water	11/23/20 13:00
LCS Dup	BIK0510-BSD1	20112306	Water	11/23/20 13:49
MW-VB3-102720	20J0389-01	20112307	Water	11/23/20 14:39
MW-CP1-102720	20J0389-02	20112308	Water	11/23/20 15:28
MW-CP2-102720	20J0389-03	20112309	Water	11/23/20 16:18
MW-CP3-102720	20J0389-04	20112310	Water	11/23/20 17:07
CS3S2	SIK0339-CCV1	20112311	NA	11/23/20 17:57
ISCS2	SIK0339-RES2	20112312	NA	11/23/20 18:50
MW-CP4-102720	20J0389-05	20112313	Water	11/23/20 19:42
MW-CP6-102720	20J0389-07	20112314	Water	11/23/20 20:31
MW-CP7-102720	20J0389-08	20112315	Water	11/23/20 21:20
MW-CP2-102720-D	20J0389-09	20112316	Water	11/23/20 22:10
MW-C1/VB1-102820	20J0389-10	20112317	Water	11/23/20 22:59
MW-C101-102820	20J0389-11	20112318	Water	11/23/20 23:49
HCOO-B312-102820	20J0389-14	20112319	Water	11/24/20 00:38
CS3S3	SIK0339-CCV2	20112320	NA	11/24/20 01:27
ISCS3	SIK0339-RES3	20112321	NA	11/24/20 02:21

Printed: 11/24/2020 1:08:43PM

ANALYSIS SEQUENCE

SIK0339

Instrument: AUTOSPEC01 Element Column ID: I10582
Calibration ID: DJ00101 Tune File: OCT1320_1-5
EM Voltage: 370 Resolution check times : 10:19, 18:50, 02:21

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIK0339-ICV1	CS3S1	QC		1	I005452		
SIK0339-RES1	ISCS1	QC		2	I008888		
BIK0510-BLK1	DBLK19	QC		3		I005453	
BIK0510-BS1	DLCS19	QC		4		I005453	
BIK0510-BSD1	DLCSD19	QC		5		I005453	
20J0389-01	MW-VB3-102720	1613B Dioxin	A 01	6		I005453	
20J0389-02	MW-CP1-102720	1613B Dioxin	A 01	7		I005453	
20J0389-03	MW-CP2-102720	1613B Dioxin	A 01	8		I005453	
20J0389-04	MW-CP3-102720	1613B Dioxin	A 01	9		I005453	
SIK0339-CCV1	CS3S2	QC		10	I005452		
SIK0339-RES2	ISCS2	QC		11	I008888		
20J0389-05	MW-CP4-102720	1613B Dioxin	A 01	12		I005453	
20J0389-07	MW-CP6-102720	1613B Dioxin	A 01	13		I005453	
20J0389-08	MW-CP7-102720	1613B Dioxin	A 01	14		I005453	
20J0389-09	MW-CP2-102720-D	1613B Dioxin	A 01	15		I005453	
20J0389-10	MW-C1/VB1-102820	1613B Dioxin	A 01	16		I005453	
20J0389-11	MW-C101-102820	1613B Dioxin	A 01	17		I005453	
20J0389-14	HCOO-B312-102820	1613B Dioxin	A 01	18		I005453	
SIK0339-CCV2	CS3S3	QC		19	I005452		
SIK0339-RES3	ISCS3	QC		20	I008888		

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 13:11:23 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin201118.mdb 23 Nov 2020 15:03:57
Calibration: T:\Autospec\Curves\201029ICIH.cdb 30 Oct 2020 08:08:24

Compound name: 2378-TCDF

#	Acq.Date	Acq.Time	File	ID	Comments
1	23-Nov-20	10:28:28	20112302	CS3S1	
2	23-Nov-20	11:19:19	20112303	ISCS1	
3	23-Nov-20	12:11:55	20112304	BIK0510-BLK1	
4	23-Nov-20	13:00:40	20112305	BIK0510-BS1	
5	23-Nov-20	13:49:58	20112306	BIK0510-BSD1	
6	23-Nov-20	14:39:27	20112307	20J0389-01	
7	23-Nov-20	15:28:51	20112308	20J0389-02	
8	23-Nov-20	16:18:20	20112309	20J0389-03	
9	23-Nov-20	17:07:37	20112310	20J0389-04	
10	23-Nov-20	17:57:07	20112311	CS3S2	
11	23-Nov-20	18:50:47	20112312	ISCS2	
12	23-Nov-20	19:42:21	20112313	20J0389-05	
13	23-Nov-20	20:31:38	20112314	20J0389-07	
14	23-Nov-20	21:20:59	20112315	20J0389-08	
15	23-Nov-20	22:10:16	20112316	20J0389-09	
16	23-Nov-20	22:59:53	20112317	20J0389-10	
17	23-Nov-20	23:49:10	20112318	20J0389-11	
18	24-Nov-20	00:38:40	20112319	20J0389-14	
19	24-Nov-20	01:27:56	20112320	CS3S3	
20	24-Nov-20	02:21:42	20112321	ISCS3	

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 09:55:10 Pacific Standard Time 11/24/20 [redacted]

Event	Details	Sample ID
Process Extract		
Process Integrate		
Process Quantify		
Dataset Created		
Pre modification peak	Sample:20112302, Compound:13C-OCDD, RT:45.137	1
Peak modified	Sample:20112302, Compound:13C-OCDD, RT:45.137	1
Peak deleted	Sample:20112303, Compound:13C-1234-TCDD, RT:25.697	2
Pre modification peak	Sample:20112304, Compound:OD, RT:45.128	3
Peak modified	Sample:20112304, Compound:OD, RT:45.128	3
Pre modification peak	Sample:20112304, Compound:OD, RT:45.137	3
Peak modified	Sample:20112304, Compound:OD, RT:45.137	3
Peak deleted	Sample:20112304, Compound:OF, RT:45.402	3
Peak deleted	Sample:20112304, Compound:PF, RT:30.064	3
Pre modification peak	Sample:20112305, Compound:13C-123789-HxCDF, RT:36.997	4
Peak modified	Sample:20112305, Compound:13C-123789-HxCDF, RT:36.997	4
Peak deleted	Sample:20112305, Compound:HD, RT:37.020	4
Pre modification peak	Sample:20112305, Compound:HPD, RT:40.359	4
Peak modified	Sample:20112305, Compound:HPD, RT:40.359	4
Pre modification peak	Sample:20112305, Compound:HPF, RT:41.104	4
Peak modified	Sample:20112305, Compound:HPF, RT:41.104	4
Pre modification peak	Sample:20112305, Compound:OF, RT:45.365	4
Peak modified	Sample:20112305, Compound:OF, RT:45.365	4
Pre modification peak	Sample:20112305, Compound:TD, RT:26.528	4
Peak modified	Sample:20112305, Compound:TD, RT:26.528	4
Pre modification peak	Sample:20112306, Compound:HD, RT:36.597	5
Peak modified	Sample:20112306, Compound:HD, RT:36.597	5
Pre modification peak	Sample:20112306, Compound:HD, RT:36.597	5
Peak modified	Sample:20112306, Compound:HD, RT:36.597	5
Pre modification peak	Sample:20112306, Compound:HF, RT:35.985	5
Peak modified	Sample:20112306, Compound:HF, RT:35.985	5
Pre modification peak	Sample:20112306, Compound:HF, RT:35.985	5
Peak modified	Sample:20112306, Compound:HF, RT:35.985	5
Pre modification peak	Sample:20112306, Compound:HPF, RT:38.846	5
Peak modified	Sample:20112306, Compound:HPF, RT:38.846	5
Pre modification peak	Sample:20112306, Compound:OD, RT:45.119	5
Peak modified	Sample:20112306, Compound:OD, RT:45.119	5
Pre modification peak	Sample:20112306, Compound:OF, RT:45.366	5
Peak modified	Sample:20112306, Compound:OF, RT:45.366	5
Pre modification peak	Sample:20112306, Compound:PD, RT:31.633	5
Peak modified	Sample:20112306, Compound:PD, RT:31.633	5
Pre modification peak	Sample:20112307, Compound:HPD, RT:40.348	6
Peak modified	Sample:20112307, Compound:HPD, RT:40.348	6
Pre modification peak	Sample:20112307, Compound:HPD, RT:40.360	6
Peak modified	Sample:20112307, Compound:HPD, RT:40.360	6
Pre modification peak	Sample:20112307, Compound:OF, RT:45.348	6
Peak modified	Sample:20112307, Compound:OF, RT:45.348	6
Pre modification peak	Sample:20112307, Compound:OF, RT:45.366	6
Peak modified	Sample:20112307, Compound:OF, RT:45.366	6
Peak deleted	Sample:20112307, Compound:PF, RT:30.042	6
Peak deleted	Sample:20112307, Compound:TF, RT:24.534	6
Pre modification peak	Sample:20112308, Compound:13C-234678-HxCDF, RT:35.963	7
Peak modified	Sample:20112308, Compound:13C-234678-HxCDF, RT:35.963	7
Pre modification peak	Sample:20112308, Compound:HPD, RT:40.337	7
Peak modified	Sample:20112308, Compound:HPD, RT:40.337	7
Pre modification peak	Sample:20112308, Compound:OF, RT:45.338	7

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 09:55:10 Pacific Standard Time

Event	Details	Sample ID
Peak modified	Sample:20112308, Compound:OF, RT:45.338	7
Pre modification peak	Sample:20112308, Compound:OF, RT:45.338	7
Peak modified	Sample:20112308, Compound:OF, RT:45.338	7
Peak deleted	Sample:20112309, Compound:HD, RT:35.974	8
Pre modification peak	Sample:20112309, Compound:HPD, RT:40.326	8
Peak modified	Sample:20112309, Compound:HPD, RT:40.326	8
Pre modification peak	Sample:20112309, Compound:HPD, RT:40.338	8
Peak modified	Sample:20112309, Compound:HPD, RT:40.338	8
Pre modification peak	Sample:20112309, Compound:OD, RT:45.092	8
Peak modified	Sample:20112309, Compound:OD, RT:45.092	8
Pre modification peak	Sample:20112309, Compound:OD, RT:45.110	8
Peak modified	Sample:20112309, Compound:OD, RT:45.110	8
Peak deleted	Sample:20112309, Compound:PD, RT:31.611	8
Pre modification peak	Sample:20112310, Compound:OD, RT:45.128	9
Peak modified	Sample:20112310, Compound:OD, RT:45.128	9
Peak deleted	Sample:20112310, Compound:OF, RT:45.339	9
Pre modification peak	Sample:20112311, Compound:13C-123478-HxCDF, RT:34.961	10
Peak modified	Sample:20112311, Compound:13C-123478-HxCDF, RT:34.961	10
Pre modification peak	Sample:20112311, Compound:13C-123478-HxCDF, RT:34.961	10
Peak modified	Sample:20112311, Compound:13C-123478-HxCDF, RT:34.961	10
Peak modified	Sample:20112311, Compound:13C-123478-HxCDF, RT:34.961	10
Peak modified	Sample:20112311, Compound:13C-123478-HxCDF, RT:34.961	10
Pre modification peak	Sample:20112311, Compound:13C-123678-HxCDF, RT:35.106	10
Peak modified	Sample:20112311, Compound:13C-123678-HxCDF, RT:35.106	10
Pre modification peak	Sample:20112311, Compound:13C-123678-HxCDF, RT:35.106	10
Peak modified	Sample:20112311, Compound:13C-123678-HxCDF, RT:35.106	10
Peak modified	Sample:20112311, Compound:13C-123678-HxCDF, RT:35.106	10
Peak modified	Sample:20112311, Compound:13C-123678-HxCDF, RT:35.106	10
Peak modified	Sample:20112311, Compound:13C-123678-HxCDF, RT:35.106	10
Pre modification peak	Sample:20112311, Compound:13C-12378-PeCDF, RT:30.008	10
Peak modified	Sample:20112311, Compound:13C-12378-PeCDF, RT:30.008	10
Pre modification peak	Sample:20112311, Compound:HPD, RT:40.348	10
Peak modified	Sample:20112311, Compound:HPD, RT:40.348	10
Pre modification peak	Sample:20112311, Compound:HPF, RT:41.093	10
Peak modified	Sample:20112311, Compound:HPF, RT:41.093	10
Pre modification peak	Sample:20112311, Compound:OD, RT:45.109	10
Peak modified	Sample:20112311, Compound:OD, RT:45.109	10
Pre modification peak	Sample:20112311, Compound:OD, RT:45.109	10
Peak modified	Sample:20112311, Compound:OD, RT:45.109	10
Pre modification peak	Sample:20112311, Compound:OF, RT:45.356	10
Peak modified	Sample:20112311, Compound:OF, RT:45.356	10
Pre modification peak	Sample:20112313, Compound:13C-1234789-HpCDF, RT:41.072	12
Peak modified	Sample:20112313, Compound:13C-1234789-HpCDF, RT:41.072	12
Pre modification peak	Sample:20112313, Compound:13C-1234789-HpCDF, RT:41.072	12
Peak modified	Sample:20112313, Compound:13C-1234789-HpCDF, RT:41.072	12
Pre modification peak	Sample:20112313, Compound:HPD, RT:40.337	12
Peak modified	Sample:20112313, Compound:HPD, RT:40.337	12
Pre modification peak	Sample:20112313, Compound:OF, RT:45.329	12
Peak modified	Sample:20112313, Compound:OF, RT:45.329	12
Pre modification peak	Sample:20112313, Compound:OF, RT:45.347	12
Peak modified	Sample:20112313, Compound:OF, RT:45.347	12
Peak deleted	Sample:20112313, Compound:PF, RT:30.041	12
Pre modification peak	Sample:20112314, Compound:13C-123789-HxCDF, RT:36.986	13
Peak modified	Sample:20112314, Compound:13C-123789-HxCDF, RT:36.986	13
Pre modification peak	Sample:20112314, Compound:13C-123789-HxCDF, RT:36.986	13

Dataset: T:\Autospec\Processed Data Batch\201123.qld
Last Altered: Tuesday, November 24, 2020 09:52:30 Pacific Standard Time
Printed: Tuesday, November 24, 2020 09:55:10 Pacific Standard Time

Event	Details	Sample ID
Peak modified	Sample:20112314, Compound:13C-123789-HxCDF, RT:36.986	13
Pre modification peak	Sample:20112314, Compound:OD, RT:45.100	13
Peak modified	Sample:20112314, Compound:OD, RT:45.100	13
Pre modification peak	Sample:20112314, Compound:OD, RT:45.100	13
Peak modified	Sample:20112314, Compound:OD, RT:45.100	13
Peak deleted	Sample:20112314, Compound:TF, RT:25.848	13
Pre modification peak	Sample:20112315, Compound:13C-123678-HxCDF, RT:35.084	14
Peak modified	Sample:20112315, Compound:13C-123678-HxCDF, RT:35.084	14
Pre modification peak	Sample:20112315, Compound:OD, RT:45.083	14
Peak modified	Sample:20112315, Compound:OD, RT:45.083	14
Pre modification peak	Sample:20112315, Compound:OF, RT:45.329	14
Peak modified	Sample:20112315, Compound:OF, RT:45.329	14
Pre modification peak	Sample:20112315, Compound:OF, RT:45.375	14
Peak modified	Sample:20112315, Compound:OF, RT:45.375	14
Pre modification peak	Sample:20112316, Compound:OD, RT:45.082	15
Peak modified	Sample:20112316, Compound:OD, RT:45.082	15
Pre modification peak	Sample:20112316, Compound:OD, RT:45.091	15
Peak modified	Sample:20112316, Compound:OD, RT:45.091	15
Pre modification peak	Sample:20112317, Compound:HPD, RT:40.314	16
Peak modified	Sample:20112317, Compound:HPD, RT:40.314	16
Pre modification peak	Sample:20112317, Compound:HPD, RT:40.336	16
Peak modified	Sample:20112317, Compound:HPD, RT:40.336	16
Pre modification peak	Sample:20112317, Compound:OF, RT:45.301	16
Peak modified	Sample:20112317, Compound:OF, RT:45.301	16
Pre modification peak	Sample:20112317, Compound:OF, RT:45.347	16
Peak modified	Sample:20112317, Compound:OF, RT:45.347	16
Peak deleted	Sample:20112317, Compound:PF, RT:30.052	16
Peak deleted	Sample:20112317, Compound:PF, RT:31.277	16
Peak deleted	Sample:20112317, Compound:TF, RT:25.893	16
Pre modification peak	Sample:20112318, Compound:OF, RT:45.339	17
Peak modified	Sample:20112318, Compound:OF, RT:45.339	17
Pre modification peak	Sample:20112318, Compound:OF, RT:45.357	17
Peak modified	Sample:20112318, Compound:OF, RT:45.357	17
Pre modification peak	Sample:20112319, Compound:13C-1234678-HpCDD, RT:40.314	18
Peak modified	Sample:20112319, Compound:13C-1234678-HpCDD, RT:40.314	18
Pre modification peak	Sample:20112319, Compound:13C-1234678-HpCDD, RT:40.314	18
Peak modified	Sample:20112319, Compound:13C-1234678-HpCDD, RT:40.314	18
Pre modification peak	Sample:20112319, Compound:OD, RT:45.073	18
Peak modified	Sample:20112319, Compound:OD, RT:45.073	18
Pre modification peak	Sample:20112319, Compound:OD, RT:45.082	18
Peak modified	Sample:20112319, Compound:OD, RT:45.082	18
Pre modification peak	Sample:20112320, Compound:13C-1234678-HpCDD, RT:40.314	19
Peak modified	Sample:20112320, Compound:13C-1234678-HpCDD, RT:40.314	19
Pre modification peak	Sample:20112320, Compound:13C-234678-HxCDF, RT:35.951	19
Peak modified	Sample:20112320, Compound:13C-234678-HxCDF, RT:35.951	19
Pre modification peak	Sample:20112320, Compound:OD, RT:45.090	19
Peak modified	Sample:20112320, Compound:OD, RT:45.090	19
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\201123.qld'	
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\201123.qld'	

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIJ0454	Instrument:	AUTOSPEC01
Sample ID:	SIJ0454-ICV1	Calibration:	DJ00101
File ID:	20102902	Analyzed:	10/29/20 15:55

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	98.3	71 - 129	24.7737	24.77625	-0.0025	N/A	
13C12-2,3,7,8-TCDD	100.00	98.2	82 - 118	25.4233	25.41327	0.0100	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	98.5	76 - 124	28.9128	28.91323	-0.0004	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	101	77 - 123	30.2483	30.25615	-0.0079	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	102	62 - 138	30.5155	30.51585	-0.0004	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	101	76 - 124	33.9102	33.91813	-0.0079	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	97.9	70 - 130	34.0548	34.05908	-0.0043	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	97.4	73 - 127	34.9453	34.95695	-0.0116	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	103	74 - 126	35.9917	36.0051	-0.0134	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	102	85 - 115	35.079	35.08685	-0.0078	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	97.6	85 - 115	35.1902	35.20187	-0.0117	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	104	78 - 122	37.8838	37.8954	-0.0116	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	109	77 - 123	40.0208	40.04165	-0.0208	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	112	72 - 128	39.3308	39.34422	-0.0134	N/A	
13C12-OCDD	200.00	104	48 - 152	43.794	43.81713	-0.0231	N/A	
37Cl4-2,3,7,8-TCDD	10.000	95.3	0 - 200	25.4383	25.43348	0.0048	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIJ0454	Instrument:	AUTOSPEC01
Sample ID:	SIJ0454-SCV1	Calibration:	DJ00101
File ID:	20102910	Analyzed:	10/29/20 23:12

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	98.3	0 - 200	24.7738	24.77625	-0.0024	N/A	
13C12-2,3,7,8-TCDD	100.00	97.6	0 - 200	25.4235	25.41327	0.0102	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	103	0 - 200	28.9132	28.91323	0.0000	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	105	0 - 200	30.2598	30.25615	0.0036	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	95.7	0 - 200	30.5158	30.51585	-0.0001	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	114	0 - 200	33.9218	33.91813	0.0037	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	117	0 - 200	34.0665	34.05908	0.0074	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	109	0 - 200	34.968	34.95695	0.0111	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	112	0 - 200	36.0143	36.0051	0.0092	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	111	0 - 200	35.0905	35.08685	0.0037	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	117	0 - 200	35.2128	35.20187	0.0109	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	114	0 - 200	37.9065	37.8954	0.0111	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	107	0 - 200	40.0435	40.04165	0.0019	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	118	0 - 200	39.3533	39.34422	0.0091	N/A	
13C12-OCDD	200.00	98.2	0 - 200	43.8217	43.81713	0.0046	N/A	
37Cl4-2,3,7,8-TCDD	10.000	102	0 - 200	25.4387	25.43348	0.0052	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIJ0454	Instrument:	AUTOSPEC01
Sample ID:	SIJ0454-CCV1	Calibration:	DJ00101
File ID:	20102911	Analyzed:	10/30/20 00:01

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	101	71 - 129	24.7887	24.77625	0.0124	N/A	
13C12-2,3,7,8-TCDD	100.00	99.0	82 - 118	25.4232	25.41327	0.0099	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	100	76 - 124	28.9242	28.91323	0.0110	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	99.4	77 - 123	30.2708	30.25615	0.0146	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	96.3	62 - 138	30.5267	30.51585	0.0109	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	102	76 - 124	33.9325	33.91813	0.0144	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	106	70 - 130	34.0772	34.05908	0.0181	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	98.7	73 - 127	34.9677	34.95695	0.0108	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	97.9	74 - 126	36.025	36.0051	0.0199	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	97.0	85 - 115	35.1012	35.08685	0.0144	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	106	85 - 115	35.2237	35.20187	0.0218	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	100	78 - 122	37.9172	37.8954	0.0218	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	98.1	77 - 123	40.0542	40.04165	0.0126	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	104	72 - 128	39.3642	39.34422	0.0200	N/A	
13C12-OCDD	200.00	102	48 - 152	43.8302	43.81713	0.0131	N/A	
37Cl4-2,3,7,8-TCDD	10.000	95.0	0 - 200	25.4535	25.43348	0.0200	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0272	Instrument:	AUTOSPEC01
Sample ID:	SIK0272-ICV1	Calibration:	DJ00101
File ID:	20111802	Analyzed:	11/18/20 11:32

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	96.1	71 - 129	25.9533	24.77625	1.1771	N/A	
13C12-2,3,7,8-TCDD	100.00	92.2	82 - 118	26.588	25.41327	1.1747	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	94.9	76 - 124	30.108	28.91323	1.1948	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	91.4	77 - 123	31.4547	30.25615	1.1986	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	95.1	62 - 138	31.7107	30.51585	1.1949	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	99.6	76 - 124	35.061	33.91813	1.1429	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	105	70 - 130	35.2057	34.05908	1.1466	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	97.1	73 - 127	36.0628	34.95695	1.1059	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	100	74 - 126	37.0868	36.0051	1.0817	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	95.2	85 - 115	36.174	35.08685	1.0872	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	89.0	85 - 115	36.2965	35.20187	1.0946	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	107	78 - 122	38.9235	37.8954	1.0281	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	112	77 - 123	41.183	40.04165	1.1414	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	108	72 - 128	40.4373	39.34422	1.0931	N/A	
13C12-OCDD	200.00	94.8	48 - 152	45.2287	43.81713	1.4116	N/A	
37Cl4-2,3,7,8-TCDD	10.000	93.5	0 - 200	26.6182	25.43348	1.1847	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0272	Instrument:	AUTOSPEC01
Sample ID:	20J0389-06	Calibration:	DJ00101
File ID:	20111806	Analyzed:	11/18/20 14:52

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	1936.1	78.8	24 - 169	25.9232	24.77625	1.1470	N/A	
13C12-2,3,7,8-TCDD	1936.1	76.9	25 - 164	26.5578	25.41327	1.1445	N/A	
13C12-1,2,3,7,8-PeCDF	1936.1	76.5	24 - 185	30.0745	28.91323	1.1613	N/A	
13C12-2,3,4,7,8-PeCDF	1936.1	77.4	21 - 178	31.4213	30.25615	1.1652	N/A	
13C12-1,2,3,7,8-PeCDD	1936.1	82.9	25 - 181	31.6773	30.51585	1.1615	N/A	
13C12-1,2,3,4,7,8-HxCDF	1936.1	82.0	26 - 152	35.0275	33.91813	1.1094	N/A	
13C12-1,2,3,6,7,8-HxCDF	1936.1	76.1	26 - 123	35.1722	34.05908	1.1131	N/A	
13C12-2,3,4,6,7,8-HxCDF	1936.1	79.6	28 - 136	36.0292	34.95695	1.0723	N/A	
13C12-1,2,3,7,8,9-HxCDF	1936.1	81.6	29 - 147	37.0532	36.0051	1.0481	N/A	
13C12-1,2,3,4,7,8-HxCDD	1936.1	80.9	32 - 141	36.1517	35.08685	1.0649	N/A	
13C12-1,2,3,6,7,8-HxCDD	1936.1	69.8	28 - 130	36.2628	35.20187	1.0609	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	1936.1	81.3	28 - 143	38.8897	37.8954	0.9943	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	1936.1	91.7	26 - 138	41.149	40.04165	1.1074	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	1936.1	96.4	23 - 140	40.4033	39.34422	1.0591	N/A	
13C12-OCDD	3872.2	59.6	17 - 157	45.1913	43.81713	1.3742	N/A	
37Cl4-2,3,7,8-TCDD	774.44	91.8	35 - 197	26.5728	25.43348	1.1393	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0272	Instrument:	AUTOSPEC01
Sample ID:	SIK0272-CCV1	Calibration:	DJ00101
File ID:	20111808	Analyzed:	11/18/20 16:32

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	92.4	71 - 129	25.9082	24.77625	1.1320	N/A	
13C12-2,3,7,8-TCDD	100.00	91.5	82 - 118	26.5578	25.41327	1.1445	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	89.1	76 - 124	30.0745	28.91323	1.1613	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	91.4	77 - 123	31.41	30.25615	1.1539	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	98.4	62 - 138	31.666	30.51585	1.1502	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	98.3	76 - 124	35.0273	33.91813	1.1092	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	89.2	70 - 130	35.161	34.05908	1.1019	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	92.7	73 - 127	36.018	34.95695	1.0611	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	97.0	74 - 126	37.042	36.0051	1.0369	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	96.4	85 - 115	36.1403	35.08685	1.0535	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	85.8	85 - 115	36.2517	35.20187	1.0498	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	105	78 - 122	38.8785	37.8954	0.9831	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	107	77 - 123	41.138	40.04165	1.0964	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	110	72 - 128	40.3923	39.34422	1.0481	N/A	
13C12-OCDD	200.00	95.8	48 - 152	45.1733	43.81713	1.3562	N/A	
37Cl4-2,3,7,8-TCDD	10.000	96.8	0 - 200	26.5728	25.43348	1.1393	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0272	Instrument:	AUTOSPEC01
Sample ID:	BIK0278-BLK2	Calibration:	DJ00101
File ID:	20111810	Analyzed:	11/18/20 18:17

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	2000.0	75.0	24 - 169	25.893	24.77625	1.1168	N/A	
13C12-2,3,7,8-TCDD	2000.0	74.5	25 - 164	26.5277	25.41327	1.1144	N/A	
13C12-1,2,3,7,8-PeCDF	2000.0	70.0	24 - 185	30.0523	28.91323	1.1391	N/A	
13C12-2,3,4,7,8-PeCDF	2000.0	67.7	21 - 178	31.388	30.25615	1.1319	N/A	
13C12-1,2,3,7,8-PeCDD	2000.0	70.1	25 - 181	31.6552	30.51585	1.1394	N/A	
13C12-1,2,3,4,7,8-HxCDF	2000.0	86.4	26 - 152	35.0055	33.91813	1.0874	N/A	
13C12-1,2,3,6,7,8-HxCDF	2000.0	89.9	26 - 123	35.1392	34.05908	1.0801	N/A	
13C12-2,3,4,6,7,8-HxCDF	2000.0	83.2	28 - 136	36.0073	34.95695	1.0504	N/A	
13C12-1,2,3,7,8,9-HxCDF	2000.0	81.6	29 - 147	37.0313	36.0051	1.0262	N/A	
13C12-1,2,3,4,7,8-HxCDD	2000.0	84.8	32 - 141	36.1187	35.08685	1.0319	N/A	
13C12-1,2,3,6,7,8-HxCDD	2000.0	72.3	28 - 130	36.2412	35.20187	1.0393	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	2000.0	84.3	28 - 143	38.8568	37.8954	0.9614	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	2000.0	84.1	26 - 138	41.1163	40.04165	1.0747	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	2000.0	89.5	23 - 140	40.3705	39.34422	1.0263	N/A	
13C12-OCDD	4000.0	43.3	17 - 157	45.1462	43.81713	1.3291	N/A	
37Cl4-2,3,7,8-TCDD	800.00	93.1	35 - 197	26.5578	25.43348	1.1243	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0272	Instrument:	AUTOSPEC01
Sample ID:	BIK0278-BS2	Calibration:	DJ00101
File ID:	20111811	Analyzed:	11/18/20 19:07

Surrogate Compound	Spike Level pg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	2000.0	75.8	24 - 169	25.8928	24.77625	1.1166	N/A	
13C12-2,3,7,8-TCDD	2000.0	75.9	25 - 164	26.5425	25.41327	1.1292	N/A	
13C12-1,2,3,7,8-PeCDF	2000.0	70.6	24 - 185	30.0518	28.91323	1.1386	N/A	
13C12-2,3,4,7,8-PeCDF	2000.0	70.2	21 - 178	31.3987	30.25615	1.1426	N/A	
13C12-1,2,3,7,8-PeCDD	2000.0	73.2	25 - 181	31.6547	30.51585	1.1389	N/A	
13C12-1,2,3,4,7,8-HxCDF	2000.0	89.5	26 - 152	35.0048	33.91813	1.0867	N/A	
13C12-1,2,3,6,7,8-HxCDF	2000.0	88.3	26 - 123	35.1495	34.05908	1.0904	N/A	
13C12-2,3,4,6,7,8-HxCDF	2000.0	83.4	28 - 136	36.0067	34.95695	1.0498	N/A	
13C12-1,2,3,7,8,9-HxCDF	2000.0	79.9	29 - 147	37.0307	36.0051	1.0256	N/A	
13C12-1,2,3,4,7,8-HxCDD	2000.0	84.9	32 - 141	36.129	35.08685	1.0422	N/A	
13C12-1,2,3,6,7,8-HxCDD	2000.0	75.1	28 - 130	36.2403	35.20187	1.0384	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	2000.0	77.4	28 - 143	38.867	37.8954	0.9716	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	2000.0	85.2	26 - 138	41.1267	40.04165	1.0851	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	2000.0	90.9	23 - 140	40.3698	39.34422	1.0256	N/A	
13C12-OCDD	4000.0	49.6	17 - 157	45.1543	43.81713	1.3372	N/A	
37Cl4-2,3,7,8-TCDD	800.00	91.6	35 - 197	26.5577	25.43348	1.1242	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0339	Instrument:	A7 UT SPOC0E
Sample ID:	SIK0339-IC1 E	Calibration:	DJ00E0E
File ID:	20EE2302	Analy/ ed:	EEV23V20 E0:28

Surrozate Compound	Spike Legel nzVmL	v Recogery	Recogery Limits	RU	Calibration %ean RU	RU DiMM	RU DiMM Limit	f
E3CE2-2,3,Q8-UCDF	E00.00	92.6	QE - E29	25.8932	24.QQ625	E.EEQ0	NVA	
E3CE2-2,3,Q8-UCDD	E00.00	9E.5	82 - EE8	26.52QQ	25.4E32Q	E.EE44	NVA	
E3CE2-E,2,3,Q8-PeCDF	E00.00	86.3	Q6 - E24	30.04E3	28.9E323	E.E28E	NVA	
E3CE2-2,3,4,Q8-PeCDF	E00.00	86.9	QQ- E23	3E.388	30.256E5	E.E3E9	NVA	
E3CE2-E,2,3,Q8-PeCDD	E00.00	89.8	62 - E38	3E.644	30.5E585	E.E282	NVA	
E3CE2-E,2,3,4,Q8-HxCDF	E00.00	9Q9	Q6 - E24	34.9942	33.9E8E3	E.0Q6E	NVA	
E3CE2-E,2,3,6,Q8-HxCDF	E00.00	EEE	Q0 - E30	35.E2Q8	34.05908	E.068Q	NVA	
E3CE2-2,3,4,6,Q8-HxCDF	E00.00	94.E	Q8 - E2Q	35.996	34.95695	E.039E	NVA	
E3CE2-E,2,3,Q8,9-HxCDF	E00.00	95.Q	Q4 - E26	3Q02	36.005E	E.0E49	NVA	
E3CE2-E,2,3,4,Q8-HxCDD	E00.00	93.Q	85 - EE5	36.EE83	35.08685	E.03E5	NVA	
E3CE2-E,2,3,6,Q8-HxCDD	E00.00	93.4	85 - EE5	36.229Q	35.20E8Q	E.02Q8	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDF	E00.00	EE2	Q8 - E22	38.8565	3Q8954	0.96EE	NVA	
E3CE2-E,2,3,4,Q8,9-HpCDF	E00.00	99.6	QQ- E23	4E.E048	40.04E65	E.0632	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDD	E00.00	E06	82 - EE8	40.3592	39.34422	E.0E50	NVA	
E3CE2-TCDD	200.00	95.8	48 - E52	45.E2Q5	43.8EQE3	E.3E04	NVA	
3QCl4-2,3,Q8-UCDD	E0.000	92.2	Q9 - E2E	26.542Q	25.43348	E.E092	NVA	

* 1alues outside oMf C limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0339	Instrument:	A7 UT SPOC0E
Sample ID:	BIK05E0-BLKE	Calibration:	DJ00E0E
File ID:	20EE2304	Analy/ ed:	EEV23V20 E2:EE

Surrozate Compound	Spike Legel pzVL	v Recogery	Recogery Limits	RU	Calibration %ean RU	RU DiMM	RU DiMM Limit	f
E3CE2-2,3,Q8-UCDF	2000.0	84.5	24 - E69	25.8Q8	24.QQ625	E.E0E8	NVA	
E3CE2-2,3,Q8-UCDD	2000.0	84.6	25 - E64	26.5E2Q	25.4E32Q	E.0994	NVA	
E3CE2-E,2,3,Q8-PeCDF	2000.0	80.2	24 - E85	30.0302	28.9E323	E.EEQ0	NVA	
E3CE2-2,3,4,Q8-PeCDF	2000.0	Q6.0	2E - EQ8	3E.3QQ	30.256E5	E.E209	NVA	
E3CE2-E,2,3,Q8-PeCDD	2000.0	Q8.E	25 - E8E	3E.633	30.5E585	E.EEQ2	NVA	
E3CE2-E,2,3,4,Q8-HxCDF	2000.0	E04	26 - E52	34.9833	33.9E8E3	E.0652	NVA	
E3CE2-E,2,3,6,Q8-HxCDF	2000.0	E08	26 - E23	35.E282	34.05908	E.069E	NVA	
E3CE2-2,3,4,6,Q8-HxCDF	2000.0	96.4	28 - E36	35.9852	34.95695	E.0283	NVA	
E3CE2-E,2,3,Q8,9-HxCDF	2000.0	9E.6	29 - E4Q	3Q0092	36.005E	E.004E	NVA	
E3CE2-E,2,3,4,Q8-HxCDD	2000.0	9E.5	32 - E4E	36.E0Q5	35.08685	E.020Q	NVA	
E3CE2-E,2,3,6,Q8-HxCDD	2000.0	93.E	28 - E30	36.2E88	35.20E8Q	E.0E69	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDF	2000.0	89.4	28 - E43	38.8458	3Q8954	0.9504	NVA	
E3CE2-E,2,3,4,Q8,9-HpCDF	2000.0	9E.6	26 - E38	4E.E052	40.04E65	E.0636	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDD	2000.0	90.6	23 - E40	40.3483	39.34422	E.004E	NVA	
E3CE2-TCDD	4000.0	66.9	EQ- E5Q	45.EE9	43.8EQE3	E.30E9	NVA	
3QCl4-2,3,Q8-UCDD	800.00	99.6	35 - E9Q	26.5428	25.43348	E.E093	NVA	

* 1alues outside oMf C limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0339	Instrument:	A7 UT SPOC0E
Sample ID:	BIK05E0-BSE	Calibration:	DJ00E0E
File ID:	20EE2305	Analy/ ed:	EEV23V20 E3:00

Surrozate Compound	Spike Legel pzVL	v Recogery	Recogery Limits	RU	Calibration %ean RU	RU DiMM	RU DiMM Limit	f
E3CE2-2,3,Q8-UCDF	2000.0	Q8.5	24 - E69	25.8628	24.QQ625	E.0866	NVA	
E3CE2-2,3,Q8-UCDD	2000.0	Q9.9	25 - E64	26.49Q8	25.4E32Q	E.0840	NVA	
E3CE2-E,2,3,Q8-PeCDF	2000.0	Q4.0	24 - E85	30.0E88	28.9E323	E.E056	NVA	
E3CE2-2,3,4,Q8-PeCDF	2000.0	69.Q	2E - EQ8	3E.3543	30.256E5	E.0982	NVA	
E3CE2-E,2,3,Q8-PeCDD	2000.0	Q5.E	25 - E8E	3E.6E03	30.5E585	E.0945	NVA	
E3CE2-E,2,3,4,Q8-HxCDF	2000.0	88.6	26 - E52	34.9QE5	33.9E8E3	E.0534	NVA	
E3CE2-E,2,3,6,Q8-HxCDF	2000.0	94.6	26 - E23	35.E052	34.05908	E.046E	NVA	
E3CE2-2,3,4,6,Q8-HxCDF	2000.0	8Q9	28 - E36	35.9Q83	34.95695	E.0E64	NVA	
E3CE2-E,2,3,Q8,9-HxCDF	2000.0	88.E	29 - E4Q	36.99Q8	36.005E	0.9922	NVA	
E3CE2-E,2,3,4,Q8-HxCDD	2000.0	84.0	32 - E4E	36.095Q	35.08685	E.0089	NVA	
E3CE2-E,2,3,6,Q8-HxCDD	2000.0	82.8	28 - E30	36.20Q	35.20E8Q	E.005E	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDF	2000.0	84.4	28 - E43	38.8338	3Q8954	0.9384	NVA	
E3CE2-E,2,3,4,Q8,9-HpCDF	2000.0	84.E	26 - E38	4E.0932	40.04E65	E.05E6	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDD	2000.0	85.E	23 - E40	40.3363	39.34422	0.992E	NVA	
E3CE2-TCDD	4000.0	63.E	EQ- E5Q	45.0998	43.8EQE3	E.282Q	NVA	
3QCl4-2,3,Q8-UCDD	800.00	93.6	35 - E9Q	26.5E25	25.43348	E.0Q90	NVA	

* 1alues outside oMf C limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0339	Instrument:	A7 UT SPOC0E
Sample ID:	BIK05E0-BSDE	Calibration:	DJ00E0E
File ID:	20EE2306	Analy/ ed:	EEV23V20 E3:49

Surrozate Compound	Spike Legel pzV.	v Recogery	Recogery Limits	RU	Calibration %ean RU	RU DiMM	RU DiMM Limit	f
E3CE2-2,3,Q8-UCDF	2000.0	83.3	24 - E69	25.863	24.QQ625	E.0868	NVA	
E3CE2-2,3,Q8-UCDD	2000.0	84.3	25 - E64	26.49Q5	25.4E32Q	E.0842	NVA	
E3CE2-E,2,3,Q8-PeCDF	2000.0	QQ8	24 - E85	30.0E92	28.9E323	E.E060	NVA	
E3CE2-2,3,4,Q8-PeCDF	2000.0	Q6.E	2E - EQ8	3E.3548	30.256E5	E.098Q	NVA	
E3CE2-E,2,3,Q8-PeCDD	2000.0	Q9.6	25 - E8E	3E.6E08	30.5E585	E.0950	NVA	
E3CE2-E,2,3,4,Q8-HxCDF	2000.0	92.9	26 - E52	34.9Q22	33.9E8E3	E.054E	NVA	
E3CE2-E,2,3,6,Q8-HxCDF	2000.0	E05	26 - E23	35.E058	34.05908	E.046Q	NVA	
E3CE2-2,3,4,6,Q8-HxCDF	2000.0	94.8	28 - E36	35.963	34.95695	E.006E	NVA	
E3CE2-E,2,3,Q8,9-HxCDF	2000.0	9E.8	29 - E4Q	36.9982	36.005E	0.993E	NVA	
E3CE2-E,2,3,4,Q8-HxCDD	2000.0	90.8	32 - E4E	36.0853	35.08685	0.9984	NVA	
E3CE2-E,2,3,6,Q8-HxCDD	2000.0	85.9	28 - E30	36.20Q8	35.20E8Q	E.0059	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDF	2000.0	88.0	28 - E43	38.8348	3Q8954	0.9394	NVA	
E3CE2-E,2,3,4,Q8,9-HpCDF	2000.0	9E.Q	26 - E38	4E.0832	40.04E65	E.04E6	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDD	2000.0	98.0	23 - E40	40.33Q5	39.34422	0.9933	NVA	
E3CE2-TCDD	4000.0	59.5	EQ- E5Q	45.E0E2	43.8EQE3	E.284E	NVA	
3QCl4-2,3,Q8-UCDD	800.00	E0E	35 - E9Q	26.5E25	25.43348	E.0Q90	NVA	

* 1alues outside oMf C limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0339	Instrument:	A7 UT SPOC0E
Sample ID:	20J0389-0E	Calibration:	DJ00E0E
File ID:	20EE230Q	Analy/ ed:	EEV23V20 E4:39

Surrozate Compound	Spike Legel pzVL	v Recogery	Recogery Limits	RU	Calibration %ean RU	RU DiMM	RU DiMM Limit	f
E3CE2-2,3,Q8-UCDF	E8Q4.4	83.2	24 - E69	25.84Q8	24.QQ625	E.0QE6	NVA	
E3CE2-2,3,Q8-UCDD	E8Q4.4	82.Q	25 - E64	26.49QQ	25.4E32Q	E.0844	NVA	
E3CE2-E,2,3,Q8-PeCDF	E8Q4.4	Q6.8	24 - E85	30.0E93	28.9E323	E.E06E	NVA	
E3CE2-2,3,4,Q8-PeCDF	E8Q4.4	Q8.Q	2E - EQ8	3E.355	30.256E5	E.0989	NVA	
E3CE2-E,2,3,Q8-PeCDD	E8Q4.4	Q5.8	25 - E8E	3E.6EE	30.5E585	E.0952	NVA	
E3CE2-E,2,3,4,Q8-HxCDF	E8Q4.4	92.4	26 - E52	34.9Q23	33.9E8E3	E.0542	NVA	
E3CE2-E,2,3,6,Q8-HxCDF	E8Q4.4	E02	26 - E23	35.E06	34.05908	E.0469	NVA	
E3CE2-2,3,4,6,Q8-HxCDF	E8Q4.4	8Q8	28 - E36	35.963	34.95695	E.006E	NVA	
E3CE2-E,2,3,Q8,9-HxCDF	E8Q4.4	8Q3	29 - E4Q	36.9982	36.005E	0.993E	NVA	
E3CE2-E,2,3,4,Q8-HxCDD	E8Q4.4	84.6	32 - E4E	36.0855	35.08685	0.998Q	NVA	
E3CE2-E,2,3,6,Q8-HxCDD	E8Q4.4	86.E	28 - E30	36.E968	35.20E8Q	0.9949	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDF	E8Q4.4	85.5	28 - E43	38.8348	3Q8954	0.9394	NVA	
E3CE2-E,2,3,4,Q8,9-HpCDF	E8Q4.4	8E.5	26 - E38	4E.0832	40.04E65	E.04E6	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDD	E8Q4.4	9Q9	23 - E40	40.33Q8	39.34422	0.993E	NVA	
E3CE2-TCDD	3Q48.8	60.2	EQ- E5Q	45.E0E	43.8EQE3	E.2839	NVA	
3QCl4-2,3,Q8-UCDD	Q49.QQ	98.2	35 - E9Q	26.5E2Q	25.43348	E.0Q92	NVA	

* 1alues outside oMf C limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0339	Instrument:	A7 UT SPOC0E
Sample ID:	20J0389-02	Calibration:	DJ00E0E
File ID:	20EE2308	Analy/ ed:	EEV23V20 E5:28

Surrozate Compound	Spike Legel pzVL	v Recogery	Recogery Limits	RU	Calibration %ean RU	RU DiMM	RU DiMM Limit	f
E3CE2-2,3,Q8-UCDF	E956.9	86.9	24 - E69	25.84Q8	24.QQ625	E.0QE6	NVA	
E3CE2-2,3,Q8-UCDD	E956.9	8Q3	25 - E64	26.4823	25.4E32Q	E.0690	NVA	
E3CE2-E,2,3,Q8-PeCDF	E956.9	8E.3	24 - E85	30.00Q8	28.9E323	E.0946	NVA	
E3CE2-2,3,4,Q8-PeCDF	E956.9	QQ5	2E - EQ8	3E.3435	30.256E5	E.08Q4	NVA	
E3CE2-E,2,3,Q8-PeCDD	E956.9	Q9.6	25 - E8E	3E.5995	30.5E585	E.083Q	NVA	
E3CE2-E,2,3,4,Q8-HxCDF	E956.9	9Q6	26 - E52	34.96E	33.9E8E3	E.0429	NVA	
E3CE2-E,2,3,6,Q8-HxCDF	E956.9	99.5	26 - E23	35.094Q	34.05908	E.0356	NVA	
E3CE2-2,3,4,6,Q8-HxCDF	E956.9	9Q3	28 - E36	35.9628	34.95695	E.0059	NVA	
E3CE2-E,2,3,Q8,9-HxCDF	E956.9	95.0	29 - E4Q	36.986Q	36.005E	0.98E6	NVA	
E3CE2-E,2,3,4,Q8-HxCDD	E956.9	93.0	32 - E4E	36.0852	35.08685	0.9984	NVA	
E3CE2-E,2,3,6,Q8-HxCDD	E956.9	88.5	28 - E30	36.E965	35.20E8Q	0.9946	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDF	E956.9	96.5	28 - E43	38.8232	3Q8954	0.92Q8	NVA	
E3CE2-E,2,3,4,Q8,9-HpCDF	E956.9	89.5	26 - E38	4E.0QE3	40.04E65	E.029Q	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDD	E956.9	E06	23 - E40	40.325Q	39.34422	0.98E5	NVA	
E3CE2-TCDD	39E3.9	64.5	EQ- E5Q	45.0908	43.8EQE3	E.2Q8Q	NVA	
3QCl4-2,3,Q8-UCDD	Q82.Q8	E02	35 - E9Q	26.5E25	25.43348	E.0Q90	NVA	

* 1alues outside oMf C limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0339	Instrument:	A7 UT SPOC0E
Sample ID:	20J0389-03	Calibration:	DJ00E0E
File ID:	20EE2309	Analy/ ed:	EEV23V20 E6:E8

Surrozate Compound	Spike Legel pzVL	v Recogery	Recogery Limits	RU	Calibration %ean RU	RU DiMM	RU DiMM Limit	f
E3CE2-2,3,Q8-UCDF	E895.Q	83.2	24 - E69	25.84Q8	24.QQ625	E.0QE6	NVA	
E3CE2-2,3,Q8-UCDD	E895.Q	8E.0	25 - E64	26.4823	25.4E32Q	E.0690	NVA	
E3CE2-E,2,3,Q8-PeCDF	E895.Q	Q4.Q	24 - E85	30.008	28.9E323	E.0948	NVA	
E3CE2-2,3,4,Q8-PeCDF	E895.Q	Q2.5	2E - EQ8	3E.343Q	30.256E5	E.08Q6	NVA	
E3CE2-E,2,3,Q8-PeCDD	E895.Q	Q3.6	25 - E8E	3E.599Q	30.5E585	E.0839	NVA	
E3CE2-E,2,3,4,Q8-HxCDF	E895.Q	89.4	26 - E52	34.96E2	33.9E8E3	E.043E	NVA	
E3CE2-E,2,3,6,Q8-HxCDF	E895.Q	98.2	26 - E23	35.094Q	34.05908	E.0356	NVA	
E3CE2-2,3,4,6,Q8-HxCDF	E895.Q	92.2	28 - E36	35.963	34.95695	E.006E	NVA	
E3CE2-E,2,3,Q8,9-HxCDF	E895.Q	8Q8	29 - E4Q	36.98Q	36.005E	0.98E9	NVA	
E3CE2-E,2,3,4,Q8-HxCDD	E895.Q	86.5	32 - E4E	36.0Q43	35.08685	0.98Q5	NVA	
E3CE2-E,2,3,6,Q8-HxCDD	E895.Q	82.6	28 - E30	36.E96Q	35.20E8Q	0.9948	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDF	E895.Q	84.6	28 - E43	38.823Q	3Q8954	0.9283	NVA	
E3CE2-E,2,3,4,Q8,9-HpCDF	E895.Q	8E.0	26 - E38	4E.0Q22	40.04E65	E.0306	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDD	E895.Q	86.9	23 - E40	40.3263	39.34422	0.982E	NVA	
E3CE2-TCDD	3Q9E.5	56.Q	EQ- E5Q	45.092	43.8EQE3	E.2Q49	NVA	
3QCl4-2,3,Q8-UCDD	Q58.29	E0E	35 - E9Q	26.5E2Q	25.43348	E.0Q92	NVA	

* 1alues outside oMf C limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0339	Instrument:	A7 UT SPOC0E
Sample ID:	20J0389-04	Calibration:	DJ00E0E
File ID:	20EE23E0	Analy/ ed:	EEV23V20 EQ0Q

Surrozate Compound	Spike Legel pzVL	v Recogery	Recogery Limits	RU	Calibration %ean RU	RU DiMM	RU DiMM Limit	f
E3CE2-2,3,Q8-UCDF	E865.Q	84.E	24 - E69	25.84Q8	24.QQ625	E.0QE6	NVA	
E3CE2-2,3,Q8-UCDD	E865.Q	82.6	25 - E64	26.49Q5	25.4E32Q	E.0842	NVA	
E3CE2-E,2,3,Q8-PeCDF	E865.Q	Q4.6	24 - E85	30.0082	28.9E323	E.0950	NVA	
E3CE2-2,3,4,Q8-PeCDF	E865.Q	Q0.9	2E - EQ8	3E.3548	30.256E5	E.098Q	NVA	
E3CE2-E,2,3,Q8-PeCDD	E865.Q	QE.4	25 - E8E	3E.6E08	30.5E585	E.0950	NVA	
E3CE2-E,2,3,4,Q8-HxCDF	E865.Q	E0E	26 - E52	34.96E2	33.9E8E3	E.043E	NVA	
E3CE2-E,2,3,6,Q8-HxCDF	E865.Q	EE0	26 - E23	35.E06	34.05908	E.0469	NVA	
E3CE2-2,3,4,6,Q8-HxCDF	E865.Q	96.E	28 - E36	35.9628	34.95695	E.0059	NVA	
E3CE2-E,2,3,Q8,9-HxCDF	E865.Q	9E.5	29 - E4Q	36.998	36.005E	0.9929	NVA	
E3CE2-E,2,3,4,Q8-HxCDD	E865.Q	90.5	32 - E4E	36.0853	35.08685	0.9984	NVA	
E3CE2-E,2,3,6,Q8-HxCDD	E865.Q	89.E	28 - E30	36.E96Q	35.20E8Q	0.9948	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDF	E865.Q	89.8	28 - E43	38.8235	3Q8954	0.928E	NVA	
E3CE2-E,2,3,4,Q8,9-HpCDF	E865.Q	99.E	26 - E38	4E.082Q	40.04E65	E.04EE	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDD	E865.Q	89.6	23 - E40	40.326	39.34422	0.98E8	NVA	
E3CE2-TCDD	3Q8E.3	5Q9	EQ- E5Q	45.09EQ	43.8EQE3	E.2Q46	NVA	
3QCl4-2,3,Q8-UCDD	Q46.2Q	94.6	35 - E9Q	26.5E2Q	25.43348	E.0Q92	NVA	

* 1alues outside oMf C limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0339	Instrument:	A7 UT SPOC0E
Sample ID:	SIK0339-CC1 E	Calibration:	DJ00E0E
File ID:	20EE23EE	Analy/ ed:	EEV23V20 EQ5Q

Surrozate Compound	Spike Legel nzVmL	v Recogery	Recogery Limits	RU	Calibration %ean RU	RU DiMM	RU DiMM Limit	f
E3CE2-2,3,Q8-UCDF	E00.00	96.5	QE - E29	25.848	24.QQ625	E.0QE8	NVA	
E3CE2-2,3,Q8-UCDD	E00.00	93.6	82 - EE8	26.49QQ	25.4E32Q	E.0844	NVA	
E3CE2-E,2,3,Q8-PeCDF	E00.00	88.E	Q6 - E24	30.008	28.9E323	E.0948	NVA	
E3CE2-2,3,4,Q8-PeCDF	E00.00	8Q6	QQ- E23	3E.354Q	30.256E5	E.0986	NVA	
E3CE2-E,2,3,Q8-PeCDD	E00.00	89.9	62 - E38	3E.6E08	30.5E585	E.0950	NVA	
E3CE2-E,2,3,4,Q8-HxCDF	E00.00	E03	Q6 - E24	34.9608	33.9E8E3	E.042Q	NVA	
E3CE2-E,2,3,6,Q8-HxCDF	E00.00	EE3	Q0 - E30	35.E05Q	34.05908	E.0466	NVA	
E3CE2-2,3,4,6,Q8-HxCDF	E00.00	EE0	Q8 - E2Q	35.962Q	34.95695	E.0058	NVA	
E3CE2-E,2,3,Q8,9-HxCDF	E00.00	E04	Q4 - E26	36.99QQ	36.005E	0.9926	NVA	
E3CE2-E,2,3,4,Q8-HxCDD	E00.00	95.3	85 - EE5	36.0852	35.08685	0.9984	NVA	
E3CE2-E,2,3,6,Q8-HxCDD	E00.00	98.6	85 - EE5	36.E965	35.20E8Q	0.9946	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDF	E00.00	EE2	Q8 - E22	38.8232	3Q8954	0.92Q8	NVA	
E3CE2-E,2,3,4,Q8,9-HpCDF	E00.00	E08	QQ- E23	4E.0823	40.04E65	E.040Q	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDD	E00.00	EE4	82 - EE8	40.3255	39.34422	0.98E3	NVA	
E3CE2-TCDD	200.00	95.8	48 - E52	45.0908	43.8EQE3	E.2Q8Q	NVA	
3QCl4-2,3,Q8-UCDD	E0.000	95.E	Q9 - E2E	26.5E28	25.43348	E.0Q93	NVA	

* 1alues outside oMf C limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0339	Instrument:	A7 UT SPOC0E
Sample ID:	20J0389-05	Calibration:	DJ00E0E
File ID:	20EE23E3	Analy/ ed:	EEV23V20 E9:42

Surrozate Compound	Spike Legel pzVL	v Recogery	Recogery Limits	RU	Calibration %ean RU	RU DiMM	RU DiMM Limit	f
E3CE2-2,3,Q8-UCDF	E8Q4.4	8E.9	24 - E69	25.84Q8	24.QQ625	E.0QE6	NVA	
E3CE2-2,3,Q8-UCDD	E8Q4.4	82.4	25 - E64	26.4823	25.4E32Q	E.0690	NVA	
E3CE2-E,2,3,Q8-PeCDF	E8Q4.4	Q0.Q	24 - E85	30.00Q8	28.9E323	E.0946	NVA	
E3CE2-2,3,4,Q8-PeCDF	E8Q4.4	Q0.E	2E - EQ8	3E.3433	30.256E5	E.08Q2	NVA	
E3CE2-E,2,3,Q8-PeCDD	E8Q4.4	QE.0	25 - E8E	3E.5993	30.5E585	E.0835	NVA	
E3CE2-E,2,3,4,Q8-HxCDF	E8Q4.4	9Q5	26 - E52	34.9608	33.9E8E3	E.042Q	NVA	
E3CE2-E,2,3,6,Q8-HxCDF	E8Q4.4	E05	26 - E23	35.0945	34.05908	E.0354	NVA	
E3CE2-2,3,4,6,Q8-HxCDF	E8Q4.4	96.3	28 - E36	35.962Q	34.95695	E.0058	NVA	
E3CE2-E,2,3,Q8,9-HxCDF	E8Q4.4	90.9	29 - E4Q	36.986Q	36.005E	0.98E6	NVA	
E3CE2-E,2,3,4,Q8-HxCDD	E8Q4.4	89.4	32 - E4E	36.0Q4	35.08685	0.98Q2	NVA	
E3CE2-E,2,3,6,Q8-HxCDD	E8Q4.4	86.0	28 - E30	36.E852	35.20E8Q	0.9833	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDF	E8Q4.4	94.3	28 - E43	38.8232	3Q8954	0.92Q8	NVA	
E3CE2-E,2,3,4,Q8,9-HpCDF	E8Q4.4	92.4	26 - E38	4E.0QEQ	40.04E65	E.030E	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDD	E8Q4.4	86.Q	23 - E40	40.326	39.34422	0.98E8	NVA	
E3CE2-TCDD	3Q48.8	5E.9	EQ- E5Q	45.0825	43.8EQE3	E.2654	NVA	
3QCl4-2,3,Q8-UCDD	Q49.QQ	95.4	35 - E9Q	26.5E2Q	25.43348	E.0Q92	NVA	

* 1alues outside oMf C limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0339	Instrument:	A7 UT SPOC0E
Sample ID:	20J0389-0Q	Calibration:	DJ00E0E
File ID:	20EE23E4	Analy/ ed:	EEV23V20 20:3E

Surrozate Compound	Spike Legel pzVL	v Recogery	Recogery Limits	RU	Calibration %ean RU	RU DiMM	RU DiMM Limit	f
E3CE2-2,3,Q8-UCDF	E8Q4.4	Q8.6	24 - E69	25.84QQ	24.QQ625	E.0QE5	NVA	
E3CE2-2,3,Q8-UCDD	E8Q4.4	Q5.5	25 - E64	26.4822	25.4E32Q	E.0689	NVA	
E3CE2-E,2,3,Q8-PeCDF	E8Q4.4	65.8	24 - E85	30.00Q8	28.9E323	E.0946	NVA	
E3CE2-2,3,4,Q8-PeCDF	E8Q4.4	65.0	2E - EQ8	3E.3433	30.256E5	E.08Q2	NVA	
E3CE2-E,2,3,Q8-PeCDD	E8Q4.4	6Q4	25 - E8E	3E.5993	30.5E585	E.0835	NVA	
E3CE2-E,2,3,4,Q8-HxCDF	E8Q4.4	92.0	26 - E52	34.9605	33.9E8E3	E.0424	NVA	
E3CE2-E,2,3,6,Q8-HxCDF	E8Q4.4	94.4	26 - E23	35.E052	34.05908	E.046E	NVA	
E3CE2-2,3,4,6,Q8-HxCDF	E8Q4.4	90.4	28 - E36	35.9623	34.95695	E.0054	NVA	
E3CE2-E,2,3,Q8,9-HxCDF	E8Q4.4	84.3	29 - E4Q	36.9862	36.005E	0.98EE	NVA	
E3CE2-E,2,3,4,Q8-HxCDD	E8Q4.4	8E.9	32 - E4E	36.084Q	35.08685	0.99Q9	NVA	
E3CE2-E,2,3,6,Q8-HxCDD	E8Q4.4	80.8	28 - E30	36.E96	35.20E8Q	0.994E	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDF	E8Q4.4	84.3	28 - E43	38.822Q	3Q8954	0.92Q3	NVA	
E3CE2-E,2,3,4,Q8,9-HpCDF	E8Q4.4	80.9	26 - E38	4E.0Q08	40.04E65	E.0292	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDD	E8Q4.4	83.9	23 - E40	40.3252	39.34422	0.98E0	NVA	
E3CE2-TCDD	3Q48.8	53.6	EQ- E5Q	45.0905	43.8EQE3	E.2Q34	NVA	
3QCl4-2,3,Q8-UCDD	Q49.QQ	90.E	35 - E9Q	26.5E23	25.43348	E.0Q88	NVA	

* 1alues outside oMf C limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0339	Instrument:	A7 UT SPOC0E
Sample ID:	20J0389-08	Calibration:	DJ00E0E
File ID:	20EE23E5	Analy/ ed:	EEV23V20 2E:20

Surrozate Compound	Spike Legel pzVL	v Recogery	Recogery Limits	RU	Calibration %ean RU	RU DiMM	RU DiMM Limit	f
E3CE2-2,3,Q8-UCDF	E865.Q	8E.E	24 - E69	25.8328	24.QQ625	E.0566	NVA	
E3CE2-2,3,Q8-UCDD	E865.Q	80.3	25 - E64	26.4825	25.4E32Q	E.0692	NVA	
E3CE2-E,2,3,Q8-PeCDF	E865.Q	Q5.4	24 - E85	29.99Q	28.9E323	E.0838	NVA	
E3CE2-2,3,4,Q8-PeCDF	E865.Q	Q3.8	2E - EQ8	3E.332Q	30.256E5	E.0Q66	NVA	
E3CE2-E,2,3,Q8-PeCDD	E865.Q	QQ3	25 - E8E	3E.588Q	30.5E585	E.0Q29	NVA	
E3CE2-E,2,3,4,Q8-HxCDF	E865.Q	90.5	26 - E52	34.9502	33.9E8E3	E.032E	NVA	
E3CE2-E,2,3,6,Q8-HxCDF	E865.Q	99.5	26 - E23	35.0948	34.05908	E.035Q	NVA	
E3CE2-2,3,4,6,Q8-HxCDF	E865.Q	88.9	28 - E36	35.952	34.95695	0.9950	NVA	
E3CE2-E,2,3,Q8,9-HxCDF	E865.Q	8Q2	29 - E4Q	36.9Q6	36.005E	0.9Q09	NVA	
E3CE2-E,2,3,4,Q8-HxCDD	E865.Q	84.6	32 - E4E	36.0Q43	35.08685	0.98Q5	NVA	
E3CE2-E,2,3,6,Q8-HxCDD	E865.Q	83.3	28 - E30	36.E85Q	35.20E8Q	0.9838	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDF	E865.Q	86.3	28 - E43	38.8E2Q	3Q8954	0.9EQ8	NVA	
E3CE2-E,2,3,4,Q8,9-HpCDF	E865.Q	84.4	26 - E38	4E.0608	40.04E65	E.0E92	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDD	E865.Q	95.0	23 - E40	40.3E52	39.34422	0.9QE0	NVA	
E3CE2-TCDD	3Q8E.3	5Q8	EQ- E5Q	45.0Q83	43.8EQE3	E.2562	NVA	
3QCl4-2,3,Q8-UCDD	Q46.2Q	95.5	35 - E9Q	26.49QQ	25.43348	E.0642	NVA	

* 1alues outside oMf C limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0339	Instrument:	A7 UT SPOC0E
Sample ID:	20J0389-09	Calibration:	DJ00E0E
File ID:	20EE23E6	Analy/ ed:	EEV23V20 22:E0

Surrozate Compound	Spike Legel pzVL	v Recogery	Recogery Limits	RU	Calibration %ean RU	RU DiMM	RU DiMM Limit	f
E3CE2-2,3,Q8-UCDF	E895.Q	85.3	24 - E69	25.832Q	24.QQ625	E.0565	NVA	
E3CE2-2,3,Q8-UCDD	E895.Q	83.3	25 - E64	26.4825	25.4E32Q	E.0692	NVA	
E3CE2-E,2,3,Q8-PeCDF	E895.Q	Q9.8	24 - E85	29.9968	28.9E323	E.0836	NVA	
E3CE2-2,3,4,Q8-PeCDF	E895.Q	QQ0	2E - EQ8	3E.3322	30.256E5	E.0Q6E	NVA	
E3CE2-E,2,3,Q8-PeCDD	E895.Q	80.6	25 - E8E	3E.5882	30.5E585	E.0Q24	NVA	
E3CE2-E,2,3,4,Q8-HxCDF	E895.Q	94.E	26 - E52	34.9495	33.9E8E3	E.03E4	NVA	
E3CE2-E,2,3,6,Q8-HxCDF	E895.Q	98.3	26 - E23	35.0832	34.05908	E.024E	NVA	
E3CE2-2,3,4,6,Q8-HxCDF	E895.Q	92.6	28 - E36	35.95E2	34.95695	0.9943	NVA	
E3CE2-E,2,3,Q8,9-HxCDF	E895.Q	9E.Q	29 - E4Q	36.9Q52	36.005E	0.9Q0E	NVA	
E3CE2-E,2,3,4,Q8-HxCDD	E895.Q	8Q6	32 - E4E	36.0625	35.08685	0.9Q5Q	NVA	
E3CE2-E,2,3,6,Q8-HxCDD	E895.Q	8Q6	28 - E30	36.E85	35.20E8Q	0.983E	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDF	E895.Q	9E.9	28 - E43	38.8EEQ	3Q8954	0.9E63	NVA	
E3CE2-E,2,3,4,Q8,9-HpCDF	E895.Q	9E.5	26 - E38	4E.0602	40.04E65	E.0E86	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDD	E895.Q	95.Q	23 - E40	40.3E43	39.34422	0.9Q0E	NVA	
E3CE2-TCDD	3Q9E.5	58.8	EQ- E5Q	45.0Q28	43.8EQE3	E.255Q	NVA	
3QCl4-2,3,Q8-UCDD	Q58.29	9Q6	35 - E9Q	26.49Q5	25.43348	E.0640	NVA	

* 1alues outside oMf C limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0339	Instrument:	A7 UT SPOC0E
Sample ID:	20J0389-E0	Calibration:	DJ00E0E
File ID:	20EE23EQ	Analy/ ed:	EEV23V20 22:59

Surrozate Compound	Spike Legel pzVL	v Recogery	Recogery Limits	RU	Calibration %ean RU	RU DiMM	RU DiMM Limit	f
E3CE2-2,3,Q8-UCDF	E956.9	89.5	24 - E69	25.84Q8	24.QQ625	E.0QE6	NVA	
E3CE2-2,3,Q8-UCDD	E956.9	86.4	25 - E64	26.4823	25.4E32Q	E.0690	NVA	
E3CE2-E,2,3,Q8-PeCDF	E956.9	Q8.E	24 - E85	29.996Q	28.9E323	E.0835	NVA	
E3CE2-2,3,4,Q8-PeCDF	E956.9	Q5.6	2E - EQ8	3E.3322	30.256E5	E.0Q6E	NVA	
E3CE2-E,2,3,Q8-PeCDD	E956.9	Q4.8	25 - E8E	3E.5882	30.5E585	E.0Q24	NVA	
E3CE2-E,2,3,4,Q8-HxCDF	E956.9	98.Q	26 - E52	34.9493	33.9E8E3	E.03E2	NVA	
E3CE2-E,2,3,6,Q8-HxCDF	E956.9	98.0	26 - E23	35.094	34.05908	E.0349	NVA	
E3CE2-2,3,4,6,Q8-HxCDF	E956.9	9E.E	28 - E36	35.95E	34.95695	0.994E	NVA	
E3CE2-E,2,3,Q8,9-HxCDF	E956.9	90.E	29 - E4Q	36.9862	36.005E	0.98EE	NVA	
E3CE2-E,2,3,4,Q8-HxCDD	E956.9	8Q2	32 - E4E	36.0Q83	35.08685	0.9865	NVA	
E3CE2-E,2,3,6,Q8-HxCDD	E956.9	Q9.Q	28 - E30	36.E84Q	35.20E8Q	0.9828	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDF	E956.9	84.4	28 - E43	38.8EE5	3Q8954	0.9E6E	NVA	
E3CE2-E,2,3,4,Q8,9-HpCDF	E956.9	95.2	26 - E38	4E.0QE	40.04E65	E.0294	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDD	E956.9	94.5	23 - E40	40.3E42	39.34422	0.9Q00	NVA	
E3CE2-TCDD	39E3.9	49.8	EQ- E5Q	45.0Q23	43.8EQE3	E.2552	NVA	
3QCl4-2,3,Q8-UCDD	Q82.Q8	E03	35 - E9Q	26.49Q5	25.43348	E.0640	NVA	

* 1alues outside oMf C limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0339	Instrument:	A7 UT SPOC0E
Sample ID:	20J0389-EE	Calibration:	DJ00E0E
File ID:	20EE23E8	Analy/ ed:	EEV23V20 23:49

Surrozate Compound	Spike Legel pzVL	v Recogery	Recogery Limits	RU	Calibration %ean RU	RU DiNM	RU DiNM Limit	f
E3CE2-2,3,Q8-UCDF	E90E.E	Q8.9	24 - E69	25.8328	24.QQ625	E.0566	NVA	
E3CE2-2,3,Q8-UCDD	E90E.E	QQ2	25 - E64	26.46Q5	25.4E32Q	E.0542	NVA	
E3CE2-E,2,3,Q8-PeCDF	E90E.E	Q0.2	24 - E85	29.986	28.9E323	E.0Q28	NVA	
E3CE2-2,3,4,Q8-PeCDF	E90E.E	6QQ	2E - EQ8	3E.32EQ	30.256E5	E.0656	NVA	
E3CE2-E,2,3,Q8-PeCDD	E90E.E	68.2	25 - E8E	3E.5QQQ	30.5E585	E.06E9	NVA	
E3CE2-E,2,3,4,Q8-HxCDF	E90E.E	93.6	26 - E52	34.9392	33.9E8E3	E.02EE	NVA	
E3CE2-E,2,3,6,Q8-HxCDF	E90E.E	96.9	26 - E23	35.0838	34.05908	E.024Q	NVA	
E3CE2-2,3,4,6,Q8-HxCDF	E90E.E	88.9	28 - E36	35.94E	34.95695	0.984E	NVA	
E3CE2-E,2,3,Q8,9-HxCDF	E90E.E	86.Q	29 - E4Q	36.965	36.005E	0.9599	NVA	
E3CE2-E,2,3,4,Q8-HxCDD	E90E.E	86.3	32 - E4E	36.0635	35.08685	0.9Q66	NVA	
E3CE2-E,2,3,6,Q8-HxCDD	E90E.E	82.E	28 - E30	36.EQ48	35.20E8Q	0.9Q29	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDF	E90E.E	88.2	28 - E43	38.80E5	3Q8954	0.906E	NVA	
E3CE2-E,2,3,4,Q8,9-HpCDF	E90E.E	8E.9	26 - E38	4E.0498	40.04E65	E.0082	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDD	E90E.E	84.6	23 - E40	40.3042	39.34422	0.9600	NVA	
E3CE2-TCDD	3802.3	48.9	EQ- E5Q	45.0645	43.8EQE3	E.24Q4	NVA	
3QCl4-2,3,Q8-UCDD	Q60.46	9E.Q	35 - E9Q	26.482Q	25.43348	E.0492	NVA	

* 1alues outside oMf C limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0339	Instrument:	A7 UT SPOC0E
Sample ID:	20J0389-E4	Calibration:	DJ00E0E
File ID:	20EE23E9	Analy/ ed:	EEV24V20 00:38

Surrozate Compound	Spike Legel pzVL	v Recogery	Recogery Limits	RU	Calibration %ean RU	RU DiMM	RU DiMM Limit	f
E3CE2-2,3,Q8-UCDF	E895.Q	Q9.0	24 - E69	25.8328	24.QQ625	E.0566	NVA	
E3CE2-2,3,Q8-UCDD	E895.Q	Q9.E	25 - E64	26.4825	25.4E32Q	E.0692	NVA	
E3CE2-E,2,3,Q8-PeCDF	E895.Q	Q2.2	24 - E85	29.996Q	28.9E323	E.0835	NVA	
E3CE2-2,3,4,Q8-PeCDF	E895.Q	QE.8	2E - EQ8	3E.3322	30.256E5	E.0Q6E	NVA	
E3CE2-E,2,3,Q8-PeCDD	E895.Q	Q2.Q	25 - E8E	3E.5882	30.5E585	E.0Q24	NVA	
E3CE2-E,2,3,4,Q8-HxCDF	E895.Q	96.Q	26 - E52	34.949Q	33.9E8E3	E.03E6	NVA	
E3CE2-E,2,3,6,Q8-HxCDF	E895.Q	98.3	26 - E23	35.0832	34.05908	E.024E	NVA	
E3CE2-2,3,4,6,Q8-HxCDF	E895.Q	93.6	28 - E36	35.95E3	34.95695	0.9944	NVA	
E3CE2-E,2,3,Q8,9-HxCDF	E895.Q	95.E	29 - E4Q	36.9Q53	36.005E	0.9Q02	NVA	
E3CE2-E,2,3,4,Q8-HxCDD	E895.Q	88.6	32 - E4E	36.062Q	35.08685	0.9Q59	NVA	
E3CE2-E,2,3,6,Q8-HxCDD	E895.Q	83.0	28 - E30	36.E852	35.20E8Q	0.9833	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDF	E895.Q	89.9	28 - E43	38.8EE8	3Q8954	0.9E64	NVA	
E3CE2-E,2,3,4,Q8,9-HpCDF	E895.Q	90.5	26 - E38	4E.0602	40.04E65	E.0E86	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDD	E895.Q	94.5	23 - E40	40.3E45	39.34422	0.9Q03	NVA	
E3CE2-TCDD	3Q9E.5	53.0	EQ- E5Q	45.063Q	43.8EQE3	E.2466	NVA	
3QCl4-2,3,Q8-UCDD	Q58.29	88.8	35 - E9Q	26.49Q5	25.43348	E.0640	NVA	

* 1alues outside oMf C limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0339	Instrument:	A7 UT SPOC0E
Sample ID:	SIK0339-CC1 2	Calibration:	DJ00E0E
File ID:	20EE2320	Analy/ ed:	EEV24V20 0E:2Q

Surrozate Compound	Spike Legel nzVmL	v Recogery	Recogery Limits	RU	Calibration %ean RU	RU DiMM	RU DiMM Limit	f
E3CE2-2,3,Q8-UCDF	E00.00	96.Q	QE - E29	25.84QQ	24.QQ625	E.0QE5	NVA	
E3CE2-2,3,Q8-UCDD	E00.00	94.E	82 - EE8	26.4822	25.4E32Q	E.0689	NVA	
E3CE2-E,2,3,Q8-PeCDF	E00.00	92.2	Q6 - E24	29.996Q	28.9E323	E.0835	NVA	
E3CE2-2,3,4,Q8-PeCDF	E00.00	88.E	QQ- E23	3E.3433	30.256E5	E.08Q2	NVA	
E3CE2-E,2,3,Q8-PeCDD	E00.00	88.3	62 - E38	3E.5992	30.5E585	E.0834	NVA	
E3CE2-E,2,3,4,Q8-HxCDF	E00.00	E03	Q6 - E24	34.9492	33.9E8E3	E.03EE	NVA	
E3CE2-E,2,3,6,Q8-HxCDF	E00.00	E08	Q0 - E30	35.094	34.05908	E.0349	NVA	
E3CE2-2,3,4,6,Q8-HxCDF	E00.00	E02	Q8 - E2Q	35.95E	34.95695	0.994E	NVA	
E3CE2-E,2,3,Q8,9-HxCDF	E00.00	E03	Q4 - E26	36.9862	36.005E	0.98EE	NVA	
E3CE2-E,2,3,4,Q8-HxCDD	E00.00	93.Q	85 - EE5	36.0Q85	35.08685	0.986Q	NVA	
E3CE2-E,2,3,6,Q8-HxCDD	E00.00	9QE	85 - EE5	36.E848	35.20E8Q	0.9829	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDF	E00.00	E08	Q8 - E22	38.8EE5	3Q8954	0.9E6E	NVA	
E3CE2-E,2,3,4,Q8,9-HpCDF	E00.00	E06	QQ- E23	4E.0QE	40.04E65	E.0294	NVA	
E3CE2-E,2,3,4,6,Q8-HpCDD	E00.00	E0Q	82 - EE8	40.3E4	39.34422	0.9698	NVA	
E3CE2-TCDD	200.00	8Q5	48 - E52	45.0Q22	43.8EQE3	E.255E	NVA	
3QCl4-2,3,Q8-UCDD	E0.000	94.6	Q9 - E2E	26.49Q8	25.43348	E.0638	NVA	

* 1alues outside oMf C limits

HOLDING TIME SUMMARY

Analysis: EPA 1613B

Laboratory: Analytical Resources, Inc. SDG: 20J0389

Client: Floyd - Snider Project: Lora Lake Apartments

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MW-VB3-102720 20J0389-01	10/27/20 09:50	10/28/20 13:48	11/19/20 07:10	22	365	11/23/20 14:39	4	365	
MW-CP1-102720 20J0389-02	10/27/20 11:25	10/28/20 13:48	11/19/20 07:10	22	365	11/23/20 15:28	4	365	
MW-CP2-102720 20J0389-03	10/27/20 15:40	10/28/20 13:48	11/19/20 07:10	22	365	11/23/20 16:18	4	365	
MW-CP3-102720 20J0389-04	10/27/20 12:42	10/28/20 13:48	11/19/20 07:10	22	365	11/23/20 17:07	4	365	
MW-CP4-102720 20J0389-05	10/27/20 14:20	10/28/20 13:48	11/19/20 07:10	22	365	11/23/20 19:42	5	365	
MW-CP5-102720 20J0389-06	10/27/20 14:28	10/28/20 13:48	11/11/20 13:40	14	365	11/18/20 14:52	7	365	
MW-CP6-102720 20J0389-07	10/27/20 13:20	10/28/20 13:48	11/19/20 07:10	22	365	11/23/20 20:31	5	365	
MW-CP7-102720 20J0389-08	10/27/20 12:00	10/28/20 13:48	11/19/20 07:10	22	365	11/23/20 21:20	5	365	
MW-CP2-102720-D 20J0389-09	10/27/20 15:45	10/28/20 13:48	11/19/20 07:10	22	365	11/23/20 22:10	5	365	
MW-C1/VB1-102820 20J0389-10	10/28/20 09:37	10/28/20 13:48	11/19/20 07:10	21	365	11/23/20 22:59	5	365	
MW-C101-102820 20J0389-11	10/28/20 09:47	10/28/20 13:48	11/19/20 07:10	21	365	11/23/20 23:49	5	365	
HCOO-B312-102820 20J0389-14	10/28/20 13:00	10/28/20 13:48	11/19/20 07:10	21	365	11/24/20 00:38	5	365	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 1613B

Laboratory: Analytical Resources, Inc.
SDG: 20J0389
Client: Floyd - Snider
Project: Lora Lake Apartments
Matrix: Solid
Instrument: AUTOSPEC01

Analyte	MDL	RL	Units
2,3,7,8-TCDF	0.063	1.00	ng/kg
2,3,7,8-TCDD	0.140	1.00	ng/kg
1,2,3,7,8-PeCDF	0.150	1.00	ng/kg
2,3,4,7,8-PeCDF	0.150	1.00	ng/kg
1,2,3,7,8-PeCDD	0.180	1.00	ng/kg
1,2,3,4,7,8-HxCDF	0.140	1.00	ng/kg
1,2,3,6,7,8-HxCDF	0.180	1.00	ng/kg
2,3,4,6,7,8-HxCDF	0.110	1.00	ng/kg
1,2,3,7,8,9-HxCDF	0.210	1.00	ng/kg
1,2,3,4,7,8-HxCDD	0.180	1.00	ng/kg
1,2,3,6,7,8-HxCDD	0.150	1.00	ng/kg
1,2,3,7,8,9-HxCDD	0.220	1.00	ng/kg
1,2,3,4,6,7,8-HpCDF	0.210	1.00	ng/kg
1,2,3,4,7,8,9-HpCDF	0.160	1.00	ng/kg
1,2,3,4,6,7,8-HpCDD	0.560	2.50	ng/kg
OCDF	1.10	2.50	ng/kg
OCDD	4.30	10.0	ng/kg

METHOD DETECTION AND REPORTING LIMITS

EPA 1613B

Laboratory: Analytical Resources, Inc. SDG: 20J0389

Client: Floyd - Snider Project: Lora Lake Apartments

Matrix: Water Instrument: AUTOSPEC01

Analyte	MDL	RL	Units
2,3,7,8-TCDF	0.60	10.0	pg/L
2,3,7,8-TCDD	1.10	10.0	pg/L
1,2,3,7,8-PeCDF	2.10	10.0	pg/L
2,3,4,7,8-PeCDF	2.00	10.0	pg/L
1,2,3,7,8-PeCDD	1.90	10.0	pg/L
1,2,3,4,7,8-HxCDF	1.70	10.0	pg/L
1,2,3,6,7,8-HxCDF	2.20	10.0	pg/L
2,3,4,6,7,8-HxCDF	1.30	10.0	pg/L
1,2,3,7,8,9-HxCDF	2.00	10.0	pg/L
1,2,3,4,7,8-HxCDD	1.60	10.0	pg/L
1,2,3,6,7,8-HxCDD	1.50	10.0	pg/L
1,2,3,7,8,9-HxCDD	1.70	10.0	pg/L
1,2,3,4,6,7,8-HpCDF	2.20	10.0	pg/L
1,2,3,4,7,8,9-HpCDF	2.10	10.0	pg/L
1,2,3,4,6,7,8-HpCDD	1.90	10.0	pg/L
OCDF	5.40	20.0	pg/L
OCDD	34.0	50.0	pg/L
Total TCDF		10.0	pg/L
Total TCDD		10.0	pg/L
Total PeCDF		10.0	pg/L
Total PeCDD		10.0	pg/L
Total HxCDF		10.0	pg/L
Total HxCDD		10.0	pg/L
Total HpCDF		10.0	pg/L
Total HpCDD		10.0	pg/L

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

CS3WT

Calibration and Verification Solution (EPA-1613CS3) combined with Window Defining and 2,3,7,8-TCDD Resolution Testing Congeners

G 001361 Recd. 2/15/18

PRODUCT CODE:	CS3WT
LOT NUMBER:	CS3WT0617
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	06/27/2017
LAST TESTED: (mm/dd/yyyy)	06/27/2017
EXPIRY DATE: (mm/dd/yyyy)	06/27/2024
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

CS3WT is a solution/mixture of native and $^{13}C_{12}$-labelled chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

CS3WT was designed and prepared to be used as a HRMS calibration standard according to U.S. EPA Method 1613B.

It is to be used for calibration verification in place of EPA-1613CS3 (Lot: 13CS30617). It also contains the PCDD and PCDF window defining congeners for a DB-5 (or equivalent) capillary column as well as the TCDD isomers required to test and confirm the resolution of 2,3,7,8-TCDD.

The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%. The individual native 2,3,7,8-substituted PCDD and PCDF congeners all have chemical purities of >98%; the other congeners (window defining and resolution testing) should only be considered semi-quantitative.

This current lot of CS3WT (CS3WT0617) is to be used with the 1613 calibration solutions having the following lot numbers:

PRODUCT CODE	LOT NUMBER
EPA-1613CS1	13CS10617
EPA-1613CS2	13CS20617
EPA-1613CS3	13CS30617
EPA-1613CS4	13CS40617
EPA-1613CS5	13CS50617
EPA-1613CSL	13CSL0617
EPA-1613CS0.5	13CS0.50617

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Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) has been assigned to the quantitative analytes in this mixture. Conversely, semi-quantitative analytes have been assigned an uncertainty of ±20%.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using calibrated NIST and/or NRC traceable external weights. All volumetric glassware used is calibrated, of Class A tolerance, and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

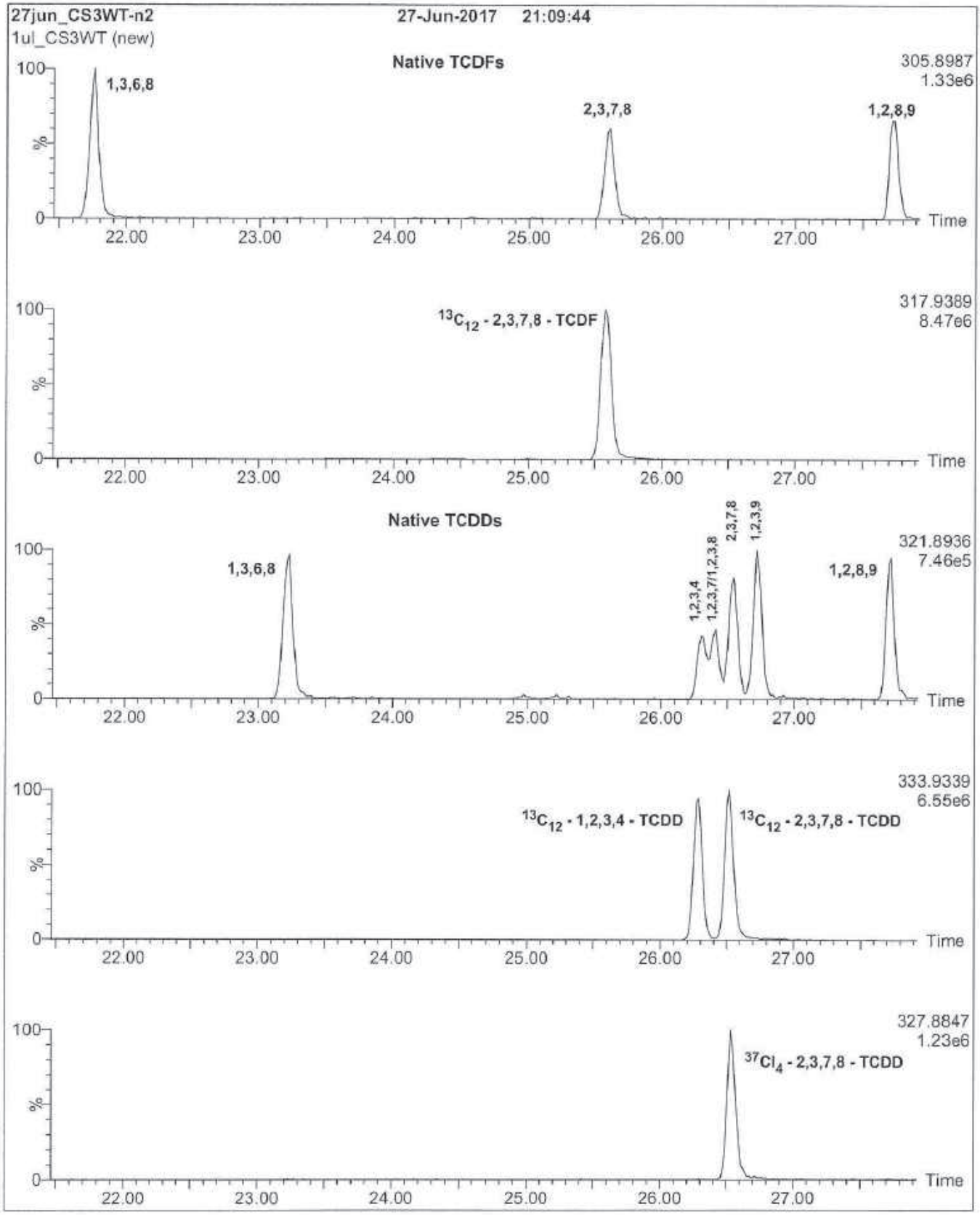


Figure 1: CS3WT; HRGC/HRMS Data (60 m DB-5 Column)

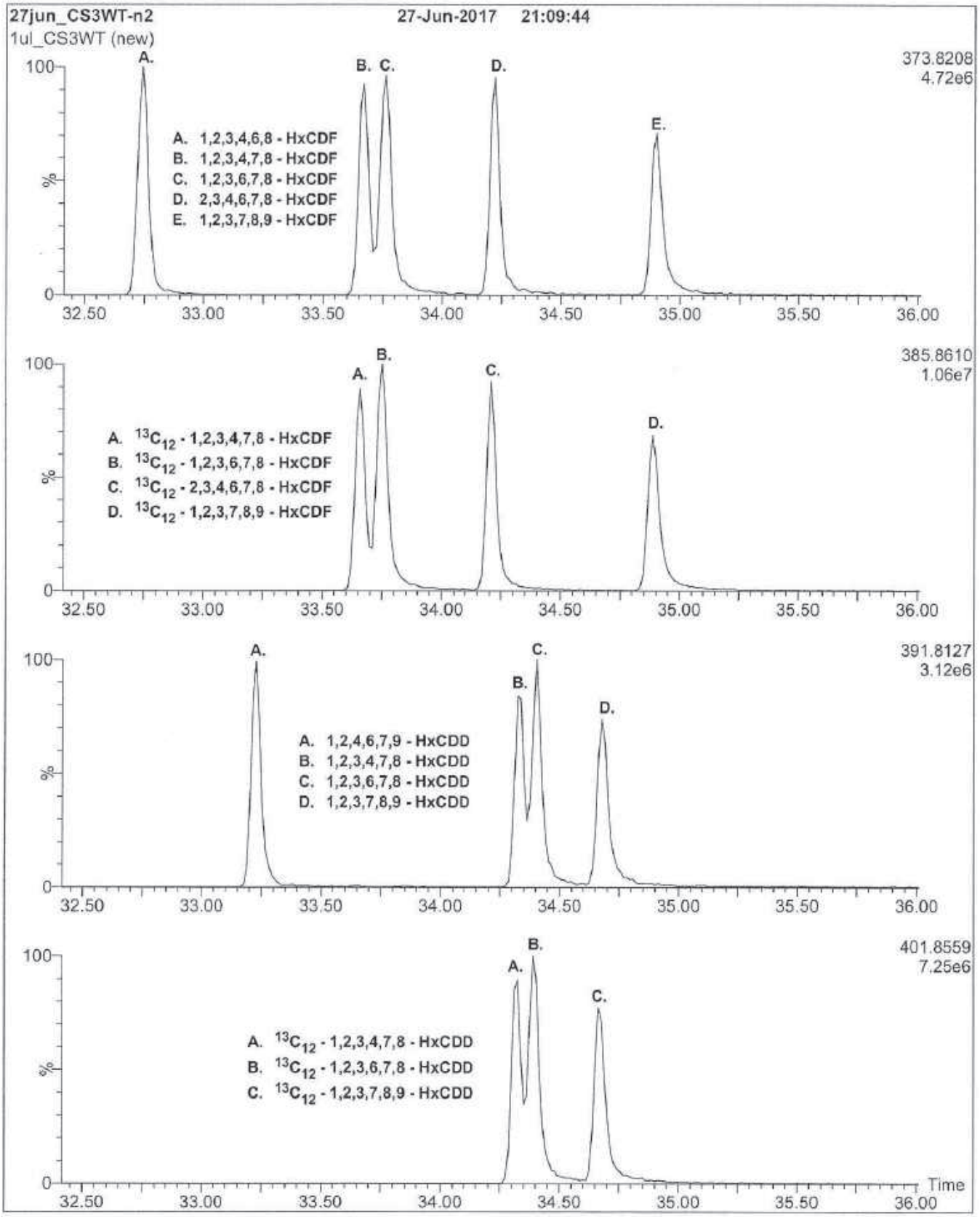
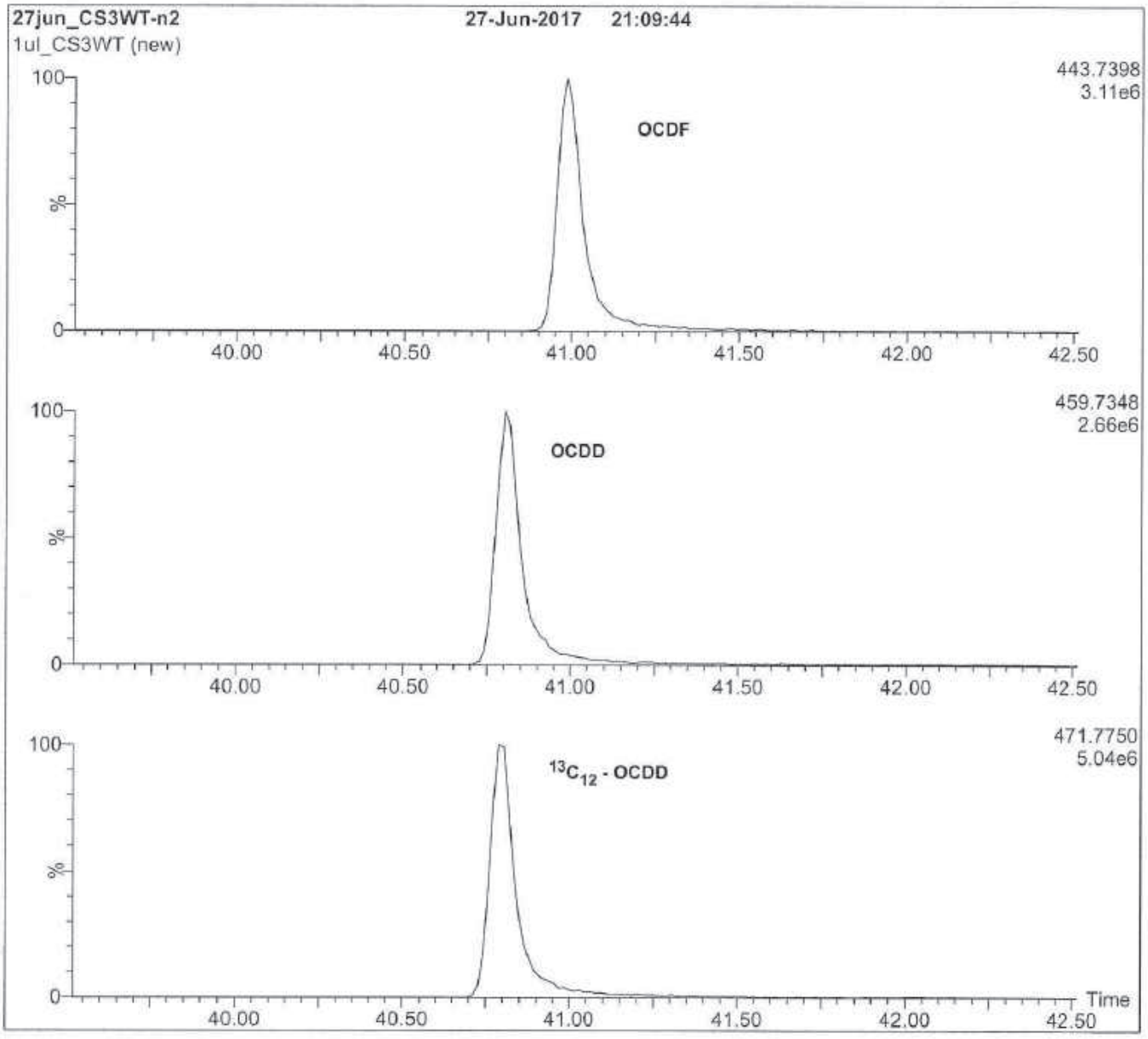


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613PAR

U.S. EPA Method 1613 Native PCDD/PCDF
Precision and Recovery Stock Solution

PRODUCT CODE:	EPA-1613PAR
LOT NUMBER:	13PAR0418
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	04/11/2018
LAST TESTED: (mm/dd/yyyy)	04/12/2018
EXPIRY DATE: (mm/dd/yyyy)	03/01/2025
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted chlorinated dibenzo-p-dioxins (PCDDs) and 2,3,7,8-substituted dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B).

The individual PCDDs and PCDFs all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

H006086
Recd. JR
06/21/19

ADDITIONAL INFORMATION:

- See page 2 for further details.

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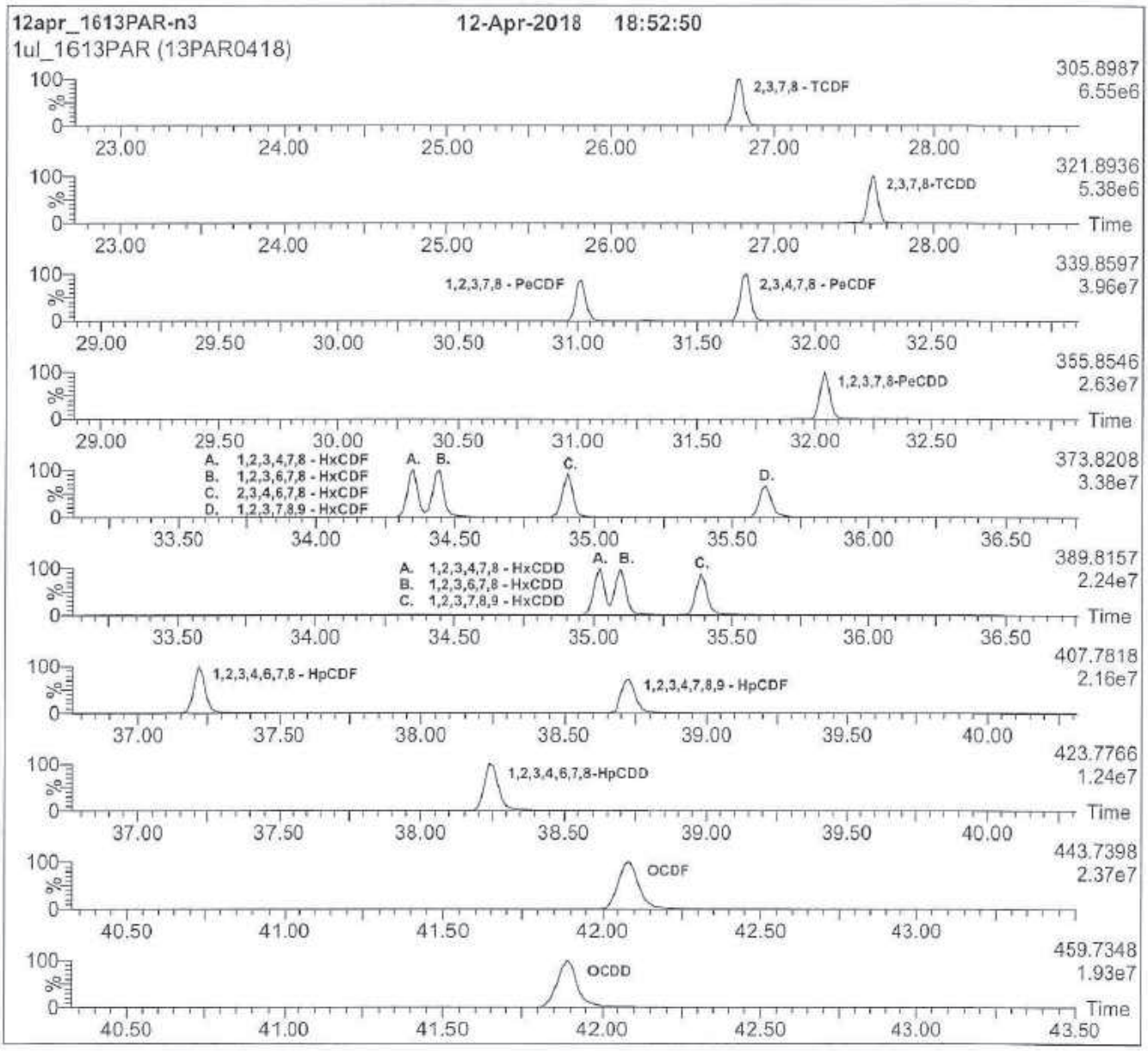
Figure 1: EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

Table A: **EPA-1613PAR; Components and Concentrations (ng/ml, ± 5% in nonane/ 2.4% toluene)**

	Concentration (ng/ml)
PCDDs:	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	40
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	200
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	200
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	200
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	200
Octachlorodibenzo-p-dioxin	400
PCDFs:	
2,3,7,8-Tetrachlorodibenzofuran	40
1,2,3,7,8-Pentachlorodibenzofuran	200
2,3,4,7,8-Pentachlorodibenzofuran	200
1,2,3,4,7,8-Hexachlorodibenzofuran	200
1,2,3,6,7,8-Hexachlorodibenzofuran	200
1,2,3,7,8,9-Hexachlorodibenzofuran	200
2,3,4,6,7,8-Hexachlorodibenzofuran	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	200
Octachlorodibenzofuran	400

Certified By: _____ **Date:** 04/16/2018
(mm/dd/yyyy)
B.G. Chittim, General Manager

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CSS

U.S. EPA Method 1613 Cleanup Standard Spiking Solution

PRODUCT CODE:	EPA-1613CSS
LOT NUMBER:	13CSS1019
SOLVENT(S):	Nonane
DATE PREPARED: (mm/dd/yyyy)	10/19/2019
LAST TESTED: (mm/dd/yyyy)	10/19/2019
EXPIRY DATE: (mm/dd/yyyy)	10/19/2026
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

H 12367
Recd. JF
12/20/19

DESCRIPTION:

EPA-1613CSS contains 2,3,7,8-[$^{37}Cl_4$]-Tetrachlorodibenzo-p-dioxin at the concentration given in Table A.

EPA-1613CSS was designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B).

2,3,7,8-[$^{37}Cl_4$]-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

Table A: **EPA-1613CSS; Components and Concentrations (ng/ml, ± 5% in nonane)**

Compound	Concentration (ng/ml)
2,3,7,8-[$^{37}Cl_4$]-Tetrachlorodibenzo-p-dioxin	40

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Certified By: _____ **Date:** 11/05/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_1, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

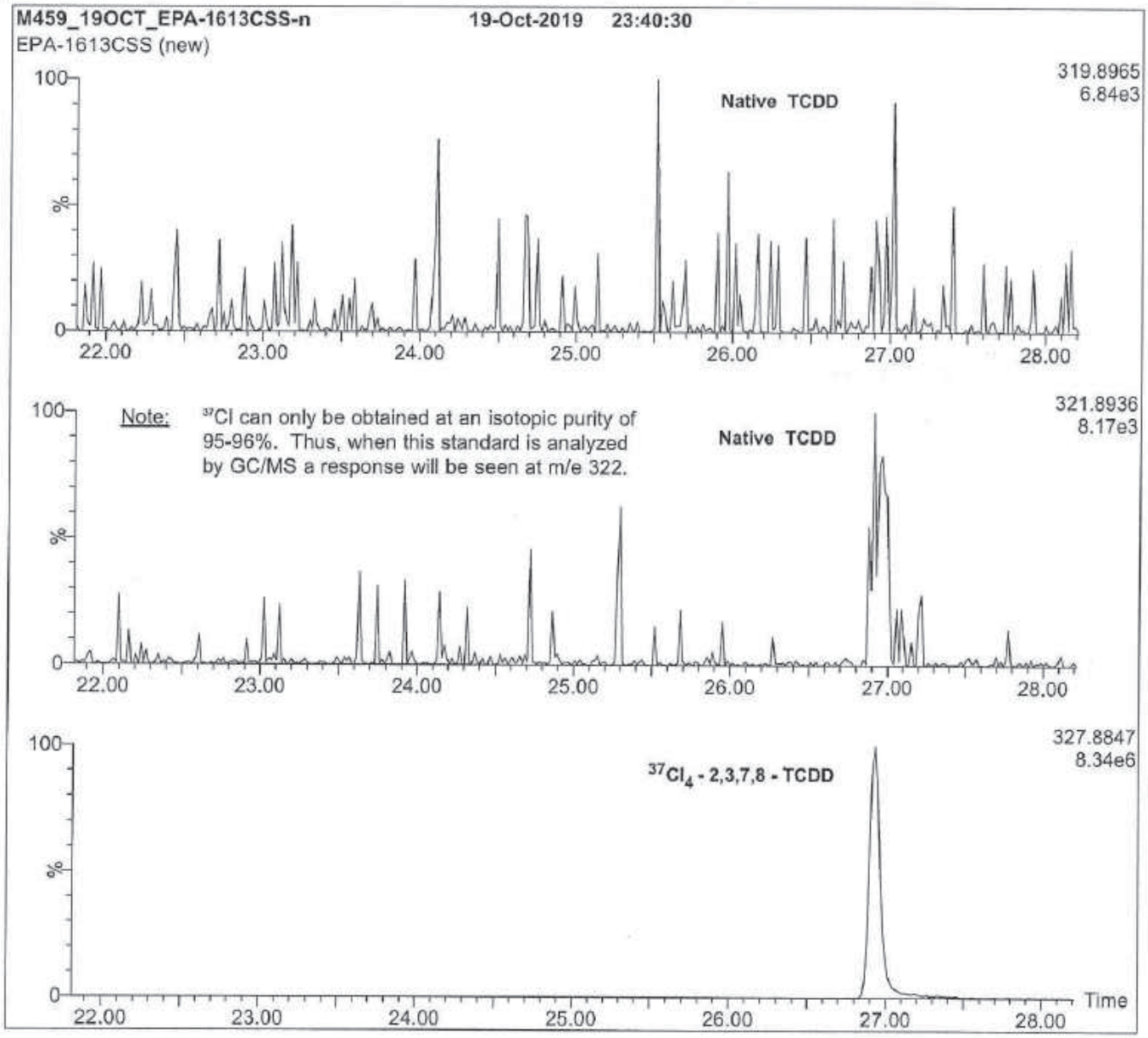
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: EPA-1613CSS; HRGC/HRMS Data (60 m DB-5 Column)



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613LCS

U.S. EPA Method 1613
Labelled Compound Stock Solution

I 002879
Recd. JR
03/27/20

PRODUCT CODE:	EPA-1613LCS
LOT NUMBER:	13LCS1019
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/11/2019
LAST TESTED: (mm/dd/yyyy)	10/17/2019
EXPIRY DATE: (mm/dd/yyyy)	10/17/2026
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

EPA-1613LCS is a solution/mixture of $^{13}C_{12}$-labelled chlorinated dibenzo-p-dioxins ($^{13}C_{12}$-PCDDs) and dibenzofurans ($^{13}C_{12}$-PCDFs). The components and their concentrations are given in Table A.

EPA-1613LCS was designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B).

The individual $^{13}C_{12}$-PCDDs and $^{13}C_{12}$-PCDFs all have chemical purities of >98% and isotopic purities of ≥99%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Table A: **EPA-1613LCS; Components and Concentrations (ng/ml, ± 5% in nonane/ 3.2% toluene)**

$^{13}C_{12}$-PCDDs	Concentration (ng/ml)	$^{13}C_{12}$-PCDFs	Concentration (ng/ml)
$^{13}C_{12}$-2,3,7,8-TCDD	100	$^{13}C_{12}$-2,3,7,8-TCDF	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	$^{13}C_{12}$-1,2,3,7,8-PeCDF	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	$^{13}C_{12}$-2,3,4,7,8-PeCDF	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100
$^{13}C_{12}$-OCDD	200	$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100
		$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100
		$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100
		$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100

Certified By: _____ **Date:** 10/22/2019
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)

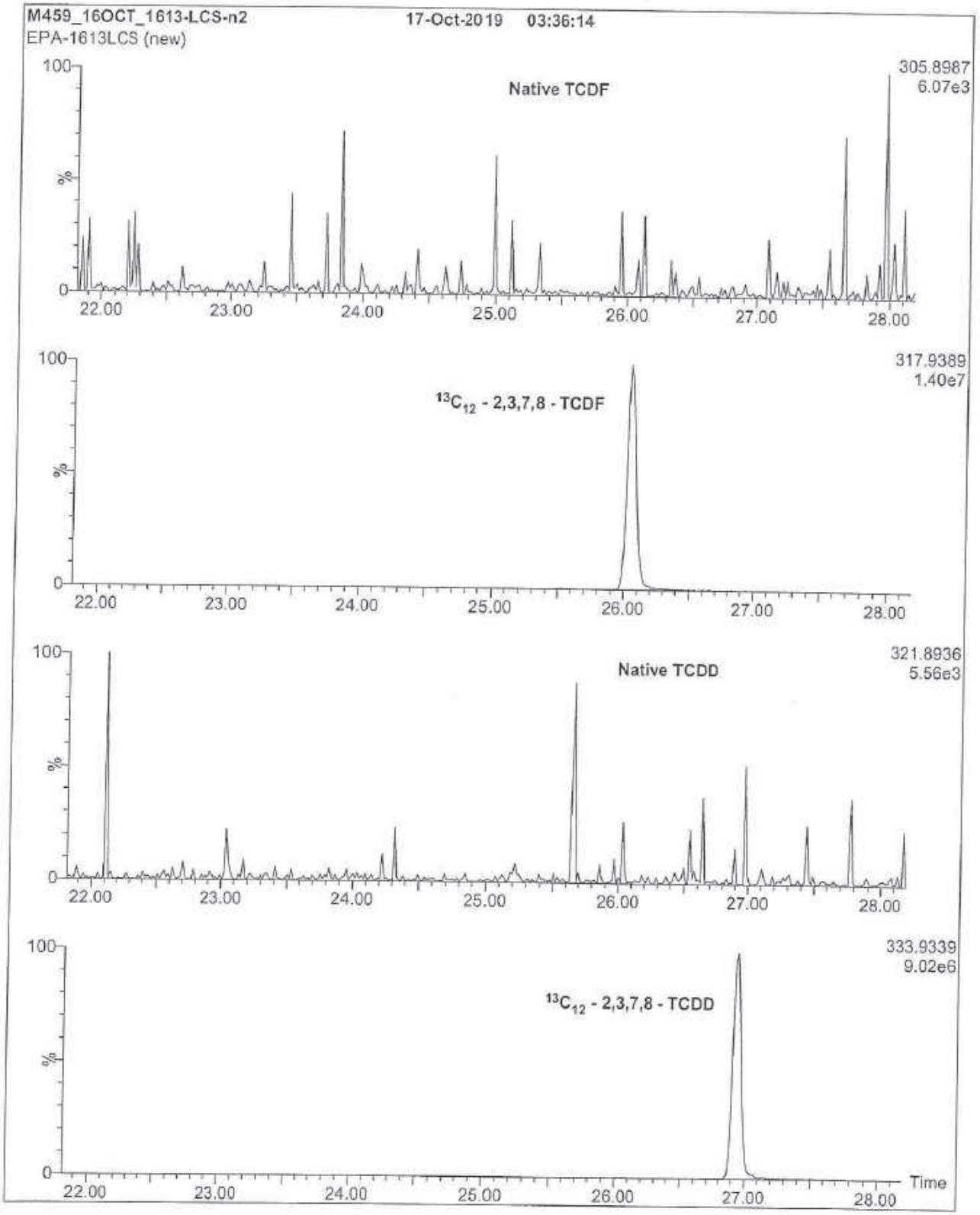


Figure 1: EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)

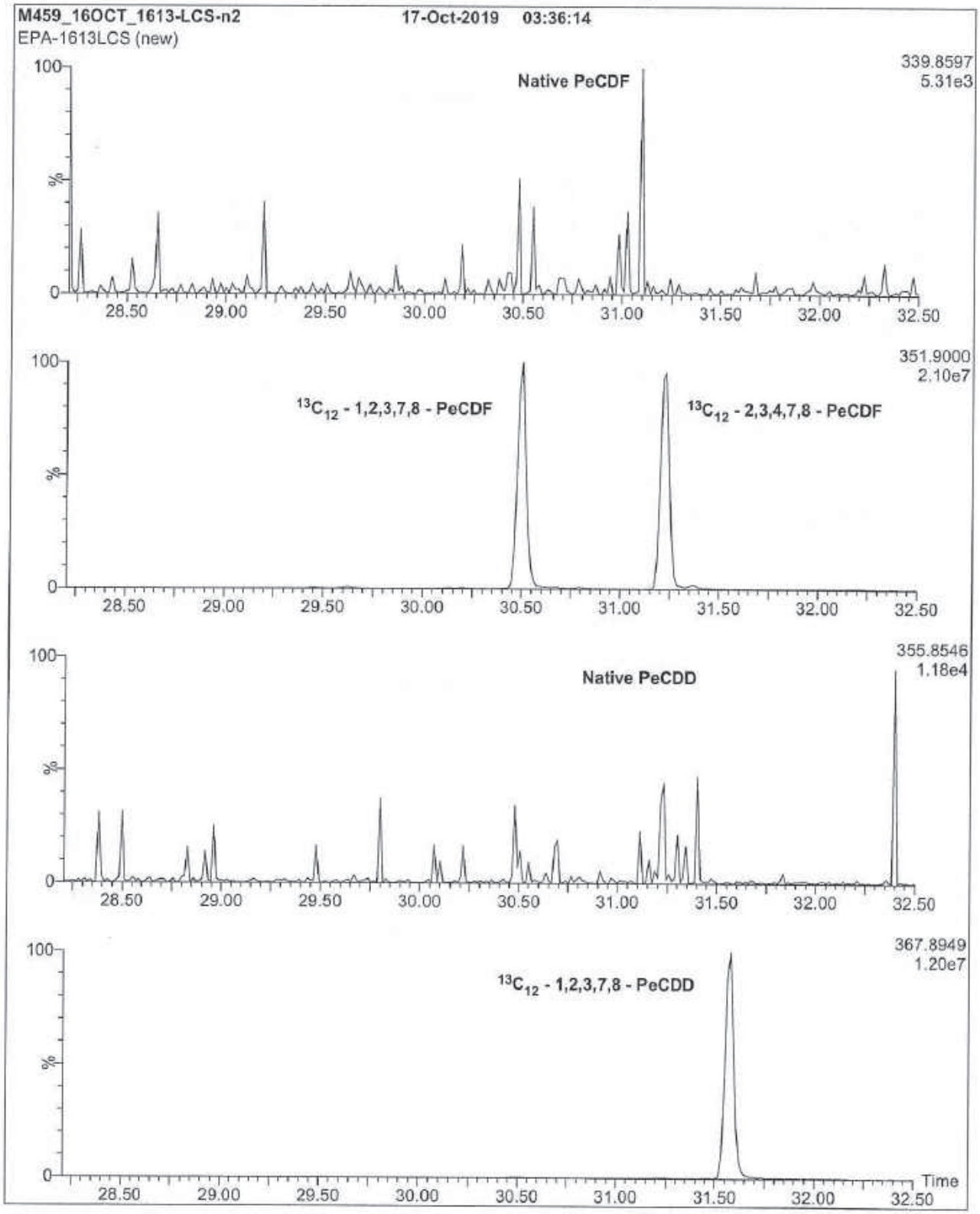


Figure 1: EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)

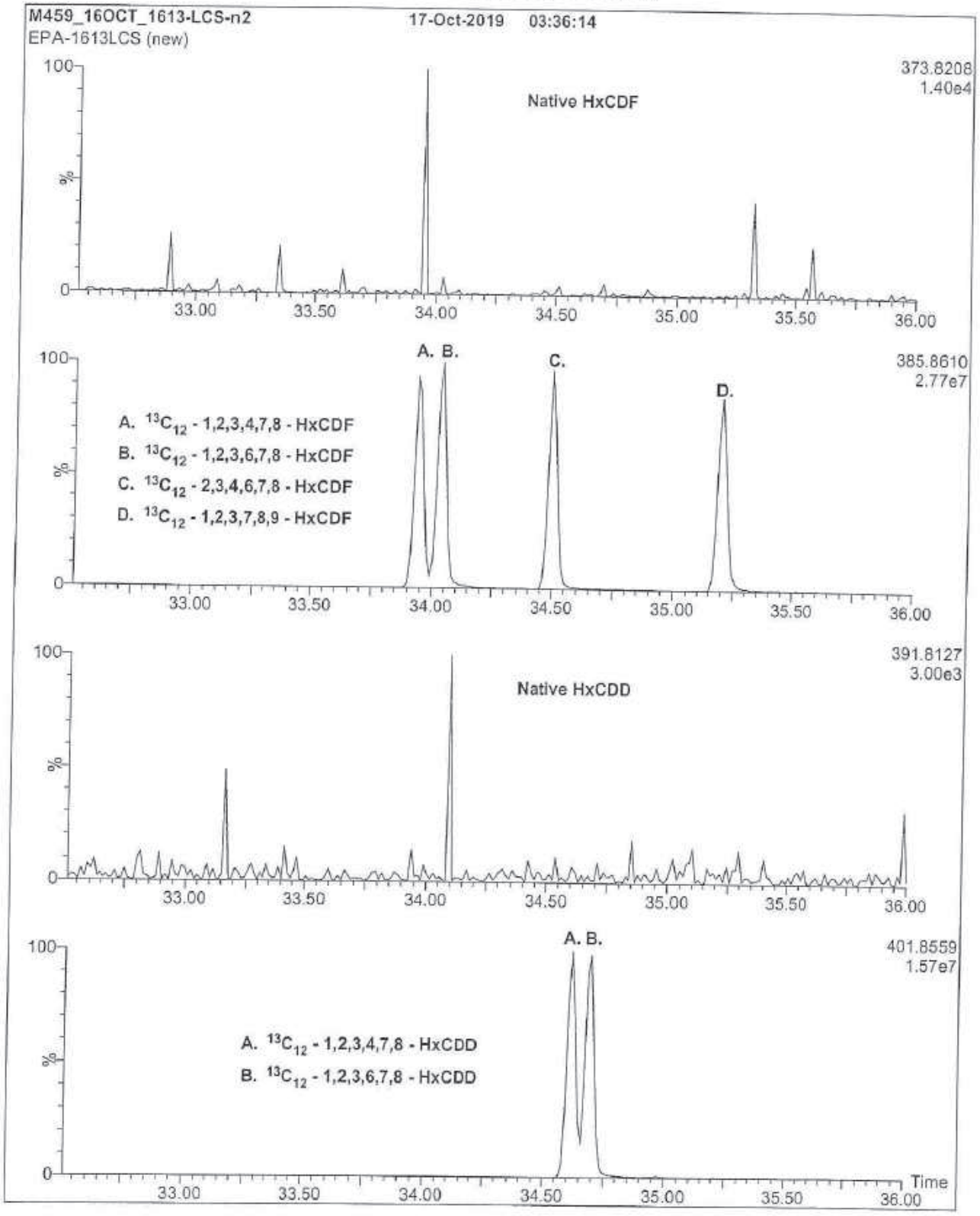


Figure 1: EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)

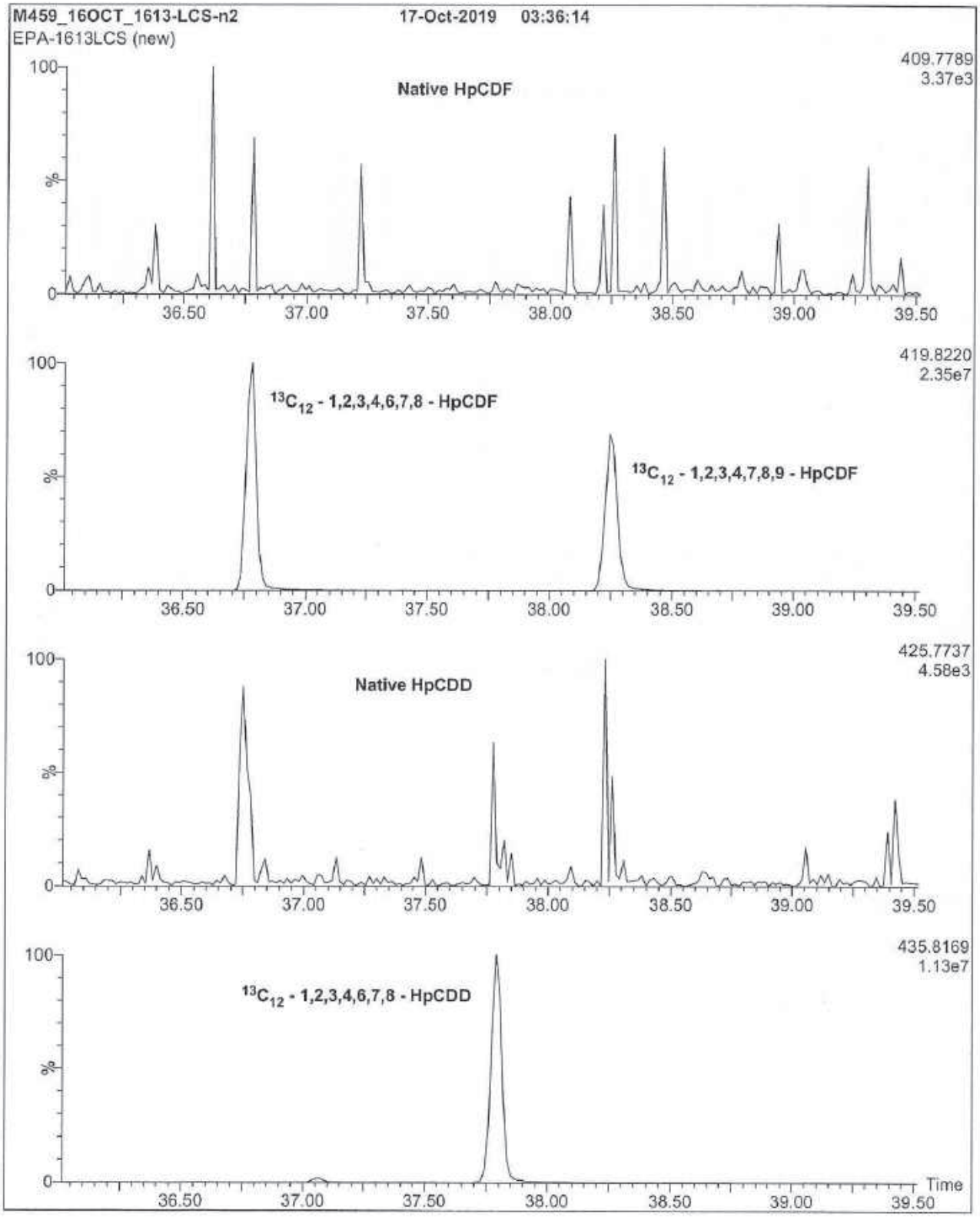
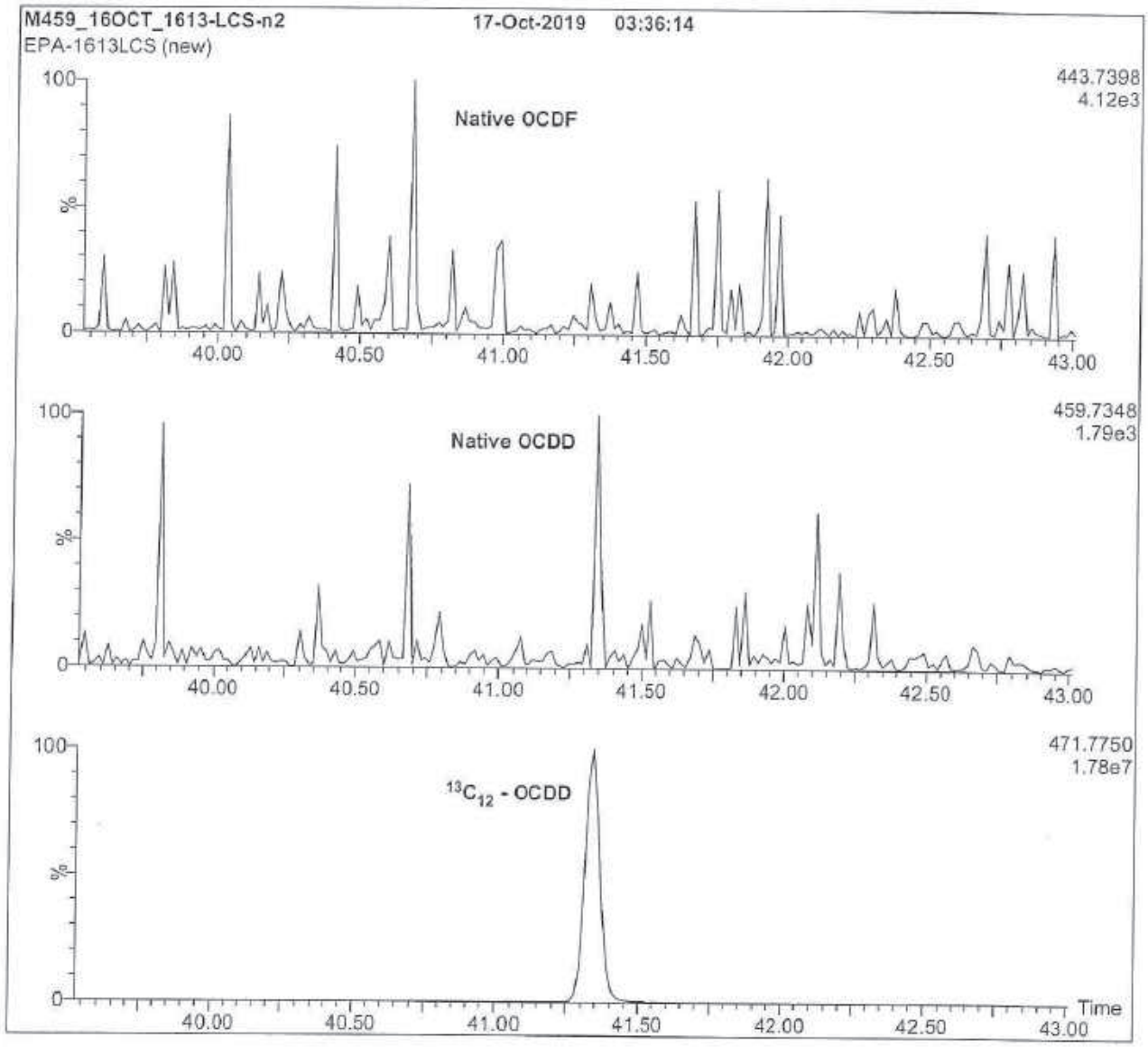


Figure 1: EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

CS3WT

**Calibration and Verification Solution (EPA-1613CS3)
combined with Window Defining and 2,3,7,8-TCDD
Resolution Testing Congeners**

PRODUCT CODE:	CS3WT
LOT NUMBER:	CS3WT1019
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/30/2019
LAST TESTED: (mm/dd/yyyy)	10/31/2019
EXPIRY DATE: (mm/dd/yyyy)	10/31/2026
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

I005452

DESCRIPTION:

CS3WT is a solution/mixture of native and $^{13}C_{12}$-labelled chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

CS3WT was designed and prepared to be used as a HRMS calibration standard according to U.S. EPA Method 1613B.

It is to be used for calibration verification in place of EPA-1613CS3 (Lot: 13CS31019). It also contains the PCDD and PCDF window defining congeners for a DB-5 (or equivalent) capillary column as well as the TCDD isomers required to test and confirm the resolution of 2,3,7,8-TCDD.

The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%. The individual native 2,3,7,8-substituted PCDD and PCDF congeners all have chemical purities of >98%; the other congeners (window defining and resolution testing) should only be considered semi-quantitative.

This current lot of CS3WT is to be used with the 1613 calibration solutions having the following lot numbers:

PRODUCT CODE	LOT NUMBER
EPA-1613CS1	13CS11019
EPA-1613CS2	13CS21019
EPA-1613CS3	13CS31019
EPA-1613CS4	13CS41019
EPA-1613CS5	13CS51019
EPA-1613CSL	13CSL1019
EPA-1613CS0.5	13CS0.51019

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Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.
- Only the 2,3,7,8-substituted PCDDs and PCDFs should be used for quantitation. The other congeners (window defining and 2378-TCDD resolution testing) should be considered semi-quantitative (within ±20% of their design value). Impurities have been identified where possible.

INTENDED USE:

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SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

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where x is expressed as a relative standard uncertainty of the individual parameter.

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TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A 1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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Table A: CS3WT; Components and Concentrations (ng/ml, in nonane/4.5% toluene)

QUANTITATIVE ANALYTES (ng/ml, ±5%)	
Native PCDDs & PCDFs:	
2,3,7,8-TCDD	10
2,3,7,8-TCDF	10
1,2,3,7,8-PeCDD	50
1,2,3,7,8-PeCDF	50
2,3,4,7,8-PeCDF	50
1,2,3,4,7,8-HxCDD	50
1,2,3,6,7,8-HxCDD	50
1,2,3,7,8,9-HxCDD	50
1,2,3,4,7,8-HxCDF	50
1,2,3,6,7,8-HxCDF	50
1,2,3,7,8,9-HxCDF	50
2,3,4,6,7,8-HxCDF	50
1,2,3,4,6,7,8-HpCDD *(WD)*	50
1,2,3,4,6,7,8-HpCDF *(WD)*	50
1,2,3,4,7,8,9-HpCDF *(WD)*	50
OCDD	100
OCDF	100
Labelled PCDDs & PCDFs:	
$^{13}C_{12}$-2,3,7,8-TCDD	100
$^{13}C_{12}$-2,3,7,8-TCDF	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100
$^{13}C_{12}$-OCDD	200
Cleanup Standard:	
$^{37}Cl_4$-2,3,7,8-TCDD	10
Internal Standards:	
$^{13}C_{12}$-1,2,3,4-TCDD	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100

SEMI-QUANTITATIVE ANALYTES (ng/ml, ±20%)	
Window Definers:*	
1,3,6,8-TCDD	10
1,2,8,9-TCDD	10
1,3,6,8-TCDF	10
1,2,8,9-TCDF	10
1,2,4,6,8/1,2,4,7,9-PeCDD	50
1,2,3,8,9-PeCDD	50
1,3,4,6,8-PeCDF	50
1,2,3,8,9-PeCDF	50
1,2,4,6,7,9-HxCDD	50
1,2,3,4,6,8-HxCDF	50
1,2,3,4,6,7,9-HpCDD	50
2378-TCDD Resolution Testing Isomers:	
1,2,3,4-TCDD	5
1,2,3,7/1,2,3,8-TCDD	5
1,2,3,9-TCDD	10

WD – Window Definer

* *1,2,3,4,6,7-HxCDD (last eluting HxCDD) not included; coelutes with 1,2,3,7,8,9-HxCDD. Use 1,2,3,4,6,7,9-HpCDD to set window.*

* *1,2,3,4,8,9-HxCDF (last eluting HxCDF) not included; can interfere with 1,2,3,7,8,9-HxCDF. Use 1,2,3,4,6,7,8-HpCDF to set window.*

Certified By: _____ Date: 11/07/2019 (mm/dd/yyyy)

B.G. Chittim, General Manager

Figure 1: CS3WT; HRGC/HRMS Data (60 m DB-5 Column)

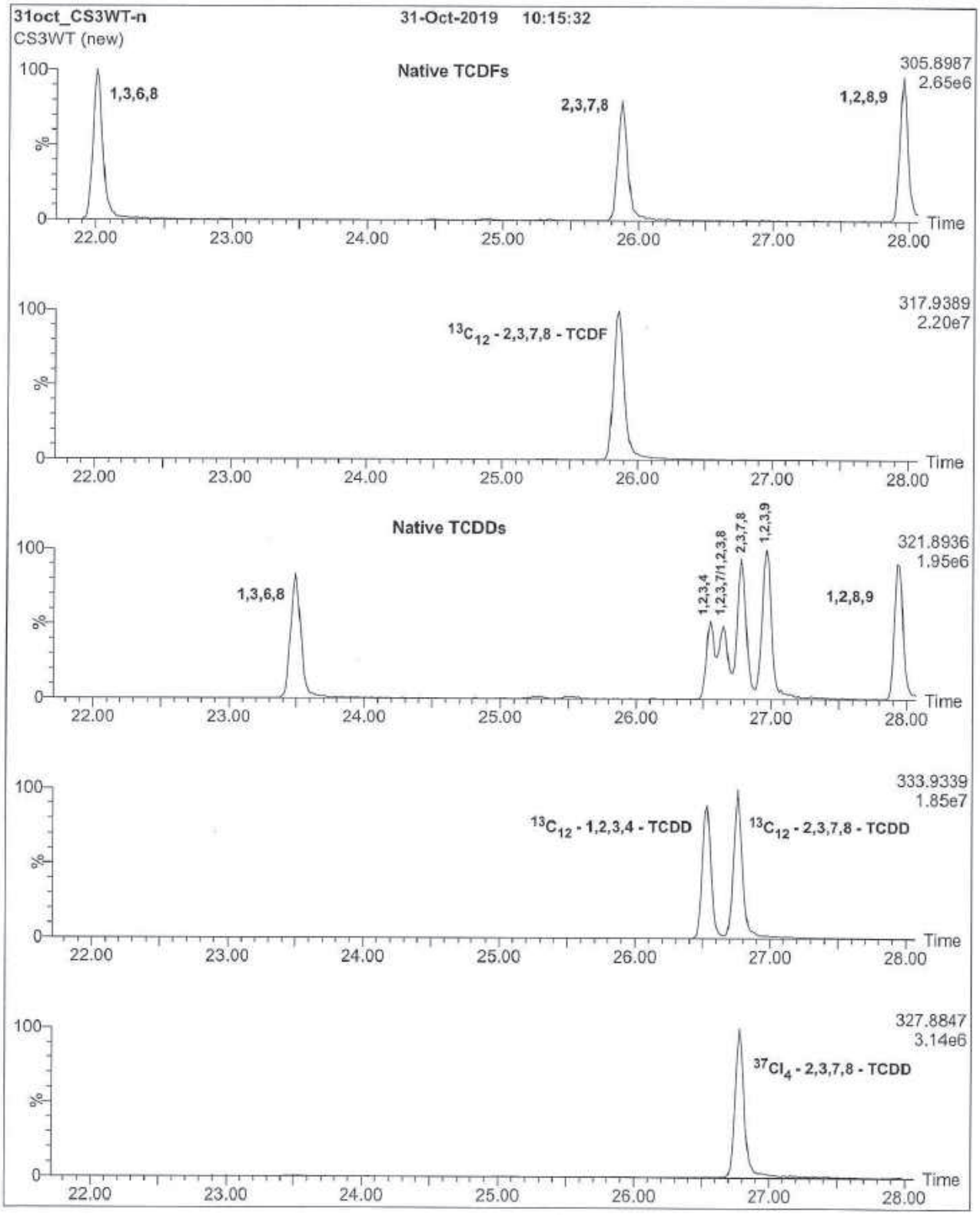
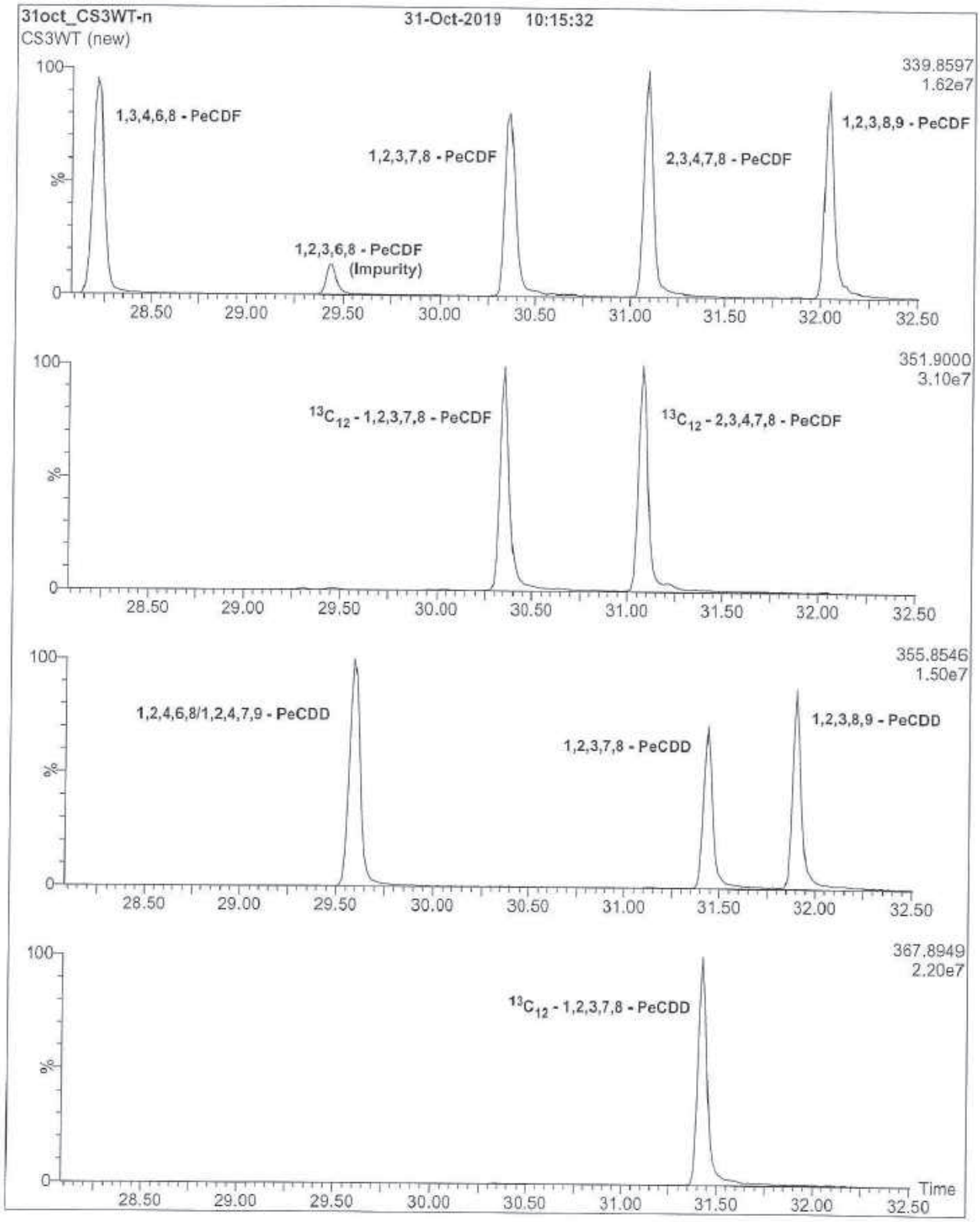


Figure 1: CS3WT; HRGC/HRMS Data (60 m DB-5 Column)



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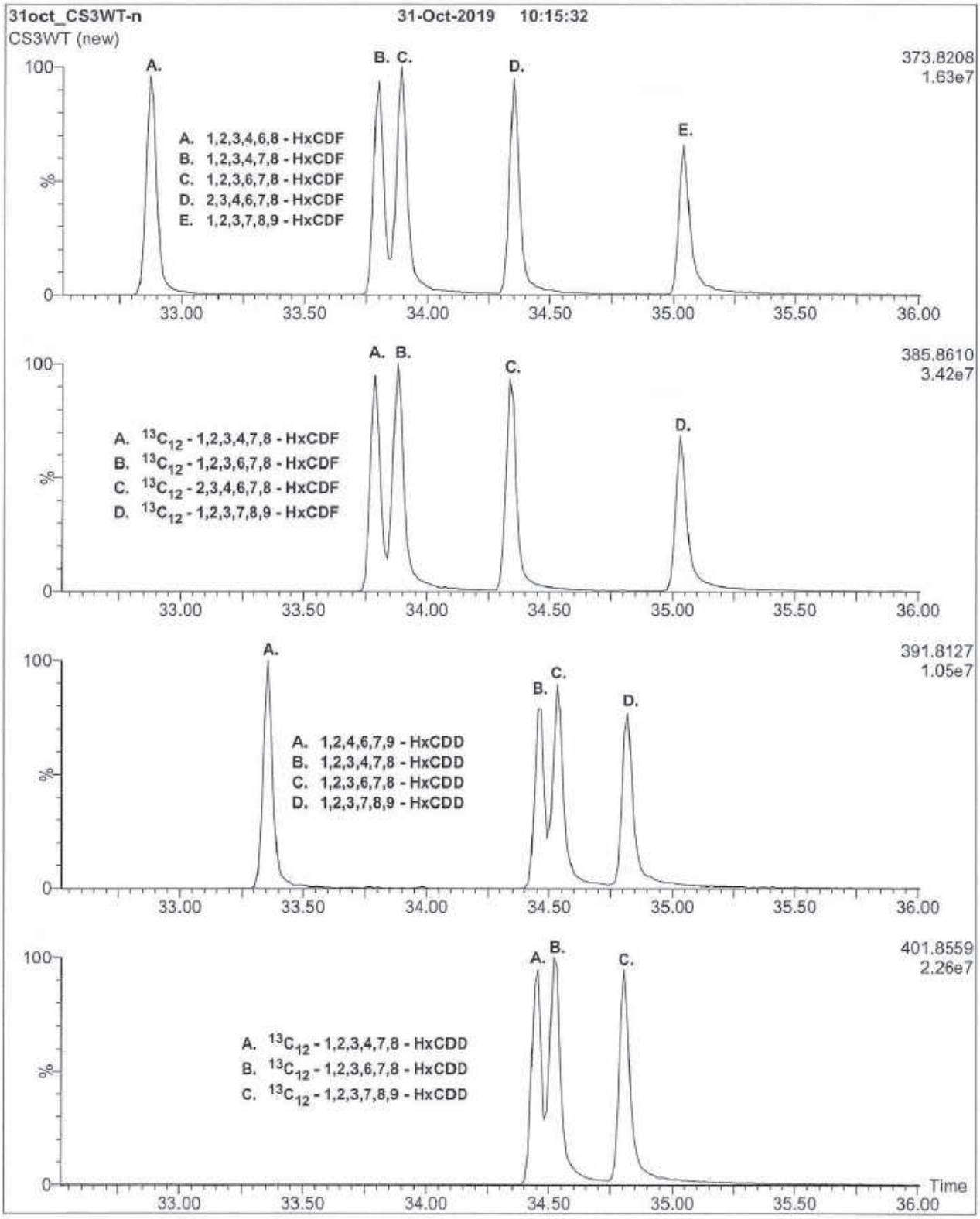


Figure 1: CS3WT; HRGC/HRMS Data (60 m DB-5 Column)

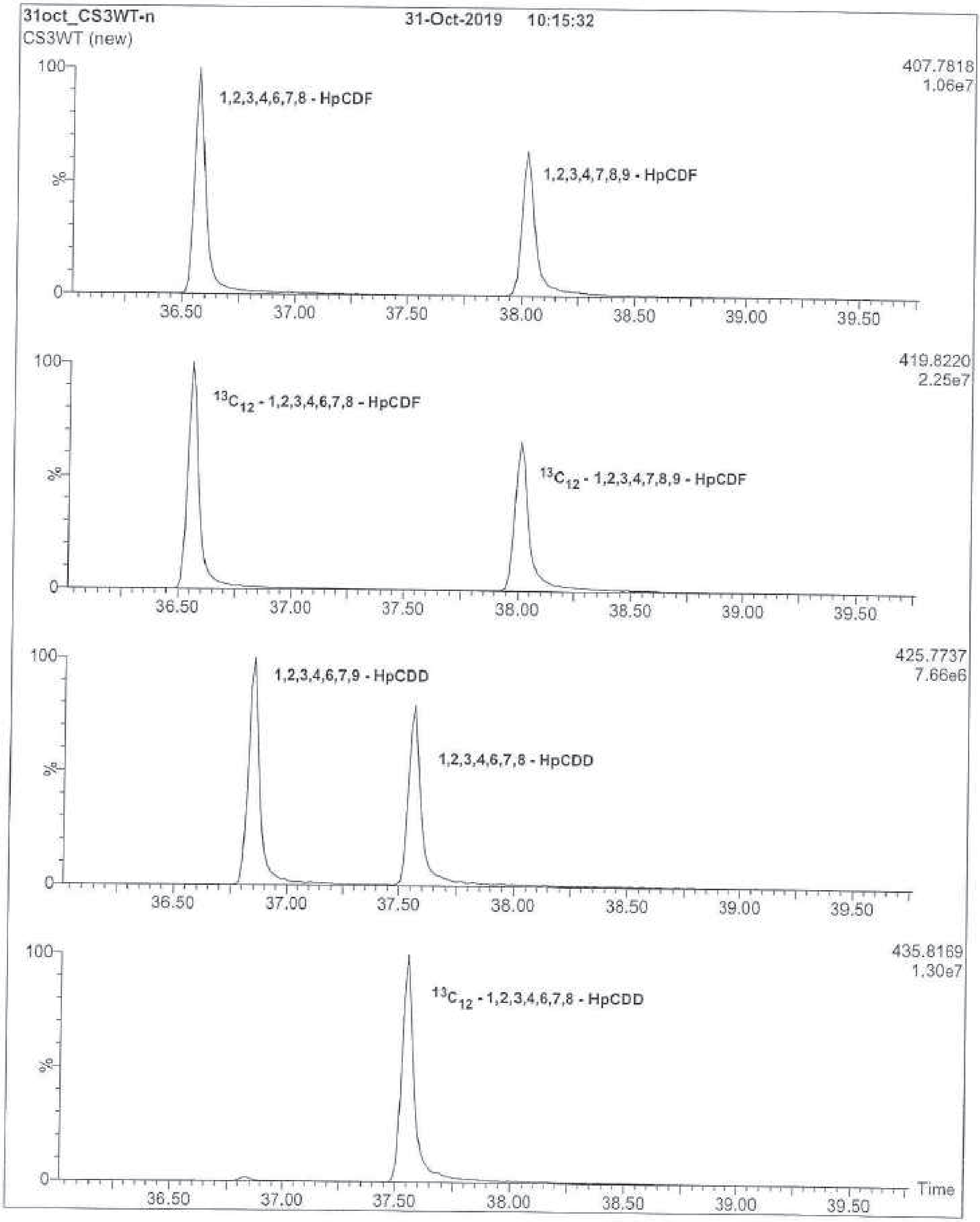
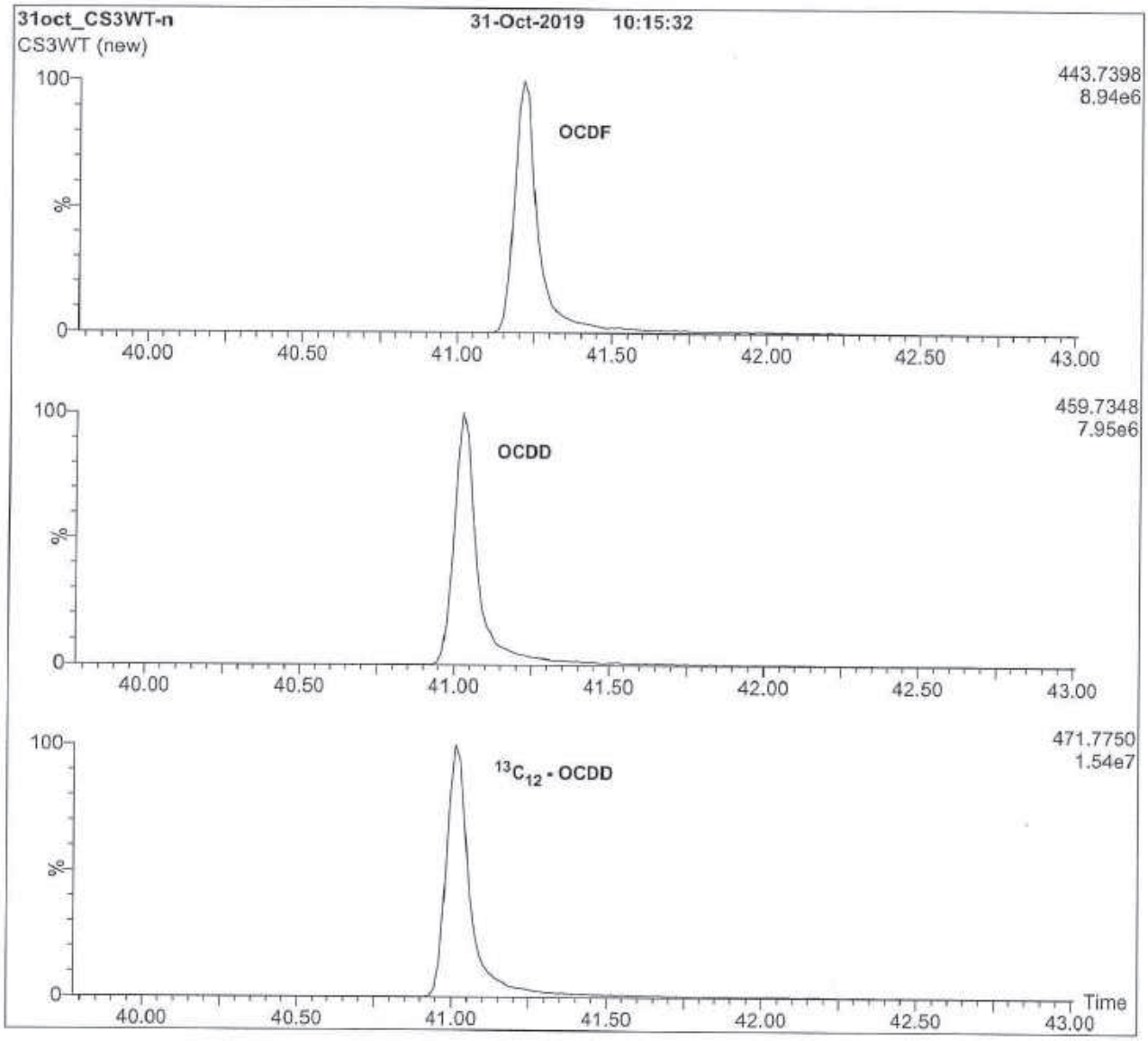


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CVS

U.S. EPA Method 1613 Calibration and Verification Solutions plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5

PRODUCT CODES:	EPA-1613CVS	**LOT NUMBERS:**	(see below)
	EPA-1613CS1		13CS11019 I005456
	EPA-1613CS2		13CS21019 I005457
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019 I005458
	EPA-1613CS5		13CS51019 I005459

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/22/2019
LAST TESTED: (mm/dd/yyyy)	10/24/2019
EXPIRY DATE: (mm/dd/yyyy)	10/24/2026 I005460
RECOMMENDED STORAGE:	Store ampoules in a cool, dark place

DESCRIPTION:

EPA-1613CVS is a series of 5 calibration solutions containing native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$ and $^{37}Cl_4$) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Table B: 5-point HRGC/HRMS Calibration and RRF Summary
Table C: 7-point HRGC/HRMS Calibration and RRF Summary
Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); Components and Concentrations (ng/ml, ± 5% in nonane/toluene)

Compound	Concentration (ng/ml)						
Native PCDDs and PCDFs:	CS1	CS2	CS3	CS4	CS5	CSL	CS0.5
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
Labelled PCDDs and PCDFs:							
$^{13}C_{12}$-2,3,7,8-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,7,8-TCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-OCDD	200	200	200	200	200	200	200
Cleanup Standard:							
$^{37}Cl_4$-2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
Internal Standards:							
$^{13}C_{12}$-1,2,3,4-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By: _____ Date: 10/25/2019 (mm/dd/yyyy)

B.G. Chittim, General Manager

Table B: **EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

Table C: EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); 7-point HRGC/HRMS Calibration and RRF Summary

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)

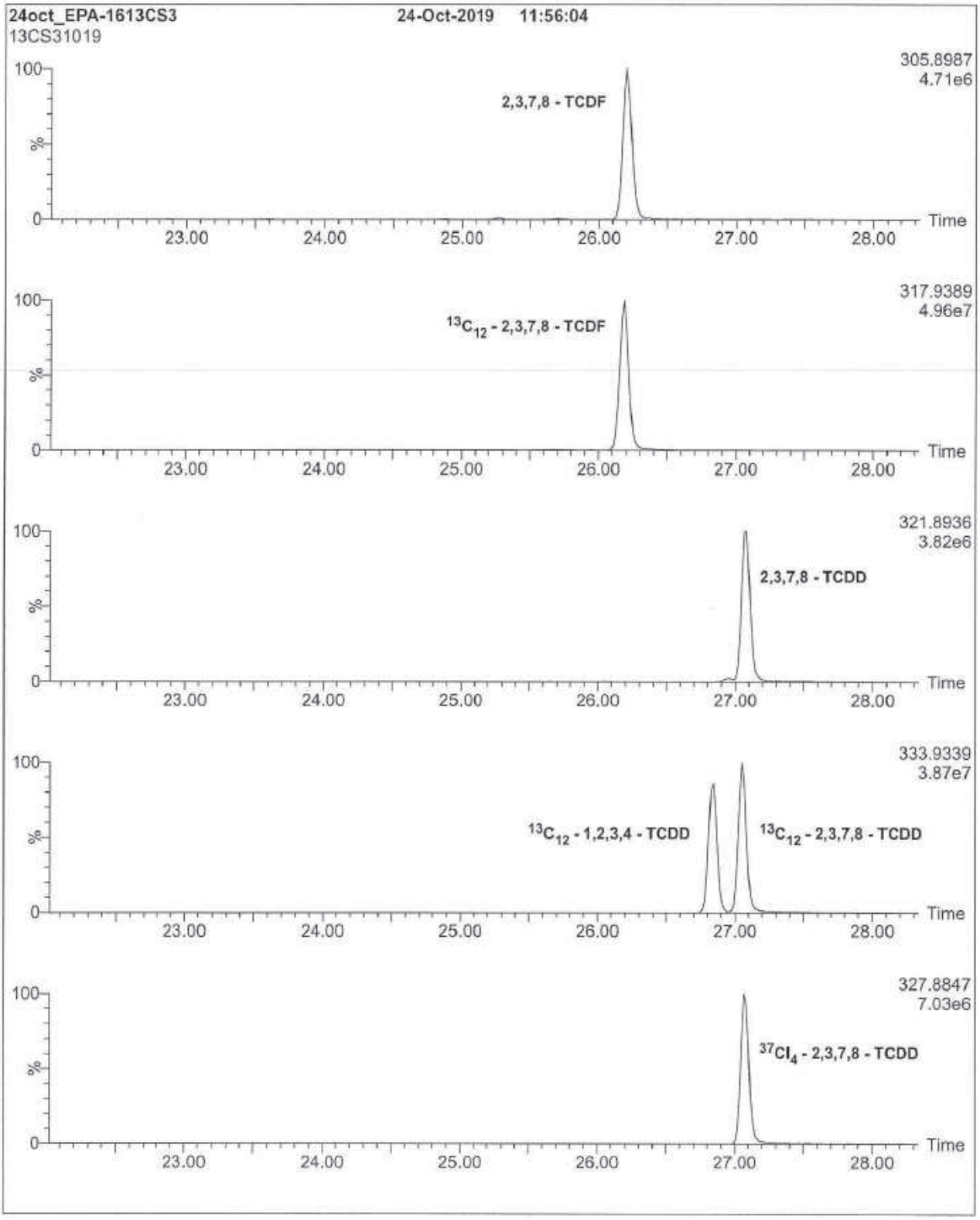


Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)

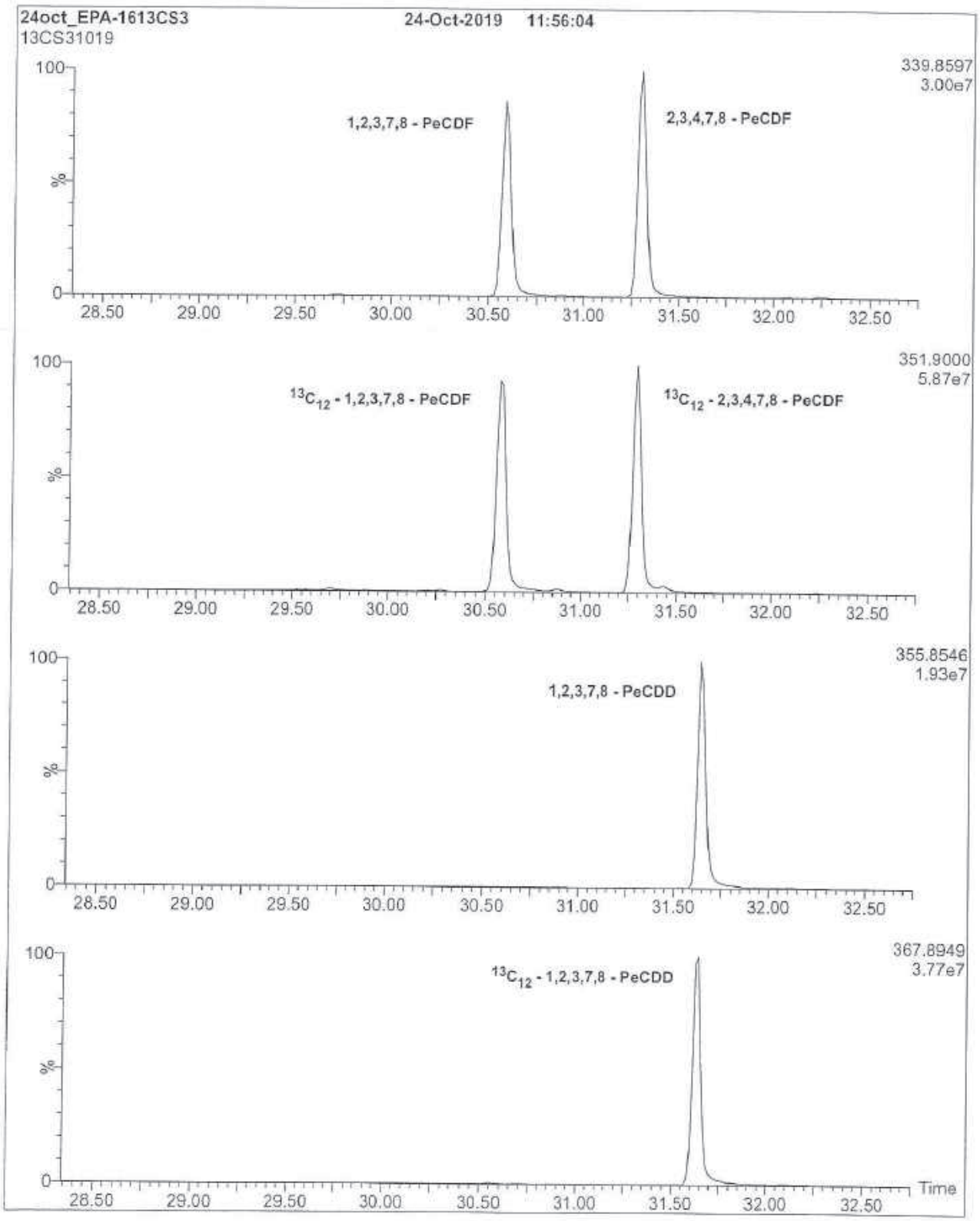


Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)

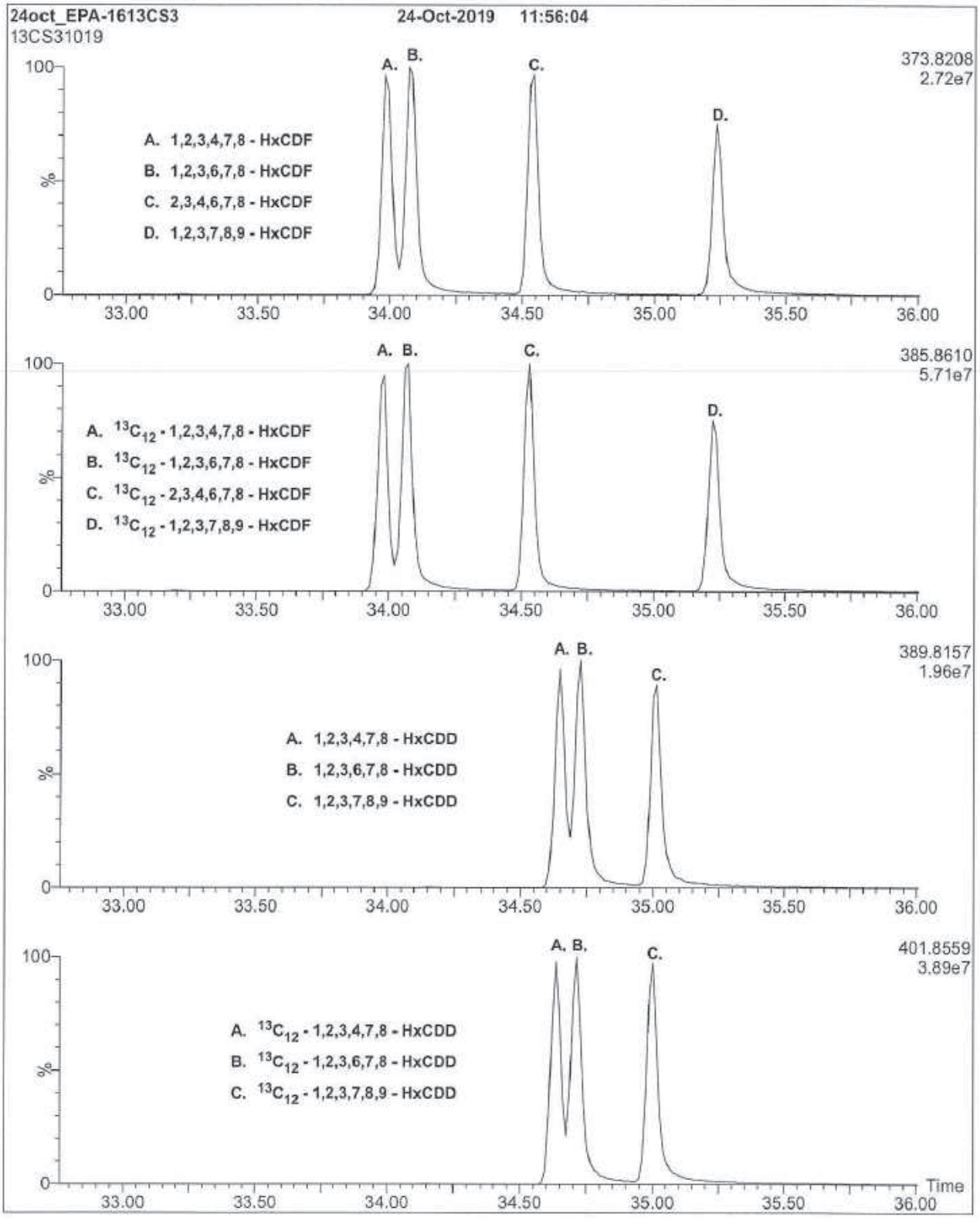


Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)

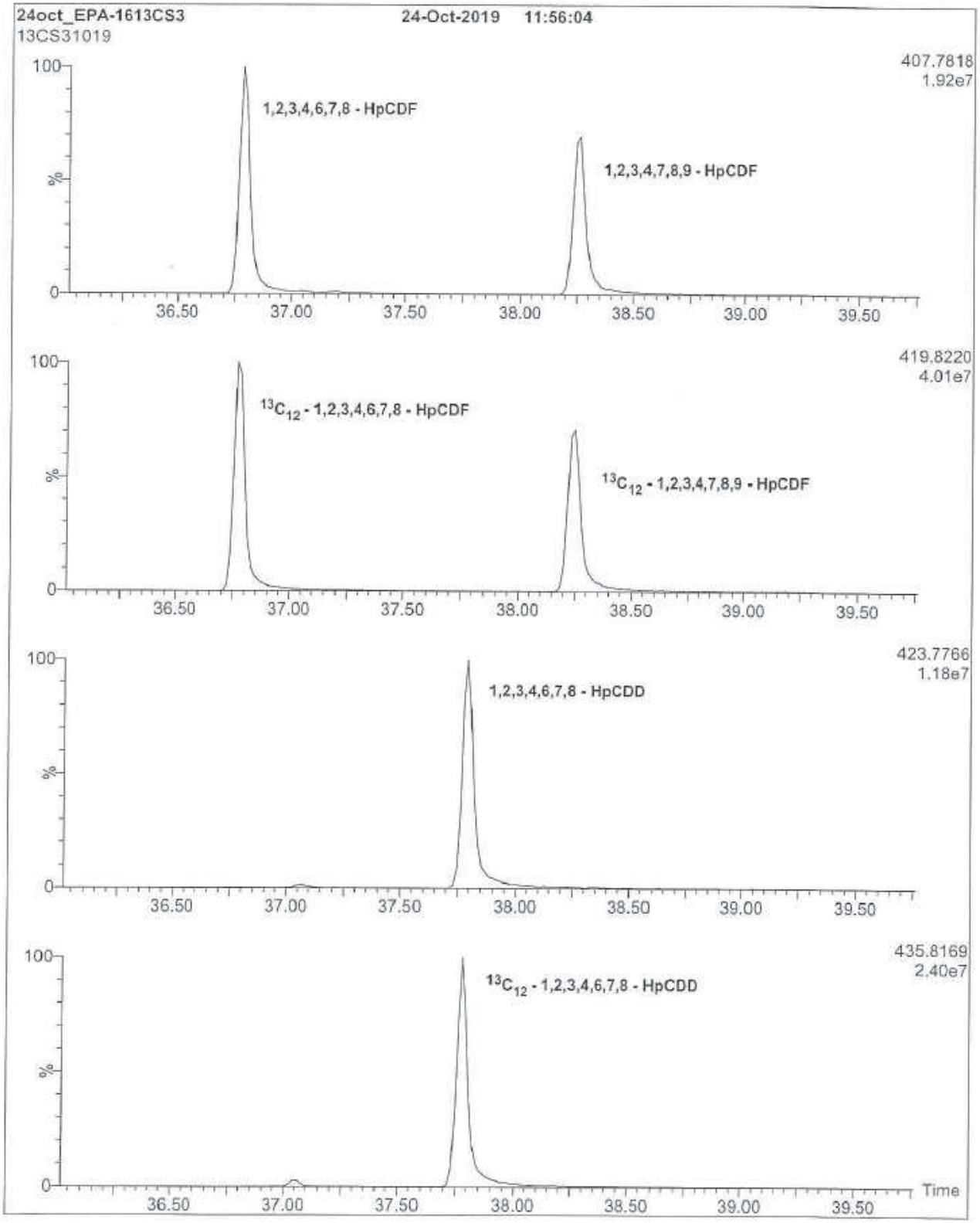
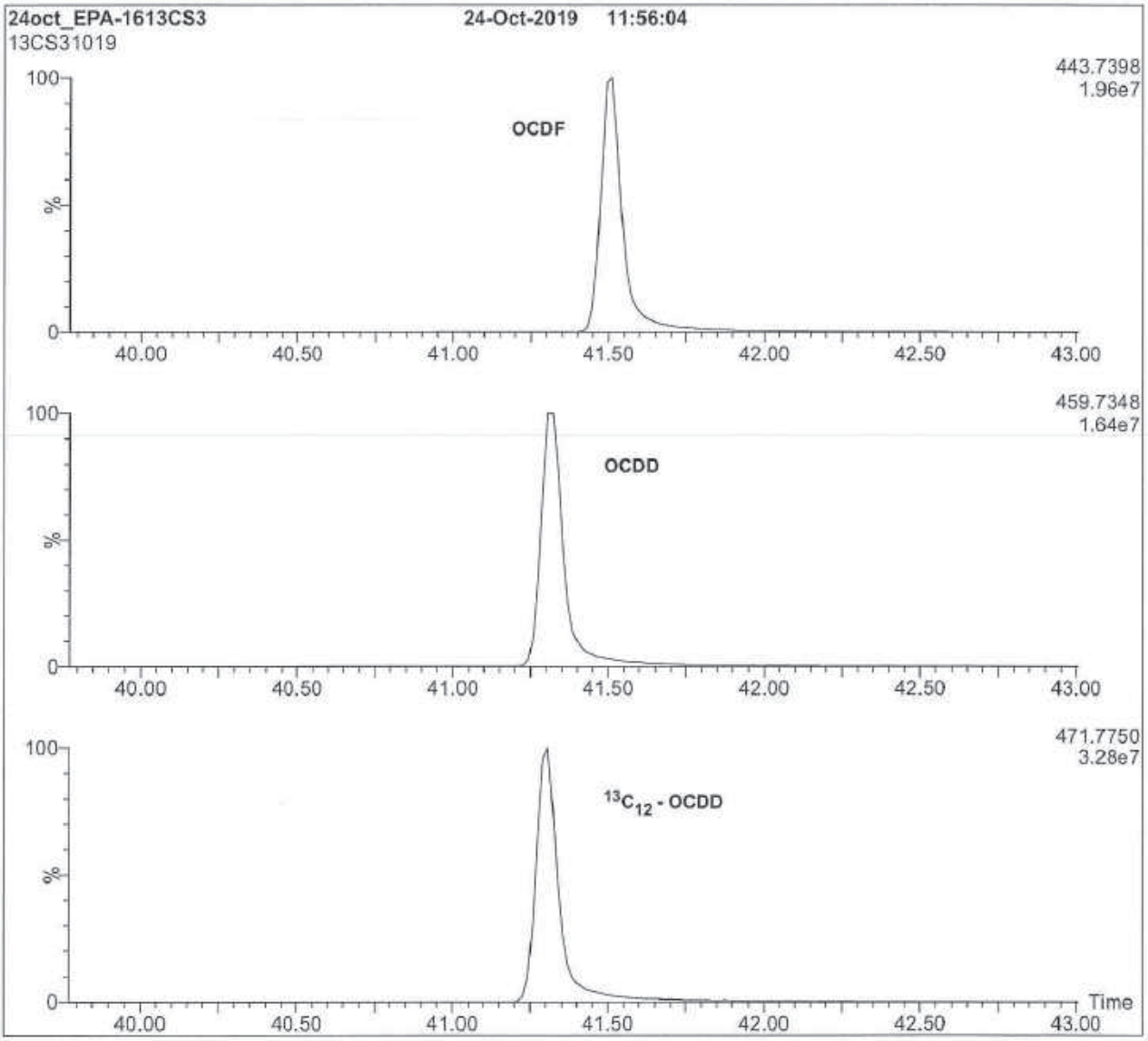


Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CVS

U.S. EPA Method 1613 Calibration and Verification Solutions
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5

PRODUCT CODES:	EPA-1613CVS	**LOT NUMBERS:**	(see below)
	EPA-1613CS1		13CS11019 I005456
	EPA-1613CS2		13CS21019 I005457
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019 I005458
	EPA-1613CS5		13CS51019 I005459

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/22/2019
LAST TESTED: (mm/dd/yyyy)	10/24/2019
EXPIRY DATE: (mm/dd/yyyy)	10/24/2026 I005460
RECOMMENDED STORAGE:	Store ampoules in a cool, dark place

DESCRIPTION:

EPA-1613CVS is a series of 5 calibration solutions containing native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$ and $^{37}Cl_4$) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Table B: 5-point HRGC/HRMS Calibration and RRF Summary
Table C: 7-point HRGC/HRMS Calibration and RRF Summary
Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2,...x_n$ on which it depends is:

$$u_c(y(x_1, x_2,...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); Components and Concentrations (ng/ml, ± 5% in nonane/toluene)

Compound	Concentration (ng/ml)						
Native PCDDs and PCDFs:	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CSL**	**CS0.5**
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
Labelled PCDDs and PCDFs:							
$^{13}C_{12}$-2,3,7,8-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,7,8-TCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-OCDD	200	200	200	200	200	200	200
Cleanup Standard:							
$^{37}Cl_4$-2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
Internal Standards:							
$^{13}C_{12}$-1,2,3,4-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By: _____ Date: 10/25/2019 (mm/dd/yyyy)

B.G. Chittim, General Manager

Table B: **EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

Table C: EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); 7-point HRGC/HRMS Calibration and RRF Summary

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)

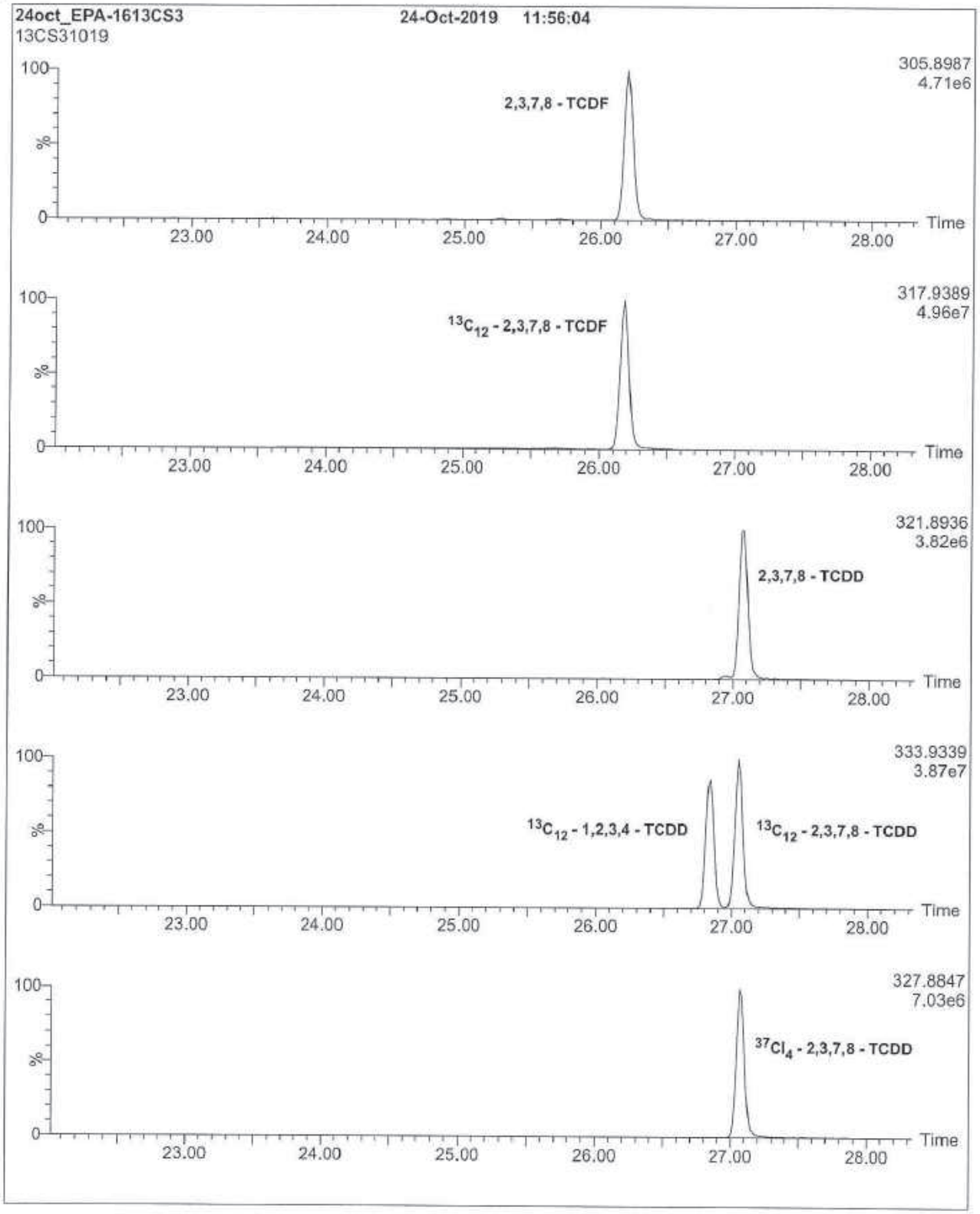


Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)

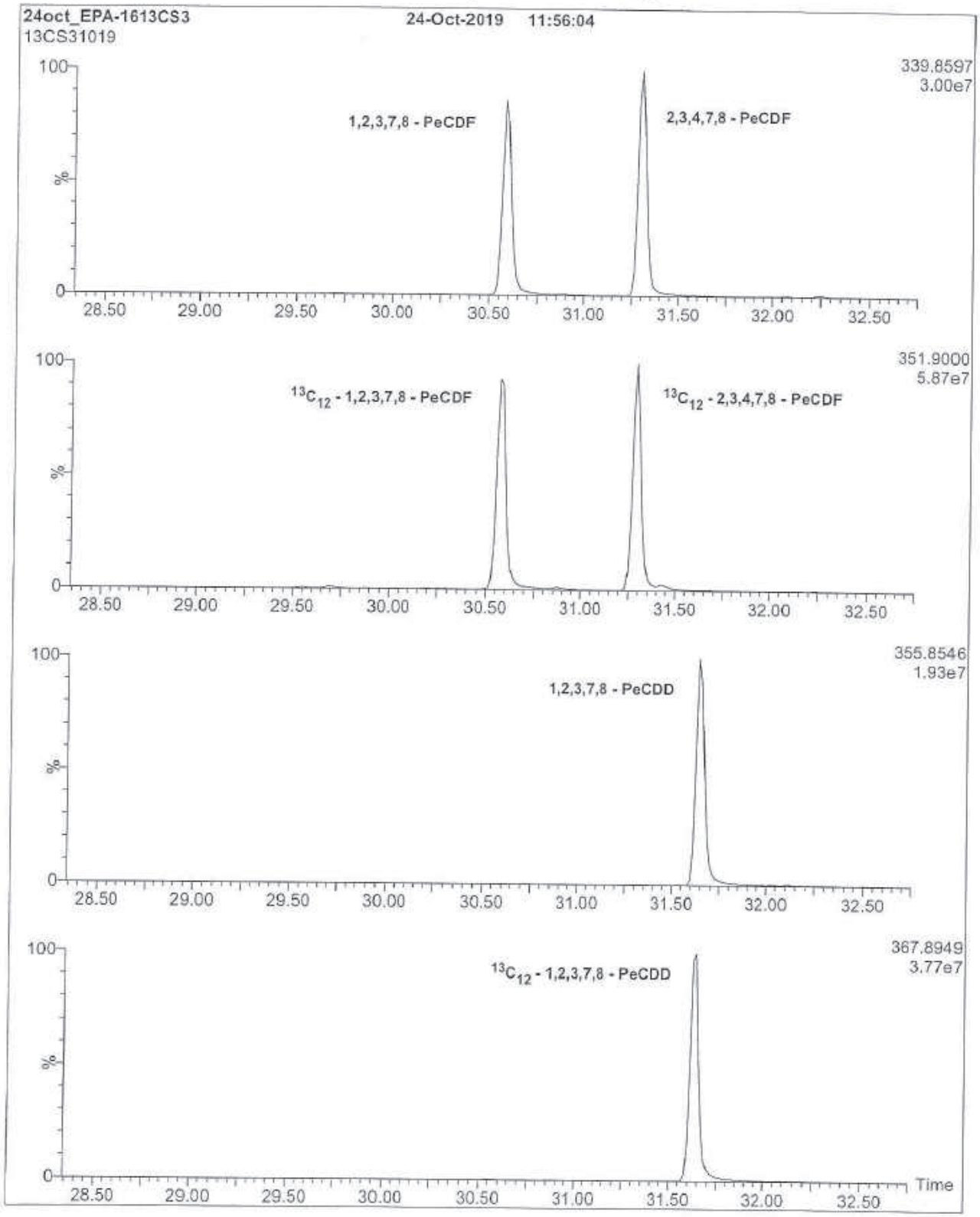


Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)

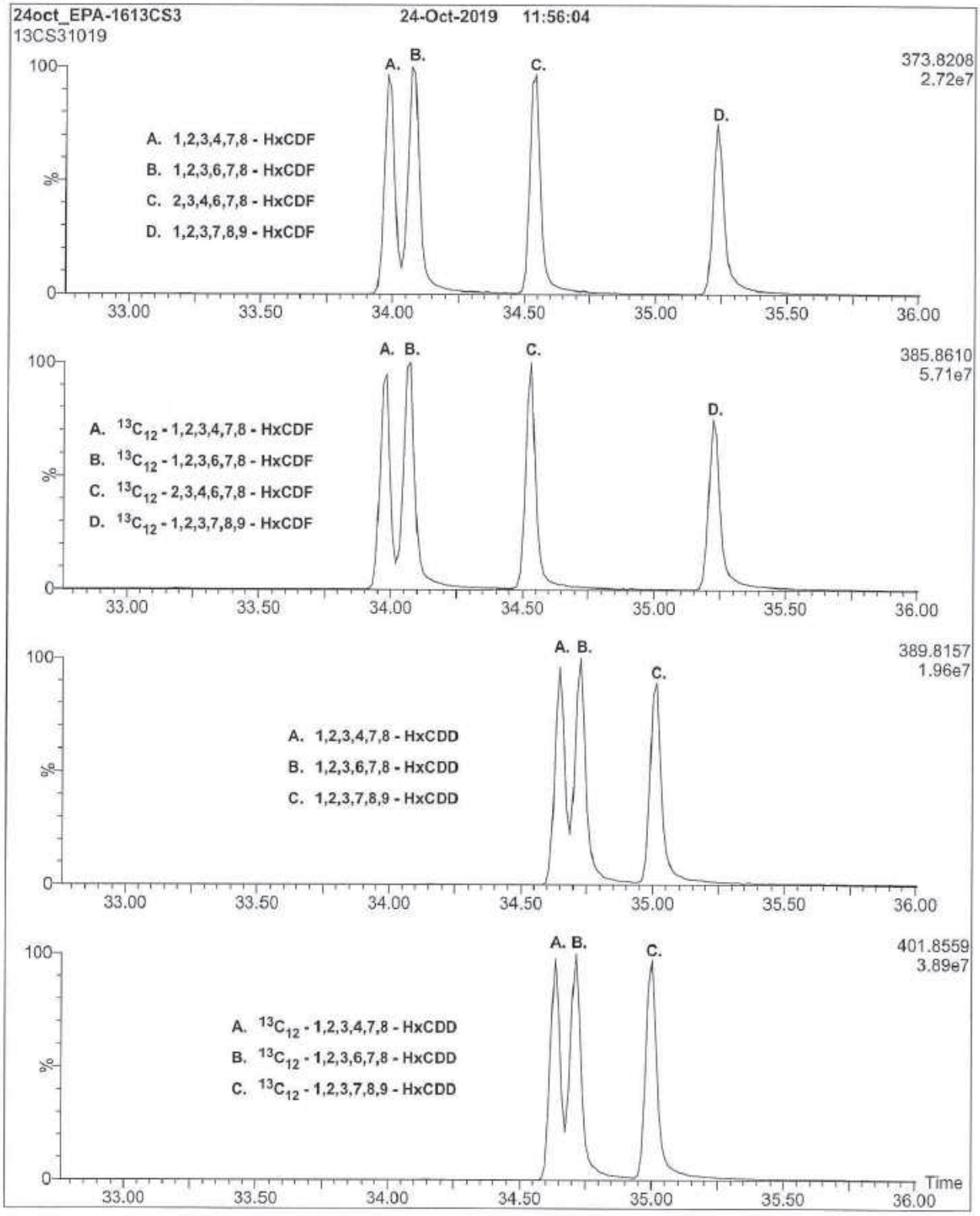


Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)

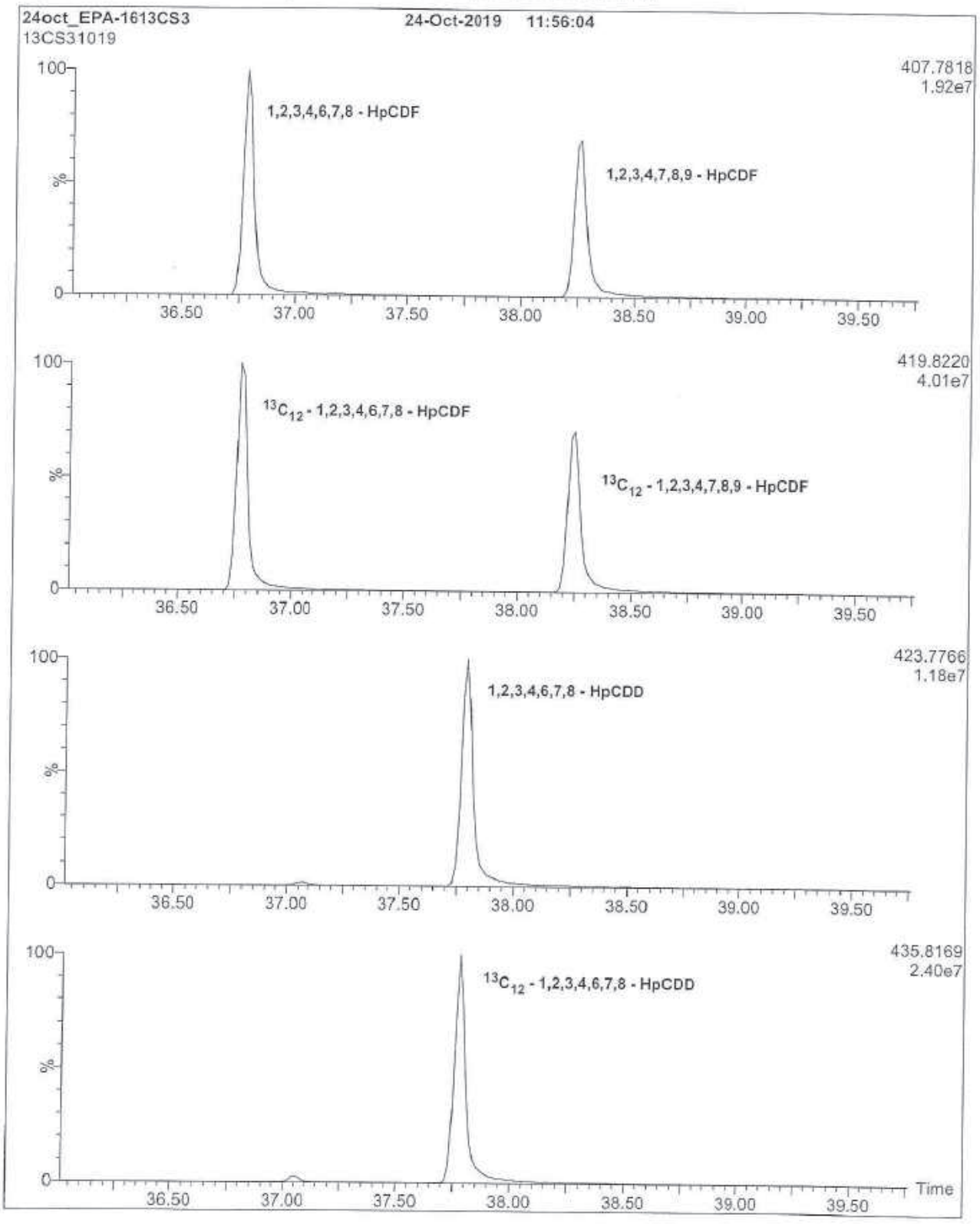
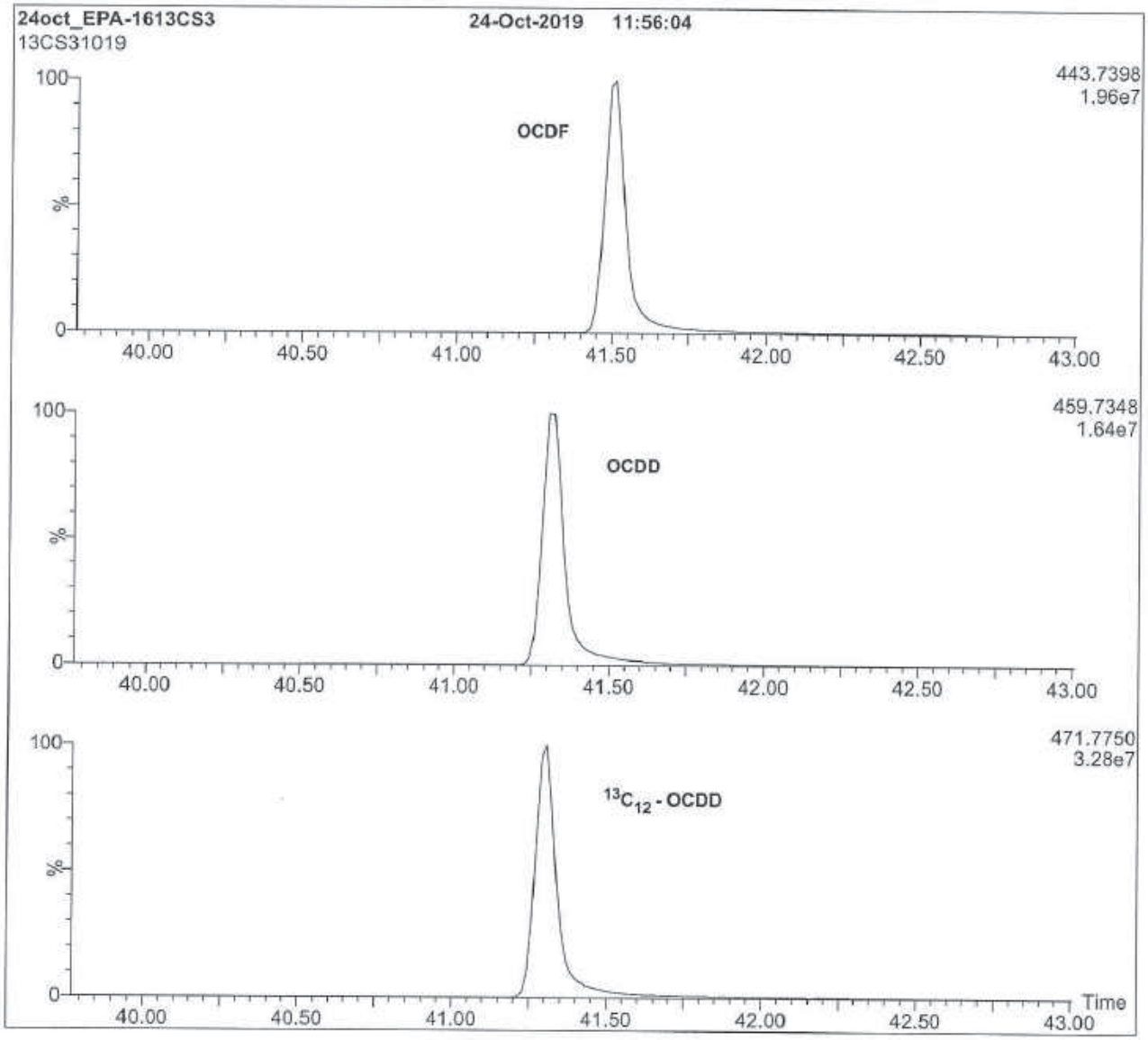


Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CVS

U.S. EPA Method 1613 Calibration and Verification Solutions
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5

PRODUCT CODES:	EPA-1613CVS	**LOT NUMBERS:**	(see below)
	EPA-1613CS1		13CS11019 I005456
	EPA-1613CS2		13CS21019 I005457
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019 I005458
	EPA-1613CS5		13CS51019 I005459

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/22/2019
LAST TESTED: (mm/dd/yyyy)	10/24/2019
EXPIRY DATE: (mm/dd/yyyy)	10/24/2026 I005460
RECOMMENDED STORAGE:	Store ampoules in a cool, dark place

2e 05/23/20

DESCRIPTION:

m 05/23/20

EPA-1613CVS is a series of 5 calibration solutions containing native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$ and $^{37}Cl_4$) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Table B: 5-point HRGC/HRMS Calibration and RRF Summary
Table C: 7-point HRGC/HRMS Calibration and RRF Summary
Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); Components and Concentrations (ng/ml, ± 5% in nonane/toluene)

Compound	Concentration (ng/ml)						
Native PCDDs and PCDFs:	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CSL**	**CS0.5**
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
Labelled PCDDs and PCDFs:							
$^{13}C_{12}$-2,3,7,8-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,7,8-TCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-OCDD	200	200	200	200	200	200	200
Cleanup Standard:							
$^{37}Cl_4$-2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
Internal Standards:							
$^{13}C_{12}$-1,2,3,4-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By: _____ Date: 10/25/2019 (mm/dd/yyyy)

B.G. Chittim, General Manager

Table B: **EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

Table C: EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); 7-point HRGC/HRMS Calibration and RRF Summary

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)

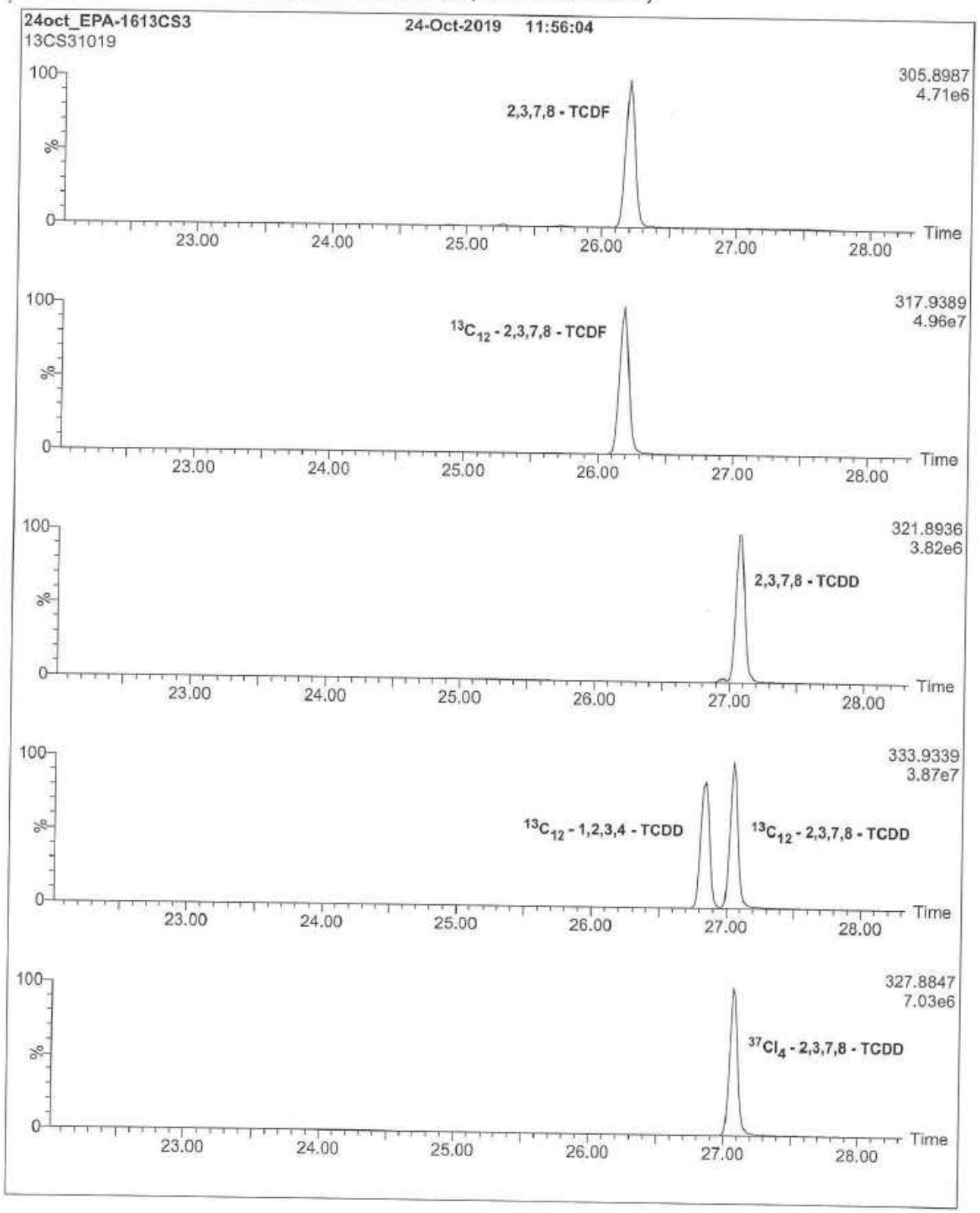


Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)

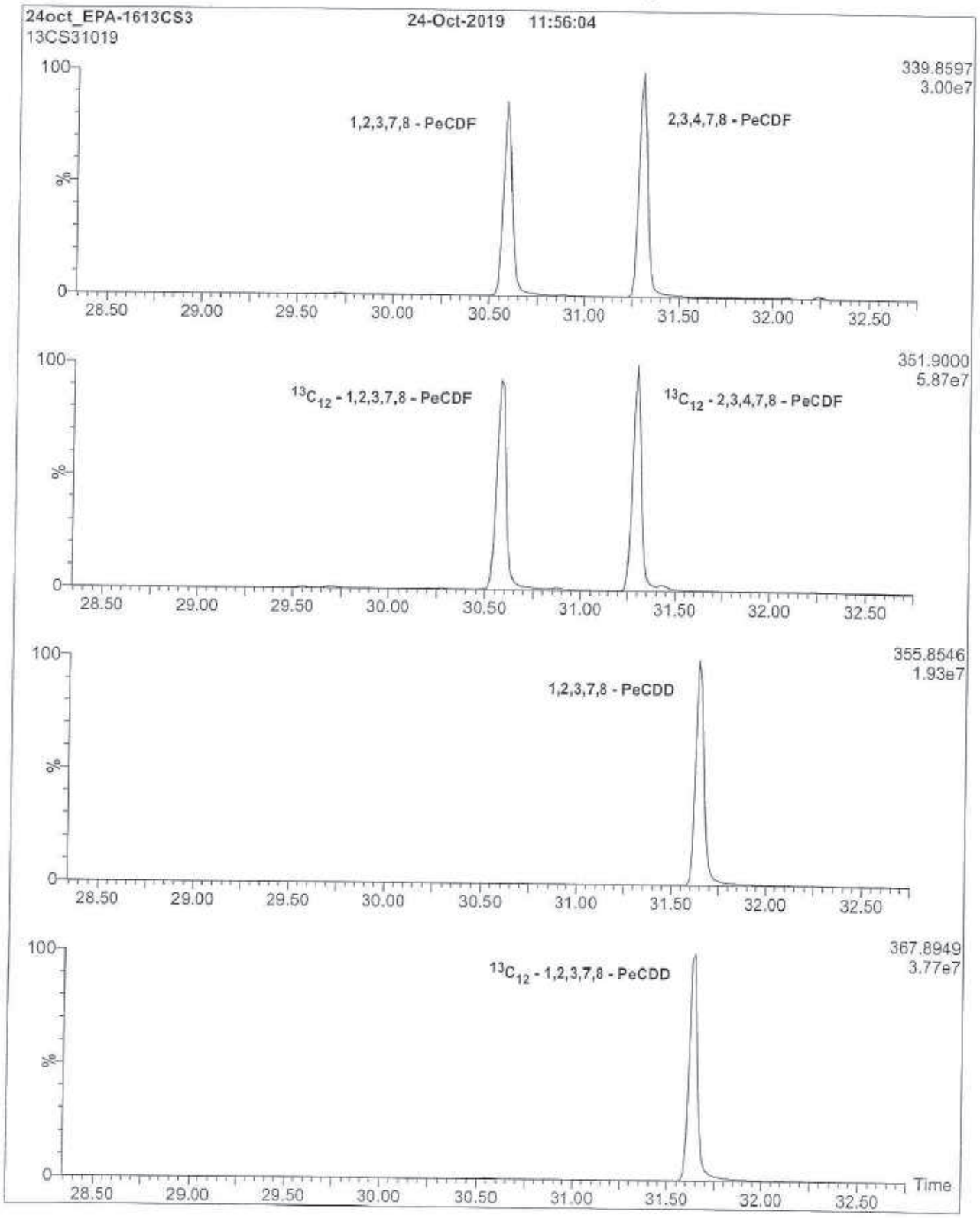


Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)

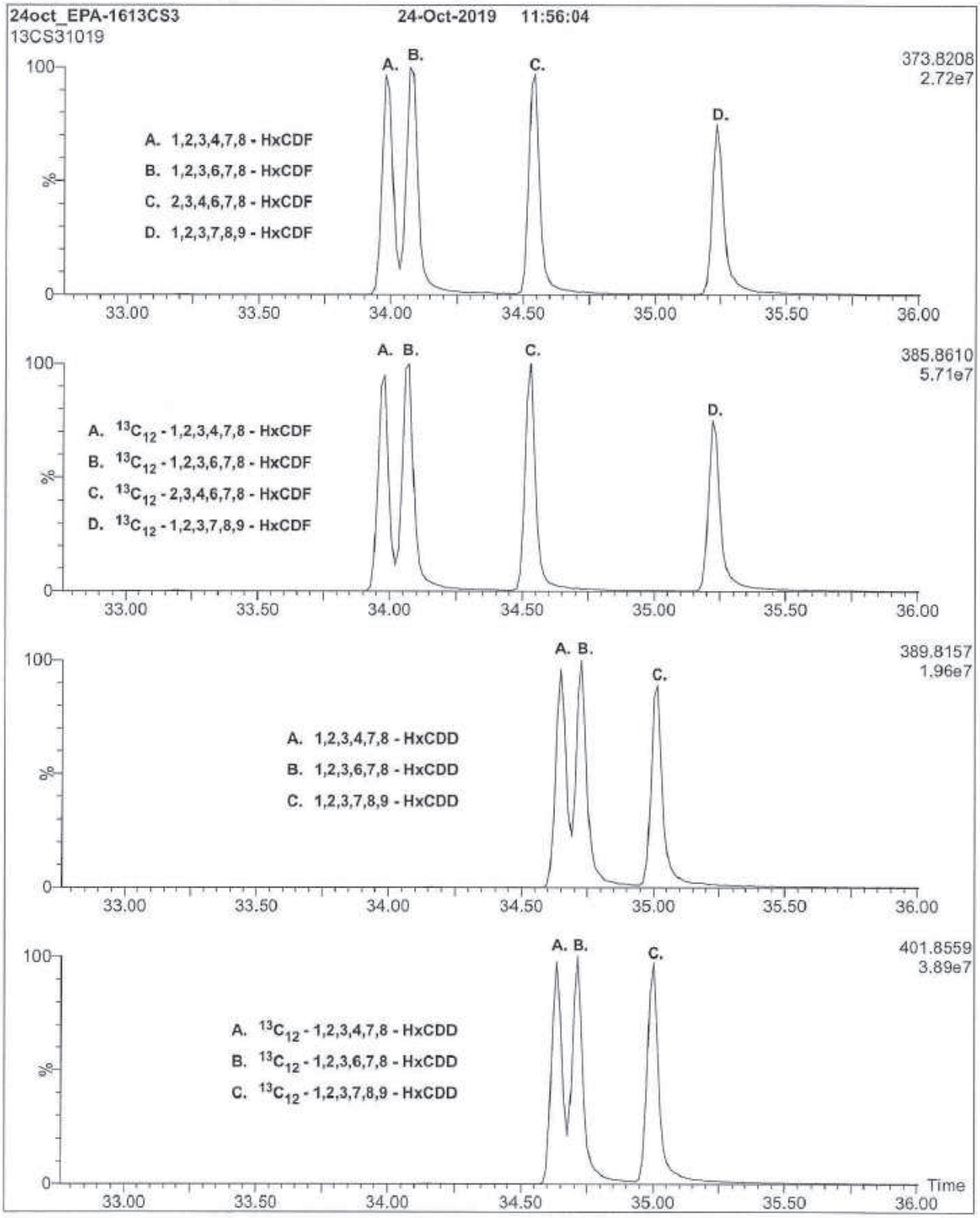


Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)

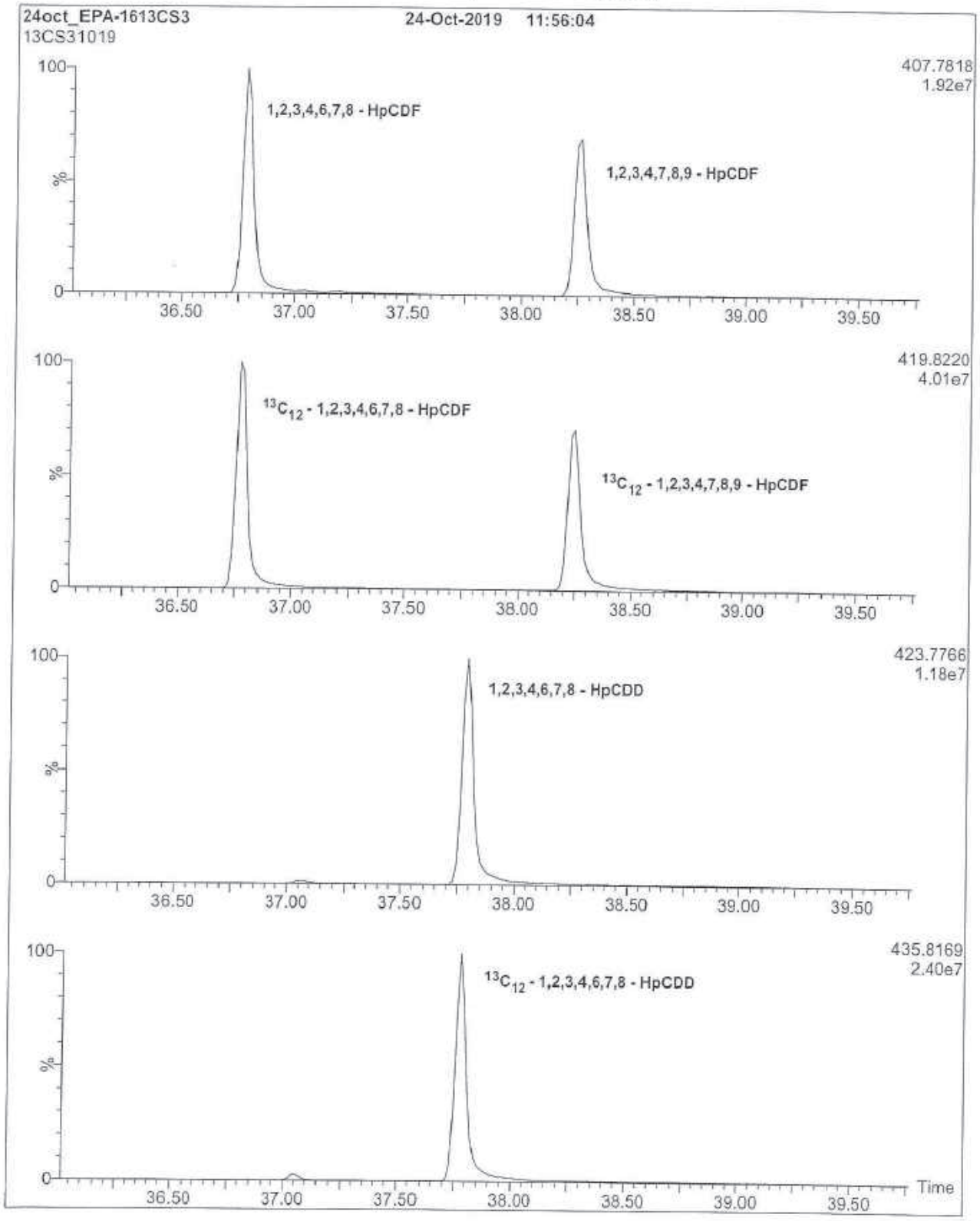
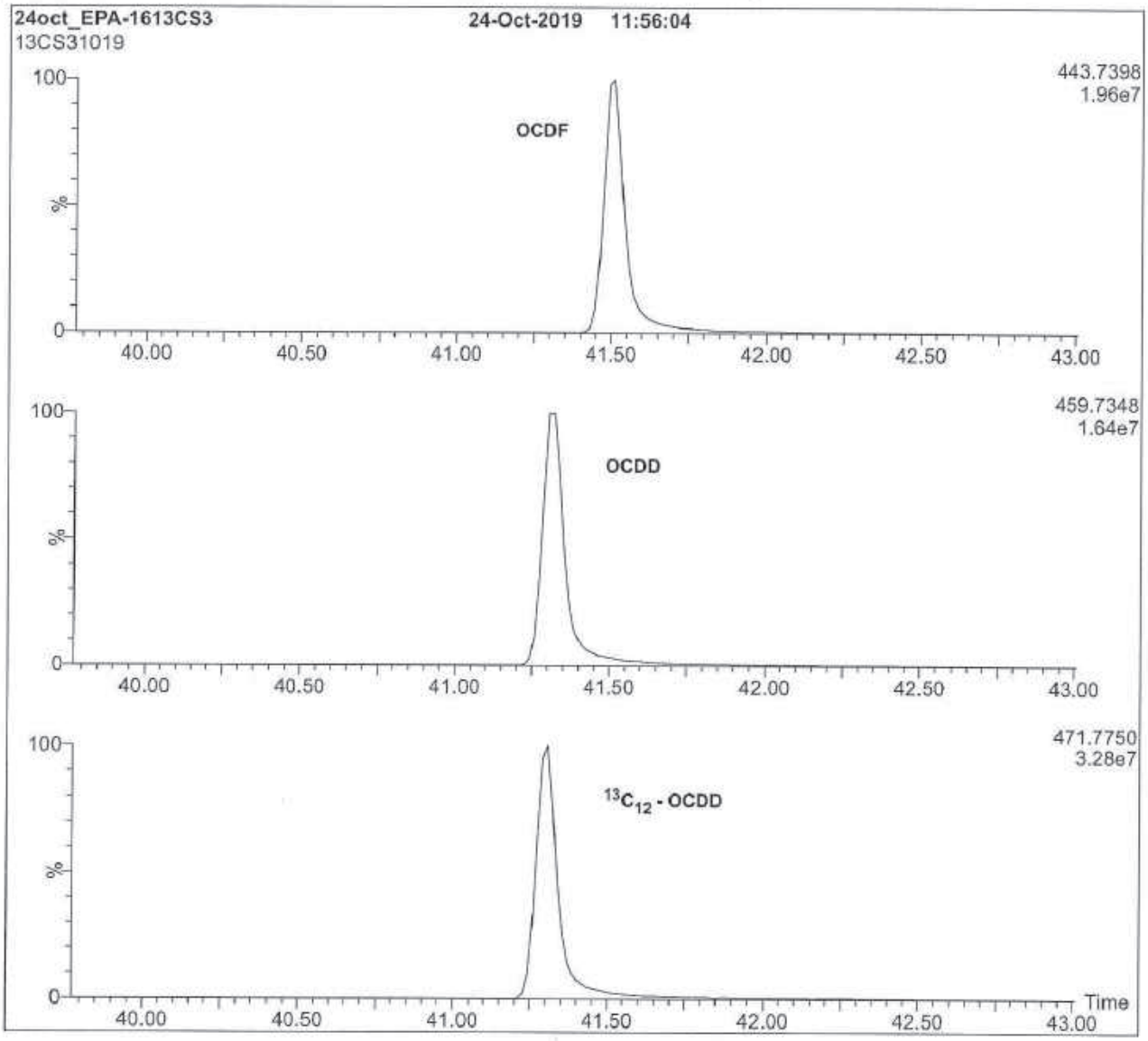


Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CVS

U.S. EPA Method 1613 Calibration and Verification Solutions
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5

PRODUCT CODES:	EPA-1613CVS	**LOT NUMBERS:**	(see below)
	EPA-1613CS1		13CS11019 I005456
	EPA-1613CS2		13CS21019 I005457
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019 I005458
	EPA-1613CS5		13CS51019 I005459

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/22/2019
LAST TESTED: (mm/dd/yyyy)	10/24/2026 ✓ I005460
EXPIRY DATE: (mm/dd/yyyy)	
RECOMMENDED STORAGE:	Store ampoules in a cool, dark place

DESCRIPTION:

EPA-1613CVS is a series of 5 calibration solutions containing native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$ and $^{37}Cl_4$) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Table B: 5-point HRGC/HRMS Calibration and RRF Summary
Table C: 7-point HRGC/HRMS Calibration and RRF Summary
Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2,...x_n$ on which it depends is:

$$u_c(y(x_1, x_2,...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1523

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); Components and Concentrations (ng/ml, ± 5% in nonane/toluene)

Compound	Concentration (ng/ml)						
Native PCDDs and PCDFs:	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CSL**	**CS0.5**
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
Labelled PCDDs and PCDFs:							
$^{13}C_{12}$-2,3,7,8-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,7,8-TCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-OCDD	200	200	200	200	200	200	200
Cleanup Standard:							
$^{37}Cl_4$-2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
Internal Standards:							
$^{13}C_{12}$-1,2,3,4-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By: _____ Date: 10/25/2019 (mm/dd/yyyy)

B.G. Chittim, General Manager

Table B: **EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

Table C: EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); 7-point HRGC/HRMS Calibration and RRF Summary

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)

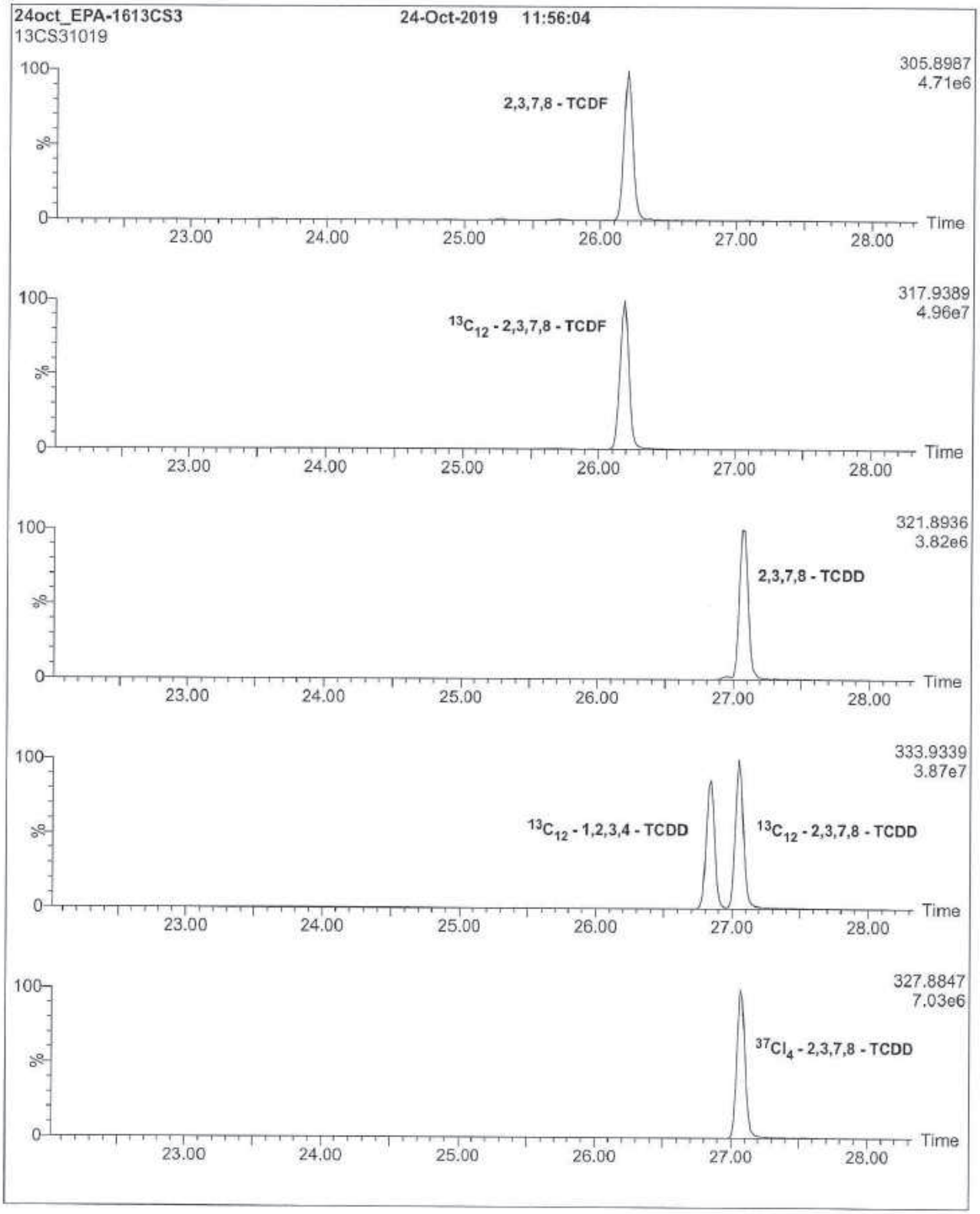


Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)

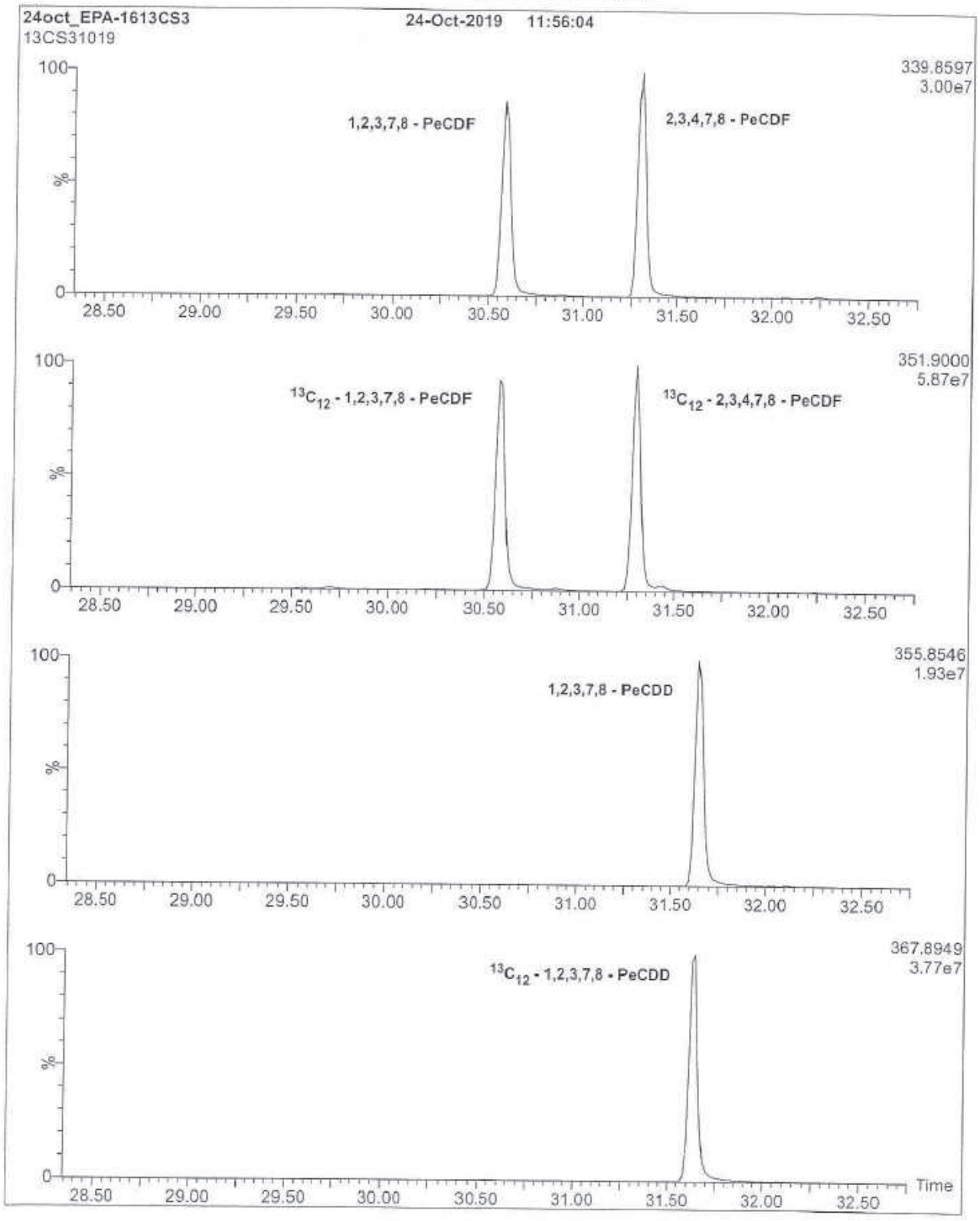


Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)

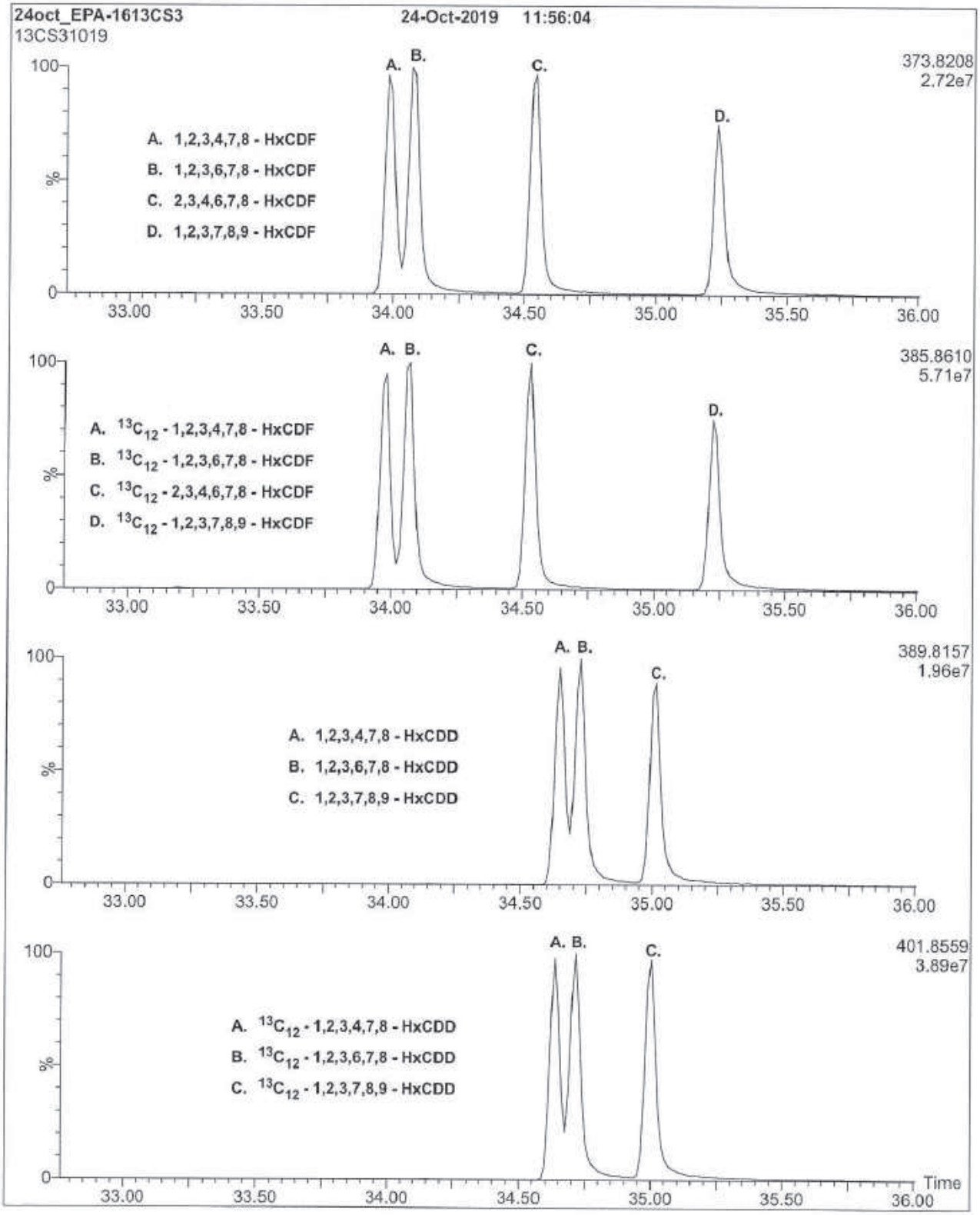


Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)

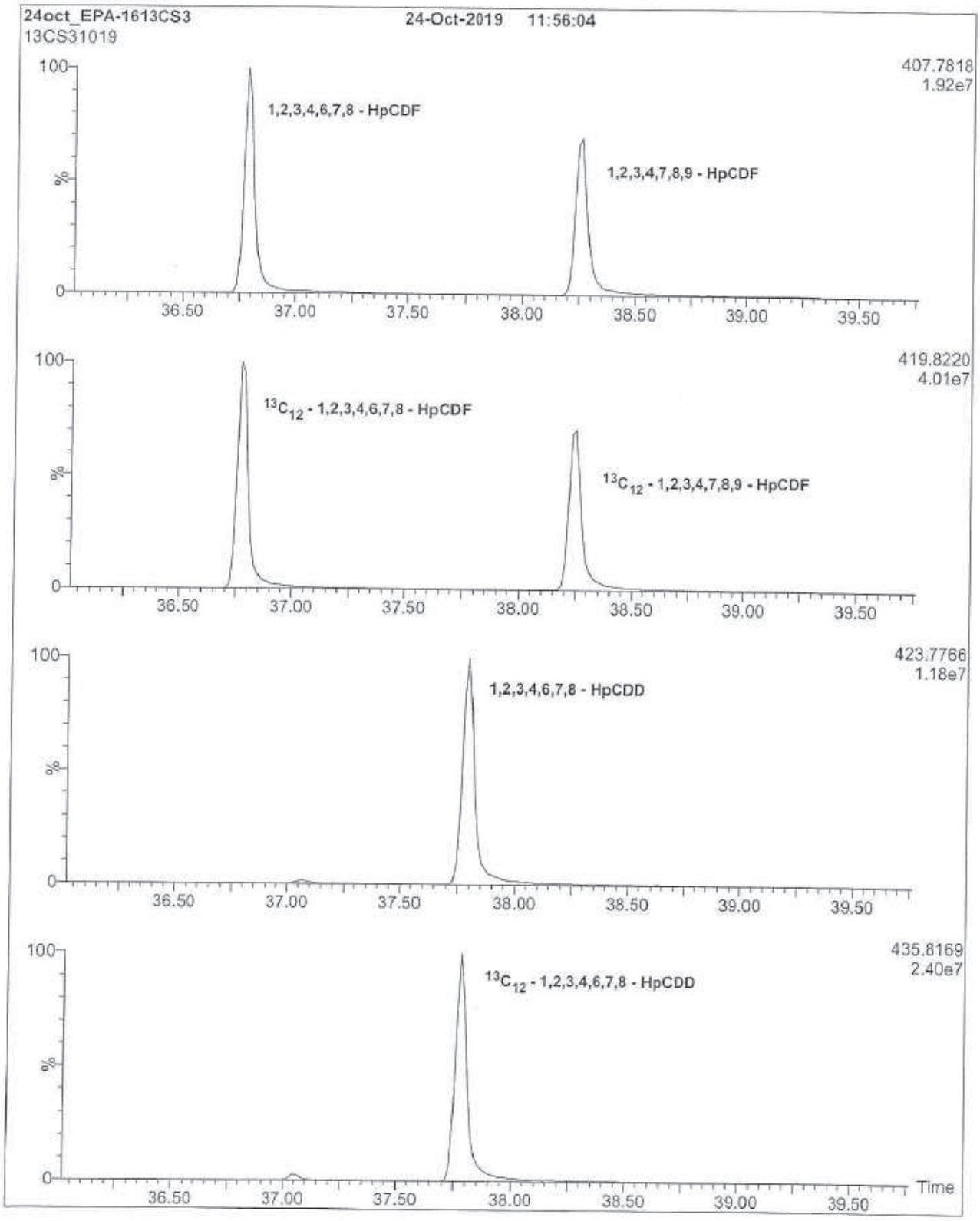
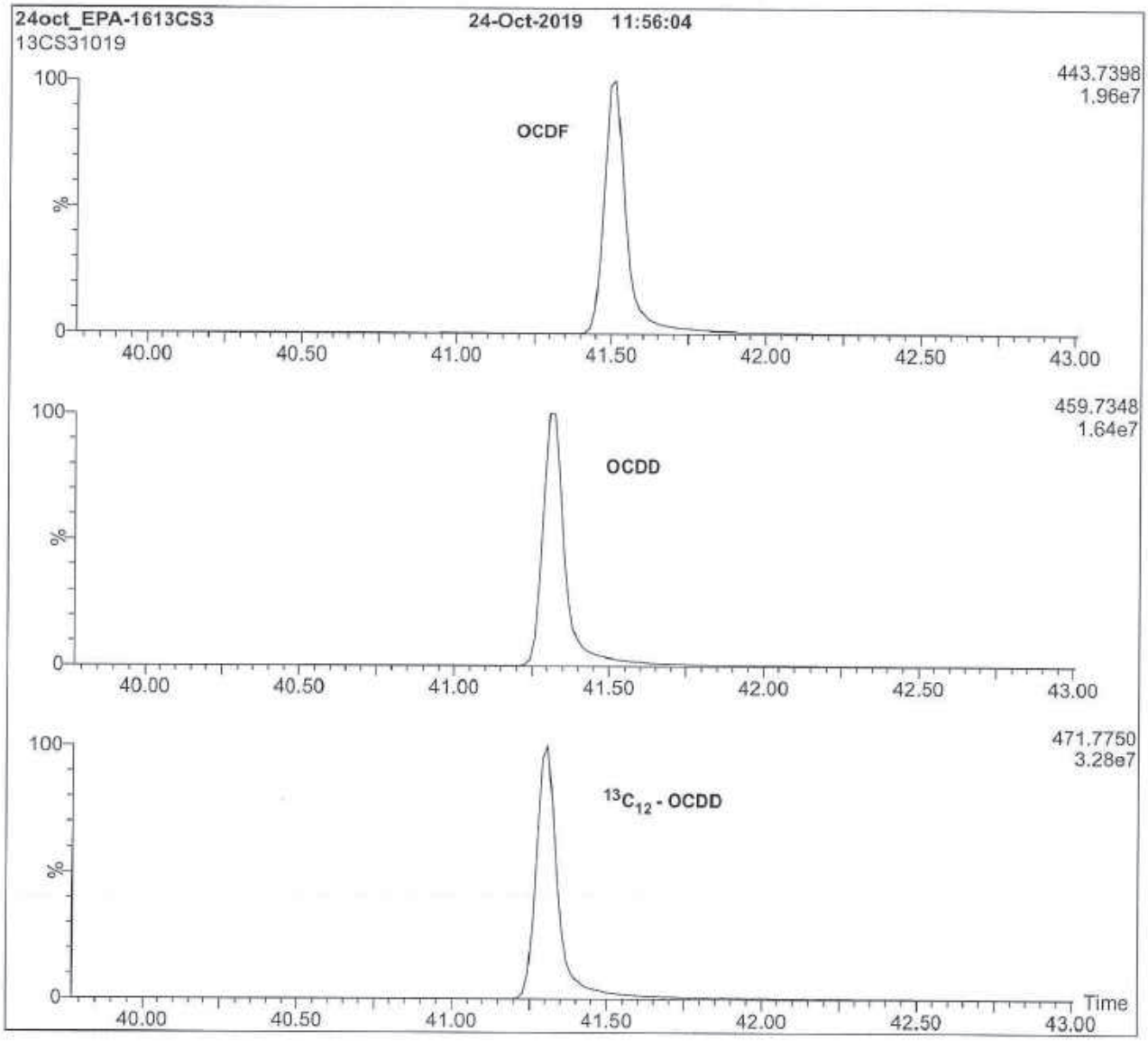


Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CVS

U.S. EPA Method 1613 Calibration and Verification Solutions
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5

PRODUCT CODES:	EPA-1613CVS	**LOT NUMBERS:**	(see below)
	EPA-1613CS1		13CS11019 I005456
	EPA-1613CS2		13CS21019 I005457
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019 I005458
	EPA-1613CS5		13CS51019 I005459

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/22/2019
LAST TESTED: (mm/dd/yyyy)	10/24/2019
EXPIRY DATE: (mm/dd/yyyy)	10/24/2026 I005460
RECOMMENDED STORAGE:	Store ampoules in a cool, dark place

DESCRIPTION:

EPA-1613CVS is a series of 5 calibration solutions containing native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$ and $^{37}Cl_4$) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Table B: 5-point HRGC/HRMS Calibration and RRF Summary
Table C: 7-point HRGC/HRMS Calibration and RRF Summary
Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); Components and Concentrations (ng/ml, ± 5% in nonane/toluene)

Compound	Concentration (ng/ml)						
Native PCDDs and PCDFs:	CS1	CS2	CS3	CS4	CS5	CSL	CS0.5
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
Labelled PCDDs and PCDFs:							
$^{13}C_{12}$-2,3,7,8-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,7,8-TCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-OCDD	200	200	200	200	200	200	200
Cleanup Standard:							
$^{37}Cl_4$-2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
Internal Standards:							
$^{13}C_{12}$-1,2,3,4-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By: _____ Date: 10/25/2019 (mm/dd/yyyy)

B.G. Chittim, General Manager

Table B: **EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

Table C: EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); 7-point HRGC/HRMS Calibration and RRF Summary

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)

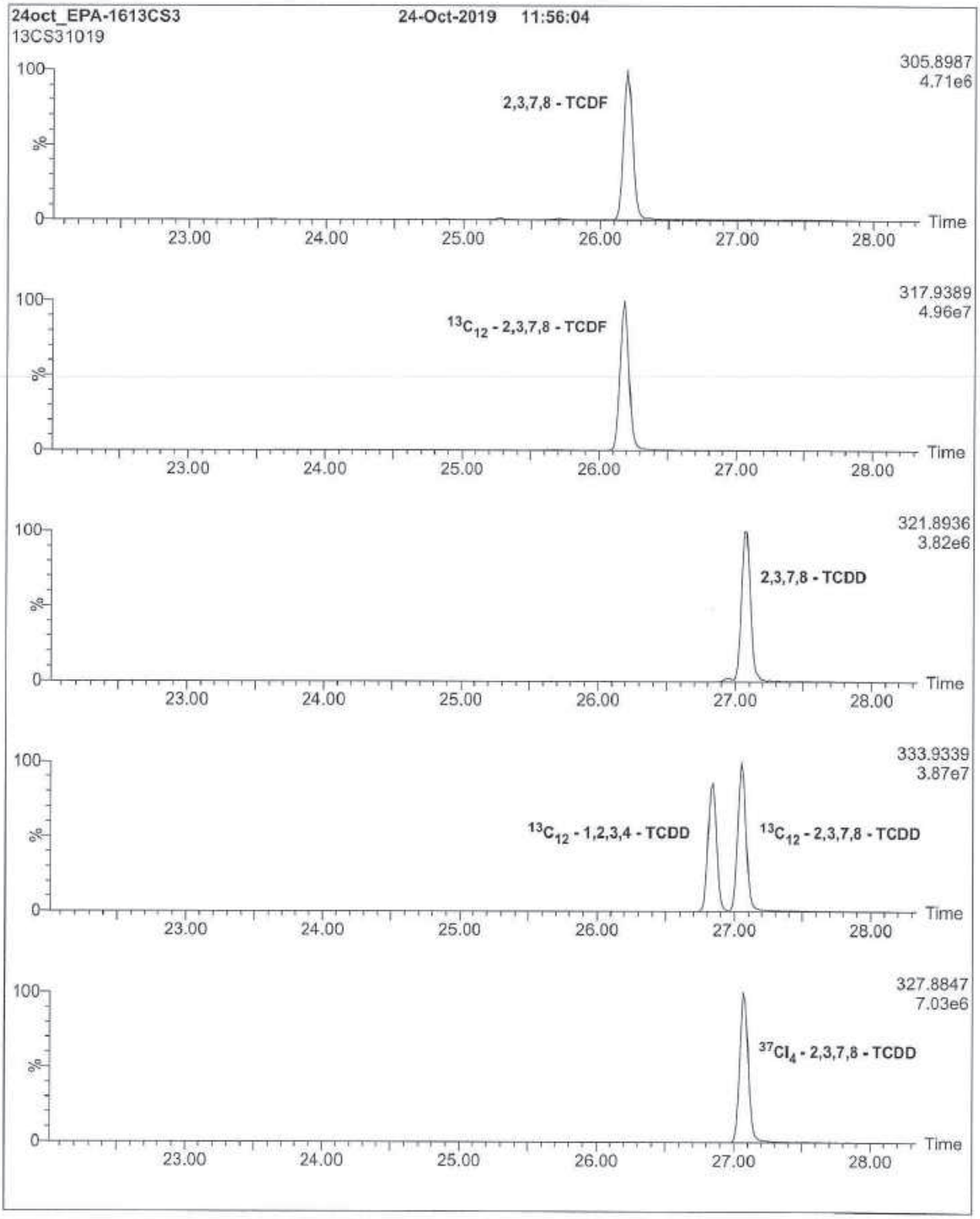


Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)

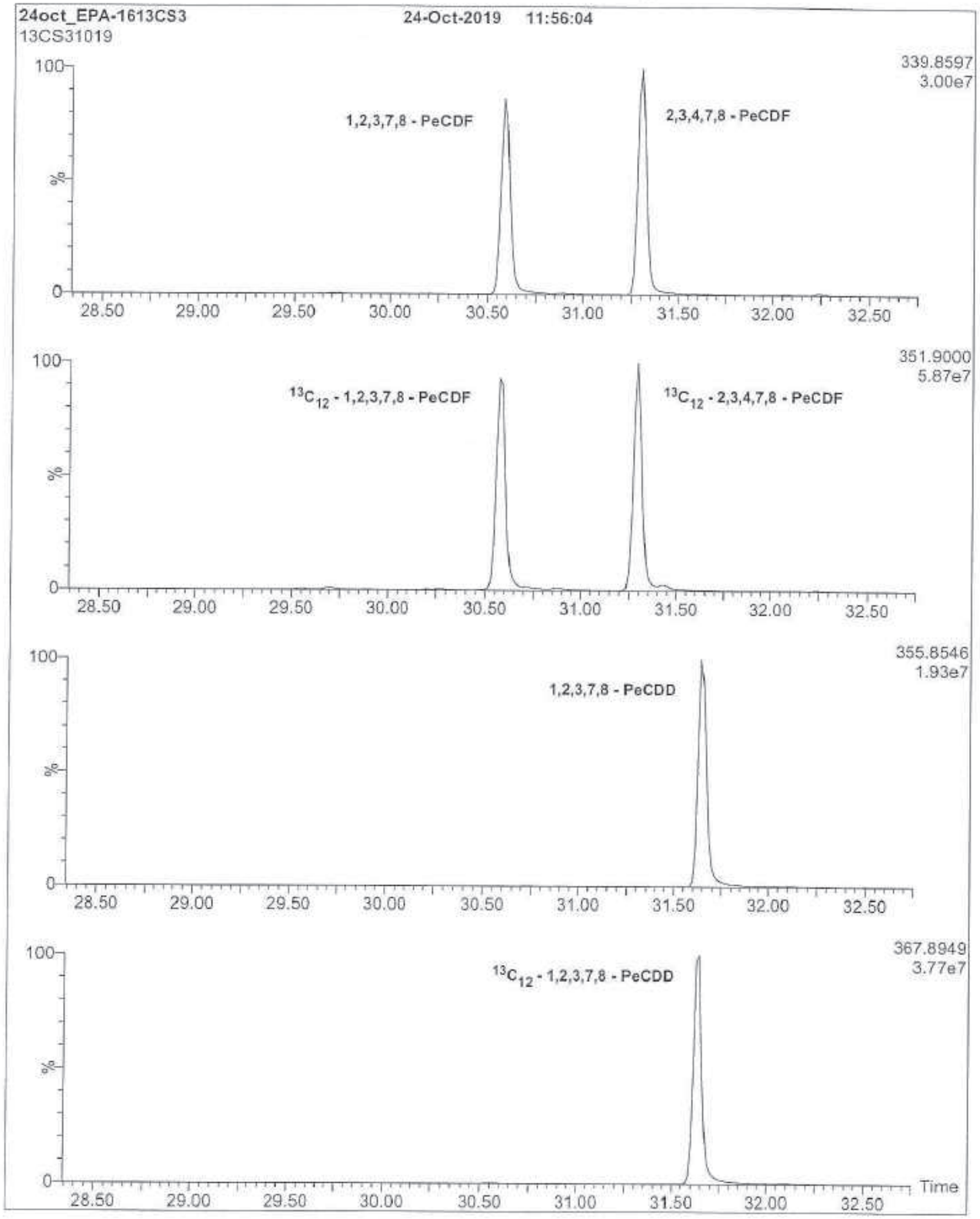


Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)

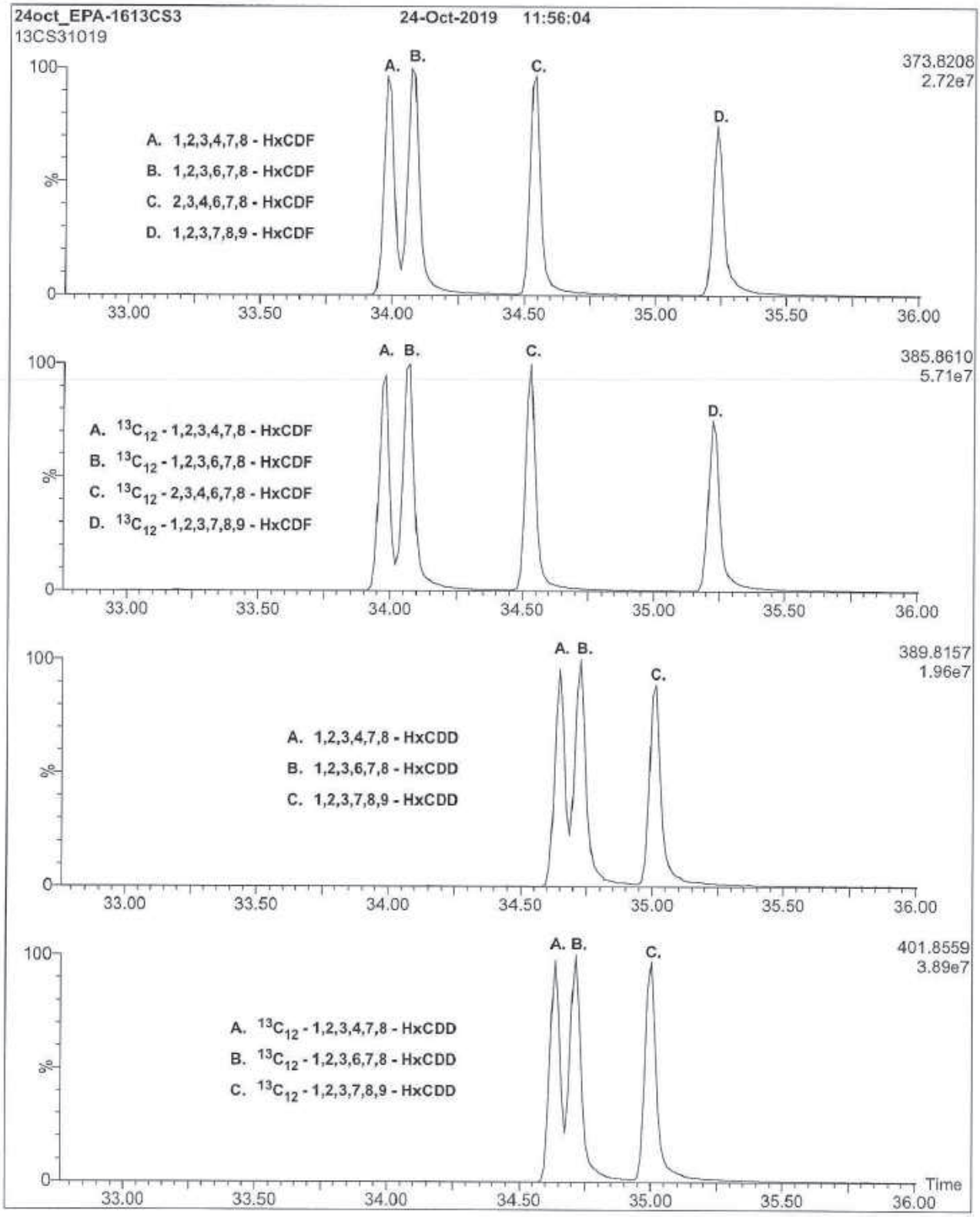


Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)

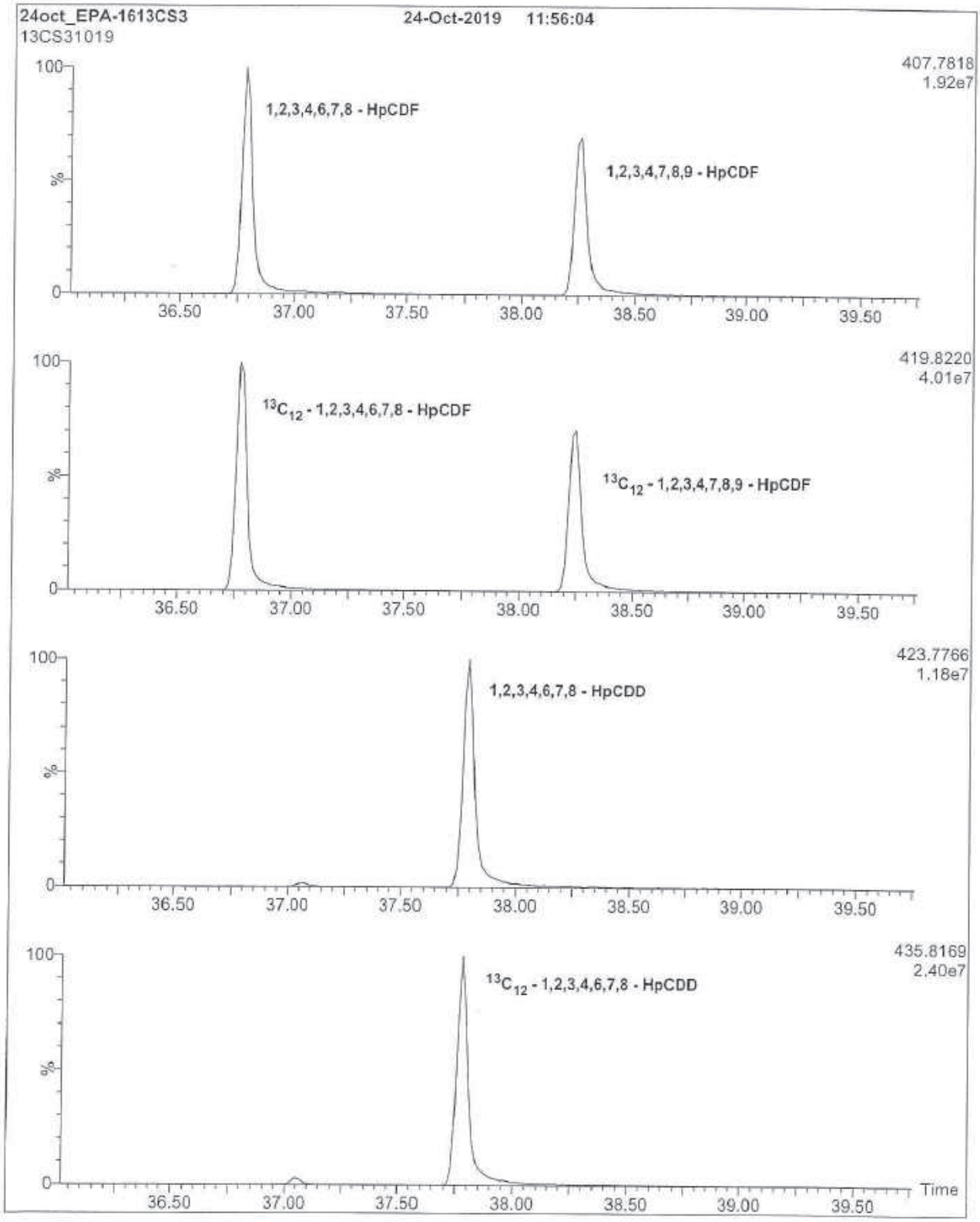
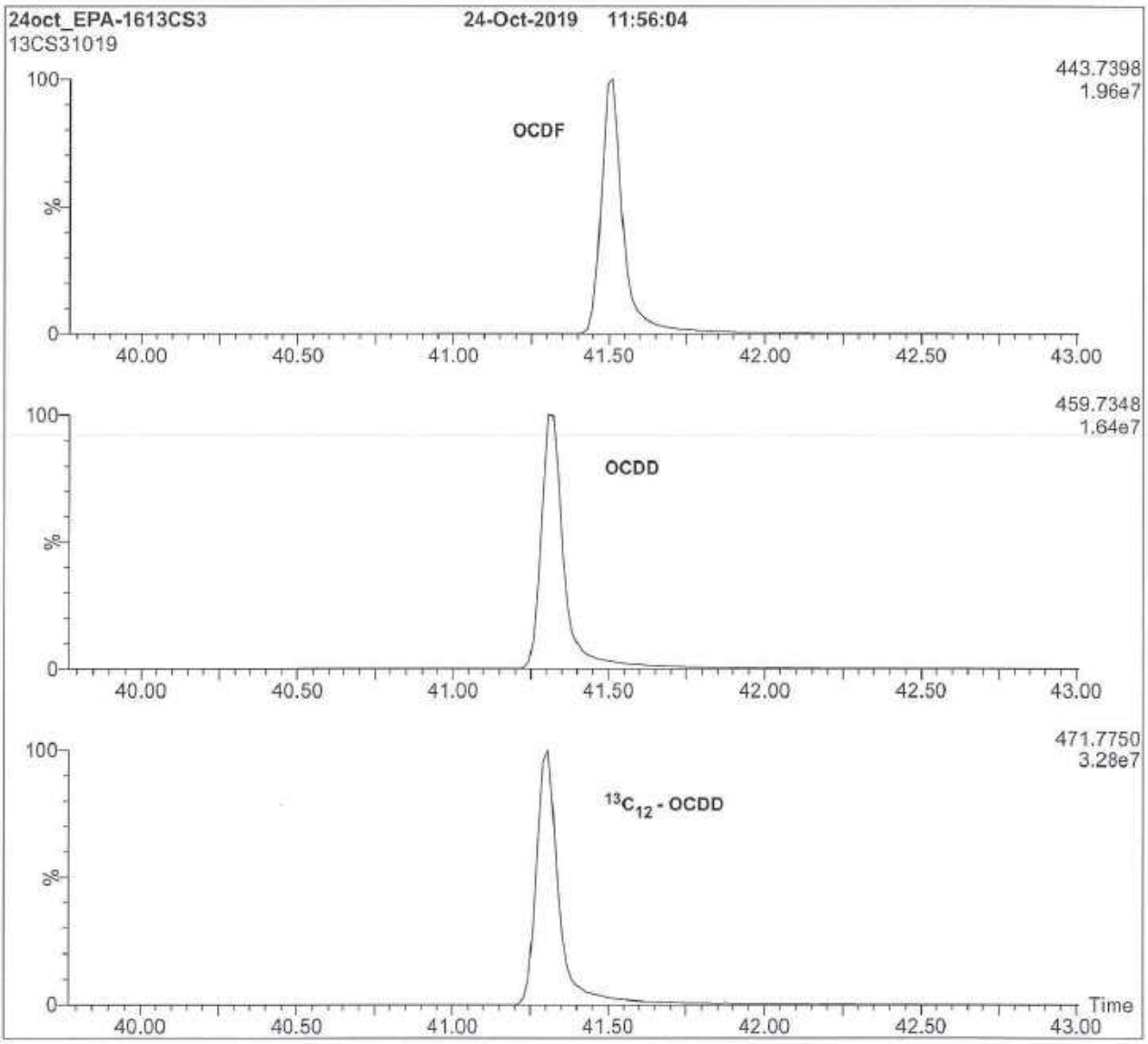


Figure 1: EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CSS

U.S. EPA Method 1613 Cleanup Standard Spiking Solution

PRODUCT CODE:	EPA-1613CSS
LOT NUMBER:	13CSS1019
SOLVENT(S):	Nonane
DATE PREPARED: (mm/dd/yyyy)	10/19/2019
LAST TESTED: (mm/dd/yyyy)	10/19/2019
EXPIRY DATE: (mm/dd/yyyy)	10/19/2026
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

I8323

DESCRIPTION:

EPA-1613CSS contains 2,3,7,8-[$^{37}Cl_4$]-Tetrachlorodibenzo-p-dioxin at the concentration given in Table A.

EPA-1613CSS was designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B).

2,3,7,8-[$^{37}Cl_4$]-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

Table A: **EPA-1613CSS; Components and Concentrations (ng/ml, ± 5% in nonane)**

Compound	Concentration (ng/ml)
2,3,7,8-[$^{37}Cl_4$]-Tetrachlorodibenzo-p-dioxin	40

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/05/2019 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

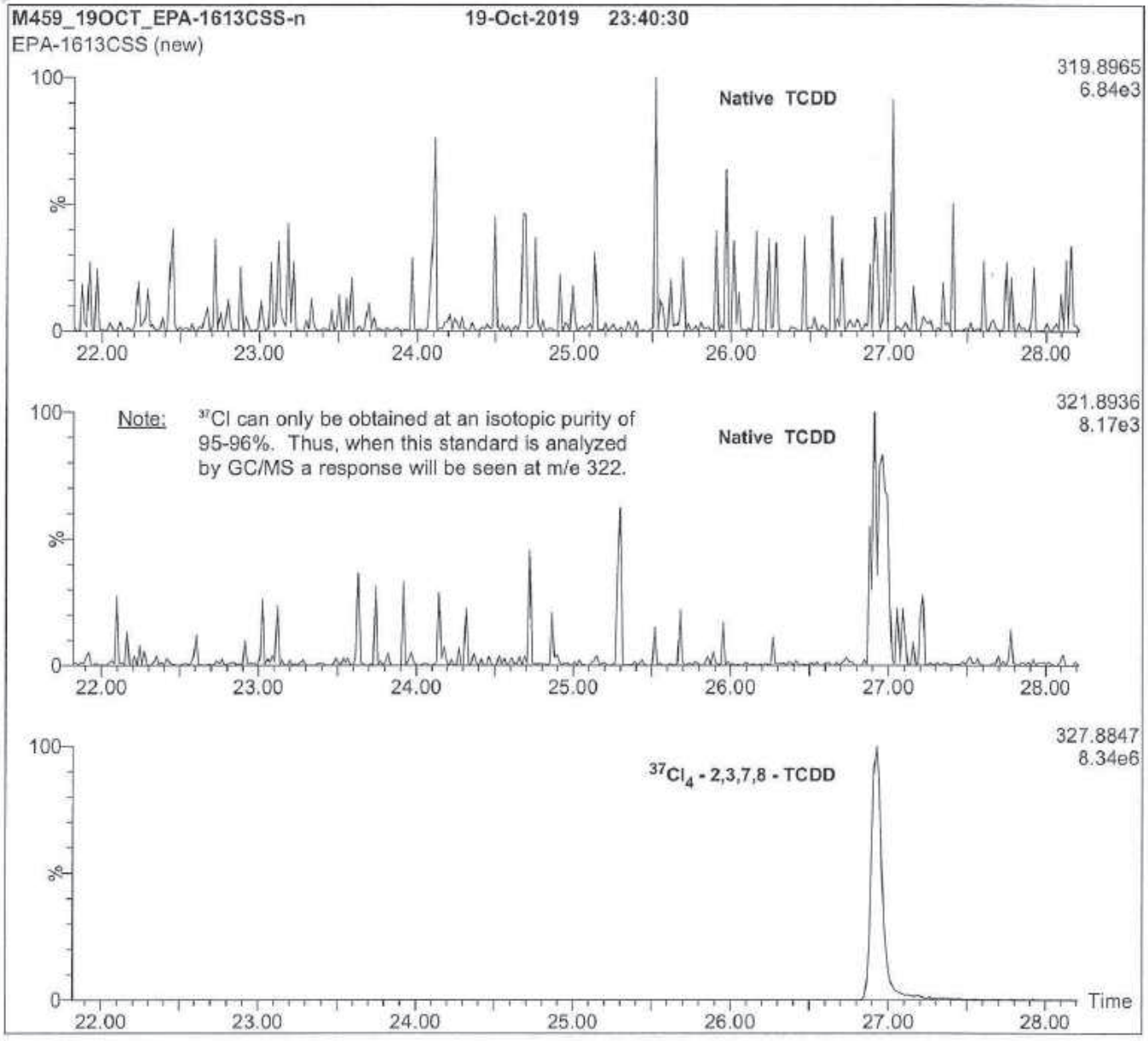
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **EPA-1613CSS; HRGC/HRMS Data (60 m DB-5 Column)**



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613LCS

U.S. EPA Method 1613
Labelled Compound Stock Solution

PRODUCT CODE:	EPA-1613LCS
LOT NUMBER:	13LCS1019
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/11/2019
LAST TESTED: (mm/dd/yyyy)	10/17/2019
EXPIRY DATE: (mm/dd/yyyy)	10/17/2026
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

I 8324

DESCRIPTION:

EPA-1613LCS is a solution/mixture of $^{13}C_{12}$-labelled chlorinated dibenzo-p-dioxins ($^{13}C_{12}$-PCDDs) and dibenzofurans ($^{13}C_{12}$-PCDFs). The components and their concentrations are given in Table A.

EPA-1613LCS was designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B).

The individual $^{13}C_{12}$-PCDDs and $^{13}C_{12}$-PCDFs all have chemical purities of >98% and isotopic purities of ≥99%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2 \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

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CALA Testing

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: EPA-1613LCS; Components and Concentrations (ng/ml, ± 5% in nonane/ 3.2% toluene)

$^{13}C_{12}$-PCDDs	Concentration (ng/ml)	$^{13}C_{12}$-PCDFs	Concentration (ng/ml)
$^{13}C_{12}$-2,3,7,8-TCDD	100	$^{13}C_{12}$-2,3,7,8-TCDF	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	$^{13}C_{12}$-1,2,3,7,8-PeCDF	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	$^{13}C_{12}$-2,3,4,7,8-PeCDF	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100
$^{13}C_{12}$-OCDD	200	$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100
		$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100
		$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100
		$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100

Certified By: _____ **Date:** 10/22/2019 (mm/dd/yyyy)

B.G. Chittim, General Manager

Figure 1: EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)

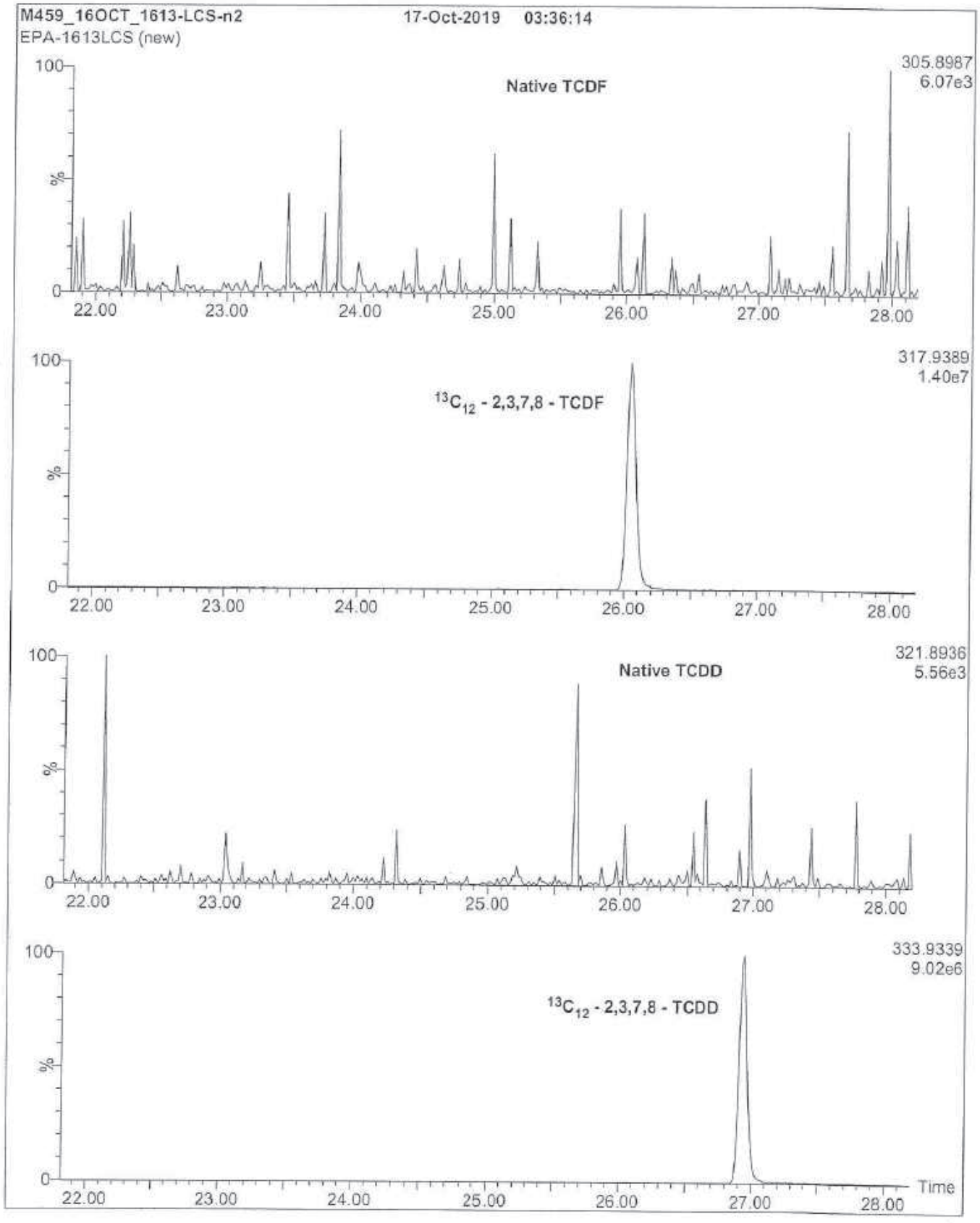


Figure 1: EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)

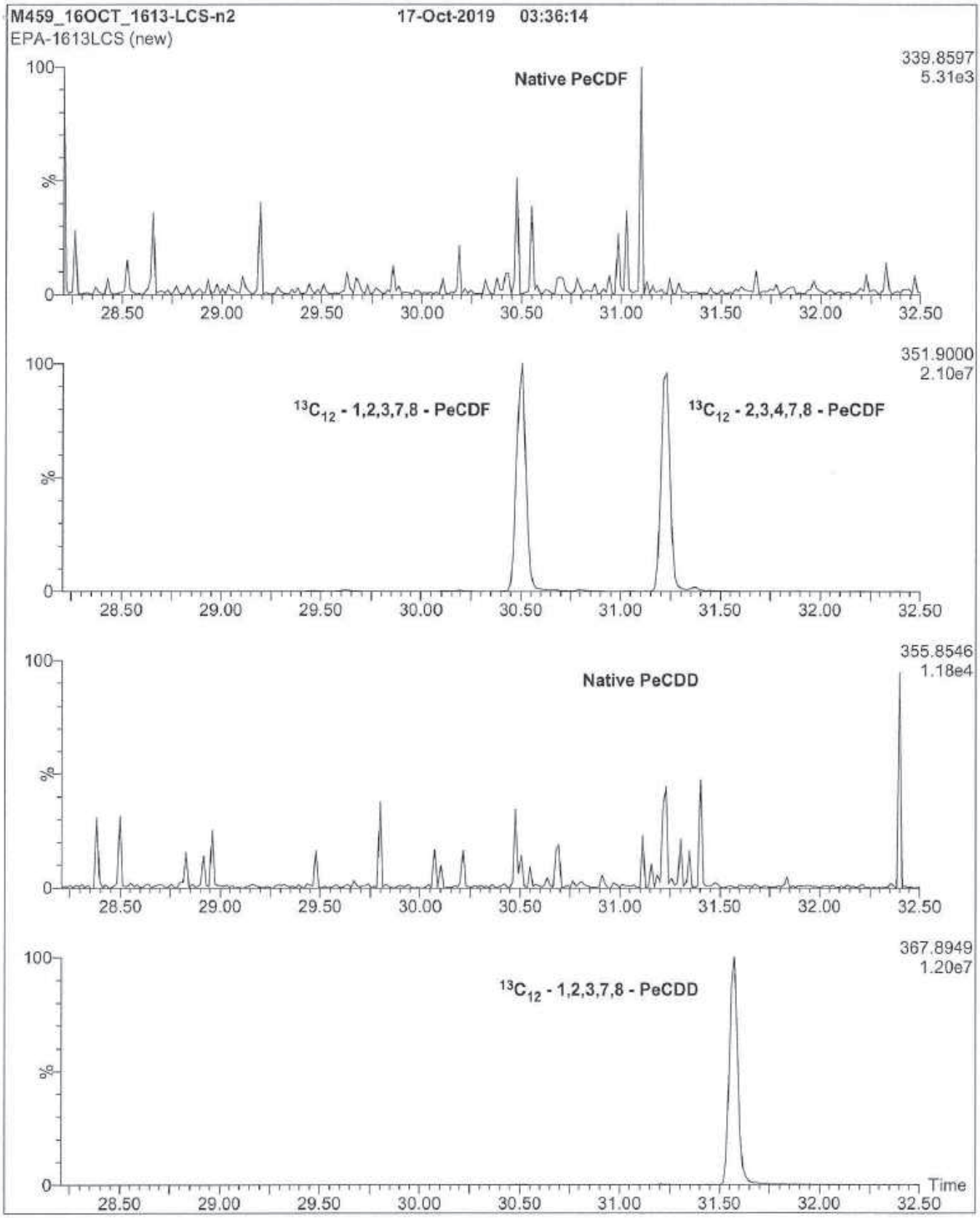


Figure 1: EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)

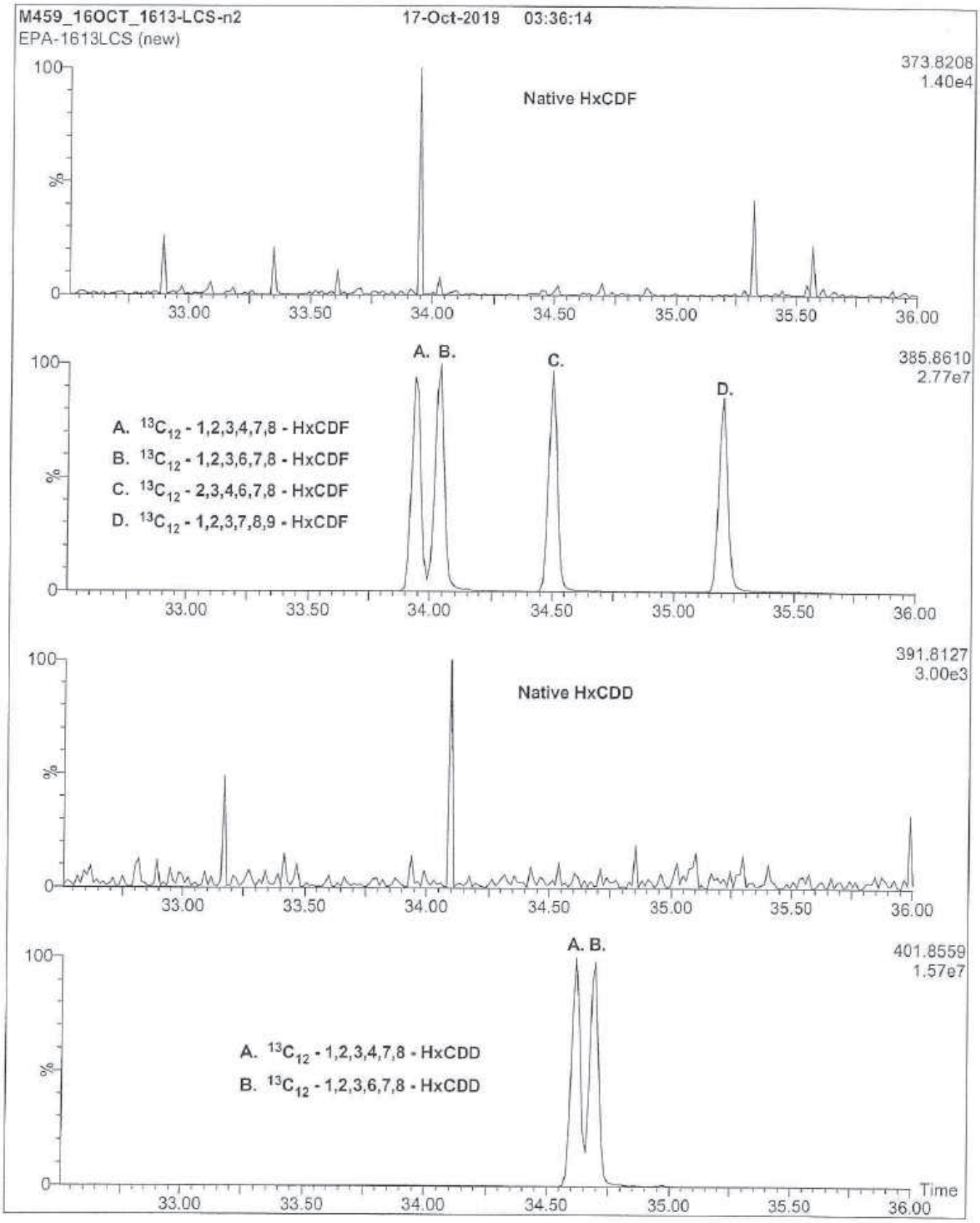


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

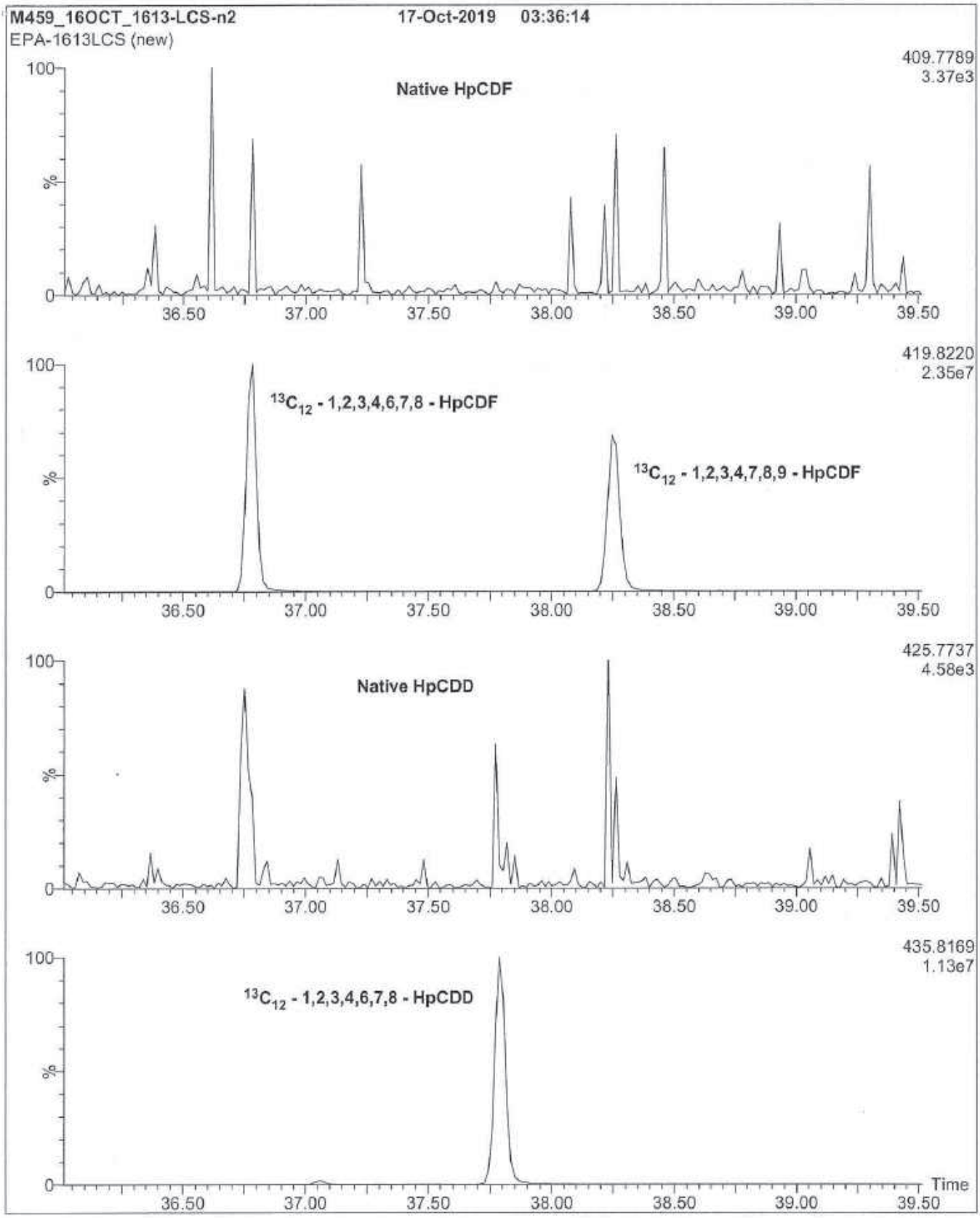
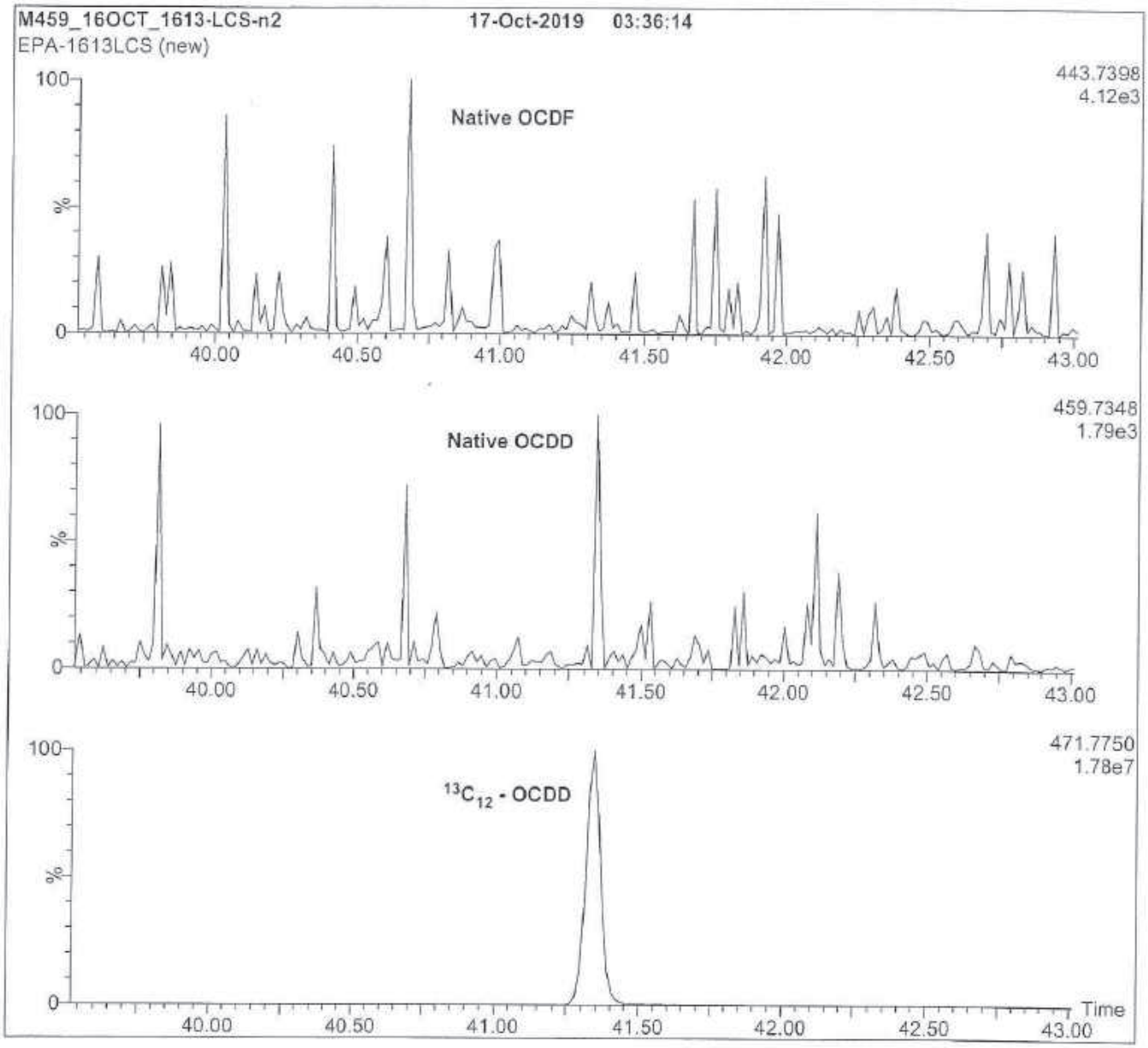


Figure 1: EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 200.8 UCT-KED

Dissolved Metals

MW-VB3-102720

Laboratory:	Analytical Resources, Inc.				
Client:	Floyd - Snider				
Project:	Lora Lake Apartments				
Matrix:	Ground Water	Laboratory ID:	20J0389-01 C 01	SDG:	20J0389
Sampled:	10/27/20 09:50	Prepared:	11/03/20 13:09	File ID:	XDT_m1201103-109
% Solids:	0.00	Preparation:	REN_EPA 600/4-79-020 4.1.4 HNO3 matrix	Analyzed:	11/03/20 21:09
Batch:	BIK0057	Sequence:	SIK0044	Initial/Final:	25 mL / 25 mL
Instrument:	ICPMS1			Calibration:	DK00005

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic, Dissolved	0.452	1	0.0220	0.200	

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 200.8 UCT-KED

Dissolved Metals

MW-CP1-102720

Laboratory5	Analytical Resources, Inc.				
Client5	Floyd - Snider				
Project5	Lora Lake Apartments				
Matrix5	Ground Water	Laboratory ID5	20J0389-02 C 01	SDG5	20J0389
Sampled5	1072: 720 1152/	Prepared5	1170372O 13509	File ID5	XDT_m1201103-09/
% Solids5	0.00	Preparation5	REN_EPA 6007A-: 9-020 4.1.4 HNO3 matrix	Analyzed5	1170372O 20501
Batch5	BIK00/ :	Sequence5	SIK0044	Initial7Final5	2/ mL 72/ mL
Instrument5	ICPMS1			Calibration5	DK0000/

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
: 440-38-2	Arsenic, Dissolved	0.462	1	0.0220	0.200	

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INORGANIC ANALYSIS DATA SHEET
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Dissolved Metals

MW-CP1-021712

LaboratoryE	Analytical Resources, Inc.				
ClientE	Floyd - Snider				
4rojectE	Lora Lake Apartments				
MatrixE	Ground Water	Laboratory IDE	20J0389-03 C 01	SDGE	20J0389
SampledE	107 2: 720 15EN0	4reparedE	117037 20 13E09	File IDE	XDT_m1201103-09/
% SolidsE	0.00	4reparationE	RP6_P4A / 007N: 9-020 N1.NH6 O3 matrix	AnalyzedE	117037 20 20E0/
BatchE	BIK005:	SequenceE	SIK00NN	Initial7FinalE	25 mL 725 mL
InstrumentE	IC4MS1			CalibrationE	DK00005

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
: NN0-38-2	Arsenic, Dissolved	0.210	1	0.0220	0.200	

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INORGANIC ANALYSIS DATA SHEET
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Dissolved Metals

MW-CP3-102720

Laboratory:	Analytical Resources, Inc.				
Client:	Floyd - Snider				
Project:	Lora Lake Apartments				
MatriQ	Ground Water	Laboratory ID:	20J0389-05 C 01	SDG:	20J0389
Sampled:	107/ 720 12:52	Prepared:	11703720 13:09	File ID:	XDT_m1201103-09/
% Solids:	0.00	Preparation:	REN_EPA 6007-/ 9-020 5.1.5 4 NH3 matriO	Analyzed:	11703720 20:10
x atch:	x IB00K/	Sequence:	SIB0055	Initial7Final:	2KmL 72KmL
Instrument:	ICPMS1			Calibration:	DB0000K

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
/ 550-38-2	Arsenic, Dissolved	0.50K	1	0.0220	0.200	

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 200.8 UCT-KED

Dissolved Metals

MW-CP4-102720

Laboratory5	Analytical Resources, Inc.				
Client5	Floyd - Snider				
Project5	Lora Lake Apartments				
MatriO5	Ground Water	Laboratory ID5	20J0389-0KC 01	SDG5	20J0389
Sampled5	107 2: 720 1/ 520	Prepared5	11703720 13509	File ID5	XDT_m1201103-10/
% Solids5	0.00	Preparation5	REN_EPA 6007 -: 9-020 / .1./ 4 NH3 matriO	Analyzed5	11703720 205/ 8
x atch5	x IB00K:	Sequence5	SIB00/ /	Initial7Final5	2KmL 72KmL
Instrument5	ICPMS1			Calibration5	DB0000K

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
: / / 0-38-2	Arsenic, Dissolved	0.0980	1	0.0220	0.200	J

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Form I
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Dissolved Metals

MW-CP5-102720

LaboratoryE	Analytical Resources, Inc.				
ClientE	Floyd - Snider				
6rojectE	Lora Lake Apartments				
MatrixE	Ground Water	Laboratory IDE	20J0389-04 C 01	SDGE	20J0389
SampledE	107 2: 720 15E28	6reparedE	117037 20 13H09	File IDE	XDT_m1201103-10/
% SolidsE	0.00	6reparationE	RNP_N6A 40075-: 9-020 5.1.5 HP O3 matrix	AnalyzedE	117037 20 20E 2
BatchE	BIK00/ :	SequenceE	SIK0055	Initial7FinalE	2/ mL 72/ mL
InstrumentE	IC6MS1			CalibrationE	DK0000/

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
: 550-38-2	Arsenic, Dissolved	3.22	1	0.0220	0.200	

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Dissolved Metals

MW-CP6-102720

Laboratory5	Analytical Resources, Inc.				
Client5	Floyd - Snider				
6roject5	Lora Lake Apartments				
Matrix5	Ground Water	Laboratory ID5	20J0389-0: C 01	SDG5	20J0389
Sampled5	107/: 7/20 1352/20	6repared5	117/037/20 1350/09	File ID5	XDT_m1201103-10/
% Solids5	0.00	6reparation5	RNP N6A / 0074-: 9-020 4.1.4 HP O3 matrix	Analyzed5	117/037/20 205E/
Batch5	BIK00E:	Sequence5	SIK0044	Initial7Final5	2E mL 72E mL
Instrument5	IC6MS1			Calibration5	DK0000E

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
: 440-38-2	Arsenic, Dissolved	1.0/	1	0.0220	0.200	

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INORGANIC ANALYSIS DATA SHEET
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Dissolved Metals

MW-CP1-027172

Laboratory:	Analytical Resources, Inc.				
Client:	Floyd - Snider				
Project:	Lora Lake Apartments				
Matrix:	Ground Water	Laboratory ID:	20J0389-08 C 01	SDG:	20J0389
Sampled:	10/2/20 12:00	Prepared:	11/03/20 13:09	File ID:	XDT_m1201103-10/
% Solids:	0.00	Preparation:	R5E_5NA P007/-/ 9-020 6.1.6 4 EH3 matrix	Analyzed:	11/03/20 21:01
Batch:	1B00K/	Sequence:	SIB0066	Initial/Final:	2K mL/2K mL
Instrument:	ICPMS1			Calibration:	DB0000K

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic, Dissolved	0.618	1	0.0220	0.200	

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 122.8 UCT-KED

Dissolved Metals

MW-CP1-021712-D

Laboratory5	Analytical Resources, Inc.				
Client5	Floyd - Snider				
6roject5	Lora Lake Apartments				
Matrix5	Ground Water	Laboratory ID5	20J0389-09 C 01	SDG5	20J0389
Sampled5	10/27/20 1: 5E:	6repared5	11/03/20 13509	File ID5	XDT_m1201103-108
% Solids5	0.00	6reparation5	RNP_N6A 400/E-79-020 E.1.E HP O3 matrix	Analyzed5	11/03/20 2150:
Batch5	BIK00: 7	Sequence5	SIK00EE	Initial/Final5	2: mL / 2: mL
Instrument5	IC6MS1			Calibration5	DK0000:

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7EE0-38-2	Arsenic, Dissolved	0.23:	1	0.0220	0.200	

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Form I
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Dissolved Metals

MW-C1/VB1-102820

Laboratory:	Analytical Resources, Inc.				
Client:	Floyd - Snider				
6roject:	Lora Lake Apartments				
MatriQ	Ground Water	Laboratory ID:	20J0389-10 C 01	SDG:	20J0389
Sampled:	10728720 09:35	6repared:	11703720 13:09	File ID:	XDT_m1201103-11/
% Solids:	0.00	6reparation:	RNP_N6A / 007E-59-020 E.1.E 4 P H3 matriO	Analyzed:	11703720 21:E/
x atch:	x IB00K5	Sequence:	SIB00EE	Initial7Final:	2KmL 72KmL
Instrument:	IC6MS1			Calibration:	DB0000K

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
5EE0-38-2	Arsenic, Dissolved	0.1/ 0	1	0.0220	0.200	J

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EPA 200.8 UCT-KED

Dissolved Metals

MW-C101-102820

Laboratory:	Analytical Resources, Inc.				
Client:	Floyd - Snider				
6roject:	Lora Lake Apartments				
Matrix:	Ground Water	Laboratory ID:	20J0389-11 C 01	SDG:	20J0389
Sampled:	107287207 09:5/	6repared:	11703720 13:09	File ID:	XDT_m1201103-11/
% Solids:	0.00	6reparation:	RNP_N6A 40075-/ 9-020 5.1.5 HP O3 matrix	Analyzed:	11703720 21:E0
Batch:	BIK00E/	Sequence:	SIK0055	Initial7Final:	2E mL 72E mL
Instrument:	IC6MS1			Calibration:	DK0000E

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
/ 550-38-2	Arsenic, Dissolved	0.1E8	1	0.0220	0.200	J

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Dissolved Metals

MW-C1-021812

Laboratory7	Analytical Resources, Inc.				
Client7	Floyd - Snider				
Project7	Lora Lake Apartments				
Matrix7	Ground Water	Laboratory ID7	20J0389-12 A 01	SDG7	20J0389
Sampled7	10/28/20 1170 1	Prepared7	11/03/20 1370 9	File ID7	XDT_m1201103-118
% Solids7	0.00	Preparation7	REN_EPA 600/5-49-020 5.1.5 HNO3 matrix	Analyzed7	11/03/20 217: 5
Batch7	BIK00: 4	Sequence7	SIK0055	Initial/Final7	2: mL / 2: mL
Instrument7	ICPMS1			Calibration7	DK0000:

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
4550-38-2	Arsenic, Dissolved	3.09	1	0.0220	0.200	

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EPA 200.8 UCT-KED

Dissolved Metals

MW-C3-102820

Laboratory7	Analytical Resources, Inc.				
Client7	Floyd - Snider				
Project7	Lora Lake Apartments				
Matrix7	Ground Water	Laboratory ID7	20J0389-13 A 01	SDG7	20J0389
Sampled7	10/28/20 1070:	Prepared7	11/03/20 13709	File ID7	XDT_m1201103-119
% Solids7	0.00	Preparation7	REN_EPA : 00/6-49-020 6.1.6 HNO3 matrix	Analyzed7	11/03/20 21759
Batch7	BIK0054	Sequence7	SIK0066	Initial/Final7	25 mL / 25 mL
Instrument7	ICPMS1			Calibration7	DK00005

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
4660-38-2	Arsenic, Dissolved	0.21:	1	0.0220	0.200	

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 200.8 UCT-KED

Dissolved Metals

HCOO-B312-102820

Laboratory7	Analytical Resources, Inc.				
Client7	Floyd - Snider				
Eroject7	Lora Lake Apartments				
MatriO7	Ground Water	Laboratory ID7	20J0389-1P C 01	SDG7	20J0389
Sampled7	10/28/20 13700	Erepared7	11/03/20 13709	File ID7	XDT_m1201103-120
% Solids7	0.00	Ereparation7	R: 5 : EA N00/P-69-020 P.1.P 4 5 H3 matriO	Analyzed7	11/03/20 22703
x atch7	x IB00K6	Sequence7	SIB00PP	Initial/Final7	2KmL / 2KmL
Instrument7	ICEMS1			Calibration7	DB0000K

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
6PP0-38-2	Arsenic, Dissolved	0.1NK	1	0.0220	0.200	J

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PREPARATION BATCH SUMMARY

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc. SDG: 20J0389

Client: Floyd - Snider Project: Lora Lake Apartments

Batch: BIK0057 Batch Matrix: Water Preparation: REN EPA 600/4-79-020 4.1.4 HNO3 matrix

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
MW-VB3-102720	20J0389-01	XDT_m1201103-109	11/03/20 13:09	
MW-CP1-102720	20J0389-02	XDT_m1201103-095	11/03/20 13:09	
MW-CP2-102720	20J0389-03	XDT_m1201103-096	11/03/20 13:09	
MW-CP3-102720	20J0389-04	XDT_m1201103-097	11/03/20 13:09	
MW-CP4-102720	20J0389-05	XDT_m1201103-104	11/03/20 13:09	
MW-CP5-102720	20J0389-06	XDT_m1201103-105	11/03/20 13:09	
MW-CP6-102720	20J0389-07	XDT_m1201103-106	11/03/20 13:09	
MW-CP7-102720	20J0389-08	XDT_m1201103-107	11/03/20 13:09	
MW-CP2-102720-D	20J0389-09	XDT_m1201103-108	11/03/20 13:09	
MW-C1/VB1-102820	20J0389-10	XDT_m1201103-116	11/03/20 13:09	
MW-C101-102820	20J0389-11	XDT_m1201103-117	11/03/20 13:09	
MW-C2-102820	20J0389-12	XDT_m1201103-118	11/03/20 13:09	
MW-C3-102820	20J0389-13	XDT_m1201103-119	11/03/20 13:09	
HCOO-B312-102820	20J0389-14	XDT_m1201103-120	11/03/20 13:09	
Blank	BIK0057-BLK1	XDT_m1201103-079	11/03/20 13:09	
LCS	BIK0057-BS1	XDT_m1201103-080	11/03/20 13:09	
MW-VB3-102720	BIK0057-DUP1	XDT_m1201103-110	11/03/20 13:09	
MW-VB3-102720	BIK0057-MS1	XDT_m1201103-111	11/03/20 13:09	
MW-VB3-102720	BIK0057-MSD1	XDT_m1201103-112	11/03/20 13:09	

Form I

METHOD BLANK DATA SHEET

EPA 200.8 UCT-KED

Dissolved Metals

Blank

Laboratory: Analytical Resources, Inc. SDG: 20J0389

Client: Floyd - Snider Project: Lora Lake Apartments

Batch: BIK0057 Laboratory ID: BIK0057-BLK1 Prepared: 11/03/20 13:09

Matrix: Water Preparation: REN_EPA 600/4-79-020 4 Analyzed: 11/03/20 18:46

Sequence: SIK0044 Calibration: DK00005 Instrument: ICPMS1

CAS NO.	Analyte	Concentration (ug/L)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic-75a	ND	1	0.0220	0.200	U

LCS / LCS DUPLICATE RECOVERY

EPA 200.8 UCT-KED

Dissolved Metals

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Matrix:	Water	Analyzed:	11/03/20 18:50
Batch:	BIK0057	Laboratory ID:	BIK0057-BS1
Preparation:	REN EPA 600/4-79-020 4.1.4 HNO3 matrix	Sequence Name:	LCS
Initial/Final:	25 mL / 25 mL		

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	Q	LCS % REC. #	QC LIMITS REC.
Arsenic-75a (dissolved)	25.0	24.5		97.8	80 - 120

* Indicates values outside of QC limits

MW-VB3-102720

DUPLICATES

EPA 200.8 UCT-KED

Dissolved Metals

Laboratory: Analytical Resources, Inc.
SDG: 20J0389
Client: Floyd - Snider
Project: Lora Lake Apartments
Matrix: Water
Laboratory ID: BIK0057-DUP1
Batch: BIK0057
Lab Source ID: 20J0389-01
Preparation: REN EPA 600/4-79-020 4.1.4 HNO3 matrix
Initial/Final: 25 mL / 25 mL
Source Sample Name: MW-VB3-102720
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Arsenic-75a (dissolved)	20	0.452	0.448	0.889	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

MS / MS DUPLICATE RECOVERY

EPA 200.8 UCT-KED

Dissolved Metals

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Matrix:	Water	Analyzed:	11/03/20 21:18
Batch:	BIK0057	Laboratory ID:	BIK0057-MS1
Preparation:	REN EPA 600/4-79-020 4.1.4 HNO3 matrix	Sequence Name:	Matrix Spike
Initial/Final:	25 mL / 25 mL	Source Sample:	MW-VB3-102720

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	Q	MS CONCENTRATION (ug/L)	Q	MS % REC. #	QC LIMITS REC.
Arsenic-75a (dissolved)	25.0	0.452		25.3		99.5	75 - 125

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY

EPA 200.8 UCT-KED

Dissolved Metals

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Matrix:	Water	Analyzed:	11/03/20 21:22
Batch:	BIK0057	Laboratory ID:	BIK0057-MSD1
Preparation:	REN EPA 600/4-79-020 4.1.4 HNO3 matrix	Sequence Name:	Matrix Spike Dup
Initial/Final:	25 mL / 25 mL	Source Sample:	MW-VB3-102720

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Arsenic-75a (dissolved)	25.0	25.5		100	0.685	20	75 - 125

* Values outside of QC limits

INITIAL CALIBRATION DATA

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20J0389
Client: Floyd - Snider
Project: Lora Lake Apartments
Calibration: DK00005
Instrument: ICPMS1
Calibration Date: 11/03/2020 12:22

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Arsenic-75a, Dissolved	0	0	0.2	420	10	392.4	20	394.85	50	387.52	100	387.1

INITIAL CALIBRATION DATA

EPA 200.8 UCT-KED

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Calibration:	DK00005	Instrument:	ICPMS1
Calibration Date:	11/03/2020 12:22		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Arsenic-75a, Dissolved	330.3117	49.1	1.0000		0.998	

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 11/3/20 **Analyst:** MB **Sequence:** SIKØØ44 **Cal:** OKØØØØ5

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CAL1	I9984		
		-CAL2	IIØ248		
		-CAL3	I9949		
		-CAL4	I995Ø		
		-CAL5	I9983		
		-CAL6	I9951		
		-IBL1	—		
		-ICV1	I7471		
		-ICB1	I9984		
		-CCV1	I9983		
		-CCB1	I9984		
		-CRL1	IIØ248		
		-IFA1	I9767		Cr^{53} ↑
		-IFB1	I9768		
		-HCV1	IIØ247		
		-HCV2	I9953		
		-IBL2	—		
		-IBL3	—		
		-CCV2			
		-CCB2			
	✓	BIKØØ39-BLK1	REN		Cu, Pb, Zn ↑
		-BS1			↑
		-BLK1			Cu, Pb, Zn ↑ Cu+Pb NR
		ZØJØ415-Ø1			Zn >10x cont. Reprep Cu Cu NR

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 11/3/20 **Analyst:** MB **Sequence:** ——— **Cal:** ———

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		20Φ043Φ-Φ3	REN		Reprep Cu, Pb, Zn / Cu, Pb, Zn NR
		-Φ2	↓		↓ ↓
		-Φ1	↓		
		BIKΦΦ39-DUP1	↓		
		↓ -MS1	↓		
		SEQ-IBL4			
		-CCV3			
		-CCB3			
	✓	SED SPIKE TEST	SWN	20	Test only
		BIJΦ815-BLK1	↓	↓	Cd NR
		↓ -BS1	↓	↓	↓
		20JΦ381-Φ2	↓	↓	
		-Φ4	↓	↓	
		-Φ5	↓	↓	
		-Φ1	↓	↓	
		BIJΦ815-DUP1	↓	↓	As, Ba, Cu RPD↑
		↓ -MS1	↓	↓	Cr %R↓ ↓
		SEQ-IBL5			
		-CCV4			
		-CCB4			In-1 noisy
		-CCV5			
		-CCB5			
		20JΦ366-Φ4	SWN	20	
		↓ -Φ3	↓	↓	

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 11/3/20 **Analyst:** MS **Sequence:** ——— **Cal:** ———

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		20J0366-02	SWN	20	
		SEQ-IBL6			
		20J0382-01	SWN	20	
		-02	↓	↓	
		-03	↓	↓	
		-05	↓	↓	
		-06	↓	↓	
		SEQ-IBL7			
		-CCV6			
		-CCB6			
		20J0382-07	SWN	20	
		-08	↓	↓	
		-09	↓	↓	
		-10	↓	↓	
		SEQ-IBL8			
		BIJ0815-BLK2	SWN	20	Cd only
		-BS2	↓	↓	↓
		20J0381-02REI	↓	↓	
		-04REI	↓	↓	
		-05REI	↓	↓	
		SEQ-CCV7			
		-CCB7			
		BIK0058-BLK1	REN		
		-BS1	↓		

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 11/3/20 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		BIKØØ57-BLK1	REN		
		↓ -BS1	↓		
		2ØJØ412-Ø9	↓		
		↓ -11	↓		
		SEQ-IBL9			
		2ØJØ381-ØIRE1	SWN	20	Cl only
		BIJØ815-DUP2	↓	↓	↓
		↓ -MS2	↓	↓	↓
		SEQ-CCV8			Sc sl. noisy - %R+Analytes OK
		↓ -CCB8			
		2ØJØ412-13	REN		
		↓ -15	↓		
		↓ -17	↓		
		↓ -19	↓		
		↓ -21	↓		
		↓ -23	↓		
		2ØJØ389-Ø2	↓		
		↓ -Ø3	↓		
		↓ -Ø4	↓		
		SEQ-IBLA			
		↓ -CCV9			
		↓ -CCB9			
	✓	↓ -CAL1			
		↓ -CCVA			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 11/3/20 **Analyst:** MB **Sequence:** ——— **Cal:** ———

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CCBA			
		20J0389-05	REN		
		-06	↓		
		-07			
		-08			
		-09			
		-01			
		BIK0057-DUP1			
		-MS1			
		-MSD1	↓		
		SEQ-IBLB			
		-CCVB			
		-CCBB			
		20J0389-10	REN		
		-11	↓		
		-12			
		-13			
		-14	↓		
		SEQ-IBLC			
		20J0434-02	REN		
		-03	↓		
		20J0420-07	↓		
		SEQ-IBLD			
		-CCVC			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 11/3/20 **Analyst:** NB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CCBC			
		20K0001-02	REN		
		20K0002-05	↓		
		20J0396-03	↓		
		BIK0058-DUP1	↓		
		↓ -MS1	↓		
		↓ -MSD1	↓		
		SEQ-IBLE			
		↓ -CCV1			
		↓ -CCB1			
	✓	FRN SPIKE TEST		100	
	✓	↓		5	
		Rinse/DI			
			NB 11/3/20		

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Tuesday, November 03, 2020 11:43:05
Sample Description:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Default\STD Performance Check.9572
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	4325.3	4316.588	31.761	0.7	Standard
	In	114.9	133004.6	-1792428.994	1241.859	0.1	Standard
	U	238.1	142833.0	142833.006	3370.581	2.4	Standard
⌈	CeO	155.9	3009.3	0.022	0.000	2.0	Standard
| >	Ce	139.9	135526.8	135526.849	1773.401	1.3	Standard
⌊	Ce++	70.0	1433.8	0.011	0.000	2.3	Standard
	Bkgd	220.0	1.9	1.900	1.188	62.5	Standard

Current Conditions File Data

Current Value	Description
0.93	Nebulizer Gas Flow STD/KED [NEB]
1.25	Auxiliary Gas Flow
17.50	Plasma Gas Flow
-10.75	Deflector Voltage
1600.00	ICP RF Power
-1750.00	Analog Stage Voltage
1400.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-16.00	Cell Rod Offset STD [CRO]
14.00	Discriminator Threshold
-1.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.93	DRC Mode NEB
-7.50	DRC Mode QRO
-2.00	DRC Mode CRO
-5.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
200.00	Axial Field Voltage
-11.00	KED Mode CRO
-12.00	KED Mode QRO
-11.00	KED Mode Cell Entrance Voltage
-33.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
125.00	KED Mode Axial Field Voltage

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Tuesday, November 03, 2020 11:53:06
Sample Description:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Default\STD Performance Check.9578
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	3589.6	3589.585	146.837	4.1	Standard
	In	114.9	146191.6	146191.577	1085.540	0.7	Standard
	U	238.1	171684.1	171684.077	1553.448	0.9	Standard
⌈	CeO	155.9	2976.2	0.019	0.000	1.5	Standard
| >	Ce	139.9	160419.1	160419.129	1450.489	0.9	Standard
⌊	Ce++	70.0	1332.9	0.008	0.000	2.4	Standard
	Bkgd	220.0	1.7	1.733	0.418	24.1	Standard

Current Conditions File Data

Current Value	Description
0.92	Nebulizer Gas Flow STD/KED [NEB]
1.25	Auxiliary Gas Flow
17.50	Plasma Gas Flow
-10.75	Deflector Voltage
1600.00	ICP RF Power
-1750.00	Analog Stage Voltage
1400.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-16.00	Cell Rod Offset STD [CRO]
14.00	Discriminator Threshold
-1.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.92	DRC Mode NEB
-7.50	DRC Mode QRO
-2.00	DRC Mode CRO
-5.00	DRC Mode Cell Entrance/Exit Voltage
1.00	Cell Gas A
0.00	Cell Gas B
200.00	Axial Field Voltage
-11.00	KED Mode CRO
-12.00	KED Mode QRO
-11.00	KED Mode Cell Entrance Voltage
-33.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
125.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Start Time: 11/3/2020 11:43:03 AM
End Time: 11/3/2020 11:55:10 AM

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 4325.25
Obtained Intensity (In 115): 133004.60
Obtained Intensity (U 238): 142833.01
Obtained Intensity (Bkgd 220): 1.90
Obtained Formula (Ce++ 70 / Ce 140): 0.011 (=1433.81 / 135526.85)
Obtained Formula (CeO 156 / Ce 140): 0.022 (=3009.32 / 135526.85)
Obtained RSD (Be 9): 0.0074
Obtained RSD (In 115): 0.0007
Obtained RSD (U 238): 0.0236

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
2.03 mm	-0.37 mm	190848.35

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 0.92
Obtained Intensity (In 115): 156173.01
Obtained Formula (CeO 156 / Ce 140): 0.0177 (=2834.28 / 160414.62)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.688)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.712)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.710)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.706)

QID STD/DRC - Optimum value(s): Correlation Coefficient = 1.000; Intercept = -16.71

KED Mode QID - Optimum value(s): Correlation Coefficient = 1.000; Intercept = -13.91

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 3589.58
Obtained Intensity (In 115): 146191.58
Obtained Intensity (U 238): 171684.08
Obtained Intensity (Bkgd 220): 1.73
Obtained Formula (Ce++ 70 / Ce 140): 0.008 (=1332.86 / 160419.13)
Obtained Formula (CeO 156 / Ce 140): 0.019 (=2976.24 / 160419.13)
Obtained RSD (Be 9): 0.0409
Obtained RSD (In 115): 0.0074
Obtained RSD (U 238): 0.0090

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Optimization Status

Start Time: 11/3/2020 11:43:03 AM

STD Performance Check
	Optimization Settings:
		Method: STD Performance Check.mth.
		Intensity Criterion: Be 9 > 2000
		Intensity Criterion: In 115 > 40000
		Intensity Criterion: U 238 > 30000
		Intensity Criterion: Bkgd 220 <= 5
		Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
		Formula Criterion: CeO 156 / Ce 140 <= 0.025
		RSD Criterion: Be 9.0122 < 5
		RSD Criterion: In 114.904 < 5
		RSD Criterion: U 238.05 < 5

	Optimization Results:
	Initial Try
		Obtained Intensity (Be 9): 4325.25
		Obtained Intensity (In 115): 133004.60
		Obtained Intensity (U 238): 142833.01
		Obtained Intensity (Bkgd 220): 1.90
		Obtained Formula (Ce++ 70 / Ce 140): 0.011 (=1433.81 / 135526.85)
		Obtained Formula (CeO 156 / Ce 140): 0.022 (=3009.32 / 135526.85)
		Obtained RSD (Be 9): 0.0074
		Obtained RSD (In 115): 0.0007
		Obtained RSD (U 238): 0.0236

[Passed] Optimum value(s): N/A

Torch Alignment
	Optimization Settings:
		Method: Torch Alignment.mth.
		Intensity Criterion: In 115 Maximum

	Optimization Results:
		Vertical	Horizontal	Intensity
[Passed]	2.03 mm	-0.37 mm	190848.35

Nebulizer Gas Flow STD/KED [NEB]
	Optimization Settings:
		Method: Optimize.mth.
			Initial Try - Start/End/Step: 0.9/1/0.01.
		Intensity Criterion: In 115 Maximum
		Formula Criterion: CeO 156 / Ce 140 <= 0.02

	Optimization Results:
	Initial Try

		Obtained Intensity (In 115): 156173.01
		Obtained Formula (CeO 156 / Ce 140): 0.0177 (=2834.28 / 160414.62)
[Passed] Optimum value(s): 0.92

Mass Calibration and Resolution
Optimization Settings:
Method: Tuning.mth.
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Iterations: 6
Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution
Peak height (%) for Res. Opt.: 10

Optimization Results:
Initial Try
Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.688)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.712)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.710)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.706)
[Passed] Optimum value(s): N/A

QID STD/DRC
Optimization Settings:
Method: QID Calibration.mth.
Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:
Initial Try

Optimum value(s): Correlation Coefficient = 1.000; Intercept = -16.71

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-16	17987.3
Mg	24	41	-14.5	41817.1
In	115	41	-11	154196
Ce	140	41	-10.5	165898
Pb	208	41	-10	95703.5
U	238	41	-10	172349

KED Mode QID
Optimization Settings:
Method: QID Calibration.mth.
Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:
Initial Try

Optimum value(s): Correlation Coefficient = 1.000; Intercept = -13.91

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-14	18916.5
Mg	24	41	-14	47571.1
In	115	41	-11	141287
Ce	140	41	-10.5	118308
Pb	208	41	-10	50878.4
U	238	41	-10	89241.9

STD Performance Check
Optimization Settings:
Method: STD Performance Check.mth.
Intensity Criterion: Be 9 > 2000
Intensity Criterion: In 115 > 40000

```
            Intensity Criterion: U 238 > 30000
            Intensity Criterion: Bkgd 220 <= 5
            Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
            Formula Criterion: CeO 156 / Ce 140 <= 0.025
            RSD Criterion: Be 9.0122 < 5
            RSD Criterion: In 114.904 < 5
            RSD Criterion: U 238.05 < 5

       Optimization Results:
       Initial Try
            Obtained Intensity (Be 9): 3589.58
            Obtained Intensity (In 115): 146191.58
            Obtained Intensity (U 238): 171684.08
            Obtained Intensity (Bkgd 220): 1.73
            Obtained Formula (Ce++ 70 / Ce 140): 0.008 (=1332.86 / 160419.13)
            Obtained Formula (CeO 156 / Ce 140): 0.019 (=2976.24 / 160419.13)
            Obtained RSD (Be 9): 0.0409
            Obtained RSD (In 115): 0.0074
            Obtained RSD (U 238): 0.0090

[Passed]  Optimum value(s): N/A

End Time: 11/3/2020 11:55:10 AM
```

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 12:22:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				16177	3	Standard
	Cl	**37**		ug/L				6593477	0	Standard
⎡>	**Sc**	**45**		ug/L				1335244	1	Standard
⎢	**Cr**	**52**		ug/L				23740	0	Standard
⎣	**Cr**	**53**		ug/L				139	7	Standard
⎡>	**Ge**	**72**		ug/L				113005	1	KED
⎢	**Ni**	**60**		ug/L				95	24	KED
⎢	**Ni**	**62**		ug/L				22	22	KED
⎢	**Cu**	**63**		ug/L				102	14	KED
⎢	**Cu**	**65**		ug/L				58	32	KED
⎢	**Zn**	**66**		ug/L				138	18	KED
⎢	**Zn**	**67**		ug/L				20	23	KED
⎢	**As**	**75**		ug/L				5	15	KED
⎣	**Se**	**78**		ug/L				17	15	KED
	Y	**89**		ug/L				969026	1	Standard
	Kr	**83**		ug/L				90	10	Standard
⎡>	**In-1**	**115**		ug/L				29579	1	KED
⎢	**Cd**	**111**		ug/L				2	49	KED
⎣	**Cd**	**114**		ug/L				1	211	KED
⎡>	**In**	**115**		ug/L				1949131	1	Standard
⎢	**Ag**	**107**		ug/L				71	14	Standard
⎢	**Ba**	**135**		ug/L				150	10	Standard
⎣	**Ba**	**137**		ug/L				258	4	Standard
⎡>	**Tb**	**159**		ug/L				3793166	1	Standard
⎣	**Pb**	**208**		ug/L				670	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 12:26:50
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	16390	1	Standard
	Cl	**37**		ug/L			6593477	6477294	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1327826	0	Standard
|	**Cr**	**52**	**0.500**	ug/L	0.037	7	23740	34840	1	Standard
⌊	**Cr**	**53**	**0.500**	ug/L	0.011	2	139	1574	1	Standard
⌈>	**Ge**	**72**		ug/L			113005	112973	0	KED
|	**Ni**	**60**	**0.500**	ug/L	0.015	3	95	1112	3	KED
|	**Ni**	**62**	**0.500**	ug/L	0.082	16	22	158	14	KED
|	**Cu**	**63**	**0.500**	ug/L	0.013	2	102	3140	2	KED
|	**Cu**	**65**	**0.500**	ug/L	0.016	3	58	1532	2	KED
|	**Zn**	**66**	**4.000**	ug/L	0.028	0	138	3317	0	KED
|	**Zn**	**67**	**4.000**	ug/L	0.098	2	20	490	2	KED
|	**As**	**75**	**0.200**	ug/L	0.018	9	5	84	8	KED
⌊	**Se**	**78**	**0.500**	ug/L	0.036	7	17	38	4	KED
	Y	**89**		ug/L			969026	963742	2	Standard
	Kr	**83**		ug/L			90	95	28	Standard
⌈>	**In-1**	**115**		ug/L			29579	29232	0	KED
|	**Cd**	**111**	**0.100**	ug/L	0.008	7	2	41	7	KED
⌊	**Cd**	**114**	**0.100**	ug/L	0.014	14	1	110	14	KED
⌈>	**In**	**115**		ug/L			1949131	1979114	0	Standard
|	**Ag**	**107**	**0.200**	ug/L	0.003	1	71	6149	1	Standard
|	**Ba**	**135**	**0.500**	ug/L	0.003	0	150	4599	1	Standard
⌊	**Ba**	**137**	**0.500**	ug/L	0.016	3	258	7823	3	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3714250	1	Standard
⌊	**Pb**	**208**	**0.100**	ug/L	0.003	3	670	15252	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 12:31:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	26387	5	Standard
	Cl	**37**		ug/L			6593477	6629696	0	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1381805	0	Standard
|	**Cr**	**52**	**10.001**	ug/L	0.055	0	23740	272575	0	Standard
⌊	**Cr**	**53**	**9.999**	ug/L	0.098	0	139	28861	0	Standard
⌈>	**Ge**	**72**		ug/L			113005	113210	3	KED
|	**Ni**	**60**	**10.000**	ug/L	0.272	2	95	20638	0	KED
|	**Ni**	**62**	**10.005**	ug/L	0.725	7	22	3343	4	KED
|	**Cu**	**63**	**10.000**	ug/L	0.271	2	102	60787	0	KED
|	**Cu**	**65**	**10.000**	ug/L	0.129	1	58	30168	2	KED
|	**Zn**	**66**	**10.024**	ug/L	0.028	0	138	8244	3	KED
|	**Zn**	**67**	**10.176**	ug/L	0.159	1	20	1367	2	KED
|	**As**	**75**	**10.000**	ug/L	0.298	2	5	3924	0	KED
⌊	**Se**	**78**	**10.000**	ug/L	0.295	2	17	442	5	KED
	Y	**89**		ug/L			969026	1006142	0	Standard
	Kr	**83**		ug/L			90	88	3	Standard
⌈>	**In-1**	**115**		ug/L			29579	29636	0	KED
|	**Cd**	**111**	**10.000**	ug/L	0.080	0	2	4381	0	KED
⌊	**Cd**	**114**	**10.000**	ug/L	0.067	0	1	11396	0	KED
⌈>	**In**	**115**		ug/L			1949131	2015465	2	Standard
|	**Ag**	**107**	**10.000**	ug/L	0.051	0	71	320233	2	Standard
|	**Ba**	**135**	**10.000**	ug/L	0.214	2	150	90916	0	Standard
⌊	**Ba**	**137**	**10.001**	ug/L	0.195	1	258	158304	1	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3897260	0	Standard
⌊	**Pb**	**208**	**10.000**	ug/L	0.061	0	670	1437274	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 12:35:28
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	24282	5	Standard
	Cl	**37**		ug/L			6593477	6778517	2	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1367338	0	Standard
|	**Cr**	**52**	**20.004**	ug/L	0.180	0	23740	515558	0	Standard
⌊	**Cr**	**53**	**20.071**	ug/L	0.341	1	139	57997	1	Standard
⌈>	**Ge**	**72**		ug/L			113005	114510	0	KED
|	**Ni**	**60**	**19.972**	ug/L	0.189	0	95	41393	1	KED
|	**Ni**	**62**	**19.971**	ug/L	0.207	1	22	6699	1	KED
|	**Cu**	**63**	**19.948**	ug/L	0.163	0	102	121341	0	KED
|	**Cu**	**65**	**20.010**	ug/L	0.063	0	58	61138	0	KED
|	**Zn**	**66**	**19.870**	ug/L	0.190	0	138	16038	1	KED
|	**Zn**	**67**	**20.056**	ug/L	0.677	3	20	2732	3	KED
|	**As**	**75**	**19.979**	ug/L	0.383	1	5	7897	2	KED
⌊	**Se**	**78**	**19.718**	ug/L	0.562	2	17	819	2	KED
	Y	**89**		ug/L			969026	991031	1	Standard
	Kr	**83**		ug/L			90	90	9	Standard
⌈>	**In-1**	**115**		ug/L			29579	29287	2	KED
|	**Cd**	**111**	**20.034**	ug/L	0.499	2	2	8729	0	KED
⌊	**Cd**	**114**	**19.977**	ug/L	0.338	1	1	22388	1	KED
⌈>	**In**	**115**		ug/L			1949131	1969780	1	Standard
|	**Ag**	**107**	**20.083**	ug/L	0.067	0	71	639157	1	Standard
|	**Ba**	**135**	**20.162**	ug/L	0.253	1	150	184994	0	Standard
⌊	**Ba**	**137**	**20.117**	ug/L	0.371	1	258	318396	1	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3916607	0	Standard
⌊	**Pb**	**208**	**19.994**	ug/L	0.233	1	670	2883712	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL5
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 12:40:03
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	16086	5	Standard
	Cl	**37**		ug/L			6593477	6849576	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1329477	0	Standard
|	**Cr**	**52**	**49.975**	ug/L	0.843	1	23740	1213767	0	Standard
⌊	**Cr**	**53**	**50.081**	ug/L	0.650	1	139	141635	0	Standard
⌈>	**Ge**	**72**		ug/L			113005	111843	2	KED
|	**Ni**	**60**	**49.951**	ug/L	1.835	3	95	100423	1	KED
|	**Ni**	**62**	**49.895**	ug/L	1.570	3	22	16137	1	KED
|	**Cu**	**63**	**49.857**	ug/L	1.049	2	102	291814	1	KED
|	**Cu**	**65**	**49.871**	ug/L	1.509	3	58	146792	1	KED
|	**Zn**	**66**	**49.933**	ug/L	0.592	1	138	38908	2	KED
|	**Zn**	**67**	**50.043**	ug/L	1.258	2	20	6656	0	KED
|	**As**	**75**	**50.037**	ug/L	0.989	1	5	19376	0	KED
⌊	**Se**	**78**	**49.864**	ug/L	1.259	2	17	1970	0	KED
	Y	**89**		ug/L			969026	979272	2	Standard
	Kr	**83**		ug/L			90	97	11	Standard
⌈>	**In-1**	**115**		ug/L			29579	28891	0	KED
|	**Cd**	**111**	**49.951**	ug/L	0.323	0	2	21369	0	KED
⌊	**Cd**	**114**	**49.985**	ug/L	0.272	0	1	55197	1	KED
⌈>	**In**	**115**		ug/L			1949131	1975327	0	Standard
|	**Ag**	**107**	**49.641**	ug/L	0.639	1	71	1529192	1	Standard
|	**Ba**	**135**	**49.791**	ug/L	1.138	2	150	448541	1	Standard
⌊	**Ba**	**137**	**49.886**	ug/L	0.934	1	258	782528	1	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3818689	1	Standard
⌊	**Pb**	**208**	**49.866**	ug/L	0.731	1	670	6917952	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL6
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 12:46:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	19864	6	Standard
	Cl	**37**		ug/L			6593477	6667016	3	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1293216	2	Standard
|	**Cr**	**52**	**99.674**	ug/L	3.520	3	23740	2306693	3	Standard
⌊	**Cr**	**53**	**99.782**	ug/L	2.672	2	139	272388	3	Standard
⌈>	**Ge**	**72**		ug/L			113005	109411	2	KED
|	**Ni**	**60**	**99.822**	ug/L	4.051	4	95	195045	1	KED
|	**Ni**	**62**	**100.208**	ug/L	3.058	3	22	31902	1	KED
|	**Cu**	**63**	**100.348**	ug/L	0.852	0	102	581275	1	KED
|	**Cu**	**65**	**100.388**	ug/L	2.059	2	58	292824	1	KED
|	**Zn**	**66**	**99.982**	ug/L	1.917	1	138	76009	1	KED
|	**Zn**	**67**	**99.527**	ug/L	0.409	0	20	12736	2	KED
|	**As**	**75**	**100.498**	ug/L	1.219	1	5	38710	1	KED
⌊	**Se**	**78**	**100.311**	ug/L	1.083	1	17	3903	3	KED
	Y	**89**		ug/L			969026	946994	2	Standard
	Kr	**83**		ug/L			90	133	13	Standard
⌈>	**In-1**	**115**		ug/L			29579	28587	0	KED
|	**Cd**	**111**	**99.894**	ug/L	0.882	0	2	42135	0	KED
⌊	**Cd**	**114**	**99.983**	ug/L	1.953	1	1	109177	1	KED
⌈>	**In**	**115**		ug/L			1949131	1920461	2	Standard
|	**Ag**	**107**	**98.466**	ug/L	3.489	3	71	2806441	5	Standard
|	**Ba**	**135**	**100.281**	ug/L	2.199	2	150	886381	2	Standard
⌊	**Ba**	**137**	**100.551**	ug/L	1.959	1	258	1561667	1	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3845855	2	Standard
⌊	**Pb**	**208**	**98.678**	ug/L	3.937	3	670	13200917	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 12:53:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	16248	2	Standard
	Cl	**37**		ug/L			6593477	6697767	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1301597	2	Standard
|	**Cr**	**52**	**-0.023**	ug/L	0.028	123	23740	22605	0	Standard
⌊	**Cr**	**53**	**0.008**	ug/L	0.008	91	139	158	13	Standard
⌈>	**Ge**	**72**		ug/L			113005	113973	1	KED
|	**Ni**	**60**	**0.024**	ug/L	0.008	31	95	145	9	KED
|	**Ni**	**62**	**-0.006**	ug/L	0.043	668	22	20	68	KED
|	**Cu**	**63**	**0.005**	ug/L	0.002	35	102	131	8	KED
|	**Cu**	**65**	**0.000**	ug/L	0.002	3128	58	59	8	KED
|	**Zn**	**66**	**-0.044**	ug/L	0.001	1	138	104	1	KED
|	**Zn**	**67**	**-0.016**	ug/L	0.030	188	20	18	21	KED
|	**As**	**75**	**0.009**	ug/L	0.003	31	5	8	11	KED
⌊	**Se**	**78**	**0.043**	ug/L	0.058	136	17	19	13	KED
	Y	**89**		ug/L			969026	962788	3	Standard
	Kr	**83**		ug/L			90	85	15	Standard
⌈>	**In-1**	**115**		ug/L			29579	29715	0	KED
|	**Cd**	**111**	**0.027**	ug/L	0.019	70	2	13	58	KED
⌊	**Cd**	**114**	**0.022**	ug/L	0.011	49	1	26	46	KED
⌈>	**In**	**115**		ug/L			1949131	1977068	0	Standard
|	**Ag**	**107**	**0.014**	ug/L	0.002	14	71	474	11	Standard
|	**Ba**	**135**	**-0.002**	ug/L	0.001	28	150	134	4	Standard
⌊	**Ba**	**137**	**0.000**	ug/L	0.002	18865	258	262	14	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3740756	0	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.000	8	670	1229	4	Standard

Sample Information

Sample Date/Time: Tuesday, November 03, 2020 12:46:19
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.m
Mass Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

Calibration

Analyte	Mass	**r Corr Coef**	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
C	13							
Cl	37							
Sc	45							
Cr	52	**1.0000**	0.018	0.50	10	20	50	100
Cr	53	**1.0000**	0.002	0.50	10	20	50	100
Ge	72							
Ni	60	**1.0000**	0.018	0.50	10	20	50	100
Ni	62	**1.0000**	0.003	0.50	10	20	50	100
Cu	63	**1.0000**	0.053	0.50	10	20	50	100
Cu	65	**1.0000**	0.027	0.50	10	20	50	100
Zn	66	**1.0000**	0.007	4.00	10	20	50	100
Zn	67	**1.0000**	0.001	4.00	10	20	50	100
As	75	**1.0000**	0.004	0.20	10	20	50	100
Se	78	**1.0000**	0.000	0.50	10	20	50	100
Y	89							
Kr	83							
In-1	115							
Cd	111	**1.0000**	0.015	0.10	10	20	50	100
Cd	114	**1.0000**	0.038	0.10	10	20	50	100
In	115							
Ag	107	**0.9996**	0.015	0.20	10	20	50	100
Ba	135	**1.0000**	0.005	0.50	10	20	50	100
Ba	137	**0.9999**	0.008	0.50	10	20	50	100
Tb	159							
Pb	208	**0.9997**	0.035	0.10	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICV1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 12:58:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	19398	4	Standard
	Cl	**37**		ug/L			6593477	7229842	2	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1341608	3	Standard
|	**Cr**	**52**	**51.263**	ug/L	1.238	2	23740	1242262	2	Standard
⌊	**Cr**	**53**	**50.934**	ug/L	1.431	2	139	144274	3	Standard
⌈>	**Ge**	**72**		ug/L			113005	114633	2	KED
|	**Ni**	**60**	**50.119**	ug/L	1.248	2	95	102677	0	KED
|	**Ni**	**62**	**49.653**	ug/L	0.655	1	22	16578	1	KED
|	**Cu**	**63**	**49.386**	ug/L	0.909	1	102	299744	1	KED
|	**Cu**	**65**	**49.503**	ug/L	0.603	1	58	151344	2	KED
|	**Zn**	**66**	**48.537**	ug/L	0.583	1	138	38734	1	KED
|	**Zn**	**67**	**48.366**	ug/L	1.954	4	20	6491	2	KED
|	**As**	**75**	**49.143**	ug/L	0.601	1	5	19835	1	KED
⌊	**Se**	**78**	**78.362**	ug/L	1.077	1	17	3197	2	KED
	Y	**89**		ug/L			969026	957161	2	Standard
	Kr	**83**		ug/L			90	104	34	Standard
⌈>	**In-1**	**115**		ug/L			29579	29484	1	KED
|	**Cd**	**111**	**48.524**	ug/L	0.990	2	2	21107	0	KED
⌊	**Cd**	**114**	**48.609**	ug/L	1.227	2	1	54736	1	KED
⌈>	**In**	**115**		ug/L			1949131	1971718	1	Standard
|	**Ag**	**107**	**53.377**	ug/L	1.521	2	71	1561813	4	Standard
|	**Ba**	**135**	**49.074**	ug/L	0.796	1	150	445560	2	Standard
⌊	**Ba**	**137**	**49.551**	ug/L	0.731	1	258	790437	1	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3886185	2	Standard
⌊	**Pb**	**208**	**52.071**	ug/L	0.701	1	670	7041472	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICB1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 13:05:47
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	16110	3	Standard
	Cl	**37**		ug/L			6593477	6749036	2	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1322872	1	Standard
|	**Cr**	**52**	**-0.004**	ug/L	0.016	397	23740	23421	1	Standard
⌊	**Cr**	**53**	**0.006**	ug/L	0.004	70	139	154	6	Standard
⌈>	**Ge**	**72**		ug/L			113005	112349	1	KED
|	**Ni**	**60**	**0.001**	ug/L	0.010	975	95	96	19	KED
|	**Ni**	**62**	**-0.011**	ug/L	0.012	103	22	19	20	KED
|	**Cu**	**63**	**0.003**	ug/L	0.006	229	102	116	28	KED
|	**Cu**	**65**	**-0.000**	ug/L	0.006	1368	58	56	31	KED
|	**Zn**	**66**	**-0.017**	ug/L	0.028	160	138	123	16	KED
|	**Zn**	**67**	**0.011**	ug/L	0.019	179	20	21	10	KED
|	**As**	**75**	**0.007**	ug/L	0.004	60	5	7	19	KED
⌊	**Se**	**78**	**-0.020**	ug/L	0.052	258	17	16	11	KED
	Y	**89**		ug/L			969026	983347	2	Standard
	Kr	**83**		ug/L			90	97	6	Standard
⌈>	**In-1**	**115**		ug/L			29579	28947	2	KED
|	**Cd**	**111**	**0.002**	ug/L	0.004	281	2	2	66	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.002	74	1	3	51	KED
⌈>	**In**	**115**		ug/L			1949131	1983485	1	Standard
|	**Ag**	**107**	**0.009**	ug/L	0.000	5	71	323	4	Standard
|	**Ba**	**135**	**0.000**	ug/L	0.002	608	150	155	8	Standard
⌊	**Ba**	**137**	**-0.003**	ug/L	0.000	9	258	215	2	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3793919	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	13	670	846	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 13:09:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	16023	3	Standard
	Cl	**37**		ug/L			6593477	6998106	0	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1357429	1	Standard
|	**Cr**	**52**	**51.105**	ug/L	0.515	1	23740	1253450	0	Standard
⌊	**Cr**	**53**	**50.065**	ug/L	1.685	3	139	143498	2	Standard
⌈>	**Ge**	**72**		ug/L			113005	113580	1	KED
|	**Ni**	**60**	**48.567**	ug/L	0.382	0	95	98621	1	KED
|	**Ni**	**62**	**49.115**	ug/L	0.590	1	22	16250	0	KED
|	**Cu**	**63**	**49.288**	ug/L	0.572	1	102	296448	0	KED
|	**Cu**	**65**	**48.611**	ug/L	0.753	1	58	147251	0	KED
|	**Zn**	**66**	**49.489**	ug/L	1.368	2	138	39128	1	KED
|	**Zn**	**67**	**49.312**	ug/L	0.628	1	20	6560	0	KED
|	**As**	**75**	**49.214**	ug/L	0.726	1	5	19683	0	KED
⌊	**Se**	**78**	**49.339**	ug/L	0.591	1	17	2001	0	KED
	Y	**89**		ug/L			969026	980079	2	Standard
	Kr	**83**		ug/L			90	105	3	Standard
⌈>	**In-1**	**115**		ug/L			29579	29395	1	KED
|	**Cd**	**111**	**49.196**	ug/L	1.117	2	2	21333	0	KED
⌊	**Cd**	**114**	**48.949**	ug/L	0.719	1	1	54954	1	KED
⌈>	**In**	**115**		ug/L			1949131	1972306	0	Standard
|	**Ag**	**107**	**54.360**	ug/L	1.189	2	71	1590550	1	Standard
|	**Ba**	**135**	**50.332**	ug/L	1.066	2	150	457008	1	Standard
⌊	**Ba**	**137**	**49.860**	ug/L	0.764	1	258	795546	0	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3865812	1	Standard
⌊	**Pb**	**208**	**52.423**	ug/L	0.963	1	670	7051774	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 13:16:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	16196	6	Standard
	Cl	**37**		ug/L			6593477	6939713	2	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1356014	0	Standard
|	**Cr**	**52**	**-0.054**	ug/L	0.021	38	23740	22800	2	Standard
⌊	**Cr**	**53**	**-0.003**	ug/L	0.003	109	139	132	6	Standard
⌈>	**Ge**	**72**		ug/L			113005	112962	2	KED
|	**Ni**	**60**	**-0.015**	ug/L	0.006	38	95	65	14	KED
|	**Ni**	**62**	**-0.035**	ug/L	0.005	13	22	11	16	KED
|	**Cu**	**63**	**0.001**	ug/L	0.002	234	102	107	13	KED
|	**Cu**	**65**	**-0.000**	ug/L	0.004	5864	58	58	22	KED
|	**Zn**	**66**	**-0.020**	ug/L	0.016	80	138	122	13	KED
|	**Zn**	**67**	**-0.010**	ug/L	0.034	332	20	19	26	KED
|	**As**	**75**	**0.002**	ug/L	0.005	235	5	6	31	KED
⌊	**Se**	**78**	**0.002**	ug/L	0.128	5417	17	17	26	KED
	Y	**89**		ug/L			969026	989066	2	Standard
	Kr	**83**		ug/L			90	90	24	Standard
⌈>	**In-1**	**115**		ug/L			29579	29414	1	KED
|	**Cd**	**111**	**0.002**	ug/L	0.007	319	2	3	96	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.003	131	1	3	92	KED
⌈>	**In**	**115**		ug/L			1949131	2001724	1	Standard
|	**Ag**	**107**	**0.009**	ug/L	0.001	12	71	340	8	Standard
|	**Ba**	**135**	**-0.001**	ug/L	0.001	88	150	148	2	Standard
⌊	**Ba**	**137**	**-0.002**	ug/L	0.002	116	258	236	15	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3826164	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	33	670	832	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CRL1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 13:21:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	15368	1	Standard
	Cl	**37**		ug/L			6593477	6865847	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1378056	0	Standard
|	**Cr**	**52**	**0.429**	ug/L	0.008	1	23740	34973	1	Standard
⌊	**Cr**	**53**	**0.504**	ug/L	0.009	1	139	1609	1	Standard
⌈>	**Ge**	**72**		ug/L			113005	115439	1	KED
|	**Ni**	**60**	**0.485**	ug/L	0.013	2	95	1097	1	KED
|	**Ni**	**62**	**0.443**	ug/L	0.013	2	22	172	3	KED
|	**Cu**	**63**	**0.499**	ug/L	0.018	3	102	3153	2	KED
|	**Cu**	**65**	**0.492**	ug/L	0.005	1	58	1572	1	KED
|	**Zn**	**66**	**4.032**	ug/L	0.064	1	138	3369	0	KED
|	**Zn**	**67**	**3.917**	ug/L	0.156	3	20	548	2	KED
|	**As**	**75**	**0.204**	ug/L	0.016	8	5	88	8	KED
⌊	**Se**	**78**	**0.558**	ug/L	0.067	11	17	40	6	KED
	Y	**89**		ug/L			969026	978799	1	Standard
	Kr	**83**		ug/L			90	95	24	Standard
⌈>	**In-1**	**115**		ug/L			29579	29967	1	KED
|	**Cd**	**111**	**0.110**	ug/L	0.003	2	2	50	2	KED
⌊	**Cd**	**114**	**0.108**	ug/L	0.013	12	1	124	11	KED
⌈>	**In**	**115**		ug/L			1949131	1991988	1	Standard
|	**Ag**	**107**	**0.212**	ug/L	0.005	2	71	6346	3	Standard
|	**Ba**	**135**	**0.473**	ug/L	0.003	0	150	4487	1	Standard
⌊	**Ba**	**137**	**0.480**	ug/L	0.010	2	258	8002	0	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3822276	1	Standard
⌊	**Pb**	**208**	**0.111**	ug/L	0.000	0	670	15483	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFA1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 13:27:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	75942	0	Standard
	Cl	**37**		ug/L			6593477	13681720	2	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1283716	0	Standard
|	**Cr**	**52**	**0.477**	ug/L	0.006	1	23740	33667	0	Standard
⌊	**Cr**	**53**	**3.812**	ug/L	0.096	2	139	10458	2	Standard
⌈>	**Ge**	**72**		ug/L			113005	107679	1	KED
|	**Ni**	**60**	**0.064**	ug/L	0.010	14	95	213	9	KED
|	**Ni**	**62**	**0.091**	ug/L	0.019	21	22	50	12	KED
|	**Cu**	**63**	**0.071**	ug/L	0.011	14	102	501	10	KED
|	**Cu**	**65**	**0.071**	ug/L	0.014	20	58	258	14	KED
|	**Zn**	**66**	**0.339**	ug/L	0.010	2	138	385	1	KED
|	**Zn**	**67**	**0.361**	ug/L	0.035	9	20	64	7	KED
|	**As**	**75**	**0.030**	ug/L	0.005	15	5	16	10	KED
⌊	**Se**	**78**	**0.121**	ug/L	0.115	95	17	21	21	KED
	Y	**89**		ug/L			969026	959891	0	Standard
	Kr	**83**		ug/L			90	158	5	Standard
⌈>	**In-1**	**115**		ug/L			29579	28119	0	KED
|	**Cd**	**111**	**0.070**	ug/L	0.026	36	2	31	33	KED
⌊	**Cd**	**114**	**0.053**	ug/L	0.012	22	1	58	22	KED
⌈>	**In**	**115**		ug/L			1949131	1879175	1	Standard
|	**Ag**	**107**	**0.009**	ug/L	0.000	2	71	332	1	Standard
|	**Ba**	**135**	**0.060**	ug/L	0.007	10	150	666	7	Standard
⌊	**Ba**	**137**	**0.052**	ug/L	0.006	10	258	1040	7	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3831860	1	Standard
⌊	**Pb**	**208**	**0.019**	ug/L	0.001	3	670	3180	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFB1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 13:31:53
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	77757	4	Standard
	Cl	**37**		ug/L			6593477	13970132	3	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1281054	1	Standard
|	**Cr**	**52**	**20.451**	ug/L	0.477	2	23740	486917	0	Standard
⌊	**Cr**	**53**	**23.561**	ug/L	0.839	3	139	63787	1	Standard
⌈>	**Ge**	**72**		ug/L			113005	108370	1	KED
|	**Ni**	**60**	**20.166**	ug/L	0.176	0	95	39123	0	KED
|	**Ni**	**62**	**19.556**	ug/L	0.023	0	22	6187	1	KED
|	**Cu**	**63**	**19.519**	ug/L	0.276	1	102	112068	0	KED
|	**Cu**	**65**	**19.690**	ug/L	0.454	2	58	56941	1	KED
|	**Zn**	**66**	**19.279**	ug/L	0.044	0	138	14627	1	KED
|	**Zn**	**67**	**17.865**	ug/L	0.431	2	20	2280	2	KED
|	**As**	**75**	**19.671**	ug/L	0.053	0	5	7510	1	KED
⌊	**Se**	**78**	**0.073**	ug/L	0.061	84	17	19	11	KED
	Y	**89**		ug/L			969026	995430	0	Standard
	Kr	**83**		ug/L			90	168	3	Standard
⌈>	**In-1**	**115**		ug/L			29579	27757	0	KED
|	**Cd**	**111**	**19.179**	ug/L	0.608	3	2	7856	2	KED
⌊	**Cd**	**114**	**19.353**	ug/L	0.186	0	1	20520	0	KED
⌈>	**In**	**115**		ug/L			1949131	1862058	1	Standard
|	**Ag**	**107**	**20.604**	ug/L	0.524	2	71	569095	1	Standard
|	**Ba**	**135**	**0.058**	ug/L	0.006	10	150	642	9	Standard
⌊	**Ba**	**137**	**0.052**	ug/L	0.002	3	258	1032	0	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3872684	0	Standard
⌊	**Pb**	**208**	**0.018**	ug/L	0.000	1	670	3167	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 13:36:10
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	16449	3	Standard
	Cl	**37**		ug/L			6593477	6767230	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1247230	1	Standard
|	**Cr**	**52**	**191.784**	ug/L	2.856	1	23740	4261169	1	Standard
⌊	**Cr**	**53**	**192.699**	ug/L	2.293	1	139	507198	0	Standard
⌈>	**Ge**	**72**		ug/L			113005	107038	0	KED
|	**Ni**	**60**	**194.486**	ug/L	0.742	0	95	371925	0	KED
|	**Ni**	**62**	**195.269**	ug/L	2.698	1	22	60824	0	KED
|	**Cu**	**63**	**190.880**	ug/L	1.682	0	102	1081759	0	KED
|	**Cu**	**65**	**187.083**	ug/L	3.474	1	58	533979	1	KED
|	**Zn**	**66**	**189.852**	ug/L	4.437	2	138	141126	2	KED
|	**Zn**	**67**	**185.632**	ug/L	2.910	1	20	23221	1	KED
|	**As**	**75**	**194.001**	ug/L	2.458	1	5	73113	1	KED
⌊	**Se**	**78**	**190.440**	ug/L	1.538	0	17	7233	1	KED
	Y	**89**		ug/L			969026	943556	0	Standard
	Kr	**83**		ug/L			90	163	2	Standard
⌈>	**In-1**	**115**		ug/L			29579	27770	1	KED
|	**Cd**	**111**	**189.071**	ug/L	1.026	0	2	77468	0	KED
⌊	**Cd**	**114**	**188.395**	ug/L	1.103	0	1	199840	0	KED
⌈>	**In**	**115**		ug/L			1949131	1820941	2	Standard
|	**Ag**	**107**	**190.139**	ug/L	7.099	3	71	5133998	2	Standard
|	**Ba**	**135**	**200.295**	ug/L	4.394	2	150	1678297	1	Standard
⌊	**Ba**	**137**	**193.635**	ug/L	7.113	3	258	2850196	1	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3761918	0	Standard
⌊	**Pb**	**208**	**194.623**	ug/L	4.171	2	670	25476291	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 13:40:22
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	19243	1	Standard
	Cl	**37**		ug/L			6593477	6609082	2	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1199239	0	Standard
|	**Cr**	**52**	**303.422**	ug/L	3.177	1	23740	6469594	0	Standard
⌊	**Cr**	**53**	**301.392**	ug/L	5.120	1	139	762694	0	Standard
⌈>	**Ge**	**72**		ug/L			113005	103607	1	KED
|	**Ni**	**60**	**292.545**	ug/L	4.253	1	95	541451	1	KED
|	**Ni**	**62**	**291.403**	ug/L	4.271	1	22	87847	1	KED
|	**Cu**	**63**	**283.872**	ug/L	2.917	1	102	1557065	0	KED
|	**Cu**	**65**	**284.739**	ug/L	6.306	2	58	786510	1	KED
|	**Zn**	**66**	**277.564**	ug/L	3.180	1	138	199642	1	KED
|	**Zn**	**67**	**278.405**	ug/L	4.218	1	20	33699	1	KED
|	**As**	**75**	**294.996**	ug/L	2.576	0	5	107605	0	KED
⌊	**Se**	**78**	**285.169**	ug/L	2.455	0	17	10476	1	KED
	Y	**89**		ug/L			969026	909748	2	Standard
	Kr	**83**		ug/L			90	212	16	Standard
⌈>	**In-1**	**115**		ug/L			29579	26745	1	KED
|	**Cd**	**111**	**286.674**	ug/L	5.586	1	2	113100	0	KED
⌊	**Cd**	**114**	**286.037**	ug/L	4.946	1	1	292161	0	KED
⌈>	**In**	**115**		ug/L			1949131	1726141	1	Standard
|	**Ag**	**107**	**290.157**	ug/L	5.243	1	71	7432151	3	Standard
|	**Ba**	**135**	**311.601**	ug/L	3.583	1	150	2475460	1	Standard
⌊	**Ba**	**137**	**309.593**	ug/L	4.465	1	258	4321595	0	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3697027	1	Standard
⌊	**Pb**	**208**	**289.314**	ug/L	2.293	0	670	37219904	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 13:47:17
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	19015	0	Standard
	Cl	**37**		ug/L			6593477	6837237	2	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1331096	0	Standard
|	**Cr**	**52**	**-0.034**	ug/L	0.006	18	23740	22868	0	Standard
⌊	**Cr**	**53**	**0.044**	ug/L	0.005	10	139	262	4	Standard
⌈>	**Ge**	**72**		ug/L			113005	113165	1	KED
|	**Ni**	**60**	**-0.009**	ug/L	0.002	25	95	76	7	KED
|	**Ni**	**62**	**-0.033**	ug/L	0.007	22	22	12	18	KED
|	**Cu**	**63**	**0.014**	ug/L	0.003	18	102	187	6	KED
|	**Cu**	**65**	**0.006**	ug/L	0.002	33	58	78	8	KED
|	**Zn**	**66**	**0.068**	ug/L	0.008	11	138	191	3	KED
|	**Zn**	**67**	**0.076**	ug/L	0.111	146	20	30	48	KED
|	**As**	**75**	**0.022**	ug/L	0.007	30	5	13	20	KED
⌊	**Se**	**78**	**0.064**	ug/L	0.070	109	17	19	14	KED
	Y	**89**		ug/L			969026	976047	0	Standard
	Kr	**83**		ug/L			90	97	8	Standard
⌈>	**In-1**	**115**		ug/L			29579	29078	1	KED
|	**Cd**	**111**	**0.010**	ug/L	0.005	47	2	6	31	KED
⌊	**Cd**	**114**	**0.017**	ug/L	0.005	30	1	20	30	KED
⌈>	**In**	**115**		ug/L			1949131	1980081	0	Standard
|	**Ag**	**107**	**0.027**	ug/L	0.002	6	71	850	5	Standard
|	**Ba**	**135**	**0.004**	ug/L	0.002	56	150	190	11	Standard
⌊	**Ba**	**137**	**0.005**	ug/L	0.002	30	258	350	7	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3789816	1	Standard
⌊	**Pb**	**208**	**0.011**	ug/L	0.001	4	670	2152	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 13:53:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	19023	4	Standard
	Cl	**37**		ug/L			6593477	6802082	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1327001	1	Standard
|	**Cr**	**52**	**-0.041**	ug/L	0.007	17	23740	22628	0	Standard
⌊	**Cr**	**53**	**0.023**	ug/L	0.006	27	139	203	7	Standard
⌈>	**Ge**	**72**		ug/L			113005	113328	3	KED
|	**Ni**	**60**	**0.012**	ug/L	0.050	416	95	117	80	KED
|	**Ni**	**62**	**-0.005**	ug/L	0.053	1089	22	20	78	KED
|	**Cu**	**63**	**0.041**	ug/L	0.059	143	102	340	98	KED
|	**Cu**	**65**	**0.035**	ug/L	0.051	142	58	162	89	KED
|	**Zn**	**66**	**0.051**	ug/L	0.067	131	138	177	25	KED
|	**Zn**	**67**	**0.116**	ug/L	0.090	77	20	35	31	KED
|	**As**	**75**	**0.043**	ug/L	0.063	143	5	22	107	KED
⌊	**Se**	**78**	**0.012**	ug/L	0.049	413	17	17	8	KED
	Y	**89**		ug/L			969026	977492	1	Standard
	Kr	**83**		ug/L			90	95	6	Standard
⌈>	**In-1**	**115**		ug/L			29579	29239	2	KED
|	**Cd**	**111**	**0.004**	ug/L	0.001	32	2	4	13	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.003	130	1	3	91	KED
⌈>	**In**	**115**		ug/L			1949131	1966437	0	Standard
|	**Ag**	**107**	**0.013**	ug/L	0.001	7	71	436	6	Standard
|	**Ba**	**135**	**0.000**	ug/L	0.002	464	150	155	11	Standard
⌊	**Ba**	**137**	**0.000**	ug/L	0.001	2616	258	261	8	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3819012	2	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.001	22	670	1158	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 13:59:31
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	16527	0	Standard
	Cl	**37**		ug/L			6593477	6974892	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1301546	0	Standard
|	**Cr**	**52**	**51.370**	ug/L	1.026	1	23740	1207972	1	Standard
⌊	**Cr**	**53**	**50.281**	ug/L	0.685	1	139	138213	1	Standard
⌈>	**Ge**	**72**		ug/L			113005	112009	2	KED
|	**Ni**	**60**	**49.868**	ug/L	1.170	2	95	99838	1	KED
|	**Ni**	**62**	**50.667**	ug/L	1.302	2	22	16530	2	KED
|	**Cu**	**63**	**49.408**	ug/L	0.655	1	102	293037	0	KED
|	**Cu**	**65**	**49.704**	ug/L	1.073	2	58	148463	1	KED
|	**Zn**	**66**	**51.244**	ug/L	1.088	2	138	39947	0	KED
|	**Zn**	**67**	**48.694**	ug/L	0.215	0	20	6389	2	KED
|	**As**	**75**	**49.538**	ug/L	0.502	1	5	19538	1	KED
⌊	**Se**	**78**	**49.786**	ug/L	0.724	1	17	1991	1	KED
	Y	**89**		ug/L			969026	984547	0	Standard
	Kr	**83**		ug/L			90	87	20	Standard
⌈>	**In-1**	**115**		ug/L			29579	29460	1	KED
|	**Cd**	**111**	**48.917**	ug/L	0.884	1	2	21263	1	KED
⌊	**Cd**	**114**	**49.264**	ug/L	0.373	0	1	55437	0	KED
⌈>	**In**	**115**		ug/L			1949131	1921682	0	Standard
|	**Ag**	**107**	**54.774**	ug/L	1.532	2	71	1561498	2	Standard
|	**Ba**	**135**	**49.475**	ug/L	0.574	1	150	437711	0	Standard
⌊	**Ba**	**137**	**49.652**	ug/L	0.514	1	258	771905	0	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3876185	1	Standard
⌊	**Pb**	**208**	**51.825**	ug/L	0.931	1	670	6989768	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 14:06:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	15918	5	Standard
	Cl	**37**		ug/L			6593477	6811107	2	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1344929	1	Standard
|	**Cr**	**52**	**-0.064**	ug/L	0.023	35	23740	22378	1	Standard
⌊	**Cr**	**53**	**0.017**	ug/L	0.007	42	139	189	10	Standard
⌈>	**Ge**	**72**		ug/L			113005	114170	1	KED
|	**Ni**	**60**	**-0.033**	ug/L	0.004	11	95	29	26	KED
|	**Ni**	**62**	**-0.049**	ug/L	0.018	37	22	6	87	KED
|	**Cu**	**63**	**0.003**	ug/L	0.003	96	102	121	15	KED
|	**Cu**	**65**	**0.003**	ug/L	0.007	229	58	67	29	KED
|	**Zn**	**66**	**-0.023**	ug/L	0.017	77	138	121	10	KED
|	**Zn**	**67**	**0.041**	ug/L	0.044	107	20	26	22	KED
|	**As**	**75**	**0.009**	ug/L	0.006	62	5	9	27	KED
⌊	**Se**	**78**	**-0.016**	ug/L	0.095	581	17	16	24	KED
	Y	**89**		ug/L			969026	982343	3	Standard
	Kr	**83**		ug/L			90	97	30	Standard
⌈>	**In-1**	**115**		ug/L			29579	29480	1	KED
|	**Cd**	**111**	**0.006**	ug/L	0.008	129	2	4	69	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.005	121	1	6	101	KED
⌈>	**In**	**115**		ug/L			1949131	1967561	0	Standard
|	**Ag**	**107**	**0.011**	ug/L	0.001	9	71	402	7	Standard
|	**Ba**	**135**	**-0.001**	ug/L	0.002	153	150	140	12	Standard
⌊	**Ba**	**137**	**-0.001**	ug/L	0.001	211	258	249	9	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3774587	2	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	23	670	921	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIK0039-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 14:10:52

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	19932	2	Standard
	Cl	37		ug/L			6593477	6801417	2	Standard
>	Sc	45		ug/L			1335244	1323093	1	Standard
	Cr	52	0.001	ug/L	0.026	2541	23740	23543	1	Standard
	Cr	53	0.049	ug/L	0.003	5	139	273	1	Standard
>	Ge	72		ug/L			113005	113869	3	KED
	Ni	60	-0.016	ug/L	0.004	23	95	64	9	KED
	Ni	62	-0.010	ug/L	0.023	230	22	19	39	KED
	Cu	63	7.470	ug/L	0.219	2	102	45106	0	KED
	Cu	65	7.591	ug/L	0.210	2	58	23094	1	KED
	Zn	66	5.377	ug/L	0.093	1	138	4386	2	KED
	Zn	67	5.036	ug/L	0.165	3	20	690	4	KED
	As	75	0.009	ug/L	0.002	28	5	8	8	KED
	Se	78	0.046	ug/L	0.050	110	17	19	8	KED
	Y	89		ug/L			969026	992522	1	Standard
	Kr	83		ug/L			90	80	27	Standard
>	In-1	115		ug/L			29579	29461	1	KED
	Cd	111	-0.001	ug/L	0.003	180	2	1	69	KED
	Cd	114	0.004	ug/L	0.000	7	1	5	4	KED
>	In	115		ug/L			1949131	1974596	0	Standard
	Ag	107	0.006	ug/L	0.001	13	71	255	9	Standard
	Ba	135	0.002	ug/L	0.002	77	150	173	8	Standard
	Ba	137	0.001	ug/L	0.002	177	258	283	13	Standard
>	Tb	159		ug/L			3793166	3780627	1	Standard
	Pb	208	0.289	ug/L	0.000	0	670	38710	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIK0039-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 14:15:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	21250	1	Standard
	Cl	37		ug/L			6593477	6775855	1	Standard
>	Sc	45		ug/L			1335244	1322715	0	Standard
	Cr	52	25.847	ug/L	0.190	0	23740	629415	1	Standard
	Cr	53	25.234	ug/L	0.394	1	139	70565	1	Standard
>	Ge	72		ug/L			113005	115875	0	KED
	Ni	60	25.345	ug/L	0.472	1	95	52561	2	KED
	Ni	62	25.726	ug/L	0.554	2	22	8696	2	KED
	Cu	63	26.250	ug/L	0.235	0	102	161127	0	KED
	Cu	65	25.661	ug/L	0.326	1	58	79337	1	KED
	Zn	66	85.838	ug/L	0.925	1	138	69147	1	KED
	Zn	67	80.845	ug/L	1.954	2	20	10958	1	KED
	As	75	24.852	ug/L	0.402	1	5	10143	0	KED
	Se	78	81.802	ug/L	1.794	2	17	3374	3	KED
	Y	89		ug/L			969026	995366	1	Standard
	Kr	83		ug/L			90	102	15	Standard
>	In-1	115		ug/L			29579	29736	1	KED
	Cd	111	25.750	ug/L	0.769	2	2	11297	2	KED
	Cd	114	25.722	ug/L	0.390	1	1	29214	0	KED
>	In	115		ug/L			1949131	1961121	1	Standard
	Ag	107	27.943	ug/L	0.640	2	71	813060	2	Standard
	Ba	135	24.751	ug/L	0.589	2	150	223506	1	Standard
	Ba	137	24.609	ug/L	0.143	0	258	390564	1	Standard
>	Tb	159		ug/L			3793166	3786408	0	Standard
	Pb	208	28.126	ug/L	0.089	0	670	3706614	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIK0039-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 14:19:16
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	20511	6	Standard
	Cl	37		ug/L			6593477	6783755	1	Standard
>	Sc	45		ug/L			1335244	1341606	1	Standard
	Cr	52	-0.001	ug/L	0.021	1556	23740	23821	2	Standard
	Cr	53	0.047	ug/L	0.004	8	139	272	2	Standard
>	Ge	72		ug/L			113005	115192	1	KED
	Ni	60	-0.012	ug/L	0.006	47	95	73	14	KED
	Ni	62	-0.016	ug/L	0.018	111	22	17	34	KED
	Cu	63	7.606	ug/L	0.065	0	102	46488	0	KED
	Cu	65	7.472	ug/L	0.175	2	58	23002	1	KED
	Zn	66	5.200	ug/L	0.023	0	138	4297	1	KED
	Zn	67	4.892	ug/L	0.629	12	20	678	12	KED
	As	75	0.011	ug/L	0.004	36	5	9	15	KED
	Se	78	0.067	ug/L	0.113	167	17	20	23	KED
	Y	89		ug/L			969026	1006164	0	Standard
	Kr	83		ug/L			90	81	5	Standard
>	In-1	115		ug/L			29579	29315	0	KED
	Cd	111	0.007	ug/L	0.005	74	2	5	44	KED
	Cd	114	0.002	ug/L	0.002	108	1	3	70	KED
>	In	115		ug/L			1949131	1958326	1	Standard
	Ag	107	0.011	ug/L	0.001	10	71	383	7	Standard
	Ba	135	0.010	ug/L	0.003	27	150	237	9	Standard
	Ba	137	0.006	ug/L	0.002	27	258	349	6	Standard
>	Tb	159		ug/L			3793166	3813201	1	Standard
	Pb	208	0.292	ug/L	0.008	2	670	39427	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0415-01
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 14:23:50
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	30712	1	Standard
	Cl	**37**		ug/L			6593477	6756959	2	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1334519	1	Standard
|	**Cr**	**52**	**0.436**	ug/L	0.033	7	23740	34021	1	Standard
⌊	**Cr**	**53**	**0.580**	ug/L	0.011	1	139	1773	3	Standard
⌈>	**Ge**	**72**		ug/L			113005	115561	1	KED
|	**Ni**	**60**	**0.457**	ug/L	0.007	1	95	1040	2	KED
|	**Ni**	**62**	**0.452**	ug/L	0.038	8	22	175	5	KED
|	**Cu**	**63**	**3.873**	ug/L	0.025	0	102	23800	1	KED
|	**Cu**	**65**	**3.915**	ug/L	0.079	2	58	12121	2	KED
|	**Zn**	**66**	**89.611**	ug/L	0.879	0	138	71982	1	KED
|	**Zn**	**67**	**82.230**	ug/L	0.819	0	20	11118	2	KED
|	**As**	**75**	**0.268**	ug/L	0.033	12	5	114	12	KED
⌊	**Se**	**78**	**0.110**	ug/L	0.045	40	17	22	9	KED
	Y	**89**		ug/L			969026	995878	2	Standard
	Kr	**83**		ug/L			90	74	25	Standard
⌈>	**In-1**	**115**		ug/L			29579	29246	2	KED
|	**Cd**	**111**	**0.052**	ug/L	0.010	19	2	24	17	KED
⌊	**Cd**	**114**	**0.056**	ug/L	0.002	3	1	63	3	KED
⌈>	**In**	**115**		ug/L			1949131	1971065	1	Standard
|	**Ag**	**107**	**0.009**	ug/L	0.001	7	71	329	6	Standard
|	**Ba**	**135**	**2.712**	ug/L	0.060	2	150	24752	1	Standard
⌊	**Ba**	**137**	**2.693**	ug/L	0.083	3	258	43178	2	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3807434	1	Standard
⌊	**Pb**	**208**	**0.201**	ug/L	0.003	1	670	27325	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0430-03
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 14:29:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	37821	3	Standard
	Cl	37		ug/L			6593477	6981872	2	Standard
>	Sc	45		ug/L			1335244	1293914	1	Standard
	Cr	52	8.325	ug/L	0.096	1	23740	213884	1	Standard
	Cr	53	8.566	ug/L	0.085	0	139	23519	0	Standard
>	Ge	72		ug/L			113005	102212	1	KED
	Ni	60	1.448	ug/L	0.094	6	95	2728	4	KED
	Ni	62	1.333	ug/L	0.060	4	22	417	4	KED
	Cu	63	8.701	ug/L	0.107	1	102	47174	2	KED
	Cu	65	8.702	ug/L	0.091	1	58	23764	1	KED
	Zn	66	2.534	ug/L	0.102	4	138	1921	3	KED
	Zn	67	2.462	ug/L	0.085	3	20	312	4	KED
	As	75	0.144	ug/L	0.014	9	5	56	7	KED
	Se	78	0.111	ug/L	0.131	118	17	19	24	KED
	Y	89		ug/L			969026	998511	2	Standard
	Kr	83		ug/L			90	93	17	Standard
>	In-1	115		ug/L			29579	26305	0	KED
	Cd	111	0.015	ug/L	0.006	39	2	7	30	KED
	Cd	114	0.017	ug/L	0.006	38	1	17	37	KED
>	In	115		ug/L			1949131	1766329	2	Standard
	Ag	107	0.004	ug/L	0.001	19	71	178	14	Standard
	Ba	135	0.782	ug/L	0.011	1	150	6496	0	Standard
	Ba	137	0.766	ug/L	0.004	0	258	11177	1	Standard
>	Tb	159		ug/L			3793166	3675944	1	Standard
	Pb	208	0.009	ug/L	0.001	6	670	1782	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0430-02
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 14:34:01
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	44661	1	Standard
	Cl	37		ug/L			6593477	6661584	1	Standard
>	Sc	45		ug/L			1335244	1268761	0	Standard
	Cr	52	12.308	ug/L	0.242	1	23740	299264	1	Standard
	Cr	53	12.272	ug/L	0.100	0	139	32984	0	Standard
>	Ge	72		ug/L			113005	103444	0	KED
	Ni	60	1.616	ug/L	0.055	3	95	3073	3	KED
	Ni	62	1.675	ug/L	0.021	1	22	525	0	KED
	Cu	63	9.414	ug/L	0.076	0	102	51650	0	KED
	Cu	65	9.435	ug/L	0.035	0	58	26077	0	KED
	Zn	66	3.841	ug/L	0.053	1	138	2883	1	KED
	Zn	67	3.747	ug/L	0.340	9	20	471	8	KED
	As	75	0.156	ug/L	0.005	2	5	61	2	KED
	Se	78	0.145	ug/L	0.068	47	17	21	11	KED
	Y	89		ug/L			969026	954981	0	Standard
	Kr	83		ug/L			90	85	19	Standard
>	In-1	115		ug/L			29579	26609	1	KED
	Cd	111	0.011	ug/L	0.006	51	2	6	34	KED
	Cd	114	0.023	ug/L	0.006	25	1	24	24	KED
>	In	115		ug/L			1949131	1724906	0	Standard
	Ag	107	0.004	ug/L	0.000	4	71	158	2	Standard
	Ba	135	0.762	ug/L	0.011	1	150	6185	1	Standard
	Ba	137	0.738	ug/L	0.012	1	258	10517	1	Standard
>	Tb	159		ug/L			3793166	3668031	1	Standard
	Pb	208	0.022	ug/L	0.000	1	670	3464	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0430-01
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 14:38:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	32836	1	Standard
	Cl	37		ug/L			6593477	6816938	0	Standard
>	Sc	45		ug/L			1335244	1272196	1	Standard
	Cr	52	8.455	ug/L	0.057	0	23740	213239	0	Standard
	Cr	53	8.566	ug/L	0.123	1	139	23124	0	Standard
>	Ge	72		ug/L			113005	102896	0	KED
	Ni	60	1.602	ug/L	0.078	4	95	3030	4	KED
	Ni	62	1.593	ug/L	0.088	5	22	497	6	KED
	Cu	63	10.945	ug/L	0.184	1	102	59712	1	KED
	Cu	65	11.025	ug/L	0.156	1	58	30297	1	KED
	Zn	66	4.747	ug/L	0.141	2	138	3515	3	KED
	Zn	67	4.396	ug/L	0.264	6	20	546	5	KED
	As	75	0.127	ug/L	0.011	8	5	50	7	KED
	Se	78	0.142	ug/L	0.126	88	17	20	21	KED
	Y	89		ug/L			969026	954727	0	Standard
	Kr	83		ug/L			90	80	15	Standard
>	In-1	115		ug/L			29579	26499	0	KED
	Cd	111	0.026	ug/L	0.010	39	2	12	32	KED
	Cd	114	0.026	ug/L	0.007	26	1	27	25	KED
>	In	115		ug/L			1949131	1760639	1	Standard
	Ag	107	0.004	ug/L	0.001	36	71	161	21	Standard
	Ba	135	0.729	ug/L	0.012	1	150	6044	1	Standard
	Ba	137	0.735	ug/L	0.004	0	258	10698	1	Standard
>	Tb	159		ug/L			3793166	3647845	1	Standard
	Pb	208	0.022	ug/L	0.001	4	670	3409	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIK0039-DUP1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 14:43:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	31644	2	Standard
	Cl	37		ug/L			6593477	6771367	2	Standard
>	Sc	45		ug/L			1335244	1280769	1	Standard
	Cr	52	8.314	ug/L	0.175	2	23740	211444	0	Standard
	Cr	53	8.358	ug/L	0.137	1	139	22717	1	Standard
>	Ge	72		ug/L			113005	105157	1	KED
	Ni	60	1.540	ug/L	0.040	2	95	2981	3	KED
	Ni	62	1.566	ug/L	0.196	12	22	500	12	KED
	Cu	63	10.601	ug/L	0.158	1	102	59104	0	KED
	Cu	65	10.579	ug/L	0.229	2	58	29709	1	KED
	Zn	66	4.611	ug/L	0.095	2	138	3492	1	KED
	Zn	67	4.232	ug/L	0.294	6	20	539	8	KED
	As	75	0.136	ug/L	0.010	7	5	55	4	KED
	Se	78	0.156	ug/L	0.120	76	17	21	19	KED
	Y	89		ug/L			969026	936655	2	Standard
	Kr	83		ug/L			90	83	19	Standard
>	In-1	115		ug/L			29579	26614	0	KED
	Cd	111	0.019	ug/L	0.008	43	2	9	34	KED
	Cd	114	0.021	ug/L	0.006	28	1	22	26	KED
>	In	115		ug/L			1949131	1769704	2	Standard
	Ag	107	0.003	ug/L	0.000	12	71	136	8	Standard
	Ba	135	0.717	ug/L	0.010	1	150	5979	2	Standard
	Ba	137	0.716	ug/L	0.020	2	258	10482	2	Standard
>	Tb	159		ug/L			3793166	3708289	0	Standard
	Pb	208	0.021	ug/L	0.001	3	670	3367	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIK0039-MS1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 14:48:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	31821	3	Standard
	Cl	37		ug/L			6593477	6790203	1	Standard
>	Sc	45		ug/L			1335244	1274269	2	Standard
	Cr	52	33.870	ug/L	0.311	0	23740	787465	1	Standard
	Cr	53	33.200	ug/L	0.900	2	139	89371	1	Standard
>	Ge	72		ug/L			113005	104184	0	KED
	Ni	60	26.598	ug/L	0.288	1	95	49584	1	KED
	Ni	62	26.562	ug/L	0.181	0	22	8071	0	KED
	Cu	63	35.723	ug/L	0.703	1	102	197113	1	KED
	Cu	65	35.743	ug/L	0.738	2	58	99332	1	KED
	Zn	66	79.680	ug/L	0.554	0	138	57720	0	KED
	Zn	67	74.868	ug/L	1.643	2	20	9126	1	KED
	As	75	25.879	ug/L	0.478	1	5	9497	1	KED
	Se	78	80.356	ug/L	0.285	0	17	2979	1	KED
	Y	89		ug/L			969026	945595	1	Standard
	Kr	83		ug/L			90	111	15	Standard
>	In-1	115		ug/L			29579	26810	1	KED
	Cd	111	24.242	ug/L	0.206	0	2	9590	0	KED
	Cd	114	24.014	ug/L	0.467	1	1	24592	1	KED
>	In	115		ug/L			1949131	1787971	1	Standard
	Ag	107	24.759	ug/L	0.221	0	71	656864	2	Standard
	Ba	135	26.373	ug/L	0.171	0	150	217154	0	Standard
	Ba	137	26.030	ug/L	0.136	0	258	376654	1	Standard
>	Tb	159		ug/L			3793166	3656432	1	Standard
	Pb	208	26.126	ug/L	0.440	1	670	3324401	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 14:55:44
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	20317	3	Standard
	Cl	**37**		ug/L			6593477	7273295	0	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1356505	1	Standard
|	**Cr**	**52**	**0.088**	ug/L	0.009	9	23740	26227	1	Standard
⌊	**Cr**	**53**	**0.035**	ug/L	0.007	20	139	240	6	Standard
⌈>	**Ge**	**72**		ug/L			113005	119597	1	KED
|	**Ni**	**60**	**-0.029**	ug/L	0.005	18	95	39	28	KED
|	**Ni**	**62**	**-0.044**	ug/L	0.009	20	22	8	32	KED
|	**Cu**	**63**	**0.014**	ug/L	0.009	67	102	194	30	KED
|	**Cu**	**65**	**0.007**	ug/L	0.003	38	58	84	11	KED
|	**Zn**	**66**	**0.224**	ug/L	0.030	13	138	332	8	KED
|	**Zn**	**67**	**0.182**	ug/L	0.026	14	20	46	9	KED
|	**As**	**75**	**0.003**	ug/L	0.003	104	5	6	18	KED
⌊	**Se**	**78**	**0.074**	ug/L	0.068	90	17	21	12	KED
	Y	**89**		ug/L			969026	922376	1	Standard
	Kr	**83**		ug/L			90	92	11	Standard
⌈>	**In-1**	**115**		ug/L			29579	30600	0	KED
|	**Cd**	**111**	**0.005**	ug/L	0.006	102	2	4	52	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.002	46	1	5	37	KED
⌈>	**In**	**115**		ug/L			1949131	1980523	1	Standard
|	**Ag**	**107**	**0.005**	ug/L	0.001	13	71	218	10	Standard
|	**Ba**	**135**	**0.013**	ug/L	0.004	32	150	270	15	Standard
⌊	**Ba**	**137**	**0.013**	ug/L	0.002	14	258	467	7	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3828445	1	Standard
⌊	**Pb**	**208**	**0.010**	ug/L	0.001	7	670	2000	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 15:01:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	16612	1	Standard
	Cl	**37**		ug/L			6593477	7036914	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1350046	1	Standard
|	**Cr**	**52**	**52.047**	ug/L	1.656	3	23740	1268747	1	Standard
⌊	**Cr**	**53**	**50.564**	ug/L	1.221	2	139	144144	1	Standard
⌈>	**Ge**	**72**		ug/L			113005	116997	0	KED
|	**Ni**	**60**	**48.800**	ug/L	0.391	0	95	102079	0	KED
|	**Ni**	**62**	**48.677**	ug/L	0.137	0	22	16591	0	KED
|	**Cu**	**63**	**47.515**	ug/L	0.742	1	102	294426	1	KED
|	**Cu**	**65**	**48.011**	ug/L	0.740	1	58	149828	1	KED
|	**Zn**	**66**	**49.467**	ug/L	0.273	0	138	40296	0	KED
|	**Zn**	**67**	**48.571**	ug/L	0.485	0	20	6656	0	KED
|	**As**	**75**	**49.078**	ug/L	0.252	0	5	20221	0	KED
⌊	**Se**	**78**	**49.685**	ug/L	0.694	1	17	2075	1	KED
	Y	**89**		ug/L			969026	973118	0	Standard
	Kr	**83**		ug/L			90	95	7	Standard
⌈>	**In-1**	**115**		ug/L			29579	30313	2	KED
|	**Cd**	**111**	**48.992**	ug/L	0.675	1	2	21910	0	KED
⌊	**Cd**	**114**	**48.753**	ug/L	0.852	1	1	56442	1	KED
⌈>	**In**	**115**		ug/L			1949131	1964810	0	Standard
|	**Ag**	**107**	**52.409**	ug/L	0.169	0	71	1527775	1	Standard
|	**Ba**	**135**	**50.379**	ug/L	0.410	0	150	455717	0	Standard
⌊	**Ba**	**137**	**49.851**	ug/L	0.377	0	258	792401	0	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3864485	1	Standard
⌊	**Pb**	**208**	**51.467**	ug/L	0.911	1	670	6920199	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 15:07:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	16229	1	Standard
	Cl	**37**		ug/L			6593477	7423229	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1402309	1	Standard
|	**Cr**	**52**	**-0.059**	ug/L	0.019	33	23740	23481	3	Standard
⌊	**Cr**	**53**	**0.015**	ug/L	0.005	31	139	189	8	Standard
⌈>	**Ge**	**72**		ug/L			113005	119415	1	KED
|	**Ni**	**60**	**-0.031**	ug/L	0.003	10	95	34	20	KED
|	**Ni**	**62**	**-0.060**	ug/L	0.003	5	22	3	34	KED
|	**Cu**	**63**	**0.005**	ug/L	0.001	13	102	142	4	KED
|	**Cu**	**65**	**0.003**	ug/L	0.006	188	58	71	25	KED
|	**Zn**	**66**	**-0.046**	ug/L	0.001	2	138	107	2	KED
|	**Zn**	**67**	**0.011**	ug/L	0.087	824	20	22	52	KED
|	**As**	**75**	**0.004**	ug/L	0.002	36	5	7	9	KED
⌊	**Se**	**78**	**0.043**	ug/L	0.083	191	17	20	17	KED
	Y	**89**		ug/L			969026	969343	2	Standard
	Kr	**83**		ug/L			90	86	3	Standard
⌈>	**In-1**	**115**		ug/L			29579	31059	1	KED
|	**Cd**	**111**	**0.002**	ug/L	0.001	61	2	3	17	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.003	127	1	4	94	KED
⌈>	**In**	**115**		ug/L			1949131	2051519	2	Standard
|	**Ag**	**107**	**0.009**	ug/L	0.001	12	71	335	11	Standard
|	**Ba**	**135**	**-0.003**	ug/L	0.001	23	150	130	5	Standard
⌊	**Ba**	**137**	**-0.000**	ug/L	0.002	3432	258	270	11	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3915840	0	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	7	670	958	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SED SPIKE TEST
Sample Dil Factor: 20
Comments:

DEL

Sample Date/Time: Tuesday, November 03, 2020 15:17:01
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	20659	5	Standard
	Cl	**37**		ug/L			6593477	7432036	0	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1454232	0	Standard
|	**Cr**	**52**	**5.108**	ug/L	0.139	2	23740	157482	1	Standard
⌊	**Cr**	**53**	**5.122**	ug/L	0.115	2	139	15865	2	Standard
⌈>	**Ge**	**72**		ug/L			113005	119480	1	KED
|	**Ni**	**60**	**4.888**	ug/L	0.073	1	95	10530	1	KED
|	**Ni**	**62**	**4.822**	ug/L	0.374	7	22	1701	8	KED
|	**Cu**	**63**	**4.999**	ug/L	0.019	0	102	31725	1	KED
|	**Cu**	**65**	**5.085**	ug/L	0.187	3	58	16267	5	KED
|	**Zn**	**66**	**4.675**	ug/L	0.086	1	138	4022	2	KED
|	**Zn**	**67**	**4.832**	ug/L	0.185	3	20	695	5	KED
|	**As**	**75**	**4.822**	ug/L	0.063	1	5	2033	1	KED
⌊	**Se**	**78**	**4.760**	ug/L	0.306	6	17	219	4	KED
	Y	**89**		ug/L			969026	1005308	2	Standard
	Kr	**83**		ug/L			90	91	18	Standard
⌈>	**In-1**	**115**		ug/L			29579	31443	0	KED
|	**Cd**	**111**	**4.758**	ug/L	0.202	4	2	2209	3	KED
⌊	**Cd**	**114**	**4.815**	ug/L	0.044	0	1	5784	0	KED
⌈>	**In**	**115**		ug/L			1949131	2071458	1	Standard
|	**Ag**	**107**	**5.357**	ug/L	0.184	3	71	164656	2	Standard
|	**Ba**	**135**	**5.064**	ug/L	0.041	0	150	48441	1	Standard
⌊	**Ba**	**137**	**5.043**	ug/L	0.094	1	258	84758	1	Standard
⌈>	**Tb**	**159**		ug/L			3793166	4014533	2	Standard
⌊	**Pb**	**208**	**5.433**	ug/L	0.144	2	670	759390	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIJ0815-BLK1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 15:21:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	20929	2	Standard
	Cl	37		ug/L			6593477	7358206	1	Standard
>	Sc	45		ug/L			1335244	1426584	0	Standard
	Cr	52	-0.038	ug/L	0.013	34	23740	24397	2	Standard
	Cr	53	0.017	ug/L	0.002	9	139	198	1	Standard
>	Ge	72		ug/L			113005	120920	1	KED
	Ni	60	-0.037	ug/L	0.002	5	95	22	17	KED
	Ni	62	-0.061	ug/L	0.011	18	22	3	124	KED
	Cu	63	0.025	ug/L	0.005	20	102	266	12	KED
	Cu	65	0.023	ug/L	0.002	9	58	135	4	KED
	Zn	66	0.051	ug/L	0.013	25	138	191	6	KED
	Zn	67	0.057	ug/L	0.055	95	20	29	26	KED
	As	75	0.001	ug/L	0.005	780	5	5	36	KED
	Se	78	-0.034	ug/L	0.063	186	17	17	15	KED
	Y	89		ug/L			969026	1003973	0	Standard
	Kr	83		ug/L			90	102	9	Standard
>	In-1	115		ug/L			29579	32047	1	KED
	Cd	111	0.005	ug/L	0.007	139	2	4	69	KED
	Cd	114	0.005	ug/L	0.003	52	1	7	44	KED
>	In	115		ug/L			1949131	2073453	1	Standard
	Ag	107	0.004	ug/L	0.001	23	71	204	12	Standard
	Ba	135	0.004	ug/L	0.003	78	150	194	12	Standard
	Ba	137	0.004	ug/L	0.003	57	258	347	10	Standard
>	Tb	159		ug/L			3793166	3942382	0	Standard
	Pb	208	0.001	ug/L	0.001	73	670	857	13	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIJ0815-BS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 15:25:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	19999	4	Standard
	Cl	37		ug/L			6593477	7373134	1	Standard
>	Sc	45		ug/L			1335244	1429368	0	Standard
	Cr	52	26.331	ug/L	0.434	1	23740	692346	0	Standard
	Cr	53	26.013	ug/L	0.580	2	139	78593	1	Standard
>	Ge	72		ug/L			113005	121952	2	KED
	Ni	60	24.857	ug/L	0.947	3	95	54215	1	KED
	Ni	62	24.501	ug/L	0.469	1	22	8714	0	KED
	Cu	63	25.216	ug/L	0.298	1	102	162884	1	KED
	Cu	65	25.081	ug/L	0.934	3	58	81576	2	KED
	Zn	66	76.710	ug/L	1.306	1	138	65041	1	KED
	Zn	67	72.992	ug/L	2.161	2	20	10413	2	KED
	As	75	23.894	ug/L	0.327	1	5	10264	2	KED
	Se	78	76.226	ug/L	2.922	3	17	3307	1	KED
	Y	89		ug/L			969026	1006129	3	Standard
	Kr	83		ug/L			90	102	4	Standard
>	In-1	115		ug/L			29579	31329	2	KED
	Cd	111	24.765	ug/L	0.207	0	2	11449	1	KED
	Cd	114	24.660	ug/L	0.385	1	1	29507	1	KED
>	In	115		ug/L			1949131	2057329	2	Standard
	Ag	107	27.947	ug/L	1.620	5	71	852371	3	Standard
	Ba	135	25.470	ug/L	0.620	2	150	241240	0	Standard
	Ba	137	25.012	ug/L	0.616	2	258	416320	1	Standard
>	Tb	159		ug/L			3793166	3981018	1	Standard
	Pb	208	27.229	ug/L	0.371	1	670	3772676	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0381-02
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 15:30:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	28323	2	Standard
	Cl	37		ug/L			6593477	7331882	1	Standard
>	Sc	45		ug/L			1335244	1603893	1	Standard
	Cr	52	18.315	ug/L	0.531	2	23740	548995	1	Standard
	Cr	53	18.539	ug/L	0.264	1	139	62898	0	Standard
>	Ge	72		ug/L			113005	118979	0	KED
	Ni	60	16.658	ug/L	0.295	1	95	35501	1	KED
	Ni	62	16.987	ug/L	0.149	0	22	5904	1	KED
	Cu	63	18.478	ug/L	0.138	0	102	116498	0	KED
	Cu	65	18.494	ug/L	0.278	1	58	58729	1	KED
	Zn	66	30.278	ug/L	0.396	1	138	25138	1	KED
	Zn	67	33.260	ug/L	1.594	4	20	4642	4	KED
	As	75	3.704	ug/L	0.036	0	5	1557	0	KED
	Se	78	1.149	ug/L	0.166	14	17	66	10	KED
	Y	89		ug/L			969026	1608124	3	Standard
	Kr	83		ug/L			90	198	18	Standard
>	In-1	115		ug/L			29579	31016	1	KED
	Cd	111	0.043	ug/L	0.004	9	2	22	8	KED
	Cd	114	0.047	ug/L	0.010	21	1	57	22	KED
>	In	115		ug/L			1949131	1972644	0	Standard
	Ag	107	0.056	ug/L	0.001	2	71	1715	2	Standard
	Ba	135	77.853	ug/L	0.466	0	150	706990	0	Standard
	Ba	137	78.023	ug/L	1.603	2	258	1245048	2	Standard
>	Tb	159		ug/L			3793166	4120894	0	Standard
	Pb	208	3.366	ug/L	0.012	0	670	483423	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0381-04
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 15:34:11
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	22802	4	Standard
	Cl	37		ug/L			6593477	7124838	2	Standard
>	Sc	45		ug/L			1335244	1548671	0	Standard
	Cr	52	20.162	ug/L	0.467	2	23740	580853	1	Standard
	Cr	53	20.350	ug/L	0.237	1	139	66655	0	Standard
>	Ge	72		ug/L			113005	119157	0	KED
	Ni	60	20.015	ug/L	0.102	0	95	42701	0	KED
	Ni	62	19.834	ug/L	0.738	3	22	6899	3	KED
	Cu	63	13.537	ug/L	0.121	0	102	85507	1	KED
	Cu	65	13.673	ug/L	0.196	1	58	43503	1	KED
	Zn	66	24.926	ug/L	0.472	1	138	20752	1	KED
	Zn	67	27.351	ug/L	0.671	2	20	3827	2	KED
	As	75	2.352	ug/L	0.008	0	5	992	0	KED
	Se	78	0.881	ug/L	0.120	13	17	55	9	KED
	Y	89		ug/L			969026	1381791	1	Standard
	Kr	83		ug/L			90	184	8	Standard
>	In-1	115		ug/L			29579	30729	2	KED
	Cd	111	0.061	ug/L	0.008	12	2	29	9	KED
	Cd	114	0.053	ug/L	0.010	18	1	63	16	KED
>	In	115		ug/L			1949131	1966369	0	Standard
	Ag	107	0.042	ug/L	0.001	3	71	1286	2	Standard
	Ba	135	57.475	ug/L	0.619	1	150	520315	1	Standard
	Ba	137	56.917	ug/L	0.709	1	258	905449	1	Standard
>	Tb	159		ug/L			3793166	4040329	0	Standard
	Pb	208	2.490	ug/L	0.008	0	670	350795	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0381-05
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 15:38:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	19756	4	Standard
	Cl	37		ug/L			6593477	7108409	1	Standard
>	Sc	45		ug/L			1335244	1518701	2	Standard
	Cr	52	36.039	ug/L	0.258	0	23740	996859	1	Standard
	Cr	53	36.089	ug/L	0.255	0	139	115813	2	Standard
>	Ge	72		ug/L			113005	117461	0	KED
	Ni	60	19.665	ug/L	0.449	2	95	41351	1	KED
	Ni	62	19.855	ug/L	0.583	2	22	6807	2	KED
	Cu	63	18.922	ug/L	0.192	1	102	117770	0	KED
	Cu	65	19.087	ug/L	0.419	2	58	59829	1	KED
	Zn	66	27.561	ug/L	0.482	1	138	22602	1	KED
	Zn	67	30.602	ug/L	0.778	2	20	4218	2	KED
	As	75	5.153	ug/L	0.251	4	5	2135	3	KED
	Se	78	0.824	ug/L	0.146	17	17	52	12	KED
	Y	89		ug/L			969026	1341491	4	Standard
	Kr	83		ug/L			90	140	19	Standard
>	In-1	115		ug/L			29579	30552	1	KED
	Cd	111	0.067	ug/L	0.003	4	2	32	3	KED
	Cd	114	0.055	ug/L	0.007	12	1	65	13	KED
>	In	115		ug/L			1949131	1992662	1	Standard
	Ag	107	0.057	ug/L	0.011	19	71	1774	19	Standard
	Ba	135	57.039	ug/L	0.317	0	150	523262	0	Standard
	Ba	137	56.596	ug/L	0.701	1	258	912307	0	Standard
>	Tb	159		ug/L			3793166	4007883	0	Standard
	Pb	208	2.712	ug/L	0.015	0	670	378903	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0381-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 15:42:35
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	20201	3	Standard
	Cl	37		ug/L			6593477	7060637	1	Standard
>	Sc	45		ug/L			1335244	1496356	1	Standard
	Cr	52	19.579	ug/L	0.305	1	23740	545752	1	Standard
	Cr	53	19.300	ug/L	0.258	1	139	61082	0	Standard
>	Ge	72		ug/L			113005	118987	1	KED
	Ni	60	16.143	ug/L	0.420	2	95	34406	2	KED
	Ni	62	16.482	ug/L	0.082	0	22	5729	0	KED
	Cu	63	16.214	ug/L	0.306	1	102	102236	1	KED
	Cu	65	16.003	ug/L	0.393	2	58	50827	1	KED
	Zn	66	26.715	ug/L	0.307	1	138	22198	0	KED
	Zn	67	29.377	ug/L	0.217	0	20	4103	1	KED
	As	75	2.750	ug/L	0.071	2	5	1157	2	KED
	Se	78	0.842	ug/L	0.108	12	17	53	7	KED
	Y	89		ug/L			969026	1339643	1	Standard
	Kr	83		ug/L			90	138	15	Standard
>	In-1	115		ug/L			29579	30662	1	KED
	Cd	111	0.069	ug/L	0.003	4	2	33	2	KED
	Cd	114	0.058	ug/L	0.011	19	1	69	18	KED
>	In	115		ug/L			1949131	1971326	0	Standard
	Ag	107	0.036	ug/L	0.001	2	71	1117	2	Standard
	Ba	135	54.029	ug/L	0.759	1	150	490361	1	Standard
	Ba	137	54.239	ug/L	0.649	1	258	865013	1	Standard
>	Tb	159		ug/L			3793166	4012058	1	Standard
	Pb	208	3.216	ug/L	0.035	1	670	449622	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIJ0815-DUP1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 15:47:11
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	20506	3	Standard
	Cl	37		ug/L			6593477	7113260	1	Standard
>	Sc	45		ug/L			1335244	1537809	0	Standard
	Cr	52	21.806	ug/L	0.354	1	23740	621647	2	Standard
	Cr	53	21.495	ug/L	0.088	0	139	69904	0	Standard
>	Ge	72		ug/L			113005	117481	0	KED
	Ni	60	18.849	ug/L	0.337	1	95	39651	1	KED
	Ni	62	18.760	ug/L	0.331	1	22	6435	1	KED
	Cu	63	21.512	ug/L	0.220	1	102	133901	0	KED
	Cu	65	21.354	ug/L	0.103	0	58	66950	1	KED
	Zn	66	34.464	ug/L	1.450	4	138	28231	3	KED
	Zn	67	37.004	ug/L	0.585	1	20	5097	1	KED
	As	75	4.646	ug/L	0.097	2	5	1927	1	KED
	Se	78	1.013	ug/L	0.158	15	17	60	11	KED
	Y	89		ug/L			969026	1466783	2	Standard
	Kr	83		ug/L			90	186	11	Standard
>	In-1	115		ug/L			29579	30475	1	KED
	Cd	111	0.044	ug/L	0.009	20	2	21	18	KED
	Cd	114	0.048	ug/L	0.019	39	1	57	40	KED
>	In	115		ug/L			1949131	1969473	1	Standard
	Ag	107	0.041	ug/L	0.003	8	71	1270	8	Standard
	Ba	135	69.221	ug/L	1.161	1	150	627601	1	Standard
	Ba	137	69.382	ug/L	0.184	0	258	1105431	1	Standard
>	Tb	159		ug/L			3793166	4005530	1	Standard
	Pb	208	3.535	ug/L	0.037	1	670	493392	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIJ0815-MS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 15:52:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	19796	2	Standard
	Cl	37		ug/L			6593477	7108131	0	Standard
>	Sc	45		ug/L			1335244	1556165	0	Standard
	Cr	52	37.926	ug/L	0.786	2	23740	1073494	1	Standard
	Cr	53	37.860	ug/L	0.601	1	139	124463	0	Standard
>	Ge	72		ug/L			113005	117324	0	KED
	Ni	60	40.682	ug/L	0.033	0	95	85353	0	KED
	Ni	62	41.028	ug/L	1.567	3	22	14024	3	KED
	Cu	63	47.567	ug/L	0.349	0	102	295550	0	KED
	Cu	65	47.488	ug/L	0.382	0	58	148617	1	KED
	Zn	66	109.933	ug/L	2.676	2	138	89629	2	KED
	Zn	67	106.176	ug/L	1.925	1	20	14567	1	KED
	As	75	25.543	ug/L	0.076	0	5	10556	1	KED
	Se	78	74.526	ug/L	1.237	1	17	3113	2	KED
	Y	89		ug/L			969026	1486811	0	Standard
	Kr	83		ug/L			90	184	8	Standard
>	In-1	115		ug/L			29579	30616	1	KED
	Cd	111	23.892	ug/L	0.195	0	2	10794	0	KED
	Cd	114	23.504	ug/L	0.390	1	1	27486	1	KED
>	In	115		ug/L			1949131	1968034	0	Standard
	Ag	107	23.926	ug/L	0.696	2	71	698611	2	Standard
	Ba	135	84.833	ug/L	0.673	0	150	768553	0	Standard
	Ba	137	84.929	ug/L	0.171	0	258	1352063	0	Standard
>	Tb	159		ug/L			3793166	4119739	0	Standard
	Pb	208	27.504	ug/L	0.097	0	670	3943680	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL5
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 15:59:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	20034	3	Standard
	Cl	**37**		ug/L			6593477	7130523	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1399037	0	Standard
|	**Cr**	**52**	**-0.083**	ug/L	0.025	30	23740	22807	2	Standard
⌊	**Cr**	**53**	**0.004**	ug/L	0.003	79	139	158	5	Standard
⌈>	**Ge**	**72**		ug/L			113005	119011	1	KED
|	**Ni**	**60**	**-0.027**	ug/L	0.004	16	95	42	21	KED
|	**Ni**	**62**	**-0.055**	ug/L	0.003	6	22	5	21	KED
|	**Cu**	**63**	**0.016**	ug/L	0.006	35	102	206	17	KED
|	**Cu**	**65**	**0.018**	ug/L	0.005	25	58	118	12	KED
|	**Zn**	**66**	**0.303**	ug/L	0.003	0	138	395	2	KED
|	**Zn**	**67**	**0.298**	ug/L	0.034	11	20	62	8	KED
|	**As**	**75**	**0.007**	ug/L	0.004	51	5	8	19	KED
⌊	**Se**	**78**	**-0.031**	ug/L	0.147	473	17	16	36	KED
	Y	**89**		ug/L			969026	962407	5	Standard
	Kr	**83**		ug/L			90	88	14	Standard
⌈>	**In-1**	**115**		ug/L			29579	30942	2	KED
|	**Cd**	**111**	**0.003**	ug/L	0.001	42	2	3	15	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.001	40	1	4	29	KED
⌈>	**In**	**115**		ug/L			1949131	2005007	0	Standard
|	**Ag**	**107**	**0.005**	ug/L	0.001	12	71	213	8	Standard
|	**Ba**	**135**	**0.013**	ug/L	0.002	13	150	276	6	Standard
⌊	**Ba**	**137**	**0.014**	ug/L	0.003	20	258	496	8	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3872103	0	Standard
⌊	**Pb**	**208**	**0.010**	ug/L	0.000	3	670	2019	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 16:04:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	16331	2	Standard
	Cl	**37**		ug/L			6593477	7411313	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1381363	1	Standard
|	**Cr**	**52**	**51.225**	ug/L	0.539	1	23740	1278508	0	Standard
⌊	**Cr**	**53**	**50.626**	ug/L	0.432	0	139	147695	0	Standard
⌈>	**Ge**	**72**		ug/L			113005	117626	1	KED
|	**Ni**	**60**	**48.216**	ug/L	0.397	0	95	101395	0	KED
|	**Ni**	**62**	**48.449**	ug/L	0.365	0	22	16603	2	KED
|	**Cu**	**63**	**48.444**	ug/L	0.195	0	102	301772	0	KED
|	**Cu**	**65**	**48.826**	ug/L	0.994	2	58	153162	0	KED
|	**Zn**	**66**	**50.119**	ug/L	0.618	1	138	41041	0	KED
|	**Zn**	**67**	**49.755**	ug/L	0.386	0	20	6855	1	KED
|	**As**	**75**	**49.236**	ug/L	0.380	0	5	20396	1	KED
⌊	**Se**	**78**	**50.958**	ug/L	0.339	0	17	2139	0	KED
	Y	**89**		ug/L			969026	981442	1	Standard
	Kr	**83**		ug/L			90	101	2	Standard
⌈>	**In-1**	**115**		ug/L			29579	30509	1	KED
|	**Cd**	**111**	**49.556**	ug/L	1.001	2	2	22305	0	KED
⌊	**Cd**	**114**	**49.967**	ug/L	0.966	1	1	58222	0	KED
⌈>	**In**	**115**		ug/L			1949131	1998453	1	Standard
|	**Ag**	**107**	**53.286**	ug/L	1.307	2	71	1579862	2	Standard
|	**Ba**	**135**	**50.376**	ug/L	0.991	1	150	463435	1	Standard
⌊	**Ba**	**137**	**49.762**	ug/L	1.272	2	258	804362	1	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3967202	0	Standard
⌊	**Pb**	**208**	**50.793**	ug/L	0.562	1	670	7012485	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 16:11:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	16387	2	Standard
	Cl	**37**		ug/L			6593477	7093481	2	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1380004	0	Standard
|	**Cr**	**52**	**-0.079**	ug/L	0.005	6	23740	22609	0	Standard
⌊	**Cr**	**53**	**0.006**	ug/L	0.002	41	139	160	4	Standard
⌈>	**Ge**	**72**		ug/L			113005	118095	1	KED
|	**Ni**	**60**	**-0.034**	ug/L	0.003	9	95	28	23	KED
|	**Ni**	**62**	**-0.053**	ug/L	0.016	30	22	5	100	KED
|	**Cu**	**63**	**0.005**	ug/L	0.002	33	102	139	7	KED
|	**Cu**	**65**	**0.004**	ug/L	0.003	65	58	74	11	KED
|	**Zn**	**66**	**0.006**	ug/L	0.017	269	138	149	8	KED
|	**Zn**	**67**	**0.077**	ug/L	0.054	71	20	31	22	KED
|	**As**	**75**	**-0.000**	ug/L	0.008	3277	5	5	65	KED
⌊	**Se**	**78**	**0.031**	ug/L	0.034	110	17	19	6	KED
	Y	**89**		ug/L			969026	954685	2	Standard
	Kr	**83**		ug/L			90	76	10	Standard
⌈>	**In-1**	**115**		ug/L			29579	28957	10	KED
|	**Cd**	**111**	**0.003**	ug/L	0.004	167	2	3	45	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.001	64	1	3	51	KED
⌈>	**In**	**115**		ug/L			1949131	1988892	0	Standard
|	**Ag**	**107**	**0.007**	ug/L	0.001	17	71	279	13	Standard
|	**Ba**	**135**	**-0.000**	ug/L	0.001	1025	150	152	8	Standard
⌊	**Ba**	**137**	**0.000**	ug/L	0.001	1304	258	265	8	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3890274	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	17	670	878	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 16:17:53
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	16600	3	Standard
	Cl	**37**		ug/L			6593477	7320293	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1367242	0	Standard
|	**Cr**	**52**	**50.771**	ug/L	0.107	0	23740	1254509	0	Standard
⌊	**Cr**	**53**	**50.738**	ug/L	0.659	1	139	146504	0	Standard
⌈>	**Ge**	**72**		ug/L			113005	117609	0	KED
|	**Ni**	**60**	**48.534**	ug/L	0.701	1	95	102053	1	KED
|	**Ni**	**62**	**48.271**	ug/L	0.369	0	22	16540	1	KED
|	**Cu**	**63**	**48.655**	ug/L	0.476	0	102	303040	0	KED
|	**Cu**	**65**	**48.723**	ug/L	1.075	2	58	152833	1	KED
|	**Zn**	**66**	**49.608**	ug/L	0.855	1	138	40619	1	KED
|	**Zn**	**67**	**49.096**	ug/L	0.384	0	20	6764	1	KED
|	**As**	**75**	**48.862**	ug/L	0.417	0	5	20237	0	KED
⌊	**Se**	**78**	**50.663**	ug/L	0.645	1	17	2127	1	KED
	Y	**89**		ug/L			969026	969630	2	Standard
	Kr	**83**		ug/L			90	97	11	Standard
⌈>	**In-1**	**115**		ug/L			29579	30719	1	KED
|	**Cd**	**111**	**49.249**	ug/L	0.399	0	2	22323	0	KED
⌊	**Cd**	**114**	**49.025**	ug/L	0.548	1	1	57524	0	KED
⌈>	**In**	**115**		ug/L			1949131	1987831	0	Standard
|	**Ag**	**107**	**53.095**	ug/L	1.674	3	71	1565769	2	Standard
|	**Ba**	**135**	**49.581**	ug/L	0.303	0	150	453782	1	Standard
⌊	**Ba**	**137**	**49.816**	ug/L	0.603	1	258	801121	0	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3965990	0	Standard
⌊	**Pb**	**208**	**50.054**	ug/L	0.327	0	670	6908721	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 16:24:50
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	16674	3	Standard
	Cl	**37**		ug/L			6593477	7318334	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1395443	4	Standard
|	**Cr**	**52**	**-0.076**	ug/L	0.027	35	23740	22919	1	Standard
⌊	**Cr**	**53**	**0.003**	ug/L	0.003	101	139	154	5	Standard
⌈>	**Ge**	**72**		ug/L			113005	118413	0	KED
|	**Ni**	**60**	**-0.035**	ug/L	0.006	18	95	24	55	KED
|	**Ni**	**62**	**-0.053**	ug/L	0.005	10	22	5	33	KED
|	**Cu**	**63**	**0.004**	ug/L	0.004	86	102	133	17	KED
|	**Cu**	**65**	**0.002**	ug/L	0.003	111	58	68	11	KED
|	**Zn**	**66**	**0.108**	ug/L	0.025	23	138	233	9	KED
|	**Zn**	**67**	**0.094**	ug/L	0.024	25	20	34	9	KED
|	**As**	**75**	**0.007**	ug/L	0.005	66	5	8	24	KED
⌊	**Se**	**78**	**-0.042**	ug/L	0.059	140	17	16	14	KED
	Y	**89**		ug/L			969026	965799	1	Standard
	Kr	**83**		ug/L			90	95	16	Standard
⌈>	**In-1**	**115**		ug/L			29579	30845	1	KED
|	**Cd**	**111**	**0.005**	ug/L	0.002	36	2	4	20	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.005	74	1	8	64	KED
⌈>	**In**	**115**		ug/L			1949131	2000062	1	Standard
|	**Ag**	**107**	**0.009**	ug/L	0.002	17	71	344	14	Standard
|	**Ba**	**135**	**0.006**	ug/L	0.003	49	150	208	13	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.002	264	258	274	10	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3862146	0	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.001	38	670	1169	16	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0366-04
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 16:30:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	20751	1	Standard
	Cl	37		ug/L			6593477	7220031	0	Standard
>	Sc	45		ug/L			1335244	1484754	2	Standard
	Cr	52	9.447	ug/L	0.381	4	23740	274833	1	Standard
	Cr	53	9.516	ug/L	0.248	2	139	29954	1	Standard
>	Ge	72		ug/L			113005	121384	1	KED
	Ni	60	9.916	ug/L	0.247	2	95	21595	1	KED
	Ni	62	9.935	ug/L	0.383	3	22	3532	3	KED
	Cu	63	9.869	ug/L	0.206	2	102	63514	0	KED
	Cu	65	9.785	ug/L	0.299	3	58	31720	1	KED
	Zn	66	19.298	ug/L	0.244	1	138	16399	1	KED
	Zn	67	20.570	ug/L	0.801	3	20	2936	2	KED
	As	75	2.182	ug/L	0.110	5	5	937	3	KED
	Se	78	0.453	ug/L	0.031	6	17	38	5	KED
	Y	89		ug/L			969026	1219985	2	Standard
	Kr	83		ug/L			90	125	16	Standard
>	In-1	115		ug/L			29579	30906	1	KED
	Cd	111	0.019	ug/L	0.005	25	2	10	18	KED
	Cd	114	0.022	ug/L	0.009	39	1	27	36	KED
>	In	115		ug/L			1949131	2001111	2	Standard
	Ag	107	0.071	ug/L	0.001	1	71	2174	1	Standard
	Ba	135	35.344	ug/L	0.924	2	150	325561	0	Standard
	Ba	137	35.326	ug/L	0.951	2	258	571779	0	Standard
>	Tb	159		ug/L			3793166	3987123	0	Standard
	Pb	208	1.452	ug/L	0.015	1	670	202218	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0366-03
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 16:34:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	21799	2	Standard
	Cl	37		ug/L			6593477	7105796	1	Standard
>	Sc	45		ug/L			1335244	1561505	0	Standard
	Cr	52	17.800	ug/L	0.185	1	23740	520343	1	Standard
	Cr	53	18.006	ug/L	0.150	0	139	59487	0	Standard
>	Ge	72		ug/L			113005	118276	1	KED
	Ni	60	15.360	ug/L	0.303	1	95	32543	0	KED
	Ni	62	15.197	ug/L	0.515	3	22	5251	1	KED
	Cu	63	25.621	ug/L	0.525	2	102	160499	0	KED
	Cu	65	25.386	ug/L	0.495	1	58	80112	2	KED
	Zn	66	34.667	ug/L	0.475	1	138	28587	0	KED
	Zn	67	35.592	ug/L	0.763	2	20	4936	1	KED
	As	75	4.251	ug/L	0.238	5	5	1774	3	KED
	Se	78	0.851	ug/L	0.211	24	17	53	16	KED
	Y	89		ug/L			969026	1451689	1	Standard
	Kr	83		ug/L			90	162	3	Standard
>	In-1	115		ug/L			29579	31052	0	KED
	Cd	111	0.048	ug/L	0.021	43	2	24	39	KED
	Cd	114	0.053	ug/L	0.006	10	1	63	10	KED
>	In	115		ug/L			1949131	1978425	1	Standard
	Ag	107	0.073	ug/L	0.003	3	71	2221	2	Standard
	Ba	135	55.437	ug/L	0.701	1	150	504923	1	Standard
	Ba	137	55.258	ug/L	0.541	0	258	884360	0	Standard
>	Tb	159		ug/L			3793166	4009074	0	Standard
	Pb	208	3.635	ug/L	0.026	0	670	507839	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0366-02
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 16:39:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	39198	2	Standard
	Cl	37		ug/L			6593477	7152262	2	Standard
>	Sc	45		ug/L			1335244	1523397	1	Standard
	Cr	52	13.250	ug/L	0.044	0	23740	384803	0	Standard
	Cr	53	13.185	ug/L	0.092	0	139	42539	0	Standard
>	Ge	72		ug/L			113005	120038	0	KED
	Ni	60	13.259	ug/L	0.228	1	95	28526	0	KED
	Ni	62	13.171	ug/L	0.341	2	22	4624	3	KED
	Cu	63	10.659	ug/L	0.126	1	102	67850	1	KED
	Cu	65	10.608	ug/L	0.192	1	58	34008	0	KED
	Zn	66	45.750	ug/L	0.310	0	138	38247	0	KED
	Zn	67	47.678	ug/L	0.764	1	20	6705	2	KED
	As	75	3.985	ug/L	0.003	0	5	1689	0	KED
	Se	78	0.865	ug/L	0.090	10	17	55	6	KED
	Y	89		ug/L			969026	1261311	0	Standard
	Kr	83		ug/L			90	189	14	Standard
>	In-1	115		ug/L			29579	30660	2	KED
	Cd	111	0.084	ug/L	0.012	13	2	40	10	KED
	Cd	114	0.079	ug/L	0.008	10	1	93	12	KED
>	In	115		ug/L			1949131	1989060	0	Standard
	Ag	107	0.054	ug/L	0.002	4	71	1655	3	Standard
	Ba	135	70.440	ug/L	0.877	1	150	645023	1	Standard
	Ba	137	71.065	ug/L	0.280	0	258	1143478	0	Standard
>	Tb	159		ug/L			3793166	4030537	1	Standard
	Pb	208	5.735	ug/L	0.150	2	670	804939	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL6
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 16:46:10
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	20330	4	Standard
	Cl	**37**		ug/L			6593477	7237112	0	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1414214	1	Standard
|	**Cr**	**52**	**-0.111**	ug/L	0.014	12	23740	22358	0	Standard
⌊	**Cr**	**53**	**0.007**	ug/L	0.003	41	139	169	5	Standard
⌈>	**Ge**	**72**		ug/L			113005	118824	0	KED
|	**Ni**	**60**	**-0.032**	ug/L	0.003	9	95	33	18	KED
|	**Ni**	**62**	**-0.047**	ug/L	0.011	23	22	7	50	KED
|	**Cu**	**63**	**0.015**	ug/L	0.000	1	102	204	0	KED
|	**Cu**	**65**	**0.012**	ug/L	0.005	43	58	100	16	KED
|	**Zn**	**66**	**0.335**	ug/L	0.041	12	138	421	8	KED
|	**Zn**	**67**	**0.285**	ug/L	0.052	18	20	60	11	KED
|	**As**	**75**	**0.005**	ug/L	0.005	86	5	7	25	KED
⌊	**Se**	**78**	**-0.028**	ug/L	0.088	312	17	16	22	KED
	Y	**89**		ug/L			969026	973455	0	Standard
	Kr	**83**		ug/L			90	106	17	Standard
⌈>	**In-1**	**115**		ug/L			29579	30911	0	KED
|	**Cd**	**111**	**0.010**	ug/L	0.003	30	2	6	20	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.002	81	1	3	55	KED
⌈>	**In**	**115**		ug/L			1949131	2026079	1	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.001	92	71	104	25	Standard
|	**Ba**	**135**	**0.011**	ug/L	0.002	16	150	257	8	Standard
⌊	**Ba**	**137**	**0.015**	ug/L	0.002	13	258	518	5	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3919800	1	Standard
⌊	**Pb**	**208**	**0.009**	ug/L	0.000	0	670	1987	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0382-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 16:51:47
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	22614	4	Standard
	Cl	37		ug/L			6593477	7195982	0	Standard
>	Sc	45		ug/L			1335244	1551781	1	Standard
	Cr	52	24.888	ug/L	0.463	1	23740	711971	1	Standard
	Cr	53	24.936	ug/L	0.209	0	139	81812	1	Standard
>	Ge	72		ug/L			113005	119873	1	KED
	Ni	60	28.521	ug/L	0.360	1	95	61161	0	KED
	Ni	62	28.652	ug/L	0.048	0	22	10016	1	KED
	Cu	63	14.655	ug/L	0.213	1	102	93098	0	KED
	Cu	65	14.582	ug/L	0.296	2	58	46658	1	KED
	Zn	66	30.085	ug/L	0.119	0	138	25168	2	KED
	Zn	67	32.615	ug/L	0.643	1	20	4586	1	KED
	As	75	2.757	ug/L	0.048	1	5	1169	0	KED
	Se	78	0.801	ug/L	0.056	6	17	52	4	KED
	Y	89		ug/L			969026	1393614	0	Standard
	Kr	83		ug/L			90	137	11	Standard
>	In-1	115		ug/L			29579	30529	0	KED
	Cd	111	0.067	ug/L	0.007	10	2	32	10	KED
	Cd	114	0.060	ug/L	0.005	7	1	70	8	KED
>	In	115		ug/L			1949131	2026660	2	Standard
	Ag	107	0.063	ug/L	0.004	6	71	1969	4	Standard
	Ba	135	65.430	ug/L	0.861	1	150	610363	1	Standard
	Ba	137	65.464	ug/L	2.146	3	258	1072780	1	Standard
>	Tb	159		ug/L			3793166	4097667	2	Standard
	Pb	208	2.814	ug/L	0.070	2	670	401895	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0382-02
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 16:55:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	22775	2	Standard
	Cl	37		ug/L			6593477	7170118	1	Standard
>	Sc	45		ug/L			1335244	1567985	0	Standard
	Cr	52	35.307	ug/L	0.378	1	23740	1008950	0	Standard
	Cr	53	34.610	ug/L	0.437	1	139	114668	1	Standard
>	Ge	72		ug/L			113005	119900	1	KED
	Ni	60	35.709	ug/L	0.731	2	95	76565	0	KED
	Ni	62	35.075	ug/L	0.990	2	22	12257	2	KED
	Cu	63	14.303	ug/L	0.207	1	102	90894	0	KED
	Cu	65	14.232	ug/L	0.233	1	58	45559	1	KED
	Zn	66	29.593	ug/L	0.688	2	138	24760	1	KED
	Zn	67	31.446	ug/L	0.637	2	20	4424	1	KED
	As	75	2.596	ug/L	0.102	3	5	1101	3	KED
	Se	78	1.127	ug/L	0.082	7	17	66	4	KED
	Y	89		ug/L			969026	1511695	0	Standard
	Kr	83		ug/L			90	192	2	Standard
>	In-1	115		ug/L			29579	30651	1	KED
	Cd	111	0.050	ug/L	0.005	9	2	24	7	KED
	Cd	114	0.056	ug/L	0.015	26	1	66	25	KED
>	In	115		ug/L			1949131	1983347	3	Standard
	Ag	107	0.062	ug/L	0.001	1	71	1886	4	Standard
	Ba	135	62.283	ug/L	1.952	3	150	568408	1	Standard
	Ba	137	62.582	ug/L	1.870	2	258	1003509	0	Standard
>	Tb	159		ug/L			3793166	4017617	1	Standard
	Pb	208	2.864	ug/L	0.065	2	670	401044	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0382-03
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 17:00:10
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	22064	3	Standard
	Cl	37		ug/L			6593477	7131370	0	Standard
>	Sc	45		ug/L			1335244	1577274	1	Standard
	Cr	52	22.746	ug/L	0.774	3	23740	663646	1	Standard
	Cr	53	22.462	ug/L	0.375	1	139	74905	0	Standard
>	Ge	72		ug/L			113005	119708	0	KED
	Ni	60	30.625	ug/L	0.336	1	95	65581	0	KED
	Ni	62	31.438	ug/L	0.565	1	22	10972	1	KED
	Cu	63	12.135	ug/L	0.062	0	102	77015	0	KED
	Cu	65	12.170	ug/L	0.027	0	58	38905	0	KED
	Zn	66	21.722	ug/L	0.301	1	138	18186	0	KED
	Zn	67	22.968	ug/L	0.189	0	20	3232	0	KED
	As	75	4.464	ug/L	0.100	2	5	1886	1	KED
	Se	78	1.072	ug/L	0.117	10	17	63	7	KED
	Y	89		ug/L			969026	1494837	1	Standard
	Kr	83		ug/L			90	191	6	Standard
>	In-1	115		ug/L			29579	31000	1	KED
	Cd	111	0.018	ug/L	0.009	49	2	10	36	KED
	Cd	114	0.029	ug/L	0.008	28	1	35	29	KED
>	In	115		ug/L			1949131	1978958	1	Standard
	Ag	107	0.049	ug/L	0.003	5	71	1511	4	Standard
	Ba	135	47.595	ug/L	0.288	0	150	433658	1	Standard
	Ba	137	47.804	ug/L	0.901	1	258	765288	1	Standard
>	Tb	159		ug/L			3793166	4022137	0	Standard
	Pb	208	2.529	ug/L	0.023	0	670	354648	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0382-05
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 17:04:22
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	19365	1	Standard
	Cl	37		ug/L			6593477	7091860	0	Standard
>	Sc	45		ug/L			1335244	1475727	0	Standard
	Cr	52	42.928	ug/L	0.780	1	23740	1148812	1	Standard
	Cr	53	42.423	ug/L	0.482	1	139	132241	0	Standard
>	Ge	72		ug/L			113005	118276	1	KED
	Ni	60	26.118	ug/L	0.837	3	95	55262	1	KED
	Ni	62	26.423	ug/L	0.324	1	22	9115	0	KED
	Cu	63	22.694	ug/L	0.540	2	102	142194	1	KED
	Cu	65	22.579	ug/L	0.366	1	58	71269	2	KED
	Zn	66	42.861	ug/L	0.977	2	138	35310	1	KED
	Zn	67	42.368	ug/L	0.710	1	20	5872	0	KED
	As	75	5.513	ug/L	0.092	1	5	2300	1	KED
	Se	78	0.785	ug/L	0.026	3	17	50	3	KED
	Y	89		ug/L			969026	1330525	0	Standard
	Kr	83		ug/L			90	156	9	Standard
>	In-1	115		ug/L			29579	30180	3	KED
	Cd	111	0.045	ug/L	0.004	9	2	22	6	KED
	Cd	114	0.049	ug/L	0.015	31	1	57	29	KED
>	In	115		ug/L			1949131	1974429	0	Standard
	Ag	107	0.056	ug/L	0.001	1	71	1708	1	Standard
	Ba	135	44.377	ug/L	0.664	1	150	403415	1	Standard
	Ba	137	45.067	ug/L	0.572	1	258	719889	0	Standard
>	Tb	159		ug/L			3793166	4016419	0	Standard
	Pb	208	3.532	ug/L	0.028	0	670	494302	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0382-06
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 17:08:58
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	19731	5	Standard
	Cl	37		ug/L			6593477	7050560	4	Standard
>	Sc	45		ug/L			1335244	1497607	0	Standard
	Cr	52	16.593	ug/L	0.124	0	23740	467005	1	Standard
	Cr	53	16.320	ug/L	0.362	2	139	51716	1	Standard
>	Ge	72		ug/L			113005	117934	1	KED
	Ni	60	22.671	ug/L	0.216	0	95	47857	1	KED
	Ni	62	22.535	ug/L	0.776	3	22	7753	2	KED
	Cu	63	19.391	ug/L	0.375	1	102	121166	1	KED
	Cu	65	19.422	ug/L	0.213	1	58	61131	0	KED
	Zn	66	34.377	ug/L	0.307	0	138	28273	1	KED
	Zn	67	35.835	ug/L	0.706	1	20	4956	2	KED
	As	75	3.407	ug/L	0.088	2	5	1420	3	KED
	Se	78	0.660	ug/L	0.152	23	17	45	13	KED
	Y	89		ug/L			969026	1381950	1	Standard
	Kr	83		ug/L			90	158	14	Standard
>	In-1	115		ug/L			29579	30526	1	KED
	Cd	111	0.103	ug/L	0.009	8	2	48	7	KED
	Cd	114	0.120	ug/L	0.012	10	1	141	11	KED
>	In	115		ug/L			1949131	1990143	0	Standard
	Ag	107	0.045	ug/L	0.001	3	71	1394	3	Standard
	Ba	135	49.760	ug/L	0.807	1	150	455927	1	Standard
	Ba	137	50.007	ug/L	0.207	0	258	805148	0	Standard
>	Tb	159		ug/L			3793166	3990416	1	Standard
	Pb	208	3.052	ug/L	0.030	0	670	424505	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL7
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 17:14:35
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	19718	3	Standard
	Cl	**37**		ug/L			6593477	7113914	0	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1397949	0	Standard
|	**Cr**	**52**	**-0.097**	ug/L	0.026	26	23740	22456	2	Standard
⌊	**Cr**	**53**	**0.003**	ug/L	0.002	43	139	155	3	Standard
⌈>	**Ge**	**72**		ug/L			113005	121033	0	KED
|	**Ni**	**60**	**-0.021**	ug/L	0.007	34	95	55	28	KED
|	**Ni**	**62**	**-0.039**	ug/L	0.016	39	22	10	50	KED
|	**Cu**	**63**	**0.016**	ug/L	0.002	15	102	209	6	KED
|	**Cu**	**65**	**0.012**	ug/L	0.004	35	58	102	13	KED
|	**Zn**	**66**	**0.293**	ug/L	0.064	21	138	393	12	KED
|	**Zn**	**67**	**0.327**	ug/L	0.105	32	20	67	21	KED
|	**As**	**75**	**0.002**	ug/L	0.002	127	5	6	15	KED
⌊	**Se**	**78**	**0.008**	ug/L	0.038	497	17	18	8	KED
	Y	**89**		ug/L			969026	975285	2	Standard
	Kr	**83**		ug/L			90	86	17	Standard
⌈>	**In-1**	**115**		ug/L			29579	30906	3	KED
|	**Cd**	**111**	**0.004**	ug/L	0.008	180	2	4	86	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.004	98	1	6	82	KED
⌈>	**In**	**115**		ug/L			1949131	2044150	0	Standard
|	**Ag**	**107**	**-0.000**	ug/L	0.001	6115	71	74	24	Standard
|	**Ba**	**135**	**0.009**	ug/L	0.003	33	150	246	11	Standard
⌊	**Ba**	**137**	**0.012**	ug/L	0.003	23	258	471	9	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3964010	1	Standard
⌊	**Pb**	**208**	**0.011**	ug/L	0.001	7	670	2154	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 17:20:11
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	16496	1	Standard
	Cl	**37**		ug/L			6593477	7178924	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1384416	1	Standard
|	**Cr**	**52**	**50.762**	ug/L	1.034	2	23740	1269873	1	Standard
⌊	**Cr**	**53**	**50.047**	ug/L	0.900	1	139	146315	0	Standard
⌈>	**Ge**	**72**		ug/L			113005	117185	1	KED
|	**Ni**	**60**	**49.122**	ug/L	0.321	0	95	102912	0	KED
|	**Ni**	**62**	**48.394**	ug/L	0.861	1	22	16520	1	KED
|	**Cu**	**63**	**48.240**	ug/L	0.507	1	102	299356	0	KED
|	**Cu**	**65**	**48.217**	ug/L	0.344	0	58	150705	1	KED
|	**Zn**	**66**	**49.901**	ug/L	0.850	1	138	40708	0	KED
|	**Zn**	**67**	**48.162**	ug/L	0.863	1	20	6611	1	KED
|	**As**	**75**	**49.419**	ug/L	0.386	0	5	20393	0	KED
⌊	**Se**	**78**	**50.021**	ug/L	0.778	1	17	2093	2	KED
	Y	**89**		ug/L			969026	996093	2	Standard
	Kr	**83**		ug/L			90	92	7	Standard
⌈>	**In-1**	**115**		ug/L			29579	30742	0	KED
|	**Cd**	**111**	**48.495**	ug/L	0.851	1	2	21997	1	KED
⌊	**Cd**	**114**	**48.362**	ug/L	0.306	0	1	56793	1	KED
⌈>	**In**	**115**		ug/L			1949131	1961592	2	Standard
|	**Ag**	**107**	**53.708**	ug/L	1.384	2	71	1563226	3	Standard
|	**Ba**	**135**	**50.426**	ug/L	1.257	2	150	455280	1	Standard
⌊	**Ba**	**137**	**49.835**	ug/L	0.668	1	258	790723	0	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3913358	0	Standard
⌊	**Pb**	**208**	**51.145**	ug/L	0.361	0	670	6965573	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 17:27:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	16560	1	Standard
	Cl	**37**		ug/L			6593477	7215918	3	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1392351	0	Standard
|	**Cr**	**52**	**-0.072**	ug/L	0.021	28	23740	22967	1	Standard
⌊	**Cr**	**53**	**-0.001**	ug/L	0.002	330	139	143	4	Standard
⌈>	**Ge**	**72**		ug/L			113005	120553	2	KED
|	**Ni**	**60**	**-0.035**	ug/L	0.001	1	95	25	4	KED
|	**Ni**	**62**	**-0.051**	ug/L	0.003	5	22	6	17	KED
|	**Cu**	**63**	**0.007**	ug/L	0.004	55	102	152	14	KED
|	**Cu**	**65**	**0.005**	ug/L	0.002	38	58	80	10	KED
|	**Zn**	**66**	**0.049**	ug/L	0.006	13	138	188	1	KED
|	**Zn**	**67**	**0.077**	ug/L	0.077	100	20	32	32	KED
|	**As**	**75**	**-0.001**	ug/L	0.006	1153	5	5	48	KED
⌊	**Se**	**78**	**-0.044**	ug/L	0.075	171	17	16	20	KED
	Y	**89**		ug/L			969026	1012461	1	Standard
	Kr	**83**		ug/L			90	71	8	Standard
⌈>	**In-1**	**115**		ug/L			29579	31409	0	KED
|	**Cd**	**111**	**0.008**	ug/L	0.004	54	2	6	32	KED
⌊	**Cd**	**114**	**0.005**	ug/L	0.002	55	1	6	45	KED
⌈>	**In**	**115**		ug/L			1949131	2066846	0	Standard
|	**Ag**	**107**	**0.006**	ug/L	0.001	17	71	269	12	Standard
|	**Ba**	**135**	**0.002**	ug/L	0.003	112	150	182	14	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	107	258	294	8	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3962855	1	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	20	670	1016	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0382-07
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 17:34:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	32692	1	Standard
	Cl	37		ug/L			6593477	7121136	0	Standard
>	Sc	45		ug/L			1335244	1519484	1	Standard
	Cr	52	14.499	ug/L	0.303	2	23740	417397	1	Standard
	Cr	53	14.688	ug/L	0.360	2	139	47235	0	Standard
>	Ge	72		ug/L			113005	117363	0	KED
	Ni	60	15.948	ug/L	0.293	1	95	33528	1	KED
	Ni	62	15.817	ug/L	0.130	0	22	5423	0	KED
	Cu	63	16.914	ug/L	0.109	0	102	105199	1	KED
	Cu	65	16.787	ug/L	0.116	0	58	52591	1	KED
	Zn	66	30.909	ug/L	0.156	0	138	25312	1	KED
	Zn	67	34.630	ug/L	1.160	3	20	4767	3	KED
	As	75	3.271	ug/L	0.079	2	5	1357	2	KED
	Se	78	0.955	ug/L	0.158	16	17	57	10	KED
	Y	89		ug/L			969026	1375058	2	Standard
	Kr	83		ug/L			90	187	3	Standard
>	In-1	115		ug/L			29579	30676	1	KED
	Cd	111	0.087	ug/L	0.017	18	2	41	19	KED
	Cd	114	0.083	ug/L	0.017	21	1	97	20	KED
>	In	115		ug/L			1949131	1977151	2	Standard
	Ag	107	0.067	ug/L	0.001	1	71	2028	0	Standard
	Ba	135	80.151	ug/L	1.345	1	150	729356	0	Standard
	Ba	137	80.817	ug/L	1.030	1	258	1292333	0	Standard
>	Tb	159		ug/L			3793166	4011549	1	Standard
	Pb	208	4.916	ug/L	0.058	1	670	686859	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0382-08
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 17:38:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	42969	2	Standard
	Cl	37		ug/L			6593477	7079158	1	Standard
>	Sc	45		ug/L			1335244	1549458	1	Standard
	Cr	52	15.447	ug/L	0.296	1	23740	451640	0	Standard
	Cr	53	15.203	ug/L	0.102	0	139	49864	1	Standard
>	Ge	72		ug/L			113005	121966	1	KED
	Ni	60	15.044	ug/L	0.213	1	95	32877	2	KED
	Ni	62	15.228	ug/L	0.310	2	22	5427	2	KED
	Cu	63	16.196	ug/L	0.274	1	102	104672	0	KED
	Cu	65	16.185	ug/L	0.371	2	58	52681	0	KED
	Zn	66	40.450	ug/L	0.818	2	138	34370	0	KED
	Zn	67	43.507	ug/L	0.415	0	20	6219	2	KED
	As	75	3.648	ug/L	0.092	2	5	1571	2	KED
	Se	78	0.930	ug/L	0.037	4	17	58	1	KED
	Y	89		ug/L			969026	1341935	3	Standard
	Kr	83		ug/L			90	183	5	Standard
>	In-1	115		ug/L			29579	31793	0	KED
	Cd	111	0.117	ug/L	0.018	15	2	57	15	KED
	Cd	114	0.112	ug/L	0.003	2	1	136	3	KED
>	In	115		ug/L			1949131	2022805	1	Standard
	Ag	107	0.079	ug/L	0.002	3	71	2441	4	Standard
	Ba	135	92.522	ug/L	2.359	2	150	861331	1	Standard
	Ba	137	92.967	ug/L	1.161	1	258	1521053	1	Standard
>	Tb	159		ug/L			3793166	4043664	0	Standard
	Pb	208	16.304	ug/L	0.031	0	670	2294872	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0382-09
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 17:43:35
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	46994	0	Standard
	Cl	37		ug/L			6593477	7189691	1	Standard
>	Sc	45		ug/L			1335244	1472703	2	Standard
	Cr	52	9.580	ug/L	0.168	1	23740	276147	1	Standard
	Cr	53	9.401	ug/L	0.383	4	139	29345	1	Standard
>	Ge	72		ug/L			113005	121943	2	KED
	Ni	60	12.233	ug/L	0.421	3	95	26736	1	KED
	Ni	62	12.012	ug/L	0.683	5	22	4282	3	KED
	Cu	63	7.387	ug/L	0.222	3	102	47776	0	KED
	Cu	65	7.462	ug/L	0.211	2	58	24314	1	KED
	Zn	66	26.778	ug/L	0.673	2	138	22798	1	KED
	Zn	67	32.947	ug/L	2.035	6	20	4709	4	KED
	As	75	2.975	ug/L	0.008	0	5	1282	2	KED
	Se	78	0.475	ug/L	0.075	15	17	39	8	KED
	Y	89		ug/L			969026	1137889	1	Standard
	Kr	83		ug/L			90	111	4	Standard
>	In-1	115		ug/L			29579	31243	1	KED
	Cd	111	0.097	ug/L	0.011	11	2	46	11	KED
	Cd	114	0.100	ug/L	0.017	17	1	120	17	KED
>	In	115		ug/L			1949131	2049046	1	Standard
	Ag	107	0.039	ug/L	0.001	3	71	1250	4	Standard
	Ba	135	91.218	ug/L	0.725	0	150	860356	0	Standard
	Ba	137	91.753	ug/L	1.675	1	258	1520573	0	Standard
>	Tb	159		ug/L			3793166	4039396	0	Standard
	Pb	208	12.247	ug/L	0.103	0	670	1722108	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0382-10
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 17:48:11
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	33690	4	Standard
	Cl	37		ug/L			6593477	7147859	0	Standard
>	Sc	45		ug/L			1335244	1549050	1	Standard
	Cr	52	13.125	ug/L	0.232	1	23740	387804	0	Standard
	Cr	53	13.087	ug/L	0.168	1	139	42931	0	Standard
>	Ge	72		ug/L			113005	121155	1	KED
	Ni	60	17.764	ug/L	0.274	1	95	38538	1	KED
	Ni	62	17.817	ug/L	0.219	1	22	6304	2	KED
	Cu	63	14.991	ug/L	0.320	2	102	96245	1	KED
	Cu	65	14.945	ug/L	0.141	0	58	48334	0	KED
	Zn	66	29.919	ug/L	0.602	2	138	25290	0	KED
	Zn	67	32.270	ug/L	0.638	1	20	4586	2	KED
	As	75	2.780	ug/L	0.069	2	5	1191	1	KED
	Se	78	0.717	ug/L	0.096	13	17	49	6	KED
	Y	89		ug/L			969026	1345121	1	Standard
	Kr	83		ug/L			90	153	14	Standard
>	In-1	115		ug/L			29579	31671	2	KED
	Cd	111	0.049	ug/L	0.012	24	2	25	19	KED
	Cd	114	0.057	ug/L	0.004	7	1	70	5	KED
>	In	115		ug/L			1949131	2033877	1	Standard
	Ag	107	0.041	ug/L	0.001	2	71	1325	4	Standard
	Ba	135	56.995	ug/L	1.878	3	150	533491	1	Standard
	Ba	137	56.678	ug/L	2.344	4	258	932159	2	Standard
>	Tb	159		ug/L			3793166	4102387	0	Standard
	Pb	208	5.369	ug/L	0.014	0	670	767166	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL8
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 17:55:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	19675	2	Standard
	Cl	**37**		ug/L			6593477	7071307	0	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1397734	1	Standard
|	**Cr**	**52**	**-0.096**	ug/L	0.016	17	23740	22484	2	Standard
⌊	**Cr**	**53**	**0.005**	ug/L	0.007	146	139	160	14	Standard
⌈>	**Ge**	**72**		ug/L			113005	119173	0	KED
|	**Ni**	**60**	**-0.006**	ug/L	0.042	742	95	88	102	KED
|	**Ni**	**62**	**-0.018**	ug/L	0.037	205	22	17	72	KED
|	**Cu**	**63**	**0.040**	ug/L	0.038	95	102	360	67	KED
|	**Cu**	**65**	**0.034**	ug/L	0.038	111	58	170	70	KED
|	**Zn**	**66**	**0.341**	ug/L	0.088	25	138	427	16	KED
|	**Zn**	**67**	**0.339**	ug/L	0.061	18	20	68	12	KED
|	**As**	**75**	**0.010**	ug/L	0.017	167	5	9	71	KED
⌊	**Se**	**78**	**-0.005**	ug/L	0.112	2130	17	17	25	KED
	Y	**89**		ug/L			969026	971669	0	Standard
	Kr	**83**		ug/L			90	84	10	Standard
⌈>	**In-1**	**115**		ug/L			29579	31725	1	KED
|	**Cd**	**111**	**0.006**	ug/L	0.004	71	2	5	39	KED
⌊	**Cd**	**114**	**-0.000**	ug/L	0.001	9116	1	1	102	KED
⌈>	**In**	**115**		ug/L			1949131	2036868	1	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.001	438	71	80	34	Standard
|	**Ba**	**135**	**0.011**	ug/L	0.001	8	150	259	2	Standard
⌊	**Ba**	**137**	**0.011**	ug/L	0.001	9	258	455	4	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3918128	1	Standard
⌊	**Pb**	**208**	**0.010**	ug/L	0.001	6	670	2104	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIJ0815-BLK2
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 18:00:44
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	18866	3	Standard
	Cl	**37**		ug/L			6593477	7268710	0	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1475159	1	Standard
|	**Cr**	**52**	**-0.111**	ug/L	0.013	12	23740	23311	1	Standard
⌊	**Cr**	**53**	**0.000**	ug/L	0.006	1396	139	154	11	Standard
⌈>	**Ge**	**72**		ug/L			113005	122044	0	KED
|	**Ni**	**60**	**-0.040**	ug/L	0.002	5	95	15	33	KED
|	**Ni**	**62**	**-0.046**	ug/L	0.008	17	22	8	35	KED
|	**Cu**	**63**	**0.002**	ug/L	0.002	96	102	125	11	KED
|	**Cu**	**65**	**0.004**	ug/L	0.006	133	58	76	23	KED
|	**Zn**	**66**	**0.107**	ug/L	0.034	31	138	240	11	KED
|	**Zn**	**67**	**0.113**	ug/L	0.036	32	20	38	13	KED
|	**As**	**75**	**-0.001**	ug/L	0.003	248	5	5	28	KED
⌊	**Se**	**78**	**-0.021**	ug/L	0.011	54	17	17	3	KED
	Y	**89**		ug/L			969026	1008835	1	Standard
	Kr	**83**		ug/L			90	80	18	Standard
⌈>	**In-1**	**115**		ug/L			29579	32136	1	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.002	129	2	1	69	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.002	43	1	6	35	KED
⌈>	**In**	**115**		ug/L			1949131	2100654	2	Standard
|	**Ag**	**107**	**-0.000**	ug/L	0.000	20	71	62	6	Standard
|	**Ba**	**135**	**-0.003**	ug/L	0.001	18	150	132	6	Standard
⌊	**Ba**	**137**	**-0.003**	ug/L	0.002	70	258	233	10	Standard
⌈>	**Tb**	**159**		ug/L			3793166	4001305	1	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.000	141	670	667	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIJ0815-BS2
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 18:04:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	17591	3	Standard
	Cl	**37**		ug/L			6593477	7304712	2	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1447000	1	Standard
|	**Cr**	**52**	**26.518**	ug/L	0.734	2	23740	705534	0	Standard
⌊	**Cr**	**53**	**26.157**	ug/L	0.884	3	139	79980	1	Standard
⌈>	**Ge**	**72**		ug/L			113005	121478	0	KED
|	**Ni**	**60**	**25.574**	ug/L	0.399	1	95	55591	1	KED
|	**Ni**	**62**	**25.816**	ug/L	0.856	3	22	9148	3	KED
|	**Cu**	**63**	**26.037**	ug/L	0.605	2	102	167549	1	KED
|	**Cu**	**65**	**26.021**	ug/L	0.227	0	58	84343	1	KED
|	**Zn**	**66**	**78.747**	ug/L	0.984	1	138	66513	0	KED
|	**Zn**	**67**	**75.349**	ug/L	1.024	1	20	10710	1	KED
|	**As**	**75**	**24.487**	ug/L	0.102	0	5	10478	0	KED
⌊	**Se**	**78**	**78.034**	ug/L	0.509	0	17	3374	1	KED
	Y	**89**		ug/L			969026	1009610	0	Standard
	Kr	**83**		ug/L			90	97	19	Standard
⌈>	**In-1**	**115**		ug/L			29579	31935	2	KED
|	**Cd**	**111**	**24.676**	ug/L	0.961	3	2	11623	1	KED
⌊	**Cd**	**114**	**24.627**	ug/L	0.524	2	1	30034	0	KED
⌈>	**In**	**115**		ug/L			1949131	2053818	2	Standard
|	**Ag**	**107**	**28.610**	ug/L	1.305	4	71	871171	2	Standard
|	**Ba**	**135**	**25.668**	ug/L	0.605	2	150	242705	0	Standard
⌊	**Ba**	**137**	**25.517**	ug/L	0.643	2	258	423945	0	Standard
⌈>	**Tb**	**159**		ug/L			3793166	4042718	0	Standard
⌊	**Pb**	**208**	**27.327**	ug/L	0.174	0	670	3844986	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0381-02RE1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 18:09:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	24072	2	Standard
	Cl	**37**		ug/L			6593477	7201885	2	Standard
>	**Sc**	**45**		ug/L			1335244	1580885	0	Standard
	Cr	**52**	**18.768**	ug/L	0.256	1	23740	553904	1	Standard
	Cr	**53**	**18.467**	ug/L	0.197	1	139	61761	0	Standard
>	**Ge**	**72**		ug/L			113005	120686	0	KED
	Ni	**60**	**16.825**	ug/L	0.277	1	95	36368	0	KED
	Ni	**62**	**16.638**	ug/L	0.370	2	22	5866	2	KED
	Cu	**63**	**18.215**	ug/L	0.168	0	102	116487	0	KED
	Cu	**65**	**17.964**	ug/L	0.352	1	58	57872	2	KED
	Zn	**66**	**29.674**	ug/L	0.367	1	138	24994	1	KED
	Zn	**67**	**33.491**	ug/L	0.682	2	20	4741	2	KED
	As	**75**	**3.722**	ug/L	0.076	2	5	1587	2	KED
	Se	**78**	**1.166**	ug/L	0.116	9	17	68	7	KED
	Y	**89**		ug/L			969026	1636063	0	Standard
	Kr	**83**		ug/L			90	220	6	Standard
>	**In-1**	**115**		ug/L			29579	30287	1	KED
	Cd	**111**	**0.050**	ug/L	0.005	10	2	24	10	KED
	Cd	**114**	**0.041**	ug/L	0.011	27	1	48	26	KED
>	**In**	**115**		ug/L			1949131	1980232	0	Standard
	Ag	**107**	**0.053**	ug/L	0.004	7	71	1615	7	Standard
	Ba	**135**	**77.194**	ug/L	0.836	1	150	703674	0	Standard
	Ba	**137**	**78.042**	ug/L	2.169	2	258	1250064	2	Standard
>	**Tb**	**159**		ug/L			3793166	4121648	0	Standard
	Pb	**208**	**3.341**	ug/L	0.080	2	670	479871	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0381-04RE1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 18:13:20
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	19076	4	Standard
	Cl	**37**		ug/L			6593477	7129434	2	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1567248	0	Standard
|	**Cr**	**52**	**20.504**	ug/L	0.319	1	23740	597378	2	Standard
⌊	**Cr**	**53**	**20.312**	ug/L	0.156	0	139	67330	0	Standard
⌈>	**Ge**	**72**		ug/L			113005	120636	1	KED
|	**Ni**	**60**	**20.061**	ug/L	0.319	1	95	43326	1	KED
|	**Ni**	**62**	**20.120**	ug/L	0.442	2	22	7084	1	KED
|	**Cu**	**63**	**13.695**	ug/L	0.115	0	102	87572	1	KED
|	**Cu**	**65**	**13.703**	ug/L	0.151	1	58	44133	0	KED
|	**Zn**	**66**	**25.721**	ug/L	0.197	0	138	21674	0	KED
|	**Zn**	**67**	**28.049**	ug/L	0.708	2	20	3973	2	KED
|	**As**	**75**	**2.424**	ug/L	0.030	1	5	1035	0	KED
⌊	**Se**	**78**	**0.869**	ug/L	0.182	20	17	55	14	KED
	Y	**89**		ug/L			969026	1437788	1	Standard
	Kr	**83**		ug/L			90	161	11	Standard
⌈>	**In-1**	**115**		ug/L			29579	31206	1	KED
|	**Cd**	**111**	**0.061**	ug/L	0.006	9	2	30	9	KED
⌊	**Cd**	**114**	**0.057**	ug/L	0.007	11	1	69	12	KED
⌈>	**In**	**115**		ug/L			1949131	2028611	0	Standard
|	**Ag**	**107**	**0.042**	ug/L	0.003	8	71	1325	7	Standard
|	**Ba**	**135**	**56.929**	ug/L	0.507	0	150	531667	0	Standard
⌊	**Ba**	**137**	**56.714**	ug/L	1.115	1	258	930729	1	Standard
⌈>	**Tb**	**159**		ug/L			3793166	4079058	1	Standard
⌊	**Pb**	**208**	**2.529**	ug/L	0.022	0	670	359738	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0381-05RE1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 18:17:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	16698	4	Standard
	Cl	**37**		ug/L			6593477	7120785	1	Standard
>	**Sc**	**45**		ug/L			1335244	1486219	1	Standard
	Cr	**52**	**36.839**	ug/L	1.069	2	23740	996484	1	Standard
	Cr	**53**	**35.636**	ug/L	0.286	0	139	111904	1	Standard
>	**Ge**	**72**		ug/L			113005	118024	1	KED
	Ni	**60**	**19.909**	ug/L	0.338	1	95	42061	0	KED
	Ni	**62**	**20.027**	ug/L	0.373	1	22	6899	1	KED
	Cu	**63**	**19.215**	ug/L	0.278	1	102	120153	0	KED
	Cu	**65**	**19.299**	ug/L	0.236	1	58	60786	1	KED
	Zn	**66**	**28.023**	ug/L	0.479	1	138	23092	2	KED
	Zn	**67**	**30.449**	ug/L	0.765	2	20	4217	2	KED
	As	**75**	**5.186**	ug/L	0.075	1	5	2160	0	KED
	Se	**78**	**0.779**	ug/L	0.132	16	17	50	11	KED
	Y	**89**		ug/L			969026	1372118	0	Standard
	Kr	**83**		ug/L			90	151	7	Standard
>	**In-1**	**115**		ug/L			29579	30523	1	KED
	Cd	**111**	**0.061**	ug/L	0.012	18	2	29	17	KED
	Cd	**114**	**0.054**	ug/L	0.007	12	1	64	13	KED
>	**In**	**115**		ug/L			1949131	1963131	0	Standard
	Ag	**107**	**0.051**	ug/L	0.001	2	71	1559	2	Standard
	Ba	**135**	**57.936**	ug/L	1.309	2	150	523584	1	Standard
	Ba	**137**	**58.242**	ug/L	0.745	1	258	924948	0	Standard
>	**Tb**	**159**		ug/L			3793166	4055235	0	Standard
	Pb	**208**	**2.687**	ug/L	0.048	1	670	379805	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 18:25:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	16867	2	Standard
	Cl	**37**		ug/L			6593477	7318152	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1373618	0	Standard
|	**Cr**	**52**	**50.977**	ug/L	0.586	1	23740	1265319	0	Standard
⌊	**Cr**	**53**	**49.667**	ug/L	0.490	0	139	144088	0	Standard
⌈>	**Ge**	**72**		ug/L			113005	117013	1	KED
|	**Ni**	**60**	**48.721**	ug/L	0.529	1	95	101922	1	KED
|	**Ni**	**62**	**48.512**	ug/L	0.342	0	22	16536	1	KED
|	**Cu**	**63**	**48.570**	ug/L	0.344	0	102	300966	1	KED
|	**Cu**	**65**	**48.304**	ug/L	0.461	0	58	150764	1	KED
|	**Zn**	**66**	**48.966**	ug/L	0.671	1	138	39892	1	KED
|	**Zn**	**67**	**49.049**	ug/L	0.766	1	20	6723	2	KED
|	**As**	**75**	**49.208**	ug/L	0.493	1	5	20275	0	KED
⌊	**Se**	**78**	**50.618**	ug/L	1.260	2	17	2115	4	KED
	Y	**89**		ug/L			969026	975633	2	Standard
	Kr	**83**		ug/L			90	99	12	Standard
⌈>	**In-1**	**115**		ug/L			29579	30478	1	KED
|	**Cd**	**111**	**49.800**	ug/L	0.721	1	2	22393	0	KED
⌊	**Cd**	**114**	**49.437**	ug/L	1.210	2	1	57541	0	KED
⌈>	**In**	**115**		ug/L			1949131	1987653	1	Standard
|	**Ag**	**107**	**53.048**	ug/L	1.139	2	71	1564066	0	Standard
|	**Ba**	**135**	**49.837**	ug/L	0.538	1	150	456033	0	Standard
⌊	**Ba**	**137**	**49.931**	ug/L	1.038	2	258	802820	1	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3955516	0	Standard
⌊	**Pb**	**208**	**50.893**	ug/L	0.272	0	670	7006010	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 18:32:28
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	16910	4	Standard
	Cl	**37**		ug/L			6593477	7161287	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1363609	0	Standard
|	**Cr**	**52**	**-0.068**	ug/L	0.037	53	23740	22588	3	Standard
⌊	**Cr**	**53**	**-0.002**	ug/L	0.002	95	139	137	3	Standard
⌈>	**Ge**	**72**		ug/L			113005	117760	0	KED
|	**Ni**	**60**	**-0.029**	ug/L	0.004	13	95	38	19	KED
|	**Ni**	**62**	**-0.044**	ug/L	0.003	7	22	8	12	KED
|	**Cu**	**63**	**0.003**	ug/L	0.001	31	102	126	4	KED
|	**Cu**	**65**	**0.004**	ug/L	0.001	29	58	72	5	KED
|	**Zn**	**66**	**0.076**	ug/L	0.021	27	138	206	7	KED
|	**Zn**	**67**	**0.072**	ug/L	0.093	128	20	31	40	KED
|	**As**	**75**	**0.002**	ug/L	0.003	158	5	6	21	KED
⌊	**Se**	**78**	**0.052**	ug/L	0.104	201	17	20	21	KED
	Y	**89**		ug/L			969026	960977	1	Standard
	Kr	**83**		ug/L			90	79	15	Standard
⌈>	**In-1**	**115**		ug/L			29579	30157	1	KED
|	**Cd**	**111**	**0.006**	ug/L	0.006	86	2	5	47	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.003	73	1	5	59	KED
⌈>	**In**	**115**		ug/L			1949131	2027883	0	Standard
|	**Ag**	**107**	**0.005**	ug/L	0.001	14	71	234	8	Standard
|	**Ba**	**135**	**-0.002**	ug/L	0.002	122	150	137	16	Standard
⌊	**Ba**	**137**	**-0.002**	ug/L	0.002	64	258	229	10	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3869047	0	Standard
⌊	**Pb**	**208**	**0.005**	ug/L	0.000	5	670	1346	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIK0058-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 18:37:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	19670	5	Standard
	Cl	37		ug/L			6593477	7172888	1	Standard
>	Sc	45		ug/L			1335244	1383366	2	Standard
	Cr	52	-0.048	ug/L	0.042	87	23740	23408	2	Standard
	Cr	53	0.024	ug/L	0.004	15	139	214	5	Standard
>	Ge	72		ug/L			113005	118913	1	KED
	Ni	60	-0.037	ug/L	0.000	0	95	20	0	KED
	Ni	62	-0.055	ug/L	0.003	5	22	5	21	KED
	Cu	63	0.004	ug/L	0.001	39	102	130	5	KED
	Cu	65	0.003	ug/L	0.007	279	58	69	34	KED
	Zn	66	0.559	ug/L	0.020	3	138	606	1	KED
	Zn	67	0.549	ug/L	0.068	12	20	97	11	KED
	As	75	-0.000	ug/L	0.003	1093	5	5	28	KED
	Se	78	0.021	ug/L	0.081	396	17	19	17	KED
	Y	89		ug/L			969026	975925	1	Standard
	Kr	83		ug/L			90	78	42	Standard
>	In-1	115		ug/L			29579	31237	1	KED
	Cd	111	0.007	ug/L	0.009	127	2	5	71	KED
	Cd	114	0.005	ug/L	0.002	42	1	6	33	KED
>	In	115		ug/L			1949131	2012758	0	Standard
	Ag	107	0.005	ug/L	0.000	8	71	220	6	Standard
	Ba	135	-0.004	ug/L	0.000	0	150	118	0	Standard
	Ba	137	-0.004	ug/L	0.001	32	258	196	11	Standard
>	Tb	159		ug/L			3793166	3885489	1	Standard
	Pb	208	0.000	ug/L	0.001	396	670	720	17	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIK0058-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 18:42:03
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	20206	5	Standard
	Cl	37		ug/L			6593477	7072468	0	Standard
>	Sc	45		ug/L			1335244	1342424	0	Standard
	Cr	52	26.380	ug/L	0.250	0	23740	651424	0	Standard
	Cr	53	26.130	ug/L	0.673	2	139	74141	1	Standard
>	Ge	72		ug/L			113005	117286	1	KED
	Ni	60	25.615	ug/L	0.778	3	95	53752	2	KED
	Ni	62	25.955	ug/L	0.576	2	22	8879	2	KED
	Cu	63	26.044	ug/L	0.165	0	102	161818	0	KED
	Cu	65	25.897	ug/L	0.166	0	58	81043	0	KED
	Zn	66	85.687	ug/L	0.641	0	138	69867	0	KED
	Zn	67	80.979	ug/L	1.864	2	20	11112	2	KED
	As	75	25.157	ug/L	0.280	1	5	10393	1	KED
	Se	78	85.236	ug/L	2.498	2	17	3556	2	KED
	Y	89		ug/L			969026	966079	1	Standard
	Kr	83		ug/L			90	90	10	Standard
>	In-1	115		ug/L			29579	30591	0	KED
	Cd	111	25.650	ug/L	0.509	1	2	11579	1	KED
	Cd	114	25.775	ug/L	0.252	0	1	30119	0	KED
>	In	115		ug/L			1949131	1983200	1	Standard
	Ag	107	27.814	ug/L	0.300	1	71	818382	0	Standard
	Ba	135	25.342	ug/L	0.029	0	150	231471	1	Standard
	Ba	137	25.121	ug/L	0.201	0	258	403173	0	Standard
>	Tb	159		ug/L			3793166	3815275	1	Standard
	Pb	208	27.611	ug/L	0.267	0	670	3666629	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIK0057-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 18:46:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	19395	1	Standard
	Cl	**37**		ug/L			6593477	7230628	2	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1403782	0	Standard
|	**Cr**	**52**	**-0.006**	ug/L	0.019	325	23740	24816	1	Standard
⌊	**Cr**	**53**	**0.088**	ug/L	0.007	8	139	406	5	Standard
⌈>	**Ge**	**72**		ug/L			113005	118070	0	KED
|	**Ni**	**60**	**-0.032**	ug/L	0.005	16	95	31	35	KED
|	**Ni**	**62**	**-0.053**	ug/L	0.015	27	22	5	88	KED
|	**Cu**	**63**	**0.025**	ug/L	0.001	2	102	266	2	KED
|	**Cu**	**65**	**0.029**	ug/L	0.004	13	58	151	8	KED
|	**Zn**	**66**	**0.862**	ug/L	0.063	7	138	850	5	KED
|	**Zn**	**67**	**0.924**	ug/L	0.139	15	20	148	12	KED
|	**As**	**75**	**0.005**	ug/L	0.004	85	5	7	22	KED
⌊	**Se**	**78**	**0.095**	ug/L	0.176	184	17	22	33	KED
	Y	**89**		ug/L			969026	971512	1	Standard
	Kr	**83**		ug/L			90	77	14	Standard
⌈>	**In-1**	**115**		ug/L			29579	31179	1	KED
|	**Cd**	**111**	**0.005**	ug/L	0.003	64	2	4	34	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.001	24	1	5	22	KED
⌈>	**In**	**115**		ug/L			1949131	2002682	0	Standard
|	**Ag**	**107**	**0.009**	ug/L	0.000	4	71	338	4	Standard
|	**Ba**	**135**	**0.003**	ug/L	0.004	122	150	185	20	Standard
⌊	**Ba**	**137**	**0.003**	ug/L	0.001	46	258	311	6	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3898688	0	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	7	670	956	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIK0057-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 18:50:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	21004	1	Standard
	Cl	**37**		ug/L			6593477	7272582	0	Standard
>	**Sc**	**45**		ug/L			1335244	1393790	0	Standard
	Cr	**52**	**26.119**	ug/L	0.185	0	23740	669955	0	Standard
	Cr	**53**	**25.890**	ug/L	0.157	0	139	76283	0	Standard
>	**Ge**	**72**		ug/L			113005	120879	1	KED
	Ni	**60**	**25.322**	ug/L	0.850	3	95	54756	1	KED
	Ni	**62**	**25.550**	ug/L	0.771	3	22	9007	2	KED
	Cu	**63**	**25.972**	ug/L	0.699	2	102	166275	1	KED
	Cu	**65**	**25.574**	ug/L	0.629	2	58	82481	2	KED
	Zn	**66**	**82.195**	ug/L	2.013	2	138	69067	1	KED
	Zn	**67**	**77.248**	ug/L	1.327	1	20	10924	1	KED
	As	**75**	**24.453**	ug/L	0.373	1	5	10411	0	KED
	Se	**78**	**78.949**	ug/L	1.585	2	17	3396	0	KED
	Y	**89**		ug/L			969026	994102	2	Standard
	Kr	**83**		ug/L			90	95	12	Standard
>	**In-1**	**115**		ug/L			29579	30741	2	KED
	Cd	**111**	**25.470**	ug/L	0.448	1	2	11552	1	KED
	Cd	**114**	**24.982**	ug/L	0.590	2	1	29327	0	KED
>	**In**	**115**		ug/L			1949131	2030593	1	Standard
	Ag	**107**	**27.182**	ug/L	1.140	4	71	818751	3	Standard
	Ba	**135**	**25.205**	ug/L	0.390	1	150	235681	0	Standard
	Ba	**137**	**24.931**	ug/L	0.548	2	258	409623	1	Standard
>	**Tb**	**159**		ug/L			3793166	3892203	1	Standard
	Pb	**208**	**27.461**	ug/L	0.414	1	670	3719811	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0412-09
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 18:54:39
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	26888	2	Standard
	Cl	**37**		ug/L			6593477	7223757	0	Standard
>	**Sc**	**45**		ug/L			1335244	1416651	0	Standard
	Cr	**52**	**0.482**	ug/L	0.021	4	23740	37290	0	Standard
	Cr	**53**	**0.881**	ug/L	0.004	0	139	2779	0	Standard
>	**Ge**	**72**		ug/L			113005	116638	2	KED
	Ni	**60**	**0.567**	ug/L	0.036	6	95	1278	3	KED
	Ni	**62**	**0.533**	ug/L	0.131	24	22	203	19	KED
	Cu	**63**	**0.454**	ug/L	0.029	6	102	2904	3	KED
	Cu	**65**	**0.446**	ug/L	0.023	5	58	1447	4	KED
	Zn	**66**	**1.913**	ug/L	0.039	2	138	1690	1	KED
	Zn	**67**	**2.801**	ug/L	0.085	3	20	402	4	KED
	As	**75**	**0.767**	ug/L	0.013	1	5	320	3	KED
	Se	**78**	**0.047**	ug/L	0.070	149	17	19	16	KED
	Y	**89**		ug/L			969026	966072	1	Standard
	Kr	**83**		ug/L			90	85	12	Standard
>	**In-1**	**115**		ug/L			29579	30068	1	KED
	Cd	**111**	**0.017**	ug/L	0.002	12	2	9	11	KED
	Cd	**114**	**0.010**	ug/L	0.004	35	1	12	30	KED
>	**In**	**115**		ug/L			1949131	1930796	1	Standard
	Ag	**107**	**0.007**	ug/L	0.001	7	71	282	5	Standard
	Ba	**135**	**11.809**	ug/L	0.206	1	150	105073	1	Standard
	Ba	**137**	**11.493**	ug/L	0.189	1	258	179695	0	Standard
>	**Tb**	**159**		ug/L			3793166	3845131	1	Standard
	Pb	**208**	**0.085**	ug/L	0.002	2	670	12059	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0412-11
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 18:59:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	31156	4	Standard
	Cl	**37**		ug/L			6593477	7365973	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1452630	0	Standard
|	**Cr**	**52**	**0.298**	ug/L	0.039	13	23740	33480	2	Standard
⌊	**Cr**	**53**	**0.839**	ug/L	0.033	3	139	2721	3	Standard
⌈>	**Ge**	**72**		ug/L			113005	117298	0	KED
|	**Ni**	**60**	**0.964**	ug/L	0.025	2	95	2118	2	KED
|	**Ni**	**62**	**0.941**	ug/L	0.071	7	22	344	7	KED
|	**Cu**	**63**	**0.647**	ug/L	0.008	1	102	4124	1	KED
|	**Cu**	**65**	**0.635**	ug/L	0.016	2	58	2045	2	KED
|	**Zn**	**66**	**1.801**	ug/L	0.100	5	138	1608	5	KED
|	**Zn**	**67**	**2.446**	ug/L	0.091	3	20	356	4	KED
|	**As**	**75**	**3.491**	ug/L	0.095	2	5	1446	1	KED
⌊	**Se**	**78**	**0.052**	ug/L	0.105	202	17	20	22	KED
	Y	**89**		ug/L			969026	977507	2	Standard
	Kr	**83**		ug/L			90	86	5	Standard
⌈>	**In-1**	**115**		ug/L			29579	30102	1	KED
|	**Cd**	**111**	**0.006**	ug/L	0.002	38	2	4	20	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.001	14	1	8	13	KED
⌈>	**In**	**115**		ug/L			1949131	1970719	0	Standard
|	**Ag**	**107**	**0.003**	ug/L	0.000	6	71	173	3	Standard
|	**Ba**	**135**	**10.716**	ug/L	0.127	1	150	97350	1	Standard
⌊	**Ba**	**137**	**10.704**	ug/L	0.095	0	258	170872	0	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3914871	2	Standard
⌊	**Pb**	**208**	**0.116**	ug/L	0.001	1	670	16537	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL9
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 19:03:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	19287	4	Standard
	Cl	**37**		ug/L			6593477	7127717	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1359141	1	Standard
|	**Cr**	**52**	**-0.021**	ug/L	0.022	103	23740	23648	1	Standard
⌊	**Cr**	**53**	**0.007**	ug/L	0.004	64	139	160	6	Standard
⌈>	**Ge**	**72**		ug/L			113005	119353	1	KED
|	**Ni**	**60**	**-0.034**	ug/L	0.002	7	95	28	17	KED
|	**Ni**	**62**	**-0.049**	ug/L	0.008	16	22	6	41	KED
|	**Cu**	**63**	**0.006**	ug/L	0.003	52	102	146	12	KED
|	**Cu**	**65**	**0.005**	ug/L	0.003	53	58	76	11	KED
|	**Zn**	**66**	**0.085**	ug/L	0.038	44	138	216	13	KED
|	**Zn**	**67**	**0.096**	ug/L	0.102	106	20	34	42	KED
|	**As**	**75**	**-0.003**	ug/L	0.002	60	5	4	19	KED
⌊	**Se**	**78**	**-0.008**	ug/L	0.042	543	17	17	9	KED
	Y	**89**		ug/L			969026	970782	1	Standard
	Kr	**83**		ug/L			90	85	10	Standard
⌈>	**In-1**	**115**		ug/L			29579	31045	1	KED
|	**Cd**	**111**	**0.001**	ug/L	0.002	180	2	2	33	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.002	335	1	1	111	KED
⌈>	**In**	**115**		ug/L			1949131	1977591	0	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.000	7	71	126	3	Standard
|	**Ba**	**135**	**0.001**	ug/L	0.002	148	150	165	11	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	97	258	285	8	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3805899	1	Standard
⌊	**Pb**	**208**	**0.003**	ug/L	0.000	7	670	1116	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0381-01RE1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 19:09:28
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	17941	3	Standard
	Cl	**37**		ug/L			6593477	7159496	2	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1465293	0	Standard
|	**Cr**	**52**	**19.310**	ug/L	0.241	1	23740	527461	0	Standard
⌊	**Cr**	**53**	**18.911**	ug/L	0.261	1	139	58615	0	Standard
⌈>	**Ge**	**72**		ug/L			113005	112009	7	KED
|	**Ni**	**60**	**17.406**	ug/L	1.049	6	95	34810	2	KED
|	**Ni**	**62**	**17.077**	ug/L	1.658	9	22	5559	1	KED
|	**Cu**	**63**	**17.004**	ug/L	1.061	6	102	100609	2	KED
|	**Cu**	**65**	**16.971**	ug/L	1.439	8	58	50525	2	KED
|	**Zn**	**66**	**28.089**	ug/L	2.208	7	138	21875	0	KED
|	**Zn**	**67**	**30.650**	ug/L	2.839	9	20	4010	2	KED
|	**As**	**75**	**2.935**	ug/L	0.302	10	5	1156	2	KED
⌊	**Se**	**78**	**0.884**	ug/L	0.241	27	17	51	11	KED
	Y	**89**		ug/L			969026	1387767	2	Standard
	Kr	**83**		ug/L			90	163	15	Standard
⌈>	**In-1**	**115**		ug/L			29579	29677	1	KED
|	**Cd**	**111**	**0.065**	ug/L	0.016	24	2	30	21	KED
⌊	**Cd**	**114**	**0.063**	ug/L	0.012	18	1	71	16	KED
⌈>	**In**	**115**		ug/L			1949131	1988251	0	Standard
|	**Ag**	**107**	**0.032**	ug/L	0.003	10	71	1002	9	Standard
|	**Ba**	**135**	**52.958**	ug/L	0.760	1	150	484766	1	Standard
⌊	**Ba**	**137**	**52.845**	ug/L	0.488	0	258	850026	0	Standard
⌈>	**Tb**	**159**		ug/L			3793166	4002489	1	Standard
⌊	**Pb**	**208**	**3.270**	ug/L	0.072	2	670	456057	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIJ0815-DUP2
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 19:13:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	17188	1	Standard
	Cl	**37**		ug/L			6593477	7139935	0	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1495309	2	Standard
|	**Cr**	**52**	**21.695**	ug/L	0.587	2	23740	601240	1	Standard
⌊	**Cr**	**53**	**21.434**	ug/L	0.559	2	139	67750	0	Standard
⌈>	**Ge**	**72**		ug/L			113005	118428	1	KED
|	**Ni**	**60**	**18.534**	ug/L	0.390	2	95	39297	1	KED
|	**Ni**	**62**	**18.539**	ug/L	0.588	3	22	6408	1	KED
|	**Cu**	**63**	**21.307**	ug/L	0.283	1	102	133677	0	KED
|	**Cu**	**65**	**21.287**	ug/L	0.151	0	58	67274	1	KED
|	**Zn**	**66**	**34.311**	ug/L	0.708	2	138	28336	2	KED
|	**Zn**	**67**	**36.537**	ug/L	1.189	3	20	5072	1	KED
|	**As**	**75**	**4.542**	ug/L	0.021	0	5	1899	1	KED
⌊	**Se**	**78**	**1.025**	ug/L	0.068	6	17	61	6	KED
	Y	**89**		ug/L			969026	1486702	0	Standard
	Kr	**83**		ug/L			90	168	3	Standard
⌈>	**In-1**	**115**		ug/L			29579	30588	1	KED
|	**Cd**	**111**	**0.054**	ug/L	0.009	16	2	26	16	KED
⌊	**Cd**	**114**	**0.054**	ug/L	0.006	10	1	63	10	KED
⌈>	**In**	**115**		ug/L			1949131	1950178	0	Standard
|	**Ag**	**107**	**0.040**	ug/L	0.000	0	71	1238	0	Standard
|	**Ba**	**135**	**68.784**	ug/L	0.683	0	150	617524	0	Standard
⌊	**Ba**	**137**	**68.790**	ug/L	0.837	1	258	1085204	0	Standard
⌈>	**Tb**	**159**		ug/L			3793166	4024992	1	Standard
⌊	**Pb**	**208**	**3.543**	ug/L	0.074	2	670	496819	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIJ0815-MS2
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, November 03, 2020 19:18:16
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	15932	6	Standard
	Cl	**37**		ug/L			6593477	7136403	0	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1501249	0	Standard
|	**Cr**	**52**	**38.110**	ug/L	1.065	2	23740	1040489	2	Standard
⌊	**Cr**	**53**	**37.291**	ug/L	0.579	1	139	118272	1	Standard
⌈>	**Ge**	**72**		ug/L			113005	116890	1	KED
|	**Ni**	**60**	**40.704**	ug/L	0.435	1	95	85074	0	KED
|	**Ni**	**62**	**39.936**	ug/L	0.654	1	22	13602	0	KED
|	**Cu**	**63**	**47.126**	ug/L	0.846	1	102	291729	2	KED
|	**Cu**	**65**	**47.590**	ug/L	0.485	1	58	148363	0	KED
|	**Zn**	**66**	**108.515**	ug/L	0.432	0	138	88146	1	KED
|	**Zn**	**67**	**105.572**	ug/L	0.500	0	20	14430	1	KED
|	**As**	**75**	**25.508**	ug/L	0.275	1	5	10503	2	KED
⌊	**Se**	**78**	**74.078**	ug/L	0.922	1	17	3083	1	KED
	Y	**89**		ug/L			969026	1487650	2	Standard
	Kr	**83**		ug/L			90	186	11	Standard
⌈>	**In-1**	**115**		ug/L			29579	30500	2	KED
|	**Cd**	**111**	**23.766**	ug/L	0.744	3	2	10692	1	KED
⌊	**Cd**	**114**	**23.574**	ug/L	0.547	2	1	27457	0	KED
⌈>	**In**	**115**		ug/L			1949131	1932822	2	Standard
|	**Ag**	**107**	**24.498**	ug/L	0.675	2	71	702642	4	Standard
|	**Ba**	**135**	**84.958**	ug/L	1.731	2	150	755712	1	Standard
⌊	**Ba**	**137**	**85.985**	ug/L	1.720	1	258	1343942	0	Standard
⌈>	**Tb**	**159**		ug/L			3793166	4029016	1	Standard
⌊	**Pb**	**208**	**28.327**	ug/L	0.142	0	670	3972042	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV8
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 19:25:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	15912	5	Standard
	Cl	**37**		ug/L			6593477	7233834	3	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1334845	6	Standard
|	**Cr**	**52**	**52.217**	ug/L	2.896	5	23740	1255922	2	Standard
⌊	**Cr**	**53**	**50.021**	ug/L	2.321	4	139	140732	2	Standard
⌈>	**Ge**	**72**		ug/L			113005	117763	2	KED
|	**Ni**	**60**	**49.062**	ug/L	1.198	2	95	103265	0	KED
|	**Ni**	**62**	**48.947**	ug/L	0.593	1	22	16795	3	KED
|	**Cu**	**63**	**48.850**	ug/L	0.251	0	102	304648	1	KED
|	**Cu**	**65**	**48.980**	ug/L	0.442	0	58	153840	1	KED
|	**Zn**	**66**	**50.785**	ug/L	1.291	2	138	41623	0	KED
|	**Zn**	**67**	**49.559**	ug/L	0.799	1	20	6835	1	KED
|	**As**	**75**	**49.678**	ug/L	0.537	1	5	20600	1	KED
⌊	**Se**	**78**	**50.552**	ug/L	1.560	3	17	2125	2	KED
	Y	**89**		ug/L			969026	963400	5	Standard
	Kr	**83**		ug/L			90	86	13	Standard
⌈>	**In-1**	**115**		ug/L			29579	30872	0	KED
|	**Cd**	**111**	**49.548**	ug/L	0.370	0	2	22571	0	KED
⌊	**Cd**	**114**	**49.430**	ug/L	0.656	1	1	58289	0	KED
⌈>	**In**	**115**		ug/L			1949131	1926590	5	Standard
|	**Ag**	**107**	**54.239**	ug/L	1.760	3	71	1549581	4	Standard
|	**Ba**	**135**	**51.737**	ug/L	2.317	4	150	458275	2	Standard
⌊	**Ba**	**137**	**51.194**	ug/L	1.846	3	258	796978	1	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3816150	4	Standard
⌊	**Pb**	**208**	**53.191**	ug/L	1.680	3	670	7057228	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB8
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 19:32:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	16005	1	Standard
	Cl	**37**		ug/L			6593477	7246560	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1374928	0	Standard
|	**Cr**	**52**	**-0.087**	ug/L	0.021	24	23740	22333	1	Standard
⌊	**Cr**	**53**	**0.004**	ug/L	0.008	184	139	155	13	Standard
⌈>	**Ge**	**72**		ug/L			113005	117782	1	KED
|	**Ni**	**60**	**-0.032**	ug/L	0.005	14	95	31	33	KED
|	**Ni**	**62**	**-0.053**	ug/L	0.000	0	22	5	0	KED
|	**Cu**	**63**	**0.002**	ug/L	0.001	71	102	116	7	KED
|	**Cu**	**65**	**0.001**	ug/L	0.004	697	58	62	21	KED
|	**Zn**	**66**	**0.010**	ug/L	0.015	152	138	152	6	KED
|	**Zn**	**67**	**0.072**	ug/L	0.046	63	20	31	21	KED
|	**As**	**75**	**0.006**	ug/L	0.005	78	5	7	24	KED
⌊	**Se**	**78**	**0.029**	ug/L	0.028	96	17	19	6	KED
	Y	**89**		ug/L			969026	984851	1	Standard
	Kr	**83**		ug/L			90	85	14	Standard
⌈>	**In-1**	**115**		ug/L			29579	31109	1	KED
|	**Cd**	**111**	**0.004**	ug/L	0.004	110	2	4	48	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.002	76	1	4	59	KED
⌈>	**In**	**115**		ug/L			1949131	1996838	0	Standard
|	**Ag**	**107**	**0.007**	ug/L	0.001	6	71	287	5	Standard
|	**Ba**	**135**	**-0.001**	ug/L	0.003	191	150	141	16	Standard
⌊	**Ba**	**137**	**-0.000**	ug/L	0.002	446	258	257	13	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3874485	1	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.000	7	670	1205	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0412-13
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 19:36:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	29287	4	Standard
	Cl	**37**		ug/L			6593477	7062162	3	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1353227	7	Standard
|	**Cr**	**52**	**0.432**	ug/L	0.031	7	23740	34376	5	Standard
⌊	**Cr**	**53**	**0.909**	ug/L	0.017	1	139	2737	7	Standard
⌈>	**Ge**	**72**		ug/L			113005	117844	1	KED
|	**Ni**	**60**	**0.933**	ug/L	0.048	5	95	2061	3	KED
|	**Ni**	**62**	**0.958**	ug/L	0.046	4	22	352	5	KED
|	**Cu**	**63**	**0.515**	ug/L	0.014	2	102	3317	3	KED
|	**Cu**	**65**	**0.526**	ug/L	0.020	3	58	1714	5	KED
|	**Zn**	**66**	**1.724**	ug/L	0.111	6	138	1554	6	KED
|	**Zn**	**67**	**2.485**	ug/L	0.143	5	20	363	5	KED
|	**As**	**75**	**3.759**	ug/L	0.018	0	5	1565	1	KED
⌊	**Se**	**78**	**0.070**	ug/L	0.033	46	17	20	7	KED
	Y	**89**		ug/L			969026	927723	7	Standard
	Kr	**83**		ug/L			90	92	15	Standard
⌈>	**In-1**	**115**		ug/L			29579	29922	2	KED
|	**Cd**	**111**	**0.006**	ug/L	0.004	77	2	4	40	KED
⌊	**Cd**	**114**	**0.007**	ug/L	0.002	24	1	8	21	KED
⌈>	**In**	**115**		ug/L			1949131	1862542	7	Standard
|	**Ag**	**107**	**0.006**	ug/L	0.000	3	71	223	5	Standard
|	**Ba**	**135**	**9.834**	ug/L	0.148	1	150	84384	5	Standard
⌊	**Ba**	**137**	**9.681**	ug/L	0.197	2	258	145932	5	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3644545	5	Standard
⌊	**Pb**	**208**	**0.096**	ug/L	0.002	2	670	12816	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0412-15
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 19:40:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	33443	5	Standard
	Cl	**37**		ug/L			6593477	7343484	0	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1415585	0	Standard
|	**Cr**	**52**	**0.509**	ug/L	0.030	5	23740	37933	2	Standard
⌊	**Cr**	**53**	**1.097**	ug/L	0.045	4	139	3424	3	Standard
⌈>	**Ge**	**72**		ug/L			113005	118949	0	KED
|	**Ni**	**60**	**1.546**	ug/L	0.054	3	95	3383	2	KED
|	**Ni**	**62**	**1.476**	ug/L	0.097	6	22	534	5	KED
|	**Cu**	**63**	**2.484**	ug/L	0.044	1	102	15750	2	KED
|	**Cu**	**65**	**2.542**	ug/L	0.064	2	58	8123	1	KED
|	**Zn**	**66**	**4.041**	ug/L	0.057	1	138	3480	1	KED
|	**Zn**	**67**	**5.321**	ug/L	0.244	4	20	760	5	KED
|	**As**	**75**	**1.252**	ug/L	0.027	2	5	529	2	KED
⌊	**Se**	**78**	**0.099**	ug/L	0.064	64	17	22	12	KED
	Y	**89**		ug/L			969026	993517	2	Standard
	Kr	**83**		ug/L			90	78	13	Standard
⌈>	**In-1**	**115**		ug/L			29579	30368	1	KED
|	**Cd**	**111**	**0.010**	ug/L	0.004	40	2	6	28	KED
⌊	**Cd**	**114**	**0.012**	ug/L	0.006	52	1	14	48	KED
⌈>	**In**	**115**		ug/L			1949131	1972589	0	Standard
|	**Ag**	**107**	**0.018**	ug/L	0.001	5	71	591	4	Standard
|	**Ba**	**135**	**20.806**	ug/L	0.305	1	150	189042	1	Standard
⌊	**Ba**	**137**	**20.929**	ug/L	0.410	1	258	334132	1	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3921270	0	Standard
⌊	**Pb**	**208**	**0.087**	ug/L	0.003	3	670	12501	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0412-17
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 19:44:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	27741	4	Standard
	Cl	**37**		ug/L			6593477	7175707	1	Standard
>	**Sc**	**45**		ug/L			1335244	1444645	0	Standard
	Cr	**52**	**0.258**	ug/L	0.014	5	23740	32299	1	Standard
	Cr	**53**	**0.668**	ug/L	0.008	1	139	2187	1	Standard
>	**Ge**	**72**		ug/L			113005	116794	1	KED
	Ni	**60**	**0.844**	ug/L	0.026	3	95	1859	4	KED
	Ni	**62**	**0.813**	ug/L	0.032	3	22	299	2	KED
	Cu	**63**	**0.716**	ug/L	0.010	1	102	4532	1	KED
	Cu	**65**	**0.709**	ug/L	0.011	1	58	2268	0	KED
	Zn	**66**	**1.724**	ug/L	0.068	3	138	1539	2	KED
	Zn	**67**	**2.923**	ug/L	0.159	5	20	419	5	KED
	As	**75**	**3.541**	ug/L	0.115	3	5	1461	2	KED
	Se	**78**	**0.146**	ug/L	0.098	67	17	23	17	KED
	Y	**89**		ug/L			969026	1007857	1	Standard
	Kr	**83**		ug/L			90	92	15	Standard
>	**In-1**	**115**		ug/L			29579	29708	1	KED
	Cd	**111**	**0.007**	ug/L	0.005	63	2	5	36	KED
	Cd	**114**	**0.009**	ug/L	0.001	10	1	11	7	KED
>	**In**	**115**		ug/L			1949131	1934769	2	Standard
	Ag	**107**	**0.003**	ug/L	0.001	20	71	144	11	Standard
	Ba	**135**	**15.305**	ug/L	0.738	4	150	136310	1	Standard
	Ba	**137**	**15.248**	ug/L	0.450	2	258	238719	0	Standard
>	**Tb**	**159**		ug/L			3793166	3946880	2	Standard
	Pb	**208**	**0.102**	ug/L	0.004	4	670	14696	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0412-19
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 19:48:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	27404	3	Standard
	Cl	**37**		ug/L			6593477	7215978	1	Standard
>	**Sc**	**45**		ug/L			1335244	1415570	1	Standard
	Cr	**52**	**0.223**	ug/L	0.017	7	23740	30761	0	Standard
	Cr	**53**	**0.628**	ug/L	0.005	0	139	2024	0	Standard
>	**Ge**	**72**		ug/L			113005	118833	2	KED
	Ni	**60**	**0.547**	ug/L	0.016	2	95	1261	4	KED
	Ni	**62**	**0.536**	ug/L	0.022	4	22	209	5	KED
	Cu	**63**	**0.938**	ug/L	0.020	2	102	6008	3	KED
	Cu	**65**	**0.914**	ug/L	0.021	2	58	2957	1	KED
	Zn	**66**	**5.834**	ug/L	0.203	3	138	4953	1	KED
	Zn	**67**	**6.046**	ug/L	0.059	0	20	860	1	KED
	As	**75**	**1.508**	ug/L	0.035	2	5	636	2	KED
	Se	**78**	**-0.013**	ug/L	0.057	455	17	17	13	KED
	Y	**89**		ug/L			969026	988954	0	Standard
	Kr	**83**		ug/L			90	85	11	Standard
>	**In-1**	**115**		ug/L			29579	30659	0	KED
	Cd	**111**	**0.004**	ug/L	0.003	80	2	4	35	KED
	Cd	**114**	**0.014**	ug/L	0.010	72	1	17	67	KED
>	**In**	**115**		ug/L			1949131	2001094	2	Standard
	Ag	**107**	**0.002**	ug/L	0.001	66	71	121	25	Standard
	Ba	**135**	**10.864**	ug/L	0.191	1	150	100191	1	Standard
	Ba	**137**	**10.911**	ug/L	0.214	1	258	176793	0	Standard
>	**Tb**	**159**		ug/L			3793166	3923322	1	Standard
	Pb	**208**	**0.076**	ug/L	0.003	3	670	11121	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0412-21
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 19:53:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	25405	5	Standard
	Cl	**37**		ug/L			6593477	7259517	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1427773	0	Standard
|	**Cr**	**52**	**0.450**	ug/L	0.025	5	23740	36772	1	Standard
⌊	**Cr**	**53**	**0.891**	ug/L	0.009	0	139	2833	1	Standard
⌈>	**Ge**	**72**		ug/L			113005	115828	0	KED
|	**Ni**	**60**	**0.573**	ug/L	0.024	4	95	1283	3	KED
|	**Ni**	**62**	**0.511**	ug/L	0.054	10	22	195	9	KED
|	**Cu**	**63**	**0.424**	ug/L	0.004	0	102	2702	0	KED
|	**Cu**	**65**	**0.428**	ug/L	0.022	5	58	1382	4	KED
|	**Zn**	**66**	**5.757**	ug/L	0.120	2	138	4768	1	KED
|	**Zn**	**67**	**6.039**	ug/L	0.412	6	20	837	6	KED
|	**As**	**75**	**0.772**	ug/L	0.023	2	5	320	3	KED
⌊	**Se**	**78**	**0.071**	ug/L	0.045	62	17	20	9	KED
	Y	**89**		ug/L			969026	980525	2	Standard
	Kr	**83**		ug/L			90	66	3	Standard
⌈>	**In-1**	**115**		ug/L			29579	30035	0	KED
|	**Cd**	**111**	**0.004**	ug/L	0.004	105	2	4	48	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.003	58	1	7	50	KED
⌈>	**In**	**115**		ug/L			1949131	1945425	1	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.001	112	71	95	27	Standard
|	**Ba**	**135**	**11.620**	ug/L	0.063	0	150	104193	1	Standard
⌊	**Ba**	**137**	**11.370**	ug/L	0.187	1	258	179125	0	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3935689	0	Standard
⌊	**Pb**	**208**	**0.028**	ug/L	0.001	2	670	4510	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0412-23
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 19:57:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			16177	79073	3	Standard
	Cl	37		ug/L			6593477	7102881	0	Standard
>	Sc	45		ug/L			1335244	1438210	0	Standard
	Cr	52	5.417	ug/L	0.093	1	23740	163640	1	Standard
	Cr	53	5.542	ug/L	0.104	1	139	16967	1	Standard
>	Ge	72		ug/L			113005	113614	0	KED
	Ni	60	5.268	ug/L	0.046	0	95	10786	1	KED
	Ni	62	5.375	ug/L	0.064	1	22	1799	0	KED
	Cu	63	2.919	ug/L	0.109	3	102	17655	3	KED
	Cu	65	2.971	ug/L	0.046	1	58	9058	1	KED
	Zn	66	4.696	ug/L	0.075	1	138	3841	2	KED
	Zn	67	5.656	ug/L	0.146	2	20	770	2	KED
	As	75	16.574	ug/L	0.279	1	5	6634	1	KED
	Se	78	0.574	ug/L	0.108	18	17	40	11	KED
	Y	89		ug/L			969026	1027493	2	Standard
	Kr	83		ug/L			90	82	11	Standard
>	In-1	115		ug/L			29579	29249	0	KED
	Cd	111	0.022	ug/L	0.003	15	2	11	12	KED
	Cd	114	0.024	ug/L	0.007	29	1	27	28	KED
>	In	115		ug/L			1949131	1889579	0	Standard
	Ag	107	0.020	ug/L	0.009	46	71	636	41	Standard
	Ba	135	17.233	ug/L	0.328	1	150	150011	1	Standard
	Ba	137	17.271	ug/L	0.326	1	258	264172	1	Standard
>	Tb	159		ug/L			3793166	3865095	1	Standard
	Pb	208	2.505	ug/L	0.044	1	670	337513	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0389-02
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 20:01:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	21505	2	Standard
	Cl	**37**		ug/L			6593477	7796999	0	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1401932	1	Standard
|	**Cr**	**52**	**0.027**	ug/L	0.021	78	23740	25582	1	Standard
⌊	**Cr**	**53**	**1.030**	ug/L	0.018	1	139	3192	1	Standard
⌈>	**Ge**	**72**		ug/L			113005	115912	0	KED
|	**Ni**	**60**	**1.568**	ug/L	0.072	4	95	3343	3	KED
|	**Ni**	**62**	**1.497**	ug/L	0.059	3	22	528	4	KED
|	**Cu**	**63**	**0.586**	ug/L	0.009	1	102	3703	0	KED
|	**Cu**	**65**	**0.586**	ug/L	0.012	2	58	1871	2	KED
|	**Zn**	**66**	**1.114**	ug/L	0.022	1	138	1037	0	KED
|	**Zn**	**67**	**1.563**	ug/L	0.072	4	20	232	4	KED
|	**As**	**75**	**0.462**	ug/L	0.024	5	5	194	5	KED
⌊	**Se**	**78**	**-0.026**	ug/L	0.085	325	17	16	21	KED
	Y	**89**		ug/L			969026	994663	0	Standard
	Kr	**83**		ug/L			90	73	13	Standard
⌈>	**In-1**	**115**		ug/L			29579	29519	0	KED
|	**Cd**	**111**	**0.015**	ug/L	0.002	15	2	8	11	KED
⌊	**Cd**	**114**	**0.013**	ug/L	0.007	55	1	15	51	KED
⌈>	**In**	**115**		ug/L			1949131	1922260	1	Standard
|	**Ag**	**107**	**-0.000**	ug/L	0.000	48	71	60	8	Standard
|	**Ba**	**135**	**9.019**	ug/L	0.191	2	150	79922	0	Standard
⌊	**Ba**	**137**	**8.975**	ug/L	0.190	2	258	139756	0	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3866587	1	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	20	670	971	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0389-03
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 20:06:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	20398	1	Standard
	Cl	**37**		ug/L			6593477	7701442	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1383344	1	Standard
|	**Cr**	**52**	**-0.004**	ug/L	0.032	914	23740	24502	2	Standard
⌊	**Cr**	**53**	**0.892**	ug/L	0.016	1	139	2746	2	Standard
⌈>	**Ge**	**72**		ug/L			113005	115053	1	KED
|	**Ni**	**60**	**1.014**	ug/L	0.034	3	95	2180	1	KED
|	**Ni**	**62**	**1.084**	ug/L	0.048	4	22	386	2	KED
|	**Cu**	**63**	**0.366**	ug/L	0.008	2	102	2334	1	KED
|	**Cu**	**65**	**0.362**	ug/L	0.021	5	58	1168	4	KED
|	**Zn**	**66**	**1.295**	ug/L	0.037	2	138	1174	2	KED
|	**Zn**	**67**	**1.901**	ug/L	0.046	2	20	276	3	KED
|	**As**	**75**	**0.210**	ug/L	0.022	10	5	90	8	KED
⌊	**Se**	**78**	**0.055**	ug/L	0.038	70	17	19	6	KED
	Y	**89**		ug/L			969026	974660	0	Standard
	Kr	**83**		ug/L			90	71	6	Standard
⌈>	**In-1**	**115**		ug/L			29579	29461	0	KED
|	**Cd**	**111**	**0.012**	ug/L	0.004	30	2	7	21	KED
⌊	**Cd**	**114**	**0.015**	ug/L	0.004	24	1	17	24	KED
⌈>	**In**	**115**		ug/L			1949131	1891841	1	Standard
|	**Ag**	**107**	**-0.000**	ug/L	0.000	2881	71	68	15	Standard
|	**Ba**	**135**	**7.367**	ug/L	0.102	1	150	64282	0	Standard
⌊	**Ba**	**137**	**7.309**	ug/L	0.193	2	258	112056	1	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3821530	0	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.000	10	670	1175	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0389-04
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 20:10:44
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	23896	2	Standard
	Cl	**37**		ug/L			6593477	7557206	1	Standard
>	**Sc**	**45**		ug/L			1335244	1416159	0	Standard
	Cr	**52**	**0.095**	ug/L	0.010	11	23740	27552	1	Standard
	Cr	**53**	**0.672**	ug/L	0.024	3	139	2155	2	Standard
>	**Ge**	**72**		ug/L			113005	115841	1	KED
	Ni	**60**	**2.133**	ug/L	0.028	1	95	4511	1	KED
	Ni	**62**	**2.220**	ug/L	0.030	1	22	771	0	KED
	Cu	**63**	**1.073**	ug/L	0.031	2	102	6682	1	KED
	Cu	**65**	**1.082**	ug/L	0.005	0	58	3401	1	KED
	Zn	**66**	**1.230**	ug/L	0.035	2	138	1130	3	KED
	Zn	**67**	**1.832**	ug/L	0.080	4	20	268	3	KED
	As	**75**	**0.405**	ug/L	0.025	6	5	170	4	KED
	Se	**78**	**0.038**	ug/L	0.094	247	17	19	21	KED
	Y	**89**		ug/L			969026	983538	1	Standard
	Kr	**83**		ug/L			90	93	7	Standard
>	**In-1**	**115**		ug/L			29579	29789	0	KED
	Cd	**111**	**0.011**	ug/L	0.008	75	2	6	51	KED
	Cd	**114**	**0.011**	ug/L	0.003	23	1	13	21	KED
>	**In**	**115**		ug/L			1949131	1894665	2	Standard
	Ag	**107**	**0.001**	ug/L	0.000	52	71	92	12	Standard
	Ba	**135**	**8.216**	ug/L	0.226	2	150	71762	1	Standard
	Ba	**137**	**8.105**	ug/L	0.282	3	258	124375	0	Standard
>	**Tb**	**159**		ug/L			3793166	3873409	1	Standard
	Pb	**208**	**0.003**	ug/L	0.001	16	670	1125	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLA
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 20:16:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	18461	2	Standard
	Cl	**37**		ug/L			6593477	7297877	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1287981	4	Standard
|	**Cr**	**52**	**-0.007**	ug/L	0.036	489	23740	22708	1	Standard
⌊	**Cr**	**53**	**0.029**	ug/L	0.004	13	139	212	1	Standard
⌈>	**Ge**	**72**		ug/L			113005	118903	2	KED
|	**Ni**	**60**	**-0.036**	ug/L	0.003	8	95	24	27	KED
|	**Ni**	**62**	**-0.049**	ug/L	0.013	26	22	6	62	KED
|	**Cu**	**63**	**0.006**	ug/L	0.004	73	102	142	16	KED
|	**Cu**	**65**	**0.004**	ug/L	0.004	112	58	73	16	KED
|	**Zn**	**66**	**0.113**	ug/L	0.021	18	138	239	9	KED
|	**Zn**	**67**	**0.121**	ug/L	0.028	23	20	38	8	KED
|	**As**	**75**	**0.002**	ug/L	0.008	311	5	6	47	KED
⌊	**Se**	**78**	**-0.077**	ug/L	0.050	65	17	14	12	KED
	Y	**89**		ug/L			969026	945249	4	Standard
	Kr	**83**		ug/L			90	76	16	Standard
⌈>	**In-1**	**115**		ug/L			29579	30110	0	KED
|	**Cd**	**111**	**0.006**	ug/L	0.002	38	2	4	20	KED
⌊	**Cd**	**114**	**0.005**	ug/L	0.003	51	1	6	43	KED
⌈>	**In**	**115**		ug/L			1949131	1924102	4	Standard
|	**Ag**	**107**	**-0.000**	ug/L	0.000	82	71	60	12	Standard
|	**Ba**	**135**	**0.001**	ug/L	0.001	76	150	160	2	Standard
⌊	**Ba**	**137**	**-0.001**	ug/L	0.001	78	258	239	2	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3773927	3	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.000	11	670	1132	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV9
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 20:21:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	15292	0	Standard
	Cl	**37**		ug/L			6593477	7485627	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1329790	1	Standard
|	**Cr**	**52**	**52.269**	ug/L	0.667	1	23740	1255323	0	Standard
⌊	**Cr**	**53**	**50.625**	ug/L	1.126	2	139	142155	0	Standard
⌈>	**Ge**	**72**		ug/L			113005	118473	0	KED
|	**Ni**	**60**	**49.652**	ug/L	0.331	0	95	105169	0	KED
|	**Ni**	**62**	**49.128**	ug/L	0.637	1	22	16956	1	KED
|	**Cu**	**63**	**49.059**	ug/L	0.519	1	102	307802	0	KED
|	**Cu**	**65**	**48.910**	ug/L	0.441	0	58	154559	0	KED
|	**Zn**	**66**	**50.056**	ug/L	1.429	2	138	41291	3	KED
|	**Zn**	**67**	**50.199**	ug/L	1.198	2	20	6965	1	KED
|	**As**	**75**	**49.551**	ug/L	0.179	0	5	20673	0	KED
⌊	**Se**	**78**	**50.270**	ug/L	0.522	1	17	2126	0	KED
	Y	**89**		ug/L			969026	992289	1	Standard
	Kr	**83**		ug/L			90	90	9	Standard
⌈>	**In-1**	**115**		ug/L			29579	30972	1	KED
|	**Cd**	**111**	**49.793**	ug/L	0.175	0	2	22756	0	KED
⌊	**Cd**	**114**	**49.374**	ug/L	0.439	0	1	58416	1	KED
⌈>	**In**	**115**		ug/L			1949131	1966504	1	Standard
|	**Ag**	**107**	**53.477**	ug/L	0.873	1	71	1560231	1	Standard
|	**Ba**	**135**	**50.398**	ug/L	0.256	0	150	456287	0	Standard
⌊	**Ba**	**137**	**50.206**	ug/L	0.256	0	258	798797	1	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3989239	1	Standard
⌊	**Pb**	**208**	**51.907**	ug/L	0.806	1	670	7205009	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB9
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 20:28:53
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			16177	14910	0	Standard
	Cl	**37**		ug/L			6593477	6988900	1	Standard
⌈>	**Sc**	**45**		ug/L			1335244	1320694	1	Standard
|	**Cr**	**52**	**-0.074**	ug/L	0.014	18	23740	21743	0	Standard
⌊	**Cr**	**53**	**0.011**	ug/L	0.005	39	139	169	7	Standard
⌈>	**Ge**	**72**		ug/L			113005	117100	1	KED
|	**Ni**	**60**	**-0.035**	ug/L	0.004	10	95	26	29	KED
|	**Ni**	**62**	**-0.034**	ug/L	0.009	25	22	12	24	KED
|	**Cu**	**63**	**0.007**	ug/L	0.005	66	102	147	17	KED
|	**Cu**	**65**	**0.003**	ug/L	0.007	257	58	69	31	KED
|	**Zn**	**66**	**0.024**	ug/L	0.009	37	138	162	3	KED
|	**Zn**	**67**	**0.064**	ug/L	0.057	89	20	29	26	KED
|	**As**	**75**	**0.006**	ug/L	0.006	105	5	7	31	KED
⌊	**Se**	**78**	**0.028**	ug/L	0.132	472	17	18	27	KED
	Y	**89**		ug/L			969026	962380	1	Standard
	Kr	**83**		ug/L			90	81	16	Standard
⌈>	**In-1**	**115**		ug/L			29579	30767	1	KED
|	**Cd**	**111**	**0.002**	ug/L	0.006	338	2	3	91	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.003	73	1	5	58	KED
⌈>	**In**	**115**		ug/L			1949131	1974526	0	Standard
|	**Ag**	**107**	**0.007**	ug/L	0.001	7	71	264	5	Standard
|	**Ba**	**135**	**-0.001**	ug/L	0.001	205	150	146	9	Standard
⌊	**Ba**	**137**	**-0.003**	ug/L	0.002	58	258	217	11	Standard
⌈>	**Tb**	**159**		ug/L			3793166	3860331	0	Standard
⌊	**Pb**	**208**	**0.005**	ug/L	0.001	19	670	1297	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 20:33:06
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				14969	3	Standard
	Cl	**37**		ug/L				7183425	2	Standard
⎡>	**Sc**	**45**		ug/L				1342496	1	Standard
⎢	**Cr**	**52**		ug/L				22466	1	Standard
⎣	**Cr**	**53**		ug/L				148	7	Standard
⎡>	**Ge**	**72**		ug/L				118606	0	KED
⎢	**Ni**	**60**		ug/L				26	42	KED
⎢	**Ni**	**62**		ug/L				5	66	KED
⎢	**Cu**	**63**		ug/L				120	14	KED
⎢	**Cu**	**65**		ug/L				69	13	KED
⎢	**Zn**	**66**		ug/L				176	20	KED
⎢	**Zn**	**67**		ug/L				21	35	KED
⎢	**As**	**75**		ug/L				7	11	KED
⎣	**Se**	**78**		ug/L				17	12	KED
	Y	**89**		ug/L				985374	2	Standard
	Kr	**83**		ug/L				76	4	Standard
⎡>	**In-1**	**115**		ug/L				31293	1	KED
⎢	**Cd**	**111**		ug/L				2	33	KED
⎣	**Cd**	**114**		ug/L				2	74	KED
⎡>	**In**	**115**		ug/L				2016921	1	Standard
⎢	**Ag**	**107**		ug/L				142	31	Standard
⎢	**Ba**	**135**		ug/L				113	13	Standard
⎣	**Ba**	**137**		ug/L				247	6	Standard
⎡>	**Tb**	**159**		ug/L				3915797	1	Standard
⎣	**Pb**	**208**		ug/L				1114	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVA
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 20:37:18
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	15598	3	Standard
	Cl	**37**		ug/L			7183425	7055919	2	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1317422	0	Standard
|	**Cr**	**52**	**51.179**	ug/L	0.834	1	22466	1216861	1	Standard
⌊	**Cr**	**53**	**50.543**	ug/L	0.640	1	148	140647	1	Standard
⌈>	**Ge**	**72**		ug/L			118606	117966	0	KED
|	**Ni**	**60**	**49.481**	ug/L	0.381	0	26	104287	0	KED
|	**Ni**	**62**	**49.517**	ug/L	1.157	2	5	16998	1	KED
|	**Cu**	**63**	**48.533**	ug/L	0.582	1	120	303216	0	KED
|	**Cu**	**65**	**49.271**	ug/L	0.369	0	69	155039	0	KED
|	**Zn**	**66**	**50.189**	ug/L	0.587	1	176	41253	1	KED
|	**Zn**	**67**	**50.315**	ug/L	0.512	1	21	6952	1	KED
|	**As**	**75**	**50.057**	ug/L	0.713	1	7	20796	0	KED
⌊	**Se**	**78**	**50.487**	ug/L	0.296	0	17	2126	1	KED
	Y	**89**		ug/L			985374	957521	1	Standard
	Kr	**83**		ug/L			76	102	21	Standard
⌈>	**In-1**	**115**		ug/L			31293	30428	2	KED
|	**Cd**	**111**	**49.586**	ug/L	1.428	2	2	22253	0	KED
⌊	**Cd**	**114**	**49.518**	ug/L	0.786	1	2	57540	1	KED
⌈>	**In**	**115**		ug/L			2016921	1911685	0	Standard
|	**Ag**	**107**	**52.812**	ug/L	0.646	1	142	1497953	1	Standard
|	**Ba**	**135**	**51.394**	ug/L	0.436	0	113	452319	1	Standard
⌊	**Ba**	**137**	**51.236**	ug/L	0.366	0	247	792430	1	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3882612	0	Standard
⌊	**Pb**	**208**	**52.125**	ug/L	0.807	1	1114	7043641	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBA
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 20:44:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	15020	2	Standard
	Cl	**37**		ug/L			7183425	7374102	1	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1342138	1	Standard
|	**Cr**	**52**	**0.001**	ug/L	0.029	2872	22466	22478	1	Standard
⌊	**Cr**	**53**	**-0.001**	ug/L	0.001	183	148	146	1	Standard
⌈>	**Ge**	**72**		ug/L			118606	118261	2	KED
|	**Ni**	**60**	**0.001**	ug/L	0.002	205	26	27	14	KED
|	**Ni**	**62**	**-0.007**	ug/L	0.003	43	5	3	34	KED
|	**Cu**	**63**	**-0.002**	ug/L	0.001	39	120	106	4	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.002	202	69	66	9	KED
|	**Zn**	**66**	**-0.026**	ug/L	0.026	101	176	154	13	KED
|	**Zn**	**67**	**0.023**	ug/L	0.057	252	21	24	33	KED
|	**As**	**75**	**0.007**	ug/L	0.007	97	7	10	27	KED
⌊	**Se**	**78**	**0.036**	ug/L	0.072	203	17	19	15	KED
	Y	**89**		ug/L			985374	1007964	0	Standard
	Kr	**83**		ug/L			76	75	25	Standard
⌈>	**In-1**	**115**		ug/L			31293	31035	0	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.004	207	2	1	100	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.003	105	2	6	59	KED
⌈>	**In**	**115**		ug/L			2016921	2020455	0	Standard
|	**Ag**	**107**	**0.005**	ug/L	0.000	7	142	296	4	Standard
|	**Ba**	**135**	**0.003**	ug/L	0.001	24	113	137	4	Standard
⌊	**Ba**	**137**	**-0.002**	ug/L	0.001	58	247	221	7	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3931636	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	37	1114	1269	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0389-05
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 20:48:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	19433	2	Standard
	Cl	**37**		ug/L			7183425	7290969	1	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1459670	1	Standard
|	**Cr**	**52**	**0.019**	ug/L	0.019	100	22466	24923	0	Standard
⌊	**Cr**	**53**	**0.516**	ug/L	0.011	2	148	1749	2	Standard
⌈>	**Ge**	**72**		ug/L			118606	117040	1	KED
|	**Ni**	**60**	**0.965**	ug/L	0.044	4	26	2042	4	KED
|	**Ni**	**62**	**1.002**	ug/L	0.055	5	5	346	4	KED
|	**Cu**	**63**	**0.089**	ug/L	0.004	4	120	667	2	KED
|	**Cu**	**65**	**0.091**	ug/L	0.004	4	69	351	4	KED
|	**Zn**	**66**	**1.354**	ug/L	0.020	1	176	1273	1	KED
|	**Zn**	**67**	**1.642**	ug/L	0.065	3	21	245	4	KED
|	**As**	**75**	**0.098**	ug/L	0.014	14	7	47	10	KED
⌊	**Se**	**78**	**0.059**	ug/L	0.139	235	17	19	28	KED
	Y	**89**		ug/L			985374	1003151	1	Standard
	Kr	**83**		ug/L			76	85	25	Standard
⌈>	**In-1**	**115**		ug/L			31293	29831	0	KED
|	**Cd**	**111**	**0.008**	ug/L	0.005	60	2	6	34	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.002	41	2	9	29	KED
⌈>	**In**	**115**		ug/L			2016921	1969836	0	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	52	142	186	12	Standard
|	**Ba**	**135**	**5.126**	ug/L	0.025	0	113	46587	0	Standard
⌊	**Ba**	**137**	**4.977**	ug/L	0.077	1	247	79531	1	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3907174	0	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	61	1114	1008	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0389-06
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 20:52:39
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	24013	4	Standard
	Cl	**37**		ug/L			7183425	7575377	0	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1405448	0	Standard
|	**Cr**	**52**	**0.278**	ug/L	0.012	4	22466	30456	1	Standard
⌊	**Cr**	**53**	**0.548**	ug/L	0.028	5	148	1779	4	Standard
⌈>	**Ge**	**72**		ug/L			118606	112827	0	KED
|	**Ni**	**60**	**2.141**	ug/L	0.071	3	26	4339	3	KED
|	**Ni**	**62**	**2.183**	ug/L	0.042	1	5	721	1	KED
|	**Cu**	**63**	**0.125**	ug/L	0.013	10	120	858	9	KED
|	**Cu**	**65**	**0.119**	ug/L	0.008	6	69	423	5	KED
|	**Zn**	**66**	**2.233**	ug/L	0.119	5	176	1915	5	KED
|	**Zn**	**67**	**3.203**	ug/L	0.245	7	21	442	7	KED
|	**As**	**75**	**3.218**	ug/L	0.031	0	7	1285	0	KED
⌊	**Se**	**78**	**0.083**	ug/L	0.093	111	17	20	18	KED
	Y	**89**		ug/L			985374	944184	1	Standard
	Kr	**83**		ug/L			76	84	9	Standard
⌈>	**In-1**	**115**		ug/L			31293	29344	1	KED
|	**Cd**	**111**	**0.003**	ug/L	0.005	138	2	4	48	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.001	40	2	5	20	KED
⌈>	**In**	**115**		ug/L			2016921	1849872	0	Standard
|	**Ag**	**107**	**-0.000**	ug/L	0.001	357	142	124	16	Standard
|	**Ba**	**135**	**13.766**	ug/L	0.198	1	113	117304	0	Standard
⌊	**Ba**	**137**	**13.757**	ug/L	0.107	0	247	206044	0	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3892698	2	Standard
⌊	**Pb**	**208**	**-0.003**	ug/L	0.000	13	1114	744	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0389-07
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 20:56:50
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	22760	2	Standard
	Cl	**37**		ug/L			7183425	7339359	1	Standard
>	**Sc**	**45**		ug/L			1342496	1451848	1	Standard
	Cr	**52**	**0.079**	ug/L	0.022	27	22466	26334	2	Standard
	Cr	**53**	**0.546**	ug/L	0.024	4	148	1833	2	Standard
>	**Ge**	**72**		ug/L			118606	117849	0	KED
	Ni	**60**	**0.779**	ug/L	0.029	3	26	1665	3	KED
	Ni	**62**	**0.789**	ug/L	0.109	13	5	276	14	KED
	Cu	**63**	**0.043**	ug/L	0.004	9	120	385	6	KED
	Cu	**65**	**0.042**	ug/L	0.007	15	69	201	9	KED
	Zn	**66**	**1.327**	ug/L	0.054	4	176	1260	4	KED
	Zn	**67**	**2.203**	ug/L	0.207	9	21	324	8	KED
	As	**75**	**1.059**	ug/L	0.053	5	7	446	4	KED
	Se	**78**	**0.109**	ug/L	0.052	47	17	22	9	KED
	Y	**89**		ug/L			985374	1010478	1	Standard
	Kr	**83**		ug/L			76	95	3	Standard
>	**In-1**	**115**		ug/L			31293	30414	1	KED
	Cd	**111**	**0.004**	ug/L	0.002	44	2	4	20	KED
	Cd	**114**	**0.008**	ug/L	0.000	1	2	11	0	KED
>	**In**	**115**		ug/L			2016921	1953031	1	Standard
	Ag	**107**	**0.002**	ug/L	0.001	24	142	204	8	Standard
	Ba	**135**	**10.076**	ug/L	0.185	1	113	90662	0	Standard
	Ba	**137**	**9.953**	ug/L	0.147	1	247	157441	1	Standard
>	**Tb**	**159**		ug/L			3915797	3970796	1	Standard
	Pb	**208**	**0.009**	ug/L	0.001	9	1114	2342	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0389-08
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 21:01:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	21104	5	Standard
	Cl	**37**		ug/L			7183425	7256710	1	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1443162	0	Standard
|	**Cr**	**52**	**0.106**	ug/L	0.006	5	22466	26871	1	Standard
⌊	**Cr**	**53**	**0.590**	ug/L	0.011	1	148	1956	2	Standard
⌈>	**Ge**	**72**		ug/L			118606	118239	0	KED
|	**Ni**	**60**	**7.887**	ug/L	0.040	0	26	16682	0	KED
|	**Ni**	**62**	**7.729**	ug/L	0.285	3	5	2664	3	KED
|	**Cu**	**63**	**0.359**	ug/L	0.020	5	120	2365	5	KED
|	**Cu**	**65**	**0.379**	ug/L	0.032	8	69	1263	7	KED
|	**Zn**	**66**	**1.336**	ug/L	0.097	7	176	1271	5	KED
|	**Zn**	**67**	**1.913**	ug/L	0.230	12	21	285	11	KED
|	**As**	**75**	**0.418**	ug/L	0.025	5	7	181	5	KED
⌊	**Se**	**78**	**0.134**	ug/L	0.012	8	17	23	2	KED
	Y	**89**		ug/L			985374	990120	0	Standard
	Kr	**83**		ug/L			76	67	18	Standard
⌈>	**In-1**	**115**		ug/L			31293	30412	1	KED
|	**Cd**	**111**	**0.026**	ug/L	0.010	40	2	14	34	KED
⌊	**Cd**	**114**	**0.021**	ug/L	0.008	35	2	27	33	KED
⌈>	**In**	**115**		ug/L			2016921	1916146	1	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.000	9	142	76	7	Standard
|	**Ba**	**135**	**8.433**	ug/L	0.072	0	113	74473	0	Standard
⌊	**Ba**	**137**	**8.406**	ug/L	0.084	1	247	130492	0	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3883480	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	16	1114	1241	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0389-09
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 21:05:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	20422	3	Standard
	Cl	**37**		ug/L			7183425	7712596	1	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1400016	1	Standard
|	**Cr**	**52**	**0.511**	ug/L	0.028	5	22466	36091	0	Standard
⌊	**Cr**	**53**	**1.324**	ug/L	0.006	0	148	4064	1	Standard
⌈>	**Ge**	**72**		ug/L			118606	114272	1	KED
|	**Ni**	**60**	**1.131**	ug/L	0.032	2	26	2332	2	KED
|	**Ni**	**62**	**1.151**	ug/L	0.117	10	5	388	11	KED
|	**Cu**	**63**	**0.457**	ug/L	0.021	4	120	2882	4	KED
|	**Cu**	**65**	**0.455**	ug/L	0.054	11	69	1452	9	KED
|	**Zn**	**66**	**1.343**	ug/L	0.030	2	176	1234	1	KED
|	**Zn**	**67**	**1.777**	ug/L	0.149	8	21	257	6	KED
|	**As**	**75**	**0.235**	ug/L	0.008	3	7	101	2	KED
⌊	**Se**	**78**	**0.016**	ug/L	0.036	226	17	17	9	KED
	Y	**89**		ug/L			985374	979835	1	Standard
	Kr	**83**		ug/L			76	71	30	Standard
⌈>	**In-1**	**115**		ug/L			31293	29697	0	KED
|	**Cd**	**111**	**0.013**	ug/L	0.012	94	2	8	63	KED
⌊	**Cd**	**114**	**0.012**	ug/L	0.005	41	2	16	34	KED
⌈>	**In**	**115**		ug/L			2016921	1897718	0	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.000	0	142	72	0	Standard
|	**Ba**	**135**	**7.712**	ug/L	0.196	2	113	67459	1	Standard
⌊	**Ba**	**137**	**7.762**	ug/L	0.135	1	247	119360	1	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3872648	0	Standard
⌊	**Pb**	**208**	**0.030**	ug/L	0.001	2	1114	5130	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0389-01
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 21:09:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	24675	6	Standard
	Cl	**37**		ug/L			7183425	7077815	2	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1461208	2	Standard
|	**Cr**	**52**	**0.058**	ug/L	0.030	52	22466	25949	2	Standard
⌊	**Cr**	**53**	**0.467**	ug/L	0.009	1	148	1601	0	Standard
⌈>	**Ge**	**72**		ug/L			118606	117000	0	KED
|	**Ni**	**60**	**15.848**	ug/L	0.136	0	26	33145	0	KED
|	**Ni**	**62**	**15.355**	ug/L	0.215	1	5	5232	1	KED
|	**Cu**	**63**	**0.787**	ug/L	0.022	2	120	4995	2	KED
|	**Cu**	**65**	**0.799**	ug/L	0.018	2	69	2561	2	KED
|	**Zn**	**66**	**1.934**	ug/L	0.040	2	176	1744	2	KED
|	**Zn**	**67**	**2.112**	ug/L	0.136	6	21	309	5	KED
|	**As**	**75**	**0.452**	ug/L	0.037	8	7	193	7	KED
⌊	**Se**	**78**	**0.059**	ug/L	0.114	193	17	19	24	KED
	Y	**89**		ug/L			985374	983788	3	Standard
	Kr	**83**		ug/L			76	73	23	Standard
⌈>	**In-1**	**115**		ug/L			31293	30243	0	KED
|	**Cd**	**111**	**0.055**	ug/L	0.010	17	2	27	16	KED
⌊	**Cd**	**114**	**0.044**	ug/L	0.003	5	2	53	5	KED
⌈>	**In**	**115**		ug/L			2016921	1937597	1	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.000	13	142	92	7	Standard
|	**Ba**	**135**	**5.669**	ug/L	0.048	0	113	50670	2	Standard
⌊	**Ba**	**137**	**5.576**	ug/L	0.070	1	247	87613	1	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3857727	2	Standard
⌊	**Pb**	**208**	**0.018**	ug/L	0.001	6	1114	3478	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIK0057-DUP1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 21:13:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	24994	3	Standard
	Cl	**37**		ug/L			7183425	7095756	2	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1420184	0	Standard
|	**Cr**	**52**	**0.115**	ug/L	0.006	5	22466	26660	1	Standard
⌊	**Cr**	**53**	**0.534**	ug/L	0.016	2	148	1755	2	Standard
⌈>	**Ge**	**72**		ug/L			118606	115014	1	KED
|	**Ni**	**60**	**16.053**	ug/L	0.247	1	26	33000	0	KED
|	**Ni**	**62**	**15.716**	ug/L	0.615	3	5	5262	2	KED
|	**Cu**	**63**	**0.814**	ug/L	0.025	3	120	5072	2	KED
|	**Cu**	**65**	**0.815**	ug/L	0.008	0	69	2567	1	KED
|	**Zn**	**66**	**2.508**	ug/L	0.079	3	176	2172	3	KED
|	**Zn**	**67**	**2.952**	ug/L	0.240	8	21	417	6	KED
|	**As**	**75**	**0.448**	ug/L	0.018	3	7	188	4	KED
⌊	**Se**	**78**	**0.055**	ug/L	0.080	145	17	19	15	KED
	Y	**89**		ug/L			985374	981878	1	Standard
	Kr	**83**		ug/L			76	79	23	Standard
⌈>	**In-1**	**115**		ug/L			31293	28905	1	KED
|	**Cd**	**111**	**0.050**	ug/L	0.009	17	2	24	15	KED
⌊	**Cd**	**114**	**0.051**	ug/L	0.003	6	2	59	6	KED
⌈>	**In**	**115**		ug/L			2016921	1857317	1	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.000	9	142	82	4	Standard
|	**Ba**	**135**	**5.952**	ug/L	0.198	3	113	50962	1	Standard
⌊	**Ba**	**137**	**5.935**	ug/L	0.198	3	247	89345	1	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3842584	0	Standard
⌊	**Pb**	**208**	**0.019**	ug/L	0.001	6	1114	3649	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIK0057-MS1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 21:18:13
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	24567	3	Standard
	Cl	**37**		ug/L			7183425	7089501	2	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1411744	0	Standard
|	**Cr**	**52**	**23.321**	ug/L	0.323	1	22466	607092	1	Standard
⌊	**Cr**	**53**	**23.452**	ug/L	0.170	0	148	70012	0	Standard
⌈>	**Ge**	**72**		ug/L			118606	114146	1	KED
|	**Ni**	**60**	**40.240**	ug/L	1.171	2	26	82064	2	KED
|	**Ni**	**62**	**40.465**	ug/L	1.353	3	5	13441	2	KED
|	**Cu**	**63**	**25.948**	ug/L	0.363	1	120	156902	0	KED
|	**Cu**	**65**	**25.895**	ug/L	0.160	0	69	78880	1	KED
|	**Zn**	**66**	**80.193**	ug/L	0.673	0	176	63681	1	KED
|	**Zn**	**67**	**77.244**	ug/L	2.778	3	21	10315	3	KED
|	**As**	**75**	**25.328**	ug/L	0.188	0	7	10186	1	KED
⌊	**Se**	**78**	**77.711**	ug/L	0.721	0	17	3157	1	KED
	Y	**89**		ug/L			985374	986228	0	Standard
	Kr	**83**		ug/L			76	90	5	Standard
⌈>	**In-1**	**115**		ug/L			31293	29374	2	KED
|	**Cd**	**111**	**24.948**	ug/L	0.315	1	2	10814	1	KED
⌊	**Cd**	**114**	**24.525**	ug/L	0.196	0	2	27518	1	KED
⌈>	**In**	**115**		ug/L			2016921	1861702	0	Standard
|	**Ag**	**107**	**27.089**	ug/L	0.756	2	142	748353	3	Standard
|	**Ba**	**135**	**31.567**	ug/L	0.357	1	113	270585	0	Standard
⌊	**Ba**	**137**	**31.165**	ug/L	0.583	1	247	469457	1	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3844980	1	Standard
⌊	**Pb**	**208**	**26.869**	ug/L	0.289	1	1114	3595868	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIK0057-MSD1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 21:22:49
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	24590	2	Standard
	Cl	**37**		ug/L			7183425	6995239	1	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1414759	0	Standard
|	**Cr**	**52**	**23.232**	ug/L	0.324	1	22466	606145	1	Standard
⌊	**Cr**	**53**	**23.067**	ug/L	0.186	0	148	69011	0	Standard
⌈>	**Ge**	**72**		ug/L			118606	115892	0	KED
|	**Ni**	**60**	**40.552**	ug/L	0.481	1	26	83964	0	KED
|	**Ni**	**62**	**40.290**	ug/L	0.867	2	5	13591	2	KED
|	**Cu**	**63**	**26.023**	ug/L	0.076	0	120	159784	0	KED
|	**Cu**	**65**	**25.725**	ug/L	0.145	0	69	79558	0	KED
|	**Zn**	**66**	**81.581**	ug/L	0.424	0	176	65767	0	KED
|	**Zn**	**67**	**76.058**	ug/L	1.844	2	21	10314	2	KED
|	**As**	**75**	**25.502**	ug/L	0.051	0	7	10412	1	KED
⌊	**Se**	**78**	**78.244**	ug/L	0.766	0	17	3227	0	KED
	Y	**89**		ug/L			985374	999470	1	Standard
	Kr	**83**		ug/L			76	80	16	Standard
⌈>	**In-1**	**115**		ug/L			31293	29827	1	KED
|	**Cd**	**111**	**24.720**	ug/L	0.730	2	2	10878	1	KED
⌊	**Cd**	**114**	**24.732**	ug/L	0.391	1	2	28176	0	KED
⌈>	**In**	**115**		ug/L			2016921	1891027	0	Standard
|	**Ag**	**107**	**26.713**	ug/L	0.313	1	142	749577	1	Standard
|	**Ba**	**135**	**30.619**	ug/L	0.198	0	113	266599	0	Standard
⌊	**Ba**	**137**	**30.417**	ug/L	0.372	1	247	465450	1	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3856164	0	Standard
⌊	**Pb**	**208**	**26.829**	ug/L	0.343	1	1114	3600963	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLB
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 21:29:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	17601	4	Standard
	Cl	**37**		ug/L			7183425	7045177	1	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1305555	1	Standard
|	**Cr**	**52**	**0.023**	ug/L	0.017	71	22466	22382	0	Standard
⌊	**Cr**	**53**	**0.009**	ug/L	0.002	20	148	169	2	Standard
⌈>	**Ge**	**72**		ug/L			118606	115313	1	KED
|	**Ni**	**60**	**-0.001**	ug/L	0.002	253	26	23	20	KED
|	**Ni**	**62**	**0.010**	ug/L	0.009	88	5	8	32	KED
|	**Cu**	**63**	**0.004**	ug/L	0.003	62	120	141	11	KED
|	**Cu**	**65**	**0.006**	ug/L	0.001	8	69	86	2	KED
|	**Zn**	**66**	**0.066**	ug/L	0.017	26	176	224	7	KED
|	**Zn**	**67**	**0.085**	ug/L	0.076	89	21	32	30	KED
|	**As**	**75**	**-0.004**	ug/L	0.004	101	7	5	31	KED
⌊	**Se**	**78**	**0.095**	ug/L	0.052	54	17	21	10	KED
	Y	**89**		ug/L			985374	958954	2	Standard
	Kr	**83**		ug/L			76	77	14	Standard
⌈>	**In-1**	**115**		ug/L			31293	30405	1	KED
|	**Cd**	**111**	**0.005**	ug/L	0.005	91	2	5	43	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.004	3357	2	2	134	KED
⌈>	**In**	**115**		ug/L			2016921	1955424	0	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.000	24	142	171	5	Standard
|	**Ba**	**135**	**0.003**	ug/L	0.001	36	113	138	7	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.002	275	247	250	11	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3859241	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	52	1114	1220	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVB
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 21:35:22
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	15773	2	Standard
	Cl	**37**		ug/L			7183425	7203542	2	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1293062	0	Standard
|	**Cr**	**52**	**51.667**	ug/L	0.201	0	22466	1205590	0	Standard
⌊	**Cr**	**53**	**50.675**	ug/L	1.561	3	148	138376	2	Standard
⌈>	**Ge**	**72**		ug/L			118606	115286	0	KED
|	**Ni**	**60**	**50.208**	ug/L	0.889	1	26	103417	1	KED
|	**Ni**	**62**	**50.615**	ug/L	0.421	0	5	16981	1	KED
|	**Cu**	**63**	**49.930**	ug/L	0.915	1	120	304868	1	KED
|	**Cu**	**65**	**50.116**	ug/L	0.412	0	69	154116	0	KED
|	**Zn**	**66**	**50.369**	ug/L	0.543	1	176	40459	1	KED
|	**Zn**	**67**	**49.627**	ug/L	0.891	1	21	6701	1	KED
|	**As**	**75**	**50.494**	ug/L	0.476	0	7	20502	1	KED
⌊	**Se**	**78**	**51.641**	ug/L	0.570	1	17	2125	0	KED
	Y	**89**		ug/L			985374	974986	1	Standard
	Kr	**83**		ug/L			76	92	10	Standard
⌈>	**In-1**	**115**		ug/L			31293	30132	1	KED
|	**Cd**	**111**	**50.192**	ug/L	1.156	2	2	22313	1	KED
⌊	**Cd**	**114**	**49.652**	ug/L	0.800	1	2	57147	1	KED
⌈>	**In**	**115**		ug/L			2016921	1897628	1	Standard
|	**Ag**	**107**	**53.185**	ug/L	0.803	1	142	1497217	0	Standard
|	**Ba**	**135**	**50.508**	ug/L	0.704	1	113	441188	0	Standard
⌊	**Ba**	**137**	**50.881**	ug/L	0.548	1	247	781040	0	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3881909	1	Standard
⌊	**Pb**	**208**	**52.470**	ug/L	0.705	1	1114	7087776	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBB
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 21:42:18
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	15038	2	Standard
	Cl	**37**		ug/L			7183425	7141786	0	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1314316	3	Standard
|	**Cr**	**52**	**-0.011**	ug/L	0.040	375	22466	21725	1	Standard
⌊	**Cr**	**53**	**0.004**	ug/L	0.006	164	148	155	8	Standard
⌈>	**Ge**	**72**		ug/L			118606	116526	1	KED
|	**Ni**	**60**	**0.005**	ug/L	0.002	35	26	36	10	KED
|	**Ni**	**62**	**0.000**	ug/L	0.010	2745	5	5	57	KED
|	**Cu**	**63**	**0.003**	ug/L	0.002	71	120	136	10	KED
|	**Cu**	**65**	**-0.000**	ug/L	0.003	711	69	67	11	KED
|	**Zn**	**66**	**-0.012**	ug/L	0.018	148	176	163	8	KED
|	**Zn**	**67**	**0.119**	ug/L	0.075	63	21	37	28	KED
|	**As**	**75**	**0.005**	ug/L	0.003	70	7	8	16	KED
⌊	**Se**	**78**	**0.026**	ug/L	0.153	598	17	18	32	KED
	Y	**89**		ug/L			985374	977301	0	Standard
	Kr	**83**		ug/L			76	69	23	Standard
⌈>	**In-1**	**115**		ug/L			31293	30413	2	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.001	43	2	1	34	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.004	196	2	5	94	KED
⌈>	**In**	**115**		ug/L			2016921	1995558	1	Standard
|	**Ag**	**107**	**0.004**	ug/L	0.001	14	142	269	7	Standard
|	**Ba**	**135**	**0.003**	ug/L	0.003	92	113	137	16	Standard
⌊	**Ba**	**137**	**-0.002**	ug/L	0.001	52	247	215	8	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3861623	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	19	1114	1193	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0389-10
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 21:46:31
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	21322	6	Standard
	Cl	**37**		ug/L			7183425	7254557	1	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1391069	0	Standard
|	**Cr**	**52**	**0.564**	ug/L	0.035	6	22466	37167	1	Standard
⌊	**Cr**	**53**	**1.010**	ug/L	0.036	3	148	3117	4	Standard
⌈>	**Ge**	**72**		ug/L			118606	118577	0	KED
|	**Ni**	**60**	**1.545**	ug/L	0.027	1	26	3298	1	KED
|	**Ni**	**62**	**1.559**	ug/L	0.159	10	5	543	10	KED
|	**Cu**	**63**	**0.531**	ug/L	0.020	3	120	3449	2	KED
|	**Cu**	**65**	**0.521**	ug/L	0.013	2	69	1715	3	KED
|	**Zn**	**66**	**1.078**	ug/L	0.041	3	176	1062	2	KED
|	**Zn**	**67**	**1.761**	ug/L	0.290	16	21	265	15	KED
|	**As**	**75**	**0.160**	ug/L	0.016	9	7	73	8	KED
⌊	**Se**	**78**	**0.041**	ug/L	0.037	90	17	19	8	KED
	Y	**89**		ug/L			985374	990975	0	Standard
	Kr	**83**		ug/L			76	83	9	Standard
⌈>	**In-1**	**115**		ug/L			31293	30230	1	KED
|	**Cd**	**111**	**0.007**	ug/L	0.000	2	2	5	0	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.005	154	2	6	86	KED
⌈>	**In**	**115**		ug/L			2016921	1952641	2	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.000	90	142	150	9	Standard
|	**Ba**	**135**	**7.725**	ug/L	0.226	2	113	69507	0	Standard
⌊	**Ba**	**137**	**7.851**	ug/L	0.137	1	247	124208	1	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3936291	0	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	41	1114	1000	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0389-11
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 21:50:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	21713	2	Standard
	Cl	**37**		ug/L			7183425	7314862	2	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1360961	1	Standard
|	**Cr**	**52**	**0.617**	ug/L	0.030	4	22466	37658	1	Standard
⌊	**Cr**	**53**	**1.050**	ug/L	0.021	2	148	3166	3	Standard
⌈>	**Ge**	**72**		ug/L			118606	115997	1	KED
|	**Ni**	**60**	**1.548**	ug/L	0.073	4	26	3232	3	KED
|	**Ni**	**62**	**1.542**	ug/L	0.179	11	5	525	10	KED
|	**Cu**	**63**	**0.527**	ug/L	0.014	2	120	3350	2	KED
|	**Cu**	**65**	**0.500**	ug/L	0.018	3	69	1615	4	KED
|	**Zn**	**66**	**1.213**	ug/L	0.032	2	176	1149	3	KED
|	**Zn**	**67**	**1.781**	ug/L	0.183	10	21	262	8	KED
|	**As**	**75**	**0.158**	ug/L	0.006	3	7	71	4	KED
⌊	**Se**	**78**	**0.086**	ug/L	0.053	61	17	20	11	KED
	Y	**89**		ug/L			985374	964616	0	Standard
	Kr	**83**		ug/L			76	85	24	Standard
⌈>	**In-1**	**115**		ug/L			31293	30045	1	KED
|	**Cd**	**111**	**0.018**	ug/L	0.007	39	2	10	30	KED
⌊	**Cd**	**114**	**0.009**	ug/L	0.006	65	2	12	50	KED
⌈>	**In**	**115**		ug/L			2016921	1895761	0	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.003	655	142	148	65	Standard
|	**Ba**	**135**	**8.034**	ug/L	0.132	1	113	70205	1	Standard
⌊	**Ba**	**137**	**7.960**	ug/L	0.106	1	247	122275	1	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3866508	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.003	246	1114	1267	32	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0389-12
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 21:54:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	35773	2	Standard
	Cl	**37**		ug/L			7183425	7554630	1	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1355320	0	Standard
|	**Cr**	**52**	**0.426**	ug/L	0.015	3	22466	32917	1	Standard
⌊	**Cr**	**53**	**1.022**	ug/L	0.027	2	148	3070	1	Standard
⌈>	**Ge**	**72**		ug/L			118606	111484	0	KED
|	**Ni**	**60**	**4.263**	ug/L	0.041	0	26	8512	0	KED
|	**Ni**	**62**	**4.334**	ug/L	0.139	3	5	1410	2	KED
|	**Cu**	**63**	**0.963**	ug/L	0.007	0	120	5794	0	KED
|	**Cu**	**65**	**0.962**	ug/L	0.018	1	69	2924	1	KED
|	**Zn**	**66**	**3.399**	ug/L	0.097	2	176	2794	2	KED
|	**Zn**	**67**	**4.985**	ug/L	0.115	2	21	669	2	KED
|	**As**	**75**	**3.093**	ug/L	0.045	1	7	1220	0	KED
⌊	**Se**	**78**	**0.199**	ug/L	0.092	46	17	24	15	KED
	Y	**89**		ug/L			985374	975057	2	Standard
	Kr	**83**		ug/L			76	82	13	Standard
⌈>	**In-1**	**115**		ug/L			31293	28599	1	KED
|	**Cd**	**111**	**0.002**	ug/L	0.005	226	2	3	56	KED
⌊	**Cd**	**114**	**0.007**	ug/L	0.003	36	2	10	27	KED
⌈>	**In**	**115**		ug/L			2016921	1845821	1	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.001	215	142	142	17	Standard
|	**Ba**	**135**	**26.191**	ug/L	0.522	1	113	222553	0	Standard
⌊	**Ba**	**137**	**26.090**	ug/L	0.363	1	247	389643	0	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3858115	1	Standard
⌊	**Pb**	**208**	**0.024**	ug/L	0.001	3	1114	4303	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0389-13
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 21:59:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	21277	1	Standard
	Cl	**37**		ug/L			7183425	7538819	1	Standard
>	**Sc**	**45**		ug/L			1342496	1416458	1	Standard
	Cr	**52**	**0.827**	ug/L	0.031	3	22466	44455	0	Standard
	Cr	**53**	**1.386**	ug/L	0.019	1	148	4298	1	Standard
>	**Ge**	**72**		ug/L			118606	117232	0	KED
	Ni	**60**	**3.142**	ug/L	0.100	3	26	6603	2	KED
	Ni	**62**	**2.933**	ug/L	0.105	3	5	1005	3	KED
	Cu	**63**	**0.185**	ug/L	0.003	1	120	1269	1	KED
	Cu	**65**	**0.185**	ug/L	0.005	2	69	646	2	KED
	Zn	**66**	**1.302**	ug/L	0.046	3	176	1233	3	KED
	Zn	**67**	**1.917**	ug/L	0.145	7	21	283	7	KED
	As	**75**	**0.216**	ug/L	0.016	7	7	96	7	KED
	Se	**78**	**0.005**	ug/L	0.090	1673	17	17	21	KED
	Y	**89**		ug/L			985374	992193	1	Standard
	Kr	**83**		ug/L			76	72	6	Standard
>	**In-1**	**115**		ug/L			31293	29905	0	KED
	Cd	**111**	**0.009**	ug/L	0.002	23	2	6	14	KED
	Cd	**114**	**0.007**	ug/L	0.003	48	2	10	35	KED
>	**In**	**115**		ug/L			2016921	1889296	1	Standard
	Ag	**107**	**-0.002**	ug/L	0.001	27	142	80	17	Standard
	Ba	**135**	**6.688**	ug/L	0.006	0	113	58263	1	Standard
	Ba	**137**	**6.647**	ug/L	0.042	0	247	101804	1	Standard
>	**Tb**	**159**		ug/L			3915797	3865647	0	Standard
	Pb	**208**	**-0.002**	ug/L	0.000	8	1114	769	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0389-14
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 22:03:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	22934	3	Standard
	Cl	**37**		ug/L			7183425	8659559	0	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1348152	5	Standard
|	**Cr**	**52**	**0.681**	ug/L	0.093	13	22466	38748	0	Standard
⌊	**Cr**	**53**	**1.932**	ug/L	0.122	6	148	5632	1	Standard
⌈>	**Ge**	**72**		ug/L			118606	114556	2	KED
|	**Ni**	**60**	**5.604**	ug/L	0.062	1	26	11489	1	KED
|	**Ni**	**62**	**5.689**	ug/L	0.281	4	5	1900	4	KED
|	**Cu**	**63**	**0.307**	ug/L	0.014	4	120	1979	2	KED
|	**Cu**	**65**	**0.307**	ug/L	0.005	1	69	1005	3	KED
|	**Zn**	**66**	**3.253**	ug/L	0.122	3	176	2754	1	KED
|	**Zn**	**67**	**3.851**	ug/L	0.505	13	21	537	15	KED
|	**As**	**75**	**0.165**	ug/L	0.022	13	7	73	9	KED
⌊	**Se**	**78**	**0.103**	ug/L	0.095	91	17	21	19	KED
	Y	**89**		ug/L			985374	961179	4	Standard
	Kr	**83**		ug/L			76	79	22	Standard
⌈>	**In-1**	**115**		ug/L			31293	29658	1	KED
|	**Cd**	**111**	**0.023**	ug/L	0.010	45	2	12	35	KED
⌊	**Cd**	**114**	**0.022**	ug/L	0.004	20	2	27	17	KED
⌈>	**In**	**115**		ug/L			2016921	1847839	4	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.000	12	142	83	6	Standard
|	**Ba**	**135**	**10.870**	ug/L	0.683	6	113	92379	1	Standard
⌊	**Ba**	**137**	**10.824**	ug/L	0.683	6	247	161718	2	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3760849	6	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	18	1114	921	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLC
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 22:10:39
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	17725	3	Standard
	Cl	**37**		ug/L			7183425	7276586	1	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1325658	0	Standard
|	**Cr**	**52**	**0.025**	ug/L	0.017	68	22466	22768	1	Standard
⌊	**Cr**	**53**	**0.028**	ug/L	0.005	17	148	225	5	Standard
⌈>	**Ge**	**72**		ug/L			118606	118493	1	KED
|	**Ni**	**60**	**-0.004**	ug/L	0.002	53	26	18	21	KED
|	**Ni**	**62**	**0.002**	ug/L	0.008	458	5	6	45	KED
|	**Cu**	**63**	**0.005**	ug/L	0.005	98	120	150	19	KED
|	**Cu**	**65**	**0.002**	ug/L	0.007	371	69	76	31	KED
|	**Zn**	**66**	**0.045**	ug/L	0.023	51	176	213	10	KED
|	**Zn**	**67**	**0.120**	ug/L	0.027	22	21	38	8	KED
|	**As**	**75**	**-0.004**	ug/L	0.003	67	7	5	20	KED
⌊	**Se**	**78**	**0.076**	ug/L	0.026	33	17	20	5	KED
	Y	**89**		ug/L			985374	960729	3	Standard
	Kr	**83**		ug/L			76	67	14	Standard
⌈>	**In-1**	**115**		ug/L			31293	30948	1	KED
|	**Cd**	**111**	**0.003**	ug/L	0.005	171	2	4	53	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.002	71	2	5	33	KED
⌈>	**In**	**115**		ug/L			2016921	1962601	0	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.000	14	142	66	14	Standard
|	**Ba**	**135**	**0.004**	ug/L	0.001	17	113	147	4	Standard
⌊	**Ba**	**137**	**0.002**	ug/L	0.001	40	247	277	4	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3897892	1	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.000	351	1114	1091	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0434-02
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 22:16:16
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			14969	20536	1	Standard
	Cl	37		ug/L			7183425	7359428	1	Standard
⌈>	Sc	45		ug/L			1342496	1414146	0	Standard
|	Cr	52	0.207	ug/L	0.022	10	22466	28856	1	Standard
⌊	Cr	53	0.662	ug/L	0.006	0	148	2130	0	Standard
⌈>	Ge	72		ug/L			118606	115725	0	KED
|	Ni	60	0.203	ug/L	0.003	1	26	444	1	KED
|	Ni	62	0.202	ug/L	0.026	13	5	73	12	KED
|	Cu	63	0.202	ug/L	0.007	3	120	1356	3	KED
|	Cu	65	0.213	ug/L	0.003	1	69	725	1	KED
|	Zn	66	0.841	ug/L	0.025	3	176	847	2	KED
|	Zn	67	1.057	ug/L	0.089	8	21	163	6	KED
|	As	75	0.359	ug/L	0.026	7	7	153	7	KED
⌊	Se	78	0.079	ug/L	0.106	133	17	20	20	KED
	Y	89		ug/L			985374	988592	2	Standard
	Kr	83		ug/L			76	77	7	Standard
⌈>	In-1	115		ug/L			31293	30346	0	KED
|	Cd	111	0.002	ug/L	0.002	94	2	3	25	KED
⌊	Cd	114	0.005	ug/L	0.001	18	2	8	13	KED
⌈>	In	115		ug/L			2016921	1911960	2	Standard
|	Ag	107	-0.002	ug/L	0.001	28	142	80	16	Standard
|	Ba	135	3.698	ug/L	0.102	2	113	32637	0	Standard
⌊	Ba	137	3.690	ug/L	0.081	2	247	57277	0	Standard
⌈>	Tb	159		ug/L			3915797	3846551	0	Standard
⌊	Pb	208	-0.001	ug/L	0.000	19	1114	961	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0434-03
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 22:20:28
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			14969	21191	4	Standard
	Cl	37		ug/L			7183425	7620064	0	Standard
>	Sc	45		ug/L			1342496	1409881	1	Standard
	Cr	52	0.281	ug/L	0.022	7	22466	30618	1	Standard
	Cr	53	0.732	ug/L	0.006	0	148	2334	1	Standard
>	Ge	72		ug/L			118606	116211	1	KED
	Ni	60	0.563	ug/L	0.020	3	26	1194	2	KED
	Ni	62	0.556	ug/L	0.021	3	5	193	3	KED
	Cu	63	0.400	ug/L	0.011	2	120	2578	1	KED
	Cu	65	0.373	ug/L	0.022	5	69	1224	4	KED
	Zn	66	0.917	ug/L	0.058	6	176	912	6	KED
	Zn	67	1.379	ug/L	0.033	2	21	208	2	KED
	As	75	0.283	ug/L	0.032	11	7	122	9	KED
	Se	78	0.039	ug/L	0.057	146	17	18	13	KED
	Y	89		ug/L			985374	971458	0	Standard
	Kr	83		ug/L			76	71	19	Standard
>	In-1	115		ug/L			31293	29965	1	KED
	Cd	111	0.007	ug/L	0.002	32	2	5	16	KED
	Cd	114	0.013	ug/L	0.006	43	2	17	35	KED
>	In	115		ug/L			2016921	1895686	1	Standard
	Ag	107	-0.001	ug/L	0.001	108	142	95	42	Standard
	Ba	135	6.648	ug/L	0.087	1	113	58100	0	Standard
	Ba	137	6.666	ug/L	0.048	0	247	102433	0	Standard
>	Tb	159		ug/L			3915797	3896572	0	Standard
	Pb	208	0.006	ug/L	0.002	28	1114	1885	11	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0420-07
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 22:25:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			14969	20263	2	Standard
	Cl	37		ug/L			7183425	7465509	1	Standard
>	Sc	45		ug/L			1342496	1416119	0	Standard
	Cr	52	0.126	ug/L	0.021	16	22466	26856	1	Standard
	Cr	53	0.590	ug/L	0.013	2	148	1919	2	Standard
>	Ge	72		ug/L			118606	115291	2	KED
	Ni	60	2.195	ug/L	0.100	4	26	4542	2	KED
	Ni	62	2.097	ug/L	0.158	7	5	707	4	KED
	Cu	63	0.139	ug/L	0.009	6	120	961	5	KED
	Cu	65	0.131	ug/L	0.013	10	69	470	7	KED
	Zn	66	1.829	ug/L	0.043	2	176	1634	3	KED
	Zn	67	2.134	ug/L	0.262	12	21	308	12	KED
	As	75	0.100	ug/L	0.018	17	7	47	17	KED
	Se	78	0.040	ug/L	0.023	55	17	18	4	KED
	Y	89		ug/L			985374	999732	1	Standard
	Kr	83		ug/L			76	71	8	Standard
>	In-1	115		ug/L			31293	29906	1	KED
	Cd	111	0.023	ug/L	0.004	19	2	12	15	KED
	Cd	114	0.017	ug/L	0.002	11	2	21	8	KED
>	In	115		ug/L			2016921	1948163	1	Standard
	Ag	107	-0.003	ug/L	0.001	20	142	60	24	Standard
	Ba	135	4.150	ug/L	0.040	0	113	37314	0	Standard
	Ba	137	4.114	ug/L	0.093	2	247	65052	0	Standard
>	Tb	159		ug/L			3915797	3910087	2	Standard
	Pb	208	-0.003	ug/L	0.000	14	1114	734	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLD
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 22:32:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	18119	4	Standard
	Cl	**37**		ug/L			7183425	7349278	0	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1352559	2	Standard
|	**Cr**	**52**	**0.024**	ug/L	0.018	74	22466	23198	1	Standard
⌊	**Cr**	**53**	**0.018**	ug/L	0.002	9	148	199	3	Standard
⌈>	**Ge**	**72**		ug/L			118606	119411	1	KED
|	**Ni**	**60**	**-0.001**	ug/L	0.001	86	26	23	9	KED
|	**Ni**	**62**	**0.002**	ug/L	0.011	692	5	6	62	KED
|	**Cu**	**63**	**0.003**	ug/L	0.003	92	120	141	14	KED
|	**Cu**	**65**	**-0.004**	ug/L	0.005	134	69	59	24	KED
|	**Zn**	**66**	**0.041**	ug/L	0.020	47	176	211	7	KED
|	**Zn**	**67**	**0.035**	ug/L	0.016	44	21	26	7	KED
|	**As**	**75**	**-0.009**	ug/L	0.001	13	7	3	14	KED
⌊	**Se**	**78**	**-0.014**	ug/L	0.090	651	17	17	23	KED
	Y	**89**		ug/L			985374	1006444	2	Standard
	Kr	**83**		ug/L			76	57	10	Standard
⌈>	**In-1**	**115**		ug/L			31293	29078	13	KED
|	**Cd**	**111**	**0.006**	ug/L	0.010	152	2	5	70	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.001	56	2	4	24	KED
⌈>	**In**	**115**		ug/L			2016921	2014118	1	Standard
|	**Ag**	**107**	**-0.003**	ug/L	0.000	2	142	55	1	Standard
|	**Ba**	**135**	**0.005**	ug/L	0.000	3	113	156	2	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.000	28	247	264	0	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3974024	1	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.001	672	1114	1118	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVC
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 22:37:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	15716	3	Standard
	Cl	**37**		ug/L			7183425	7372856	1	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1309074	3	Standard
|	**Cr**	**52**	**51.420**	ug/L	0.908	1	22466	1214374	1	Standard
⌊	**Cr**	**53**	**50.912**	ug/L	0.848	1	148	140720	1	Standard
⌈>	**Ge**	**72**		ug/L			118606	116897	1	KED
|	**Ni**	**60**	**50.117**	ug/L	1.086	2	26	104652	1	KED
|	**Ni**	**62**	**49.989**	ug/L	0.788	1	5	17004	1	KED
|	**Cu**	**63**	**49.916**	ug/L	1.623	3	120	308941	1	KED
|	**Cu**	**65**	**49.414**	ug/L	0.974	1	69	154056	0	KED
|	**Zn**	**66**	**50.066**	ug/L	0.394	0	176	40778	1	KED
|	**Zn**	**67**	**49.472**	ug/L	0.588	1	21	6774	1	KED
|	**As**	**75**	**49.973**	ug/L	0.551	1	7	20572	0	KED
⌊	**Se**	**78**	**50.171**	ug/L	0.821	1	17	2093	1	KED
	Y	**89**		ug/L			985374	947814	2	Standard
	Kr	**83**		ug/L			76	78	12	Standard
⌈>	**In-1**	**115**		ug/L			31293	29672	4	KED
|	**Cd**	**111**	**50.603**	ug/L	1.336	2	2	22140	2	KED
⌊	**Cd**	**114**	**50.526**	ug/L	2.029	4	2	57208	2	KED
⌈>	**In**	**115**		ug/L			2016921	1876363	2	Standard
|	**Ag**	**107**	**54.191**	ug/L	1.068	1	142	1508142	0	Standard
|	**Ba**	**135**	**52.116**	ug/L	1.806	3	113	449915	1	Standard
⌊	**Ba**	**137**	**52.035**	ug/L	1.982	3	247	789349	1	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3926328	2	Standard
⌊	**Pb**	**208**	**52.190**	ug/L	1.542	2	1114	7128343	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBC
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 22:44:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	15489	3	Standard
	Cl	**37**		ug/L			7183425	7401829	2	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1355790	0	Standard
|	**Cr**	**52**	**-0.032**	ug/L	0.020	63	22466	21929	1	Standard
⌊	**Cr**	**53**	**0.008**	ug/L	0.007	91	148	172	12	Standard
⌈>	**Ge**	**72**		ug/L			118606	118566	1	KED
|	**Ni**	**60**	**0.002**	ug/L	0.005	268	26	29	35	KED
|	**Ni**	**62**	**-0.009**	ug/L	0.008	91	5	2	114	KED
|	**Cu**	**63**	**0.006**	ug/L	0.000	6	120	154	1	KED
|	**Cu**	**65**	**-0.004**	ug/L	0.001	37	69	57	6	KED
|	**Zn**	**66**	**-0.017**	ug/L	0.025	147	176	162	14	KED
|	**Zn**	**67**	**0.050**	ug/L	0.048	95	21	28	24	KED
|	**As**	**75**	**0.009**	ug/L	0.004	44	7	11	17	KED
⌊	**Se**	**78**	**-0.029**	ug/L	0.030	105	17	16	7	KED
	Y	**89**		ug/L			985374	1003978	0	Standard
	Kr	**83**		ug/L			76	72	22	Standard
⌈>	**In-1**	**115**		ug/L			31293	30670	2	KED
|	**Cd**	**111**	**0.004**	ug/L	0.004	98	2	4	40	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.003	75	2	8	48	KED
⌈>	**In**	**115**		ug/L			2016921	2025721	0	Standard
|	**Ag**	**107**	**0.004**	ug/L	0.000	8	142	257	3	Standard
|	**Ba**	**135**	**0.003**	ug/L	0.002	75	113	142	15	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	149	247	264	9	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3937396	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	29	1114	1229	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20K0001-02
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 22:48:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			14969	22021	5	Standard
	Cl	37		ug/L			7183425	7192752	0	Standard
>	Sc	45		ug/L			1342496	1427937	1	Standard
	Cr	52	0.294	ug/L	0.014	4	22466	31321	0	Standard
	Cr	53	0.519	ug/L	0.011	2	148	1721	1	Standard
>	Ge	72		ug/L			118606	118939	1	KED
	Ni	60	0.264	ug/L	0.002	0	26	586	1	KED
	Ni	62	0.259	ug/L	0.023	8	5	95	6	KED
	Cu	63	0.228	ug/L	0.009	3	120	1555	2	KED
	Cu	65	0.213	ug/L	0.020	9	69	744	8	KED
	Zn	66	0.823	ug/L	0.065	7	176	856	7	KED
	Zn	67	1.015	ug/L	0.082	8	21	162	5	KED
	As	75	0.373	ug/L	0.007	1	7	163	3	KED
	Se	78	0.029	ug/L	0.074	256	17	18	14	KED
	Y	89		ug/L			985374	1006498	1	Standard
	Kr	83		ug/L			76	76	6	Standard
>	In-1	115		ug/L			31293	30410	2	KED
	Cd	111	0.009	ug/L	0.010	110	2	6	62	KED
	Cd	114	0.006	ug/L	0.006	99	2	10	72	KED
>	In	115		ug/L			2016921	1971141	0	Standard
	Ag	107	0.010	ug/L	0.001	6	142	438	4	Standard
	Ba	135	1.631	ug/L	0.039	2	113	14908	2	Standard
	Ba	137	1.635	ug/L	0.034	2	247	26300	1	Standard
>	Tb	159		ug/L			3915797	3931600	2	Standard
	Pb	208	0.002	ug/L	0.001	43	1114	1351	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20K0002-05
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 22:52:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			14969	23411	5	Standard
	Cl	37		ug/L			7183425	7541190	1	Standard
>	Sc	45		ug/L			1342496	1379196	2	Standard
	Cr	52	0.110	ug/L	0.049	43	22466	25760	2	Standard
	Cr	53	0.659	ug/L	0.018	2	148	2069	2	Standard
>	Ge	72		ug/L			118606	115726	0	KED
	Ni	60	1.950	ug/L	0.083	4	26	4055	3	KED
	Ni	62	1.909	ug/L	0.117	6	5	648	6	KED
	Cu	63	0.221	ug/L	0.009	3	120	1471	4	KED
	Cu	65	0.220	ug/L	0.013	5	69	747	5	KED
	Zn	66	0.941	ug/L	0.076	8	176	927	7	KED
	Zn	67	1.631	ug/L	0.260	15	21	241	13	KED
	As	75	0.382	ug/L	0.021	5	7	162	5	KED
	Se	78	0.095	ug/L	0.075	78	17	21	14	KED
	Y	89		ug/L			985374	982764	0	Standard
	Kr	83		ug/L			76	78	21	Standard
>	In-1	115		ug/L			31293	29682	1	KED
	Cd	111	0.032	ug/L	0.019	58	2	16	50	KED
	Cd	114	0.025	ug/L	0.011	41	2	31	38	KED
>	In	115		ug/L			2016921	1871469	0	Standard
	Ag	107	-0.001	ug/L	0.001	86	142	107	19	Standard
	Ba	135	8.315	ug/L	0.036	0	113	71722	0	Standard
	Ba	137	8.235	ug/L	0.083	1	247	124867	0	Standard
>	Tb	159		ug/L			3915797	3854714	0	Standard
	Pb	208	0.000	ug/L	0.000	122	1114	1131	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 20J0396-03
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 22:57:11
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			14969	24239	0	Standard
	Cl	37		ug/L			7183425	7285816	1	Standard
>	Sc	45		ug/L			1342496	1399900	1	Standard
	Cr	52	0.154	ug/L	0.038	24	22466	27251	2	Standard
	Cr	53	0.367	ug/L	0.017	4	148	1237	3	Standard
>	Ge	72		ug/L			118606	117168	0	KED
	Ni	60	1.576	ug/L	0.086	5	26	3322	5	KED
	Ni	62	1.521	ug/L	0.244	16	5	523	15	KED
	Cu	63	0.445	ug/L	0.005	1	120	2876	0	KED
	Cu	65	0.453	ug/L	0.045	9	69	1483	9	KED
	Zn	66	1.193	ug/L	0.017	1	176	1144	0	KED
	Zn	67	1.608	ug/L	0.122	7	21	241	6	KED
	As	75	0.249	ug/L	0.025	9	7	109	8	KED
	Se	78	0.589	ug/L	0.118	20	17	41	11	KED
	Y	89		ug/L			985374	994134	1	Standard
	Kr	83		ug/L			76	74	16	Standard
>	In-1	115		ug/L			31293	30953	0	KED
	Cd	111	0.013	ug/L	0.002	15	2	8	11	KED
	Cd	114	0.013	ug/L	0.002	15	2	18	12	KED
>	In	115		ug/L			2016921	1914368	0	Standard
	Ag	107	-0.001	ug/L	0.001	171	142	119	23	Standard
	Ba	135	3.654	ug/L	0.078	2	113	32296	1	Standard
	Ba	137	3.643	ug/L	0.015	0	247	56645	1	Standard
>	Tb	159		ug/L			3915797	3915101	1	Standard
	Pb	208	0.013	ug/L	0.001	7	1114	2895	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIK0058-DUP1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 23:01:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			14969	23962	4	Standard
	Cl	37		ug/L			7183425	7207462	2	Standard
>	Sc	45		ug/L			1342496	1361289	0	Standard
	Cr	52	0.191	ug/L	0.018	9	22466	27391	1	Standard
	Cr	53	0.361	ug/L	0.006	1	148	1187	1	Standard
>	Ge	72		ug/L			118606	117376	0	KED
	Ni	60	1.554	ug/L	0.074	4	26	3285	5	KED
	Ni	62	1.584	ug/L	0.080	5	5	546	5	KED
	Cu	63	0.435	ug/L	0.025	5	120	2823	5	KED
	Cu	65	0.441	ug/L	0.047	10	69	1450	10	KED
	Zn	66	1.011	ug/L	0.082	8	176	998	7	KED
	Zn	67	1.354	ug/L	0.149	11	21	206	9	KED
	As	75	0.292	ug/L	0.033	11	7	127	11	KED
	Se	78	0.514	ug/L	0.105	20	17	38	12	KED
	Y	89		ug/L			985374	989130	2	Standard
	Kr	83		ug/L			76	79	16	Standard
>	In-1	115		ug/L			31293	29545	1	KED
	Cd	111	0.013	ug/L	0.002	19	2	8	13	KED
	Cd	114	0.010	ug/L	0.003	27	2	14	20	KED
>	In	115		ug/L			2016921	1910951	1	Standard
	Ag	107	-0.001	ug/L	0.001	115	142	120	13	Standard
	Ba	135	3.603	ug/L	0.067	1	113	31793	1	Standard
	Ba	137	3.621	ug/L	0.079	2	247	56188	1	Standard
>	Tb	159		ug/L			3915797	3884757	0	Standard
	Pb	208	0.011	ug/L	0.001	4	1114	2649	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIK0058-MS1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 23:05:35
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			14969	23947	2	Standard
	Cl	37		ug/L			7183425	7432665	0	Standard
>	Sc	45		ug/L			1342496	1381970	0	Standard
	Cr	52	25.461	ug/L	0.586	2	22466	646613	1	Standard
	Cr	53	24.949	ug/L	0.122	0	148	72899	0	Standard
>	Ge	72		ug/L			118606	116092	0	KED
	Ni	60	27.357	ug/L	0.426	1	26	56751	1	KED
	Ni	62	27.415	ug/L	0.101	0	5	9264	0	KED
	Cu	63	25.884	ug/L	0.042	0	120	159199	0	KED
	Cu	65	25.745	ug/L	0.409	1	69	79755	1	KED
	Zn	66	81.216	ug/L	1.390	1	176	65587	1	KED
	Zn	67	75.557	ug/L	1.192	1	21	10264	2	KED
	As	75	26.070	ug/L	0.230	0	7	10662	0	KED
	Se	78	81.552	ug/L	1.797	2	17	3369	1	KED
	Y	89		ug/L			985374	981604	1	Standard
	Kr	83		ug/L			76	95	13	Standard
>	In-1	115		ug/L			31293	29864	1	KED
	Cd	111	25.612	ug/L	0.495	1	2	11286	0	KED
	Cd	114	25.136	ug/L	0.579	2	2	28674	1	KED
>	In	115		ug/L			2016921	1920238	2	Standard
	Ag	107	26.673	ug/L	0.707	2	142	759733	0	Standard
	Ba	135	29.994	ug/L	0.996	3	113	265077	1	Standard
	Ba	137	29.961	ug/L	0.775	2	247	465396	1	Standard
>	Tb	159		ug/L			3915797	3924054	1	Standard
	Pb	208	27.397	ug/L	0.302	1	1114	3741916	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BIK0058-MSD1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 23:10:11
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			14969	23710	1	Standard
	Cl	37		ug/L			7183425	7407261	0	Standard
>	Sc	45		ug/L			1342496	1373095	0	Standard
	Cr	52	25.366	ug/L	0.140	0	22466	640222	0	Standard
	Cr	53	24.933	ug/L	0.084	0	148	72387	0	Standard
>	Ge	72		ug/L			118606	116037	1	KED
	Ni	60	27.827	ug/L	0.150	0	26	57698	0	KED
	Ni	62	27.403	ug/L	0.373	1	5	9255	1	KED
	Cu	63	26.206	ug/L	0.388	1	120	161092	0	KED
	Cu	65	26.068	ug/L	0.480	1	69	80709	0	KED
	Zn	66	81.366	ug/L	0.824	1	176	65673	0	KED
	Zn	67	77.098	ug/L	1.636	2	21	10466	1	KED
	As	75	26.073	ug/L	0.266	1	7	10658	0	KED
	Se	78	81.779	ug/L	1.681	2	17	3376	1	KED
	Y	89		ug/L			985374	965337	1	Standard
	Kr	83		ug/L			76	83	19	Standard
>	In-1	115		ug/L			31293	29864	0	KED
	Cd	111	25.785	ug/L	0.551	2	2	11363	1	KED
	Cd	114	25.932	ug/L	0.475	1	2	29583	1	KED
>	In	115		ug/L			2016921	1894748	0	Standard
	Ag	107	27.015	ug/L	0.356	1	142	759531	1	Standard
	Ba	135	30.419	ug/L	0.389	1	113	265376	1	Standard
	Ba	137	30.481	ug/L	0.211	0	247	467319	0	Standard
>	Tb	159		ug/L			3915797	3894405	1	Standard
	Pb	208	27.334	ug/L	0.555	2	1114	3704569	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLE
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 23:17:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	18098	2	Standard
	Cl	**37**		ug/L			7183425	7484054	1	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1330213	0	Standard
|	**Cr**	**52**	**0.024**	ug/L	0.016	66	22466	22837	1	Standard
⌊	**Cr**	**53**	**0.007**	ug/L	0.002	28	148	165	2	Standard
⌈>	**Ge**	**72**		ug/L			118606	117322	1	KED
|	**Ni**	**60**	**-0.000**	ug/L	0.004	839	26	24	30	KED
|	**Ni**	**62**	**0.009**	ug/L	0.013	135	5	8	49	KED
|	**Cu**	**63**	**0.005**	ug/L	0.001	14	120	151	4	KED
|	**Cu**	**65**	**0.002**	ug/L	0.003	161	69	74	11	KED
|	**Zn**	**66**	**0.044**	ug/L	0.008	19	176	210	2	KED
|	**Zn**	**67**	**0.127**	ug/L	0.047	37	21	38	15	KED
|	**As**	**75**	**-0.004**	ug/L	0.005	140	7	5	39	KED
⌊	**Se**	**78**	**0.068**	ug/L	0.149	220	17	20	29	KED
	Y	**89**		ug/L			985374	978101	2	Standard
	Kr	**83**		ug/L			76	78	19	Standard
⌈>	**In-1**	**115**		ug/L			31293	31024	0	KED
|	**Cd**	**111**	**0.008**	ug/L	0.008	109	2	6	60	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.002	269	2	3	49	KED
⌈>	**In**	**115**		ug/L			2016921	1976949	0	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	78	142	184	19	Standard
|	**Ba**	**135**	**0.007**	ug/L	0.001	18	113	174	7	Standard
⌊	**Ba**	**137**	**0.003**	ug/L	0.002	50	247	295	8	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3893351	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	40	1114	1297	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVD
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 23:22:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	15719	2	Standard
	Cl	**37**		ug/L			7183425	7458759	1	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1333693	0	Standard
|	**Cr**	**52**	**51.077**	ug/L	0.318	0	22466	1229526	0	Standard
⌊	**Cr**	**53**	**50.474**	ug/L	0.819	1	148	142182	1	Standard
⌈>	**Ge**	**72**		ug/L			118606	118988	0	KED
|	**Ni**	**60**	**49.255**	ug/L	0.971	1	26	104711	1	KED
|	**Ni**	**62**	**49.032**	ug/L	1.124	2	5	16978	2	KED
|	**Cu**	**63**	**49.669**	ug/L	0.843	1	120	313014	1	KED
|	**Cu**	**65**	**49.274**	ug/L	0.245	0	69	156395	0	KED
|	**Zn**	**66**	**49.805**	ug/L	0.882	1	176	41292	1	KED
|	**Zn**	**67**	**50.421**	ug/L	0.863	1	21	7027	1	KED
|	**As**	**75**	**49.532**	ug/L	0.704	1	7	20757	1	KED
⌊	**Se**	**78**	**50.198**	ug/L	0.199	0	17	2132	0	KED
	Y	**89**		ug/L			985374	985240	0	Standard
	Kr	**83**		ug/L			76	71	28	Standard
⌈>	**In-1**	**115**		ug/L			31293	30647	0	KED
|	**Cd**	**111**	**50.208**	ug/L	0.932	1	2	22705	1	KED
⌊	**Cd**	**114**	**49.938**	ug/L	0.188	0	2	58463	0	KED
⌈>	**In**	**115**		ug/L			2016921	1978995	0	Standard
|	**Ag**	**107**	**52.639**	ug/L	0.504	0	142	1545535	0	Standard
|	**Ba**	**135**	**50.378**	ug/L	1.224	2	113	458916	1	Standard
⌊	**Ba**	**137**	**50.168**	ug/L	1.268	2	247	803131	2	Standard
⌈>	**Tb**	**159**		ug/L			3915797	4027675	0	Standard
⌊	**Pb**	**208**	**52.021**	ug/L	0.398	0	1114	7292179	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBD
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 23:29:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	14926	0	Standard
	Cl	**37**		ug/L			7183425	7337326	1	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1337052	2	Standard
|	**Cr**	**52**	**-0.002**	ug/L	0.030	1544	22466	22317	0	Standard
⌊	**Cr**	**53**	**0.005**	ug/L	0.005	102	148	162	6	Standard
⌈>	**Ge**	**72**		ug/L			118606	119730	1	KED
|	**Ni**	**60**	**0.005**	ug/L	0.001	22	26	36	5	KED
|	**Ni**	**62**	**0.016**	ug/L	0.016	98	5	11	50	KED
|	**Cu**	**63**	**0.004**	ug/L	0.003	89	120	143	12	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.002	142	69	66	10	KED
|	**Zn**	**66**	**0.014**	ug/L	0.040	275	176	189	16	KED
|	**Zn**	**67**	**0.066**	ug/L	0.067	101	21	31	30	KED
|	**As**	**75**	**0.001**	ug/L	0.001	254	7	7	9	KED
⌊	**Se**	**78**	**0.044**	ug/L	0.057	129	17	19	10	KED
	Y	**89**		ug/L			985374	952605	3	Standard
	Kr	**83**		ug/L			76	92	14	Standard
⌈>	**In-1**	**115**		ug/L			31293	31133	0	KED
|	**Cd**	**111**	**0.001**	ug/L	0.003	223	2	3	41	KED
⌊	**Cd**	**114**	**0.005**	ug/L	0.006	108	2	9	74	KED
⌈>	**In**	**115**		ug/L			2016921	1980464	1	Standard
|	**Ag**	**107**	**0.005**	ug/L	0.001	28	142	273	12	Standard
|	**Ba**	**135**	**0.003**	ug/L	0.003	91	113	138	19	Standard
⌊	**Ba**	**137**	**-0.001**	ug/L	0.001	62	247	228	2	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3866709	2	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	69	1114	1216	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: FRN SPIKE TEST
Sample Dil Factor: 100
Comments:
Sample Date/Time: Tuesday, November 03, 2020 23:33:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	16482	1	Standard
	Cl	**37**		ug/L			7183425	7473191	1	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1356144	0	Standard
|	**Cr**	**52**	**7.269**	ug/L	0.046	0	22466	197399	1	Standard
⌊	**Cr**	**53**	**7.242**	ug/L	0.191	2	148	20872	2	Standard
⌈>	**Ge**	**72**		ug/L			118606	120794	1	KED
|	**Ni**	**60**	**2.488**	ug/L	0.107	4	26	5392	3	KED
|	**Ni**	**62**	**2.501**	ug/L	0.047	1	5	884	0	KED
|	**Cu**	**63**	**5.105**	ug/L	0.189	3	120	32758	2	KED
|	**Cu**	**65**	**5.045**	ug/L	0.082	1	69	16318	2	KED
|	**Zn**	**66**	**810.616**	ug/L	4.684	0	176	679497	0	KED
|	**Zn**	**67**	**747.118**	ug/L	15.955	2	21	105391	1	KED
|	**As**	**75**	**9.948**	ug/L	0.428	4	7	4236	3	KED
⌊	**Se**	**78**	**0.002**	ug/L	0.090	3884	17	18	20	KED
	Y	**89**		ug/L			985374	988894	1	Standard
	Kr	**83**		ug/L			76	92	25	Standard
⌈>	**In-1**	**115**		ug/L			31293	31293	1	KED
|	**Cd**	**111**	**0.233**	ug/L	0.010	4	2	110	3	KED
⌊	**Cd**	**114**	**0.235**	ug/L	0.013	5	2	283	7	KED
⌈>	**In**	**115**		ug/L			2016921	2012959	1	Standard
|	**Ag**	**107**	**0.992**	ug/L	0.024	2	142	29752	1	Standard
|	**Ba**	**135**	**0.006**	ug/L	0.002	41	113	167	14	Standard
⌊	**Ba**	**137**	**0.004**	ug/L	0.001	29	247	306	6	Standard
⌈>	**Tb**	**159**		ug/L			3915797	3957604	0	Standard
⌊	**Pb**	**208**	**1.106**	ug/L	0.004	0	1114	153474	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: FRN SPIKE TEST
Sample Dil Factor: 5
Comments:
Sample Date/Time: Tuesday, November 03, 2020 23:39:30
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	17261	3	Standard
	Cl	**37**		ug/L			7183425	7662368	0	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1407000	1	Standard
|	**Cr**	**52**	**147.633**	ug/L	3.893	2	22466	3703746	1	Standard
⌊	**Cr**	**53**	**145.410**	ug/L	3.639	2	148	431709	0	Standard
⌈>	**Ge**	**72**		ug/L			118606	123166	0	KED
|	**Ni**	**60**	**49.600**	ug/L	0.269	0	26	109146	0	KED
|	**Ni**	**62**	**50.053**	ug/L	0.262	0	5	17940	0	KED
|	**Cu**	**63**	**101.392**	ug/L	0.832	0	120	661266	0	KED
|	**Cu**	**65**	**100.332**	ug/L	0.512	0	69	329559	0	KED
|	**Zn**	**66**	**12300.450**	ug/L	168.239	1	176	10511277	1	KED
|	**Zn**	**67**	**11399.182**	ug/L	301.565	2	21	1639555	2	KED
|	**As**	**75**	**165.007**	ug/L	0.786	0	7	71561	0	KED
⌊	**Se**	**78**	**0.026**	ug/L	0.053	207	17	19	11	KED
	Y	**89**		ug/L			985374	1080941	2	Standard
	Kr	**83**		ug/L			76	170	22	Standard
⌈>	**In-1**	**115**		ug/L			31293	33787	0	KED
|	**Cd**	**111**	**4.125**	ug/L	0.037	0	2	2059	0	KED
⌊	**Cd**	**114**	**4.010**	ug/L	0.086	2	2	5179	2	KED
⌈>	**In**	**115**		ug/L			2016921	2055812	1	Standard
|	**Ag**	**107**	**21.308**	ug/L	0.381	1	142	649924	0	Standard
|	**Ba**	**135**	**0.006**	ug/L	0.001	21	113	174	7	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	99	247	267	6	Standard
⌈>	**Tb**	**159**		ug/L			3915797	4155026	0	Standard
⌊	**Pb**	**208**	**21.888**	ug/L	0.411	1	1114	3165791	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 23:47:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	20325	1	Standard
	Cl	**37**		ug/L			7183425	7920645	1	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1541471	1	Standard
|	**Cr**	**52**	**-0.015**	ug/L	0.013	92	22466	25396	1	Standard
⌊	**Cr**	**53**	**0.007**	ug/L	0.004	60	148	191	7	Standard
⌈>	**Ge**	**72**		ug/L			118606	124055	1	KED
|	**Ni**	**60**	**-0.001**	ug/L	0.001	134	26	25	8	KED
|	**Ni**	**62**	**0.008**	ug/L	0.015	187	5	8	61	KED
|	**Cu**	**63**	**0.009**	ug/L	0.003	31	120	181	11	KED
|	**Cu**	**65**	**0.007**	ug/L	0.001	20	69	97	4	KED
|	**Zn**	**66**	**0.216**	ug/L	0.053	24	176	370	12	KED
|	**Zn**	**67**	**0.230**	ug/L	0.074	32	21	55	19	KED
|	**As**	**75**	**0.004**	ug/L	0.009	207	7	9	42	KED
⌊	**Se**	**78**	**-0.024**	ug/L	0.137	576	17	17	35	KED
	Y	**89**		ug/L			985374	1138427	1	Standard
	Kr	**83**		ug/L			76	84	22	Standard
⌈>	**In-1**	**115**		ug/L			31293	33897	1	KED
|	**Cd**	**111**	**0.003**	ug/L	0.004	144	2	4	44	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.003	255	2	4	88	KED
⌈>	**In**	**115**		ug/L			2016921	2200393	0	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.000	436	142	158	9	Standard
|	**Ba**	**135**	**0.005**	ug/L	0.002	35	113	170	10	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	102	247	285	4	Standard
⌈>	**Tb**	**159**		ug/L			3915797	4349987	0	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	6	1114	1024	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 23:51:20
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	19635	3	Standard
	Cl	**37**		ug/L			7183425	7671647	0	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1540275	2	Standard
|	**Cr**	**52**	**-0.008**	ug/L	0.020	241	22466	25543	1	Standard
⌊	**Cr**	**53**	**0.003**	ug/L	0.005	181	148	178	6	Standard
⌈>	**Ge**	**72**		ug/L			118606	125277	1	KED
|	**Ni**	**60**	**0.002**	ug/L	0.004	214	26	31	28	KED
|	**Ni**	**62**	**-0.004**	ug/L	0.006	141	5	4	49	KED
|	**Cu**	**63**	**0.006**	ug/L	0.001	17	120	168	5	KED
|	**Cu**	**65**	**0.004**	ug/L	0.004	99	69	85	14	KED
|	**Zn**	**66**	**-0.055**	ug/L	0.009	15	176	138	5	KED
|	**Zn**	**67**	**0.018**	ug/L	0.049	276	21	25	28	KED
|	**As**	**75**	**-0.002**	ug/L	0.001	60	7	6	7	KED
⌊	**Se**	**78**	**-0.015**	ug/L	0.035	236	17	18	9	KED
	Y	**89**		ug/L			985374	1128083	2	Standard
	Kr	**83**		ug/L			76	73	11	Standard
⌈>	**In-1**	**115**		ug/L			31293	33893	0	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.003	264	2	2	57	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.003	973	2	3	102	KED
⌈>	**In**	**115**		ug/L			2016921	2230002	0	Standard
|	**Ag**	**107**	**-0.001**	ug/L	0.000	24	142	108	10	Standard
|	**Ba**	**135**	**0.005**	ug/L	0.002	34	113	179	10	Standard
⌊	**Ba**	**137**	**0.000**	ug/L	0.002	1632	247	275	10	Standard
⌈>	**Tb**	**159**		ug/L			3915797	4297664	0	Standard
⌊	**Pb**	**208**	**-0.002**	ug/L	0.000	16	1114	943	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, November 03, 2020 23:55:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\110320.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			14969	20851	3	Standard
	Cl	**37**		ug/L			7183425	7702604	2	Standard
⌈>	**Sc**	**45**		ug/L			1342496	1550639	1	Standard
|	**Cr**	**52**	**-0.004**	ug/L	0.017	408	22466	25830	0	Standard
⌊	**Cr**	**53**	**0.003**	ug/L	0.002	71	148	182	3	Standard
⌈>	**Ge**	**72**		ug/L			118606	127098	0	KED
|	**Ni**	**60**	**0.003**	ug/L	0.005	147	26	34	30	KED
|	**Ni**	**62**	**0.001**	ug/L	0.011	1692	5	6	62	KED
|	**Cu**	**63**	**0.007**	ug/L	0.004	63	120	174	17	KED
|	**Cu**	**65**	**0.010**	ug/L	0.005	50	69	107	16	KED
|	**Zn**	**66**	**0.307**	ug/L	0.379	123	176	460	73	KED
|	**Zn**	**67**	**0.348**	ug/L	0.307	88	21	74	61	KED
|	**As**	**75**	**0.002**	ug/L	0.008	486	7	8	43	KED
⌊	**Se**	**78**	**0.060**	ug/L	0.073	121	17	21	14	KED
	Y	**89**		ug/L			985374	1171434	1	Standard
	Kr	**83**		ug/L			76	85	2	Standard
⌈>	**In-1**	**115**		ug/L			31293	34257	0	KED
|	**Cd**	**111**	**0.000**	ug/L	0.003	3425	2	3	45	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.001	514	2	3	48	KED
⌈>	**In**	**115**		ug/L			2016921	2235047	1	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.000	20	142	97	11	Standard
|	**Ba**	**135**	**0.003**	ug/L	0.004	112	113	158	23	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	52	247	299	6	Standard
⌈>	**Tb**	**159**		ug/L			3915797	4412059	0	Standard
⌊	**Pb**	**208**	**-0.002**	ug/L	0.000	6	1114	958	2	Standard

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20J0389
Client: Floyd - Snider
Project: Lora Lake Apartments
Instrument ID: ICPMS1
Calibration: DK00005
Control Limt: +/- 10.00%
Sequence: SIK0044

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SIK0044-ICV1	Arsenic-75a (dissolved)	50.000	49.1	98.3	ug/L	EPA 200.8 UCT-KED
SIK0044-CCV1	Arsenic-75a (dissolved)	50.000	49.2	98.4	ug/L	EPA 200.8 UCT-KED
SIK0044-CCV2	Arsenic-75a (dissolved)	50.000	49.5	99.1	ug/L	EPA 200.8 UCT-KED
SIK0044-CCV3	Arsenic-75a (dissolved)	50.000	49.1	98.2	ug/L	EPA 200.8 UCT-KED
SIK0044-CCV4	Arsenic-75a (dissolved)	50.000	49.2	98.5	ug/L	EPA 200.8 UCT-KED
SIK0044-CCV5	Arsenic-75a (dissolved)	50.000	48.9	97.7	ug/L	EPA 200.8 UCT-KED
SIK0044-CCV6	Arsenic-75a (dissolved)	50.000	49.4	98.8	ug/L	EPA 200.8 UCT-KED
SIK0044-CCV7	Arsenic-75a (dissolved)	50.000	49.2	98.4	ug/L	EPA 200.8 UCT-KED
SIK0044-CCV8	Arsenic-75a (dissolved)	50.000	49.7	99.4	ug/L	EPA 200.8 UCT-KED
SIK0044-CCV9	Arsenic-75a (dissolved)	50.000	49.6	99.1	ug/L	EPA 200.8 UCT-KED
SIK0044-CCVA	Arsenic-75a (dissolved)	50.000	50.1	100	ug/L	EPA 200.8 UCT-KED
SIK0044-CCVB	Arsenic-75a (dissolved)	50.000	50.5	101	ug/L	EPA 200.8 UCT-KED
SIK0044-CCVC	Arsenic-75a (dissolved)	50.000	50.0	99.9	ug/L	EPA 200.8 UCT-KED
SIK0044-CCVD	Arsenic-75a (dissolved)	50.000	49.5	99.1	ug/L	EPA 200.8 UCT-KED

* Values outside of QC limits

INSTRUMENT BLANKS
EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20J0389
Client: Floyd - Snider
Project: Lora Lake Apartments
Instrument ID: ICPMS1
Calibration: DK00005
Sequence: SIK0044
Date Analyzed: 11/03/20 12:53

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SIK0044-IBL1	Arsenic-75a (dissolved)	0.00900	0.022	0.200	ug/L	
SIK0044-ICB1	Arsenic-75a (dissolved)	0.00700	0.022	0.200	ug/L	
SIK0044-CCB1	Arsenic-75a (dissolved)	0.00200	0.022	0.200	ug/L	
SIK0044-IBL2	Arsenic-75a (dissolved)	0.0220	0.022	0.200	ug/L	
SIK0044-IBL3	Arsenic-75a (dissolved)	0.0430	0.022	0.200	ug/L	
SIK0044-CCB2	Arsenic-75a (dissolved)	0.00900	0.022	0.200	ug/L	
SIK0044-IBL4	Arsenic-75a (dissolved)	0.00300	0.022	0.200	ug/L	
SIK0044-CCB3	Arsenic-75a (dissolved)	0.00400	0.022	0.200	ug/L	
SIK0044-IBL5	Arsenic-75a (dissolved)	0.00700	0.022	0.200	ug/L	
SIK0044-CCB4	Arsenic-75a (dissolved)	0.00	0.022	0.200	ug/L	
SIK0044-CCB5	Arsenic-75a (dissolved)	0.00700	0.022	0.200	ug/L	
SIK0044-IBL6	Arsenic-75a (dissolved)	0.00500	0.022	0.200	ug/L	
SIK0044-IBL7	Arsenic-75a (dissolved)	0.00200	0.022	0.200	ug/L	
SIK0044-CCB6	Arsenic-75a (dissolved)	-0.00100	0.022	0.200	ug/L	
SIK0044-IBL8	Arsenic-75a (dissolved)	0.0100	0.022	0.200	ug/L	
SIK0044-CCB7	Arsenic-75a (dissolved)	0.00200	0.022	0.200	ug/L	
SIK0044-IBL9	Arsenic-75a (dissolved)	-0.00300	0.022	0.200	ug/L	
SIK0044-CCB8	Arsenic-75a (dissolved)	0.00600	0.022	0.200	ug/L	
SIK0044-IBLA	Arsenic-75a (dissolved)	0.00200	0.022	0.200	ug/L	
SIK0044-CCB9	Arsenic-75a (dissolved)	0.00600	0.022	0.200	ug/L	
SIK0044-CCBA	Arsenic-75a (dissolved)	0.00700	0.022	0.200	ug/L	
SIK0044-IBLB	Arsenic-75a (dissolved)	-0.00400	0.022	0.200	ug/L	
SIK0044-CCBB	Arsenic-75a (dissolved)	0.00500	0.022	0.200	ug/L	
SIK0044-IBLC	Arsenic-75a (dissolved)	-0.00400	0.022	0.200	ug/L	
SIK0044-IBLD	Arsenic-75a (dissolved)	-0.00900	0.022	0.200	ug/L	
SIK0044-CCBC	Arsenic-75a (dissolved)	0.00900	0.022	0.200	ug/L	
SIK0044-IBLE	Arsenic-75a (dissolved)	-0.00400	0.022	0.200	ug/L	
SIK0044-CCBD	Arsenic-75a (dissolved)	0.00100	0.022	0.200	ug/L	

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20J0389
Client: Floyd - Snider
Project: Lora Lake Apartments
Sequence: SIK0044
Instrument: ICPMS1
Calibration: DK00005

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SIK0044-CAL1	XDT_m1201103-006	NA	11/03/20 12:22
CAL 1 - LOW CHECK	SIK0044-CAL2	XDT_m1201103-007	NA	11/03/20 12:26
CAL 2	SIK0044-CAL3	XDT_m1201103-008	NA	11/03/20 12:31
CAL 3	SIK0044-CAL4	XDT_m1201103-009	NA	11/03/20 12:35
CAL 4	SIK0044-CAL5	XDT_m1201103-010	NA	11/03/20 12:40
CAL 5	SIK0044-CAL6	XDT_m1201103-011	NA	11/03/20 12:46
RINSE	SIK0044-IBL1	XDT_m1201103-012	NA	11/03/20 12:53
Initial Cal Check	SIK0044-ICV1	XDT_m1201103-014	NA	11/03/20 12:58
Initial Cal Blank	SIK0044-ICB1	XDT_m1201103-015	NA	11/03/20 13:05
Calibration Check	SIK0044-CCV1	XDT_m1201103-016	NA	11/03/20 13:09
Calibration Blank	SIK0044-CCB1	XDT_m1201103-017	NA	11/03/20 13:16
Instrument RL Check	SIK0044-CRL1	XDT_m1201103-018	NA	11/03/20 13:21
Interference Check A	SIK0044-IFA1	XDT_m1201103-019	NA	11/03/20 13:27
Interference Check B	SIK0044-IFB1	XDT_m1201103-020	NA	11/03/20 13:31
LR200	SIK0044-HCV1	XDT_m1201103-021	NA	11/03/20 13:36
LR300	SIK0044-HCV2	XDT_m1201103-022	NA	11/03/20 13:40
Instrument Blank	SIK0044-IBL2	XDT_m1201103-023	NA	11/03/20 13:47
Instrument Blank	SIK0044-IBL3	XDT_m1201103-024	NA	11/03/20 13:53
Calibration Check	SIK0044-CCV2	XDT_m1201103-025	NA	11/03/20 13:59
Calibration Blank	SIK0044-CCB2	XDT_m1201103-026	NA	11/03/20 14:06
ZZZZZ	20J0415-01	XDT_m1201103-030	Water	11/03/20 14:23
ZZZZZ	20J0415-01	XDT_m1201103-030	Water	11/03/20 14:23
ZZZZZ	20J0430-03	XDT_m1201103-031	Water	11/03/20 14:29
ZZZZZ	20J0430-03	XDT_m1201103-031	Water	11/03/20 14:29
ZZZZZ	20J0430-03	XDT_m1201103-031	Water	11/03/20 14:29
ZZZZZ	20J0430-03	XDT_m1201103-031	Water	11/03/20 14:29
ZZZZZ	20J0430-03	XDT_m1201103-031	Water	11/03/20 14:29
ZZZZZ	20J0430-02	XDT_m1201103-032	Water	11/03/20 14:34
ZZZZZ	20J0430-02	XDT_m1201103-032	Water	11/03/20 14:34
ZZZZZ	20J0430-02	XDT_m1201103-032	Water	11/03/20 14:34

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20J0389
Client: Floyd - Snider
Project: Lora Lake Apartments
Sequence: SIK0044
Instrument: ICPMS1
Calibration: DK00005

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20J0430-02	XDT_m1201103-032	Water	11/03/20 14:34
ZZZZZ	20J0430-02	XDT_m1201103-032	Water	11/03/20 14:34
ZZZZZ	20J0430-01	XDT_m1201103-033	Water	11/03/20 14:38
ZZZZZ	20J0430-01	XDT_m1201103-033	Water	11/03/20 14:38
ZZZZZ	20J0430-01	XDT_m1201103-033	Water	11/03/20 14:38
ZZZZZ	20J0430-01	XDT_m1201103-033	Water	11/03/20 14:38
ZZZZZ	20J0430-01	XDT_m1201103-033	Water	11/03/20 14:38
Instrument Blank	SIK0044-IBL4	XDT_m1201103-036	NA	11/03/20 14:55
Calibration Check	SIK0044-CCV3	XDT_m1201103-037	NA	11/03/20 15:01
Calibration Blank	SIK0044-CCB3	XDT_m1201103-038	NA	11/03/20 15:07
Instrument Blank	SIK0044-IBL5	XDT_m1201103-048	NA	11/03/20 15:59
Calibration Check	SIK0044-CCV4	XDT_m1201103-049	NA	11/03/20 16:04
Calibration Blank	SIK0044-CCB4	XDT_m1201103-050	NA	11/03/20 16:11
Calibration Check	SIK0044-CCV5	XDT_m1201103-051	NA	11/03/20 16:17
Calibration Blank	SIK0044-CCB5	XDT_m1201103-052	NA	11/03/20 16:24
Instrument Blank	SIK0044-IBL6	XDT_m1201103-056	NA	11/03/20 16:46
Instrument Blank	SIK0044-IBL7	XDT_m1201103-062	NA	11/03/20 17:14
Calibration Check	SIK0044-CCV6	XDT_m1201103-063	NA	11/03/20 17:20
Calibration Blank	SIK0044-CCB6	XDT_m1201103-064	NA	11/03/20 17:27
Instrument Blank	SIK0044-IBL8	XDT_m1201103-069	NA	11/03/20 17:55
Calibration Check	SIK0044-CCV7	XDT_m1201103-075	NA	11/03/20 18:25
Calibration Blank	SIK0044-CCB7	XDT_m1201103-076	NA	11/03/20 18:32
Blank	BIK0057-BLK1	XDT_m1201103-079	Water	11/03/20 18:46
LCS	BIK0057-BS1	XDT_m1201103-080	Water	11/03/20 18:50
ZZZZZ	20J0412-09	XDT_m1201103-081	Water	11/03/20 18:54
ZZZZZ	20J0412-11	XDT_m1201103-082	Water	11/03/20 18:59
Instrument Blank	SIK0044-IBL9	XDT_m1201103-083	NA	11/03/20 19:03
Calibration Check	SIK0044-CCV8	XDT_m1201103-087	NA	11/03/20 19:25
Calibration Blank	SIK0044-CCB8	XDT_m1201103-088	NA	11/03/20 19:32
ZZZZZ	20J0412-13	XDT_m1201103-089	Water	11/03/20 19:36

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20J0389
Client: Floyd - Snider
Project: Lora Lake Apartments
Sequence: SIK0044
Instrument: ICPMS1
Calibration: DK00005

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20J0412-15	XDT_m1201103-090	Water	11/03/20 19:40
ZZZZZ	20J0412-17	XDT_m1201103-091	Water	11/03/20 19:44
ZZZZZ	20J0412-19	XDT_m1201103-092	Water	11/03/20 19:48
ZZZZZ	20J0412-21	XDT_m1201103-093	Water	11/03/20 19:53
ZZZZZ	20J0412-23	XDT_m1201103-094	Water	11/03/20 19:57
MW-CP1-102720	20J0389-02	XDT_m1201103-095	Water	11/03/20 20:01
MW-CP2-102720	20J0389-03	XDT_m1201103-096	Water	11/03/20 20:06
MW-CP3-102720	20J0389-04	XDT_m1201103-097	Water	11/03/20 20:10
Instrument Blank	SIK0044-IBLA	XDT_m1201103-098	NA	11/03/20 20:16
Calibration Check	SIK0044-CCV9	XDT_m1201103-099	NA	11/03/20 20:21
Calibration Blank	SIK0044-CCB9	XDT_m1201103-100	NA	11/03/20 20:28
Calibration Check	SIK0044-CCVA	XDT_m1201103-102	NA	11/03/20 20:37
Calibration Blank	SIK0044-CCBA	XDT_m1201103-103	NA	11/03/20 20:44
MW-CP4-102720	20J0389-05	XDT_m1201103-104	Water	11/03/20 20:48
MW-CP5-102720	20J0389-06	XDT_m1201103-105	Water	11/03/20 20:52
MW-CP6-102720	20J0389-07	XDT_m1201103-106	Water	11/03/20 20:56
MW-CP7-102720	20J0389-08	XDT_m1201103-107	Water	11/03/20 21:01
MW-CP2-102720-D	20J0389-09	XDT_m1201103-108	Water	11/03/20 21:05
MW-VB3-102720	20J0389-01	XDT_m1201103-109	Water	11/03/20 21:09
MW-VB3-102720	BIK0057-DUP1	XDT_m1201103-110	Water	11/03/20 21:13
MW-VB3-102720	BIK0057-MS1	XDT_m1201103-111	Water	11/03/20 21:18
MW-VB3-102720	BIK0057-MSD1	XDT_m1201103-112	Water	11/03/20 21:22
Instrument Blank	SIK0044-IBLB	XDT_m1201103-113	NA	11/03/20 21:29
Calibration Check	SIK0044-CCVB	XDT_m1201103-114	NA	11/03/20 21:35
Calibration Blank	SIK0044-CCBB	XDT_m1201103-115	NA	11/03/20 21:42
MW-C1/VB1-102820	20J0389-10	XDT_m1201103-116	Water	11/03/20 21:46
MW-C101-102820	20J0389-11	XDT_m1201103-117	Water	11/03/20 21:50
MW-C2-102820	20J0389-12	XDT_m1201103-118	Water	11/03/20 21:54
MW-C3-102820	20J0389-13	XDT_m1201103-119	Water	11/03/20 21:59
HCOO-B312-102820	20J0389-14	XDT_m1201103-120	Water	11/03/20 22:03

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 200.8 UCT-KED

Laboratory:	Analytical Resources, Inc.	SDG:	20J0389
Client:	Floyd - Snider	Project:	Lora Lake Apartments
Sequence:	SIK0044	Instrument:	ICPMS1
		Calibration:	DK00005

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Instrument Blank	SIK0044-IBLC	XDT_m1201103-121	NA	11/03/20 22:10
Instrument Blank	SIK0044-IBLD	XDT_m1201103-125	NA	11/03/20 22:32
Calibration Check	SIK0044-CCVC	XDT_m1201103-126	NA	11/03/20 22:37
Calibration Blank	SIK0044-CCBC	XDT_m1201103-127	NA	11/03/20 22:44
Instrument Blank	SIK0044-IBLE	XDT_m1201103-134	NA	11/03/20 23:17
Calibration Check	SIK0044-CCVD	XDT_m1201103-135	NA	11/03/20 23:22
Calibration Blank	SIK0044-CCBD	XDT_m1201103-136	NA	11/03/20 23:29

ICP INTERFERENCE CHECK SAMPLE

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20J0389
Client: Floyd - Snider
Project: Lora Lake Apartments
Instrument ID: ICPMS1
Calibration: DK00005
Sequence: SIK0044
Standard ID: I009767

Lab Sample ID	Analyte	True	Found	%R	Units
SIK0044-IFA1	Arsenic-75a (dissolved)	0	0.0300		ug/L

* Indicates %R outside of QC limits
NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

ICP INTERFERENCE CHECK SAMPLE

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20J0389
Client: Floyd - Snider
Project: Lora Lake Apartments
Instrument ID: ICPMS1
Calibration: DK00005
Sequence: SIK0044
Standard ID: I009767

Lab Sample ID	Analyte	True	Found	%R	Units
SIK0044-IFB1	Arsenic-75a (dissolved)	20.000	19.671	98.4	ug/L

* Indicates %R outside of QC limits
NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

DETECTION LEVEL STANDARD
EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20J0389
Client: Floyd - Snider
Project: Lora Lake Apartments
Instrument ID: ICPMS1
Calibration: DK00005
Sequence: SIK0044
Lab Sample ID: SIK0044-CRL1

Analyte	True	Found	%R	Units	QC Limts
Arsenic-75a (dissolved)	0.20000	0.204	102	ug/L	50 - 150

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20J0389
Client: Floyd - Snider
Project: Lora Lake Apartments
Calibration: DK00005
Laboratory ID: SIK0044-HCV1
Sequence: SIK0044
Standard ID: I010247

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a (dissolved)	200.00	194	-3.0	10.00

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20J0389
Client: Floyd - Snider
Project: Lora Lake Apartments
Calibration: DK00005
Laboratory ID: SIK0044-HCV2
Sequence: SIK0044
Standard ID: I009953

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a (dissolved)	300.00	295	-1.7	10.00

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc. SDG: 20J0389

Client: Floyd - Snider Project: Lora Lake Apartments

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MW-VB3-102720 20J0389-01	10/27/20 09:50	10/28/20 13:48	11/03/20 13:09	7	180	11/03/20 21:09	7	180	
MW-CP1-102720 20J0389-02	10/27/20 11:25	10/28/20 13:48	11/03/20 13:09	7	180	11/03/20 20:01	7	180	
MW-CP2-102720 20J0389-03	10/27/20 15:40	10/28/20 13:48	11/03/20 13:09	6	180	11/03/20 20:06	7	180	
MW-CP3-102720 20J0389-04	10/27/20 12:42	10/28/20 13:48	11/03/20 13:09	7	180	11/03/20 20:10	7	180	
MW-CP4-102720 20J0389-05	10/27/20 14:20	10/28/20 13:48	11/03/20 13:09	6	180	11/03/20 20:48	7	180	
MW-CP5-102720 20J0389-06	10/27/20 14:28	10/28/20 13:48	11/03/20 13:09	6	180	11/03/20 20:52	7	180	
MW-CP6-102720 20J0389-07	10/27/20 13:20	10/28/20 13:48	11/03/20 13:09	6	180	11/03/20 20:56	7	180	
MW-CP7-102720 20J0389-08	10/27/20 12:00	10/28/20 13:48	11/03/20 13:09	7	180	11/03/20 21:01	7	180	
MW-CP2-102720-D 20J0389-09	10/27/20 15:45	10/28/20 13:48	11/03/20 13:09	6	180	11/03/20 21:05	7	180	
MW-C1/VB1-102820 20J0389-10	10/28/20 09:37	10/28/20 13:48	11/03/20 13:09	6	180	11/03/20 21:46	7	180	
MW-C101-102820 20J0389-11	10/28/20 09:47	10/28/20 13:48	11/03/20 13:09	6	180	11/03/20 21:50	7	180	
MW-C2-102820 20J0389-12	10/28/20 11:01	10/28/20 13:48	11/03/20 13:09	6	180	11/03/20 21:54	6	180	
MW-C3-102820 20J0389-13	10/28/20 10:06	10/28/20 13:48	11/03/20 13:09	6	180	11/03/20 21:59	6	180	
HCOO-B312-102820 20J0389-14	10/28/20 13:00	10/28/20 13:48	11/03/20 13:09	6	180	11/03/20 22:03	6	180	
Duplicate BIK0057-DUP1	10/27/20 09:50	10/28/20 13:48	11/03/20 13:09	7	180	11/03/20 21:13	7	180	
Matrix Spike BIK0057-MS1	10/27/20 09:50	10/28/20 13:48	11/03/20 13:09	7	180	11/03/20 21:18	7	180	
Matrix Spike Dup BIK0057-MSD1	10/27/20 09:50	10/28/20 13:48	11/03/20 13:09	7	180	11/03/20 21:22	7	180	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 200.8 UCT-KED

Laboratory: Analytical Resources, Inc.
SDG: 20J0389
Client: Floyd - Snider
Project: Lora Lake Apartments
Matrix: Water
Instrument: ICPMS1

Analyte	MDL	RL	Units
Arsenic-75a (dissolved)	0.0220	0.200	ug/L

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMO10
Lot Number:	N2-MO670050
Matrix:	H2O tr NH4OH
Value / Analyte(s):	10 000 µg/mL ea: Molybdenum
Starting Material:	Ammonium Molybdate
Starting Material Lot#:	2197
Starting Material Purity:	99.9921%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10013 ± 31 µg/mL

Density: 1.011 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10006 ± 42 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

Assay Method #2 **10021 ± 44 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000631	M	Eu	<	0.000315	O	Na		0.006415	M	Se	<	0.010742	M	Zn		0.009510
M	Al		0.003279	M	Fe	<	0.006634	M	Nb	<	0.025907	i	Si	<		M	Zr	<	0.001263
M	As		0.104451	M	Ga	<	0.000315	i	Nd	<		M	Sm	<	0.000315				
M	Au	<	0.003161	M	Gd	<	0.000315	M	Ni	<	0.001895	M	Sn		0.004481				
M	B	<	0.050867	M	Ge	<	0.001263	M	Os	<	0.000632	M	Sr		0.000436				
i	Ba	<		M	Hf	<	0.000315	i	P	<		M	Ta	<	0.001263				
M	Be	<	0.000315	M	Hg	<	0.006954	M	Pb	<	0.001263	M	Tb	<	0.000315				
M	Bi	<	0.005055	M	Ho	<	0.000315	M	Pd	<	0.000631	i	Te	<					
O	Ca		0.011541	M	In		0.003935	M	Pr	<	0.061294	M	Th	<	0.000315				
O	Cd	<	0.118155	M	Ir	<	0.003161	M	Pt	<	0.000631	O	Ti	<	0.103600				
M	Ce	<	0.071404	O	K		0.181442	M	Rb	<	0.005687	M	Tl		0.000983				
M	Co	<	0.003159	M	La	<	0.000315	M	Re		0.050830	M	Tm	<	0.000315				
M	Cr		0.051377	O	Li		0.001182	M	Rh	<	0.000315	M	U	<	0.000315				
M	Cs	<	0.005055	M	Lu	<	0.000315	M	Ru	<	0.088514	M	V	<	0.012006				
M	Cu		0.004809	M	Mg		0.010712	i	S	<		M	W		1.251642				
M	Dy	<	0.001263	M	Mn		0.003279	M	Sb		0.003169	M	Y	<	0.000315				
M	Er	<	0.000315	s	Mo	<		M	Sc	<	0.000631	M	Yb	<	0.000315				

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 95.94 +6 6,7,8,9 [MoO4] -2(chemical form as received)
Chemical Compatibility -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5] -2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.
Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4] -2 chemically stable for years in 1% NH4OH in a LDPE container.
Mo Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or HCl).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 95 amu	3 ppt	n/a	40Ar39K16O,79Br16O,190Os2+,190Pt2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 10, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 10, 2022**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSB10
Lot Number:	N2-SB672482
Matrix:	3% (v/v) HNO3 3% (v/v) Tartaric Acid
Value / Analyte(s):	10 000 µg/mL ea: Antimony
Starting Material:	Antimony Metal
Starting Material Lot#:	1857
Starting Material Purity:	99.9838%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10041 ± 45 µg/mL

Density: 1.061 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10041 ± 39 µg/mL**
ICP Assay NIST SRM 3102a Lot Number: 140911

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000210	M	Eu	<	0.000110	O	Na		0.060000	M	Se	<	0.001500	O	Zn		0.003900
M	Al		0.110000	O	Fe		0.028000	M	Nb	<	0.000110	O	Si		0.071000	M	Zr	<	0.002700
M	As	<	0.003100	M	Ga	<	0.000210	M	Nd	<	0.000110	M	Sm	<	0.000110				
M	Au	<	0.000110	M	Gd	<	0.000110	O	Ni		0.005900	M	Sn		0.001800				
O	B		0.018000	M	Ge	<	0.000110	M	Os	<	0.000110	O	Sr	<	0.000540				
O	Ba	<	0.000540	M	Hf	<	0.000610	O	P		0.590000	M	Ta	<	0.000410				
O	Be	<	0.000110	M	Hg	<	0.000110	M	Pb	<	0.002500	M	Tb	<	0.000110				
M	Bi	<	0.000210	M	Ho	<	0.000110	M	Pd	<	0.000110	M	Te	<	0.002600				
O	Ca		0.078000	M	In	<	0.000410	M	Pr	<	0.003100	M	Th	<	0.000110				
M	Cd	<	0.000210	M	Ir	<	0.000110	M	Pt	<	0.000110	O	Ti		0.014000				
M	Ce		0.007700	O	K		0.530000	M	Rb		0.002200	M	Tl	<	0.000110				
M	Co	<	0.001300	O	La	<	0.008300	M	Re	<	0.000110	M	Tm	<	0.000110				
O	Cr		0.099000	O	Li		0.000540	M	Rh	<	0.000110	M	U	<	0.000110				
M	Cs	<	0.000510	M	Lu	<	0.000110	M	Ru	<	0.000110	O	V	<	0.001400				
O	Cu	<	0.003100	O	Mg		0.004500	n	S	<		M	W	<	0.000510				
M	Dy	<	0.000110	O	Mn		0.002700	s	Sb	<		M	Y	<	0.000110				
M	Er	<	0.000110	M	Mo		0.003600	O	Sc	<	0.000850	M	Yb	<	0.000110				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 121.75 +3 6 Sb(O)C4H4O6-1
Chemical Compatibility -Stable in conc. HCl, dilute or conc. HF. Stable in dilute HNO3 as the fluoride or tartrate complex. Avoid basic media. Stable with most metals and inorganic anions in acidic media as the tartrate provided the acidity is not too high or the acid is oxidizing causing loss of the stabilizing tartrate ion. The fluoride complex of antimony is stable in strong acid but you should only mix with other metals that are fluorinated.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-2% HNO3 / LDPE container.
Sb Containing Samples (Preparation and Solution) -Metal and alloys (Soluble in H2O / HF / HNO3 mixture); Oxides (Soluble in HCl and tartaric acid or H2O / HF / HNO3 mixtures); Ores (fusion with Na2CO3 in Pt0 followed by dissolving the fuseate in a H2O / HF / HNO3 mixture); Organic based (sulfuric acid / hydrogen peroxide digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 121 amu	5 ppt	N/A	105Pd16O, 89Y16O2
ICP-OES 206.833 nm	0.03/0.003 µg/mL	1	Ta, Cr, Ge, Hf
ICP-OES 217.581 nm	0.05/0.005 µg/mL	1	Nb, W, Re, Fe
ICP-OES 231.147 nm	0.06/0.006 µg/mL	1	Ni, Co, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 18, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 18, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAG10
Lot Number:	P2-AG679501
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Silver
Starting Material:	Ag Shot
Starting Material Lot#:	2217
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9996 ± 30 µg/mL

Density: 1.053 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10015 ± 56 µg/mL**
ICP Assay NIST SRM 3151 Lot Number: 160729

Assay Method #2 **9992 ± 25 µg/mL**
Volhard NIST SRM 999c Lot Number: 999c

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

s	Ag	<		M	Eu	<	0.000253	O	Na		0.005562	M	Se	<	0.018179	M	Zn		0.005799
O	Al		0.006295	O	Fe		0.002932	M	Nb	<	0.000253	M	Si		0.022484	M	Zr	<	0.005559
M	As	<	0.002403	M	Ga	<	0.000253	M	Nd	<	0.000253	M	Sm	<	0.000253				
M	Au		0.001634	M	Gd	<	0.000253	O	Ni	<	0.005472	M	Sn		0.001927				
O	B	<	0.009978	M	Ge	<	0.000754	M	Os	<	0.000254	O	Sr		0.000086				
M	Ba	<	0.000785	M	Hf	<	0.000253	M	P	<	0.053784	M	Ta	<	0.000253				
M	Be	<	0.002407	M	Hg	<	0.001332	M	Pb		0.003281	M	Tb	<	0.000253				
M	Bi		0.001671	M	Ho	<	0.000253	M	Pd	<	0.001382	M	Te	<	0.003715				
O	Ca		0.007115	M	In	<	0.003483	M	Pr	<	0.000253	M	Th	<	0.000253				
M	Cd	<	0.000253	M	Ir	<	0.000254	M	Pt	<	0.000253	M	Ti	<	0.002706				
M	Ce	<	0.000573	O	K		0.004010	M	Rb	<	0.000253	M	Tl	<	0.000253				
M	Co	<	0.000253	M	La	<	0.000253	M	Re	<	0.000253	M	Tm	<	0.000253				
O	Cr	<	0.005043	O	Li	<	0.000214	M	Rh	<	0.000253	M	U	<	0.000253				
M	Cs	<	0.002769	M	Lu	<	0.000253	M	Ru	<	0.000254	M	V	<	0.000822				
O	Cu		0.004614	O	Mg		0.001034	M	S	<	0.560935	M	W	<	0.002146				
M	Dy	<	0.000253	M	Mn	<	0.000253	M	Sb	<	0.006899	M	Y	<	0.000253				
M	Er	<	0.000253	M	Mo	<	0.000479	M	Sc	<	0.000733	M	Yb	<	0.000253				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 107.87 +1 6 $Ag(H_2O)_6^+$
Chemical Compatibility -Stable in HNO_3, and HF. Avoid basic media. Ag forms more insoluble salts than any other metal. It also is subject to photochemical reduction to the metal in HCl media although 10 µg/mL solutions in 10% HCl [$AgCl_{x1-x}$] are commonly used in the analytical laboratory. The most common solubility problems exist with arsenate, arsenite , bromide, chloride, iodide, carbonate , chromate, cyanide, iodate, oxalate, oxide, sulfate, sulfide, tartrate, and thiocyanate in aqueous media. The addition of nitric acid renders many of these salts soluble.
Stability - 2-100 ppb levels stable for 75+ days when mixed with equivalent levels of all other elements including the precious metals (where chloride is present) when in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.
Ag Containing Samples (Preparation and Solution) -Metal (Soluble in HNO_3); Oxides (Soluble in HNO_3); Ores (Digestion with conc. HNO_3).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 107 amu	1 ppt	N/A	91Zr16O
ICP-OES 243.779 nm	0.12/0.01 µg/mL	1	Mn, Th, Ni, Rh
ICP-OES 328.068 nm	0.007/0.0007 µg/mL	1	Ce, Rh, V
ICP-OES 338.289 nm	0.013/0.001 µg/mL	1	Ce, Cr, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 07, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 07, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAL10
Lot Number:	R2-AL689264
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Aluminum
Starting Material:	Al shot
Starting Material Lot#:	2253
Starting Material Purity:	99.9986%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10020 ± 33 µg/mL

Density: 1.085 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10028 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #2 **9979 ± 49 µg/mL**
ICP Assay NIST SRM 3101a Lot Number: 140903

Assay Method #3 **10031 ± 52 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000635	M	Eu	<	0.000635	O	Na		0.026739	M	Se	<	0.011252	M	Zn	<	0.006354
s	Al	<		O	Fe		0.014971	M	Nb	<	0.000635	O	Si		0.079302	M	Zr	<	0.005083
O	As	<	0.026840	M	Ga	<	0.005083	M	Nd	<	0.001906	M	Sm	<	0.000635				
M	Au	<	0.000625	M	Gd	<	0.000635	M	Ni	<	0.012708	M	Sn	<	0.008895				
O	B		0.010178	M	Ge	<	0.002541	M	Os	<	0.000625	O	Sr	<	0.000671				
M	Ba	<	0.003812	M	Hf	<	0.000635	n	P	<		M	Ta	<	0.000635				
M	Be	<	0.002541	M	Hg	<	0.000625	M	Pb	<	0.000635	M	Tb	<	0.006354				
M	Bi	<	0.000635	M	Ho	<	0.000635	M	Pd	<	0.000635	M	Te	<	0.006989				
O	Ca		0.010097	M	In	<	0.016521	M	Pr	<	0.000635	M	Th	<	0.001270				
M	Cd	<	0.000635	M	Ir	<	0.000625	M	Pt	<	0.000635	O	Ti		0.001157				
M	Ce	<	0.010166	O	K		0.008132	M	Rb	<	0.002541	M	Tl	<	0.000635				
O	Co	<	0.009394	O	La	<	0.009394	M	Re	<	0.000635	M	Tm	<	0.000635				
O	Cr		0.002638	O	Li	<	0.000671	M	Rh	<	0.000635	M	U	<	0.000635				
M	Cs	<	0.001906	M	Lu	<	0.000635	M	Ru	<	0.000625	O	V	<	0.013420				
O	Cu		0.008751	O	Mg		0.011605	i	S	<		M	W	<	0.003812				
M	Dy	<	0.000635	O	Mn		0.000780	M	Sb	<	0.001270	M	Y	<	0.000635				
M	Er	<	0.000635	M	Mo	<	0.005718	M	Sc	<	0.003812	M	Yb	<	0.000635				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 26.98 +3 6 Al(H2O)6+3
Chemical Compatibility -Soluble in HCl, HNO3, HF and H2SO4. Avoid neutral media. Soluble in strongly basic NaOH forming the Al(OH)4(H2O)21- species. Stable with most metals and inorganic anions. The phosphate is insoluble in water and only slightly soluble in acid.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
Al Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); a- Al2O3 (Na2CO3 fusion in Pt0);
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 27 amu	30 ppt	N/A	12C15N, 13C14N, 1H12C14N, 11B16O, 54Cr2+, 54Fe2+
ICP-OES 167.078 nm	0.1/0.009 µg/mL	1	Fe
ICP-OES 394.401 nm	0.05/0.006 µg/mL	1	U, Ce
ICP-OES 396.152 nm	0.03/0.006 µg/mL	1	Mo, Zr, Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 22, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **February 22, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAS10
Lot Number:	R2-AS691113
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Arsenic
Starting Material:	As Pieces
Starting Material Lot#:	2208
Starting Material Purity:	99.9980%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9981 ± 55 µg/mL

Density: 1.028 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9981 ± 55 µg/mL**
ICP Assay NIST SRM 3103a Lot Number: 100818

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The follow ing equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001578	M	Eu	<	0.000526	O	Na		0.036136	M	Se	<	0.014204	O	Zn	<	0.003390
O	Al		0.006694	M	Fe		0.002633	O	Nb	<	0.011526	O	Si		0.139479	M	Zr	<	0.003156
s	As	<		M	Ga	<	0.000526	M	Nd	<	0.000526	M	Sm	<	0.000526				
M	Au	<	0.000526	M	Gd	<	0.000526	O	Ni	<	0.005537	M	Sn	<	0.001052				
M	B		0.017011	M	Ge	<	0.000526	M	Os	<	0.000526	M	Sr	<	0.000526				
M	Ba	<	0.000526	M	Hf	<	0.000526	O	P	<	0.056500	M	Ta	<	0.000526				
O	Be	<	0.001130	M	Hg	<	0.002104	M	Pb	<	0.000526	M	Tb	<	0.000526				
M	Bi	<	0.002104	M	Ho	<	0.000526	M	Pd	<	0.000526	M	Te	<	0.003682				
O	Ca		0.005657	M	In	<	0.000526	M	Pr	<	0.002630	M	Th	<	0.000526				
M	Cd	<	0.000526	M	Ir	<	0.000526	M	Pt	<	0.000526	O	Ti	<	0.001017				
M	Ce	<	0.000526	O	K		0.003865	M	Rb	<	0.002104	M	Tl	<	0.000526				
M	Co	<	0.003156	M	La	<	0.000526	M	Re	<	0.000526	M	Tm	<	0.000526				
M	Cr		0.000877	M	Li	<	0.000526	M	Rh	<	0.000526	M	U	<	0.000526				
M	Cs	<	0.002104	M	Lu	<	0.000526	M	Ru	<	0.000526	M	V	<	0.001578				
M	Cu	<	0.003156	O	Mg		0.000235	O	S	<	0.056500	M	W	<	0.000526				
M	Dy	<	0.000526	M	Mn	<	0.001052	M	Sb	<	0.000526	M	Y	<	0.000526				
M	Er	<	0.000526	M	Mo	<	0.000526	M	Sc	<	0.002104	M	Yb	<	0.000526				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 74.92 ; mix of +3 and +5 ; 6 ; H_3AsO_4 and $HAsO_2$

Chemical Compatibility - Arsenic has no cationic chemistry. It is soluble in HCl, HNO_3,H_3PO_4, H_2SO_4 and HF aqueous matrices water and NH_4OH . It is stable with most inorganic anions (forms arsenate when boiled with chromate) but many cationic metals form the insoluble arsenates under pH neutral conditions. When fluorinated and / or under acidic conditions arsenate formation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO_3 / LDPE container.

As Containing Samples (Preparation and Solution) - Metal (soluble in 1:1 H_2O / HNO_3); Oxides (the oxide exists in crystalline and amorphous forms where the amorphic form is more water soluble. The oxides typically dissolve in dilute acidic solutions when boiled); Minerals (one gram of powered sample is fused in a Ni crucible with 10 grams of a 1:1 mix of K_2CO_3 and KNO_3 and the melt extracted with hot water); Organic Matrices (0.2 to 0.5 grams of sample are fused with 15 grams of a 1:1 Na_2CO_3 / Na_2O_2 mix in a Ni crucible. The fuseate is extracted with water and acidified with HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 75 amu	20 ppt	N/A	40Ar35Cl, 59Co16O, 36Ar38Ar1H,8Ar37Cl,Ar39K, 150Nd2+,150Sm2+
ICP-OES 189.042 nm	0.05/0.005 µg/mL	1	Cr
ICP-OES 193.696 nm	0.1/0.01 µg/mL	1	V, Ge
ICP-OES 228.812 nm	0.1/0.01 µg/mL	1	Cd, Pt, Ir, Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 25, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 25, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBA10
Lot Number:	P2-BA682107
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Barium
Starting Material:	Ba(NO3)2
Starting Material Lot#:	Mixed Lots
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10072 ± 32 µg/mL

Density: 1.024 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10054 ± 80 µg/mL**
ICP Assay NIST SRM 3104a Lot Number: 140909

Assay Method #2 **10075 ± 30 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001538	O	Eu	<	0.028728	O	Na		0.006767	M	Se	<	0.007964	O	Zn		0.004335
M	Al		0.005194	M	Fe		0.016554	M	Nb	<	0.000200	O	Si	<	0.020780	M	Zr	<	0.000271
M	As	<	0.000519	M	Ga	<	0.000200	M	Nd	<	0.000200	M	Sm	<	0.082480				
M	Au	<	0.003452	M	Gd	<	0.000200	M	Ni	<	0.001290	M	Sn	<	0.000200				
M	B	<	0.002519	M	Ge	<	0.000430	M	Os	<	0.000752	O	Sr		0.027070				
s	Ba	<		M	Hf	<	0.002746	O	P	<	0.044677	M	Ta	<	0.001008				
M	Be	<	0.000430	M	Hg	<	0.001063	M	Pb	<	0.002257	M	Tb	<	0.000200				
M	Bi	<	0.002971	M	Ho	<	0.000200	M	Pd	<	0.000286	M	Te	<	0.001470				
O	Ca		0.026224	M	In	<	0.000200	M	Pr	<	0.000200	M	Th	<	0.000200				
M	Cd	<	0.000200	M	Ir	<	0.000446	M	Pt	<	0.000200	M	Ti	<	0.000324				
M	Ce	<	0.004362	O	K		0.011526	M	Rb		0.001487	M	Tl	<	0.000200				
M	Co	<	0.000200	O	La	<	0.091587	M	Re	<	0.000200	M	Tm	<	0.000954				
M	Cr	<	0.002191	O	Li	<	0.002181	M	Rh	<	0.000200	M	U	<	0.000200				
M	Cs	<	0.001640	M	Lu	<	0.002934	M	Ru	<	0.000200	M	V	<	0.000229				
M	Cu	<	0.003646	O	Mg		0.002379	O	S	<	0.073041	M	W	<	0.001627				
M	Dy	<	0.000200	M	Mn	<	0.000902	M	Sb	<	0.000514	O	Y	<	0.019637				
M	Er	<	0.000556	M	Mo	<	0.000455	M	Sc	<	0.000478	M	Yb	<	0.001991				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 137.33 +2 6 $Ba(H_2O)_6^{+2}$
Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, iodate, molybdate, sulfite and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1 -10,000 ppm solutions chemically stable for years in 1-3.5% HNO_3 / LDPE container.
Ba Containing Samples (Preparation and Solution) -Metal(is best dissolved in diluted HNO_3); Ores(Carbonate fusion in Pt0 followed by HCl dissolution. If sulfate is present dissolve the fuseate using HCl / tartaric acid to prevent $BaSO_4$ precipitate); Organic Matrices (dry ash and dissolve in dilute HCl.)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 138 amu	1 ppt	N/A	122Sn16O, 122Te16O
ICP-OES 230.424 nm	0.004/0.0005 µg/mL	1	Mo, Ir, Co
ICP-OES 233.527 nm	0.004/0.0003 µg/mL	1	
ICP-OES 455.403 nm	0.002/0.0001 µg/mL	1	Zr, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 13, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **September 13, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBE10
Lot Number:	P2-BE678865
Matrix:	6% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Beryllium
Starting Material:	Beryllium diacetate
Starting Material Lot#:	2221
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10036 ± 35 µg/mL

Density: 1.140 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10051 ± 42 µg/mL**
ICP Assay NIST SRM 3105a Lot Number: 090514

Assay Method #2 **10008 ± 59 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag		0.045414	M	Eu	<	0.000254	O	Na		0.015009	M	Se	<	0.015257	O	Zn		0.004059
O	Al		0.008058	O	Fe		0.011749	M	Nb	<	0.000254	O	Si		0.063793	O	Zr	<	0.007064
M	As	<	0.006473	M	Ga	<	0.000254	M	Nd	<	0.000254	M	Sm	<	0.000254				
M	Au	<	0.000248	M	Gd	<	0.000254	M	Ni	<	0.002034	M	Sn	<	0.002542				
O	B	<	0.021661	M	Ge	<	0.000508	M	Os	<	0.000248	M	Sr	<	0.000254				
M	Ba		0.001760	M	Hf	<	0.000254	O	P	<	0.666500	M	Ta	<	0.000254				
s	Be	<		M	Hg	<	0.001244	M	Pb	<	0.001271	M	Tb	<	0.000254				
M	Bi	<	0.000254	M	Ho	<	0.000254	M	Pd	<	0.000254	M	Te	<	0.001780				
O	Ca		0.015256	M	In	<	0.000254	M	Pr	<	0.000254	M	Th	<	0.000254				
M	Cd	<	0.000254	M	Ir	<	0.000248	M	Pt	<	0.000254	O	Ti	<	0.002266				
M	Ce	<	0.000254	O	K		0.031127	M	Rb	<	0.000508	M	Tl	<	0.000254				
M	Co	<	0.004068	M	La	<	0.000254	M	Re	<	0.000254	M	Tm	<	0.000254				
M	Cr	<	0.001525	O	Li	<	0.000666	M	Rh	<	0.000254	M	U	<	0.000254				
M	Cs		0.001642	M	Lu	<	0.000254	M	Ru	<	0.000248	M	V	<	0.000508				
M	Cu	<	0.005085	O	Mg		0.001907	i	S	<		M	W	<	0.004068				
M	Dy	<	0.000254	O	Mn	<	0.001333	M	Sb	<	0.000254	M	Y	<	0.000254				
M	Er	<	0.000254	M	Mo	<	0.000762	O	Sc	<	0.001333	M	Yb	<	0.000254				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 9.01 +2 4 Be+(H2O)4+2
Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Stable with all metals and inorganic anions.
Stability - 2-100 ppb levels stable for months in 1 % HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 5-10 % HNO3 / LDPE container.
Be Containing Samples (Preparation and Solution) - Meta l(is best dissolved in diluted H2SO4); BeO (boiling nitric, hydrochloric, or sulfuric acids or KHSO4 fusion); Ores (H2SO4/HF digestion or carbonate fusion in Pt0); Organic Matrices (sulfuric/peroxide digestion or nitric/sulfuric/perchloric acid decomposition, or dry ash and dissolution according to the BeO procedure above).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 9 amu	4 ppt	N/A	
ICP-OES 234.861 nm	0.0003/0.00016 µg/mL	1	Fe, Ta, Mo
ICP-OES 313.042 nm	0.0003/0.00009 µg/mL	1	V, Ce, U
ICP-OES 313.107 nm	0.0007/0.0005 µg/mL	1	Ce, Th, Tm

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 22, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 22, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCA10
Lot Number:	P2-CA688224
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Calcium
Starting Material:	Calcium Oxide
Starting Material Lot#:	P2-CA677788
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10034 ± 30 µg/mL

Density: 1.039 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10033 ± 29 µg/mL**
ICP Assay NIST SRM 3109a Lot Number: 130213

Assay Method #2 **10038 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10021 ± 47 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.004700	M	Eu	<	0.001200	O	Na		0.005556	M	Se	<	0.023000	O	Zn		0.000555
M	Al		0.005229	O	Fe		0.002723	M	Nb	<	0.001200	O	Si	<	0.029000	M	Zr	<	0.001200
M	As	<	0.013000	M	Ga	<	0.002400	M	Nd	<	0.001200	M	Sm	<	0.001200				
M	Au	<	0.002400	M	Gd	<	0.001200	O	Ni	<	0.003100	M	Sn	<	0.003600				
O	B	<	0.014000	M	Ge	<	0.003600	M	Os	<	0.001200	O	Sr		0.043577				
M	Ba		0.001024	M	Hf	<	0.001200	O	P	<	0.067000	M	Ta	<	0.001200				
M	Be	<	0.001200	M	Hg	<	0.003600	M	Pb	<	0.017000	M	Tb	<	0.001200				
M	Bi	<	0.001200	M	Ho	<	0.001200	M	Pd	<	0.001200	M	Te	<	0.015000				
s	Ca	<		M	In	<	0.001200	M	Pr	<	0.001200	M	Th	<	0.001200				
M	Cd	<	0.001200	M	Ir	<	0.001200	M	Pt	<	0.001200	O	Ti	<	0.007900				
M	Ce	<	0.001200	O	K		0.005556	M	Rb	<	0.001200	M	Tl	<	0.001200				
O	Co		0.000642	M	La	<	0.001200	M	Re	<	0.001200	M	Tm	<	0.001200				
M	Cr	<	0.004700	O	Li	<	0.002300	M	Rh	<	0.001200	M	U	<	0.001200				
M	Cs	<	0.001200	M	Lu	<	0.001200	M	Ru	<	0.001200	M	V	<	0.001200				
M	Cu	<	0.007100	O	Mg		0.003268	n	S	<		M	W	<	0.002400				
M	Dy	<	0.001200	O	Mn		0.000119	M	Sb	<	0.001200	M	Y	<	0.001200				
M	Er	<	0.001200	M	Mo		0.001024	O	Sc	<	0.006800	M	Yb	<	0.001200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 40.08 +2 6 Ca(H2O)6+2
Chemical Compatibility - Soluble in HCl and HNO3. Avoid H2SO4, HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO3 / LDPE container.
Ca Containing Samples (Preparation and Solution) -Metal (best dissolved in diluted HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (dry ash and dissolution in dilute HCl. Do not heat when dissolving to avoid precipitation of SiO2). The oxide, hydroxide, carbonate, phosphate, and fluoride of calcium are soluble in % levels of HCl or HNO3. The sulfates (gypsum, anhydrite, etc.), certain silicates, and complex compounds require fusion with Na2CO3 followed by HCl / water dissolution. Note that contamination is a very real problem when analyzing for trace levels.
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 44 amu	1200 ppt	n/a	16O212C, 28Si16O, 88Sr
ICP-OES 393.366 nm	0.0002 / 0.00004 µg/mL	1	U, Ce
ICP-OES 396.847 nm	0.0005 / 0.00006 µg/mL	1	Th
ICP-OES 422.673 nm	0.01 / 0.001 µg/mL	1	Ge

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 25, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 25, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCD10
Lot Number:	P2-CD675954
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cadmium
Starting Material:	Cd Shot
Starting Material Lot#:	1954
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10014 ± 30 µg/mL

Density: 1.029 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**10021 ± 32 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**10038 ± 43 µg/mL** ICP Assay NIST SRM 3108 Lot Number: 130116
Assay Method #3	**9996 ± 30 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag		0.000834	O	Eu	<	0.002146	O	Na		0.003359	M	Se	<	0.003997	O	Zn		0.000251
O	Al		0.002435	O	Fe	<	0.001180	M	Nb	<	0.000399	O	Si		0.009519	M	Zr	<	0.000399
M	As	<	0.003997	M	Ga	<	0.000399	M	Nd	<	0.000399	M	Sm	<	0.000799				
M	Au	<	0.002809	M	Gd	<	0.000399	M	Ni	<	0.002398	M	Sn	<	0.000799				
M	B	<	0.005197	M	Ge	<	0.004397	M	Os	<	0.000401	O	Sr	<	0.000107				
M	Ba	<	0.000399	M	Hf	<	0.000399	O	P	<	0.023606	M	Ta	<	0.000399				
O	Be	<	0.000107	O	Hg	<	0.010730	M	Pb	<	0.001599	M	Tb	<	0.000399				
M	Bi	<	0.000399	M	Ho	<	0.000399	M	Pd	<	0.000799	M	Te	<	0.005596				
O	Ca		0.001399	O	In	<	0.015558	M	Pr	<	0.000399	M	Th	<	0.000399				
s	Cd	<		M	Ir	<	0.000401	M	Pt	<	0.000399	O	Ti	<	0.000536				
M	Ce	<	0.000399	O	K		0.004479	M	Rb	<	0.000399	M	Tl		0.000625				
M	Co	<	0.000399	M	La	<	0.000399	M	Re	<	0.000399	M	Tm	<	0.000399				
M	Cr	<	0.001199	O	Li	<	0.000214	M	Rh	<	0.000399	M	U	<	0.000399				
M	Cs	<	0.000399	M	Lu	<	0.000399	M	Ru	<	0.000401	M	V	<	0.001599				
O	Cu	<	0.003219	O	Mg		0.000083	O	S	<	0.021460	M	W	<	0.000799				
M	Dy	<	0.000399	O	Mn	<	0.000429	M	Sb	<	0.001599	M	Y	<	0.000399				
M	Er	<	0.000399	M	Mo	<	0.000399	O	Sc	<	0.000429	M	Yb	<	0.000399				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 112.41 +2 4 Cd2(OH) (aq)3+ and Cd(OH)(aq)
Chemical Compatibility -Stable in HCl, HNO3, H2SO4 , and HF. Avoid basic media forming insoluble carbonate and hydroxide.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO3 / LDPE container.
Cd Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (soluble in HCl or HNO3); Ores (dissolve in HCl /HNO3 then take to fumes with H2SO4. The silica and lead sulfate are filtered off after the addition of water); Organic based (dry ash at 450°C and dissolve ash in HCl), (sulfuric / peroxide acid digestion).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 111 amu	11 ppt	n/a	95Mo16O
ICP-OES 214.438 nm	0.003 / 0.0003 µg/mL	1	Pt, Ir
ICP-OES 226.502 nm	0.003 / 0.0003 µg/mL	1	Ir
ICP-OES 228.802 nm	0.003 / 0.0003 µg/mL	1	Co, Ir, As, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 07, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 07, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCO10
Lot Number:	N2-CO671028
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cobalt
Starting Material:	COBALT
Starting Material Lot#:	1749
Starting Material Purity:	99.9978%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9988 ± 34 µg/mL

Density: 1.057 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9973 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #2 **10024 ± 50 µg/mL**
ICP Assay NIST SRM traceable to 3113 Lot Number: M2-CO661665

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.022956	M	Eu	<	0.000422	O	Na		0.008125	M	Se	<	0.009290	M	Zn		0.007197
O	Al		0.013621	O	Fe		0.048700	M	Nb	<	0.000422	O	Si		0.017539	M	Zr	<	0.014357
i	As	<		M	Ga	<	0.000844	M	Nd	<	0.017735	M	Sm	<	0.001689				
M	Au	<	0.000583	M	Gd		0.003247	O	Ni	<	0.043642	M	Sn	<	0.005067				
M	B	<	0.013512	M	Ge	<	0.004645	M	Os	<	0.000583	O	Sr		0.000841				
O	Ba		0.071210	M	Hf	<	0.000422	n	P	<		M	Ta	<	0.000422				
O	Be	<	0.001771	M	Hg	<	0.002334	M	Pb		0.010094	M	Tb	<	0.001689				
M	Bi		0.000614	M	Ho	<	0.000422	M	Pd	<	0.000422	M	Te	<	0.008445				
O	Ca		0.025034	M	In	<	0.003378	M	Pr	<	0.006756	M	Th	<	0.000422				
M	Cd	<	0.000844	M	Ir	<	0.000583	M	Pt	<	0.000422	M	Ti	<	0.002533				
M	Ce		0.002721	O	K		0.005785	M	Rb	<	0.001689	M	Tl	<	0.000422				
s	Co	<		M	La		0.000877	M	Re		0.016853	M	Tm	<	0.000422				
M	Cr	<	0.020269	O	Li		0.000262	M	Rh	<	0.000422	M	U	<	0.000422				
M	Cs		0.000877	M	Lu	<	0.000422	M	Ru	<	0.000583	M	V	<	0.001689				
M	Cu		0.007197	O	Mg		0.003444	n	S	<		M	W	<	0.000844				
M	Dy	<	0.000422	O	Mn	<	0.006072	M	Sb	<	0.005911	M	Y		0.001228				
M	Er	<	0.000422	M	Mo	<	0.005911	M	Sc	<	0.001689	M	Yb	<	0.003378				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.93 +2 6 $Co(H_2O)_6^{2+}$
Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.
Co Containing Samples (Preparation and Solution) - Metal (soluble in HNO_3); Oxides (Soluble in HCl); Ores (dissolve in HCl / HNO_3).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 59 amu	2 ppt	n/a	42Ca16O1H , 40Ar18O1H , 36Ar23Na, 43Ca16O, 24Mg35Cl
ICP-OES 228.616 nm	0.01/0.001 µg/mL	1	
ICP-OES 237.862 nm	0.01/0.002 µg/mL	1	W, Re, Al, Ta
ICP-OES 238.892 nm	0.01/0.002 µg/mL	1	Fe, W, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 15, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 15, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

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fax: 540.585.3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCR(3)10
Lot Number:	P2-CR684202
Matrix:	10% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Chromium
Starting Material:	Cr METAL
Starting Material Lot#:	2077
Starting Material Purity:	99.9942%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10056 ± 49 µg/mL

Density: 1.084 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10061 ± 71 µg/mL**
ICP Assay NIST SRM 3112a Lot Number: 170630

Assay Method #2 **10052 ± 64 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000540	M	Eu	<	0.003200	O	Na		0.130027	M	Se	<	0.012000	O	Zn	<	0.002700
O	Al		0.016626	O	Fe		0.202502	M	Nb	<	0.022000	n	Si	<		M	Zr	<	0.020000
M	As		0.003836	O	Ga	<	0.031000	M	Nd	<	0.000540	M	Sm	<	0.035000				
M	Au	<	0.000540	M	Gd	<	0.000540	O	Ni		0.009165	M	Sn		0.004049				
M	B	<	0.049000	M	Ge	<	0.005400	M	Os	<	0.088000	O	Sr	<	0.000250				
O	Ba	<	0.002000	M	Hf	<	0.000540	i	P	<		M	Ta	<	0.000540				
O	Be	<	0.000250	M	Hg	<	0.001600	M	Pb		0.002557	M	Tb	<	0.000540				
M	Bi		0.008952	M	Ho	<	0.000540	M	Pd	<	0.001100	M	Te	<	0.004800				
O	Ca		0.074605	M	In	<	0.001100	M	Pr	<	0.000540	M	Th	<	0.000540				
M	Cd	<	0.000540	M	Ir	<	0.000540	M	Pt	<	0.000540	O	Ti		0.013428				
M	Ce	<	0.000540	O	K		0.034105	i	Rb	<		M	Tl	<	0.001100				
O	Co	<	0.002900	M	La	<	0.001100	M	Re	<	0.002700	O	Tm	<	0.001800				
s	Cr	<		O	Li	<	0.000130	M	Rh	<	0.032000	M	U	<	0.001100				
M	Cs	<	0.019000	M	Lu	<	0.000540	M	Ru	<	0.094000	O	V		0.159869				
O	Cu		0.010018	O	Mg		0.001449	i	S	<		M	W	<	0.028000				
M	Dy	<	0.000540	O	Mn	<	0.014000	M	Sb	<	0.008600	M	Y	<	0.001100				
M	Er	<	0.016000	O	Mo	<	0.013000	O	Sc	<	0.001400	M	Yb	<	0.000540				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 52.00 +3 6 $Cr(H_2O)_6^{3+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4, HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Cr3 Containing Samples (Preparation and Solution) -Metal (soluble in HCl); Oxides/Ores (Chrome ore/oxides are very difficult to dissolve. The following procedures [A-D] are commonly used: A. Fusion with $KHSO_4$ and extraction with hot KCl. The residue fused with Na_2CO_3 and $KClO_3$, 3:1. B. Fusion with $NaKSO_4$ and NaF 2:1, C. Fusion with magnesia or lime and sodium or potassium carbonates, 4:1. D. Fusion with Na_2O_2 or NaOH and KNO_3 or NaOH and Na_2O_2. Nickel, iron, copper, or silver crucibles should be used for D. Platinum may be used for A, B, C); Organic Matrices (ash at 4500C followed by one of the fusion methods above or sulfuric/hydrogen peroxide acid digestions may be applicable to non oxide containing samples).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 52 amu	40 ppt	N/A	36S16O, 36Ar16O - The 50Cr, 53Cr, 54Cr lines suffer from many more potential interferences from sulfur, chlorine and argon compounds of oxygen, nitrogen and carbon.
ICP-OES 205.552 nm	0.006/0.0008 µg/mL	1	Os
ICP-OES 276.654 nm	0.01/0.001 µg/mL	1	Cu, Ta, V
ICP-OES 284.325 nm	0.008/0.0007 µg/mL	1	

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCU10
Lot Number:	P2-CU682108
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Copper
Starting Material:	Cu Metal
Starting Material Lot#:	2095
Starting Material Purity:	99.9996%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10013 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9977 ± 50 µg/mL**
ICP Assay NIST SRM 3114 Lot Number: 121207

Assay Method #2 **10024 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10007 ± 46 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.007542	M	Eu	<	0.000942	O	Na		0.001434	M	Se	<	0.016971	M	Zn	<	0.005657
O	Al	<	0.000609	O	Fe		0.008700	M	Nb	<	0.000942	O	Si		0.003052	M	Zr	<	0.000942
M	As	<	0.010371	M	Ga	<	0.000942	M	Nd	<	0.000942	M	Sm	<	0.000942				
M	Au	<	0.001885	M	Gd	<	0.000942	M	Ni		0.003781	M	Sn	<	0.005657				
O	B		0.003663	M	Ge	<	0.005657	M	Os	<	0.000942	M	Sr	<	0.000942				
M	Ba		0.004253	M	Hf	<	0.000942	O	P	<	0.031668	M	Ta	<	0.000942				
M	Be	<	0.000942	O	Hg	<	0.007064	M	Pb		0.005789	M	Tb	<	0.000942				
M	Bi	<	0.000942	M	Ho	<	0.000942	M	Pd	<	0.000942	M	Te	<	0.004714				
O	Ca		0.002304	M	In	<	0.000942	M	Pr	<	0.000942	M	Th	<	0.000942				
M	Cd	<	0.000942	M	Ir	<	0.000942	M	Pt	<	0.000942	O	Ti	<	0.002801				
M	Ce	<	0.000942	O	K		0.000763	M	Rb	<	0.000942	M	Tl	<	0.000942				
M	Co		0.001890	M	La	<	0.000942	M	Re	<	0.000942	M	Tm	<	0.000942				
M	Cr	<	0.005657	O	Li	<	0.000243	i	Rh	<		M	U	<	0.000942				
M	Cs	<	0.000942	M	Lu	<	0.000942	M	Ru	<	0.039588	M	V	<	0.003771				
s	Cu	<		O	Mg		0.000320	O	S		0.007174	M	W	<	0.005657				
M	Dy	<	0.000942	O	Mn		0.000793	M	Sb	<	0.001885	M	Y	<	0.000942				
M	Er	<	0.000942	M	Mo	<	0.005657	M	Sc	<	0.000942	M	Yb	<	0.000942				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 63.55 +2 6 $Cu(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4, HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Cu Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 63 amu	10 ppt	n/a	40Ar23Na 47Ti16O, 14N12C37Cl, 16O12C35Cl, 23Na40Ca
ICP-OES 219.958 nm	0.01/.002 µg/mL	1	Th, Ta, Nb, U, Hf
ICP-OES 224.700 nm	0.01/.001 µg/mL	1	Pb, Ir, Ni, W
ICP-OES 324.754 nm	0.06/.001 µg/mL		Nb, U, Th, Mo, Hf

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 24, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 24, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ARI-1
Lot Number:	R2-MEB692461
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Iron

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Iron, Fe	**10 000.0 ± 40.0 µg/mL**		

Density: 1.037 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928

The follow ing equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 22, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 22, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGK10
Lot Number:	P2-K688009
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Potassium
Starting Material:	KNO3
Starting Material Lot#:	2313
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10013 ± 30 µg/mL

Density: 1.025 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10007 ± 24 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #2 **9984 ± 73 µg/mL**
ICP Assay NIST SRM 3141a Lot Number: 140813

Assay Method #3 **10020 ± 22 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001400	M	Eu	<	0.000660	O	Na		0.240000	M	Se	<	0.007900	O	Zn	0.017000
O	Al		0.001600	O	Fe		0.005800	M	Nb	<	0.000660	O	Si		0.012000	O	Zr	< 0.001600
M	As	<	0.005300	M	Ga	<	0.000660	M	Nd	<	0.000660	M	Sm	<	0.000660			
M	Au	<	0.002000	M	Gd	<	0.000660	O	Ni	<	0.004900	M	Sn	<	0.000660			
O	B	<	0.005600	M	Ge	<	0.002000	M	Os	<	0.003300	O	Sr		0.000055			
O	Ba	<	0.000860	M	Hf	<	0.000660	O	P	<	0.032000	M	Ta	<	0.000660			
O	Be	<	0.000082	M	Hg	<	0.002000	M	Pb	<	0.002300	M	Tb	<	0.000660			
M	Bi	<	0.006600	M	Ho	<	0.000660	M	Pd	<	0.000660	M	Te	<	0.017000			
O	Ca		0.031000	M	In	<	0.000660	M	Pr	<	0.000660	M	Th	<	0.000660			
O	Cd	<	0.000450	M	Ir	<	0.000660	M	Pt	<	0.002700	M	Ti	<	0.000660			
M	Ce	<	0.000660	s	K	<		M	Rb		0.480000	M	Tl	<	0.000660			
O	Co	<	0.000780	M	La	<	0.000660	M	Re	<	0.000660	M	Tm	<	0.000660			
O	Cr		0.000530	O	Li	<	0.000084	M	Rh	<	0.000660	M	U	<	0.000660			
M	Cs	<	0.000660	M	Lu	<	0.000660	M	Ru	<	0.000660	O	V	<	0.001100			
M	Cu	<	0.002700	O	Mg		0.006300	O	S		0.028000	M	W	<	0.000660			
M	Dy	<	0.000660	O	Mn		0.000480	M	Sb	<	0.000660	M	Y	<	0.000660			
M	Er	<	0.000660	M	Mo	<	0.000660	O	Sc	<	0.000340	O	Yb	<	0.000270			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 39.10 +1 (6) K+(aq)
Chemical Compatibility -Soluble in HCl, HNO_3, H_2SO_4 and HF aqueous matrices. Avoid use of $HClO_4$ due to insolubility of the perchlorate. Stable with all metals and inorganic anions except ClO_4^-.
Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.
K Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Sodium carbonate fusion in Pt0 followed by HCl dissolution-blank levels of K in sodium carbonate critical); Organic Matrices (Sulfuric/peroxide digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 39 amu	10 ppt	n/a	38ArH, 23Na16O, 78Se
ICP-OES 404.721 nm	1.1 / 0.05 µg/mL	1	U, Ce
ICP-OES 766.490 nm	0.4 / 0.001 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 771.531 nm	1.0 / 0.03 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 10, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **February 10, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMG10
Lot Number:	P2-MG686672
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Magnesium
Starting Material:	Magnesium
Starting Material Lot#:	2168
Starting Material Purity:	99.9996%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10003 ± 30 µg/mL

Density: 1.053 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9958 ± 36 µg/mL**
ICP Assay NIST SRM 3131a Lot Number: 140110

Assay Method #2 **10015 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10017 ± 29 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001471	M	Eu	<	0.000599	O	Na		0.007247	M	Se	<	0.031185	O	Zn	<	0.002438
M	Al		0.003845	M	Fe	<	0.001062	M	Nb	<	0.000599	O	Si	<	0.022307	M	Zr	<	0.000603
M	As	<	0.004195	M	Ga	<	0.000599	M	Nd	<	0.004804	M	Sm	<	0.000599				
M	Au	<	0.010269	M	Gd	<	0.000599	M	Ni		0.003944	M	Sn	<	0.000599				
O	B	<	0.015847	M	Ge	<	0.001198	M	Os	<	0.000599	O	Sr	<	0.000365				
O	Ba		0.000222	M	Hf	<	0.000599	O	P	<	0.059731	M	Ta	<	0.000599				
M	Be	<	0.000599	M	Hg	<	0.004427	M	Pb	<	0.000599	M	Tb	<	0.000599				
M	Bi	<	0.000599	M	Ho	<	0.000599	M	Pd	<	0.000599	M	Te	<	0.002397				
O	Ca		0.013052	M	In	<	0.000599	M	Pr	<	0.000599	M	Th	<	0.000599				
M	Cd	<	0.000599	M	Ir	<	0.000599	M	Pt	<	0.000599	O	Ti	<	0.002316				
M	Ce	<	0.000599	O	K		0.014274	M	Rb	<	0.006958	M	Tl	<	0.000599				
M	Co	<	0.000599	M	La	<	0.001754	M	Re	<	0.000599	M	Tm	<	0.000599				
M	Cr	<	0.005882	O	Li		0.010969	M	Rh	<	0.000599	M	U	<	0.000599				
M	Cs	<	0.001801	M	Lu	<	0.000599	M	Ru	<	0.000599	O	V	<	0.006704				
M	Cu	<	0.008473	s	Mg	<		O	S	<	0.088621	M	W	<	0.000599				
M	Dy	<	0.000599	O	Mn		0.003249	M	Sb	<	0.000599	M	Y	<	0.000599				
M	Er	<	0.000599	M	Mo	<	0.000730	O	Sc		0.000444	M	Yb	<	0.000599				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 24.31 +2 6 $Mg(H_2O)_6^{+2}$

Chemical Compatibility -Soluble in HCl, HNO_3, and H_2SO_4 avoid HF, H_3PO_4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicates, carbonates, hydroxides, oxides, and tungstates in neutral and slightly acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO_3 / LDPE container.

Mg Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO_3); Oxide (Readily soluble in above compatible aqueous acidic solutions); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric / peroxide digestion or nitric / sulfuric / perchloric acid decomposition, or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 24 amu	42 ppt	n/a	7Li17O, 48Ti+2 , 48Ca+2
ICP-OES 279.553 nm	0.0002 / 0.00003 µg/mL	1	Th
ICP-OES 280.270 nm	0.0003 / 0.00005 µg/mL	1	U, V
ICP-OES 285.213 nm	0.002 / 0.00003 µg/mL	1	U, Hf, Cr, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
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inorganicventures.com

CERTIFICATE OF ANALYSIS

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ACCREDITED
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ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMN10
Lot Number:	P2-MN687536
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Manganese
Starting Material:	Mn Metal
Starting Material Lot#:	2275
Starting Material Purity:	99.9909%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10046 ± 30 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10045 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #2 **10083 ± 68 µg/mL**
ICP Assay NIST SRM 3132 Lot Number: 050429

Assay Method #3 **10031 ± 47 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001500	M	Eu	<	0.000730	O	Na		0.176713	M	Se	<	0.006600	M	Zn		0.009960
O	Al		0.004337	M	Fe	<	0.650000	M	Nb	<	0.000730	O	Si		0.097995	M	Zr	<	0.000730
M	As	<	0.008000	M	Ga		0.004337	M	Nd	<	0.001500	M	Sm	<	0.000730				
M	Au	<	0.000730	M	Gd	<	0.000730	M	Ni		0.024097	M	Sn	<	0.002200				
M	B		0.069078	M	Ge	<	0.004400	M	Os	<	0.000730	O	Sr		0.000931				
M	Ba	<	0.001500	M	Hf	<	0.000730	i	P	<		M	Ta	<	0.000730				
M	Be	<	0.000730	M	Hg	<	0.002200	M	Pb		0.007389	M	Tb	<	0.000730				
M	Bi	<	0.003000	M	Ho	<	0.000730	M	Pd	<	0.000730	M	Te	<	0.019000				
O	Ca		0.062652	M	In	<	0.003000	M	Pr	<	0.000730	M	Th	<	0.000730				
M	Cd	<	0.001500	M	Ir	<	0.000730	M	Pt	<	0.000730	O	Ti	<	0.006500				
M	Ce	<	0.007300	O	K		0.006425	M	Rb	<	0.006600	M	Tl	<	0.000730				
O	Co		0.014779	M	La	<	0.003000	M	Re	<	0.000730	M	Tm	<	0.000730				
O	Cr		0.273102	O	Li		0.000417	M	Rh	<	0.003000	M	U	<	0.001500				
M	Cs	<	0.000730	M	Lu	<	0.000730	M	Ru	<	0.004400	M	V	<	0.000730				
O	Cu		0.007711	O	Mg		0.321297	i	S	<		M	W	<	0.004400				
M	Dy	<	0.001500	s	Mn	<		M	Sb	<	0.021000	O	Y		0.001365				
M	Er	<	0.001500	M	Mo		0.010281	O	Sc	<	0.004100	M	Yb	<	0.000730				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 54.94 +2 6 $Mn(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO_3/LDPE container.

Mn Containing Samples (Preparation and Solution) -Metal (Soluble in dilute acids); Oxides (Soluble in dilute acids); Ores (Dissolve with HCl. If silica is present add HF and then fume off silica by adding H_2SO_4 and heat to SO_3 fumes - dense white fumes).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 55 amu	10 ppt	n/a	40Ar14N1H,39K16O,37Cl18O,40Ar15N,38Ar17O,36Ar18O1H ,38Ar16O1H,37Cl17O1H,23Na32S
ICP-OES 257.610 nm	0.0014 / 0.00002 µg/mL	1	Ce, W, Re
ICP-OES 259.373 nm	0.0016 / 0.00002 µg/mL	1	U, Ta, Mo, Fe, Nb
ICP-OES 260.569 nm	0.0021 / 0.00002 µg/mL	1	Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 05, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 05, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

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2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMO10
Lot Number:	P2-MO681847
Matrix:	tr. NH_4OH H_2O
Value / Analyte(s):	10 000 µg/mL ea: Molybdenum
Starting Material:	Ammonium Molybdate
Starting Material Lot#:	2257
Starting Material Purity:	99.9914%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10030 ± 30 µg/mL

Density: 1.011 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10066 ± 45 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

Assay Method #2 **10002 ± 40 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

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u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001826	M	Eu	<	0.000300	M	Na		0.008765	M	Se	<	0.007480	M	Zn		0.002557
M	Al		0.004462	M	Fe		0.002097	M	Nb	<	0.015030	i	Si	<		M	Zr	<	0.005393
M	As	<	0.003006	M	Ga	<	0.000300	i	Nd	<		M	Sm	<	0.000300				
M	Au	<	0.006012	M	Gd	<	0.000300	M	Ni	<	0.004828	M	Sn		0.001006				
M	B	<	0.035184	M	Ge	<	0.000903	M	Os	<	0.003006	M	Sr		0.001906				
O	Ba		0.015639	M	Hf	<	0.000896	i	P	<		M	Ta	<	0.000300				
M	Be	<	0.003006	M	Hg	<	0.003006	M	Pb	<	0.000409	M	Tb	<	0.000300				
M	Bi	<	0.000401	M	Ho	<	0.000300	M	Pd	<	0.001114	M	Te	<	0.060122				
O	Ca		0.032644	M	In	<	0.015030	M	Pr	<	0.090184	M	Th	<	0.000786				
O	Cd	<	0.051800	M	Ir	<	0.007483	M	Pt	<	0.000388	O	Ti	<	0.093240				
M	Ce	<	0.015030	M	K		1.116389	M	Rb		0.040710	M	Tl		0.013162				
M	Co		0.004039	M	La	<	0.000300	M	Re	<	0.000300	M	Tm	<	0.000300				
M	Cr		0.005941	O	Li		0.000215	M	Rh	<	0.000300	M	U		0.000938				
M	Cs		0.002817	M	Lu	<	0.000300	M	Ru	<	0.003006	M	V	<	0.000759				
M	Cu		0.005181	M	Mg		0.005221	i	S	<		M	W		0.593427				
M	Dy	<	0.000300	M	Mn		0.000953	M	Sb		0.003153	M	Y	<	0.000300				
M	Er	<	0.000300	s	Mo	<		M	Sc	<	0.009019	M	Yb	<	0.000300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 95.94 +6 6,7,8,9 [MoO4] -2(chemical form as received)

Chemical Compatibility -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5] -2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4] -2 chemically stable for years in 1% NH4OH in a LDPE container.

Mo Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 95 amu	3 ppt	n/a	40Ar39K16O,79Br16O,190Os2+,190Pt2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 30, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 30, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNA10
Lot Number:	P2-NA685078
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Sodium
Starting Material:	Sodium Carbonate
Starting Material Lot#:	1870
Starting Material Purity:	99.9994%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10012 ± 40 µg/mL

Density: 1.034 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9956 ± 67 µg/mL**
ICP Assay NIST SRM 3152a Lot Number: 120715

Assay Method #2 **10019 ± 21 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #3 **10010 ± 21 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000930	M	Eu	<	0.000930	s	Na	<		M	Se	<	0.024000	M	Zn	0.001689
M	Al		0.003769	M	Fe		0.001429	M	Nb	<	0.000930	O	Si	<	0.018000	M	Zr	< 0.000930
M	As	<	0.008300	M	Ga	<	0.000930	M	Nd	<	0.000930	M	Sm	<	0.000930			
M	Au	<	0.001900	M	Gd	<	0.000930	O	Ni	<	0.005100	M	Sn	<	0.001900			
O	B	<	0.015000	M	Ge	<	0.001900	M	Os	<	0.000930	M	Sr		0.000727			
M	Ba	<	0.000930	M	Hf	<	0.000930	O	P	<	0.037000	M	Ta	<	0.000930			
M	Be	<	0.002800	M	Hg	<	0.000930	M	Pb	<	0.000930	M	Tb	<	0.000930			
M	Bi	<	0.000930	M	Ho	<	0.000930	M	Pd	<	0.000930	M	Te	<	0.002800			
O	Ca		0.019497	M	In	<	0.000930	M	Pr	<	0.000930	M	Th	<	0.000930			
M	Cd	<	0.000930	M	Ir	<	0.000930	M	Pt	<	0.000930	O	Ti	<	0.001900			
M	Ce	<	0.000930	O	K		0.142978	M	Rb	<	0.000930	M	Tl	<	0.000930			
M	Co	<	0.000930	M	La	<	0.000930	M	Re	<	0.000930	M	Tm	<	0.000930			
M	Cr		0.000844	O	Li	<	0.000130	M	Rh	<	0.000930	M	U	<	0.000930			
M	Cs	<	0.000930	M	Lu	<	0.000930	M	Ru	<	0.001900	M	V	<	0.001900			
M	Cu	<	0.004700	O	Mg		0.001143	O	S	<	0.037000	M	W	<	0.001900			
M	Dy	<	0.000930	M	Mn	<	0.001900	M	Sb	<	0.000930	M	Y	<	0.000930			
M	Er	<	0.000930	M	Mo	<	0.001900	O	Sc	<	0.000370	M	Yb	<	0.000930			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 22.99 +1 (6) Na+(aq) largely ionic in nature

Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Na Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Lithium carbonate fusion in graphite crucible followed by HCl dissolution - blank levels of Na in lithium carbonate critical); Organic Matrices (Sulfuric / peroxide digestion or nitric/sulfuric/perchloric acid decomposition).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 23 amu	310 ppt	n/a	46Ti+2 , 46Ca+2
ICP-OES 330.237 nm	2.0 / 0.09 µg/mL	1	Pd, Zn
ICP-OES 588.995 nm	0.03 / 0.006 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 589.595 nm	0.07 / 0.00009 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 12, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 12, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNI10
Lot Number:	P2-NI686384
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Nickel
Starting Material:	Ni Metal
Starting Material Lot#:	2277 and 2282
Starting Material Purity:	99.9992%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9979 ± 30 µg/mL

Density: 1.038 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9971 ± 54 µg/mL**
ICP Assay NIST SRM 3136 Lot Number: 120619

Assay Method #2 **9970 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **9993 ± 33 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag		0.002606	M	Eu	<	0.001100	O	Na		0.004965	O	Se	<	0.067000	M	Zn		0.006578
M	Al	<	0.013000	O	Fe		0.018618	M	Nb	<	0.001100	O	Si		0.010923	M	Zr	<	0.001100
O	As	<	0.067000	M	Ga	<	0.001100	M	Nd	<	0.001100	M	Sm	<	0.001100				
M	Au	<	0.002100	M	Gd	<	0.001100	s	Ni	<		M	Sn	<	0.016000				
M	B	<	0.017000	M	Ge	<	0.004200	M	Os		0.002110	O	Sr	<	0.000940				
M	Ba	<	0.001100	M	Hf	<	0.001100	i	P	<		M	Ta	<	0.001100				
O	Be	<	0.000410	M	Hg		0.014895	M	Pb		0.006578	M	Tb	<	0.001100				
M	Bi	<	0.004200	M	Ho	<	0.001100	M	Pd	<	0.001100	M	Te	<	0.015000				
O	Ca		0.003351	M	In	<	0.001100	M	Pr	<	0.001100	M	Th	<	0.001100				
M	Cd		0.001365	M	Ir		0.004716	M	Pt	<	0.001100	M	Ti	<	0.004200				
M	Ce	<	0.001100	O	K		0.004716	M	Rb	<	0.001100	M	Tl	<	0.001100				
O	Co		0.017377	M	La	<	0.001100	M	Re		0.001737	M	Tm	<	0.001100				
O	Cr	<	0.006700	O	Li	<	0.000140	M	Rh	<	0.006300	M	U	<	0.001100				
M	Cs	<	0.007300	M	Lu	<	0.001100	M	Ru	<	0.019000	M	V	<	0.002100				
M	Cu		0.004096	O	Mg		0.000372	i	S	<		M	W	<	0.006300				
M	Dy	<	0.001100	O	Mn	<	0.001900	M	Sb		0.005833	O	Y	<	0.000540				
M	Er	<	0.001100	M	Mo	<	0.008400	M	Sc	<	0.002100	M	Yb	<	0.001100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.69 +2 6 $Ni(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Ni Containing Samples (Preparation and Solution) -Metal (Soluble in HNO_3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 60 amu	100 ppt	n/a	43Ca16O1H , 44Ca16O, 23Na37Cl
ICP-OES 221.647 nm	0.01 / 0.0009 µg/mL	1	Si
ICP-OES 231.604 nm	0.02 / 0.002 µg/mL	1	Sb, Ta, Co
ICP-OES 232.003 nm	0.02 / 0.006 µg/mL	1	Cr, Re, Os, Nb, Ag, Pt, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGPB10
Lot Number:	P2-PB686383
Matrix:	0.5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Lead
Starting Material:	Lead Nitrate
Starting Material Lot#:	2299
Starting Material Purity:	99.9974%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10031 ± 30 µg/mL

Density: 1.015 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10060 ± 63 µg/mL**
ICP Assay NIST SRM 3128 Lot Number: 101026

Assay Method #2 **10048 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10007 ± 32 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag		0.000850	M	Eu	<	0.000310	O	Na		0.005780	M	Se	<	0.004600	M	Zn		0.005440
O	Al		0.234602	O	Fe		0.023460	M	Nb	<	0.000310	O	Si		0.047600	M	Zr	<	0.000610
M	As	<	0.001900	M	Ga	<	0.000310	M	Nd	<	0.000310	M	Sm	<	0.000310				
M	Au	<	0.002200	M	Gd	<	0.004300	M	Ni	<	0.001600	M	Sn	<	0.000610				
O	B	<	0.005200	M	Ge	<	0.000610	M	Os	<	0.000310	O	Sr		0.000442				
O	Ba		0.001530	M	Hf	<	0.000310	O	P	<	0.052000	M	Ta	<	0.000310				
O	Be	<	0.000630	M	Hg	<	0.001600	s	Pb	<		M	Tb	<	0.000310				
O	Bi		0.021080	M	Ho	<	0.000610	M	Pd	<	0.000310	M	Te	<	0.004300				
O	Ca		0.037400	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.000310				
M	Cd	<	0.000610	M	Ir	<	0.000310	M	Pt	<	0.000310	M	Ti		0.002992				
M	Ce	<	0.000910	O	K		0.008840	M	Rb	<	0.000610	M	Tl		0.037400				
M	Co	<	0.000610	M	La	<	0.000610	M	Re	<	0.000310	M	Tm	<	0.000610				
M	Cr	<	0.003400	O	Li		0.000108	O	Rh	<	0.006300	M	U	<	0.000310				
M	Cs		0.002686	M	Lu	<	0.000310	M	Ru	<	0.000310	M	V	<	0.000310				
M	Cu	<	0.002500	O	Mg		0.004760	O	S	<	0.052000	M	W	<	0.002200				
M	Dy	<	0.000310	M	Mn	<	0.000310	M	Sb	<	0.001300	M	Y	<	0.000310				
M	Er	<	0.000310	O	Mo	<	0.005400	M	Sc	<	0.000310	M	Yb	<	0.000310				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 207.20 +2 6 $Pb(H_2O)_6^{+2}$

Chemical Compatibility - Soluble in HCl, HF and HNO_3. Avoid H_2SO_4. Stable with most metals and inorganic anions forming insoluble carbonate, borate, sulfate, sulfite, sulfide, phosphate, oxalate, chromate, tannate, iodate, and cyanide in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO_3 / LDPE container.

Pb Containing Samples (Preparation and Solution) -Metal (Best dissolved in 1:1 H_2O / HNO_3); Oxides (The many different Pb oxides are soluble in HNO_3 with the exception of PbO_2 which is soluble in HCl or HF); Ores and Alloys (Best attacked using 1:1 H_2O / HNO_3); Organic Matrices (Dry ash and dissolve in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 208 amu	5 ppt	n/a	192Pt16O, 192Os16O
ICP-OES 168.215 nm	0.03 / 0.003 µg/mL	1	Co
ICP-OES 217.000 nm	0.09 / 0.03 µg/mL	1	W, Ir, Hf, Sb, Th
ICP-OES 220.353 nm	0.04 / 0.006 µg/mL	1	Bi, Nb

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSB10
Lot Number:	P2-SB676840
Matrix:	3% (v/v) HNO3 3% (w/v) Tartaric acid
Value / Analyte(s):	10 000 µg/mL ea: Antimony
Starting Material:	Antimony Metal
Starting Material Lot#:	1857
Starting Material Purity:	99.9898%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10019 ± 51 µg/mL

Density: 1.062 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10019 ± 45 µg/mL**
ICP Assay NIST SRM 3102a Lot Number: 140911

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000110	M	Eu	<	0.000110	O	Na		0.160000	M	Se	<	0.002700	O	Zn		0.006000
M	Al		0.010000	O	Fe		0.054000	M	Nb	<	0.000110	O	Si		0.087000	O	Zr	<	0.003200
M	As	<	0.003400	M	Ga	<	0.000110	M	Nd	<	0.000110	M	Sm	<	0.000110				
M	Au	<	0.000110	M	Gd	<	0.000110	O	Ni	<	0.005900	M	Sn	<	0.002300				
O	B		0.018000	M	Ge	<	0.000110	M	Os	<	0.000110	O	Sr		0.000540				
O	Ba	<	0.000750	M	Hf	<	0.000410	O	P		0.550000	M	Ta	<	0.000410				
O	Be	<	0.000110	M	Hg	<	0.000310	M	Pb	<	0.000210	M	Tb	<	0.000110				
M	Bi	<	0.000210	M	Ho	<	0.000110	M	Pd	<	0.000110	M	Te	<	0.001900				
O	Ca		0.097000	M	In	<	0.000110	M	Pr	<	0.002000	M	Th	<	0.000110				
M	Cd	<	0.000110	M	Ir	<	0.000410	M	Pt	<	0.000110	O	Ti	<	0.004000				
M	Ce		0.006100	O	K		0.018000	M	Rb	<	0.000110	M	Tl	<	0.000110				
M	Co	<	0.001800	O	La	<	0.005800	M	Re	<	0.000110	M	Tm	<	0.000110				
M	Cr		0.005500	O	Li	<	0.000110	M	Rh	<	0.000110	M	U	<	0.000110				
M	Cs	<	0.000110	M	Lu	<	0.000110	M	Ru	<	0.000110	M	V	<	0.000510				
M	Cu	<	0.002300	O	Mg		0.020000	n	S	<		M	W	<	0.000410				
M	Dy	<	0.000110	M	Mn		0.001200	s	Sb	<		M	Y	<	0.000110				
M	Er	<	0.000110	M	Mo	<	0.000110	O	Sc	<	0.001500	M	Yb	<	0.000110				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 121.75 +3 6 $Sb(O)C_4H_4O_6^-$1
Chemical Compatibility -Stable in conc. HCl, dilute or conc. HF. Stable in dilute HNO_3 as the fluoride or tartrate complex. Avoid basic media. Stable with most metals and inorganic anions in acidic media as the tartrate provided the acidity is not too high or the acid is oxidizing causing loss of the stabilizing tartrate ion. The fluoride complex of antimony is stable in strong acid but you should only mix with other metals that are fluorinated.
Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-2% HNO_3 / LDPE container.
Sb Containing Samples (Preparation and Solution) -Metal and alloys (Soluble in H_2O / HF / HNO_3 mixture); Oxides (Soluble in HCl and tartaric acid or H_2O / HF / HNO_3 mixtures); Ores (fusion with Na_2CO_3 in Pt0 followed by dissolving the fuseate in a H_2O / HF / HNO_3 mixture); Organic based (sulfuric acid / hydrogen peroxide digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 121 amu	5 ppt	N/A	105Pd16O, 89Y16O2
ICP-OES 206.833 nm	0.03/0.003 µg/mL	1	Ta, Cr, Ge, Hf
ICP-OES 217.581 nm	0.05/0.005 µg/mL	1	Nb, W, Re, Fe
ICP-OES 231.147 nm	0.06/0.006 µg/mL	1	Ni, Co, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 20, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 20, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSE10
Lot Number:	P2-SE684206
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Selenium
Starting Material:	Se Metal
Starting Material Lot#:	1962
Starting Material Purity:	99.9991%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9992 ± 61 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9993 ± 67 µg/mL**
ICP Assay NIST SRM 3149 Lot Number: 100901

Assay Method #2 **9992 ± 73 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002242	M	Eu	<	0.000373	O	Na		0.013700	s	Se	<		O	Zn		0.002382
M	Al		0.004465	M	Fe		0.008506	O	Nb	<	0.002975	O	Si		0.006270	M	Zr	<	0.001868
O	As	<	0.022040	M	Ga	<	0.000373	M	Nd	<	0.000373	M	Sm	<	0.000373				
M	Au	<	0.000373	M	Gd	<	0.000373	O	Ni		0.001849	M	Sn		0.000850				
O	B	<	0.007714	M	Ge	<	0.002616	M	Os	<	0.000373	M	Sr	<	0.001121				
M	Ba	<	0.001495	M	Hf	<	0.000373	O	P	<	0.022040	M	Ta	<	0.000373				
M	Be	<	0.001495	M	Hg	<	0.002240	M	Pb		0.006379	M	Tb	<	0.006353				
M	Bi	<	0.000373	M	Ho	<	0.000373	M	Pd	<	0.000373	M	Te	<	0.012707				
O	Ca		0.006552	M	In	<	0.000373	M	Pr	<	0.001495	M	Th	<	0.002990				
M	Cd		0.001169	M	Ir	<	0.000373	M	Pt	<	0.000373	M	Ti	<	0.003363				
M	Ce	<	0.000373	O	K		0.002006	M	Rb	<	0.001868	M	Tl		0.008613				
M	Co	<	0.000373	M	La	<	0.001121	M	Re	<	0.000373	M	Tm	<	0.000373				
M	Cr		0.002870	O	Li		0.000062	M	Rh	<	0.000373	M	U	<	0.000373				
M	Cs	<	0.001121	M	Lu	<	0.000373	M	Ru	<	0.001493	M	V	<	0.000747				
M	Cu	<	0.000747	O	Mg		0.001159	O	S		0.024674	M	W	<	0.002242				
M	Dy	<	0.000373	M	Mn	<	0.000373	M	Sb	<	0.002242	M	Y	<	0.000373				
M	Er	<	0.000373	O	Mo	<	0.003195	M	Sc	<	0.001121	M	Yb	<	0.000373				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 78.96 +4 6 H_2SeO_3

Chemical Compatibility -Soluble in HCl, HNO_3,H_3PO_4, H_2SO_4 and HF aqueous matrices and water. It is stable with most inorganic anions but many cationic metals form the insoluble selenites under pH neutral conditions. When fluorinated and/or under acidic conditions precipitation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Se Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (readily soluble in water); Minerals and alloys (acid digestion with HNO_3or HNO_3 / HF); Organic Matrices (acid digestion with hot concentrated H_2SO_4 accompanied by the careful dropwise addition of H_2O_2 until clear).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 82 amu	200 ppt	N/A	12C35Cl2
ICP-OES 196.026 nm	0.08/0.006 µg/mL	1	Fe
ICP-OES 203.985 nm	0.2/0.05 µg/mL	1	Sb, Ir, Cr, Ta
ICP-OES 206.279 nm	0.3/0.16 µg/mL	1	Cr, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 13, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **September 13, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTL10
Lot Number:	P2-TL681849
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Thallium
Starting Material:	TlNO3
Starting Material Lot#:	2118
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10015 ± 50 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10015 ± 45 µg/mL**
ICP Assay NIST SRM 3158 Lot Number: 151215

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Eu	<	0.000200	O	Na		0.002486	M	Se	<	0.011019	O	Zn		0.002295
O	Al	<	0.004184	O	Fe	<	0.002824	M	Nb	<	0.000200	O	Si		0.003755	M	Zr	<	0.000200
M	As	<	0.002003	M	Ga	<	0.000200	M	Nd	<	0.000200	M	Sm	<	0.000200				
O	Au	<	0.002824	M	Gd	<	0.000200	M	Ni		0.001722	M	Sn	<	0.000601				
O	B	<	0.004184	M	Ge	<	0.000801	M	Os	<	0.000198	O	Sr	<	0.000313				
M	Ba	<	0.000400	M	Hf	<	0.000200	O	P	<	0.010460	M	Ta	<	0.000200				
O	Be	<	0.000104	M	Hg	<	0.000794	M	Pb		0.000810	M	Tb	<	0.000200				
M	Bi	<	0.005209	M	Ho	<	0.000200	M	Pd	<	0.000400	M	Te	<	0.005008				
O	Ca		0.002433	M	In	<	0.000200	M	Pr	<	0.000200	M	Th	<	0.000200				
M	Cd		0.001316	M	Ir	<	0.000198	M	Pt	<	0.000801	O	Ti	<	0.001255				
M	Ce	<	0.000200	O	K		0.006167	M	Rb	<	0.000200	s	Tl	<					
M	Co	<	0.000601	M	La	<	0.000200	M	Re	<	0.000200	M	Tm	<	0.000200				
M	Cr	<	0.000801	O	Li	<	0.000177	M	Rh	<	0.000200	M	U	<	0.000200				
M	Cs	<	0.003606	M	Lu	<	0.000200	M	Ru	<	0.000397	M	V	<	0.002203				
M	Cu	<	0.001001	O	Mg		0.000528	O	S	<	0.015690	M	W	<	0.000601				
M	Dy	<	0.000200	M	Mn	<	0.000801	M	Sb	<	0.000400	M	Y	<	0.000200				
M	Er	<	0.000200	M	Mo	<	0.001202	O	Sc	<	0.000711	M	Yb	<	0.000200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 204.38 +1 6 Tl(H2O)61+

Chemical Compatibility - Soluble in HCl, HNO3, and H2SO4. Stable with most metals and inorganic anions. The sulfite, thiocyanate and oxalate are moderately soluble; the phosphate and arsenite are slightly soluble and the sulfide is insoluble.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Tl Containing Samples (Preparation and Solution) -Metal (Best dissolved in HNO3 which forms chiefly the Tl1+ ion.); Oxide (The thallous oxide is readily soluble in water. The thallic oxide requires high levels of acid); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 205 amu	2 ppt	N/A	189Os16O
ICP-OES 190.864 nm	0.04 / 0.004 µg/mL	1	V, Ti
ICP-OES 276.787 nm	0.1 / 0.01 µg/mL	1	Ta, V, Fe, Cr
ICP-OES 351.924 nm	0.2 / 0.02 µg/mL	1	Th, Ce, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 31, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 31, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGV10
Lot Number:	P2-V677312
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Vanadium
Starting Material:	V2O5
Starting Material Lot#:	1782
Starting Material Purity:	99.9939%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9984 ± 30 µg/mL

Density: 1.102 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9975 ± 30 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #2 **10026 ± 64 µg/mL**
ICP Assay NIST SRM 3165 Lot Number: 160906

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000273	M	Eu	<	0.000118	O	Na		0.100243	M	Se	<	0.001167	M	Zn	<	0.006080
M	Al		0.057110	M	Fe		0.212199	M	Nb	<	0.001479	O	Si		0.333950	M	Zr	<	0.003181
M	As	<	0.000540	M	Ga	<	0.009451	M	Nd	<	0.000118	M	Sm	<	0.000118				
M	Au	<	0.000191	M	Gd	<	0.000118	M	Ni	<	0.003169	M	Sn	<	0.000733				
M	B	<	0.002950	M	Ge	<	0.000434	M	Os	<	0.000150	M	Sr		0.000557				
M	Ba	<	0.001024	M	Hf	<	0.000118	O	P	<	0.056000	M	Ta	<	0.000118				
M	Be	<	0.000118	M	Hg	<	0.000170	M	Pb		0.002214	M	Tb	<	0.000118				
M	Bi	<	0.000363	M	Ho	<	0.000118	M	Pd	<	0.000140	M	Te	<	0.002236				
O	Ca		0.109005	M	In	<	0.000118	M	Pr	<	0.000118	M	Th	<	0.000118				
M	Cd	<	0.000145	M	Ir	<	0.000118	M	Pt	<	0.000118	M	Ti		0.012731				
M	Ce	<	0.000245	M	K		0.019121	M	Rb	<	0.000118	M	Tl	<	0.000118				
M	Co	<	0.000119	M	La	<	0.000118	M	Re	<	0.000118	M	Tm	<	0.000118				
O	Cr		0.158019	M	Li	<	0.000501	M	Rh	<	0.000118	M	U	<	0.000395				
M	Cs		0.004388	M	Lu	<	0.000118	M	Ru	<	0.000118	s	V	<					
M	Cu	<	0.002021	M	Mg		0.005621	n	S	<		M	W		0.001599				
M	Dy	<	0.000118	M	Mn		0.005968	M	Sb		0.079957	M	Y	<	0.000118				
M	Er	<	0.000118	O	Mo		0.065962	M	Sc	<	0.000118	M	Yb	<	0.000118				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 50.94 +5 6 H2V10O284-
Chemical Compatibility -Soluble in HCl, HNO3, H2SO4, HF, H3PO4 and strong basic media. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
V Containing Samples (Preparation and Solution) -Metal (Fusion with NaOH or KOH in Ni0 or Na2CO3 / KNO3); Oxides (V2O3 - use HCl, V2O4 - use HCl or HNO3, V2O5 - use concentrated acids); Ores (Na2CO3 / KNO3 in Pt0 caution - nitrates attack Pto followed by water extraction of fuseate); Organic Matrices (Ash at 450 EC followed by dissolving according to V2O5 above) .
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 51 amu	4 ppt	N/A	34S16O1H, 35Cl16O, 38Ar13C, 36Ar15N, 36Ar14N1H, 37Cl14N,36S15N, 33S18O, 34S17O, 102Ru+2,02Pd+2
ICP-OES 290.882 nm	0.008 / 0.0008 µg/mL	1	Hf, Nb
ICP-OES 292.402 nm	0.006 / 0.001 µg/mL	1	Th
ICP-OES 309.311 nm	0.005 / 0.001 µg/mL	1	Mg, U, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 12, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 12, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGZN10
Lot Number:	P2-ZN686137
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Zinc
Starting Material:	Zn Shot
Starting Material Lot#:	2201
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10040 ± 30 µg/mL

Density: 1.033 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10009 ± 54 µg/mL**
ICP Assay NIST SRM 3168a Lot Number: 120629

Assay Method #2 **10049 ± 33 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10041 ± 28 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.003057	M	Eu	<	0.000509	O	Na		0.001874	M	Se	<	0.023441	s	Zn	<
O	Al	<	0.005720	O	Fe		0.006348	M	Nb	<	0.000509	O	Si	<	0.057200	M	Zr	< 0.000509
M	As	<	0.003057	M	Ga	<	0.007134	M	Nd	<	0.000509	M	Sm	<	0.000509			
M	Au	<	0.000510	M	Gd	<	0.000509	M	Ni	<	0.000509	M	Sn	<	0.000509			
O	B	<	0.017160	M	Ge	<	0.003057	M	Os	<	0.000510	M	Sr	<	0.000509			
M	Ba	<	0.000509	M	Hf	<	0.000509	O	P	<	0.057200	M	Ta	<	0.000509			
M	Be	<	0.000509	M	Hg	<	0.001021	O	Pb		0.023870	M	Tb	<	0.000509			
M	Bi	<	0.005095	M	Ho	<	0.000509	M	Pd	<	0.002038	M	Te	<	0.023441			
O	Ca		0.033793	M	In	<	0.000509	M	Pr	<	0.000509	M	Th	<	0.000509			
O	Cd		0.003924	M	Ir	<	0.000510	M	Pt	<	0.000509	M	Ti	<	0.000509			
M	Ce	<	0.000509	O	K		0.001499	M	Rb	<	0.002038	M	Tl	<	0.009172			
M	Co	<	0.000509	M	La	<	0.000509	M	Re	<	0.000509	M	Tm	<	0.000509			
O	Cr		0.001549	O	Li	<	0.000457	M	Rh	<	0.000509	M	U	<	0.000509			
M	Cs	<	0.000509	M	Lu	<	0.000509	M	Ru	<	0.006129	M	V	<	0.000509			
O	Cu	<	0.010296	O	Mg		0.000349	O	S	<	0.034320	M	W	<	0.001019			
M	Dy	<	0.000509	M	Mn	<	0.000509	M	Sb	<	0.001019	M	Y	<	0.000509			
M	Er	<	0.000509	M	Mo	<	0.000509	M	Sc	<	0.000509	M	Yb	<	0.000509			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 65.39 +2 4 Zn(OH)(aq)1+
Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media forming insoluble carbonate and hydroxide. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.
Zn Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO_3); Organic based (dry ash at 4500C and dissolve ash in HCl) (sulfuric/peroxide acid digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 66 amu	7 ppt	N/A	50Ti16O,50Cr16O, 50V16O, 34S16O2, 32S16O18O, 32S17O2, 33S16O17O, 32S34S, 33S2
ICP-OES 202.548 nm	0.004/0.0002 µg/mL	1	Nb, Cu, Co, Hf
ICP-OES 206.200 nm	0.006/0.0006 µg/mL	1	Sb, Ta, Bi, Os
ICP-OES 213.856 nm	0.002/0.0004 µg/mL	1	Ni, Cu, V

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 05, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 05, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGU1
Lot Number:	P2-U683975
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Uranium
Starting Material:	Uranyl Nitrate
Starting Material Lot#:	1948
Starting Material Purity:	99.9985%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 5 µg/mL

Density: 1.010 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **1001 ± 5 µg/mL**
ICP Assay NIST SRM 3164 Lot Number: 080521

Assay Method #2 **1002 ± 6 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.24 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000103	M	Eu	<	0.000103	M	Na		0.020618	M	Se	<	0.001246	M	Zn	<	0.003533
M	Al	<	0.003740	M	Fe		0.001029	M	Nb	<	0.000207	M	Si	<	0.035027	M	Zr	<	0.000103
M	As	<	0.001143	M	Ga	<	0.001350	M	Nd	<	0.000623	M	Sm	<	0.000311				
M	Au	<	0.000207	M	Gd	<	0.000311	M	Ni	<	0.008313	M	Sn	<	0.007273				
M	B	<	0.005819	M	Ge	<	0.001974	M	Os	<	0.000103	M	Sr	<	0.001039				
M	Ba	<	0.002286	M	Hf	<	0.000103	i	P	<		M	Ta	<	0.000103				
M	Be	<	0.001350	M	Hg	<	0.000415	M	Pb	<	0.000103	M	Tb	<	0.000103				
M	Bi	<	0.000103	M	Ho	<	0.000103	M	Pd	<	0.000207	M	Te	<	0.006234				
M	Ca	<	0.010391	M	In	<	0.000103	M	Pr	<	0.000103	M	Th		0.010535				
M	Cd	<	0.000103	M	Ir	<	0.000103	M	Pt	<	0.000103	M	Ti	<	0.000207				
M	Ce	<	0.000103	M	K	<	0.041565	M	Rb	<	0.000519	M	Tl	<	0.000103				
M	Co	<	0.000415	M	La	<	0.001662	M	Re	<	0.000103	M	Tm	<	0.000103				
M	Cr	<	0.001870	M	Li	<	0.001662	M	Rh	<	0.000103	s	U	<					
M	Cs		0.000175	M	Lu	<	0.000103	M	Ru	<	0.000519	M	V	<	0.000207				
M	Cu		0.000792	M	Mg	<	0.002493	i	S	<		M	W	<	0.000103				
M	Dy	<	0.000103	M	Mn	<	0.001454	M	Sb	<	0.000103	M	Y	<	0.000103				
M	Er	<	0.000103	M	Mo	<	0.000415	M	Sc	<	0.006234	M	Yb	<	0.000103				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 238.03 +6 8 UO_2^{2+}(uranyl)
Chemical Compatibility - Soluble in HCl and HNO_3. Avoid H_3PO_4. H_2SO_4 and HF matrices should not be a problem depending upon [U]. Although the UO_2^{2+} ion is distinctly basic, any U+4 will precipitate in basic media. UO_2^{2+}salts are generally soluble in water and UO_2^{2+} is stable with most metals and inorganic anions. The uranyl phosphate is insoluble in water. UF_4 and UF_6 are water soluble.
Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO_3 / LDPE container.
U Containing Samples (Preparation and Solution) -Metal (Dissolves rapidly in HCl and HNO_3); Oxide (Soluble in HNO_3); Ores (Digest for 1-2 hours with 1 gram of ore to 30 mL 1:1 HNO_3. Silica insolubles are removed by filtration after bringing the sample to fumes with conc. H_2SO_4.)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 238 amu	2 ppt	N/A	206Pb16O2
ICP-OES 263.553 nm	0.3 / 0.01 µg/mL	1	Ce, Ir, Th, Rh, W, Zr, Ta, Ti, V, Hf, Fe, Re, Ru
ICP-OES 367.007 nm	0.3 / 0.02 µg/mL	1	Th, Ce
ICP-OES 385.958 nm	0.3 / 0.01 µg/mL	1	Th, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 28, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **September 28, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-ICVMS-2
Lot Number:	R2-MEB692462
Matrix:	3% (v/v) HNO3 tr. HF
Value / Analyte(s):	2.5 µg/mL ea: Molybdenum, Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**2.505 ± 0.017 µg/mL**	**Molybdenum, Mo**	**2.503 ± 0.017 µg/mL**

Density: 1.012 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Sb	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \Sigma(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a)\,(u_{char\ a})$$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 22, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 22, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-ICVMS-3
Lot Number:	R2-MEB692463
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	250 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,

4 µg/mL ea:
Selenium,

2.5 µg/mL ea:

Thorium,	Thallium,
Uranium,	Vanadium,
Zinc,	Manganese,
Cadmium,	Cobalt,
Chromium,	Copper,
Arsenic,	Barium,
Beryllium,	Nickel,
Lead,	Silver

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	250.1 ± 0.8 µg/mL	Arsenic, As	2.505 ± 0.022 µg/mL
Barium, Ba	2.504 ± 0.013 µg/mL	Beryllium, Be	2.502 ± 0.015 µg/mL
Cadmium, Cd	2.504 ± 0.013 µg/mL	Calcium, Ca	249.9 ± 1.3 µg/mL
Chromium, Cr	2.505 ± 0.017 µg/mL	Cobalt, Co	2.505 ± 0.015 µg/mL
Copper, Cu	2.505 ± 0.013 µg/mL	Iron, Fe	250.3 ± 1.0 µg/mL
Lead, Pb	2.505 ± 0.014 µg/mL	Magnesium, Mg	249.9 ± 1.3 µg/mL
Manganese, Mn	2.505 ± 0.013 µg/mL	Nickel, Ni	2.505 ± 0.014 µg/mL
Potassium, K	249.9 ± 1.2 µg/mL	Selenium, Se	4.007 ± 0.024 µg/mL
Silver, Ag	2.495 ± 0.017 µg/mL	Sodium, Na	249.9 ± 1.2 µg/mL
Thallium, Tl	2.500 ± 0.017 µg/mL	Thorium, Th	2.496 ± 0.013 µg/mL
Uranium, U	2.505 ± 0.013 µg/mL	Vanadium, V	2.505 ± 0.014 µg/mL
Zinc, Zn	2.505 ± 0.014 µg/mL		

Density: 1.040 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Calculated		See Sec. 4.2
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Co	EDTA	928	928
Co	ICP Assay	traceable to 3113	M2-CO661665
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.24 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 22, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 22, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

PREPARATION BATCH SUMMARY

Laboratory: SDG:

Client: Project:

Batch: Batch Matrix: Preparation:

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS

DATA VALIDATION REPORT

LORA LAKE - ANNUAL LAKESIDE GW MONITORING 2020

Prepared for:

Floyd | Snider
601 Union Street, Suite 600
Seattle, WA 98101

Prepared by:

EcoChem, Inc.
500 Union Street, Suite 1010
Seattle, WA 98101

EcoChem Project: C15231-1

December 22, 2020

Approved for Release:

Christine Ransom
Senior Project Chemist
EcoChem, Inc.

PROJECT NARRATIVE

Basis for the Data Validation

This report summarizes the results of data validation performed on groundwater and quality control (QC) sample data for the Lora Lake Lakeside GW Monitoring project. The dioxin data received full validation (EPA Stage 4). A complete list of samples is provided in the Sample Index.

Analytical Resources in Tukwila, WA performed the analyses. The analytical method and EcoChem project chemists are listed in the table below.

ANALYSIS	METHOD	PRIMARY REVIEW	SECONDARY REVIEW
Dioxins	EPA 1613B	E. Clayton	C. Ransom

The data were reviewed using guidance and quality control criteria documented in the analytical methods; *Port of Seattle Lora Lake Parcel, Remedial Investigation/Feasibility Study Work Plan* (Floyd Snider February 11, 2011); *National Functional Guidelines for Chlorinated Dibenzo-p-Dioxins (CDDs) and Chlorinated Dibenzofurans (CDFs) Data Review* (USEPA, September 2011); *National Functional Guidelines for High Resolution Superfund Methods Data Review* (USEPA, April 2016).

EcoChem's goal in assigning data assessment qualifiers is to assist in proper data interpretation. If values are estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. If values are assigned an R or DNR, the data should not be used for any site evaluation purposes. If values have no data qualifier assigned, then the data meet the data quality objectives as stated in the documents and methods referenced above.

Data qualifier definitions, reason codes, and validation criteria are included as Appendix A. A Qualified Data Summary Table is included in Appendix B. Data Validation Worksheets will be kept on file at EcoChem, Inc. A qualified laboratory electronic data deliverable (EDD) is also submitted with this report.

Sample Index
Lora Lake - Annual Lakeside GW Monitoring 2020

SDG	SAMPLE ID	LAB ID	1613B Dioxins
20J0389	MW-VB3-102720	20J0389-01	✓
20J0389	MW-CP1-102720	20J0389-02	✓
20J0389	MW-CP2-102720	20J0389-03	✓
20J0389	MW-CP3-102720	20J0389-04	✓
20J0389	MW-CP4-102720	20J0389-05	✓
20J0389	MW-CP5-102720	20J0389-06	✓
20J0389	MW-CP6-102720	20J0389-07	✓
20J0389	MW-CP7-102720	20J0389-08	✓
20J0389	MW-CP2-102720-D	20J0389-09	✓
20J0389	MW-C1/VB1-102820	20J0389-10	✓
20J0389	MW-C101-102820	20J0389-11	✓
20J0389	HCOO-B312-102820	20J0389-14	✓

DATA VALIDATION REPORT
Lora Lake - Annual Lakeside GW Monitoring 2020
Dioxin/Furan Compounds by Method 1613B

This report documents the review of analytical data from the analysis of groundwater samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Analytical Resources, Inc., Tukwila, Washington. Refer to the SAMPLE INDEX for a complete list of samples.

SDG	NUMBER OF SAMPLES	VALIDATION LEVEL
20J0389	12 Groundwater	EPA Stage 4

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

Sample results and related quality control data were received as an electronic data deliverable (EDD) and laboratory report. The EDD was verified against the laboratory report (10%). No errors were noted.

TECHNICAL DATA VALIDATION

The quality control (QC) requirements reviewed are summarized in the following table:

✓	Sample Receipt, Preservation, and Holding Times	1	Matrix Spike/Matrix Spike Duplicates (MS/MSD)
✓	System Performance and Resolution Checks	1	Field Duplicates
✓	Initial Calibration (ICAL)	✓	Target Analyte List
1	Calibration Verification	✓	Reported Results
2	Blanks (Laboratory and Field)	2	Compound Identification
2	Labeled Compounds	1	Calculation Verification
✓	Ongoing Precision and Recovery (OPR)		

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.
1 Quality control results are discussed below, but no data were qualified.
2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Calibration Verification

Calibration verifications (CCAL) were analyzed at the beginning of each sequence as required. With the exceptions noted below, compound concentrations fell within the acceptance limits specified in the method. All ion ratios were acceptable. The S/N ratio was greater than 10, as required, for all compounds. All relative retention times for all target compounds met the required criteria.

For the CCAL analyzed on 11/18/20 at 16:32, the CCAL recoveries for 1,2,3,7,8-PeCDF, 2,3,4,7,8-PeCDF, 1,2,3,4,7,8-HxCDF, 1,2,3,6,7,8-HxCDF, 2,3,4,6,7,8-HxCDF, 1,2,3,7,8,9-HxCDF, and 1,2,3,4,6,7,8-HpCDF were greater than the upper control limits. These analytes were not detected in the associated field samples; no data were qualified.

For the CCAL analyzed on 11/23/20, the recovery for 1,2,3,4,7,8-HxCDF was greater than the upper control limit. This analyte was not detected in the associated field samples; no data were qualified.

Blanks

To assess the impact of any blank contaminant on the reported sample results, an action level is established at five times (5x) the concentration reported in the blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). No action is taken if the sample result is greater than the action level, or for non-detected results.

OCDD was detected in both method blanks. Results for this compound in the associated samples that were less than the 5x action levels were qualified as not-detected (U-7).

No field blanks were submitted.

Labeled Compounds

The recoveries for some labeled compounds were less than the QAPP specified lower control limit of 70%. The following results were estimated (J/UJ-13L) to indicate a potential low bias.

SAMPLE ID	LABELED COMPOUND	ASSOCIATED COMPOUNDS	QUALIFIER
MW-VB3-102720	13C-OCDD	OCDD, OCDF	J/UJ-13L
MW-CP1-102720	13C-OCDD	OCDD, OCDF	J/UJ-13L
MW-CP2-102720	13C-OCDD	OCDD, OCDF	UJ-13L
MW-CP3-102720	13C-OCDD	OCDD, OCDF	UJ-13L
MW-CP4-102720	13C-OCDD	OCDD, OCDF	J/UJ-13L
MW-CP5-102720	13C12-1,2,3,6,7,8-HxCDD	1,2,3,6,7,8-HxCDD	UJ-13L
	13C-OCDD	OCDD, OCDF	UJ-13L
MW-CP6-102720	13C12-1,2,3,7,8-PeCDF	1,2,3,7,8-PeCDF	UJ-13L
	13C12-2,3,4,7,8-PeCDF	2,3,4,7,8-PeCDF	UJ-13L
	13C12-1,2,3,7,8-PeCDD	1,2,3,7,8-PeCDD	UJ-13L
	13C-OCDD	OCDD, OCDF	UJ-13L
MW-CP7-102720	13C-OCDD	OCDD, OCDF	UJ-13L
MW-CP2-102720-D	13C-OCDD	OCDD, OCDF	UJ-13L
MW-C1/VB1-102820	13C-OCDD	OCDD, OCDF	UJ-13L
MW-C101-102820	13C12-2,3,4,7,8-PeCDF	2,3,4,7,8-PeCDF	UJ-13L
	13C12-1,2,3,7,8-PeCDD	1,2,3,7,8-PeCDD	UJ-13L
	13C-OCDD	OCDD, OCDF	J/UJ-13L
HCOO-B312-102820	13C-OCDD	OCDD, OCDF	UJ-13L

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate analyses were not performed; they are not required by the method. Accuracy was evaluated using the labeled compound and ongoing precision and recovery (OPR)/OPR duplicate recoveries. Precision was evaluated using the OPR/OPR Dup and field duplicate relative percent difference (RPD) values.

Field Duplicates

The RPD control limit is 35% for results greater than 5x the reporting limit (RL). For results less than 5x the RL, the absolute difference between the sample and replicate must be less than the RL.

Two sets of field duplicates were submitted:

MW-CP2-102720 and MW-CP2-102720-D
MW-C1/VB1-102820 and MW-C101-102820

All field precision criteria were met.

Compound Identification

The method requires the confirmation of 2,3,7,8-TCDF using an alternate GC column as the DB5 column that is typically used cannot fully separate 2,3,7,8-TCDF from closely eluting non-target TCDF isomers. The laboratory did not perform a second column confirmation; however, the laboratory uses an RTX-Dioxin2 column. This column provides adequate resolution of the TCDF isomers as indicated by the acceptable peak to valley ratios. Since the 2,3,7,8-TCDF resolution was acceptable, no confirmation was necessary.

The laboratory assigned an "EMPC" flag to one or more analytes to indicate that the ion ratio criterion for positive identification was not met. Since the ion abundance ratio is the primary identification criterion for high resolution mass spectroscopy, an outlier indicates that the reported result may be a false positive. These "EMPC" flagged results were qualified as not detected (U-25) at the reported concentration.

Calculation Verification

Several results were verified by recalculation from the raw data. No calculation or transcription errors were found.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the labeled compound and OPR/OPR Dup recoveries and precision was acceptable as demonstrated by the OPR/OPR Dup and field duplicate RPD values.

Detection limits were elevated based on ion ratio outliers and method blank contamination. Results were estimated based on labeled compound recovery outliers.

All data, as qualified, are acceptable for use.

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Data Quality

APPENDIX A

DATA QUALIFIER DEFINITIONS
REASON CODES
AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES
Based on National Functional Guidelines

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents the approximate concentration.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

The following is an EcoChem qualifier that may also be assigned during the data review process:

DNR	Do not report; a more appropriate result is reported from another analysis or dilution.

DATA QUALIFIER REASON CODES

Group	Code	Reason for Qualification
Sample Handling	1	Improper Sample Handling or Sample Preservation (i.e., headspace, cooler temperature, pH, summa canister pressure); Exceeded Holding Times
Instrument Performance	24	Instrument Performance (i.e., tune, resolution, retention time window, endrin breakdown, lock-mass)
	5A	Initial Calibration (RF, %RSD, r^2)
	5B	Calibration Verification (CCV, CCAL; RF, %D, %R) Use bias flags (H,L)[1] where appropriate
	5C	Initial Calibration Verification (ICV %D, %R) Use bias flags (H,L)[1] where appropriate
Blank Contamination	6	Field Blank Contamination (Equipment Rinsate, Trip Blank, etc.)
	7	Lab Blank Contamination (i.e., method blank, instrument blank, etc.) Use low bias flag (L)[1] for negative instrument blanks
Precision and Accuracy	8	Matrix Spike (MS and/or MSD) Recoveries Use bias flags (H,L)[1] where appropriate
	9	Precision (all replicates: LCS/LCSD, MS/MSD, Lab Replicate, Field Replicate)
	10	Laboratory Control Sample Recoveries (a.k.a. Blank Spikes) Use bias flags (H,L)[1] where appropriate
	12	Reference Material Use bias flags (H,L)[1] where appropriate
	13	Surrogate Spike Recoveries (a.k.a. labeled compounds, recovery standards) Use bias flags (H,L)[1] where appropriate
Interferences	16	ICP/ICP-MS Serial Dilution Percent Difference
	17	ICP/ICP-MS Interference Check Standard Recovery Use bias flags (H,L)[1] where appropriate
	19	Internal Standard Performance (i.e., area, retention time, recovery)
	22	Elevated Detection Limit due to Interference (i.e., chemical and/or matrix)
	23	Bias from Matrix Interference (i.e. diphenyl ether, PCB/pesticides)
Identification and Quantitation	2	Chromatographic pattern in sample does not match pattern of calibration standard
	3	2nd column confirmation (RPD or %D)
	4	Tentatively Identified Compound (TIC) (associated with NJ only)
	20	Calibration Range or Linear Range Exceeded
	25	Compound Identification (i.e., ion ratio, retention time, relative abundance, etc.)
Miscellaneous	11	A more appropriate result is reported (multiple reported analyses i.e., dilutions, re-extractions, etc. Associated with "R" and "DNR" only)
	14	Other (See DV report for details)
	26	Method QC information not provided

[1] H = high bias indicated
L = low bias indicated

Dioxin/Furan Analysis by HRMS
(Based on Dioxin NFG 2011 and Methods EPA 1613B and SW-846 8290)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Sample Handling					
Cooler/Storage Temperature Preservation	Waters/Solids ≤ 6°C & in the dark Tissues <-10°C & in the dark **Preservation Aqueous:** If Cl_2 is present Thiosulfate must be added and if pH > 9 it must be adjusted to 7 - 9	NFG [1] Method[2]	J(pos)/R(ND) if thiosulfate not added if Cl_2 present; J(pos)/UJ(ND) if pH not adjusted J(pos)/UJ(ND) if temp > 20°C	1	**EcoChem PJ, see TM-05**
Holding Time	**If properly stored, 1 year or:** **Extraction (all matrices):** 30 days from collection **Analysis (all matrices)**: 45 days from extraction	NFG [1] Method[2]	If not properly stored or HT exceedance: J(pos)/UJ(ND)	1	**EcoChem PJ, see TM-05** Gross exceedance = > 1 year 2011 NFG **Note:** Under CWA, SDWA, and RCRA the HT for H2O is 7 days.
Instrument Performance					
Mass Resolution (Tuning)	PFK (Perfluorokerosene) ≥10,000 resolving power at m/z 304.9824. Exact mass of m/z 380.9760 w/in 5 ppm of theoretical value (380.97410 to 380.97790) . Analyzed prior to ICAL and at the start and end of each 12 hr. shift.	NFG [1] Method [2]	R(pos/ND) all analytes in all samples associated with the tune	24	Notify PM
Windows Defining Mix	Peaks for first and last eluters must be within established retention time windows for each selector group (chlorination level)	NFG [1] Method [2]	If peaks are not completely within windows (clipped): If natives are ok, J(pos)/UJ(ND) homologs (Totals) If natives are affected, R all results for that selector group	24	Notify PM
Column Performance Mix	Both mixes must be analyzed before ICAL and CCAL Valley < 25% (valley = (x/y)*100%) where x = ht. of TCDD (or TCDF) & y = baseline to bottom of valley For all isomers eluting near the 2378-TCDD (TCDF) peak (TCDD only for 8290)	NFG [1] Method [2]	J(pos) if valley > 25%	24	**EcoChem PJ, see TM-05, Rev. 2**; Note: TCDF is evaluated only if second column confirmation is performed
Initial Calibration **Sensitivity**	S/N ratio > 10 for all native and labeled compounds in CS1 std.	NFG [1] Method [2]	If <10, elevate Det. Limit or R(ND)	5A	
Initial Calibration **Selectivity**	Ion Abundance ratios within QC limits (Table 8 of method 8290) (Table 9 of method 1613B)	NFG [1] Method [2]	If 2 or more ion ratios are out for one compound in ICAL, J(pos)	5A	**EcoChem PJ, see TM-05, Rev. 2**

Dioxin/Furan Analysis by HRMS
(Based on Dioxin NFG 2011 and Methods EPA 1613B and SW-846 8290)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Instrument Performance (continued)					
Initial Calibration (Minimum 5 stds.) **Stability**	%RSD < 20% for native compounds %RSD <30% for labeled compounds (%RSD < 35% for labeled compounds under 1613b)	NFG [1] Method [2]	J(pos) natives if %RSD > 20%	5A	
	Absolute RT of $^{13}C_{12}$-1234-TCDD >25 min on DB5 & >15 min on DB-225	NFG [1] Method [2]	Narrate, no action		**EcoChem PJ, see TM-05, Rev. 2**
Continuing Calibration (Prior to each 12 hr. shift) **Sensitivity**	S/N ratio for CS3 standard > 10	NFG [1] Method [2]	If <10, elevate Det. Limit or R(ND)	5B	
Continuing Calibration (Prior to each 12 hr. shift) **Selectivity**	Ion Abundance ratios within QC limits (Table 8 of method 8290) (Table 9 of method 1613B)	NFG [1] Method [2]	For congener with ion ratio outlier, J(pos) natives in all samples associated with CCAL. No action for labeled congener ion ratio outliers.	25	**EcoChem PJ, see TM-05**
Continuing Calibration (Prior to each 12 hr. shift) **Stability**	%D+/-20% for native compounds %D +/-30% for labeled compounds **(Must meet limits in Table 6, Method 1613B)** If %D in the closing CCAL are within 25%/35%, the mean RF from the two CCAL may be used to calculate samples **(Section 8.3.2.4 of 8290)**.	NFG [1] Method [2]	**Labeled compounds:** Narrate, no action. **Native compounds:** 1613: J(pos)/UJ(ND)if %D is outside Table 6 limits J(pos)/R(ND) if %D is +/-75% of Table 6 limits 8290: J(pos)/UJ(ND) if %D = 20% - 75% J(pos)/R(ND) if %D > 75%	5B (H,L)[3]	
	Absolute RT of $^{13}C_{12}$-1234-TCDD and $^{13}C_{12}$-123789-HxCDD should be ± 15 seconds of ICAL RRT for all other compounds must meet criteria listed in Table 2 Method 1316.	NFG [1] Method [2]	Narrate, no action	5B	**EcoChem PJ, see TM-05**
Blank Contamination					
Method Blank (MB)	MB: One per matrix per batch of (of ≤ 20 samples) No detected compounds > RL	NFG [1] Method [2]	U(pos) if result is < 5X action level.	7	**Hierarchy of blank review:** **#1 - Review MB, qualify as needed** **#2 - Review FB , qualify as needed**
Field Blank (FB)	FB: frequency as per QAPP No detected compounds > RL		U(pos) if result is < 5X action level.	6	

Dioxin/Furan Analysis by HRMS
(Based on Dioxin NFG 2011 and Methods EPA 1613B and SW-846 8290)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Precision and Accuracy					
MS/MSD (recovery)	**MS/MSD not typically required for HRMS analyses.** If lab analyzes MS/MSD then one set per matrix per batch (of ≤ 20 samples) Use most current laboratory control limits	EcoChem standard policy	J(pos) if both %R > UCL - high bias J(pos)/UJ(ND) if both %R < LCL - low bias J(pos)/R(ND) if both %R < 10% - very low bias J(pos)/UJ(ND) if one > UCL & one < LCL, with no bias **PJ if only one %R outlier**	8 (H,L)[3]	No action if only one spike %R is outside criteria. No action if parent concentration is >4x the amount spiked. Qualify parent sample only unless other QC indicates systematic problems.
MS/MSD (RPD)	**MS/MSD not typically required for HRMS analyses.** If lab analyzes MS/MSD then one set per matrix per batch (of ≤ 20 samples) Use most current laboratory control limits	EcoChem standard policy	J(pos) in parent sample if RPD > CL	9	Qualify parent sample only.
LCS (or OPR)	One per lab batch (of ≤ 20 samples) Use most current laboratory control limits **or** Limits from Table 6 of 1613B	NFG [1] Method [2]	J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if %R < LCL - low bias J(pos)/R(ND) if %R < 10% - very low bias	10 (H,L)[3]	No action if only one spike %R is outside criteria, when LCSD is analyzed. Qualify all associated samples.
LCS/LCSD (RPD)	**LCSD not typically required for HRMS analyses.** One set per matrix and batch of 20 samples RPD < 35%	Method [2] Ecochem standard policy	J(pos) assoc. compound in all samples if RPD > CL	9	Qualify all associated samples.
Lab Duplicate (RPD)	**Lab Dup not typically required for HRMS analyses.** One per lab batch (of ≤ 20 samples) Use most current laboratory control limits	EcoChem standard policy	J(pos)/UJ(ND) if RPD > CL	9	
Labeled Compounds (Internal Standards)	Added to all samples %R = 40% - 135% in all samples 8290 %R must meet limits in Table 7 Method 1613B	NFG [1] Method [2]	J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if %R < LCL - low bias J(pos)/R(ND) if %R < 10% - very low bias	13 (H,L)[3]	
Field Duplicates	Solids: RPD <50% OR difference < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR difference < 1X RL (for results < 5X RL)	EcoChem standard policy	Narrate and qualify if required by project	9	**Use professional judgment**

Dioxin/Furan Analysis by HRMS
(Based on Dioxin NFG 2011 and Methods EPA 1613B and SW-846 8290)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Compound ID and Calculation					
Quantitation/ Identification	All ions for each isomer must maximize within ± 2 seconds. S/N ratio >2.5 Ion ratios must meet criteria listed in Table 8 Method 8290, or Table 9 of 1613B; RRTs w/in limits in Table 2 of 1613B	NFG [1] Method [2]	Narrate in report; qualify if necessary NJ(pos) for retention time outliers. U(pos) for ion ratio outliers.	25	**EcoChem PJ, see TM-05**
EMPC (estimated maximum possible concentration)	If quantitation identification criteria are not met, laboratory should report an EMPC value.	NFG [1] Method [2]	If laboratory correctly reported an EMPC value, qualify the native compound U(pos) to indicate that the value is a detection limit and qualify total homolog groups J (pos)	25	**Use professional judgment See TM-18**
Interferences	Interferences from chlorodiphenyl ether compounds	NFG [1] Method [2]	J(pos)/UJ(ND) if present	23	**See TM-16**
	Lock masses must not deviate ± 20% from values in Table 8 of 1613B	Method [2]	J(pos)/UJ(ND) if present	24	**See TM-17**
Second Column Confirmation	All 2,3,7,8-TCDF hits must be confirmed on a DB-225 (or equiv) column. All QC criteria must also be met for the confirmation analysis.	NFG [1] Method [2]	Report the DB-225 value. If not performed use PJ.	3	DNR-11 DB5 result if both results from both columns are reported. **EcoChem PJ, see TM-05**
Calculation Check	Check 10% of field & QC sample results	EcoChem standard policy	Contact laboratory for resolution and/or corrective action	na	Full data validation only.
Electronic Data Deliverable (EDD)					
Verification of EDD to hardcopy data	EcoChem verify @ 10% unless problems noted; then increase level up to 100% for next several packages.		Depending on scope of problem, correct at EcoChem (minor issues) to resubmittal by laboratory (major issues).	na	EcoChem Project Manager and/or Database Administrator will work with lab to provide long-term corrective action.
Dilutions, Re-extractions and/or Reanalyses	Report only one result per analyte	Standard reporting policy	Use "DNR" to flag results that will not be reported.	11	

(pos) - positive (detected) results; (ND) - not detected results

[1] National Functional Guidelines for Chlorinated Dibenzo-p-Dioxins (CDDs) & Chlorinated Dibenzofurans (CDFs) Data Review, September 2011

[2] Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by High-Resolution Gas Chromatography/High-Resolution Mass Spectrometry (HRGC/HRMS), USEPA SW-846, Method 8290

[2] EPA Method 1613, Rev.B, Tetra-through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGS/HRMS, October 1994

[3] NFG 2013 suggests using "+ / -" to indicate bias; EcoChem has chosen "H" = high bias indicated; "L" = low bias indicated.

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APPENDIX B

QUALIFIED DATA SUMMARY TABLE

Qualified Data Summary Table
Lora Lake - Annual Lakeside GW Monitoring 2020

SAMPLE ID	LAB ID	METHOD	ANALYTE	RESULT	UNITS	LAB QUAL	DV QUAL	DV CODE
MW-VB3-102720	20J0389-01	EPA 1613B	1,2,3,4,6,7,8-HpCDD	1.74	pg/L	EMPC, J	U	25
MW-VB3-102720	20J0389-01	EPA 1613B	1,2,3,4,6,7,8-HpCDF	1.35	pg/L	EMPC, J	U	25
MW-VB3-102720	20J0389-01	EPA 1613B	OCDD	35.3	pg/L	J, B	UJ	7,13L
MW-VB3-102720	20J0389-01	EPA 1613B	OCDF	5.29	pg/L	J	J	13L
MW-CP1-102720	20J0389-02	EPA 1613B	1,2,3,4,6,7,8-HpCDD	9.24	pg/L	EMPC, J	U	25
MW-CP1-102720	20J0389-02	EPA 1613B	1,2,3,4,6,7,8-HpCDF	2.35	pg/L	EMPC, J	U	25
MW-CP1-102720	20J0389-02	EPA 1613B	OCDD	165	pg/L	B	J	13L
MW-CP1-102720	20J0389-02	EPA 1613B	OCDF	20.2	pg/L	EMPC	UJ	13L,25
MW-CP2-102720	20J0389-03	EPA 1613B	1,2,3,4,6,7,8-HpCDD	1.68	pg/L	EMPC, J	U	25
MW-CP2-102720	20J0389-03	EPA 1613B	OCDD	27	pg/L	J, B	UJ	7,13L
MW-CP2-102720	20J0389-03	EPA 1613B	OCDF	3.08	pg/L	U	UJ	13L
MW-CP3-102720	20J0389-04	EPA 1613B	1,2,3,4,6,7,8-HpCDD	2.03	pg/L	EMPC, J	U	25
MW-CP3-102720	20J0389-04	EPA 1613B	OCDD	33	pg/L	J, B	UJ	7,13L
MW-CP3-102720	20J0389-04	EPA 1613B	OCDF	2.84	pg/L	U	UJ	13L
MW-CP4-102720	20J0389-05	EPA 1613B	1,2,3,4,6,7,8-HpCDD	2.57	pg/L	EMPC, J	U	25
MW-CP4-102720	20J0389-05	EPA 1613B	OCDD	54.1	pg/L	B	UJ	7,13L
MW-CP4-102720	20J0389-05	EPA 1613B	OCDF	5.93	pg/L	J	J	13L
MW-CP5-102720	20J0389-06	EPA 1613B	1,2,3,4,6,7,8-HpCDF	0.68	pg/L	EMPC, J, B	U	25
MW-CP5-102720	20J0389-06	EPA 1613B	1,2,3,6,7,8-HxCDD	0.63	pg/L	U	UJ	13L
MW-CP5-102720	20J0389-06	EPA 1613B	OCDD	23.8	pg/L	J, B	UJ	7,13L
MW-CP5-102720	20J0389-06	EPA 1613B	OCDF	4.01	pg/L	EMPC, J, B	UJ	13L,25
MW-CP6-102720	20J0389-07	EPA 1613B	1,2,3,7,8-PeCDD	0.92	pg/L	U	UJ	13L
MW-CP6-102720	20J0389-07	EPA 1613B	1,2,3,7,8-PeCDF	1.53	pg/L	U	UJ	13L
MW-CP6-102720	20J0389-07	EPA 1613B	2,3,4,7,8-PeCDF	1.42	pg/L	U	UJ	13L
MW-CP6-102720	20J0389-07	EPA 1613B	OCDD	28.6	pg/L	EMPC, J, B	UJ	13L,25
MW-CP6-102720	20J0389-07	EPA 1613B	OCDF	3.2	pg/L	U	UJ	13L
MW-CP7-102720	20J0389-08	EPA 1613B	OCDD	36.1	pg/L	J, B	UJ	7,13L
MW-CP7-102720	20J0389-08	EPA 1613B	OCDF	5.16	pg/L	EMPC, J	UJ	13L,25
MW-CP2-102720-D	20J0389-09	EPA 1613B	1,2,3,4,6,7,8-HpCDD	1.26	pg/L	EMPC, J	U	25
MW-CP2-102720-D	20J0389-09	EPA 1613B	OCDD	21.3	pg/L	J, B	UJ	7,13L
MW-CP2-102720-D	20J0389-09	EPA 1613B	OCDF	2.88	pg/L	EMPC, J	UJ	13L,25
MW-C1/VB1-102820	20J0389-10	EPA 1613B	1,2,3,4,6,7,8-HpCDD	1.76	pg/L	EMPC, J	U	25
MW-C1/VB1-102820	20J0389-10	EPA 1613B	OCDD	49.1	pg/L	B	UJ	7,13L
MW-C1/VB1-102820	20J0389-10	EPA 1613B	OCDF	5.84	pg/L	EMPC, J	UJ	13L,25
MW-C101-102820	20J0389-11	EPA 1613B	1,2,3,7,8-PeCDD	0.82	pg/L	U	UJ	13L
MW-C101-102820	20J0389-11	EPA 1613B	2,3,4,7,8-PeCDF	1.18	pg/L	U	UJ	13L
MW-C101-102820	20J0389-11	EPA 1613B	OCDD	66.5	pg/L	B	UJ	7,13L
MW-C101-102820	20J0389-11	EPA 1613B	OCDF	10.2	pg/L	J	J	13L
HCOO-B312-102820	20J0389-14	EPA 1613B	OCDD	10.2	pg/L	J, B	UJ	7,13L
HCOO-B312-102820	20J0389-14	EPA 1613B	OCDF	2.09	pg/L	U	UJ	13L

Lora Lake Apartments Site

2020 Annual Compliance Monitoring Report

Appendix D
Soil Cap and Wildlife Barrier Inspection Logs and Photographs

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Lora Lake Apartments Site

2020 Annual Compliance Monitoring Report

Appendix D
Soil Cap and Wildlife Barrier Inspection Logs and Photographs

Figure

1,272,000 1,272,500 1,273,000 1,273,500

175,000 174,500 174,000

LLA 07 LLA 06 LLA 05 LLA 04 LLA 03 LLA 02 LLA 08 LLA 25 LLA 23 LLA 24 LLA 22 LLA 01 LLA 09 LLA 20 LLA 21 LLA 17 LLA 10 LLA 11 LLA 19 LLA 12 LLA 16 LLA 18 LLA 13 LLA 14 LLA 15

DMCA 04 DMCA 03 DMCA 02 DMCA 13 DMCA 05 DMCA 12 DMCA 01 DMCA 11 DMCA 06 DMCA 10 DMCA 07 DMCA 09 DMCA 08

Post-construction Access Road

LORA LAKE APARTMENTS PARCEL

DES MOINES MEMORIAL DRIVE SOUTH

8TH AVE SOUTH

FORMER SEATTLE CITY LIGHT SUNNYDALE SUBSTATION

Bio-filtration Swale and Catch Basin

PORT OF SEATTLE PROPERTY

LORA LAKE PARCEL

Porous Pavement Wildlife Barrier

Crushed Rock Wildlife Barrier

1982 DREDGED MATERIAL CONTAINMENT AREA

Planted Filter Strip

Lora Lake

Legend

- Inspection Station
- Wildlife Barrier Extent
- Tax Parcel Boundary

Notes:

- Wildlife barrier inspection locations are placed at 150-foot intervals.
- Tax parcel boundaries based on King County tax parcel data.
- Locations of fences were digitized based on aerial image cited below and Google Earth Street View.
- Aerial image provided by Port of Seattle and dated March 20, 2011.
- Coordinates in North American Datum of 1983 High Accuracy Reference Network. State Plane Coordinate System, Washington North Zone, in units of Survey Feet. Map Projection = Lambert Conformal Conic.

0 60 120 240
Scale in Feet

N

Location Name	Eastings	Northings	Location Name	Eastings	Northings
DMCA 01	1273178.823	174650.3331	LLA 07	1272202.405	174502.7812
DMCA 02	1273181.617	174782.756	LLA 08	1272101.682	174552.92
DMCA 03	1273333.937	174855.47	LLA 09	1271951.716	174556.1063
DMCA 04	1273531.067	174880.8695	LLA 10	1271912.402	174665.6022
DMCA 05	1273502.63	174737.1308	LLA 11	1271915.219	174815.5757
DMCA 06	1273497.511	174588.8075	LLA 12	1272008.979	174876.8551
DMCA 07	1273395.631	174522.2635	LLA 13	1272158.835	174883.4245
DMCA 08	1273312.103	174450.6122	LLA 14	1272307.767	174891.8835
DMCA 09	1273175.863	174508.1772	LLA 15	1272454.414	174871.7565
DMCA 10	1273263.568	174560.045	LLA 16	1272603.857	174865.2233
DMCA 11	1273393.626	174631.1527	LLA 17	1272750.559	174854.2369
DMCA 12	1273275.089	174721.8078	LLA 18	1272299.096	174425.998
DMCA 13	1273402.654	174777.8207	LLA 19	1272437.892	174564.2488
LLA 01	1272702.08	174709.7362	LLA 20	1272535.137	174669.9707
LLA 02	1272613.965	174588.3852	LLA 21	1272238.553	174636.8022
LLA 03	1272534.938	174461.1134	LLA 22	1272381.755	174719.5454
LLA 04	1272448.327	174338.9419	LLA 23	1272596.313	174778.1005
LLA 05	1272311.779	174314.461	LLA 24	1272039.214	174709.3556
LLA 06	1272204.592	174358.6236	LLA 25	1272198.139	174789.68

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Compliance Monitoring Plan
Port of Seattle
Lora Lake Apartments Site
Burien, Washington

Figure D.1
Wildlife Barrier Inspection Locations

I:\GIS\Projects\POS_LLA\MXD\Task8130\Compliance Monitoring Plan Update_2020\Figure 6.1 Wildlife Barrier Inspection Locations.mxd
5/14/2020

Revised – May 2020

Lora Lake Apartments Site

2020 Annual Compliance Monitoring Report

Appendix D
Soil Cap and Wildlife Barrier Inspection Logs and Photographs

Attachment D.1
Lora Lake Apartments Parcel Inspection Log and Photographs

Lora Lake Apartments Parcel Cap Inspection Form

Monitoring Station	Photo Number	Check all that apply						Overall Condition of Barrier			Repair Needed		Comments/Observations
		Engineered surface characteristics condition compromised	Exposed underlying soil	Loss of barrier material	Down-slope movement of barrier material	Presence of debris on barrier surface	Substantial plant growth	Good	Fair	Poor	Yes	No	
LLA 01	1							x				x	Regular plant overgrowth, landscaping needed
LLA 02	1							x				x	
LLA 03	2							x				x	
LLA 04	3							x				x	
LLA 05	3 & 4							x				x	
LLA 06	4 & 5							x				x	
LLA 07	6							x				x	
LLA 08	7							x				x	
LLA 09	7 & 8							x				x	
LLA 10	8							x				x	
LLA 11	9			x		x	x			x	x		Erosion lining exposed
LLA 12	10 & 11		x	x					x		x		Animal activity, causing shallow soil disturbance
LLA 13	10 & 12		x	x					x		x		
LLA 14	13		x	x					x		x		
LLA 15	13							x					Regular plant overgrowth, landscaping needed
LLA 16	--							x					
LLA 17	--							x					
LLA 18	13		x						x		x		Erosion lining exposed
LLA 19	--							x				x	Regular plant overgrowth, landscaping needed
LLA 20	1							x				x	
LLA 21	--							x				x	
LLA 22	--							x				x	
LLA 23	1 & 2							x				x	
LLA 24	--							x				x	
LLA 25	4							x				x	

Photograph 1. This photograph was taken at the northeast corner of the site near monitoring stations LLA 01, LLA 02, LLA 20, and LLA 23, facing east. Regular plant overgrowth and landscaping needs were observed at this location.

Photograph 2. This photograph was taken at the northeast corner of the site near monitoring stations LLA 02 and LLA 23, facing north. Regular plant overgrowth and landscaping needs were observed at this location.

Photograph 3. This photograph was taken near the northern property line near monitoring stations LLA 04 and LLA 05, facing north. Regular plant overgrowth and landscaping needs were observed at this location.

Photograph 4. This photograph was taken near the northern property line near monitoring stations LLA 05, LLA 06, and LLA 25, facing northwest. Regular plant overgrowth and landscaping needs were observed at this location.

Photograph 5. This photograph was taken near monitoring station LLA 06, facing northwest. Regular plant overgrowth and landscaping needs were observed at this location.

Photograph 6. This photograph was taken near monitoring station LLA 07, facing north. Regular plant overgrowth and landscaping needs were observed at this location.

Photograph 7. This photograph was taken at the west edge of the property near monitoring stations LLA 08 and LLA 09, facing northwest. Regular plant overgrowth and landscaping needs were observed at this location.

Photograph 8. This photograph was taken near monitoring stations LLA 09 and LLA 10, facing southwest. Regular plant overgrowth and landscaping needs were observed at this location.

Photograph 9. This photograph was taken near the property entrance near monitoring station LLA 11, facing south. Exposed erosion lining was observed at this location.

Photograph 10. This photograph was taken near monitoring stations LLA 12 and LLA 13, facing south. Animal activity, causing shallow soil disturbance, was observed at this location.

Photograph 11. This photograph shows the ground surface near monitoring station LLA 12. Animal activity, causing shallow soil disturbance, was observed at this location.

Photograph 12. This photograph shows the ground surface near monitoring station LLA 13. Animal activity, causing shallow soil disturbance, was observed at this location.

Photograph 13. This photograph was taken at the southeastern corner of the site near monitoring stations LLA 14, LLA 15, and LLA 18, facing southeast. Regular plant overgrowth and landscaping needs; exposed erosion lining; and animal activity, causing shallow soil disturbance, were observed at this location.

Lora Lake Apartments Site

2020 Annual Compliance Monitoring Report

Appendix D
Soil Cap and Wildlife Barrier Inspection Logs and Photographs

Attachment D.2
DMCA Inspection Log and Photographs

DMCA Wildlife Barrier Inspection Form

Monitoring Station	Photo Number	Check all that apply						Overall Condition of Barrier			Repair Needed		Comments/Observations
		Engineered surface characteristics condition compromised	Exposed underlying soil	Loss of barrier material	Down-slope movement of barrier material	Presence of debris on barrier surface	Substantial plant growth	Good	Fair	Poor	Yes	No	
DMCA 01	1					x		x				x	Some blackberry overgrowth
DMCA 02	2						x		x			x	
DMCA 03	3 & 4							x				x	
DMCA 04	5					x			x			x	Debris piled on pavement
DMCA 05	6					x			x			x	Debris piled on pavement
DMCA 06	7							x				x	
DMCA 07	8					x	x		x			x	Debris piled on pavement
DMCA 08	9							x				x	
DMCA 09	10					x			x			x	Fallen leaves and branches
DMCA 10	11							x				x	Photo to the north
DMCA 11	12							x				x	Photo to the south west
DMCA 12	13							x				x	Photo to the north east
DMCA 13	14							x				x	Photo to the west

Photograph 1. This photograph was taken at the west property line near monitoring station DMCA 01, facing west. Some blackberry overgrowth was observed at this location.

Photograph 2. This photograph was taken at the northwest corner near monitoring station DMCA 02, facing west.

Photograph 3. This photograph was taken at the north property line near monitoring station DMCA 03, facing northwest.

Photograph 4. This photograph shows the transition of the DMCA wildlife barrier to the surrounding ground surface near monitoring station DMCA 03.

Photograph 5. This photograph was taken at the northeast corner near monitoring station DMCA 04, facing northeast. Debris piled on pavement was observed at this location.

Photograph 6. This photograph was taken at the east property line near monitoring station DMCA 05, facing east. Debris piled on pavement was observed at this location.

Photograph 7. This photograph was taken near monitoring station DMCA 06, facing southeast.

Photograph 8. This photograph was taken near monitoring station DMCA 07, facing southeast. Debris piled on pavement was observed at this location.

Photograph 9. This photograph was taken near monitoring station DMCA 08, facing south.

Photograph 10. This photograph was taken near monitoring station DMCA 09, facing southwest. Fallen leaves and branches were observed at this location.

Photograph 11. This photograph was taken near monitoring station DMCA 10, facing north.

Photograph 12. This photograph was taken near monitoring station DMCA 11, facing southwest.

Photograph 13. This photograph was taken near monitoring station DMCA 12, facing northeast.

Photograph 14. This photograph was taken near monitoring station DMCA 13, facing west.

Lora Lake Apartments Site

2020 Annual Compliance Monitoring Report

Appendix D
Soil Cap and Wildlife Barrier Inspection Logs and Photographs

Attachment D.3
DMCA 2021 Maintenance Photographs

Photograph 1. Port crew performing maintenance of the planted filter strip just south of the 1982 Dredged Material Containment Area (DMCA).

Photograph 2. Area near station DMCA 05 after removal of excess debris.

Photograph 3. Area near station DMCA 06 after removal of excess debris.

Photograph 4. Southern edge of the DMCA after removal of excess debris.

Lora Lake Apartments Site

2020 Annual Compliance Monitoring Report

Appendix E
Well Decommissioning and Installation Logs

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT
Notice of Intent No. **AE60315**

Construction/Decommission

[ ] Construction

[X] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* **n/a**

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Property Owner **Port of Seattle**

Site Address **15003 Des Moines Memorial Dr S**

Consulting Firm **Floyd Snider**

City **Burien** County **King**

Unique Ecology Well ID

Tag No.

Location 1/4 **SW** 1/4 **NE** Sec **20** TWN **23N** R **4E** [EWM] or WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards

Materials used and the information reported above are true to my best knowledge and belief

Lat/Long (s,t,r still Required) Lat Deg **n/a** Lat Min/Sec **n/a** Long Deg **n/a** Long Min/Sec **n/a**

Tax Parcel No. **202304-9281**

[X] Driller [ ] Trainee Name (Print) James Goble

Driller/Trainee Signature

Driller/Trainee License No. 3131

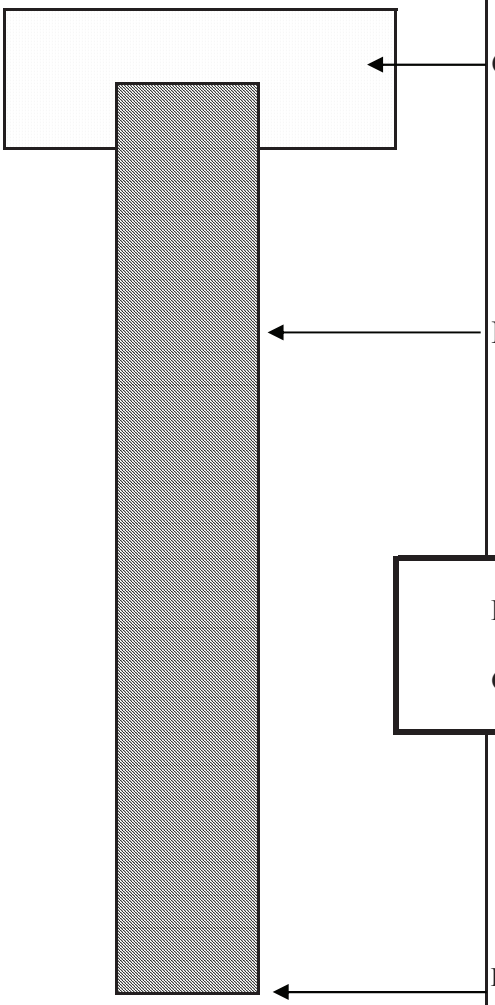
Cased or Uncased Diameter **8"** Static Level

Work/Decommision Start Date **4/24/2020**

If trainee, licensed drillers' Signature and License No.

Work/Decommision Completed Date **4/24/2020**

Construction/Design | Well Data 103-20-1138 | Formation Description



CONCRETE SURFACE SEAL — **3'** FT — Formation: **0** - FT — **19' x 2" Drill Out**

BACKFILL — **17'** FT — Formation: **0** - FT — **medium bentonite chips**

DEPTH OF BORING — **19'** FT

REQUIRED INFORMATION
(Must get one or both if available)

DEPT OF ECOLOGY WELL TAG # :

CLIENT WELL ID #: HC00-B311

Scale 1" =

Page of

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT
Notice of Intent No. **RE19299**

Construction/Decommission

[X] Construction
[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well
[X] Resource Protection
[ ] Geotechnical Soil Boring

Property Owner **Port of Seattle**
Site Address **15003 Des Moines Memorial Dr S**
Consulting Firm **Floyd Snider**
City **Burien** County **King**

Unique Ecology Well ID
Tag No. **BLK 794**

Location 1/4 **SW** 1/4 **NE** Sec **20** Twn **23N** R **4E** [EWM] or WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief

Lat/Long (s,t,r still Required) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. **202304-9281**

[X] Driller [ ] Trainee Name (Print) James Goble
Driller/Trainee Signature _____
Driller/Trainee License No. 3131

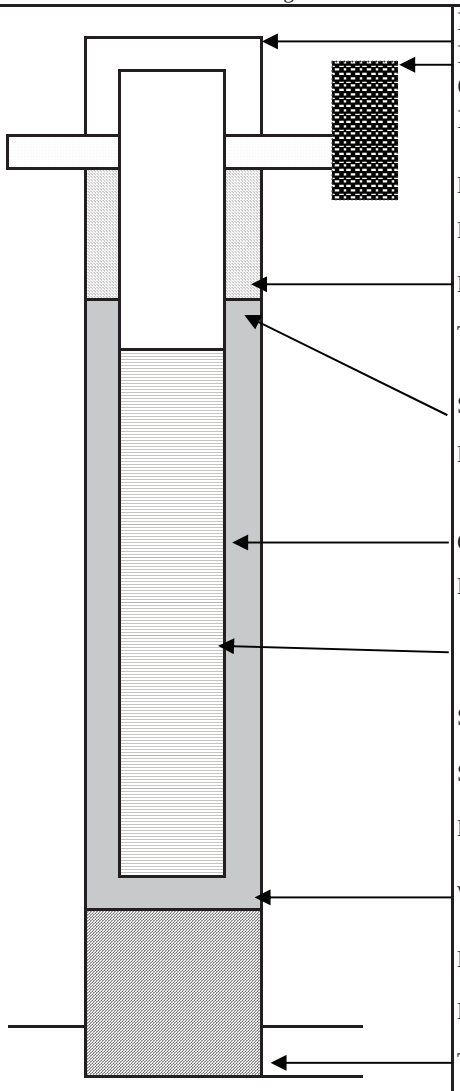
Cased or Uncased Diameter **8"** Static Level **7'**

Work/Decommision Start Date **4/24/2020**

If trainee, licesned drillers' Signature and License No. _____

Work/Decommision End Date **4/24/2020**

Construction/Design



Well Data 103-20-1138

Locking Cap Protective Post Concrete Surface Seal Depth	3'	FT
Blank Casing (dia x dep)	2" x 8'	
Material	PVC	
Backfill	4'	FT
Type	medium	
Seal	bentonite	
Material	chips	
Gravel Pack	11'	FT
Material	2/12 Sand	
Screen (dia x dep)	2" x 10'	
Slot Size	010	
Material	PVC	
Well Depth	18'	FT
Backfill		
Material		
Total Hole Depth	18'	FT

Formation Description

0	-	3'	FT	Silty sand & gravels
3'	-	10'	FT	Gray sandy silt to silty sand
10'	-	18'	FT	Silty sand to medium fine gray sands

Scale 1" = _____

ECY 050-12 (Rec=v 2/01)

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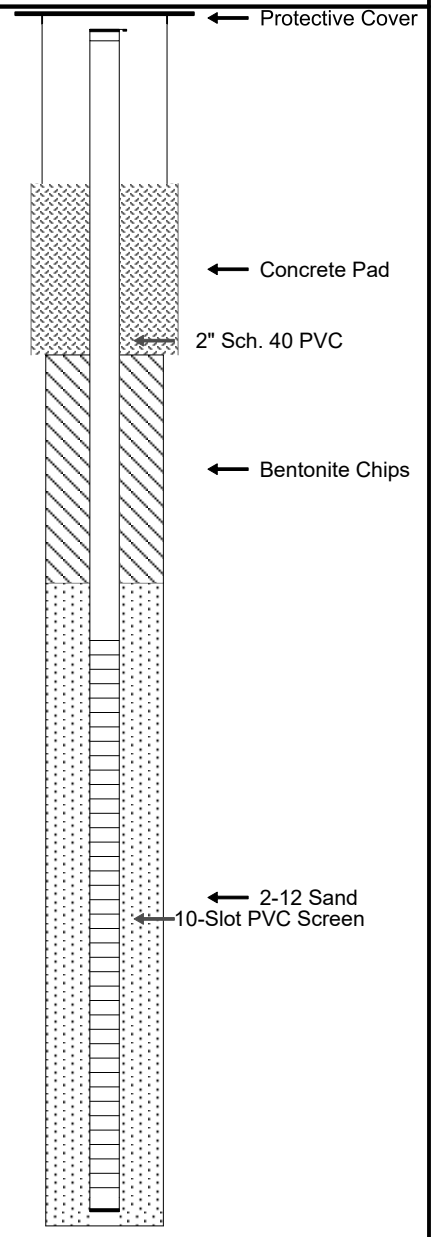
PROJECT: **POS-LL**	LOCATION: **South of Access Road**	WELL ID: **MW-VB3**
DRILL DATE: **4/24/2020**	COORDINATE SYSTEM: **NAD83**	ECOLOGY WELL ID: **BLK-794**
DRILLED BY: **James Goble (Cascade)**	LOGGED BY: **A Jumper**	NORTHING: **174300.00**	EASTING: **1273332.37**
DRILLING EQUIPMENT: **Truck Mounted Rig**	GROUND SURFACE ELEV.: **279.9**	TOC ELEVATION: **282.6**
DRILLING METHOD: **Hollow Stem Auger**	TOTAL DEPTH (ft bgs): **18**	DEPTH TO WATER (ft bgs): **10**
SAMPLING METHOD: **1.5 ft Split Spoon**	BORING DIAMETER: **8 inch**	SCREENED INTERVAL: **8-18**

Depth (feet)	USCS Symbol	Description	Drive/ Recovery	# of Blows	PID (ppm)
0	ML	Gravelly, sandy **SILT** with organics.			
2	SW	Red-brown, gravelly **SAND** with trace cobbles.		5	0.3
4	SM	At 3 ft., 1 inch dark brown, silty **SAND** lens.		7	0.4
				8	0.3
		Dark brown, silty **SAND** with red brick fragments; moist; no odor.		7	0.7
6		At 6 ft., large black cobble with silt; moist.		8	0.5
		Brown, silty **SAND**; no odor; no sheen.		8	0.5
8	ML	Gray, sandy **SILT**; no odor; no sheen.		12	
	SP	Poorly-graded, clean **SAND**; wet; no odor.		12	
10 ▼				8	
				12	0.5
	SM	At 10.75 ft., grades to gray, silty, fine **SAND**: wet; no odor. At 11ft., large cobble recovered.		12	0.8
12				10	1.0
	SP	Silty, fine **SAND** ; no odor; wet.		9	1.0
		At 13 ft., grades to gray, silty **SAND** with some orange mottling; wet; no odor.		9	0.5
14				9	0.5
		Gray-brown, fine, silty **SAND**; wet; no odor.		10	0.7
16	SM	At 15.5 ft., becomes more fine.		9	0.7
				10	0.6
		Gray-brown, fine, silty **SAND**; wet; no odor.		8	0.6
18		After drilling, boring heaved; bottom of boring = 18 ft. bgs.		8	0.7
				8	0.5

Well Construction



ABBREVIATIONS:
ft bgs = feet below ground surface
ppm = parts per million
USCS = Unified Soil Classification System
▼ = denotes groundwater table

NOTES: **HC00-B311 replacement well**