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Automated Report

Technical Report for

Providence Engineering

Valero-CAMS, Baton Rouge, LA

712-001

SGS Job Number: JD20277

Sampling Date: 02/08/21

Report to:

Providence Engineering
1201 Main Street
Baton Rouge, LA 70802
brandonkilpatrick@providenceeng.com

ATTN: Brandon Kilpatrick

Total number of pages in report: 35



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A handwritten signature in black ink that reads "Caitlin Brice".

Caitlin Brice, M.S.
General Manager

Client Service contact: Shalini Williams 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

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Test results relate only to samples analyzed.

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Sample Summary

Providence Engineering

Job No: JD20277

Valero-CAMS, Baton Rouge, LA
Project No: 712-001

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
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This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

JD20277-1	02/08/21	10:00	CJG	02/12/21	AIR	Ambient Air Comp.	CAMS 578
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Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: CAMS 578		
Lab Sample ID: JD20277-1		Date Sampled: 02/08/21
Matrix: AIR - Ambient Air Comp. Summa ID: A1098		Date Received: 02/12/21
Method: TO-15		Percent Solids: n/a
Project: Valero-CAMS, Baton Rouge, LA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6W21321.D	1	02/18/21 09:33	DFT	n/a	n/a	V6W896
Run #2							

Run #	Initial Volume
Run #1	400 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone	2.4	0.20	0.11	ppbv		5.7	0.48	0.26	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	0.046	ppbv		ND	0.44	0.10	ug/m3
71-43-2	78.11	Benzene	0.14	0.20	0.012	ppbv	J	0.45	0.64	0.038	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.20	0.027	ppbv		ND	1.3	0.18	ug/m3
75-25-2	252.8	Bromoform	ND	0.20	0.037	ppbv		ND	2.1	0.38	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	0.022	ppbv		ND	0.78	0.085	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	0.022	ppbv		ND	0.87	0.096	ug/m3
100-44-7	126	Benzyl Chloride ^a	ND	0.20	0.057	ppbv		ND	1.0	0.29	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	0.024	ppbv		ND	0.62	0.075	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	0.026	ppbv		ND	0.92	0.12	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	0.048	ppbv		ND	0.53	0.13	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	0.020	ppbv		ND	0.98	0.098	ug/m3
74-87-3	50.49	Chloromethane	0.59	0.20	0.015	ppbv		1.2	0.41	0.031	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	0.040	ppbv		ND	0.63	0.13	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	0.025	ppbv		ND	1.0	0.13	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	0.024	ppbv		ND	1.3	0.15	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.20	0.022	ppbv		ND	0.69	0.076	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	0.012	ppbv		ND	0.81	0.049	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	0.017	ppbv		ND	0.79	0.067	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.20	0.018	ppbv		ND	1.5	0.14	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	0.021	ppbv		ND	0.81	0.085	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	0.019	ppbv		ND	0.92	0.088	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	0.052	ppbv		ND	0.72	0.19	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.39	0.20	0.017	ppbv		1.9	0.99	0.084	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.20	0.033	ppbv		ND	1.7	0.28	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	0.0073	ppbv		ND	0.79	0.029	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	0.012	ppbv		ND	0.79	0.048	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	0.020	ppbv		ND	0.91	0.091	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.20	0.019	ppbv		ND	1.2	0.11	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	0.13	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.20	0.018	ppbv		ND	1.2	0.11	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	0.020	ppbv		ND	0.91	0.091	ug/m3

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAMS 578	Date Sampled:	02/08/21
Lab Sample ID:	JD20277-1	Date Received:	02/12/21
Matrix:	AIR - Ambient Air Comp. Summa ID: A1098	Percent Solids:	n/a
Method:	TO-15		
Project:	Valero-CAMS, Baton Rouge, LA		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	6.2	0.50	0.22	ppbv		12	0.94	0.41	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.20	0.015	ppbv		ND	0.87	0.065	ug/m3
141-78-6	88	Ethyl Acetate	0.39	0.20	0.038	ppbv		1.4	0.72	0.14	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.20	0.030	ppbv		ND	0.98	0.15	ug/m3
76-13-1	187.4	Freon 113	ND	0.20	0.017	ppbv		ND	1.5	0.13	ug/m3
76-14-2	170.9	Freon 114	ND	0.20	0.019	ppbv		ND	1.4	0.13	ug/m3
142-82-5	100.2	Heptane	ND	0.20	0.018	ppbv		ND	0.82	0.074	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.20	0.046	ppbv		ND	2.1	0.49	ug/m3
110-54-3	86.17	Hexane	0.22	0.20	0.011	ppbv		0.78	0.70	0.039	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	0.036	ppbv		ND	0.82	0.15	ug/m3
67-63-0	60.1	Isopropyl Alcohol	0.30	0.20	0.065	ppbv		0.74	0.49	0.16	ug/m3
75-09-2	84.94	Methylene chloride	ND	0.20	0.015	ppbv		ND	0.69	0.052	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.11	0.20	0.042	ppbv	J	0.32	0.59	0.12	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	0.036	ppbv		ND	0.82	0.15	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	0.019	ppbv		ND	0.72	0.069	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	0.033	ppbv		ND	0.82	0.14	ug/m3
115-07-1	42	Propylene	ND	0.50	0.016	ppbv		ND	0.86	0.027	ug/m3
100-42-5	104.1	Styrene	ND	0.20	0.019	ppbv		ND	0.85	0.081	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	0.033	ppbv		ND	1.1	0.18	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	0.027	ppbv		ND	1.4	0.19	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	0.030	ppbv		ND	1.1	0.16	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene ^a	ND	0.20	0.089	ppbv		ND	1.5	0.66	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.20	0.033	ppbv		ND	0.98	0.16	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.20	0.034	ppbv		ND	0.98	0.17	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.20	0.022	ppbv		ND	0.93	0.10	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	0.014	ppbv		ND	0.61	0.042	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.82	0.040	0.031	ppbv		5.6	0.27	0.21	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.20	0.050	ppbv		ND	0.59	0.15	ug/m3
108-88-3	92.14	Toluene	0.14	0.20	0.014	ppbv	J	0.53	0.75	0.053	ug/m3
79-01-6	131.4	Trichloroethylene	0.072	0.040	0.019	ppbv		0.39	0.21	0.10	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.24	0.20	0.028	ppbv		1.3	1.1	0.16	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	0.022	ppbv		ND	0.51	0.056	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	0.034	ppbv		ND	0.70	0.12	ug/m3
	106.2	m,p-Xylene	ND	0.20	0.034	ppbv		ND	0.87	0.15	ug/m3
95-47-6	106.2	o-Xylene	ND	0.20	0.017	ppbv		ND	0.87	0.074	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	0.20	0.017	ppbv		ND	0.87	0.074	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	92%		65-128%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CAMS 578	Date Sampled:	02/08/21
Lab Sample ID:	JD20277-1	Date Received:	02/12/21
Matrix:	AIR - Ambient Air Comp. Summa ID: A1098	Percent Solids:	n/a
Method:	TO-15		
Project:	Valero-CAMS, Baton Rouge, LA		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
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(a) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Summa Canister and Flow Controller Log

SGS Sample Receipt Summary

Job Number: JD20277

Client: PROVIDENCE ENG

Project: PROVIDENCE - CAMS

Date / Time Received: 2/12/2021 9:41:00 AM

Delivery Method: Fed Ex

Airbill #'s: 7728 5091 5892

Cooler Temps (Raw Measured) °C:

Cooler Temps (Corrected) °C:

Cooler Security

- | | | | | | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler Temperature

- | | | |
|------------------------------|--------------------------|--------------------------|
| 1. Temp criteria achieved: | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | N/A | |
| 3. Cooler media: | N/A | |
| 4. No. Coolers: | N/A | |

Quality Control Preservation

- | | | | |
|---------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Trip Blank listed on COC: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Sample Integrity - Documentation

- | | | |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Condition

- | | | |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample: | Intact | |

Sample Integrity - Instructions

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume recvd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Test Strip Lot #s: pH 1-12: 212820 pH 12+: 203117A Other: (Specify) _____

Comments

SM089-03
Rev. Date 12/7/17

JD20277: Chain of Custody

Page 2 of 2

Summa Canister and Flow Controller Log

Job Number: JD20277
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA
Received: 02/12/21

32
3

SUMMA CANISTERS													
Shipping							Receiving						
Summa ID	Vac L	Date " Hg	Date Out	By	SCC Batch	SCC FileID	Sample Number	Date In	By	Vac " Hg	Pres psig	Final psig	Dil Fact

A1098	6	29.4	01/29/21	JN	CP110175W42713.D		JD20277-1	02/12/21	WC	4.5			1
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SGS Bottle Order(s):
 SW-012821-182

Prep Date	Room Temp(F)	Bar Pres "Hg
01/29/21	70	29.92

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: JD20277
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W896-MB	6W21302.D	1	02/17/21	DFT	n/a	n/a	V6W896

The QC reported here applies to the following samples:

Method: TO-15

JD20277-1

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	0.11	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.046	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.012	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.027	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.037	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.022	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.022	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.057	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.024	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.026	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.048	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.020	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.015	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.040	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	0.025	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.024	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.022	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.012	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.017	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	0.018	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.021	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.019	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.052	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.017	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.033	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.0073	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.012	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.020	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.019	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.018	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.020	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	0.22	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.015	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.038	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.030	ppbv		ND	0.98	ug/m3

4.1.1
4

Method Blank Summary

Job Number: JD20277
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W896-MB	6W21302.D	1	02/17/21	DFT	n/a	n/a	V6W896

The QC reported here applies to the following samples:

Method: TO-15

JD20277-1

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	0.017	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.019	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.018	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.046	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.011	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.036	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.065	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.015	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.042	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.036	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.019	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.033	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	0.016	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.019	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.033	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.027	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.030	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.089	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.033	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.034	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.022	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.014	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.031	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.050	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.014	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.028	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.022	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.034	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.034	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.017	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.017	ppbv		ND	0.87	ug/m3

4.1.1
4

Method Blank Summary

Job Number: JD20277
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W896-MB	6W21302.D	1	02/17/21	DFT	n/a	n/a	V6W896

The QC reported here applies to the following samples:

Method: TO-15

JD20277-1

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	95% 65-128%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	3.61	9.7	ppbv	JN
	Total TIC, Volatile		0	ppbv	

4.1.1
4

Method Blank Summary

Job Number: JD20277
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1745-MB	5W42712.D	1	01/27/21	TCH	n/a	n/a	V5W1745

The QC reported here applies to the following samples:

Method: TO-15

V5W1745-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	0.11	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.046	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.012	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.027	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.037	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.022	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.022	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.057	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.024	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.026	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.048	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.020	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.015	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.040	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	0.025	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.024	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.022	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.012	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.017	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	0.018	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.021	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.019	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.052	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.017	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.033	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.0073	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.012	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.020	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.019	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.018	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.020	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	0.22	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.015	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.038	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.030	ppbv		ND	0.98	ug/m3

Method Blank Summary

Job Number: JD20277
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1745-MB	5W42712.D	1	01/27/21	TCH	n/a	n/a	V5W1745

The QC reported here applies to the following samples:

Method: TO-15

V5W1745-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	0.017	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.019	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.018	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.046	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.011	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.036	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.065	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.015	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.042	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.036	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.019	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.033	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	0.016	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.019	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.033	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.027	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.030	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.089	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.033	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.034	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.022	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.014	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.031	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.050	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.014	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.028	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.022	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.034	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.034	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.017	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.017	ppbv		ND	0.87	ug/m3

4.1.2
4

Method Blank Summary

Job Number: JD20277

Account: PROVLABR Providence Engineering

Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1745-MB	5W42712.D	1	01/27/21	TCH	n/a	n/a	V5W1745

The QC reported here applies to the following samples:

Method: TO-15

V5W1745-SCC

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	81% 65-128%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
124-38-9	Carbon dioxide	4.04	11	ppbv	JN
	Total TIC, Volatile		0	ppbv	

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD20277
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W896-BS	6W21299.D	1	02/17/21	DFT	n/a	n/a	V6W896
V6W896-BSD	6W21300.D	1	02/17/21	DFT	n/a	n/a	V6W896

The QC reported here applies to the following samples:

Method: TO-15

JD20277-1

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	11.2	112	10.7	107	5	70-130/30
106-99-0	1,3-Butadiene	10	11.1	111	10.7	107	4	70-130/30
71-43-2	Benzene	10	9.2	92	8.8	88	4	70-130/30
75-27-4	Bromodichloromethane	10	12.1	121	11.1	111	9	70-130/30
75-25-2	Bromoform	10	10.6	106	11.2	112	6	70-130/30
74-83-9	Bromomethane	10	10.6	106	10.1	101	5	70-130/30
593-60-2	Bromoethene	10	10.7	107	10.2	102	5	70-130/30
100-44-7	Benzyl Chloride	10	11.6	116	13.1	131* a	12	70-130/30
75-15-0	Carbon disulfide	10	9.7	97	9.2	92	5	70-130/30
108-90-7	Chlorobenzene	10	9.1	91	9.6	96	5	70-130/30
75-00-3	Chloroethane	10	11.0	110	10.5	105	5	70-130/30
67-66-3	Chloroform	10	9.8	98	9.4	94	4	70-130/30
74-87-3	Chloromethane	10	10.9	109	10.3	103	6	70-130/30
107-05-1	3-Chloropropene	10	10.0	100	9.6	96	4	70-130/30
95-49-8	2-Chlorotoluene	10	10.9	109	11.4	114	4	70-130/30
56-23-5	Carbon tetrachloride	10	10.2	102	9.8	98	4	70-130/30
110-82-7	Cyclohexane	10	9.9	99	9.5	95	4	70-130/30
75-34-3	1,1-Dichloroethane	10	9.2	92	8.9	89	3	70-130/30
75-35-4	1,1-Dichloroethylene	10	9.9	99	9.5	95	4	70-130/30
106-93-4	1,2-Dibromoethane	10	11.9	119	10.9	109	9	70-130/30
107-06-2	1,2-Dichloroethane	10	10.5	105	10.1	101	4	70-130/30
78-87-5	1,2-Dichloropropane	10	11.1	111	10.2	102	8	70-130/30
123-91-1	1,4-Dioxane	10	11.9	119	11.0	110	8	70-130/30
75-71-8	Dichlorodifluoromethane	10	10.4	104	9.8	98	6	70-130/30
124-48-1	Dibromochloromethane	10	12.4	124	11.5	115	8	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	9.8	98	9.4	94	4	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	10	100	9.6	96	4	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	12.5	125	11.5	115	8	70-130/30
541-73-1	m-Dichlorobenzene	10	10.0	100	10.7	107	7	70-130/30
95-50-1	o-Dichlorobenzene	10	10.5	105	11.3	113	7	70-130/30
106-46-7	p-Dichlorobenzene	10	9.1	91	9.8	98	7	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	12.9	129	12.0	120	7	70-130/30
64-17-5	Ethanol	10	11.7	117	10.6	106	10	70-130/30
100-41-4	Ethylbenzene	10	9.2	92	9.7	97	5	70-130/30
141-78-6	Ethyl Acetate	10	10.5	105	10	100	5	70-130/30
622-96-8	4-Ethyltoluene	10	12.0	120	12.6	126	5	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD20277
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W896-BS	6W21299.D	1	02/17/21	DFT	n/a	n/a	V6W896
V6W896-BSD	6W21300.D	1	02/17/21	DFT	n/a	n/a	V6W896

The QC reported here applies to the following samples:

Method: TO-15

JD20277-1

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	9.4	94	8.9	89	5	70-130/30
76-14-2	Freon 114	10	11.0	110	10.4	104	6	70-130/30
142-82-5	Heptane	10	12.4	124	11.5	115	8	70-130/30
87-68-3	Hexachlorobutadiene	10	10.2	102	10.8	108	6	70-130/30
110-54-3	Hexane	10	9.7	97	9.4	94	3	70-130/30
591-78-6	2-Hexanone	10	12.9	129	11.7	117	10	70-130/30
67-63-0	Isopropyl Alcohol	10	11.3	113	10.8	108	5	70-130/30
75-09-2	Methylene chloride	10	8.8	88	8.4	84	5	70-130/30
78-93-3	Methyl ethyl ketone	10	9.1	91	8.8	88	3	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	12.7	127	11.9	119	7	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	10.0	100	9.6	96	4	70-130/30
80-62-6	Methylmethacrylate	10	12.5	125	11.6	116	7	70-130/30
115-07-1	Propylene	10	9.4	94	8.8	88	7	70-130/30
100-42-5	Styrene	10	11.0	110	11.6	116	5	70-130/30
71-55-6	1,1,1-Trichloroethane	10	9.9	99	9.5	95	4	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.0	100	10.6	106	6	70-130/30
79-00-5	1,1,2-Trichloroethane	10	11.6	116	10.7	107	8	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	10.1	101	12.0	120	17	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	11.9	119	12.5	125	5	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	11.4	114	12.1	121	6	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	11.7	117	10.9	109	7	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	9.7	97	9.3	93	4	70-130/30
127-18-4	Tetrachloroethylene	10	12.2	122	11.2	112	9	70-130/30
109-99-9	Tetrahydrofuran	10	10.2	102	9.8	98	4	70-130/30
108-88-3	Toluene	10	11.7	117	10.7	107	9	70-130/30
79-01-6	Trichloroethylene	10	12.0	120	11.0	110	9	70-130/30
75-69-4	Trichlorofluoromethane	10	10.9	109	10.4	104	5	70-130/30
75-01-4	Vinyl chloride	10	11.3	113	10.6	106	6	70-130/30
108-05-4	Vinyl Acetate	10	9.9	99	9.5	95	4	70-130/30
	m,p-Xylene	20	18.3	92	19.2	96	5	70-130/30
95-47-6	o-Xylene	10	10.1	101	10.5	105	4	70-130/30
1330-20-7	Xylenes (total)	30	28.3	94	29.8	99	5	70-130/30

* = Outside of Control Limits.

4.2.1
4

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD20277

Account: PROVLABR Providence Engineering

Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W896-BS	6W21299.D	1	02/17/21	DFT	n/a	n/a	V6W896
V6W896-BSD	6W21300.D	1	02/17/21	DFT	n/a	n/a	V6W896

The QC reported here applies to the following samples:

Method: TO-15

JD20277-1

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	109%	113%	65-128%

(a) High percent recovery and no associated positive reported in the QC batch.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD20277
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1745-BS	5W42708.D	1	01/27/21	TCH	n/a	n/a	V5W1745
V5W1745-BSD	5W42709.D	1	01/27/21	TCH	n/a	n/a	V5W1745

The QC reported here applies to the following samples:

Method: TO-15

V5W1745-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	10.8	108	11.0	110	2	70-130/30
106-99-0	1,3-Butadiene	10	11.7	117	12.1	121	3	70-130/30
71-43-2	Benzene	10	9.5	95	9.7	97	2	70-130/30
75-27-4	Bromodichloromethane	10	10.0	100	10.3	103	3	70-130/30
75-25-2	Bromoform	10	7.9	79	8.1	81	2	70-130/30
74-83-9	Bromomethane	10	10.4	104	10.6	106	2	70-130/30
593-60-2	Bromoethene	10	9.9	99	10.6	106	7	70-130/30
100-44-7	Benzyl Chloride	10	8.4	84	8.8	88	5	70-130/30
75-15-0	Carbon disulfide	10	10.8	108	11.0	110	2	70-130/30
108-90-7	Chlorobenzene	10	8.6	86	8.8	88	2	70-130/30
75-00-3	Chloroethane	10	12.7	127	13.0	130	2	70-130/30
67-66-3	Chloroform	10	10.0	100	10.2	102	2	70-130/30
74-87-3	Chloromethane	10	11.6	116	11.7	117	1	70-130/30
107-05-1	3-Chloropropene	10	11.2	112	11.3	113	1	70-130/30
95-49-8	2-Chlorotoluene	10	7.8	78	8.1	81	4	70-130/30
56-23-5	Carbon tetrachloride	10	9.5	95	9.7	97	2	70-130/30
110-82-7	Cyclohexane	10	10.9	109	11.1	111	2	70-130/30
75-34-3	1,1-Dichloroethane	10	10.8	108	11.0	110	2	70-130/30
75-35-4	1,1-Dichloroethylene	10	11.3	113	11.5	115	2	70-130/30
106-93-4	1,2-Dibromoethane	10	9.4	94	9.7	97	3	70-130/30
107-06-2	1,2-Dichloroethane	10	10.5	105	10.8	108	3	70-130/30
78-87-5	1,2-Dichloropropane	10	10.9	109	11.1	111	2	70-130/30
123-91-1	1,4-Dioxane	10	9.8	98	10.2	102	4	70-130/30
75-71-8	Dichlorodifluoromethane	10	10.4	104	10.5	105	1	70-130/30
124-48-1	Dibromochloromethane	10	9.4	94	9.6	96	2	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	11.0	110	11.2	112	2	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	10.8	108	11.1	111	3	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	9.9	99	10.2	102	3	70-130/30
541-73-1	m-Dichlorobenzene	10	7.5	75	7.8	78	4	70-130/30
95-50-1	o-Dichlorobenzene	10	8.2	82	8.5	85	4	70-130/30
106-46-7	p-Dichlorobenzene	10	7.6	76	7.9	79	4	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	10.1	101	10.5	105	4	70-130/30
64-17-5	Ethanol	10	11.7	117	12.0	120	3	70-130/30
100-41-4	Ethylbenzene	10	8.5	85	8.6	86	1	70-130/30
141-78-6	Ethyl Acetate	10	12.1	121	12.4	124	2	70-130/30
622-96-8	4-Ethyltoluene	10	8.9	89	8.9	89	0	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD20277
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1745-BS	5W42708.D	1	01/27/21	TCH	n/a	n/a	V5W1745
V5W1745-BSD	5W42709.D	1	01/27/21	TCH	n/a	n/a	V5W1745

The QC reported here applies to the following samples:

Method: TO-15

V5W1745-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	10.0	100	10.2	102	2	70-130/30
76-14-2	Freon 114	10	10.5	105	10.7	107	2	70-130/30
142-82-5	Heptane	10	10.2	102	10.4	104	2	70-130/30
87-68-3	Hexachlorobutadiene	10	8.2	82	9.2	92	11	70-130/30
110-54-3	Hexane	10	10.8	108	11.1	111	3	70-130/30
591-78-6	2-Hexanone	10	11.9	119	12.4	124	4	70-130/30
67-63-0	Isopropyl Alcohol	10	11.7	117	12.1	121	3	70-130/30
75-09-2	Methylene chloride	10	9.8	98	10	100	2	70-130/30
78-93-3	Methyl ethyl ketone	10	11.2	112	11.5	115	3	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	10.5	105	10.9	109	4	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	10.4	104	10.6	106	2	70-130/30
80-62-6	Methylmethacrylate	10	10.2	102	10.6	106	4	70-130/30
115-07-1	Propylene	10	11.1	111	11.2	112	1	70-130/30
100-42-5	Styrene	10	8.3	83	8.4	84	1	70-130/30
71-55-6	1,1,1-Trichloroethane	10	9.5	95	9.7	97	2	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	9.6	96	9.9	99	3	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.7	97	9.9	99	2	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	9.0	90	9.9	99	10	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	9.4	94	9.7	97	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	9.3	93	9.6	96	3	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	10.4	104	10.6	106	2	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	10.5	105	10.8	108	3	70-130/30
127-18-4	Tetrachloroethylene	10	8.8	88	9.0	90	2	70-130/30
109-99-9	Tetrahydrofuran	10	11.3	113	11.7	117	3	70-130/30
108-88-3	Toluene	10	9.5	95	9.7	97	2	70-130/30
79-01-6	Trichloroethylene	10	9.6	96	9.8	98	2	70-130/30
75-69-4	Trichlorofluoromethane	10	9.8	98	10	100	2	70-130/30
75-01-4	Vinyl chloride	10	11.4	114	11.7	117	3	70-130/30
108-05-4	Vinyl Acetate	10	10.6	106	10.8	108	2	70-130/30
	m,p-Xylene	20	17.1	86	17.3	87	1	70-130/30
95-47-6	o-Xylene	10	8.0	80	8.1	81	1	70-130/30
1330-20-7	Xylenes (total)	30	25.1	84	25.3	84	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD20277
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1745-BS	5W42708.D	1	01/27/21	TCH	n/a	n/a	V5W1745
V5W1745-BSD	5W42709.D	1	01/27/21	TCH	n/a	n/a	V5W1745

The QC reported here applies to the following samples:

Method: TO-15

V5W1745-SCC

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	92%	92%	65-128%

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD20277
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD20415-3DUP	6W21308.D	1	02/17/21	DFT	n/a	n/a	V6W896
JD20415-3	6W21307.D	1	02/17/21	DFT	n/a	n/a	V6W896

The QC reported here applies to the following samples:

Method: TO-15

JD20277-1

CAS No.	Compound	JD20415-3		Q	RPD	Limits
		ppbv	DUP ppbv			
67-64-1	Acetone	13.6	13.6		0	25
106-99-0	1,3-Butadiene	ND	ND		nc	25
71-43-2	Benzene	ND	ND		nc	25
75-27-4	Bromodichloromethane	ND	ND		nc	25
75-25-2	Bromoform	ND	ND		nc	25
74-83-9	Bromomethane	ND	ND		nc	25
593-60-2	Bromoethene	ND	ND		nc	25
100-44-7	Benzyl Chloride	ND	ND		nc	25
75-15-0	Carbon disulfide	ND	ND		nc	25
108-90-7	Chlorobenzene	ND	ND		nc	25
75-00-3	Chloroethane	ND	ND		nc	25
67-66-3	Chloroform	ND	ND		nc	25
74-87-3	Chloromethane	7.2	7.2		0	25
107-05-1	3-Chloropropene	ND	ND		nc	25
95-49-8	2-Chlorotoluene	ND	ND		nc	25
56-23-5	Carbon tetrachloride	ND	ND		nc	25
110-82-7	Cyclohexane	ND	ND		nc	25
75-34-3	1,1-Dichloroethane	ND	ND		nc	25
75-35-4	1,1-Dichloroethylene	ND	ND		nc	25
106-93-4	1,2-Dibromoethane	ND	ND		nc	25
107-06-2	1,2-Dichloroethane	ND	ND		nc	25
78-87-5	1,2-Dichloropropane	ND	ND		nc	25
123-91-1	1,4-Dioxane	ND	ND		nc	25
75-71-8	Dichlorodifluoromethane	0.44	J 0.45	J	2	25
124-48-1	Dibromochloromethane	ND	ND		nc	25
156-60-5	trans-1,2-Dichloroethylene	ND	ND		nc	25
156-59-2	cis-1,2-Dichloroethylene	ND	ND		nc	25
10061-01-5	cis-1,3-Dichloropropene	ND	ND		nc	25
541-73-1	m-Dichlorobenzene	ND	ND		nc	25
95-50-1	o-Dichlorobenzene	ND	ND		nc	25
106-46-7	p-Dichlorobenzene	ND	ND		nc	25
10061-02-6	trans-1,3-Dichloropropene	ND	ND		nc	25
64-17-5	Ethanol	103	104		1	25
100-41-4	Ethylbenzene	ND	ND		nc	25
141-78-6	Ethyl Acetate	1.1	1.1		0	25
622-96-8	4-Ethyltoluene	ND	ND		nc	25

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD20277
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD20415-3DUP	6W21308.D	1	02/17/21	DFT	n/a	n/a	V6W896
JD20415-3	6W21307.D	1	02/17/21	DFT	n/a	n/a	V6W896

The QC reported here applies to the following samples:

Method: TO-15

JD20277-1

CAS No.	Compound	JD20415-3 ppbv	DUP Q	ppbv	Q	RPD	Limits
76-13-1	Freon 113	ND	ND		nc		25
76-14-2	Freon 114	ND	ND		nc		25
142-82-5	Heptane	ND	ND		nc		25
87-68-3	Hexachlorobutadiene	ND	ND		nc		25
110-54-3	Hexane	ND	ND		nc		25
591-78-6	2-Hexanone	ND	ND		nc		25
67-63-0	Isopropyl Alcohol	5.4	5.1		6		25
75-09-2	Methylene chloride	ND	ND		nc		25
78-93-3	Methyl ethyl ketone	ND	ND		nc		25
108-10-1	Methyl Isobutyl Ketone	ND	ND		nc		25
1634-04-4	Methyl Tert Butyl Ether	ND	ND		nc		25
80-62-6	Methylmethacrylate	ND	ND		nc		25
115-07-1	Propylene	20.8	21.0		1		25
100-42-5	Styrene	ND	ND		nc		25
71-55-6	1,1,1-Trichloroethane	ND	ND		nc		25
79-34-5	1,1,2,2-Tetrachloroethane	ND	ND		nc		25
79-00-5	1,1,2-Trichloroethane	ND	ND		nc		25
120-82-1	1,2,4-Trichlorobenzene	ND	ND		nc		25
95-63-6	1,2,4-Trimethylbenzene	ND	ND		nc		25
108-67-8	1,3,5-Trimethylbenzene	ND	ND		nc		25
540-84-1	2,2,4-Trimethylpentane	ND	ND		nc		25
75-65-0	Tertiary Butyl Alcohol	ND	ND		nc		25
127-18-4	Tetrachloroethylene	ND	ND		nc		25
109-99-9	Tetrahydrofuran	ND	ND		nc		25
108-88-3	Toluene	1.2	1.2		0		25
79-01-6	Trichloroethylene	0.16	0.19		17		25
75-69-4	Trichlorofluoromethane	ND	ND		nc		25
75-01-4	Vinyl chloride	72.6	72.7		0		25
108-05-4	Vinyl Acetate	ND	ND		nc		25
	m,p-Xylene	ND	ND		nc		25
95-47-6	o-Xylene	ND	ND		nc		25
1330-20-7	Xylenes (total)	ND	ND		nc		25

* = Outside of Control Limits.

4.3.1
4

Duplicate Summary

Job Number: JD20277

Account: PROVLABR Providence Engineering

Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD20415-3DUP	6W21308.D	1	02/17/21	DFT	n/a	n/a	V6W896
JD20415-3	6W21307.D	1	02/17/21	DFT	n/a	n/a	V6W896

The QC reported here applies to the following samples:

Method: TO-15

JD20277-1

CAS No.	Surrogate Recoveries	DUP	JD20415-3	Limits
460-00-4	4-Bromofluorobenzene	99%	93%	65-128%

* = Outside of Control Limits.

Summa Cleaning Certification

Job Number: JD20277
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1745-SCC	5W42713.D	1	01/27/21	TCH	n/a	n/a	V5W1745

The QC reported here (Summa A229) applies to the following samples: Method: TO-15

Batch CP11017 cleaned 01/07/21: JD20277-1(A1098)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	0.11	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.046	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.012	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.027	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.037	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.022	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.022	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.057	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.024	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.026	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.048	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.020	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.015	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.040	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	0.025	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.024	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.022	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.012	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.017	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	0.018	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.021	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.019	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.052	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.017	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.033	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.0073	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.012	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.020	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.019	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.022	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.018	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.020	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	0.22	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.015	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.038	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.030	ppbv		ND	0.98	ug/m3

Summa Cleaning Certification

Job Number: JD20277
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1745-SCC	5W42713.D	1	01/27/21	TCH	n/a	n/a	V5W1745

The QC reported here (Summa A229) applies to the following samples: Method: TO-15

Batch CP11017 cleaned 01/07/21: JD20277-1(A1098)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	0.017	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.019	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.018	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.046	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.011	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.036	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.065	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.015	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.042	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.036	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.019	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.033	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	0.016	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.019	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.033	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.027	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.030	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.089	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.033	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.034	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.022	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.014	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.031	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.050	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.014	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.028	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.022	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.034	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.034	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.017	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.017	ppbv		ND	0.87	ug/m3

4.4.1
4

Summa Cleaning Certification

Job Number: JD20277
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5W1745-SCC	5W42713.D	1	01/27/21	TCH	n/a	n/a	V5W1745

The QC reported here (Summa A229) applies to the following samples: Method: TO-15

Batch CP11017 cleaned 01/07/21: JD20277-1(A1098)

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	82% 65-128%

4.4.1
4

Instrument Performance Check (BFB)

Job Number: JD20277
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample: V5W1741-BFB	Injection Date: 01/21/21
Lab File ID: 5W42616.D	Injection Time: 17:13
Instrument ID: GCMS5W	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	55467	18.4	Pass
75	30.0 - 66.0% of mass 95	146219	48.6	Pass
95	Base peak, 100% relative abundance	300800	100.0	Pass
96	5.0 - 9.0% of mass 95	20125	6.69	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 120.0% of mass 95	255061	84.8	Pass
175	4.0 - 9.0% of mass 174	19963	6.64 (7.83) ^a	Pass
176	93.0 - 101.0% of mass 174	248320	82.6 (97.4) ^a	Pass
177	5.0 - 9.0% of mass 176	16600	5.52 (6.68) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V5W1741-IC1741	5W42617.D	01/21/21	17:50	00:37	Initial cal 0.04
V5W1741-IC1741	5W42618.D	01/21/21	18:28	01:15	Initial cal 0.1
V5W1741-IC1741	5W42619.D	01/21/21	19:05	01:52	Initial cal 0.2
V5W1741-IC1741	5W42620.D	01/21/21	19:43	02:30	Initial cal 0.5
V5W1741-IC1741	5W42621.D	01/21/21	20:20	03:07	Initial cal 5
V5W1741-ICC1741	5W42622.D	01/21/21	20:58	03:45	Initial cal 10
V5W1741-IC1741	5W42623.D	01/21/21	21:35	04:22	Initial cal 20
V5W1741-IC1741	5W42624.D	01/21/21	22:13	05:00	Initial cal 40
V5W1741-ICV1741	5W42628.D	01/22/21	10:44	17:31	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JD20277
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample: V5W1745-BFB	Injection Date: 01/27/21
Lab File ID: 5W42705.D	Injection Time: 08:57
Instrument ID: GCMS5W	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	54256	22.2	Pass
75	30.0 - 66.0% of mass 95	125103	51.3	Pass
95	Base peak, 100% relative abundance	243968	100.0	Pass
96	5.0 - 9.0% of mass 95	16511	6.77	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 120.0% of mass 95	176171	72.2	Pass
175	4.0 - 9.0% of mass 174	14273	5.85 (8.10) ^a	Pass
176	93.0 - 101.0% of mass 174	171387	70.2 (97.3) ^a	Pass
177	5.0 - 9.0% of mass 176	11382	4.67 (6.64) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V5W1745-CC1741	5W42707.D	01/27/21	10:29	01:32	Continuing cal 10
V5W1745-BS	5W42708.D	01/27/21	11:22	02:25	Blank Spike
V5W1745-BSD	5W42709.D	01/27/21	12:07	03:10	Blank Spike Duplicate
V5W1745-MB	5W42712.D	01/27/21	15:06	06:09	Method Blank
V5W1745-SCC	5W42713.D	01/27/21	16:17	07:20	Summa Cleaning Certification
V5W1745-SCC	5W42714.D	01/27/21	17:07	08:10	Summa Cleaning Certification
V5W1745-SCC	5W42715.D	01/27/21	17:54	08:57	Summa Cleaning Certification
ZZZZZZ	5W42716.D	01/27/21	18:38	09:41	(unrelated sample)
ZZZZZZ	5W42717.D	01/27/21	19:22	10:25	(unrelated sample)
JD19632-3	5W42718.D	01/27/21	20:07	11:10	(used for QC only; not part of job JD20277)
JD19632-3DUP	5W42719.D	01/27/21	20:53	11:56	Duplicate
ZZZZZZ	5W42720.D	01/27/21	21:38	12:41	(unrelated sample)
ZZZZZZ	5W42721.D	01/27/21	22:24	13:27	(unrelated sample)
ZZZZZZ	5W42722.D	01/27/21	23:09	14:12	(unrelated sample)
ZZZZZZ	5W42723.D	01/27/21	23:54	14:57	(unrelated sample)
ZZZZZZ	5W42724.D	01/28/21	00:40	15:43	(unrelated sample)
ZZZZZZ	5W42725.D	01/28/21	01:25	16:28	(unrelated sample)
ZZZZZZ	5W42726.D	01/28/21	02:10	17:13	(unrelated sample)
ZZZZZZ	5W42727.D	01/28/21	03:02	18:05	(unrelated sample)
ZZZZZZ	5W42728.D	01/28/21	03:53	18:56	(unrelated sample)
ZZZZZZ	5W42729.D	01/28/21	04:44	19:47	(unrelated sample)
ZZZZZZ	5W42730.D	01/28/21	05:36	20:39	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD20277
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample: V6W891-BFB	Injection Date: 02/05/21
Lab File ID: 6W21187.D	Injection Time: 12:53
Instrument ID: GCMS6W	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	29456	15.4	Pass
75	30.0 - 66.0% of mass 95	84675	44.3	Pass
95	Base peak, 100% relative abundance	191296	100.0	Pass
96	5.0 - 9.0% of mass 95	12278	6.42	Pass
173	Less than 2.0% of mass 174	2107	1.10 (1.00) ^a	Pass
174	50.0 - 120.0% of mass 95	211051	110.3	Pass
175	4.0 - 9.0% of mass 174	15760	8.24 (7.47) ^a	Pass
176	93.0 - 101.0% of mass 174	206656	108.0 (97.9) ^a	Pass
177	5.0 - 9.0% of mass 176	13422	7.02 (6.49) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V6W891-IC891	6W21189.D	02/05/21	14:25	01:32	Initial cal 0.5
V6W891-IC891	6W21191.D	02/05/21	15:58	03:05	Initial cal 0.2
V6W891-IC891	6W21192.D	02/05/21	17:18	04:25	Initial cal 0.04
V6W891-IC891	6W21193.D	02/05/21	18:05	05:12	Initial cal 0.1
V6W891-IC891	6W21194.D	02/05/21	18:52	05:59	Initial cal 5
V6W891-ICC891	6W21195.D	02/05/21	19:39	06:46	Initial cal 10
V6W891-IC891	6W21196.D	02/05/21	20:28	07:35	Initial cal 20
V6W891-IC891	6W21197.D	02/05/21	21:20	08:27	Initial cal 40
V6W891-ICV891	6W21199.D	02/05/21	22:56	10:03	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JD20277
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Sample: V6W896-BFB	Injection Date: 02/17/21
Lab File ID: 6W21294.D	Injection Time: 09:44
Instrument ID: GCMS6W	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	24757	16.8	Pass
75	30.0 - 66.0% of mass 95	68736	46.8	Pass
95	Base peak, 100% relative abundance	146965	100.0	Pass
96	5.0 - 9.0% of mass 95	9705	6.60	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) ^a	Pass
174	50.0 - 120.0% of mass 95	159275	108.4	Pass
175	4.0 - 9.0% of mass 174	12165	8.28 (7.64) ^a	Pass
176	93.0 - 101.0% of mass 174	153365	104.4 (96.3) ^a	Pass
177	5.0 - 9.0% of mass 176	10198	6.94 (6.65) ^b	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V6W896-CC891	6W21296.D	02/17/21	11:54	02:10	Continuing cal 10
V6W896-BS	6W21299.D	02/17/21	14:16	04:32	Blank Spike
V6W896-BSD	6W21300.D	02/17/21	15:04	05:20	Blank Spike Duplicate
V6W896-MB	6W21302.D	02/17/21	16:44	07:00	Method Blank
V6W896-SCC	6W21303.D	02/17/21	18:40	08:56	Summa Cleaning Certification
ZZZZZZ	6W21304.D	02/17/21	19:26	09:42	(unrelated sample)
ZZZZZZ	6W21305.D	02/17/21	20:13	10:29	(unrelated sample)
ZZZZZZ	6W21306.D	02/17/21	20:59	11:15	(unrelated sample)
JD20415-3	6W21307.D	02/17/21	21:47	12:03	(used for QC only; not part of job JD20277)
JD20415-3DUP	6W21308.D	02/17/21	22:34	12:50	Duplicate
ZZZZZZ	6W21309.D	02/17/21	23:22	13:38	(unrelated sample)
ZZZZZZ	6W21310.D	02/18/21	00:10	14:26	(unrelated sample)
ZZZZZZ	6W21311.D	02/18/21	00:58	15:14	(unrelated sample)
ZZZZZZ	6W21312.D	02/18/21	01:46	16:02	(unrelated sample)
ZZZZZZ	6W21313.D	02/18/21	02:34	16:50	(unrelated sample)
ZZZZZZ	6W21314.D	02/18/21	03:22	17:38	(unrelated sample)
ZZZZZZ	6W21315.D	02/18/21	04:15	18:31	(unrelated sample)
ZZZZZZ	6W21316.D	02/18/21	05:08	19:24	(unrelated sample)
ZZZZZZ	6W21317.D	02/18/21	06:01	20:17	(unrelated sample)
ZZZZZZ	6W21318.D	02/18/21	06:54	21:10	(unrelated sample)
ZZZZZZ	6W21319.D	02/18/21	07:47	22:03	(unrelated sample)
ZZZZZZ	6W21320.D	02/18/21	08:40	22:56	(unrelated sample)
JD20277-1	6W21321.D	02/18/21	09:33	23:49	CAMS 578

Surrogate Recovery Summary

Job Number: JD20277
Account: PROVLABR Providence Engineering
Project: Valero-CAMS, Baton Rouge, LA

Method: TO-15	Matrix: AIR
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1
JD20277-1	6W21321.D	92
JD20415-3DUP	6W21308.D	99
V5W1745-SCC	5W42713.D	82
V6W896-BS	6W21299.D	109
V6W896-BSD	6W21300.D	113
V6W896-MB	6W21302.D	95
V5W1745-BS	5W42708.D	92
V5W1745-BSD	5W42709.D	92
V5W1745-MB	5W42712.D	81

Surrogate Compounds	Recovery Limits
S1 = 4-Bromofluorobenzene	65-128%

4.6.1
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