284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: TETR16

Lab Code: CHEM Case No.: P5295 SAS No.: P5295 SDG No.: P5295

Instrument ID: MSVOA_L Calibration Date(s): 12/16/2024 12/16/2024

Heated Purge: (Y/N) N Calibration Time(s): 13:30 16:41

GC Column: RTX-1 ID: 0.32 (mm)

LAB FILE ID: RRF010 = VL041752.D RRF002 = VL041753.D RRF001 = VL041754.D
RRF0.5 = VL041755.D RRF0.1 = VL041756.D RRF.03 = VL041757.D

COMPOUND	RRF010	RRF002	RRF001	RRF0.5	RRF0.1	RRF.03	$\overline{RRF}$	% RSD
Dichlorodifluoromethane	1.682	1.840	1.927	1.886			1.779	8.6
Chloromethane	0.630	0.736	0.729	0.737			0.696	7.5
Vinyl Chloride	0.625	0.689	0.695	0.682	0.673	0.909	0.701	13.6
Bromomethane	0.295	0.343	0.363	0.343			0.331	8.3
Chloroethane	0.254	0.297	0.267	0.282			0.272	6.3
Tetrahydrofuran	0.427	0.455	0.488	0.455			0.451	5.5
Trichlorofluoromethane	1.791	1.943	1.915	1.981			1.890	4.3
1,1,2-Trichlorotrifluoroethane	1.341	1.466	1.504	1.491			1.438	4.9
Dichlorotetrafluoroethane	1.461	1.616	1.659	1.712			1.593	6.5
tert-Butyl alcohol	1.833	1.975	2.024	1.999			1.930	5
Heptane	1.705	1.875	1.821	1.950			1.816	5.6
1,1-Dichloroethene	0.565	0.622	0.628	0.608			0.603	4.2
Acetone	1.461	2.047	2.284	2.474			1.946	24
Carbon Disulfide	1.346	1.202	1.237	1.024			1.238	11.3
Methyl tert-Butyl Ether	1.098	1.115	1.295	1.033			1.114	9.7
Methylene Chloride	0.477	0.562	0.587	0.653			0.555	12.9
trans-1,2-Dichloroethene	0.640	0.697	0.698	0.749			0.690	6
1,1-Dichloroethane	1.311	1.414	1.459	1.458			1.396	4.9
Cyclohexane	1.096	1.215	1.187	1.217			1.169	4.6
2-Butanone	0.736	0.860	0.820	0.869			0.805	8.1
Carbon Tetrachloride	0.756	0.758	0.716	0.634	0.657	0.671	0.710	7.9
cis-1,2-Dichloroethene	1.331	1.460	1.519	1.430			1.419	5.4
Chloroform	1.969	2.138	2.182	2.155			2.093	4.4
1,1,1-Trichloroethane	2.028	2.101	2.186	2.158	2.113	2.218	2.128	3
2,2,4-Trimethylpentane	1.674	1.842	1.809	1.826			1.767	4.6
Benzene	0.975	1.059	1.080	1.079			1.034	5.2
1,2-Dichloroethane	0.608	0.650	0.642	0.690			0.644	4.7
Trichloroethene	0.388	0.428	0.437	0.408	0.469	0.551	0.439	12.9
1,2-Dichloropropane	0.353	0.388	0.395	0.382			0.374	5.4
Bromodichloromethane	0.777	0.730	0.735	0.664			0.740	6.9

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

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VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: TETR16

Lab Code: CHEM Case No.: P5295 SAS No.: P5295 SDG No.: P5295

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RRF0.5 = VL041755.D RRF0.1 = VL041756.D RRF.03 = VL041757.D

COMPOUND	RRF010	RRF002	RRF001	RRF0.5	RRF0.1	RRF.03	$\overline{RRF}$	% RSD
4-Methyl-2-Pentanone	1.060	1.149	1.130	1.062			1.095	3.7
Toluene	1.123	1.215	1.207	1.183			1.173	3.5
t-1,3-Dichloropropene	0.423	0.407	0.393	0.382			0.408	5.3
cis-1,3-Dichloropropene	0.533	0.522	0.493	0.500			0.518	4
1,1,2-Trichloroethane	0.368	0.406	0.402	0.408			0.391	5.1
Dibromochloromethane	0.593	0.540	0.493	0.433			0.534	13.6
1,2-Dibromoethane	0.512	0.542	0.545	0.540	0.565		0.538	3.3
Tetrachloroethene	0.343	0.372	0.395	0.346	0.333	0.555	0.385	20.2
Chlorobenzene	0.951	1.088	1.078	1.053			1.023	6.8
Ethyl Benzene	1.774	1.931	1.834	1.694			1.800	4.9
m/p-Xylene	1.417	1.522	1.467	1.423			1.448	3.3
o-Xylene	1.421	1.560	1.492	1.382			1.452	5
Styrene	0.674	0.636	0.598	0.544			0.628	9.3
Bromoform	0.498	0.443	0.395	0.328			0.437	17.8
1,1,2,2-Tetrachloroethane	0.841	0.907	0.909	0.953	0.936	0.979	0.909	6
2-Chlorotoluene	1.616	1.760	1.699	1.640			1.665	3.8
1,3,5-Trimethylbenzene	1.465	1.483	1.378	1.324			1.422	4.8
1,2,4-Trimethylbenzene	1.566	1.619	1.519	1.396			1.529	5.4
1,3-Dichlorobenzene	0.929	0.994	1.015	1.023			0.975	5.2
1,4-Dichlorobenzene	0.931	0.992	0.972	0.996			0.963	3.5
1,2-Dichlorobenzene	0.865	0.983	0.978	1.009			0.938	7.7
1,2,4-Trichlorobenzene	0.621	0.592	0.553	0.536			0.582	6.3
Hexachloro-1,3-Butadiene	0.586	0.773	0.756	0.786			0.695	15.1
1,3-Butadiene	0.685	0.777	0.779	0.891			0.766	10.7
Naphthalene	1.258	1.154	1.046	0.928	0.754		1.065	18.6
4-Ethyltoluene	1.731	1.794	1.659	1.681			1.713	3.1
1-Bromo-4-Fluorobenzene	0.848	0.844	0.819	0.834	0.829	0.827	0.833	1.2
Hexane	1.303	1.423	1.403	1.423			1.374	4.3
Allyl Chloride	1.012	1.092	1.126	1.008			1.055	4.9
1,4-Dioxane	166.814	186.511	181.136	212.045			182.757	10.1

* Compounds with required minimum RRF and maximum %RSD values.
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RRF of 1,4-Dioxane = Value should be divide by 1000.

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RRF0.5 = VL041755.D RRF0.1 = VL041756.D RRF.03 = VL041757.D

COMPOUND	RRF010	RRF002	RRF001	RRF0.5	RRF0.1	RRF.03	$\overline{RRF}$	% RSD
Methyl Methacrylate	0.395	0.406	0.394	0.372			0.394	3.4

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

Response Factor Report MSVOA_L

Method Path : Z:\voasrv\HPCHEM1\MSVOA_L\methods\
Method File : VL121624AIR.M
Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
Last Update : Thu Dec 19 07:32:09 2024
Response Via : Initial Calibration

Calibration Files
0.03=VL041757.D 0.1 =VL041756.D 0.5 =VL041755.D 1 =VL041754.D 2 =VL041753.D 10 =VL041752.D 15 =VL041758.D

		Compound	0.03	0.1	0.5	1	2	10	15	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------								
2)	T	Dichlorodifluo...			1.886	1.927	1.840	1.682	1.562	1.779	8.61
3)		Chlorodifluoro...			1.679	1.697	1.653	1.566	1.559	1.631	3.94
4)		Chloromethane			0.737	0.729	0.736	0.630	0.650	0.696	7.48
5)	T	Vinyl Chloride	0.909	0.673	0.682	0.695	0.689	0.625	0.637	0.701	13.60
6)	T	Bromomethane			0.343	0.363	0.343	0.295	0.310	0.331	8.32
7)		Chloroethane			0.282	0.267	0.297	0.254	0.262	0.272	6.26
8)	T	Dichlorotetraf...			1.712	1.659	1.616	1.461	1.516	1.593	6.49
9)	T	Propene			0.788	0.734	0.750	0.633	0.629	0.707	10.16
10)	T	Heptane			1.950	1.821	1.875	1.705	1.726	1.816	5.64
11)	T	Trichlorofluor...			1.981	1.915	1.943	1.791	1.820	1.890	4.31
12)	T	1,1,2-Trichlor...			1.491	1.504	1.466	1.341	1.386	1.437	4.92
13)		Ethanol			0.081	0.080	0.059	0.036	0.037	0.059	37.17
14)	T	Bromoethene			0.509	0.477	0.484	0.474	0.482	0.485	2.84
15)	T	Acetone			2.474	2.284	2.047	1.461	1.462	1.946	24.00
16)	T	1,3-Butadiene			0.891	0.779	0.777	0.685	0.699	0.766	10.74
17)		tert-Butyl alc...			1.999	2.024	1.975	1.833	1.819	1.930	5.00
18)	T	1,1-Dichloroet...			0.608	0.628	0.622	0.565	0.591	0.603	4.20
19)	T	Isopropyl Alcohol			1.709	1.320	1.107	0.860	0.841	1.167	30.91
20)	T	Methylene Chlo...			0.653	0.587	0.562	0.477	0.495	0.555	12.88
21)	T	Allyl Chloride			1.008	1.126	1.092	1.012	1.038	1.055	4.93
22)	T	trans-1,2-Dich...			0.749	0.698	0.697	0.640	0.665	0.690	5.96
23)	T	Vinyl Acetate			0.781	0.811	1.309	0.790	0.826	0.903	25.15
24)	T	1,1-Dichloroet...			1.458	1.459	1.414	1.311	1.340	1.396	4.89
25)	T	Ethyl Acetate			3.618	3.813	3.745	3.430	3.492	3.620	4.48
26)	T	Hexane			1.423	1.403	1.423	1.303	1.316	1.374	4.32
27)	T	Carbon Disulfide			1.024	1.237	1.202	1.346	1.380	1.238	11.34
28)	T	Methyl tert-Bu...			1.033	1.295	1.115	1.098	1.030	1.114	9.69
29)	T	Chloroform			2.155	2.182	2.138	1.969	2.022	2.093	4.41
30)	T	Cyclohexane			1.217	1.187	1.215	1.096	1.130	1.169	4.62
31)	T	cis-1,2-Dichlo...			1.430	1.519	1.460	1.331	1.358	1.419	5.37
32)	T	1,1,1-Trichlor...	2.218	2.113	2.158	2.186	2.101	2.028	2.091	2.128	3.03
33)	I	1,4-Difluorobenzene	----------ISTD----------								
34)	T	2-Butanone			0.869	0.820	0.860	0.736	0.737	0.805	8.05
35)	T	Carbon Tetrach...	0.671	0.657	0.634	0.716	0.758	0.756	0.777	0.710	7.94
36)	T	Benzene			1.079	1.080	1.059	0.975	0.979	1.034	5.16
37)	T	1,2-Dichloroet...			0.690	0.642	0.650	0.608	0.628	0.644	4.71
38)	T	Trichloroethene	0.551	0.469	0.408	0.437	0.428	0.388	0.393	0.439	12.92
39)	T	1,2-Dichloropr...			0.382	0.395	0.388	0.353	0.353	0.374	5.36

Method Path : Z:\voasrv\HPCHEM1\MSVOA_L\methods\
Method File : VL121624AIR.M

40)	T	1,4-Dioxane			0.212	0.181	0.187	0.167	0.167	0.183	10.12
41)	T	Tetrahydrofuran			0.455	0.488	0.455	0.427	0.428	0.451	5.52
42)	T	Bromodichlorom...			0.664	0.735	0.730	0.777	0.796	0.740	6.88
43)		Methyl Methacr...			0.372	0.394	0.406	0.395	0.404	0.394	3.38
44)	T	2,2,4-Trimethy...			1.826	1.809	1.842	1.674	1.681	1.767	4.64
45)	T	t-1,3-Dichloro...			0.382	0.393	0.407	0.423	0.434	0.408	5.25
46)	T	cis-1,3-Dichlo...			0.500	0.493	0.522	0.533	0.540	0.518	3.96
47)	T	1,1,2-Trichlor...			0.408	0.402	0.406	0.368	0.371	0.391	5.06
48)	T	Dibromochlorom...			0.433	0.493	0.540	0.593	0.609	0.534	13.58
49)	T	Bromoform			0.328	0.395	0.443	0.498	0.519	0.437	17.80
50)	T	4-Methyl-2-Pen...			1.062	1.130	1.149	1.060	1.076	1.095	3.75
51)	T	2-Hexanone			0.831	0.923	0.953	0.857	0.876	0.888	5.59
52)	T	Tetrachloroethene	0.555	0.333	0.346	0.395	0.372	0.343	0.351	0.385	20.18
53)	T	Toluene			1.183	1.207	1.215	1.123	1.136	1.173	3.54
54)	T	1,2-Dibromoethane		0.565	0.540	0.545	0.542	0.512	0.527	0.538	3.32
55)	I	Chlorobenzene-d5	----------ISTD----------								
56)		1,1,1,2-Tetrac...			0.487	0.533	0.568	0.532	0.532	0.530	5.43
57)	T	Chlorobenzene			1.053	1.078	1.088	0.951	0.946	1.023	6.78
58)	T	Ethyl Benzene			1.694	1.834	1.931	1.774	1.769	1.800	4.90
59)	T	m/p-Xylene			1.423	1.467	1.522	1.417	1.410	1.448	3.26
60)	T	o-Xylene			1.382	1.492	1.560	1.421	1.404	1.452	5.04
61)	T	Styrene			0.544	0.598	0.636	0.674	0.687	0.628	9.27
62)		Isopropylbenzene			2.138	2.234	2.293	2.135	2.105	2.181	3.64
63)	T	1,1,2,2-Tetrac...	0.979	0.936	0.953	0.909	0.907	0.841	0.835	0.909	5.96
64)		n-propylbenzene			0.520	0.581	0.584	0.535	0.537	0.551	5.28
65)		tert-Butylbenzene			1.964	2.027	2.100	1.892	1.856	1.968	5.04
66)	T	Benzyl Chloride			0.169	0.155	0.165	0.190	0.188	0.173	8.70
67)		sec-Butylbenzene			2.682	2.774	2.926	2.638	2.595	2.723	4.84
68)	S	1-Bromo-4-Fluo...	0.827	0.829	0.834	0.819	0.844	0.848	0.833	0.833	1.18
69)		p-Isopropyltol...			2.149	2.237	2.416	2.223	2.195	2.244	4.54
70)		n-Butylbenzene			1.977	2.184	2.300	2.198	2.183	2.168	5.43
71)		2-Chlorotoluene			1.640	1.698	1.760	1.616	1.609	1.665	3.84
72)	T	4-Ethyltoluene			1.681	1.659	1.794	1.731	1.703	1.713	3.06
73)	T	1,3,5-Trimethy...			1.324	1.378	1.483	1.465	1.458	1.422	4.78
74)	T	1,2,4-Trimethy...			1.396	1.519	1.619	1.566	1.543	1.529	5.41
75)	T	1,3-Dichlorobe...			1.023	1.015	0.994	0.929	0.912	0.975	5.22
76)	T	1,4-Dichlorobe...			0.996	0.972	0.992	0.931	0.924	0.963	3.50
77)	T	1,2-Dichlorobe...			1.009	0.978	0.983	0.865	0.855	0.938	7.68
78)	T	Hexachloro-1,3...			0.786	0.756	0.773	0.586	0.575	0.695	15.13
79)	T	Naphthalene		0.754	0.928	1.046	1.154	1.258	1.251	1.065	18.57
80)	T	Naphthalene,2-...			0.094	0.093	0.137	0.651	0.673	0.329	92.27
81)	T	1,2,4-Trichlor...			0.536	0.553	0.592	0.621	0.608	0.582	6.25

(#) = Out of Range