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

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: CHEM02

Lab Code: CHEM Case No.: P4562 SAS No.: P4562 SDG No.: P4562

Instrument ID: MSVOA_X Calibration Date(s): 10/28/2024 10/28/2024

Heated Purge: (Y/N) N Calibration Time(s): 10:59 12:54

GC Column: DB-624UI ID: 0.18 (mm)

LAB FILE ID: RRF001 = VX043556.D RRF005 = VX043557.D RRF020 = VX043558.D
RRF050 = VX043559.D RRF100 = VX043560.D RRF150 = VX043561.D

COMPOUND	RRF001	RRF005	RRF020	RRF050	RRF100	RRF150	$\overline{RRF}$	% RSD
Dichlorodifluoromethane	0.589	0.553	0.552	0.506	0.522	0.485	0.535	7
Chloromethane	0.795	0.703	0.678	0.651	0.662	0.612	0.684	9.1
Vinyl Chloride	0.626	0.674	0.638	0.634	0.643	0.591	0.634	4.2
Ethyl Acetate	0.522	0.416	0.498	0.506	0.503	0.484	0.488	7.6
Bromomethane		0.267	0.246	0.262	0.260	0.258	0.259	2.9
Chloroethane	0.263	0.215	0.212	0.225	0.217	0.210	0.223	9
Trichlorofluoromethane	0.823	0.776	0.710	0.779	0.846	0.716	0.775	7.1
1,1,2-Trichlorotrifluoroethane	0.522	0.546	0.522	0.525	0.539	0.491	0.524	3.7
Tert butyl alcohol		0.131	0.131	0.156	0.170	0.155	0.149	11.4
1,1-Dichloroethene	0.533	0.555	0.521	0.536	0.556	0.513	0.536	3.3
Acrolein		0.124	0.121	0.109	0.117	0.111	0.116	5.5
Acrylonitrile	0.302	0.335	0.331	0.348	0.360	0.340	0.336	5.8
Acetone	0.365	0.320	0.294	0.312	0.314	0.295	0.317	8.2
Carbon Disulfide	1.067	0.974	1.007	1.134	1.310	1.227	1.120	11.6
Methyl tert-butyl Ether	1.992	2.025	2.038	2.080	2.086	1.999	2.037	1.9
Methyl Acetate	0.970	0.926	0.880	0.926	0.945	0.904	0.925	3.4
Methylene Chloride	0.772	0.699	0.663	0.663	0.665	0.633	0.682	7.2
trans-1,2-Dichloroethene	0.559	0.557	0.577	0.562	0.594	0.546	0.566	3
Vinyl Acetate	1.326	1.547	1.607	1.688	1.706	1.618	1.582	8.7
1,1-Dichloroethane	1.103	1.105	1.103	1.109	1.135	1.048	1.101	2.6
Cyclohexane		0.860	0.885	0.839	0.857	0.768	0.842	5.3
2-Butanone	0.427	0.462	0.457	0.483	0.484	0.459	0.462	4.5
Carbon Tetrachloride	0.462	0.442	0.423	0.444	0.465	0.429	0.444	3.8
2,2-Dichloropropane	0.928	0.914	0.901	0.889	0.925	0.848	0.901	3.3
cis-1,2-Dichloroethene	0.708	0.719	0.716	0.740	0.747	0.707	0.723	2.3
Bromochloromethane	0.512	0.529	0.531	0.507	0.545	0.516	0.524	2.7
Chloroform	1.171	1.170	1.165	1.163	1.166	1.087	1.154	2.8
1,1,1-Trichloroethane	0.939	0.949	0.978	0.986	1.020	0.939	0.969	3.3
Methylcyclohexane	0.475	0.509	0.515	0.510	0.512	0.473	0.499	3.9
1,1-Dichloropropene	0.451	0.396	0.408	0.388	0.400	0.369	0.402	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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COMPOUND	RRF001	RRF005	RRF020	RRF050	RRF100	RRF150	$\overline{RRF}$	% RSD
Benzene	1.335	1.396	1.383	1.355	1.333	1.246	1.341	4
1,2-Dichloroethane	0.455	0.488	0.500	0.495	0.489	0.466	0.482	3.6
Trichloroethene	0.321	0.345	0.338	0.338	0.341	0.317	0.333	3.4
1,2-Dichloropropane	0.327	0.339	0.325	0.338	0.333	0.320	0.330	2.2
Dibromomethane	0.230	0.264	0.258	0.260	0.262	0.252	0.254	4.9
Bromodichloromethane	0.378	0.415	0.435	0.476	0.495	0.477	0.446	10
4-Methyl-2-Pentanone	0.416	0.497	0.507	0.525	0.518	0.491	0.492	8
Toluene	0.743	0.832	0.866	0.838	0.831	0.769	0.813	5.7
t-1,3-Dichloropropene	0.421	0.424	0.485	0.509	0.526	0.510	0.479	9.6
cis-1,3-Dichloropropene	0.393	0.495	0.535	0.543	0.560	0.536	0.510	12
1,1,2-Trichloroethane	0.318	0.341	0.345	0.355	0.345	0.327	0.339	4.1
1,3-Dichloropropane	0.495	0.577	0.589	0.590	0.576	0.551	0.563	6.4
2-Chloroethyl Vinyl ether	0.232	0.257	0.287	0.268	0.279	0.275	0.266	7.3
2-Hexanone	0.333	0.369	0.380	0.400	0.392	0.368	0.374	6.3
Dibromochloromethane	0.259	0.289	0.332	0.367	0.387	0.377	0.335	15.4
1,2-Dibromoethane	0.314	0.351	0.361	0.367	0.369	0.346	0.351	5.8
Tetrachloroethene	0.337	0.323	0.327	0.309	0.308	0.284	0.314	5.8
Chlorobenzene	1.098	1.110	1.083	1.075	1.081	1.007	1.076	3.3
1,1,1,2-Tetrachloroethane	0.301	0.345	0.350	0.372	0.381	0.359	0.351	8.1
Hexachloroethane	0.408	0.421	0.476	0.519	0.560	0.533	0.486	12.8
Ethyl Benzene	1.757	1.763	1.799	1.777	1.794	1.634	1.754	3.5
m/p-Xylenes	0.625	0.680	0.708	0.691	0.691	0.629	0.671	5.2
o-Xylene	0.616	0.698	0.698	0.689	0.698	0.645	0.674	5.2
Styrene	1.007	1.055	1.174	1.183	1.189	1.114	1.120	6.8
Bromoform	0.203	0.206	0.230	0.275	0.304	0.297	0.253	17.9
Isopropylbenzene	3.522	3.684	3.705	3.560	3.549	3.230	3.542	4.8
1,1,2,2-Tetrachloroethane	1.210	1.355	1.316	1.292	1.276	1.193	1.274	4.9
1,2,3-Trichloropropane	0.928	1.210	1.166	1.071	1.043	0.996	1.069	9.8
Bromobenzene	0.922	0.945	0.926	0.925	0.922	0.847	0.915	3.7
n-propylbenzene	3.678	3.819	4.066	3.986	3.987	3.635	3.862	4.6

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COMPOUND	RRF001	RRF005	RRF020	RRF050	RRF100	RRF150	$\overline{RRF}$	% RSD
2-Chlorotoluene	2.723	2.677	2.652	2.517	2.499	2.296	2.561	6.2
1,3,5-Trimethylbenzene	2.761	3.105	3.117	3.038	2.984	2.714	2.953	5.9
4-Chlorotoluene	2.951	2.921	2.942	2.892	2.887	2.652	2.874	3.9
tert-Butylbenzene	2.885	3.100	3.149	3.041	3.068	2.777	3.003	4.7
1,2,4-Trimethylbenzene	2.780	3.111	3.187	3.099	3.051	2.829	3.010	5.5
sec-Butylbenzene	3.295	3.559	3.718	3.642	3.604	3.304	3.520	5.1
p-Isopropyltoluene	2.741	2.984	3.123	3.121	3.138	2.847	2.992	5.6
1,3-Dichlorobenzene	1.645	1.695	1.647	1.646	1.654	1.548	1.639	3
1,4-Dichlorobenzene	1.917	1.720	1.694	1.653	1.657	1.551	1.699	7.1
n-Butylbenzene	2.117	2.230	2.516	2.614	2.687	2.467	2.438	9.1
1,2-Dichlorobenzene	1.638	1.735	1.698	1.726	1.675	1.586	1.676	3.4
1,2-Dibromo-3-Chloropropane	0.229	0.220	0.256	0.281	0.291	0.281	0.260	11.5
1,2,4-Trichlorobenzene	0.865	1.008	0.999	1.080	1.099	1.052	1.017	8.3
Hexachlorobutadiene	0.392	0.367	0.378	0.373	0.391	0.351	0.375	4.1
Naphthalene	3.249	3.743	4.006	4.126	4.229	4.007	3.893	9.1
1,2,3-Trichlorobenzene	0.976	1.057	1.077	1.101	1.146	1.080	1.073	5.3
1,2-Dichloroethane-d4		0.902	0.794	0.785	0.771	0.735	0.797	7.9
Dibromofluoromethane		0.358	0.337	0.336	0.342	0.323	0.339	3.7
Toluene-d8		1.255	1.206	1.175	1.159	1.072	1.174	5.8
4-Bromofluorobenzene		0.446	0.431	0.444	0.439	0.415	0.435	2.9

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