

Pennsylvania (Chapter 252) Accreditation
Fields of Proficiency Testing
Solid Chemical Materials
Effective April 28, 2012

<i>Matrix</i>	<i>Analyte</i> ⁶	<i>PTRL</i>	<i>Units</i>	<i>Matrix</i>	<i>Analyte</i> ⁶	<i>PTRL</i>	<i>Units</i>
	Trace Metals				Low Level Volatile Aromatics ¹		
SOLIDS	Aluminum	100	mg/kg	SOLIDS	Benzene ¹	10	µg/kg
SOLIDS	Antimony	8	mg/kg	SOLIDS	Chlorobenzene ¹	10	µg/kg
SOLIDS	Arsenic	4	mg/kg	SOLIDS	1,2-Dichlorobenzene ^{1,2}	8.9	µg/kg
SOLIDS	Barium	10	mg/kg	SOLIDS	1,3-Dichlorobenzene ^{1,2}	5.1	µg/kg
SOLIDS	Beryllium	4	mg/kg	SOLIDS	1,4-Dichlorobenzene ^{1,2}	7	µg/kg
SOLIDS	Boron *	48	mg/kg	SOLIDS	Ethylbenzene ¹	9.4	µg/kg
SOLIDS	Cadmium	4	mg/kg	SOLIDS	Naphthalene ^{1,2}	6	µg/kg
SOLIDS	Calcium	150	mg/kg	SOLIDS	Styrene ^{1*}	24	µg/kg
SOLIDS	Chromium	4	mg/kg	SOLIDS	Toluene ¹	11	µg/kg
SOLIDS	Chromium VI	4	mg/kg	SOLIDS	1,2,4-Trichlorobenzene ^{1,2}	16	µg/kg
SOLIDS	Cobalt	4	mg/kg	SOLIDS	Xylenes, total ¹	18	µg/kg
SOLIDS	Copper	4	mg/kg				
SOLIDS	Iron	100	mg/kg		Low Level Volatile Halocarbons ¹		
SOLIDS	Lead	4	mg/kg	SOLIDS	Bromodichloromethane ¹	10	µg/kg
SOLIDS	Magnesium	120	mg/kg	SOLIDS	Bromoform ¹	9.3	µg/kg
SOLIDS	Manganese	10	mg/kg	SOLIDS	Carbon tetrachloride ¹	9.9	µg/kg
SOLIDS	Mercury	0.1	mg/kg	SOLIDS	Chloroform ¹	11	µg/kg
SOLIDS	Molybdenum	3	mg/kg	SOLIDS	Dibromochloromethane ¹	9.9	µg/kg
SOLIDS	Nickel	4	mg/kg	SOLIDS	1,2-Dibromo-3-chloropropane (DBCP) ^{1*}	4	µg/kg
SOLIDS	Potassium	140	mg/kg	SOLIDS	1,2-Dibromoethane (EDB) ^{1*}	24	µg/kg
SOLIDS	Selenium	4	mg/kg	SOLIDS	1,1-Dichloroethane ¹	11	µg/kg
SOLIDS	Silver	2	mg/kg	SOLIDS	1,2-Dichloroethane ¹	12	µg/kg
SOLIDS	Sodium	15	mg/kg	SOLIDS	1,1-Dichloroethene ^{1*}	13	µg/kg
SOLIDS	Strontium	4	mg/kg	SOLIDS	cis-1,2-Dichloroethene ^{1*}	20	µg/kg
SOLIDS	Thallium	4	mg/kg	SOLIDS	trans-1,2-Dichloroethene ^{1*}	23	µg/kg
SOLIDS	Tin	7.5	mg/kg	SOLIDS	Dichloromethane (Methylene chloride) ¹	9	µg/kg
SOLIDS	Vanadium	4	mg/kg	SOLIDS	1,2-Dichloropropane ¹	12	µg/kg
SOLIDS	Zinc	10	mg/kg	SOLIDS	1,1,1,2-Tetrachloroethane ¹	12	µg/kg
				SOLIDS	1,1,2,2-Tetrachloroethane ¹	8.9	µg/kg
				SOLIDS	Tetrachloroethene ¹	8.3	µg/kg
				SOLIDS	1,1,1-Trichloroethane ¹	9	µg/kg
				SOLIDS	1,1,2-Trichloroethane ¹	13	µg/kg
				SOLIDS	Trichloroethene ¹	9.7	µg/kg
				SOLIDS	1,2,3-Trichloropropane ¹	8.3	µg/kg

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	Minerals					Medium Level Volatile Halocarbons		
SOLIDS	Bromide *	1	mg/kg		SOLIDS	Bromodichloromethane	479	µg/kg
SOLIDS	Chloride *	20	mg/kg		SOLIDS	Bromoform	415	µg/kg
SOLIDS	Fluoride *	2.5	mg/kg		SOLIDS	Carbon tetrachloride	480	µg/kg
SOLIDS	Nitrate as N *	2.5	mg/kg		SOLIDS	Chloroform	550	µg/kg
SOLIDS	Sulfate *	2.5	mg/kg		SOLIDS	Dibromochloromethane	642	µg/kg
					SOLIDS	1,2-Dibromo-3-chloropropane (DBCP) *	1200	µg/kg
	Nutrients				SOLIDS	1,2-Dibromoethane (EDB) *	1200	µg/kg
SOLIDS	Ammonia as N *	30	mg/kg		SOLIDS	Dibromomethane	1200	µg/kg
SOLIDS	Total Kjeldahl-Nitrogen *	40	mg/kg		SOLIDS	1,1-Dichloroethane	676	µg/kg
SOLIDS	Total Phosphorus *	30	mg/kg		SOLIDS	1,2-Dichloroethane	663	µg/kg
					SOLIDS	1,1-Dichloroethene *	1000	µg/kg
	Misc Analytes				SOLIDS	cis-1,2-Dichloroethene *	1200	µg/kg
SOLIDS	Corrosivity (pH)	N/A	N/A		SOLIDS	trans-1,2-Dichloroethene *	1200	µg/kg
SOLIDS	Cyanide, total	2	mg/kg		SOLIDS	Dichloromethane (Methylene chloride)	435	µg/kg
SOLVENT	Ignitability (Flashpoint)	N/A	N/A		SOLIDS	1,2-Dichloropropane	1400	µg/kg
					SOLIDS	1,1,1,2-Tetrachloroethane	520	µg/kg
	Low Level Volatile Ketone/Ethers ¹				SOLIDS	1,1,2,2-Tetrachloroethane	455	µg/kg
SOLIDS	Acetone ¹	20	µg/kg		SOLIDS	Tetrachloroethene	543	µg/kg
SOLIDS	2-Butanone (Methyl ethyl ketone) ¹	10	µg/kg		SOLIDS	1,1,1-Trichloroethane	530	µg/kg
SOLIDS	2-Hexanone ^{1*}	20	µg/kg		SOLIDS	1,1,2-Trichloroethane	732	µg/kg
SOLIDS	4-Methyl-2-pentanone (MIBK) ¹	32	µg/kg		SOLIDS	Trichloroethene	638	µg/kg
SOLIDS	Methyl-tert-butyl ether (MTBE) ¹	7.8	µg/kg		SOLIDS	1,2,3-Trichloropropane	407	µg/kg
	Medium Level Volatile Aromatics					Medium Level Volatile Ketone/Ethers		
SOLIDS	Benzene	656	µg/kg		SOLIDS	Acetone	929	µg/kg
SOLIDS	Chlorobenzene	648	µg/kg		SOLIDS	2-Butanone (Methyl ethyl ketone)	808	µg/kg
SOLIDS	1,2-Dichlorobenzene ²	618	µg/kg		SOLIDS	2-Hexanone *	2000	µg/kg
SOLIDS	1,3-Dichlorobenzene ²	500	µg/kg		SOLIDS	4-Methyl-2-pentanone (MIBK)	1630	µg/kg
SOLIDS	1,4-Dichlorobenzene ²	596	µg/kg		SOLIDS	Methyl-tert-butyl ether (MTBE)	1400	µg/kg
SOLIDS	Ethylbenzene	697	µg/kg					
SOLIDS	Naphthalene ²	721	µg/kg			Herbicides		
SOLIDS	Styrene *	1200	µg/kg		SOLIDS	2,4-D	10	µg/kg
SOLIDS	Toluene	665	µg/kg		SOLIDS	2,4-DB *	10	µg/kg
SOLIDS	1,2,4-Trichlorobenzene ²	1200	µg/kg		SOLIDS	Dicamba	10	µg/kg
SOLIDS	Xylenes, total	931	µg/kg		SOLIDS	Dinoseb *	10	µg/kg
					SOLIDS	Pentachlorophenol *	10	µg/kg
	Volatile Petroleum Hydrocarbons				SOLIDS	2,4,5-T	10	µg/kg
SOLIDS	Gasoline Range Organics (GRO)	10	mg/kg		SOLIDS	2,4,5-TP (Silvex)	10	µg/kg

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	Base/Neutrals					Base/Neutrals (cont.)		
SOLIDS	Acenaphthene	100	µg/kg		SOLIDS	N-Nitroso-di-n-propylamine	150	µg/kg
SOLIDS	Acenaphthylene	100	µg/kg		SOLIDS	Phenanthrene	100	µg/kg
SOLIDS	Anthracene	100	µg/kg		SOLIDS	Pyrene	100	µg/kg
SOLIDS	Benzo(a)anthracene	100	µg/kg		SOLIDS	1,2,4-Trichlorobenzene ²	150	µg/kg
SOLIDS	Benzo(b)fluoranthene	100	µg/kg					
SOLIDS	Benzo(k)fluoranthene	100	µg/kg			Acids		
SOLIDS	Benzo(g,h,i)perylene	100	µg/kg		SOLIDS	4-Chloro-3-methylphenol	150	µg/kg
SOLIDS	Benzo(a)pyrene	100	µg/kg		SOLIDS	2-Chlorophenol	150	µg/kg
SOLIDS	4-Bromophenyl-phenylether	150	µg/kg		SOLIDS	2,4-Dichlorophenol	150	µg/kg
SOLIDS	Butylbenzylphthalate	150	µg/kg		SOLIDS	2-Methylphenol (o-Cresol)	300	µg/kg
SOLIDS	bis(2-Chloroethyl)ether *	150	µg/kg		SOLIDS	4-Methylphenol (p-Cresol) * ⁴	300	µg/kg
SOLIDS	bis(2-Chloroethoxy)methane	150	µg/kg		SOLIDS	2-Nitrophenol	300	µg/kg
SOLIDS	bis(2-Chloroisopropyl)ether	150	µg/kg		SOLIDS	4-Nitrophenol	300	µg/kg
SOLIDS	2-Chloronaphthalene	100	µg/kg		SOLIDS	Phenol	150	µg/kg
SOLIDS	4-Chlorophenyl-phenylether	150	µg/kg		SOLIDS	Pentachlorophenol	300	µg/kg
SOLIDS	Chrysene	100	µg/kg		SOLIDS	2,4,5-Trichlorophenol	150	µg/kg
SOLIDS	Dibenz(a,h)anthracene	100	µg/kg		SOLIDS	2,4,6-Trichlorophenol	150	µg/kg
SOLIDS	Dibenzofuran	150	µg/kg					
SOLIDS	1,2-Dichlorobenzene ²	150	µg/kg			PCBs ³		
SOLIDS	1,3-Dichlorobenzene ²	150	µg/kg		SOLIDS	Aroclor 1016 ³	0.1	mg/kg
SOLIDS	1,4-Dichlorobenzene ²	150	µg/kg		SOLIDS	Aroclor 1221 ³	0.1	mg/kg
SOLIDS	Diethylphthalate	150	µg/kg		SOLIDS	Aroclor 1232 ³	0.1	mg/kg
SOLIDS	Dimethylphthalate	150	µg/kg		SOLIDS	Aroclor 1242 ³	0.1	mg/kg
SOLIDS	Di-n-butylphthalate	150	µg/kg		SOLIDS	Aroclor 1248 ³	0.1	mg/kg
SOLIDS	2,4-Dinitrotoluene	150	µg/kg		SOLIDS	Aroclor 1254 ³	0.1	mg/kg
SOLIDS	2,6-Dinitrotoluene	150	µg/kg		SOLIDS	Aroclor 1260 ³	0.1	mg/kg
SOLIDS	Di-n-octylphthalate	150	µg/kg					
SOLIDS	bis(2-Ethylhexyl)phthalate	150	µg/kg			PCBs in Oil ³		
SOLIDS	Fluoranthene	100	µg/kg		OIL	Aroclor 1016 ³	1.7	mg/kg
SOLIDS	Fluorene	100	µg/kg		OIL	Aroclor 1242 ³	1.7	mg/kg
SOLIDS	Hexachloroethane *	150	µg/kg		OIL	Aroclor 1254 ³	1.6	mg/kg
SOLIDS	Hexachlorobenzene	150	µg/kg		OIL	Aroclor 1260 ³	2.4	mg/kg
SOLIDS	Hexachlorobutadiene	150	µg/kg					
SOLIDS	Indeno(1,2,3-cd)pyrene	100	µg/kg			Petroleum Hydrocarbons		
SOLIDS	Isophorone *	150	µg/kg		SOLIDS	Diesel Range Organics (DRO)	30	mg/kg
SOLIDS	2-Methylnaphthalene *	100	µg/kg		SOLIDS	n-Hexane Extractable Material (O&G) ⁵	30	mg/kg
SOLIDS	Naphthalene ²	100	µg/kg					
SOLIDS	Nitrobenzene	150	µg/kg					

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	Organochlorine Pesticides					Low Level Polvaromatic Hvdrocarbons (PAHs) ¹		
SOLIDS	Aldrin	5	µg/kg		SOLIDS	Acenaphthene ¹	15	µg/kg
SOLIDS	alpha-BHC	5	µg/kg		SOLIDS	Acenaphthylene ¹	15	µg/kg
SOLIDS	beta-BHC	5	µg/kg		SOLIDS	Anthracene ¹	10	µg/kg
SOLIDS	delta-BHC	5	µg/kg		SOLIDS	Benzo(a)anthracene ¹	5	µg/kg
SOLIDS	gamma-BHC(Lindane)	5	µg/kg		SOLIDS	Benzo(b)fluoranthene ¹	5	µg/kg
SOLIDS	alpha-Chlordane	5	µg/kg		SOLIDS	Benzo(k)fluoranthene ¹	5	µg/kg
SOLIDS	gamma-Chlordane	5	µg/kg		SOLIDS	Benzo(g,h,i)perylene ¹	10	µg/kg
SOLIDS	Chlordane, Technical	20	µg/kg		SOLIDS	Benzo(a)pyrene ¹	5	µg/kg
SOLIDS	4,4'-DDD	5	µg/kg		SOLIDS	Chrysene ¹	5	µg/kg
SOLIDS	4,4'-DDE	5	µg/kg		SOLIDS	Dibenz(a,h)anthracene ¹	5	µg/kg
SOLIDS	4,4'-DDT	5	µg/kg		SOLIDS	Fluoranthene ¹	10	µg/kg
SOLIDS	Dieldrin	5	µg/kg		SOLIDS	Fluorene ¹	5	µg/kg
SOLIDS	Endosulfan I	5	µg/kg		SOLIDS	Indeno(1,2,3-cd)pyrene ¹	5	µg/kg
SOLIDS	Endosulfan II	5	µg/kg		SOLIDS	Naphthalene ¹	15	µg/kg
SOLIDS	Endosulfan sulfate	5	µg/kg		SOLIDS	Phenanthrene ¹	10	µg/kg
SOLIDS	Endrin	5	µg/kg		SOLIDS	Pyrene ¹	5	µg/kg
SOLIDS	Endrin aldehyde	5	µg/kg					
SOLIDS	Endrin ketone	5	µg/kg					
SOLIDS	Heptachlor	5	µg/kg					
SOLIDS	Heptachlor epoxide (beta)	5	µg/kg					
SOLIDS	Methoxychlor	5	µg/kg					
SOLIDS	Toxaphene	20	µg/kg					

*) Identifies new Field of Proficiency Testing.

1) The Low Level Analytes are specifically intended for technologies/methods that can achieve the listed PTRL. Laboratories analyzing routine environmental samples using technologies/methods that can achieve the listed PTRLs must analyze the Low Level Analyte PT samples.

2) Analysis required per volatile analytical technologies and solvent extraction/semivolatile analytical technologies.

3) Laboratories must analyze and report results for all Arochlors for a given matrix in an individual PT study. Incorrect identification or quantitation of one Arochlor will result in failure for the group.

4) Laboratories seeking to report data for Solid and Chemical Material analyte 4-Methylphenol or the coeluting isomer pair of 3-Methylphenol and 4-Methylphenol must report the data as 4-Methylphenol.

5) n-Hexane Extractable Material (HEM) per solvent extraction followed by gravimetric or infrared spectrometric analysis (Oil & Grease).

6) All FoPTs must meet the design, verification, homogeneity, stability, and acceptance limits described in V3 of the TNI Standard and the TNI FoPT Tables.