

Pennsylvania (Chapter 252) Accreditation
Fields of Proficiency Testing
Drinking Water
Effective April 28, 2012

<i>Matrix</i>	<i>Analyte</i> ⁹	<i>PTRL</i>	<i>Units</i>		<i>Matrix</i>	<i>Analyte</i> ⁹	<i>PTRL</i>	<i>Units</i>
	Microbiology					Misc Analytes		
DW	Total Coliform ¹	P/A	N/A		DW	Alkalinity as CaCO ₃ /L	22	mg/L
DW	Fecal Coliform ¹	P/A	N/A		DW	Asbestos	1	MF/L
DW	E.coli ¹	P/A	N/A		DW	Corrosivity *	N/A	N/A
					DW	Cyanide, Total	0.075	mg/L
DW	Heterotrophic Plate Count (MF, PP) ²	2	CFU (MPN)/mL		DW	Dissolved Organic Carbon (DOC) *	1.1	mg/L
DW	Heterotrophic Plate Count (MPN) ³	2	CFU (MPN)/mL		DW	Perchlorate *	3.2	ug/L
					DW	pH	N/A	N/A
DW	E.coli (MF) ²	2	CFU (MPN)/100 mL		DW	Residual Free Chlorine	0.37	mg/L
DW	E.coli (MPN) ³	2	CFU (MPN)/100 mL		DW	Silica as SiO ₂ *	4.2	mg/L
DW	Fecal Coliform (MF) ²	2	CFU (MPN)/100 mL		DW	Specific Conductance	117	µmhos/cm
DW	Fecal Coliform (MPN) ³	2	CFU (MPN)/100 mL		DW	Surfactants - MBAS *	0.02	mg/L
DW	Total Coliform (MF) ²	2	CFU (MPN)/100 mL		DW	Total Residual Chlorine	0.4	mg/L
DW	Total Coliform (MPN) ³	2	CFU (MPN)/100 mL		DW	Total Filterable Residue	80	mg/L
					DW	Total Organic Carbon	1	mg/L
	Minerals				DW	Turbidity	0.36	NTU
DW	Chloride	17	mg/L		DW	UV 254 Absorbance *	0.038	cm-1
DW	Fluoride	0.9	mg/L		DW/NPW	Acidity as CaCO ₃ /L ⁸	585	mg/L
DW	Sulfate	21	mg/L		DW/NPW	Non-Filterable Residue (TSS) ⁸	14	mg/L
DW	Potassium	8.5	mg/L		DW/NPW	Total Phenolics (4AAP) ⁸	0.01	mg/L
DW	Sodium	11	mg/L		DW/NPW	5-day BOD ⁸	4.5	mg/L
DW	Calcium	26	mg/L		DW/NPW	Carbonaceous BOD ⁸	3.7	mg/L
DW	Magnesium	1.7	mg/L		DW/NPW	COD ⁸	17	mg/L
DW	Ca Hardness as CaCO ₃	64	mg/L		DW/NPW	n-Hexane Extractable Material (O&G) ^{8,14}	8.8	mg/L
DW	Total Hardness as CaCO ₃	71	mg/L		DW/NPW	Non-Polar Extractable Material (TPH) ^{8,15}	7.6	mg/L
DW/NPW	Sulfide ⁸	0.1	mg/L					
DW/NPW	Total Solids ⁸	106	mg/L					
						Nutrients		
					DW	Nitrate as N	2.7	mg/L
	Inorganic Disinfection By-Products				DW	Nitrate + Nitrite as N	2.6	mg/L
DW	Bromate	4.9	µg/L		DW	Nitrite as N	0.34	mg/L
DW	Bromide	42	µg/L		DW	Orthophosphate as P	0.43	mg/L
DW	Chlorate	42	µg/L		DW/NPW	Ammonia as N ⁸	0.35	mg/L
DW	Chlorite	70	µg/L		DW/NPW	Total Kjeldahl-Nitrogen ⁸	1.1	mg/L
					DW/NPW	Total Phosphorus ⁸	0.34	mg/L

Pennsylvania (Chapter 252) Accreditation
Fields of Proficiency Testing
Drinking Water
Effective April 28, 2012

<i>Matrix</i>	<i>Analyte</i> ⁹	<i>PTRL</i>	<i>Units</i>			<i>Matrix</i>	<i>Analyte</i> ⁹	<i>PTRL</i>	<i>Units</i>
	Trace Metals						Regulated Volatile Organic Compounds (VOCs) ⁷		
DW	Aluminum	104	µg/L			DW	Benzene ^{7,13}	1.2	µg/L
DW	Antimony	4.2	µg/L			DW	Carbon Tetrachloride ^{7,13}	1.2	µg/L
DW	Arsenic	3.5	µg/L			DW	Chlorobenzene ^{7,13}	1.2	µg/L
DW	Barium	420	µg/L			DW	1,2-Dichlorobenzene ^{7,13}	1.2	µg/L
DW	Beryllium	1.7	µg/L			DW	1,4-Dichlorobenzene ^{7,13}	1.2	µg/L
DW	Boron	680	µg/L			DW	1,2-Dichloroethane ^{7,13}	1.2	µg/L
DW	Cadmium	1.6	µg/L			DW	1,1-Dichloroethylene ^{7,13}	1.2	µg/L
DW	Chromium	8.5	µg/L			DW	Cis-1,2-Dichloroethylene ^{7,13}	1.2	µg/L
DW	Hexavalent Chromium (VI) *	4	µg/L			DW	Trans-1,2-Dichloroethylene ^{7,13}	1.2	µg/L
DW	Copper	45	µg/L			DW	Dichloromethane (Methylene Chloride) ^{7,13}	1.2	µg/L
DW	Iron	80	µg/L			DW	1,2 Dichloropropane ^{7,13}	1.2	µg/L
DW	Lead	3.5	µg/L			DW	Ethylbenzene ^{7,13}	1.2	µg/L
DW	Manganese	34	µg/L			DW	Styrene ^{7,13}	1.2	µg/L
DW	Mercury	0.35	µg/L			DW	Tetrachloroethylene ^{7,13}	1.2	µg/L
DW	Molybdenum	13	µg/L			DW	Toluene ^{7,13}	1.2	µg/L
DW	Nickel	8.5	µg/L			DW	1,1,1-Trichloroethane ^{7,13}	1.2	µg/L
DW	Selenium	8	µg/L			DW	1,1,2-Trichloroethane ^{7,13}	1.2	µg/L
DW	Silver	14	µg/L			DW	Trichloroethylene ^{7,13}	1.2	µg/L
DW	Thallium	1.4	µg/L			DW	1,2,4-Trichlorobenzene ^{7,13}	1.2	µg/L
DW	Vanadium	42	µg/L			DW	Vinyl Chloride ⁷	1.2	µg/L
DW	Zinc	170	µg/L			DW	Total Xylenes ^{7,13}	1.2	µg/L
DW/NPW	Cobalt ⁸	22	µg/L						
DW/NPW	Strontium ⁸	22	µg/L				Low Level Volatile Organic Compounds (VOCs) ¹⁶		
DW/NPW	Tin ⁸	790	µg/L			DW	1,2-Dibromo-3-chloropropane (DBCP) ¹⁶	0.06	µg/L
DW/NPW	Titanium ⁸	67	µg/L			DW	Ethylene Dibromide (EDB) ¹⁶	0.03	µg/L
						DW	1,2,3-Trichloropropane ¹⁶	0.12	µg/L
							Total Trihalomethanes (TTHMs) ⁴		
						DW	Bromodichloromethane ⁴	4	µg/L
						DW	Bromoform ⁴	4	µg/L
						DW	Chlorodibromomethane ⁴	4	µg/L
						DW	Chloroform ⁴	4	µg/L

Pennsylvania (Chapter 252) Accreditation
Fields of Proficiency Testing
Drinking Water
Effective April 28, 2012

<i>Matrix</i>	<i>Analyte</i> ⁹	<i>PTRL</i>	<i>Units</i>		<i>Matrix</i>	<i>Analyte</i> ⁹	<i>PTRL</i>	<i>Units</i>
	Volatile Organic Compounds (VOCs)					Pesticides		
DW	Bromobenzene	1.2	µg/L		DW	Alachlor	1.1	µg/L
DW	Bromochloromethane	1.2	µg/L		DW	Aldrin	0.08	µg/L
DW	Bromomethane	3	µg/L		DW	Atrazine	1.1	µg/L
DW	n-Butylbenzene	1.2	µg/L		DW	Butachlor	1.1	µg/L
DW	Sec-Butylbenzene	1.2	µg/L		DW	Chlordane (technical)	1.1	µg/L
DW	Tert-Butylbenzene	1.2	µg/L		DW	Dieldrin	0.28	µg/L
DW	Chloroethane	3	µg/L		DW	Endrin	0.14	µg/L
DW	Chloromethane	3	µg/L		DW	Heptachlor	0.11	µg/L
DW	2-Chlorotoluene	1.2	µg/L		DW	Heptachlor Epoxide (beta)	0.11	µg/L
DW	4-Chlorotoluene	1.2	µg/L		DW	Hexachlorobenzene	0.22	µg/L
DW	Dibromomethane	1.2	µg/L		DW	Hexachlorocyclopentadiene	0.49	µg/L
DW	1,3-Dichlorobenzene	1.2	µg/L		DW	Lindane	0.11	µg/L
DW	Dichlorodifluoromethane	3	µg/L		DW	Methoxychlor	1.1	µg/L
DW	1,1-Dichloroethane	1.2	µg/L		DW	Metolachlor	1.1	µg/L
DW	1,3-Dichloropropane	1.2	µg/L		DW	Metribuzin	1	µg/L
DW	2,2-Dichloropropane	1.2	µg/L		DW	Propachlor	0.55	µg/L
DW	1,1-Dichloropropene	1.2	µg/L		DW	Simazine	1.1	µg/L
DW	Cis-1,3-Dichloropropene	1.2	µg/L		DW	Toxaphene (total)	1.1	µg/L
DW	Trans-1,3-Dichloropropene	1.2	µg/L		DW	Trifluralin	0.55	µg/L
DW	Hexachlorobutadiene	3	µg/L					
DW	Isopropylbenzene	1.2	µg/L			Carbamates & Vydate		
DW	4-Isopropyltoluene	1.2	µg/L		DW	Aldicarb	11	µg/L
DW	Methyl-tert-butylether (MTBE)	3	µg/L		DW	Aldicarb Sulfone	11	µg/L
DW	Naphthalene *	1.2	µg/L		DW	Aldicarb Sulfoxide	11	µg/L
DW	n-Propylbenzene	1.2	µg/L		DW	Carbaryl	11	µg/L
DW	1,1,1,2-Tetrachloroethane	1.2	µg/L		DW	Carbofuran	8.3	µg/L
DW	1,1,2,2-Tetrachloroethane	1.2	µg/L		DW	3-Hydroxycarbofuran	12	µg/L
DW	1,2,3-Trichlorobenzene	3	µg/L		DW	Methomyl	12	µg/L
DW	Trichlorofluoromethane	3	µg/L		DW	Oxamyl (Vydate)	11	µg/L
DW	1,2,3-Trichloropropane	1.2	µg/L					
DW	1,2,4-Trimethylbenzene	1.2	µg/L			Haloacetic acids		
DW	1,3,5-Trimethylbenzene	1.2	µg/L		DW	Bromochloroacetic Acid	3	µg/L
					DW	Dibromoacetic Acid ⁵	3	µg/L
					DW	Dichloroacetic Acid ⁵	3	µg/L
DW	Other Herbicides				DW	Monobromoacetic Acid ⁵	3	µg/L
DW	Diquat	4	µg/L		DW	Monochloroacetic Acid ⁵	6	µg/L
DW	Endothall	40	µg/L		DW	Trichloroacetic Acid ⁵	3	µg/L
DW	Glyphosate	300	µg/L					

Pennsylvania (Chapter 252) Accreditation
Fields of Proficiency Testing
Drinking Water
Effective April 28, 2012

<i>Matrix</i>	<i>Analyte</i> ⁹	<i>PTRL</i>	<i>Units</i>			<i>Matrix</i>	<i>Analyte</i> ⁹	<i>PTRL</i>	<i>Units</i>
	Adipate/Phthalate						Chlorinated Acid Herbicides		
DW	Di(2-Ethylhexyl) Adipate	2.5	µg/L			DW	Acifluorfen	5	µg/L
DW	Di(2-Ethylhexyl) Phthalate	2.4	µg/L			DW	2,4-D	5	µg/L
						DW	2,4-DB	10	µg/L
	PCBs in Water ⁶					DW	Dalapon	5	µg/L
DW	PCBs as Decachlorobiphenyl ⁶	0.05	µg/L			DW	Dicamba	10	µg/L
DW	PCB Aroclor Identification ⁶	N/A	N/A			DW	Dinoseb	3.1	µg/L
						DW	Pentachlorophenol	0.5	µg/L
	PAH					DW	Picloram	5	µg/L
DW	Benzo(a)pyrene	0.02	µg/L			DW	2,4,5-TP (Silvex)	5	µg/L
						DW	2,4,5-T	5	µg/L
	Dioxin								
DW	2,3,7,8-Tetrachloro-dibenzodioxin	11	pg/L						
	Radiochemistry						Gamma Emitters		
DW/NPW	Gross Alpha ¹²	3	pCi/L			DW/NPW	Barium-133 ^{10,12}	6.4	pCi/L
DW/NPW	Gross Beta ¹²	3	pCi/L			DW/NPW	Cesium-134 ^{10,11,12}	6.6	pCi/L
DW/NPW	Iodine-131 ¹²	2.1	pCi/L			DW/NPW	Cesium-137 ^{10,11,12}	16	pCi/L
DW/NPW	Radium-226 ¹²	0.86	pCi/L			DW/NPW	Cobalt-60 ^{10,12}	7.2	pCi/L
DW/NPW	Radium-228 ¹²	0.88	pCi/L			DW/NPW	Zinc-65 ^{10,12}	25	pCi/L
DW/NPW	Natural Uranium ¹²	1.2	pCi/L						
DW/NPW	Uranium (mass) ¹²	1.8	ug/L						
DW/NPW	Strontium-89 ¹²	3.8	pCi/L						
DW/NPW	Strontium-90 ¹²	1.4	pCi/L						
DW/NPW	Tritium ¹²	760	pCi/L						

*) Identifies New Field of Proficiency Testing.

1) Laboratories analyzing qualitative sample sets for more than one method in a particular study shall obtain a unique ten-sample set for each method reported.

2) These limits are for quantitative methods using membrane filtration (MF) or pour-plate (PP) techniques.

3) These limits are for quantitative methods using most probable number (MPN) techniques.

4) Laboratories seeking or maintaining accreditation for DW TTHMs must meet PT requirements for all 4 TTHM FoPTs in the given study, by method.

5) Laboratories seeking or maintaining accreditation for DW HAA5 must meet PT requirements for 4 out of 5 HAA5 FoPTs in the given study, by method.

Pennsylvania (Chapter 252) Accreditation
Fields of Proficiency Testing
Drinking Water
Effective April 28, 2012

6) One sample in every study, containing one Aroclor, selected at random from among the Aroclors listed (1016, 1221, 1232, 1242, 1248, 1254 or 1260) for the analysis of PCBs as decachlorobiphenyl. Laboratories must analyze and report results for all Aroclors in an individual PT study. Incorrect identification or quantitation of one Aroclor will result in failure for the group.
7) Unless a fixed limit is specified, the acceptance limits for regulated volatiles are $\pm 20\%$ at $\geq 10\mu\text{g/L}$ or $\pm 40\%$ at $< 10\mu\text{g/L}$.
8) Laboratories seeking to obtain or maintain accreditation for these analytes in the DW matrix must successfully perform a PT in the Non-Potable Water Matrix, also known as a WP study.
9) All FoPTs must meet the design, verification, homogeneity, stability, and acceptance limits described in 40 CFR Part 141, V3 of the TNI Standard, and the TNI FoPT Tables.
10) Laboratories seeking or maintaining accreditation for Gamma (Photon) Emitters must meet PT requirements for all Gamma Emitter analytes in the Fields of Proficiency Testing in a given PT study, by technology/method (Barium-133, Cesium-134, Cesium-137, Cobalt-60, Zinc-65).
11) Laboratories seeking or maintaining accreditation for Radioactive Cesium must meet PT requirements for both Radioactive Cesium analytes in the Fields of Proficiency Testing in a given PT study, by technology/method (Cesium-134, Cesium-137).
12) Laboratories seeking to obtain or maintain accreditation for these analytes in the NPW matrix must successfully perform a PT in the Drinking Water Matrix, also known as a WS study.
13) These 20 VOCs constitute the USEPA's Group 1 VOCs. Laboratories seeking or maintaining accreditation for Group 1 VOCs must analyze and report results for all 20 Group 1 VOCs in a given study. Not Acceptable results for ≥ 5 compounds results in a Failure for all 20 compounds.
14) n-Hexane Extractable Material (HEM) per solvent extraction followed by gravimetric or infrared spectrometric analysis (Oil & Grease).
15) non-Polar Extractable Material per solvent extraction and Silica Gel Treated (SGT) followed by gravimetric or infrared spectrometric analysis (Total Petroleum Hydrocarbons).
16) 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.