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.: Q2812

Instrument ID: MSVOA_X Calibration Date(s): 07/21/2025 07/21/2025

Heated Purge: (Y/N) N Calibration Time(s): 09:47 11:32

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

LAB FILE ID: RRF001 = VX047055.D RRF005 = VX047056.D RRF020 = VX047057.D
RRF050 = VX047058.D RRF100 = VX047059.D RRF150 = VX047060.D

COMPOUND	RRF001	RRF005	RRF020	RRF050	RRF100	RRF150	$\overline{RRF}$	% RSD
Dichlorodifluoromethane	0.516	0.640	0.610	0.768	0.721	0.729	0.664	14.1
Chloromethane	0.582	0.668	0.626	0.699	0.667	0.701	0.657	7
Vinyl Chloride	0.578	0.739	0.700	0.780	0.716	0.723	0.706	9.7
Ethyl Acetate	0.496	0.537	0.438	0.511	0.462	0.466	0.485	7.5
Bromomethane		0.408	0.400	0.448	0.353	0.309	0.384	14
Chloroethane	0.547	0.482	0.436	0.470	0.423	0.424	0.464	10.3
Trichlorofluoromethane	0.853	1.123	1.058	1.158	1.054	1.071	1.053	10.1
1,1,2-Trichlorotrifluoroethane	0.558	0.671	0.646	0.675	0.627	0.631	0.634	6.7
Tert butyl alcohol		0.109	0.075	0.073	0.071	0.071	0.080	20.5
1,1-Dichloroethene	0.553	0.659	0.635	0.674	0.624	0.625	0.628	6.7
Acrolein		0.135	0.130	0.139	0.133	0.134	0.134	2.3
Acrylonitrile	0.208	0.321	0.317	0.329	0.305	0.302	0.297	15.2
Acetone	0.268	0.267	0.246	0.252	0.232	0.231	0.250	6.5
Carbon Disulfide	1.633	1.926	1.823	1.936	1.783	1.805	1.818	6.1
Methyl tert-butyl Ether	1.640	2.011	1.960	2.055	1.891	1.916	1.912	7.6
Methyl Acetate	0.657	0.686	0.636	0.688	0.651	0.662	0.663	3.1
Methylene Chloride	0.635	0.751	0.708	0.722	0.653	0.651	0.686	6.8
trans-1,2-Dichloroethene	0.531	0.701	0.667	0.695	0.632	0.632	0.643	9.7
Vinyl Acetate	1.333	1.804	1.858	1.940	1.792	1.782	1.752	12.2
1,1-Dichloroethane	1.044	1.327	1.245	1.300	1.177	1.193	1.214	8.4
Cyclohexane		1.221	1.187	1.215	1.099	1.101	1.164	5.2
2-Butanone	0.317	0.376	0.371	0.391	0.363	0.362	0.363	6.8
Carbon Tetrachloride	0.526	0.612	0.566	0.595	0.531	0.540	0.562	6.4
2,2-Dichloropropane	0.874	1.011	0.928	0.979	0.912	0.937	0.940	5.2
cis-1,2-Dichloroethene	0.670	0.832	0.777	0.807	0.739	0.744	0.761	7.6
Bromochloromethane	0.457	0.608	0.568	0.609	0.559	0.550	0.559	9.9
Chloroform	1.180	1.357	1.252	1.289	1.175	1.164	1.236	6.2
1,1,1-Trichloroethane	0.961	1.156	1.101	1.127	1.041	1.057	1.074	6.5
Methylcyclohexane	0.583	0.693	0.674	0.699	0.640	0.653	0.657	6.5
1,1-Dichloropropene	0.576	0.527	0.528	0.547	0.484	0.495	0.526	6.3

* Compounds with required minimum RRF and maximum %RSD values.
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COMPOUND	RRF001	RRF005	RRF020	RRF050	RRF100	RRF150	$\overline{RRF}$	% RSD
Benzene	1.327	1.656	1.573	1.650	1.451	1.480	1.523	8.4
1,2-Dichloroethane	0.468	0.587	0.558	0.576	0.512	0.517	0.536	8.5
Trichloroethene	0.350	0.427	0.392	0.420	0.371	0.383	0.391	7.5
1,2-Dichloropropane	0.334	0.419	0.393	0.408	0.363	0.371	0.381	8.2
Dibromomethane	0.204	0.304	0.275	0.294	0.261	0.267	0.267	13.2
Bromodichloromethane	0.494	0.626	0.579	0.617	0.543	0.557	0.569	8.7
4-Methyl-2-Pentanone	0.371	0.477	0.470	0.497	0.440	0.440	0.449	9.8
Toluene	0.762	1.047	0.987	1.017	0.896	0.910	0.936	11.1
t-1,3-Dichloropropene	0.429	0.549	0.546	0.592	0.548	0.562	0.538	10.4
cis-1,3-Dichloropropene	0.442	0.611	0.618	0.653	0.593	0.614	0.588	12.6
1,1,2-Trichloroethane	0.300	0.391	0.373	0.376	0.332	0.335	0.351	9.9
1,3-Dichloropropane	0.530	0.687	0.639	0.653	0.576	0.577	0.610	9.6
2-Chloroethyl Vinyl ether	0.189	0.360	0.271	0.323	0.296	0.297	0.289	19.9
2-Hexanone	0.192	0.312	0.324	0.343	0.305	0.304	0.297	17.9
Dibromochloromethane	0.343	0.449	0.428	0.444	0.398	0.409	0.412	9.4
1,2-Dibromoethane	0.334	0.398	0.377	0.395	0.349	0.351	0.367	7.3
Tetrachloroethene	0.322	0.403	0.381	0.376	0.337	0.344	0.360	8.6
Chlorobenzene	1.029	1.295	1.225	1.231	1.114	1.135	1.171	8.2
1,1,1,2-Tetrachloroethane	0.354	0.415	0.404	0.419	0.381	0.392	0.394	6.2
Hexachloroethane	0.519	0.601	0.603	0.655	0.619	0.640	0.606	7.8
Ethyl Benzene	1.814	2.189	2.119	2.204	1.975	1.987	2.048	7.4
m/p-Xylenes	0.693	0.827	0.795	0.818	0.734	0.732	0.766	7.1
o-Xylene	0.586	0.820	0.769	0.785	0.704	0.711	0.729	11.4
Styrene	1.024	1.356	1.332	1.361	1.209	1.219	1.250	10.4
Bromoform	0.257	0.323	0.302	0.325	0.292	0.299	0.300	8.2
Isopropylbenzene	3.180	4.148	4.146	4.309	3.907	3.979	3.945	10.2
1,1,2,2-Tetrachloroethane	0.979	1.203	1.182	1.210	1.085	1.103	1.127	7.9
1,2,3-Trichloropropane	0.753	1.027	0.956	0.991	0.904	0.923	0.925	10.3
Bromobenzene	0.796	0.997	0.997	1.017	0.925	0.945	0.946	8.6
n-propylbenzene	3.796	5.061	4.947	5.118	4.618	4.743	4.714	10.4

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COMPOUND	RRF001	RRF005	RRF020	RRF050	RRF100	RRF150	$\overline{RRF}$	% RSD
2-Chlorotoluene	2.428	3.036	2.895	3.029	2.730	2.789	2.818	8.1
1,3,5-Trimethylbenzene	2.639	3.508	3.437	3.523	3.181	3.265	3.259	10.2
4-Chlorotoluene	2.721	3.585	3.445	3.569	3.183	3.232	3.289	9.9
tert-Butylbenzene	2.745	3.433	3.364	3.586	3.198	3.299	3.271	8.8
1,2,4-Trimethylbenzene	2.502	3.544	3.415	3.577	3.197	3.269	3.251	12.2
sec-Butylbenzene	3.328	4.476	4.269	4.398	3.993	4.056	4.087	10.2
p-Isopropyltoluene	2.626	3.699	3.570	3.704	3.334	3.402	3.389	11.9
1,3-Dichlorobenzene	1.562	1.968	1.869	1.908	1.704	1.776	1.798	8.3
1,4-Dichlorobenzene	1.659	1.982	1.903	1.893	1.723	1.767	1.821	6.8
n-Butylbenzene	2.645	3.317	3.324	3.456	3.141	3.187	3.178	8.9
1,2-Dichlorobenzene	1.533	1.873	1.764	1.824	1.625	1.691	1.718	7.4
1,2-Dibromo-3-Chloropropane	0.140	0.223	0.223	0.239	0.231	0.242	0.216	17.6
1,2,4-Trichlorobenzene	0.919	1.189	1.159	1.224	1.144	1.176	1.135	9.6
Hexachlorobutadiene	0.334	0.396	0.407	0.406	0.392	0.382	0.386	7
Naphthalene	2.370	3.231	3.425	3.753	3.499	3.691	3.328	15.2
1,2,3-Trichlorobenzene	0.925	1.120	1.117	1.172	1.102	1.126	1.094	7.9
1,2-Dichloroethane-d4		0.768	0.511	0.575	0.611	0.649	0.623	15.4
Dibromofluoromethane		0.355	0.262	0.296	0.302	0.328	0.309	11.3
Toluene-d8		1.293	0.821	0.924	0.946	1.014	1.000	17.8
4-Bromofluorobenzene		0.514	0.369	0.409	0.417	0.445	0.431	12.5

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