



Environmental Laboratory Licensure Application

Laboratory Services

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PART E – Director Approval

Part E lists director approved methods available to all laboratories. In addition, the director approval process is outlined in the following pages. These methods are current as of **October 2008**.

Director Approved Methods (Refer to A.A.C. R9-14-610.B for references.) AIR = Air program. SDW = Drinking water. WW = Wastewater. SW = Solid, Liquid, and Hazardous Waste.

Description	Program	Reference	Method	Fee
VOCs	AIR	Note 4	TO-14A	\$152
Alkaline Digestion for Hexavalent Chromium	SW	F	3060A	\$7
Microwave Extraction	SW	Note1	3546	\$7
<i>n</i> -Hexane	SW	F	8260B	\$0
Mercury	SW	F	7474	\$152
Perchlorate	SW	F	6850	\$152
Chlorine Dioxide	SDW	C1	10126	\$76
<i>E. coli</i> by Colilert (in combination with Total Coliform)	SDW	C2	9223B	\$0
<i>E. coli</i> and Coliforms by Colitag	SDW	Note5	Colitag	\$152
<i>E. coli</i> by Colisure (in combination with Total Coliform)	SDW	C2	9223B	\$0
Heterotrophic Plate Count (For Bottled Water testing only)	SDW	C2	9215D	\$152
Silica	SDW	C2	4500 SiO ₂ -C	\$76
Total Coliforms and <i>E. coli</i> by Readyult	SDW	Note2	Readyult Coliforms 100 P/A	\$152
Total Coliforms and <i>E. coli</i> by m-ColiBlue24	SDW	C1	HACH 10029	\$228
Uranium	SDW	Note3	D5174-97, 02	\$206
Boron	WW	A1	200.8	\$26

Bromide	WW	Z	300.1	\$26
Calcium	WW	A1	200.8	\$26
Chloride	WW	Z	300.1	\$26
Chloride	WW	C2	4500-Cl D	\$39
Chlorine, Total	WW	C2	4500-Cl E	\$39
Chromium (VI) Hexavalent (IC method)	WW	A1	218.6	\$26
Chromium (VI) Hexavalent (IC Method)	WW	C	3500-Cr E	\$26
Chronic Toxicity on <i>Daphnia magna</i>	WW	Note	Lozarchak, J. 2001	\$194
Copper	WW	C	3500-Cu E	\$76
Cyanide, Total	WW	A2	335.4	\$76
Cyanide, Total	WW	C2	4500-CN F	\$76
Cyanide, Total	WW	Z9	QuikChem 10-204-00-1-X	\$76
<i>E. coli</i> by m-ColiBlue24	WW	C1	HACH 10029	\$228
Fluoride	WW	Z	300.1	\$26
Gold	WW	A1	200.8	\$26
Hardness (Sum of Ca and Mg)	WW	A1	200.8	\$10
Iron	WW	A1	200.8	\$26
Kjeldahl Total, Nitrogen	WW	C2	4500-NH3 D	\$39
Kjeldahl Total, Nitrogen	WW	C2	4500-NH3 E	\$39
Magnesium	WW	A1	200.8	\$26
Mercury	WW	A1	200.7	\$10
Mercury	WW	Note6	245.7	\$152
Nitrate	WW	Z	300.1	\$26
Nitrate	WW	C2	4500-NO3 D	\$39
Nitrate-Nitrite	WW	Z	300.1	\$26
Nitrite	WW	Z	300.1	\$26
Nitrite	WW	C2	4500-NO3 E	\$76
Nitrite	WW	C2	4500-NO3 F	\$76
Nitrite	WW	A2	353.2	\$76
Orthophosphate	WW	Z	300.1	\$26
Potassium	WW	A1	200.8	\$26

pH (Hydrogen ion)	WW	A	150.2	\$39
Phenols	WW	A2	420.4	\$116
Phosphorus	WW	A1	200.7	\$10
Silica	WW	A1	200.7	\$10
Silica	WW	A1	200.8	\$26
Sodium	WW	C	3500-Na D	\$26
Sodium	WW	A1	200.8	\$26
Sulfide	WW	C2	4500-S2 G	\$39
Sulfate	WW	A2	375.2	\$76
Sulfate	WW	Z	300.1	\$26
Tin	WW	A1	200.8	\$26
Titanium	WW	A1	200.7	\$10
Titanium	WW	A1	200.8	\$26

Note: Lozarchak, J. 2001. "Short-term Chronic Toxicity tests on *Daphnia magna* (survival and growth tests)", USEPA.

Note1: SW-846 3546 "Microwave Extraction", Rev. 0. November 2000

Note2: ReadyCult Coliforms 100 Presence/Absence Test for Detection and Identification of Coliform Bacteria and *Escherichia coli* in Finished Waters, Version 1.1, January 2007

Note3: Standard Test Method for Trace Uranium in Water by Pulsed-Laser Phosphorimetry, ASTM 5174-97, 02

Note4: Determination Of Volatile Organic Compounds (VOCs) In Ambient Air Using Specially Prepared Canisters With Subsequent Analysis By Gas Chromatography referencing the Compendium Method TO-14A, EPA/625/R-96/010b

Note5: Colitag® Product as a Test for Detection and Identification of Coliforms and *E. coli* Bacteria in Drinking Water and Source Water as Required in National Primary Drinking Water Regulations, August 2001

Note6: EPA Method 245.7, Rev. 2.0, February 2005, EPA 821-R-05-001, For the Determination of Mercury by Cold Vapor Atomic Fluorescence Spectrometry

2. Process for Director Approved Methods (A.A.C. R9-14-610.C.)
(This is a summary of the steps needed for approval, please refer to the rule cited for detailed instructions.)

Note: For a request for an alternate method or method alteration approval, there is a \$50 fee payable to the Department of Health Services.

- A. Request for approval of a different method or method alteration that is required by an EPA, ADEQ, the U.S. Food and Drug Administration or 9 A.A.C. 8.

1. Name, address, and telephone number of the licensee submitting the request.
2. Name, address, and telephone number of the laboratory for which approval is requested.
3. Identification of the parameter for which approval is requested.
4. Reference to the EPA, ADEQ, the U.S. Food and Drug Administration or 9 A.A.C. 8 that requires or authorizes the use of the method or method alteration for which approval is requested.

- B. Request for approval of a different method or method alteration that is **not** required by an EPA or ADEQ statute or rule.

1. Name, address, and telephone number of the licensee submitting the request.
2. Name, address, and telephone number of the laboratory for which approval is requested.
3. Identification of the parameter for which approval is requested.
4. Written justification for using the method or method alteration for which approval is requested, including the following:
 - a. A detailed description of the method or method alteration.
 - b. References to published or other studies confirming the general applicability of the method or method alteration to the parameter.
 - c. Reference to the EPA, ADEQ, the U.S. Food and Drug Administration or 9 A.A.C. 8 requirement to test the parameter.
 - d. Data that demonstrates the performance of the method or method alteration in terms of accuracy, precision, reliability, ruggedness, ease of use, and ability to achieve a detection limit appropriate to the proposed use of the method or method alteration.

The Department, before approving a method or method alteration that is not required or authorized by EPA or ADEQ statute or rule, may require that the method or method alteration be performed by a designated laboratory to verify that the method or method alteration complies with (C)(2)(d)(iv).