



Environmental

Test Catalog and Fee Schedule
Salt Lake City, Utah



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Effective May 15, 2011

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Qualifications and Accreditations

ALS Environmental in Salt Lake City, Utah is AIHA accredited for the specified Field(s) of Testing as documented by the scope of accreditation. These fields include the following:

- ◆ **AIHA Accreditation (No. 17)**
 - Industrial Hygiene Program
 - Environmental Lead Program (Paint, Soil, Dust, Air)
- ◆ Participation in:
 - ❖ AIHA Proficiency Analytical Testing (PAT) Programs
 - ◆ Industrial Hygiene
 - ◆ Metals, Silica, Asbestos/Fibers, Organic Compounds
 - ◆ Beryllium (BEPAT)
 - ◆ Lead (ELPAT)
 - ◆ Paint, Soil, Dust, Air
 - ❖ AIHA Bulk Asbestos Analysis Program
- ◆ NIOSH Contract Laboratory for 32 years (1974—2006)

Description of Services

ALS Environmental—Salt Lake City is pleased to offer an extensive array of Industrial Hygiene analyses. Specific analytical tests are listed in this catalog. Lists of tests are presented in two sections. The first section is an alphabetical list by analyte. The second section lists NIOSH and OSHA methods numerically. The third section provides a list of methods developed in-house and finally the fourth section provides details pertinent to prominent types of industrial hygiene analyses (e.g., asbestos, silica, metals, particulate). Volume discounts are available depending on the scope of the project. Please call a member of our customer service team for additional information.

When preparing samples for analysis, please note that many analyses require a three sample minimum fee to cover the costs of method setup. Please inquire as to which analyses require this minimum.

SURCHARGES WILL BE ADDED TO THE LISTED FEES BASED ON THE FOLLOWING SAMPLE TURNAROUND TIMES (*Please Note: Standard Turnaround Time for Routine IH Analytes - 5 Working Days*):

Pre-arranged Same Day (received by 9:00 am MST—reported by 6:00 pm MST)	Quote
Next Working Day—reported by 12:00 pm MST	150%
Next Working Day—reported by 6:00 pm MST	100%
Second Day—reported by 6:00 pm MST	75%
Third Day—reported by 6:00 pm MST	50%
Fourth Day—reported by 6:00 pm MST	35%

***Prior notification* to confirm rush analysis capacity is requested**

Industrial Hygiene Test Catalog and Fee Schedule

EFFECTIVE MAY 15, 2011

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♦ *Direct analysis of air samples collected in SUMMA canisters or Tedlar bags*

Alphabetical List of Analysis by Analyte

Analyte(s)	Method	Instrument	Sample Medium	Fee (\$)*
Acetaldehyde	NIOSH 2538	GC-FID	SKC 226-27	60
Acetaldehyde	NIOSH 3507	HPLC-UV	Impinger	90
Acetic acid	NIOSH 1603	GC-FID	SKC 226-01	100
Acetoin	NIOSH 2558	GC-FID	SKC 226-121	90
Acetoin	OSHA 1012	GC-ECD	SKC 226-183	80
Acetone	OSHA 69	GC-FID	SKC 226-121	50
Acetonitrile	NIOSH 1606	GC-FID	SKC 226-09	50
Acid mist	OSHA ID 165SG	IC	SKC 226-10-03	60/20*
Acids (Inorganic)	NIOSH 7903	IC	SKC 226-10-03	(pgs 15 & 20)
Acrylic acid	OSHA 28	HPLC-UV	SKC 226-30-08 (2)	80
Acrylonitrile	NIOSH 1604	GC-FID	SKC 226-01	50
Acrylonitrile	OSHA 37	GC-FID	SKC 226-01	75
Alcohols I	NIOSH 1400	GC-FID	SKC 226-01	50/15*
Alcohols II	NIOSH 1401	GC-FID	SKC 226-01	50/15*
Alcohols III	NIOSH 1402	GC-FID	SKC 226-01	50/15*
Alcohols IV	NIOSH 1403	GC-FID	SKC 226-01	50/15*
Aldehyde screen	NIOSH 2539 (Mod)	GC-FID	SKC 226-118 (Panel of 9 compounds – 175) (pgs 15 & 20)	60/20*
Aldrin/Lindane	NIOSH 5502	GC-ECD	Impinger	80/35*
Aliphatic Aldehydes	NIOSH 2018	HPLC-UV	226-119	110/35*
Aliphatic Amines	NIOSH 2010 (Mod)	LC-MS	SKC 226-10	Call for quote
Alkaline dust	NIOSH 7401	TITRA	PTFE filter, 1µm	65
Allyl chloride	NIOSH 1000	GC-FID	SKC 226-01	75
Allyl glycidyl ether	NIOSH 2545	GC-FID	SKC 226-35-03	75
Aluminum compounds as Al	NIOSH 7013 (Mod)	ICP	MCE filter, .8µm	45
Amines (pgs 15 & 26)				
Ammonia	NIOSH 6015	VIS	SKC 226-10-06	50
Aniline	OSHA PV 2079	GC/MS	SKC 226-53	90
Anisidine	NIOSH 2514	HPLC-UV	SKC 226-30-05	80
Antineoplastics (pgs 16 & 20)				
Aromatic hydrocarbons	NIOSH 1501	GC-FID	SKC 226-01	50/15*
Arsenic Trioxide	NIOSH 7901 (Mod)	ICP	SKC 225-9005	75
Arsine	NIOSH 6001 (Mod)	ICP	SKC 226-01	90
Asbestos (air)	NIOSH 7400	PCM	MCE filter	15
Asbestos (bulk)	NIOSH 9002	PLM	Bulk material	25
Aspartame	NIOSH 5031	HPLC-UV	PTFE filter, 1µm	135
Benzene	OSHA 12	GC-FID	SKC 226-01	50
Benzene Solubles & Total Weight	NIOSH 5042	GRAV	PTFE, 2µm, Preweighed	75
Benzidine/3,3-Dichlorobenzidine	NIOSH 5509	HPLC-UV	Glass fiber filter, 1µm	80/35*
Benzoyl peroxide	NIOSH 5009	HPLC	MCE filter, .8µm	80
Bifenthrin	ALS	GC-MS	SKC 226-58 OVS2 or cotton gauze wipe	120/35*
Bromine	OSHA ID 108	IC	Impinger	60
1– Bromopropane/ 2-bromopropane	NIOSH 1025	GC-FID	226-01 or 226-121	75/25*
Bromotrifluoromethane	NIOSH 1017	GC-FID	SKC 226-09	375
Bromoxynil	NIOSH 5010	HPLC-UV	PTFE filter, 2µm	80/30*
1,3-Butadiene	NIOSH 1024	GC-FID	SKC 226-37	75
2-Butanone (MEK)	OSHA 84	GC-FID	SKC 226-121	50

<u>Analyte(s)</u>	<u>Method</u>	<u>Instrument</u>	<u>Sample Medium</u>	<u>Fee (\$)*</u>
2-Butoxyethanol	OSHA 83	GC-FID	SKC 226-01	50
n-Butyl glycidyl ether	NIOSH 1616	GC-FID	SKC 226-01	75
Butyric Acid	OSHA CSI	GC-FID	226-15	75
Carbaryl (Sevin)	OSHA 63	HPLC-UV	SKC 226-30-16	80
Carbon black	NIOSH 5000	GRAV	PVC, 5µm, Prew weighed	10
Carbon black	OSHA ID 196	GRAV	PVC, 5µm, Prew weighed	75
Carbon disulfide	NIOSH 1622 (Draft)	GC-SCD	SKC 226-01/226-44	80
Chemotherapy Drugs (pgs 16 & 20)				
Chloramines	NIOSH 7607	IC	Silica gel/filter cassette	145
Chlordane	NIOSH 5510	GC-ECD	226-107/Prefilter (MCE)	80
Chlordane	OSHA 67	GC-ECD	SKC 226-30-16	80
Chlorinated camphene (Toxaphene)	NIOSH 5039	GC-ECD	MCE filter, .8µm	80
Chlorinated terphenyl	NIOSH 5014	GC-ECD	Glass fiber filter, 1µm	80
Chlorine/Bromine	NIOSH 6011	IC	SKC 225-9006	100/50*
Chlorine dioxide	OSHA ID 202	IC	Impinger	80
Chloroacetaldehyde	OSHA 76	GC-ECD	SKC 226-15 GWS	90
p-Chlorobenzotrifluoride	NIOSH 1026	GC-FID	SKC 226-01	75
Chloroform	OSHA 05	GC-FID	SKC 226-01	50
Chloromethyl methyl ether (CMME)	OSHA 10	GC-ECD	Impinger	90
p-Chlorophenol	NIOSH 2014	HPLC-UV	SKC 226-10	80
Chloroprene	NIOSH 1002	GC-FID	SKC 226-01	90
Chlorothalonil	ALS	GC-MS	SKC 226-58 OVS2 or cotton gauze wipe	120
Chlorpyrifos/Diazinon/Malathion	OSHA 62 (Mod)	GC-ECD	SKC 226-30-16	80/35*
Coal tar pitch volatiles (PAH Analysis: Panel)	OSHA 58	GRAV HPLC	PTFE filter, 2µm PTFE filter, 2µm (pgs 18 & 21)	75 230
Copper (Fumes/Dust/Soluble/Insoluble/etc.)	NIOSH 7029 (Mod)	ICP	MCE filter, .8µm	45/25/25
Cresols/ Phenols	NIOSH 2546	GC-FID	SKC 226-95	75/35*
Crotonaldehyde	OSHA 81	HPLC-UV	SKC 225-9019	90
Cyanides, particulate/gaseous	NIOSH 7904 (Mod)	VIS	Filter + Impinger	60/20*
Cyanuric acid	NIOSH 5030	HPLC-UV	PVC, 5µm, Prew weighed	160
Cyclohexanone	OSHA 01	GC-FID	SKC 226-110	50
Cyclohexyl amine	ALS	GC-MS	Acid treated XAD-7	150
1,3-Cyclopentadiene	NIOSH 2523	GC-FID	Chromosorb 104 tube	75
Cyfluthrin	ALS	GC-MS	SKC 226-58 OVS2 or cotton gauze wipe	120/35*
Cypermethrin	OSHA PV2063	GC-MS	226-30-16	100
2,4-D/2,4,5-T	NIOSH 5001	HPLC-UV	Glass fiber filter, 1µm	125/35*
2,4-DNT/2,6-DNT/ 2,4,6-TNT	OSHA 44 (Mod)	HPLC	SKC 226-56	80/35*
Decabromodiphenyl Oxide	NIOSH 2559	HPLC-UV	Quartz fiber filter	120
Deltamethrin	ALS	GC-MS	SKC 226-58 OVS2 or cotton gauze wipe	120/35*
Demeton	NIOSH 5514 (Mod)	GC-MS	MCE filter, 2µm	80
Desflurane	OSHA 106	GC-FID	SKC 226-81A	90
Diacetyl/Acetoin	NIOSH 2557	GC-FID	SKC 226-121	90
Diacetyl/Acetoin	OSHA 1012	CG-ECD	SKC 226-183	80/40*
Dibutyl phosphate	NIOSH 5017 (Mod)	GC-MS	PTFE filter, 1µm	80
Dibutyl phthalate/Di(2-ethylhexyl phthalate)	NIOSH 5020	GC-FID	MCE filter, .8µm	60/20*
1,1-Dichloro-1-nitroethane	NIOSH 1601	GC-FID	SKC 226-81A	75
Dichlorodifluoromethane	NIOSH 1018	GC-FID	SKC 226-01	90
Dichloroethyl ether	NIOSH 1004	GC-FID	SKC 226-01	75
Dichlorofluoromethane	NIOSH 2516	GC-FID	SKC 226-09 (2)/226-25	90

<u>Analyte(s)</u>	<u>Method</u>	<u>Instrument</u>	<u>Sample Medium</u>	<u>Fee (\$)*</u>
Diesel Particulate	NIOSH 5040	TOA	Quartz fiber filter	(pg7)
Diethanolamine	OSHA PV2111	HPLC NITC derivative	XAD-2 SKC 226-30-18	150
Diethylamine	OSHA 41	HPLC	SKC-226-96	75
Diethylenediamine (piperazine)	OSHA 60	HPLC	SKC 226-30-18	75/25*
Diethylenetriamine (DETA)	OSHA 60	HPLC	SKC 226-30-18	75/25*
Difluorodibromomethane	NIOSH 1012	GC-FID	SKC 226-01 (2)	75
Dimethyl acetamide	NIOSH 2004 (Mod)	GC-FID	SKC 226-10	75
Dimethyl Sulfate	NIOSH 2524	GC-SCD or GC-MS	SKC 226-114	90
Dimethylamine	OSHA 34	HPLC	SKC 226-96	75
Dioxane	NIOSH 1602	GC-FID	SKC 226-01	50
Diphenyl (Biphenyl)	NIOSH 2530	GC-FID	SKC 226-35-01	60
Diphenylamine/Isopropylamine	OSHA 78	HPLC	GFF SKC 225-9004	75/25*
Divinyl benzene/Styrene	OSHA 89	GC-FID	SKC 226-73	65/20*
Dust, respirable	NIOSH 0600	GRAV	PVC, 5µm, Preweighed	10
Dust, total	NIOSH 0500	GRAV	PVC, 5µm, Preweighed	10
EGDN/Nitroglycerin	OSHA 43	HPLC-UV	SKC 226-35-03	80/35*
Elemental Carbon	NIOSH 5040	TOA	Quartz fiber filter	45
Endrin	NIOSH 5519	GC-ECD	MCE filter, .8µm	80
Enflurane/Halothane	OSHA 29	GC-FID	SKC 226-01 (2)	90/35*
Epichlorohydrin	NIOSH 1010	GC-FID	SKC 226-01	75
EPN	NIOSH 5012(Mod)	GC-MS	Glass fiber filter, 1µm	80
Esters I	NIOSH 1450	GC-FID	SKC 226-01	50/15*
Estrogenic Hormones	NIOSH 5044	HPLC	PTFE Filter	125/50*
Ethanolamine	OSHA PV2111	HPLC NITC derivative	XAD-2 SKC 226-30-18	150
Ethyl acetate	NIOSH 1457	GC-FID	SKC 226-01	60
Ethyl alcohol	OSHA 100	GC-FID	SKC 226-82 (2)	50
Ethyl bromide	NIOSH 1011	GC-FID	SKC 226-01	75
Ethyl chloride	NIOSH 2519	GC-FID	SKC 226-25	90
Ethyl ether	NIOSH 1610	GC-FID	SKC 226-01	50
Ethyl formate	NIOSH 1452	GC-FID	SKC 226-01	60
Ethyl acrylate/Methyl acrylate	OSHA 92	HPLC	SKC 226-73	100/25
Ethyl methacrylate/Methyl methacrylate	NIOSH 2537	GC-FID	SKC 226-30-06	50/15*
Ethylamine	OSHA 36	GC-FID	SKC-226-110	80
Ethylene chlorohydrin	NIOSH 2513	GC-FID	SKC 226-81A	75
Ethylene dibromide	NIOSH 1008	GC-ECD	SKC 226-01 GWS	75
Ethylene dibromide	OSHA 02	GC-ECD	SKC 226-01	75
Ethylene dichloride	OSHA 03	GC-ECD	SKC 226-01 GWS	75
Ethylenediamine	NIOSH 2540 or OSHA 60	HPLC-UV	SKC 226-30-18	120
Ethylene oxide	NIOSH 1614 (Mod)	GC-MS	SKC 226-178	150
Ethylene oxide	OSHA 50 (Mod)	GC-MS	SKC 226-178	150
Ethylene thiourea	OSHA 95	HPLC-UV	Glass fiber filter, 1µm	160
Fenthion	ALS	GC-MS	SKC 226-58 OVS2 or cotton gauze wipe	180/35*
Fipronil	ALS	GC-MS	SKC 226-58 OVS2 or cotton gauze wipe	(See p.18 & 22-25)
Fluorides, particulate/gaseous	NIOSH 7902	ISE	SKC 225-9001	50/20*
Fluorotrichloromethane	NIOSH 1006	GC-FID	SKC 226-09	75
Formaldehyde	NIOSH 2016	HPLC-UV	SKC 226-119	80
Formaldehyde	NIOSH 2016(Mod)	HPLC-UV	Passive monitor DNPH treated	80
Formaldehyde	NIOSH 2541	GC-FID	SKC 226-118 (2-hydroxy methyl) piperidine	60

Analyte(s)	Method	Instrument	Sample Medium	Fee (\$)*
Formaldehyde	NIOSH 3500	VIS	Impinger/3M 3721/ SKC 526-100, 526-200, 526-201	50
Formic acid	NIOSH 2011	IC	226-10-03/Prefilter (PTFE)	75
Formic acid	OSHA ID 112	IC	Impinger	75
Formic acid	OSHA ID 186SG	IC	Impinger	75
Furfural	OSHA 72	GC-FID	SKC 226-81A	75
Furfuryl alcohol	NIOSH 2505	GC-FID	SKC 226-115	50
Glutaraldehyde	NIOSH 2532	HPLC-UV	SKC 226-119	90
Glutaraldehyde	OSHA 64	HPLC-UV	SKC 225-9003	90
Glycidol	NIOSH 1608	GC-FID	SKC 226-01	75
Glycol ethers	NIOSH 2554	GC-FID	SKC 226-81A	50/15*
Glycols	NIOSH 5523	GC-FID	SKC 226-57	75/35*
Glyphosate	ALS	GC-MS	Quartz fiber filter	100
H ₂ S/SO ₂	OSHA 1011	IC	SKC 226-177	125/50*
Halogenated hydrocarbons	NIOSH 1003	GC-FID	SKC 226/01	50/15*
HDI, 2,4-TDI, 2,6-TDI	OSHA 42	HPLC-UV	SKC 225-9002	80/35*
HDI, 2,4-TDI, 2,6-TDI, MDI	NIOSH 5522	HPLC-UV	Impinger	135/45*
Hexachlorobutadiene	NIOSH 2543	GC-ECD	SKC 226-30-04	75
Hexachlorocyclopentadiene	NIOSH 2518	GC-ECD	SKC 226-116 (2)	95
Hexavalent chromium	NIOSH 7600	VIS	PVC filter, 5µm	60
Hexavalent chromium	NIOSH 7605	HPLC	PVC filter, 5µm	80
Hexavalent chromium	OSHA ID 215	HPLC	PVC filter, 5µm	80
Hydrazine	NIOSH 3503	VIS	Impinger	130
Hydrazine	OSHA 108	HPLC-UV	SKC 225-9012	80
Hydrocarbons	NIOSH 1500	GC-FID	SKC 226-01	50/15*
Hydrocarbons	NIOSH 1500	GC-FID	3M 3500 POVM	50/15*
Hydrocarbons (light)	ALS	GC-FID	SUMMA or Tedlar bag	(pgs 15 & 20)
Hydrogen cyanide	NIOSH 6010	VIS	SKC 226-28	50
Hydrogen peroxide	OSHA ID 126SG	VIS	Impinger	75
Hydrogen peroxide	OSHA ID 006	VIS	Impinger	75
Hydrogen sulfide	NIOSH 6013	IC	226-09/Prefilter (PTFE)	75
Hydrogen sulfide	OSHA 1008	IC	SKC 226-177	150
Hydroquinone	NIOSH 5004	HPLC-UV	MCE filter, .8µm	80
Imidacloprid	ALS	HPLC	SKC 226-58 OVS2 or cotton gauze wipe	180
Inorganic acids	NIOSH 7903	IC	SKC 226-10-03	50/20*
			(Complete panel of 6 analytes – 140) (pgs 15 & 20)	
Iodine	NIOSH 6005	IC	SKC 226-67	75
Isophorone	NIOSH 2508	GC-FID	SKC 226-81A	60
Isophorone	NIOSH 2556	GC-FID	SKC226-93	75
Isophorone diisocyanate (IPDI)	OSHA 42	HPLC	SKC 225-9002	120
Isopropyl alcohol	OSHA 109	GC-FID	SKC 226-82 (2)	60
Isopropyl acetate	NIOSH 1454	GC-FID	SKC 226-01	60
Isopropyl acetate	NIOSH 1460	GC-FID	SKC 226-01	75
Isopropyl ether	NIOSH 1618	GC-FID	SKC 226-01	75
Ketones I	NIOSH 1300	GC-FID	SKC 226-01	50/15*
Ketones II	NIOSH 1301	GC-FID	SKC 226-01	50/15*
Ketones I	NIOSH 2555	GC-FID	SKC 226-121	75/20*
Ketones II	NIOSH 2553	GC-FID	SKC 226-121	75/20*
Lead	NIOSH 7082	FLAA	MCE filter, .8µm	15
Lead	40CFR50APPG	FLAA	GFF, 8x10	45
Lead in urine or blood	NIOSH 8003 (Mod)	ICP-MS	Urine or blood	60
Maleic anhydride	NIOSH 3512	HPLC-UV	Impinger	125

<u>Analyte(s)</u>	<u>Method</u>	<u>Instrument</u>	<u>Sample Medium</u>	<u>Fee (\$)*</u>
Maleic anhydride	OSHA 25	HPLC-UV	SKC 226-30-07/226-30	200
Maleic anhydride	OSHA 86	HPLC-UV	SKC 225-9021	125
Marijuana (Identified)	ALS	LC-MS	Bulk plant material	75
MCA/ECA	OSHA 55	HPLC-UV	SKC 226-98	80/35*
Mercury	NIOSH 6009	CVAA	SKC 226-17-1A	60
Mercury, particulate	OSHA ID 145	CVAA	MCE filter, .8µm	60
Mercury on wipe	NIOSH 9103	CVAA	Wipe	60
Metals	NIOSH 7300	ICP	MCE filter, .8µm	45/20*
			(Complete panel of 27 elements – 115) (pgs 17 & 20)	
Metals	OSHA ID 125G	ICP	MCE filter, .8µm	45/20*
			(Complete panel of 27 elements – 115) (pgs 17 & 20)	
Metals	NIOSH 7303 (Mod)	ICP	MCE filter, .8µm	45/20*
Metals on wipe	NIOSH 9102	ICP	Wipe	45/20*
Metals in urine	NIOSH 8310 (Mod)	ICP-MS	Urine	60
Metal working fluids	NIOSH 5524	GRAV	PTFE, 2µm, Preweighed	60
Methamphetamine Only	NIOSH 9111 (Draft)	LC-MS	Cotton Gauze	(pgs 17 & 20)
Methamphetamine and other compounds	NIOSH 9106 or NIOSH 9109	GC-MS	Cotton Gauze	(pgs 17 & 20)
Methanol	NIOSH 2000	GC-FID	SKC 226-51	50
2-Methoxyethanol/2-Ethoxyethanol	OSHA 79	GC-FID	SKC 226-01	50/15*
n-Methyl-2-pyrrolidinone	NIOSH 1302 (Mod)	GC-MS	SKC 226-01	60
Methyl acetate	NIOSH 1458	GC-FID	SKC 226-01	60
Methyl acrylate	NIOSH 1459	GC-FID	SKC 226-01	60
Methyl acrylate	NIOSH 2552	GC-FID	SKC 226-121	75/20*
Methyl alcohol	OSHA 91	GC-FID	SKC 226-82 (2)	50
Methyl cellosolve	OSHA 53	GC-FID	SKC 226-01	50/15*
Methyl cellosolve acetate	NIOSH 1451	GC-FID	SKC 226-01	60
Methyl chloride	NIOSH 1001	GC-FID	SKC 226-09	90
Methyl cyclohexanone	NIOSH 2521	GC-FID	SKC 226-115	75
Methyl ethyl ketone	NIOSH 2500	GC-FID	SKC 226-81A/226-121	50
Methyl iodide	NIOSH 1014	GC-FID	SKC 226-01	75
Methyl isocyanate	OSHA 54	HPLC-UV	ORBO 657	80
Methyl methacrylate/Ethyl methacrylate	NIOSH 2537	GC-FID	SKC 226-30-06	50/15*
Methyl methacrylate	OSHA 94	GC-FID	SKC 226-73	75
Methyl tert-butyl ether	NIOSH 1615	GC-FID	SKC 226-37	50
Methylal	NIOSH 1611	GC-FID	SKC 226-01	75
Methylamine	OSHA 40	HPLC	SKC-226-96	75
Methylene bisphenyl diisocyanate (MDI)	OSHA 47	HPLC-UV	SKC 225-9002	80
Methylene chloride	NIOSH 1005	GC-FID	SKC 226-01 (2)	50
Methylene chloride	OSHA 59	GC-FID	SKC 226-09-02	50
Methylene chloride	OSHA 80	GC-FID	SKC 226-121	50
Methylenebis-(o-chloroaniline) (MOCA)	OSHA 24	HPLC	Impinger	80
4,4- Methyleneedianiline (MDA)	OSHA 57 (Mod)	GC-MS	SKC 225-9004	90
4,4- Methyleneedianiline (MDA)	NIOSH 5029	HPLC-UV	SKC 225-9004	80
MOCA/o-Dianisidine/o-Tolidine	OSHA 71 (Mod)	GC-MS	SKC 225-9004	90/35*
Morpholine	ALS	GC-MS	Water	150
			Air—Acid treated XAD-7	
Naphthalene	OSHA 35	GC-FID	SKC 226-110	80
Naphthas	NIOSH 1550	GC-FID	SKC 226-01	50
Nickel Carbonyl	NIOSH 6007(Mod)	ICP	ORBO 304	60
Nicotine	NIOSH 2551 (Mod)	GC-MS	SKC 226-93	75
Nitric oxide/Nitrogen dioxide	NIOSH 6014	VIS	SKC 226-40	75/30*
p-Nitroaniline	NIOSH 5033	HPLC-UV	MCE filter, .8µm	80

<u>Analyte(s)</u>	<u>Method</u>	<u>Instrument</u>	<u>Sample Medium</u>	<u>Fee (\$)*</u>
Nitrobenzene	NIOSH 2005	HPLC	SKC 226-10	75
Nitroethane	NIOSH 2526	GC-FID	SKC 226-30-02	75
Nitroglycerin/EGDN	OSHA 43	HPLC	SKC 226-35-03	75/35*
Nitromethane	NIOSH 2527	GC-FID	SKC 226-111A	75
1-Nitropropane	OSHA 46	GC-FID	SKC 226-93	75
Nitrotoluene	NIOSH 2005	HPLC	SKC 226-10	75
Nitrosamine	NIOSH 2522	GC-MS	Thermosorb/N	250
2-Nitropropane	NIOSH 2528	GC-FID	SKC 226-110	75
1-Octanethiol	NIOSH 2510	GC-SCD	SKC 226-81A	60
Oil mist, mineral (bulk sample must be submitted with filters)	NIOSH 5026	IR	MCE filter, .8µm	Call for quote
Organic Carbon	NIOSH 5040	TOA	Quartz Fiber Filter	45
Organic vapors	OSHA 07	GC-FID	SKC 226-01	50/15*
Organochlorine Pesticides	NIOSH 5602	GC-MS	SKC 226-58	100/50* (pgs 18 & 22-25)
Organophosphorus Pesticides	NIOSH 5600	GC-MS	SKC 226-58	100/50* (pgs 18 & 22-25)
Organosulfur Compounds (see Sulfur Gases)	ALS	GC-SCD	SUMMA or Tedlar bag	(pgs 19 & 21)
Ozone	OSHA ID 214	IC	SKC 225-9014	80
Paraquat	NIOSH 5003	HPLC-UV	PTFE filter, 1µm	80
Pentachloroethane	NIOSH 2517	GC-ECD	SKC 226-59-04	75
Pentachlorophenol	NIOSH 5512	HPLC-UV	Impinger	80
Pentachlorophenol	OSHA 39	HPLC-UV	SKC 226-97 (2)	125
Permethrin	ALS	GC-MS	SKC 226-58 OVS2 or cotton gauze wipe	(pgs 17 & 22-25)
Pesticides	EPA TO-10A	GC-ECD	SKC PUF Cartridge	(pgs 17 & 22-25)
Pesticides	NIOSH 5601	HPLC	SKC 226-58 OVS2	(pgs 17 & 22-25)
Pesticides or Herbicides	NIOSH 5605 (Draft)	GC-MS	SKC 226-58 OVS2	100/35
Pesticide Surface Residues	NIOSH 9201	GC-MS	SKC 226-58 OVS2	Call for quote
Pesticide Surface Residues	NIOSH 9202	GC-MS	SKC 226-58 OVS2	Call for quote
Piperonyl Butoxide	OSHA PV 2110	HPLC	SKC 226-58 OVS2	175
Phthalates	OSHA 104	GC-FID	SKC 226-56	80/35*
Phthalic anhydride	OSHA 90	HPLC-UV	Glass fiber filter (treated)	80
Phenol/Cresol	OSHA 32	HPLC-UV	SKC 226-95	80/35*
Phenylene Diamine	OSHA 87	HPLC-UV	SKC 225-9004	100/35*
Phosgene	NON 40	GC-MS	SKC-226-153	150
Phosphine	OSHA 1003	ICP	SKC 225-9018	65
Phosphoric acid	OSHA ID 111	IC	MCE filter, .8µm	60
Phosphorus (P ₄)	NIOSH 7905 (Mod)	GC-FPD	SKC 226-35-03	80
Phthalic anhydride	OSHA 90	HPLC-UV	Glass fiber filter (treated)	80
Polychlorinated biphenyls (PCBs)	NIOSH 5503	GC-ECD	226-39/Prefilter (GFF)	80
Quartz & Cristobalite	OSHA ID 142	XRD	PVC filter, 5µm	(pg19) 65
Ribavirin	NIOSH 5027	HPLC-UV	Glass fiber filter, 1µm	135
Silica (Crystalline)	NIOSH 7500 (Mod)	XRD	PVC filter, 5µm	(pg19)
Solvent Panel (pgs 19 & 21)				
Sodium Azide (Gaseous/ Particulate)	OSHA ID 211	IC-UV	226-55/Prefilter (PVC)	80/80*
Solder metals	OSHA ID 206	ICP	MCE filter, .8µm	45/20*
Strychnine	NIOSH 5016	HPLC-UV	Glass fiber filter, 1µm	80
Styrene	OSHA 09	GC-FID	SKC 226-01	50
Sulfur dioxide	OSHA ID 104	IC	Impinger	60
Sulfur dioxide	OSHA ID 200	IC	SKC 226-80	60
Sulfur dioxide/Sulfate	NIOSH 6004	IC	SKC 225-9005	60/20*

<u>Analyte(s)</u>	<u>Method</u>	<u>Instrument</u>	<u>Sample Medium</u>	<u>Fee (\$)*</u>
Sulfur Gases (14)	ALS	GC-SCD	SUMMA or Tedlar bag	(pgs 19 & 21)
Sulfuric acid	OSHA ID 113	IC	MCE filter, .8µm	60
Sulfuryl Fluoride	NIOSH 6012	IC	SKC 226-16	90
Temephos	ALS	GC-MS	SKC 226-58 OVS2 or cotton gauze wipe	(pgs 18 & 22-25)
o-Terphenyl	NIOSH 5021	GC-FID	PTFE filter, 2µm	60
1,1,2,2-Tetrabromoethane	NIOSH 2003	GC-FID	SKC 226-10	75
Tetrachlorodifluoroethane	NIOSH 1016	GC-FID	SKC 226-01	75
1,1,2,2-Tetrachloroethane	NIOSH 1019	GC-FID	SKC 226-81A	75
2,3,5,6-Tetrachlorophenol	OSHA 45	HPLC-UV	SKC 226-97 (2)	125
Tetraethyl Lead/ Tetramethyl Lead	NIOSH 2533 (Mod)	GC-MS	SKC 226-30-04/226-30-06	90/35*
Tetrahydrofuran	NIOSH 1609	GC-FID	SKC 226-01	50
Tetranitromethane	NIOSH 3513 (Mod)	GC-MS	Impinger	75
THC (marijuana identification)	ALS	LC-MS	Bulk plant material	75
Thiram	NIOSH 5005	HPLC-UV	PTFE filter, 1µm	80
o,m,p-Toluidine	OSHA 73 (Mod)	GC-MS	SKC 225-9004	90
Total fibers	NIOSH 7400	PCM	SKC 225-321A	15
Toxic Organic Compounds	EPA TO-10A	GC-ECD	SKG Cartridges	(pg 19)
Tributyl phosphate	NIOSH 5034 (Mod)	GC-MS	MCE filter, .8µm	80
1,1,2-Trichloro-1,2,2-trifluoroethane	NIOSH 1020	GC-FID	SKC 226-01	75
1,1,2-Trichloroethane	OSHA 11	GC-FID	SKC 226-01	50
1,1,1-Trichloroethane	OSHA 14	GC-FID	SKC 226-01	50
Trichloroethylene	NIOSH 1022	GC-FID	SKC 226-01	50
Triethanolamine	ALS	GC-MS Silane derivative	Acid treated GFF (SKC 225-0994) or Acid treated XAD-7 (SKC 226-98)	150
Triethylene tetramine (TETA)	OSHA 60	HPLC	SKC 226-30-18	75/25*
Trimellitic anhydride (TMA)	OSHA 98	HPLC-UV	Glass fiber filter (treated)	160
Turpentine	NIOSH 1551	GC-FID	SKC 226-01	50
Valeraldehyde	NIOSH 2536	GC-FID	SKC 226-118	60
Valeraldehyde	OSHA 85	HPLC-UV	SKC 225-9020	90
Vanadium Pentoxide	NIOSH 7504	XRD	PVC filter, 5µm	55
Vapor Intrusion	TO-15	GC-MS	Tedlar bag or SUMMA Can	250
Vinyl acetate	NIOSH 1453	GC-FID	ORBO 92 Tube	60
Vinyl acetate	OSHA 51	GC-FID	ORBO 92 Tube	60
Vinyl bromide	OSHA 08	GC-FID	SKC 226-01	90
Vinyl chloride	NIOSH 1007	GC-FID	SKC 226-01 (2)	90
Vinyl chloride	OSHA 75	GC-FID	ORBO 92 Tube	90
Vinylidene chloride	NIOSH 1015	GC-FID	SKC 226-01	90
Vinylidene chloride	OSHA 19	GC-FID	SKC 226-01	90
Warfarin	NIOSH 5002	HPLC-UV	PTFE filter, 1µm	80

NIOSH 4th Edition Methods


<u>Fourth Edition NIOSH Method</u>	<u>Analyte(s)</u>	<u>Instrument</u>	<u>Sample Medium</u>	<u>Fee (\$)*</u>
0500	Dust, total	GRAV	PVC, 5µm, Preweighed	10
0600	Dust, respirable	GRAV	PVC, 5µm, Preweighed	10
1000	Allyl chloride	GC-FID	SKC 226-01	75
1001	Methyl chloride	GC-FID	SKC 226-09	90
1002	Chloroprene	GC-FID	SKC 226-01	90
1003	Halogenated hydrocarbons	GC-FID	SKC 226-01	50/15*
1004	Dichloroethyl ether	GC-FID	SKC 226-01	75
1005	Methylene chloride	GC-FID	SKC 226-01 (2)	50
1006	Fluorotrichloromethane	GC-FID	SKC 226-09	75
1007	Vinyl chloride	GC-FID	SKC 226-01 (2)	90
1008	Ethylene dibromide	GC-ECD	SKC 226-01 GWS	75
1010	Epichlorohydrin	GC-FID	SKC 226-01	75
1011	Ethyl bromide	GC-FID	SKC 226-01	75
1012	Difluorodibromomethane	GC-FID	SKC 226-01 (2)	75
1013	Propylene dichloride	GC-FID	SKC 226-81A	75
1014	Methyl iodide	GC-FID	SKC 226-01	75
1015	Vinylidene chloride	GC-FID	SKC 226-01	90
1016	Tetrachlorodifluoroethane	GC-FID	SKC 226-01	75
1017	Bromotrifluoromethane	GC-FID	SKC 226-09	75
1018	Dichlorodifluoromethane	GC-FID	SKC 226-01	90
1019	1,1,2,2-Tetrachloroethane	GC-FID	SKC 226-81A	75
1020	1,1,2-Trichloro-1,2,2-trifluoroethane	GC-FID	SKC 226-01	75
1022	Trichloroethylene	GC-FID	SKC 226-01	50
1024	1,3-Butadiene	GC-FID	SKC 226-37	75
1025	1-bromopropane/ 2-bromopropane	GC-FID	SKC 266-01 or 226-121	75/25*
1026	p-Chlorobenzotrifluoride	GC-FID	SKC 226-01	75
1300	Ketones I	GC-FID	SKC 226-01	50/15*
1301	Ketones II	GC-FID	SKC 226-01	50/15*
1302 (Mod)	n-Methyl-2-pyrrolidinone	GC-MS	SKC 226-01	60
1400	Alcohols I	GC-FID	SKC 226-01	50/15*
1401	Alcohols II	GC-FID	SKC 226-01	50/15*
1402	Alcohols III	GC-FID	SKC 226-01	50/15*
1403	Alcohols IV	GC-FID	SKC 226-01	50/15*
1450	Esters I	GC-FID	SKC 226-01	50/15*
1451	Methyl cellosolve acetate	GC-FID	SKC 226-01	60
1452	Ethyl formate	GC-FID	SKC 226-01	60
1453	Vinyl acetate	GC-FID	ORBO 92 Tube	60
1454	Isopropyl acetate	GC-FID	SKC 226-01	60
1457	Ethyl acetate	GC-FID	SKC 226-01	60
1458	Methyl acetate	GC-FID	SKC 226-01	60
1459	Methyl acrylate	GC-FID	SKC 226-01	60
1460	Isopropyl Acetate	GC-FID	SKC 226-01	75
1500	Hydrocarbons	GC-FID	SKC 226-01	50/15*
1501	Aromatic hydrocarbons	GC-FID	SKC 226-01	50/15*
1550	Naphthas	GC-FID	SKC 226-01	50
1551	Turpentine	GC-FID	SKC 226-01	50
1601	1,1-Dichloro-1-nitroethane	GC-FID	SKC 226-81A	75
1602	Dioxane	GC-FID	SKC 226-01	50
1603	Acetic acid	GC-FID	SKC 226-01	100

<u>Fourth Edition NIOSH Method</u>	<u>Analyte(s)</u>	<u>Instrument</u>	<u>Sample Medium</u>	<u>Fee (\$)*</u>
1604	Acrylonitrile	GC-FID	SKC 226-01	50
1606	Acetonitrile	GC-FID	SKC 226-09	50
1608	Glycidol	GC-FID	SKC 226-01	75
1609	Tetrahydrofuran	GC-FID	SKC 226-01	50
1610	Ethyl ether	GC-FID	SKC 226-01	50
1611	Methylal	GC-FID	SKC 226-01	75
1612	Propylene oxide	GC-FID	SKC 226-01	90
1613 (Mod)	Pyridine	GC-MS	SKC 226-01	75
1614 (Mod)	Ethylene oxide	GC-MS	SKC 226-178	150
1615	Methyl tert-butyl ether	GC-FID	SKC 226-37	50
1616	n-Butyl glycidyl ether	GC-FID	SKC 226-01	75
1618	Isopropyl ether	GC-FID	SKC 226-01	75
1622	Carbon Disulfide	GC-SCD	SKC 226-01/226-44	80
2000	Methanol	GC-FID	SKC 226-51	50
2002 (Mod)	Aromatic Amines	LC-MS	SKC 226-10	120
2003	1,1,2,2-Tetrabromoethane	GC-FID	SKC 226-10	75
2004 (Mod)	Dimethyl acetamide	GC-FID	SKC 226-10	75
2005	Nitrobenzene/Nitrotoluene (by OSHA 44)	HPLC	SKC 226-10	80/35*
2010 (Mod)	Aliphatic Amines (See page 35)			
2011	Formic acid	IC	226-10-03/Prefilter (PTFE)	75
2014	p-Chlorophenol	HPLC-UV	SKC 226-10	80
2016	Formaldehyde	HPLC-UV	SKC 226-119 DNPH	80
2018	Aliphatic Aldehydes	HPLC-UV	SKC 226-119 DNPH	110/35*
2500	Methyl ethyl ketone	GC-FID	SKC 226-81A/226-121	50
2505	Furfuryl alcohol	GC-FID	SKC 226-115	50
2507 (Mod)	Nitroglycerin/EGDN	HPLC	SKC 226-35-03	75/25*
2508	Isophorone	GC-FID	SKC 226-81A	60
2510	l-Octanethiol	GC-SCD	SKC 226-35-03	60
2513	Ethylene chlorohydrin	GC-FID	SKC 226-81A	75
2514	Anisidine	HPLC-UV	SKC 226-30-05	80
2516	Dichlorofluoromethane	GC-FID	SKC 226-09 (2)/226-25	90
2517	Pentachloroethane	GC-ECD	SKC 226-59-04	75
2518	Hexachlorocyclopentadiene	GC-ECD	SKC 226-116 (2)	95
2519	Ethyl chloride	GC-FID	SKC 226-25	90
2521	Methyl cyclohexanone	GC-FID	SKC 226-115	75
2522 (Mod)	Nitrosamine	GC-MS	Thermosorb/N	250
2523	1,3-Cyclopentadiene	GC-FID	Chromosorb 104 tube	75
2524	Dimethyl Sulfate	GC-MS or GC-SCD	SKC 226-114	90
2526	Nitroethane	GC-FID	SKC 226-30-02	75
2527	Nitromethane	GC-FID	SKC 226-111A	75
2528	2-Nitropropane	GC-FID	SKC 226-110	75
2530	Diphenyl (biphenyl)	GC-FID	SKC 226-35-01	60
2532	Glutaraldehyde	HPLC-UV	SKC 226-119	90
2533 (Mod)	Tetraethyl Lead/Tetramethyl Lead	GC-MS	SKC 226-30-04/226-30-06	90/35*
2536	Valeraldehyde	GC-FID	SKC 226-118	60
2537	Ethyl methacrylate/Methyl methacrylate	GC-FID	SKC 226-30-06	50/15*
2538	Acetaldehyde	GC-FID	SKC 226-27	60
2539	Aldehyde screen	GC-FID	SKC 226-118 (2-hydroxy methyl) piperidine (Panel of 9 compounds)	60/20* \$175 (pgs 15 & 20)
2540	Ethylenediamine	HPLC-UV	SKC 226-30-18	120
2541	Formaldehyde	GC-FID	SKC 226-118	60
2543	Hexachlorobutadiene	GC-ECD	SKC 226-30-04	75

<u>Fourth Edition NIOSH Method</u>	<u>Analytes(s)</u>	<u>Instrument</u>	<u>Sample Medium</u>	<u>Fee (\$)*</u>
2544 (Mod)	Nicotine (see NIOSH 2551 (Mod))	GC-MS	SKC 226-30-04	75
2545	Allyl glycidyl ether	GC-FID	SKC 226-35-03	75
2546	Cresols/ Phenols	GC-FID	SKC 226-95	75/35*
2551 (Mod)	Nicotine	GC-MS	SKC 226-93	75
2552	Methyl Acrylate	GC-FID	SKC 226-121	75/20*
2553	Ketones II	GC-FID	SKC 226-121	75/20*
2554	Glycol Ethers	GC-FID	SKC 226-81A	50/15*
2555	Ketones I	GC-FID	SKC 226-121	75/20*
2556	Isophorone	GC-FID	SKC 226-93	75
2557	Diacyl/Acetoin	GC-FID	SKC 226-121	90/25*
2558	Acetoin	GC-FID	SKC 226-121	90
2559	Decabromodiphenyl Oxide	HPLC-UV	Quartz fiber filter	120
3500	Formaldehyde	VIS	Impinger	50
3503	Hydrazine	VIS	Impinger	130
3507	Acetaldehyde	HPLC-UV	Impinger	90
3512	Maleic anhydride	HPLC-UV	Impinger	125
3513 (Mod)	Tetranitromethane	GC-MS	Impinger	75
5000	Carbon black	GRAV	PVC, 5µm, Preweighed	10
5001	2,4-D/2,4,5-T	HPLC-UV	Glass fiber filter, 1µm	125/35*
5002	Warfarin	HPLC-UV	PTFE filter, 1µm	80
5003	Paraquat	HPLC-UV	PTFE filter, 1µm	80
5004	Hydroquinone	HPLC-UV	MCE filter, .8µm	80
5005	Thiram	HPLC-UV	PTFE filter, 1µm	80
5008	Pyrethrum	HPLC-UV	Glass fiber filter, 1µm	80
5009	Benzoyl peroxide	HPLC-UV	MCE filter, .8µm	80
5010	Bromoxynil	HPLC-UV	PTFE filter, 2µm	80/30*
5012 (Mod)	EPN	GC-MS	Glass fiber filter, 1µm	80
5014	Chlorinated terphenyl	GC-ECD	Glass fiber filter, 1µm	80
5016	Strychnine	HPLC	Glass fiber filter, 1µm	80
5017 (Mod)	Dibutyl phosphate	GC-MS	PTFE filter, 1µm	80
5020	Dibutyl phthalate/Di(2-ethylhexyl)phthalate	GC-FID	MCE filter, .8µm	60/20*
5021	o-Terphenyl	GC-FID	PTFE filter, 2µm	60
5026	Oil mist, mineral	IR	MCE filter, .8µm	100
5027	Ribavirin	HPLC-UV	Glass fiber filter, 1µm	135
5029	4,4-Methylenedianiline (MDA)	HPLC-UV	SKC 225-9004	80
5030	Cyanuric acid	HPLC-UV	PVC, 5µm, Preweighed	160
5031	Aspartame	HPLC-UV	PTFE filter, 1µm	135
5033	p-Nitroaniline	HPLC	MCE filter, .8µm	80
5034 (Mod)	Tributyl phosphate	GC-MS	MCE filter, .8µm	80
5039	Chlorinated camphene (Toxaphene)	GC-ECD	MCE filter, .8µm	80
5040	Elemental carbon	TOA	Quartz fiber filter	45
5042	Benzene solubles & Total weight	GRAV	PTFE, 2µm, Preweighed	75
5044	Estrogenic / Hormone Compounds	HPLC	PTFE Filter	125
5502	Aldrin/Lindane	GC-ECD	Impinger	80/35*
5503 (Mod)	Polychlorinated biphenyls	GC-ECD	226-39/Prefilter (GFF)	80
5506 (Mod)	Polynuclear aromatic hydrocarbons (PAH)	HPLC-UV	226-30-04/Prefilter (PTFE)	80/35*
			(Panel – \$230) (pgs 18 & 21)	
5509	Benidine/3,3-Dichlorobenzidine	HPLC-UV	Glass fiber filter, 1µm	80/35*
5510	Chlordane	GC-ECD	226-107/Prefilter (MCE)	80
5512	Pentachlorophenol	HPLC-UV	Impinger	80
5514 (Mod)	Demeton	GC-MS	MCE filter, 2µm	80
5519	Endrin	GC-ECD	MCE filter, .8µm	80
5522	HDI/2,4-TDI/2,6-TDI/MDI	HPLC-UV	Impinger	135/45*

<u>Fourth Edition NIOSH Method</u>	<u>Analytes(s)</u>	<u>Instrument</u>	<u>Sample Medium</u>	<u>Fee (\$)*</u>
5523	Glycols	GC-FID	SKC 226-57	75/35*
5524	Metal working fluids	GRAV	PTFE, 2µm, Preweighed	60
5528 (Draft)	Polynuclear Aromatic Hydrocarbons (PAH)	GC-MS SIM	SKC 226-57, OVS (XAD-7) (Panel—\$230) (pgs 18 & 21)	80/35*
5600	Organophosphorus pesticides	GC-MS	SKC 226-58 (Panel – \$350) (pgs 18 & 22-25)	100/50*
5601	Pesticides	HPLC	SKC 226-58 OVS2 (pgs 18 & 22-25)	100/50*
5602	Organochlorine pesticides	GC-MS	SKC 226-58 (Panel – \$350) (pgs 18 & 22-25)	100/50*
5605 (Draft)	Pesticides or Herbicides	GC-MS	SKC 226-58	100/35*
6001(Mod)	Arsine	ICP	SKC 226-01	90
6004	Sulfur dioxide/Sulfate	IC	SKC 225-9005	60/20*
6005	Iodine	IC	SKC 226-67	75
6007(Mod)	Nickel Carbonyl	ICP	ORBO 304	90
6009	Mercury	CVAA	SKC 226-17-1A	60
6010	Hydrogen cyanide	VIS	SKC 226-28	50
6011	Chlorine/Bromine	IC	SKC 225-9006	100/50*
6012	Sulfuryl Fluoride	IC	SKC 226-16	90
6013	Hydrogen Sulfide	IC	226-09/Prefilter (PTFE)	75
6014	Nitric oxide/Nitrogen dioxide	VIS	SKC 226-40	75/30*
6015	Ammonia	VIS	SKC 226-10-06	50
7013(Mod)	Aluminum compounds as Al	ICP	MCE filter, .8µm	45
7029 (Mod)	Copper, or other metals (Dust/Fume)	ICP	MCE filter, .8µm	45/25*/25¢
7082	Lead	FLAA	MCE filter, .8µm	15
7300	Metals	ICP	MCE filter, .8µm (Complete panel of 27 elements – \$115) (pgs 17 & 20)	45/20*
7303	Metals	ICP	MCE filter, .8 µm	45/20*
7400	Total Fibers	PCM	SKC 225-321A	15
7401	Alkaline dust	TITRA	PTFE filter, 1µm	65
7500	Silica (crystalline)	XRD	PVC filter, 5µm	(pg 19)
7504	Vanadium Pentoxide	XRD	PVC filter, 5µm	55
7600	Hexavalent chromium	VIS	PVC filter, 5µm	60
7605	Hexavalent chromium	HPLC-UV	PVC filter, 5µm	80
7607)	Chloramine Compounds	IC	Silica gel/filter cassette	145
7901(Mod)	Arsenic Trioxide	ICP	SKC 225-9005	75
7902	Fluorides, particulate/gaseous	ISE	SKC 225-9001	50/20*
7903	Inorganic acids	IC	SKC 226-10-03 (Complete panel of 6 analytes – \$140) (pgs 15 & 20)	50/20*
7904(Mod)	Cyanides, particulate/gaseous	VIS	MCE filter, .8µm/impinger	60/20*
7905 (Mod)	Phosphorus (P ₄)	GC-FPD	SKC 226-35-03	80
8003	Lead in urine or blood	ICP-MS	Urine or blood	40
8310(Mod)	Metals in urine	ICP-MS	Urine	60
9002	Asbestos bulk	PLM	Bulk material	25
9102	Metals on wipe	ICP	Wipe	45/20*
9103	Mercury on wipe	CVAA	Wipe	60
9106	Methamphetamine, Amphetamine, Ephedrine, MDMA and Pseudoephedrine	GC-MS	Cotton Gauze	(pgs 17 & 21)
9109	Methamphetamine, Amphetamine, Ephedrine, MDMA and Pseudoephedrine	GC-MS	Cotton Gauze	(pgs 17 & 21)
9111	Methamphetamine only	LC-MS	Cotton Gauze	(pgs 17 & 21)
9201	Pesticide Surface Residues, scan	GC-MS	SKC 226-58 OVS2	Call for quote
9202	Pesticide Surface Residues, scan	GC-MS	SKC 226-58 OVS2	Call for quote

OSHA Methods


<u>OSHA Method</u>	<u>Analytes(S)</u>	<u>Instrument</u>	<u>Sample Medium</u>	<u>Fee (\$)*</u>
01	Cyclohexanone	GC-FID	SKC 226-110	50
02	Ethylene dibromide	GC-ECD	SKC 226-01	75
03	Ethylene dichloride	GC-ECD	SKC 226-01 GWS	75
05	Chloroform	GC-FID	SKC 226-01	50
07	Organic vapors	GC-FID	SKC 226-01	50/15*
08	Vinyl bromide	GC-FID	SKC 226-01	90
09	Styrene	GC-FID	SKC 226-01	50
10	Chloromethyl methyl ether (CMME)	GC-ECD	Impinger	90
11	1,1,2-Trichloroethane	GC-FID	SKC 226-01	50
12	Benzene	GC-FID	SKC 226-01	50
14	1,1,1-Trichloroethane	GC-FID	SKC 226-01	50
19	Vinylidene chloride	GC-FID	SKC 226-01	90
21	Acrylamide	GC-MS	SKC 226-10	120
24	Methylenebis-(o-chloroaniline) (MOCA)	HPLC-UV	Impinger	80
25	Maleic anhydride	HPLC-UV	SKC 226-30-07/226-30	200
28	Acrylic acid	HPLC-UV	SKC 226-30-08 (2)	80
29	Enflurane/Halothane	GC-FID	SKC 226-01 (2)	90
32	Phenol /Cresol	HPLC-UV	SKC 226-95	80/35*
34	Dimethylamine	HPLC	SKC 226-96	75
35	Naphthalene	GC-FID	SKC 226-110	80
36	Ethylamine	HPLC	SKC-226-96	75
37	Acrylonitrile	GC-FID	SKC 226-01	75
39	Pentachlorophenol	HPLC-UV	SKC 226-97 (2)	125
40	Methylamine	HPLC	SKC 226-96	75
41	Diethylamine	HPLC	SKC 226-96	75
42	HDI/2,4-TDI/2,6-TDI	HPLC-UV	SKC 225-9002	80/35*
42	Isophorone diisocyanate	HPLC-UV	SKC 225-9002	120
43	EGDN/Nitroglycerin	HPLC-UV	SKC 226-35-03	80/35*
44	2,4-DNT/2,6-DNT/2,4,6-TNT	HPLC	SKC 226-56	80/35*
45	2,3,5,6-Tetrachlorophenol	HPLC-UV	SKC 226-97 (2)	125
46	1-Nitropropane	GC-FID	SKC 226-93	75
47	Methylene bis-phenyl diisocyanate (MDI)	HPLC-UV	SKC 225-9002	80
50 (Mod)	Ethylene oxide	GC-MS	SKC 226-178	150
51	Vinyl acetate	GC-FID	ORBO 92 Tube	60
53	Methyl cellosolve	GC-FID	SKC 226-01	50/15*
54	Methyl isocyanate	HPLC-UV	ORBO 657	80
55	MCA & ECA	HPLC-UV	SKC 226-98	80/35*
57	4,4-Methylenedianiline (MDA) (by NIOSH 5029)	GC-MS	SKC 225-9004	90
58 (Mod)	Coal tar pitch volatiles (PAH Analysis: Panel)	GRAV HPLC	PTFE, 2µm PTFE, 2µm	75 \$230 (pgs 18 & 21)
59	Methylene chloride	GC-FID	SKC 226-09-02	50
60	Diethylenediamine (piperazine), Ethylenediamine (EDA), Diethylenetriamine (DETA), Triethylenetetramine (TETA)	HPLC	SKC 226-30-18	75/25*
62 (Mod)	Chlorpyrifos/Diazinon/Malathion	GC-ECD	SKC 226-30-16	80/35*
63	Carbaryl (Sevin)	HPLC-UV	SKC 226-30-16	80
64	Glutaraldehyde	HPLC-UV	SKC 225-9003	90
67	Chlordane	GC-ECD	SKC 226-30-16	80
69	Acetone	GC-FID	SKC 226-121	50
70	Pyrethrum	GC-MS	SKC 226-30-16	80

<u>OSHA Method</u>	<u>Analytes(s)</u>	<u>Instrument</u>	<u>Sample Medium</u>	<u>Fee (\$)*</u>
71	MOCA/o-Dianisidine/o-Tolidine	GC-MS	SKC 225-9004	90/35*
72	Furfural	GC-FID	SKC 226-81A	75
73	o,m,p-Toluidine	GC-MS	SKC 225-9004	90
75	Vinyl chloride	GC-FID	ORBO 92 Tube	90
76	Chloroacetaldehyde	GC-ECD	SKC 226-15 GWS	90
78	Diphenylamine/Isopropylamine	HPLC	GFF SKC 225-9004	75/25*
79	2-Methoxyethanol/2-Ethoxyethanol	GC-FID	SKC 226-01	50/15*
80	Methylene chloride	GC-FID	SKC 226-121	50
81	Crotonaldehyde	HPLC	SKC 225-9019	90
83	2-Butoxyethanol	GC-FID	SKC 226-01	50
84	2-Butanone (MEK)	GC-FID	SKC 226-121	50
85	Valeraldehyde	HPLC-UV	SKC 225-9020	90
86	Maleic anhydride	HPLC-UV	SKC 225-9021	125
87	Phenylene Diamine	HPLC-UV	SKC 225-9004	100/35*
89	Divinyl benzene/Styrene	GC-FID	SKC 226-73	65/20*
90	Phthalic anhydride	HPLC-UV	Glass fiber filter (treated)	80
91	Methyl alcohol	GC-FID	SKC 226-82 (2)	50
92	Ethylacrylate/Methylacrylate	HPLC	SKC 226-73	100/25
94	Methyl methacrylate	GC-FID	SKC 226-73	75
95	Ethylene thiourea	HPLC-UV	Glass fiber filter, 1µm	160
98	Trimellitic anhydride (TMA)	HPLC-UV	Glass fiber filter (treated)	160
100	Ethyl alcohol	GC-FID	SKC 226-82 (2)	50
104	Phthalates	GC-FID	SKC 226-56	80/35*
106	Desflurane	GC-FID	SKC 226-81A	90
108	Hydrazine	HPLC-UV	SKC 225-9012	80
109	Isopropyl Alcohol	GC/FID	SKC 226-82(2)	60
1003	Phosphine	ICP	SKC 225-9018	75
1008	Hydrogen Sulfide	IC	SKC 226-177	150
1011	H ₂ S/SO ₂	IC	SKC 226-177	150/25*
ID 006	Hydrogen peroxide	VIS	Impinger	75
ID 104	Sulfur dioxide	IC	Impinger	60
ID 108	Bromine	IC	Impinger	60
ID 111	Phosphoric acid	IC	MCE filter, .8µm	60
ID 112	Formic acid	IC	Impinger	75
ID 113	Sulfuric acid	IC	MCE filter, .8µm	60
ID 125G	Metals	ICP	MCE filter, .8µm (Full Panel – \$115)	45/20*(pgs 17 & 20)
ID 126SG	Hydrogen peroxide	VIS	Impinger	75
ID 142	Quartz & Cristobalite	XRD	PVC filter, 5µm	\$55 (pg19)
ID 145	Mercury, particulate	CVAA	MCE filter, .8µm	60
ID 165SG	Acid mist	IC	SKC 226-10-03	60/20*
ID 186SG	Formic Acid	IC	Impinger	75
ID 196	Carbon black	GRAV	PVC, 5µm, Prewweighed	75
ID 200	Sulfur dioxide	IC	SKC 226-80	60
ID 202	Chlorine dioxide	IC	Impinger	80
ID 206	Solder metals	ICP	MCE filter, .8µm	45/20*
ID 211	Sodium Azide (Gaseous/ Particulate)	IC	226-55/Prefilter (PVC)	80/80*
ID 214	Ozone	IC	SKC 225-9014	80
ID 215	Hexavalent Chromium	HPLC	PVC filter, 5µm	80
PV2063	Cypermethrin	GC-MS	SKC 226-30-16	120
PV2110	Piperonyl Butoxide	HPLC	SKC 226-58	175
PV2111	Diethanolamine	HPLC (NITC der.)	XAD-2, SKC 226-30-18	150
PV2111	Ethanolamine	HPLC (NITC der.)	XAD-2, SKC 226-30-18	150

ALS-Salt Lake City Methods

Analyte(s)	Method	Instrument	Sorbent or Sample type	Air Sampler SKC Number	Fee (\$)
Acrylamide in Air by GC-MS	OSHA 21 ALS mod	GC-MS	Silica gel	226-10	120
Alcohol-Glycols in Water by GC-MS (Semi-quantitative Screen)	ALS	GC-MS	Water	Not applicable	300
Bis Chloromethyl ether (BCME) by Thermal Desorption GC-MS (Short term sampling)	ALS	GC-MS	250mg Tenax TD tube	226-157PE	200
Bis Chloromethyl ether (BCME) by GC-MS (Short term sampling)	ALS	GC-MS	250mg Tenax TD tube	226-157PE	200
Benzalkonium (Chloride) in Hand Lotion and Sanitizer by GC-MS	ALS	GC-MS	Bulk emulsion	Not applicable	300
Benzalkonium (Chloride) and Didecyl Dimethyl-ammonium (Chloride) in Air by GC-MS	ALS	GC-MS	QFF, PTFE	225-1822, 225-17-01	275
Benzalkonium (Chloride) and Didecyl Dimethyl-ammonium (Chloride) on wipes (bulks) by GC-MS	ALS	GC-MS	Cotton gauze; AlphaWipe; Nu-gauze,	Not applicable	275
Benzothiazole and Sulfur Heterocycles in Petroleum (Screen)	ALS	GC-MS	Bulk	Not applicable	500
Dimethyl-methylphosphonate (DMMP) by GC-MS	ALS	GC-MS	Tenax	226-35-03 or 226-56	175
Dioic Acids in Air by BSTFA and GC-MS	N5019, ALS mod	GC-MS	QFF, PTFE	225-1822 or 225-17-01	300
5-Fluorouracil (Antineoplastics) (on Wipes) by GC-MS	ALS	GC-MS	Cotton gauze; AlphaWipe; Nu-gauze,	Not applicable	175
Gentamycin (Antineoplastics)	ALS	GC-MS	QFF, PTFE	225-1822, 225-17-01	250
Glycerol, Diethyleneglycol, Thiodiglycol (Polyols in general) Water, Air by GC-MS	ALS	GC-MS	water, bulk, air, wipe	226-709; 226-10; 226-94/95	300
Glyphosate in Air by GC-MS	ALS	GC-MS	QFF, PTFE	Not applicable	200
Hexahydrophthalic anhydride, Tetrahydrophthalic anhydride, and Methyl Analogs, in Air by GC-MS	ALS	GC-MS	Water, Impinger, Sorbent tube	For air: 226-58	300
Mercaptoethanol, 1,2-Ethanedithiol, Alkyl mercaptans in Air by GC-MS	N2510, ALS mod	GC-MS	Tenax, XAD-7	226-35-03	300
Methane-sulfonic Acid in Air by GC-MS	ALS	GC-MS	13mm GFF	225-16	175
Multiple Herbicide Residues in Plant Matter and Soil by GC-MS (Screen)	ALS	GC-MS	Bulk	Not applicable	600
N-Methylpyrrolidinone in Water by GC-MS	8270 ALS-mod	GC-MS	water	Not applicable	200
ortho-Phenyl Phenol (in Air) by GC-MS	ALS	GC-MS	Tenax	226-35-03	175
Phosgene by GC-MS (in Air) by GC-MS	NON 40	GC-MS	Treated XAD-2	226-153	175
Sulfur Hexafluoride	ALS	GC-ECD	SUMMA/Tedlar	Not applicable	125
Thiolamine and N,N-Diethylaminoethanethiol by GC-MS	ALS	GC-MS	Air	225-9004	250
Trimethoxypropoxyglycidyl ether, 3-Mercaptopropyltrimethoxysilane by GC-MS	ALS	GC-MS	Tenax	226-35-03	300

Common Industrial Hygiene Analyses

Acids (Inorganic) Analyte List (Pg 20)

Analyte	Method	Instrument	Medium	Fee(\$)
Inorganic Acids (Full Panel)	NIOSH 7903	IC	Silica Gel Tube (SKC 226-10-03)	140
Inorganic Acids (Select Analytes)	NIOSH 7903	IC	Silica Gel Tube (SKC 226-10-03)	50/20*

Aldehydes Analyte List (Pg 20)

Analyte	Method	Instrument	Medium	Fee(\$)
Aldehydes (Full Panel)	NIOSH 2539 (Mod)	GC-FID	XAD-2 Tube (SKC 226-118)	175
Aldehydes (Select Analytes)	NIOSH 2539 (Mod)	GC-FID	XAD-2 Tube (SKC 226-118)	60/20*

Amines Analyte List (Pg 26)

Panel	Analyte	Method	Instrument	Medium	Fee(\$)
VAA-1	Volatile Aliphatic Amines	OSHA 34, 36, 40, 41	HPLC-UV	SKC 226-96	100/30*
VAA-2	Volatile Aliphatic Amines	OSHA CSI, PV2126, ALS	HPLC-UV	SKC 226-30-18	100/30*
ALA-1	Aliphatic Amines	ALS	GC-MS	SKC 226-98	100/35*
ALA-2	Aliphatic Amines	OSHA 60	HPLC-UV	SKC 226-30-18	100/30*
CAA-1	Cyclic Alkyl Amines	PV2123, PV2016 mod by ALS	GC-MS	SKC 226-96	100/35*
CAA-2	Cyclic Alkyl Amines	NIOSH 2551	GC-MS	SKC 226-93	100/35*
EA-1	Ethanol Amines	PV2018, PV2111, PV2116, PV2122, PV2145	HPLC-UV	SKC 226-30-18	100/30*
EA-2	Ethanol Amines	ALS, NIOSH 3509, NIOSH 2007, or NIOSH 2561 mod by ALS	GC-MS	SKC 226-98, SKC 225-9004, Impinger, SKC 226- 94, SKC 10-04	100/35*
EA-3	Ethanol Amines	PV2141 mod by ALS, ALS	GC-MS	SKC 225-709, SKC 10-04, SKC 226-94	100/35*
EA-4	Ethanol Amines	ALS	GC-MS	SKC 225-709, SKC 10-04, SKC 226-94	100/35*
QA-1	Quaternary Amines	ALS	GC-MS	SKC 225-709, SKC 225-17-01	100/35*
ADA-1	Aromatic Di-Amines	NIOSH 5029, NIOSH 5509, NIOSH 5516, OSHA 24, OSHA 87, OSHA 105	HPLC-UV	SKC 225-16, SKC 225-9004, Impinger	100/30*
ADA-2	Aromatic Di-Amines	ALS SOP similar to OSHA 71 or 73	GC-MS	SKC 225-9004	100/35*
ARA-1	Aromatic Amines	PV2079 mod by ALS, ALS SOP similar to OSHA 71 or 73, OSHA 93 mod by ALS	GC-MS	SKC 226-98, SKC 225-9004	100/35*
ARA-2	Aromatic Amines	NIOSH 2514, NIOSH 5033, OSHA CSI, OSHA 78	HPLC-UV	SKC 226-30-05 (XAD -2), SKC 225-9004, SKC 225-3-01 (MCE)	100/30*

Common Industrial Hygiene Analyses (cont)
Antineoplastic and Chemotherapy Drugs *Analyte List (Pgs 20 and 27)*

Analyte	Method	Instrument	Medium	Fee(\$)
Select compounds of interest	ALS SOP	LC-MS or GC-MS	Wipe (cotton gauze)	200/75*
	ALS SOP	LC-MS or GC-MS	Air samples collected on filters or OVS7	200/75*

Asbestos/Total Fibers

Analyte	Method	Instrument	Medium	TAT	Fee(\$)
Bulk Asbestos	NIOSH 9002	PLM	Bulk	Five Working Days	25
Bulk Asbestos	NIOSH 9002	PLM	Bulk	Next Working Day	35
Asbestos in Soil	NIOSH 9002	PLM	Soil	Five Working Days	50
Asbestos in Air	NIOSH 7400	PCM	MCE Filter	Five Working Days	15
Asbestos in Air	NIOSH 7400	PCM	MCE Filter	Next Working Day	25

Diesel Particulate (Elemental Carbon)

Analyte	Method	Instrument	Medium	Fee(\$)
Elemental Carbon	NIOSH 5040	TOA	Treated Quartz Fiber Filter	45
Elemental Carbon (Acid treatment for removal of carbonaceous material)	NIOSH 5040	TOA	Treated Quartz Fiber Filter	110

Gravimetric

Analyte	Method	Instrument	Medium	Fee(\$)
Total Dust	NIOSH 0500	Microbalance	PVC, 5µm, Preweighed or matched weight	10
Respirable Dust	NIOSH 0600	Microbalance	PVC, 5µm, Preweighed or matched weight	10
PM 10	40 CFR 50 APP B	Microbalance	QFF, 8"x10", Preweighed or matched weight	20
Coal Tar Pitch Volatiles	OSHA 58	Microbalance	PTFE, 2µm or matched weight	75
Benzene Solubles	NIOSH 5042	Microbalance	PTFE, 2µm, Preweighed or matched weight	85
Metalworking Fluids	NIOSH 5524	Microbalance	PTFE, 2µm, Preweighed or matched weight	60

Note: Tare weighed PVC and PTFE filters (2- or 3-piece cassettes) are available from ALS; the standard cost is \$5.00 per cassette. For gravimetric determinations, ALS recommends that tare weights and post-collection weights be determined using the same microbalance. ALS also recommends that filters be utilized within six months of their tare weight determination.

Indoor Air Quality (VOCs) *Analyte List (Pg 20)*

Analyte	Method	Instrument	Medium	Fee(\$)
Volatile Organics	EPA TO-15	GC-MS	SUMMA/SilcoCan canister/Tedlar Bag	250
			SUMMA/SilcoCan canister/Tedlar Bag/flow controller seven calendar day rental	40
Volatile Organics ¹	EPA TO-17 (Mod) Semi-quantitative	GC-MS	Supelco Carbotrap 300 Tube	250
			Supelco Carbotrap 300 Tube seven calendar day rental	40
Volatile Organics ² (Passive Monitoring)	EPA TO-17 (Mod) Semi-quantitative	GC-MS	Ultra Passive Sampler SKC 590-100	250

¹ *In addition to the compounds listed above, a National Institute of Standards and Technology (NIST) database search will be performed and significant TICs (Tentatively Identified Compounds) will be reported from a library of over 75,000 compounds. Contact ALS customer service for more information.*

² *Sampling rates for passive monitors not determined for all compounds.*

Lead and Beryllium

Analyte	Method	Instrument	Medium	Fee(\$)
Lead	NIOSH 7082	FLAA	MCE Cassette	15
Lead	ALS	FLAA	Paint/Swipe/Bulk	15
Lead	40 CFR 50 APP G	FLAA	8 X 10 Glass Fiber Filter	45
Beryllium	NIOSH 7300/7303	ICP	MCE Cassette/Swipe	45

Light Hydrocarbons (GC-FID)

Analyte	Method	Instrument	Medium	Fee(\$)
Light Hydrocarbons (Full Panel)	ALS	GC-FID	Tedlar Air Bag or Summa	200
Single Analyte/Additional Analyte	ALS	GC-FID	Tedlar Air Bag or Summa	100/50*

Metals Analyte List (Pg 20)

Analyte	Method	Instrument	Medium	Fee(\$)
Metals Panel A (15 Metals)	NIOSH 7300/7303 (Mod)	ICP	MCE Cassette/Swipe/Bulk	95
Metals Panel B (27 Metals, full list)	NIOSH 7300/7303 (Mod)	ICP	MCE Cassette/Swipe/Bulk	115
Metals Panel C (5 Metals)	NIOSH 7300/7303 (Mod)	ICP	MCE Cassette/Swipe/Bulk	95
Metals Panel D (8 Metals, welding fume specific)	NIOSH 7300/7303 (Mod)	ICP	MCE Cassette/Swipe/Bulk	95
Specific Metals from full list (Panel B)	NIOSH 7300/7303 (Mod)	ICP	MCE Cassette/Swipe/Bulk	45/20*
Metals	ALS	ICP-MS	Whole Blood/Urine/Plasma	Call for Quote

Note: Additional fee may be charged for unusual mediums. Please call 1-800-356-9135 for information about recommended media types.

Methamphetamine, Illicit Drugs and Related Compounds Analyte List (Pg 21)

Option	Analyte	Method	Instrument	Medium	TAT & Fee(\$)	
1	Methamphetamine (only)	NIOSH 9111	LC-MS	Cotton Gauze	45 4 day TAT	90 2 day TAT
2	Quantitation of the following five drugs: Methamphetamine, Amphetamine, Ephedrine, MDMA (ecstasy) and Pseudoephedrine	NIOSH 9111	LC-MS	Cotton Gauze	125 10 day TAT	Quote Other TAT
3	Option # 2 above with LSD, Heroin, PCP or Cocaine added	NIOSH 9111	LC-MS	Cotton Gauze	125 (Option #2 price) + 50 per analyte 10 day TAT	Quote Other TAT
4	Semi-quantitative analysis: (Select compounds of interest)	NIOSH 9106 or 9109	GC-MS	Cotton Gauze	100/30 10 day TAT	Quote Other TAT
5	Custom quantitation of individual Compounds listed below using the deuterated analog as internal standard	NIOSH 9106 or 9109	GC-MS	Cotton Gauze	150/50 10 day TAT	Quote Other TAT
6	Unknown illicit drug identification	ALS	GC-MS	Powders/liquids/Wipes	500 14 day TAT	Quote Other TAT

Marijuana & Cocaine Identification

Analyte	Method	Instrument	Medium	Fee(\$)
THC (active drug)	ALS	LC-MS	Bulk Plant Material/Wipes	75 5 day TAT
Cocaine	ALS	LC-MS	Bulk Plant Material/Wipes	75 5 day TAT

Pesticides and Herbicides Analyte List (Pgs 22-25)

Option	Analyte	Method	Instrument	TAT	Fee(\$)
1	Pesticides	NIOSH 5600 or NIOSH 5605 (Draft)	GC-ECD	5 days	100/30*
2	Herbicides	NIOSH 5600 or NIOSH 5605 (Draft)	GC-ECD	5 days	100/30*
3	Pesticides	NIOSH 5602	GC-MS	5 days	100/35*
4	Herbicides	NIOSH 5605 (Draft)	GC-MS	5 days	100/35*
5	Pesticides by HPLC	NIOSH 5601	HPLC	5 days	100/30*
6	Pesticides and Herbicides	NIOSH 5601 (Mod)	LC-MS	5 days	130/90*

Please select compounds of interest and associated air methodology from Pesticide Table.

Price listed above is per analyte. Groups of analytes may be analyzed at a reduced cost. Please inquire for comparable wipe methods. For any pesticide not listed, call 1-800-356-9135 for more information.

ALS Sampling Recommendations: Unless otherwise specified in the method, ALS recommends for most pesticide and herbicide air sampling, use of SKC 226-58 OVS-2 tube. Sample at 0.1 to 1 liter/minute for up to 8 hours. For wipe samples use pre-cleaned cotton gauze moistened with 100% isopropanol.

Analyte	Method	Instrument	TAT	Fee(\$)
Comprehensive Pesticide Screen (semi-quantitative)	ALS Method on SKC 226-58	GC-MS	14 days	500
Comprehensive Herbicide Screen (semi-quantitative)	ALS Method on SKC 226-58	GC-MS	14 days	500

Note: Comprehensive Pesticide Screen: The classes of pesticides that have a reasonable expectation of being detected by this procedure are organophosphorus, organochlorine, pyrethroid, imidazole and triazole fungicides, and most organonitrogen pesticides. Pesticides and fungicides that cannot be detected by this procedure include inorganics (arsenic and tin compounds), dithiocarbamates (maneb, mancozeb, etc.), and most carbamate insecticides. For these classes of compounds, refer to methods listed above or call for quote.

Note: Comprehensive Herbicide Screen: The classes of pesticides that have a reasonable expectation of being detected by this procedure are nitro- and chlorinated phenols (e.g., trichlorophenol, pentachlorophenol, dinoseb), most benzoic acid herbicides (e.g. dicamba), and phenoxyacetic acid and related herbicides and their esters (e.g., 2,4-D, 2,4-DB, 2,4,5-T, dichlorprop, MCPA, mecoprop, Silvex, etc.), triazines (atrazine, propazine, simazine), bromacil, many N-arylcarbamates, and many more. Herbicides that cannot be detected by this procedure include inorganics (arsenic compounds), glyphosate (Roundup™), quaternary amines (paraquat and diquat), sulfonyleureas, and most substituted ureas. For these classes of compounds, refer to methods listed above or call for quote.

Polychlorinated Biphenyls (PCBs) Analyte List (Pg 21)

Analyte	Method	Instrument	Medium	Fee(\$)
PCBs	NIOSH 5503 (Mod)	GC-ECD	Wipe/Filter/Florisil Tube/Oil/Bulk	80
PCBs	EPA TO-10A	GC-ECD	SKC PUF Cartridge	200
PCBs (calking)	SW 8082/3540	Sox Ex GC-ECD	Bulk	150

Polynuclear Aromatic Hydrocarbons (PAHs) Analyte List (Pg 21)

Analyte	Method	Instrument	Medium	Fee(\$)
PAHs	NIOSH 5528 (Draft) ³	GC-MS	OVS, XAD-7 ⁴ SKC 226-57	80/35*;200†
PAHs	NIOSH 5506 (Mod)	HPLC-UV	SKC 226-30-04 ⁵ + Prefilter (PTFE)	80/35*;230†
PAHs	OSHA 58 (Mod)	HPLC-UV	PTFE Filter, 2µm	80/35*;230†
PAHs	EPA TO-13	GC-MS	SKC 226-131 (PUF Sampler)	325†

Silica (Crystalline)

Analyte	Method	Instrument	Medium	Fee(\$)
Quartz ⁶	NIOSH 7500 (Mod)	XRD	PVC, 5µm	45
Quartz, ⁶ Cristobalite	NIOSH 7500 (Mod)	XRD	PVC, 5µm	55
Quartz, ⁶ Cristobalite, Tridymite	NIOSH 7500 (Mod)	XRD	PVC, 5µm	65
Quartz	NIOSH 7500 (Mod)	XRD	Bulk Material	100
Quartz, Cristobalite	NIOSH 7500 (Mod)	XRD	Bulk Material	110
Quartz, Cristobalite, Tridymite	NIOSH 7500 (Mod)	XRD	Bulk Material	120

Solvent Panel-Low Level Indoor Air Quality *Analyte List (Pg 21)*

Analyte	Method	Instrument	Medium	Fee(\$)
Quantitative Analysis (all Compounds on list)	ALS SOP	GC-MS	Charcoal 226-01 or 3M 3500 Passive Monitor	110
Full Scan with 10 highest TICs (Tentatively Identified Compounds)	ALS SOP	GC-MS	Charcoal 226-01 or 3M 3500 Passive Monitor	250

Note: Analysis is performed by mass spectrometry which ensures positive identification. Full calibration provides quantitative results for all compounds. Identification of unknown compounds not listed is available at an additional charge of \$10 per compound. Contact ALS customer service for information.

Sulfur Gases *Analyte List (Pg 21)*

Analyte	Method	Instrument	Medium	Fee(\$)
Sulfur Gases (Full List)	ALS	GC-SCD	Tedlar Air Bag or SUMMA/SilcoCan Canister	320
Sulfur Gases (Specific Analytes Chosen from List)	ALS	GC-SCD	Tedlar Air Bag or SUMMA/SilcoCan Canister	100/50*
SO ₂	ALS	GC-SCD	Tedlar Air Bag or SUMMA/SilcoCan Canister	100

Toxic Organic Methods (EPA) *Analyte Lists (Pgs 21 and 22-25)*

Analyte	Method	Instrument	Medium	Fee(\$)
Pesticides & PCBs (Low Volume)	EPA TO-10A	GC-ECD	SKC PUF Cartridge	300
PAHs	EPA TO-13	GC-MS	SKC PUF Cartridge	225
Volatiles (SUMMA/Silco Canisters)	EPA TO-15	GC-MS	SUMMA/SilcoCan Canister	250
Volatiles (Carbotrap Tubes)	EPA TO-17 (Mod) Semi-quantitative	GC-MS	Supelco Carbotrap 300 Tube	250

Vapor Intrusion *Analyte List (Pg 20)*

Analyte	Method	Instrument	Medium	Fee(\$)
Volatiles (Selected List)	TO-15	GC-MS SIM	Tedlar Air Bag or SUMMA/Silco Canister	320

Footnotes Legend:

- * First analyte on a sample/additional analyte on same sample
- † Fee for complete panel
- ³ Improved NIOSH method for collection and analysis
- ⁴ Validation studies demonstrate excellent retention and no breakthrough for listed PAH compounds
- ⁵ Not recommended for naphthalene or other low molecular weight PAH
- ⁶ Total weight measurement should also be requested to calculate OSHA PEL

When preparing samples for analysis, please note that many analyses require a three sample minimum fee to cover the costs of method setup. Please inquire as to which analyses require this minimum.



Analyte and Panel Lists for Common Industrial Hygiene Methods

Acids (Inorganic)

Hydrobromic Acid	Hydrofluoric Acid	Phosphoric Acid
Hydrochloric Acid	Nitric Acid	Sulfuric Acid

Aldehydes

Acetaldehyde	Formaldehyde	Isovaleraldehyde
Acrolein	Heptanal	Propionaldehyde
Butyraldehyde	Hexanal	Valeraldehyde

Antineoplastic and Chemotherapy Drugs

Cisplatin	Fluorouracil	Gentamycin	Methotrexate	Mitoxantrone
Cyclophosphamide	Gemcitabine	Ifosfamide	Mitomycin	Paclitaxil

EPA TO-15, 17: (Mod)

Acetone	Chloroform	cis-1,2-Dichloroethene	Hexachloro-1,3-butadiene	Toluene
Benzene	Chloromethane	trans-1,2-Dichloroethene	n-Hexane	1,2,4-Trichlorobenzene
Benzyl chloride	Cyclohexane	1,2-Dichloropropane	2-Hexanone	1,1,1-Trichloroethane
Bromodichloromethane	Dibromochloromethane	cis-1,3-Dichloropropene	Methyl t-butyl ether	1,1,2-Trichloroethane
Bromoform	1,2-Dibromoethane	trans-1,3-Dichloropropene	4-Methyl-2-pentanone	Trichloroethene
Bromomethane	m-Dichlorobenzene	Ethyl acetate	Methylene chloride	1,2,4-Trimethylbenzene
1,3-Butadiene	o-Dichlorobenzene	Ethyl benzene	Propene	1,3,5-Trimethylbenzene
2-Butanone	p-Dichlorobenzene	4-Ethyl toluene	Styrene	Vinyl acetate
Carbon disulfide	Dichlorodifluoromethane	Freon 11	1,1,2,2-Tetrachloroethane	Vinyl chloride
Carbon tetrachloride	1,1-Dichloroethane	Freon 113	Tetrachloroethene	m/p-Xylene
Chlorobenzene	1,2-Dichloroethane	Freon 114	Tetrahydrofuran	o-Xylene
Chloroethane	1,1-Dichloroethene	Heptane		

In addition to the compounds listed above, a National Institute of Standards and Technology (NIST) database search will be performed and significant TICs (Tentatively Identified Compounds) will be reported from a library of over 75,000 compounds. Contact ALS customer service for more information.

Light Hydrocarbons (GC-FID)

Methane	Propane	n-Hexane
Ethane	n-Butane	n-Pentane

Metals Lists and Panels NIOSH 7300/7303: (Mod)

Panel A

Aluminum	Cadmium	Copper	Manganese	Silver
Arsenic	Calcium	Iron	Nickel	Sodium
Beryllium	Chromium	Lead	Selenium	Zinc

Panel B

Aluminum	Cobalt	Manganese	Silver	Yttrium
Arsenic	Copper	Molybdenum	Sodium	Zinc
Beryllium	Iron	Nickel	Tellurium	Zirconium
Cadmium	Lead	Phosphorus	Thallium	
Calcium	Lithium	Platinum	Titanium	
Chromium	Magnesium	Selenium	Vanadium	

Panel C

Arsenic	Beryllium	Cadmium	Chromium	Lead
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Panel D—Welding Fumes

Cadmium	Copper	Manganese	Silver
Chromium	Iron	Nickel	Zinc

Note: Additional fees may be charged for unusual mediums. Please call 1-800-356-9135 for information about recommended media types.

Analyte and Panel Lists (cont.)
Methamphetamine, Illicit Drugs and Related Compounds

Amphetamine	Codeine	LSD	4-Methylaminorex
Acetaminophen	Dextromethorphan	MBDB	Morphine
6-Acetyl morphine	Diazepam	MDA (ecstasy analog)	N-Ethyl amphetamine
Aminorex	Diphenhydramine	MDEA (ecstasy analog)	N,N-Dimethyltryptamine
Atropine	Ecgonine, methyl ester	MDMA (ecstasy)	Norephedrine (Phenyl propanol amine)
Barbituates	Ephedrine	Melatonin	Norspseudoephedrine
BDB	Fenfluramine	Meperidine	Oxazepam
Benzyl piperazine	Fentanyl	Mescaline	Oxycodone
4-Bromo-2, 5-DMPEA	Flunitrazepam	Methadone	Phencyclidine (PCP)
Caffeine	Heroin	Methamphetamine	Phenethylamine
Cathine (norpseudoephedrine)	Hydrocodone	Methaqualone	Phentermine
Cathinone	Hydromorphone	Methcathinone	Pseudoephedrine
Chlorpheniramine	Ketamine	Methoxyamphetamine, 4-(PMMA)	Tramadol
Cocaine	Lidocaine	Methyl phenidate (Ritalin)	Trifluoromethylphenyl piperazine

Polychlorinated Biphenyls (PCBs)

Aroclor 1016	Aroclor 1232	Aroclor 1248	Aroclor 1260
Aroclor 1221	Aroclor 1242	Aroclor 1254	Aroclor 1268

Polynuclear Aromatic Hydrocarbons (PAHs)

Acenaphthene	Benzo[b]fluoranthene	Chrysene	Indeno[1,2,3-cd]pyrene
Acenaphthylene	Benzo[k]fluoranthene	Dibenz[a,h]anthracene	Naphthalene
Anthracene	Benzo[g,h,i]perylene	Fluoranthene	Phenanthrene
Benz[a]anthracene	Benzo[a]pyrene	Fluorene	Pyrene

Solvent Panel-Low Level Indoor Air Quality

Benzene	Cyclohexene	Methyl isobutyl ketone	Tetrachloroethene
n-butyl alcohol	1,3-dichlorobenzene	Naphthalene	Tetrahydrofuran
n-butyl acetate	1,2-dichlorobenzene	n-octane	Toluene
2-ethoxyethanol acetate	1,4-dichlorobenzene	2-pentanone	Trichloroethene
Chlorobenzene	1,2-dichloroethane	n-propyl acetate	Total methyl styrenes
Chloroform	Ethylbenzene	Styrene	Total xylenes
Cumene (isopropyl benzene)	n-hexane	1,1,1-trichloroethane	
Cyclohexane	Methyl ethyl ketone (MEK)	1,1,2-trichloroethane	

Sulfur Gases

n-Butyl mercaptan	Diethyl sulfide	Hydrogen sulfide	Tetrahydrothiophene
t-Butyl mercaptan	Dimethyl sulfide	Isopropyl mercaptan	Thiophene
Carbon disulfide	Dimethyl disulfide	Methyl mercaptan	
Carbonyl sulfide	Ethyl Mercaptan	n-Propyl mercaptan	

Pesticides and Herbicides

PESTICIDE	AIR METHODS				PESTICIDE	AIR METHODS			
	GC-MS	GC-ECD	LC-MS HPLC	Notes		GC-MS	GC-ECD	LC-MS HPLC	Notes
Abamectin			LC-MS	MM(870)	Chloroneb	5605	5600	5601	
Acephate	5604	5604			Chlorophacinone			5601	QFF
Acetochlor	5605	5600	5601		Chloropicrin	5605	5600		
Acifluorfen	5605	5600	5601	ME	Chlorothalonil	5605	5600	5601	
Alachlor	5605	5600	5601		Chlorpropham	5605	5600	5601	
Aldicarb			5601		Chlorpyrifos	5605	5600	5601	
Aldoxycarb			5601		Chlorpyrifos methyl	5605	5600	5601	
Aldrin	5605	5600			Chlorsulfuron			5601	
Allethrin	5605	5600	5601		Clethodim	5605		5601	ME
Ametryn	5605		5601		Clofentezine	5605	5600	5601	
Amitraz	ALS		5601		Clomazone	5605	5600	5601	
Amitrole	ALS			TMS	Clopyralid	5605	5600	5601	ME
Ancymidol	ALS		5601	TMS	Coumaphos	5605	5600	5601	
Asulam	ALS		5601	TMS	Cyanazine	5605	5600	5601	
Atrazine	5605	5600	5601		Cyanophos	5605	5600	5601	
Azadirachtin			LC-MS	MM(721)	Cybutryne	5605		5601	
Azinphos methyl	5605	5600	5601		Cyfluthrin	5605	5600	5601	ME
Azoxystrobin			5601		Cycloate	5605			
Benalaxyl	5605		5601		Cyfluthrin	5605	5600	5601	QFF
Bendiocarb			5601		Cyhalothrin, lambda-	5605	5600	5601	QFF
Benfluralin	5605	5600	5601		Cypermethrin	5605	5600	5601	QFF
Benomyl			5601		Cyphenothrin	5605	5600	5601	QFF
Bensulfuron methyl			5601		Cyproconazole	5605	5600	5601	
Bensulide	ALS		5601	TMS	Cypromazine	ALS		5601	
Bentazon	5605		5601	ME	2,4-D	5605	5600	5601	ME
Benzthiazuron			5601		Dacthal	5605	5600	5601	
BHC	5605	5600			Dazomet	5605			
Bifenthrin	5605	5600	5601	QFF	2,4-DB	5605	5600	5601	ME
Bioallethrin	5605	5600	5601		DDD	5605	5600		
Bioresmethrin	5605		5601		DDE	5605	5600		
Biphenyl	5605		5601		DDT	5605	5600		
Brodifacoum			5601	QFF	DEF	5605			
Bromacil	5605	5600	5601	ME	Deltamethrin	5605	5600	5601	QFF
Bromadiolone			5601	QFF	Desmedipham			5601	
Bromophos	5605	5600	5601		Diazinon	5605	5600	5601	
Bromophos ethyl	5605	5600	5601		Dicamba	5605	5600	5601	ME
Bromopropylate	ALS		5601	TMS	Dichlobenil	5605	5600	5601	
Bromoxynil	5605	5600	5601	ME	Dichlorprop	5605	5600	5601	ME
Bromoxynil octanoate	5605	5600	5601		Dichlorvos	5605	5600		
Bronopol	ALS			TMS	Diclofop methyl	5605	5600	5601	
Buprofezin	5605		5601		Dicloran	ALS	5600	5601	TMS
Butralin	5605	5600	5601		Dicofol	ALS		5601	TMS
Butylate	5605				Dicrotophos	5605	5600	5601	
Captan	5605	5600	5601		Dieldrin	5605	5600		
Carbaryl			5601		Dienochlor	5605	5600		
Carbendazim			5601		Difenzoquat			5601	QFF
Carbofuran			5601		Diflubenzuron			5601	
Carbosulfan	5605		5601		Diflufenzopyr			5601	
Carboxin	5605		5601		Dimethenamid	5605	5600	5601	
Chlorbenside	5605	5600	5601		Dimethoate	5605	5600		
Chlordane	5605	5600			Diniconazole	5605	5600	5601	
Chlorethoxyfos	5605	5600			Dinocap	5605	5600	5601	
Chlorfenapyr	5605	5600	5601		Dinoseb	5605	5600	5601	ME
Chlorflurenol	ALS		5601	TMS	Diphacinone			5601	QFF
Chlorimuron ethyl			5601		Diquat dibromide			5601	QFF
Chlorobenzilate	ALS		5601	TMS	Disulfoton	5605			

Pesticides and Herbicides (cont.)

PESTICIDE	AIR METHODS			Notes	PESTICIDE	AIR METHODS			Notes
	GC-MS	GC-ECD	LC-MS HPLC			GC-MS	GC-ECD	LC-MS HPLC	
Dithianon	5605	5600	5601		Hydramethylnon (Amdro)			5601	
Dithiopyr	5605	5600	5601		Hymexazol	ALS		5601	TMS
Diuron			5601		Imazalil	5605	5600	5601	
Dodine	ALS			TMS	Imazamethabenz-methyl	5605	5600	5601	ME
Endosulfan sulfate	5605	5600			Imazapic	5605	5600	5601	ME
Endosulfan, alpha-	5605	5600			Imazapyr	5605		5601	ME
Endosulfan, beta-	5605	5600			Imazaquin	5605		5601	ME
Endothall	5605			ME	Imazethapyr	5605	5600	5601	ME
Endrin	5605	5600			Imidacloprid	ALS		5601	TMS
EPTC	5605				Iprodione	ALS		5601	TMS
Esfenvalerate	5605	5600	5601	QFF	Isazophos methyl	5605	5600	5601	
Ethalfuralin	5605	5600	5601		Isodrin	5605	5600		
Ethephon	ALS			ME;TMS	Isoproturon			5601	
Ethion	5605	5600			Isoxaben	5605		5601	
Ethofumasate	5605		5601		Kinoprene	5605	5600		
Ethoprop	5605				Lactofen	5605	5600	5601	
Ethoxyquin	ALS		5601	TMS	Lindane	5605	5600		
Fenamiphos	5605		5601		Linuron			5601	
Fenarimol	ALS		5601	TMS	Malathion	5605	5600		
Fenbuconazole	5605	5600	5601		Maleic Hydrazide	ALS			TMS
Fenbutatin oxide	ALS		5601	QFF	Mancozeb			3600	Red
Fenitrothion	5605	5600	5601		Maneb			3600	Red
Fenoxaprop ethyl	5605	5600	5601		MCPA	5605	5600	5601	ME
Fenoxycarb	5605		5601		MCPB	5605	5600	5601	ME
Fenpropathrin	5605	5600	5601		Mecoprop	5605	5600	5601	ME
Fensulfthion	5605	5600	5601		Mefenoxam	5605		5601	
Fenthion	5605		5601		Mefluidide	5605	5600	5601	ME
Fenvalerate	5605	5600	5601	QFF	Mepiquat chloride	ALS		5601	OFF;Pyr
Ferbam			3600	Red	Mercaptobenzothiazole	5605		5601	
Fipronil	5605	5600	5601		Metalaxyl	5605		5601	
Fipronil sulfone	5605	5600	5601	TBP	Metam			3600	
Fipronil sulfide	5605	5600	5601	TBP	Methabenzthiazuron			5601	
Flamprop isopropyl	5605	5600	5601		Methamidophos	5605			
Flamprop methyl	5605	5600	5601		Methidathion	5605		5601	
Fluazifop-p-butyl	5605	5600	5601		Methiocarb			5601	
Fludioxonil	5605	5600	5601		Methomyl			5601	
Flumetralin	5605	5600	5601		Methoprene	5605	5600		
Flumetsulam	ALS		5601		Methoxychlor	5605	5600		
Flumiclorac-pentyl	5605	5600	5601		Methyl parathion	5605	5600	5601	
Fluometuron			5601		Metolachlor	5605	5600	5601	
Fluridone	ALS		5601		Metribuzin	5605		5601	
Flutolail	5605	5600	5601		Metsulfuron methyl			5601	
Fluvalinate	5605	5600	5601	QFF	MGK 264	5605			
Folpet	5605	5600	5601		MGK 326	5605		5601	
Fomesafen sodium	5605	5600	5601		Mirex	5605	5600		
Fonofos	5605				Molinate	5605			
Formetanate			5601		Monuron			5601	
Fosamine ammonium	9206			QFF	Myclobutanil	5605	5600	5601	
Fuvalinate, tau-	5605	5600	5601	QFF	Nabam			3600	
Gluphosinate ammonium	9206			QFF	Naled	5605	5600		
Glyphosate	9206			QFF	Naphthyloxyacetic acid	5605		5601	ME
Glyphosine	9206			QFF	Napropamide	5605		5601	
Halofenozide		5600	5601		Naptalam	ALS		5601	ME;TMS
Halosulfuron			5601		Neburon			5601	
Heptachlor	5605	5600			Niclosamide	5605	5600	5601	ME
Heptachlor epoxide	5605	5600			Nicosulfuron			5601	
Hexaconazole	5605	5600	5601		Norflurazon	5605	5600	5601	
Hexaflumuron			5601		Omethoate	5605			
Hexazinone	5605		5601		Oryzalin	ALS		5601	TMS
Hexythiazox			5601		Oxadiazon	5605	5600	5601	

AIR METHODS					AIR METHODS				
PESTICIDE	GC-MS	GC-ECD	LC-MS HPLC	Notes	PESTICIDE	GC-MS	GC-ECD	LC-MS HPLC	Notes
Oxadixyl	5605		5601		Simazine	5605	5600	5601	
Oxamyl			5601		Simetryn	5605		5601	
Oxycarboxin	5605		5601		Spinosad			LC-MS	MM(740)
Oxydemeton methyl	5605				Sulfentrazone	5605	5600	5601	ME;TMS
Oxyfluorfen	5605	5600	5601		Sulfometuron methyl			5601	
Oxytetracycline			LC-MS	MM(497)	Sulfotepp	5605			
Oxythioquinox	5605		5601		Sulprofos	5605		5601	
Paclobutrazol	5605	5600	5601		2,4,5-T	5605	5600	5601	ME
Paraquat			5601	QFF	TCMTB	5605		5601	
Parathion	5605	5600	5601		Tebuconazole	5605	5600	5601	
PCNB	5605	5600	5601		Tebuthiuron			5601	
Pebulate	5605				Tecnazene	5605	5600	5601	
Pendimethalin	5605	5600	5601		Tefluthrin	5605	5600	5601	
Pentachlorophenol	5605	5600	5601	ME	Temephos	5605		5601	QFF
Permethrin	5605	5600	5601		Terbacil	5605		5601	
Perthane	5605	5600			Terbufos	5605			
Phenmedipham			5601		Terbutylazine	5605	5600	5601	
Phenothrin, d-	5605		5601		Terbutryn	5605		5601	
Phenthoate	5605		5601		Terrazole	5605	5600	5601	
Phenylphenol, o-	ALS		5601	TMS	Tetrachlorvinphos	5605	5600	5601	
Phorate	5605				Tetramethrin	5605	5600	5601	
Phosalone	5605	5600	5601		Thiabendazole	ALS		5601	TMS
Phosfolan	5605				Thiadiazuron			5601	
Phosmet	5605	5600	5601		Thifensulfuron-methyl			5601	
Phosphamidon	5605	5600	5601		Thiobencarb	5605	5600	5601	
Phostebupirim	5605	5600	5601		Thiodicarb			5601	
Picloram	5605	5600	5601	ME	Thiophanate-methyl			5601	
Pindone (Pival)	ALS		5601	TMS	Thiram			3600	Red
Piperalin	5605	5600	5601		Toxaphene	5605	5600		
Piperonyl butoxide	5605				Tralomethrin	5605	5600	5601	
Pirimicarb			5601		Triadimefon	5605	5600	5601	
Pirimiphos methyl	5605		5601		Triadimenol	ALS		5601	TMS
Pirimisulfuron-methyl			5601		Triallate	5605			
Prallethrin	5605	5600	5601		Triasulfuron			5601	
Prodiamine	ALS		5601		Triazophos	5605		5601	
Profenofos	5605	5600	5601		Tribenuron-methyl			5601	
Prometon	5605		5601		Trichlorfon	5605	5600		
Prometryn	5605		5601		Trichloronate	5605	5600	5601	
Pronamide	5605	5600	5601		Trichlorophenol, 2,4,6-	5605	5600	5601	ME
Propachlor	5605	5600	5601		Triclopyr	5605	5600	5601	ME
Propamocarb	ALS			TMS	Trifluzole	5605	5600	5601	
Propanil	5605	5600	5601		Triflumuron			5601	
Propargite	5605		5601		Trifluralin	5605	5600	5601	
Propazine	5605	5600	5601		Triflusulfuron-methyl			5601	
Propetamphos	5605	5600			Triforine	ALS			
Propiconazole	5605	5600	5601		Trinexapac-ethyl	ALS		5601	ME;TMS
Propoxur			5601		Troysan KK-108A	5605		5601	
Prosulfuron			5601		Triphenyltin hydroxide	ALS			
Pyraclofos	5605	5600	5601		Uniconazole-P	5605	5600	5601	
Pyrazon	ALS		5601	TMS	Vernolate	5605			
Pyrazophos	5605		5601		Vinclozolin	5605	5600	5601	
Pyrazoxyfen	5605	5600	5601		Warfarin	5605		5601	ME
Pyrethrum	5605	5600	5601		Zectran			5601	
Pyridaben	5605	5600	5601		Zineb			3600	Red

Pesticides and Herbicides (cont.)

PESTICIDE	AIR METHODS			Notes	PESTICIDE	AIR METHODS			Notes
	GC-MS	GC-ECD	LC-MS HPLC			GC-MS	GC-ECD	LC-MS HPLC	
Pyridate	5605	5600	5601		Thiophanate-methyl			5601	
Pyriithiobac-sodium	5605	5600	5601	ME	Thiram			3600	Red
Pyproxifen	5605		5601		Toxaphene	5605	5600		
Quinalphos	5605		5601		Tralomethrin	5605	5600	5601	
Quinclorac	5605	5600	5601	ME	Triadimefon	5605	5600	5601	
Quinolinol, 8-	ALS		5601	TMS	Triadimenol	ALS		5601	TMS
Quizalofop ethyl	5605	5600	5601		Triallate	5605			
Resmethrin	5605		5601		Triasulfuron			5601	
Rimsulfuron			5601		Triazophos	5605		5601	
Ronnel	5605	5600	5601		Tribenuron-methyl			5601	
Rotenone	5605		5601		Trichlorfon	5605	5600		
Sethoxydim	5605		5601	ME	Trichloronate	5605	5600	5601	
Siduron			5601		Trichlorophenol, 2,4,6-	5605	5600	5601	ME
Silvex	5605	5600	5601	ME	Triclopyr	5605	5600	5601	ME
Simazine	5605	5600	5601		Triflumizole	5605	5600	5601	
Simetryn	5605		5601		Triflururon			5601	
Spinosad			LC-MS	MM(740)	Trifluralin	5605	5600	5601	
Sulfentrazone	5605	5600	5601	ME;TMS	Triflusulfuron-methyl			5601	
Sulfometuron methyl			5601		Triforine	ALS			
Sulfotepp	5605				Trinexapac-ethyl	ALS		5601	ME;TMS
Sulprofos	5605		5601		Troysan KK-108A	5605		5601	
2,4,5-T	5605	5600	5601	ME	Triphenyltin hydroxide	ALS			
TCMTB	5605		5601		Uniconazole-P	5605	5600	5601	
Tebuconazole	5605	5600	5601		Vernolate	5605			
Tebuthiuron			5601		Vinclozolin	5605	5600	5601	
Tecnazene	5605	5600	5601		Warfarin	5605		5601	ME
Tefluthrin	5605	5600	5601		Zectran			5601	
Temephos	5605		5601	QFF	Zineb			3600	Red
Terbacil	5605		5601		Ziram			3600	Red
Terbufos	5605								
Terbutylazine	5605	5600	5601						
Terbutryn	5605		5601						
Terrazole	5605	5600	5601						
Tetrachlorvinphos	5605	5600	5601						
Tetramethrin	5605	5600	5601						
Thiabendazole	ALS		5601	TMS					
Thiadiazuron			5601						
Thifensulfuron-methyl			5601						
Thiobencarb	5605	5600	5601						
Thiodicarb			5601						

ME = Methylation of acidic groups necessary for GC
MM = Macromolecule (approx. molecular weight)
Pyr = Pyrolysis injection technique for GC-MS.
QFF = For air sampling, use SKC 226-58 with Quartz Fiber Filter.
Red = Need to keep sample under reducing conditions.
TBP = Toxic breakdown products.
TMS = Trimethylsilylation of polar groups necessary for GC.

Amines—Volatile Aliphatic VAA-1

Diethylamine Dimethylamine Ethylamine Methylamine

Amines—Volatile Aliphatic VAA-2

Diethylamine Isopropylamine (2-Propylamine) 1-Propylamine

Amines—Aliphatic ALA-1

Benzylamine Di-n-butylamine Di-n-propylamine 2-Ethylhexylamine 3-Methoxypropylamine
 Butylamine Diethylamine 1,3-Dimethylpentamine 1-Hexylamine Phenethylamine

Amines—Aliphatic ALA-2

Diethylenediamine (Piperazine) Diethylenetriamine (DETA) Ethylenediamine (EDA) Triethylene tetramine (TETA)

Amines—Aromatic ARA-1

Aniline Dichloranilines Ethylanilines Naphthylamines, alpha-, beta- N-Isopropylaniline
 Chloroanilines Dimethylanilines (Xylidines) Methylanilines (Toluidines) N-Ethylaniline N-Methylaniline

Amines—Aromatic ARA-2

Anisidines Dimethoxyanilines 5-Methyl-orth-anisidine ((p-Cresidine)

Amines—Cyclic Alkyl CAA-1

Cyclohexylamine 2,6-Dimethylpiperidine N-Methylcyclohexylamine
 Diethylenediamine (piperazine) Morpholine Piperdine

Amines—Cyclic Alkyl CAA-2

Cotinine Nicotine

Amines—Aromatic Di- ADA-1

Benzidine Methylene-bis(2-chloroaniline) (MOCA) Phenylenediamine, ortho-meta-para Xylenediamine, meta-, para-
 3,3-Dichlorobenzidine 4,4'-Methylenedianiline (MDA) Toluenediamine,, 2,4-, 2,6-

Amines—Aromatic Di- ADA-2

Benzidine Methylene-bis(2-chloroaniline) (MOCA) Ortho-Dianisidine Toluenediamine,, 2,4-, 2,6-
 Diethylmethylphenylenediamine (mixed isomers) Methylene-bis(ortho-ethylaniline) (MBOEA) Ortho-Tolidine 2,4,6-Trimethylphenylenediamine
 3,3-Dichlorobenzidine 4,4'-Methylenedianiline (MDA) Phenylenediamine, ortho-meta-para Xylenediamine, meta-, para-

Amines—Ethanol EA-1

Aminoethylethanolamine (AEEA) 1-Amino-2-propanol 2-Amino-2-methyl-1-propanol Diethanolamine Ethanolamine

Amines—Ethanol EA-2

Ethanolamine N, N-Dibutylaminoethanol (DBAE) N, N-Diethylaminoethanol (DEAE) N, N-Dimethylaminoethanol (DMAE) N, N-Dimethylaminopropanol (DMAP)

Amines—Ethanol EA-3

N-Butyldiethanolamine (NBDEA) N-Ethyldiethanolamine (NEDEA) N-Methyldiethanolamine (NMDEA) Triethanolamine

Amines—Ethanol EA-4

Diethanolamine

Amines—Quaternary QA-1

Benzalkonium Chloride Didecyldimethylammonium Chloride (DDAC)

Media Available

Through ALS Environmental—Salt Lake City

Contact your Project Manager for ordering details. *Media Italicized—generally in stock.*

SKC SORBENT TUBES (All Media is subject to availability and may require a minimum order)

NOTE: If large or 3-stage media collection tubes are selected, the cost of associated analysis doubles.

Tube Number (SKC)	Description	Treated	Sorbent (mg)	Cost (\$)
226-01	<i>Charcoal tube</i>	No	50/100	1.50
226-01 GWS	<i>Charcoal tube, Glass wool separator</i>	No	50/100	1.50
226-09	<i>Charcoal tube</i>	No	200/400	1.50
226-09-02	<i>Charcoal tube</i>	No	350/350/350	4.00
226-10	<i>Silica gel tube</i>	No	75/150	1.50
226-10-03	<i>Silica gel tube (Specially Cleaned)</i>	Yes	200/400	2.00
226-10-04	<i>Silica gel tube</i>	No	150/300	3.00
226-10-06	<i>Silica gel tube (Sulfuric acid)</i>	Yes	100/200	3.00
226-15 GWS	Silica gel tube, Glass wool separator	No	260/520	3.00
226-17-1A	<i>Anasorb C300 (Comparable to Hopcalite)</i>	No	200	2.50
226-25	Charcoal (two tubes)	No	200 and 400	4.00
226-27	<i>XAD-2 (2-Hydroxymethyl piperidine)</i>	Yes	225/450	6.00
226-28	<i>Soda Lime</i>	No	200/600	4.00
226-30-02 A	XAD-2 (two tubes)	No	300 and 600	6.00
226-30-04	<i>XAD-2 tube</i>	No	50/100	2.50
226-30-05	XAD-2 tube	No	75/150	3.00
226-30-06	<i>XAD-2 tube</i>	No	200/400	4.00
226-30-07	XAD-2 tube (p-Anisidine)	Yes	50/100	6.00
226-30-08	<i>Anasorb 708</i>	No	100	4.00
226-30-16	<i>OVS (XAD-2, GFF)</i>	Yes	140/270	12.00
226-30-18	<i>XAD-2 (Naphthylisothiocyanate)</i>	Yes	40/80	4.00
226-35-01	Tenax® tube	No	10/20	5.00
226-35-03	<i>Tenax® tube</i>	No	50/100	6.00
226-37	Charcoal (2 tubes)	No	200 and 400	4.00
226-39	<i>Florisil tube</i>	No	50/100	2.00
226-40	<i>Molecular Sieve (2 tubes and oxidizer)</i>	Yes	400	12.00
226-44	Drying tube	No	250	2.00
226-51	<i>Silica gel tube</i>	No	50/100	2.00
226-56	<i>OVS (Tenax, GFF) tube</i>	No	70/140	20.00
226-57	<i>OVS (XAD-7, GFF) tube</i>	No	100/200	15.00
226-58	<i>OVS (XAD-2, QFF) tube</i>	No	140/270	16.00
226-59-04	Porapak-R	No	35/70	3.00
226-67	<i>Charcoal tube (Potassium Hydroxide)</i>	Yes	50/100	2.50
226-73	<i>Charcoal tube (t-Butylcatechol)</i>	Yes	50/100	2.50
226-80	<i>Anasorb 747 (Potassium Hydroxide)</i>	Yes	50/100	2.50
226-81A	<i>Anasorb 747 tube</i>	No	70/140	2.00
226-82	<i>Anasorb 747 (2 tubes)</i>	No	200 and 400	4.00
226-93	XAD-4 tube	No	40/80	2.00
226-94 + treatment	ORBO 657 (Treated)	No	30/60	3.00

Tube Number (SKC)	Description	Treated	Sorbent (mg)	Cost (\$)
226-95	XAD-7	No	50/100	2.00
226-96	XAD-7 (Plus NBD Chloride)	Yes	50/100	3.00
226-97	XAD-7 (2 tubes + 1 specially cleaned tube)	No	175	12.00
226-98	XAD-7 (Phosphoric acid)	Yes	40/80	2.50
226-107	Chromosorb-102	No	50/100	3.00
226-110	Chromosorb-106	No	50/100	5.50
226-111A	Chromosorb-106	No	300/600	21.50
226-114	Porapak-P	No	50/100	5.00
226-115	Porapak-Q	No	75/150	4.00
226-116 A	Porapak-T (2 tubes)	No	25 and 75	11.00
226-117	XAD-2 tube	Yes	75/150	5.00
226-118	XAD-2 tube	Yes	60/120	4.50
226-119	Silica gel tube	Yes	150/300	5.00
226-121	Anasorb-CMS	No	75/150	4.50
226-153	XAD-2 (di-n-Butylamine)	Yes	400/200	7.00
226-177	Silica gel (silver nitrate-treated)	Yes	200/200	25.00
226-178	Anasorb 747 (Hydrobromic acid)	Yes	100/50	4.00






SKC INDUSTRIAL HYGIENE FILTERS (ASSEMBLED)

Filter No. (SKC)	Description (Material, Pore Size, Cassette Type)	Treated	Size (mm)	Cost (\$)
225-321A	Mixed cellulose ester, 0.8 μ m, black polypropylene cassette	No	25	1.50
225-502	MCE, (matched weight), 5.0 μ m, 2-piece	No	37	5.00
225-503	MCE, (matched weight), 5.0 μ m, 3-piece	No	37	5.00
225-9001	MCE, (sodium carbonate)	Yes	37	9.50
225-9002	Glass fiber, (1-(2-pyridyl) piperazine)	Yes	37	8.50
225-9003	Glass fiber, 2 filters, (2,4-DNPH)	Yes	37	8.50
225-9004	Glass fiber, (H ₂ SO ₄)	Yes	37	8.00
225-9005	MCE, cellulose, (sodium carbonate)	Yes	37	11.00
225-9006	Cleaned silver membrane filter, black polypropylene cassette	Yes	25	37.00
225-9014	Glass fiber, 2 filters, nitrite impregnated	Yes	37	8.50
225-9018	Glass filter & polyester filter (Mercuric chloride treatment on polyester only)	Yes	37	16.00
225-9019	Glass fiber, 2 filters, (phosphoric acid & 2,4-dinitrophenylhydrazine)	Yes	37	25.50
225-9020	Glass fiber, 3 filters, (phosphoric acid & 2,4-dinitrophenylhydrazine)	Yes	37	18.50
225-9021	Glass fiber, (veratrylamine)	Yes	37	18.50












INDUSTRIAL HYGIENE FILTERS (ASSEMBLED AT ALS-SALT LAKE CITY)

Filter Material	Description (Pore Size, Cassette Type)	Preweighed	Size (mm)	Cost (\$)
PVC	5.0 µm, 2-piece	No	37	3.00
PVC	5.0 µm, 3-piece	No	37	3.00
PVC	5.0 µm, 2-piece (MW)	Yes	37	5.00
PVC	5.0 µm, 3-piece (MW)	Yes	37	5.00
PTFE	1.0 µm, 2-piece	No	37	3.00
PTFE	1.0 µm, 3-piece	No	37	3.00
PTFE	2.0 µm, 2-piece	No	37	3.00
PTFE	2.0 µm, 3-piece	No	37	3.00
PTFE	2.0 µm, 2-piece	Yes	37	6.00
PTFE	2.0 µm, 3-piece	Yes	37	6.00
MCE	0.8 µm, 2-piece	No	37	1.50
MCE	0.8 µm, 3-piece	No	37	1.50
QFF	No pore size, heat-treated, 2-piece	No	37	3.00
QFF	No pore size, heat-treated, 3-piece	No	37	3.00
GFF	1.0 µm, (binder-free, type AE), 2-piece	No	37	3.00
GFF	1.0 µm, (binder-free, type AE), 3-piece	No	37	3.00

MICROBIOLOGY SAMPLING MEDIA

	Description	Cost (\$)
	<i>Bio-Tape™ Surface Sampler</i> <i>Bio-Tape™ provides a standardized sampling method for the determination of possible mold, microbial, bioaerosol, and inorganic dust contamination.</i>	1.00
	<i>Air-O-Cell™ Air Sampling Cassette or Allergenco-D</i> <i>The Air-O-Cell and Allergenco-D sampling cassette is specifically designed for the rapid collection and analysis of a wide range of airborne aerosols.</i>	5.00
	<i>Sterile Surface Swabs</i> <i>The Surface Swab is ideal for determining the relative degree and type of biological contamination in an area.</i>	1.00
	Malt Extract Agar 85mm diameter sterile plastic petri dish with malt extract agar.	3.00
	Tryptic Soy Agar 85mm diameter sterile plastic petri dish with tryptic soy agar.	1.50

MISCELLANEOUS MEDIA

	Description	Treated	Size	Cost
	<i>SKC 232-01 Tedlar air bag</i>	<i>No</i>	<i>1 L</i>	<i>10.00</i>
	<i>SKC 232-03 Tedlar air bag</i>	<i>No</i>	<i>3 L</i>	<i>12.00</i>
	<i>SKC 232-05 Tedlar air bag</i>	<i>No</i>	<i>5 L</i>	<i>14.00</i>
	<i>3M 3500 POVM</i>	<i>No</i>	<i>NA</i>	<i>16.00</i>
	<i>3M 3520 POVM (2-stage)</i>	<i>No</i>	<i>NA</i>	<i>19.00</i>
	<i>3M 3721 Formaldehyde POVM</i>	<i>Yes</i>	<i>NA</i>	<i>27.00</i>
	<i>SKC UME^x 100 Formaldehyde Passive Sampler</i>	<i>Yes</i>	<i>NA</i>	<i>15.00</i>
	<i>SKC UME^x 200 Formaldehyde Passive Sampler</i>	<i>Yes</i>	<i>NA</i>	<i>13.00</i>
	<i>3M 3551 Ethylene oxide POVM</i>	<i>No</i>	<i>NA</i>	<i>24.00</i>
	<i>Methylene Chloride extracted cotton gauze with amber glass container</i>	<i>Yes</i>	<i>10 cm²</i>	<i>2.00</i>
	<i>Ghost wipes</i>	<i>No</i>	<i>10 wipes</i>	<i>1.00</i>
	<i>SUMMA canister (7 day rental)</i>	<i>Silonized</i>	<i>6 L</i>	<i>40.00</i>
	<i>Flow regulator valve for SUMMA canister (7 day rental)</i>	<i>—</i>	<i>—</i>	<i>No chg.</i>
	<i>Supelco Carbotrap 300 tube</i>	<i>Yes</i>	<i>¾</i>	<i>40.00</i>
	<i>Cyclone Rental (daily)</i>			<i>8.00</i>
	<i>Impinger Solutions (250 mL)</i>			<i>20.00</i>

Sampling Pump Rentals

Industrial Hygiene Sampling Pumps



EACH KIT INCLUDES:

- (1) Personal Sampling Pump 5 to 4000 ml/min flow range
- (1) Field Rotameter , 5 feet of PVC Tubing
- (1) Low flow adapter for sampling in the 5 to 800 ml/min flow range
- (1) Sampling Tube Holder and/or Sampling Cassette Holder

RENTAL PRICE:

- \$15 per day/per pump**

Microbial Sampling Pumps



SINGLE PUMP RENTAL:

- (1) Sampling pump with maximum air volume of 15 liters/minute
- (1) Field Rotameter , 5 feet of PVC Tubing
- \$15 per day/per pump**

Note: For large projects pump rental may be included at no additional charge.

Please contact an ALS representative for further information.

(If shipping is required, a \$15 fee is applied for FedEx overnight delivery)

** Additional fees may be applied for non-return or damaged equipment.

Legend of Acronyms

AIHA	American Industrial Hygiene Association	NIOSH	NIOSH Manual of Analytical Methods
ALS	Australian Laboratory Services	NPDWR	National Primary Drinking Water Regulations
BEPAT	Beryllium Proficiency Analytical Testing	OSHA	Occupational Safety and Health Act
CFR	Code of Federal Regulations	OVS	OSHA Versatile Sampler
CMA	Corn Meal Agar	PAHs	Polynuclear Aromatic Hydrocarbons
CVAA	Cold Vapor Atomic Absorption	PAT	Proficiency Analytical Testing
EC-OC	Elemental Carbons-Organic Carbons	PCBs	Polychlorinated Biphenyls
ELPAT	Lead Proficiency Analytical Testing	PCM	Phase Contrast Microscopy
EMPAT	Environmental Mold Proficiency Analytical Testing	PDA	Potato Dextrose Agar
EPA	Environmental Protection Agency	PEL	Permissible Exposure Limit
FLAA	Flame Atomic Absorption	PLM	Polarized Light Microscopy
GC-ECD	Gas Chromatography-Electron Capture Detector	POVM	Passive Organic Vapor Monitor
GC-FID	Gas Chromatography-Flame Ionization Detector	ppb	Parts per billion
GC-FPD	Gas Chromatography-Flame Photometric Detector	ppm	Parts per million
GC-MS	Gas Chromatography-Mass Spectrometry	PTFE	Poly-tetra-fluoro-ethylene
GC-NPD	Gas Chromatography-Nitrogen Phosphorus Detector	PUF	Poly-urethane foam
GC-SCD	Gas Chromatography-Sulfur Chemiluminescence Detector	PVC	Poly-vinyl chloride
GC-TCD	Gas Chromatography-Thermal Coupled Detector	SIM	Selected Ion Monitoring
GFF	Glass Fiber Filter	TICs	Tentatively Identified Compounds
GRAV	Gravimetric	TITRA	Titration
HPLC	High Performance Liquid Chromatography	TSA	Tryptic Soy Agar
HPLC-UV	High Performance Liquid Chromatography-Ultraviolet	VIS	Visible Absorption Spectrophotometry
IC	Ion Chromatography	XRD	X-ray Diffraction
ICP	Inductively Coupled Plasma	µg/m ³	Micrograms/cubic meter
ICP-MS	Inductively Coupled Plasma-Mass Spectrometry	µg/sample	Micrograms/sample
IR	Infrared Spectrophotometry		
IRB	Iron Related Bacteria		
ISE	Ion Specific Electrode		
LAL	Limulus Amebocyte Lysate		
LC-MS	Liquid Chromatography-Mass Spectrometry		
MCE	Mixed Cellulose Ester		
MEA	Malt Extract Agar		
mg/m ³	Milligrams/cubic meter		
MVOC	Microbial Volatile Organic Compound		
NIOSH	National Institute for Occupational Safety and Health		
NIST	National Institute of Standards & Technology		

Microbiological Services

Aerobiology

Non-Viable Fungal Spore Analyses

Fungal Spore Trap Spore and Pollen COUNT (Allergenco-D, Micro-5, etc.)	Test Code	3 Days	1 Day
Fungal Spore Genus Identification and Numeration; Mycelial Fragment and Pollen COUNT	AC1	\$35	\$70
Fungal Spore Genus Identification and Numeration; Mycelial Fragment, Pollen, Total Fiber, and Skin Cell COUNT	AC2	\$45	\$70

Viable Fungal Analyses

<u>Impactor Plate</u> GENUS Classification and Count (MEA, PDA, SABDEX, etc.)*	Test Code	7-10 Days
Xerophilic or Thermophilic Fungi ID and Total Plate Count (GENUS ID)	VA1	\$35
<u>Impactor Plate</u> SPECIES Classification and Count (MEA, PDA, SABDEX, etc.)*	Test Code	7-10 Days
Xerophilic or Thermophilic Fungi ID and Total Plate Count (SPECIES ID)	VA2	\$65 Dominant Species Only (\$135 up to five Species (+) \$20 additional Species)

Viable Bacterial Analyses

<u>Impactor Plate</u> GRAM STAIN Classification and Count (TSA, 5% SBA, etc.)	Test Code	2-3 Days
Heterotrophic or Thermophilic Bacteria GRAM STAIN and Total Plate Count	VA3	\$35
<u>Impactor Plate</u> SPECIES Classification and Count (TSA, 5% SBA, etc.)	Test Code	Species 5-7 Days
Heterotrophic or Thermophilic Bacteria SPECIES ID and Total Plate Count	VA4	\$70 Dominant species only (+) Gram Stain ID; \$25 each additional species

Note: Many additional specialty media and analyses are available, call 1-800-356-9135 for more information

Environmental Mycology

Liquid, Swab, Tape-Lift, Bulk Analyses

Fungal Culture Genus ID and Quantification (Liquid, Swab, bulk)	Test Code	Genus ID 7-10 Days	
Xerophilic or Thermophilic Fungi	FC1	\$45	
Fungal Culture Species ID and Quantification (Liquid, Swab, bulk)	Test Code	Species ID 7-10 Days	
Xerophilic or Thermophilic Fungi	FC2	\$65 Dominant Species Only (\$135 up to five Species (+) \$20 additional Species)	
Fungal Screen Percent ESTIMATE (Swab, Tape-Lift, Bio-Tape, Bulk)	Test Code	3 Days	1 Day
Fungal GENUS Identification Screen and % ESTIMATE	SB1	\$30	\$60
Bulk Dust Fungal Spore COUNTS PER GRAM (Dust Bulk Only)	Test Code	3 Days	1 Day
Fungal Spore GENUS Identification; Mycelial Fragment and Pollen	BD1	\$45	\$70

Environmental Bacteriology

Water Analyses by Membrane Filtration

Liquid Only	Test Code	3 Days
Heterotrophic or Thermophilic Bacteria COLONY PLATE COUNT	EM1	\$45
Heterotrophic or Thermophilic Bacteria GRAM STAIN ID and Total Plate Count	EM2	\$55
Heterotrophic or Thermophilic Bacteria SPECIES ID and Total Plate Count	EM3	\$75 Dominant Species only (+) Gram ID; (\$20 each additional species)

E.Coli and Total Coliform Analyses

PRESENCE or ABSENCE of E. coli (+) Total Coliform (liquid, swab)	Test Code	2 Days
(USEPA: 40 CFR Part 141) Accepted Method	CF1	\$25
QUANTITATIVE Analysis of E. coli (+) Total Coliform (liquid, swab)	Test Code	3 Days
USEPA: 40 CFR Part 141) Accepted Method	CF2	\$45

Biological Activity Reaction Test (BART)

Environmental Corrosive Bacterial (liquid, swab)	Test Code	10 Days
Iron Related Bacteria (IRB) for microbiological influenced corrosion	MA1	\$75 /sample >3 samples - \$30/sample
Sulfate Reducing Bacteria; (NPDWR) EPA Accepted	MA2	\$75 /sample >3 samples - \$30/sample
Blue-Green Micro-Algae	MA3	\$75 /sample >3 samples - \$30/sample
Fluorescent Pseudomonas; (NPDWR) EPA Accepted	MA4	\$75 /sample >3 samples - \$30/sample
Denitrifying Bacteria	MA5	\$75 /sample >3 samples - \$30/sample
Nitrifying Bacteria	MA6	\$75 /sample >3 samples - \$30/sample
Slime Forming Bacteria	MA7	\$75 /sample >3 samples - \$30/sample

Commercial Microbiology

Microbial Toxin Analyses

Gram Negative Bacterial LAL ENDOTOXIN Assay (liquid, swab, bulk)	Test Code	7 Days
Endotoxin Units/mL	SA1	1-3 samples - \$140/sample >3 samples - \$95/sample
Fungi AFLATOXIN Assay (liquid, swab, bulk)	Test Code	7 Days
Aflatoxin Micrograms/mL	SA2	1-3 samples - \$155/sample >3 samples - \$100/sample

Standard Heterotrophic Plate Count

Liquid, Swab, Bulk Material	Test Code	2 Days
Heterotrophic or Thermophilic Bacteria COLONY PLATE COUNT	SM1	\$35
Heterotrophic or Thermophilic Bacteria GRAM STAIN ID and Total Plate Count	SM2	\$45
Heterotrophic or Thermophilic Bacteria SPECIES ID and Total Plate Count	SM3	\$75 Dominant Species only (+) Gram ID; (\$25 each additional species)

Commercial Microbiology (cont.)

Specific Bacteria ID Analyses

Enteric Bacteria ID and Quantification (liquid, swab, bulk)	Test Code	2 Days
Salmonella—CFU/mL or Gram	EC1	\$45
E.coli 0157:H7	EC2	\$45
Pseudomonas—CFU/mL or Gram	EC3	\$35
Staph aureus—CFU/mL or Gram	EC4	\$35
(Panel of all 4)	EC5	\$120

ALS Environmental—Salt Lake City performs USP methods and tailored microbial analytical services including:

- *Listeria Qualitative Screening*
- *Microbial Challenge Testing*
- *Microbial Limits Testing*

Please call to speak to a client services representative about other microbial analytical services and pricing.

Dietary Supplements Analyses

ALS Environmental—Salt Lake City is ISO 17025 certified for dietary supplement analyses and offers vitamins, minerals, heavy metals, microbial, pesticides, herbicides, and other organic contaminants analyses. Our services are in accordance with the new FDA GMP. Providing quality analytical services is our mission and we can help you assure the excellence of your product.

Turn Around Time & Applicable Surcharges

7 Work Day Normal	Normal Fee
4 Work Day Expedited	25% Additional Charge
3 Work Day Rush.....	50% Additional Charge
2 Work Day Rush.....	75% Additional Charge
Next Work Day Critical.....	100% Additional Charge

Some analysis, due to the nature of the methods and conditions, may not be offered as rush. Contact your PM to check availability for rush services prior to shipping your samples.

Special analyses may take longer than the normal turn around time.

Recheck analysis performed at the client's request are billable if the reanalysis confirms the original results.

Payment terms are Net 30 days from date of invoice.

Sample Control

A completed ALS Environmental Analytical Request Form must accompany all samples.

Hazardous substances and pathogens must be clearly indicated in the Analytical Request Form and relayed to project manager prior to shipment.

Remaining samples will be typically retained for three (3) months.

Unless indicated by client, samples will be stored at room temperature. ALS Environmental is not responsible for natural degradation of samples.

Other Terms & Conditions

Above items are applicable to Dietary Supplement analyses. Other terms and conditions of our services are subject to the Terms and Conditions of ALS Environmental.

Analytical Service Fee Schedule

Prices are subject to change at any time without prior notification. This list focuses on dietary supplement related analyses. If your desired analysis is not listed, please contact an ALS Environmental customer service representative at 1-800-356-9135 for more information.

Microbial Analyses

Analytes	Method / Instrument	Price (USD)
Total Aerobic Microbial Count (Total Plate Count, Standard Plate Count)	USP 61	25
Anaerobic Plate Count	USP 61	30
Present or Absence of Total Coliform & E. Coli	US EPA	25
Total Coliform & E. Coli Count	US EPA	35
E. Coli 0157:H7	AOAC 2005.04	40
Enterbacteriaceae	BAM	25
Lactobacillus Acidophilus	BAM	35
Lactobacillus Count	BAM	35
Listeria Monocytogenes	BAM	Quote
Pseudomonas Aeruginosa Screen	USP 61	25
Pseudomonas Aeruginosa Confirmation	USP 62	45
Salmonella Screen	USP 61	20
Salmonella Confirmation	USP 62	65
Shigella Screen	USP 61	25
Shigella Confirmation	USP 62	65
Staphylococcus Aureus Screen	USP 61	20
Staphylococcus Aureus Confirmation	USP 62	40
Yeast & Mold Count	USP 61	20
Bacteria, Mold & Fungi Spiciation	USP 62	65 (dominant species only), 20 (each additional species)
Microbial Limit Tests (Total Aerobic Microbial Count, Staphylococcus aureus, Pseudomonas aeruginosa, Salmonella, Total Coliform, Escherichia coli, and Yeast & Mold Count)	USP 61	100
Tests for Specified Microorganisms (Escherichia coli, Salmonella, Pseudomonas aeruginosa, Staphylococcus aureus, Clostridia, and Candida albicans)	USP 62	Quote
Microbial Enumeration Tests– Nutritional and Dietary Supplements (Total Aerobic Microbial Count, Total Combined Yeast and Mold Count, and Enterobacterial Count.)	USP 2021	Quote
Microbiological Procedures for Absence of Specified Microorganisms– Nutritional and Dietary Supplements (Absence of Staphylococcus aureus, Salmonella, Escherichia coli and Clostridium.)	USP 2022	Quote
Antimicrobial Effectiveness Testing (USP Challenge Test)	USP 51	Quote

Minerals and Heavy Metals Analyses

Analytes	Method / Instrument	Price (USD)
Minerals & Metals (Up To 15 Elements) or % DV 14 Minerals	ICP and/or ICP-MS	150
Minerals & Metals (Up to 40 Elements)	ICP and/or ICP-MS	250
Minerals & Metals (Up to 76 Elements: up to 40 Quantitative & at least 36 Semi-Quantitative Elements)	ICP and/or ICP-MS	350
Metal, High Concentration, Individual	ICP	35
Metal, Low Concentration, Individual	ICP-MS	45
Anions Panel (Br ⁻ , Cl ⁻ , F ⁻ , NO ₃ ⁻ , NO ₂ ⁻ , PO ₄ ³⁻ , SO ₄ ²⁻)	IC	150
Anion, Individual	IC	50
Iodine	ICP-MS	50
Heavy Metals (As, Cd, Pb)	ICP-MS	100
Mercury	CVAA	50
Heavy Metals (Al, As, Bi, Cd, Cu, Pb, Sb, Sn, Mo)	ICP and ICP-MS	150

Organic Contaminants Analyses

Analytes	Method / Instrument	Price (USD)
Pesticides, Multi-Residue Screen (Up to 165 Pesticides includes the groups of Organochlorine, Organonitrogen, Organophosphorus, Pyrethroids, Acid Herbicides, Carbamates, Sulfenimides, Ureas, other very-polar, and thermally unstable pesticides)	USP 561, AOAC 2007.01, or FDA PAM 304 / GC-MS	350
Pesticides, Comprehensive Screen (Checking every peak manually for possible pesticide or other organic contaminants beyond the Multi-Residue Screen above)	USP 561, AOAC 2007.01, or FDA PAM 304 / GC-MS	500
Pesticide, Individual	GC-MS	100
Polychlorinated Biphenyls (PCBs) (Up to 9 Compounds)	GC	250
Organic Volatile Impurities (Up to 22 Selected Compounds)	USP 467 modified / GC-MS	250
Organic Volatile Impurities, Individual	USP 467 modified / GC-MS	100
Semi-Volatile Contaminants Screen (Up to 68 Compounds including PAHs)	GC-MS	250
Semi-Volatile Contaminant, Individual	GC-MS	100
Bisphenol A (BPA)	GC-MS	250
Phthalates (Plasticizers)	GC-MS	200
Melamine & Cyanuric Acid	HPLC or LC-MS	230

Vitamins Analyses

Analytes	Method / Instrument	Price (USD)
Vitamin A (β-Carotene)	HPLC	150
Vitamin A (Retinyl Palmitate)	HPLC	150
Vitamin A (Retinyl Acetate)	HPLC	150
Vitamin B1 (Thiamine HCl)	HPLC	120
Vitamin B2 (Riboflavin)	HPLC	120
Vitamin B3 (Nicotinic Acid, Niacin)	HPLC	120
Vitamin B3 (Niacinamide)	HPLC	120
Vitamin B5 (D-Calcium Pantothenate)	HPLC	120
Vitamin B6 (Pyridoxine HCl)	HPLC	120
Vitamin B6 (Pyridoxal-5-Phosphate)	HPLC	120
Vitamin B7 (Biotin)	HPLC	120
Vitamin B9 (Folic Acid)	HPLC	120
Vitamin B12 (Cyanocobalamin)	HPLC	120
Vitamin B12 (Adenosylcobalamin)	HPLC	120
Vitamin C (Ascorbic Acid)	HPLC	120
Vitamin D3 (Cholecalciferol)	HPLC	150
Vitamin E (D-α-Tocopheryl Acetate)	HPLC	150
Vitamin E (D-α-Tocopheryl Succinate)	HPLC	150
Vitamin K1 (Phylloquinone)	HPLC	200
Vitamin K2 (Menaquinone)	HPLC	200
Betaine HCl	HPLC	120
Coenzyme Q10	HPLC	120
Glutamine	HPLC	120
Any sample with 5 or more analytes for the same preparation at the same time	HPLC	20% Discount from the full price

Environmental Analytical Offerings

EFFECTIVE MAY 15, 2011

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Qualifications and Accreditations

ALS Environmental—Salt Lake City is a NELAC accredited laboratory providing environmental analytical services to government and private clientele such as the EPA, Departments of Defense and Energy, and numerous environmental engineering firms. In supporting environmental investigation and monitoring programs, ALS—SLC performs a full range of organic and inorganic analyses using SW-846 and EPA methodologies on a wide range of sample matrices including groundwater, surface water, wastewater, soil, sludge, and hazardous waste.

- ◆ Certifications/Validations include:
 - ❖ U.S. Army Corps of Engineers
 - ❖ DoD ELAP
 - ❖ Department of Energy (DOE)
 - ❖ Air Force Center for Environmental Excellence (AFCEE)
 - ❖ NELAP
 - ❖ Various state certifications
- ◆ Program participation:
 - ❖ Environmental Protection Agency (EPA-CLP)
 - ❖ Water Pollution (NELAP)
 - ❖ Water Supply (NELAP)
 - ❖ Soil (NELAP)

Description of Services

ALS Environmental—Salt Lake City is pleased to offer an extensive array of environmental analyses. Specific analytical tests are listed in this catalog. Lists of tests are presented in two sections. The first section provides details pertinent to prominent types of environmental analyses (Specialty Analysis, TCLP and Hazardous Waste Characterization and EPA CLP). The second section lists analysis alphabetically by subject and then numerically by method. Please call a member of our staff for additional information.

SURCHARGES WILL BE ADDED TO THE LISTED FEES BASED ON THE FOLLOWING SAMPLE TURNAROUND TIMES (*Please Note: Standard Turn-around Time for Routine Environmental Analyses - 14 Calendar Days*):

Pre-arranged Same Day (received by 9:00 am MST—reported by 6:00 pm MST)	Quote
Next Working Day—reported by 6:00 pm MST	150%
Second Day—reported by 6:00 pm MST	100%
Third Day—reported by 6:00 pm MST	75%
1 Week—reported by 6:00 pm MST on 7th day	50%

***Prior notification* to confirm rush analysis capacity is requested**

Specialty Analyses

	<i>Method</i>
PERCHLORATE	
Perchlorate in Vegetation	ALS/6850
Perchlorate Analysis by LC-MS	SW 6850
WHITE PHOSPHORUS	SW 7580
METHANE / ETHANE / ETHENE ¹	ALS/RSK175
EXPLOSIVES / NITROAROMATICS	
Explosives	SW 8321
Explosives (14 Compounds)	SW 8330
Nitroglycerine/PETN	SW 8332
NDMA (N-NITROSODIMETHYLAMINE)	
NDMA by GC/MS-SIM	ALS
CHEMICAL AGENT BREAKDOWN PRODUCTS BY LC-MS	
DIMP/DMMP	ALS/SW 8321 (Mod)
Organoacids (EMPA, IMPA, MPA, FAA)	ALS/SW 8321 (Mod)
Organosulfur Compounds by GC-MS	SW 8270 (Mod)
Thiodiglycol	ALS/SW 8321 (Mod)
POLYNUCLEAR AROMATIC HYDROCARBONS	
PAHs by GC-MS	SW 8270
PAHs by GC-MS SIM, Low	SW 8270/SIM

TCLP and Hazardous Waste Characterization Analyses

	<i>Method</i>
TCLP ANALYSIS	
Complete TCLP Analysis	
Itemized TCLP Analysis Pricing:	
TCLP Leaching:	SW 1311
Metals/Non-Volatile Organics	
ZHE (Volatiles)	
SPLP Leaching:	SW1312
California WET Extraction	Title 22
Leachate Analysis:	
Volatiles (10 COMPOUNDS)	SW 8260C
Semivolatiles (12 COMPOUNDS)	SW 8270D
Pesticides (7 COMPOUNDS)	SW 8081A
Herbicides (2 COMPOUNDS)	SW 8151A
ICP Metals (7 ELEMENTS)	SW 6010B
Mercury (1 ELEMENT)	SW 7470A
HAZARDOUS WASTE CHARACTERIZATION	
Ignitability	SW 1010/1030/7.1.2.1
Corrosivity	SW 9040B/9045C
Reactivity	
Reactive Cyanide	SW-846 Chap. 7.3.3.2
Reactive Sulfide	SW-846 Chap. 7.3.4.2
Paint Filter Liquids	SW 9095A

EPA CLP Analyses

	<i>SOW</i>	<i>Technique</i>
CLP ORGANICS		
Volatiles		
Volatiles	EPA SOM*	P&T GC-MS
Volatiles, Trace	EPA SOM*	P&T GC-MS
Volatiles, SIM	EPA SOM*	P&T GC-MS
Semivolatiles		
Semivolatiles	EPA SOM*	GC-MS
Semivolatiles, SIM	EPA SOM*	GC-MS
1,4-Dioxane	EPA SOM*	GC-MS
Pesticides		
Pesticides	EPA SOM*	GC-ECD
Aroclors		
Aroclors	EPA SOM*	GC-ECD
CLP INORGANICS		
Metals (ICP/ICP-MS + Hg)	EPA ISM*	ICP/ICP-MS/CVAA
Mercury	EPA ISM*	CVAA
Cyanide	EPA ISM*	AutoAnalyzer

Schedule of Services Arranged by Analytical Subject

INORGANIC ANALYSES

<i>Parameter</i>	<i>Method</i>	<i>Technique</i>
Metals Panels		
TAL Metals (23 metals)	SW 6010B + 7470A/7471B	ICP-CVAA
TAL Metals (23 metals)	CLP ISM*	ICP-AES/ICP-MS/CVAA
Appendix IX (17 metals)	SW 6010B + 7470A/7471B	ICP-CVAA
RCRA Metals (8 metals)	SW 6010B + 7470A/7471B	ICP-CVAA
TCLP Metals (8 metals)	SW 1311/6010B + 7470A	1311/ICP-CVAA
California CAM 17 (17 metals)	SW 6010B + 7470A/7471B	ICP-CVAA
ICP Metals		
ICP Metals (26 metals)	SW 6010B	ICP
ICP Metals (23 metals)	EPA 200.7	ICP
Single Metal	SW 6010B	ICP
Additional Metals	SW 6010B	ICP
Boron	SW 6010B	ICP
Silicon	SW 6010B	ICP
ICP-MS Metals ⁵		
Standard Metals List (20 metals)	EPA 200.8	ICP-MS
Standard Metals List (22 metals)	SW 6020A	ICP-MS
Single Metal	SW 6020A	ICP-MS
Additional Metals	SW 6020A	ICP-MS
Mercury		
Mercury in Water	EPA 245.1	CVAA
Mercury in Water	SW 7470A	CVAA
Mercury in Soil/Sediment	SW 7471B	CVAA
Mercury in Sediment	EPA 245.5	CVAA
Hexavalent Chromium ⁶		
Hexavalent Chromium	SW 7196A	Colorimetry

GENERAL INORGANICS

<i>Parameter</i>	<i>Method</i>	<i>Technique</i>
Acidity	EPA 305.1	Titration
Alkalinity	EPA 310.1/SM 2320B	Titration
Alkalinity (as CO ₃ , HCO ₃ , OH)	EPA 310.1/SM 2320B	Titration
Alkalinity	EPA 310.2	AutoAnalyzer
Ammonia Nitrogen	EPA 350.1	AutoAnalyzer
(with distillation)	EPA 350.1	AutoAnalyzer
Anions ⁵		
Complete Scan	EPA 300.0/SW9056	Ion Chromatography
Single Anion	EPA 300.0/SW9056	Ion Chromatography
Additional Anions	EPA 300.0/SW9056	Ion Chromatography

GENERAL INORGANIC ANALYSES (CONT.)

<i>Parameter</i>	<i>Method</i>	<i>Technique</i>
Asbestos	NIOSH 9002	PLM
Asbestos ⁶	EPA 100.1	TEM
Cation Exchange Capacity	SW 9081	ICP
Chemical Oxygen Demand	410.2 HACH Kits	Colorimetry
Color	EPA 110.2	Visual
Conductivity	EPA 120.1/SM 2510B	Conductivity Meter
Corrosivity		
Corrosivity in Water	SW 9040	Electrode
Corrosivity in Soil	SW 9045	Electrode
NACE	SW 1110	Gravimetric
Cyanide		
EPA-CLP	CLP ISM	AutoAnalyzer
Reactive	EPA 7.3.3.2	Colorimetry
Total	EPA 335.4	AutoAnalyzer/UV
Total	SW 9012A	AutoAnalyzer/UV
Weak and Dissociable	SM 4500-CN I	AutoAnalyzer/UV
Fluoride	EPA 340.2/SM 4500(F)C	Electrode
Hardness (as CaCO₃)	EPA 130.2	Titrimetric
Hardness (as CaCO₃) ⁷	SM 2340B/6010B/200.7	Calculation (ICP)
Hexavalent Chromium ⁴	SW 7196A	Colorimetry
Ignitability	SW 1010	Pensky-Martin
Ignitability	SW 1030	Flame
IMPA, MPA	USAEC	Ion Chromatography
%Moisture / %Solids Determination	ASTM D-2216	Gravimetric
Nitrocellulose	USAEC	Colorimetry
Nitrogen as N		
Ammonia	EPA 350.1	AutoAnalyzer
Nitrate	EPA 353.2	AutoAnalyzer
Nitrate/Nitrite	EPA 353.2	AutoAnalyzer
Nitrite	EPA 353.2 Mod	AutoAnalyzer
Total Kjeldahl	EPA 351.2/SM 4500(N org)B	AutoAnalyzer
Odor	EPA 140.1	Olfactory
Organoacids	ALS	Ion Chromatography
Paint Filter Liquids	SW 9095A	Paint Filter
Perchlorate	EPA 6850	LC/MS
pH in Water	EPA 150.1/SM 4500 (H+)B	Electrode
pH in Water	SW 9040B	Electrode
pH in Soil	SW 9045C	Electrode
Phenolics ⁸	EPA 420.4	AutoAnalyzer
Phenolics	SW 9066	AutoAnalyzer
Phosphorus		
Ortho	EPA 365.1	AutoAnalyzer
Total	EPA 365.4	AutoAnalyzer
White Phosphorus	SW 7580	GC/FPD
Reactive Cyanide	EPA 7.3.3.2	AutoAnalyzer
Reactive Sulfide	EPA 7.3.4.2	Colorimetry
Solids		
Total Dissolved	EPA 160.1/SM 2540C	Gravimetric
Total Suspended	EPA 160.2/SM 2540D	Gravimetric
Total	EPA 160.3	Gravimetric
Total Volatile	EPA 160.4	Oven/Gravimetric
Total Settleable	EPA 160.5	Volumetric

GENERAL INORGANIC ANALYSES (CONT.)

<i>Parameter</i>	<i>Method</i>	<i>Technique</i>
Specific Conductance	EPA 120.1 or 9050A	Conductivity Meter
Sulfate	EPA 375.2	Colorimetry
Sulfide		
Reactive	EPA 7.3.4.2	Colorimetry
Total	EPA 376.1	Titration
Sulfides	SW 9030B	Distillation/Titration
Total Kjeldahl Nitrogen	EPA 351.2/SM 4500 (N org)B	AutoAnalyzer
Total Organic Carbon (dup)	EPA 415.1	Oxidation/IR
Total Organic Carbon (quad)	SW 9060	IR Analyzer
Total Organic Carbon	Lloyd Kahn	Combustion/IR Carbon Analyzer
Turbidity	EPA 180.1	Nephelometer

ORGANIC ANALYSES

<i>Parameter</i>	<i>Method</i>	<i>Technique</i>
Volatile Organics		
Volatiles	SW 5030/8260C	GC/MS
Volatiles, Closed System P&T for Soils	SW 5035/8260C	GC/MS
Volatiles, CLP (Low/Medium)	EPA SOM*	GC/MS
Volatiles, CLP (Trace)	EPA SOM*	GC/MS
Volatiles Trace (CLP + SIM)	EPA SOM*	GC/MS
Volatiles, Drinking Water	EPA 524.2	P&T GC/MS
TCLP Volatiles (10 cmpds)	SW 1311/8260C	TCLP/GC/MS
BTEX	SW 5030/8260C	GC/MS
BTEX & Naphthalene	SW 5030/8260C	GC/MS
BTEX & Naphthalene + MTBE	SW 5030/8260C	GC/MS
Methane, Ethane, Ethene ¹	ALS/RSK175	Headspace/GC/FID
Semivolatile Organics		
Semivolatiles	SW 8270D	GC/MS
Semivolatiles, CLP	EPA SOM*	GC/MS
Semivolatiles, (CLP + SIM)	EPA SOM*	GC/MS
PAHs Only	SW 8270D	GC/MS
PAHs Only, Low-Level	SW 8270D	GC/MS SIM
TCLP Semivolatiles (12 cmpds)	SW 1311/8270D	TCLP/GC/MS
Pesticides and Aroclors (PCBs)		
Organochlorine Pesticides	SW 8081	GC/ECD
Organochlorine Pesticides/Aroclors, CLP	EPA SOM*	GC/ECD
Aroclors	EPA SOM*	GC/ECD
TCLP Pesticides (7 cmpds)	SW 1311/8081A	TCLP/GC/ECD
Aroclors (PCBs)	SW 8082	GC/ECD
Aroclors (PCBs) in Transformer Oil	SW 8082	GC/ECD
Aroclors (PCBs) in Wipes	SW 8082	GC/ECD
Herbicides		
Chlorinated Herbicides	SW 8151A	GC/ECD
TCLP Herbicides	SW 1311/8151A	TCLP/GC/ECD
Petroleum Hydrocarbons		
Gasoline Range Organics (GRO)	SW 8260C	GC/MS
Diesel Range Organics (DRO)	SW 8015B	GC/FID
Residual Range Organics (RRO)	SW 8015B	GC/FID
BTEX	SW 8260C	GC/MS
BTEX & Napthalene	SW 8260C	GC/MS
BTEX, Napthalene & MTBE	SW 8260C	GC/MS

ORGANIC ANALYSES (CONT.)

<i>Parameter</i>	<i>Method</i>	<i>Technique</i>
Chemical Agent Breakdown Products by LC/MS		
DIMP/DMMP	ALS/SW 8321 (Mod)	LC/MS
Organoacids (EMPA, IMPA, MPA, CAA, FAA)	ALS/SW 8321 (Mod)	Ion Chromatography
Thiodiglycol	ALS/SW 8321 (Mod)	GC/SCD (water)
Explosives		
Explosives	SW 8321	LC/MS
Explosives (Nitroaromatics)	SW 8330	HPLC
Nitroglycerin/PETN	SW 8332	HPLC
Other Organics		
Alcohols	SW 8321	LC/MS
Dioxins, Low Resolution ⁹	SW 8280	GC/MS
Dioxins, High Resolution ⁹	SW 8290	GC/HRMS
NDMA	DCL SOP	GC/MS
Air Monitoring		
Pesticides & PCBs (High Volume)	EPA TO-4	GC/ECD
Pesticides & PCBs (Low Volume)	EPA TO-10	GC/ECD
Formaldehyde (other aldehydes– contact representative)	EPA TO-11	HPLC
PAHs	EPA TO-13	GC/MS
Volatiles (SUMMA/Silco Canisters)	EPA TO-14/15	GC/MS
Volatiles (Carbotrap Tubes)	EPA TO-17	GC/MS

RADIOCHEMISTRY¹⁰

Schedule of Services Arranged Numerically by Method

EPA 100 SERIES

	Analysis	Instrumentation
100.1	Asbestos ⁶	TEM
110.2	Color	Visual
120.1	Conductivity	Conductivity Meter
130.2	Hardness (as CaCO ₃)	Titrimetric
140.1	Odor	Olfactory
150.1	pH	Electrode
160.1	Total Dissolved Solids (TDS)	Gravimetric
160.2	Total Suspended Solids (TSS)	Gravimetric
160.3	Total Solids (TS)	Gravimetric
160.4	Total Volatile Residue (TVS)	Oven and Gravimetric
160.5	Settleable Solids	Volumetric
180.1	Turbidity	Nephelometer

EPA 200 SERIES

	Analysis	Instrumentation
200.7	Metals Panel (23 metals)	ICP
200.8	Metals Panel (20 metals) ³	ICP-MS
245.1	Mercury	CVAA
245.5	Mercury in Sediment	CVAA

EPA 300 SERIES

	Analysis	Instrumentation
300.0	Anions (Br, Cl, F, NO ₃ ⁷ , NO ₂ ⁷ , PO ₄ ⁷ , SO ₄)	Ion Chromatography
300.0	Anions - First Analyte Additional Analytes	Ion Chromatography
305.1	Acidity	Titration
310.1	Alkalinity	Titration
310.2	Alkalinity	AutoAnalyzer
335.4	Total Cyanide	AutoAnalyzer
340.2	Fluoride	Electrode
350.1	Ammonia	AutoAnalyzer
350.1	Ammonia with Distillation	AutoAnalyzer
351.2	TKN	AutoAnalyzer
353.2	Nitrate as N	AutoAnalyzer
353.2	Nitrate + Nitrite as N	AutoAnalyzer
353.2 Mod	Nitrite as N	AutoAnalyzer
365.1	ortho-Phosphorus	AutoAnalyzer
365.4	Total Phosphorus	Auto Analyzer
375.2	Sulfate	Colorimeter
376.1	Sulfide	Titration
377.1	Sulfite	Titration

EPA 400 SERIES

	Analysis	Instrumentation
410.2 HACH Kits	COD	Colorimetry
415.1	TOC	Oxidation/IR
420.4 ⁸	Phenolics	AutoAnalyzer

Schedule of Services Arranged Numerically by Method (cont.)

EPA 500 SERIES

	Analysis	Instrumentation
524.2	Volatile Organics	P&T GC/MS

SW-846 EPA 6000 AND 7000 SERIES

	Analysis	Instrumentation
6010B	Metals Panel - 26 Metals	ICP
6010B	Single Metal - (Includes Prep Fee) Additional Metals	ICP
6020A/6010B	Metals Panel - 22 Metals	ICP-MS/ICP ²
6020A	Single Metal - (Includes Prep Fee) Additional Metals	ICP-MS
6010B	Boron*	ICP
6010B	Silicon*	ICP
7196A ⁴	Chromium VI*	Colorimetry
7470A	Mercury (in Liquids)*	CVAA
7471B	Mercury (in Solids)*	CVAA
7580	White Phosphorus	GC/FPD

* Prep fee included

SW-846 EPA 8000 SERIES

	Analysis	Instrumentation
8015B	Diesel Range Organics (DRO)	GC/FID
8015B	Residual Range Organics (RRO)	GC/FID
8081A	Organochlorine Pesticides	GC/ECD
8082A	PCBs	GC/ECD
8151A	Chlorinated Herbicides	GC/ECD
5030/8260C	Volatile Organics - TCL List	GC/MS
5035/8260C	Volatile Organics - TCL List	GC/MS
8260C	Gasoline Range Organics (GRO)	GC/MS
8270D	Semivolatile Organics - TCL List	GC/MS
8270D	PAHs Only	GC/MS
8270D	PAHs Only, Low-Level	GC/MS SIM
8280	Dioxins/Furans ⁹	HRGC/LRMS
8290	Dioxins/Furans ⁹	HRGC/LRMS
8321	Selected Alcohols/ABPs/etc.	LC/MS
8330	Explosives	HPLC
8332	Nitroglycerine/PETN	HPLC

SW-846 EPA 9000 SERIES AND MISCELLANEOUS

	Analysis	Instrumentation
9012A	Total Cyanide	AutoAnalyzer
9030B	Sulfides	Distillation/Titration
9040B	pH in Water	Electrode
9045C	pH in Soil	Electrode
9050A	Specific Conductance	Conductivity Meter
9060	Total Organic Carbon (quad)	Combustion/IR Carbon Analyzer
Lloyd Kahn	Total Organic Carbon	Combustion / IR Carbon Analyzer
9066	Phenolics	AutoAnalyzer
1664A	Oil & Grease	Gravimetric
1680	Fecal Coliform	Visual
1680	Fecal Coliform (Non-drinking water)	Visual
9081	Cation Exchange Capacity	ICP
9095A	Paint Filter Liquids	Paint Filter
SM 2340B	Hardness (Ca & Mg)	ICP (Calculation)
SM 4500-CN I	Weak and Dissociable Cyanide	AutoAnalyzer/UV
SW 6850	Perchlorate	LC/MS
Air Monitoring		
Pesticides & PCBs (High Volume)	TO-4	GC
Pesticides & PCBs (Low Volume)	TO-10	GC
PAHs	TO-13	GC/MS
Volatiles (SUMMA/Silco Canisters)	TO-14/15	GC/MS
Volatiles (Carbotrap Tubes)	TO-17	GC/MS

1. Based on method RSK 175 and the U. S. EPA Technical Guidance for the Natural Attenuation Indicators, July, 2001.
 2. Pricing is dependant on full panel analyses request. Contact your ALS project manager for individual panel pricing.
 3. Methods 200.8 and 6020 do not include Mercury as an analyte.
 4. Analysis holding time is 48 hours from collection—Laboratory must be contacted prior to shipping samples for Hexavalent Chromium in water by SW7196A
 5. Analysis holding time is 48 hours from collection for Nitrate/Nitrite and ortho-phosphate by EPA 300.0. Laboratory must be contacted prior to shipping samples.
 6. Subcontracted to ALS - Cincinnati.
 7. Unit price is \$20 if ICP scan has already been performed.
 8. Analysis holding time is 24 hours from collection—Laboratory must be contacted prior to shipping samples for phenolics by EPA 420.2
 9. ALS Environmental—Salt Lake City does not perform these analyses and subcontracts this work with client approval to certified vendors.
 10. Subcontracted to ALS - Ft. Collins.
- * ALS—Salt Lake City utilizes the most current EPA-CLP Statement of Work

ALS Environmental—Salt Lake City Standard Report Formats

ALS Environmental—Salt Lake City has the flexibility to supply your data in a variety of report formats. The enclosed table lists the standard features and options available in each of these formats. There is a marginal surcharge for Level 3 and Level 4 report formats.

Report Level Deliverable	Level 1 Report with Title Page	Level 2 Report with Narrative and QC	Level 3 CLP-Like No Raw Data	Level 4 CLP-Like with Raw Data
Cover Page	Required	Required	Required	Required
Narrative		Required	Required	Required
Client Documentation (COC/ARF/Client Instructions)	Required	Required	Required	Required
Analytical Results	Sample Results	Sample Results	Sample Results RLIMS	Sample Results RLIMS
QC Summaries and Data		Method QC	Method QC Instrument QC CLP Forms	Method QC Instrument QC CLP Forms
Raw Data				All Raw Data
Laboratory Logs			Internal COC	Internal COC Standards Logs Digestion/Extraction Logs Instrument Logs Other Logs
Options	EDD Summary Table	EDD Summary Table	EDD Summary Table	EDD Summary Table

Method QC = Method Blank, Lab Control Standard, Matrix Duplicate, Matrix Spike, Matrix Spike Duplicate, and/or Surrogates where applicable.

Instrument QC = Tuning, Calibration Curve, Calibration Checks, Instrument Blanks, Background Checks, Efficiencies, and/or Interference Checks where applicable.

ALS Environmental—Salt Lake City has extensive experience in supplying a wide range of electronic deliverable formats, from a simple spreadsheet to federal program-based database support (e.g., ERPIMS, ERIS, AFCEE, SEDD). ALS—SLC can also customize an electronic deliverable to meet your own format . A surcharge may be assessed for a customized EDD.

All report formats can be delivered via email, on CD or in hard copy. Surcharges may apply for multiple types of deliverables.

Sample Preservation, Containers and Hold Times

Analysis	Matrix	Method	Sample Size/Container	Preservative ¹	Holding Time (Days)	
					From Sampling	From Extraction
Acidity	W/WW	305.1	500 mL/P	Cool, 4°C	14	
Alkalinity	W/WW	310.1/310.2	500 mL/P	Cool, 4°C	14	
Ammonia	W/WW	350.1	500 mL/P	Cool, 4°C H ₂ SO ₄ pH<2	28	
Anions	W/WW S/SW	300.0 300.0 Mod	500 mL/P 4 oz/G	Cool, 4°C	28 (2 for NO ₃ , NO ₂ & PO ₄)	
Aroclors (PCBs)	W/WW S/SW	8082	2 x 1 L/AG 4 oz/AG	Cool, 4°C	7 14	40 40
BTEX	W/WW S/SW	8260C	2 x 40 mL/AG 4 oz/AG	Cool, 4°C, HCl pH<2	14 14	
Chemical Oxygen Demand (COD)	W/WW	COD/HACH	500 mL/P	Cool, 4°C H ₂ SO ₄ pH<2	28	
Color	W	110.2	250 mL/P	Cool, 4°C	2	
Conductivity	W/WW S/SW	120.1 9050A	500 mL/P 4 oz/G	Cool, 4°C	28	
Corrosivity	W/WW S/SW	1110	250 mL/P 4 oz/P	NA	7 7	
Cyanide	W/WW S/SW	335.4 9010A/9012A	1L/P 4 oz/P	NaOH, pH>12 Cool, 4°C	14 14	
Diesel Range Organics	W/WW S/SW	8015B	1 L/AG 4 oz/AG	Cool, 4°C	14 14	40 40
DIMP/DMMP	W/WW S/SW	ALS SOP	2 x 1L/AG 4 oz/AG	Cool, 4°C	7 7	— 40
Dioxins/Furans (7)	W/WW S/SW	8280/8290	2 x 1 L/AG 4 oz/AG	Cool, 4°C 0.008% Na ₂ S ₂ O ₃	7 30	40 45
EMPA, IMPA,MPA, etc.	W/WW S/SW	UT04 ALS SOP	2 x 1L/AG 4 oz/AG	Cool, 4°C	40 40	
Explosives	W/WW S/SW	8330	2 x 1 L/AG 4 oz/AG	Cool, 4°C, Dark 0.008% Na ₂ S ₂ O ₃	7 14	40 40
Fluoride	W/WW	340.2	500 mL/P	NA	28	
Gasoline Range Organics	W/WW S/SW	8260C	2 X 40 mL/AG 4 oz/P	Cool, 4°C HCl, pH<2	14 14	
Herbicides	W/WW S/SW	8151A	2 x 1 L/AG 4 oz/AG	Cool, 4°C 0.008% Na ₂ S ₂ O ₃	7 14	40 40
Hexavalent Chromium	W/WW S/SW	7196A	500 mL/P 4 oz/P/G	Cool, 4°C	1 28	1
Ignitability	W/WW S/SW	1010	500 mL/G 4 oz/G	None	7	
Mercury	W/WW S/SW	245.1/245.5 7470A/7471A	250mL/P/G 4 oz/P/G	HNO ₃ , pH<2	28 28	
Metals ICP/AA	W/WW S/SW	200 Series 6010B/6020	500 mL/P 4 oz/P/G	HNO ₃ pH<2	180 180	
NDMA	W/WW S/SW	UM34 and ALS SOP	2 x 1 L/AG 4 oz/AG	Cool, 4°C	7 14	40 40
Nitrate	W/WW	353.2	250 mL/P	Cool, 4°C	2	
Nitrate + Nitrite	W/WW	353.2	250 mL/P	Cool, 4°C H ₂ SO ₄ pH<2	28	
Nitrite	W/WW	353.2 Mod	125 mL/P	Cool, 4°C	2	

Analysis	Matrix	Method	Sample Size/Container	Preservative ¹	Holding Time (Days)	
					From Sampling	From Extraction
Nitroglycerin/PETN	W/WW S/SW	8332	2 x 1 L/AG 4 oz/AG	Cool, 4°C	7 14	40 40
Odor	W/WW	140.1	500 mL/G	Cool, 4°C	1	
Oil & Grease	W/WW	1664	1 L/AG	Cool, 4°C H ₂ SO ₄ or HCL pH<2	28	
Organochlorine Pesticides	W/WW S/SW	8081	2 x 1 L/AG S/SW	Cool, 4°C, pH 5-9 0.008% Na ₂ S ₂ O ₃	7 14	40 40
ortho-Phosphate	W/WW	365.1	125 mL/P	Cool, 4°C Filter Immediately	2	
Perchlorate	W/WW S/SW	EPA 6850	500 mL/P 4 oz/AG	Cool, 4°C	28 28	
pH	W/WW S/SW	150.1 9040B/9045C	500mL/P 4 oz/P/G	Cool, 4°C	ASAP ASAP	
Phenolics	W/WW	420.4 9066	1 L/AG 4 oz/AG	Cool, 4°C H ₂ SO ₄ pH<2	1 28	
Phosphorus—White/ Elemental (P4)	WWW S/SW	7580	250 mL/AG S/SW	Cool, 4°C, No headspace	5 30	
Polynuclear Aromatics (PAHs)	W/WW S/SW	8270D 8310	2 x 1 L/AG S/SW	Cool, 4°C, Dark 0.008% Na ₂ S ₂ O ₃	7 14	40 40
Reactive Cyanide	W/WW S/SW	7.3.3.2	500 mL/P 4 oz/P/G	Cool, 4°C Dark	7 7	
Reactive Sulfide	W/WW S/SW	7.3.4.2	500 mL/P 4 oz/P/G	Cool, 4°C Dark	7 7	
Semivolatile Organics	W/WW S/SW	8270D	2 x 1 L/AG 4 oz/AG	Cool, 4°C 0.008% Na ₂ S ₂ O ₃	7 14	40 40
Sulfide	W/WW S/SW	376.1 9030B	500 mL/P 4 oz/P/G	Cool, 4°C pH>9 NaOH, ZnOAc	7 7	
TCLP Metals	W/WW S/SW	1311	1 L/P	NA	180	
TCLP Semivolatiles, Pesticides, & Herbicides	W/WW S/SW	1311	3 X 1L/AG 4 oz/AG	Cool, 4°C	14 (leach) 7 (extraction)	40
TCLP Volatiles	W/WW S/SW	1311	3 X 40mL/AG 4 oz/AG	Cool, 4°C	14 (leach) 14 (analyze)	
Thiodiglycol	W/WW S/SW	UL09 LL9	2 x 1 L/AG 4 oz/AG	Cool, 4°C	40 7	— 40
Total Dissolved Solids	W/WW	160.1	500 mL/P	Cool, 4°C	7	
Total Kjeldahl Nitrogen	W/WW	351.2	1 L/P	Cool, 4°C H ₂ SO ₄ pH<2	28	
Total Organic Carbon (TOC)	W/WW S/SW	415.1 9060	250 mL/AG 4 oz/AG	Cool, 4°C H ₂ SO ₄ pH<2	28 28	
Total Phosphorus	W/WW	365.4	125 mL/P	Cool, 4°C H ₂ SO ₄ pH<2	28	
Total Recoverable Petroleum Hydrocar- bons (TRPH)	W/WW	418.1	1 L/AG	Cool, 4°C H ₂ SO ₄ pH<2	28	
Total Settleable Solids	W/WW	160.1	500 mL/P	Cool, 4°C	2	
Total Solids Moisture	W/WW S/SW	160.3	500 mL/P 4 oz/G	Cool, 4°C	7 7	

Sample Preservation, Containers and Hold Times (cont.)

Analysis	Matrix	Method	Sample Size/Container	Preservative ¹	Holding Time (Days)	
					From Sampling	From Extraction
Total Suspended Solids	W/WW	160.2	500 mL/P	Cool, 4°C	7	
Total Volatile Solids	W/WW	160.4	250 mL/P	Cool, 4°C	7	
Turbidity	W/WW	180.1	250 mL/P	Cool, 4°C	2	
Volatile Organics	W/WW	524.2	2 x 40 mL/AG	Cool, 4°C Dechlorination then HCl, pH<2 No Headspace	14	
Volatile Organics	W/WW S/SW	8260C	2 x 40 mL/AG 4 oz/AG	Cool, 4°C HCl, pH<2, No Headspace	14 14	
MISCELLANEOUS						
Asbestos (7)	W	100.1	1 L/P	Cool, 4°C	2	
Asbestos (7)	WW	100.1	1 L/P	Cool, 4°C	None	

Abbreviations used are as follows:

Matrix		Container		Preservatives	
W	Water	P	Plastic (HDPE)	NaOH	Sodium Hydroxide
WW	Waste Water	AG	Amber Glass	HCl	Hydrochloric Acid
S	Soil/Sediment	G	Glass	HNO ₃	Nitric Acid
SW	Solid Waste			H ₂ SO ₄	Sulfuric Acid
				Na ₂ S ₂ O ₄	Sodium Thiosulfate

¹ Chemical Preservative on W/WW matrix only.

NOTES:

- Sample preservation should be performed during sample collection.
- Soil samples can be collected in either glass jars or stainless steel liners with both ends sealed with Teflon[®] paper and plastic caps.
- Extraction hold times are from the date of sampling, and analysis hold times are from the date of extraction.
- If analyzing for dissolved metals, the sample shall be field-filtered through a 0.45-µm filter immediately (within 15 minutes) after sample collection and prior to preservation.
- Provide twice the number of containers listed when matrix spike, matrix duplicate, and matrix spike duplicate analyses are requested for the sample. Minimum frequency is one per 20 field samples.
- This table includes the requirements of the U. S. Environmental Protection Agency, as published in the *Code of Federal Regulations*, Volume 49, Number 209, 40 CFR 136 dated October 26, 1984, page 43260 and SW846 Chapter 2 Table 2-36 Revision 3, December 1996.
- ALS—SLC does not perform these analyses and subcontracts this work, with client approval, to certified vendors.

PREPARATION METHODS
SW-846
EPA 300 SERIES METHODS
METALS PREPARATION METHODS

Regulatory Method	Matrix	Metals Analysis	Instrumentation	Acid
3005	Water/Soil (Modified)	ICP Digestion	Hotplate	HNO ₃
3010	Water	ICP Digestion	Hotplate	HNO ₃ /HCl
3015	Water	ICP	Microwave	HNO ₃
3050	Solids	ICP Digestion	Hotplate	HNO ₃ /H ₂ O ₂ /HCl
3051 ¹	Solids	ICP Digestion	Microwave	HNO ₃
3060	Solids	Hexavalent Chromium Digestion	Hotplate	NA

¹ Not appropriate for antimony.

ORGANIC PREPARATION METHODS

Regulatory Method	Analysis	Preparation Technique
3510	Organics	Separatory Funnel Extraction
3550	Organics	Sonication Extraction

The following preparation techniques are commonly applied for volatiles analysis

Regulatory Method	Analysis	Preparation Description
3810	Volatile Organics	Headspace
5030	Volatile Organics	Purge-and-Trap
5035	Volatile Organics	Closed-System Purge-and-Trap (Encore)

The following preparation methods can be utilized upon client specific request (additional charges may apply)

Regulatory Method	Analysis	Preparation Technique
3520	Organics	Liquid/Continuous Liquid Extraction
3540	Organics	Soxhlet Extraction
3580	Organics	Waste Dilution
3620	Organics	Florisil Cleanup
3640	Organics	Gel Permeation
3660	Organics	Sulfur Cleanup

Environmental Method Analyte Lists

6010B & 6020A - ICP Metals

<i>Aluminum</i>	<i>Chromium</i>	<i>Nickel</i>	<i>Thallium</i>
<i>Antimony</i>	<i>Cobalt</i>	<i>Palladium</i>	<i>Thorium</i>
<i>Arsenic</i>	<i>Copper</i>	<i>Phosphorus</i>	<i>Tin</i>
<i>Barium</i>	<i>Gallium</i>	<i>Platinum</i>	<i>Titanium</i>
<i>Beryllium</i>	<i>Gold</i>	<i>Potassium</i>	<i>Tungsten</i>
<i>Bismuth</i>	<i>Iron</i>	<i>Selenium</i>	<i>Uranium</i>
<i>Boron</i>	<i>Lead</i>	<u>Silica/Silicon</u>	<i>Vanadium</i>
<i>Cadmium</i>	<u>Lithium</u>	<i>Silver</i>	<i>Zinc</i>
<u>Calcium</u>	<i>Magnesium</i>	<i>Sodium</i>	<u>Zirconium</u>
<i>Cerium</i>	<i>Manganese</i>	<i>Strontium</i>	
<i>Cesium</i>	<i>Molybdenum</i>	<i>Tellurium</i>	

Note: Analytes in **bold italics** can be analyzed utilizing **6020A ICP-MS** methodology as well as by method 6010B ICP; Analytes just italicized are analyzed by 6020 ICP-MS only. Underlined analytes are analyzed only by 6010 ICP-AES. Please consult your project manager for other elements of interest.

300.0 - Anions

Bromide	Nitrate	Sulfate
Chloride	Nitrite	
Fluoride	Ortho-Phosphate-P	

524.2 – Volatile Organics in Drinking Water

1,1-Dichloroethane	1,2-Dibromo-3-Chloropropane	Hexachlorobutadiene
1,1-Dichloroethene	2,2-Dichloropropane	Isopropylbenzene
1,1-Dichloropropene	4-Chlorotoluene	<i>m&p</i> -Xylene
1,1,1-Trichloroethane	Benzene	Methylene Chloride
1,1,1,2-Tetrachloroethane	Bromobenzene	Naphthalene
1,1,1,2-Trichloroethane	Bromochloromethane	<i>n</i> -Butylbenzene
1,1,1,2,2-Tetrachloroethane	Bromodichloromethane	<i>n</i> -Propylbenzene
1,2-Dibromoethane	Bromoform	<i>o</i> -Xylene
1,2-Dichlorobenzene	Bromomethane	<i>p</i> -Isopropyltoluene
1,2-Dichloroethane	Carbon Tetrachloride	<i>sec</i> -Butylbenzene
1,2-Dichloropropane	Chlorobenzene	Styrene
1,2,3-Trichlorobenzene	Chloroethane	<i>tert</i> -Butylbenzene
1,2,3-Trichloropropane	Chloroform	Tetrachloroethene
1,2,4-Trichlorobenzene	Chloromethane	Toluene
1,2,4-Trimethylbenzene	<i>cis</i> -1,2-Dichloroethene	<i>trans</i> -1,2-Dichloroethene
1,3-Dichlorobenzene	<i>cis</i> -1,3-Dichloropropene	<i>trans</i> -1,3-Dichloropropene
1,3-Dichloropropane	Dibromochloromethane	Trichloroethene
1,3,5-Trimethylbenzene	Dibromomethane	Trichlorofluoromethane
1,4-Dichlorobenzene	Dichlorodifluoromethane	Vinyl Chloride
2-Chlorotoluene	Ethylbenzene	

8081 – Organochlorine Pesticides

4,4'-DDD	delta-BHC	Endrin Ketone
4,4'-DDE	Dieldrin	gamma-Chlordane
4,4'-DDT	Endosulfan I	Heptachlor
Aldrin	Endosulfan II	Heptachlor epoxide
alpha-BHC	Endosulfan Sulfate	Hexachlorobenzene*
alpha-Chlordane	Endrin	Lindane
beta-BHC	Endrin Aldehyde	Methoxychlor
* If requested		Toxaphene

Environmental Method Analyte Lists (cont.)

8082 - Aroclor (PCBs)

Aroclor 1016	Aroclor 1242	Aroclor 1260
Aroclor 1221	Aroclor 1248	Aroclor 1262
Aroclor 1232	Aroclor 1254	Aroclor 1268

8270D – Polynuclear Aromatic Hydrocarbons (PAHs)

Acenaphthene	Benzo(ghi)perylene	Indeno(1,2,3-cd)pyrene
Acenaphthylene	Benzo(k)fluoranthene	Naphthalene
Anthracene	Chrysene	Phenanthrene
Benzo(a)anthracene	Dibenzo(a,h)anthracene	Pyrene
Benzo(a)pyrene	Fluoranthrene	
Benzo(b)fluoranthene	Fluorene	

8151A – Chlorinated Herbicides

2,4-D	Dalapon	MCPA
2,4-DB	Dicamba	MCPP
2,4,5-T	Dichlorprop	Pentachlorophenol*

8260C – Volatile Organics

1,1,1,2-Tetrachloroethane	Acetone	Isopropylbenzene
1,1,1-Trichloroethane	Allyl chloride	m&p-Xylene
1,1,1,2,2-Tetrachloroethane	Benzene	Methyl acetate
1,1,2-Trichloroethane	Bromobenzene	Methylcyclohexane
1,1-Dichloroethane	Bromochloromethane	Methylene chloride
1,1-Dichloroethene	Bromodichloromethane	Methyl-t-butyl ether
1,1-Dichloropropene	Bromoform	Naphthalene
1,2,3-Trichlorobenzene	Bromomethane	n-butylbenzene
1,2,3-Trichloropropane	Carbon disulfide	n-propylbenzene
1,2,4-Trichlorobenzene	Carbon tetrachloride	o-Xylene
1,2,4-Trimethylbenzene	Chlorobenzene	pentachloroethane
1,2-Dibromo-3-Chloropropane	Chloroethane	P-Isopropyltoluene
1,2-Dibromoethane	Chloroform	sec-Butylbenzene
1,2-Dichlorobenzene	Chloromethane	Styrene
1,2-Dichloroethane	cis-1,2-Dichloroethene	Tert-Butylbenzene
1,2-Dichloropropane	cis-1,3-Dichloropropene	Tetrachloroethene
1,3,5-Trimethylbenzene	Cyclohexane	Tetrahydrofuran
1,3-Dichlorobenzene	Dibromochloromethane	Toluene
1,4-Dichlorobenzene	Dibromomethane	trans-1,2-Dichloroethene
1,3-Dichloropropane	Dichlorodifluoromethane	trans-1,3-Dichloropropene
1-Chlorohexane	Dichlorofluoromethane	trans-1,4-dichloro-2-butene
2,2-Dichloropropane	Ethyl acetate	Trichloroethene
2-Butanone	Ethyl ether	Trichlorofluoromethane
2-Chlorotoluene	Ethyl methacrylate	Trichlorotrifluoroethane
2-Hexanone	Ethylbenzene	Vinyl chloride
4-Chlorotoluene	Hexachlorobutadiene	
4-Methyl-2-pentanone	Iodomethane	

8330 - Explosives

1,3-Dinitrobenzene	2,4,6-Trinitrotoluene	HMX
1,3,5-Trinitrobenzene	2,6-Dinitrotoluene	Nitrobenzene
2-Amino-4,6-Dinitrotoluene	3-Nitrotoluene	RDX
2-Nitrotoluene	4-Amino-2,6-Dinitrotoluene	Tetryl
2,4-Dinitrotoluene	4-Nitrotoluene	

8270D – Semivolatile Organics

1,2-Dichlorobenzene	4-Chlorophenyl Phenyl Ether	Dibenzo[a,h]anthracene
1,2,4-Trichlorobenzene	4-Methylphenol (p-cresol)	Dibenzofuran
1,3-Dichlorobenzene	4-Nitroaniline	Diethylphthalate
1,4-Dichlorobenzene	4-Nitrophenol	Dimethylphthalate
2-Chloronaphthalene	4,6-Dinitro-2-Methylphenol	Di-n-butylphthalate
2-Chlorophenol	Acenaphthene	Di-n-octylphthalate
2-Methylnaphthalene	Acenaphthylene	Fluoranthene
2-Methylphenol (o-cresol)	Anthracene	Fluorene
2-Nitrophenol	Benzo[a]anthracene	Hexachlorobenzene
2,4-Dichlorophenol	Benzo[a]pyrene	Hexachlorobutadiene
2,4-Dimethylphenol	Benzo[b]fluoranthene	Hexachlorocyclopentadiene
2,4-Dinitrophenol	Benzo[ghi]perylene	Hexachloroethane
3,3-Dichlorobenzidine	Bis(2-chloroethoxy)methane	Bis(2-chloroisopropyl)ether
Benzo[k]fluoranthene	Bis(2-chloroethyl)ether	Indeno(1,2,3-cd)pyrene
2,4-Dinitrotoluene	Pentachlorophenol	Isophorone
2,4,5-Trichlorophenol	Phenanthrene	Naphthalene
2,4,6-Trichlorophenol	Phenol	Nitrobenzene
2,6-Dinitrotoluene	2-Nitroaniline	N-nitroso-di-n-propylamine
3-Nitroaniline	Carbazole	N-nitrosodiphenylamine
4-Bromophenyl Phenyl Ether	Bis(2-ethylhexyl)phthalate	Pyrene
4-Chloro-3-methylphenol	Butylbenzylphthalate	Pyridine
4-Chloroaniline	Chrysene	
Benzoic Acid	Benzyl alcohol	

TCLP
1311/6010B/7470A - Metals

Arsenic	Chromium	Selenium
Barium	Lead	Silver
Cadmium	Mercury	

1311/8081 - Pesticides

Chlordane	Heptachlor epoxide	Toxaphene
Endrin	Lindane	
Heptachlor	Methoxychlor	

1311/8151A - Herbicides

2,4-D	2,4,5-TP	
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1311/8260C - Volatiles

1,1-Dichloroethylene	Carbon Tetrachloride	Trichloroethylene
1,2-Dichloroethane	Chlorobenzene	Vinyl Chloride
2-Butanone	Chloroform	
Benzene	Tetrachloroethylene	

1311/8270D - Semivolatiles

1,4-Dichlorobenzene	Hexachloro-1,3-butadiene	Nitrobenzene
2,4-Dinitrotoluene	Hexachlorobenzene	o-Cresol
2,4,5-Trichlorophenol	Hexachloroethane	Pentachlorophenol
2,4,6-Trichlorophenol	m&p-Cresol	Pyridine

Terms & Conditions

ALS Environmental—Salt Lake City provides professional analytical services for all samples submitted. The following statements describe the terms and conditions under which ALS—SLC agrees to operate.

1. GENERAL

- 1.1 ALS—SLC is not in the position to interpret data as they pertain to regulations, etc. and assumes no responsibility for the quality of samples submitted.
- 1.2 The Schedule of Fees and Services provides a partial listing of routine analyses performed by ALS—SLC . If you have requirements for analyses not listed, special analytical requirements, or desire information addressing sampling and/or analytical protocols, please contact a member of our project management department.
- 1.3 Upon request ALS—SLC will supply (at cost plus shipping charges) sampling media, sample bottles and preservatives. Shipping containers will be provided at no cost. No credit will be given for returns.
- 1.4 Fees are subject to change without notice.

2. ANALYTICAL SERVICE ORDERS

- 2.1 Requests for analytical services may be made by telephone, FAX, e-mail, or in writing. The client's authorized representative must confirm all requests for services in writing.
- 2.2 Chain of Custody (COC) not provided for Industrial Hygiene analysis unless specifically requested by client.
- 2.3 ALS—SLC reserves the right to refuse to proceed with an analytical request if the customer fails to provide an acceptable written analytical request or to establish acceptable credit arrangements.
- 2.4 Prior to submission of environmental samples, the client should develop an appropriate project Quality Assurance/Quality Control (QA/QC) plan. This plan should identify, among other items, the intent of the project, sample collection and preservation requirements, types of QC samples that are required (e.g., matrix spikes, matrix spike duplicates, field blanks), laboratory analysis/methods to be performed, minimum data reporting requirements, and required sample turnaround times. This plan should be submitted to ALS prior to sample submission. Unless such a plan is submitted, ALS—SLC is not responsible for project-specific QA/QC requirements. ALS personnel can assist in the preparation of project QA/QC plans.
- 2.5 ALS—SLC reserves the right to invoke a minimum charge of \$50 for each Industrial Hygiene sample project and \$200 for each Environmental sample project. Each field QC sample will be billed as a regular field sample. Clients will not be charged for laboratory QC samples.

3. SAMPLE RECEIPT AND PROCESSING

- 3.1 The client is responsible for the condition and custody of all samples prior to receipt, inspection, and acceptance by ALS—SLC .
- 3.2 ALS—SLC will use analytical methodologies which have been certified as compliant with requirements published or specified by the U.S. Environmental Protection Agency (EPA), State Environmental or Health Agencies, the National Institute for Occupational Safety and Health (NIOSH), the Occupational Safety and Health Administration (OSHA), or other regulatory agencies. ALS reserves the right to interpret these methodologies when applying them to the analysis of client's samples based on the reasonable, professional judgment of ALS personnel and recognized standards of the industry.
- 3.3 All analyses will be monitored under the ALS—SLC Quality Assurance/Quality Control (QA/QC) program. This program includes: instrument calibration, the analysis of spiked samples, quality control samples, laboratory blanks, replicate analyses, comparison of QA/QC data with accepted limits, and monitoring of instrument performance.
- 3.4 ALS performs Method Detection Limits Studies on a continual basis. Because MDLs change from time to time, projects in progress are subject to new MDL results.
- 3.5 ALS uses QA/QC protocols which are consistent with current industry standards. It is the responsibility of the client to determine if the proposed QA/QC protocols meet the project or site-specific QA/QC requirements determined by a particular regulatory agent.

- 3.6 ALS—SLC reserves the right to refuse to proceed with the processing of any sample which is judged by ALS—SLC to be noncompliant with quality assurance requirements of a requested regulatory analytical protocol. In such an event, the client shall reimburse ALS—SLC for any costs incurred prior to the stop-work order.
- 3.7 ALS—SLC will attempt to comply with applicable Federal and State requirements for storage, processing, and analytical holding times. However, unless samples have been scheduled with a ALS—SLC Project Manager prior to delivery, these time limits cannot be guaranteed.
- 3.8 Should the QA/QC requirements of a requested regulatory method or protocol specify that a sample must be reanalyzed, any additional sample required for the reanalysis will be provided by the client at the client's expense. Any mandated or requested QA/QC reanalysis, which generates data consistent with original results, will be at the client's expense.
- 3.9 ALS—SLC will retain any residual sample for a period of 30 days after data is reported, after which the residual sample will be properly disposed of, unless a written agreement directing ALS otherwise has been established. ALS—SLC reserves the right to return unused portions to the client for disposal.
- 3.10 ALS—SLC reserves the right to charge \$3.00 per sample for handling and disposal. Samples will be disposed of in accordance with current RCRA requirements.

4. ANALYTICAL RESULTS

- 4.1 ALS—SLC reserves the right to determine the appropriate format in which the analytical results are reported. ALS—SLC will make every effort to honor requests for special hardcopy or electronic report formats where reasonable, advanced notice has been provided by the client. All results are provided for the exclusive use of the client. ALS—SLC accepts no responsibility or liability for the client's use of such results.
- 4.2 ALS—SLC requires precise and complete instructions pertaining to parties authorized to receive results of analyses. Any subsequent request for client results by unauthorized parties will require written permission from the authorized client.
- 4.3 When requested, ALS—SLC may release verbal, FAX, e-mail (.pdf) results in advance of the written report of results. Such results are tentative and are subject to subsequent confirmation or modification during standard ALS—SLC QA/QC review procedures.
- 4.4 ALS—SLC will maintain supporting documentation for analytical results for a period of five (5) years, unless a written agreement directing ALS has been otherwise established.

5. SERVICES OUTSIDE THE SCOPE OF WORK

- 5.1 In the event the customer requests ALS—SLC to perform extraordinary services which are not included in the scope of work to which the parties agreed, ALS—SLC reserves the right to invoice for the services performed at a minimum rate of \$100/hour. Extraordinary services include, but are not limited to, the following:
 - 1) Correcting client errors.
 - 2) Request for information or data not required by the scope of work.
 - 3) Modifications to deliverables not required by the scope of work.Prior to performing requested extraordinary services, the estimated number of hours required shall be negotiated with the client. ALS shall not proceed with extraordinary services until receiving written authorization from the client.

6. PAYMENT AND TERMS

- 6.1 Any order less than \$500 may require payment at the time of sample delivery prior to sample analysis, unless other payment terms have been established. All major credit cards are accepted.
- 6.2 Any amounts owing ALS—SLC by the client which are not paid within thirty (30) days after invoicing shall accrue interest at the rate of 1 1/2% per month (18% annually).
- 6.3 Any taxes local or otherwise are the responsibility of the client and are not deducted from any amount owed to ALS Environmental.
- 6.4 In the event it becomes necessary for ALS—SLC to proceed with legal action to collect past due amounts, the client agrees to pay court costs and attorneys' fees.