

Analytical Labs: Environmental Bioassay Laboratory

EBL IH Capabilities

Test	Method	Lab MDC [^] Solid***	Air
Rad & Clean Bulk Asbestos	NIOSH 9002	1% asbestos	N/A
Rad & Clean Air Asbestos	NIOSH 7400	N/A	7 fibers/sq mm
Gravimetrics	NIOSH 500/600	N/A	0.04 mg
Aluminum	Mod NIOSH 7303		10 ug/filter
Arsenic	Mod NIOSH 7303		1.5 ug/filter
Beryllium-IEX	Mod NIOSH 7303	0.03/wipe	0.01/filter
Rad Beryllium-IEX	Mod NIOSH 7303	0.02/wipe	0.01/filter
Cadmium	Mod NIOSH 7303		0.25 ug/filter
Radiological Cadmium	Mod NIOSH 7303		2 ug/filter
Calcium	Mod NIOSH 7303		40 ug/filter
Chromium	Mod NIOSH 7303		2 ug/filter
Radiological Chromium	Mod NIOSH 7303		2 ug/filter
Cobalt	Mod NIOSH 7303		1 ug/filter
Copper	Mod NIOSH 7303		1.3 ug/filter
Iron	Mod NIOSH 7303		10 ug/filter
Magnesium	Mod NIOSH 7303		5 ug/filter
Manganese	Mod NIOSH 7303		0.25 ug/filter
Molybdenum	Mod NIOSH 7303		0.25 ug/filter
Nickel	Mod NIOSH 7303		0.25 ug/filter
Lead	Mod NIOSH 7303	1 ug/wipe	1 ug/filter
Titanium	Mod NIOSH 7303		0.25 ug/filter
Vandium	Mod NIOSH 7303		0.25 ug/filter
Zinc	Mod NIOSH 7303		7.5 ug/filter
Radiological Zinc	Mod NIOSH 7303		6.0 ug/filter
Lead-Bulk Paint Chips	Mod NIOSH 7303	40 ppm	N/A
Radiological Lead-Bulk Paint Chips	Mod NIOSH 7303	100 ppm	N/A
Rad & Clean Beryllium-w/o IEX	Mod NIOSH 7303	0.05 ug/wipe	0.05 ug/filter
Hexavalent Chromium	OSHA ID215		0.025 ug/filter

EBL Radiological Processing Capabilities

Test	Method	Solid(pCi/g)**	Lab MDC [^] Water(pCi/L)	Air(pCi/m3)	Typical/Rapid TATs [^]
Tritium	Liquid Scintillation Counting	N/A	850	20	14/1 days
Carbon-14	Liquid Scintillation Counting	N/A	5	N/A	
Nickel-63	Liquid Scintillation Counting	N/A	6	N/A	
Technetium -99	Liquid Scintillation Counting	N/A	4.3	N/A	
Gross Alpha	Gas Proportional Counting	4	1.5	6.00E-04	
Gross Beta	Gas Proportional Counting	6	2.4	1.0 E-3	
Strontium 89/90	Gas Proportional Counting	2.00E-01	1.7	6.00E-03	
*Cobalt-60	Gamma Spectroscopy	3.50E-02	7	6.00E-03	
*Cesium-137	Gamma Spectroscopy	3.50E-02	7	6.00E-03	
*Iodine-129	Gamma Spectroscopy	4.00E-02	6.00E-01	N/A	
Plutonium-238	Alpha Spectroscopy	2.90E-03	9.20E-03	5.70E-06	
Plutonium-239/240	Alpha Spectroscopy	2.90E-03	9.20E-03	5.70E-06	
Plutonium-236	Alpha Spectroscopy	2.90E-03	9.20E-03	5.70E-06	
Plutonium-242	Alpha Spectroscopy	2.90E-03	9.20E-03	5.70E-06	
Uranium-232	Alpha Spectroscopy	3.30E-03	1.50E-02	2.00E-05	
Uranium-234	Alpha Spectroscopy	3.30E-03	1.20E-02	2.00E-05	
Uranium-235	Alpha Spectroscopy	3.50E-03	1.50E-02	2.00E-05	
Uranium-238	Alpha Spectroscopy	3.30E-03	1.20E-02	2.00E-05	
Thorium-228	Alpha Spectroscopy	2.90E-03	1.20E-02	2.00E-05	
Thorium-230	Alpha Spectroscopy	2.90E-03	1.20E-02	2.00E-05	
Thorium-232	Alpha Spectroscopy	2.90E-03	1.20E-02	2.00E-05	
Neptunium-237	Alpha Spectroscopy	2.90E-03	1.20E-02	5.70E-06	
Americium-241	Alpha Spectroscopy	3.20E-03	1.20E-02	6.00E-06	
Americium-243	Alpha Spectroscopy	3.20E-03	1.20E-02	6.00E-06	
Curium-242	Alpha Spectroscopy	3.20E-03	1.20E-02	6.00E-06	

EBL Water Quality Capabilities

Test	Method	Lab MDC [^] Water (ug/L)
*1,1,1-Trichloroethane	EPA8260B/EPA5030B-GC/MS	2
*1,1,2-Trichloroethane	EPA8260B/EPA5030B-GC/MS	2
*1,1,2,2-Tetrachloroethane	EPA8260B/EPA5030B-GC/MS	2
*1,1-Dichloroethane	EPA8260B/EPA5030B-GC/MS	2
*1,1-Dichloroethene(ylene)	EPA8260B/EPA5030B-GC/MS	2
*4-Methyl-2-Pentanone MIBK	EPA8260B/EPA5030B-GC/MS	2
*Benzene	EPA8260B/EPA5030B-GC/MS	2
*Carbon Disulfide	EPA8260B/EPA5030B-GC/MS	2
*Carbon Tetrachloride	EPA8260B/EPA5030B-GC/MS	2
*Chloroform	EPA8260B/EPA5030B-GC/MS	2
*Cis-1,2-Dichloroethene(ylene)	EPA8260B/EPA5030B-GC/MS	2
*Trans-1,2-Dichloroethene(ylene)	EPA8260B/EPA5030B-GC/MS	2
*1,2-Dichloroethene (ylene)	EPA8260B/EPA5030B-GC/MS	2
*Methylene Chloride	EPA8260B/EPA5030B-GC/MS	2
*Tetrachloroethene (ylene)	EPA8260B/EPA5030B-GC/MS	2
*Toluene	EPA8260B/EPA5030B-GC/MS	2
*Trichloroethene (ylene)	EPA8260B/EPA5030B-GC/MS	2
*Trichlorofluoromethane	EPA8260B/EPA5030B-GC/MS	2
*Vinyl Chloride	EPA8260B/EPA5030B-GC/MS	2
*Total Xylenes	EPA8260B/EPA5030B-GC/MS	2
Metals	ICP-AES EPA200.7/6010	ICP-MS EPA200.8/6020
Silver	1	0.1
Aluminum	10	10
Arsenic	10	5
Barium	1	0
Boron	5	10
Beryllium	0.2	0.05
Calcium	10	
Cadmium	1	0.05
Cobalt	1	0.5
Chromium	1	2
Copper	1	0.5
Iron	1	
Potassium	15	15
Magnesium	10	
Manganese	1	
Molybdenum	1	
Sodium	10	10
Nickel	1	0.5
Lead	2	0.2
Antimony	5	0.1
Selenium	10	0.5
Tin	5	0.5
Strontium	1	
Titanium	1	
Thallium	10	0.1
Uranium		0.5
Zinc	1	1.0
Mercury - EPA245.5/7470A	0.02	

EBL Bioassay Capabilities

Test	Method	Lab MDA [^] Urine (dpm/sample)	Typical/Rapid TATs [^] Fecal (dpm/sample)	Urine	Fecal
Isotopic U	Alpha Spectroscopy	1.00E-02	2.00E-02	45/3 days	25/10 days
Americium-241	Alpha Spectroscopy	1.00E-02	2.00E-02	45/3 days	25/10 days
Americium-243	Alpha Spectroscopy	2.00E-02	3.00E-02	45/3 days	25/10 days
Neptunium-237	Alpha Spectroscopy	1.00E-02	2.00E-02	45/3 days	25/10 days
Isotopic Cm	Alpha Spectroscopy	1.00E-02	2.00E-02	45/3 days	25/10 days
Isotopic Plutonium	Alpha Spectroscopy	1.00E-02	2.00E-02	45/3 days	25/10 days
Isotopic Thorium	Alpha Spectroscopy	2.00E-02	N/A	45/3 days	25/10 days
Strontium - 90	Gas Proportional Counting	2	4	45/3 days	25/10 days
Tritium	Liquid Scintillation Counting	2000	N/A	14/1 days	N/A
Gamma	Gamma Spectroscopy	10-200	N/A	14/1 days	N/A

*Frequent Requests/Other Available Upon Request

** Solids include: vegetation, foodstuffs, soils & sediments

***Solids include: floor tiles, roof tiles, building materials, filters, swipes, etc.

[^] Typical/Rapid TATs are generally 28/3 Days, unless noted differently.

Please contact EBL if a lower MDA or more rapid TAT is required and we will be glad to work with you on this.