

Wisconsin Department of Natural Resources Laboratory Certification Program

Approved Proficiency Testing Samples for the Aqueous Matrix (*Effective December 1, 2008*)

The following proficiency testing samples are required for all applications and annual renewal for WDNR certification or registration. These PTs must be from a Water Pollution (WP) study. Laboratories that are certified in the aqueous matrix must submit one acceptable PT result, where required, for each analytical technique/analyte combination. If a laboratory maintains certification or registration for the same analyte but multiple analytical techniques, they must analyze the PT by each technique, but can use the same PT sample for each analytical technique. PT samples for each analytical technique/analyte combination in the solid matrix are not required at this time.

Each table indicates the PT in which the analyte is contained. Organic analytes are abbreviated as follows: B/N (Base/Neutral Extractables), EXPLO (Explosive Residues), HERB (Acid Herbicides), PAH (Polynuclear Aromatic Hydrocarbons), PCDD/DF (Polychlorinated Dibenzo-Dioxins and Furans), PEST-NT (Nitrogen and Triazine Pesticides), and PEST-OP (Organophosphorus Pesticides).

TABLE 17
HIGH RESOLUTION GAS CHROMATOGRAPHY– MASS SPECTROMETRY

Analytical Technique	Class	Analyte	PT	Req'd	Absolute	ERA	NSI	NYDoH	RTC	Wibby
High Resolution Gas Chromatography/Mass Spectrometry										
Polychlorinated Biphenyl Congeners										
		<i>PCB Congeners Analyte Group</i>	NA	No	-N-	-N-	-N-	-N-	-N-	-N-
Polychlorinated Dibenzo-p-Dioxins and Furans										
		<i>PCDD/PCDF Analyte Group</i>	PCDD/DF	Yes	-Y-	-N-	-N-	-N-	-Y-	-N-

TABLE 18
HIGH PERFORMANCE LIQUID CHROMATOGRAPHY

Analytical Technique	Class	Analyte	PT	Req'd	Absolute	ERA	NSI	NYDoH	RTC	Wibby
High Performance Liquid Chromatography										
BNAs, Aldehydes and Ketones										
		None Required	NA	No	-N-	-N-	-N-	-N-	-N-	-N-
BNAs, Benzidines										
		Benzidine	B/N	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		3,3'-Dichlorobenzidine	B/N	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
BNAs, Explosive Residues										
		2-Amino-4,6-dinitrotoluene	EXPLO	Yes	-Y-	-Y-	-Y-	-N-	-Y-	-Y-
		4-Amino-2,6-dinitrotoluene	EXPLO	Yes	-Y-	-Y-	-Y-	-N-	-Y-	-Y-

Required Proficiency Testing Samples for HRGC/HRMS, HPLC, and LC/MS Analytes

Analytical Technique	Class	Analyte	PT	Req'd	Absolute	ERA	NSI	NYDoH	RTC	Wibby
High Performance Liquid Chromatography										
		1,3-Dinitrobenzene	EXPLO	Yes	-Y-	-Y-	-Y-	-N-	-Y-	-Y-
		2,4-Dinitrotoluene	EXPLO	Yes	-Y-	-Y-	-Y-	-N-	-Y-	-Y-
		2,6-Dinitrotoluene	EXPLO	Yes	-Y-	-Y-	-Y-	-N-	-Y-	-Y-
		HMX	EXPLO	Yes	-Y-	-Y-	-Y-	-N-	-Y-	-Y-
		Nitrobenzene	EXPLO	Yes	-Y-	-Y-	-Y-	-N-	-Y-	-Y-
		Nitroglycerine	EXPLO	Yes	-N-	-N-	-Y-	-N-	-Y-	-N-
		2-Nitrotoluene	EXPLO	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		3-Nitrotoluene	EXPLO	Yes	-Y-	-Y-	-Y-	-N-	-Y-	-Y-
		4-Nitrotoluene	EXPLO	Yes	-Y-	-Y-	-Y-	-N-	-Y-	-Y-
		RDX	EXPLO	Yes	-Y-	-Y-	-Y-	-N-	-Y-	-Y-
		Tetryl	EXPLO	Yes	-Y-	-Y-	-Y-	-N-	-Y-	-Y-
		1,3,5-Trinitrobenzene	EXPLO	Yes	-Y-	-Y-	-Y-	-N-	-Y-	-Y-
		2,4,6-Trinitrotoluene	EXPLO	Yes	-Y-	-Y-	-Y-	-N-	-Y-	-Y-
BNAs, Nonhalogenated Organics										
		None Required	NA	No	-N-	-N-	-N-	-N-	-N-	-N-
Metals										
		Mercury	VARIOUS	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
Pesticides, Acid Herbicides										
		2,4-D	HERB	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		Dalapon	HERB	Yes	-Y-	-Y-	-Y-	-N-	-Y-	-Y-
		Dinoseb	HERB	Yes	-Y-	-Y-	-Y-	-N-	-Y-	-Y-
		2,4,5-T	HERB	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		2,4,5-TP (Silvex)	HERB	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
Pesticides, N-Methyl Carbamates and Substituted Ureas										
		None Required	NA	No	-N-	-N-	-N-	-N-	-N-	-N-
Pesticides, Nitrogen										
		None Required	NA	No	-N-	-N-	-N-	-N-	-N-	-N-
Pesticides, Not Otherwise Specified										
		None Required	NA	No	-N-	-N-	-N-	-N-	-N-	-N-
Polynuclear Aromatic Hydrocarbons										

Required Proficiency Testing Samples for HRGC/HRMS, HPLC, and LC/MS Analytes

Analytical Technique	Class	Analyte	PT	Req'd	Absolute	ERA	NSI	NYDoH	RTC	Wibby
High Performance Liquid Chromatography										
		<i>PAHs Analyte Group</i>	PAH	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		Acenaphthene	PAH	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		Acenaphthylene	PAH	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		Anthracene	PAH	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		Benzo(a)anthracene	PAH	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		Benzo(a)pyrene	PAH	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		Benzo(b)fluoranthene	PAH	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		Benzo(g,h,i)perylene	PAH	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		Benzo(k)fluoranthene	PAH	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		Chrysene	PAH	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		Dibenzo(a,h)anthracene	PAH	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		Fluoranthene	PAH	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		Fluorene	PAH	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		Indeno(1,2,3-cd)pyrene	PAH	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		2-Metylnaphthalene	PAH	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		Naphthalene	PAH	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		Phenanthrene	PAH	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		Pyrene	PAH	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-

TABLE 19
LIQUID CHROMATOGRAPHY-MASS SPECTROMETRY

Analytical Technique	Class	Analyte	PT	Req'd	Absolute	ERA	NSI	NYDoH	RTC	Wibby
Liquid Chromatography/Mass Spectrometry										
	BNAs, Benzidines									
		Benzidine	B/N	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		3,3'-Dichlorobenzidine	B/N	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
	Pesticides, Acid Herbicides									
		2,4-D	HERB	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		Dalapon	HERB	Yes	-Y-	-Y-	-Y-	-N-	-Y-	-Y-

Required Proficiency Testing Samples for HRGC/HRMS, HPLC, and LC/MS Analytes

Analytical Technique	Class	Analyte	PT	Req'd	Absolute	ERA	NSI	NYDoH	RTC	Wibby
Liquid Chromatography/Mass Spectrometry										
		Dinoseb	HERB	Yes	-Y-	-Y-	-Y-	-N-	-Y-	-Y-
		2,4,5-T	HERB	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
		2,4,5-TP (Silvex)	HERB	Yes	-Y-	-Y-	-Y-	-Y-	-Y-	-Y-
Pesticides, N-Methyl Carbamates and Substituted Ureas										
		None Required	NA	No	-N-	-N-	-N-	-N-	-N-	-N-
Pesticides, Nitrogen										
		Bromacil	PEST- NT	Yes	-N-	-Y-	-Y-	-N-	-Y-	-Y-
Pesticides, Not Otherwise Specified										
		None Required	NA	No	-N-	-N-	-N-	-N-	-N-	-N-
Pesticides, Organophosphorus										
		Disulfoton	PEST- OP	Yes	-Y-	-Y-	-Y-	-N-	-Y-	-Y-
		Famphur	PEST- OP	Yes	-N-	-Y-	-N-	-N-	-Y-	-Y-
		Parathion Methyl	PEST- OP	Yes	-Y-	-Y-	-Y-	-N-	-Y-	-Y-