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.: Q3506

Instrument ID: MSVOA_X Calibration Date(s): 10/29/2025 10/29/2025

Heated Purge: (Y/N) N Calibration Time(s): 11:12 13:03

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

LAB FILE ID: RRF001 = VX048407.D RRF005 = VX048408.D RRF020 = VX048409.D
RRF050 = VX048410.D RRF100 = VX048411.D RRF150 = VX048412.D

COMPOUND	RRF001	RRF005	RRF020	RRF050	RRF100	RRF150	$\overline{RRF}$	% RSD
Dichlorodifluoromethane	0.488	0.487	0.477	0.539	0.504	0.565	0.510	6.8
Chloromethane	0.366	0.263	0.275	0.271	0.274	0.277	0.288	13.5
Vinyl Chloride	0.639	0.647	0.642	0.666	0.677	0.718	0.665	4.5
Ethyl Acetate	0.364	0.421	0.396	0.410	0.426	0.430	0.408	6.1
Bromomethane		0.254	0.257	0.242	0.237	0.210	0.240	7.8
Chloroethane	0.405	0.394	0.382	0.391	0.398	0.402	0.395	2.1
Trichlorofluoromethane	0.984	1.004	0.981	1.036	1.006	1.100	1.019	4.4
1,1,2-Trichlorotrifluoroethane	0.542	0.569	0.546	0.589	0.565	0.626	0.573	5.4
Tert butyl alcohol		0.049	0.054	0.053	0.061	0.059	0.055	8.5
1,1-Dichloroethene	0.573	0.559	0.559	0.581	0.591	0.628	0.582	4.4
Acrolein		0.105	0.112	0.112	0.128	0.118	0.115	7.4
Acrylonitrile	0.251	0.233	0.241	0.247	0.272	0.261	0.251	5.6
Acetone	0.176	0.136	0.156	0.159	0.176	0.175	0.163	9.8
Carbon Disulfide	1.871	1.692	1.629	1.676	1.568	1.577	1.669	6.7
Methyl tert-butyl Ether	1.967	1.753	1.815	1.763	1.975	1.908	1.864	5.4
Methyl Acetate	0.578	0.474	0.488	0.494	0.612	0.625	0.545	12.4
Methylene Chloride	0.660	0.613	0.619	0.598	0.651	0.628	0.628	3.7
trans-1,2-Dichloroethene	0.614	0.604	0.610	0.606	0.632	0.643	0.618	2.5
Vinyl Acetate	1.453	1.390	1.457	1.330	1.373	1.237	1.373	6
1,1-Dichloroethane	1.130	1.140	1.127	1.106	1.190	1.176	1.145	2.8
Cyclohexane		0.962	0.968	1.011	0.964	1.063	0.994	4.4
2-Butanone	0.257	0.225	0.261	0.257	0.287	0.275	0.260	8.1
Carbon Tetrachloride	0.578	0.562	0.528	0.559	0.517	0.572	0.553	4.4
2,2-Dichloropropane	1.042	0.949	0.935	0.952	1.002	1.035	0.986	4.7
cis-1,2-Dichloroethene	0.756	0.717	0.709	0.712	0.771	0.761	0.738	3.8
Bromochloromethane	0.465	0.513	0.556	0.513	0.519	0.546	0.519	6.2
Chloroform	1.200	1.176	1.167	1.131	1.212	1.180	1.178	2.4
1,1,1-Trichloroethane	1.030	1.024	1.013	1.030	1.057	1.084	1.040	2.5
Methylcyclohexane	0.578	0.604	0.565	0.665	0.585	0.696	0.616	8.5
1,1-Dichloropropene	0.482	0.446	0.481	0.490	0.463	0.511	0.479	4.6

* Compounds with required minimum RRF and maximum %RSD values.
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COMPOUND	RRF001	RRF005	RRF020	RRF050	RRF100	RRF150	$\overline{RRF}$	% RSD
Benzene	1.397	1.464	1.457	1.472	1.461	1.524	1.462	2.8
1,2-Dichloroethane	0.521	0.520	0.519	0.501	0.514	0.515	0.515	1.5
Trichloroethene	0.365	0.399	0.368	0.381	0.379	0.406	0.383	4.3
1,2-Dichloropropane	0.367	0.357	0.359	0.362	0.369	0.377	0.365	2
Dibromomethane	0.245	0.260	0.252	0.252	0.261	0.263	0.256	2.8
Bromodichloromethane	0.542	0.553	0.536	0.538	0.542	0.550	0.543	1.2
4-Methyl-2-Pentanone	0.366	0.355	0.373	0.375	0.391	0.388	0.375	3.5
Toluene	0.864	0.918	0.902	0.931	0.914	0.955	0.914	3.3
t-1,3-Dichloropropene	0.463	0.491	0.510	0.496	0.501	0.493	0.492	3.2
cis-1,3-Dichloropropene	0.549	0.525	0.558	0.524	0.522	0.506	0.531	3.7
1,1,2-Trichloroethane	0.329	0.330	0.332	0.326	0.333	0.334	0.331	1
1,3-Dichloropropane	0.578	0.580	0.566	0.568	0.574	0.575	0.573	1
2-Chloroethyl Vinyl ether	0.145	0.216	0.278	0.282	0.281	0.302	0.251	23.7
2-Hexanone	0.219	0.217	0.248	0.251	0.264	0.263	0.244	8.6
Dibromochloromethane	0.405	0.408	0.403	0.408	0.412	0.418	0.409	1.3
1,2-Dibromoethane	0.340	0.338	0.338	0.341	0.349	0.347	0.342	1.3
Tetrachloroethene	0.433	0.411	0.384	0.402	0.376	0.410	0.403	5.1
Chlorobenzene	1.135	1.174	1.118	1.150	1.154	1.179	1.152	2
1,1,1,2-Tetrachloroethane	0.360	0.387	0.386	0.396	0.404	0.417	0.392	5
Hexachloroethane	0.521	0.518	0.537	0.594	0.589	0.669	0.571	10.2
Ethyl Benzene	1.825	1.909	1.888	1.994	1.951	2.070	1.940	4.4
m/p-Xylenes	0.663	0.731	0.718	0.773	0.744	0.777	0.734	5.7
o-Xylene	0.636	0.689	0.686	0.729	0.721	0.750	0.702	5.8
Styrene	1.059	1.139	1.180	1.235	1.247	1.273	1.189	6.7
Bromoform	0.284	0.268	0.267	0.281	0.299	0.302	0.283	5.2
Isopropylbenzene	3.372	3.599	3.592	3.841	3.700	4.085	3.698	6.6
1,1,2,2-Tetrachloroethane	0.915	0.919	0.914	0.929	0.956	0.988	0.937	3.2
1,2,3-Trichloropropane	0.617	0.702	0.708	0.743	0.765	0.779	0.719	8.1
Bromobenzene	0.877	0.904	0.886	0.912	0.919	0.984	0.914	4.1
n-propylbenzene	3.871	4.307	4.262	4.596	4.352	4.838	4.371	7.5

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COMPOUND	RRF001	RRF005	RRF020	RRF050	RRF100	RRF150	$\overline{RRF}$	% RSD
2-Chlorotoluene	2.524	2.598	2.538	2.652	2.609	2.825	2.624	4.1
1,3,5-Trimethylbenzene	2.640	2.973	2.948	3.194	3.065	3.369	3.032	8.1
4-Chlorotoluene	2.883	3.105	3.023	3.125	3.076	3.299	3.085	4.4
tert-Butylbenzene	2.798	3.001	2.945	3.216	3.098	3.459	3.086	7.5
1,2,4-Trimethylbenzene	2.580	2.875	2.976	3.141	3.082	3.355	3.002	8.8
sec-Butylbenzene	3.379	3.847	3.727	4.052	3.793	4.276	3.846	7.9
p-Isopropyltoluene	2.815	3.198	3.145	3.435	3.257	3.657	3.251	8.7
1,3-Dichlorobenzene	1.911	1.733	1.660	1.690	1.666	1.807	1.745	5.6
1,4-Dichlorobenzene	1.948	1.824	1.666	1.710	1.684	1.829	1.777	6.2
n-Butylbenzene	2.892	2.903	2.886	3.183	3.003	3.447	3.052	7.3
1,2-Dichlorobenzene	1.618	1.609	1.565	1.589	1.607	1.712	1.617	3.1
1,2-Dibromo-3-Chloropropane	0.181	0.156	0.171	0.187	0.195	0.210	0.183	10.2
1,2,4-Trichlorobenzene	1.140	1.040	1.045	1.112	1.124	1.232	1.116	6.3
Hexachlorobutadiene	0.507	0.437	0.435	0.481	0.431	0.516	0.468	8.2
Naphthalene	2.578	2.419	2.645	2.935	3.064	3.264	2.818	11.4
1,2,3-Trichlorobenzene	0.981	0.937	0.957	1.033	1.029	1.143	1.013	7.3
1,2-Dichloroethane-d4		0.765	0.689	0.674	0.728	0.739	0.719	5.2
Dibromofluoromethane		0.300	0.260	0.276	0.283	0.307	0.285	6.6
Toluene-d8		1.333	1.191	1.222	1.207	1.339	1.258	5.7
4-Bromofluorobenzene		0.537	0.437	0.446	0.449	0.485	0.471	8.8

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