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

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: GENV01

Lab Code: CHEM Case No.: Q1945 SAS No.: Q1945 SDG No.: Q1945

Instrument ID: BNA_M Calibration Date(s): 04/28/2025 04/28/2025

Calibration Time(s): 12:30 17:04

LAB FILE ID: RRF2.5 = BM050024.D RRF005 = BM050025.D RRF010 = BM050026.D
RRF020 = BM050027.D RRF040 = BM050028.D RRF050 = BM050029.D

COMPOUND	RRF2.5	RRF005	RRF010	RRF020	RRF040	RRF050	RRF	% RSD
2-Fluorophenol		1.074	1.079	1.107	1.208	1.211	1.142	5.0
Benzaldehyde		0.940	0.920	0.971	1.031	1.013	0.961	5.1
Aniline		1.657	1.689	1.768	1.942	1.922	1.813	6.2
Phenol-d6		1.290	1.318	1.398	1.543	1.537	1.436	7.1
Phenol		1.349	1.344	1.420	1.539	1.537	1.453	5.7
bis(2-Chloroethyl)ether		1.213	1.105	1.176	1.279	1.271	1.214	4.9
2-Chlorophenol		1.169	1.161	1.198	1.312	1.301	1.235	5.0
2-Methylphenol		0.857	0.893	0.931	1.033	1.026	0.957	7.0
2,2-oxybis(1-Chloropropane)		1.487	1.422	1.445	1.552	1.513	1.475	3.2
Acetophenone		0.483	0.464	0.485	0.531	0.525	0.497	4.9
3+4-Methylphenols		1.137	1.170	1.267	1.393	1.392	1.293	8.1
n-Nitroso-di-n-propylamine	0.802	0.889	0.885	0.921	1.003	0.988	0.921	7.0
Nitrobenzene-d5		0.386	0.374	0.397	0.434	0.433	0.406	5.7
Hexachloroethane		0.552	0.508	0.521	0.556	0.548	0.533	3.8
Nitrobenzene		0.337	0.325	0.345	0.374	0.372	0.351	5.2
Isophorone		0.666	0.648	0.680	0.729	0.729	0.692	4.4
2-Nitrophenol		0.148	0.157	0.172	0.196	0.198	0.179	11.3
2,4-Dimethylphenol		0.263	0.266	0.289	0.324	0.322	0.297	8.4
bis(2-Chloroethoxy)methane		0.407	0.399	0.422	0.455	0.452	0.428	4.9
2,4-Dichlorophenol		0.294	0.298	0.326	0.362	0.359	0.333	8.5
Naphthalene		1.001	0.959	0.993	1.066	1.057	1.013	3.8
4-Chloroaniline		0.361	0.393	0.404	0.441	0.448	0.415	7.5
Hexachlorobutadiene		0.253	0.240	0.249	0.270	0.270	0.258	4.3
Caprolactam		0.090	0.085	0.095	0.104	0.104	0.097	7.7
4-Chloro-3-methylphenol		0.289	0.283	0.302	0.325	0.329	0.308	5.7
2-Methylnaphthalene		0.656	0.639	0.662	0.713	0.714	0.679	4.2
Hexachlorocyclopentadiene			0.303	0.362	0.455	0.468	0.423	17.3
2,4,6-Trichlorophenol		0.372	0.381	0.423	0.476	0.485	0.439	10.8
2-Fluorobiphenyl		1.588	1.555	1.632	1.807	1.822	1.691	6.2
2,4,5-Trichlorophenol		0.410	0.417	0.453	0.517	0.519	0.474	9.8
1,1-Biphenyl		1.427	1.395	1.452	1.573	1.581	1.487	4.8
2-Chloronaphthalene		1.126	1.112	1.155	1.250	1.248	1.177	4.7
2-Nitroaniline		0.238	0.242	0.269	0.302	0.304	0.276	10.0
Dimethylphthalate		1.444	1.377	1.437	1.532	1.543	1.462	4.0

All other compounds must meet a minimum RRF of 0.010.

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SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: GENV01

Lab Code: CHEM Case No.: Q1945 SAS No.: Q1945 SDG No.: Q1945

Instrument ID: BNA_M Calibration Date(s): 04/28/2025 04/28/2025

Calibration Time(s): 12:30 17:04

LAB FILE ID: RRF2.5 = BM050024.D RRF005 = BM050025.D RRF010 = BM050026.D
RRF020 = BM050027.D RRF040 = BM050028.D RRF050 = BM050029.D

COMPOUND	RRF2.5	RRF005	RRF010	RRF020	RRF040	RRF050	RRF	% RSD
Acenaphthylene		1.794	1.715	1.810	1.972	1.971	1.857	5.1
2,6-Dinitrotoluene		0.266	0.271	0.299	0.327	0.331	0.303	8.5
3-Nitroaniline		0.233	0.247	0.284	0.321	0.325	0.289	12.5
Acenaphthene		1.038	0.998	1.046	1.133	1.145	1.075	4.9
2,4-Dinitrophenol			0.100	0.132	0.178	0.194	0.164	23.6
4-Nitrophenol			0.128	0.180	0.224	0.237	0.205	21.0
Dibenzofuran		1.749	1.681	1.749	1.876	1.888	1.788	4.2
2,4-Dinitrotoluene		0.338	0.366	0.412	0.456	0.468	0.418	11.7
Diethylphthalate		1.372	1.301	1.380	1.433	1.451	1.377	3.9
4-Chlorophenyl-phenylether		0.741	0.716	0.770	0.857	0.871	0.804	7.6
Fluorene		1.387	1.343	1.431	1.558	1.573	1.463	5.8
4-Nitroaniline		0.208	0.234	0.277	0.313	0.321	0.279	15.2
4,6-Dinitro-2-methylphenol			0.088	0.110	0.135	0.142	0.125	17.2
n-Nitrosodiphenylamine		0.580	0.572	0.596	0.655	0.657	0.614	5.6
2,4,6-Tribromophenol		0.253	0.249	0.281	0.318	0.329	0.296	11.6
4-Bromophenyl-phenylether		0.223	0.216	0.229	0.258	0.258	0.242	7.6
Hexachlorobenzene		0.265	0.251	0.264	0.294	0.295	0.279	6.5
Atrazine		0.196	0.198	0.214	0.236	0.242	0.222	8.5
Pentachlorophenol			0.117	0.141	0.167	0.172	0.157	14.5
Phenanthrene		1.075	1.035	1.083	1.187	1.212	1.128	5.8
Anthracene		1.062	1.038	1.096	1.214	1.236	1.142	6.8
Carbazole		0.909	0.900	0.960	1.054	1.075	0.991	7.1
Di-n-butylphthalate		1.106	1.082	1.151	1.246	1.277	1.180	6.2
Fluoranthene		1.178	1.142	1.250	1.410	1.455	1.324	9.9
Pyrene		1.290	1.255	1.332	1.518	1.520	1.404	7.8
Terphenyl-d14		1.176	1.189	1.332	1.524	1.541	1.352	11.6
Butylbenzylphthalate		0.489	0.479	0.515	0.562	0.568	0.526	6.5
3,3-Dichlorobenzidine		0.434	0.432	0.483	0.580	0.597	0.527	14.1
Benzo(a)anthracene		1.280	1.231	1.321	1.478	1.479	1.377	7.2
Chrysene		1.208	1.170	1.214	1.342	1.369	1.275	6.0
Bis(2-ethylhexyl)phthalate		0.726	0.725	0.775	0.843	0.852	0.786	6.6
Di-n-octyl phthalate		1.221	1.197	1.267	1.366	1.404	1.296	5.9
Benzo(b)fluoranthene		1.128	1.149	1.209	1.406	1.415	1.301	10.2
Benzo(k)fluoranthene		1.219	1.150	1.251	1.387	1.449	1.316	8.3
Benzo(a)pyrene		1.094	1.066	1.147	1.295	1.330	1.218	9.2

All other compounds must meet a minimum RRF of 0.010.

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COMPOUND	RRF2.5	RRF005	RRF010	RRF020	RRF040	RRF050	RRF	% RSD
Indeno(1,2,3-cd)pyrene		1.301	1.293	1.404	1.602	1.646	1.490	10.3
Dibenzo(a,h)anthracene		1.056	1.044	1.142	1.300	1.347	1.215	10.7
Benzo(g,h,i)perylene		1.066	1.030	1.105	1.236	1.268	1.163	8.1
1,2,4,5-Tetrachlorobenzene		0.624	0.622	0.655	0.742	0.745	0.692	8.2
1,4-Dioxane		0.506	0.464	0.478	0.511	0.504	0.490	3.8
2,3,4,6-Tetrachlorophenol		0.366	0.362	0.398	0.435	0.445	0.410	8.4

All other compounds must meet a minimum RRF of 0.010.

Response Factor Report BNA_M

Method Path : Z:\svoasrv\HPCHEM1\BNA_M\Methods\
Method File : 8270-BM042825.M
Title : ASP BNA STANDARDS FOR 5 POINT CALIBRATION
Last Update : Mon Apr 28 18:09:16 2025
Response Via : Initial Calibration

Calibration Files
2.5 =BM050024.D 5 =BM050025.D 10 =BM050026.D 20 =BM050027.D 40 =BM050028.D 50 =BM050029.D 60 =BM050030.D 80 =BM0500
31.D

		Compound	2.5	5	10	20	40	50	60	80	Avg	%RSD
1)	I	1,4-Dichlorobenzen...	----------ISTD----------									
2)		1,4-Dioxane		0.506	0.464	0.478	0.511	0.504	0.491	0.473	0.490	3.75
3)		Pyridine		1.201	1.166	1.229	1.331	1.328	1.292	1.261	1.258	5.03
4)		n-Nitrosodimet...		0.487	0.459	0.475	0.522	0.518	0.504	0.490	0.493	4.62
5)	S	2-Fluorophenol		1.074	1.079	1.107	1.208	1.211	1.173	1.142	1.142	5.04
6)		Aniline		1.657	1.689	1.768	1.942	1.922	1.875	1.835	1.813	6.16
7)	S	Phenol-d6		1.290	1.318	1.398	1.543	1.537	1.494	1.469	1.436	7.13
8)		2-Chlorophenol		1.169	1.161	1.198	1.312	1.301	1.268	1.235	1.235	4.96
9)		Benzaldehyde		0.940	0.920	0.971	1.031	1.013	0.956	0.894	0.961	5.08
10)	C	Phenol		1.349	1.344	1.420	1.539	1.537	1.501	1.483	1.453	5.73
11)		bis(2-Chloroet...		1.213	1.105	1.176	1.279	1.271	1.233	1.218	1.213	4.90
12)		1,3-Dichlorobe...		1.483	1.428	1.453	1.566	1.552	1.508	1.453	1.492	3.51
13)	C	1,4-Dichlorobe...		1.518	1.418	1.463	1.561	1.557	1.516	1.458	1.499	3.60
14)		1,2-Dichlorobe...		1.420	1.393	1.423	1.522	1.506	1.464	1.405	1.448	3.50
15)		Benzyl Alcohol		0.866	0.881	0.966	1.080	1.074	1.050	1.050	0.996	9.16
16)		2,2'-oxybis(1-...		1.487	1.422	1.445	1.552	1.513	1.473	1.433	1.475	3.17
17)		2-Methylphenol		0.857	0.893	0.931	1.033	1.026	0.988	0.975	0.957	6.96
18)		Hexachloroethane		0.552	0.508	0.521	0.556	0.548	0.533	0.510	0.533	3.79
19)	P	n-Nitroso-di-n...	0.802	0.889	0.885	0.921	1.003	0.988	0.949	0.928	0.921	6.95
20)		3+4-Methylphenols		1.137	1.170	1.267	1.393	1.392	1.349	1.341	1.293	8.09
21)	I	Naphthalene-d8	----------ISTD----------									
22)		Acetophenone		0.483	0.464	0.485	0.531	0.525	0.506	0.487	0.497	4.94
23)	S	Nitrobenzene-d5		0.386	0.374	0.397	0.434	0.433	0.417	0.400	0.406	5.68
24)		Nitrobenzene		0.337	0.325	0.345	0.374	0.372	0.358	0.346	0.351	5.16
25)		Isophorone		0.666	0.648	0.680	0.729	0.729	0.704	0.687	0.692	4.44
26)	C	2-Nitrophenol		0.148	0.157	0.172	0.196	0.198	0.192	0.191	0.179	11.33
27)		2,4-Dimethylph...		0.263	0.266	0.289	0.324	0.322	0.312	0.305	0.297	8.42
28)		bis(2-Chloroet...		0.407	0.399	0.422	0.455	0.452	0.434	0.425	0.428	4.92
29)	C	2,4-Dichloroph...		0.294	0.298	0.326	0.362	0.359	0.351	0.342	0.333	8.47
30)		1,2,4-Trichlor...		0.400	0.384	0.394	0.427	0.426	0.412	0.399	0.406	4.02
31)		Naphthalene		1.001	0.959	0.993	1.066	1.057	1.023	0.989	1.013	3.80
32)		Benzoic acid			0.138	0.172	0.197	0.206	0.212	0.215	0.190	15.67
33)		4-Chloroaniline		0.361	0.393	0.404	0.441	0.448	0.437	0.423	0.415	7.51
34)	C	Hexachlorobuta...		0.253	0.240	0.249	0.270	0.270	0.263	0.258	0.258	4.34
35)		Caprolactam		0.090	0.085	0.095	0.104	0.104	0.102	0.100	0.097	7.73
36)	C	4-Chloro-3-met...		0.289	0.283	0.302	0.325	0.329	0.317	0.309	0.308	5.72
37)		2-Methylnaphth...		0.656	0.639	0.662	0.713	0.714	0.692	0.678	0.679	4.22
38)		1-Methylnaphth...		0.703	0.675	0.708	0.753	0.751	0.731	0.710	0.719	3.92

Method Path : Z:\svoasrv\HPCHEM1\BNA_M\Methods\
Method File : 8270-BM042825.M

39)	I	Acenaphthene-d10	----------ISTD----------							
40)		1,2,4,5-Tetrac...	0.624	0.622	0.655	0.742	0.745	0.725	0.733	0.692	8.17
41)	P	Hexachlorocycl...		0.303	0.362	0.455	0.468	0.467	0.483	0.423	17.30
42)	S	2,4,6-Tribromo...	0.253	0.249	0.281	0.318	0.329	0.318	0.323	0.296	11.61
43)	C	2,4,6-Trichlor...	0.372	0.381	0.423	0.476	0.485	0.467	0.469	0.439	10.76
44)		2,4,5-Trichlor...	0.410	0.417	0.453	0.517	0.519	0.501	0.497	0.474	9.83
45)	S	2-Fluorobiphenyl	1.588	1.555	1.632	1.807	1.822	1.744	1.688	1.691	6.21
46)		1,1'-Biphenyl	1.427	1.395	1.452	1.573	1.581	1.507	1.473	1.487	4.77
47)		2-Chloronaphth...	1.126	1.112	1.155	1.250	1.248	1.192	1.158	1.177	4.69
48)		2-Nitroaniline	0.238	0.242	0.269	0.302	0.304	0.294	0.286	0.276	9.96
49)		Acenaphthylene	1.794	1.715	1.810	1.972	1.971	1.889	1.845	1.857	5.10
50)		Dimethylphthalate	1.444	1.377	1.437	1.532	1.543	1.470	1.429	1.462	4.02
51)		2,6-Dinitrotol...	0.266	0.271	0.299	0.327	0.331	0.316	0.309	0.303	8.50
52)	C	Acenaphthene	1.038	0.998	1.046	1.133	1.145	1.094	1.067	1.075	4.93
53)		3-Nitroaniline	0.233	0.247	0.284	0.321	0.325	0.311	0.302	0.289	12.47
54)	P	2,4-Dinitrophenol		0.100	0.132	0.178	0.194	0.188	0.191	0.164	23.65
55)		Dibenzofuran	1.749	1.681	1.749	1.876	1.888	1.810	1.763	1.788	4.17
56)	P	4-Nitrophenol		0.128	0.180	0.224	0.237	0.231	0.231	0.205	20.96
57)		2,4-Dinitrotol...	0.338	0.366	0.412	0.456	0.468	0.447	0.440	0.418	11.72
58)		Fluorene	1.387	1.343	1.431	1.558	1.573	1.500	1.453	1.463	5.84
59)		2,3,4,6-Tetrac...	0.366	0.362	0.398	0.435	0.445	0.432	0.431	0.410	8.44
60)		Diethylphthalate	1.372	1.301	1.380	1.433	1.451	1.376	1.328	1.377	3.86
61)		4-Chlorophenyl...	0.741	0.716	0.770	0.857	0.871	0.836	0.836	0.804	7.58
62)		4-Nitroaniline	0.208	0.234	0.277	0.313	0.321	0.301	0.295	0.279	15.17
63)		Azobenzene	1.118	1.091	1.150	1.216	1.229	1.165	1.110	1.154	4.59
64)	I	Phenanthrene-d10	----------ISTD----------							
65)		4,6-Dinitro-2-...		0.088	0.110	0.135	0.142	0.138	0.137	0.125	17.16
66)	c	n-Nitrosodiphe...	0.580	0.572	0.596	0.655	0.657	0.629	0.610	0.614	5.56
67)		4-Bromophenyl-...	0.223	0.216	0.229	0.258	0.258	0.256	0.253	0.242	7.60
68)		Hexachlorobenzene	0.265	0.251	0.264	0.294	0.295	0.291	0.291	0.279	6.49
69)		Atrazine	0.196	0.198	0.214	0.236	0.242	0.234	0.230	0.222	8.47
70)	C	Pentachlorophenol		0.117	0.141	0.167	0.172	0.170	0.174	0.157	14.52
71)		Phenanthrene	1.075	1.035	1.083	1.187	1.212	1.173	1.132	1.128	5.84
72)		Anthracene	1.062	1.038	1.096	1.214	1.236	1.191	1.154	1.142	6.78
73)		Carbazole	0.909	0.900	0.960	1.054	1.075	1.038	0.999	0.991	7.05
74)		Di-n-butylphth...	1.106	1.082	1.151	1.246	1.277	1.231	1.165	1.180	6.25
75)	C	Fluoranthene	1.178	1.142	1.250	1.410	1.455	1.425	1.411	1.324	9.86
76)	I	Chrysene-d12	----------ISTD----------							
77)		Benzidine		0.560	0.646	0.772	0.769	0.765	0.751	0.710	12.36
78)		Pyrene	1.290	1.255	1.332	1.518	1.520	1.465	1.453	1.404	7.83
79)	S	Terphenyl-d14	1.176	1.189	1.332	1.524	1.541	1.458	1.239	1.352	11.58
80)		Butylbenzylpht...	0.489	0.479	0.515	0.562	0.568	0.545	0.524	0.526	6.53
81)		Benzo(a)anthra...	1.280	1.231	1.321	1.478	1.479	1.442	1.408	1.377	7.24
82)		3,3'-Dichlorob...	0.434	0.432	0.483	0.580	0.597	0.583	0.581	0.527	14.14
83)		Chrysene	1.208	1.170	1.214	1.342	1.369	1.325	1.296	1.275	6.03
84)		Bis(2-ethylhex...	0.726	0.725	0.775	0.843	0.852	0.814	0.765	0.786	6.61
85)	c	Di-n-octyl pht...	1.221	1.197	1.267	1.366	1.404	1.341	1.275	1.296	5.92

Method Path : Z:\svoasrv\HPCHEM1\BNA_M\Methods\
Method File : 8270-BM042825.M

86)	I	Perylene-d12	----------ISTD----------							
87)		Indeno(1,2,3-c...	1.301	1.293	1.404	1.602	1.646	1.591	1.595	1.490	10.27
88)		Benzo(b)fluora...	1.128	1.149	1.209	1.406	1.415	1.408	1.390	1.301	10.16
89)		Benzo(k)fluora...	1.219	1.150	1.251	1.387	1.449	1.383	1.372	1.316	8.29
90)	C	Benzo(a)pyrene	1.094	1.066	1.147	1.295	1.330	1.298	1.297	1.218	9.15
91)		Dibenzo(a,h)an...	1.056	1.044	1.142	1.300	1.347	1.305	1.310	1.215	10.72
92)		Benzo(g,h,i)pe...	1.066	1.030	1.105	1.236	1.268	1.224	1.212	1.163	8.07

(#) = Out of Range