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.: Q3373

Instrument ID: MSVOA_N Calibration Date(s): 10/23/2025 10/23/2025

Heated Purge: (Y/N) N Calibration Time(s): 09:42 12:02

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

LAB FILE ID: RRF001 = VN088078.D RRF005 = VN088079.D RRF020 = VN088080.D
RRF050 = VN088081.D RRF100 = VN088082.D RRF150 = VN088083.D

COMPOUND	RRF001	RRF005	RRF020	RRF050	RRF100	RRF150	$\overline{RRF}$	% RSD
Dichlorodifluoromethane	0.606	0.645	0.594	0.458	0.493	0.588	0.564	12.8
Chloromethane	0.782	0.707	0.725	0.519	0.579	0.669	0.664	14.7
Vinyl Chloride	0.801	0.784	0.787	0.581	0.639	0.746	0.723	12.6
Ethyl Acetate	0.742	0.656	0.676	0.491	0.579	0.653	0.633	13.7
Bromomethane		0.527	0.485	0.341	0.389	0.420	0.432	17.2
Chloroethane	0.598	0.601	0.558	0.413	0.447	0.509	0.521	15.2
Trichlorofluoromethane	1.199	1.317	1.246	0.955	1.031	1.171	1.153	11.8
1,1,2-Trichlorotrifluoroethane	0.637	0.632	0.612	0.476	0.561	0.653	0.595	11.2
Tert butyl alcohol		0.164	0.170	0.116	0.151	0.144	0.149	14.2
1,1-Dichloroethene	0.806	0.686	0.631	0.462	0.547	0.637	0.628	18.7
Acrolein		0.196	0.172	0.124	0.163	0.183	0.168	16.3
Acrylonitrile	0.398	0.423	0.452	0.324	0.426	0.413	0.406	10.8
Acetone	0.563	0.441	0.440	0.319	0.411	0.431	0.434	17.9
Carbon Disulfide	2.143	2.041	1.984	1.483	1.917	1.895	1.910	11.9
Methyl tert-butyl Ether	2.356	2.498	2.493	1.790	2.370	2.342	2.308	11.4
Methyl Acetate	0.982	0.910	0.980	0.688	0.896	0.880	0.889	12.1
Methylene Chloride	0.894	0.774	0.775	0.540	0.708	0.684	0.729	16.2
trans-1,2-Dichloroethene	0.820	0.716	0.715	0.536	0.673	0.678	0.690	13.3
Vinyl Acetate	1.958	2.237	2.387	1.737	1.958	2.244	2.087	11.6
1,1-Dichloroethane	1.371	1.432	1.418	1.026	1.142	1.312	1.283	12.8
Cyclohexane		1.488	1.301	0.965	1.055	1.243	1.210	17.1
2-Butanone	0.615	0.616	0.639	0.465	0.516	0.584	0.572	11.8
Carbon Tetrachloride	0.544	0.525	0.538	0.417	0.470	0.546	0.507	10.3
2,2-Dichloropropane	1.403	1.226	1.234	0.920	1.023	1.190	1.166	14.7
cis-1,2-Dichloroethene	0.884	0.892	0.868	0.626	0.694	0.800	0.794	13.9
Bromochloromethane	0.608	0.669	0.549	0.589	0.596	0.627	0.606	6.6
Chloroform	1.334	1.433	1.405	1.040	1.162	1.318	1.282	11.8
1,1,1-Trichloroethane	1.293	1.230	1.241	0.912	1.014	1.160	1.142	13
Methylcyclohexane	0.701	0.649	0.634	0.524	0.578	0.698	0.630	11
1,1-Dichloropropene	0.515	0.514	0.530	0.406	0.453	0.525	0.490	10.2

* Compounds with required minimum RRF and maximum %RSD values.
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COMPOUND	RRF001	RRF005	RRF020	RRF050	RRF100	RRF150	$\overline{RRF}$	% RSD
Benzene	1.621	1.577	1.609	1.216	1.372	1.566	1.494	10.9
1,2-Dichloroethane	0.552	0.572	0.590	0.436	0.480	0.554	0.531	11.2
Trichloroethene	0.375	0.374	0.374	0.284	0.318	0.369	0.349	11.1
1,2-Dichloropropane	0.420	0.408	0.397	0.306	0.340	0.391	0.377	11.7
Dibromomethane	0.275	0.298	0.295	0.218	0.246	0.281	0.269	11.5
Bromodichloromethane	0.561	0.570	0.589	0.439	0.499	0.573	0.538	10.8
4-Methyl-2-Pentanone	0.548	0.600	0.647	0.485	0.552	0.620	0.575	10.2
Toluene	0.971	0.958	0.991	0.755	0.862	0.989	0.921	10.2
t-1,3-Dichloropropene	0.554	0.576	0.618	0.479	0.559	0.652	0.573	10.4
cis-1,3-Dichloropropene	0.615	0.622	0.652	0.501	0.587	0.671	0.608	9.9
1,1,2-Trichloroethane	0.421	0.348	0.374	0.281	0.317	0.355	0.349	13.7
1,3-Dichloropropane	0.639	0.647	0.674	0.506	0.572	0.647	0.614	10.3
2-Chloroethyl Vinyl ether	0.280	0.274	0.299	0.245	0.280	0.348	0.288	11.9
2-Hexanone	0.369	0.332	0.418	0.333	0.392	0.447	0.382	12.1
Dibromochloromethane	0.418	0.392	0.433	0.327	0.377	0.436	0.397	10.4
1,2-Dibromoethane	0.403	0.356	0.384	0.289	0.339	0.388	0.360	11.6
Tetrachloroethene	0.400	0.344	0.335	0.258	0.298	0.344	0.330	14.6
Chlorobenzene	1.197	1.208	1.205	0.941	1.053	1.208	1.135	9.9
1,1,1,2-Tetrachloroethane	0.396	0.385	0.395	0.310	0.348	0.397	0.372	9.6
Hexachloroethane	0.687	0.679	0.671	0.535	0.610	0.736	0.653	10.8
Ethyl Benzene	2.069	2.066	2.123	1.649	1.873	2.177	1.993	9.9
m/p-Xylenes	0.733	0.774	0.804	0.635	0.708	0.827	0.747	9.4
o-Xylene	0.670	0.742	0.764	0.604	0.684	0.784	0.708	9.6
Styrene	0.946	1.204	1.276	1.011	1.165	1.325	1.154	12.9
Bromoform	0.268	0.274	0.294	0.233	0.276	0.320	0.278	10.4
Isopropylbenzene	4.189	3.857	4.067	3.173	3.580	4.272	3.856	10.8
1,1,2,2-Tetrachloroethane	1.304	1.258	1.336	0.957	1.080	1.270	1.201	12.4
1,2,3-Trichloropropane	1.334	1.351	1.062	0.930	1.014	1.169	1.143	15.1
Bromobenzene	0.826	0.859	0.926	0.687	0.789	0.902	0.832	10.4
n-propylbenzene	4.874	4.855	4.930	3.925	4.436	5.217	4.706	9.7

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COMPOUND	RRF001	RRF005	RRF020	RRF050	RRF100	RRF150	$\overline{RRF}$	% RSD
2-Chlorotoluene	2.492	2.833	2.974	2.245	2.545	3.014	2.684	11.3
1,3,5-Trimethylbenzene	3.329	3.254	3.385	2.669	3.028	3.551	3.203	9.8
4-Chlorotoluene	3.219	3.019	3.114	2.345	2.623	3.102	2.904	11.8
tert-Butylbenzene	3.154	2.876	3.002	2.358	2.646	3.131	2.861	10.8
1,2,4-Trimethylbenzene	3.242	3.316	3.465	2.700	3.012	3.491	3.204	9.4
sec-Butylbenzene	4.578	4.273	4.382	3.490	3.881	4.616	4.203	10.4
p-Isopropyltoluene	3.269	3.541	3.602	2.866	3.170	3.783	3.372	9.9
1,3-Dichlorobenzene	1.777	1.673	1.822	1.380	1.535	1.773	1.660	10.3
1,4-Dichlorobenzene	2.065	1.953	1.863	1.399	1.582	1.836	1.783	13.9
n-Butylbenzene	3.396	3.438	3.493	2.827	3.158	3.730	3.340	9.3
1,2-Dichlorobenzene	1.768	1.652	1.678	1.291	1.469	1.744	1.600	11.5
1,2-Dibromo-3-Chloropropane	0.325	0.289	0.301	0.214	0.243	0.305	0.279	15.1
1,2,4-Trichlorobenzene	1.058	0.976	0.989	0.785	0.902	1.105	0.969	11.8
Hexachlorobutadiene	0.412	0.374	0.373	0.293	0.319	0.395	0.361	12.7
Naphthalene	3.451	3.110	3.437	2.732	3.203	3.987	3.320	12.6
1,2,3-Trichlorobenzene	1.098	0.894	0.937	0.736	0.848	1.062	0.929	14.5
1,2-Dichloroethane-d4		0.914	0.915	0.799	0.822	0.872	0.865	6.1
Dibromofluoromethane		0.343	0.344	0.315	0.327	0.350	0.336	4.3
Toluene-d8		1.283	1.298	1.224	1.283	1.384	1.294	4.4
4-Bromofluorobenzene		0.435	0.457	0.439	0.466	0.488	0.457	4.8

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