

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: NOBI03
Lab Code: CHEM Case No.: P5306 SAS No.: P5306 SDG No.: P5306
Instrument ID: MSVOA_Y Calibration Date(s): 12/17/2024 12/17/2024
Heated Purge: (Y/N) Y Calibration Time(s): 10:01 14:51
GC Column: RXI-624 ID: 0.25 (mm)

LAB FILE ID:								
RRF010 = VY020613.D			RRF020 = VY020614.D			RRF050 = VY020615.D		
RRF100 = VY020616.D			RRF150 = VY020617.D			RRF005 = VY020619.D		
COMPOUND	RRF010	RRF020	RRF050	RRF100	RRF150	RRF005	RRF	% RSD
Dichlorodifluoromethane	0.678	0.633	0.617	0.601	0.552	0.665	0.625	7.3
Chloromethane	0.490	0.506	0.428	0.426	0.372	0.555	0.463	14.3
Vinyl Chloride	0.443	0.469	0.371	0.440	0.374	0.487	0.431	11.3
Bromomethane	0.291	0.279	0.229	0.282	0.254	0.327	0.277	12.1
Chloroethane	0.273	0.287	0.212	0.272	0.251	0.302	0.266	11.8
Tetrahydrofuran	0.154	0.126	0.133	0.132	0.110	0.116	0.128	11.8
Trichlorofluoromethane	0.981	0.954	0.791	0.878	0.810	0.993	0.901	9.7
1,1,2-Trichlorotrifluoroethane	0.715	0.659	0.603	0.649	0.537	0.712	0.646	10.5
1,1-Dichloroethene	0.701	0.637	0.589	0.638	0.528	0.667	0.627	9.7
Acrylonitrile	0.179	0.144	0.155	0.153	0.132	0.144	0.151	10.4
Acetone	0.141	0.107	0.098	0.110		0.168	0.125	23.2
Carbon Disulfide	2.315	2.083	1.939	2.092	1.669	2.142	2.040	10.7
Methyl tert-butyl Ether	1.799	1.584	1.663	1.652	1.466	1.542	1.618	7.1
Methylene Chloride	0.758	0.683	0.617	0.665	0.596	0.766	0.681	10.3
trans-1,2-Dichloroethene	0.771	0.703	0.710	0.692	0.636	0.707	0.703	6.2
1,1-Dichloroethane	1.401	1.307	1.323	1.300	1.173	1.333	1.306	5.7
2-Butanone	0.245	0.191	0.197	0.195	0.166	0.228	0.204	13.9
Carbon Tetrachloride	0.768	0.715	0.701	0.697	0.656	0.730	0.711	5.2
2,2-Dichloropropane	1.366	1.219	1.184	1.146	1.041	1.451	1.235	12.1
cis-1,2-Dichloroethene	0.875	0.815	0.817	0.797	0.724	0.827	0.809	6.1
Chloroform	1.768	1.465	1.378	1.302	1.186	2.069	1.528	21.6
1,1,1-Trichloroethane	1.298	1.215	1.198	1.183	1.086	1.219	1.200	5.7
1,1-Dichloropropene	0.691	0.637	0.637	0.622	0.581	0.688	0.643	6.5
Benzene	2.055	1.900	1.859	1.847	1.713	1.927	1.883	5.9
1,2-Dichloroethane	0.546	0.499	0.500	0.498	0.452	0.502	0.500	6
Trichloroethene	0.501	0.462	0.458	0.453	0.422	0.481	0.463	5.8
1,2-Dichloropropane	0.473	0.450	0.434	0.440	0.401	0.442	0.440	5.3
Dibromomethane	0.262	0.230	0.231	0.233	0.209	0.232	0.233	7.2
Bromodichloromethane	0.672	0.632	0.632	0.627	0.581	0.626	0.628	4.6
4-Methyl-2-Pentanone	0.364	0.290	0.299	0.301	0.261	0.297	0.302	11.1

* 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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Heated Purge: (Y/N) Y Calibration Time(s): 10:01 14:51
GC Column: RXI-624 ID: 0.25 (mm)

LAB FILE ID:		RRF010 = VY020613.D		RRF020 = VY020614.D		RRF050 = VY020615.D			
		RRF100 = VY020616.D		RRF150 = VY020617.D		RRF005 = VY020619.D			
COMPOUND	RRF010	RRF020	RRF050	RRF100	RRF150	RRF005	RRF	% RSD	
Toluene	1.247	1.185	1.167	1.165	1.082	1.176	1.170	4.5	
t-1,3-Dichloropropene	0.638	0.572	0.602	0.611	0.556	0.534	0.586	6.5	
cis-1,3-Dichloropropene	0.742	0.694	0.706	0.714	0.646	0.661	0.694	5.1	
1,1,2-Trichloroethane	0.344	0.306	0.303	0.309	0.276	0.308	0.308	7.1	
1,3-Dichloropropane	0.609	0.544	0.555	0.554	0.495	0.534	0.548	6.7	
2-Hexanone	0.225	0.183	0.199	0.202	0.175	0.180	0.194	9.5	
Dibromochloromethane	0.447	0.402	0.420	0.421	0.381	0.396	0.411	5.7	
1,2-Dibromoethane	0.319	0.281	0.288	0.290	0.261	0.277	0.286	6.7	
Tetrachloroethene	0.505	0.464	0.452	0.446	0.422	0.533	0.470	8.7	
Chlorobenzene	1.501	1.397	1.374	1.381	1.293	1.441	1.398	5	
1,1,1,2-Tetrachloroethane	0.529	0.468	0.474	0.476	0.443	0.479	0.478	5.9	
Ethyl Benzene	2.747	2.583	2.556	2.543	2.414	2.633	2.579	4.2	
m/p-Xylenes	1.031	0.951	0.953	0.942	0.892	0.984	0.959	4.8	
o-Xylene	0.956	0.892	0.898	0.887	0.842	0.894	0.895	4.1	
Styrene	1.586	1.496	1.502	1.501	1.406	1.478	1.495	3.8	
Bromoform	0.302	0.256	0.270	0.272	0.250	0.262	0.269	6.9	
Isopropylbenzene	4.636	4.451	4.356	4.284	4.051	4.401	4.363	4.4	
1,1,2,2-Tetrachloroethane	0.804	0.702	0.710	0.710	0.635	0.689	0.708	7.7	
1,2,3-Trichloropropane	0.581	0.520	0.522	0.511	0.450	0.532	0.519	8.1	
Bromobenzene	1.007	0.953	0.947	0.944	0.877	0.974	0.950	4.5	
n-propylbenzene	5.566	5.397	5.283	5.151	4.837	5.307	5.257	4.7	
2-Chlorotoluene	3.114	3.012	2.940	2.932	2.727	3.020	2.958	4.4	
1,3,5-Trimethylbenzene	3.701	3.622	3.560	3.473	3.270	3.616	3.540	4.3	
4-Chlorotoluene	3.185	3.123	3.059	2.993	2.786	3.264	3.068	5.5	
tert-Butylbenzene	3.378	3.288	3.215	3.178	2.992	3.188	3.206	4	
1,2,4-Trimethylbenzene	3.660	3.534	3.536	3.429	3.224	3.454	3.473	4.2	
sec-Butylbenzene	4.894	4.777	4.690	4.543	4.263	4.806	4.662	4.9	
p-Isopropyltoluene	3.975	3.951	3.916	3.809	3.574	3.838	3.844	3.8	
1,3-Dichlorobenzene	1.982	1.912	1.864	1.832	1.702	1.966	1.876	5.5	
1,4-Dichlorobenzene	1.980	1.852	1.832	1.797	1.680	2.008	1.858	6.5	

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 GC Column: RXI-624 ID: 0.25 (mm)

LAB FILE ID:		RRF010 = VY020613.D		RRF020 = VY020614.D		RRF050 = VY020615.D			
		RRF100 = VY020616.D		RRF150 = VY020617.D		RRF005 = VY020619.D			
COMPOUND	RRF010	RRF020	RRF050	RRF100	RRF150	RRF005	RRF	% RSD	
n-Butylbenzene	3.755	3.736	3.749	3.599	3.393	3.625	3.643	3.8	
1,2-Dichlorobenzene	1.735	1.614	1.606	1.602	1.501	1.694	1.626	5	
1,2-Dibromo-3-Chloropropane	0.133	0.107	0.113	0.114	0.107	0.116	0.115	8.4	
1,2,4-Trichlorobenzene	0.975	0.927	1.014	1.030	0.990	0.964	0.983	3.8	
Hexachlorobutadiene	0.650	0.636	0.657	0.634	0.613	0.667	0.643	3	
1,2,3-Trichlorobenzene	0.798	0.791	0.864	0.874	0.846	0.813	0.831	4.2	
1,2-Dichloroethane-d4	0.619	0.487	0.569	0.507	0.467	0.636	0.548	13	
Dibromofluoromethane	0.385	0.328	0.360	0.325	0.313	0.404	0.352	10.4	
Toluene-d8	1.314	1.127	1.271	1.143	1.100	1.445	1.233	10.9	
4-Bromofluorobenzene	0.538	0.448	0.480	0.433	0.412	0.585	0.482	13.9	
trans-1,4-Dichloro-2-butene	0.270	0.247	0.256	0.262	0.237	0.212	0.247	8.4	

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Lab Name:	<u>CHEMTECH</u>	Contract:	<u>NOBI03</u>
Lab Code:	<u>CHEM</u>	Case No.:	<u>P5306</u>
Instrument ID:	<u>MSVOA_Y</u>	SAS No.:	<u>P5306</u>
Heated Purge: (Y/N)	<u>Y</u>	SDG No.:	<u>P5306</u>
GC Column:	<u>RXI-624</u>	Calibration Date(s):	<u>12/23/2024</u>
ID:	<u>0.25 (mm)</u>	Calibration Time(s):	<u>11:30</u>
			<u>13:24</u>

LAB FILE ID:		RRF005 = VY020684.D		RRF010 = VY020685.D		RRF020 = VY020686.D		
		RRF050 = VY020687.D		RRF100 = VY020688.D		RRF150 = VY020689.D		
COMPOUND	RRF005	RRF010	RRF020	RRF050	RRF100	RRF150	RRF	% RSD
Dichlorodifluoromethane	0.338	0.391	0.389	0.424	0.391	0.378	0.385	7.2
Chloromethane	0.125	0.165	0.151	0.176	0.161	0.163	0.157	11.1
Vinyl Chloride	0.163	0.196	0.184	0.212	0.193	0.200	0.191	8.6
Bromomethane	0.111	0.133	0.123	0.150	0.144	0.151	0.135	11.9
Chloroethane	0.097	0.115	0.113	0.128	0.120	0.125	0.116	9.3
Tetrahydrofuran	0.035	0.039	0.040	0.053	0.039	0.044	0.042	15.4
Trichlorofluoromethane	0.597	0.687	0.671	0.765	0.698	0.711	0.688	8
1,1,2-Trichlorotrifluoroethane	0.316	0.386	0.379	0.413	0.379	0.381	0.376	8.5
1,1-Dichloroethene	0.279	0.341	0.315	0.371	0.349	0.346	0.333	9.6
Acrylonitrile	0.051	0.056	0.058	0.076	0.059	0.064	0.061	13.8
Acetone	0.059	0.049	0.047	0.058	0.043	0.048	0.051	12.4
Carbon Disulfide	0.654	0.768	0.769	0.978	0.907	0.913	0.831	14.6
Methyl tert-butyl Ether	0.769	0.869	0.904	1.042	0.908	0.949	0.907	9.9
Methylene Chloride	0.324	0.346	0.317	0.370	0.333	0.332	0.337	5.5
trans-1,2-Dichloroethene	0.310	0.350	0.350	0.404	0.370	0.374	0.360	8.7
1,1-Dichloroethane	0.500	0.583	0.597	0.668	0.616	0.611	0.596	9.3
2-Butanone	0.069	0.070	0.067	0.085	0.064	0.071	0.071	10.2
Carbon Tetrachloride	0.472	0.585	0.562	0.654	0.595	0.597	0.577	10.4
2,2-Dichloropropane	0.720	0.768	0.725	0.798	0.735	0.726	0.746	4.2
cis-1,2-Dichloroethene	0.389	0.415	0.418	0.472	0.433	0.442	0.428	6.6
Chloroform	0.787	0.799	0.753	0.841	0.760	0.760	0.783	4.2
1,1,1-Trichloroethane	0.706	0.835	0.809	0.903	0.829	0.828	0.818	7.8
1,1-Dichloropropene	0.302	0.358	0.352	0.402	0.364	0.364	0.357	8.9
Benzene	0.870	1.019	1.009	1.163	1.057	1.058	1.030	9.3
1,2-Dichloroethane	0.271	0.324	0.324	0.384	0.327	0.334	0.327	11
Trichloroethene	0.261	0.306	0.307	0.339	0.310	0.310	0.306	8.3
1,2-Dichloropropane	0.166	0.197	0.205	0.231	0.206	0.209	0.202	10.5
Dibromomethane	0.118	0.131	0.138	0.163	0.144	0.144	0.140	10.6
Bromodichloromethane	0.326	0.384	0.392	0.461	0.404	0.409	0.396	11
4-Methyl-2-Pentanone	0.110	0.111	0.116	0.148	0.114	0.127	0.121	12

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COMPOUND	RRF005	RRF010	RRF020	RRF050	RRF100	RRF150	RRF	% RSD	
Toluene	0.582	0.687	0.693	0.792	0.723	0.729	0.701	9.8	
t-1,3-Dichloropropene	0.277	0.323	0.349	0.411	0.366	0.376	0.351	13.3	
cis-1,3-Dichloropropene	0.304	0.369	0.386	0.452	0.402	0.405	0.386	12.7	
1,1,2-Trichloroethane	0.154	0.175	0.176	0.214	0.180	0.186	0.181	10.8	
1,3-Dichloropropane	0.242	0.286	0.291	0.353	0.296	0.305	0.296	12.1	
2-Hexanone	0.057	0.067	0.073	0.100	0.078	0.087	0.077	19.4	
Dibromochloromethane	0.244	0.271	0.287	0.335	0.292	0.303	0.289	10.6	
1,2-Dibromoethane	0.132	0.172	0.168	0.203	0.166	0.176	0.170	13.5	
Tetrachloroethene	0.274	0.339	0.331	0.362	0.341	0.346	0.332	9.1	
Chlorobenzene	0.811	0.932	0.924	1.022	0.956	0.961	0.934	7.5	
1,1,1,2-Tetrachloroethane	0.321	0.368	0.360	0.398	0.369	0.373	0.365	6.9	
Ethyl Benzene	1.397	1.698	1.668	1.841	1.722	1.731	1.676	8.9	
m/p-Xylenes	0.531	0.645	0.644	0.703	0.656	0.656	0.639	8.9	
o-Xylene	0.493	0.610	0.599	0.670	0.621	0.611	0.600	9.7	
Styrene	0.823	1.026	1.020	1.119	1.039	1.033	1.010	9.8	
Bromoform	0.180	0.195	0.208	0.247	0.206	0.219	0.209	11	
Isopropylbenzene	2.983	3.415	3.372	3.667	3.515	3.453	3.401	6.7	
1,1,2,2-Tetrachloroethane	0.386	0.444	0.430	0.498	0.424	0.445	0.438	8.3	
1,2,3-Trichloropropane	0.305	0.372	0.341	0.349	0.346	0.357	0.345	6.5	
Bromobenzene	0.667	0.779	0.752	0.853	0.794	0.802	0.774	8	
n-propylbenzene	3.382	3.920	3.786	4.131	3.928	3.859	3.834	6.5	
2-Chlorotoluene	1.923	2.228	2.169	2.368	2.221	2.188	2.183	6.7	
1,3,5-Trimethylbenzene	2.458	2.840	2.814	3.058	2.911	2.845	2.821	7	
4-Chlorotoluene	1.938	2.214	2.232	2.421	2.262	2.290	2.226	7.1	
tert-Butylbenzene	2.340	2.609	2.608	2.842	2.703	2.647	2.625	6.3	
1,2,4-Trimethylbenzene	2.330	2.749	2.772	3.039	2.858	2.786	2.756	8.5	
sec-Butylbenzene	3.092	3.493	3.553	3.813	3.671	3.584	3.534	6.9	
p-Isopropyltoluene	2.598	3.016	3.111	3.376	3.260	3.178	3.090	8.8	
1,3-Dichlorobenzene	1.340	1.499	1.475	1.675	1.528	1.510	1.504	7.1	
1,4-Dichlorobenzene	1.290	1.485	1.473	1.605	1.502	1.489	1.474	6.9	

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COMPOUND	RRF005	RRF010	RRF020	RRF050	RRF100	RRF150	RRF	% RSD
n-Butylbenzene	2.232	2.504	2.602	2.825	2.750	2.705	2.603	8.2
1,2-Dichlorobenzene	1.121	1.291	1.286	1.431	1.311	1.308	1.291	7.7
1,2-Dibromo-3-Chloropropane	0.075	0.080	0.079	0.096	0.080	0.090	0.083	9.3
1,2,4-Trichlorobenzene	0.563	0.667	0.713	0.882	0.866	0.908	0.767	18.2
Hexachlorobutadiene	0.466	0.530	0.561	0.628	0.622	0.618	0.571	11.3
1,2,3-Trichlorobenzene	0.465	0.545	0.607	0.747	0.721	0.760	0.641	18.8
1,2-Dichloroethane-d4		0.407	0.359	0.511	0.469	0.468	0.443	13.5
Dibromofluoromethane		0.286	0.250	0.330	0.303	0.299	0.294	10
Toluene-d8		0.891	0.815	1.244	1.209	1.174	1.066	18.6
4-Bromofluorobenzene		0.373	0.339	0.424	0.408	0.396	0.388	8.6
trans-1,4-Dichloro-2-butene	0.128	0.153	0.155	0.195	0.154	0.167	0.159	13.8

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