

Co-Located Sampling Targeted Detection Limits and Reported Laboratory Method Detection Limits

Method / Analyte	Targeted Detection Limits	Typical Laboratory Detection Limits	Lab #1	Lab #2	Lab #3	Lab #4	Lab #5
			MDL	MDL	MDL	MDL	MDL
Volatile Organics by EPA 8260B	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg
1,3-Dichlorobenzene	20	514	120	600	160	1000	300
1,3-Dichloropropane	20	476	80	650	180	1000	300
1,4-Dichlorobenzene	20	483	160	670	150	1000	300
2-Chloroethyl vinyl ether	50	602	300	7700	3000	1000	1250
2-Chloro-1,1,1-trifluoroethane	50		500	NB	TBD	TBD	3000
2-Chlorotoluene	50	541	140	990	120	1000	3000
2-Butanone (MEK)	100	1870	1220	710	9600	5000	1250
2-Hexanone	100	2047	820	160	5600	5000	1500
2,2-Dichloropropane	10	433	170	670	460	2000	300
4-Chlorotoluene	50	528	140	1050	100	1000	300
4-Methyl-2-pentanone (MIBK)	50	1852	390	930	2000	5000	1250
Acetone	100	3050	6690	2800	6400	5000	1660
Benzene	20	436	100	630	130	1000	300
Bromobenzene	50	561	130	760	210	1000	300
Bromochloromethane	50	510	330	810	1400	1000	330
Bromodichloromethane	50	543	80	690	150	1000	300
Bromoform	50	855	400	800	660	1000	300
Bromomethane	50	500	250	1600	1800	2000	300
n-Propylbenzene	20	651	70	420	1000	1000	300
p-Isopropyltoluene	20	598	110	450	120	1000	300
sec-Butylbenzene	50	499	60	930	100	1000	300
tert-Butylbenzene	50	493	160	450	120	1000	300
Styrene	20	601	100	690	210	1000	300
Tetrachloroethene	20	745	200	540	170	1000	300
Toluene	20	521	80	650	150	1000	300
trans-1,2-Dichloroethene	20	502	120	1350	250	1000	300
trans-1,3-Dichloropropene	20	526	130	430	1900	1000	300
Trichloroethene	20	481	150	710	180	1000	330
Trichlorofluoromethane	50	333	290	1260	160	1000	570
o-Xylene	20	566	170	610	110	1000	300
m, p-Xylene	50	1192	170	430	200	2000	300
Vinyl chloride	20	256	200	1680	210	1000	300
1,1,2-Trichloro-1,2,2-trifluoroethane	50	648	200	830	470	2000	1600
1,1,1-Trichloroethane	20	460	200	810	250	1000	300
1,1,1,2-Tetrachloroethane	10	651	110	690	330	1000	300
1,1,2,2-Tetrachloroethane	20	446	230	1240	230	1000	300
1,1,2-Trichloroethane	20	504	270	270	240	1000	300
1,1-Dichloroethane	20	413	100	1130	160	1000	300
1,1-Dichloroethene	50	595	390	790	140	1000	300
1,1-Dichloropropene	20	523	130	550	220	1000	300
1,2,3-Trichlorobenzene	50	406	140	280	200	1000	300
1,2,3-Trichloropropane	10	430	330	1240	650	2000	300
1,2,4-Trichlorobenzene	50	694	180	520	180	1000	300
1,2,4-Trimethylbenzene	20	579	60	1180	120	1000	300
1,2-Dibromo-3-chloropropane	50	844	200	2190	3700	2000	300
1,2-Dibromoethane (EDB)	20	530	130	600	450	1000	300
1,2-Dichlorobenzene	20	462	90	950	130	1000	300
1,2-Dichloroethane	10	318	150	720	170	1000	300
1,2-Dichloropropane	20	501	170	620	270	1000	300
1,3,5-Trimethylbenzene	20	582	100	970	99	1000	300
Carbon tetrachloride	10	520	140	800	320	1000	300
Chlorobenzene	20	557	110	490	150	1000	300
Chloroethane	50	293	130	1550	420	1000	300
Chloroform	20	455	120	1430	170	1000	300
Chloromethane	50	288	330	1820	2900	2000	300

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			MDL	MDL	MDL	MDL	MDL
Chlorotrifluoroethylene	50	456	500	NB	TBD	TBD	3000
cis-1,2-Dichloroethene	20	487	190	1070	280	1000	300
cis-1,3-Dichloropropene	20	488	160	470	180	1000	300
Dibromochloromethane	20	712	200	850	200	1000	300
Dibromomethane	10	426	240	650	700	1000	300
Dichlorodifluoromethane	50	407	120	830	190	2000	300
Ethylbenzene	20	557	60	640	150	1000	300
Hexachlorobutadiene	50	535	140	600	190	1000	300
Isopropylbenzene	20	561	60	1110	120	1000	300
Methyl-tert-butyl- Ether (MTBE)	50	727	210	890	130	1000	300
Methylene chloride	50	1930	240	4580	5200	1000	2000
n-butylbenzene	50	2633	120	520	220	1000	300
1,4-Dioxane by EPA 8260B SIM	ng/kg		ng/kg	ng/kg	ng/kg	ng/kg	ng/kg
1,4-Dioxane	5	5000	5000	TBD	NB	50000	3000
Metals by EPA 6010/6020B	µg/kg		µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Aluminum	100	Ambient	5030	57.2	580	10000	1500
Antimony	10	Ambient	60	25.9	13.2	200	50
Arsenic	5	Ambient	40	80.9	50.7	100	100
Barium	5	Ambient	108	35.1	22.3	100	50
Beryllium	3	Ambient	16	66.7	17.6	100	10
Boron	50	Ambient	882	300	626	5000	400
Cadmium	2	Ambient	19.6	30.6	4.49	100	10
Calcium	100	Ambient	6130	8760	792	20000	3300
Chromium	10	Ambient	120	18	17.4	100	100
Cobalt	5	Ambient	20	16.8	6.74	100	30
Copper	2	Ambient	66	36.2	18.3	200	33
Iron	50	Ambient	4710	2910	396	10000	2500
Lead	4	Ambient	10.4	19.3	8.92	100	50
Lithium	63	Ambient	220	80	213	200	200
Magnesium	100	Ambient	2540	1900	430	20000	750
Manganese	10	Ambient	88	53.6	219	200	100
Molybdenum	1	Ambient	20	14.09	14.1	200	30
Nickel	4	Ambient	100	44.5	115	100	50
Phosphorus	500	Ambient	560	30	459	TBD	3300
Potassium	500	Ambient	18000	3860	6600	20000	8000
Selenium	10	Ambient	40	44.2	16.4	100	250
Silver	2	Ambient	10	17.3	3.53	100	20
Sodium	500	Ambient	37300	2170	5590	20000	8000
Strontium	50	Ambient	26	37.7	95	100	200
Thallium	2	Ambient	30	21.5	32.1	100	30
Tin	100	Ambient	190	80	372	10000	100
Titanium	20	Ambient	380	82.7	305	250	200
Vanadium	10	Ambient	16	20.8	97	250	200
Zinc	50	Ambient	560	132	242	1000	200
Zirconium	250	Ambient	831	60	100		50
Mercury by EPA 7471A	µg/kg		µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Mercury	0.1	10	2.9	17	13	20	2.2
Chromium VI by EPA 7196A or 7199	µg/kg		µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Chromium VI	2	34.1	200	10	3.8	20	120
Select SVOC by EPA Method 8270C(SIM)*	ng/kg		ng/kg	ng/kg	ng/kg	ng/kg	ng/kg

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			MDL	MDL	MDL	MDL	MDL
1-Methyl naphthalene	200	1,110	670	900	1800	2500	5000
2-Methylnaphthalene	200	1,110	670	900	1800	2500	3300
Acenaphthene	200	1,110	670	1000	1800	2500	5600
Acenaphthylene	200	1,110	330	900	1600	2500	5000
Anthracene	200	1,110	330	800	1800	2500	3300
Benzo(a)anthracene	200	1,110	670	900	2200	2500	5000
Benzo(a)pyrene	200	1,110	670	900	1800	2500	5000
Benzo(b)fluoranthene	200	1,110	670	1100	1800	2500	5000
Benzo(ghi)perylene	200	1,110	670	1300	1800	2500	5000
Benzo(k)fluoranthene	200	1,110	670	1000	2500	2500	5000
bis(2-Ethylhexyl) phthalate	200	1,110	6000	TBD	3100	50000	5500
Butyl benzyl phthalate	200	1,110	6000	TBD	3200	TBD	5000
Chrysene	200	1,110	330	800	2000	2500	5000
Dibenzo(a,h)anthracene	200	1,110	670	900	2000	2500	5000
Diethyl phthalate	200	1,110	6000	TBD	2000	TBD	5000
Dimethyl phthalate	200	1,110	6000	TBD	1800	TBD	5000
Di-n-butyl phthalate	200	1,110	6000	TBD	2100	TBD	5000
Di-n-octyl phthalate	200	1,110	6000	TBD	2900	TBD	5000
Fluoranthene	200	1,110	670	1200	1900	2500	5000
Fluorene	200	1,110	670	1000	1800	2500	5000
Indeno(1,2,3-cd)pyrene	200	1,110	670	900	1800	2500	5000
Naphthalene	200	1,110	670	900	1800	2500	5000
n-Nitrosodimethylamine	200	1,110	670	TBD	1800	2500	3300
Phenanthrene	200	1,110	670	1100	1900	2500	5000
Pyrene	200	1,110	670	1200	2500	2500	5200
Semivolatiles by EPA 8270C	µg/kg		µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
1-Methylnaphthalene	3.3	66.6	16.67	TBD	840	167	5
1,2-Dichlorobenzene	3.3	66.6	16.67	51.2	1000	167	67
1,2-Diphenylhydrazine/Azobenzene	3.3	66.6	16.67	TBD	1100	167	67
1,3-Dichlorobenzene	3.3	66.6	16.67	50.7	940	167	67
1,4-Dichlorobenzene	3.3	66.6	16.67	48.9	970	167	67
1,2,4-Trichlorobenzene	3.3	66.6	16.67	49.4	800	167	67
2,4,5-Trichlorophenol	3.3	66.6	33.33	60.1	790	167	67
2,4,6-Trichlorophenol	3.3	66.6	33.33	48.3	890	167	67
2,4-Dichlorophenol	3.3	66.6	16.67	50.5	970	167	67
2,4-Dimethylphenol	3.3	66.6	33.33	43.9	1200	167	117
2,4-Dinitrophenol	6.6	66.6	666.67	53.7	12000	167	127
2,4-Dinitrotoluene	3.3	66.6	33.33	63.8	960	167	33
2,6-Dinitrotoluene	3.3	66.6	16.67	60.6	1000	167	33
3,3-Dichlorobenzidine	8.3	66.6	99.99	56.3	1300	167	100
2-Chloronaphthalene	3.3	66.6	16.67	52.4	860	167	11
2-Chlorophenol	3.3	66.6	16.67	44.3	870	167	67
2-Methylnaphthalene	3.3	66.6	16.67	50.4	910	167	7
2-Methylphenol	3.3	66.6	33.33	45.2	2200	167	67
2-Nitroaniline	3.3	133	16.67	62.4	1300	167	67
2-Nitrophenol	3.3	66.6	16.67	47.8	1000	167	67
3-Nitroaniline	3.3	133	33.33	61.1	1300	167	67
3,5-Dimethylphenol	3.3	66.6	TBD	NB	TBD	TBD	NB
4,6-Dinitro-2-methylphenol	4.2	66.6	166.67	56.4	15000	167	67
4-Bromophenyl-phenylether	3.3	66.6	16.67	56.6	920	167	67
4-Chloroaniline	3.3	66.6	66.67	16.5	770	167	67
4-Chloro-3-methylphenol	3.3	66.6	33.33	58.8	1100	167	67
4-Chlorophenyl-phenylether	3.3	66.6	33.33	60.7	1200	167	67
4-Methylphenol	3.3	66.6	33.33	46.4	940	167	100
4-Nitroaniline	8.3	133	66.67	72.8	1000	167	100

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Method / Analyte	Targeted Detection Limits	Typical Laboratory Detection Limits	Lab #1	Lab #2	Lab #3	Lab #4	Lab #5
			MDL	MDL	MDL	MDL	MDL
4-Nitrophenol	8.3	175	166.67	59.8	1000	167	110
Acenaphthene	3.3	66.6	16.67	53.8	930	167	11
Acenaphthylene	3.3	66.6	16.67	53.1	990	167	10
Aniline	4.2	66.6	166.67	31	770	167	100
Anthracene	3.3	66.6	16.67	61.3	1000	167	6.7
Benzidine	16	66.6	1166.5	NB	1200	867	100
Benzoic acid	8.3	491	166.67	29.6	11000	667	167
Benzo(a)anthracene	3.3	66.6	16.67	58.0	1200	167	10
Benzo(a)pyrene	3.3	66.6	16.67	50.7	760	167	10
Benzo(b)fluoranthene	3.3	66.6	16.67	60.0	680	167	10
Benzo(g,h,i)perylene	3.3	66.6	16.67	55.2	970	167	10
Benzo(k)fluoranthene	3.3	66.6	16.67	61.0	700	167	10
Benzyl alcohol	3.3	66.6	166.67	55.8	860	167	100
bis(2-Chloroethoxy)methane	3.3	66.6	16.67	50.0	1100	167	67
Bis(2-chloroethyl)ether	3.3	66.6	16.67	49.9	1300	167	67
Bis(2-chloroisopropyl)ether	3.3	66.6	16.67	47.3	1100	167	67
Bis(2-ethylhexyl)phthalate	3.3	66.6	16.67	61.6	1600	167	67
Butylbenzylphthalate	3.3	66.6	16.67	55.5	1300	167	67
Carbazole	3.3	66.6	16.67	81.6	TBD	167	10
Chrysene	3.3	66.6	16.67	60.6	1000	167	10
Dibenzo(a,h)anthracene	3.3	66.6	16.67	59.4	810	167	10
Dibenzofuran	3.3	66.6	16.67	57.3	1000	167	67
Diethylphthalate	3.3	66.6	16.67	62.1	940	167	67
Dimethylphthalate	3.3	66.6	16.67	63.3	790	167	67
Di-n-butylphthalate	3.3	66.6	16.67	65.9	1100	167	67
Di-n-octyl-phthalate	3.3	66.6	16.67	58.4	870	167	67
Fluoranthene	3.3	66.6	16.67	65.4	910	167	10
Fluorene	3.3	66.6	16.67	61.3	960	167	10
Hexachlorobenzene	3.3	66.6	16.67	60.3	650	167	67
Hexachlorobutadiene	3.3	66.6	66.67	51.7	920	167	67
Hexachlorocyclopentadiene	8.3	66.6	166.67	44.0	870	167	67
Hexachloroethane	3.3	66.6	16.67	49.9	680	167	67
Indeno(1,2,3-cd)pyrene	3.3	66.6	16.67	60.4	910	167	10
Isophorone	3.3	66.6	16.67	57.0	960	167	67
Naphthalene	3.3	66.6	16.67	50.5	1000	167	10
Nitrobenzene	3.3	66.6	16.67	49.8	1100	167	67
n-Nitroso-di-n-propylamine	3.3	66.6	16.67	54.9	1200	167	67
n-Nitrosodimethylamine	3.3	66.6	33.33	50.6	870	167	67
n-Nitrosodiphenylamine	3.3	66.6	16.67	50.6	960	167	67
Phenanthrene	3.3	66.6	16.67	58.2	870	167	10
Pentachlorophenol	8.3	104	166.67	58.7	15000	167	83
Phenol	3.3	66.6	16.67	43.0	1000	167	67
Pyrene	3.3	66.6	16.67	54.1	1100	167	10
Perchlorate	ng/kg		ng/kg	ng/kg	ng/kg	ng/kg	ng/kg
EPA 8321/331.0/6850/6860	20		2100	2000	240	500	500
EPA 314.0	40		9000	2390	5360	10000	10000
PCB and PCT by EPA 8082	ng/kg		ng/kg	ng/kg	ng/kg	ng/kg	ng/kg
Aroclor 1016	150	1100	330	20000	2000	5000	1100
Aroclor 1221	150	1100	500	12000	2000	5000	1100
Aroclor 1232	150	1100	520	800	2000	5000	1100
Aroclor 1242	150	1100	500	800	2000	5000	1100
Aroclor 1248	150	1100	330	800	2000	5000	1100
Aroclor 1254	150	1100	330	800	2000	5000	1100

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			MDL	MDL	MDL	MDL	MDL
Aroclor 1260	150	1100	330	800	2200	5000	1100
Aroclor 1262	500	1100	330	11000	2000	5000	1100
Aroclor 1268	500	1100	330	11000	2000	5000	1100
Aroclor 5432	500	1100	1000	TBD	TBD	TBD	NB
Aroclor 5442	500	1100	1000	TBD	TBD	TBD	NB
Aroclor 5460	500	1100	1000	TBD	TBD	TBD	NB
Energetics by EPA 8330A	µg/kg		ug/kg	µg/kg	µg/kg	µg/kg	µg/kg
HMX	2.5	71.7	100	80	75	100	50
Nitrobenzene	2.5	49.2	40	75	75	100	50
Nitroglycerin	50	132	800	85	85	250	250
PETN	40	214	800	579	579	250	83
RDX	2.5	41.7	50	80	80	100	50
Tetryl	5	51.5	61	91	91	100	50
1,3-Dinitrobenzene	2.5	49.8	40	63	63	100	50
1,3,5-Trinitrobenzene	2.5	45.8	40	79	79	100	50
2-Amino-4,6-dinitrotoluene	2.5	50	40	75	75	100	50
2-Nitrotoluene	2.5	72.5	80	66	71	100	50
2,4-diamino-6-nitrotoluene	10		40	NB	75	TBD	500
2,4-Dinitrotoluene	2.5	54.5	40	83	83	100	50
2,4,6-Trinitrotoluene	2.5	82	40	83	83	100	50
2,6-diamino-4-nitrotoluene	10		40	NB	75	TBD	500
2,6-Dinitrotoluene	2.5	50.9	40	83	83	100	50
3-Nitrotoluene	2.5	44.4	100	71	66	100	50
4-Amino-2,6-dinitrotoluene	2.5	50	60	75	75	100	50
4-Nitrotoluene	4	69.6	80	80	80	100	50
Cyanide by EPA 9012B	µg/kg		µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Cyanide	5		200	NB	490	200	68
TPH by EPA 8015B	µg/kg		ug/kg	µg/kg	µg/kg	µg/kg	µg/kg
Gasoline (C4-C12)	50		200	340	61	500	11.4
– Specific Carbon Ranges							
EFH(C8-C11)	50		400	TBD	3100	5000	1100
EFH(C12-C14)	50		400	TBD	1800	5000	1100
EFH(C15-C20)	50		400	TBD	1800	5000	1100
EFH(C21-C30)	50		400	TBD	2400	5000	1100
(C30-C40)	250		400	TBD	1600	5000	1100
Pesticides by 8081A	ng/kg		ng/kg	ng/kg	ng/kg	ng/kg	ng/kg
4,4'-DDD	50	500	33	1800	180	400	330
4,4'-DDE	50	500	33	1600	300	400	330
4,4'-DDT	50	500	33	400	330	400	330
Aldrin	50	500	33	1400	310	400	170
alpha-BHC	50	500	17	500	290	400	170
beta-BHC	50	500	30	1000	250	400	170
Chlordane (Technical)	100	1000	400	1500	4000	20000	1700
delta-BHC	100	500	18	1100	320	400	170
Dieldrin	50	500	33	1100	230	400	330
Endosulfan I	50	500	22	440	360	400	170
Endosulfan II	50	500	33	440	180	400	330
Endosulfan sulfate	100	5000	33	440	260	400	330
Endrin	50	500	33	1100	200	400	330
Endrin aldehyde	50	500	33	2900	200	400	330
Endrin ketone	50	500	33	3500	300	400	330

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			MDL	MDL	MDL	MDL	MDL
gamma-BHC	50	500	17	900	230	400	170
Heptachlor	50	500	30	1100	220	400	170
Heptachlor epoxide	50	500	17	1100	180	400	209
Mirex	50	500	33	2700	1200	1000	170
p,p'-Methoxychlor	50	500	170	1400	170	5000	1700
Toxaphene	500	100000	1100	15670	8500	10000	5560
Herbicides by EPA Method 8151	ng/kg		ng/kg	ng/kg	ng/kg	ng/kg	ng/kg
2,4,5-T	200	100	82	NB	1500	5000	5000
2,4,5-Trichlorophenoxypropionic acid	800	200	75	NB	1300	5000	5000
2,4-Dichlorophenoxyacetic Acid (2,4-D)	200	100	1200	NB	15000	5000	5000
2,4-Dichlorophenoxybutyric acid	800	100	620	NB	16000	5000	5000
Dalapon	500	200	4400	NB	16000	5000	20000
Dicamba	400	100	400	NB	2200	5000	5000
Dichlorprop	800	100	800	NB	17000	5000	5000
Dinoseb	120	100	800	NB	5000	5000	5000
MCPA	80000	10000	75000	NB	1600000	1000000	230000
MCPP	80000	10000	76000	NB	1000000	1000000	200000
Dioxin/Furan by EPA Method 1613B	ng/g		ng/g	ng/g	ng/g	ng/g	ng/g
1,2,3,4,6,7,8-HpCDF	50		300	NB	NB	NB	--
1,2,3,4,6,7,8-HpCDD	50		200	NB	NB	NB	--
1,2,3,4,7,8,9-HpCDF	50		400	NB	NB	NB	--
1,2,3,4,7,8-HxCDF	50		200	NB	NB	NB	--
1,2,3,4,7,8-HxCDD	50		300	NB	NB	NB	--
1,2,3,6,7,8-HxCDF	50		200	NB	NB	NB	--
1,2,3,6,7,8-HxCDD	50		400	NB	NB	NB	--
1,2,3,7,8,9-HxCDF	50		500	NB	NB	NB	--
1,2,3,7,8,9-HxCDD	50		300	NB	NB	NB	--
1,2,3,7,8-PeCDF	50		400	NB	NB	NB	--
1,2,3,7,8-PeCDD	50		400	NB	NB	NB	--
2,3,4,6,7,8-HxCDF	50		300	NB	NB	NB	--
2,3,4,7,8-PeCDF	50		200	NB	NB	NB	--
2,3,7,8-TCDD	10		60	NB	NB	NB	--
2,3,7,8-TCDF	10		90	NB	NB	NB	--
OCDF	100		500	NB	NB	NB	--
OCDD	100		700	NB	NB	NB	--

Notes:

EPA = U.S. Environmental Protection Agency

MDL = method detection limit

mg/kg = milligrams per kilogram

pg/g = picograms per gram

µg/kg = micrograms per kilogram

ng/kg = nanograms per kilogram

TBD = to be determined

NB = no bid

No Fill		Lowest Reported Detection Limit
Yellow Fill		Second Lowest Detection Limit
Tan Fill		Third Lowest Detection Limit
Pink Fill		Fourth Detection Limit
Red Fill		Highest Detection Limit