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

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Alliance Contract: CHEM02

Lab Code: ACE SDG No.: Q2939

Instrument ID: MSVOA_X Calibration Date(s): 08/15/2025 08/15/2025

Heated Purge: (Y/N) N Calibration Time(s): 09:40 12:30

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

LAB FILE ID: RRF005 = VX047349.D RRF020 = VX047350.D RRF050 = VX047351.D
RRF100 = VX047352.D RRF150 = VX047353.D RRF001 = VX047356.D

COMPOUND	RRF005	RRF020	RRF050	RRF100	RRF150	RRF001	$\overline{RRF}$	% RSD
Dichlorodifluoromethane	0.558	0.638	0.731	0.671	0.680	0.546	0.637	11.4
Chloromethane	0.539	0.568	0.624	0.567	0.594	0.549	0.573	5.4
Vinyl Chloride	0.651	0.751	0.800	0.729	0.757	0.630	0.720	9.2
Ethyl Acetate	0.491	0.568	0.590	0.528	0.523	0.492	0.532	7.6
Bromomethane	0.251	0.296	0.336	0.309	0.261		0.291	11.9
Chloroethane	0.392	0.440	0.463	0.410	0.422	0.515	0.440	10
Trichlorofluoromethane	1.012	1.121	1.188	1.060	1.069	0.938	1.065	8.1
1,1,2-Trichlorotrifluoroethane	0.589	0.664	0.697	0.624	0.637	0.494	0.618	11.4
Tert butyl alcohol	0.052	0.059	0.068	0.062	0.063		0.061	9.8
1,1-Dichloroethene	0.575	0.664	0.697	0.635	0.651	0.555	0.630	8.6
Acrolein	0.130	0.122	0.132	0.127	0.131		0.129	3.2
Acrylonitrile	0.260	0.314	0.340	0.299	0.303	0.248	0.294	11.6
Acetone	0.259	0.310	0.280	0.240	0.240	0.249	0.263	10.5
Carbon Disulfide	1.747	1.916	1.993	1.819	1.854	2.069	1.900	6.2
Methyl tert-butyl Ether	1.768	2.019	2.175	1.962	2.014	1.554	1.915	11.5
Methyl Acetate	0.620	0.661	0.769	0.689	0.728	0.621	0.682	8.7
Methylene Chloride	0.645	0.732	0.757	0.669	0.684	0.691	0.697	5.9
trans-1,2-Dichloroethene	0.638	0.705	0.725	0.655	0.664	0.621	0.668	6
Vinyl Acetate	1.596	1.919	2.040	1.821	1.841	1.412	1.772	12.9
1,1-Dichloroethane	1.180	1.294	1.356	1.210	1.238	1.052	1.222	8.5
Cyclohexane	1.024	1.202	1.210	1.082	1.113		1.126	7
2-Butanone	0.328	0.378	0.389	0.342	0.343	0.287	0.344	10.6
Carbon Tetrachloride	0.536	0.596	0.607	0.549	0.554	0.515	0.560	6.3
2,2-Dichloropropane	0.864	0.976	1.017	0.940	0.960	0.776	0.922	9.5
cis-1,2-Dichloroethene	0.758	0.826	0.846	0.769	0.779	0.692	0.778	7
Bromochloromethane	0.543	0.402	0.540	0.560	0.525	0.481	0.508	11.6
Chloroform	1.236	1.328	1.368	1.214	1.243	1.091	1.247	7.8
1,1,1-Trichloroethane	1.043	1.151	1.195	1.081	1.106	0.863	1.073	10.8
Methylcyclohexane	0.589	0.673	0.695	0.640	0.642	0.595	0.639	6.5
1,1-Dichloropropene	0.475	0.551	0.562	0.509	0.502	0.474	0.512	7.2

* Compounds with required minimum RRF and maximum %RSD values.
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COMPOUND	RRF005	RRF020	RRF050	RRF100	RRF150	RRF001	$\overline{RRF}$	% RSD
Benzene	1.502	1.665	1.701	1.516	1.504	1.312	1.533	9.1
1,2-Dichloroethane	0.521	0.594	0.600	0.532	0.528	0.484	0.543	8.3
Trichloroethene	0.383	0.423	0.432	0.390	0.391	0.336	0.393	8.6
1,2-Dichloropropane	0.349	0.415	0.421	0.381	0.382	0.357	0.384	7.6
Dibromomethane	0.272	0.302	0.302	0.273	0.276	0.248	0.279	7.3
Bromodichloromethane	0.548	0.621	0.635	0.578	0.573	0.513	0.578	7.8
4-Methyl-2-Pentanone	0.408	0.479	0.509	0.451	0.444	0.346	0.440	13
Toluene	0.920	1.043	1.057	0.936	0.927	0.802	0.947	9.9
t-1,3-Dichloropropene	0.444	0.537	0.584	0.541	0.550	0.371	0.505	15.9
cis-1,3-Dichloropropene	0.531	0.608	0.642	0.592	0.602	0.451	0.571	12
1,1,2-Trichloroethane	0.358	0.393	0.396	0.352	0.347	0.313	0.360	8.6
1,3-Dichloropropane	0.591	0.672	0.670	0.600	0.592	0.553	0.613	7.8
2-Chloroethyl Vinyl ether	0.191	0.184	0.274	0.256	0.259	0.103	0.211	30.8
2-Hexanone	0.284	0.338	0.347	0.310	0.306	0.239	0.304	12.9
Dibromochloromethane	0.412	0.461	0.464	0.426	0.420	0.382	0.428	7.3
1,2-Dibromoethane	0.358	0.397	0.409	0.365	0.361	0.336	0.371	7.2
Tetrachloroethene	0.351	0.384	0.398	0.360	0.360	0.316	0.362	7.8
Chlorobenzene	1.163	1.268	1.286	1.163	1.175	1.073	1.188	6.6
1,1,1,2-Tetrachloroethane	0.389	0.423	0.441	0.403	0.409	0.345	0.402	8.3
Hexachloroethane	0.505	0.584	0.653	0.618	0.657	0.529	0.591	10.7
Ethyl Benzene	1.941	2.216	2.277	2.062	2.056	1.718	2.045	9.8
m/p-Xylenes	0.722	0.831	0.858	0.765	0.759	0.642	0.763	10.2
o-Xylene	0.679	0.793	0.813	0.735	0.732	0.651	0.734	8.6
Styrene	1.186	1.397	1.411	1.271	1.266	0.909	1.240	14.8
Bromoform	0.294	0.322	0.335	0.306	0.313	0.241	0.302	10.9
Isopropylbenzene	3.547	4.192	4.399	4.048	4.080	3.211	3.913	11.4
1,1,2,2-Tetrachloroethane	1.077	1.208	1.269	1.142	1.152	1.044	1.149	7.2
1,2,3-Trichloropropane	0.888	0.941	1.014	0.919	0.921	0.818	0.917	7
Bromobenzene	0.909	1.017	1.053	0.978	0.977	0.797	0.955	9.5
n-propylbenzene	4.263	5.031	5.179	4.817	4.844	3.905	4.673	10.4

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COMPOUND	RRF005	RRF020	RRF050	RRF100	RRF150	RRF001	$\overline{RRF}$	% RSD
2-Chlorotoluene	2.612	3.039	3.096	2.828	2.830	2.545	2.825	7.8
1,3,5-Trimethylbenzene	2.909	3.463	3.588	3.311	3.329	2.716	3.219	10.4
4-Chlorotoluene	3.128	3.542	3.630	3.299	3.338	3.043	3.330	6.8
tert-Butylbenzene	2.867	3.451	3.619	3.334	3.342	2.658	3.212	11.5
1,2,4-Trimethylbenzene	2.990	3.521	3.645	3.318	3.326	2.516	3.219	12.7
sec-Butylbenzene	3.630	4.323	4.417	4.101	4.142	3.273	3.981	11.1
p-Isopropyltoluene	3.071	3.569	3.726	3.416	3.469	2.961	3.369	8.8
1,3-Dichlorobenzene	1.719	1.907	1.983	1.811	1.823	1.710	1.825	5.8
1,4-Dichlorobenzene	1.788	1.952	1.986	1.788	1.814	1.936	1.877	4.8
n-Butylbenzene	2.796	3.309	3.444	3.208	3.227	2.816	3.133	8.5
1,2-Dichlorobenzene	1.617	1.851	1.862	1.705	1.729	1.631	1.733	6.1
1,2-Dibromo-3-Chloropropane	0.182	0.225	0.247	0.238	0.249	0.191	0.222	13
1,2,4-Trichlorobenzene	1.030	1.168	1.234	1.191	1.204	1.144	1.161	6.2
Hexachlorobutadiene	0.367	0.387	0.404	0.376	0.383	0.562	0.413	17.9
Naphthalene	2.705	3.401	3.779	3.639	3.717	2.674	3.319	15.2
1,2,3-Trichlorobenzene	0.919	1.109	1.174	1.132	1.160	1.075	1.095	8.5
1,2-Dichloroethane-d4	0.709	0.581	0.700	0.747	0.762		0.700	10.2
Dibromofluoromethane	0.310	0.278	0.331	0.354	0.349		0.325	9.6
Toluene-d8	1.157	0.994	1.171	1.246	1.232		1.160	8.7
4-Bromofluorobenzene	0.441	0.371	0.428	0.452	0.448		0.428	7.8

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