

Pace Analytical LLC

Additional Services Listing for

Indiana Department of Environmental Management



Pace Analytical Services is pleased to present our client preferred Price list. We believe it will serve as a useful tool in estimating your projects' analytical costs. However, we encourage you to contact Pace Analytical directly for each individual project. Considering all aspects of your project, our marketing, project management, and technical personnel can provide you with a cost effective quotation based on your specific project scope and the appropriate analytical protocol. In addition, we will work with you to define and understand your expectations prior to the start of the project. During the course of your project, we will monitor the lab activities and provide feedback to you. It is our belief that diligent project setup, good communication, and attentive maintenance activities will ensure the success of your project.

The Pace Analytical nationwide system of laboratories offers quality technical data delivered on time with exceptional client service. Pace Analytical continues to be actively engaged in the evolution of the environmental industry by investing both time and money into our people, instrumentation, and quality control measures. Our philosophy at Pace Analytical, as it has always been, is to provide clients with the standards of service they require and deserve. It is a philosophy dedicated to providing:

Uncompromising Quality
Service Responsive to Client's Needs
A Single Source of Comprehensive Services

ORGANICS	
Gas Chromatography / Mass Spectrometry	
1,4-Dioxane	EPA 522
Volatile Organic Compounds (VOCs)	EPA 8260
Volatile Organic Compounds (VOCs)	EPA 624
Short List VOCs (<15 compounds)	EPA 8260
Terracore Kits (for VOC sampling)	N/A
Encore Sampling Kits	N/A
Semivolatiles Organics (full list SVOCs)	EPA 8270
Polynuclear Aromatic Hydrocarbons (PAH) (low level, water)	EPA 8270SIM
Polynuclear Aromatic Hydrocarbons (PAH) (low level, soil)	EPA 8270SIM
Polynuclear Aromatic Hydrocarbons (PAH)(low level, extended list)	EPA 8270SIM
Semivolatiles Organics (full list SVOCs + PAH, low level)	EPA 8270/8270SIM
Gas Chromatography (GC)	
Organochlorine Pesticides	EPA 8081
Organophosphorous Pesticides	EPA 8141
Polychlorinated Biphenyls (PCBs)	EPA 8082
Polychlorinated Biphenyls (PCBs) in Caulk	EPA 8082
Herbicides	EPA 8151
PETROLEUM HYDROCARBONS / UST ANALYSES	
BTEX	EPA 8260
BTEX/MTBE	EPA 8260
BTEX/MTBE/Naphthalene	EPA 8260
BTEX/MTBE/Naphthalene/12DCA	EPA 8260
BTEX + 1 Oxygenate	EPA 8260
BTEX + 2 Oxygenates	EPA 8260
BTEX + 3 - 5 Oxygenate	EPA 8260
BTEX/GRO	EPA 8260
Gasoline Range Organics (TPH-GRO) [C6-C10]	EPA 8015M
Gasoline Range Organics - Ohio (TPH-GRO-OH) [C6-C12]	EPA 8015M
CT VPH	VPH
MO GRO	EPA 8260
MADEP VPH	MADEP
WIGRO	WIGRO
Diesel Range Organics (TPH-DRO) [C10-C28]	EPA 8015M
Diesel Range Organics - Ohio (TPH-OH) [C10-C20, C21-C34]	EPA 8015M
CT EPH	EPH
MO DRO	EPA 8270
MADEP EPH	MADEP
Tennessee - EPH (TN-EPH) [C12-C40]	TN-EPH
WIDRO	WI DRO
Extended Range Organics (TPH-ERO) [C10-C36]	EPA 8015M
Methane, Ethane, Ethene	RSK-175
Oil & Grease	EPA 1664 / EPA 9071
Glycols - Propylene, Ethylene, Triethylene	EPA 8015 mod
NWTPH-Gx	NWTPH-Gx
NWTPH -DX	NWTPH-Dx
NWTPH-silica gel	NW-TPH-Dx
AK101	AK101
AK102	AK102
AK103	AK103
AK 102/103	AK 102/103
Hexane extractable material	EPA RevA SGT
MT EPH - screening	MT/MADEP
MT EPH Fractions	MT/MADEP

MT VPH	MT/MADEP
TPH TX1005	TX1005
TPH TX1006	TX1006
RCRA HAZARDOUS WASTE	
Corrosivity (pH)	EPA 9045
Reactive Cyanide	EPA 7.3.3.2
Reactive Sulfide	EPA 7.3.4.2
Ignitability of Solids	EPA 1030
Ignitability/Flashpoint (closed-cup)	EPA 1010
Paint Filter Liquids Test	EPA 9095
VOCs - Wastewater	EPA 624
SVOCs - Wastewater	EPA 625
Pesticides / PCBs - Wastewater	EPA 608
TCLP Leachate	EPA 1311
TCLP Zero Headspace	EPA 1311
TCLP Lead only (includes leachate)	EPA 1311/6010
TCLP RCRA Metals (includes leachate)	EPA 1311/6010/7470
TCLP Benzene (includes leachate)	EPA 1311/8260
TCLP Volatiles (includes leachate)	EPA 1311/8260
TCLP Semi-Volatiles (includes leachate)	EPA 1311/8270
TCLP Metals & Volatiles (includes leachate)	EPA Methods
TCLP Metals, Volatiles, Semi-Volatiles (includes leachate)	EPA Methods
Full TCLP w/ Pests & Herbs (includes leachate)	EPA Methods
METALS	
INDIVIDUAL METALS by ICP (Inductively Coupled Plasma) EPA 6010B/ 200.7	

Antimony (Sb)	Copper (Cu)	Selenium (Se)		
Arsenic (As)	Iron (Fe)	Silicon (Si)		
Barium (Ba)	Lead (Pb)	Silver (Ag)		
Beryllium (Be)	Magnesium (Mg)	Sodium (Na)		
Boron (B)	Manganese (Mn)	Tin (Sn)		
Cadmium (Cd)	Molybdenum (Mo)	Thallium (Tl)		
Calcium (Ca)	Nickel (Ni)	Titanium (Ti)		
Chromium, total (Cr)	Potassium (K)	Vanadium (V)		
Hexavalent Chromium, Low-Level (Cr VI), water		Zinc (Zn)		
Hexavalent Chromium, Low-Level (Cr VI), water		EPA 218.6		
Hexavalent Chromium (Cr VI), water		SW 7196, SM4500-Cr-B		
Hexavalent Chromium (Cr VI), soil		SW 7196, SM4500-Cr-B		
Hexavalent Chromium, Low-Level (Cr VI), soil		SW-846 7199		
Mercury (Hg)		EPA 7470A/7471		
Mercury, Low-Level (Hg)		EPA 1631E		
Package Metals				
Priority Pollutant Metals -Soils (13)		EPA 6010B/7471		
(Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn)				
RCRA Metals (8)		EPA 6010B/7470-7471		
(As, Ba, Cd, Cr, Pb, Hg, Se, Ag)				
TAL Metals (23)		EPA 6010B/7470		
INDIVIDUAL METALS by ICPMS (Inductively Coupled Plasma) EPA 6020/ 200.8				
Aluminum(Al)	Cobalt (Co)	Molybdenum (Mo)	Silver (Ag)	Zinc (Zn)
Antimony (Sb)	Copper(Cu)	Neodymium (Ne)	Sodium (Na)	
Barium (Ba)	Iron (fe)	Nickel (Ni)	Strontium (Sr)	
Beryllium (Be)	Iridium (Ir)	Palladium (Pd)	Tin (Sn)	
Bismuth (Bi)	Lanthanum (la)	Platinum (Pl)	Thallium (Tl)	
Boron (B)	Lead (pb)	Potassium (K)	Thorium in water	

Cadmium (Cd)	Lithium (Li)	Rhodium (Rh)	Titanium (Ti)
Calcium(Ca)	Magnesium (Mg)	Selenium (Se)	Tungsten in water
Cerium (Ce)	Manganese (Mn)	Silica	Uranium - 238 in water
Cesium (Cs)	Mercury (Hg) in water	Silicon (Si)	Vanadium (Va)
Chromium (Cr)			

DRINKING WATER ANALYSIS

Primary Inorganics

Metals, Primary Drinking Water: Antimony, Arsenic, Lead, Selenium, Thallium	EPA 200.8
Metals, Primary Drinking Water: Barium, Beryllium, Cadmium, Chromium, Nickel, Sodium	EPA 200.7
Metals, Primary Drinking Water: Mercury	EPA 245.1
Cyanide	EPA 335.4
Fluoride	EPA 300.0
Nitrogen, Nitrate	EPA 300.0/353.2
Nitrogen, Nitrite	EPA 300.0/353.2
Nitrogen, Nitrate/Nitrite (calculation)	EPA 300.0/353.2
Asbestos	EPA 100.2

Secondary Standard Inorganics

Metals, Secondary Drinking Water: Aluminum, Copper	EPA 200.8
Metals, Secondary Drinking Water: Iron, Manganese, Silver, Zinc	EPA 200.7
Chloride	EPA 300.0
Color, Apparent	SM2120B
Fluoride, no charge if running Primary Inorganics	EPA 300.0
Odor - SHORT HOLD-TIME PARAMETER; COORDINATE SAMPLING AND SHIPPING	SM2150B
pH	SM4500H+B
Solids, Total Dissolved (TDS)	SM2540C
Sulfate	EPA 300.0
Surfactants MBAS Foaming Agents	SM5540C

Primary Volatile Organics

Volatile Organic Compounds	EPA 524.2
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Primary Synthetic Organic Contaminants

Carbamates	EPA 531.1
Diquat/Paraquat	EPA 549.2
EDB/DBCP	EPA 504.1
Endothall	EPA 548.1
Glyphosate	EPA 547
Herbicides	EPA 515.3
Pesticides, Chlorinated, and PCBs	EPA 508.1
Semi-Volatile Organic Compounds	EPA 525.2
2,3,7,8-TCDD (Dioxin)	EPA 1613

Primary Residual Disinfectants

Chlorine, Total Residual	SM4500CI-D
Chloramine	SM4500CI-D
Chlorine Dioxide	SM4500CIO2

Primary Disinfection Byproducts

Trihalomethanes (THMs) - NO CHARGE WHEN RUN WITH VOCs	EPA 524.2
Haloacetic Acids (HAAs)	EPA 552.2
Bromate	EPA 300.1
Chlorate	EPA 300.1
Chlorite	EPA 300.1

Primary Radiochemicals

Gross Alpha	EPA 900.0
Gross Beta - NO CHARGE WHEN RUN WITH GROSS ALPHA	EPA 900.0
Radium-226	EPA 903.1

Radium-228	EPA 904.0
Tritium	EPA 906.0
Uranium	EPA 200.8

Primary Microbiologicals

Coliform, Total - SHORT HOLD-TIME PARAMETER; COORDINATE SAMPLING AND SHIPPING WITH PACE PM	SM9223B
Heterotrophic Plate Count - SHORT HOLD-TIME PARAMETER; COORDINATE SAMPLING AND SHIPPING WITH PACE PM	Simplate
Turbidity	EPA 180.1

Miscellaneous

Alkalinity	SM2320B
Carbon, Dissolved Organic (DOC)	SM5310B
Carbon, Total Organic (TOC)	SM5310B
Chromium, Hexavalent	EPA 218.7
Corrosivity, Langlier Index (Calculation using Calcium, TDS, Temperature, pH, Alkalinity)	SM2330B
Hardness	SM2340B
Lead & Copper	EPA 200.8
Microcystins, total	EPA 546
Microcystins Congeners & Nodularin	EPA 544
Anatoxin-a & Cylindrospermopsin	EPA 545
Perchlorate	EPA 314.0
Perfluorinated Alkylated Substances (PFAS)/ Perfluorinated Compounds (PFCs) (field blank may be required)	EPA 537
Phenols, Total Recoverable	EPA 420.4
Radon	SM7500-Rn
Salinity	SM2520B
SUVA (Calculation using UV254 and DOC)	SM5910B
UV 254	SM5910B

WET CHEMISTRY / INORGANIC ANALYSIS	WATER	SOIL
Acidity	SM 2310B	EPA 305.1
Alkalinity	SM 2320B	EPA 310.1
Biochemical Oxygen Demand (BOD)	SM 5210B	n/a
CBOD	SM 5210B	n/a
Chloride	4500-CLE	EPA 325.2
Chlorine, Total Residual	4500-CLG	n/a
Chemical Oxygen Demand (COD)	EPA 410.4	n/a
Conductivity (Specific Conductance)	EPA 120.1	n/a
Cyanide, amenable	4500 CN-G	EPA 335.4
Cyanide, free	4500 CN-E	EPA 9213
Cyanide, total	4500 CN-E	EPA 335.4
Ferrous Iron	SM3500-Fe-D	n/a
Fluoride	EPA 30	EPA 340.2
Hardness, total	EPA 130.2	n/a
Hydrogen Sulfide	SM4500-S	n/a
Nitrogen, Ammonia	EPA 350.1	EPA 350.1-2
Nitrogen, Nitrate	EPA 353.2	EPA 353.2
Nitrogen, Nitrite	EPA 353.2	EPA 353.2
Nitrogen, Nitrate+Nitrite	EPA 353.2	EPA 353.2
Nitrogen, Total Kjeldahl (TKN)	EPA 351.2	EPA 351.2
Oxidation-Reduction Potential (REDOX)	n/a	SM2580B
Oxygen, Dissolved	SM4500-O G	n/a
pH	4500 H+B	EPA 9045
Phenol (4aap)	EPA 420.2	EPA 420.2
Phosphorus, Ortho	EPA 365.2	n/a
Phosphorus, Total	EPA 365.2	EPA 365.2
Resistivity	n/a	AASHTO-288

Solids, Total (TS)	EPA 160.3	n/a
Solids, Total Dissolved (TDS)	2540 C	n/a
Solids, Total Suspended (TSS)	2540 D	n/a
Sulfate	EPA 375.4	EPA 375.4
Sulfide	4500 S2E	n/a
Sulfite	4500-SO3	n/a
FOC	ASTM 2974 -87	
DOC	415.2 / 3510C	
TOC single analysis	5310C	EPA 9060M
TOC - Walkley Black	n/a	Walk.-Black.
TOX / EOX	EPA 1650	EPA 1650
Turbidity	EPA 180.1	n/a

***Non-Standard Wet Chemistries may be available on a per project bases. Contact your Pace Representative for details.*

AIR TOXICS

LANDFILL GAS / AMBIENT AIR METHODS

Landfill Gas: (Price does not include sampling media)

Permanent Gases:Methane, O2, CO2, N2, CO, He	3C
Methane, Ethane, Ethene, Propane	TO-3M
Methane only	TO-3M

Air Toxics (Ambient Air): (Price does not include sampling media)

Volatile Organic Compounds (BTEX, MTBE, TMBs & THC as gas)	TO-3
Dioxin & Furan PCDD/PCDF (HRGCMS)	TO-9
Volatile Organic Compounds (standard list)	TO-14M
Reduced List 1-5 Analytes (1-5 analytes, \$5 each additional compound)	TO-14M
Volatile Organic Compounds (standard list)	TO-15 scan
Volatile Organic Compounds (1-5 analytes, \$5 each additional compound)	TO-15 scan
Volatile Organic Compounds (standard list)	TO-15 SIM scan
Volatile Organic Compounds (1-5 analytes, \$5 each additional compound)	TO-15 SIM scan

STATIONARY SOURCE TESTING

Stack Air (stationary source): (Price does not include sampling media)

Particulate Matter	5
Lead Emissions	12
Volatile Organic Compounds(GC/MS)	18
Semivolatiles (modified list 60 compounds) (GC/MS)	110
Dioxin & Furan (separate front end rinse value)	0023A
Dioxin & Furan PCDD/PCDF (HRGCMS)	23
Metals (12 Elements plus Mercury)	29
Mercury	101
Mercury Speciation in Stack Gas (CVAA)	324
PM 10 Emissions (requires high volume sampler)*	201A
Condensable Particulate Emissions	202
Hydrogen Halide & Halogen Emissions (price per fraction)	26A
Polynuclear Aromatic Hydrocarbons (GC/MS SIM) (Std List 14 compounds)	429

Sampling Media:

6 Liter Summa Canister (two week rental, subject to \$35 fee each addtl week)
1 Liter Summa Canister (two week rental, subject to \$35 fee each addtl week)
Individual Canister Certification Process - scan
Individual Canister Certification Process - SIM scan
Flow Control Valve (two week rental, subject to \$25 fee each addtl week)
1 Liter Tedlar Bag
XAD2 Trap (includes prespike fee)
Impinger
Impinger Pump Rental
Impinger Replacement
Charcoal Tubes (ORBO 100)

Filter	
BIOTA/BIOLOGICAL SAMPLES	
Organochlorine Pesticides (EPA TCL 3.4 List)	8081A
PCB Aroclors (standard 7 compounds)	8082
PAHs (GC/MS-SIM)	8270C
Tetra-Octa (All 17 Dioxin/Furan compounds)	EPA 1613
PCB Congeners (WHO List, 12 PCB congeners)	EPA 1668
PCB Congeners (209 PCB congeners and totals)	EPA 1668A
Lipid Analysis	Lab SOP
Mercury by CVAA (includes Prep Charge)	7471A
Mercury by CVAA (includes Prep Charge)	245.6
Metals by ICP-MS (each metal)	6020
Mercury by Low Level Method	1631
TAL Metals	6020
AVS/SEM	
Moisture Content	Lab SOP
Biota Tissue Homogenization (incl. fish filleting)	Lab SOP
Fish Scaling	Lab SOP
Hantavirus Decontamination (required for all small rodents)	Lab SOP
OTHER ANALYSIS	
Grain Size (Sieve only)	ASTM D422
Grain Size (Sieve plus hydrometer)	ASTM D422
PERSISTENT ORGANIC POLLUTANTS (POPs)	
Dioxin / Furans (and Dioxin-like compounds)	
<i>High Resolution Methods</i>	
2,3,7,8-TCDD (Single Compound, Drinking water)	EPA 1613
2,3,7,8-TCDD (Single Compound, other matrices)	EPA 1613
2,3,7,8-TCDD/TCDF (2 Compounds, pulp & paper industry)	EPA 1613
Tetra-Octa (All 17 Dioxin/Furan compounds)	EPA 1613
2,3,7,8-TCDD (Single compound, all matrices)	EPA 8290
Tetra-Octa (All 17 Dioxin/Furan compounds)	EPA 8290
Tetra-Octa (Stack Testing, 17 compounds)	Method 23
Tetra-Octa (Ambient Air Testing, 17 compounds)	TO-9
<i>Low Resolution Methods</i>	
Tetra-Hexa (Tetra-Hexa isomers only, Appendix IX)	EPA 8280A
2,3,7,8-TCDD (Single compound, all matrices)	EPA 8280A
Tetra-Octa (All 17 Dioxin/Furan compounds)	EPA 8280A
PCB Congeners	
PCB Congeners (WHO List, 12 PCB congeners)	EPA 1668
PCB Congeners (209 PCB congeners and totals))	EPA 1668A
Tetra-Octa & PCBs (Dioxin/Furan/PCB's 29 compounds)	1613-1668
PFAS	
14 compound - EPA Method 537 (DW only)	EPA Method 537
24 compound - EPA Method 537M (non-potable and soils)	EPA Method 537M
24 compound - DOD QSM 5.1 (non-potable and soils)	QSM 5.1
Miscellaneous	
PBDE (Brominated Flame Retardants 49 compounds)	EPA 1614
RADIOCHEMISTRY / RADIOACTIVITY ANALYSES	
<i>Radiochemistry in Drinking Water</i>	
Gross Alpha	EPA 900.0
Gross Beta	EPA 900.0
Gross Alpha/Beta	EPA 900.0
Total Alpha-Emitting Radium Isotopes	EPA 903.0
Radium-226; Radon Emanation	EPA 903.1
Radium-228	EPA 904.0

Radioactive Strontium	EPA 905.0
Tritium	EPA 906.0
Uranium	EPA 908.0
Uranium (KPA)	ASTM D5174-97
Radon-Liquid Scintillation Method	SM 7500-Rn
ACID BASE ACCOUNTING MINING METHODS	
Air Dry and Sieve	
Sample Prep for pH	
pH on paste	ASA Monograph No. 9
SMP Buffer pH	ASA
Neutralization Potential	Sobek et.al
Total Sulfur	Leco Corporation 6
HCL Extractable Sulfur	Modified Sobek 7
Hot water Extractable Sulfur	Modified Sobek 7
HNO3 Extractable Sulfur	Modified Sobek 7
Residual Sulfur	Modified Sobek 7
Acid Potential	Modified Sobek 7
Acid Base Potential	Modified Sobek
Lime Requirement	Modified Sobek 7 and MT DEQ Calculation

EPA or other approved methods will be used for all analyses.

- Pace Analytical will dispose of all non-hazardous samples. Pace Analytical reserves the right to return to the client any highly hazardous, acutely toxic, or radioactive samples and sample containers.
- The Client is responsible for informing Pace of any necessary certifications, reporting limits and or methods at the time of initial project set-up.
- Pace Analytical reserves the right to subcontract any method listed with prior consent of the Client