

**Absolute Standards**

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Performance Testing Samples (AbsoluteGrade®)*

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Stephen J. Arpie, M.S. Technical Director



John P. Criscio, President/CEO

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# INORGANIC SINGLE COMPONENTS

## PLASMA EMISSION SPECTROSCOPY REFERENCE STANDARDS

### 1,000 ug/mL Single Components for ICP/AA

Element		Matrix	Part#	\$/100mL	Part#	\$/500mL
Aluminum	Al	Al(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57013	25	58013	65
Antimony	Sb	Sb <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub> tr.Tartaric acid	57051	25	58051	65
Arsenic	As	As <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57033	25	58033	65
Barium	Ba	Ba(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57056	25	58056	65
Beryllium	Be	Be <sub>4</sub> O(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>6</sub> /HNO <sub>3</sub>	57004	25	58004	65
Bismuth	Bi	Bi(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57083	25	58083	65
Boron	B	H <sub>3</sub> BO <sub>3</sub> /H <sub>2</sub> O	57005	25	58005	65
Cadmium	Cd	Cd(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57048	25	58048	65
Calcium	Ca	CaCO <sub>3</sub> /HNO <sub>3</sub>	57020	25	58020	65
Carbon	C	C(Citric Acid)/HNO <sub>3</sub>	57006	25	58006	65
Cerium	Ce	Ce(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57058	25	58058	65
Cesium	Cs	CsNO <sub>3</sub> /HNO <sub>3</sub>	57055	25	58055	65
Chromium	Cr	Cr(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57024	25	58024	65
Chromium-Cr <sup>6+</sup>	Cr <sup>6+</sup>	(NH <sub>4</sub> ) <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> /H <sub>2</sub> O	54161	25	54172	65
Cobalt	Co	Co(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57027	25	58027	65
Copper	Cu	Cu(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57029	25	58029	65
Dysprosium	Dy	Dy <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57066	25	58066	75
Erbium	Er	Er <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57068	25	58068	75
Europium	Eu	Eu <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57063	25	58063	75
Gadolinium	Gd	Gd <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57064	25	58064	75
Gallium	Ga	Ga <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57031	75	58031	150
Germanium	Ge	(NH <sub>4</sub> ) <sub>2</sub> GeF <sub>6</sub> /tr, HF	57032	25	58032	65
Gold	Au	NH <sub>4</sub> AuCl <sub>4</sub> /HCL	57079	75	58079	150
Hafnium	Hf	Hf <sub>2</sub> O <sub>3</sub> /HCl	57072	30	58072	75
Holmium	Ho	Ho <sub>3</sub> O <sub>3</sub> /HNO <sub>3</sub>	57067	25	58067	75
Indium	In	In <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57049	25	58049	65
Iridium	Ir	IrCl <sub>3</sub> /HCl	57077	75	58077	150
Iron	Fe	Fe(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57026	25	58026	65
Iron-Ferrous	Fe <sup>2+</sup>	(NH <sub>4</sub> )Fe <sub>2</sub> (SO <sub>4</sub> ) <sub>2</sub> /H <sub>2</sub> SO <sub>4</sub>	54141	25	54174	65
Iron-Total	Fe	[Fe <sup>2+</sup> ]+[Fe <sup>3+</sup> ]/H <sub>2</sub> SO <sub>4</sub>	54140	25	54173	65
Lanthanum	La	LaCl/HNO <sub>3</sub>	57057	25	58057	65
Lead	Pb	Pb(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57082	25	58082	65
Lithium	Li	LiNO <sub>3</sub> /HNO <sub>3</sub>	57003	25	58003	65
Lithium 6 <sup>+</sup>	Li 6 <sup>+</sup>	Li <sub>6</sub> +NO <sub>3</sub> /HNO <sub>3</sub>	59021	200	59097	1000
Lutetium	Lu	Lu <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57071	30	58071	75
Magnesium	Mg	Mg(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57012	25	58012	65
Manganese	Mn	Mn(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57025	25	58025	65
Mercury	Hg	Hg(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57080	25	58080	65
Mercury-Organic	Hg	MeHgCl/HNO <sub>3</sub>	54170	25	54171	65
Mercury-Total	Hg	Hg(NO <sub>3</sub> ) <sub>2</sub> +MeHgCl/HNO <sub>3</sub>	54004	25	54168	65

**PLASMA EMISSION SPECTROSCOPY  
REFERENCE STANDARDS**
**INORGANIC  
SINGLE  
COMPONENTS**
**1,000 ug/mL Single Components for ICP/AA**

Element		Matrix	Part#	\$/100mL	Part#	\$/500mL
Molybdenum	Mo	(NH <sub>4</sub> )MoO <sub>4</sub> /H <sub>2</sub> O	57042	25	58042	65
Neodymium	Nd	Nd <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57060	25	58060	75
Nickel	Ni	Ni(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57028	25	58028	65
Niobium	Nb	(NH <sub>4</sub> )NbF <sub>6</sub> /tr.HF	57041	25	58041	65
Palladium	Pd	Pd/HNO <sub>3</sub>	57046	125	58046	200
Phosphorus	P	(NH <sub>4</sub> )H <sub>2</sub> PO <sub>4</sub> /HNO <sub>3</sub>	57015	25	58015	65
Platinum	Pt	[Pt(NH <sub>3</sub> ) <sub>4</sub> ](NO <sub>3</sub> ) <sub>2</sub> /HCL	57078	75	58078	150
Potassium	K	KNO <sub>3</sub> /HNO <sub>3</sub>	57019	25	58019	65
Praesodymium	Pr	Pr <sub>6</sub> O <sub>11</sub> /HNO <sub>3</sub>	57059	25	58059	75
Rhenium	Re	Re/HNO <sub>3</sub>	57075	50	58075	150
Rhodium	Rh	RhCl <sub>3</sub> /HCl	57045	100	58045	400
Rubidium	Rb	RbNO <sub>3</sub> /HNO <sub>3</sub>	57037	25	58037	75
Ruthenium	Ru	RuCl <sub>3</sub> /HNO <sub>3</sub>	57044	75	58044	150
Samarium	Sm	Sm <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57062	25	58062	75
Scandium	Sc	Sc(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57021	75	58021	150
Selenium	Se	SeO <sub>2</sub> /HNO <sub>3</sub>	57034	25	58034	65
Silica	SiO <sub>2</sub>	SiO <sub>2</sub> /NaOH	54159	25	54169	75
Silicon	Si	(NH <sub>4</sub> ) <sub>2</sub> SiF <sub>6</sub> /HNO <sub>3</sub>	57014	25	58014	65
Silver	Ag	AgNO <sub>3</sub> /HNO <sub>3</sub>	57047	25	58047	65
Sodium	Na	NaNO <sub>3</sub> /HNO <sub>3</sub>	57011	25	58011	65
Strontium	Sr	Sr(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57038	25	58038	65
Sulfur	S	(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> /H <sub>2</sub> O	57016	25	58016	65
Tantalum	Ta	NH <sub>4</sub> TaF <sub>6</sub> /tr.HF	57073	25	57073	75
Tellurium	Te	TeO <sub>2</sub> /HCl	57052	25	58052	150
Terbium	Tb	Tb <sub>4</sub> O <sub>7</sub> /HNO <sub>3</sub>	57065	25	58065	75
Thallium	Tl	TlNO <sub>3</sub> /HNO <sub>3</sub>	57081	25	58081	65
Thorium	Th	Th(NO <sub>3</sub> ) <sub>4</sub> /HNO <sub>3</sub>	57090	25	57090	65
Thulium	Tm	Tm <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57069	30	58069	75
Tin	Sn	(NH <sub>4</sub> )SnF <sub>6</sub> /HNO <sub>3</sub> /HCL	57050	25	58050	65
Titanium	Ti	(NH <sub>4</sub> ) <sub>2</sub> TiF <sub>6</sub> /HNO <sub>3</sub> /tr.HF	57022	25	58022	65
Tungsten	W	(NH <sub>4</sub> ) <sub>2</sub> WO <sub>4</sub> /H <sub>2</sub> O	57074	25	58074	65
Uranium	U	U <sub>3</sub> O <sub>8</sub> /HNO <sub>3</sub>	57092	25	57092	65
Vanadium	V	NH <sub>4</sub> VO <sub>3</sub> /HNO <sub>3</sub>	57023	25	58023	65
Ytterbium	Yb	Yb <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57070	25	58070	75
Yttrium	Y	Y <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57039	25	58039	65
Zinc	Zn	Zn(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57030	25	58030	65
Zirconium	Zr	ZrO <sub>2</sub> /HNO <sub>3</sub>	57040	25	58040	65

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[AbsoluteStandards.com](http://AbsoluteStandards.com)



<b>ORGANIC SINGLE COMPONENTS</b>
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<u>Solvent Code:</u>	
1. Methanol	7. Water
2. Methylene chloride	8. Acetonitrile
3. Hexane	9. Carbon disulphide
4. Acetone	10. Toluene
5. MTBE	11. Ethyl acetate
6. Methanol:Water(9:1)	12. Methylene chloride:Benzene(3:1)
	13. Methanol:Acetone(95:5)
	14. Isooctane
	15. 2-Propanol

All solutions are at a concentration of 1000 ug/mL.

Price \$22/ 1 mL

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
72470	Abamectin	1	70326	1-Acetyl-2-thiourea	1
71356	Abate	1	78001	Acifluorfen	5
70564	Acarol	1	71090	Acifluorfen methyl derivative	3
79001	Acenaphthene	1	71122	Acridine	1
79094	Acenaphthene	2	79005	Acrolein	\$30 7
79023	Acenaphthene	8	79006	Acrylamide	1
79002	Acenaphthene-d10	1	71212	Acrylic acid	1
79003	Acenaphthylene	1	79340	Acrylic acid	7
79095	Acenaphthylene	2	79007	Acrylonitrile	1
79239	Acenaphthylene	4	79054	Acrylonitrile	7
79024	Acenaphthylene	8	72046	Acrylonitrile-d3	1
72059	Acenaphthylene-d8	1	72092	Adenine	7
70527	Acephate	1	79008	Alachlor	1
72088	Acesulfame K	7	79085	Alachlor	4
71919	Acetal	1	72093	L-Alanine	7
79104	Acetaldehyde	7	71071	Alar	1
71484	Acetaldehyde	9	70322	Aldicarb	1
79135	Acetaldehyde	10	70328	Aldicarb sulfone	1
71694	Acetamide	2	70390	Aldicarb sulfoxide	1
72089	Acetaminophen	1	79009	Aldrin	1
72090	Acetazolamide	1	79015	Aldrin	3
71806	Acetic acid	7	79164	Aldrin	4
71413	Acetochlor	4	79283	Aldrin	5
79004	Acetone	6	79046	Aldrin	14
79323	Acetone	7	70528	Allethrin	1
71818	Acetone-d6	1	70330	Allyl alcohol	1
70324	Acetonitrile	1	70325	Allyl chloride	1
79215	Acetonitrile	3	70372	5-alpha-Androstane	1
79057	Acetophenone	1	72129	5-alpha-Cholestane	1
70434	Acetophenone	2	72039	alpha-Picoline-d7	1
72017	Acetophenone-d5	1	71752	alpha-Terpineol	3
70495	2-Acetylaminofluorene	2	72055	alpha-Terpineol-d3	\$50 3
71041	Acetyl chloride	3	70010	Ametryn	1
71743	2-Acetylfuran	1	72094	Amiloride	1
72091	Acetylsalicylic Acid	1	71219	2-Aminoanthraquinone	2

<u>Solvent Code:</u>	
1. Methanol	7. Water
2. Methylene chloride	8. Acetonitrile
3. Hexane	9. Carbon disulphide
4. Acetone	10. Toluene
5. MTBE	11. Ethyl acetate
6. Methanol:Water(9:1)	12. Methylene chloride:Benzene(3:1)
	13. Methanol:Acetone(95:5)
	14. Isooctane
	15. 2-Propanol

**ORGANIC  
SINGLE  
COMPONENTS**

All solutions are at a concentration of 1000 ug/mL.

Price **\$22/ 1 mL**

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
71382	o-Aminoazo-p-toluene	2	70537	Anthraquinone	2
70332	4-Aminobiphenyl	4	72401	Antipyrine	1
70532	Aminocarb	8	72098	D-(+)-Arabinitol	7
71394	2-Amino-4,6-dinitrotoluene	1	72362	D-(-)-Arabinose	7
79069	2-Amino-4,6-dinitrotoluene	8	72099	L-Arabinose	7
71395	4-Amino-2,6-dinitrotoluene	1	70482	Aramite	<b>\$50</b> 3
79070	4-Amino-2,6-dinitrotoluene	8	72100	L-Arginine	7
71602	2-(2-Aminoethoxy)ethanol	1	70015	Aroclor 1016	1
72019	3-Amino-9-ethyl carbazole	1	70016	Aroclor 1221	1
71039	2-Amino-n-isopropylbenzamide	1	70017	Aroclor 1232	1
71067	Aminomethylphosphonic acid	7	79097	Aroclor 1232	14
71243	4-Aminophenol	1	70018	Aroclor 1242	1
72422	2-Aminopyridine	1	79098	Aroclor 1242	14
70427	4-Aminopyridine	1	70019	Aroclor 1248	1
70534	Aminotriazole	1	79099	Aroclor 1248	14
71596	5-Amino-1,3,3-trimethylcyclohexanemethylamine	1	70020	Aroclor 1254	1
72095	Amitriptyline	1	79100	Aroclor 1254	14
72096	Amoxicillin	1	70021	Aroclor 1260	1
72097	Ampicillin	1	79101	Aroclor 1260	14
71515	Amyl acetate	1	70444	Aroclor 1262	1
71025	tert-Amyl alcohol	1	79102	Aroclor 1262	14
71470	tert-Amyl methyl ether	1	71790	Aroclor 5432	<b>\$40</b> 1
71750	p-tert-Amylphenol	2	71791	Aroclor 5442	<b>\$40</b> 1
71207	Anilazine	4	71792	Aroclor 5460	<b>\$40</b> 1
79145	Aniline	1	72471	o-Arsanilic acid	4
70011	Aniline	2	72101	Ascorbic acid	7
70012	Aniline-d5	1	72102	L-Asparagine	7
71844	p-Anisidine	1	72103	Aspartame	7
71843	m-Anisidine	1	72104	L-Aspartic acid	7
70918	o-Anisidine	4	70539	Aspon	1
71667	Anisole	3	72105	Atenolol	1
79025	Anthracene	8	70022	Atraton	1
70013	Anthracene	2	70023	Atrazine	4
70014	Anthracene-d10	2	71420	Atrazine-desisopropyl	4
79125	Anthracene-d10	14	72106	Atropine	7

**ORGANIC  
SINGLE  
COMPONENTS**

<u>Solvent Code:</u>	
1. Methanol	7. Water
2. Methylene chloride	8. Acetonitrile
3. Hexane	9. Carbon disulphide
4. Acetone	10. Toluene
5. MTBE	11. Ethyl acetate
6. Methanol:Water(9:1)	12. Methylene chloride:Benzene(3:1)
	13. Methanol:Acetone(95:5)
	14. Isooctane
	15. 2-Propanol

All solutions are at a concentration of 1000 ug/mL.

Price \$22/ 1 mL

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
72108	Azathioprine	7	70476	Benzo(j)fluoranthene	2
70541	Azinphos ethyl	1	70033	Benzo(k)fluoranthene	2
70954	Azinphos methyl	1	71868	Benzophenone	1
79043	Azobenzene	14	70030	Benzo(a)pyrene	2
70024	Azobenzene	2	79027	Benzo(a)pyrene	8
71867	Azoxystrobin	1	71739	Benzo(a)pyrene-d12	2
70543	<b>Barban</b>	8	71016	Benzo(e)pyrene	2
70498	Baygon	1	70336	p-Benzoquinone	2
70544	Bendiocarb	8	71357	Benzothiazole	1
70545	Benefin	1	71914	Benzo(triazole	2
70546	Benomyl	8	71594	Benzoyl peroxide	8
72109	Benoxinate	7	70550	Benzoylprop ethyl	1
70547	Bensulide	1	70035	Benzyl alcohol	1
78002	Bentazon	5	70551	Benzyl benzoate	1
71093	Bentazon methyl derivative	3	70036	Benzyl butyl phthalate	1
70329	Benzal chloride	1	79183	Benzyl butyl phthalate	4
71707	Benzaldehyde	2	70037	Benzyl chloride	1
70025	Benzene	1	71751	o-Benzyl-p-chlorophenol	2
70026	Benzene-d6	1	71486	Benzyl mercaptan	1
70027	Benzidine	1	71870	Bifenthrin	3
79141	Benzidine	2	72111	D-Biotin	7
79151	Benzidine	10	71678	trans-beta-Carotene	2
72071	Benzidine-d8	<b>\$35</b> 1	72110	Betamethasone	7
70028	Benzo(a)anthracene	2	70038	a-BHC	1
70029	Benzo(a)anthracene-d12	2	79016	a-BHC	3
71293	Benzo(c)cinnoline	1	79174	a-BHC	4
71854	Benzo(c)phenanthrene	2	79284	a-BHC	5
71977	1,2-Benzodiphenylene sulfide	1	70039	b-BHC	1
70031	Benzo(b)fluoranthene	2	79175	b-BHC	4
71240	2,3-Benzofluorene	2	79285	b-BHC	5
71128	2,3-Benzofuran	2	79047	b-BHC	10
70032	Benzo(g,h,i)perylene	2	70040	d-BHC	1
79181	Benzo(g,h,i)perylene	4	79048	d-BHC	3
70454	Benzo(g,h,i)perylene-d12	<b>\$75</b> 2	79176	d-BHC	4
70034	Benzoic acid	1	79286	d-BHC	5

<u>Solvent Code:</u>	
1. Methanol	7. Water
2. Methylene chloride	8. Acetonitrile
3. Hexane	9. Carbon disulphide
4. Acetone	10. Toluene
5. MTBE	11. Ethyl acetate
6. Methanol:Water(9:1)	12. Methylene chloride:Benzen(3:1)
	13. Methanol:Acetone(95:5)
	14. Isooctane
	15. 2-Propanol

**ORGANIC  
SINGLE  
COMPONENTS**

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Price \$22/ 1 mL

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
79282	d-BHC	10	70042	Bromacil	1
70041	g-BHC (Lindane)	1	79321	Bromacil	4
79049	g-BHC (Lindane)	3	70560	Bromadiolone (Talon)	1
79169	g-BHC (Lindane)	4	70890	Bromoacetic acid	5
79278	g-BHC (Lindane)	5	72501	2-Bromoacetophenone	5
79287	g-BHC (Lindane)	10	70045	Bromobenzene	1
79045	g-BHC (Lindane)	14	70891	Bromochloroacetic acid	5
70556	Biphenyl	2	70333	Bromochloroacetonitrile	5
72058	Biphenyl-d10	1	72500	2-Bromo-4'-chloroacetophenone	5
71294	2,2'-Biquinoline	1	71242	2-Bromochlorobenzene	1
71299	bis(2-n-Butoxyethyl) phthalate	1	71179	3-Bromochlorobenzene	1
70996	1,2-bis(2-Chloroethoxy)ethane	1	70925	4-Bromochlorobenzene	1
70073	bis(2-Chloroethoxy) methane	1	71245	1-Bromo-2-chloroethane	1
70075	bis(2-Chloroethyl) ether	1	70046	Bromochloromethane	1
70078	bis(2-Chloroisopropyl) ether	1	70044	2-Bromo-1-chloropropane	1
71189	bis(Chloromethyl) ether	14	71415	Bromodichloroacetic acid	5
71971	bis(4-Chlorophenyl)acetic acid	1	70047	Bromodichloromethane	1
71973	2,2-Bis(4-chlorophenyl)ethanol	1	71223	4-Bromo-2,6-dichlorophenol	1
71984	bis(4-Chlorophenyl) methane	1	71144	1-Bromo-2,2-dimethoxypropane	1
71781	N,N'-bis(1,4-Dimethylpentyl)-1,4-phenylenediamine	2	70502	4-Bromo-3,5-dimethylphenyl-N-methylcarbamate	1
71300	bis(2-Ethoxyethyl) phthalate	1	71098	Bromoethane	1
79143	bis(2-Ethylhexyl) adipate	4	71603	Bromoethane-d5	1
70178	bis(2-Ethylhexyl) adipate	1	72503	2-Bromoethanol	5
79144	bis(2-Ethylhexyl) phthalate	4	70048	4-Bromofluorobenzene	1
70179	bis(2-Ethylhexyl) phthalate	1	70049	Bromoform	1
71199	bis(2-Ethylhexyl)phthalate-3,4,5,6-d4	1	70050	Bromomethane	1
72074	Bis(2-ethylhexyl)phthalate-d4	\$40 1	72043	Bromomethane-d3	1
71993	Bis(2-hydroxyphenyl)methane	1	72502	Bromomethyl methyl ether	5
71994	Bis(4-hydroxyphenyl)methane	1	71392	1-Bromonaphthalene	1
71302	bis(4-Methyl-2-pentyl) phthalate	1	71387	2-Bromonaphthalene	1
71034	bis(Pentachlorocyclopentadienyl)	4	79210	1-Bromo-2-nitrobenzene	3
71811	Bisphenol A	1	71673	1-Bromo-2-nitrobenzene	1
70840	Bolstar	3	71987	2-Bromo-2-nitro-1,3-propanediol	1
71876	[(1S)-endo]-(-)-Borneol	1	71388	2-Bromophenol	1
72112	Brassicasterol	1	72445	2-Bromophenyl methyl sulfide	1

**ORGANIC  
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COMPONENTS**

<u>Solvent Code:</u>	
1. Methanol	7. Water
2. Methylene chloride	8. Acetonitrile
3. Hexane	9. Carbon disulphide
4. Acetone	10. Toluene
5. MTBE	11. Ethyl acetate
6. Methanol:Water(9:1)	12. Methylene chloride:Benzene(3:1)
	13. Methanol:Acetone(95:5)
	14. Isooctane
	15. 2-Propanol

All solutions are at a concentration of 1000 ug/mL.

Price \$22/ 1 mL

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
79109	4-Bromophenyl phenyl ether	1	71918	sec-Butyl acetate	1
70051	4-Bromophenyl phenyl ether	2	70440	n-Butyl acetate	1
70563	Bromophos ethyl	1	71194	Butyl acrylate	1
70562	Bromophos methyl	1	71389	n-Butylamine	1
71070	2-Bromopropionic acid	5	71543	sec-Butylamine	1
71091	2-Bromopropionic acid methyl ester	5	71371	tert-Butylamine	1
71527	2-Bromopyridine	2	71461	2-(tert-Butyl)anthracene	2
72445	2-Bromothioanisole	1	70057	Butylate	1
70565	Bromoxynil	1	72115	Butylated hydroxyanisole (BHA)	1
72366	Bromoxynil methyl ether	5	71028	Butylated hydroxytoluene	1
70052	Butachlor	1	70054	n-Butyl benzene	1
79120	Butachlor	4	70055	sec-Butyl benzene	1
71492	1,3-Butadiene	1	70056	tert-Butyl benzene	1
79332	1,3-Butadiene	2	70415	N-n-Butylbenzenesulfonamide	2
79341	1,3-Butadiene	9	71898	4-tert-Butylcatechol	1
71086	2,3-Butanediol	1	71955	Butylcyclohexane	1
71949	1-Butanethiol	14	71848	tert-Butyl disulfide	1
79240	1,2,4-Butanetriol-1,4-dinitrate	8	71679	tert-Butyl formate	\$30 7
79241	1,2,4-Butanetriol trinitrate	8	71812	n-Butyl glycidyl ether	1
70453	n-Butanol	1	72114	tert-butyl hydroquinone (TBHQ)	1
79221	n-Butanol	7	79326	tert-Butyl hydroquinone (TBHQ)	4
71030	sec-Butanol	1	71998	2+3-tert-Butyl-4-hydroxyanisole	1
70988	tert-Butanol	1	71920	4,4'-Butylidenebis(6-tert-butyl-m-cresol)	1
71808	tert-Butanol-d9	1	71314	n-Butyl methacrylate	1
72164	tert-Butanol-d10	1	72116	Butyl paraben	1
70053	2-Butanone	6	71058	tert-Butyl peroxide	4
79253	2-Butanone	14	71373	2-tert-Butylphenol	2
71677	1-Butene	1	71374	3-tert-Butylphenol	2
72428	cis-2-Butene	1	71375	4-tert-Butylphenol	2
72429	trans-2-Butene	1	71682	n-Butyl sulfide	1
71154	2-Butoxyethanol	1	72028	Butyltin trichloride	2
72380	2-(2-Butoxyethoxy)ethanol	1	71615	Butyraldehyde	1
71033	2-(2-Butoxyethoxy) ethylacetate	11	72408	Butyric acid	7
72361	2-Butoxyethyl acetate	1	71200	g-Butyrolactone	1
71257	1-Butoxy-2-propanol	1	71151	<b>Caffeine</b>	1

<u>Solvent Code:</u>		
1. Methanol	7. Water	14. Isooctane
2. Methylene chloride	8. Acetonitrile	15. 2-Propanol
3. Hexane	9. Carbon disulphide	
4. Acetone	10. Toluene	
5. MTBE	11. Ethyl acetate	
6. Methanol:Water(9:1)	12. Methylene chloride:Benzene(3:1)	
	13. Methanol:Acetone(95:5)	

**ORGANIC  
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COMPONENTS**

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Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
72117	Calcium cyclamate	7	70063	Chlordane	1
72118	Calcium propionate	1	79115	Chlordane	11
72119	Campesterol	1	70064	a-Chlordane (cis)	1
70310	Camphene	3	79213	a-Chlordane (cis)	4
71400	(+/-)-Camphor	1	79288	a-Chlordane (cis)	5
71695	Caprolactam	1	79279	a-Chlordane (cis)	10
71258	Capsaicin	1	70065	g-Chlordane (trans)	1
70571	Captafol	4	79214	g-Chlordane (trans)	4
79118	Captan	4	79289	g-Chlordane (trans)	5
72120	Captopril	1	79280	g-Chlordane (trans)	10
72121	Carbamazepine	1	71005	Chlorendic acid	2
70499	Carbaryl	1	70588	Chlorfenvinphos	1
79199	Carbaryl	8	70887	Chloroacetic acid	5
70059	Carbazole	2	71074	Chloroacetonitrile	1
72122	Carbinoxamine	1	71474	2-Chloroacetophenone	4
70340	Carbofuran	1	71479	4'-Chloroacetophenone	1
70577	Carbofuran phenol	1	71926	N-Chloroacetyl-2,6-diethylaniline	1
70060	Carbon disulphide	1	71652	2-Chloroacrylonitrile	1
79139	Carbon disulphide	3	71708	2-Chloroaniline	2
70061	Carbon tetrachloride	1	71963	3-Chloroaniline	2
70578	Carbophenothion	1	70067	4-Chloroaniline	2
70062	Carboxin	1	71665	4-Chloroanisole	3
71877	(-)-Carveol	1	71941	2-Chloroanthracene	2
71503	(S)-(+)-Carvone	1	70068	Chlorobenzene	1
71712	(-)-trans-Caryophyllene	1	70069	Chlorobenzene-d5	1
79218	Catechol	1	79329	Chlorobenzilate	2
71512	Catechol	2	70070	Chlorobenzilate	14
72123	Cefaclor	1	71118	2-Chlorobenzotrifluoride	1
72124	Cefadroxil	1	71947	3-Chlorobenzotrifluoride	1
72125	Cephalexin	1	71948	4-Chlorobenzotrifluoride	1
70335	Chloral hydrate	5	70483	2-Chloro-1,3-butadiene	1
79331	Chloral hydrate	7	71072	1-Chlorobutane	1
78003	Chloramben	5	71626	2-Chloro-4,6-diamino-1,3,5-triazine	THF
71076	Chloramben methyl derivative	3	71689	1-Chloro-1,1-difluoroethane	1
72126	Chloramphenicol	1	71295	Chlorodifluoromethane	1

**ORGANIC  
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COMPONENTS**

<u>Solvent Code:</u>	
1. Methanol	7. Water
2. Methylene chloride	8. Acetonitrile
3. Hexane	9. Carbon disulphide
4. Acetone	10. Toluene
5. MTBE	11. Ethyl acetate
6. Methanol:Water(9:1)	12. Methylene chloride:Benzene(3:1)
	13. Methanol:Acetone(95:5)
	14. Isooctane
	15. 2-Propanol

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Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
71491	4-Chloro-3,5-dimethylphenol	1	71824	1-Chloro-4-nitrobenzene	1
71822	1-Chloro-2,4-dinitrobenzene	1	71396	4-Chloro-3-nitrobenzotrifluoride	1
71823	1-Chloro-3,4-dinitrobenzene	1	71965	2-Chloro-4-nitrotoluene	1
70072	Chloroethane	1	71825	2-Chloro-6-nitrotoluene	1
72045	Chloroethane-d5	1	71826	4-Chloro-2-nitrotoluene	1
70908	2-Chloroethanol	1	71827	4-Chloro-3-nitrotoluene	14
79890	2-Chloroethanol	7	71604	1-Chlorooctadecane	4
79039	2-Chloroethyl vinyl ether	9	72087	1-Chlorooctane	1
70074	2-Chloroethyl vinyl ether	1	70591	Chlorophacinone	1
70895	1-Chloro-2-fluorobenzene	1	70083	2-Chlorophenol	1
71136	1-Chloro-3-fluorobenzene	1	70084	2-Chlorophenol-d4	1
70905	1-Chloro-4-fluorobenzene	1	70399	3-Chlorophenol	1
70076	Chloroform	1	79060	3-Chlorophenol	2
70077	1-Chlorohexane	1	70344	4-Chlorophenol	1
70079	Chloromethane	1	79061	4-Chlorophenol	2
72042	Chloromethane-d3	1	71576	2-Chlorophenol-PFB derivative	15
71380	4-Chloro-2-methylaniline	2	71150	4-Chlorophenoxyacetic acid	1
70919	5-Chloro-2-methylaniline	1	72494	2-Chlorophenoxyacetic acid	5
71664	4-Chloro-3-methylanisole	3	72021	4-Chloro-1,2-phenylenediamine	1
70080	Chloromethyl methyl ether	1	72022	4-Chloro-1,3-phenylenediamine	1
71488	2-Chloro-5-methylphenol	2	71972	1-(4-Chlorophenyl)ethanol	1
71095	4-Chloro-2-methylphenol	2	71478	p-Chlorophenyl methyl sulfone	1
79130	4-Chloro-3-methylphenol	1	71477	p-Chlorophenyl methyl sulfoxide	1
70066	4-Chloro-3-methylphenol	2	79110	4-Chlorophenyl phenyl ether	1
72078	4-Chloro-3-methylphenol-d2	<b>\$50</b> 1	70085	4-Chlorophenyl phenyl ether	2
71575	4-Chloro-3-methylphenol-PFB derivative	15	72063	4-Chlorophenyl phenyl ether-d5	<b>\$40</b> 1
72020	3-(Chloromethyl) pyridine HCL	1	70339	1-(o-Chlorophenyl)-2-thiourea	1
70311	1-Chloronaphthalene	1	71592	Chlorophyll A/B Standard (in Acetone/Oil base)	4
70081	2-Chloronaphthalene	1	79338	Chlorophyll A/B Standard (in MTBE/Oil base)	5
72057	2-Chloronaphthalene-d7	<b>\$75</b> 1	70506	Chloropicrin	5
70082	Chloroneb	1	72351	2-Chloropropane	1
79306	Chloroneb	5	70346	3-Chloropropionitrile	1
71964	4-Chloro-2-nitroaniline	1	71186	Chloropropylate	1
71709	1-Chloro-2-nitrobenzene	2	71528	2-Chloropyridine	2
71674	1-Chloro-3-nitrobenzene	1	70086	Chlorothalonil	1

<u>Solvent Code:</u>		
1. Methanol	7. Water	14. Isooctane
2. Methylene chloride	8. Acetonitrile	15. 2-Propanol
3. Hexane	9. Carbon disulphide	
4. Acetone	10. Toluene	
5. MTBE	11. Ethyl acetate	
6. Methanol:Water(9:1)	12. Methylene chloride:Benzen(3:1)	
	13. Methanol:Acetone(95:5)	

**ORGANIC  
SINGLE  
COMPONENTS**

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*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
79307	Chlorothalonil	5	71146	Creosote	2
79317	Chlorothalonil	10	70920	p-Cresidine	1
71476	4-Chlorothioanisole	1	79133	m-Cresol	1
70087	2-Chlorotoluene	1	70215	m-Cresol	2
70438	3-Chlorotoluene	1	71585	m-Cresol-PFB derivative	15
70088	4-Chlorotoluene	1	79127	o-Cresol	1
71605	Chlorotrifluoroethene	1	70093	o-Cresol	2
71807	Chloroxuron	1	71569	o-Cresol-PFB derivative	15
71787	2-Chloro-m-xylene	1	79128	p-Cresol	1
72128	Chlorpheniramine	1	70216	p-Cresol	2
70089	Chlorpropham	1	71570	p-Cresol-PFB derivative	15
70090	Chlorpyrifos	1	71160	Cresylic acid	1
70593	Chlorpyrifos methyl	1	79222	Crotonaldehyde	7
70594	Chlortoluron	1	70348	Crotonaldehyde	8
72483	Cholecalciferol (Vitamin D)	7	71771	Crotononitrile	1
71719	Cholesterol	THF	70598	Crotoxyphos	3
70091	Chrysene	2	70601	Cyanazine	4
79205	Chrysene	4	72134	Cyanocobalamin	1
79031	Chrysene	8	71116	Cyanofenphos	1
70092	Chrysene-d12	2	70094	Cycloate	1
72130	Cimetidine	1	71616	Cycloheptane	1
71504	Cineole	1	71023	Cyclohexane	1
72223	Ciprofloxacin	1	72191	Cyclohexane-d12	1
71547	Clomazone	4	70542	Cyclohexanol	1
79119	Clopyralid	4	70458	Cyclohexanone	7
71229	Clopyralid methyl derivative	1	79189	Cyclohexene	1
72131	Cloxacillin	1	71777	Cyclohexene	2
71282	Coal Tar Oil	2	71215	Cyclohexylamine	2
71741	Coprostan-3-ol	1	72086	2-cyclohexyl-4,6-dinitrophenol	1
72132	Coprosterol	1	71939	1,5-Cyclooctadiene	1
79231	Coronene	2	71617	Cyclooctane	1
70877	Coronene	9	71716	Cyclooctanone	2
72133	Cortisone	1	71618	Cyclopentane	1
71995	(-)-Cotinine	1	70519	Cyclopentene	1
70596	Coumaphos	1	71078	Cyclophexamine	1



**ORGANIC  
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COMPONENTS**

<u>Solvent Code:</u>	
1. Methanol	7. Water
2. Methylene chloride	8. Acetonitrile
3. Hexane	9. Carbon disulphide
4. Acetone	10. Toluene
5. MTBE	11. Ethyl acetate
6. Methanol:Water(9:1)	12. Methylene chloride:Benzen(3:1)
	13. Methanol:Acetone(95:5)
	14. Isooctane
	15. 2-Propanol

All solutions are at a concentration of 1000 ug/mL.

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Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
72083	Cycloprate	5	70102	2,4'-DDT	1
71496	Cyfluthrin, "Baythroid"	10	79052	2,4'-DDT	3
79055	Cypermethrin	3	70101	4,4'-DDT	1
70604	Cypermethrin	8	79018	4,4'-DDT	3
79235	Cypermethrin	14	79150	4,4'-DDT	4
71795	Cyproconazole	1	79292	4,4'-DDT	5
71899	Cyprodinil	1	70103	Decachlorobiphenyl	5
71847	Cyprodinil	4	70104	Decafluorobiphenyl	\$25 1
72135	L-Cysteine	7	79325	Decafluorobiphenyl	4
79255	<b>2,4-D</b>	4	79212	Decafluorobiphenyl	\$25 5
78004	2,4-D	5	70105	Decafluorotriphenylphosphine	2
79196	2,4-D	8	79093	Decafluorotriphenylphosphine	4
70608	2,4-D, butoxyethanol ester	8	71814	Decahydronaphthalene (Decalin)	1
71629	2,4-D n-butyl ester	3	71975	cis-Decahydronaphthalene	1
70612	2,4-D, ethylhexyl ester	8	71976	trans-Decahydronaphthalene	1
79059	Dacthal	3	71513	Decamethylcyclopentasiloxane	1
79258	Dacthal	4	79154	n-Decane	1
79254	Dalapon	4	70106	n-Decane	2
78005	Dalapon	5	72041	n-Decane-d22	1
70934	Dalapon methyl ester	1	71619	1-Decene	1
72013	Dazomet	4	71703	Decyl aldehyde	1
78006	2,4-DB	5	70478	Deet	1
70931	2,4-DB methyl derivative	3	70629	DEF	1
70459	2,4'-DDD	1	72107	delta-5-Avenasterol	1
79051	2,4'-DDD	3	70630	Deltamethrin	Hexane : Acetone [9:1]
70099	4,4'-DDD	1	70957	Demeton [O & S Isomers]	3
79017	4,4'-DDD	3	70124	Desethylatrazine	4
79148	4,4'-DDD	4	71320	Desflurane	1
79290	4,4'-DDD	5	72138	Desipramine	1
71203	2,4'-DDE	1	71857	Desmetryn	1
79114	2,4'-DDE	3	72141	Dexamethasone	1
70100	4,4'-DDE	1	71804	Dextrin	7
79041	4,4'-DDE	3	72142	Dextromethorphan	1
79149	4,4'-DDE	4	70350	Diallate	1
79291	4,4'-DDE	5	79311	Diallate	5

<u>Solvent Code:</u>		
1. Methanol	7. Water	14. Isooctane
2. Methylene chloride	8. Acetonitrile	15. 2-Propanol
3. Hexane	9. Carbon disulphide	
4. Acetone	10. Toluene	
5. MTBE	11. Ethyl acetate	
6. Methanol:Water(9:1)	12. Methylene chloride:Benzen(3:1)	
	13. Methanol:Acetone(95:5)	

**ORGANIC  
SINGLE  
COMPONENTS**

All solutions are at a concentration of 1000 ug/mL.

Price \$22/ 1 mL

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
71386	2,4-Diaminoanisole	Pyridine	79013	4,4'-Dibromooctafluorobiphenyl	3
71381	2,4-Diaminoanisole sulfate hydrate	7	71672	2,4-Dibromophenol	1
71378	4,4'-Diamino-3,3'-dimethyldiphenylmethane	2	71556	1,2-Dibromopropane	1
72327	1,5-Diaminonaphthalene	1	71326	1,3-Dibromopropane	1
70403	2,4-Diaminotoluene	10	71609	2,3-Dibromopropionamide	1
72464	2,5-Diaminotoluene dihydrochloride	1	71411	2,3-Dibromopropionic acid	5
71303	Di-n-amyI phthalate	1	71894	1,2-Dibromotetrafluoroethane	1
70108	Diazinon	1	71457	2,5-Dibromotoluene	1
70109	Dibenz(a,h)acridine	2	71462	a,a'-Dibromo-m-xylene	4
70110	Dibenz(a,j)acridine	2	72143	Dibucaine	1
71611	Dibenzo-p-dioxin	10	71485	Dibutylamine	7
70116	Dibenzofuran	1	72370	2,4-Di-tert-amyIphenol	1
72062	Dibenzofuran-d8	\$40 1	71997	2,6-Di-tert-butyl-1,4-benzoquinone	1
70112	Dibenzo(a,h)anthracene	2	71104	Dibutylchlorendate	1
79207	Dibenzo(a,h)anthracene	4	71275	2,4-Di-tert-butylphenol	2
70111	Dibenzo(a,e)pyrene	2	71589	2,6-Di-tert-butylphenol	2
70113	Dibenzo(a,h)pyrene	2	71372	3,5-Di-tert-butylphenol	2
71277	Dibenzo(a,l)pyrene	2	79083	Di-n-butyl phthalate	1
71015	Dibenzothiophene	1	70058	Di-n-butyl phthalate	2
72068	Dibenzothiophene-d8	\$35 1	72070	Di-n-butyl phthalate-d4	\$40 1
71248	Dibenzyl phthalate	1	72029	Dibutyltin dichloride	2
70892	Dibromoacetic acid	5	79257	Dicamba	4
70507	Dibromoacetonitrile	5	78008	Dicamba	5
70119	4,4'-Dibromobiphenyl	2	70935	Dicamba methyl derivative	3
79111	4,4'-Dibromobiphenyl	11	70637	Dichlobenil	1
71410	Dibromochloroacetic acid	5	72047	1,1-Dichloeoethene-d2	1
70120	Dibromochloromethane	1	70638	Dichlofenthion	1
70117	1,2-Dibromo-3-chloropropane	1	70347	Dichlone	1
71137	Dibromodifluoromethane	1	71401	Dichloroacetaldehyde diethyl acetal	1
70986	1,1-Dibromoethane	1	70888	Dichloroacetic acid	5
70121	1,2-Dibromoethane	1	70356	Dichloroacetonitrile	5
71235	1,2-Dibromoethane-d4	1	71397	Dichloroacetyl chloride	3
70460	Dibromofluoromethane	\$50 1	71131	2,3-Dichloroaniline	1
70122	Dibromomethane	1	71778	2,5-Dichloroaniline	2
70123	4,4'-Dibromooctafluorobiphenyl	1	71121	3,4-Dichloroaniline	1

**ORGANIC  
SINGLE  
COMPONENTS**

<u>Solvent Code:</u>	
1. Methanol	7. Water
2. Methylene chloride	8. Acetonitrile
3. Hexane	9. Carbon disulphide
4. Acetone	10. Toluene
5. MTBE	11. Ethyl acetate
6. Methanol:Water(9:1)	12. Methylene chloride:Benzene(3:1)
	13. Methanol:Acetone(95:5)
	14. Isooctane
	15. 2-Propanol

All solutions are at a concentration of 1000 ug/mL.

Price **\$22/ 1 mL**

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
72352	3,5-Dichloroaniline	2	70138	1,1-Dichloroethene	1
71929	2,3-Dichloroanisole	3	70141	cis-1,2-Dichloroethene	1
79163	2,4-Dichloroanisole	3	70140	trans-1,2-Dichloroethene	1
70885	2,4-Dichloroanisole	5	72047	1,1-Dichloroethene-d2	<b>\$50</b> 1
71655	2,6-Dichloroanisole	3	71120	1,1-Dichloro-1-fluoroethane	1
71775	3,4-Dichloroanisole	1	70904	Dichlorofluoromethane	1
71930	3,4-Dichloroanisole	3	70212	Dichloromethane	1
71776	3,5-Dichloroanisole	1	71828	2,3-Dichloronitrobenzene	1
72377	2,6-Dichlorobenzamide	4	71829	2,4-Dichloronitrobenzene	1
70125	1,2-Dichlorobenzene	1	71832	2,5-Dichloronitrobenzene	1
70128	1,2-Dichlorobenzene-d4	1	71831	3,4-Dichloronitrobenzene	1
70126	1,3-Dichlorobenzene	1	71830	3,5-Dichloronitrobenzene	1
70127	1,4-Dichlorobenzene	1	71606	Dichlorophen	10
70118	1,4-Dichlorobenzene-d4	1	71253	2,3-Dichlorophenol	1
71970	4,4'-Dichlorobenzhydrol	1	79062	2,3-Dichlorophenol	2
70130	3,3'-Dichlorobenzidine	1	70142	2,4-Dichlorophenol	1
72073	3,3'-Dichlorobenzidine-d6	<b>\$75</b> 1	72077	2,4-Dichlorophenol-d3	<b>\$35</b> 1
78009	3,5-Dichlorobenzoic acid	5	71254	2,5-Dichlorophenol	1
79204	4,4'-Dichlorobenzophenone	14	79063	2,5-Dichlorophenol	2
71610	4,4'-Dichlorobenzophenone	10	79105	2,6-Dichlorophenol	1
71117	2,4-Dichlorobenzotrifluoride	1	70143	2,6-Dichlorophenol	2
71932	2,5-Dichlorobenzotrifluoride	1	71255	3,4-Dichlorophenol	1
71908	3,4-Dichlorobenzotrifluoride	1	79064	3,4-Dichlorophenol	2
79011	4,4'-Dichlorobiphenyl	3	71256	3,5-Dichlorophenol	1
70133	1,4-Dichlorobutane	1	79065	3,5-Dichlorophenol	2
71391	1,4-Dichloro-2-butene	1	71577	2,4-Dichlorophenol-PFB derivative	15
71196	cis-1,4-Dichloro-2-butene	1	71566	2,6-Dichlorophenol-PFB derivative	15
70486	trans-1,4-Dichloro-2-butene	1	70990	2,4-Dichlorophenylacetic acid	1
71890	3,4-Dichloro-1-butene	1	79236	2,4-Dichlorophenylacetic acid	4
70134	Dichlorodifluoromethane	1	79103	2,4-Dichlorophenylacetic acid	5
71281	Dichlorodimethylsilane	10	70468	2,4-Dichlorophenylacetic acid methyl ester	5
70135	1,1-Dichloroethane	1	71417	1,1-Dichloropropane	1
72048	1,1-Dichloroethane-d3	<b>\$40</b> 1	70144	1,2-Dichloropropane	1
70136	1,2-Dichloroethane	1	72051	1,2-Dichloropropane-d6	<b>\$40</b> 1
70137	1,2-Dichloroethane-d4	1	70145	1,3-Dichloropropane	1

<u>Solvent Code:</u>		
1. Methanol	7. Water	14. Isooctane
2. Methylene chloride	8. Acetonitrile	15. 2-Propanol
3. Hexane	9. Carbon disulphide	
4. Acetone	10. Toluene	
5. MTBE	11. Ethyl acetate	
6. Methanol:Water(9:1)	12. Methylene chloride:Benzene(3:1)	
	13. Methanol:Acetone(95:5)	

**ORGANIC  
SINGLE  
COMPONENTS**

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Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
70146	2,2-Dichloropropane	1	79019	Dieldrin	3
70432	1,3-Dichloro-2-propanol	1	79165	Dieldrin	4
70509	1,1-Dichloropropanone-2	4	79293	Dieldrin	5
79217	1,1-Dichloropropanone-2	6	71163	Dienochlor	1
70147	1,1-Dichloropropene	1	70355	1,2:3,4-Diepoxybutane	1
70148	1,3-Dichloropropene	1	71190	Diethanolamine	1
71419	cis-1,3-Dichloro-1-propene	1	70436	Diethylamine	1
71418	trans-1,3-Dichloro-1-propene	1	71099	2-Diethylamino-6-methylpyrimidin-4-ol	1
72052	cis/trans-1,3-Dichloropropene-d4	\$50 1	71100	2,6-Diethylaniline	1
70354	2,3-Dichloro-1-propene	1	72462	N,N-Diethylaniline	2
72437	2,3-Dichloropropionic acid	5	70947	1,2-Diethylbenzene	1
71232	1,2-Dichlorotetrafluoroethane	1	70948	1,3-Diethylbenzene	1
71911	2,3-Dichlorotoluene	1	70949	1,4-Diethylbenzene	1
70407	2,4-Dichlorotoluene	1	71769	N,N-Diethylcyclohexylamine	2
71912	2,5-Dichlorotoluene	1	71158	Diethylene glycol	1
71325	2,6-Dichlorotoluene	1	79220	Diethylene glycol	7
71909	3,4-Dichlorotoluene	1	71869	Di(ethylene glycol) methyl ether	1
71260	1,2-Dichlorotrifluoroethane	1	71595	Diethylenetriamine	1
71261	2,2-Dichloro-1,1,1-trifluoroethane	1	71080	N,N-Diethylethanolamine	2
78010	Dichlorprop	5	70153	Diethyl ether	1
70936	Dichlorprop methyl derivative	3	72016	Diethyl ether-d10	1
70936	Dichlorprop methyl derivative	3	71558	Diethyl maleate	1
79140	Dichlorvos	3	71815	N,N-Diethylmethylamine	7
70151	Dichlorvos	1	70154	Diethyl phthalate	1
79315	Dichlorvos	11	79184	Diethyl phthalate	4
71153	2,6-Dichlorophenoxyacetic acid	1	72064	Diethylphthalate-d4	\$40 1
72144	Diclofenac	1	70361	Diethyl stilbestrol	1
70639	Dicloran	1	72023	Diethyl sulfate	1
70646	Dicofol	14	70649	Difenzoquat methylsulfate	1
71197	Dicrotophos	1	70650	Difflubenzuron	4
71084	Dicyclohexylamine	1	72145	Difflunisal	1
71147	1,3-Dicyclohexylcarbodiimide	1	70155	1,4-Difluorobenzene	1
70359	Dicyclohexyl phthalate	1	71916	1,1-Difluoroethane	1
71181	Dicyclopentadiene	1	71907	1,1-Difluoroethylene	\$35 1
70152	Dieldrin	1	71057	1,2-Difluorotetrachloroethane	1

**ORGANIC  
SINGLE  
COMPONENTS**

<u>Solvent Code:</u>	
1. Methanol	7. Water
2. Methylene chloride	8. Acetonitrile
3. Hexane	9. Carbon disulphide
4. Acetone	10. Toluene
5. MTBE	11. Ethyl acetate
6. Methanol:Water(9:1)	12. Methylene chloride:Benzene(3:1)
	13. Methanol:Acetone(95:5)
	14. Isooctane
	15. 2-Propanol

All solutions are at a concentration of 1000 ug/mL.

Price \$22/ 1 mL

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
72146	Digoxin	1	71340	1,1-Dimethylcyclopentane	1
71007	Di-n-hexyl adipate(tech)	1	71755	cis-1,2-Dimethylcyclopentane	1
71304	Di-n-hexyl phthalate	1	71756	trans-1,2-Dimethylcyclopentane	1
71506	(+)-Dihydrocarvone	1	71341	cis-1,3-Dimethylcyclopentane	1
72147	3,4-Dihydroxybenzylamine	1	71339	trans-1,3-Dimethylcyclopentane	1
71305	Di-isobutyl phthalate	1	71715	4,6-Dimethyldibenzothiophene	2
71481	Diisononyl phthalate	1	71103	Dimethyl endothall	1
71079	Diisopropylamine	7	72297	Dimethyl ether	1
71480	Diisopropyl methylphosphonate	1	71817	N,N-Dimethylethylamine	7
72148	Diltiazem	1	70362	N,N-Dimethylformamide	1
72149	Diluarthiopropionate	1	71343	2,2-Dimethylheptane	1
71115	Dimethachlor	1	71954	2,3-Dimethylheptane	1
70363	Dimethoate	1	71991	2,4-Dimethylheptane	1
70921	3,3'-Dimethoxybenzidine	1	71761	2,6-Dimethylheptane	1
70139	1,1-Dimethoxyethane	1	71344	3,3-Dimethylheptane	1
71692	1,2-Dimethoxyethane	1	71345	3,4-Dimethylheptane	1
71301	Dimethoxy ethyl phthalate	1	72414	2,6-Dimethyl-4-heptanone	6
71649	N,N-Dimethylacetamide	1	71336	2,2-Dimethylhexane	1
71423	Dimethylamine	7	71040	2,4-Dimethylhexane	1
70365	4-Dimethylaminoazobenzene	1	71334	2,5-Dimethylhexane	1
70985	N,N-Dimethylaniline	1	71355	3,4-Dimethylhexane	1
70983	2,4-Dimethylaniline	1	71489	2,5-Dimethylindole	1
71082	2,6-Dimethylaniline	1	71650	Dimethylmercury	2
71656	2,4-Dimethylanisole	3	71475	Dimethyl methylphosphonate	1
70411	7,12-Dimethylbenz(a)anthracene	2	71287	1,2-Dimethylnaphthalene	1
70367	3,3'-Dimethylbenzidine	1	71855	1,3-Dimethylnaphthalene	1
71779	2,5-Dimethylbenzyl chloride	2	71944	1,4-Dimethylnaphthalene	1
71327	2,2-Dimethylbutane	1	71288	1,6-Dimethylnaphthalene	1
71003	2,3-Dimethylbutane	1	71271	1,7-Dimethylnaphthalene	1
71753	cis-1,2-Dimethylcyclohexane	1	71942	1,8-Dimethylnaphthalene	1
71754	trans-1,2-Dimethylcyclohexane	1	71270	2,3-Dimethylnaphthalene	1
71759	cis-1,3-Dimethylcyclohexane	1	71049	2,6-Dimethylnaphthalene	2
71760	trans-1,3-Dimethylcyclohexane	1	71469	4,4-Dimethyl-2-neopentyl-1-pentene	1
71757	cis-1,4-Dimethylcyclohexane	1	72009	1,2-Dimethyl-3-nitrobenzene	1
71758	trans-1,4-Dimethylcyclohexane	1	70462	1,3-Dimethyl-2-nitrobenzene	1

<u>Solvent Code:</u>	7. Water	14. Isooctane
1. Methanol	8. Acetonitrile	15. 2-Propanol
2. Methylene chloride	9. Carbon disulphide	
3. Hexane	10. Toluene	
4. Acetone	11. Ethyl acetate	
5. MTBE	12. Methylene chloride:Benzene(3:1)	
6. Methanol:Water(9:1)	13. Methanol:Acetone(95:5)	

**ORGANIC  
SINGLE  
COMPONENTS**

All solutions are at a concentration of 1000 ug/mL.

Price \$22/ 1 mL

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
71331	2,2-Dimethylpentane	1	79245	1,2-Dinitroglycerin	\$75 8
70950	2,3-Dimethylpentane	1	79246	1,3-Dinitroglycerin	\$75 8
71231	2,4-Dimethylpentane	1	72066	2,4-Dinitrotoluene-d3	1
71333	3,3-Dimethylpentane	1	70158	4,6-Dinitro-2-methylphenol	1
70157	Dimethyl phthalate	1	71568	4,6-Dinitro-2-methylphenol-PFB derivative	15
72060	Dimethylphthalate-d4	\$35 1	70159	2,4-Dinitrophenol	1
71166	3,6-Dimethylphenanthrene	2	72080	2,4-Dinitrophenol-d3	\$35 1
70369	a,a-Dimethylphenethylamine	2	71578	2,4-Dinitrophenol-PFB derivative	15
71507	2,3-Dimethylphenol	2	71193	2,5-Dinitrophenol	1
70463	2,4-Dimethylphenol	1	71937	2,6-Dinitrophenol	1
72011	2,4-Dimethylphenol-d3	1	71966	2,3-Dinitrotoluene	1
71567	2,4-Dimethylphenol-PFB derivative	15	70160	2,4-Dinitrotoluene	1
71508	2,5-Dimethylphenol	2	79072	2,4-Dinitrotoluene	8
71509	2,6-Dimethylphenol	2	70161	2,6-Dinitrotoluene	1
71402	3,4-Dimethylphenol	1	79073	2,6-Dinitrotoluene	8
71284	3,5-Dimethylphenol	1	72061	2,6-Dinitrotoluene-d3	\$35 1
71043	2,3-Dimethylpyrazine	1	71773	3,4-Dinitrotoluene	1
71042	2,5-Dimethylpyrazine	1	79247	3,4-Dinitrotoluene	8
71045	2,6-Dimethylpyrazine	1	70654	Dinocap	1
71273	2,6-Dimethylquinoline	1	71306	Dinonyl phthalate	1
70358	Dimethyl sulfate	1	70162	Dinoseb	1
71035	Dimethyl terephthalate	1	79162	Dinoseb	3
71950	2,5-Dimethylthiophene	14	79256	Dinoseb	4
71772	3,5-Dinitroaniline	8	78011	Dinoseb	5
71666	2,4-Dinitroanisole	3	70469	Dinoseb methyl ether	3
70911	1,2-Dinitrobenzene	1	71565	Dinoseb-PFB derivative	15
79071	1,3-Dinitrobenzene	8	79107	Di-n-octyl phthalate	1
70366	1,3-Dinitrobenzene	1	70107	Di-n-octyl phthalate	2
70912	1,4-Dinitrobenzene	1	72075	Di-n-octyl phthalate-d4	\$35 1
79333	1,4-Dinitrobenzene	2	71931	Dioxacarb	1
71838	2,2'-Dinitrobiphenyl	1	79227	Dioxacarb	8
71037	2,6-Dinitro-p-cresol	1	70373	1,4-Dioxane	1
79242	2,2'-Dinitrodiphenylamine	\$50 8	79216	1,4-Dioxane	2
79243	2,4'-Dinitrodiphenylamine	\$50 8	79090	1,4-Dioxane	7
79244	4,4'-Dinitrodiphenylamine	\$50 8	71882	1,4-Dioxane-d8	1

**ORGANIC  
SINGLE  
COMPONENTS**

<u>Solvent Code:</u>	
1. Methanol	7. Water
2. Methylene chloride	8. Acetonitrile
3. Hexane	9. Carbon disulphide
4. Acetone	10. Toluene
5. MTBE	11. Ethyl acetate
6. Methanol:Water(9:1)	12. Methylene chloride:Benzen(3:1)
	13. Methanol:Acetone(95:5)
	14. Isooctane
	15. 2-Propanol

All solutions are at a concentration of 1000 ug/mL.

Price \$22/ 1 mL

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Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
79305	1,4-Dioxane-d8	2	72154	Doxylamine	1
71204	Dioxathion	3	79194	<b>n-Eicosane</b>	1
71274	Dipentene	1	70973	n-Eicosane	2
70657	Diphacinone	4	72069	n-Eicosane-d42	1
70163	Diphenamid	1	72155	Enalapril	1
72150	Diphenhydramine	1	79319	Endosulfan I	1
70314	Diphenylamine	1	79020	Endosulfan I	3
71241	9,10-Diphenylanthracene	2	79178	Endosulfan I	4
72036	Diphenyl ether-d10	1	79294	Endosulfan I	5
70916	5,5-Diphenylhydantoin	1	70167	Endosulfan I	10
71247	Diphenyl isophthalate	1	79320	Endosulfan II	1
71246	Diphenyl phthalate	4	79040	Endosulfan II	3
72032	Diphenyltin dichloride	2	79182	Endosulfan II	4
71315	Di(propylene glycol)	1	79295	Endosulfan II	5
79193	Di(propylene glycol)	7	70168	Endosulfan II	10
70416	Di(propylene glycol) methyl ether	1	79318	Endosulfan sulphate	1
71885	Di-n-propyl phthalate	1	79179	Endosulfan sulphate	4
72151	Dipyridamole	1	79296	Endosulfan sulphate	5
70660	Diquat	7	70169	Endosulfan sulphate	10
70165	Disulfoton	1	70504	Endothall	4
79206	Disulfoton	5	79190	Endothall	7
71927	Disulfoton sulfone	1	70505	Endothall-PFPH	5
70473	Disulfoton sulfoxide	1	79123	Endrin	1
72370	2,4-Di-tert-amylphenol	1	79021	Endrin	3
71471	1,4-Dithiane	1	79166	Endrin	4
71794	Dithiopyr	1	79297	Endrin	5
71425	Dithiothreitol	2	70170	Endrin	10
70663	Diuron	1	79177	Endrin aldehyde	4
70980	n-Docosane	2	79298	Endrin aldehyde	5
70966	n-Dodecane	1	70171	Endrin aldehyde	10
72056	n-Dodecane-d26	1	79208	Endrin ketone	4
70994	1-Dodecanol	1	79299	Endrin ketone	5
72152	Dopamine	1	70172	Endrin ketone	10
71011	Dotriacontane	2	71321	Enflurane	1
72153	Doxepin	1	72156	Ephedrin (Pseudoephedrin)	1

<u>Solvent Code:</u>		
1. Methanol	7. Water	14. Isooctane
2. Methylene chloride	8. Acetonitrile	15. 2-Propanol
3. Hexane	9. Carbon disulphide	
4. Acetone	10. Toluene	
5. MTBE	11. Ethyl acetate	
6. Methanol:Water(9:1)	12. Methylene chloride:Benzen(3:1)	
	13. Methanol:Acetone(95:5)	

**ORGANIC  
SINGLE  
COMPONENTS**

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*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
70377	Epichlorohydrin	1	71464	Ethyl-t-butyl ether	1
72157	Epinephrinel	1	71620	Ethylcyclohexane	1
70671	EPN	3	71330	Ethylcyclopentane	1
70429	1,2-Epoxybutane	1	71924	Ethyl disulfide	1
70173	EPTC	1	79010	Ethylenediamine	1
72158	Ergocalciferol	7	71083	Ethylene glycol	1
72159	Erythrodial	1	79088	Ethylene glycol	7
71279	Esfenvalerate	1	71645	Ethylene glycol-n-hexyl ether	1
72000	17B-Estradiol	1	72361	Ethylene glycol monobutylether acetate	1
70878	Ethalfuralin	1	71096	Ethyleneimine	1
71177	Ethanethiol	7	79887	Ethyleneimine	7
70174	Ethanol	1	71421	Ethylene oxide	\$35 7
79124	Ethanol	7	71951	Ethylene sulfide	14
71192	Ethanolamine	1	70385	Ethylenethiourea	11
79096	Ethanolamine	2	72006	4-Ethylguaiaicol	1
70673	Ethephon	1	71346	4-Ethylheptane	1
70675	Ethion	1	71085	2-Ethylhexanoic acid	4
79211	Ethion	3	71788	2-Ethyl-1-hexanol	1
70677	Ethofumesate	1	71688	2-Ethyl-1-hexene	1
70175	Ethoprop	1	71195	2-Ethylhexyl acrylate	1
70513	2-Ethoxyethanol	1	71746	Ethyl 4-hydroxybenzoate	8
71312	2-(2-Ethoxyethoxy)ethanol	1	71875	Ethyl isobutyrate	1
71276	2-Ethoxyethyl acetate	1	71917	Ethyl (S)-(-)-lactate	1
71985	3-Ethoxy-1-propanol	1	70381	Ethyl methacrylate	1
71310	Ethoxyquin	1	70419	Ethyl methane sulfonate	2
70464	Ethyl acetate	1	71816	N-Ethylmethylamine	7
70374	Ethyl acrylate	1	71342	t-1-Ethyl-2-methylcyclopentane	1
71542	Ethylamine	1	71337	3-Ethyl-3-methylpentane	1
71403	2-Ethylaniline	1	71217	1-Ethylinaphthalene	1
71460	2-Ethylanthracene	2	71218	2-Ethylinaphthalene	1
70176	Ethylbenzene	1	71354	3-Ethylpentane	1
70896	Ethylbenzene-d5	1	71510	2-Ethylphenol	2
70177	Ethylbenzene-d10	1	71511	3-Ethylphenol	2
71793	2-Ethyl-1-butanol	1	71283	4-Ethylphenol	1
71684	2-Ethyl-1-butene	1	71588	1-Ethyl-2-pyrrolidinone	1



**ORGANIC  
SINGLE  
COMPONENTS**

<u>Solvent Code:</u>	
1. Methanol	7. Water
2. Methylene chloride	8. Acetonitrile
3. Hexane	9. Carbon disulphide
4. Acetone	10. Toluene
5. MTBE	11. Ethyl acetate
6. Methanol:Water(9:1)	12. Methylene chloride:Benzene(3:1)
	13. Methanol:Acetone(95:5)
	14. Isooctane
	15. 2-Propanol

All solutions are at a concentration of 1000 ug/mL.

Price \$22/ 1 mL

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
72486	Ethyl sorbate	1	70185	4-Fluoroaniline	1
71545	Ethyl sulfide	1	70186	Fluorobenzene	1
71056	2-Ethyltoluene	1	70187	2-Fluorobiphenyl	1
70999	3-Ethyltoluene	1	70188	1-Fluoronaphthalene	1
71001	4-Ethyltoluene	1	70189	2-Fluoronaphthalene	1
70180	Etridiazole	1	70190	2-Fluorophenol	1
79308	Etridiazole	5	71586	2-Fluorophenol-PFB derivative	15
72004	Eugenol	1	72163	Fluphenazine	1
72160	<b>Famotidine</b>	1	70191	Fluridone	1
70387	Famphur	1	71598	Flutolanil	1
70181	Fenamiphos	1	72165	Folic Acid	7
71249	Fenamiphos sulfone	1	70696	Folpet	4
71676	Fenamiphos sulfoxide	1	70697	Fonofos	1
70182	Fenarimol	1	71762	Formaldehyde	6
71634	Fenbutatin-oxide	10	72384	Formamide	7
71884	Fenchone	3	71126	Formic acid	1
71205	Fenitrothion	1	71961	4-Formylmorpholine	1
71651	Fenoxaprop ethyl	1	71801	Fructose	7
70510	Fensulfothion	1	72166	L-Fucitol	7
70686	Fenthion	3	72363	D-(+)-Fucose	7
71114	Fenuron	1	71362	#1 Fuel Oil (Diesel)	2
79056	Fenvalerate	3	71364	#2 Fuel Oil (Diesel)	2
70690	Fenvalerate	14	71363	#2 Fuel Oil (Home Heating)	2
72382	Fipronil	4	72167	Fumaric Acid	1
71789	Fluazifop-p-butyl	4	79187	3-Furaldehyde	8
70692	Fluchloralin	1	71782	3-Furaldehyde	8
71900	Fludioxinil	1	79186	3-Furaldehyde	10
72162	Flunarizine	1	70389	Furan	1
70693	Fluometuron	1	71540	Furfural	1
70183	Fluoranthene	2	71591	Furfuryl alcohol	1
79033	Fluoranthene	8	72168	Furosemide	1
71198	Fluoranthene-d10	2	72169	<b>Galactitol</b>	7
70184	Fluorene	1	72170	D-Galactose	7
79034	Fluorene	8	72171	Gentian (Crystal) violet	1
71490	Fluorene-d10	2	71889	Geosmin	1

<u>Solvent Code:</u>		
1. Methanol	7. Water	14. Isooctane
2. Methylene chloride	8. Acetonitrile	15. 2-Propanol
3. Hexane	9. Carbon disulphide	
4. Acetone	10. Toluene	
5. MTBE	11. Ethyl acetate	
6. Methanol:Water(9:1)	12. Methylene chloride:Benzene(3:1)	
	13. Methanol:Acetone(95:5)	

**ORGANIC  
SINGLE  
COMPONENTS**

All solutions are at a concentration of 1000 ug/mL.

Price \$22/ 1 mL

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
72172	D-Glucitol	7	79152	Hexachlorobenzene	2
71805	D-Glucose	7	70195	Hexachlorobenzene	4
72173	L-Glutamic acid	7	79058	Hexachlorobenzene	10
72174	L-Glutamine	7	70197	Hexachlorobutadiene	1
72175	Glybenclamide	1	79116	Hexachlorobutadiene	10
71774	Glycerol	7	70198	Hexachlorocyclopentadiene	1
72176	L-Glycine	7	79142	Hexachlorocyclopentadiene	4
72503	Glycol bromohydrin	5	79328	Hexachlorocyclopentadiene	8
72177	Glycolic acid	1	79304	Hexachlorocyclopentadiene	14
71766	Glyoxal	7	79117	Hexachloroethane	10
70503	Glyphosate	7	70199	Hexachloroethane	1
72179	Griseofulvin	1	70393	Hexachlorophene	4
72180	Guanine	7	70396	Hexachloropropene	1
71946	<b>Halofenozide</b>	1	70978	n-Hexacosane	2
71322	Halothane	1	79156	n-Hexadecane	1
70974	n-Heneicosane	2	70514	n-Hexadecane	2
71021	n-Hentriacontane	2	72065	n-Hexadecane-d34	1
70192	Heptachlor	1	71873	Hexafluorobenzene	\$25 1
79022	Heptachlor	3	71654	Hexafluoro-2-methyl-2-propanol	1
79167	Heptachlor	4	71653	Hexafluoro-2-propanol	1
79300	Heptachlor	5	71262	Hexamethylphosphoramide	1
70193	Heptachlor epoxide (isomer B)	1	70962	n-Hexane	1
79050	Heptachlor epoxide (isomer B)	3	72239	n-Hexane-d14	1
79168	Heptachlor epoxide (isomer B)	4	71644	2-Hexanol	1
79301	Heptachlor epoxide (isomer B)	5	70200	2-Hexanone	6
71014	n-Heptacosane	2	71101	3-Hexanone	6
70970	n-Heptadecane	2	71185	n-Hexatriacontane	2
70963	n-Heptane	1	70201	Hexazinone	4
72238	n-Heptane-d16	1	71614	1-Hexene	1
70479	1-Heptanol	1	71986	trans-2-Hexene	1
70211	2-Heptanone	6	70480	Hexyl alcohol	1
71621	1-Heptene	1	71922	n-Hexylcyclohexane	1
70943	Hexabromobenzene	10	71307	Hexyl-2-ethylhexyl phthalate	1
70946	Hexabromobiphenyl	1	72181	L-Histidine	7
71173	2,2',4,4',5,5'-Hexabromobiphenyl	1	79074	HMX	8

**ORGANIC  
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COMPONENTS**

Solvent Code:	
1. Methanol	7. Water
2. Methylene chloride	8. Acetonitrile
3. Hexane	9. Carbon disulphide
4. Acetone	10. Toluene
5. MTBE	11. Ethyl acetate
6. Methanol:Water(9:1)	12. Methylene chloride:Benzene(3:1)
	13. Methanol:Acetone(95:5)
	14. Isooctane
	15. 2-Propanol

All solutions are at a concentration of 1000 ug/mL.

Price \$22/ 1 mL

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
71593	Hydraulic Oil	2	71313	Isobutyl methacrylate	1
72182	Hydrochlorothiazide	1	72478	2-Isobutyl-3-methoxy-pyrazine	1
72183	Hydrocortisone	1	71646	Isobutyl propionate	1
70914	Hydroquinone	1	71763	Isobutyraldehyde	1
70500	3-Hydroxycarbofuran	1	79201	Isobutyraldehyde	7
72184	4-Hydroxymethyl-2,6-di-tert-butylphenol	1	71809	Isobutyric acid	7
71744	5-(Hydroxymethyl)furfural	1	70448	Isodrin	1
71109	4-Hydroxy-4-methyl-2-pentanone	6	79313	Isodrin	5
70907	2-Hydroxypropionitrile	1	72005	Isoeugenol	1
72185	<b>Ibuprofen</b>	1	70717	Isofenphos	1
71635	Imazalil	1	71323	Isoflurane	1
71770	Imazamethabenz-methyl	1	72189	L-Isoleucine	7
72367	Imazamox	1	71187	Iso-octane	1
71230	Imazapyr	1	71683	ISOPAR H	1
71548	Imazethapyr	4	70203	Isophorone	1
71697	Imidacloprid	1	71541	Isoprene	1
72186	Imipramine	1	70718	Isoproc carb	8
70955	Indan	1	70719	Isopropalin	1
70898	Indene	2	71819	Isopropanol dimethyl-d6	1
70202	Indeno(1,2,3-cd)pyrene	2	71106	Isopropyl acetate	1
79035	Indeno(1,2,3-cd)pyrene	8	70205	Isopropyl benzene	1
79092	Indole	1	70987	Isopropyl ether	1
70312	Indole	2	79203	Isopropyl ether	7
72187	Indomethacin	1	71887	2-Isopropyl-3-methoxy-pyrazine	1
72188	Inositol	7	71969	Isopropyl methylphosphonic acid	1
70489	Iodomethane	1	71874	2-Isopropyl-naphthlene	1
71988	3-Iodo-2-propynyl N-butylcarbamate	8	71642	Isopropyl sulfide	1
72015	Ioxnyl (methyl ether)	5	70204	p-Isopropyl toluene	1
71162	Iprodione	4	71124	Isoquinoline	1
71516	Isoamyl acetate	1	70398	Isosafrole	2
71643	Isobenzan	1	72419	Isovaleraldehyde	1
72431	Isobutene	1	72417	Isovaleric acid	7
70445	Isobutanol	1	71597	Isoxaben	1
71236	Isobutyl acetate	1	71360	<b>Jet (Commercial A) Fuel</b>	2
71038	Isobutylbenzene	1	71560	JP-4 Fuel	2

<u>Solvent Code:</u>		
1. Methanol	7. Water	14. Isooctane
2. Methylene chloride	8. Acetonitrile	15. 2-Propanol
3. Hexane	9. Carbon disulphide	
4. Acetone	10. Toluene	
5. MTBE	11. Ethyl acetate	
6. Methanol:Water(9:1)	12. Methylene chloride:Benzen(3:1)	
	13. Methanol:Acetone(95:5)	

**ORGANIC  
SINGLE  
COMPONENTS**

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Price \$22/ 1 mL

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
71561	JP-5 Fuel	2	70938	MCPA methyl derivative	1
71562	JP-8 Fuel	2	70734	MCPB	1
71563	JPTS	2	71077	MCPB methyl derivative	1
70433	<b>Kepone</b>	4	78018	MCPP	5
71367	Kerosene K2	2	70939	MCPP methyl derivative	1
72190	Ketoprofen	1	79084	MCPP methyl derivative	3
72084	Kinoprene	5	72203	Mefanamic acid	1
71519	<b>Lacquer Thinner</b>	2	72204	Menadione	1
71799	L-(+)-Lactic acid	7	71502	(-)-Menthone	1
72412	beta-D-Lactose	7	70867	Mercaptobenzothiazole	1
70848	lambda-Cyhalothrin	1	72436	2-Mercaptoethanol	1
72192	Lanosterol	\$75 1	70206	Merphos	3
70725	Leptophos	1	79232	Merphos	11
72193	L-Leucine	7	71860	Mesityl oxide	7
72195	Lidoflazine	1	70915	Mestranol	2
71501	(R)-(+)-Limonene	1	71601	Metalaxyl	1
70728	Linuron	1	71265	Metaldehyde	4
72196	Lisinopril	1	72205	Metanilic acid	1
72197	Lomefloxacin	1	72206	Metaproterenol	1
72198	L-Lysine	7	71866	Metazachlor	1
71742	<b>Malaoxon</b>	1	72207	Metformin	1
70729	Malathion	1	70442	Methacrylonitrile	1
71148	Maleic anhydride	1	71097	Methamidophos	1
72199	Malic acid	1	71209	Methanol	7
72200	Malonic acid	1	71820	Methanol-d3	7
70400	Malononitrile	1	70402	Methapyrilene HCl	1
71945	Maltoooligosaccharide	7	79334	Methapyrilene HCl	2
71802	Maltose	7	70745	Methidathion	1
71803	D-Maltotriose	7	70501	Methiocarb	1
71180	Mancozeb	Ethanol : Water [1:1]	72208	L-Methionine	7
70731	Maneb	7	70435	Methomyl	1
72201	Mannitol	7	72085	Methoprene	5
72492	Manool	2	72209	Methodretaxate	1
72202	D-Mannose	7	71858	2,4'-Methoxychlor	1
78017	MCPA	5	70207	4,4'-Methoxychlor	1

**ORGANIC  
SINGLE  
COMPONENTS**

<u>Solvent Code:</u>		
1. Methanol	7. Water	14. Isooctane
2. Methylene chloride	8. Acetonitrile	15. 2-Propanol
3. Hexane	9. Carbon disulphide	
4. Acetone	10. Toluene	
5. MTBE	11. Ethyl acetate	
6. Methanol:Water(9:1)	12. Methylene chloride:Benzene(3:1)	
	13. Methanol:Acetone(95:5)	

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Price **\$22/ 1 mL**

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
79053	4,4'-Methoxychlor	3	71167	Methyl-4-Chlorophenoxyacetate	1
79170	4,4'-Methoxychlor	4	70488	3-Methylcholanthrene	2
79302	4,4'-Methoxychlor	5	71482	5-Methylchrysene	<b>\$50</b> 2
71155	2-Methoxyethanol	1	70899	6-Methylchrysene	<b>\$50</b> 2
71427	2-Methoxyethyl acetate	1	71627	Methylcyclohexane	1
71324	Methoxyflurane	1	71934	2-Methylcyclohexanone	7
71031	Methyl acetate	1	71935	3-Methylcyclohexanone	7
71075	Methyl acrylate	1	71936	4-Methylcyclohexanone	7
71405	N-Methylaniline	1	71967	(Methylcyclopentadienyl)manganese tricarbonyl	1
71658	2-Methylanisole	3	71328	Methylcyclopentane	1
71671	3-Methylanisole	3	71940	1-Methyl-1-cyclopentene	1
71659	4-Methylanisole	3	71978	3-Methylcyclopentene	1
71943	1-Methylanthracene	2	71081	Methyl decanoate	1
71048	2-Methylanthracene	2	70096	2,4-D methyl derivative	1
71065	9-Methylanthracene	2	71892	4-Methylidibenzothiophene	1
71176	2-Methylaziridine	1	70884	Methyl dibromoacetate	5
70882	Methyl bromoacetate	5	71409	Methyl dibromochloroacetate	5
70883	Methyl bromochloroacetate	5	71416	Methyl 2,3-dibromopropionate	5
71408	Methyl bromodichloroacetate	5	70880	Methyl dichloroacetate	5
70998	2-Methylbutane	1	70893	Methyl-3,5-Dichlorobenzoate	3
71845	2-Methyl-1-butanol	7	71168	Methyl-2,6-Dichlorophenoxyacetate	1
71141	2-Methyl-1-butanol	1	71309	N-Methyldiethanolamine	1
71024	3-Methyl-1-butanol	1	71657	2-Methyl-4,6-dinitroanisole	3
71636	3-Methyl-2-butanol	1	72081	2-Methyl-4,6-dinitrophenol-d2	<b>\$40</b> 1
72432	2-Methyl-1-butene	1	71036	2-Methyl-1,3-dioxolane	1
71465	2-Methyl-2-butene	1	71252	Methyl disulfide	1
70209	Methyl-t-butyl ether	1	70410	4,4'-Methylene bis(2-chloroaniline)	2
79138	Methyl-t-butyl ether	7	79226	4,4'-Methylenebis(cyclohexyl isocyanate)	2
71529	Methyl butyrate	3	71925	4,4'-Methylenebis(cyclohexyl isocyanate)	4
71895	2-Methylcatechol	1	72024	4,4'-Methylenebis(n,n-Dimethylaniline)	1
71896	3-Methylcatechol	1	70213	Methylene chloride-d2	1
71897	4-Methylcatechol	1	71161	4,4'-Methylenedianiline	2
70879	Methyl chloroacetate	5	71544	Methylene dithiocyanate	2
71974	Methyl 4-chlorobenzoate	1	71290	4,5-Methylenephenanthrene	1
71213	Methyl chloroformate	1	72297	Methyl ether	1

<u>Solvent Code:</u>		
1. Methanol	7. Water	14. Isooctane
2. Methylene chloride	8. Acetonitrile	15. 2-Propanol
3. Hexane	9. Carbon disulphide	
4. Acetone	10. Toluene	
5. MTBE	11. Ethyl acetate	
6. Methanol:Water(9:1)	12. Methylene chloride:Benzen(3:1)	
	13. Methanol:Acetone(95:5)	

**ORGANIC  
SINGLE  
COMPONENTS**

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Price \$22/ 1 mL

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
72049	Methyl ethyl ketone-d3	\$40 6	71244	Methyl paraoxon	1
71269	1-Methylfluorene	1	70992	2-Methylpentane	1
71765	Methyl formate	1	70993	3-Methylpentane	1
79202	Methyl formate	7	71956	2-Methyl-1-pentanol	1
71628	2-Methylfuran	1	71517	4-Methyl-2-pentanol	1
71881	3-Methylfuran	1	70210	4-Methyl-2-pentanone	6
71745	5-Methyl-2-furfural	1	71456	2-Methyl-2-pentene	1
72003	4-Methylguaiaacol	1	71990	4-Methyl-1-pentene	1
71928	5-Methyl-1H-benzotriazole	1	72434	4-Methyl-2-pentene	1
70780	2-Methylheptane	1	71292	1-Methylphenanthrene	2
70901	3-Methylheptane	1	71152	2-Methylphenanthrene	2
71335	4-Methylheptane	1	71142	1-Methyl phenoxyacetate	1
71883	4-Methyl-2-heptanone	6	71968	Methylphosphonic acid	1
71532	2-Methyl-1-heptene	3	71849	2-Methyl-2-propanethiol	1
71332	2-Methylhexane	1	71289	1-Methylpyrene	2
70995	3-Methylhexane	1	71201	1-Methyl-2-pyrrolidinone	2
71530	Methyl hexanoate	3	71494	Methyl quinoxaline-2-carboxylate	1
71680	2-Methyl-1-hexene	1	72487	Methyl sorbate	1
71143	Methylhydrazine	1	70208	Methyl stearate	1
71348	Methyl-4-hydroxybenzoate	1	70573	a-Methylstyrene	1
71483	3-Methylindole	1	71062	m-Methylstyrene	1
71111	Methyl isothiocyanate	4	71063	o-Methylstyrene	1
71087	Methyl laurate	1	71064	p-Methylstyrene	1
71533	Methyl laurate	3	71915	trans-beta-Methylstyrene	1
70404	Methyl methacrylate	1	71251	Methyl sulfide	1
70443	Methyl methane sulfonate	2	71377	3-Methylsulfolane	1
71534	Methyl myristate	3	71202	Methyl sulfone	1
70313	1-Methylnaphthalene	1	71810	Methyl sulfoxide	1
71221	1-Methylnaphthalene-d10	1	71952	2-Methylthianaphthene	1
70214	2-Methylnaphthalene	1	71850	2-Methylthiophene	14
71379	2-Methyl-4-nitroaniline	4	71851	3-Methylthiophene	14
71352	2-Methyloctane	1	71399	Methyl tribromoacetate	5
71347	4-Methyloctane	1	70881	Methyl trichloroacetate	5
71531	Methyl octanoate	3	71169	Methyl-2,4,6-trichlorophenoxyacetate	1
71535	Methyl palmitate	3	71088	Methyl-2-trifluoromethyl benzoate	1

**ORGANIC  
SINGLE  
COMPONENTS**

Solvent Code:	
1. Methanol	7. Water
2. Methylene chloride	8. Acetonitrile
3. Hexane	9. Carbon disulphide
4. Acetone	10. Toluene
5. MTBE	11. Ethyl acetate
6. Methanol:Water(9:1)	12. Methylene chloride:Benzen(3:1)
	13. Methanol:Acetone(95:5)
	14. Isooctane
	15. 2-Propanol

All solutions are at a concentration of 1000 ug/mL.

Price \$22/ 1 mL

\* except where noted

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
71089	Methyl undecanoate	1	79036	Naphthalene	8
71108	1-Methoxy-2-propanol	1	70223	Naphthalene-d8	1
70217	Metolachlor	1	72469	1-Naphthaleneacetic acid	4
79086	Metolachlor	4	71239	1-Naphthol	1
72402	Metoprolol	1	71833	1,2-Naphthoquinone	1
70218	Metribuzin	1	70412	1,4-Naphthoquinone	2
79121	Metribuzin	4	70447	1-Naphthylamine	2
79192	Metribuzin	toluene : isooctane [4:1]	70414	2-Naphthylamine	2
79314	Metribuzin	11	70224	Napropamide	1
70219	Mevinphos	1	72213	Naproxen	1
70220	MGK-264	1	70765	Neburon	1
72210	Milk of Magnesia [Mg(OH)2]	1	72214	Neohesperidin dihydrochalcone	7
71685	Mineral oil	2	72215	Niacinamide	7
71687	Mineral oil (white, heavy)	2	70439	1-Nicotine	1
71686	Mineral oil (white, light)	2	72216	Nicotinic acid	7
71518	Mineral Spirits	2	72217	Nifedipine	1
79136	Mirex	4	70309	5-Nitroacenaphthene	2
70437	Mirex	1	70225	2-Nitroaniline	1
70221	Molinate	1	70226	3-Nitroaniline	1
70755	Monocrotophos	1	70227	4-Nitroaniline	1
70756	Monolinuron	1	71660	2-Nitroanisole	3
71422	Monomethylamine	7	70470	4-Nitroanisole	3
71853	Monomethyl tetrachloroterephthalate	5	72025	5-Nitro-o-anisidine	1
79248	1-Mononitroglycerin	\$75 8	72481	9-Nitroanthracene	2
79249	2-Mononitroglycerin	\$75 8	79075	Nitrobenzene	8
70757	Monuron	1	70228	Nitrobenzene	1
79195	Morpholine	1	70229	Nitrobenzene-d5	1
71216	Morpholine	2	70913	4-Nitrobiphenyl	1
71904	Motor Oil Composite Standard	2	71957	6-Nitrochrysene	2
70953	<b>Naled</b>	1	70769	Nitrofen	1
79339	Naled	2	72482	3-Nitrofluoranthene	2
72211	Nalidixic acid	1	71958	2-Nitrofluorene	2
71521	Naphtha	2	70230	2-Nitrophenol	1
70222	Naphthalene	1	72076	2-Nitrophenol-d4	1
79185	Naphthalene	4	70418	3-Nitrophenol	1

Solvent Code:	7. Water	14. Isooctane
1. Methanol	8. Acetonitrile	15. 2-Propanol
2. Methylene chloride	9. Carbon disulphide	
3. Hexane	10. Toluene	
4. Acetone	11. Ethyl acetate	
5. MTBE	12. Methylene chloride:Benzen(3:1)	
6. Methanol:Water(9:1)	13. Methanol:Acetone(95:5)	

**ORGANIC  
SINGLE  
COMPONENTS**

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Price \$22/ 1 mL

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
70231	4-Nitrophenol	1	71050	4-Nitrotoluene	1
78012	4-Nitrophenol	5	79078	4-Nitrotoluene	8
71571	2-Nitrophenol-PFB derivative	15	71959	3-Nitro-o-toluidine	8
71579	4-Nitrophenol-PFB derivative	15	70449	5-Nitro-o-toluidine	2
71107	1-Nitropropane	1	79234	5-Nitro-o-toluidine	8
70461	2-Nitropropane	1	71960	3-Nitro-p-toluidine	8
71319	1-Nitropyrene	2	71237	cis-Nonachlor	1
70496	4-Nitroquinoline-1-oxide	2	70235	trans-Nonachlor	1
79336	N-Nitroso-di-butylamine	1	79209	trans-Nonachlor	4
70420	N-Nitroso-di-butylamine	2	79303	trans-Nonachlor	5
71263	N-Nitroso-di-ethanolamine	1	79281	trans-Nonachlor	10
70441	N-Nitroso-di-ethylamine	2	71019	n-Nonacosane	2
71536	N-Nitroso-di-isopropylamine	2	70972	n-Nonadecane	2
79068	N-Nitroso-di-methylamine	1	79122	n-Nonane	1
79159	N-Nitroso-di-methylamine	4	70236	n-Nonane	2
70233	N-Nitroso-di-methylamine	2	71821	Nonanoic acid	7
71839	N-Nitroso-di-methylamine-d6	\$175 2	71878	2-Nonanone	6
70234	N-Nitroso-di-phenylamine	2	79126	Nonatriacontane	9
79160	N-Nitroso-di-phenylamine	4	71407	Nonatriacontane	10
72067	n-Nitrosodiphenylamine-d6	\$35 1	71622	1-Nonene	1
72443	N-Nitroso-N-ethylurea	1	71046	Nonyl aldehyde	1
72331	N-Nitroso-N-methylaniline	1	71000	4-n-Nonylphenol	1
70232	N-Nitrosodi-n-propylamine	2	72219	Noradrenaline	1
79158	N-Nitrosodi-n-propylamine	4	71130	2,5-Norbornadiene	1
71526	N-Nitrosoethyl-n-propylamine	2	72220	Nordoxepin	1
70452	N-Nitrosomorpholine	2	72221	Norephedrin	1
70490	N-Nitroso-N-methylethylamine	2	70237	Norflurazon	1
71184	N-Nitroso-n-methylurea	1	72222	Nortriptyline	1
70422	1-Nitrosopiperidine	2	71004	<b>Octachlorocyclopentene</b>	1
70451	N-Nitrosopyrrolidine	2	70742	Octachloronaphthalene	2
71264	N-Nitrososarcosine	1	79327	Octachlorocyclopentene	8
71051	2-Nitrotoluene	1	79153	Octachlorostyrene	3
79076	2-Nitrotoluene	8	71233	Octachlorostyrene	2
71052	3-Nitrotoluene	1	72479	n-Octacosane-d58	\$83 2
79077	3-Nitrotoluene	8	70979	n-Octacosane	2



**ORGANIC  
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COMPONENTS**

<b>Solvent Code:</b>	7. Water	14. Isooctane
1. Methanol	8. Acetonitrile	15. 2-Propanol
2. Methylene chloride	9. Carbon disulphide	
3. Hexane	10. Toluene	
4. Acetone	11. Ethyl acetate	
5. MTBE	12. Methylene chloride:Benzene(3:1)	
6. Methanol:Water(9:1)	13. Methanol:Acetone(95:5)	

All solutions are at a concentration of 1000 ug/mL.

Price **\$22/ 1 mL**

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
79157	n-Octadecane	1	72229	Paracetamol	1
70971	n-Octadecane	2	71459	Paraoxon	1
71886	1,7-Octadiene	1	70779	Paraquat	7
71458	Octafluoronaphthalene	4	70383	Parathion ethyl	1
71514	Octamethylcyclotetrasiloxane	1	70406	Parathion methyl	1
70964	n-Octane	1	79044	Parathion methyl	14
70981	1-Octanol	1	70240	Pebulate	1
71505	3-Octanol	1	70952	Pendimethalin	1
70982	2-Octanone	1	72230	Penicillin G	1
71638	3-Octanone	6	72231	Penicillin V	1
71224	n-Octatriacontane	10	71061	Pentachloroanisole	1
71623	1-Octene	1	79161	Pentachloroanisole	3
71637	1-Octen-3-ol	1	70321	Pentachlorobenzene	1
71879	trans-2-Octen-1-ol	1	70450	Pentachloroethane	1
71639	(2E)-Octen-1-ol	1	71681	Pentachlorofluoroethane	1
71711	Octyl aldehyde	1	70242	Pentachloronitrobenzene	1
71238	n-Octylcyclohexane	1	79012	Pentachloronitrobenzene	3
71933	4-(tert-Octyl)phenol	1	70243	Pentachlorophenol	1
71250	Omethoate	1	79261	Pentachlorophenol	4
79191	Oryzalin	1	78013	Pentachlorophenol	5
70770	Oryzalin	8	71580	Pentachlorophenol-PFB derivative	15
72224	Oxacillin	1	71183	2,3,4,5,6-Pentachlorotoluene	4
70772	Oxadiazon	1	71871	n-Pentacontane	9
70424	Oxamyl	1	70977	n-Pentacosane	2
72226	Oxprenolol	1	71608	Pentadecafluorooctanoic acid	2
70775	Oxychlordan	<b>\$50</b> 10	70969	n-Pentadecane	1
70776	Oxydemeton methyl	1	71272	1-Pentadecene	1
79137	Oxydemeton methyl	4	71625	1,4-Pentadiene	1
70922	4,4'-Oxydianiline	Pyridine	79250	Pentaerythritol tetranitrate (PETN)	<b>\$50</b> 8
70777	Oxyfluorfen	1	70244	Pentafluorobenzene	1
72225	Oxyphenbutazone	1	70245	Pentafluorophenol	1
71599	<b>Pacllobutrazol</b>	1	71140	Pentafluorophenylhydrazine	1
71520	Paint Thinner	2	71525	Pentamethylbenzene	14
72227	Pancreatin	1	71468	2,2',4,6,6'-Pentamethyl-3-heptene (cis,trans)	1
72228	D-Pantothenic acid	7	79322	2,2',4,6,6'-Pentamethyl-3-heptene (cis,trans)	2

<u>Solvent Code:</u>		
1. Methanol	7. Water	14. Isooctane
2. Methylene chloride	8. Acetonitrile	15. 2-Propanol
3. Hexane	9. Carbon disulphide	
4. Acetone	10. Toluene	
5. MTBE	11. Ethyl acetate	
6. Methanol:Water(9:1)	12. Methylene chloride:Benzen(3:1)	
	13. Methanol:Acetone(95:5)	

**ORGANIC  
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COMPONENTS**

All solutions are at a concentration of 1000 ug/mL.

Price \$22/ 1 mL

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
70783	n-Pentane	1	72415	4-Phenyl-1-cyclohexene	1
71026	1-Pentanol	1	71783	N-Phenyl-N'-cyclohexyl-p-phenylenediamine	2
71022	2-Pentanol	1	71714	1-Phenyldecane	2
71027	3-Pentanol	1	71785	N-Phenyl-N'-(1,3-dimethylbutyl)-p-phenylenediamine	2
71675	2-Pentanone	6	71731	1-Phenyldodecane	2
71020	n-Pentatriacontane	2	71813	1,3-Phenylenediamine	2
71983	1-Pentene	1	70430	1,4-Phenylenediamine	2
71466	cis-2-Pentene	1	71068	Phenyl ether	2
71467	trans-2-Pentene	1	71784	N-Phenyl-N'-isopropyl-p-phenylenediamine	2
71880	2-n-Pentylfuran	1	72336	2-Phenylnaphthalene	1
72435	1-Pentyne	1	71718	1-Phenylnonane	2
71699	Perfluorohexane	1	79155	o-Phenylphenol	2
71700	Perfluoromethylcyclohexane	1	70794	o-Phenylphenol	1
70786	Permethrin (mixed isomers)	1	71780	N-Phenyl-1,4-phenylenediamine	2
79309	Permethrin (mixed isomers)	5	71296	Phenyl sulfide	1
70246	cis-Permethrin	1	71720	1-Phenyltetradecane	2
70465	trans-Permethrin	1	72033	Phenyltin trichloride	2
72232	Perphenazine	1	71268	3-Phenyltoluene	1
71134	Perthane	1	71717	1-Phenyltridecane	2
70471	Perylene	2	71721	1-Phenylundecane	2
70247	Perylene-d12	2	70492	Phorate	1
70446	Phenacetin	1	72356	Phorate oxon	10
70248	Phenanthrene	2	70796	Phosalone	1
79180	Phenanthrene	4	70798	Phosmet	1
79037	Phenanthrene	8	70800	Phosphamidon	1
70249	Phenanthrene-d10	2	72488	Phosphoric acid	7
71123	Phenanthridine	1	70989	Phoxim	1
72018	Phenetole	8	71311	Phthalic acid	1
70250	Phenol	1	71921	Phthalic acid bis(2-methoxyethyl) ester	1
70252	Phenol-d6	1	70431	Phthalic anhydride	4
71564	Phenol-PFB derivative	15	71017	Phytane	1
72369	2-Phenoxyethanol	1	79260	Picloram	4
71696	Phenylacetic acid	2	78014	Picloram	5
72233	L-Phenylalanine	7	79337	Picloram methyl derivative	5
72234	Phenylbutazone	1	71060	Picloram methyl derivative	10

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<b>Solvent Code:</b>	
1. Methanol	7. Water
2. Methylene chloride	8. Acetonitrile
3. Hexane	9. Carbon disulphide
4. Acetone	10. Toluene
5. MTBE	11. Ethyl acetate
6. Methanol:Water(9:1)	12. Methylene chloride:Benzene(3:1)
	13. Methanol:Acetone(95:5)
	14. Isooctane
	15. 2-Propanol

All solutions are at a concentration of 1000 ug/mL.

Price \$22/ 1 mL

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
70327	2-Picoline	1	79251	1,2-Propanediol dinitrate	8
72235	Pindolol	1	70334	1,3-Propane sultone	1
71500	(1S)-(-)-b-Pinene	1	70817	Propanil	1
71499	(1S)-(-)-a-Pinene	1	79238	Propanil	8
72236	Piperacillin	1	71009	n-Propanol	1
71280	Piperonyl butoxide	1	70941	2-Propanol	1
71210	cis-Piperylene	1	70818	Propargite	14
71211	trans-Piperylene	1	70341	Propargyl alcohol	1
70803	Pirimicarb	1	70257	Propazine	4
70805	Pirimiphos-methyl	1	71206	Propetamphos	1
72237	Piroxicam	1	70819	Propham	1
71175	Polyethylene glycol (Avg Wt = 300)	1	71495	Propiconazole, "Tilt"	1
71174	Polyethylene glycol (Avg Wt = 200)	1	71624	Propionaldehyde	1
72485	Potassium benzoate	7	70345	Propionic acid	1
72238	Potassium sorbate	1	71648	Propionic acid isobutyl ester	1
71859	Prednisolone	1	70349	Propionitrile	1
72240	Procainamide	1	71105	Propyl acetate	1
71693	Prochloraz	1	70910	n-Propylamine	1
71846	Procymidone	4	70258	n-Propylbenzene	1
71797	Prodiamine	1	71613	Propylcyclohexane	1
70813	Profenophos	1	79089	Propylene glycol	7
79316	Profenophos	11	71110	Propylene glycol methyl ether acetate	1
70814	Profluralin	1	71032	Propylene oxide	7
72241	L-Proline	7	72242	n-propyl gallate (PG)	1
70815	Promecarb	4	71349	Propyl 4-hydroxybenzoate	1
70253	Prometon	1	71641	Propyl sulfide	1
79171	Prometon	4	71953	2-Propylthiophene	1
70254	Prometryne	1	72026	6-Propyl-2-thiouracil	1
79223	Prometryne	4	71905	Pymetrozine	1
70255	Pronamide	10	71992	Pyrazoxyfen	5
79172	Propachlor	4	70259	Pyrene	2
70256	Propachlor	1	79038	Pyrene	8
79310	Propachlor	5	71390	Pyrene-d10	1
71600	Propamocarb	1	70825	Pyrethrum	1
70337	1,2-Propanediol	1	70260	Pyridine	1

Solvent Code:	7. Water	14. Isooctane
1. Methanol	8. Acetonitrile	15. 2-Propanol
2. Methylene chloride	9. Carbon disulphide	
3. Hexane	10. Toluene	
4. Acetone	11. Ethyl acetate	
5. MTBE	12. Methylene chloride:Benzene(3:1)	
6. Methanol:Water(9:1)	13. Methanol:Acetone(95:5)	

**ORGANIC  
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COMPONENTS**

All solutions are at a concentration of 1000 ug/mL.

Price \$22/ 1 mL

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
79091	Pyridine	2	70833	Siduron	1
70261	Pyridine-d5	1	70263	Simazine	4
72243	Pyridoxine	7	70866	Simeton	1
72472	Pyriproxyfen	1	70264	Simetryne	1
71764	Pyruvic aldehyde	7	72258	b-Sitosterol	1
72082	<b>Quinlorac</b>	5	72250	Sodium benzoate	7
70353	Quinoline	2	72251	Sodium cyclamate	7
71493	Quinoxaline-2-carboxylic acid	1	71698	Sodium N-methyl-N-coconut acid taurate	7
71546	Quizalofop ethyl	4	72252	Sodium propionate	1
72244	<b>Ranitidine</b>	1	72253	Sodium saccharin	7
79079	RDX	8	72254	Sorbic acid	7
71278	Resmethrin	1	72255	D-Sorbitol	7
70360	Resorcinol	1	72256	L-Sorbosose	7
72245	L-Rhamnitol	7	72473	Spinosad	1
72364	L-Rhamnose monohydrate	7	71893	Squalane	1
72246	Ribitol	7	72326	Squalene	2
72247	Riboflavin	7	71559	Stearic acid	4
72291	L-Ribose	7	71938	Stearic acid butyl ester	2
72290	D-Ribose	7	72259	Stevioside	7
70951	Ronnel	1	72002	Stigmastanol	1
70830	Rotenone	8	72260	Stigmasterol	1
72248	<b>Saccharin hemicalcium salt</b>	7	70265	Stiropfos	1
71537	SAE 30 Motor Oil	2	71523	Stoddard Solvent	2
71538	SAE 40 Motor Oil	2	70839	Strobane	1
71539	SAE 50 Motor Oil	2	70376	Strychnine	8
71901	SAE 5-30W Motor Oil	2	70266	Styrene	1
71902	SAE 10-30W Motor Oil	2	72040	Styrene-d5	\$35 1
71748	SAE 10w-40 Motor Oil	2	71640	Styrene oxide	1
71903	SAE 20-50W Motor Oil	2	71800	Succinic acid	7
70368	Safrole	1	72484	Sucralose	7
72379	Salicylaldehyde	1	71554	Sucrose	7
71865	Sebuthylazin	4	71188	Sulfadimethoxine	2
71059	Secbumeton	1	72262	Sulfamerazine	1
72249	L-Serine	7	72263	Sulfamethazine	1
70832	Sethoxydim	10	72264	Sulfanilamide	1

**ORGANIC  
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COMPONENTS**

<u>Solvent Code:</u>		
1. Methanol	7. Water	14. Isooctane
2. Methylene chloride	8. Acetonitrile	15. 2-Propanol
3. Hexane	9. Carbon disulphide	
4. Acetone	10. Toluene	
5. MTBE	11. Ethyl acetate	
6. Methanol:Water(9:1)	12. Methylene chloride:Benzen(3:1)	
	13. Methanol:Acetone(95:5)	

All solutions are at a concentration of 1000 ug/mL.

Price \$22/ 1 mL

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
72265	Sulfathiazole	1	70318	1,2,3,4-Tetrachlorobenzene	1
71376	Sulfolane	1	70319	1,2,3,5-Tetrachlorobenzene	1
70511	Sulfotepp	1	70274	1,2,4,5-Tetrachlorobenzene	1
72266	Sulindac	1	70277	1,1,1,2-Tetrachloroethane	1
72357	Sumithrin	1	70278	1,1,2,2-Tetrachloroethane	1
71112	Swep	1	72053	1,1,2,2-Tetrachloroethane-d2	1
71298	Systhane	1	70279	Tetrachloroethene	1
70413	<b>2,4,5-T</b>	1	71834	2,3,4,5-Tetrachloronitrobenzene	1
78015	2,4,5-T	5	79146	2,3,4,5-Tetrachlorophenol	1
79197	2,4,5-T	8	70991	2,3,4,5-Tetrachlorophenol	2
70842	2,4,5-T, butoxyethanol ester	8	79131	2,3,4,6-Tetrachlorophenol	1
70843	2,4,5-T, butyl ester	8	70477	2,3,4,6-Tetrachlorophenol	2
71630	2,4,5-T n-butyl ester	3	79129	2,3,5,6-Tetrachlorophenol	1
70932	2,4,5-T methyl ester	1	70315	2,3,5,6-Tetrachlorophenol	2
72267	Tartaric acid	1	71581	2,3,4,6-Tetrachlorophenol-PFB derivative15	
71852	Tebufenozide	1	71572	2,3,5,6-Tetrachlorophenol-PFB derivative15	
70267	Tebuthiuron	8	78007	2,3,5,6-Tetrachloroterephthalic acid	5
70834	TEPP	3	70273	Tetrachloro-m-xylene	1
70268	Terbacil	1	79233	Tetrachloro-m-xylene	10
79224	Terbacil	4	71220	n-Tetracontane	9
70269	Terbufos	1	70976	n-Tetracosane	2
72403	Terbutaline	1	79229	n-Tetracosane	3
70849	Terbuthylazine	4	79230	n-Tetracosane	4
72378	Terbuthylazine-desethyl	4	72072	n-Tetracosane-d50	1
70270	Terbutryn	1	70968	n-Tetradecane	1
71226	m-Terphenyl	1	70851	Tetradifon	4
71225	o-Terphenyl	1	71157	Tetraethylene glycol	1
71227	p-Terphenyl	2	71412	Tetraethyllead	1
71962	g-Terpinene	1	70380	Tetrahydrofuran	1
70272	p-Terphenyl-d14	2	79200	Tetrahydrofuran	7
79326	tert-Butyl hydroquinone (TBHQ)	4	72261	Tetrahydrofuran-d8	1
72030	Tetrabutyltin	2	71891	1,2,3,4-Tetrahydronaphthalene	1
71768	2,3,4,5-Tetrachloroanisole	1	71426	3,4,5,6-Tetrahydro-2-pyrimidinethiol	2
71668	2,3,4,6-Tetrachloroanisole	3	70491	1,2,3,4-Tetramethylbenzene	1
71661	2,3,5,6-Tetrachloroanisole	3	71524	1,2,3,5-Tetramethylbenzene	1

<u>Solvent Code:</u>		
1. Methanol	7. Water	14. Isooctane
2. Methylene chloride	8. Acetonitrile	15. 2-Propanol
3. Hexane	9. Carbon disulphide	
4. Acetone	10. Toluene	
5. MTBE	11. Ethyl acetate	
6. Methanol:Water(9:1)	12. Methylene chloride:Benzen(3:1)	
	13. Methanol:Acetone(95:5)	

**ORGANIC  
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COMPONENTS**

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Price \$22/ 1 mL

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
71222	1,2,4,5-Tetramethylbenzene	1	72274	g-tocopherol	1
71010	2,6,10,14-Tetramethylpentadecane	1	72275	Tocopherol acetate	1
71549	2,2,5,5-Tetramethyltetrahydrofuran	1	70956	Tokuthion	3
71406	Tetramethylurea	1	72277	Tolmetin	1
71856	Tetranitromethane	3	70281	Toluene	1
72038	Tetrapentyltin	2	70282	Toluene-d8	1
72034	Tetraphenyltin	2	71159	Toluene-2,4-diisocyanate	10
71647	n-Tetratetracontane	9	79335	o-Toluidine	1
71018	n-Tetratriacontane	2	70401	o-Toluidine	2
79080	Tetryl	8	71135	p-Toluidine	1
72031	Theophylline	8	79198	Toxaphene	14
70855	Thiabendazole	1	70283	Toxaphene	1
72268	Thiamine	7	79259	2,4,5-TP acid (Silvex)	4
71066	Thianaphthene	1	78016	2,4,5-TP acid (Silvex)	5
72474	Thiazopyr	1	70472	2,4,5-TP methyl ester	1
70856	Thidiazuron	1	71013	n-Triacontane	2
72332	Thioacetamide	1	70286	Triadimefon	1
70857	Thiobencarb	1	71872	Triadimenol	1
71384	4,4'-Thiodianiline	2	70864	Triallate	1
71473	2,2'-Thiodiethanol	1	70865	Triazophos	1
70493	Thionazine	1	71297	Tribenuron methyl	1
79042	Thionazine	2	71398	Tribromoacetic acid	5
70860	Thiophanate ethyl	1	72014	2,4,6-Tribromoanisole	5
70861	Thiophanate methyl	1	71463	1,3,5-Tribromobenzene	4
70984	Thiophene	1	71069	1,1,2-Tribromoethane	1
79228	Thiophene	n-Decane	79134	2,4,6-Tribromophenol	1
70900	Thiophenol	2	70287	2,4,6-Tribromophenol	2
70397	Thiourea	1	71587	2,4,6-Tribromophenol-PFB derivative	15
71472	1,4-Thioxane	1	71053	Tributyl phosphate	1
70862	Thiram	4	70634	Tributyltin chloride	1
72269	L-Threonine	7	79324	Tributyltin chloride	2
71888	Thujopsene	1	70889	Trichloroacetic acid	5
72270	Thymine	7	70405	1,1,1-Trichloroacetone	5
72271	(+)-a-Tocopherol	1	70508	Trichloroacetone	5
72273	δ-tocopherol	1	71054	2,4,6-Trichloroaniline	2

**ORGANIC  
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COMPONENTS**

<u>Solvent Code:</u>		
1. Methanol	7. Water	14. Isooctane
2. Methylene chloride	8. Acetonitrile	15. 2-Propanol
3. Hexane	9. Carbon disulphide	
4. Acetone	10. Toluene	
5. MTBE	11. Ethyl acetate	
6. Methanol:Water(9:1)	12. Methylene chloride:Benzene(3:1)	
	13. Methanol:Acetone(95:5)	

All solutions are at a concentration of 1000 ug/mL.

Price **\$22/ 1 mL**

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
71669	2,3,4-Trichloroanisole	3	71584	2,4,6-Trichlorophenol-PFB derivative	15
71662	2,3,5-Trichloroanisole	3	71149	2,4,6-Trichlorophenoxyacetic acid	5
71670	2,3,6-Trichloroanisole	3	71840	1,1,2-Trichloropropane	1
71663	2,4,5-Trichloroanisole	3	70297	1,2,3-Trichloropropane	1
79886	2,4,6-Trichloroanisole	3	71178	a,a,a-Trichlorotoluene	14
70886	2,4,6-Trichloroanisole	5	71119	a,2,4-Trichlorotoluene	1
70288	1,2,3-Trichlorobenzene	1	71182	a,2,6-Trichlorotoluene	1
70289	1,2,4-Trichlorobenzene	1	71913	2,3,6-Trichlorotoluene	1
72054	1,2,4-Trichlorobenzene-d3	1	70320	2,4,5-Trichlorotoluene	1
70409	1,3,5-Trichlorobenzene	1	71094	1,1,1-Trichlorotrifluoroethane	1
72465	3,4,4'-Trichlorocarbaniide	4	70474	1,1,2-Trichlorotrifluoroethane	1
70291	1,1,1-Trichloroethane	1	71165	Trichlorphon	1
70292	1,1,2-Trichloroethane	1	70868	Triclopyr	1
79087	1,1,2-Trichloroethane	5	72335	Tri(propylene glycol)methyl ether	1
70293	Trichloroethene	1	71092	Triclopyr methyl derivative	3
70294	Trichlorofluoromethane	1	71999	Triclosan	1
70930	Trichloronate	3	70975	n-Tricosane	2
71835	1,2,3-Trichloro-4-nitrobenzene	1	70298	Tricyclazole	1
71836	1,2,4-Trichloro-5-nitrobenzene	1	70967	n-Tridecane	1
71837	2,4,6-Trichloronitrobenzene	1	71191	Triethanolamine	1
79132	2,3,4-Trichlorophenol	1	70417	Triethylamine	<b>\$25</b> 1
70316	2,3,4-Trichlorophenol	2	71156	Triethylene glycol	1
70317	2,3,5-Trichlorophenol	1	79219	Triethylene glycol	7
79066	2,3,5-Trichlorophenol	2	72012	Triethylenetetramine hydrate	1
70515	2,3,6-Trichlorophenol	1	70043	Triethyl phosphate	1
79067	2,3,6-Trichlorophenol	2	70526	O,O,O-Triethylphosphorothioate	1
70295	2,4,5-Trichlorophenol	1	71138	1,3,5-Trifluorobenzene	1
70296	2,4,6-Trichlorophenol	1	71498	Trifluoromethane	1
72079	2,4,6-Trichlorophenol-d2	<b>\$50</b> 1	70299	a,a,a-Trifluorotoluene	1
79147	3,4,5-Trichlorophenol	1	71786	2,3,4-Trifluorotoluene	1
71414	3,4,5-Trichlorophenol	2	70300	Trifluralin	1
71582	2,3,4-Trichlorophenol-PFB derivative	15	79173	Trifluralin	4
71573	2,3,5-Trichlorophenol-PFB derivative	15	79014	Trifluralin	3
71583	2,3,6-Trichlorophenol-PFB derivative	15	71266	Triforine	1
71574	2,4,5-Trichlorophenol-PFB derivative	15	72278	2,4,6-Trihydrobutyrophenone	1

<u>Solvent Code:</u>		
1. Methanol	7. Water	14. Isooctane
2. Methylene chloride	8. Acetonitrile	15. 2-Propanol
3. Hexane	9. Carbon disulphide	
4. Acetone	10. Toluene	
5. MTBE	11. Ethyl acetate	
6. Methanol:Water(9:1)	12. Methylene chloride:Benzen(3:1)	
	13. Methanol:Acetone(95:5)	

**ORGANIC  
SINGLE  
COMPONENTS**

All solutions are at a concentration of 1000 ug/mL.

Price \$22/ 1 mL

*\* except where noted*

Part #	Compound	Solvent Code	Part #	Compound	Solvent Code
71424	Trimethylamine	7	72446	Trippropyl phosphate	1
71383	2,4,5-Trimethylaniline	2	71996	Tris(2-butoxyethyl) phosphate	1
70944	1,2,3-Trimethylbenzene	1	72001	Tris (2-chloroethyl) phosphate	2
70475	1,2,4-Trimethylbenzene	1	79108	Tris(2,3-dibromopropyl)phosphate	1
70301	1,3,5-Trimethylbenzene	1	71008	Tris(2,3-dibromopropyl)phosphate	2
71329	2,2,3-Trimethylbutane	1	71047	Tris(1,3-Dichloroisopropyl) phosphate	1
71979	1,1,2-Trimethylcyclohexane	1	71029	Tritolyl phosphate (Tech)	1
71982	1,cis-2,trans-4-Trimethylcyclohexane	\$75 1	71012	n-Tritriacontane	2
71981	1,trans-2,trans-4-Trimethylcyclohexane	\$75 1	72281	L-Tryptophan	7
71980	1,trans-2,cis-4-Trimethylcyclohexane	\$75 1	71522	Turpentine	2
70902	3,4,5-Trimethylheptane	1	72282	L-Tyrosine	7
71338	2,2,5-Trimethylhexane	1	70965	n-Undecane	1
71552	2,3,5-Trimethylnaphthalene	2	71612	1-Undecene	1
71291	2,3,6-Trimethylnaphthalene	2	71358	Unleaded Gasoline 87 Octane	1
71353	2,2,3-Trimethylpentane	1	71842	Unleaded Gasoline 89 Octane	1
70997	2,3,3-Trimethylpentane	1	71359	Unleaded Gasoline 93 Octane	1
71002	2,3,4-Trimethylpentane	1	72283	Uracil	7
71841	2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate	1	70421	Urethane	1
71316	2,3,4-Trimethyl-2-pentene	1	71767	Valeraldehyde	1
71317	2,4,4-Trimethyl-1-pentene	1	72285	L-Valine	7
71318	2,4,4-Trimethyl-2-pentene	1	71590	Vanillin	1
71285	2,4,6-Trimethylphenol	1	71208	Vegadex	1
72027	Trimethylphosphate	1	72286	Verapamil	1
71044	2,3,5-Trimethylpyrazine	1	70303	Vernolate	1
72279	Trimipramine	1	79225	Vernolate	4
72480	Trinexapac-ethyl	1	71170	Vinclozolin	4
70494	sym-Trinitrobenzene	1	71172	Vinyl bromide	1
79081	sym-Trinitrobenzene	8	70305	Vinyl chloride	1
79252	Trinitroglycerin	\$75 8	72044	Vinyl chloride-d3	\$35 1
79082	2,4,6-Trinitrotoluene	8	70872	Warfarin	1
71393	2,4,6-Trinitrotoluene	1	70308	p-Xylene	1
72037	Tripentyltin chloride	2	70307	o-Xylene	1
71267	Triphenylene	1	70306	m-Xylene	1
70302	Triphenyl phosphate	1	72289	p-Xylene-d10	1
72035	Triphenyltin chloride	2	71796	o-Xylene-d10	1
			72287	Xylitol	7
			72288	D-Xylose	7



METHOD  
**502.2**  
 Rev 2.0

**VOLATILE HALOGENATED ORGANIC  
 COMPOUNDS IN WATER BY  
 PURGE AND TRAP GC**

This is a general-purpose method for the simultaneous identification and measurement of purgeable VOCs in drinking water, raw source water, or drinking water in any stage of treatment. It is applicable to a wide range of organic compounds (including the four trihalomethane disinfection by-products) that have sufficient volatility and low water-solubility to be removed efficiently from water samples by purge and trap procedures.

### LIQUIDS

- |                                  |                                |                                |
|----------------------------------|--------------------------------|--------------------------------|
| (1) Benzene                      | (19) 1,2-Dichlorobenzene       | (37) Naphthalene               |
| (2) Bromobenzene                 | (20) 1,4-Dichlorobenzene       | (38) n-Propylbenzene           |
| (3) Bromochloromethane           | (21) 1,1-Dichloroethane        | (39) Styrene                   |
| (4) Bromodichloromethane         | (22) 1,2-Dichloroethane        | (40) 1,1,1,2-Tetrachloroethane |
| (5) Bromoform                    | (23) cis-1,2-Dichloroethene    | (41) 1,1,2,2-Tetrachloroethane |
| (6) n-Butyl benzene              | (24) trans-1,2-Dichloroethene  | (42) Tetrachloroethene         |
| (7) tert-Butyl benzene           | (25) 1,1-Dichloroethene        | (43) Toluene                   |
| (8) sec-Butyl benzene            | (26) 1,3-Dichloropropane       | (44) 1,2,3-Trichlorobenzene    |
| (9) Carbon tetrachloride         | (27) 1,2-Dichloropropane       | (45) 1,2,4-Trichlorobenzene    |
| (10) Chlorobenzene               | (28) 2,2-Dichloropropane       | (46) 1,1,1-Trichloroethane     |
| (11) Chloroform                  | (29) 1,1-Dichloropropene       | (47) 1,1,2-Trichloroethane     |
| (12) 4-Chlorotoluene             | (30) cis-1,3-Dichloropropene   | (48) Trichloroethene           |
| (13) 2-Chlorotoluene             | (31) trans-1,3-Dichloropropene | (49) 1,2,3-Trichloropropane    |
| (14) 1,2-Dibromo-3-chloropropane | (32) Ethyl benzene             | (50) 1,2,4-Trimethylbenzene    |
| (15) Dibromochloromethane        | (33) Hexachlorobutadiene       | (51) 1,3,5-Trimethylbenzene    |
| (16) 1,2-Dibromoethane           | (34) Isopropyl benzene         | (52) o-Xylene                  |
| (17) Dibromomethane              | (35) p-Isopropyl toluene       | (53) m-Xylene                  |
| (18) 1,3-Dichlorobenzene         | (36) Methylene chloride        | (54) p-Xylene                  |

**Part # 30001 200 ug/mL in Methanol \$50/ 1 mL**

**Part # 32001 2000 ug/mL in Methanol \$95/ 1 mL**

### GASES

- |                   |                             |
|-------------------|-----------------------------|
| (1) Bromomethane  | (4) Dichlorodifluoromethane |
| (2) Chloroethane  | (5) Trichlorofluoromethane  |
| (3) Chloromethane | (6) Vinyl chloride          |

**Part # 30002 200 ug/mL in Methanol. \$25/ 1 mL**

**Part # 30058 2000 ug/mL in Methanol. \$25/ 1 mL**

**VOLATILE HALOGENATED  
ORGANIC COMPOUNDS IN WATER  
BY PURGE AND TRAP GC**METHOD  
**502.2**  
Rev 2.0**INTERNAL  
STANDARD #1***2000 ug/mL in Methanol*

2-Bromo-1-chloropropane

**Part # 30066 \$25/ 1 mL****INTERNAL  
STANDARD #3***2000 ug/mL in Methanol*

- (1) 1-Chloro-2-fluorobenzene
- (2) 2-Bromo-1-chloropropane

**Part # 30069 \$25/ 1 mL****INTERNAL  
STANDARD #5***2000 ug/mL in Methanol*

Fluorobenzene

**Part # 30004 \$25/ 1 mL****INTERNAL  
STANDARD #2***2000 ug/mL in Methanol*

1,4-Dichlorobutane

**Part # 30068 \$25/ 1 mL****INTERNAL  
STANDARD #4***2000 ug/mL in Methanol*

- (1) 2-Bromo-1-chloropropane
- (2) Fluorobenzene

**Part # 30003 \$25/ 1 mL****INTERNAL  
STANDARD #6***2000 ug/mL in Methanol*

1-Chloro-2-fluorobenzene

**Part # 30169 \$25/ 1 mL****SURROGATE  
STANDARD #1***2000 ug/mL in Methanol*1,2-Dichlorobenzene-d<sub>4</sub>**Part # 30070 \$25/ 1 mL****SURROGATE  
STANDARD #3***2000 ug/mL in Methanol*

- (1) 4-Bromofluorobenzene
- (2) 1,2-Dichlorobenzene-d<sub>4</sub>

**Part # 31070 \$25/ 1 mL****SURROGATE  
STANDARD #2***2000 ug/mL in Methanol*

4-Bromofluorobenzene

**Part # 19267 \$25/ 1 mL****FORTIFICATION  
SOLUTION***2000 ug/mL in Methanol*

- (1) 4-Bromofluorobenzene
- (2) 1,2-Dichlorobenzene-d<sub>4</sub>
- (3) Fluorobenzene

**Part # 30005 \$25/ 1 mL**

METHOD

**502.2**

Rev 2.0

**VOLATILE HALOGENATED  
ORGANIC COMPOUNDS IN WATER  
BY PURGE AND TRAP GC****HIGH CONCENTRATION MIXTURES**

Our high concentration VOCs are specifically formulated for use in EPA Methods 502.2 and 524.2. The high (2000 ug/ml) concentration of these solutions allows you to create standards to cover a wide range of detector response. We offer the Method 502 compounds in several different mixes to assist with retention time calibration over most ranges of interest.

**MIX #1 GASES***2000 ug/mL in Methanol*

- |                   |                             |
|-------------------|-----------------------------|
| (1) Bromomethane  | (4) Dichlorodifluoromethane |
| (2) Chloroethane  | (5) Trichlorofluoromethane  |
| (3) Chloromethane | (6) Vinyl chloride          |

**Part # 30058     \$25/ 1 mL****MIX #2***2000 ug/mL in Methanol*

- |                            |                              |
|----------------------------|------------------------------|
| (1) Bromodichloromethane   | (4) 1,1-Dichloroethene       |
| (2) Dibromochloromethane   | (5) trans-1,2-Dichloroethene |
| (3) cis-1,2-Dichloroethene | (6) Methylene chloride       |

**Part # 30059     \$25/ 1 mL****MIX# 3***2000 ug/mL in Methanol*

- |                          |                           |
|--------------------------|---------------------------|
| (1) Bromochloromethane   | (6) 1,1-Dichloroethane    |
| (2) Bromoform            | (7) 2,2-Dichloropropane   |
| (3) Carbon tetrachloride | (8) Tetrachloroethene     |
| (4) Chloroform           | (9) 1,1,1-Trichloroethane |
| (5) Dibromomethane       |                           |

**Part # 30060     \$25/ 1 mL**

**VOLATILE HALOGENATED  
ORGANIC COMPOUNDS IN WATER  
BY PURGE AND TRAP GC**

METHOD

**502.2***Rev 2.0***HIGH CONCENTRATION MIXTURES-Continued****MIX #4***2000 ug/mL in Methanol*

- |                                 |                                |
|---------------------------------|--------------------------------|
| (1) 1,2-Dibromo-3-chloropropane | (8) 1,1-Dichloropropene        |
| (2) 1,2-Dibromoethane (EDB)     | (9) Hexachlorobutadiene        |
| (3) 1,2-Dichloroethane          | (10) 1,1,1,2-Tetrachloroethane |
| (4) 1,2-Dichloropropane         | (11) 1,1,2,2-Tetrachloroethane |
| (5) 1,3-Dichloropropane         | (12) 1,1,2-Trichloroethane     |
| (6) cis-1,3-Dichloropropene     | (13) Trichloroethene           |
| (7) trans-1,3-Dichloropropene   | (14) 1,2,3-Trichloropropene    |

**Part # 30061     \$30/ 1 mL****MIX #5***2000 ug/mL in Methanol*

- |                         |                             |
|-------------------------|-----------------------------|
| (1) Benzene             | (8) Toluene                 |
| (2) Bromobenzene        | (9) 1,2,3-Trichlorobenzene  |
| (3) n-Butyl benzene     | (10) 1,2,4-Trichlorobenzene |
| (4) Ethylbenzene        | (11) 1,2,4-Trimethylbenzene |
| (5) p-Isopropyl toluene | (12) 1,3,5-Trimethylbenzene |
| (6) Naphthalene         | (13) m-Xylene               |
| (7) Styrene             |                             |

**Part # 30062     \$30/ 1 mL****MIX #6***2000 ug/mL in Methanol*

- |                         |                         |
|-------------------------|-------------------------|
| (1) tert-Butyl benzene  | (7) 1,2-Dichlorobenzene |
| (2) sec-Butyl benzene   | (8) 1,4-Dichlorobenzene |
| (3) Chlorobenzene       | (9) Isopropylbenzene    |
| (4) 4-Chlorotoluene     | (10) n-Propylbenzene    |
| (5) 2-Chlorotoluene     | (11) o-Xylene           |
| (6) 1,3-Dichlorobenzene | (12) p-Xylene           |

**Part # 30063     \$30/ 1 mL**

METHOD

**502.2***Rev 2.0***VOLATILE HALOGENATED  
ORGANIC COMPOUNDS IN WATER  
BY PURGE AND TRAP GC****HIGH CONCENTRATION MIXTURES -Continued****MIX #7***2000 ug/mL in Methanol*

- |                          |                            |
|--------------------------|----------------------------|
| (1) Benzene              | (7) 1,4-Dichlorobenzene    |
| (2) Bromodichloromethane | (8) 1,2-Dichloroethane     |
| (3) Bromoform            | (9) 1,1-Dichloroethene     |
| (4) Carbon tetrachloride | (10) 1,1,1-Trichloroethane |
| (5) Chloroform           | (11) Trichloroethene       |
| (6) Dibromochloromethane | (12) Vinyl chloride        |

**Part # 30064     \$30/ 1 mL****MIX #8***2000 ug/mL in Methanol*

- (1) Chlorobenzene
- (2) 1,2-Dichlorobenzene
- (3) cis-1,2-Dichloroethene
- (4) trans-1,2-Dichloroethene
- (5) 1,2-Dichloropropane
- (6) Ethylbenzene
- (7) Styrene
- (8) Tetrachloroethene
- (9) Toluene
- (10) o-Xylene
- (11) m-Xylene
- (12) p-Xylene

**Part # 30065     \$30/ 1 mL****COMPLETE SET OF 8 AMPULES****Part # 30067     \$150**

**1,2-DIBROMOETHANE (EDB),  
1,2-DIBROMO-3-CHLOROPROPANE  
(DBCP), 1,2,3-TRICHLOROPROPANE IN  
WATER BY MICROEXTRACTION AND GC**

METHOD

**504.1**

**ANALYTES**

*200 ug/mL in Methanol*

- (1) 1,2-Dibromoethane (EDB)
- (2) 1,2-Dibromo-3-chloropropane (DBCP)
- (3) 1,2,3-Trichloropropane

**Part # 30096     \$25/ 1 mL**

**ANALYTES**

*200 ug/mL in Methanol*

- (1) 1,2-Dibromoethane (EDB)
- (2) 1,2-Dibromo-3-chloropropane (DBCP)

**Part # 19029     \$25/ 1 mL**

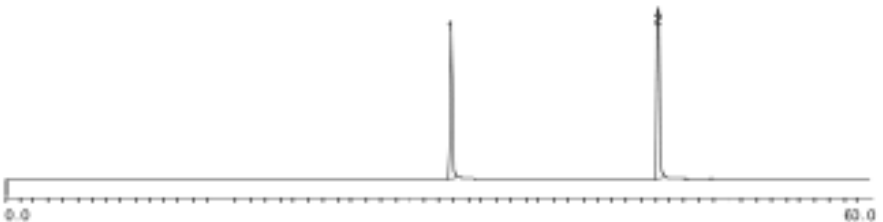
**Method:** GC1 M7. Detectors: PID (Range=1)/ELCD (Nitrogen mode). Column: Vocol (105m X 0.53mm ID X 3.0 µm film thickness). Flow rates: Helium (carrier) = 10 mL/min., Helium (make-up) = 20 mL/min., Hydrogen (reactor) = 100 mL/min.. Oven Profile: Temp. 1 = 35°C (Time 1 = 10 min.), Temp. 2 = 200°C (Time 2 = 8.75 min.), Rate = 4°C/min., Injector Temp. = 200°C, PID Temp. = 200°C, ELCD Temp. = 950°C. Analyst: Candice Warren.

Date: Thu, Jun 6, 2012 10:20 PM  
Data: #19029 L08203 001

Sample: Absolute Standards, Inc. QA/QC Analysis by PID/ELCD  
P19029 L480602 [200ug/mL in MeOH]  
05µL standard injection, Flangeul  
EPA Method 504  
EDB & DBCP

Method: GC1M7  
Sampling Int: 0.1 Seconds  
Date:

- 1 1,2-Dibromoethane (EDB)
- 2 1,2-Dibromo-3-chloropropane (DBCP)



METHOD

**505**

Rev 2.0

**ANALYSIS OF ORGANOHALIDE PESTICIDES  
AND COMMERCIAL POLYCHLORINATED  
BIPHENYL (PCB) PRODUCTS IN WATER BY  
MICROEXTRACTION AND GAS  
CHROMATOGRAPHY**

This method is applicable to the determination of the analytes in finished drinking water during intermediate stages of treatment, and the raw source water.

**ANALYTES MIX***100 ug/mL in Acetone*

- (1) Alachlor
- (2) Aldrin
- (3) Atrazine
- (4) a-Chlordane
- (5) g-Chlordane
- (6) Dieldrin
- (7) Endrin
- (8) Heptachlor
- (9) Heptachlor epoxide (isomer B)
- (10) Hexachlorobenzene
- (11) Hexachlorocyclopentadiene
- (12) g-BHC
- (13) Methoxychlor
- (14) cis-Nonachlor
- (15) trans-Nonachlor
- (16) Simazine

**Part # 30081     \$30/ 1 mL****CHLORDANE***2000 ug/mL in Methanol***Part # 16208     \$25/ 1 mL****TOXAPHENE***4000 ug/mL in Methanol***Part # 17208     \$22/ 1 mL****WS PCB'S as****“DECACHLOROBIPHENYL”***100 ug/mL in MTBE*

Decachlorobiphenyl

**Part # 91835     \$22/ 1 mL****AROCLOR MIXES***All mixes 1000 ug/mL.*

<b>Aroclor</b>	<b>Part # Hexane</b>	<b>Part # Methanol</b>	<b>Price/ 1 mL</b>
1016	90123	70015	\$22
1221	90124	70016	\$22
1232	90125	70017	\$22
1242	90126	70018	\$22
1248	90127	70019	\$22
1254	90128	70020	\$22
1260	90129	70021	\$22
<b>Set of 7</b>	<b>91130</b>	<b>91131</b>	<b>\$125</b>

**DETERMINATION OF PHTHALATE  
AND ADIPATE ESTERS IN DRINKING  
WATER BY GC WITH PID DETECTION**

METHOD

**506**

This method describes a procedure for the determination of certain phthalate and adipate esters in drinking water by liquid/liquid or liquid/solid extraction.

**ANALYTES**

*200 ug/mL in Methanol*

- (1) Benzyl butyl phthalate
- (2) Di-n-butylphthalate
- (3) Di-n-octyl phthalate
- (4) Diethyl phthalate
- (5) Dimethyl phthalate
- (6) Bis(2-ethylhexyl) adipate
- (7) Bis(2-ethylhexyl) phthalate

**Part # 30012     \$30/ 1 mL**

**ADIPATE & PHTHALATE**

*1000 ug/mL in Acetone*

- (1) Bis(2-ethylhexyl) adipate
- (2) Bis(2-ethylhexyl) phthalate

**Part # 91832     \$25/ 1 mL**

**PHTHALATE MIXTURE**

*100 ug/mL in Acetone*

- (1) Benzyl butyl phthalate
- (2) Di-n-Butylphthalate
- (3) Diethyl phthalate
- (4) Dimethyl phthalate
- (5) bis(2-Ethylhexyl) adipate
- (6) bis(2-Ethylhexyl) phthalate

**Part # 30028     \$25/ 1 mL**



METHOD

**507**

Rev 2.0

**DETERMINATION OF NITROGEN  
AND PHOSPHORUS-CONTAINING  
PESTICIDES IN WATER BY GC/NPD**

This is a gas chromatography (GC) method applicable to the determination of certain nitrogen- and phosphorus-containing pesticides in groundwater and finished drinking water.

**MIX #1***100 ug/mL in Acetone*

- (1) Bromacil
- (2) Chlorpropham
- (3) Metolachlor

**Part # 30082     \$25/ 1 mL****MIX #2***100 ug/mL in Acetone*

- (1) Norflurazon
- (2) Alachlor
- (3) Diphenamid
- (4) Pebulate
- (5) Fenarimol
- (6) Vernolate
- (7) Metribuzin
- (8) Triadimefon
- (9) Butylate
- (10) Simazine
- (11) Simetryn
- (12) Prometryn

**Part # 30083     \$30/ 1 mL****MIX #3***100 ug/mL in Acetone*

- (1) Fenamiphos
- (2) Dichlorvos
- (3) Atrazine
- (4) Ethoprop
- (5) Terbufos
- (6) Diazinon

**Part # 30084     \$25/ 1 mL****MIX #4***100 ug/mL in Acetone*

- (1) Fluridone
- (2) MGK 264
- (3) Terbacil
- (4) Carboxin
- (5) Tricyclazole

**Part # 30085     \$25/ 1 mL****MIX #5***100 ug/mL in Acetone*

- (1) Napropamide
- (2) Butachlor
- (3) Molinate
- (4) EPTC
- (5) Cycloate
- (6) Hexazinone
- (7) Atraton
- (8) Prometon
- (9) Ametryn
- (10) Terbutryn
- (11) Propazine

**Part # 30086     \$30/ 1 mL****MIX #6***100 ug/mL in Acetone*

- (1) Methyl paraoxon
- (2) Mevinphos
- (3) Stirofos
- (4) Disulfoton

**Part # 30087     \$25/ 1 mL****SINGLE COMPONENTS***100 ug/mL in stated concentrations*

- |                 |                      |                     |                   |
|-----------------|----------------------|---------------------|-------------------|
| (1) Tebuthiuron | in Acetonitrile      | <b>Part # 30089</b> | <b>\$22/ 1 mL</b> |
| (2) Merphos     | in Hexane            | <b>Part # 30090</b> | <b>\$22/ 1 mL</b> |
| (3) Pronamide   | in MeCl <sub>2</sub> | <b>Part # X9184</b> | <b>\$22/ 1 mL</b> |

**DETERMINATION OF NITROGEN  
AND PHOSPHORUS-CONTAINING  
PESTICIDES IN WATER BY GC/NPD**

METHOD

**507**

Rev 2.0

This is a gas chromatography (GC) method applicable to the determination of certain nitrogen- and phosphorus-containing pesticides in groundwater and finished drinking water.

**MIX #7***100 ug/mL in Ethyl acetate*

- (1) Alachlor
- (2) Atrazine
- (3) Simazine
- (4) Butachlor
- (5) Metolachlor
- (6) Metribuzin
- (7) Propachlor

**Part # 91185     \$30/ 1 mL****MIX #8***100 ug/mL in Acetone*

- (1) Alachlor
- (2) Atrazine
- (3) Simazine

**Part # 91110     \$25/ 1 mL****MIX #9***100 ug/mL in Acetone*

- (1) Butachlor
- (2) Metolachlor
- (3) Metribuzin
- (4) Prometon

**Part # 91826     \$25/ 1 mL****MIX #10***100 ug/mL in Methanol*

- (1) Bromacil
- (2) Butachlor
- (3) Metolachlor
- (4) Metribuzin
- (5) Prometon

**Part # 91424     \$30/ 1 mL****PERFORMANCE CHECK SOLUTION***At stated concentrations (ug/mL) in Methyl tert-butyl ether*

- |                                 |     |
|---------------------------------|-----|
| (1) Atrazine                    | 15  |
| (2) Bromacil                    | 500 |
| (3) 1,3-Dimethyl-2-nitrobenzene | 250 |
| (4) Prometon                    | 30  |
| (5) Triphenyl phosphate         | 250 |
| (6) Vernolate                   | 5   |

**Part # 19130     \$25/ 1 mL****SURROGATE STANDARD***250 ug/mL in Methyl tert-butyl ether*

1,3-Dimethyl-2-nitrobenzene

**Part # 19049     \$22/ 1 mL****INTERNAL STANDARD***500 ug/mL in Methyl tert-butyl ether*

Triphenyl phosphate

**Part # 19031     \$22/ 1 mL**

METHOD

**508,508.1,  
508A****DETERMINATION OF  
CHLORINATED PESTICIDES IN  
WATER BY GC WITH AN ECD**

This gas chromatography (GC) method is applicable to the determination of certain chlorinated pesticides in groundwater and finished drinking water.

**ANALYTES MIX #1***At stated concentrations in Methanol*

<b>Component</b>	<b>ug/mL</b>	<b>Component</b>	<b>ug/mL</b>
(1) Aldrin	100	(9) Dieldrin	200
(2) a-BHC	100	(10) Endosulfan I	200
(3) b-BHC	100	(11) Endosulfan II	200
(4) g-BHC	100	(12) Endosulfan sulfate	600
(5) d-BHC	100	(13) Endrin	200
(6) 4,4'-DDD	600	(14) Endrin aldehyde	600
(7) 4,4'-DDE	200	(15) Heptachlor	100
(8) 4,4'-DDT	600	(16) Heptachlor epoxide (isomer B)	100

**Part # 41001     \$30/ 1 mL****ANALYTES MIX #2***100 ug/mL in Ethyl acetate*

(1) a-Chlordane	(7) Etridiazole
(2) g-Chlordane	(8) Hexachlorobenzene
(3) Chloroneb	(9) Methoxychlor
(4) Chlorobenzilate	(10) Permethrin (cis + trans isomers)
(5) Chlorothalonil	(11) Propachlor
(6) DCPA	(12) Trifluralin

**Part # 30088     \$35/ 1 mL****CHLORDANE***2000 ug/mL in Methanol***Part # 16208     \$25/ 1 mL****TOXAPHENE***4000 ug/mL in Methanol***Part # 17208     \$25/ 1 mL****WS PESTICIDE AMP 1***100 ug/mL in Acetone*

(1) g-BHC
(2) Endrin
(3) 4,4'-Methoxychlor
(4) Aldrin
(5) Dieldrin
(6) Heptachlor
(7) Heptachlor epoxide (isomer B)
(8) Hexachlorobenzene
(9) Hexachlorocyclopentadiene
(10) Propachlor
(11) Trifluralin

**Part # 92100     \$35/ 1 mL**

**DETERMINATION OF  
CHLORINATED PESTICIDES IN  
WATER BY GC WITH AN ECD**

METHOD

**508,508.1,  
508A**

**PESTICIDE MIX 508.1 / 525.2**

*500 ug/mL in Ethyl acetate*

- (1) Alachlor
- (2) Aldrin
- (3) Atrazine
- (4) Butachlor
- (5) Cyanazine
- (6) Dieldrin
- (7) Endrin
- (8) g-BHC (Lindane)
- (9) Heptachlor
- (10) Heptachlor epoxide
- (11) Hexachlorobenzene
- (12) Hexachlorocyclopentadiene
- (13) 4,4'-Methoxychlor
- (14) Metolachlor
- (15) Metribuzin
- (16) Propachlor
- (17) Simazine
- (18) Trifluralin

**Part # 91970    \$50/ 1 mL**

**AROCLOR 1260**

*1000 ug/mL in Methanol*

**Part # 70021    \$22/ 1 mL**

**DECACHLOROBIPHENYL**

*1000 ug/mL in Toluene*

**Part # 91480    \$22/ 1 mL**

**PERFORMANCE CHECK SOLUTION**

*At stated concentrations (ug/mL) in Methyl tert-butyl ether*

- |                    |    |                  |    |
|--------------------|----|------------------|----|
| (1) d-BHC          | 20 | (3) Chlorpyrifos | 1  |
| (2) Chlorothalonil | 25 | (4) Dacthal      | 25 |

**Part # 19132    \$25/ 1 mL**

**INTERNAL STANDARD**

*100 ug/mL in MTBE*

Pentachloronitrobenzene

**Part # 19041    \$22/ 1 mL**

**SURROGATE STANDARD**

*500 ug/mL in MTBE*

4,4' - Dichlorobiphenyl

**Part # 19042    \$22/ 1 mL**

METHOD

**509**

*Rev 1.0*

**DETERMINATION OF  
ETHYLENE THIOUREA IN WATER  
USING GC/NPD**

**METHOD 509 ANALYTE**

*1000 ug/mL in Ethyl acetate\**

Ethylene thiourea

**Part # 70385 \$22/ 1 mL**

**INTERNAL STANDARD**

*1000 ug/mL in Ethyl acetate\**

3,4,5,6-Tetrahydro-2-pyrimidinethiol

**Part # 30097 \$22/ 1 mL**

*\*Contains 1000 ug/mL Dithiothreitol as a free radical scavenger.*

## CHLORINATED ACIDS IN WATER BY GC/ECD

METHOD

# 515.1

Rev 4.0

This is a gas chromatographic (GC) method applicable to the determination of certain chlorinated acids in groundwater and finished drinking water. This method may be applicable to the determination of salts and esters of analyte acids. The form of each acid is not distinguished by this method. Results are calculated and reported for each listed analyte as the total free acid.

### INDIVIDUAL ANALYTES

*Price: \$22 each. Quantity: 1 mL Concentration: 200 ug/mL*

Compound	Part # Underivatized in MTBE	Part # Methyl derivative in hexane	<b>COMPLETE SETS of all 18 Compounds</b>
(1) Acifluorfen	83588	30025	
(2) Bentazon	83589	30026	
(3) Chloramben	83590	30030	
(4) 2, 4-D	83572	81501	<b>Part # 30040 UNDERIVATIZED \$195</b>
(5) Dalapon	83576	81505	
(6) 2,4-DB	83573	81502	<b>Part # 30044 METHYL DERIVATIVES \$195</b>
(7) Dacthal	83591	30035	
(8) Dicamba	83577	81506	
(9) 3,5-Dichlorobenzoic acid	83592	30036	
(10) Dichlorprop	83578	81507	
(11) Dinoseb	83579	81508	
(12) 4-Nitrophenol	83593	30037	
(13) Pentachlorophenol	83594	30038	
(14) Picloram	83595	30039 (Toluene)	
(15) 2,4,5-T	83574	81503	
(16) 2,4,5-TP	83575	81504	
(17) MCPA [2000 ug/mL]	83570	81509	
(18) MCPP [2000 ug/mL]	83571	81510	

### HERBICIDES MIX #1

*(FREE ACIDS)*

*100 ug/mL in MTBE*

- (1) 2,4-D
- (2) 2,4,5-TP, "Silvex"
- (3) Pentachlorophenol
- (4) Acifluorfen
- (5) Dalapon
- (6) Dicamba
- (7) Dinoseb
- (8) Picloram

**Part # 92102    \$35/ 1 mL**

### HERBICIDES MIX #1

*(METHYL ESTERS)*

*100 ug/mL in Hexane*

- (1) 2,4-D
- (2) 2,4,5-TP, "Silvex"
- (3) Pentachlorophenol
- (4) Acifluorfen
- (5) Dalapon
- (6) Dicamba
- (7) Dinoseb
- (8) Picloram

**Part # 92103    \$35/ 1 mL**

METHOD

**515.1**

Rev 4.0

**CHLORINATED ACIDS IN  
WATER BY GC/ECD****ANALYTES MIX***100 ug/mL each in solvent listed below*

- |                 |                              |
|-----------------|------------------------------|
| (1) Acifluorfen | (9) 3,5-Dichlorobenzoic acid |
| (2) Bentazon    | (10) Dichlorprop             |
| (3) Chloramben  | (11) Dinoseb                 |
| (4) 2,4-D       | (12) 4-Nitrophenol           |
| (5) Dalapon     | (13) Pentachlorophenol       |
| (6) 2,4-DB      | (14) Picloram                |
| (7) Dacthal     | (15) 2,4,5-T                 |
| (8) Dicamba     | (16) 2,4,5-TP                |

**Part # 83596 Underivatized in MTBE****\$35/ 1 mL****Part # 30072 Methyl derivatives in Hexane/Toluene [95:5]****\$50/ 1 mL****PERFORMANCE CHECK SOLUTION***At stated concentrations in Methyl tert-butyl ether*

<b>Component</b>	<b>ug/mL</b>
(1) 4,4'-Dibromooctafluorobiphenyl	250
(2) 3,5-Dichlorobenzoic acid methyl ester	600
(3) 2,4-Dichlorophenyl acetic acid methyl ester	500
(4) Dinoseb methyl ether	4
(5) 4-Nitroanisole	1600

**Part # 30121 \$30/ 1 mL****SURROGATE STANDARD***100 ug/mL in Methyl tert-butyl ether*2,4-Dichlorophenyl acetic acid *methyl ester***Part # 30022 \$22/ 1 mL***100 ug/mL in Methyl tert-butyl ether*

2,4-Dichlorophenyl acetic acid

**Part # 30122 \$22/ 1 mL****INTERNAL STANDARD***100 ug/mL in Methyl tert-butyl ether*

4,4'-Dibromooctafluorobiphenyl

**Part # 30023 \$22/ 1 mL**

**DETERMINATION OF CHLORINATED ACIDS  
IN WATER USING LIQUID-SOLID  
EXTRACTION AND GAS CHROMATOGRAPHY  
WITH AN ELECTRON CAPTURE DETECTOR**

METHOD

**515.2**

Rev 1.0

This is a gas chromatographic (GC) method applicable to the determination of certain chlorinated acids in groundwater and finished drinking water. This method may be applicable to the determination of salts and esters for analyte acids. The form of each acid is not distinguished by this method. Results are calculated and reported for each listed analyte as the total free acid.

**INDIVIDUAL ANALYTES***200 ug/mL - \$22/ 1 mL*

<b>Compound</b>	<b>Part # Underivatized in MTBE</b>	<b>Part # Methyl Derivative in Hexane</b>
(1) Acifluorfen	83588	30025
(2) Bentazon	83589	30026
(3) 2,4-D	83572	81501
(4) 2,4-DB	83573	81502
(5) Dacthal	83591	30035
(6) Dicamba	83577	81506
(7) 3,5-Dichlorobenzoic acid	83592	30036
(8) Dichlorprop	83578	81507
(9) Dinoseb	83579	81508
(10) Pentachlorophenol	83594	30038
(11) Picloram	83595	30039 (Toluene)
(12) 2,4,5-T	83574	81503
(13) 2,4,5-TP	83575	81504

**COMPLETE SETS of all 13 Compounds**

Part # 30073 Underivatized in MTBE \$150

Part # 30074 Methyl Derivatives in Hexane \$150

**HERBICIDES MIX #1***(FREE ACIDS)**100 ug/mL in MTBE*

- (1) 2,4-D
- (2) 2,4,5-TP, "Silvex"
- (3) Pentachlorophenol
- (4) Acifluorfen
- (5) Dalapon
- (6) Dicamba
- (7) Dinoseb
- (8) Picloram

**Part # 92102 \$35/ 1 mL****HERBICIDES MIX #1***(METHYL ESTERS)**100 ug/mL in Hexane*

- (1) 2,4-D
- (2) 2,4,5-TP, "Silvex"
- (3) Pentachlorophenol
- (4) Acifluorfen
- (5) Dalapon
- (6) Dicamba
- (7) Dinoseb
- (8) Picloram

**Part # 92103 \$35/ 1 mL**



METHOD

**515.2**

Rev 1.0

**DETERMINATION OF CHLORINATED ACIDS  
IN WATER USING LIQUID-SOLID  
EXTRACTION AND GAS CHROMATOGRAPHY  
WITH AN ELECTRON CAPTURE DETECTOR**

**ANALYTES MIX***100 ug/mL*

- (1) Acifluorfen
- (2) Bentazon
- (3) 2,4-D
- (4) 2,4-DB
- (5) Dacthal
- (6) Dicamba
- (7) 3,5-Dichlorobenzoic acid
- (8) Dichlorprop
- (9) Dinoseb
- (10) Pentachlorophenol
- (11) Picloram
- (12) 2,4,5-T
- (13) 2,4,5-TP

**Part # 83597 Underivatized in MTBE \$35/ 1 mL****Part # 30076 Methyl derivatives in Hexane / Toluene [95:5] \$50/ 1 mL****PERFORMANCE CHECK SOLUTION***At stated concentrations in Methyl tert-butyl ether*

<b>Component</b>	<b>ug/mL</b>
(1) 4,4'-Dibromooctafluorobiphenyl	250
(2) 3,5-Dichlorobenzoic acid methyl ester	600
(3) 2,4-Dichlorophenyl acetic acid methyl ester	500
(4) Dinoseb methyl ether	4
(5) 4-Nitroanisole	1600

**Part # 30121 \$30/ 1 mL****SURROGATE STANDARD***100 ug/mL in Methyl tert-butyl ether*

2,4-Dichlorophenyl acetic acid methyl ester

**Part # 30022 \$22/ 1 mL***100 ug/mL in Methyl tert-butyl ether*

2,4-Dichlorophenyl acetic acid

**Part # 30122 \$22/ 1 mL****INTERNAL STANDARD***100 ug/mL in Methyl tert-butyl ether*

4,4'-Dibromooctafluorobiphenyl

**Part # 30023 \$22/ 1 mL**

**DETERMINATION OF CHLORINATED ACIDS  
IN DRINKING WATER BY LIQUID-LIQUID  
EXTRACTION, DERIVATIZATION AND GAS  
CHROMATOGRAPHY WITH ELECTRON  
CAPTURE DETECTION**

METHOD

**515.3**

Rev 1.0

**ANALYTES MIX**

*100 ug/mL each in solvent listed below*

- (1) Acifluorfen
- (2) Bentazon
- (3) Chloramben
- (4) 2,4-D
- (5) Dalapon
- (6) 2,4-DB
- (7) Dacthal mono acid (Monomethyl tetrachloroterephthalate)
- (8) Dacthal
- (9) Dicamba
- (10) 3,5-Dichlorobenzoic acid
- (11) Dichlorprop
- (12) Dinoseb
- (13) 4-Nitrophenol
- (14) Pentachlorophenol
- (15) Picloram
- (16) 2,4,5-T
- (17) 2,4,5-TP (Silvex)

**Part # 30150 Underivatized in MTBE \$45/ 1 mL**

**Part # 30151 Methyl derivatives in Hexane:Toluene [95:5] \$55/ 1 mL**

**ANALYTES MIX**

*20 mg/mL each in solvent listed below*

- (1) MCPA
- (2) MCPP

**Part # 31196 Underivatized in MTBE \$30/ 1 mL**

**Part # 91700 Methyl derivatives in Hexane \$30/ 1 mL**

**SURROGATE STANDARD**

*100 ug/mL in Methyl tert-butyl ether*

2,4-Dichlorophenyl acetic acid methyl ester

**Part # 30022 \$22/ 1 mL**

*100 ug/mL in Methyl tert-butyl ether*

2,4-Dichlorophenyl acetic acid

**Part # 30122 \$22/ 1 mL**

METHOD

**515.4**

Rev 1.0

**DETERMINATION OF CHLORINATED ACIDS  
IN DRINKING WATER BY LIQUID-LIQUID  
MICROEXTRACTION, DERIVATIZATION,  
AND FAST GAS CHROMATOGRAPHY WITH  
ELECTRON CAPTURE DETECTION**

This is a fast gas chromatography (GC) method for the determination of chlorinated acids in drinking waters. This method is also applicable to the determination of salts and esters of analyte acids. The form of each acid is not distinguished by this method. Results are calculated and reported for each listed analyte as the total free acid. This method is able to quantify the mono- and di-acid forms of Dacthal but not the parent compound.

**INDIVIDUAL ANALYTES***200 ug/mL - \$22/ 1 mL*

<b>Compound</b>	<b>Underivatized in MTBE Part #</b>	<b>Methyl Derivative in Hexane Part #</b>
(1) Acifluorfen	83588	30025
(2) Bentazon	83589	30026
(3) Chloramben	83590	30030
(4) 2,4-D	83572	81501
(5) Dalapon	83576	81505
(6) 2,4-DB	83573	81502
(7) Dacthal monoacid	83603	NA
(8) Dacthal di-acid	83591	NA
(9) Dacthal methyl derivative	NA	30035
(10) Dicamba	83577	81506
(11) 3,5-Dichlorobenzoic acid	83592	30036
(12) Dichlorprop	83578	81507
(13) Dinoseb	83579	81508
(14) Pentachlorophenol	83594	30038
(15) Picloram	83595	30039 (Toluene)
(16) 2,4,5-T	83574	81503
(17) 2,4,5-TP	83575	81504
(18) Quinclorac	83604	NA

**INTERNAL STANDARD***100 ug/mL in Methyl tert-butyl ether**4,4'-Dibromooctafluorobiphenyl***Part # 30023    \$22/ 1 mL**

**THE DETERMINATION OF  
NITROSAMINES IN DRINKING  
WATER BY CAPILLARY GC &  
CHEMICAL IONIZATION MS/MS**

METHOD

**521**

This method employs SPE and capillary column GC/MS/MS equipped with a large volume injector for the analysis of nitrosamines in drinking water. The target analytes are considered aptly volatile and thermally stable for determination by gas chromatography.

**Nitrosamines Mix***2000 ug/mL in Methylene chloride*

- (1) N-Nitrosodimethylamine
- (2) N-Nitrosomethylethylamine
- (3) N-Nitroso-di-ethylamine
- (4) N-Nitroso-di-n-propylamine
- (5) N-Nitrosodibutylamine
- (6) 1-Nitrosopiperidine
- (7) N-Nitrosopyrrolidine
- (8) N-Nitrosomorpholine

**Part # 90729     \$30/ 1 mL****EPA METHOD 521 ANALYTES***1000 ug/mL in Methanol*

- (1) N-Nitrosodimethylamine
- (2) N-Nitrosodiphenylamine
- (3) N-Nitrosodi-n-propylamine

**Part # 40012     \$25/ 1 mL****SURROGATE STANDARD***1000 ug/mL in Methylene chloride*

N-Nitrosodimethylamine-d6

**Part # 71839     \$175/ 1 mL****INTERNAL STANDARD***100 ug/mL in Methylene chloride*

N-Nitrosodi-n-propylamine-d14

**Part # 72136     \$50/ 1 mL**

## METHOD

**524.2****MEASUREMENT OF PURGEABLE  
ORGANIC COMPOUNDS IN WATER  
BY CAPILLARY GC/MS**

This is a general purpose method for the identification and simultaneous measurement of purgeable volatile organic compounds in surface water, groundwater, and drinking water in any stage of treatment. The method is applicable to a wide range of organic compounds, including the four trihalomethane disinfection by-products, that have sufficiently high volatility and low water solubility to be removed from water samples with purge and trap procedures. The following compounds can be determined by this method.

**LIQUIDS**

- |                                  |                                |                                |
|----------------------------------|--------------------------------|--------------------------------|
| (1) Benzene                      | (19) 1,2-Dichlorobenzene       | (37) Naphthalene               |
| (2) Bromobenzene                 | (20) 1,4-Dichlorobenzene       | (38) n-Propylbenzene           |
| (3) Bromochloromethane           | (21) 1,1-Dichloroethane        | (39) Styrene                   |
| (4) Bromodichloromethane         | (22) 1,2-Dichloroethane        | (40) 1,1,1,2-Tetrachloroethane |
| (5) Bromoform                    | (23) cis-1,2-Dichloroethene    | (41) 1,1,2,2-Tetrachloroethane |
| (6) n-Butyl benzene              | (24) trans-1,2-Dichloroethene  | (42) Tetrachloroethene         |
| (7) tert-Butyl benzene           | (25) 1,1-Dichloroethene        | (43) Toluene                   |
| (8) sec-Butyl benzene            | (26) 1,3-Dichloropropane       | (44) 1,2,3-Trichlorobenzene    |
| (9) Carbon tetrachloride         | (27) 1,2-Dichloropropane       | (45) 1,2,4-Trichlorobenzene    |
| (10) Chlorobenzene               | (28) 2,2-Dichloropropane       | (46) 1,1,1-Trichloroethane     |
| (11) Chloroform                  | (29) 1,1-Dichloropropene       | (47) 1,1,2-Trichloroethane     |
| (12) 4-Chlorotoluene             | (30) cis-1,3-Dichloropropene   | (48) Trichloroethene           |
| (13) 2-Chlorotoluene             | (31) trans-1,3-Dichloropropene | (49) 1,2,3-Trichloropropane    |
| (14) 1,2-Dibromo-3-chloropropane | (32) Ethyl benzene             | (50) 1,2,4-Trimethylbenzene    |
| (15) Dibromochloromethane        | (33) Hexachlorobutadiene       | (51) 1,3,5-Trimethylbenzene    |
| (16) 1,2-Dibromoethane           | (34) Isopropyl benzene         | (52) o-Xylene                  |
| (17) Dibromomethane              | (35) p-Isopropyl toluene       | (53) m-Xylene                  |
| (18) 1,3-Dichlorobenzene         | (36) Methylene chloride        | (54) p-Xylene                  |

**Part # 30001 200 ug/mL in Methanol. \$50/ 1 mL**

**Part # 32001 2000 ug/mL in Methanol. \$95/ 1 mL**

**GASES**

- |                   |                             |
|-------------------|-----------------------------|
| (1) Bromomethane  | (4) Dichlorodifluoromethane |
| (2) Chloroethane  | (5) Trichlorofluoromethane  |
| (3) Chloromethane | (6) Vinyl chloride          |

**Part # 30002 200 ug/mL in Methanol. \$25/ 1 mL**

**Part # 30058 2000 ug/mL in Methanol. \$25/ 1 mL**

## MEASUREMENT OF PURGEABLE ORGANIC COMPOUNDS IN WATER BY CAPILLARY GC/MS

METHOD

**524.2**

Rev 4.0

### LIQUIDS

- |                                  |                                  |                                |
|----------------------------------|----------------------------------|--------------------------------|
| (1) Acetone                      | (27) 1,4-Dichlorobenzene         | (53) Methylmethacrylate        |
| (2) Acrylonitrile                | (28) trans-1,4-Dichloro-2-butene | (54) 4-Methyl-2-pentanone      |
| (3) Allyl chloride               | (29) 1,1-Dichloroethane          | (55) Methyl-t-butyl ether      |
| (4) Benzene                      | (30) 1,2-Dichloroethane          | (56) Naphthalene               |
| (5) Bromobenzene                 | (31) 1,1-Dichloroethene          | (57) Nitrobenzene              |
| (6) Bromochloromethane           | (32) cis-1,2-Dichloroethene      | (58) 2-Nitropropane            |
| (7) Bromodichloromethane         | (33) trans-1,2-Dichloroethene    | (59) Pentachloroethane         |
| (8) Bromoform                    | (34) 1,2-Dichloropropane         | (60) Propionitrile             |
| (9) 2-Butanone                   | (35) 1,3-Dichloropropane         | (61) n-Propylbenzene           |
| (10) n-Butylbenzene              | (36) 2,2-Dichloropropane         | (62) Styrene                   |
| (11) sec-Butylbenzene            | (37) 1,1-Dichloropropene         | (63) 1,1,1,2-Tetrachloroethane |
| (12) tert-Butylbenzene           | (38) 1,1-Dichloropropanone       | (64) 1,1,2,2-Tetrachloroethane |
| (13) Carbon disulfide            | (39) cis-1,3-Dichloropropene     | (65) Tetrachloroethene         |
| (14) Carbon tetrachloride        | (40) trans-1,3-Dichloropropene   | (66) Tetrahydrofuran           |
| (15) Chloroacetone               | (41) Diethyl ether               | (67) Toluene                   |
| (16) Chlorobenzene               | (42) Ethylbenzene                | (68) 1,2,3-Trichlorobenzene    |
| (17) 1-Chlorobutane              | (43) Ethyl methacrylate          | (69) 1,2,4-Trichlorobenzene    |
| (18) Chloroform                  | (44) Hexachlorobutadiene         | (70) 1,1,1-Trichloroethane     |
| (19) 2-Chlorotoluene             | (45) Hexachloroethane            | (71) 1,1,2-Trichloroethane     |
| (20) 4-Chlorotoluene             | (46) 2-Hexanone                  | (72) Trichloroethene           |
| (21) Dibromochloromethane        | (47) Isopropylbenzene            | (73) 1,2,3-Trichloropropane    |
| (22) 1,2-Dibromo-3-chloropropane | (48) 4-Isopropyltoluene          | (74) 1,2,4-Trimethylbenzene    |
| (23) 1,2-Dibromoethane           | (49) Methacrylonitrile           | (75) 1,3,5-Trimethylbenzene    |
| (24) Dibromomethane              | (50) Methylacrylate              | (76) o-Xylene                  |
| (25) 1,2-Dichlorobenzene         | (51) Methylene chloride          | (77) m-Xylene                  |
| (26) 1,3-Dichlorobenzene         | (52) Methyl iodide               | (78) p-Xylene                  |

**Part # 33001      200 ug/mL in Methanol.      \$75/ 1mL**  
**Part # 33003      2000 ug/mL in Methanol.      \$125/ 1mL**

### LIQUIDS - ADDITIONAL ANALYTES

- |   |                                     |
|---|-------------------------------------|
| (1) 1,1-Dichloropropanone-2                       | (13) Ethyl methacrylate             |
| (2) 1-Chlorobutane                                | (14) Hexachloroethane               |
| (3) 2-Butanone (Methyl ethyl ketone)              | (15) Iodomethane (Methyl iodide)    |
| (4) 2-Hexanone                                    | (16) Methacrylonitrile              |
| (5) 2-Nitropropane                                | (17) Methyl acrylate                |
| (6) 4-Methyl-2-pentanone (Methyl isobutyl ketone) | (18) Methyl methacrylate            |
| (7) Acetone                                       | (19) Methyl tert-butyl ether (MTBE) |
| (8) Acrylonitrile                                 | (20) Nitrobenzene                   |
| (9) Allyl chloride (3-Chloropropene)              | (21) Pentachloroethane              |
| (10) Carbon disulphide                            | (22) Propionitrile                  |
| (11) Chloroacetone                                | (23) Tetrahydrofuran                |
| (12) Diethyl ether (Ethyl ether)                  | (24) trans-1,4-Dichloro-2-butene    |

**Part # 34002      2000 ug/mL in Methanol.      \$50/ 1mL**

METHOD

**524.2**

Rev 4.0

**VOLATILE HALOGENATED  
ORGANIC COMPOUNDS IN WATER  
BY PURGE AND TRAP GC****INTERNAL  
STANDARD #1***2000 ug/mL in Methanol*

2-Bromo-1-chloropropane

**Part # 30066 \$25/ 1 mL****INTERNAL  
STANDARD #3***2000 ug/mL in Methanol*

- (1) 1-Chloro-2-fluorobenzene
- (2) 2-Bromo-1-chloropropane

**Part # 30069 \$25/ 1 mL****INTERNAL  
STANDARD #5***2000 ug/mL in Methanol*

Fluorobenzene

**Part # 30004 \$25/ 1 mL****INTERNAL  
STANDARD #2***2000 ug/mL in Methanol*

1,4-Dichlorobutane

**Part # 30068 \$25/ 1 mL****INTERNAL  
STANDARD #4***2000 ug/mL in Methanol*

- (1) 2-Bromo-1-chloropropane
- (2) Fluorobenzene

**Part # 30003 \$25/ 1 mL****INTERNAL  
STANDARD #6***2000 ug/mL in Methanol*

1-Chloro-2-fluorobenzene

**Part # 30169 \$25/ 1 mL****SURROGATE  
STANDARD #1***2000 ug/mL in Methanol*1,2-Dichlorobenzene-d<sub>4</sub>**Part # 30070 \$25/ 1 mL****SURROGATE  
STANDARD #2***2000 ug/mL in Methanol*

4-Bromofluorobenzene

**Part # 19267 \$25/ 1 mL****SURROGATE  
STANDARD #3***2000 ug/mL in Methanol*

- (1) 4-Bromofluorobenzene
- (2) 1,2-Dichlorobenzene-d<sub>4</sub>

**Part # 31070 \$25/ 1 mL****FORTIFICATION  
SOLUTION***2000 ug/mL in Methanol*

- (1) 4-Bromofluorobenzene
- (2) 1,2-Dichlorobenzene-d<sub>4</sub>
- (3) Fluorobenzene

**Part # 30005 \$25/ 1 mL**

**ORGANIC COMPOUNDS IN  
DRINKING WATER BY LIQUID-  
SOLID EXTRACTION AND  
CAPILLARY GC/MS**

METHOD

**525**

This is a general-purpose method that provides procedures for the determination of organic compounds in finished drinking water, raw source water or water at any stage of treatment. The method is applicable to a wide range of organic compounds that are efficiently partitioned from the water sample onto a C<sub>18</sub> organic phase which is chemically bonded to a solid inorganic matrix, and sufficiently volatile and thermally stable for gas chromatography. Particulate-bound organic matter will not be partitioned, and more than trace levels of particulates may disrupt the partitioning process.

**POLYNUCLEAR AROMATIC HYDROCARBONS MIXTURE***100 ug/mL in Acetone*

- (1) Acenaphthylene
- (2) Anthracene
- (3) Benzo(a)anthracene
- (4) Benzo(a)pyrene
- (5) Benzo(b)fluoranthene
- (6) Benzo(g,h,i)perylene
- (7) Benzo(k)fluoranthene
- (8) Chrysene
- (9) Dibenzo(a,h)anthracene
- (10) Fluorene
- (11) Indeno(1,2,3-cd)pyrene
- (12) Phenanthrene
- (13) Pyrene

**Part # 19062     \$25/ 1 mL****PCB MIXTURE***100 ug/mL in Acetone*

- (1) 2-Chlorobiphenyl
- (2) 2,3-Dichlorobiphenyl
- (3) 2,2',3,3',4,4',6-Heptachlorobiphenyl
- (4) 2,2',4,4',5,6'-Hexachlorobiphenyl
- (5) 2,2',3,3',4,5',6,6'-Octachlorobiphenyl
- (6) 2,2',3',4,6-Pentachlorobiphenyl
- (7) 2,2',4,4'-Tetrachlorobiphenyl
- (8) 2,4,5-Trichlorobiphenyl

**Part # 19063     \$45/ 1 mL****PERCHLORINATES***in Acetone**ug/mL*

- |                               |     |
|-------------------------------|-----|
| (1) Hexachlorobenzene         | 100 |
| (2) Hexachlorocyclopentadiene | 100 |
| (3) Pentachlorophenol         | 400 |

**Part # 30029     \$25/ 1 mL**



METHOD

**525****ORGANIC COMPOUNDS IN DRINKING  
WATER BY LIQUID-SOLID  
EXTRACTION AND CAPILLARY  
COLUMN GC/MS****PESTICIDE MIXTURE***100 ug/mL in Acetone*

- (1) Alachlor
- (2) Aldrin
- (3) Atrazine
- (4) a-Chlordane
- (5) g-Chlordane
- (6) Endrin
- (7) Heptachlor
- (8) Heptachlor epoxide (isomer B)
- (9) Lindane (g-BHC)
- (10) 4,4'-Methoxychlor
- (11) Simazine
- (12) trans-Nonachlor

**Part # 30027     \$35/ 1 mL****PHTHALATE MIXTURE***100 ug/mL in Acetone*

- (1) Benzyl butyl phthalate
- (2) Di-n-butylphthalate
- (3) Diethyl phthalate
- (4) Dimethyl phthalate
- (5) Bis(2-ethylhexyl) adipate
- (6) Bis(2-ethylhexyl) phthalate

**Part # 30028     \$25/ 1 mL****INTERNAL STANDARD***500 ug/mL in Acetone*

- (1) Acenaphthene-d<sub>10</sub>
- (2) Chrysene-d<sub>12</sub>
- (3) Perylene-d<sub>12</sub>
- (4) Phenanthrene-d<sub>10</sub>

**Part # 30031     \$25/ 1 mL****INTERNAL STANDARD***500 ug/mL in Acetone*

- (1) Acenaphthene-d<sub>10</sub>
- (2) Perylene-d<sub>12</sub>
- (3) Phenanthrene-d<sub>10</sub>

**Part # 37031     \$25/ 1 mL**

**ORGANIC COMPOUNDS IN  
DRINKING WATER BY LIQUID-  
SOLID EXTRACTION AND  
CAPILLARY GC/MS**

METHOD

**525**

**TOXAPHENE SOLUTION**

*2500 ug/mL in Acetone*

Toxaphene

**Part # 19079     \$25/ 1 mL**

**FORTIFICATION SOLUTION**

*500 ug/mL in Methylene chloride*

p-Terphenyl-d<sub>14</sub>

**Part # 30032     \$22/ 1 mL**

**TUNING STANDARD**

*250 ug/mL in Methylene chloride*

Decafluorotriphenylphosphine

**Part # 43026     \$22/ 1 mL**

**Complete Set of EPA Method 525 Standards**

**Set of all nine mixes (p. 64-65):**

**Part # 30034     \$175**

**ADIPATE & PHTHALATE**

*1000 ug/mL in Acetone*

- (1) Bis(2-ethylhexyl) adipate
- (2) Bis(2-ethylhexyl) phthalate

**Part # 91832     \$25/ 1 mL**

**BENZO(A)PYRENE**

*1000 ug/mL in Acetone*

**Part # 91833     \$22/ 1 mL**

METHOD

**525.2***Rev 1.0*

## ORGANIC COMPOUNDS IN DRINKING WATER BY LIQUID- SOLID EXTRACTION AND CAPILLARY GC/MS

This is a general-purpose method that provides procedures for the determination of organic compounds in finished drinking water, raw source water or water at any stage of treatment. The method is applicable to a wide range of organic compounds that are efficiently partitioned from the water sample onto a C<sub>18</sub> organic phase which is chemically bonded to a solid inorganic matrix, and sufficiently volatile and thermally stable for gas chromatography. Particulate-bound organic matter will not be partitioned, and more than trace levels of particulates may disrupt the partitioning process.

### PAH MIXTURE

*100 ug/mL in Acetone*

- |                          |                             |
|--------------------------|-----------------------------|
| (1) Acenaphthylene       | (9) Dibenzo(a,h)anthracene  |
| (2) Anthracene           | (10) Fluorene               |
| (3) Benzo(a)anthracene   | (11) Indeno(1,2,3-cd)pyrene |
| (4) Benzo(a)pyrene       | (12) 2,4-Dinitrotoluene     |
| (5) Benzo(b)fluoranthene | (13) 2,6-Dinitrotoluene     |
| (6) Benzo(g,h,i)perylene | (14) Naphthalene            |
| (7) Benzo(k)fluoranthene | (15) Phenanthrene           |
| (8) Chrysene             | (16) Pyrene                 |

**Part # 19162      \$30/ 1 mL**

### PCB MIXTURE

*100 ug/mL in Acetone*

- (1) 2-Chlorobiphenyl
- (2) 2,3-Dichlorobiphenyl
- (3) 2,2',3,3',4,4',6-Heptachlorobiphenyl
- (4) 2,2',4,4',5,6'-Hexachlorobiphenyl
- (5) 2,2',3,3',4,5',6,6'-Octachlorobiphenyl
- (6) 2,2',3',4,6-Pentachlorobiphenyl
- (7) 2,2',4,4'-Tetrachlorobiphenyl
- (8) 2,4,5-Trichlorobiphenyl

**Part # 19063      \$45/ 1 mL**

### PERCHLORINATES

*At the stated concentrations (ug/mL) in Acetone*

- |                               |     |
|-------------------------------|-----|
| (1) Hexachlorobenzene         | 100 |
| (2) Hexachlorocyclopentadiene | 100 |
| (3) Pentachlorophenol         | 400 |

**Part # 30029      \$25/ 1 mL**

**ORGANIC COMPOUNDS IN  
DRINKING WATER BY LIQUID-  
SOLID EXTRACTION AND  
CAPILLARY GC/MS**

METHOD

**525.2**

Rev 1.0

**PESTICIDE MIXTURES****MIX #1***100 ug/mL in Hexane: Toluene [1:1]*

- |                    |                         |
|--------------------|-------------------------|
| (1) Aldrin         | (12) Endosulfan sulfate |
| (2) a-BHC          | (13) Endrin             |
| (3) b-BHC          | (14) Endrin aldehyde    |
| (4) d-BHC          | (15) Endrin ketone      |
| (5) g-BHC          | (16) Heptachlor         |
| (6) 4,4'-DDD       | (17) Heptachlor epoxide |
| (7) 4,4'-DDE       | (isomer B)              |
| (8) 4,4'-DDT       | (18) Methoxychlor       |
| (9) Dieldrin       | (19) a-Chlordane        |
| (10) Endosulfan I  | (20) g-Chlordane        |
| (11) Endosulfan II | (21) trans-Nonachlor    |

**Part # 30006 \$35/ 1 mL****MIX #2***100 ug/mL in Acetone*

- (1) Norflurazon
- (2) Alachlor
- (3) Diphenamid
- (4) Pebulate
- (5) Fenarimol
- (6) Vernolate
- (7) Metribuzin
- (8) Triadimefon
- (9) Butylate
- (10) Simazine
- (11) Simetryn
- (12) Prometryn

**Part # 30083 \$30/ 1 mL****MIX #3***100 ug/mL in Acetone*

- (1) Fenamiphos
- (2) Dichlorvos
- (3) Atrazine
- (4) Ethoprop
- (5) Terbufos
- (6) Diazinon

**Part # 30084 \$25/ 1 mL****MIX #4***100 ug/mL in Acetone*

- (1) Bromacil
- (2) Chlorpropham
- (3) Metolachlor

**Part # 30082 \$25/ 1 mL****MIX #5***100 ug/mL in Acetone*

- (1) Fluridone
- (2) MGK 264
- (3) Terbacil
- (4) Carboxin
- (5) Tricyclazole

**Part # 30085 \$25/ 1 mL****MIX #6***100 ug/mL in Acetone*

- (1) Napropamide
- (2) Butachlor
- (3) Molinate
- (4) EPTC
- (5) Cycloate
- (6) Hexazinone
- (7) Atraton
- (8) Prometon
- (9) Ametryn
- (10) Terbutryn
- (11) Propazine

**Part # 30086 \$30/ 1 mL****MIX #7***100 ug/mL in Acetone*

- (1) Methyl paraoxon
- (2) Mevinphos
- (3) Stirofos
- (4) Disulfoton

**Part # 30087 \$25/ 1 mL**

METHOD

**525.2**

Rev 1.0

**ORGANIC COMPOUNDS IN  
DRINKING WATER BY LIQUID-  
SOLID EXTRACTION AND  
CAPILLARY GC/MS**

**PESTICIDE MIX #8***100 ug/mL in Acetone*

- |                     |                               |
|---------------------|-------------------------------|
| (1) Chloroneb       | (8) Isophorone                |
| (2) Chlorobenzilate | (9) Merphos                   |
| (3) Chlorothalonil  | (10) Permethrin (cis & trans) |
| (4) Chlorpyrifos    | (11) Pronamide                |
| (5) Cyanazine       | (12) Trifluralin              |
| (6) Dacthal         | (13) Tebuthiuron              |
| (7) Etridiazole     |                               |

**Part # 30007    \$30/ 1 mL****AROCLOR MIXES***All mixes 1000 ug/mL*

<i>Aroc lor</i>	<i>Part # Hexane</i>	<i>Part # Methanol</i>	<i>Price/ 1 mL</i>
1016	90123	70015	\$22
1221	90124	70016	\$22
1232	90125	70017	\$22
1242	90126	70018	\$22
1248	90127	70019	\$22
1254	90128	70020	\$22
1260	90129	70021	\$22
<b>Set of 7</b>	<b>91130</b>	<b>91131</b>	<b>\$125</b>

**PHTHALATE MIXTURE***100 ug/mL in Acetone*

- (1) Benzyl butyl phthalate
- (2) Di-n-Butylphthalate
- (3) Diethyl phthalate
- (4) Dimethyl phthalate
- (5) bis(2-Ethylhexyl) adipate
- (6) bis(2-Ethylhexyl) phthalate

**Part # 30028    \$25/ 1 mL**

**ORGANIC COMPOUNDS IN  
DRINKING WATER BY LIQUID-  
SOLID EXTRACTION AND  
CAPILLARY GC/MS**

METHOD

**525.2**

*Rev 1.0*

**INTERNAL STANDARDS**

*500 ug/mL in Acetone*

- (1) Acenaphthene-d<sub>10</sub>
- (2) Chrysene-d<sub>12</sub>
- (3) Perylene-d<sub>12</sub>
- (4) Phenanthrene-d<sub>10</sub>

**Part # 30031    \$25/ 1 mL**

**TOXAPHENE SOLUTION**

*2500 ug/mL in Acetone*

**Part # 19079    \$25/ 1 mL**

**FORTIFICATION SOLUTION**

*500 ug/mL in Methylene chloride*

p-Terphenyl-d<sub>14</sub>

**Part # 30032    \$22/ 1 mL**

**TUNING STANDARD**

*50 ug/mL in Methylene chloride*

Decafluorotriphenylphosphine

**Part # 30033    \$22/ 1 mL**

**ADIPATE & PHTHALATE**

*1000 ug/mL in Acetone*

- (1) Bis(2-ethylhexyl) adipate
- (2) Bis(2-ethylhexyl) phthalate

**Part # 91832    \$25/ 1 mL**

**BENZO(A)PYRENE**

*1000 ug/mL in Acetone*

**Part # 91833    \$22/ 1 mL**

METHOD

**526****DETERMINATION OF SELECTED  
SEMIVOLATILE ORGANIC  
COMPOUNDS IN DRINKING WATER  
BY SOLID PHASE EXTRACTION AND  
CAPILLARY COLUMN (GC/MS)**

This is a gas chromatography/mass spectrometry (GC/MS) method for the determination of selected semivolatile organic compounds in raw and finished drinking waters. This method is applicable to the organic compounds which are efficiently extracted from water using a polystyrene divinylbenzene solid phase sorbent, and are sufficiently volatile and thermally stable for gas chromatography.

**EPA METHOD 526 MIX***1000 ug/mL in Methylene chloride*

- (1) Acetochlor
- (2) Cyanazine
- (3) Diazinon
- (4) 2,4-Dichlorophenol
- (5) Azobenzene
- (6) Disulfoton
- (7) Fonofos
- (8) Nitrobenzene
- (9) Prometon
- (10) Terbufos
- (11) 2,4,6-Trichlorophenol

**Part # 93244 \$75/1 mL****INTERNAL STANDARD***500 ug/mL in Acetone*

- (1) Acenaphthene-d<sub>10</sub>
- (2) Perylene-d<sub>12</sub>
- (3) Phenanthrene-d<sub>10</sub>

**Part # 37031 \$25/ 1 mL****SURROGATE STANDARD***500 ug/mL in Acetone*

- (1) Triphenyl phosphate
- (2) 1,3-Dimethyl-2-nitrobenzene

**Part # 93187 \$25/ 1 mL****TUNING STANDARD***2500 ug/mL in Methylene chloride*

DFTPP (Decafluorotriphenylphosphine)

**Part # 43126 \$25/ 1 mL**

**DETERMINATION OF PHENOLS IN  
DRINKING WATER BY SOLID PHASE  
EXTRACTION AND CAPILLARY  
COLUMN (GC/MS)**

METHOD

**528**

This method provides procedures for the determination of phenols in finished drinking water. The method may be applicable to untreated source waters and other types of water samples, but it has not yet been evaluated for these uses. The method is applicable to a variety of phenols that are efficiently partitioned from the water sample onto a modified polystyrene divinylbenzene solid phase sorbent, and sufficiently volatile and thermally stable for gas chromatography.

**EPA METHOD 528 MIX***Varied ug/mL in Methylene chloride*

(1)	4-Chloro-3-methylphenol	1000
(2)	2-Chlorophenol	1000
(3)	2,4-Dichlorophenol	1000
(4)	2,6-Dichlorophenol	1000
(5)	2,4-Dimethylphenol	1000
(6)	2,4-Dinitrophenol	5000
(7)	2-Methyl-4,6-dinitrophenol	1000
(8)	2-Methylphenol (o-Cresol)	1000
(9)	2-Nitrophenol	1000
(10)	4-Nitrophenol	1000
(11)	Pentachlorophenol	1000
(12)	Phenol	1000
(13)	2,4,6-Trichlorophenol	1000

**Part # 92969     \$75/ 1 mL****EPA METHOD 528 FORTIFICATION SOLUTION***Varied ug/mL in Methanol*

(1)	2,4-Dimethylphenol-d <sub>3</sub>	100
(2)	2-Chlorophenol-d <sub>4</sub>	100
(3)	2,4,6-Tribromophenol	250

**Part # 93245     \$50/ 1 mL****EPA METHOD 528 INTERNAL STANDARD***Varied ug/mL in Methylene chloride*

(1)	1,2-Dimethyl-3-nitrobenzene	100
(2)	2,3,4,5-Tetrachlorophenol	200

**Part # 93188     \$30/ 1 mL**



METHOD

**529**

Rev 1.0

**DETERMINATION OF SELECTED  
SEMIVOLATILE ORGANIC  
COMPOUNDS IN DRINKING WATER  
BY SOLID PHASE EXTRACTION AND  
CAPILLARY COLUMN (GC/MS)**

Method 529 employs SPE and capillary column GC/MS for the analysis of explosives and related nitro-compounds in drinking water. The compounds listed below are considered aptly volatile and thermally stable for determination by gas chromatography.

**All solutions are in Acetonitrile**

<b>Part #</b>	<b>Compound</b>	<b>Conc. ug/mL</b>	<b>Price /mL</b>
79069	2-Amino-4,6-dinitrotoluene	1000	\$22
79070	4-Amino-2,6-dinitrotoluene	1000	\$22
79071	1,3-Dinitrobenzene	1000	\$22
79072	2,4-Dinitrotoluene	1000	\$22
79073	2,6-Dinitrotoluene	1000	\$22
79074	HMX	1000	\$22
79075	Nitrobenzene	1000	\$22
79076	2-Nitrotoluene	1000	\$22
79077	3-Nitrotoluene	1000	\$22
79078	4-Nitrotoluene	1000	\$22
79079	RDX	1000	\$22
79080	Tetryl	1000	\$22
79081	1,3,5-Trinitrobenzene	1000	\$22
71772	3,5-Dinitroaniline	1000	\$22

**INTERNAL STANDARD**

*1000 ug/mL in Methanol*

3,4-Dinitrotoluene

**Part # 71773    \$22/ 1 mL**

**SURROGATE STANDARD**

*1000 ug/mL in Methanol*

1,3,5-Trimethyl-2-nitrobenzene

**Part # 72553    \$22/ 1 mL**

**SURROGATE STANDARD**

*1000 ug/mL in Methanol*

1,2,4-Trimethyl-2-nitrobenzene

**Part # 72552    \$22/ 1 mL**

**SURROGATE STANDARD**

*1000 ug/mL in Methanol*

Nitrobenzene-d5

**Part # 70229    \$22/ 1 mL**

**DETERMINATION OF SELECTED SEMIVOLATILE ORGANIC COMPOUNDS IN DRINKING WATER BY SOLID PHASE EXTRACTION AND CAPILLARY COLUMN (GC/MS)**

METHOD

**529**

*Rev 1.0*

**EPA METHOD 529 CALIBRATION STANDARD MIX #1**

*100 ug/mL In Acetonitrile*

- (1) 2-Amino-4,6-dinitrotoluene
- (2) 1,3-Dinitrobenzene
- (3) 2,4-Dinitrotoluene
- (4) HMX
- (5) Nitrobenzene
- (6) RDX
- (7) 1,3,5-Trinitrobenzene
- (8) 2,4,6-Trinitrotoluene (TNT)

**Part # 83525 \$45/ 1 mL**

**EPA METHOD 529 CALIBRATION STANDARD MIX #2**

*100 ug/mL In Acetonitrile*

- (1) 4-Amino-2,6-dinitrotoluene
- (2) 2,6-Dinitrotoluene
- (3) 2-Nitrotoluene
- (4) 3-Nitrotoluene
- (5) 4-Nitrotoluene
- (6) Tetryl

**Part # 83526 \$45/ 1 mL**

**3,5-Dinitroaniline**

*1000 ug/mL in Acetonitrile*

**Part # 71772 \$22/ 1 mL**

**COMBINED CALIBRATION STANDARD**

*Varied ug/mL In Acetonitrile*

- |      |                             |     |
|------|-----------------------------|-----|
| (1)  | 2-Amino-4,6-dinitrotoluene  | 100 |
| (2)  | 4-Amino-2,6-dinitrotoluene  | 100 |
| (3)  | 1,3-Dinitrobenzene          | 100 |
| (4)  | 2,4-Dinitrotoluene          | 100 |
| (5)  | 2,6-Dinitrotoluene          | 100 |
| (6)  | Nitrobenzene                | 100 |
| (7)  | 2-Nitrotoluene              | 200 |
| (8)  | 3-Nitrotoluene              | 200 |
| (9)  | 4-Nitrotoluene              | 200 |
| (10) | 1,3,5-Trinitrobenzene       | 100 |
| (11) | 2,4,6-Trinitrotoluene (TNT) | 100 |
| (12) | 4-Nitroaniline              | 200 |
| (13) | HMX                         | 200 |
| (14) | RDX                         | 200 |
| (15) | Tetryl                      | 200 |

**Part # 93466 \$60/ 1 mL**

METHOD

**531.1**

Rev 3.0

## N-METHYLCARBAMOYLOXIMES AND N-METHYLCARBAMATES IN WATER BY HPLC WITH POST COLUMN DERIVATIZATION

**Individual Analytes @ [100 ug/mL] \$22/ 1 mL**

		Part#
(1)	Aldicarb	30141
(2)	Aldicarb sulfone	30241
(3)	Aldicarb sulfoxide	30341
(4)	Baygon (Propoxur)	30441
(5)	Carbaryl	30541
(6)	Carbofuran	30641
(7)	3-Hydroxycarbofuran	30741
(8)	Methiocarb	30841
(9)	Methomyl	30941
(10)	Oxamyl	31041

**Set of 10 x 1 mL @ [100 ug/mL] Part # 30041 in Methanol \$90**

### EPA METHOD 531.1 MIX

*100 ug/mL in Methanol*

(1)	Aldicarb	(6)	Carbofuran
(2)	Aldicarb sulfone	(7)	3-Hydroxycarbofuran
(3)	Aldicarb sulfoxide	(8)	Methiocarb
(4)	Baygon	(9)	Methomyl
(5)	Carbaryl	(10)	Oxamyl

**Part # 30042 \$35/ 1 mL**

### PERFORMANCE CHECK SOLUTION

*At stated concentrations in Methanol*

<b>Component</b>		<b>ug/mL</b>
(1)	Aldicarb sulfoxide	100
(2)	4-Bromo-3,5-dimethylphenyl-N-methylcarbamate	10
(3)	3-Hydroxycarbofuran	2
(4)	Methiocarb	20

**Part # 30043 \$30/ 1 mL**

### CARBAMATES & CARBAMOYLOXIMES

*100 ug/mL in Methanol*

- (1) Aldicarb
- (2) Aldicarb sulfone
- (3) Aldicarb sulfoxide
- (4) Carbofuran
- (5) Methomyl
- (6) Oxamyl (Vydate)

**Part # 91831 \$25/ 1 mL**

### INTERNAL STANDARD

*1000 ug/mL in Methanol*

4-Bromo-3,5-dimethylphenyl-N-methylcarbamate

**Part # 70502 \$22/1 mL**

**N-METHYLCARBAMOYLOXIMES  
AND N-METHYLCARBAMATES  
IN WATER BY HPLC WITH POST  
COLUMN DERIVATIZATON**

METHOD

**531.2**

**Individual Analytes @ [100 ug/mL] \$22/ 1 mL**

	<b>Part#</b>
(1) Aldicarb	30141
(2) Aldicarb sulfone	30241
(3) Aldicarb sulfoxide	30341
(4) Baygon (Propoxur)	30441
(5) Carbaryl	30541
(6) Carbofuran	30641
(7) 3-Hydroxycarbofuran	30741
(8) Methiocarb	30841
(9) Methomyl	30941
(10) Oxamyl	31041
(11) 1-Naphthol	31142

**EPA METHOD 531.2 MIX**

*100 ug/mL in Methanol*

(1) Aldicarb	(6) Carbofuran
(2) Aldicarb sulfone	(7) 3-Hydroxycarbofuran
(3) Aldicarb sulfoxide	(8) Methiocarb
(4) Baygon	(9) Methomyl
(5) Carbaryl	(10) Oxamyl
	(11) 1-Naphthol

**Part # 34042 \$35/ 1 mL**

**SURROGATE STANDARD SOLUTION**

*1000 ug/mL in Methanol*

4-Bromo-3,5-dimethylphenyl-N-methylcarbamate

**Part # 70502 \$22/1 mL**

METHOD

**532***Rev 1.0***DETERMINATION OF PHENYLUREA  
COMPOUNDS IN DRINKING WATER BY  
SOLID PHASE EXTRACTION AND HIGH  
PERFORMANCE LIQUID  
CHROMATOGRAPHY WITH UV DETECTION**

This is a high performance liquid chromatographic (HPLC) method for the determination of phenylurea pesticides in drinking waters. This method is applicable to phenylurea compounds that are efficiently extracted from the water using a C18 solid phase cartridge or disk.

**METHOD 532 STANDARD***200 ug/mL each in Methanol:Acetone [9:1]*

- (1) Diflubenuron
- (2) Diuron
- (3) Fluometuron
- (4) Linuron
- (5) Propanil
- (6) Siduron
- (7) Tebuthiuron
- (8) Thidiazuron

**Part # 30196    \$30/ 1 mL****SURROGATE STANDARD***200 ug/mL in Methanol:Acetonitrile*

- (1) Monuron
- (2) Carbazole

**Part # 30197    \$25/ 1 mL**

**GLYPHOSATE IN DRINKING WATER  
BY HPLC, POST-COLUMN  
DERIVATIZATION, AND  
FLUORESCENCE DETECTION**

METHOD

**547**

This method describes a procedure for the identification and measurement of glyphosate in drinking water matrices.

**GLYPHOSATE STANDARD**

*1000 ug/mL in Water*

N-Phosphonomethyl glycine

**Part # 70503     \$22/ 1 mL**

**WS / WP / DMRQA  
NELAC  
SDWA/ CWA/ RCRA**

***PT Samples  
can be found in the  
GREEN Section***

METHOD

**548**

**DETERMINATION OF ENDOTHALL  
IN DRINKING WATER BY LIQUID-  
SOLID EXTRACTION AND  
GC/ECD DETECTION**

This method covers the determination of endothall in drinking water sources and finished drinking water.

**ENDOTHALL STANDARD SOLUTION**

*1000 ug/mL in Acetone*

**Part # 70504    \$22/ 1 mL**

**INTERNAL STANDARD SOLUTION**

*1000 ug/mL in Toluene*

Endosulfan I

**Part # 70167    \$22/ 1 mL**

**CALIBRATION SOLUTION #1**

*1000 ug/mL in Methyl tert-butyl ether*

Endothall-PFPH

**Part # 70505    \$22/ 1 mL**

**CALIBRATION SOLUTION #2**

*1000 ug/mL in Methanol*

Dimethyl endothall

**Part # 71103    \$22/ 1 mL**

**DETERMINATION OF ENDOTHALL IN  
DRINKING WATER BY ION EXCHANGE  
EXTRACTION, ACIDIC METHANOL  
METHYLATION AND GAS  
CHROMATOGRAPHY/MASS SPECTROMETRY**

METHOD

**548.1**

Rev 1.0

This method is for the identification and simultaneous measurement of endothall in drinking water sources and finished drinking water. This is a gas chromatographic/mass spectrometric (GC/MS) method. However, a flame ionization detector (FID) may be utilized for the determination, but must be supported by an additional analysis using a confirmatory gas chromatographic column.

**STOCK ENDOTHALL STANDARD SOLUTION**

*1000 ug/mL in Acetone*

**Part # 70504    \$22/ 1 mL**

**INTERNAL STANDARD SOLUTION**

*1000 ug/mL in Methanol*

Acenaphthene-d<sub>10</sub>

**Part # 79002    \$22/ 1 mL**

**CALIBRATION SOLUTION #1**

*1000 ug/mL in Methyl tert-butyl ether*

Endothall-PFPH

**Part # 70505    \$22/ 1 mL**

**CALIBRATION SOLUTION #2**

*1000 ug/mL in Methanol*

Dimethyl endothall

**Part # 71103    \$22/ 1 mL**

**TUNING STANDARD**

*2500 ug/mL in Methylene chloride*

DFTPP (Decafluorotriphenylphosphine)

**Part # 43126    \$22/ 1 mL**



METHOD

**549.1/  
549.2**

**DETERMINATION OF DIQUAT AND  
PARAQUAT IN DRINKING WATER BY  
LIQUID-SOLID EXTRACTION AND  
HPLC WITH UV DETECTION**

This is a high performance liquid chromatography (HPLC) method for the determination of diquat and paraquat in drinking water sources and finished drinking water.

**ANALYTES**

*2000 ug/mL each in Water*

- (1) Diquat
- (2) Paraquat

**Part # 31079    \$25/ 1 mL**

**DIQUAT**

*100 ug/mL Water*

**Part # 90600    \$22/ 1 mL**

**PARAQUAT**

*100 ug/mL in Water*

**Part # 91951    \$22/ 1 mL**

**POLYCYCLIC AROMATIC  
HYDROCARBONS IN DRINKING  
WATER BY HPLC WITH UV/  
FLUORESCENCE DETECTION**

METHOD

**550/  
550.1**

This method describes a procedure for the determination of certain polycyclic aromatic hydrocarbons (PAHs) in drinking water sources and finished drinking water.

**ANALYTES**

*At stated concentrations (ug/mL) in Acetonitrile*

(1) Acenaphthene	1000
(2) Acenaphthylene	1000
(3) Anthracene	50
(4) Benzo(a)anthracene	1
(5) Benzo(a)pyrene	5
(6) Benzo(b)fluoranthene	1
(7) Benzo(g,h,i)perylene	5
(8) Benzo(k)fluoranthene	1
(9) Chrysene	50
(10) Dibenzo(a,h)anthracene	10
(11) Fluoranthene	50
(12) Fluorene	100
(13) Indeno(1,2,3-cd)pyrene	10
(14) Naphthalene	1000
(15) Phenanthrene	50
(16) Pyrene	50

**Part # 30051      \$35/ 1 mL**

**HIGH CONCENTRATION ANALYTES MIX**

*Varied concentrations (ug/mL) in Methylene chloride:Methanol [1:1]*

(1) Acenaphthene	1000
(2) Acenaphthylene	1000
(3) Anthracene	100
(4) Benzo(a)anthracene	100
(5) Benzo(a)pyrene	100
(6) Benzo(b)fluoranthene	100
(7) Benzo(g,h,i)perylene	100
(8) Benzo(k)fluoranthene	100
(9) Chrysene	100
(10) Dibenzo(a,h)anthracene	100
(11) Fluoranthene	100
(12) Fluorene	100
(13) Indeno(1,2,3-cd)pyrene	100
(14) 2-Methylnaphthalene	1000
(15) Naphthalene	1000
(16) Phenanthrene	100
(17) Pyrene	100

**Part # 92201      \$40/ 1 mL**

METHOD

**551**

## CHLORINATED DISINFECTION BY-PRODUCTS AND CHLORINATED SOLVENTS IN DRINKING WATER BY GC/ECD

**ANALYTES MIX #1***100 ug/mL in MTBE*

- (1) Bromochloroacetonitrile
- (2) Bromodichloromethane
- (3) Bromoform
- (4) Carbon tetrachloride
- (5) Chloroform
- (6) Chloropicrin
- (7) 1,2-Dibromo-3-chloropropane
- (8) Dibromoacetonitrile
- (9) Dibromochloromethane
- (10) 1,2-Dibromoethane
- (11) Dichloroacetonitrile
- (12) 1,1-Dichloropropanone-2
- (13) Tetrachloroethene
- (14) Trichloroacetonitrile
- (15) 1,1,1-Trichloroethane
- (16) Trichloroethene
- (17) 1,1,1-Trichloroacetone

**Part # 32052    \$35/ 1 mL****ANALYTES MIX #2***100 ug/mL in MTBE*

- (1) Bromochloroacetonitrile
- (2) Bromodichloromethane
- (3) Bromoform
- (4) Carbon tetrachloride
- (5) Chloroform
- (6) Chloropicrin
- (7) 1,2-Dibromo-3-chloropropane
- (8) Dibromoacetonitrile
- (9) Dibromochloromethane
- (10) 1,2-Dibromoethane
- (11) Dichloroacetonitrile
- (12) 1,1-Dichloropropanone-2
- (13) Tetrachloroethene
- (14) Trichloroacetonitrile
- (15) 1,1,1-Trichloroethane
- (16) Trichloroethene
- (17) 1,1,1-Trichloroacetone
- (18) Chloral hydrate

**Part # 32053    \$35/ 1 mL****ANALYTES MIX A***2000 ug/mL in Acetone*

- (1) Bromodichloromethane
- (2) Bromoform
- (3) Carbon tetrachloride
- (4) Chloroform
- (5) Dibromochloromethane
- (6) 1,2-Dibromo-3-chloropropane
- (7) 1,2-Dibromoethane
- (8) Tetrachloroethene
- (9) 1,1,1-Trichloroethane
- (10) Trichloroethene

**Part # 30094    \$30/ 1 mL****ANALYTES MIX B***2000 ug/mL in MTBE*

- (1) Bromochloroacetonitrile
- (2) Chloropicrin
- (3) Dibromoacetonitrile
- (4) Dichloroacetonitrile
- (5) 1,1-Dichloro-2-propanone
- (6) Trichloroacetonitrile
- (7) 1,1,1-Trichloro-2-propanone

**Part # 30095    \$30/ 1 mL**

**CHLORINATION DISINFECTION BY-  
PRODUCTS, CHLORINATED SOLVENTS, AND  
HALOGENATED PESTICIDES/HERBICIDES IN  
DRINKING WATER BY  
LIQ/LIQ EXTRACTION GC/ECD**

METHOD

**551.1****ANALYTES MIX #1***100 ug/mL in MTBE*

- (1) Bromochloroacetonitrile
- (2) Bromodichloromethane
- (3) Bromoform
- (4) Carbon tetrachloride
- (5) Chloroform
- (6) Chloropicrin
- (7) 1,2-Dibromo-3-chloropropane
- (8) Dibromoacetonitrile
- (9) Dibromochloromethane
- (10) 1,2-Dibromoethane
- (11) Dichloroacetonitrile
- (12) 1,1-Dichloropropanone-2
- (13) Tetrachloroethene
- (14) Trichloroacetonitrile
- (15) 1, 1, 1 -Trichloroethane
- (16) Trichloroethene
- (17) 1,1,1-Trichloroacetone
- (18) 1,1,2-Trichloroethane
- (19) 1,2,3-Trichloropropane

**Part # 30098 \$35/ 1 mL****ANALYTES MIX C***1000 ug/mL in Acetone*

- (1) Alachlor
- (2) Atrazine
- (3) Bromacil
- (4) Cyanazine
- (5) Endrin
- (6) Endrin aldehyde
- (7) Endrin ketone
- (8) Heptachlor
- (9) Heptachlor epoxide
- (10) Hexachlorobenzene
- (11) Hexachlorocyclopentadiene
- (12) g-BHC
- (13) Metolachlor
- (14) Metribuzin
- (15) Methoxychlor
- (16) Trifluralin
- (17) Simazine

**Part # 30116 \$35/ 1 mL****ANALYTES MIX #2***100 ug/mL in MTBE*

- (1) Bromochloroacetonitrile
- (2) Bromodichloromethane
- (3) Bromoform
- (4) Carbon tetrachloride
- (5) Chloroform
- (6) Chloropicrin
- (7) 1,2-Dibromo-3-chloropropane
- (8) Dibromoacetonitrile
- (9) Dibromochloromethane
- (10) 1,2-Dibromoethane
- (11) Dichloroacetonitrile
- (12) 1,1-Dichloropropanone-2
- (13) Tetrachloroethene
- (14) Trichloroacetonitrile
- (15) 1, 1, 1 -Trichloroethane
- (16) Trichloroethene
- (17) 1,1,1-Trichloroacetone
- (18) Chloral hydrate
- (19) 1,1,2-Trichloroethane
- (20) 1,2,3-Trichloropropane

**Part # 30099 \$35/ 1 mL****ANALYTES MIX D***1000 ug/mL in MTBE*

Chloral hydrate

**Part # 70335 \$22/ 1 mL**

METHOD

**551.1**

(CONTINUED)

**CHLORINATION DISINFECTION BY-  
PRODUCTS, CHLORINATED SOLVENTS, AND  
HALOGENATED PESTICIDES/HERBICIDES IN  
DRINKING WATER BY  
LIQ/LIQ EXTRACTION GC/ECD**

**PERFORMANCE CHECK SOLUTION #1***At stated concentrations in MTBE.*

Component	ug/mL
(1) g-BHC	0.2
(2) Hexachlorocyclopentadiene	20
(3) Bromodichloromethane	30
(4) Trichloroethene	30
(5) Bromacil	90
(6) Alachlor	90
(7) Endrin	30

**Part # 30104     \$25/ 1 mL****PERFORMANCE CHECK SOLUTION #2***At stated concentrations in MTBE.*

Component	ug/mL
(1) g-BHC	0.2
(2) Hexachlorocyclopentadiene	20
(3) Bromodichloromethane	30
(4) Trichloroethene	30

**Part # 30115     \$25/ 1 mL****INTERNAL STANDARD***1000 ug/mL in Acetone*

4-Bromofluorobenzene

**Part # 30103     \$22/ 1 mL****SURROGATE STANDARD***1000 ug/mL in Acetone*

Decafluorobiphenyl

**Part # 30102     \$22/ 1 mL**

## HALOACETIC ACIDS IN DRINKING WATER BY LIQUID- LIQUID EXTRACTION, DERIVATIZATION, & GC/ECD

METHOD

**552**

This is a gas chromatographic method applicable to the determination of halogenated acetic acids in drinking water, groundwater, raw water and water at any intermediate stage of treatment. In addition, the chlorinated phenols listed here may be analyzed by this method.

### ANALYTES - Methyl Derivatives

*100 ug/mL in Methyl tert-butyl ether*

- |                             |                               |
|-----------------------------|-------------------------------|
| (1) Methyl chloroacetate    | (5) Methyl bromochloroacetate |
| (2) Methyl dichloroacetate  | (6) Methyl dibromoacetate     |
| (3) Methyl trichloroacetate | (7) 2,4-Dichloroanisole       |
| (4) Methyl bromoacetate     | (8) 2,4,6-Trichloroanisole    |

**Part # 30053      \$35/ 1 mL**

### ANALYTES - Free Acids

*100 ug/mL in Methyl tert-butyl ether*

- |                          |                            |
|--------------------------|----------------------------|
| (1) Chloroacetic acid    | (5) Bromochloroacetic acid |
| (2) Dichloroacetic acid  | (6) Dibromoacetic acid     |
| (3) Trichloroacetic acid | (7) 2,4-Dichlorophenol     |
| (4) Bromoacetic acid     | (8) 2,4,6-Trichlorophenol  |

**Part # 30054      \$35/ 1 mL**

### WS DISINFECTION BY-PRODUCTS (FREE ACIDS)

*100 ug/mL in MTBE*

- (1) Bromochloroacetic acid
- (2) Dibromoacetic acid
- (3) Dichloroacetic acid
- (4) Monobromoacetic acid
- (5) Monochloroacetic acid
- (6) Trichloroacetic acid

**Part # 91836      \$35/ 1 mL**

### WS DISINFECTION BY-PRODUCTS (METHYL ESTERS)

*100 ug/mL in MTBE*

- (1) Methyl bromochloroacetate
- (2) Methyl dibromoacetate
- (3) Methyl dichloroacetate
- (4) Methyl monobromoacetate
- (5) Methyl monochloroacetate
- (6) Methyl trichloroacetate

**Part # 91837      \$35/ 1 mL**

### Surrogate Standards

*2000 ug/mL in Methanol  
Methyl Derivative*

Methyl-3,5-dichlorobenzoate

**Part # 30057      \$25/ 1 mL**

*2000 ug/mL in MTBE  
Free Acid*

3,5-Dichlorobenzoic acid

**Part # 83584      \$25/ 1 mL**

### Internal Standard

*2000 ug/mL in MTBE*

1,2,3-Trichloropropane

**Part # 30105      \$25/ 1 mL**

**Call Toll-Free 800-368-1131**

**METHOD**  
**552.1**

Rev 1.0

**DETERMINATION OF HALOACETIC ACIDS  
 AND DALAPON IN DRINKING WATER BY  
 ION-EXCHANGE LIQUID-SOLID  
 EXTRACTION AND GC-ECD**

This is a gas chromatographic (GC) method applicable to the determination of the listed halogenated acetic acids in drinking water, groundwater, raw water and water at any intermediate treatment stage. In addition, the chlorinated herbicide, Dalapon, is determined using this method. This is a liquid-solid extraction method and is designed as a simplified alternative to the liquid-liquid extraction approach of Method 552 for the haloacetic acids. This method also provides a much superior technique for the determination of the herbicide, Dalapon, compared to the complex herbicide procedure described in Method 515.1 The procedure also represents a major step in pollution prevention in methods development by eliminating the use of large volumes of organic solvents.

**ANALYTES - Methyl Derivatives**
*100 ug/mL in Methyl tert-butyl ether*

- |                             |                               |
|-----------------------------|-------------------------------|
| (1) Methyl chloroacetate    | (5) Methyl bromochloroacetate |
| (2) Methyl dichloroacetate  | (6) Methyl dibromoacetate     |
| (3) Methyl trichloroacetate | (7) Dalapon methyl ester      |
| (4) Methyl bromoacetate     |                               |

**Part # 31053     \$30/ 1 mL**
**ANALYTES - Free Acids**
*100 ug/mL in Methyl tert-butyl ether*

- |                          |                            |
|--------------------------|----------------------------|
| (1) Chloroacetic acid    | (5) Bromochloroacetic acid |
| (2) Dichloroacetic acid  | (6) Dibromoacetic acid     |
| (3) Trichloroacetic acid | (7) Dalapon                |
| (4) Bromoacetic acid     |                            |

**Part # 31054     \$30/ 1 mL**
**INTERNAL STANDARD**
*2000 ug/mL in MTBE*

1,2,3-Trichloropropane

**Part # 30105     \$25/ 1 mL**
**SURROGATE STANDARDS**
*2000 ug/mL in Methyl tert-butyl ether*
*Free Acid*

2-Bromopropionic acid

**Part # 31056     \$25/ 1 mL**
*Methyl Derivative*

Methyl-2-bromopropionate

**Part # 31057     \$25/ 1 mL**

**DETERMINATION OF HALOACETIC ACIDS  
AND DALAPON IN DRINKING WATER BY  
LIQUID-LIQUID EXTRACTION,  
DERIVATIZATION AND  
GC-ECD**

METHOD  
**552.2/  
552.3**

This is a gas chromatographic (GC) method applicable to the determination of the listed halogenated acetic acids in drinking water, groundwater, raw water and water at any intermediate treatment stage. In addition, the chlorinated herbicide, Dalapon, is determined using this method.

### ANALYTES - Methyl Derivative

*100 ug/mL in Methyl tert-butyl ether*

- |                             |                                 |
|-----------------------------|---------------------------------|
| (1) Methyl chloroacetate    | (6) Methyl tribromoacetate      |
| (2) Methyl dichloroacetate  | (7) Methyl bromochloroacetate   |
| (3) Methyl trichloroacetate | (8) Methyl dibromochloroacetate |
| (4) Methyl bromoacetate     | (9) Methyl bromodichloroacetate |
| (5) Methyl dibromoacetate   | (10) Dalapon methyl ester       |

**Part # 30106    \$30/ 1 mL**

### ANALYTES - Free Acids

*100 ug/mL in Methyl tert-butyl ether*

- |                          |                              |
|--------------------------|------------------------------|
| (1) Chloroacetic acid    | (6) Tribromoacetic acid      |
| (2) Dichloroacetic acid  | (7) Bromochloroacetic acid   |
| (3) Trichloroacetic acid | (8) Dibromochloroacetic acid |
| (4) Bromoacetic acid     | (9) Bromodichloroacetic acid |
| (5) Dibromoacetic acid   | (10) Dalapon                 |

**Part # 30107    \$30/ 1 mL**

### INTERNAL STANDARD

*2000 ug/mL in MTBE*

1,2,3-Trichloropropane

**Part # 30105    \$25/ 1 mL**

### METHOD 552.2 SURROGATE STANDARDS

*2000 ug/mL in Methyl tert-butyl ether*

*Free Acid*

2,3-Dibromopropionic acid

*Methyl Derivative*

Methyl-2,3-dibromopropionate

**Part # 30108    \$25/ 1 mL**

**Part # 30109    \$25/ 1 mL**

### METHOD 552.3 SURROGATE STANDARD

*2000 ug/mL in MTBE*

2-Bromobutanoic acid

**Part # 30125    \$25/ 1 mL**



METHOD

**553***Rev 1.0.1***DETERMINATION OF BENZIDINES AND  
NITROGEN-CONTAINING PESTICIDES IN WATER  
BY LIQUID-LIQUID EXTRACTION AND REVERSE  
PHASE HIGH PERFORMANCE LIQUID  
CHROMATOGRAPHY/PARTICLE BEAM/MASS  
SPECTROMETRY**

This is a general purpose method that provides procedures for determination of benzidines and nitrogen-containing pesticides in water and wastewater. The method is applicable to a wide range of compounds that are efficiently partitioned from a water sample into methylene chloride or onto a liquid-solid extraction device. The compounds must also be amenable to separation on a reverse phase liquid chromatography column and transferable to the mass spectrometer with a particle beam interface. Particulate bound organic matter will not be partitioned onto the liquid-solid extraction system, and more than trace levels of particulates in the water may disrupt the partitioning process.

**ANALYTES***1000 ug/mL in Acetonitrile: Water (1:1)*

- (1) Benzidine
- (2) Benzoylprop ethyl
- (3) Caffeine
- (4) Carbaryl
- (5) o-Chlorophenyl thiourea
- (6) 3,3'-Dichlorobenzidine
- (7) 3,3'-Dimethoxybenzidine
- (8) 3,3'-Dimethylbenzidine
- (9) Diuron
- (10) Ethylene thiourea
- (11) Linuron
- (12) Monuron
- (13) Rotenone
- (14) Siduron

**Part # 30080    \$40/ 1 mL**

## DETERMINATION OF CHLORINATED ACIDS IN WATER BY HPLC WITH A PHOTODIODE ARRAY UV DETECTOR

METHOD

**555**

This is a high performance liquid chromatographic (HPLC) method for the determination of certain chlorinated acids in groundwater and finished drinking water.

### INDIVIDUAL ANALYTES

*Price: \$25 each. Quantity: 1 mL Concentration: 2000 ug/mL*

	<b>(Underivatized in MTBE)</b>	<b>Part #</b>
(1)	Acifluorfen	83580
(2)	Bentazon	83581
(3)	Chloramben	83582
(4)	2, 4-D	83562
(5)	2,4-DB	83563
(6)	Dicamba	83567
(7)	3,5-Dichlorobenzoic acid	83584
(8)	Dichlorprop	83568
(9)	Dinoseb	83569
(10)	MCPA	83570
(11)	MCPP	83571
(12)	4-Nitrophenol	83585
(13)	Pentachlorophenol	83586
(14)	Picloram [1000 ug/mL]	78014
(15)	2,4,5-T	83564
(16)	2,4,5-TP	83565

**COMPLETE SET of all 16 Single Component Solutions**

**Part # 30555 \$200**

**Mixture of Analytes [100 ug/mL] in MTBE**

**Part # 83600 \$35/ 1 mL**

### FREE ACIDS HERBICIDES MIX

*100 ug/mL in MTBE*

- (1) 2,4-D
- (2) 2,4,5-TP, "Silvex"
- (3) Pentachlorophenol
- (4) Acifluorfen
- (5) Dalapon
- (6) Dicamba
- (7) Dinoseb
- (8) Picloram

**Part # 92102 \$35/ 1 mL**

METHOD

**601****PURGEABLE HALOCARBONS IN  
WASTEWATER BY PURGE AND  
TRAP GAS CHROMATOGRAPHY**

This is a purge and trap gas chromatographic method applicable to the determination of purgeable halocarbons in municipal and industrial discharges as provided for under 40 CFR 136.1. See Method 624 for GC/MS conditions.

**EPA METHOD 601 ANALYTES****PURGEABLES MIX #1**

- |                              |                                |
|------------------------------|--------------------------------|
| (1) Carbon tetrachloride     | (10) 1,2-Dichloropropane       |
| (2) Chlorobenzene            | (11) cis-1,3-Dichloropropene   |
| (3) 1,2-Dichlorobenzene      | (12) trans-1,3-Dichloropropene |
| (4) 1,4-Dichlorobenzene      | (13) Methylene chloride        |
| (5) 1,3-Dichlorobenzene      | (14) 1,1,2,2-Tetrachloroethane |
| (6) 1,1-Dichloroethane       | (15) Tetrachloroethene         |
| (7) 1,2-Dichloroethane       | (16) 1,1,1-Trichloroethane     |
| (8) trans-1,2-Dichloroethene | (17) 1,1,2-Trichloroethane     |
| (9) 1,1-Dichloroethene       | (18) Trichloroethene           |

**Part # 40001 200 ug/mL in Methanol. \$30/ 1 mL**

**Part # 42001 2000 ug/mL in Methanol. \$35/ 1 mL**

**PURGEABLES MIX #2**

- |                          |                          |
|--------------------------|--------------------------|
| (1) Chloroform           | (3) Bromodichloromethane |
| (2) Dibromochloromethane | (4) Bromoform            |

**Part # 40002 200 ug/mL in Methanol. \$25/ 1 mL**

**Part # 44002 2000 ug/mL in Methanol. \$30/ 1 mL**

**PURGEABLES MIX #3**

- |                   |                             |
|-------------------|-----------------------------|
| (1) Bromomethane  | (4) Dichlorodifluoromethane |
| (2) Chloromethane | (5) Trichlorofluoromethane  |
| (3) Chloroethane  | (6) Vinyl chloride          |

**Part # 30002 200 ug/mL in Methanol. \$25/ 1 mL**

**Part # 30058 2000 ug/mL in Methanol. \$25/ 1 mL**

**PURGEABLES MIX #4**

2-Chloroethyl vinyl ether

**Part # 40003 200 ug/mL in Methanol. \$22/ 1 mL**

**Part # 82408 2000 ug/mL in Methanol. \$25/ 1 mL**

**PURGEABLE HALOCARBONS IN  
WASTEWATER BY PURGE AND  
TRAP GAS CHROMATOGRAPHY**

METHOD

**601***Continued***INTERNAL STANDARD MIX for METHOD 601***20,000 ug/mL in Methanol*

- (1) Bromochloromethane
- (2) 2-Bromo-1-chloropropane
- (3) 1,4-Dichlorobutane

**Part # 19094     \$25/ 1 mL**

**COMPLETE SET OF METHOD 601 ANALYTES  
MIXES 1- 4 & Internal Standards**

*Contains 1 each of Part Numbers:*

<i>200 ug/mL</i>	<i>2000 ug/mL</i>
<b>40001</b>	<b>42001</b>
<b>40002</b>	<b>44002</b>
<b>40003</b>	<b>82408</b>
<b>30002</b>	<b>30058</b>
<b>19094</b>	<b>19094</b>

**Part # 40000****\$75 / set of 5 x 1mL****Part # 44000****\$95 / set of 5 x 1mL**

**WP VOLATILE  
HALOCARBONS**

*100 ug/mL in Methanol*

- (1) Bromodichloromethane
- (2) Bromoform
- (3) Carbon tetrachloride
- (4) Chlorobenzene
- (5) Chloroform
- (6) Dibromochloromethane
- (7) 1,2-Dichloroethane
- (8) Methylene chloride
- (9) Tetrachloroethene
- (10) 1,1,1-Trichloroethane
- (11) Trichloroethene

**Part # 90512     \$30/ 1 mL**

METHOD  
**602****PURGEABLE AROMATICS IN WASTE  
WATER BY PURGE AND TRAP GAS  
CHROMATOGRAPHY**

This is a purge and trap gas chromatographic method applicable to the determination of purgeable aromatics in municipal and industrial discharges as provided for under 40 CFR 136.1. See Method 624 for GC/MSD conditions.

**PURGEABLE AROMATICS**

- (1) Benzene
- (2) Chlorobenzene
- (3) 1,2-Dichlorobenzene
- (4) 1,3-Dichlorobenzene
- (5) 1,4-Dichlorobenzene
- (6) Ethylbenzene
- (7) Toluene

**Part # 19096 200 ug/mL in Methanol. \$25/ 1 mL**

**Part # 19196 2000 ug/mL in Methanol. \$30/ 1 mL**

**SURROGATE STANDARD**

a,a,a-Trifluorotoluene

**Part # 19097 200 ug/mL in Methanol. \$22/ 1 mL**

**Part # 19197 2000 ug/mL in Methanol. \$25/ 1 mL**

**WP VOLATILE  
AROMATICS**

*100 ug/mL in Methanol*

- (1) Benzene
- (2) Ethyl benzene
- (3) Toluene
- (4) 1,2-Dichlorobenzene
- (5) 1,3-Dichlorobenzene
- (6) 1,4-Dichlorobenzene

**Part # 91871 \$25/ 1 mL**

**PURGEABLE AROMATICS  
FOR GASOLINE  
IDENTIFICATION**

*in Methanol*

- (1) Benzene
- (2) Chlorobenzene
- (3) 1,2-Dichlorobenzene
- (4) 1,3-Dichlorobenzene
- (5) 1,4-Dichlorobenzene
- (6) Ethylbenzene
- (7) Methyl tert-butyl ether
- (8) Toluene
- (9) o-Xylene
- (10) m-Xylene
- (11) p-Xylene

**Part # 19098 200 ug/mL. \$30/ 1 mL**

**Part # 19198 2000 ug/mL. \$40/ 1 mL**

**ACROLEIN & ACRYLONITRILE**

METHOD

**603**

This is a purge and trap gas chromatographic method for the determination of acrolein and acrylonitrile in municipal and industrial wastewater discharges as provided for in 40 CFR 136.1. Method 624 provides GC/MS conditions appropriate for the qualitative and quantitative determination of these compounds if the purge and trap conditions of this method are employed.

**ACROLEIN**

*1000 ug/mL in Water*

**Part # 79005    \$30/ 1 mL**

**ACRYLONITRILE**

*1000 ug/mL in Methanol*

**Part # 79007    \$22/ 1 mL**

**ACROLEIN &  
ACRYLONITRILE**

*1000 ug/mL in Water*

- (1) Acrolein
- (2) Acrylonitrile

**Part # 19099    \$30/ 1 mL**

**WS / WP / DMRQA  
NELAC  
SDWA/ CWA/ RCRA  
PT Samples  
can be found in the  
GREEN Section**

METHOD

**604****PHENOLS**

This is a flame ionization gas chromatographic method applicable to the determination of phenols in municipal and industrial discharges as provided under 40 CFR 136. 1. Method 625 provides GC/MS conditions appropriate for the qualitative and quantitative confirmation of results for all the compounds, using the extract produced by this method.

**ANALYTES***At stated concentrations (ug/mL)*

(1)	2-Chlorophenol	500
(2)	2,4-Dichlorophenol	500
(3)	2,4-Dimethylphenol	500
(4)	2-Nitrophenol	500
(5)	Pentachlorophenol	2500
(6)	2,4,6-Trichlorophenol	1500
(7)	4-Chloro-3-methylphenol	2500
(8)	4,6-Dinitro-2-methylphenol	2500
(9)	2,4-Dinitrophenol	1500
(10)	4-Nitrophenol	2500
(11)	Phenol	500

**Part # 19092 in Methanol. \$30/ 1 mL****Part # 40010 in Methylene chloride. \$30/ 1 mL**

**BENZIDINE &  
3,3'-DICHLOROBENZIDINE**

METHOD  
**605**

This is a high performance liquid chromatographic (HPLC) method for the determination of Benzidine and 3,3'-Dichlorobenzidine in municipal and industrial discharges as provided for under 40 CFR 136.1. Method 625 provides GC/MS conditions appropriate for the qualitative and quantitative determination of these compounds using the extract produced by this method.

**EPA METHOD 605 ANALYTES**

*2000 ug/mL in Methanol*

- (1) Benzidine
- (2) 3,3'-Dichlorobenzidine

**Part # 10006     \$25/ 1 mL**

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METHOD  
**606****PHTHALATE ESTERS**

This is a gas chromatographic method for the determination of phthalate esters in municipal and industrial discharges as provided for under 40 CFR 136.1. Method 625 provides GC/MS conditions appropriate for the qualitative and quantitative determination of these compounds using the extract produced by this method.

**EPA METHOD 606 ANALYTES**

*in Methanol*

- (1) Bis(2-ethylhexyl) phthalate
- (2) Di-n-butyl phthalate
- (3) Dimethyl phthalate
- (4) Butyl benzyl phthalate
- (5) Diethyl phthalate
- (6) Di-n-octyl phthalate

**Part # 19102 200 ug/mL. \$25/ 1 mL**

**Part # 19242 2000 ug/mL. \$30/ 1 mL**

# NITROSAMINES

## METHOD 607

This is a gas chromatographic method applicable to the determination of nitrosamines in municipal and industrial discharges as provided for under 40 CFR 136.1.

### EPA METHOD 607 ANALYTES *1000 ug/mL in Methanol*

- (1) N-Nitrosodimethylamine
- (2) N-Nitrosodiphenylamine
- (3) N-Nitrosodi-n-propylamine

**Part # 40012     \$25/ 1 mL**

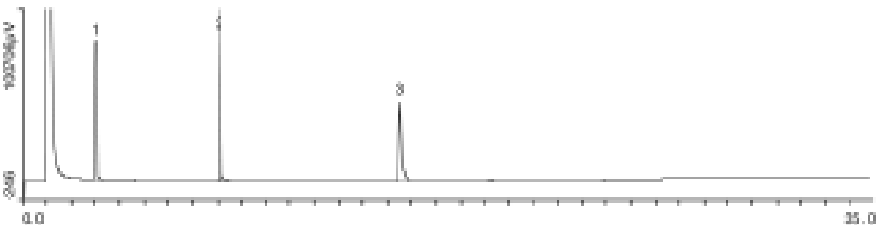
**Method GC4-M1:** Column SPB-5 (30m X 0.53mm ID X 1.5 µm film thickness). Flow rates: Total flow = 260mL/min, Helium (carrier) = 5 mL/min., Helium (make-up) = 15 mL/min., Hydrogen (make-up) = 40 mL/min., air (make-up) = 200 mL/min.. Temp. 1 = 50°C (1 min.), Temp. 2 = 300°C (9 min.), Rate = 10°C/min., Injector Temp. = 200°C, FID Temp. = 300°C. Analysis performed by Nicole Davis.

Date: Thu, Mar 29, 2001 1:34 AM  
Data: P40012 L112895-033

Sample: Absolute Standards, Inc. QA/QC Analysis by FIC  
P40012 L112895 (1000µg/mL in Methanol)  
Standard Injection: 0.1µL, Range=3  
EPA Method 6070 - Nitrosamines  
3 Components

Processing File: GC03 FID-Process File  
Method: GC4-M1  
Sample Inj: 0.1 Seconds  
Data:

- 1 N-Nitroso-di-methylamine
- 2 N-Nitroso-di-n-propylamine
- 3 N-Nitroso-di-phenylamine



METHOD  
**608****ORGANOCHLORINE PESTICIDES  
AND PCBs**

This is a gas chromatographic method for the determination of organochlorine pesticides and PCBs in municipal and industrial discharges as provided for under 40 CFR 136. 1. Method 625 provides GC/MS conditions appropriate for the qualitative and quantitative determination of these compounds using the extract produced by this method.

**ANALYTES MIX #1**

*At stated concentrations (ug/mL) in Methanol*

(1) Aldrin	100	(9) Dieldrin	200
(2) a-BHC	100	(10) Endosulfan I	200
(3) b-BHC	100	(11) Endosulfan II	200
(4) g-BHC	100	(12) Endosulfan sulfate	600
(5) d-BHC	100	(13) Endrin	200
(6) 4,4'-DDD	600	(14) Endrin aldehyde	600
(7) 4,4'-DDE	200	(15) Heptachlor	100
(8) 4,4'-DDT	600	(16) Heptachlor epoxide	100
		(isomer B)	

**Part # 41001     \$30/ 1 mL**

**ANALYTES MIX #2**

*At stated concentrations in Methanol*

(1) Chlordane	20 ug/mL
(2) Toxaphene	200 ug/mL

**Part # 41002     \$25/ 1 mL**

**ANALYTES MIX #3**

*200 ug/mL in Methanol*

(1) Aroclor	1016
(2) Aroclor	1232
(3) Aroclor	1248
(4) Aroclor	1260

**Part # 41003     \$25/ 1 mL**

**ANALYTES MIX #4**

*200 ug/mL in Methanol*

(1) Aroclor	1221
(2) Aroclor	1242
(3) Aroclor	1254

**Part # 41004     \$25/ 1 mL**

**THE DETERMINATION OF  
ORGANOCHLORINE PESTICIDES IN  
MUNICIPAL AND INDUSTRIAL  
WASTEWATER**

METHOD

**608.1**

This is a gas chromatographic (GC) method applicable to the determination of the compounds listed in industrial and municipal discharges as provided under 40 CFR 136.1 This method presents an extension in the scope of Method 608. Further, the sample extraction and concentration steps in this method are essentially the same as several others in the 600-series methods. Thus, a single sample may be extracted to measure the parameters included in the scope of each of these methods. When cleanup is required, the concentration levels must be high enough to permit selecting aliquots, as necessary, in order to apply appropriate cleanup procedures. Under gas chromatography, the analyst is allowed the latitude to select chromatographic conditions appropriate for the simultaneous measurement of combinations of these parameters.

**EPA METHOD 608.1 ANALYTES***100 ug/mL in Isooctane*

- (1) Chlorobenzilate
- (2) Chloroneb
- (3) Chloropropylate
- (4) Dibromochloropropane
- (5) Etridiazole
- (6) PCNB
- (7) Propachlor

**Part # 40005      \$25/1 mL**

METHOD

**608.2****THE DETERMINATION OF CERTAIN  
ORGANOCHLORINE PESTICIDES IN  
MUNICIPAL AND INDUSTRIAL  
WASTEWATER**

This is a GC method applicable to the determination of the compounds listed in municipal and industrial discharges. When this method is used to analyze unfamiliar samples for any or all of the compounds listed above, compound identifications should be supported by at least one additional qualitative technique. Section 13 provides gas chromatograph/mass spectrometer (GC/MS) conditions appropriate for the qualitative confirmation of compound identifications.

**EPA METHOD 608.2 ANALYTES***1000 ug/mL in Isooctane*

- (1) Chlorothalonil
- (2) DCPA
- (3) Dichloran
- (4) Methoxychlor
- (5) Permethrin (cis & trans mix of isomers)

**Part # 40006     \$30/ 1 mL**

**NITROAROMATICS &  
ISOPHORONE**

METHOD

**609**

This is a gas chromatographic method for the determination of nitroaromatics and isophorone in municipal and industrial discharges as provided for under 40 CFR 136.1. Method 625 provides GC/MS conditions appropriate for the qualitative and quantitative determination of these compounds using the extract produced by this method.

**EPA METHOD 609 ANALYTES**

**Nitroaromatics Mix**

*200 ug/mL in Methanol*

- (1) 2,4-Dinitrotoluene
- (2) 2,6-Dinitrotoluene

**Part # 40013     \$25/ 1 mL**

**EPA METHOD 609 ANALYTES**

*200 ug/mL in Methanol*

- (1) Isophorone
- (2) Nitrobenzene

**Part # 40014     \$25/ 1 mL**

METHOD

**610****POLYNUCLEAR AROMATIC  
HYDROCARBONS**

This is a gas chromatographic method for the determination of polynuclear aromatic hydrocarbons (PAHs) in municipal and industrial discharges as provided for under 40 CFR 136.1. Method 625 provides GC/MSD conditions appropriate for the qualitative and quantitative determination of these compounds using the extract produced by this method.

**POLYNUCLEAR AROMATIC HYDROCARBONS***100 ug/mL in Acetonitrile*

- |                          |                             |
|--------------------------|-----------------------------|
| (1) Acenaphthene         | (9) Chrysene                |
| (2) Acenaphthylene       | (10) Dibenzo(a,h)anthracene |
| (3) Anthracene           | (11) Fluoranthene           |
| (4) Benzo(a)anthracene   | (12) Fluorene               |
| (5) Benzo(a)pyrene       | (13) Indeno(1,2,3-cd)pyrene |
| (6) Benzo(b)fluoranthene | (14) Naphthalene            |
| (7) Benzo(g,h,i)perylene | (15) Phenanthrene           |
| (8) Benzo(k)fluoranthene | (16) Pyrene                 |

**Part # 40016     \$30/ 1 mL****POLYNUCLEAR AROMATIC HYDROCARBONS***At stated concentrations (ug/mL) in Methylene chloride:Methanol [1:1]*

- |                             |      |
|-----------------------------|------|
| (1) Acenaphthene            | 1000 |
| (2) Acenaphthylene          | 2000 |
| (3) Anthracene              | 100  |
| (4) Benzo(a)anthracene      | 100  |
| (5) Benzo(a)pyrene          | 100  |
| (6) Benzo(b)fluoranthene    | 200  |
| (7) Benzo(g,h,i)perylene    | 200  |
| (8) Benzo(k)fluoranthene    | 100  |
| (9) Chrysene                | 100  |
| (10) Dibenzo(a,h)anthracene | 200  |
| (11) Fluoranthene           | 200  |
| (12) Fluorene               | 200  |
| (13) Indeno(1,2,3-cd)pyrene | 100  |
| (14) Naphthalene            | 1000 |
| (15) Phenanthrene           | 100  |
| (16) Pyrene                 | 100  |

**Part # 19106     \$30/ 1 mL**

## HALOETHERS

METHOD

**611**

This is a gas chromatographic method for the determination of haloethers in municipal and industrial discharges as provided for under 40 CFR 136. 1. Method 625 provides GC/MS conditions appropriate for the qualitative and quantitative determination of these compounds using the extract produced by this method.

### EPA METHOD 611 ANALYTES

*200 ug/mL in Methanol*

- (1) 4-Bromophenyl phenyl ether
- (2) Bis(2-chloroethoxy) methane
- (3) Bis(2-chloroethyl) ether
- (4) Bis(2-chloroisopropyl) ether
- (5) 4-Chlorophenyl phenyl ether

**Part # 19107     \$25/ 1 mL**



METHOD  
**612****CHLORINATED HYDROCARBONS**

This is a gas chromatographic method for the determination of chlorinated hydrocarbons in municipal and industrial discharges as provided for under 40 CFR 136.1. Method 625 provides GC/MS conditions appropriate for the qualitative and quantitative confirmation of these compounds using the extract produced by this method.

**CHLORINATED HYDROCARBONS**

*At stated concentrations (ug/mL) in Isooctane*

(1)	2-Chloronaphthalene	400
(2)	1,2-Dichlorobenzene	200
(3)	1,3-Dichlorobenzene	200
(4)	1,4-Dichlorobenzene	400
(5)	Hexachlorobenzene	1
(6)	Hexachlorobutadiene	1
(7)	Hexachlorocyclopentadiene	1
(8)	Hexachloroethane	1
(9)	1,2,4-Trichlorobenzene	40

**Part # 19108     \$25/ 1 mL**

**WS / WP / DMRQA  
NELAC  
SDWA/ CWA/ RCRA  
PT Samples  
can be found in the  
Green Section**

**THE DETERMINATION OF  
ORGANOPHOSPHORUS PESTICIDES  
IN MUNICIPAL AND INDUSTRIAL  
WASTEWATER**

METHOD

**614**

This is a GC method applicable to the determination of the compounds listed in municipal and industrial discharges as provided under 40 CFR 136.1. The sample extraction and concentration steps in this method are essentially the same as in Method 617. Thus, a single sample may be extracted to measure the parameters included in the scope of both of these methods. When cleanup is required, the concentration levels must be high enough to permit selecting aliquots, as necessary, in order to apply appropriate cleanup procedures. Under gas chromatography, the analyst is allowed the latitude to select chromatographic conditions appropriate for the simultaneous measurement of combinations of these parameters.

**EPA METHOD 614 ANALYTES***1000 ug/mL in Acetone: Hexane. (1:1)*

- (1) Azinphos methyl
- (2) Demeton (mix of O & S isomers)
- (3) Diazinon
- (4) Disulfoton
- (5) Ethion
- (6) Malathion
- (7) Parathion ethyl
- (8) Parathion methyl

**Part # 40011     \$30/ 1 mL**

METHOD

**614.1****THE DETERMINATION OF  
ORGANOPHOSPHORUS PESTICIDES  
IN MUNICIPAL AND INDUSTRIAL  
WASTEWATER**

This is a GC method applicable to the determination of the compounds listed in municipal and industrial discharges. When this method is used to analyze unfamiliar samples for any or all of the compounds listed below, compound identifications should be supported by at least one additional qualitative technique. Section 13 provides gas chromatographic/mass spectrometer (GC/MS) conditions appropriate for the qualitative confirmation of compound identifications.

**ANALYTES**

*1000 ug/mL in Hexane : Acetone [1:1]*

- (1) Dioxathion
- (2) EPN
- (3) Ethion
- (4) Terbufos

**Part # 40007     \$25/ 1 mL**

**THE DETERMINATION OF  
CHLORINATED HERBICIDES IN  
MUNICIPAL AND INDUSTRIAL  
WASTEWATER**

METHOD

**615**

This is a gas chromatographic (GC) method applicable to the determination of the compounds listed in industrial and municipal discharges and provided under 40 CFR 136.1.

**HERBICIDES***Each \$22/ 1 mL*

<i>Analyte</i>	<i>Conc. (ug/mL)</i>	<i>Part# Underivatized (in MTBE)</i>	<i>Part# Methyl Derivative (in Hexane)</i>
2,4-D	200	83572	81501
2,4-DB	200	83573	81502
2,4,5-T	200	83574	81503
2,4,5-TP	200	83575	81504
Dalapon	200	83576	81505
Dicamba	200	83577	81506
Dichlorprop	200	83578	81507
Dinoseb	200	83579	81508
MCPA	2000	83570	81509
MCPP	2000	83571	81510

**COMPLETE SETS of all 10 Compounds**

<b>Part # 81512</b>	<b>UNDERIVATIZED</b>	<b>\$120</b>
<b>Part # 81500</b>	<b>METHYL DERIVATIVES</b>	<b>\$120</b>

METHOD

**615***Continued***THE DETERMINATION OF  
CHLORINATED HERBICIDES IN  
MUNICIPAL AND INDUSTRIAL  
WASTEWATER**

We offer mixes of both underivatized herbicides and methyl derivatives in solutions in MTBE or hexane respectively, at the concentrations shown below:

**EPA METHOD 615 ANALYTES***Underivatized Acids in MTBE*

- (1) 2,4-D
- (2) 2,4-DB
- (3) 2,4,5-T
- (4) 2,4,5-TP
- (5) Dalapon
- (6) Dicamba
- (7) Dichlorprop
- (8) Dinoseb

**Part # 83598** 20 ug/mL. \$25/ 1 mL

**Part # 83599** 200 ug/mL. \$30/ 1 mL

**EPA METHOD 615 ANALYTES***Methyl Derivatives in Hexane*

- (1) 2,4-D
- (2) 2,4-DB
- (3) 2,4,5-T
- (4) 2,4,5-TP
- (5) Dalapon
- (6) Dicamba
- (7) Dichlorprop
- (8) Dinoseb

**Part # 81511** 20 ug/mL. \$25/ 1 mL

**Part # 82511** 200 ug/mL. \$30/ 1 mL

**THE DETERMINATION OF CERTAIN  
CARBON-, HYDROGEN-, AND OXYGEN-  
CONTAINING PESTICIDES IN MUNICIPAL  
AND INDUSTRIAL WASTEWATER**

METHOD

**616**

This is a gas chromatographic (GC) method applicable to the determination of the compounds listed above in municipal and industrial discharges as provided under 40 CFR 136.1.

**METHOD 616 STANDARD**

*1000 ug/mL in MTBE*

- (1) Cycloprate
- (2) Kinoprene
- (3) Methoprene
- (4) Resmethrin

**Part # 19200    \$30/ 1 mL**

<b>Single Component</b>	<b>Part #</b>	<b>Price</b>	<b>ug/mL</b>	<b>Solvent</b>
(1) Cycloprate	72083	\$22	1000	MTBE
(2) Kinoprene	72084	\$22	1000	MTBE
(3) Methoprene	72085	\$22	1000	MTBE
(4) Resmethrin	71278	\$22	1000	Methanol

METHOD  
**617****THE DETERMINATION OF  
ORGANOHALIDE PESTICIDES AND  
PCBS IN MUNICIPAL AND  
INDUSTRIAL WASTEWATER**

This is a gas chromatographic (GC) method applicable to the determination of the compounds listed in industrial and municipal discharges and provided under 40 CFR 136.1.

**EPA METHOD 617 ANALYTES  
MIX #1**

*2000 ug/mL in Toluene:Hexane [1:1]*

- |              |                                    |
|--------------|------------------------------------|
| (1) Aldrin   | (10) Endosulfan I                  |
| (2) a-BHC    | (11) Endosulfan II                 |
| (3) b-BHC    | (12) Endosulfan sulphate           |
| (4) g-BHC    | (13) Endrin                        |
| (5) d-BHC    | (14) Endrin ketone                 |
| (6) 4,4'-DDD | (15) Endrin aldehyde               |
| (7) 4,4'-DDE | (16) Heptachlor                    |
| (8) 4,4'-DDT | (17) Heptachlor epoxide (isomer B) |
| (9) Dieldrin | (18) Methoxychlor                  |

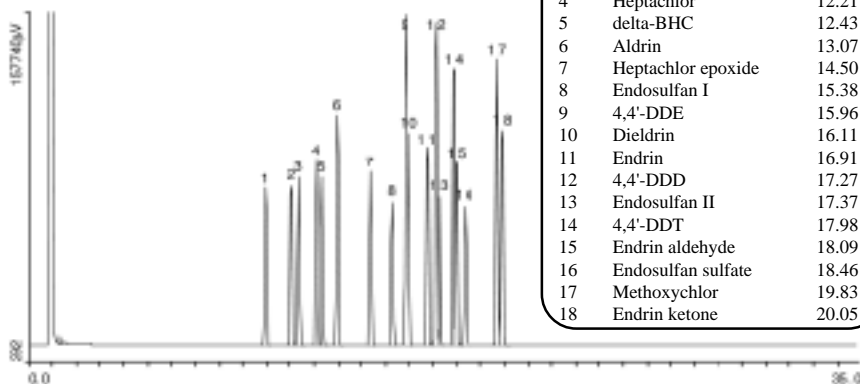
**Part # 10013      \$70/ 1 mL**

Date: Thu, May 16, 2002 5:02 PM  
Data: P10013 L012202-008

Sample: AbsoluteStandards, Inc. QAQC Analyte by FID  
Standard Injection:0.1µL, Range:3  
P10013 L012202 [2000µg/mL in HT, 1:1]

Processing File: GC3 FID-Puroso File  
Method: GC3 M1  
Sampling Int: 0.1 Seconds  
Data:

**Method:** GC3-M1. Detector: FID. Column: SPB-608 (30m X 0.53mm X 0.5 µm film). Flow rates: Helium (carrier) = 10 mL/min., Helium (make-up) = 15 mL/min., Hydrogen (make-up) = 40 mL/min., air (make-up) = 200 mL/min.. Oven Profile: Temp 1 = 150°C (Time 1 = 4 min.), Temp 2 = 290°C (Time 2 = 13.5 min.), Rate = 8°C/min., Injector = 200°C, FID = 300°C. Analyst: Nicole Davis.



Peak No.	Name	FID RT (min.)
1	alpha-BHC	10.06
2	gamma-BHC (Lindane)	11.19
3	beta-BHC	11.49
4	Heptachlor	12.21
5	delta-BHC	12.43
6	Aldrin	13.07
7	Heptachlor epoxide	14.50
8	Endosulfan I	15.38
9	4,4'-DDE	15.96
10	Dieldrin	16.11
11	Endrin	16.91
12	4,4'-DDD	17.27
13	Endosulfan II	17.37
14	4,4'-DDT	17.98
15	Endrin aldehyde	18.09
16	Endosulfan sulfate	18.46
17	Methoxychlor	19.83
18	Endrin ketone	20.05

**THE DETERMINATION OF  
ORGANOHALIDE PESTICIDES AND  
PCBS IN MUNICIPAL AND  
INDUSTRIAL WASTEWATER**

METHOD  
**617**

**EPA METHOD 617 ANALYTES  
MIX #2**

*2000 ug/mL in Toluene:Hexane [1:1]*

- (1) Captan
- (2) Carbophenothion
- (3) Dichloran
- (4) Dicofol
- (5) Isodrin
- (6) Mirex
- (7) PCNB
- (8) Perthane
- (9) Trifluralin

**Part # 40008      \$40/ 1 mL**

**MIX #3  
CHLORDANE**

*2000 ug/mL in Methanol*

**Part # 16208      \$25/ 1 mL**

**MIX #4  
TOXAPHENE**

*4000 ug/mL in Methanol*

**Part # 17208      \$25/1 mL**

**AROCLOR MIXES**

*All mixes 1000 ug/mL*

<i>Aroc lor</i>	<i>Part # Hexane</i>	<i>Part # Methanol</i>	<i>Price/ 1 mL</i>
1016	90123	70015	\$22
1221	90124	70016	\$22
1232	90125	70017	\$22
1242	90126	70018	\$22
1248	90127	70019	\$22
1254	90128	70020	\$22
1260	90129	70021	\$22
<b>Set of 7</b>	<b>91130</b>	<b>91131</b>	<b>\$125</b>



METHOD

**618****THE DETERMINATION OF VOLATILE  
PESTICIDES IN MUNICIPAL AND  
INDUSTRIAL WASTEWATER**

This is a gas chromatographic (GC) method applicable to the determination of the compounds listed in municipal and industrial discharges. When this method is used to analyze unfamiliar samples for any or all of the compounds listed above, compound identifications should be supported by at least one additional qualitative technique. This method describes analytical conditions for a second gas chromatographic column that can be used to confirm measurements made with the primary column. Section 14 provides gas chromatographic/mass spectrometer (GC/MS) criteria appropriate for the qualitative confirmation of compound identifications.

**EPA METHOD 618 ANALYTES***20,000 ug/mL in Isooctane*

- (1) Chloropicrin
- (2) Ethylene dibromide

**Part # 40009    \$25/ 1 mL**

**THE DETERMINATION OF TRIAZINE  
PESTICIDES IN MUNICIPAL AND  
INDUSTRIAL WASTEWATER**

METHOD  
**619**

This is a gas chromatographic (GC) method applicable to the determination of the compounds listed in municipal and industrial discharges. The sample extraction and concentration steps in this method are essentially the same as several others in 600-series methods. Thus, a single sample may be extracted to measure the parameters included in the scope of each of these methods. When cleanup is required, the concentration levels must be high enough to permit selecting aliquots, as necessary, in order to apply appropriate cleanup procedures. Under gas chromatography, the analyst is allowed the latitude to select chromatographic conditions appropriate for the simultaneous measurement of combinations of these parameters.

**EPA METHOD 619 ANALYTES  
TRIAZINE PESTICIDES**

*500 ug/mL in Acetone*

- (1) Ametryn
- (2) Atraton
- (3) Atrazine
- (4) Prometon
- (5) Prometryn
- (6) Propazine
- (7) Secbumeton
- (8) Simetryn
- (9) Simazine
- (10) Terbutylazine
- (11) Terbutryn

**Part # 40017    \$30/ 1 mL**

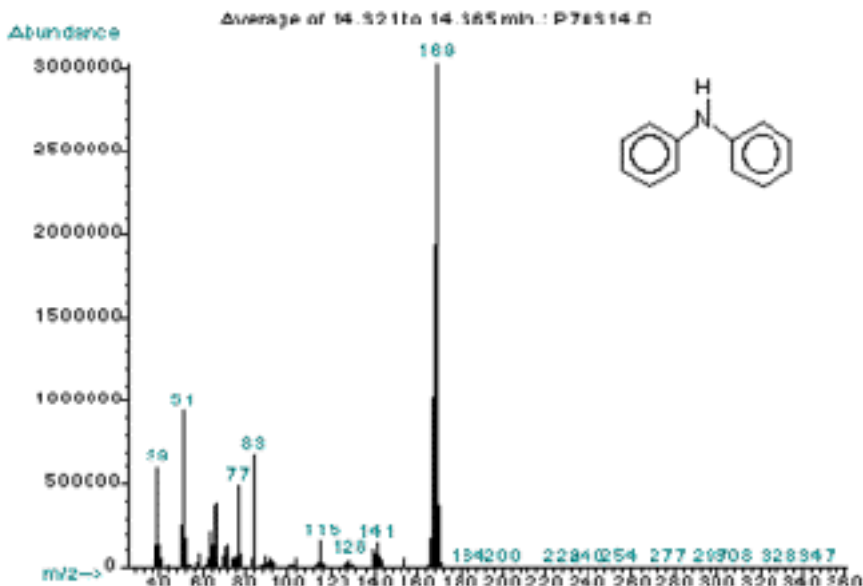
METHOD

**620****THE DETERMINATION OF  
DIPHENYLAMINE IN MUNICIPAL  
AND INDUSTRIAL WASTEWATER**

This is a gas chromatographic (GC) method applicable to the determination of diphenylamine in municipal and industrial discharges. The sample extraction and concentration steps in this method are essentially the same as several others in 600-series methods. Thus, a single sample may be extracted to measure the parameters included in the scope of each of these methods. When cleanup is required, the concentration levels must be high enough to permit selecting aliquots, as necessary, in order to apply appropriate cleanup procedures. When this method is used to analyze unfamiliar samples for any or all of the compounds listed above, compound identifications should be supported by at least one additional qualitative technique. This method describes analytical conditions for a second gas chromatographic column that can be used to confirm measurements made with the primary column. Section 14 provides gas chromatographic/mass spectrometer (GC/MS) criteria appropriate for the qualitative confirmation of compound identifications.

**EPA METHOD 620 ANALYTE***1000 ug/mL in Methanol*

Diphenylamine

**Part # 70314 \$22/ 1 mL**

**THE DETERMINATION OF  
ORGANOPHOSPHORUS PESTICIDES  
IN MUNICIPAL AND INDUSTRIAL  
WASTEWATER**

METHOD  
**622**

This is a gas chromatographic (GC) method applicable to the determination of the compounds listed below in municipal and industrial discharges.

**EPA METHOD 622 ANALYTES  
INDIVIDUAL SOLUTIONS**

*Each at 1000 ug/mL. \$22/ 1 mL*

Part #	Compound	Solvent	Part #	Compound	Solvent
70954	Azinphos methyl	Methanol	70206	Merphos	Hexane
70840	Bolstar (Sulprofos)	Hexane	70219	Mevinphos	Methanol
70090	Chlorpyrifos	Methanol	70755	Monocrotophos	Methanol
70596	Coumaphos	Methanol	70953	Naled	Methanol
70957	Demeton, O & S	Hexane	70383	Parathion ethyl	Methanol
70108	Diazinon	Methanol	70406	Parathion methyl	Methanol
70151	Dichlorvos	Methanol	70492	Phorate	Methanol
70363	Dimethoate	Methanol	70951	Ronnel	Methanol
70165	Disulfoton	Methanol	70511	Sulfotep	Methanol
70671	EPN	Hexane	70834	TEPP	Hexane
70175	Ethoprop	Methanol	70265	Stirophos	Methanol
70510	Fensulfothion	Methanol	70956	Tokuthion	Hexane
70686	Fenthion	Hexane	70930	Trichloronate	Hexane
70729	Malathion	Methanol			

**COMPLETE SET  
27 SINGLE COMPONENTS**

**Part # 81400     \$450/ 27 x 1 mL**

METHOD

**622****THE DETERMINATION OF  
ORGANOPHOSPHORUS PESTICIDES  
IN MUNICIPAL AND INDUSTRIAL  
WASTEWATER****EPA METHOD 622 ANALYTES MIX***200 ug/mL in Ethyl Acetate*

- (1) Azinphosmethyl, "Guthion"
- (2) Bolstar (Sulprofos)
- (3) Chlorpyrifos
- (4) Coumaphos
- (5) Demeton, (Mix of Isomers O:S)
- (6) Diazinon
- (7) Dichlorvos (Vapona)
- (8) Disulfoton
- (9) Ethoprop (Mocap)
- (10) Fensulfothion
- (11) Fenthion
- (12) Merphos
- (13) Mevinphos
- (14) Naled (Dibrom)
- (15) Parathion methyl
- (16) Phorate
- (17) Fenchlorphos (Ronnell)
- (18) Tetrachlorvinphos (Stirophos)
- (19) Tokuthion (Prothiophos)
- (20) Trichloronate

**Part # 90378 \$95/ 1 mL**

**THE DETERMINATION OF  
THIOPHOSPHATE PESTICIDES IN  
MUNICIPAL AND INDUSTRIAL  
WASTEWATER**METHOD  
**622.1**

This is a gas chromatographic (GC) method applicable to the determination of the compounds listed in municipal and industrial discharges under 40 CFR 136.1. The sample extraction and concentration steps in this method are essentially the same as several others in 600-series methods. Thus, a single sample may be extracted to measure the parameters included in the scope of each of these methods. When cleanup is required, the concentration levels must be high enough to permit selecting aliquots, as necessary, in order to apply appropriate cleanup procedures. When this method is used to analyze unfamiliar samples for any or all of the compounds listed above, compound identifications should be supported by at least one additional qualitative technique. This method describes analytical conditions for a second gas chromatographic column that can be used to confirm measurements made with the primary column. Section 14 provides gas chromatographic/mass spectrometer (GC/MS) criteria appropriate for the qualitative confirmation of compound identifications.

**EPA METHOD 622.1 ANALYTES MIX***1000 ug/mL in MTBE*

- (1) Aspon
- (2) Dichlofenthion
- (3) Famphur
- (4) Fenitrothion
- (5) Fonophos
- (6) Phosmet
- (7) Thionazin

**Part # 40019    \$30/ 1 mL**

METHOD  
**624****PURGEABLE ORGANICS IN  
WASTEWATER BY GC/MS**

This is a purge and trap gas chromatography/mass spectrometer method applicable to the determination of purgeable halocarbons in municipal and industrial discharges as provided for under 40 CFR 136.1.

**EPA METHOD 624 PURGEABLES MIX #1**

- |                               |                                |
|-------------------------------|--------------------------------|
| (1) Benzene                   | (12) cis-1,3-Dichloropropene   |
| (2) Carbon tetrachloride      | (13) trans-1,3-Dichloropropene |
| (3) Chlorobenzene             | (14) Ethyl benzene             |
| (4) 1,2-Dichlorobenzene       | (15) Methylene chloride        |
| (5) 1,3-Dichlorobenzene       | (16) 1,1,2,2-Tetrachloroethane |
| (6) 1,4-Dichlorobenzene       | (17) Tetrachloroethene         |
| (7) 1,1-Dichloroethane        | (18) Toluene                   |
| (8) 1,2-Dichloroethane        | (19) 1,1,1-Trichloroethane     |
| (9) 1,1-Dichloroethene        | (20) 1,1,2-Trichloroethane     |
| (10) trans-1,2-Dichloroethene | (21) Trichloroethene           |
| (11) 1,2-Dichloropropane      |                                |

**Part # 40021 200 ug/mL in Methanol. \$25/ 1 mL**

**Part # 40221 2000 ug/mL in Methanol. \$35/ 1 mL**

**EPA METHOD 624 PURGEABLES MIX #2**

- |                          |                          |
|--------------------------|--------------------------|
| (1) Chloroform           | (3) Bromodichloromethane |
| (2) Dibromochloromethane | (4) Bromoform            |

**Part # 40002 200 ug/mL in Methanol. \$25/ 1 mL**

**Part # 44002 2000 ug/mL in Methanol. \$30/ 1 mL**

**EPA METHOD 624 PURGEABLES MIX #3**

- |                   |                             |
|-------------------|-----------------------------|
| (1) Bromomethane  | (4) Dichlorodifluoromethane |
| (2) Chloromethane | (5) Trichlorofluoromethane  |
| (3) Chloroethane  | (6) Vinyl chloride          |

**Part # 30002 200 ug/mL in Methanol. \$25/ 1 mL**

**Part # 30058 2000 ug/mL in Methanol. \$25/ 1 mL**

**EPA METHOD 624 PURGEABLES MIX #4**

2-Chloroethyl vinyl ether

**Part # 40003 200 ug/mL in Methanol. \$22/ 1 mL**

**Part # 82408 2000 ug/mL in Methanol. \$25/ 1 mL**

## PURGEABLE ORGANICS IN WASTEWATER BY GC/MS

METHOD

**624***Continued*

### 5 COMPLETE SET OF METHOD 624 ANALYTES

**200 ug/mL**

40021

40002

40003

30002

19094\*

**Part # 40020****\$75/ Set of 5 Ampules****2000 ug/mL**

40221

44002

82408

30058

19094\*

**Part # 40120****\$85 / Set of 5 Ampules****\*Part #19094 @20,000 ug/mL****SURROGATE MIX***20,000 ug/mL in Methanol*

- (1) 4-Bromofluorobenzene
- (2) Fluorobenzene
- (3) Pentafluorobenzene

**Part # 19112     \$25/ 1 mL****INTERNAL STANDARDS MIX***20,000 ug/mL in Methanol*

- (1) Bromochloromethane
- (2) 1,4-Dichlorobutane
- (3) 2-Bromo-1-chloropropane

**Part # 19094     \$25/ 1 mL**

### INDIVIDUAL SOLUTIONS OF SURROGATES AND INTERNAL STANDARDS

*200 ug/mL in Methanol*

<b>Compound</b>	<b>Part #</b>	<b>Price/ 1 mL</b>
Benzene-d <sub>6</sub>	47021	\$22
Bromochloromethane	43021	\$22
4-Bromofluorobenzene	44021	\$22
2-Bromo-1-chloropropane	49021	\$22
1,4-Difluorobenzene	41021	\$22
Ethylbenzene-d <sub>5</sub>	46021	\$22
Ethylbenzene-d <sub>10</sub>	42021	\$22
Fluorobenzene	45021	\$22
Pentafluorobenzene	48021	\$22
1,2-Dichloroethane-d <sub>4</sub>	40121	\$22
1,4-Dichlorobutane	41121	\$22



METHOD  
**625****BASE/NEUTRALS and ACIDS IN  
WASTEWATER BY GC/MS**  
**BASE / NEUTRALS**

This method covers the determination of a number of organic compounds that are partitioned into an organic solvent and are amenable to gas chromatography. This is a gas chromatography/mass spectrometry method, applicable to the determination of the listed compounds in municipal and industrial discharges as provided for under 40 CFR 136.1.

**EPA METHOD 625 BASE / NEUTRALS****MIX #1***500 ug/mL in Methylene chloride*

- (1) Acenaphthylene
- (2) Benzo(b)fluoranthene
- (3) 4-Bromophenyl phenyl ether
- (4) Di-n-butyl phthalate
- (5) Bis(2-chloroethyl) ether
- (6) Bis(2-chloroisopropyl) ether
- (7) 1,4-Dichlorobenzene
- (8) 3,3'-Dichlorobenzidine
- (9) Dimethyl phthalate
- (10) 2,6-Dinitrotoluene
- (11) Bis(2-ethylhexyl) phthalate
- (12) Nitrobenzene

**Part # 19114    \$30/ 1 mL****MIX #2***500 ug/mL in Methylene chloride*

- (1) Acenaphthene
- (2) Anthracene
- (3) Benzo(a)anthracene
- (4) Bis(2-chloroethoxy) methane
- (5) Chrysene
- (6) Dibenzo(a,h)anthracene
- (7) 1,3-Dichlorobenzene
- (8) 1,2-Dichlorobenzene
- (9) Diethyl phthalate
- (10) 2,4-Dinitrotoluene
- (11) Fluorene
- (12) Hexachlorobenzene
- (13) Hexachlorobutadiene
- (14) Naphthalene
- (15) Pyrene

**Part # 19115    \$30/ 1 mL****MIX #3***500 ug/mL in Methylene chloride*

- (1) Azobenzene
- (2) Benzyl butyl phthalate
- (3) 2-Chloronaphthalene
- (4) Fluoranthene
- (5) Hexachlorocyclopentadiene
- (6) Hexachloroethane
- (7) Isophorone
- (8) N-Nitrosodi-n-propylamine
- (9) N-Nitrosodiphenylamine
- (10) Phenanthrene
- (11) 1,2,4-Trichlorobenzene

**Part # 19116    \$30/ 1 mL****MIX #4***500 ug/mL in Methylene chloride*

- (1) Benzidine
- (2) Benzo(a)pyrene
- (3) Benzo(g,h,i)perylene
- (4) Benzo(k)fluoranthene
- (5) 4-Chlorophenyl phenyl ether
- (6) Di-n-octyl phthalate
- (7) Indeno(1,2,3-cd)pyrene
- (8) N-Nitrosodimethylamine

**Part # 19117    \$30/ 1 mL****MIX #5***2000 ug/mL in Methylene chloride*

44 component solution of  
Mixes # 1, 2, 3, & 4

*excluding 3,3'-Dichlorobenzidine or Benzidine***Part # 91759    \$125/ 1 mL**

## BASE/NEUTRALS & ACIDS IN WASTEWATER BY GC/MS

### ACIDS

METHOD

**625***Continued*

### EPA METHOD 625 ACID MIXTURE

*At stated concentrations in (ug/mL)*

(1) 4-Chloro-3-methyl phenol	2500
(2) 2-Chlorophenol	500
(3) 2,4-Dichlorophenol	500
(4) 2,4-Dimethylphenol	500
(5) 2-Methyl-4,6-dinitrophenol	2500
(6) 2,4-Dinitrophenol	1500
(7) 2-Nitrophenol	500
(8) 4-Nitrophenol	2500
(9) Pentachlorophenol	2500
(10) Phenol	500
(11) 2,4,6-Trichlorophenol	1500

**Part # 19092 in Methanol** **\$30/ 1 mL**

**Part # 40010 in Methylene Chloride** **\$30/ 1 mL**

### SURROGATE AND INTERNAL STANDARDS

#### Individual Solutions

*200 ug/mL in Methylene Chloride*

Compound	Part #	Compound	Part #
Aniline-d <sub>5</sub>	<b>43005</b>	2-Fluoronaphthalene	<b>43015</b>
Anthracene-d <sub>10</sub>	<b>43006</b>	Naphthalene-d <sub>8</sub>	<b>43016</b>
Benzo(a)anthracene-d <sub>12</sub>	<b>43007</b>	Nitrobenzene-d <sub>5</sub>	<b>43017</b>
Decafluorobiphenyl	<b>43008</b>	Phenanthrene-d <sub>10</sub>	<b>43018</b>
4,4'-Dibromobiphenyl	<b>43009</b>	Pyridine-d <sub>5</sub>	<b>43019</b>
4,4'-Dibromooctafluorobiphenyl	<b>43010</b>	2-Fluorophenol	<b>43020</b>
4-Fluoroaniline	<b>43012</b>	Pentafluorophenol	<b>43031</b>
2-Fluorobiphenyl	<b>43013</b>	Phenol-d <sub>6</sub>	<b>43022</b>
1-Fluoronaphthalene	<b>43014</b>	2,4,6-Tribromophenol	<b>43023</b>

**Price \$22/ 1 mL**

METHOD

**625***Continued*

**BASE/NEUTRALS & ACIDS  
IN WASTEWATER BY GC/MS  
PESTICIDE & PCB MIXTURES**

**PESTICIDE and PCB MIXTURES****MIX #1****EPA METHOD 625 PESTICIDES***At stated concentrations (ug/mL) in Methanol*

(1) Aldrin	100	(9) Dieldrin	200
(2) a-BHC	100	(10) Endosulfan I	200
(3) b-BHC	100	(11) Endosulfan II	200
(4) g-BHC	100	(12) Endosulfan sulfate	600
(5) d-BHC	100	(13) Endrin	200
(6) 4,4'-DDD	600	(14) Endrin aldehyde	600
(7) 4,4'-DDE	200	(15) Heptachlor	100
(8) 4,4'-DDT	600	(16) Heptachlor epoxide (isomer B)	100

**Part # 41001      \$30/ 1 mL****MIX #2***At stated concentrations in Methanol*

Chlordane	20 ug/mL
Toxaphene	200 ug/mL

**Part # 41002      \$25/ 1 mL****MIX #3****AROCLORS***200 ug/mL in Methanol*

(1) Aroclor	1016
(2) Aroclor	1232
(3) Aroclor	1248
(4) Aroclor	1260

**Part # 41003      \$25/ 1 mL****MIX #4****AROCLORS***200 ug/mL in Methanol*

(1) Aroclor	1221
(2) Aroclor	1242
(3) Aroclor	1254

**Part # 41004      \$25/ 1 mL**

**BASE/NEUTRALS & ACIDS  
IN WASTEWATER BY GC/MS**

METHOD

**625***Continued***CALIBRATION STANDARDS FOR GC/MS***At stated concentrations in Methylene chloride*

<b>Compound</b>	<b>ug/mL</b>	<b>Part #</b>	<b>Price</b>
Benzidine	500	<b>43024</b>	<b>\$22</b>
Pentachlorophenol	250	<b>43025</b>	<b>\$22</b>
Decafluorotriphenylphosphine	250	<b>43026</b>	<b>\$22</b>
<b>MIX 1</b>		<b>43027</b>	<b>\$25</b>
Benzidine	500		
DFTPP	250		
<b>MIX 2</b>		<b>43028</b>	<b>\$25</b>
Pentachlorophenol	250		
DFTPP	250		

**SET OF ALL 5 GC/MS STANDARDS LISTED ABOVE****Part # 43029     \$50/ 5 x 1 mL****METHOD 625  
TUNING STANDARD***500 ug/mL in Methylene chloride*

- (1) Benzidine
- (2) Pentachlorophenol
- (3) 4,4'-DDT
- (4) DFTPP

**Part # 43030     \$25/ 1 mL**

METHOD

**627****THE DETERMINATION OF  
DINITROANILINE PESTICIDES IN  
MUNICIPAL AND INDUSTRIAL  
WASTEWATER**

This is a gas chromatographic (GC) method applicable to the determination of the compounds listed in municipal and industrial discharges under 40 CFR 136.1. The sample extraction and concentration steps in this method are essentially the same as several others in 600-series methods. Thus, a single sample may be extracted to measure the parameters included in the scope of each of these methods. When cleanup is required, the concentration levels must be high enough to permit selecting aliquots, as necessary, in order to apply appropriate cleanup procedures. Under gas chromatography, the analyst is allowed the latitude to select chromatographic conditions appropriate for the simultaneous measurement of combinations of these parameters (see Section 12).

**EPA METHOD 627 ANALYTES***1000 ug/mL in Hexane*

- (1) Isopropalin
- (2) Profluralin
- (3) Trifluralin

**Part # 40022 \$30/ 1 mL**

**WS / WP / DMRQA  
NELAC  
SDWA/ CWA/ RCRA  
PT Samples  
can be found in the  
GREEN Section**

## THE DETERMINATION OF CYANAZINE IN MUNICIPAL AND INDUSTRIAL WASTEWATER

METHOD  
**629**

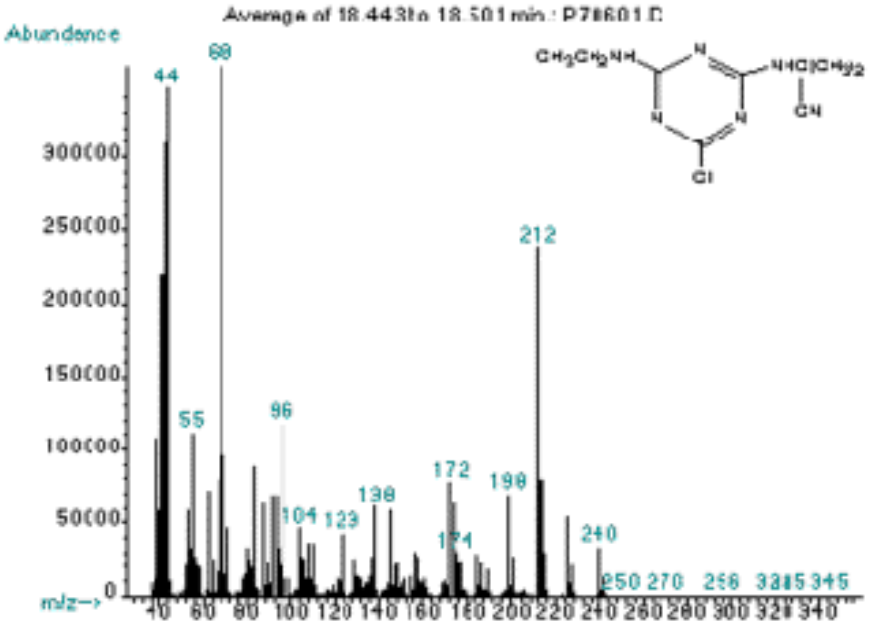
This is a high performance liquid chromatographic (HPLC) method applicable to the determination of the compound listed above in industrial and municipal discharges as provided under 40 CFR 136.1. The method detection limit (MDL, defined in Section 15) for cyanazine is 6 ug/mL. The MDL for a specific wastewater may differ from those listed, depending upon the nature of interference in the sample matrix.

### EPA METHOD 629 ANALYTE

*1000 ug/mL in Acetone*

Cyanazine

**Part # 70601     \$22/ 1 mL**



METHOD

**630/  
630.1****THE DETERMINATION OF  
DITHIOCARBAMATE PESTICIDES  
IN MUNICIPAL AND INDUSTRIAL  
WASTEWATER**

Method 630 is a colorimetric method applicable to the determination of the compounds listed in industrial and municipal discharges as provided under 40 CFR 136.1.

Method 630.1 is a total-residue gas chromatographic (GC) method applicable to the determination of the compounds listed in municipal and industrial discharges as provided under 40 CFR 136.1. Both methods fail to distinguish between the individual dithiocarbamates. The compounds are reduced to carbon disulfide and the total dithiocarbamate concentration is measured. Unless the sample can be otherwise characterized, all results are reported as Ziram. Carbon disulfide is a known interferent.

**EPA METHOD 630-630.1  
STOCK SOLUTIONS****SOLUTION #1***1000 ug/mL in Acetone*

Ziram

**Part # 40024     \$22/ 1 mL****SOLUTION #2***100 ug/mL in Hexane*

Carbon disulfide

**Part # 40025     \$22/ 1 mL****SOLUTION #3***100 ug/mL in 0.1M Na<sub>3</sub>PO<sub>3</sub>*

Dithiocarbamate

**Part # 40026     \$22/ 1 mL**

**THE DETERMINATION OF  
BENOMYL AND CARBENDAZIM  
IN MUNICIPAL AND INDUSTRIAL  
WASTEWATER**

METHOD  
**631**

This is a high performance liquid chromatographic (HPLC) method applicable to the determination of the compound listed in industrial and municipal discharges as provided under 40 CFR 136.1. Benomyl cannot be determined directly by this method. Benomyl is hydrolyzed to carbendazim, and both compounds are measured and reported as carbendazim. The method detection limit (MDL, defined in Section 15) for each parameter is 8.7 ug/mL. The MDL for each specific wastewater may differ from those listed, depending upon the nature of interferences in the sample matrix.

**EPA METHOD 631 ANALYTE**

*100 ug/mL in UV Methanol*

Carbendazim

**Part # 40027     \$22/ 1 mL**





METHOD

**632**

**THE DETERMINATION OF  
CARBAMATE AND UREA PESTICIDES  
IN MUNICIPAL AND INDUSTRIAL  
WASTEWATER**

This is a high performance liquid chromatographic (HPLC) method applicable to the determination of the compound listed above in industrial and municipal discharges as provided under 40 CFR 136.1. This method cannot distinguish Monuron from Monuron-TCA and Fenuron from Fenuron-TCA. Results for the paired parameters are reported as Monuron and Fenuron respectively.

**EPA METHOD 632  
INDIVIDUAL STOCK SOLUTIONS**

*Each solution 1000 ug/mL*

Compound	Solvent	Part #
Aminocarb	Acetonitrile	70532
Barban	Acetonitrile	70543
Carbaryl	Methanol	70499
Carbofuran	Methanol	70340
Chlorpropham	Methanol	70089
Diuron	Methanol	70663
Fenuron	Methanol	71114
Fluometuron	Methanol	70693
Linuron	Methanol	70728
Methiocarb	Methanol	70501
Methomyl	Methanol	70435
Monuron	Methanol	70757
Neburon	Methanol	70765
Oxamyl	Methanol	70424
Propham	Methanol	70819
Propoxur	Methanol	70498
Siduron	Methanol	70833
Swep	Methanol	71112

**All Part #'s      \$22 / 1 mL**

**THE DETERMINATION OF  
CARBAMATE AND AMIDE  
PESTICIDES IN MUNICIPAL AND  
INDUSTRIAL WASTEWATER**

METHOD  
**632.1**

This is a high performance liquid chromatograph (HPLC) method applicable to the determination of the compounds listed in municipal and industrial discharges. When this method is used to analyze unfamiliar samples for any or all of the compounds, compound identification should be supported by at least one additional qualitative technique. This method describes analytical conditions for a second HPLC column that can be used to confirm measurements made with the primary column.

**EPA METHOD 632.1 ANALYTES**

*1000 ug/mL in Acetonitrile:Acetone (9:1)*

- (1) Napropamide
- (2) Propanil

**Part # 40047     \$25/ 1 mL**

METHOD

**633****THE DETERMINATION OF  
ORGANONITROGEN PESTICIDES IN  
MUNICIPAL AND INDUSTRIAL  
WASTEWATER**

This is a gas chromatographic (GC) method applicable to the determination of the compounds listed in municipal and industrial discharges. When this method is used to analyze unfamiliar samples for any or all of the compounds, compound identification should be supported by at least one additional qualitative technique. Section 14 provides gas chromatograph/mass spectrometer (GC/MS) criteria appropriate for the qualitative confirmation of compound identification.

**EPA METHOD 633 ANALYTES***1000 ug/mL in Acetone*

- (1) Bromacil
- (2) Deet
- (3) Hexazinone
- (4) Metribuzin
- (5) Terbacil
- (6) Triadimefon
- (7) Tricyclazole

**Part # 40048    \$30/ 1 mL**

**THE DETERMINATION OF NEUTRAL  
NITROGEN-CONTAINING  
PESTICIDES IN MUNICIPAL AND  
INDUSTRIAL WASTEWATER**

METHOD  
**633.1**

This is a gas chromatographic (GC) method applicable to the determination of the compounds listed in municipal and industrial discharges as provided for under 40 CFR 136.1. The sample extraction and concentration steps in this method are similar to those in other 600-series methods. Thus, a single sample may be extracted to measure the compounds included in the scope of the methods. When cleanup is required, the concentration levels must be high enough to permit selecting aliquots, as necessary, in order to apply appropriate cleanup procedures. When this method is used to analyze unfamiliar samples for any or all of the compounds, compound identification should be supported by at least one additional qualitative technique. Section 14 provides gas chromatograph/mass spectrometer (GC/MS) criteria appropriate for the qualitative confirmation of compound identification.

**EPA METHOD 633.1 ANALYTES**

*1000 ug/mL in Methanol*

- (1) Fenarimol
- (2) MGK 264-A
- (3) MGK 264-B
- (4) MGK 326
- (5) Pronamide

**Part # 40049    \$30/ 1 mL**

METHOD

**634****THE DETERMINATION OF  
THIOCARBAMATE PESTICIDES IN  
MUNICIPAL AND INDUSTRIAL  
WASTEWATER**

This is a gas chromatographic (GC) method applicable to the determination of the compounds listed in municipal and industrial discharges as provided for under 40 CFR 136.1. The sample extraction and concentration steps in this method are similar to those in other 600-series methods. Thus, a single sample may be extracted to measure the compounds included in the scope of the methods. When cleanup is required, the concentration levels must be high enough to permit selecting aliquots, as necessary, in order to apply appropriate cleanup procedures. When this method is used to analyze unfamiliar samples for any or all of the compounds, compound identification should be supported by at least one additional qualitative technique. Section 14 provides gas chromatograph/mass spectrometer (GC/MS) criteria appropriate for the qualitative confirmation of compound identification.

**EPA METHOD 634 ANALYTES***1000 ug/mL in Methanol*

- (1) Butylate
- (2) Cycloate
- (3) EPTC
- (4) Molinate
- (5) Pebulate
- (6) Vernolate

**Part # 40050 \$30/ 1 mL**

## THE DETERMINATION OF ROTENONE IN MUNICIPAL AND INDUSTRIAL WASTEWATER

METHOD

**635**

This is a high performance liquid chromatographic (HPLC) method applicable to the determination of the compounds listed in municipal and industrial discharges as provided for under 40 CFR 136.1. When this method is used to analyze unfamiliar samples for the compound, compound identifications should be supported by at least one additional qualitative technique. This method describes analytical conditions for a second liquid chromatographic column that can be used to confirm measurements made with the primary column.

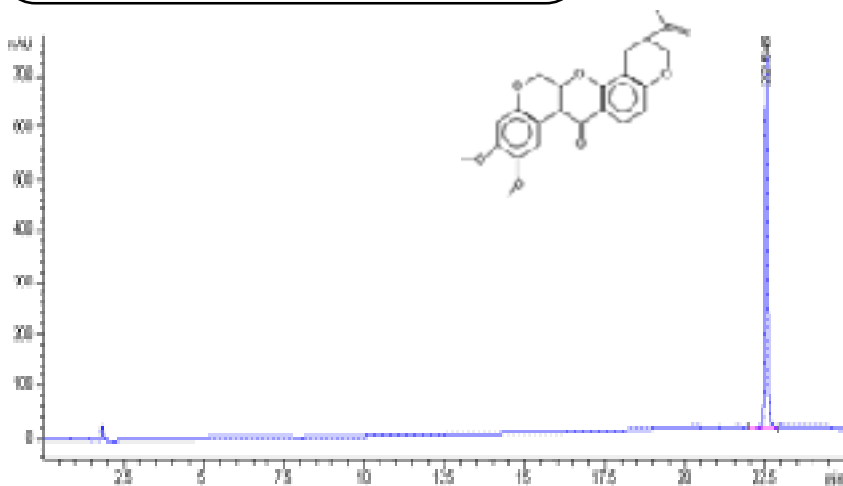
### EPA METHOD 635 ANALYTE

*1000 ug/mL in Acetonitrile*

Rotenone

**Part # 70830    \$22/ 1 mL**

**Method:** E531.1. Column: PTH ODS 5 micron. (250 X 2.1mm). Flow Rate= 0.5ml/min. Column Temp: = 40°C. Gradient Profile: Time= 0 [100% Water, 0% Acetonitrile], Time = 21min [30% Water, 70% Acetonitrile].  
**Detector:** PDA [DAD1, Sig=200, 10 REF=450.4, Range=190-500nm].  
**Analyst:** Pedro Rentas



METHOD

**636****THE DETERMINATION OF  
BENSULIDE IN MUNICIPAL AND  
INDUSTRIAL WASTEWATER**

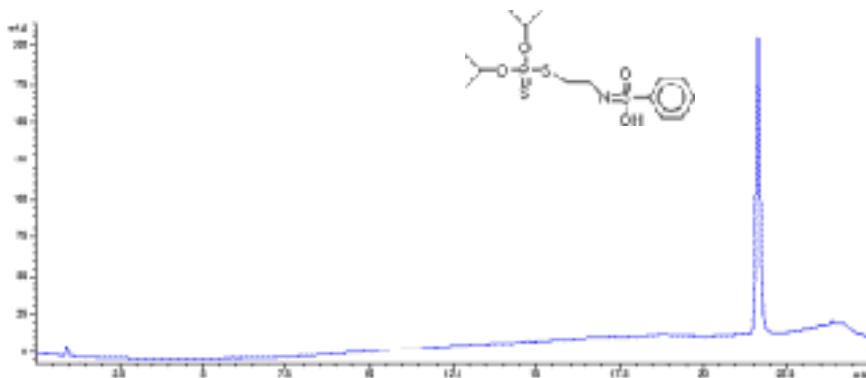
This is a high performance liquid chromatographic (HPLC) method applicable to the determination of the compounds listed in municipal and industrial discharges as provided for under 40 CFR 136.1. When this method is used to analyze unfamiliar samples for the compound, compound identifications should be supported by at least one additional qualitative technique. This method describes analytical conditions for a second liquid chromatographic column that can be used to confirm measurements made with the primary column.

**EPA METHOD 636 ANALYTE***1000 ug/mL in Methanol*

Bensulide

**Part # 70547 \$22/ 1 mL**

**Method:** E531.1. Column: PTHODS 5 micron. (250 X 2.1mm). Flow Rate= 0.5ml/min. Column Temp: = 40°C. Gradient Profile: Time= 0 [100% Water, 0% Acetonitrile], Time = 21min [30% Water, 70% Acetonitrile].  
**Detector:** PDA [DAD1, Sig=200, 10 REF=450,4, Range=190-500nm.]  
**Analyst:** Pedro Rentas



## THE DETERMINATION OF ORYZALIN IN MUNICIPAL AND INDUSTRIAL WASTEWATER

METHOD  
**638**

This is a high performance liquid chromatographic (HPLC) method applicable to the determination of the compounds listed in municipal and industrial discharges as provided for under 40 CFR 136.1. When this method is used to analyze unfamiliar samples for the compound, compound identifications should be supported by at least one additional qualitative technique. This method describes analytical conditions for a second liquid chromatographic column that can be used to confirm measurements made with the primary column.

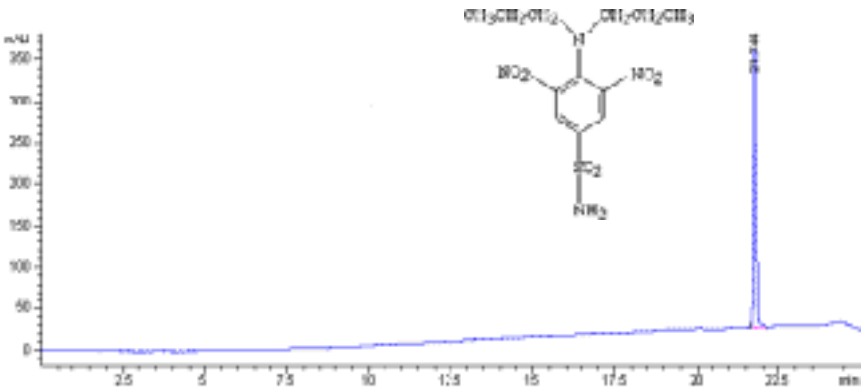
### EPA METHOD 638 ANALYTE

*1000 ug/mL in Acetonitrile*

Oryzalin

**Part # 70770 \$22/ 1 mL**

**Method:** E531.1. Column: PTH ODS 5 micron. (250 X 2.1mm). Flow Rate= 0.5ml/min. Column Temp: = 40°C. Gradient Profile: Time= 0 [100% Water, 0% Acetonitrile], Time = 21min [30% Water, 70% Acetonitrile].  
**Detector:** PDA [DAD1, Sig=200, 10 REF=450,4, Range=190-500nm.]  
**Analyst:** Pedro Rentas





METHOD

**639****THE DETERMINATION OF  
BENDIOCARB IN MUNICIPAL AND  
INDUSTRIAL WASTEWATERS**

This is a high performance liquid chromatographic (HPLC) method applicable to the determination of the compounds listed in municipal and industrial discharges as provided for under 40 CFR 136.1. When this method is used to analyze unfamiliar samples for the compound, compound identifications should be supported by at least one additional qualitative technique. This method describes analytical conditions for a second liquid chromatographic column that can be used to confirm measurements made with the primary column.

**EPA METHOD 639 ANALYTE***1000 ug/mL in Acetonitrile*

Bendiocarb

**Part # 70544 \$22/ 1 mL**

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**THE DETERMINATION OF  
MERCAPTOBENZOTHAZOLE  
IN MUNICIPAL AND INDUSTRIAL  
WASTEWATER**

METHOD  
**640**

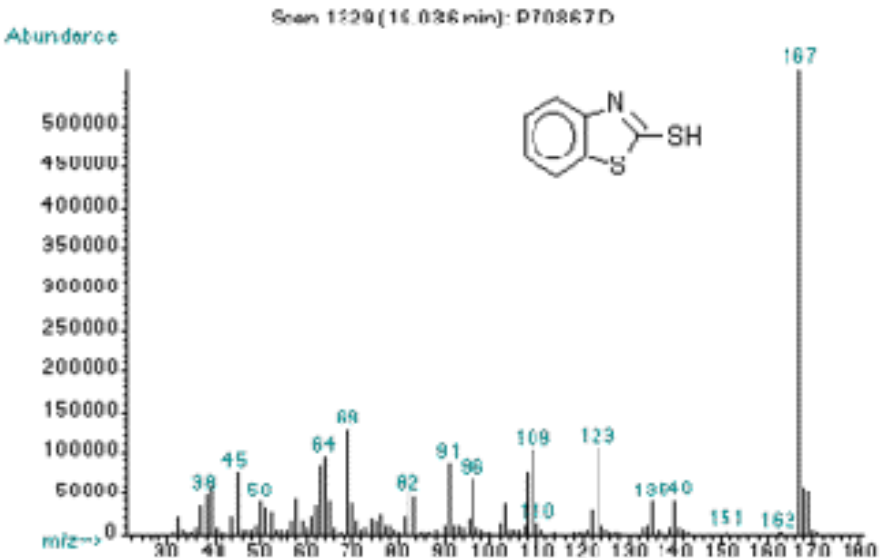
This is a high performance liquid chromatographic (HPLC) method applicable to the determination of the compounds listed in municipal and industrial discharges as provided for under 40 CFR 136.1. The sample extraction and concentration steps in this method are essentially the same as in certain other 600-series methods. Thus, a single sample may be extracted to measure the compounds included in the scope of the methods. When cleanup is required, the concentration levels must be high enough to permit selecting aliquots, as necessary, in order to apply appropriate cleanup procedures. When this method is used to analyze unfamiliar samples for the compound, compound identifications should be supported by at least one additional qualitative technique. This method describes analytical conditions for a second liquid chromatographic column that can be used to confirm measurements made with the primary column.

**EPA METHOD 640 ANALYTE**

*1000 ug/mL in Methanol*

Mercaptobenzothiazole

**Part # 70867 \$22/ 1 mL**



METHOD

**641****THE DETERMINATION OF  
THIABENDAZOLE  
IN MUNICIPAL AND INDUSTRIAL  
WASTEWATER**

This is a liquid chromatographic method applicable to the determination of thiabendazole in municipal and industrial discharges. When this method is used to analyze unfamiliar samples for thiabendazole, compound identifications should be supported by at least one additional qualitative technique.

**EPA METHOD 641 ANALYTE***1000 ug/mL in Methanol*

Thiabendazole

**Part # 70855 \$22/ 1 mL**

**THE DETERMINATION OF BIPHENYL  
AND ORTHO-PHENYLPHENOL  
IN MUNICIPAL AND INDUSTRIAL  
WASTEWATER**

METHOD

**642**

This is a high performance liquid chromatographic (HPLC) method applicable to the determination of the compounds listed in municipal and industrial discharges as provided for under 40 CFR 136.1. When this method is used to analyze unfamiliar samples for the compound, compound identifications should be supported by at least one additional qualitative technique. This method describes analytical conditions for a second liquid chromatographic column that can be used to confirm measurements made with the primary column.

**EPA METHOD 642 ANALYTES**

*1000 ug/mL in Methanol*

- (1) Biphenyl
- (2) o-Phenylphenol

**Part # 40057 \$25/ 1 mL**

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# of Components  
Concentration  
EPA Method

METHOD

**643**

## THE DETERMINATION OF BENTAZON IN MUNICIPAL AND INDUSTRIAL WASTEWATER

This is a high performance liquid chromatographic (HPLC) method applicable to the determination of the compound listed in municipal and industrial discharges as provided for under 40 CFR 136.1. When this method is used to analyze unfamiliar samples for the compound, compound identifications should be supported by at least one additional qualitative technique. This method describes analytical conditions for a second liquid chromatographic column that can be used to confirm measurements made with the primary column

### EPA METHOD 643 ANALYTE

*1000 ug/mL in MTBE*

Bentazon

**Part # 78002    \$22/ 1 mL**

Method LC2-E8150:

Column: C18 15 cm x 2.1 mm id

Inj. Vol = 0.5 µL

Flow Rate = 1.25 mL/min.

Column Temp. = 43°C.

Solvent A: Water, 0.5mM KH<sub>2</sub>PO<sub>4</sub>, 0.01% Acetic Acid

Solvent B: Acetonitrile:Methanol [1:1], 0.01% Acetic Acid

Gradient: Time=0 min, 85% A, 15% B

Time=16 min, 50% A, 50% B

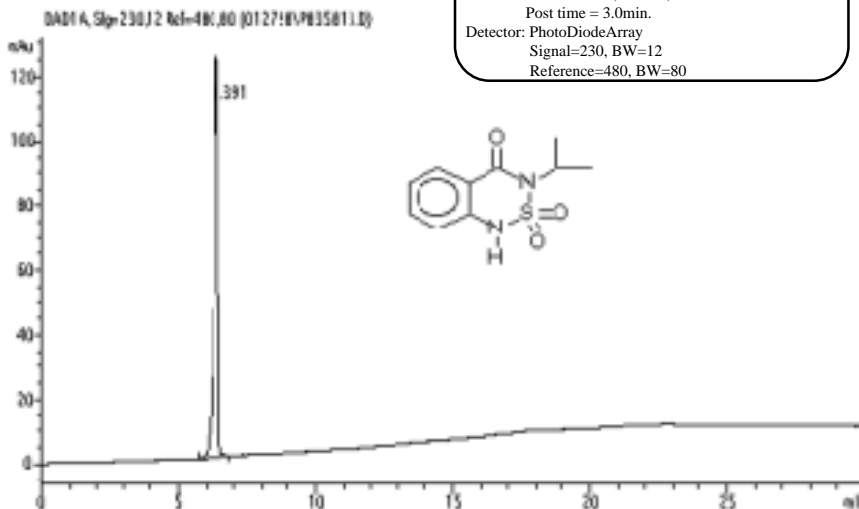
Time=20 min, 45% A, 55% B

Post time = 3.0min.

Detector: PhotoDiodeArray

Signal=230, BW=12

Reference=480, BW=80



## THE DETERMINATION OF PICLORAM IN MUNICIPAL AND INDUSTRIAL WASTEWATER

METHOD

**644**

This is a high performance liquid chromatographic (HPLC) method applicable to the determination of the compound listed in municipal and industrial discharges as provided for under 40 CFR 136.1. When this method is used to analyze unfamiliar samples for the compound, compound identifications should be supported by at least one additional qualitative technique.

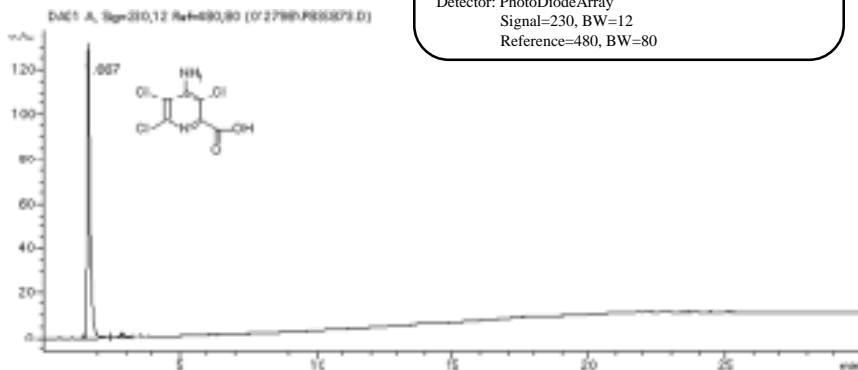
### EPA METHOD 644 ANALYTE

*200 ug/mL in MTBE*

Picloram

**Part # 83595    \$22/ 1 mL**

Method LC2-E8150:  
 Column: C18 15 cm x 2.1 mm id  
 Inj. Vol = 0.5 µL  
 Flow Rate = 1.25 mL/min.  
 Column Temp. = 43°C.  
 Solvent A: Water, 0.5mM KH<sub>2</sub>PO<sub>4</sub>, 0.01% Acetic Acid  
 Solvent B: Acetonitrile:Methanol [1:1], 0.01% Acetic Acid  
 Gradient: Time=0 min, 85% A, 15% B  
           Time=16 min, 50% A, 50% B  
           Time=20 min, 45% A, 55% B  
           Post time = 3.0min.  
 Detector: PhotoDiodeArray  
 Signal=230, BW=12  
 Reference=480, BW=80



METHOD

**645****THE DETERMINATION OF CERTAIN  
AMINE PESTICIDES AND LETHANE  
IN MUNICIPAL AND INDUSTRIAL  
WASTEWATER**

This is a gas chromatographic (GC) method applicable to the determination of the compounds listed in municipal and industrial discharges. When this method is used to analyze unfamiliar samples for the compounds listed, compound identifications should be supported by at least one additional qualitative technique. Section 13 provides gas chromatographic/mass spectrometer (GC/MS) conditions for the qualitative confirmation of compound identifications.

**EPA METHOD 645 ANALYTES***1000 ug/mL in Hexane*

- (1) Alachlor
- (2) Butachlor
- (3) Diphenamid
- (4) Fluridone
- (5) Lethane
- (6) Norflurazon

**Part # 40059 \$35/ 1 mL**

## ORGANO-HALIDE PESTICIDES BY WIDE BORE CAPILLARY COLUMN GC

METHOD

**1618**

This method is used with wide bore GC columns to analyze for organo-halide and organo-phosphorus pesticides, phenoxy-acid herbicides and herbicide esters, polychlorinated biphenyls (PCB's) and other compounds amenable to extraction and analysis by wide bore capillary column gas chromatography with halogen-specific and organo-phosphorus detectors.

**MIXTURE A***Conc. (ug/mL) in Hexane:Toluene*

(1)	a-BHC	80
(2)	Heptachlor	80
(3)	g-BHC	80
(4)	Endosulfan I	80
(5)	Dieldrin	160
(6)	Endrin	160
(7)	4,4'-DDD	160
(8)	4,4'-DDT	160
(9)	Methoxychlor	800
(10)	Tetrachloro-m-xylene	80
(11)	Decachlorobiphenyl	160

**Part # 20126 \$35/ 1 mL****MIXTURE B***Conc. (ug/mL) in Hexane:Toluene*

(1)	b-BHC	80
(2)	d-BHC	80
(3)	Aldrin	80
(4)	Heptachlor epoxide (isomer B)	80
(5)	a-Chlordane	80
(6)	g-Chlordane	80
(7)	4,4'-DDE	160
(8)	Endosulfan sulphate	160
(9)	Endrin aldehyde	160
(10)	Endrin ketone	160
(11)	Endosulfan II	160
(12)	Tetrachloro-m-xylene	80
(13)	Decachlorobiphenyl	160

**Part # 20119 \$35/ 1 mL****MIXTURE C***Conc. (ug/mL) in  
Hexane:Toluene [1:1]*

(1)	Captan	200
(2)	Chlorobenzilate	500
(3)	Diallate	250
(4)	Isodrin	100
(5)	Carbophenothion	1000
(6)	Captafol	200
(7)	Dichlone	100
(8)	Mirex	100
(9)	Pentachloronitrobenzene	100
(10)	Trifluralin	200

**Part # 20138 \$35/ 1 mL**



METHOD  
**1618**

**ORGANO-PHOSPHORUS PESTICIDES  
BY WIDE BORE  
CAPILLARY COLUMN GC**

**PESTICIDE MIX A -  
Methods 8141/1618**

*Varied ug/mL in  
Ethyl acetate*

(1) Demeton, (Mix of Isomers O:S)	1500
(2) Disulfoton	500
(3) Fensulfothion	1000
(4) Fenthion	500
(5) Merphos	1000
(6) Mevinphos	1000
(7) Naled (Dibrom)	1000
(8) Fenchlorphos (Ronnel)	500
(9) Tetrachlorvinphos (Stirophos)	1000
(10) Trichloronate	500

**Part # 91397 \$45/ 1 mL**

**PESTICIDE MIX B -  
Methods 8141/1618**

*Varied ug/mL in  
Ethyl acetate*

(1) Azinphos methyl (Guthion)	1500
(2) Bolstar (Sulprofos)	500
(3) Chlorpyrifos	500
(4) Coumaphos	1500
(5) Diazinon	500
(6) Dichlorvos	500
(7) Ethoprop	500
(8) Parathion methyl	500
(9) Phorate	500
(10) Tokuthion (Prothiophos)	500

**Part # 91398 \$45/ 1 mL**

**PESTICIDE MIX C  
EPA Method 1618**

*Varied ug/mL in  
Ethyl acetate*

(1) Dimethoate	500
(2) Ethyl parathion	1000
(3) Azinphos ethyl	1000
(4) Malathion	1000
(5) Trichlorfon	1000
(6) Chlorfenvinphos	500
(7) Chlorpyrifos methyl	1000
(8) Dichlofenthion	1000
(9) Famphur	2000
(10) Phosmet	2000
(11) Crotoxyphos	2000
(12) Sulfotep	500
(13) Leptophos	2000

**Part # 20139 \$45/ 1 mL**

**PESTICIDE MIX D  
EPA Method 614.1/1618**

*1000 ug/mL in  
Hexane/Acetone [1:1]*

(1) Dioxathion
(2) EPN
(3) Ethion
(4) Terbufos

**Part # 40007 \$25/ 1 mL**

## VOLATILE ORGANIC COMPOUNDS BY ISOTOPE DILUTION GC/MS

METHOD

**1624**

Rev. B

This method is designed to determine the volatile toxic organic pollutants associated with the 1976 Consent Decree and additional compounds amenable to purge and trap gas chromatography-mass spectrometry (GC/MS).

### GC/MS ANALYSIS OF VOLATILES TARGET COMPOUND LIST - LIQUIDS

- |                          |                               |                               |
|--------------------------|-------------------------------|-------------------------------|
| 1) Acetone               | 12) 1,1-Dichloroethane        | 23) Styrene                   |
| 2) Benzene               | 13) trans-1,2-Dichloroethene  | 24) 1,1,2,2-Tetrachloroethane |
| 3) Bromodichloromethane  | 14) cis-1,2-Dichloroethene    | 25) Tetrachloroethene         |
| 4) Bromoform             | 15) 1,1-Dichloroethene        | 26) Toluene                   |
| 5) 2-Butanone            | 16) Dichloromethane           | 27) 1,1,1-Trichloroethane     |
| 6) Carbon disulphide     | 17) 1,2-Dichloropropane       | 28) 1,1,2-Trichloroethane     |
| 7) Carbon tetrachloride  | 18) cis-1,3-Dichloropropene   | 29) Trichloroethene           |
| 8) Chlorobenzene         | 19) trans-1,3-Dichloropropene | 30) m-Xylene                  |
| 9) Chloroform            | 20) Ethylbenzene              | 31) o-Xylene                  |
| 10) Dibromochloromethane | 21) 2-Hexanone                | 32) p-Xylene                  |
| 11) 1,2-Dichloroethane   | 22) 4-Methyl-2-pentanone      |                               |

**Part # 21004 @ 200 ug/mL in Methanol:Water [9:1]. \$35/ 1 mL**

**Part # 21014 @ 2000 ug/mL in Methanol:Water [9:1]. \$40/ 1 mL**

### TARGET COMPOUND LIST - GASES

- |                  |                    |
|------------------|--------------------|
| (1) Bromomethane | (3) Chloromethane  |
| (2) Chloroethane | (4) Vinyl chloride |

**Part # 20008 @ 200 ug/mL in Methanol. \$25/ 1 mL**

**Part # 21008 @ 2000 ug/mL in Methanol. \$30/ 1 mL**

**Part # 20028 @ 1000 ug/mL in Methanol. \$25/ 1 mL**

### ACROLEIN & ACRYLONITRILE

*1000 ug/mL in Water*

- (1) Acrolein
- (2) Acrylonitrile

**Part # 19099 \$30/ 1 mL**

METHOD

**1624**

Rev. B

**VOLATILE ORGANIC COMPOUNDS  
BY ISOTOPE DILUTION GC/MS**

Additional Method 1624 Analytes	Part #	Price	ug/mL	Solvent
(1) 2-Chloroethyl vinyl ether	70074	\$22	1000	Methanol
(2) Diethyl ether	70153	\$22	1000	Methanol
(3) 1,4-Dioxane	70373	\$22	1000	Methanol

**Deuterated Analytes (Listed in Retention Order)**

(4) Chloromethane-d3	72042	\$22	1000	Methanol
(5) Bromomethane-d3	72043	\$22	1000	Methanol
(6) Vinyl chloride-d3	72044	\$35	1000	Methanol
(7) Chloroethane-d5	72045	\$22	1000	Methanol
(8) Methylene chloride-d2	70213	\$22	1000	Methanol
(9) Acetone-d6	71818	\$22	1000	Methanol
(10) Acrylonitrile-d3	72046	\$50	1000	Methanol
(11) 1,1-Dichloroethene-d2	72047	\$50	1000	Methanol
(12) 1,1-Dichloroethane-d3	72048	\$40	1000	Methanol
(13) Diethyl ether-d10	72016	\$22	1000	Methanol
(14) Methyl ethyl ketone-d3	72049	\$40	1000	MeOH/H2O
(15) 1,2-Dichloroethane-d4	70137	\$22	1000	Methanol
(16) 1,2-Dichloropropane-d6	72051	\$40	1000	Methanol
(17) cis / trans-1,3-Dichloropropene-d4	72052	\$50	1000	Methanol
(18) Benzene-d6	70026	\$22	1000	Methanol
(19) 1,1,1,2-Tetrachloroethane-d2	72053	\$22	1000	Methanol
(20) Toluene-d8	70282	\$22	1000	Methanol
(21) Chlorobenzene-d5	70069	\$22	1000	Methanol
(22) Ethylbenzene-d10	70177	\$22	1000	Methanol

**PURGEABLE  
INTERNAL STANDARD***2500 ug/mL in Methanol*

- (1) Bromochloromethane
- (2) Chlorobenzene-d<sub>5</sub>
- (3) 1,4-Difluorobenzene

**Part # 20009 \$25/ 1 mL****SYSTEM MONITORING  
COMPOUNDS  
SPIKING SOLUTION***2500 ug/mL in Methanol*

- (1) 4-Bromofluorobenzene
- (2) 1,2-Dichloroethane-d<sub>4</sub>
- (3) Toluene-d<sub>8</sub>

**Part # 20010 \$25/ 1 mL****INSTRUMENT PERFORMANCE****CHECK SOLUTION***2500 ug/mL in Methanol*

4-Bromofluorobenzene

**Part # 19167 \$25/ 1 mL**

## SEMI-VOLATILE ORGANIC COMPOUNDS BY ISOTOPE DILUTION GC/MS

METHOD  
**1625**  
Rev. B

This method is designed to determine the semivolatile toxic organic pollutants associated with the 1976 Consent Decree and additional compounds amenable to extraction and analysis by capillary column gas chromatography-mass spectrometry (GC/MS).

### TARGET COMPOUND LIST MIXES

#### BASE NEUTRALS #1

*2000 ug/mL in Methylene chloride*

- (1) Bis(2-chloroethoxy) methane
- (2) Bis(2-chloroethyl) ether
- (3) Bis(2-ethylhexyl) phthalate
- (4) Bis(2-chloroisopropyl) ether
- (5) 4-Bromophenylphenyl ether
- (6) Butyl benzyl phthalate
- (7) 4-Chlorophenylphenyl ether
- (8) Diethyl phthalate
- (9) Dimethyl phthalate
- (10) Di-n-butyl phthalate
- (11) Di-n-octyl phthalate
- (12) N-Nitrosodimethylamine
- (13) N-Nitrosodi-n-propylamine
- (14) N-Nitrosodiphenylamine

**Part # 10001     \$45/ 1 mL**

#### BASE NEUTRALS #2

*2000 ug/mL in Methylene chloride*

- (1) Azobenzene
- (2) 2-Chloronaphthalene
- (3) 1,2-Dichlorobenzene
- (4) 1,4-Dichlorobenzene
- (5) 1,3-Dichlorobenzene
- (6) 2,6-Dinitrotoluene
- (7) 2,4-Dinitrotoluene
- (8) Hexachlorobenzene
- (9) Hexachlorobutadiene
- (10) Hexachlorocyclopentadiene
- (11) Hexachloroethane
- (12) Isophorone
- (13) Nitrobenzene
- (14) 1,2,4-Trichlorobenzene

**Part # 10002     \$45/ 1 mL**

### POLYNUCLEAR AROMATIC HYDROCARBONS

*2000 ug/mL in Methylene chloride*

- |                          |                             |
|--------------------------|-----------------------------|
| (1) Acenaphthene         | (10) Chrysene               |
| (2) Acenaphthylene       | (11) Dibenzo(a,h)anthracene |
| (3) Anthracene           | (12) Fluoranthene           |
| (4) Benzo(a)anthracene   | (13) Fluorene               |
| (5) Benzo(a)pyrene       | (14) Indeno(1,2,3-cd)pyrene |
| (6) Benzo(b)fluoranthene | (15) Naphthalene            |
| (7) Benzo(k)fluoranthene | (16) Phenanthrene           |
| (8) Benzo(g,h,i)perylene | (17) Pyrene                 |
| (9) Carbazole            |                             |

**Part # 10007     \$65/ 1 mL**

**“Without Carbazole”**

**Part # 10017     \$65/ 1 mL**

METHOD

**1625**

Rev. B

**SEMI-VOLATILE ORGANIC  
COMPOUNDS BY ISOTOPE DILUTION  
GC/MS****PHENOLS***2000 ug/mL in Methylene chloride*

- |                                |                                |
|--------------------------------|--------------------------------|
| (1) 4-Chloro-3-methylphenol    | (8) 2-Nitrophenol              |
| (2) 2-Chlorophenol             | (9) 4-Nitrophenol              |
| (3) 2,4-Dichlorophenol         | (10) Pentachlorophenol         |
| (4) 2,6-Dichlorophenol         | (11) Phenol                    |
| (5) 2,4-Dimethylphenol         | (12) 2,4,6-Trichlorophenol     |
| (6) 2,4-Dinitrophenol          | (13) 2,3,4,6-Tetrachlorophenol |
| (7) 2-Methyl-4,6-dinitrophenol |                                |

**Part # 10018     \$40/ 1 mL****N-HYDROCARBON STANDARD***2000 ug/mL in Hexane*

- |                   |                      |
|-------------------|----------------------|
| (1) n-Nonane      | (8) n-Eicosane       |
| (2) n-Decane      | (9) n-Docosane       |
| (3) n-Dodecane    | (10) n-Tetracosane   |
| (4) n-Tetradecane | (11) n-Hexacosane    |
| (5) n-Hexadecane  | (12) n-Octacosane    |
| (6) n-Octadecane  | (13) Triacontane     |
| (7) n-Nonadecane  | (14) Hexatriacontane |

**Part # 91488     \$40/ 1 mL****BENZIDINES***2000 ug/mL in Methanol*

- (1) Benzidine
- (2) 3,3'-Dichlorobenzidine

**Part # 10006     \$25/ 1 mL**

**SEMI-VOLATILE ORGANIC  
COMPOUNDS BY ISOTOPE DILUTION  
GC/MS**

METHOD

**1625**

Rev. B

Additional Method 1625 Analytes	Part #	Price	ug/mL	Solvent
(1) Biphenyl	70556	\$22	1000	MeCl <sub>2</sub>
(2) p-Isopropyl toluene	70204	\$22	1000	Methanol
(3) Dibenzofuran	70116	\$22	1000	Methanol
(4) Dibenzothiophene	71015	\$22	1000	Methanol
(5) Diphenylamine	70314	\$22	1000	Methanol
(6) Phenyl ether	71068	\$22	1000	MeCl <sub>2</sub>
(7) Styrene	70266	\$22	1000	Methanol
(8) alpha-Terpineol	71752	\$22	1000	Hexane
(9) 1,2,3-Trichlorobenzene	70288	\$22	1000	Methanol
(10) 2,3,6-Trichlorophenol	70515	\$22	1000	Methanol
(11) 2,4,5-Trichlorophenol	70295	\$22	1000	Methanol

**ACID SURROGATE  
STANDARD**

*2000 ug/mL in Methanol*

- (1) 2-Fluorophenol
- (2) Phenol-d<sub>6</sub>
- (3) 2,4,6-Tribromophenol
- (4) 2-Chlorophenol-d<sub>4</sub>

**Part # 20005     \$25/ 1 mL**

**BASE-NEUTRALS  
SURROGATE STANDARD**

*1000 ug/mL in Methylene chloride*

- (1) 2-Fluorobiphenyl
- (2) p-Terphenyl-d<sub>14</sub>
- (3) Nitrobenzene-d<sub>5</sub>
- (4) 1,2-Dichlorobenzene-d<sub>4</sub>

**Part # 20006     \$25/ 1 mL**

**EPA METHOD 1625-INTERNAL STANDARD**

*4000 ug/mL in Methylene chloride*

- |  |                                  |
|--|----------------------------------|
| (1) Acenaphthene-d <sub>10</sub>       | (4) Naphthalene-d <sub>8</sub>   |
| (2) Chrysene-d <sub>12</sub>           | (5) Perylene-d <sub>12</sub>     |
| (3) 1,4-Dichlorobenzene-d <sub>4</sub> | (6) Phenanthrene-d <sub>10</sub> |

**Part # 10009     \$50/ 1 mL**

**Deuterated Analytes  
(Listed in Retention Order)**

	Part #	Price	ug/mL	Solvent
<b>Base/Neutrals</b>				
(1) alpha-Picoline-d7	72039	\$22	1000	Methanol
(2) Styrene-d5	72040	\$35	1000	Methanol
(3) Phenol-d6	70252	\$22	1000	Methanol
(4) n-Decane-d22	72041	\$22	1000	Methanol
(5) 1,4-Dichlorobenzene-d4	70118	\$22	1000	Methanol
(6) 1,2-Dichlorobenzene-d4	70128	\$22	1000	Methanol

METHOD

**1625**

Rev. B

**SEMI-VOLATILE ORGANIC  
COMPOUNDS BY ISOTOPE DILUTION  
GC/MS**

**Deuterated Analytes (Cont.) Part # Price ug/mL Solvent**  
(Listed in Retention Order)

(7)	Nitrobenzene-d5	70229	\$22	1000	Methanol
(8)	2,4-Dimethylphenol-d3	72011	\$22	1000	Methanol
(9)	1,2,4-Trichlorobenzene-d3	72054	\$22	1000	Methanol
(10)	Naphthalene-d8	70223	\$22	1000	Methanol
(11)	alpha-Terpineol-d3	72055	\$50	1000	Hexane
(12)	n-Dodecane-d26	72056	\$22	1000	MeCl <sub>2</sub>
(13)	2-Chloronaphthalene-d7	72057	\$75	1000	Methanol
(14)	Biphenyl-d10	72058	\$22	1000	Methanol
(15)	Diphenyl ether-d10	72036	\$22	1000	Methanol
(16)	Acenaphthylene-d8	72059	\$22	1000	Methanol
(17)	Dimethylphthalate-d4	72060	\$40	1000	Methanol
(18)	2,6-Dinitrotoluene-d3	72061	\$35	1000	Methanol
(19)	Acenaphthene-d10	79002	\$22	1000	Methanol
(20)	Dibenzofuran-d8	72062	\$40	1000	Methanol
(21)	Fluorene-d10	71490	\$22	1000	MeCl <sub>2</sub>
(22)	4-Chlorophenyl phenyl ether-d5	72063	\$40	1000	Methanol
(23)	Diethylphthalate-d4	72064	\$40	1000	Methanol
(24)	n-Hexadecane-d34	72065	\$22	1000	MeCl <sub>2</sub>
(25)	2,4-Dinitrotoluene-d3	72066	\$35	1000	Methanol
(26)	n-Nitrosodiphenylamine-d6	72067	\$35	1000	Methanol
(27)	Phenanthrene-d10	70249	\$22	1000	MeCl <sub>2</sub>
(28)	Anthracene-d10	70014	\$22	1000	MeCl <sub>2</sub>
(29)	Dibenzothiophene-d8	72068	\$35	1000	Methanol
(30)	n-Eicosane-d42	72069	\$22	1000	MeCl <sub>2</sub>
(31)	Di-n-butyl phthalate-d4	72070	\$40	1000	Methanol
(32)	Fluoranthene-d10	71198	\$22	1000	MeCl <sub>2</sub>
(33)	Pyrene-d10	71390	\$22	1000	Methanol
(34)	Benzydine-d8	72071	\$110	1000	Methanol
(35)	n-Tetracosane-d50	72072	\$22	1000	MeCl <sub>2</sub>
(36)	Chrysene-d12	70092	\$22	1000	MeCl <sub>2</sub>
(37)	Benzo(a)anthracene-d12	70029	\$22	1000	MeCl <sub>2</sub>
(38)	3,3'-Dichlorobenzidine-d6	72073	\$110	1000	Methanol
(39)	Bis(2-ethylhexyl)phthalate-d4	71199	\$40	1000	Methanol
(40)	Di-n-octylphthalate-d4	72075	\$40	1000	Methanol
(41)	Benzo(a)pyrene-d12	71739	\$50	1000	MeCl <sub>2</sub>
(42)	Benzo(g,h,i)perylene-d12	70454	\$75	1000	MeCl <sub>2</sub>

**Acids**

(43)	2-Chlorophenol-d4	70084	\$22	1000	Methanol
(44)	2-Nitrophenol-d4	72076	\$22	1000	Methanol
(45)	2,4-Dichlorophenol-d3	72077	\$35	1000	Methanol
(46)	4-Chloro-3-methylphenol-d2	72078	\$50	1000	Methanol
(47)	2,4,6-Trichlorophenol-d2	72079	\$50	1000	Methanol
(48)	2,4-Dinitrophenol-d3	72080	\$35	1000	Methanol
(49)	2-Methyl-4,6-dinitrophenol-d2	72081	\$40	1000	Methanol

**CHLORINATED PHENOLICS IN  
WASTEWATER AMENABLE TO IN-  
SITU ACETYLATION AND ANALYSIS  
BY GC/MS.**

METHOD  
**1653**

This method is designed to determine chlorinated phenolics and other compounds in wastewater amenable to in-situ acetylation and analysis by GC/MS

**EPA METHOD 1653  
PHENOL STANDARD**

*100 ug/mL in Methanol*

- (1) 2,3,4,6-Tetrachlorophenol
- (2) 2,4,5-Trichlorophenol
- (3) 2,4,6-Trichlorophenol
- (4) 2,4-Dichlorophenol
- (5) 2,6-Dichlorophenol
- (6) Pentachlorophenol
- (7) 4-Chlorophenol

**Part # 92487 \$50 / 1 mL**

**EPA METHOD 1653  
INTERNAL STANDARD**

*1000 ug/mL in Methanol*

3,4,5-Trichlorophenol

**Part # 79147 \$22/ 1 mL**

**INSTRUMENT PERFORMANCE  
CHECK SOLUTION**

*500 ug/mL in Methanol*

Decafluorotriphenylphosphine (DFTPP)

**Part # 91413 \$22/ 1 mL**



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 METHOD  
**1656**


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**ORGANO-HALIDE PESTICIDES IN  
 WASTEWATER, SOIL, SLUDGE,  
 SEDIMENT, AND TISSUE BY GC/HSD**

This method is designed for the determination of organo-halide pesticides, polychlorinated biphenyls (PCBs), and other analytes amenable to extraction and analysis by wide-bore capillary column gas chromatography (GC) with a halogen-specific detector (HSD).

**GPC Calibration Solution***Varied (ug/mL) in Methylene chloride*

(1) Corn oil	300000
(2) bis(2-Ethylhexyl)phthalate	15000
(3) Pentachlorophenol	1400
(4) Perylene	100
(5) Sulfur	500

**Part # 20142 \$35/ 1 mL****Solid-Phase Extraction  
Cartridge***100 ug/mL in Methanol*

2,4,6-Trichlorophenol

**Part # X9208 \$22/ 1 mL****EPA METHOD 1656****Surrogate Standard #1***200 ug/mL in Acetone*

- (1) Tetrachloro-m-xylene
- (2) Decachlorobiphenyl

**Part # 20023 \$25/ 1 mL****EPA METHOD 1656****Surrogate Solution #2***200 ug/mL in Acetone*

- (1) Tetrachloro-m-xylene
- (2) Dibutylchloroendate

**Part # 20040 \$25/ 1 mL****EPA METHOD 1656****Surrogate Standard #3***200 ug/mL in Methanol*

Dibutylchloroendate

**Part # 91399 \$22/ 1 mL****Decomposition Test Solution****Pesticide Standard***2000 ug/mL in**Hexane:Toluene [1:1]*

- (1) 4,4'-DDT
- (2) Endrin

**Part # 91202 \$25/ 1 mL**

**ORGANO-HALIDE PESTICIDES IN  
WASTEWATER, SOIL, SLUDGE,  
SEDIMENT, AND TISSUE BY GC/HSD**

METHOD  
**1656**

**ORGANOCHLORINE PESTICIDES  
MIX #1**

*2000 ug/mL in Toluene:Hexane [1:1]*

- |              |                                   |
|--------------|-----------------------------------|
| (1) Aldrin   | (10) Endosulfan I                 |
| (2) a-BHC    | (11) Endosulfan II                |
| (3) b-BHC    | (12) Endosulfan sulphate          |
| (4) g-BHC    | (13) Endrin                       |
| (5) d-BHC    | (14) Endrin ketone                |
| (6) 4,4'-DDD | (15) Endrin aldehyde              |
| (7) 4,4'-DDE | (16) Heptachlor                   |
| (8) 4,4'-DDT | (17) Heptachlor epoxide(isomer B) |
| (9) Dieldrin | (18) Methoxychlor                 |

**Part # 10013    \$70/ 1 mL**

**CHLORDANE**

*2000 ug/mL in Methanol*

**Part # 16208    \$25/ 1 mL**

**TOXAPHENE**

*4000 ug/mL in Methanol*

**Part # 17208    \$25/ 1 mL**

**AROCLOR MIXES**

*All mixes 1000 ug/mL*

<b>AROCLOR</b>	<b>Part # Hexane</b>	<b>Part # Methanol</b>	<b>Price/ 1 mL</b>
1016	90123	70015	\$22
1221	90124	70016	\$22
1232	90125	70017	\$22
1242	90126	70018	\$22
1248	90127	70019	\$22
1254	90128	70020	\$22
1260	90129	70021	\$22
<b>Set of 7</b>	<b>91130</b>	<b>91131</b>	<b>\$125</b>

METHOD  
**1656**

**ORGANO-HALIDE PESTICIDES IN  
WASTEWATER, SOIL, SLUDGE,  
SEDIMENT, AND TISSUE BY GC/HSD**

**MIX #4  
ORGANOCHLORINE PESTICIDES**

*1000 ug/mL in Acetone*

- |                                      |                                       |
|--------------------------------------|---------------------------------------|
| (1) DBCP                             | (11) Dacthal                          |
| (2) Hexachlorocyclopentadiene        | (12) g-Chlordane                      |
| (3) Etridiazole                      | (13) trans-Nonachlor                  |
| (4) Chloroneb                        | (14) a-Chlordane                      |
| (5) Propachlor                       | (15) Chloropropylate                  |
| (6) Diallylate (cis & trans isomers) | (16) Chlorobenzilate                  |
| (7) Hexachlorobenzene                | (17) Nitrofen                         |
| (8) Dichlone                         | (18) Kepone                           |
| (9) Chlorothalonil                   | (19) Captafol                         |
| (10) Alachlor                        | (20) Permethrin (cis & trans isomers) |

**Part # 40060 \$60/ 1 mL**

**MIX #3**

*2000 ug/mL in  
Toluene:Hexane [1:1]*

- (1) Captan
- (2) Carbophenothion
- (3) Dichloran
- (4) Dicofol
- (5) Isodrin
- (6) Mirex
- (7) PCNB
- (8) Perthane
- (9) Trifluralin

**Part # 40008 \$40/ 1 mL**

**MIX #10  
ORGANONITROGEN  
PESTICIDES**

*100 ug/mL in Methanol*

- (1) Bromacil
- (2) Butachlor
- (3) Metolachlor
- (4) Metribuzin
- (5) Prometon

**Part # 91424 \$30/ 1 mL**

**MIX #8  
TRIAZINES**

*1000 ug/mL in Acetone*

- (1) Atrazine
- (2) Simazine

**Part # 91414 \$25/ 1 mL**

**METHOD 1656  
ADDITIONAL ANALYTES**

*100 ug/mL in Acetone*

- (1) Acephate
- (2) Ethalfluralin

**Part # 93059 \$25/ 1 mL**

**ORGANO-HALIDE PESTICIDES IN  
WASTEWATER, SOIL, SLUDGE,  
SEDIMENT, AND TISSUE BY GC/HSD**

METHOD  
**1656**

**EPA METHOD 1656**  
**Nitrogen Phosphorus Pesticides #1**  
*1000 ug/mL in MTBE*

- (1) Benfluralin
- (2) Isopropalin
- (3) Oxadiazon
- (4) Oxyfluorfen
- (5) Pendimethalin (Prowl)
- (6) Profluralin
- (7) Propachlor
- (8) Trifluralin

**Part # 31782 \$60/ 1 mL**

**EPA METHOD 1656**  
**Nitrogen Phosphorus Pesticides #2**  
*1000 ug/mL in MTBE*

- (1) Acifluorfen
- (2) Bromoxynil octanoate
- (3) Fenarimol
- (4) Norfluorazon
- (5) Propanil
- (6) Propazine
- (7) Strobane
- (8) Terbacil
- (9) Terbutylazine
- (10) Triadimefon

**Part # 31783 \$60/ 1 mL**

METHOD  
**1657****ORGANO-PHOSPHORUS PESTICIDES  
IN WASTEWATER, SOIL, SLUDGE,  
SEDIMENT, AND TISSUE BY GC/FPD**

This method is designed for the determination of organo-phosphorus pesticides and other analytes amenable to extraction and analysis by wide-bore capillary column gas chromatography combined with a flame photometric detector (GC/FPD).

**GPC CALIBRATION SOLUTION**

*Varied ug/mL in Methylene chloride*

(1) Corn oil	300000
(2) bis(2-Ethylhexyl)phthalate	15000
(3) Pentachlorophenol	1400
(4) Perylene	100
(5) Sulfur	500

**Part # 20142 \$35/ 1 mL**

**SOLID-PHASE EXTRACTION  
CARTRIDGE**

*100 ug/mL in Methanol*

2,4,6-Trichlorophenol

**Part # X9208 \$22/ 1 mL**

**EPA METHOD 8141/1657  
SURROGATE STANDARD**

*200 ug/mL in Methanol*

- (1) Tributyl phosphate
- (2) Triphenyl phosphate

**Part # 92357 \$25/ 1 mL**

**ORGANO-PHOSPHORUS PESTICIDES  
IN WASTEWATER, SOIL, SLUDGE,  
SEDIMENT, AND TISSUE BY GC/FPD**

METHOD  
**1657**

**EPA METHOD  
622/8140/1657 ANALYTES**

*200 ug/mL in Ethyl acetate*

- (1) Azinphosmethyl
- (2) Bolstar (Sulprofos)
- (3) Chlorpyrifos
- (4) Coumaphos
- (5) Demeton, (Mix of Isomers O:S)
- (6) Diazinon
- (7) Dichlorvos (Vapona)
- (8) Disulfoton
- (9) Ethoprop (Mocap)
- (10) Fensulfothion
- (11) Fenthion
- (12) Mevinphos
- (13) Naled (Dibrom)
- (14) Parathion methyl
- (15) Phorate
- (16) Fenchlorphos (Ronnel)
- (17) Tetrachlorvinphos (Stirophos)
- (18) Tokuthion (Prothiophos)
- (19) Trichloronate

**Part # 93126     \$75/ 1 mL**

**EPA METHOD  
8141A/1657 - ANALYTES**

*200 ug/mL in Acetone*

- (1) Aspon
- (2) Azinphos ethyl
- (3) Carbophenothion (Trithion)
- (4) Chlorfenvinphos
- (5) Chlorpyrifos methyl
- (6) Crotoxyphos
- (7) Dichlofenthion
- (8) Dicrotophos
- (9) Dioxathion
- (10) Ethion
- (11) Famphur
- (12) Fenitrothion
- (13) Fonofos (Dyfonate)
- (14) Leptophos (Phosvel)
- (15) Merphos
- (16) Phosmet (Imidan)
- (17) Phosphamidon
- (18) Terbufos
- (19) Fenamiphos sulfoxide

**Part # 92800     \$75/ 1 mL**

**EPA METHOD  
1657 ANALYTES**

*200 ug/mL in Acetone*

- (1) Acephate
- (2) DEF
- (3) Hexamethylphosphoramidate
- (4) Methamidophos
- (5) Methyl trithion
- (6) Trichlorfon
- (7) Tricresylphosphate
- (8) Trimethylphosphate

**Part # 31784     \$50/ 1 mL**

METHOD  
**1658****THE DETERMINATION OF PHENOXY-  
ACID HERBICIDES IN MUNICIPAL  
AND INDUSTRIAL WASTEWATER****EPA METHOD 8150/1658 HERBICIDES***100 ug/mL in solvent listed below*

- |                              |                        |
|------------------------------|------------------------|
| (1) Acifluorfen              | (8) Dichlorprop        |
| (2) Bentazon                 | (9) Dinoseb            |
| (3) 2,4-D                    | (10) Pentachlorophenol |
| (4) 2,4-DB                   | (11) Picloram          |
| (5) Dacthal                  | (12) 2,4,5-T           |
| (6) Dicamba                  | (13) 2,4,5-TP          |
| (7) 3,5-Dichlorobenzoic acid |                        |

**Part # 83597 Underivatized in MTBE \$35/ 1 mL****Part # 30076 Methyl derivatives in Hexane:Toluene [95:5] \$50/ 1 mL****EPA METHOD 8150/1658 HERBICIDES***20 mg/mL in solvent listed below*

- |          |
|----------|
| (1) MCPA |
| (2) MCPP |

**Part # 82448 Underivatized in MTBE \$30/ 1 mL****Part # 91700 Methyl derivatives in Hexane \$30/ 1 mL****SURROGATE STANDARD***100 ug/mL in Methyl tert-butyl ether*

2,4-Dichlorophenyl acetic acid methyl ester

**Part # 30022 \$22/ 1 mL***100 ug/mL in Methyl tert-butyl ether*

2,4-Dichlorophenyl acetic acid

**Part # 30122 \$22/ 1 mL****GPC CALIBRATION SOLUTION***Varied ug/mL in Methylene chloride*

- |                                |        |
|--------------------------------|--------|
| (1) Corn oil                   | 300000 |
| (2) bis(2-Ethylhexyl)phthalate | 15000  |
| (3) Pentachlorophenol          | 1400   |
| (4) Perylene                   | 100    |
| (5) Sulfur                     | 500    |

**Part # 20142 \$35/ 1 mL**

**THE DETERMINATION OF DAZOMET  
IN MUNICIPAL AND INDUSTRIAL  
WASTEWATER**

METHOD  
**1659**

Method 1659 is used to determine Dazomet by base hydrolysis to Methyl Isothiocyanate(MITC) and subsequent determination of MITC by wide-bore fused-silica capillary column gas chromatography with a Nitrogen Phosphorus Detector (NPD).

**DAZOMET**

*1000 ug/mL in Acetone*

**Part # 72013    \$22/ 1 mL**

**METHYL ISOTHIOCYANATE**

*1000 ug/mL in Acetone*

**Part # 71111    \$22/ 1 mL**



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 METHOD  
**1666**


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**VOLATILE ORGANIC COMPOUNDS  
 SPECIFIC TO THE PHARMACEUTICAL  
 MANUFACTURING INDUSTRY BY  
 ISOTOPE DILUTION GC/MS**

Method 1666 is used to monitor the discharge of pollutants into surface waters of the United States by the Pharmaceutical Manufacturing Industry. The methods can be used to identify and measure purgeable and non-purgeable volatiles specific to PMI discharge in water, soils, and municipal sludges.

**Method 1666 Standard #1***Varied (ug/mL) in Methanol*

(1) n-Amyl acetate	1000
(2) n-Amyl alcohol	2500
(3) tert-Butyl alcohol	2500
(4) Isopropyl acetate	1000
(5) Methyl formate	2500
(6) MIBK	1000
(7) n-Pentane	1000
(8) Tetrahydrofuran	1000
(9) Trichlorofluoromethane	1000
(10) m-Xylene	500

**Part # 82449 \$60/ 1 mL****Method 1666 Standard #2***Varied (ug/mL) in Methanol*

(1) n-Butanol	2500
(2) n-Butyl acetate	1000
(3) Cyclohexane	1000
(4) Ethyl acetate	1000
(5) n-Heptane	1000
(6) n-Hexane	1000
(7) Isopropanol	2500
(8) Isopropyl ether	1000
(9) o-Xylene	1000
(10) p-Xylene	500

**Part # 82450 \$60/ 1 mL****Method 1666 Labeled Standard***Varied (ug/mL) in Methanol*

(1) tert-Butanol-d9	250
(2) Cyclohexane-d12	25
(3) n-Heptane-d16	25
(4) n-Hexane-d14	25
(5) Tetrahydrofuran-d8	25
(6) o-Xylene-d10	25
(7) p-Xylene-d10	25

**Part # 82491 \$150/ 1 mL****EPA Method 8240A/1666 -  
Purgeable Internal Standard***2000 ug/mL in Methanol*

- (1) Bromochloromethane
- (2) Chlorobenzene-d5
- (3) 1,4-Difluorobenzene

**Part # 20003 \$25/ 1 mL**

**FORMALDEHYDE,  
ISOBUTYRALDEHYDE, AND  
FURFURAL  
BY DERIVATIZATION & HPLC**

METHOD  
**1667**

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**METHOD 1667 COMPONENTS**

*1000 ug/mL in Water*

- (1) Formaldehyde
- (2) Isobutyraldehyde
- (3) Furfural

**Part # 82451 \$40/ 1 mL**

METHOD

**1671****VOLATILE ORGANIC COMPOUNDS  
SPECIFIC TO THE PHARMACEUTICAL  
MANUFACTURING  
INDUSTRY BY GC/FID****VOLATILE ORGANIC COMPOUNDS  
EPA Method 1671***Varied (ug/mL) in Water*

(1) Acetonitrile	1000
(2) Diethylamine	2500
(3) Dimethylamine	1000
(4) Dimethyl sulfoxide	1000
(5) Ethanol	1000
(6) Ethylene glycol	2500
(7) Formamide	5000
(8) Methanol	1000
(9) Methylamine	2500
(10) Methyl Cellosolve® (2-Methoxyethanol)	1000
(11) n-Propanol	1000
(12) Triethylamine	2500

**Part # 82454 \$70/ 1 mL****INTERNAL STANDARD***1000 ug/mL in Water*

Tetrahydrofuran

**Part # 79200 \$22/ 1 mL**

**EDB & DBCP  
(ETHYLENE DIBROMIDE &  
1,2-DIBROMO-3-CHLOROPROPANE)**

METHOD

**8011**

This method covers the determination of ethylene dibromide and 1,2-dibromo-3-chloropropane in water by microextraction and gas chromatography.

**EPA METHOD 8011 ANALYTES**

*2000 ug/mL in Methanol*

- (1) 1,2-Dibromoethane
- (2) 1,2-Dibromo-3-chloropropane

**Part # 19211     \$25/ 1 mL**

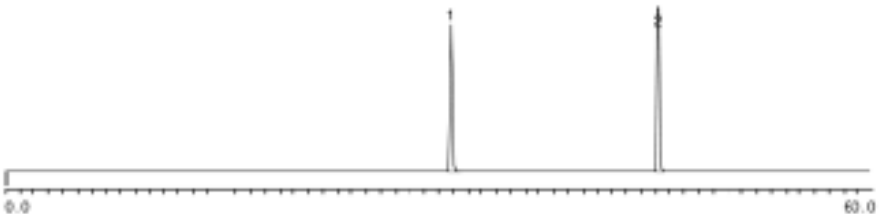
**Method:** GC1 M7. Detectors: PID (Range=1)/ELCD (Nitrogen mode). Column: Vocol (105m X 0.53mm ID X 3.0 µm film thickness). Flow rates: Helium (carrier) = 10 mL/min., Helium (make-up) = 20 mL/min., Hydrogen (reactor) = 100 mL/min.. Oven Profile: Temp. 1 = 35°C (Time 1 = 10 min.), Temp. 2 = 200°C (Time 2 = 8.75 min.), Rate = 4°C/min., Injector Temp. = 200°C, PID Temp. = 200°C, ELCD Temp. = 950°C. Analyst: Candice Warren.

Date: Thu, Apr 26, 2002 2:35 PM  
Data: P19211 L043203 036

Sample: Absolute Standards, Inc. QA/QC Analysis by PIDE/ELCD  
P19211 L043202 (2000µg/mL in MeOH)  
05µL standard injection, Range=1  
EPA Method 504  
EDB & DBCP

- 1 1,2-Dibromoethane (EDB)
- 2 1,2-Dibromo-3-chloropropane (DBCP)

Processing File:  
Method: GC1M7  
Sampling Int: 0.1 Seconds  
Date:



METHOD  
**8015B**
**NONHALOGENATED ORGANICS  
 USING GC/FID**

Method 8015 is used to determine the concentration of various nonhalogenated volatile organic compounds and semi-volatile organic compounds by gas chromatography. The following compounds can be determined by this method. This method may also be applicable to the analysis of petroleum hydrocarbons, including gasoline range organics (GROs) and diesel range organics (DROs).

**Azeotropic Microdistillation  
 Analyte Mix**

*2000 ug/mL in Water*

- (1) Acetone
- (2) Acetonitrile
- (3) Acrylonitrile
- (4) 1-Butanol
- (5) t-Butanol
- (6) 1,4-Dioxane
- (7) Ethanol
- (8) Ethyl acetate
- (9) Isobutanol
- (10) Isopropanol
- (11) Methanol
- (12) Methyl ethyl ketone
- (13) Methyl isobutyl ketone
- (14) 2-Pentanone
- (15) 1-Propanol
- (16) Propionitrile
- (17) Pyridine

**Part# 80152      \$50/ 1 mL**

**Extraction  
 Analyte Mix**

*2000 ug/mL in  
 Methanol:Water [9:1]*

- (1) Acetone
- (2) Acetonitrile
- (3) Acrylonitrile
- (4) Allyl alcohol
- (5) 1-Butanol
- (6) t-Butanol
- (7) Diethyl ether
- (8) 1,4-Dioxane
- (9) Ethanol
- (10) Ethylene glycol
- (11) Ethyl acetate
- (12) Isobutanol
- (13) Isopropanol
- (14) Methyl ethyl ketone
- (15) Methyl isobutyl ketone
- (16) N-Nitrosodi-n-butylamine
- (17) 2-Pentanone
- (18) 2-Picoline
- (19) 1-Propanol
- (20) Propionitrile
- (21) Pyridine
- (22) o-Toluidine

**Part# 80153      \$60/ 1 mL**

**NONHALOGENATED ORGANICS  
USING GC/FID**

METHOD  
**8015B**

**n-HYDROCARBON MIX**

*2000 ug/mL in Methylene Chloride*

C<sub>6</sub> - C<sub>28</sub> n-Hydrocarbons

**Part # 90814     \$40/ 1 mL**

**ACROLEIN**

*1000 ug/mL in Water*

**Part # 79005     \$30/ 1 mL**

**ETHYLENE OXIDE**

*1000 ug/mL in Water*

**\*Part # 71421     \$35/ 1 mL**

*\*Must expedite shipping for stability*

**EPA METHOD 8015B  
INTERNAL STANDARDS**

*1000 ug/mL in Methanol*

(1) 2-Chloroacrylonitrile	<b>Part # 71652</b>	<b>\$22/ 1 mL</b>
(2) Hexafluoro-2-propanol	<b>Part # 71653</b>	<b>\$22/ 1 mL</b>
(3) Hexafluoro-2-methyl-2-propanol	<b>Part # 71654</b>	<b>\$22/ 1 mL</b>

METHOD

**8021B****HALOGENATED AND AROMATIC  
VOLATILES BY CAPILLARY GC  
USING ELCD AND PID IN SERIES**

Method 8021 is used to determine volatile organic compounds in a variety of solid waste matrices. This method is applicable to nearly all types of samples regardless of water content, including groundwater, aqueous sludges, caustic liquors, acid liquors, waste solvents, oily wastes, mousses, tars, fibrous waste, polymeric emulsions, filter cakes, spent carbons, spent catalysts, soils and sediments.

**EPA METHOD 8021B MIX #1**

(1) Benzene	(19) 1,2-Dichlorobenzene	(37) Naphthalene
(2) Bromobenzene	(20) 1,4-Dichlorobenzene	(38) n-Propylbenzene
(3) Bromochloromethane	(21) 1,1-Dichloroethane	(39) Styrene
(4) Bromodichloromethane	(22) 1,2-Dichloroethane	(40) 1,1,1,2-Tetrachloroethane
(5) Bromoform	(23) cis-1,2-Dichloroethene	(41) 1,1,2,2-Tetrachloroethane
(6) n-Butyl benzene	(24) trans-1,2-Dichloroethene	(42) Tetrachloroethene
(7) tert-Butyl benzene	(25) 1,1-Dichloroethene	(43) Toluene
(8) sec-Butyl benzene	(26) 1,3-Dichloropropane	(44) 1,2,3-Trichlorobenzene
(9) Carbon tetrachloride	(27) 1,2-Dichloropropane	(45) 1,2,4-Trichlorobenzene
(10) Chlorobenzene	(28) 2,2-Dichloropropane	(46) 1,1,1-Trichloroethane
(11) Chloroform	(29) 1,1-Dichloropropene	(47) 1,1,2-Trichloroethane
(12) 4-Chlorotoluene	(30) cis-1,3-Dichloropropene	(48) Trichloroethene
(13) 2-Chlorotoluene	(31) trans-1,3-Dichloropropene	(49) 1,2,3-Trichloropropane
(14) 1,2-Dibromo-3-chloropropane	(32) Ethyl benzene	(50) 1,2,4-Trimethylbenzene
(15) Dibromochloromethane	(33) Hexachlorobutadiene	(51) 1,3,5-Trimethylbenzene
(16) 1,2-Dibromoethane	(34) Isopropyl benzene	(52) o-Xylene
(17) Dibromomethane	(35) p-Isopropyl toluene	(53) m-Xylene
(18) 1,3-Dichlorobenzene	(36) Methylene chloride	(54) p-Xylene

**Part # 30001 200 ug/mL in Methanol. \$50/ 1 mL**

**Part # 32001 2000 ug/mL in Methanol. \$95/ 1 mL**

**EPA METHOD 8021B MIX #2**

(1) Bromomethane	(4) Dichlorodifluoromethane
(2) Chloroethane	(5) Trichlorofluoromethane
(3) Chloromethane	(6) Vinyl chloride

**Part # 30002 200 ug/mL in Methanol. \$25/ 1 mL**

**Part # 30058 2000 ug/mL in Methanol. \$25/ 1 mL**

**HALOGENATED AND AROMATIC  
VOLATILES BY CAPILLARY GC  
USING ELCD AND PID IN SERIES**

METHOD

**8021B**

**EPA METHOD 8021B ANALYTE MIX #3**

*2000 ug/mL in Methanol*

- (1) Allyl chloride
- (2) bis(2-Chloroisopropyl) ether
- (3) 2-Chloroethanol
- (4) Chloromethyl methyl ether
- (5) Chloroprene
- (6) 1,3-Dichloro-2-propanol

**Part# 80210 \$35/ 1 mL**

**SINGLE COMPONENTS**

*1000 ug/mL in Methanol*

<b>Part #</b>	<b>Component</b>	<b>Price</b>
70037	Benzyl chloride	\$22/ 1 mL
70074	2-Chloroethylvinyl ether	\$22/ 1 mL

**EPA METHOD 8021B  
INTERNAL STANDARD SOLUTION**

*2000 ug/mL in Methanol*

- (1) 2-Bromo-1-chloropropane
- (2) Fluorobenzene

**Part # 30003 \$25/ 1 mL**

**EPA METHOD 8021B  
SURROGATE STANDARD MIX**

*2000 ug/mL in Methanol*

- (1) 4-Bromochlorobenzene
- (2) 1,4-Dichlorobutane

**Part # 19394 \$25/ 1 mL**



METHOD

**8031****ACRYLONITRILE BY GAS  
CHROMATOGRAPHY**

Method 8031 is used to determine the concentration of Acrylonitrile in water. This method may also be applicable to other matrices. A measured sample volume is micro-extracted with methyl tert-butyl ether. The extract is separated by gas chromatography and measured with a Nitrogen/Phosphorus detector.

**EPA METHOD 8031 ANALYTE***1000 ug/mL in Methanol*

Acrylonitrile

**Part # 79007    \$22/ 1 mL**

**WS / WP / DMRQA  
NELAC  
SDWA/ CWA/ RCRA  
PT Samples  
can be found in the  
GREEN Section**

**ACRYLAMIDE BY GAS  
CHROMATOGRAPHY**

METHOD  
**8032A**

Method 8032 is used to determine trace amounts of Acrylamide monomer in aqueous matrices. This method may be applicable to other matrices. Method 8032 is based on bromination of the acrylamide double bond. The reaction product (2,3-dibromopropionamide) is extracted from the reaction mixture with ethyl acetate, after salting out with sodium sulfate. The extract is cleaned up using a Florisil column, and analyzed by gas chromatography with electron capture detection (GC/ECD).

**EPA METHOD 8032A  
ANALYTE MIX #1**

*1000 ug/mL in Water*

Acrylamide

**Part # 80301     \$22/ 1mL**

**ANALYTE MIX #2**

*1000 ug/mL in Ethyl Acetate*

2,3-Dibromopropionamide

**Part # 80302     \$22/ 1 mL**

**INTERNAL STANDARD SOLUTION**

*1000 ug/mL in Ethyl Acetate*

Dimethyl phthalate

**Part # 80303     \$22/ 1 mL**

METHOD  
**8041****PHENOLS  
BY GAS CHROMATOGRAPHY****Mix A***2000 ug/mL in 2-Propanol. 1 mL*

(1)	2-sec-Butyl-4,6-dinitrophenol (Dinoseb) .....	70162
(2)	2,6-Dichlorophenol .....	79105
(3)	2,4-Dimethylphenol .....	70463
(4)	4,6-Dinitro-2-methylphenol .....	70158
(5)	2-Methylphenol (o-Cresol) .....	79127
(6)	4-Methylphenol (p-Cresol) .....	79128
(7)	2-Nitrophenol .....	70230
(8)	2,3,5,6-Tetrachlorophenol .....	79129
(9)	2,3,5-Trichlorophenol .....	70317
(10)	2,4,5-Trichlorophenol .....	<u>70295</u>

**Singles @ 1000 ug/mL, \$22/ 1mL**

Methanol	2-Propanol	Hexane
70162	71565	70469
79105	71566	71655
70463	71567	71656
70158	71568	71657
79127	71569	71658
79128	71570	71659
70230	71571	71660
79129	71572	71661
70317	71573	71662
<u>70295</u>	<u>71574</u>	<u>71663</u>
<b>Un-</b>	<b>PFB-</b>	<b>Methyl-</b>

**Derivatized Derivatized Derivatized****Underivatized Mix Part # 80401 - \$30****PFB Derivatized Mix Part # 80421 - \$60****Mix B***2000 ug/mL in 2-Propanol. 1 mL*

(1)	4-Chloro-3-methylphenol .....	79130
(2)	2-Chlorophenol .....	70083
(3)	2,4-Dichlorophenol .....	70142
(4)	2,4-Dinitrophenol .....	70159
(5)	4-Nitrophenol .....	70231
(6)	Pentachlorophenol .....	70243
(7)	Phenol .....	70250
(8)	2,3,4,6-Tetrachlorophenol .....	79131
(9)	2,3,4-Trichlorophenol .....	79132
(10)	2,3,6-Trichlorophenol .....	70515
(11)	2,4,6-Trichlorophenol .....	70296
(12)	3-Methylphenol (m-Cresol) .....	<u>79133</u>

**Singles @ 1000 ug/mL, \$22/ 1mL**

Methanol	2-Propanol	Hexane
79130	71575	71664
70083	71576	71665
70142	71577	79163
70159	71578	71666
70231	71579	70470
70243	71580	79161
70250	71564	71667
79131	71581	71668
79132	71582	71669
70515	71583	71670
70296	71584	79886
<u>79133</u>	<u>71585</u>	<u>71671</u>
<b>Un-</b>	<b>PFB-</b>	<b>Methyl-</b>

**Derivatized Derivatized Derivatized****Underivatized Mix Part # 80402 - \$30****PFB Derivatized Mix Part # 80412 - \$60****Surrogate Standard***1000 ug/mL in Methanol*

2,4-Dibromophenol

**Part # 71672 \$22/ 1 mL****Internal Standard***1000 ug/mL in Methanol*

2,5-Dibromotoluene

**Part # 71457 \$22/ 1 mL**

**PHTHALATE ESTERS BY CAPILLARY  
GAS CHROMATOGRAPHY WITH  
ELECTRON CAPTURE DETECTION  
(GC/ECD)**METHOD  
**8061A**

Method 8061 is used to determine the identities and concentrations of various phthalate esters in liquid, solid and sludge matrices. When this method is used to analyze for any or all of the target analytes, compound identification should be supported by at least one additional qualitative technique. This method describes conditions for parallel column, dual electron capture detector analysis which fulfills the above requirement. Retention time information obtained on two megabore fused-silica open tubular columns is given. Alternatively, gas chromatography/mass spectrometry could be used for compound confirmation.

**EPA METHOD 8061A  
MIX #1***2000 ug/mL in Iso-octane*

- (1) Bis(2-ethylhexyl) phthalate
- (2) Di-n-butyl phthalate
- (3) Dimethyl phthalate
- (4) Butyl benzyl phthalate
- (5) Diethyl phthalate
- (6) Di-n-octyl phthalate

**Part # 19220     \$25/ 1 mL****EPA METHOD 8061A  
ANALYTES***1000 ug/mL in Hexane:Acetone [95:5]*

- (1) Benzyl benzoate (I.S.)
- (2) Bis (2-n-butoxyethyl) phthalate (BBEP)
- (3) Bis (2-ethoxyethyl) phthalate (BEEP)
- (4) Bis (2-ethylhexyl) phthalate (DEHP)
- (5) Bis (2-methoxyethyl) phthalate (BMEP)
- (6) Bis (4-methyl-2-pentyl) phthalate (BMPP)
- (7) Butyl benzyl phthalate (BBP)
- (8) Diamyl phthalate (DAP)
- (9) Di-n-butyl phthalate (DBP)
- (10) Dicyclohexyl phthalate (DCP)
- (11) Diethyl phthalate (DEP)
- (12) Dihexyl phthalate (DHP)
- (13) Diisobutyl phthalate (DIBP)
- (14) Dimethyl phthalate (DMP)
- (15) Dinonyl phthalate (DNP)
- (16) Di-n-octyl phthalate (DOP)

**Part # 80601     \$50/ 1 mL**

METHOD  
**8061A****PHTHALATE ESTERS BY CAPILLARY  
GAS CHROMATOGRAPHY WITH  
ELECTRON CAPTURE DETECTION  
(GC/ECD)****EPA METHOD 8061A  
QUALITY CONTROL CHECK SOLUTION***At stated concentrations (ug/mL) in Acetone*

- |                                 |    |
|---------------------------------|----|
| (1) Butyl benzyl phthalate      | 10 |
| (2) Bis(2-ethylhexyl) phthalate | 50 |
| (3) Di-n-octyl phthalate        | 50 |
| (4) Dimethyl phthalate          | 25 |

**Part # 80602     \$25/ 1 mL****EPA METHOD 8061A  
INTERNAL STANDARD***5000 ug/mL in Hexane*

Benzyl benzoate

**Part # 80603     \$25/ 1 mL****EPA METHOD 8061A  
SURROGATE STANDARD***500 ug/mL in Acetone*

- (1) Diphenyl phthalate
- (2) Dibenzyl phthalate

**Part # 80614     \$25/ 1 mL****EPA METHOD 8061A  
MATRIX SPIKE SOLUTION***2000 ug/mL in Iso-octane*

- (1) Bis(2-ethylhexyl) phthalate
- (2) Butyl benzyl phthalate

**Part # 80605     \$25/ 1 mL**

# NITROSAMINES

# METHOD 8070A

## EPA METHOD 8070A ANALYTES

*2000 ug/mL in Methanol*

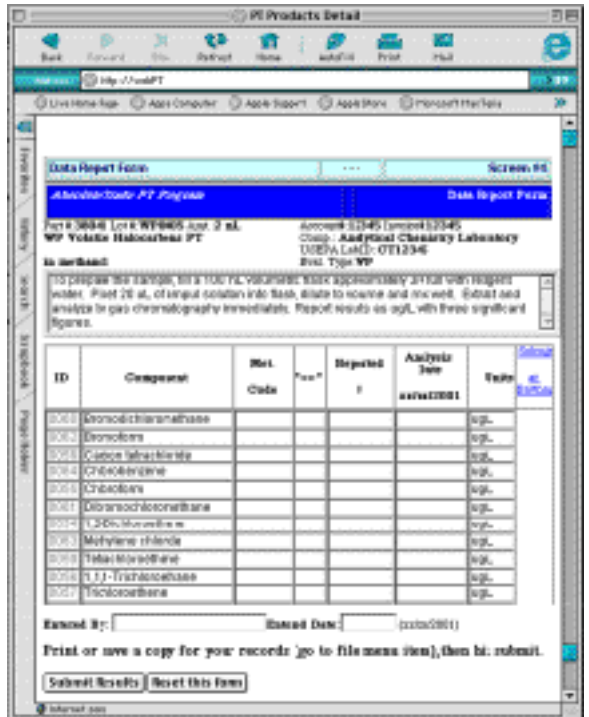
- (1) N-Nitrosodimethylamine
- (2) N-Nitrosodi-n-propylamine
- (3) N-Nitrosodiphenylamine

**Part # 19222     \$25/ 1 mL**

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METHOD  
**8081A/B**

**ORGANOCHLORINE PESTICIDES  
BY GC**

Method 8081 provides GC conditions for the detection of ppb levels of certain organo-chlorine pesticides and PCBs. Prior to the use of this method, appropriate sample extraction techniques must be used. Both neat and diluted organic liquids (Method 3580, Waste Dilution) may be analyzed by direct injection. A 2 to 5  $\mu\text{L}$  aliquot of the extract is injected into a GC using the solvent-flush technique and compounds are detected by an ECD or ELCD. Groundwater samples should be determined by ECD.

**EPA METHOD 8081A/B  
ANALYTES MIX #1**

*2000  $\mu\text{g}/\text{mL}$  in Toluene:Hexane [1:1]*

- |              |                                   |
|--------------|-----------------------------------|
| (1) Aldrin   | (10) Endosulfan I                 |
| (2) a-BHC    | (11) Endosulfan II                |
| (3) b-BHC    | (12) Endosulfan sulphate          |
| (4) g-BHC    | (13) Endrin                       |
| (5) d-BHC    | (14) Endrin ketone                |
| (6) 4,4'-DDD | (15) Endrin aldehyde              |
| (7) 4,4'-DDE | (16) Heptachlor                   |
| (8) 4,4'-DDT | (17) Heptachlor epoxide(isomer B) |
| (9) Dieldrin | (18) Methoxychlor                 |

**Part # 10013     \$70/ 1 mL**

**EPA METHOD 8081A/B  
ANALYTES MIX #2**

*2000  $\mu\text{g}/\text{mL}$  in Toluene*

- (1) Chlorobenzilate
- (2) alpha-Chlordane
- (3) gamma-Chlordane
- (4) 1,2-Dibromo-3-chloropropane
- (5) Diallate (Isomer Mix)
- (6) Hexachlorobenzene
- (7) Hexachlorocyclopentadiene
- (8) Isodrin

**Part # 80810     \$40/ 1 mL**

**EPA METHOD 8081A/B  
MIX #3**

*2000  $\mu\text{g}/\text{mL}$  in  
Toluene:Hexane [1:1]*

- (1) Captan
- (2) Carbophenothion
- (3) Dichloran
- (4) Dicofol
- (5) Isodrin
- (6) Mirex
- (7) PCNB
- (8) Perthane
- (9) Trifluralin

**Part # 40008     \$40/ 1 mL**

**ORGANOCHLORINE PESTICIDES  
BY GC**

METHOD  
**8081A/B**

**EPA METHOD 8081A/B  
MIX #4**

*1000 ug/mL in Acetone*

- |                                      |                                       |
|--------------------------------------|---------------------------------------|
| (1) DBCP                             | (11) Dacthal                          |
| (2) Hexachlorocyclopentadiene        | (12) g-Chlordane                      |
| (3) Etridiazole                      | (13) trans-Nonachlor                  |
| (4) Chloroneb                        | (14) a-Chlordane                      |
| (5) Propachlor                       | (15) Chloropropylate                  |
| (6) Diallylate (cis & trans isomers) | (16) Chlorobenzilate                  |
| (7) Hexachlorobenzene                | (17) Nitrofen                         |
| (8) Dichlone                         | (18) Kepone                           |
| (9) Chlorothalonil                   | (19) Captafol                         |
| (10) Alachlor                        | (20) Permethrin (cis & trans isomers) |

**Part # 40060 \$60/ 1 mL**

**CHLORDANE**

*2000 ug/mL in Methanol*

**Part # 16208 \$25/ 1 mL**

**TOXAPHENE**

*4000 ug/mL in Methanol*

**Part # 17208 \$25/ 1 mL**

**STROBANE**

*1000 ug/mL in Methanol*

**Part # 70839 \$22/ 1 mL**

**EPA METHOD 8081A/B  
SURROGATE STANDARD**

*200 ug/mL in Acetone*

- (1) 2,4,5,6-Tetrachloro-m-xylene
- (2) Decachlorobiphenyl

**Part # 20023 \$25/ 1 mL**

**INTERNAL STANDARD #1**

*100 ug/mL in MTBE*

Pentachloronitrobenzene

**Part # 19041 \$22/ 1 mL**

**INTERNAL STANDARD #2**

*1000 ug/mL in Methanol*

1-Bromo-2-nitrobenzene

**Part # 71673 \$22/ 1 mL**



METHOD  
**8082A**

**POLYCHLORINATED BIPHENYLS  
BY GC**

**AROCLOR MIXES**

*All mixes 1000 ug/mL. 1 mL.*

<b>AROCLOR</b>	<b>Part # Hexane</b>	<b>Part # Methanol</b>	<b>Price/ 1 mL</b>
1016	90123	70015	\$22
1221	90124	70016	\$22
1232	90125	70017	\$22
1242	90126	70018	\$22
1248	90127	70019	\$22
1254	90128	70020	\$22
1260	90129	70021	\$22
<b>Set of 7</b>	<b>91130</b>	<b>91131</b>	<b>\$125</b>

**SEE PAGES 307-312 FOR PCB CONGENERS**

**COMPOUND-INDEPENDENT  
ELEMENTAL QUANTITATION OF  
PESTICIDES BY GC WITH ATOMIC  
EMISSION DETECTION (GC/AED)**

METHOD  
**8085**

This method is applicable to the quantitation of semivolatile organohalide, organophosphorus, organonitrogen, and organosulfur pesticides that are amenable to gas chromatography.

## CHLORINATED PESTICIDES

### EPA METHOD 8085 MIX #1

*100 ug/mL in Toluene:Hexane [1:1]*

- |                    |                         |
|--------------------|-------------------------|
| (1) Aldrin         | (12) Endosulfan sulfate |
| (2) a-BHC          | (13) Endrin             |
| (3) b-BHC          | (14) Endrin aldehyde    |
| (4) d-BHC          | (15) Endrin ketone      |
| (5) g-BHC          | (16) Heptachlor         |
| (6) 4,4'-DDD       | (17) Heptachlor epoxide |
| (7) 4,4'-DDE       | (isomer B)              |
| (8) 4,4'-DDT       | (18) Methoxychlor       |
| (9) Dieldrin       | (19) a-Chlordane        |
| (10) Endosulfan I  | (20) g-Chlordane        |
| (11) Endosulfan II | (21) trans-Nonachlor    |

**Part # 30006    \$35/ 1 mL**

### EPA METHOD 8085 MIX #2

*100 ug/mL in Toluene*

- (1) 2,4'-DDD
- (2) 2,4'-DDE
- (3) 2,4'-DDT
- (4) Hexachlorobenzene
- (5) Isodrin
- (6) Mirex
- (7) cis-Nonachlor
- (8) trans-Nonachlor
- (9) Oxychlordane
- (10) Pentachloroanisole

**Part # 92655    \$45/ 1 mL**

Additional Single Components are listed at the front of the catalog.

METHOD

**8085****COMPOUND-INDEPENDENT  
ELEMENTAL QUANTITATION OF  
PESTICIDES BY GC WITH ATOMIC  
EMISSION DETECTION (GC/AED)****ORGANO-NITROGEN PESTICIDES****MIX #1***100 ug/mL in Acetone*

- (1) Bromacil
- (2) Chlorpropham
- (3) Metolachlor

**Part # 30082     \$25/ 1 mL****MIX #3***100 ug/mL in Acetone*

- (1) Fenamiphos
- (2) Dichlorvos
- (3) Atrazine
- (4) Ethoprop
- (5) Terbufos
- (6) Diazinon

**Part # 30084     \$25/ 1 mL****MIX #4***100 ug/mL in Acetone*

- (1) Fluridone
- (2) MGK 264
- (3) Terbacil
- (4) Carboxin
- (5) Tricyclazole

**Part # 30085     \$25/ 1 mL****MIX #2***100 ug/mL in Acetone*

- (1) Norflurazon
- (2) Alachlor
- (3) Diphenamid
- (4) Pebulate
- (5) Fenarimol
- (6) Vernolate
- (7) Metribuzin
- (8) Triadimefon
- (9) Butylate
- (10) Simazine
- (11) Simetryn
- (12) Prometryn

**Part # 30083     \$30/ 1 mL****MIX #5***100 ug/mL in Acetone*

- (1) Napropamide
- (2) Butachlor
- (3) Molinate
- (4) EPTC
- (5) Cycloate
- (6) Hexazinone
- (7) Atraton
- (8) Prometon
- (9) Ametryn
- (10) Terbutryn
- (11) Propazine

**Part # 30086     \$30/ 1 mL**

**COMPOUND-INDEPENDENT  
ELEMENTAL QUANTITATION OF  
PESTICIDES BY GC WITH ATOMIC  
EMISSION DETECTION (GC/AED)**

METHOD  
**8085**

**ORGANO-NITROGEN PESTICIDES CONT'D**

**507/8085 MIX #1**

*1000 ug/mL in Ethyl acetate*

- (1) Acetochlor
- (2) Atrazine-desethyl
- (3) Atrazine-desisopropyl
- (4) Chlorpyrifos
- (5) Cyanazine
- (6) Ethalfluralin
- (7) Fonofos
- (8) Kelthane
- (9) Malathion
- (10) Phorate
- (11) Triallate

**Part # 91899     \$40/ 1 mL**

**507/8085 MIX #2**

*1000 ug/mL in MTBE*

- (1) Benfluralin
- (2) Isopropalin
- (3) Oxadiazon
- (4) Oxyfluorfen
- (5) Pendimethalin (Prowl)
- (6) Profluralin
- (7) Propachlor
- (8) Trifluralin

**Part # 31782     \$60/ 1 mL**

**ORGANO-PHOSPHORUS PESTICIDES**

**ANALYTES MIX**

*200 ug/mL in Ethyl acetate*

- |                                  |                                    |
|----------------------------------|------------------------------------|
| (1) Azinphosmethyl, "Guthion"    | (11) Fenthion                      |
| (2) Bolstar (Sulprofos)          | (12) Merphos                       |
| (3) Chlorpyrifos                 | (13) Mevinphos                     |
| (4) Coumaphos                    | (14) Naled (Dibrom)                |
| (5) Demeton (Mix of Isomers O:S) | (15) Parathion methyl              |
| (6) Diazinon                     | (16) Phorate                       |
| (7) Dichlorvos (Vapona)          | (17) Fenchlorphos (Ronnel)         |
| (8) Disulfoton                   | (18) Tetrachlorvinphos (Stirophos) |
| (9) Ethoprop (Mocap)             | (19) Tokuthion (Prothiophos)       |
| (10) Fensulfothion               | (20) Trichloronate                 |

**Part # 90378     \$95/ 1 mL**

METHOD  
**8085**

**COMPOUND-INDEPENDENT  
ELEMENTAL QUANTITATION OF  
PESTICIDES BY GC WITH ATOMIC  
EMISSION DETECTION (GC/AED)**

**ORGANO-PHOSPHORUS PESTICIDES CONT'D**

**PESTICIDE MIX #1**

*100 ug/mL in Acetone*

- |                     |                               |
|---------------------|-------------------------------|
| (1) Chloroneb       | (8) Isophorone                |
| (2) Chlorobenzilate | (9) Merphos                   |
| (3) Chlorothalonil  | (10) Permethrin (cis & trans) |
| (4) Chlorpyrifos    | (11) Pronamide                |
| (5) Cyanazine       | (12) Trifluralin              |
| (6) Dacthal         | (13) Tebuthiuron              |
| (7) Etridiazole     |                               |

**Part # 30007    \$30/ 1 mL**

**PESTICIDES MIX #2**

*1000 ug/mL in Hexane:Acetone [4:1]*

- (1) Carbophenothion
- (2) Coumaphos
- (3) EPN
- (4) Ethion
- (5) Fensulfothion
- (6) Fenthion
- (7) Leptophos
- (8) Malathion
- (9) Parathion
- (10) Phosalone
- (11) Phosmet
- (12) Terbufos

**Part # 91003    \$50/ 1 mL**

**EPA METHOD 8085  
ANALYTES**

*1000 ug/mL  
in Hexane:Acetone [1:1]*

- (1) Dioxathion
- (2) EPN
- (3) Ethion
- (4) Terbufos

**Part # 40007    \$25/ 1 mL**

**METHOD 8141/1657/8085**

*200 ug/mL in Acetone*

- (1) Dimethoate
- (2) EPN
- (3) Malathion
- (4) Monocrotophos
- (5) Parathion ethyl
- (6) Sulfotep
- (7) Tetraethylpyrophosphate (TEPP)

**Part # 90605    \$40/ 1 mL**

**COMPOUND-INDEPENDENT  
ELEMENTAL QUANTITATION OF  
PESTICIDES BY GC WITH ATOMIC  
EMISSION DETECTION (GC/AED)**

METHOD  
**8085**

**ACID HERBICIDES**

**ANALYTES MIX**

*100 ug/mL in MTBE*

- |                 |                              |
|-----------------|------------------------------|
| (1) Acifluorfen | (9) 3,5-Dichlorobenzoic acid |
| (2) Bentazon    | (10) Dichlorprop             |
| (3) Chloramben  | (11) Dinoseb                 |
| (4) 2,4-D       | (12) 4-Nitrophenol           |
| (5) Dalapon     | (13) Pentachlorophenol       |
| (6) 2,4-DB      | (14) Picloram                |
| (7) Dacthal     | (15) 2,4,5-T                 |
| (8) Dicamba     | (16) 2,4,5-TP                |

**Part # 83596     \$35/ 1 mL**

**PHENOL MIX #1**

*100 ug/mL in Methanol*

- (1) 2,4-Dichlorophenol
- (2) Pentachlorophenol
- (3) Phenol
- (4) 2,3,4,5-Tetrachlorophenol
- (5) 2,3,4,6-Tetrachlorophenol
- (6) 2,4,6-Trichlorophenol

**Part # 92236     \$45/ 1 mL**

Additional Single Components are listed at the front of the catalog.

METHOD  
**8085**

**COMPOUND-INDEPENDENT  
ELEMENTAL QUANTITATION OF  
PESTICIDES BY GC WITH ATOMIC  
EMISSION DETECTION (GC/AED)**

**COMPOUND INDEPENDENT CALIBRATION MIX  
(CIC)**

*Varied ng/mL in MTBE*

(1)	Chlorpyrifos	5680
(2)	Decachlorobiphenyl	492
(3)	Diazinon	9800
(4)	4,4'-Dibromooctafluorobiphenyl	1000
(5)	Dichlobenil	6140
(6)	Ethoprop	391
(7)	Ioxynil (methyl ether)	500
(8)	Malathion	1070
(9)	Pentachloronitrobenzene	1690
(10)	Phorate	2100
(11)	Silvex (methyl ester)	400
(12)	Terbufos	7600
(13)	2,4,6-Tribromoanisole	2870
(14)	1,2,3-Trichlorobenzene	6810
(15)	Trifluralin	16000

**Part # 82460    \$95/ 1 mL**

**EPA METHOD 8085 SURROGATES**

*Varied ug/mL in MTBE*

(1)	4,4'-Dibromooctafluorobiphenyl	200
(2)	Decachlorobiphenyl	100
(3)	Triphenyl phosphate	200
(4)	1,3-Dimethyl-2-nitrobenzene	200

**Part # 82459    \$35/ 1 mL**

**8085 SURROGATE  
ALTERNATIVES**

*200 ug/mL in Acetone*

- (1) Dibutylchloroendate
- (2) 2,4,5,6-Tetrachloro-m-xylene

**Part # 20040    \$25/ 1 mL**

## NITROAROMATICS AND CYCLIC KETONES

METHOD  
**8091**

Method 8091 is a gas chromatographic method used to determine the concentration of nitroaromatics and cyclic ketones. It describes wide-bore, open-tubular, capillary gas chromatography procedures using either electron capture (ECD) or nitrogen-phosphorous (NPD) detectors.

### EPA METHOD 8091 MIX #1

*1000 ug/mL in Acetone*

- (1) 1,4-Dinitrobenzene
- (2) 2,4-Dinitrotoluene
- (3) 2,6-Dinitrotoluene
- (4) 1,4-Naphthoquinone
- (5) Nitrobenzene
- (6) Pentachloronitrobenzene

**Part # 80910    \$30/ 1 mL**

### INTERNAL STANDARD

*1000 ug/mL in Acetone*

Hexachlorobenzene

**Part # 70195    \$22/ 1 mL**

### SURROGATE STANDARD

*1000 ug/mL in Methanol*

1-Chloro-3-nitrobenzene

**Part # 71674    \$22/ 1 mL**

### EPA METHOD 8091 MIX #2

*1000 ug/mL in Acetone*

- (1) 1-Chloro-2,4-dinitrobenzene
- (2) 1-Chloro-2-nitrobenzene
- (3) 1-Chloro-4-nitrobenzene
- (4) 2-Chloro-6-nitrotoluene
- (5) 4-Chloro-2-nitrotoluene
- (6) 4-Chloro-3-nitrotoluene
- (7) 2,3-Dichloronitrobenzene
- (8) 2,4-Dichloronitrobenzene
- (9) 3,5-Dichloronitrobenzene
- (10) 3,4-Dichloronitrobenzene
- (11) 2,5-Dichloronitrobenzene
- (12) 1,2-Dinitrobenzene
- (13) 1,3-Dinitrobenzene
- (14) Isopropalin
- (15) 1,2-Naphthoquinone
- (16) 2-Nitrotoluene
- (17) 3-Nitrotoluene
- (18) 4-Nitrotoluene
- (19) Pendimethalin
- (20) Profluralin
- (21) 2,3,4,5-Tetrachloronitrobenzene
- (22) 2,3,5,6-Tetrachloronitrobenzene
- (23) 1,2,3-Trichloro-4-nitrobenzene
- (24) 1,2,4-Trichloro-5-nitrobenzene
- (25) 2,4,6-Trichloronitrobenzene
- (26) Trifluralin

**Part # 80911    \$60/ 1 mL**



METHOD  
**8095****NITROAROMATICS BY GAS  
CHROMATOGRAPHY**

Method 8095 may be used to determine the concentrations of various explosives in water and soil using capillary column gas chromatography with an electron capture detector (GC/ECD). The compound, nitroaromatics, nitramines, and nitrate esters, which are used as explosives, are byproducts of the manufacture of explosives, or are the transformation products of explosives. The method has also been successfully used to determine the commonly found explosives in acetonitrile extracts from soil prepared by the extraction procedure in Method 8330.

**EPA METHOD 8095  
CALIBRATION MIX #1***100 ug/mL In Acetonitrile*

- (1) 2-Amino-4,6-dinitrotoluene
- (2) 1,3-Dinitrobenzene
- (3) 2,4-Dinitrotoluene
- (4) HMX
- (5) Nitrobenzene
- (6) RDX
- (7) 1,3,5-Trinitrobenzene
- (8) 2,4,6-Trinitrotoluene(TNT)

**Part # 83525 \$45/ 1 mL****EPA METHOD 8095  
CALIBRATION MIX #2***100 ug/mL In Acetonitrile*

- (1) 4-Amino-2,6-dinitrotoluene
- (2) 2,6-Dinitrotoluene
- (3) 2-Nitrotoluene
- (4) 3-Nitrotoluene
- (5) 4-Nitrotoluene
- (6) Tetryl

**Part # 83526 \$45/ 1 mL****All solutions are in Acetonitrile.**

<b>Part #</b>	<b>Compound</b>	<b>Conc. ug/mL</b>	<b>Price / 1 mL</b>
79069	2-Amino-4,6-dinitrotoluene	1000	\$22
79070	4-Amino-2,6-dinitrotoluene	1000	\$22
79071	1,3-Dinitrobenzene	1000	\$22
79072	2,4-Dinitrotoluene	1000	\$22
79073	2,6-Dinitrotoluene	1000	\$22
79074	HMX	1000	\$22
79075	Nitrobenzene	1000	\$22
79076	2-Nitrotoluene	1000	\$22
79077	3-Nitrotoluene	1000	\$22
79078	4-Nitrotoluene	1000	\$22
79079	RDX	1000	\$22
79080	Tetryl	1000	\$22
79081	1,3,5-Trinitrobenzene	1000	\$22
79082	2,4,6-Trinitrotoluene(TNT)	1000	\$22
79250	Pentaerythritol tetranitrate (PETN)	1000	\$22

## POLYNUCLEAR AROMATIC HYDROCARBONS

METHOD  
**8100**

Method 8100 provides GC conditions for the detection of ppb levels of certain polynuclear aromatic hydrocarbons (PAHs). Prior to the use of this method, appropriate sample extraction techniques must be used. Both neat and diluted organic liquids (Method 3580, Waste Dilution) may be analyzed by direct injection. A 2 to 5 uL aliquot of the extract is injected into a GC using the solvent-flush technique, and compounds are detected by an FID. The packed column method described in Method 8100 cannot adequately resolve the following pairs of compounds: anthracene & phenanthrene; chrysene & benzo(a)anthracene; benzo(b)fluoranthene and benzo(k)fluoranthene; and dibenzo(a,h)anthracene and indeno (1,2,3-cd)pyrene. The use of a capillary column instead of the packed column (also described in this method) may better resolve these PAHs, however unless the purpose of the analysis can be served adequately by reporting a sum for the unresolved PAH pair, either liquid chromatography (Method 8310) or GC/MS (Method 8270) should be used for these compounds.

## POLYNUCLEAR AROMATIC HYDROCARBONS

*2000 ug/mL in Methylene chloride*

- |                          |                             |
|--------------------------|-----------------------------|
| (1) Acenaphthene         | (10) Chrysene               |
| (2) Acenaphthylene       | (11) Dibenzo(a,h)anthracene |
| (3) Anthracene           | (12) Fluoranthene           |
| (4) Benzo(a)anthracene   | (13) Fluorene               |
| (5) Benzo(a)pyrene       | (14) Indeno(1,2,3-cd)pyrene |
| (6) Benzo(b)fluoranthene | (15) Naphthalene            |
| (7) Benzo(k)fluoranthene | (16) Phenanthrene           |
| (8) Benzo(g,h,i)perylene | (17) Pyrene                 |
| (9) Carbazole            |                             |

**Part # 10007** **\$65/ 1 mL**

**Part # 10017 (Without Carbazole)** **\$65/ 1 mL**

## EPA METHOD 8100 SURROGATE STANDARD

*1000 ug/mL in Iso-octane*

- (1) 2-Fluorobiphenyl
- (2) 1-Fluoronaphthalene

**Part # 81002** **\$25/ 1 mL**

METHOD

**8111****HALOETHERS BY GC**

Method 8111 provides GC conditions for the detection of ppb levels of haloethers. Prior to the use of this method, appropriate sample extraction techniques must be used. Both neat and diluted organic liquids (Method 3580, Waste Dilution) may be analyzed by direct injection. A 2 to 5uL aliquot of the extract is injected into a GC using the solvent-flush technique, and compounds are detected by an ELCD (electrolytic conductivity detector). When this method is used to analyze unfamiliar samples for any or all of the compounds, compound identification should be supported by at least one additional qualitative technique. This method describes analytical conditions of a second column that can be used to confirm measurements made with the primary column. Method 8270 provides GC/MS conditions appropriate for the qualitative and quantitative confirmation of results for all of the parameters listed, using the extract from this method.

**EPA METHOD 8111 ANALYTES***2000 ug/mL in Methanol*

- (1) Bis(2-chloroethoxy) methane
- (2) Bis(2-chloroethyl) ether
- (3) Bis(2-chloroisopropyl) ether
- (4) 4-Bromophenylphenyl ether
- (5) 4-Chlorophenylphenyl ether

**Part # 19227    \$25/ 1 mL****INTERNAL STANDARD***1000 ug/mL in Ethyl acetate*

4,4'-Dibromobiphenyl

**Part # 79111    \$22/ 1 mL**

## CHLORINATED HYDROCARBONS BY GAS CHROMATOGRAPHY: CAPILLARY COLUMN TECHNIQUE

METHOD  
**8121**

Method 8121 provides gas chromatographic conditions for the detection of ppb concentrations of chlorinated hydrocarbons in water and soil or ppm concentrations in waste samples. Prior to use of this method, appropriate sample extraction techniques must be used for environmental samples. Both neat and diluted organic liquids (Method 3580) may be analyzed by direct injection. Spiked samples are used to verify the applicability of the chosen extraction technique to each new sample type. Analysis is accomplished by gas chromatography utilizing an instrument equipped with wide bore capillary columns and single or dual electron capture detectors (ECD).

### EPA METHOD 8121 ANALYTES

*Varied ug/mL in Hexane/Toluene [1:1]*

(1)	Benzal chloride	2000
(2)	Benzotrichloride	200
(3)	Benzyl chloride	2000
(4)	2-Chloronaphthalene	2000
(5)	1,2-Dichlorobenzene	1000
(6)	1,3-Dichlorobenzene	1000
(7)	1,4-Dichlorobenzene	2000
(8)	Hexachlorobenzene	20
(9)	Hexachlorobutadiene	20
(10)	alpha-BHC	20
(11)	beta-BHC	20
(12)	gamma-BHC	20
(13)	delta-BHC	20
(14)	Hexachlorocyclopentadiene	20
(15)	Hexachloroethane	20
(16)	Pentachlorobenzene	40
(17)	1,2,3,4-Tetrachlorobenzene	40
(18)	1,2,4,5-Tetrachlorobenzene	40
(19)	1,2,3,5-Tetrachlorobenzene	40
(20)	1,2,4-Trichlorobenzene	200
(21)	1,2,3-Trichlorobenzene	200
(22)	1,3,5-Trichlorobenzene	200

**Part # 82202      \$60/ 1 mL**

METHOD

**8121****CHLORINATED HYDROCARBONS BY  
GAS CHROMATOGRAPHY:  
CAPILLARY COLUMN TECHNIQUE****EPA METHOD 8121 ANALYTES***1000 ug/mL in Hexane/Toluene [1:1]*

- |                         |                                 |
|-------------------------|---------------------------------|
| (1) Benzal chloride     | (12) gamma-BHC                  |
| (2) Benzotrichloride    | (13) delta-BHC                  |
| (3) Benzyl chloride     | (14) Hexachlorocyclopentadiene  |
| (4) 2-Chloronaphthalene | (15) Hexachloroethane           |
| (5) 1,2-Dichlorobenzene | (16) Pentachlorobenzene         |
| (6) 1,3-Dichlorobenzene | (17) 1,2,3,4-Tetrachlorobenzene |
| (7) 1,4-Dichlorobenzene | (18) 1,2,4,5-Tetrachlorobenzene |
| (8) Hexachlorobenzene   | (19) 1,2,3,5-Tetrachlorobenzene |
| (9) Hexachlorobutadiene | (20) 1,2,4-Trichlorobenzene     |
| (10) alpha-BHC          | (21) 1,2,3-Trichlorobenzene     |
| (11) beta-BHC           | (22) 1,3,5-Trichlorobenzene     |

**Part # 81202    \$50/ 1 mL****ANALYTES***Varied concentrations (ug/mL) in Iso-octane*

- |                               |      |
|-------------------------------|------|
| (1) 2-Chloronaphthalene       | 4000 |
| (2) 1,2-Dichlorobenzene       | 2000 |
| (3) 1,3-Dichlorobenzene       | 2000 |
| (4) 1,4-Dichlorobenzene       | 4000 |
| (5) Hexachlorobenzene         | 10   |
| (6) Hexachlorobutadiene       | 10   |
| (7) Hexachlorocyclopentadiene | 10   |
| (8) Hexachloroethane          | 10   |
| (9) 1,2,4-Trichlorobenzene    | 400  |

**Part # 81201    \$30/ 1 mL****INTERNAL STANDARD***500 ug/mL in Acetone*

- 2,5-Dibromotoluene
- 1,3,5-Tribromobenzene
- a,a'-Dibromo-m-xylene

**Part # 81203    \$25/ 1 mL****SURROGATE STANDARD***1000 ug/mL in Acetone*

- a,2,6-Trichlorotoluene
- 2,3,4,5,6-Pentachlorotoluene

**Part # 81204    \$25/ 1 mL**

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METHOD  
**8141A****ORGANOPHOSPHORUS PESTICIDES  
BY CAPILLARY GC**

Method 8141 is a capillary gas chromatographic method used to determine the concentration of organophosphorous compounds. The fused silica, open tubular columns specified in this method offer improved resolution, better selectivity, increased sensitivity, and faster analysis than packed columns. The compounds listed can be determined by GC using capillary columns with a flame photometric detector (FPD) or a nitrogen-phosphorous detector (NPD). Triazine herbicides can also be determined with this method when the NPD is used. Although performance data is presented for each of the listed chemicals, it is unlikely that all of them could be determined in a single analysis. This limitation results because the chemical and chromatographic behavior of many of these analytes can result in co-elution. The analyst must select columns, detectors and calibration procedures for the specific analytes of interest. Any listed chemical is a potential method interference when it is not a target analyte.

**EPA METHOD 8141A  
ANALYTES MIX**

*200 ug/mL in Ethyl Acetate*

- (1) Azinphosmethyl, "Guthion"
- (2) Bolstar (Sulprofos)
- (3) Chlorpyrifos
- (4) Coumaphos
- (5) Demeton, (Mix of Isomers O:S)
- (6) Diazinon
- (7) Dichlorvos (Vapona)
- (8) Disulfoton
- (9) Ethoprop (Mocap)
- (10) Fensulfothion
- (11) Fenthion
- (12) Merphos
- (13) Mevinphos
- (14) Naled (Dibrom)
- (15) Parathion methyl
- (16) Phorate
- (17) Fenchlorphos (Ronnell)
- (18) Tetrachlorvinphos (Stirophos)
- (19) Tokuthion (Prothiophos)
- (20) Trichloronate

**Part # 90378    \$95/ 1 mL**

## ORGANOPHOSPHORUS PESTICIDES BY CAPILLARY GC

METHOD  
**8141A/B**

### SINGLE COMPONENTS

*1000 ug/mL - \$22/ 1 mL.*

	Compound	Part #	Solvent
(1)	Aspon	70539	Methanol
(2)	Atrazine	70023	Acetone
(3)	Azinphos methyl	70954	Methanol
(4)	Azinphos-ethyl	70541	Methanol
(5)	Bolstar (Sulprofos)	70840	Hexane
(6)	Carbophenothion	70578	Methanol
(7)	Chlorfenvinphos	70588	Methanol
(8)	Chlorpyrifos	70090	Methanol
(9)	Chlorpyrifos methyl	70593	Methanol
(10)	Coumaphos	70596	Methanol
(11)	Crotoxyphos	70598	Hexane
(12)	Demeton, O & S	70957	Hexane
(13)	Diazinon	70108	Methanol
(14)	Dichlofenthion	70638	Methanol
(15)	Dichlorvos	70151	Methanol
(16)	Dicrotophos	71197	Methanol
(17)	Dimethoate	70363	Methanol
(18)	Dioxathion	71204	Hexane
(19)	Disulfoton	70165	Methanol
(20)	EPN	70671	Hexane
(21)	Ethion	70675	Methanol
(22)	Ethoprop	70175	Methanol
(23)	Famphur	70387	Methanol
(24)	Fenitrothion	71205	Methanol
(25)	Fensulfothion	70510	Methanol
(26)	Fenthion	70686	Hexane
(27)	Fonophos	70697	Methanol
(28)	Hexamethylphosphoramide	71262	Methanol
(29)	Leptophos	70725	Methanol
(30)	Malathion	70729	Methanol
(31)	Merphos	70206	Hexane
(32)	Mevinphos	70219	Methanol
(33)	Monocrotophos	70755	Methanol
(34)	Naled	70953	Methanol
(35)	Parathion ethyl	70383	Methanol
(36)	Parathion methyl	70406	Methanol
(37)	Phorate	70492	Methanol
(38)	Phosmet	70798	Methanol
(39)	Phosphamidon	70800	Methanol
(40)	Ronnel	70951	Methanol
(41)	Simazine	70263	Acetone
(42)	Stiropfos	70265	Methanol
(43)	Sulfotep	70511	Methanol
(44)	TEPP	70834	Hexane
(45)	Terbufos	70269	Methanol
(46)	Thionazin	70493	Methanol
(47)	Tokuthion	70956	Hexane
(48)	Tritolyl phosphate (Tech)	71029	Methanol
(49)	Trichlorfon	71165	Methanol
(50)	Trichloronate	70930	Hexane



METHOD  
**8141B**

**ORGANOPHOSPHORUS PESTICIDES  
BY CAPILLARY GC**

**METHOD 8141B  
INTERNAL STANDARD**

*1000 ug/mL in Methanol*

1-Bromo-2-nitrobenzene

**Part # 71673      \$22/ 1 mL**

**METHOD 8141B  
SURROGATE STANDARD**

*1000 ug/mL in Methanol*

Tributyl phosphate

**Part # 71053      \$22/ 1 mL**

**METHOD 8141B  
SURROGATE STANDARD**

*1000 ug/mL in Methanol*

4-Chloro-3-nitrobenzotrifluoride

**Part # 71396      \$22/ 1 mL**

**METHOD 8141B  
SURROGATE STANDARD**

*1000 ug/mL in Methanol*

Triphenyl phosphate

**Part # 70302      \$22/ 1 mL**

**CHLORINATED HERBICIDES BY GC  
USING METHYLATION OR  
PENTAFLUOROBENZYLATION  
DERIVATIZATION: CAPILLARY  
COLUMN TECHNIQUE**

METHOD  
**8151A**

Method 8151 provides extraction, esterification, and GC conditions for the analysis of chlorinated acid herbicides. Spiked samples are used to verify the applicability of the chosen extraction technique to each new sample type. The acids are hydrolyzed with potassium hydroxide and extraneous organic material is removed with a solvent wash. After acidification, the acids are extracted with solvent and converted to their methyl esters using diazomethane as the derivatizing agent. After excess reagent is removed, the esters are determined by GC employing an ECD, microcoulometric detector or electrolytic conductivity detector (ELCD).

### INDIVIDUAL ANALYTES

**Price: \$22 / 1 mL. Concentration: 200 ug/mL**

Compound	Part # Underivatized in MTBE	Part # Methyl Derivative in Hexane
(1) Acifluorfen	83588	30025
(2) Bentazon	83589	30026
(3) Chloramben	83590	30030
(4) 2, 4-D	83572	81501
(5) Dalapon	83576	81505
(6) 2,4-DB	83573	81502
(7) Dacthal	83591	30035
(8) Dicamba	83577	81506
(9) 3,5-Dichlorobenzoic acid	83592	30036
(10) Dichlorprop	83578	81507
(11) Dinoseb	83579	81508
(12) 4-Nitrophenol	83593	30037
(13) Pentachlorophenol	83594	30038
(14) Picloram	83595	30039 (Toluene)
(15) 2,4,5-T	83574	81503
(16) 2,4,5-TP	83575	81504
(17) MCPA [2000 ug/mL]	83570	81509
(18) MCPP [2000 ug/mL]	83571	81510

**COMPLETE SETS of all 18 Compounds**

**Part # 30040 UNDERIVATIZED in MTBE \$195**

**Part # 30044 METHYL DERIVATIVES in Hexane \$195**

METHOD

**8151A***Continued*

**CHLORINATED HERBICIDES BY GC  
USING METHYLATION OR  
PENTAFLUOROBENZYLATION  
DERIVATIZATION: CAPILLARY  
COLUMN TECHNIQUE**

**ANALYTES MIX***100 ug/mL each in solvent listed below*

- |                 |                              |
|-----------------|------------------------------|
| (1) Acifluorfen | (9) 3,5-Dichlorobenzoic acid |
| (2) Bentazon    | (10) Dichlorprop             |
| (3) Chloramben  | (11) Dinoseb                 |
| (4) 2,4-D       | (12) 4-Nitrophenol           |
| (5) Dalapon     | (13) Pentachlorophenol       |
| (6) 2,4-DB      | (14) Picloram                |
| (7) Dacthal     | (15) 2,4,5-T                 |
| (8) Dicamba     | (16) 2,4,5-TP                |

**Part # 83596 Underivatized in MTBE \$35/ 1 mL****Part # 30072 Methyl derivatives in Hexane:Toluene [95:5] \$50/ 1 mL****PERFORMANCE CHECK SOLUTION***At stated concentrations (ug/mL) in Methyl tert-butyl ether*

- |   |      |
|---|------|
| (1) 4,4'-Dibromooctafluorobiphenyl              | 250  |
| (2) 3,5-Dichlorobenzoic acid methyl ester       | 600  |
| (3) 2,4-Dichlorophenyl acetic acid methyl ester | 500  |
| (4) Dinoseb methyl ether                        | 4    |
| (5) 4-Nitroanisole                              | 1600 |

**Part # 30121 \$30/ 1 mL****SURROGATE STANDARD***100 ug/mL in Methyl tert-butyl ether*

2,4-Dichlorophenyl acetic acid methyl ester

**Part # 30022 \$22/ 1 mL***100 ug/mL in Methyl tert-butyl ether*

2,4-Dichlorophenyl acetic acid

**Part # 30122 \$22/ 1 mL****INTERNAL STANDARD***100 ug/mL in Methyl tert-butyl ether*

4,4'-Dibromooctafluorobiphenyl

**Part # 30023 \$22/ 1 mL**

## VOLATILE ORGANICS BY GC/MS USING CAPILLARY COLUMNS

METHOD  
**8260B**

Method 8260B is used to determine volatile organic compounds in a variety of solid waste matrices. This method is applicable to nearly all types of samples, regardless of water content, including groundwater, aqueous sludges, caustic liquors, acid liquors, waste solvents, oily wastes, mousses, tars, fibrous wastes, polymeric emulsions, filter cakes, spent carbons, spent catalysts, soil and sediments.

### LIQUIDS

- |                                  |                                |                                |
|----------------------------------|--------------------------------|--------------------------------|
| (1) Benzene                      | (19) 1,2-Dichlorobenzene       | (37) Naphthalene               |
| (2) Bromobenzene                 | (20) 1,4-Dichlorobenzene       | (38) n-Propylbenzene           |
| (3) Bromochloromethane           | (21) 1,1-Dichloroethane        | (39) Styrene                   |
| (4) Bromodichloromethane         | (22) 1,2-Dichloroethane        | (40) 1,1,1,2-Tetrachloroethane |
| (5) Bromoform                    | (23) cis-1,2-Dichloroethene    | (41) 1,1,2,2-Tetrachloroethane |
| (6) n-Butyl benzene              | (24) trans-1,2-Dichloroethene  | (42) Tetrachloroethene         |
| (7) tert-Butyl benzene           | (25) 1,1-Dichloroethene        | (43) Toluene                   |
| (8) sec-Butyl benzene            | (26) 1,3-Dichloropropane       | (44) 1,2,3-Trichlorobenzene    |
| (9) Carbon tetrachloride         | (27) 1,2-Dichloropropane       | (45) 1,2,4-Trichlorobenzene    |
| (10) Chlorobenzene               | (28) 2,2-Dichloropropane       | (46) 1,1,1-Trichloroethane     |
| (11) Chloroform                  | (29) 1,1-Dichloropropene       | (47) 1,1,2-Trichloroethane     |
| (12) 4-Chlorotoluene             | (30) cis-1,3-Dichloropropene   | (48) Trichloroethene           |
| (13) 2-Chlorotoluene             | (31) trans-1,3-Dichloropropene | (49) 1,2,3-Trichloropropane    |
| (14) 1,2-Dibromo-3-chloropropane | (32) Ethyl benzene             | (50) 1,2,4-Trimethylbenzene    |
| (15) Dibromochloromethane        | (33) Hexachlorobutadiene       | (51) 1,3,5-Trimethylbenzene    |
| (16) 1,2-Dibromoethane           | (34) Isopropyl benzene         | (52) o-Xylene                  |
| (17) Dibromomethane              | (35) p-Isopropyl toluene       | (53) m-Xylene                  |
| (18) 1,3-Dichlorobenzene         | (36) Methylene chloride        | (54) p-Xylene                  |

**Part # 30001 200 ug/mL in Methanol. \$50/ 1 mL**

**Part # 32001 2000 ug/mL in Methanol. \$95/ 1 mL**

### GASES

- |                   |                             |
|-------------------|-----------------------------|
| (1) Bromomethane  | (4) Dichlorodifluoromethane |
| (2) Chloroethane  | (5) Trichlorofluoromethane  |
| (3) Chloromethane | (6) Vinyl chloride          |

**Part # 30002 200 ug/mL in Methanol. \$25/ 1 mL**

**Part # 30058 2000 ug/mL in Methanol. \$25/ 1 mL**

### KETONES

*2000 ug/mL in Methanol:Water [9:1]*

- (1) Acetone
- (2) 2-Butanone
- (3) 2-Hexanone
- (4) 4-Methyl-2-pentanone

**Part # 82402 \$25/ 1 mL**

METHOD  
**8260B**

**VOLATILE ORGANICS BY GC/MS  
USING CAPILLARY COLUMNS**

**LIQUIDS**

- |                                  |                                  |                                |
|----------------------------------|----------------------------------|--------------------------------|
| (1) Acetone                      | (27) 1,4-Dichlorobenzene         | (53) Methylmethacrylate        |
| (2) Acrylonitrile                | (28) trans-1,4-Dichloro-2-butene | (54) 4-Methyl-2-pentanone      |
| (3) Allyl chloride               | (29) 1,1-Dichloroethane          | (55) Methyl-t-butyl ether      |
| (4) Benzene                      | (30) 1,2-Dichloroethane          | (56) Naphthalene               |
| (5) Bromobenzene                 | (31) 1,1-Dichloroethene          | (57) Nitrobenzene              |
| (6) Bromochloromethane           | (32) cis-1,2-Dichloroethene      | (58) 2-Nitropropane            |
| (7) Bromodichloromethane         | (33) trans-1,2-Dichloroethene    | (59) Pentachloroethane         |
| (8) Bromoform                    | (34) 1,2-Dichloropropane         | (60) Propionitrile             |
| (9) 2-Butanone                   | (35) 1,3-Dichloropropane         | (61) n-Propylbenzene           |
| (10) n-Butylbenzene              | (36) 2,2-Dichloropropane         | (62) Styrene                   |
| (11) sec-Butylbenzene            | (37) 1,1-Dichloropropene         | (63) 1,1,1,2-Tetrachloroethane |
| (12) tert-Butylbenzene           | (38) 1,1-Dichloropropanone       | (64) 1,1,2,2-Tetrachloroethane |
| (13) Carbon disulfide            | (39) cis-1,3-Dichloropropene     | (65) Tetrachloroethene         |
| (14) Carbon tetrachloride        | (40) trans-1,3-Dichloropropene   | (66) Tetrahydrofuran           |
| (15) Chloroacetonitrile          | (41) Diethyl ether               | (67) Toluene                   |
| (16) Chlorobenzene               | (42) Ethylbenzene                | (68) 1,2,3-Trichlorobenzene    |
| (17) 1-Chlorobutane              | (43) Ethyl methacrylate          | (69) 1,2,4-Trichlorobenzene    |
| (18) Chloroform                  | (44) Hexachlorobutadiene         | (70) 1,1,1-Trichloroethane     |
| (19) 2-Chlorotoluene             | (45) Hexachloroethane            | (71) 1,1,2-Trichloroethane     |
| (20) 4-Chlorotoluene             | (46) 2-Hexanone                  | (72) Trichloroethene           |
| (21) Dibromochloromethane        | (47) Isopropylbenzene            | (73) 1,2,3-Trichloropropane    |
| (22) 1,2-Dibromo-3-chloropropane | (48) 4-Isopropyltoluene          | (74) 1,2,4-Trimethylbenzene    |
| (23) 1,2-Dibromoethane           | (49) Methacrylonitrile           | (75) 1,3,5-Trimethylbenzene    |
| (24) Dibromomethane              | (50) Methylacrylate              | (76) o-Xylene                  |
| (25) 1,2-Dichlorobenzene         | (51) Methylene chloride          | (77) m-Xylene                  |
| (26) 1,3-Dichlorobenzene         | (52) Methyl iodide               | (78) p-Xylene                  |

<b>Part # 33001</b>	<b>in Methanol</b>	<b>200 ug/mL</b>	<b>\$75/ 1 mL</b>
<b>Part # 33003</b>	<b>in Methanol</b>	<b>2000 ug/mL</b>	<b>\$125/ 1 mL</b>

**LIQUIDS - ADDITIONAL ANALYTES**

- |   |                                     |
|---|-------------------------------------|
| (1) 1,1-Dichloropropanone-2                       | (13) Ethyl methacrylate             |
| (2) 1-Chlorobutane                                | (14) Hexachloroethane               |
| (3) 2-Butanone (Methyl ethyl ketone)              | (15) Iodomethane (Methyl iodide)    |
| (4) 2-Hexanone                                    | (16) Methacrylonitrile              |
| (5) 2-Nitropropane                                | (17) Methyl acrylate                |
| (6) 4-Methyl-2-pentanone (Methyl isobutyl ketone) | (18) Methyl methacrylate            |
| (7) Acetone                                       | (19) Methyl tert-butyl ether (MTBE) |
| (8) Acrylonitrile                                 | (20) Nitrobenzene                   |
| (9) Allyl chloride (3-Chloropropene)              | (21) Pentachloroethane              |
| (10) Carbon disulphide                            | (22) Propionitrile                  |
| (11) Chloroacetonitrile                           | (23) Tetrahydrofuran                |
| (12) Diethyl ether (Ethyl ether)                  | (24) trans-1,4-Dichloro-2-butene    |

<b>Part # 34002</b>	<b>in Methanol</b>	<b>2000 ug/mL</b>	<b>\$50/ 1 mL</b>
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## VOLATILE ORGANICS BY GC/MS USING CAPILLARY COLUMNS

METHOD  
**8260B**

### EPA METHOD 8260B MIX #2

*2000 ug/mL in Methanol*

- (1) Acetonitrile
- (2) 3-Chloropropionitrile
- (3) 2-Hydroxypropionitrile
- (4) Malononitrile

**Part # 82433     \$30/ 1 mL**

### EPA METHOD 8260B MIX #4

*2000 ug/mL in Methanol*

- (1) N-Nitroso-di-n-butylamine
- (2) 2-Picoline
- (3) n-Propylamine
- (4) Pyridine
- (5) o-Toluidine

**Part # 82466     \$30/ 1 mL**

### EPA METHOD 8260B MIX #3

*2000 ug/mL in Water*

- (1) Allyl alcohol
- (2) n-Butanol
- (3) t-Butanol
- (4) 2-Chloroethanol
- (5) 1,3-Dichloro-2-propanol
- (6) Ethanol
- (7) Isobutyl alcohol
- (8) Methanol
- (9) 1-Propanol
- (10) 2-Propanol
- (11) Propargyl alcohol

**Part # 82444     \$30/ 1 mL**

### EPA METHOD 8260B MIX #5

*2000 ug/mL*

*in Methanol:Water [9:1]*

- (1) 1-Chlorohexane
- (2) cis-1,4-Dichloro-2-butene
- (3) 1,4-Dioxane
- (4) Ethyl acetate
- (5) Pentafluorobenzene
- (6) 2-Pentanone

**Part # 82445     \$30/ 1 mL**

### SINGLE COMPONENTS @ 1000 ug/mL \$22 / 1 mL.

	Compound	Part #	Solvent
(1)	Acrolein	79005 (\$30)	Water
(2)	Benzyl chloride	70037	Methanol
(3)	Chloral hydrate	70335	MTBE
(4)	2-Chloroethylvinyl ether	70074	Methanol
(5)	Chloroprene	70483	Methanol
(6)	Crotonaldehyde	70348	Acetonitrile
(7)	1,2:3,4-Diepoxybutane	70355	Methanol
(8)	Epichlorohydrin	70377	Methanol
(9)	Ethylene oxide	71421 (\$35)	Water
(10)	Vinyl acetate [20mg/mL]	82472 (\$30)	Water

METHOD  
**8260B****VOLATILE ORGANICS BY GC/MS  
USING CAPILLARY COLUMNS****PURGEABLE  
SURROGATE STANDARD***2000 ug/mL in Methanol*

- (1) p-Bromofluorobenzene
- (2) 1,2-Dichloroethane-d4
- (3) Toluene-d8

**Part # 20002     \$25/ 1 mL****PURGEABLE  
INTERNAL STANDARD***2000 ug/mL in Methanol*

- (1) 1,4-Dichlorobenzene-d4
- (2) Chlorobenzene-d<sub>5</sub>
- (3) Fluorobenzene

**Part # 22013     \$25/ 1 mL****INSTRUMENT PERFORMANCE  
CHECK SOLUTION***2500 ug/mL in Methanol*

4-Bromofluorobenzene

**Part # 19167     \$25 1 mL****SYSTEM PERFORMANCE  
CHECK COMPOUNDS***2000 ug/mL in Methanol*

- (1) Bromoform
- (2) Chloromethane
- (3) 1,1-Dichloroethane
- (4) 1,1,2,2-Tetrachloroethane
- (5) Chlorobenzene

**Part # 82411     \$30/ 1 mL****MATRIX SPIKING STANDARD***250 ug/mL in Methanol*

- (1) Benzene
- (2) Chlorobenzene
- (3) 1,1-Dichloroethene
- (4) Toluene
- (5) Trichloroethene

**Part # 82410     \$30/ 1 mL****CALIBRATION CHECK  
COMPOUNDS***2000 ug/mL in Methanol*

- (1) Chloroform
- (2) 1,1-Dichloroethene
- (3) 1,2-Dichloropropane
- (4) Ethylbenzene
- (5) Toluene
- (6) Vinyl chloride

**Part # 82412     \$30/ 1 mL**

## VOLATILE ORGANIC COMPOUNDS BY VACUUM DISTILLATION IN COMBINATION WITH GC/MS (VD/GC/MS)

METHOD

**8261**

Method 8261 is used to determine the concentrations of volatile organic compounds, and some low-boiling semivolatile organic compounds, in a variety of liquid, solid, and oily waste matrices, as well as animal tissues. This method is applicable to nearly all types of matrices regardless of water, soil, sediment, sludge, oil, and biota content.

### LIQUIDS

- |                                  |                                |                                |
|----------------------------------|--------------------------------|--------------------------------|
| (1) Benzene                      | (19) 1,2-Dichlorobenzene       | (37) Naphthalene               |
| (2) Bromobenzene                 | (20) 1,4-Dichlorobenzene       | (38) n-Propylbenzene           |
| (3) Bromochloromethane           | (21) 1,1-Dichloroethane        | (39) Styrene                   |
| (4) Bromodichloromethane         | (22) 1,2-Dichloroethane        | (40) 1,1,1,2-Tetrachloroethane |
| (5) Bromoform                    | (23) cis-1,2-Dichloroethene    | (41) 1,1,2,2-Tetrachloroethane |
| (6) n-Butyl benzene              | (24) trans-1,2-Dichloroethene  | (42) Tetrachloroethene         |
| (7) tert-Butyl benzene           | (25) 1,1-Dichloroethene        | (43) Toluene                   |
| (8) sec-Butyl benzene            | (26) 1,3-Dichloropropane       | (44) 1,2,3-Trichlorobenzene    |
| (9) Carbon tetrachloride         | (27) 1,2-Dichloropropane       | (45) 1,2,4-Trichlorobenzene    |
| (10) Chlorobenzene               | (28) 2,2-Dichloropropane       | (46) 1,1,1-Trichloroethane     |
| (11) Chloroform                  | (29) 1,1-Dichloropropene       | (47) 1,1,2-Trichloroethane     |
| (12) 4-Chlorotoluene             | (30) cis-1,3-Dichloropropene   | (48) Trichloroethene           |
| (13) 2-Chlorotoluene             | (31) trans-1,3-Dichloropropene | (49) 1,2,3-Trichloropropane    |
| (14) 1,2-Dibromo-3-chloropropane | (32) Ethyl benzene             | (50) 1,2,4-Trimethylbenzene    |
| (15) Dibromochloromethane        | (33) Hexachlorobutadiene       | (51) 1,3,5-Trimethylbenzene    |
| (16) 1,2-Dibromoethane           | (34) Isopropyl benzene         | (52) o-Xylene                  |
| (17) Dibromomethane              | (35) p-Isopropyl toluene       | (53) m-Xylene                  |
| (18) 1,3-Dichlorobenzene         | (36) Methylene chloride        | (54) p-Xylene                  |

**Part # 30001 200 ug/mL in Methanol. \$50/ 1 mL**

**Part # 32001 2000 ug/mL in Methanol. \$95/ 1 mL**

### LIQUIDS - ADDITIONAL ANALYTES

*2000 ug/mL in Methanol*

- |   |                                     |
|---|-------------------------------------|
| (1) 1,1-Dichloropropanone-2                       | (13) Ethyl methacrylate             |
| (2) 1-Chlorobutane                                | (14) Hexachloroethane               |
| (3) 2-Butanone (Methyl ethyl ketone)              | (15) Iodomethane (Methyl iodide)    |
| (4) 2-Hexanone                                    | (16) Methacrylonitrile              |
| (5) 2-Nitropropane                                | (17) Methyl acrylate                |
| (6) 4-Methyl-2-pentanone (Methyl isobutyl ketone) | (18) Methyl methacrylate            |
| (7) Acetone                                       | (19) Methyl tert-butyl ether (MTBE) |
| (8) Acrylonitrile                                 | (20) Nitrobenzene                   |
| (9) Allyl chloride (3-Chloropropene)              | (21) Pentachloroethane              |
| (10) Carbon disulphide                            | (22) Propionitrile                  |
| (11) Chloroacetonitrile                           | (23) Tetrahydrofuran                |
| (12) Diethyl ether (Ethyl ether)                  | (24) trans-1,4-Dichloro-2-butene    |

**Part # 34002 \$50/ 1 mL**



METHOD

**8261**

**VOLATILE ORGANIC COMPOUNDS  
BY VACUUM DISTILLATION IN  
COMBINATION WITH GC/MS  
(VD/GC/MS)**

**GASES**

- |                   |                             |
|-------------------|-----------------------------|
| (1) Bromomethane  | (4) Dichlorodifluoromethane |
| (2) Chloroethane  | (5) Trichlorofluoromethane  |
| (3) Chloromethane | (6) Vinyl chloride          |

**Part # 30002 200 ug/mL in Methanol. \$25/ 1 mL**  
**Part # 30058 2000 ug/mL in Methanol. \$25/ 1 mL**

**MIX #4***2000 ug/mL in Methanol*

- (1) N-Nitroso-di-n-butylamine
- (2) 2-Picoline
- (3) n-Propylamine
- (4) Pyridine
- (5) o-Toluidine

**Part # 82466 \$30/ 1 mL****MIX #5***2000 ug/mL  
in Methanol:Water [9:1]*

- (1) 1-Chlorohexane
- (2) cis-1,4-Dichloro-2-butene
- (3) 1,4-Dioxane
- (4) Ethyl acetate
- (5) Pentafluorobenzene
- (6) 2-Pentanone

**Part # 82445 \$30/ 1 mL****NITROSAMINES MIX***2000 ug/mL in Methylene chloride*

- (1) N-Nitrosodimethylamine
- (2) N-Nitrosomethylethylamine
- (3) N-Nitroso-di-ethylamine
- (4) N-Nitroso-di-n-propylamine
- (5) N-Nitrosodibutylamine
- (6) 1-Nitrosopiperidine
- (7) N-Nitrosopyrrolidine
- (8) N-Nitrosomorpholine

**Part # 90729 \$30/ 1 mL****METHYLNAPHTHALENE MIX***2000 ug/mL in Methylene chloride*

- (1) 1-Methylnaphthalene
- (2) 2-Methylnaphthalene

**Part # 90289 \$35/ 1 mL**

Single Components	Part #	Price	ug/mL	Solvent
(1) Acetonitrile	70324	\$22/ 1 mL	1000	Methanol
(2) Acetophenone	79057	\$22/ 1 mL	1000	Methanol
(3) Acrolein	79005	\$30/ 1 mL	1000	Water
(4) Aniline	79145	\$22/ 1 mL	1000	Methanol
(5) Isobutyl alcohol	70445	\$22/ 1 mL	1000	Methanol

## VOLATILE ORGANIC COMPOUNDS BY VACUUM DISTILLATION IN COMBINATION WITH GC/MS (VD/GC/MS)

METHOD

**8261**

A system performance check should be made before the initial calibration data is used. There are four classes of compounds that are determined using this method. Class I compounds include those compounds with boiling points generally below 160 EC and -values (or K-values) below 50 (i.e., the permanent gases and volatiles). Class II compounds are those with boiling points greater than 160 EC (i.e., the neutral semivolatiles). Class III compounds are those with values greater than 50 (i.e., the water soluble volatiles). Class IV compounds are the basic compounds that are susceptible to degradation and have a low detector response (i.e., the basic semi-volatiles).

**SPCC Class I***1000 ug/mL in Methanol*

- (1) Chloromethane
- (2) Bromoform
- (3) 1,1,2,2-Tetrachloroethane
- (4) 1,1-Dichloroethane

**Part # 82467    \$35/ 1 mL****SPCC Class II***1000 ug/mL in Methanol*

- (1) Hexachlorobutadiene
- (2) 2-Methylnaphthalene

**Part # 82468    \$35/ 1 mL****SPCC Class III***1000 ug/mL in Methanol*

- (1) 1,4-Dioxane
- (2) Pyridine

**Part # 82469    \$35/ 1 mL****SPCC Class IV***1000 ug/mL in Methanol*

- (1) Aniline
- (2) N-Nitrosodimethylamine
- (3) N-Nitrosodiethylamine

**Part # 82470    \$35/ 1 mL****CCC Class I***1000 ug/mL in Methanol*

- (1) Vinyl chloride
- (2) Chloroform
- (3) Toluene
- (4) Ethylbenzene
- (5) 1,2-Dichloroethane
- (6) Bromobenzene

**Part # 82473    \$35/ 1 mL****CCC Class II***1000 ug/mL in Methanol*

- (1) 1,3-Dichlorobenzene
- (2) 1,2,3-Trichlorobenzene
- (3) Naphthalene

**Part # 82474    \$35/ 1 mL****CCC Class III***1000 ug/mL in Methanol*

- (1) 4-Methyl-2-pentanone
- (2) Methacrylonitrile
- (3) 1,4-Dioxane

**Part # 82475    \$35/ 1 mL****CCC Class IV***1000 ug/mL in Methanol*

- (1) N-Nitrosomethylethylamine
- (2) N-Nitrosodi-n-propylamine

**Part # 82476    \$35/ 1 mL**

METHOD

**8261**

**VOLATILE ORGANIC COMPOUNDS  
BY VACUUM DISTILLATION IN  
COMBINATION WITH GC/MS  
(VD/GC/MS)**

**EPA Method 8261  
Gas-Liquid Partitioning Surrogates**

*1000 ug/mL in Methanol*

- (1) Hexafluorobenzene
- (2) Pentafluorobenzene
- (3) Fluorobenzene
- (4) o-Xylene-d10
- (5) Chlorobenzene-d5
- (6) 1,2-Dichloroethane-d4
- (7) 1,2-Dibromoethane-d4
- (8) Acetone-d6
- (9) 1,4-Dioxane-d8
- (10) Pyridine-d5
- (11) 1,4-Difluorobenzene

**Part # 82477 \$55/ 1 mL**

**EPA Method 8261  
Condensation Surrogates**

*1000 ug/mL in Methanol*

- (1) Toluene-d8
- (2) Bromobenzene-d5
- (3) Decafluorobiphenyl
- (4) 1,2,4-Trichlorobenzene-d3
- (5) 1,2-Dichlorobenzene-d4
- (6) 1-Methylnaphthalene-d10

**Part # 82478 \$50/ 1 mL**

<b>Additional Surrogates</b>	<b>Part #</b>	<b>Price</b>	<b>ug/mL</b>	<b>Solvent</b>
(1) Benzene-d6	70026	\$22/ 1 mL	1000	Methanol
(2) Methylene chloride-d2	70213	\$22/ 1 mL	1000	Methanol
(3) Diethyl ether-d10	72016	\$22/ 1 mL	1000	Methanol
(4) 4-Bromofluorobenzene	70048	\$22/ 1 mL	1000	Methanol
(5) Naphthalene-d8	70223	\$22/ 1 mL	1000	Methanol
(6) Acetophenone-d5	72017	\$22/ 1 mL	1000	Methanol
(7) Nitrobenzene-d5	70229	\$22/ 1 mL	1000	Methanol

## VOLATILE ORGANIC COMPOUNDS IN WATER, SOIL, GAS, AND AIR BY DIRECT SAMPLING ION TRAP MASS SPECTROMETRY (DSITMS)

METHOD  
**8265**

This method uses direct sampling ion trap mass spectrometry (DSITMS) for the rapid quantitative measurement, continuous real-time monitoring, and qualitative and quantitative preliminary screening of volatile organic compounds (VOCs) in water, soil, soil gas, and air. DSITMS introduces sample materials directly into an ion trap mass spectrometer by means of a simple interface (such as a capillary restrictor). There is little if any sample preparation and no chromatographic separation. The response of the instrument to analytes in a sample is nearly instantaneous. In addition, the instrument is field transportable, rugged, and relatively easy to operate and maintain.

This method is applicable to the determination of VOCs in discrete samples taken to the laboratory and to on-site measurement and monitoring. It is best suited for semiquantitative screening, for repetitive quantitative analysis of previously characterized samples for pre-selected analytes, and for establishing the absence/presence of VOCs at the limit of detection of the operating conditions employed. Specialty applications include on-line deployment with direct-push technologies, in situ sampling, and continuous real-time monitoring of VOCs.

### EPA METHOD 8265 TARGET COMPOUND LIST - LIQUIDS

- |                           |                                |                                |
|---------------------------|--------------------------------|--------------------------------|
| (1) Acetone               | (12) 1,1-Dichloroethane        | (23) Styrene                   |
| (2) Benzene               | (13) trans-1,2-Dichloroethene  | (24) 1,1,2,2-Tetrachloroethane |
| (3) Bromodichloromethane  | (14) cis-1,2-Dichloroethene    | (25) Tetrachloroethene         |
| (4) Bromoform             | (15) 1,1-Dichloroethene        | (26) Toluene                   |
| (5) 2-Butanone            | (16) Dichloromethane           | (27) 1,1,1-Trichloroethane     |
| (6) Carbon disulphide     | (17) 1,2-Dichloropropane       | (28) 1,1,2-Trichloroethane     |
| (7) Carbon tetrachloride  | (18) cis-1,3-Dichloropropene   | (29) Trichloroethene           |
| (8) Chlorobenzene         | (19) trans-1,3-Dichloropropene | (30) m-Xylene                  |
| (9) Chloroform            | (20) Ethylbenzene              | (31) o-Xylene                  |
| (10) Dibromochloromethane | (21) 2-Hexanone                | (32) p-Xylene                  |
| (11) 1,2-Dichloroethane   | (22) 4-Methyl-2-pentanone      |                                |

**Part # 21004 @ 200 ug/mL in Methanol:Water [9:1]    \$30/ 1 mL**  
**Part # 21014 @ 2000 ug/mL in Methanol:Water [9:1]    \$40/ 1 mL**

METHOD  
**8270C**

**SEMIVOLATILE ORGANICS BY  
GC/MS USING CAPILLARY  
COLUMNS**

Method 8270 is used to determine the concentration of semivolatile organic compounds in extracts prepared from all types of solid waste matrices, soils and groundwater. Direct injection of a sample may be used in limited applications. Method 8270 can be used to quantify most neutral, acidic and basic organic compounds that are soluble in methylene chloride and capable of being eluted without derivatization as sharp peaks from a GC fused silica capillary column coated with a slightly polar silicone phase. Such compounds include polynuclear aromatic hydrocarbons and pesticides, phthalate esters, organo-phosphate esters, nitrosamines, haloethers, aldehydes, ethers, ketones, anilines, pyridines, quinolines, aromatic nitro compounds, and phenols including nitrophenols.

**EPA METHOD 8270C  
MIX #1**

*2000 ug/mL in Methylene chloride*

- |                                  |                                |
|----------------------------------|--------------------------------|
| (1) Bis(2-chloroethoxy) methane  | (8) Diethyl phthalate          |
| (2) Bis(2-chloroethyl) ether     | (9) Dimethyl phthalate         |
| (3) Bis(2-ethylhexyl) phthalate  | (10) Di-n-butyl phthalate      |
| (4) Bis(2-chloroisopropyl) ether | (11) Di-n-octyl phthalate      |
| (5) 4-Bromophenyl phenyl ether   | (12) N-Nitrosodimethylamine    |
| (6) Butyl benzyl phthalate       | (13) N-Nitrosodi-n-propylamine |
| (7) 4-Chlorophenylphenyl ether   | (14) N-Nitrosodiphenylamine    |

**Part # 10001     \$45/ 1 mL**

**EPA METHOD 8270C  
MIX #3**

*2000 ug/mL in Toluene/Hexane [1:1]*

- |              |                          |                         |
|--------------|--------------------------|-------------------------|
| (1) Aldrin   | (7) 4,4'-DDE             | (13) Endrin             |
| (2) a-BHC    | (8) 4,4'-DDT             | (14) Endrin aldehyde    |
| (3) b-BHC    | (9) Dieldrin             | (15) Endrin ketone      |
| (4) g-BHC    | (10) Endosulfan I        | (16) Heptachlor         |
| (5) d-BHC    | (11) Endosulfan II       | (17) Heptachlor epoxide |
| (6) 4,4'-DDD | (12) Endosulfan sulphate | (isomer B)              |
|              |                          | (18) Methoxychlor       |

**Part # 10013     \$70/ 1 mL**

## SEMIVOLATILE ORGANICS BY GC/MS USING CAPILLARY COLUMNS

METHOD  
**8270C**

### METHOD 8270C MIX #2

*2000 ug/mL in Methylene Chloride*

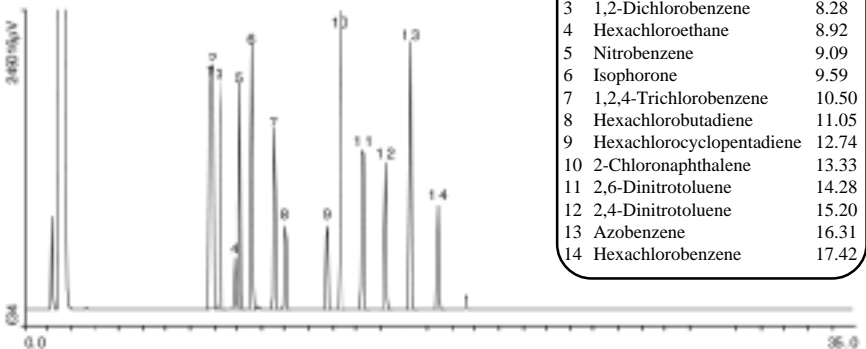
- |                         |                                |
|-------------------------|--------------------------------|
| (1) Azobenzene          | (8) Hexachlorobenzene          |
| (2) 2-Chloronaphthalene | (9) Hexachlorobutadiene        |
| (3) 1,2-Dichlorobenzene | (10) Hexachlorocyclopentadiene |
| (4) 1,3-Dichlorobenzene | (11) Hexachloroethane          |
| (5) 1,4-Dichlorobenzene | (12) Isophorone                |
| (6) 2,4-Dinitrotoluene  | (13) Nitrobenzene              |
| (7) 2,6-Dinitrotoluene  | (14) 1,2,4-Trichlorobenzene    |

**Part # 10002     \$45/ 1 mL**

Date: Mon, Nov 12 2001 10:55 PM  
Data: P10002 L110901-014

Sample: AbsoluteStandards, Inc. Q4/C Analysis by FIC  
P10002 L110901 [2000ug/mL in Methylene chloride]  
Standard: injector=0.5uL, Fanger=5  
CLP Semi-Volatiles Base Nuttalls Mix #2  
14 Components

Processing File: GC4 FID-Process.Fib  
Method: GC4-M1  
Sampling Int: 0.1 Seconds  
Data:



**Method GC4-M1:** Column: SPB-5 (30m X 0.53mm X 1.5 µm film thickness), Flow rates: Helium (carrier) = 10 mL/min., Helium (make-up) = 15 mL/min., Hydrogen (make-up) = 40 mL/min., air (make-up) = 200 mL/min., Temp 1 = 50°C (1 min.), Temp 2 = 300°C (9 min.), Rate = 10°C/min., Injector = 200°C, FID = 300°C. Analysis performed by Nicole Davis.

Peak No.	Name	FID RT (min.)
1	1,3-Dichlorobenzene	7.79
2	1,4-Dichlorobenzene	7.89
3	1,2-Dichlorobenzene	8.28
4	Hexachloroethane	8.92
5	Nitrobenzene	9.09
6	Isophorone	9.59
7	1,2,4-Trichlorobenzene	10.50
8	Hexachlorobutadiene	11.05
9	Hexachlorocyclopentadiene	12.74
10	2-Chloronaphthalene	13.33
11	2,6-Dinitrotoluene	14.28
12	2,4-Dinitrotoluene	15.20
13	Azobenzene	16.31
14	Hexachlorobenzene	17.42

METHOD  
**8270C***Continued***SEMIVOLATILE ORGANICS BY  
GC/MS USING CAPILLARY COLUMNS****MIX #4***2000 ug/mL in Methylene chloride*

- (1) Benzoic acid
- (2) 2-Methylphenol
- (3) 4-Methylphenol
- (4) 2,4,5-Trichlorophenol

**Part # 10004    \$30/ 1 mL****MIX #5***2000 ug/mL in Methylene chloride*

- (1) Aniline
- (2) Benzyl alcohol
- (3) 4-Chloroaniline
- (4) Dibenzofuran
- (5) 2-Methylnaphthalene
- (6) 2-Nitroaniline
- (7) 3-Nitroaniline
- (8) 4-Nitroaniline

**Part # 10005    \$30/ 1 mL****MIX #6***2000 ug/mL in Methanol*

- (1) Benzidine
- (2) 3,3'-Dichlorobenzidine

**Part # 10006    \$25/ 1 mL****MIX #7***2000 ug/mL in Methylene chloride*

- |                          |                             |
|--------------------------|-----------------------------|
| (1) Acenaphthene         | (10) Chrysene               |
| (2) Acenaphthylene       | (11) Dibenzo(a,h)anthracene |
| (3) Anthracene           | (12) Fluoranthene           |
| (4) Benzo(a)anthracene   | (13) Fluorene               |
| (5) Benzo(a)pyrene       | (14) Indeno(1,2,3-cd)pyrene |
| (6) Benzo(b)fluoranthene | (15) Naphthalene            |
| (7) Benzo(g,h,i)perylene | (16) Phenanthrene           |
| (8) Benzo(k)fluoranthene | (17) Pyrene                 |
| (9) Carbazole            |                             |

**Part # 10007    \$65/ 1 mL****“Without Carbazole” Part # 10017    \$65/ 1 mL**

## SEMIVOLATILE ORGANICS BY GC/MS USING CAPILLARY COLUMNS

METHOD  
**8270C**

*Continued*

### MIX #8

*2000 ug/mL in Methylene chloride*

- |                                |                                |
|--------------------------------|--------------------------------|
| (1) 4-Chloro-3-methylphenol    | (8) 2-Nitrophenol              |
| (2) 2-Chlorophenol             | (9) 4-Nitrophenol              |
| (3) 2,4-Dichlorophenol         | (10) Pentachlorophenol         |
| (4) 2,6-Dichlorophenol         | (11) Phenol                    |
| (5) 2,4-Dimethylphenol         | (12) 2,4,6-Trichlorophenol     |
| (6) 2,4-Dinitrophenol          | (13) 2,3,4,6-Tetrachlorophenol |
| (7) 4,6-Dinitro-2-methylphenol |                                |

**Part # 10018     \$40/ 1 mL**

### MIX #9

*2000 ug/mL in Methylene chloride*

- (1) Acetophenone
- (2) 4-Aminobiphenyl
- (3) 1-Chloronaphthalene
- (4) 7,12-Dimethylbenz(a)anthracene
- (5) Pentachlorobenzene
- (6) Pentachloronitrobenzene
- (7) 1,2,4,5-Tetrachlorobenzene

**Part # 82501     \$30/ 1 mL**

### MIX #10

*2000 ug/mL in  
Methylene chloride*

- (1) Ethylmethanesulfonate
- (2) Methylmethanesulfonate

**Part # 82502     \$25/ 1 mL**

### MIX #11

*2000 ug/mL each in Methylene chloride*

- |                                |                              |
|--------------------------------|------------------------------|
| (1) p-Dimethylaminoazobenzene  | (7) N-Nitrosodi-n-butylamine |
| (2) a,a-Dimethylphenethylamine | (8) N-Nitrosopiperidine      |
| (3) Diphenylamine              | (9) Phenacetin               |
| (4) 1,4-Phenylenediamine       | (10) 2-Picoline              |
| (5) 1-Naphthylamine            | (11) Pronamide               |
| (6) 2-Naphthylamine            |                              |

**Part # 82503     \$35/ 1 mL**

### 3-METHYLCHOLANTHRENE

*1000 ug/mL in Methylene chloride*

**Part # 70488     \$22/ 1 mL**



METHOD

**8270C***Continued***SEMIVOLATILE ORGANICS BY  
GC/MS USING CAPILLARY COLUMNS****MIX #12  
CHLORDANE***2000 ug/mL in Methanol***Part # 16208     \$25/ 1 mL****MIX #13  
TOXAPHENE***4000 ug/mL in Methanol***Part # 17208     \$25/ 1 mL****MIX #14***2000 ug/mL in Acetone*

- (1) 1,2-Dinitrobenzene
- (2) 1,3-Dinitrobenzene
- (3) 1,4-Dinitrobenzene
- (4) 5-Nitroacenaphthene
- (5) 4-Nitrobiphenyl
- (6) p-Benzoquinone
- (7) 1,4-Naphthoquinone
- (8) Hydroquinone

**Part # 82701     \$35/ 1 mL****MIX # 15***2000 ug/mL in Methylene chloride*

- (1) Diethylstilbestrol
- (2) Mestranol
- (3) Resorcinol

**Part # 82702     \$25/ 1 mL****MIX #16***2000 ug/mL in Acetone*

- (1) Isosafrole
- (2) Safrole
- (3) Phthalic anhydride

**Part # 82703     \$25/ 1 mL**

## SEMIVOLATILE ORGANICS BY GC/MS USING CAPILLARY COLUMNS

METHOD  
**8270C**

*Continued*

### MIX #17

*2000 ug/mL in Acetone*

- (1) Isodrin
- (2) Hexachlorophene
- (3) Hexachloropropene
- (4) Pyridine

**Part # 82705      \$25/ 1 mL**

### MIX #18

*2000 ug/mL in Methylene chloride*

- (1) 2-Acetylaminofluorene
- (2) Aminoazobenzene
- (3) o-Anisidine
- (4) 5-Chloro-2-methylaniline
- (5) p-Cresidine
- (6) 2,4-Diaminotoluene
- (7) 3,3'-Dimethoxybenzidine
- (8) 5-Nitro-o-toluidine
- (9) Nitroquinoline-1-oxide
- (10) 4,4'-Oxydianiline
- (11) o-Toluidine
- (12) N-Nitrosodiethylamine
- (13) N-Nitrosomethylethylamine
- (14) N-Nitrosomorpholine
- (15) N-Nitrosopyrrolidine

**Part # 82706      \$40/ 1 mL**

## SINGLE COMPONENT SOLUTIONS

*Each Solution - 1000 ug/mL - \$22/ 1 mL*

70916	5,5-Diphenylhydantoin	Methanol
70439	Nicotine	Methanol
70376	Strychnine	Acetonitrile

METHOD  
**8270C***Continued***SEMIVOLATILE ORGANICS BY  
GC/MS USING CAPILLARY COLUMNS****MIX #19***2000 ug/mL**in Hexane:Toluene [1:1]*

- (1) Dimethoate
- (2) Disulfoton
- (3) Famphur
- (4) Parathion ethyl
- (5) Parathion methyl
- (6) Phorate
- (7) Sulfotep
- (8) Thionazin (Zinophos)
- (9) O,O,O-Triethylphosphorothioate

**Part # 82720     \$40/ 1 mL****MIX #20***1000 ug/mL**in Hexane:Acetone [4:1]*

- (1) Carbophenothion (Trithion)
- (2) Coumaphos
- (3) EPN
- (4) Ethion
- (5) Fensulfothion
- (6) Fenthion
- (7) Leptophos (Phosvel)
- (8) Malathion
- (9) Parathion
- (10) Phosalone
- (11) Phosmet (Imidan)
- (12) Terbufos

**Part # 91003     \$50/ 1 mL****MIX #21***2000 ug/mL in Toluene*

- (1) Chlorobenzilate
- (2) Di-allate
- (3) Dinoseb (2-sec-Butyl-4,6-dinitrophenol)
- (4) Kepone

**Part # 82721     \$40/ 1 mL****MIX #22****Aramite***2000 ug/mL in Hexane***Part # 70482     \$50/ 1 mL**

**SEMIVOLATILE ORGANICS BY  
GC/MS USING CAPILLARY COLUMNS**METHOD  
**8270C***Continued***MIX #24***1000 ug/mL in Ethyl acetate*

- (1) Chlorfenvinphos (Supona)
- (2) Crotoxyphos
- (3) Dichlorvos
- (4) Dicrotophos
- (5) Mevinphos
- (6) Monocrotophos (Azodrin)
- (7) Naled (Dibrom)
- (8) Phosphamidon
- (9) Simazine
- (10) Tetraethylpyrophosphate (TEPP)

**Part # 91004    \$50/ 1 mL****MIX #25***1000 ug/mL in Ethyl acetate*

- (1) Anilazine
- (2) Azinphos methyl
- (3) Barban
- (4) Demeton (O&S)
- (5) Dichlone
- (6) Dioxathion
- (7) Mirex
- (8) Sulfallate
- (9) Trifluralin

**Part # 82723    \$40/ 1 mL****MIX #26***1000 ug/mL in Methylene chloride*

- (1) Bromoxynil
- (2) Captafol
- (3) Captan
- (4) Dinocap
- (5) Fluchloralin
- (6) Nitrofen

**Part # 91005    \$40/ 1 mL****MIX #27***1000 ug/mL in Methylene chloride*

- (1) Carbaryl
- (2) Carbofuran

**Part # 91006    \$25/ 1 mL**

METHOD  
**8270C**
*Continued*
**SEMIVOLATILE ORGANICS BY  
 GC/MS USING CAPILLARY COLUMNS**
**SURROGATE STANDARDS**
**ACID SURROGATE  
 STANDARD**
*2000 ug/mL in Methanol*

- (1) 2-Fluorophenol
- (2) Phenol-d<sub>6</sub>
- (3) 2,4,6-Tribromophenol

**Part # 20015     \$25/ 1 mL**
**BASE/NEUTRALS  
 SURROGATE STANDARD**
*1000 ug/mL in Methylene chloride*

- (1) 2-Fluorobiphenyl
- (2) p-Terphenyl-d<sub>14</sub>
- (3) Nitrobenzene-d<sub>5</sub>

**Part # 20016     \$25/ 1 mL**
**HIGH CONCENTRATION SURROGATE STANDARDS**
**ACID SURROGATE  
 STANDARD**
*10,000 ug/mL in Methanol*

- (1) 2-Fluorophenol
- (2) Phenol-d<sub>6</sub>
- (3) 2,4,6-Tribromophenol

**Part # 21015     \$60/ 1 mL**
**BASE-NEUTRALS  
 SURROGATE STANDARD**
*5000 ug/mL in Methylene chloride*

- (1) 2-Fluorobiphenyl
- (2) p-Terphenyl-d<sub>14</sub>
- (3) Nitrobenzene-d<sub>5</sub>

**Part # 21016     \$60/ 1 mL**
**AROCLOR MIXES**
*All mixes 1000 ug/mL*

<i>Aroc lor</i>	<i>Part # Hexane</i>	<i>Part # Methanol</i>	<i>Price/ 1 mL</i>
1016	90123	70015	\$22
1221	90124	70016	\$22
1232	90125	70017	\$22
1242	90126	70018	\$22
1248	90127	70019	\$22
1254	90128	70020	\$22
1260	90129	70021	\$22
<b>Set of 7</b>	<b>91130</b>	<b>91131</b>	<b>\$125</b>

## SEMIVOLATILE ORGANICS BY GC/MS USING CAPILLARY COLUMNS

METHOD  
**8270C**

*Continued*

### GC/MS CALIBRATION & TUNING STANDARDS CALIBRATION STANDARDS

*At stated concentrations in Methylene chloride*

COMPONENT	ug/mL	Part#	Price/ 1 mL
<b>Benzidine</b>	500	<b>43024</b>	<b>\$22</b>
<b>Pentachlorophenol</b>	250	<b>43025</b>	<b>\$22</b>
<b>DFTPP</b>	250	<b>43026</b>	<b>\$22</b>
<b>MIX #1</b>		<b>43027</b>	<b>\$25</b>
Benzidine	500		
DFTPP	250		
<b>MIX #2</b>		<b>43028</b>	<b>\$25</b>
Pentachlorophenol	250		
DFTPP	250		

### SET OF ALL 5 MIXES

**Part # 43029    \$50**

### TUNING STANDARD

*500 ug/mL in Methylene chloride*

- (1) Benzidine
- (2) Pentachlorophenol
- (3) 4,4'-DDT
- (4) DFTPP

**Part # 43030    \$25/ 1 mL**

### INTERNAL STANDARDS

*4000 ug/mL in Methylene chloride*

- |  |                                  |
|--|----------------------------------|
| (1) Acenaphthene-d <sub>10</sub>       | (4) Naphthalene-d <sub>8</sub>   |
| (2) Chrysene-d <sub>12</sub>           | (5) Perylene-d <sub>12</sub>     |
| (3) 1,4-Dichlorobenzene-d <sub>4</sub> | (6) Phenanthrene-d <sub>10</sub> |

**Part # 10009    \$50/ 1 mL**

METHOD  
**8270C***Continued***SEMIVOLATILE ORGANICS BY  
GC/MS USING CAPILLARY COLUMNS****MATRIX SPIKING SOLUTIONS****MIX #1 BASE/NEUTRALS***500 ug/mL in Methanol*

- (1) Acenaphthene
- (2) 1,4-Dichlorobenzene
- (3) 2,4-Dinitrotoluene
- (4) N-Nitrosodi-n-propylamine
- (5) Pyrene
- (6) 1,2,4-Trichlorobenzene

**Part # 82504     \$30/ 1 mL****MIX #2 ACIDS***1000 ug/mL in Methanol*

- (1) 4-Chloro-3-methylphenol
- (2) 2-Chlorophenol
- (3) 4-Nitrophenol
- (4) Pentachlorophenol
- (5) Phenol

**Part # 82505     \$30/ 1 mL****MIX #3 PESTICIDES***At the stated concentrations (ug/mL) in Acetone*

- |                |     |
|----------------|-----|
| (1) Lindane    | 100 |
| (2) Heptachlor | 100 |
| (3) Aldrin     | 100 |
| (4) Dieldrin   | 250 |
| (5) Endrin     | 250 |
| (6) 4,4'-DDT   | 250 |

**Part # 82516     \$30/ 1 mL**

**SEMIVOLATILE ORGANICS BY GC/MS  
USING CAPILLARY COLUMNS**

METHOD  
**8270C**

*Continued*

**CALIBRATION CHECK COMPOUNDS**

**MIX #1 BASE/NEUTRAL FRACTION**

*2000 ug/mL in Methylene chloride*

- (1) Acenaphthene
- (2) 1,4-Dichlorobenzene
- (3) Hexachlorobutadiene
- (4) N-Nitrosodiphenylamine
- (5) Di-n-octyl phthalate
- (6) Fluoranthene
- (7) Benzo(a)pyrene

**Part # 82507      \$30/ 1 mL**

**MIX #2 ACID FRACTION**

*2000 ug/mL in Methylene chloride*

- (1) 4-Chloro-3-methylphenol
- (2) 2,4-Dichlorophenol
- (3) 2-Nitrophenol
- (4) Phenol
- (5) Pentachlorophenol
- (6) 2,4,6-Trichlorophenol

**Part # 82508      \$30/ 1 mL**

---

**SYSTEM PERFORMANCE CHECK COMPOUNDS**

*2000 ug/mL in Methylene chloride*

- (1) N-Nitrosodi-n-propylamine
- (2) Hexachlorocyclopentadiene
- (3) 2,4-Dinitrophenol
- (4) 4-Nitrophenol

**Part # 82509      \$30/ 1 mL**



METHOD  
**8270D**
**SEMIVOLATILE ORGANICS BY  
 GC/MS USING CAPILLARY  
 COLUMNS**

Method 8270 is used to determine the concentration of semivolatile organic compounds in extracts prepared from many types of solid waste matrices, soils, air sampling media and water samples. The USEPA has added several new target analytes in Revision 8270D. A list of the additional single components follows.

Single Component	Part #	Price	ug/mL	Solvent
(1) 1-Acetyl-2-thiourea	70326	\$22	1000	Methanol
(2) 2-Aminoanthraquinone	71219	\$22	1000	MeCl <sub>2</sub>
(3) 3-Amino-9-ethyl carbazole	72019	\$22	1000	Methanol
(4) 3-(Chloromethyl) pyridine HCL	72020	\$22	1000	Methanol
(5) 4-Chloro-1,2-phenylenediamine	72021	\$22	1000	Methanol
(6) 4-Chloro-1,3-phenylenediamine	72022	\$22	1000	Methanol
(7) Dibenz(a,j)acridine	70110	\$22	1000	MeCl <sub>2</sub>
(8) 2-cyclohexyl-4,6-dinitrophenol	72086	\$22	1000	Methanol
(9) Dibenzo(a,e)pyrene	70111	\$22	1000	MeCl <sub>2</sub>
(10) 1,2-Dibromo-3-chloropropane (DBCP)	70117	\$22	1000	Methanol
(11) Diethyl sulfate	72023	\$22	1000	Methanol
(12) 3,3'-Dimethylbenzidine	70367	\$22	1000	Methanol
(13) Ethylcarbamate (Urethane)	70421	\$22	1000	Methanol
(14) Hexamethylphosphoramide	71262	\$22	1000	Methanol
(15) Maleic anhydride	71148	\$22	1000	Methanol
(16) Methapyrilene HCl	70402	\$22	1000	Methanol
(17) 4,4'-Methylene bis(2-chloroaniline)	70410	\$22	1000	MeCl <sub>2</sub>
(18) 4,4'-Methylenebis(n,n-Dimethylaniline)	72024	\$22	1000	Methanol
(19) 3-Methylphenol	79133	\$22	1000	Methanol
(20) 5-Nitro-o-anisidine	72025	\$22	1000	Methanol
(21) 6-Propyl-2-thiouracil	72026	\$22	1000	Methanol
(22) Tetrachlorvinphos (Stirophos)	70265	\$22	1000	Methanol
(23) Thiophenol	70900	\$22	1000	MeCl <sub>2</sub>
(24) Toluene-2,4-diisocyanate	71159	\$22	1000	Toluene
(25) 2,4,5-Trimethylaniline	71383	\$22	1000	MeCl <sub>2</sub>
(26) Trimethylphosphate	72027	\$22	1000	Methanol
(27) sym-Trinitrobenzene	70494	\$22	1000	Methanol
(28) Tris(2,3-Dibromopropyl) phosphate	71008	\$22	1000	MeCl <sub>2</sub>

## POLYNUCLEAR AROMATIC HYDROCARBONS

METHOD

# 8310

Method 8310 is used to determine the concentration of certain polynuclear aromatic hydrocarbons (PAHs) in groundwater and wastes. It provides high performance HPLC conditions for the detection of ppb levels of these PAHs. Prior to the use of the method, appropriate sample extraction techniques must be used. A 5 to 25  $\mu\text{L}$  aliquot of the extract is injected into an HPLC and compounds are detected by ultraviolet (UV) and fluorescence detectors. We offer the PAH standard at either 100  $\mu\text{g}/\text{mL}$  in acetonitrile or at various concentrations in a methanol/methylene chloride mix.

### MIX #1

*100  $\mu\text{g}/\text{mL}$  in Acetonitrile*

- |                          |                             |
|--------------------------|-----------------------------|
| (1) Acenaphthene         | (9) Chrysene                |
| (2) Acenaphthylene       | (10) Dibenzo(a,h)anthracene |
| (3) Anthracene           | (11) Fluoranthene           |
| (4) Benzo(a)anthracene   | (12) Fluorene               |
| (5) Benzo(a)pyrene       | (13) Indeno(1,2,3-cd)pyrene |
| (6) Benzo(b)fluoranthene | (14) Naphthalene            |
| (7) Benzo(g,h,i)perylene | (15) Phenanthrene           |
| (8) Benzo(k)fluoranthene | (16) Pyrene                 |

**Part # 40016     \$30/ 1 mL**

### MIX #2

*At stated concentrations ( $\mu\text{g}/\text{mL}$ ) in Methylene chloride:Methanol [1:1]*

- |                             |      |
|-----------------------------|------|
| (1) Acenaphthene            | 1000 |
| (2) Acenaphthylene          | 2000 |
| (3) Anthracene              | 100  |
| (4) Benzo(a)anthracene      | 100  |
| (5) Benzo(a)pyrene          | 100  |
| (6) Benzo(b)fluoranthene    | 200  |
| (7) Benzo(g,h,i)perylene    | 200  |
| (8) Benzo(k)fluoranthene    | 100  |
| (9) Chrysene                | 100  |
| (10) Dibenzo(a,h)anthracene | 200  |
| (11) Fluoranthene           | 200  |
| (12) Fluorene               | 200  |
| (13) Indeno(1,2,3-cd)pyrene | 100  |
| (14) Naphthalene            | 1000 |
| (15) Phenanthrene           | 100  |
| (16) Pyrene                 | 100  |

**Part # 19106     \$30/ 1 mL**

### Surrogate Standard

*50  $\mu\text{g}/\text{mL}$  in Methylene chloride*

- (1) 2,3-Benzofluorene
- (2) 9,10-Diphenylanthracene

**Part # 91206     \$40/ 5 mL**

**Call Toll-Free 800-368-1131**

**217**

METHOD  
**8315A****DETERMINATION OF CARBONYL  
COMPOUNDS BY HPLC****ALDEHYDE/KETONE-DNPH  
CALIBRATION STANDARD - MIX #1***15 ug/mL (as Aldehyde/Ketone) in Acetonitrile*

- (1) Acetaldehyde-DNPH
- (2) Acetone-DNPH
- (3) Acrolein-DNPH
- (4) Benzaldehyde-DNPH
- (5) 2-Butanone (MEK)-DNPH
- (6) n-Butyraldehyde-DNPH
- (7) Crotonaldehyde-DNPH
- (8) Formaldehyde-DNPH
- (9) Hexanaldehyde-DNPH
- (10) Methacrolein-DNPH
- (11) Propionaldehyde-DNPH
- (12) m-Tolualdehyde-DNPH
- (13) Valeraldehyde-DNPH

**Part # 83509     \$40/ 1 mL****ALDEHYDE/KETONE-DNPH  
CALIBRATION STANDARD - MIX #2***15 ug/mL (as Aldehyde/Ketone) in Acetonitrile*

- (1) Acetaldehyde-DNPH
- (2) Acetone-DNPH
- (3) Acrolein-DNPH
- (4) Benzaldehyde-DNPH
- (5) n-Butyraldehyde-DNPH
- (6) Crotonaldehyde-DNPH
- (7) 2,5-Dimethylbenzaldehyde-DNPH
- (8) Formaldehyde-DNPH
- (9) Hexanaldehyde-DNPH
- (10) Isovaleraldehyde-DNPH
- (11) Propionaldehyde-DNPH
- (12) o-Tolualdehyde-DNPH
- (13) m-Tolualdehyde-DNPH
- (14) p-Tolualdehyde-DNPH
- (15) Valeraldehyde-DNPH

**Part # 83510     \$50/ 1 mL**

## DETERMINATION OF CARBONYL COMPOUNDS BY HPLC

METHOD  
**8315A**

**All solutions are in Acetonitrile at stated concentration,  
\*except 2-Butanone (MEK)-DNPH which is in Methanol.**

Mix	Part #	Compound	Conc. ug/mL	Price / 1 mL
1	83536	Acetaldehyde-DNPH	500	\$25
2	83537	Acetone-DNPH	500	\$25
3	83538	Acetophenone-DNPH	100	\$22
4	83539	Acrolein-DNPH	500	\$25
5	83540	Benzaldehyde-DNPH	100	\$22
6	83541	1,4-Benzoquinone-DNPH (mono)	100	\$22
7	83542	*2-Butanone (MEK)-DNPH	100	\$22
8	83543	n-Butyraldehyde-DNPH	500	\$25
9	83544	Crotonaldehyde-DNPH	100	\$22
10	83545	Cyclohexanone-DNPH	500	\$25
11	83546	2,5-Dimethylbenzaldehyde-DNPH	500	\$25
12	83547	Formaldehyde-DNPH	100	\$22
13	83548	Formaldehyde-DNPH	500	\$25
14	83549	Heptaldehyde-DNPH	500	\$25
15	83550	Hexanaldehyde-DNPH	500	\$25
16	83551	Isobutyraldehyde-DNPH	500	\$25
17	83552	Isophorone-DNPH	100	\$22
18	83553	Isovaleraldehyde-DNPH	500	\$25
19	83554	Methacrolein-DNPH	100	\$22
20	83555	Methyl Isobutyl Ketone-DNPH	500	\$25
21	83556	Methyl Isopropyl Ketone-DNPH	500	\$25
22	83557	Propionaldehyde-DNPH	500	\$25
23	83558	o-Tolualdehyde-DNPH	100	\$22
24	83559	m-Tolualdehyde-DNPH	100	\$22
25	83560	p-Tolualdehyde-DNPH	100	\$22
26	83561	Valeraldehyde-DNPH	500	\$25

METHOD

**8316**

**ACRYLAMIDE, ACRYLONITRILE  
AND ACROLEIN BY HIGH  
PERFORMANCE LIQUID  
CHROMATOGRAPHY (HPLC)**

**ACROLEIN**

*1000 ug/mL in Water*

**Part # 79005    \$30/ 1 mL**

**ACRYLAMIDE**

*1000 ug/mL in Water*

**Part # 80301    \$22/ 1 mL**

**ACRYLONITRILE**

*1000 ug/mL in Water*

**Part # 79054    \$22/ 1 mL**

## N-METHYLCARBAMATES BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC)

METHOD  
**8318A**

Method 8318 is used to determine the concentration of N-methylcarbamates in soil, water, and waste matrices.

### EPA METHOD 8318A - ANALYTES MIX

*100 ug/mL in Methanol*

- (1) Aldicarb
- (2) Aldicarb sulfone
- (3) Aldicarb sulfoxide
- (4) Baygon (Propoxur)
- (5) Carbaryl
- (6) Carbofuran
- (7) 3-Hydroxycarbofuran
- (8) Methiocarb
- (9) Methomyl
- (10) Oxamyl

**Part # 30042    \$35/ 1 mL**

### INDIVIDUAL STOCK SOLUTIONS

*Each solution 1000 ug/mL*

	Compound	Solvent	Part #
(1)	Aminocarb	Acetonitrile	70532
(2)	Barban	Acetonitrile	70543
(2)	Bendiocarb	Acetonitrile	70544
(3)	Carbaryl	Methanol	70499
(4)	Carbofuran	Methanol	70340
(5)	Chlorpropham	Methanol	70089
(5)	Dioxacarb	Methanol	71931
(6)	Diuron	Methanol	70663
(7)	Fenuron	Methanol	71114
(8)	Fluometuron	Methanol	70693
(9)	Linuron	Methanol	70728
(10)	Methiocarb	Methanol	70501
(11)	Methomyl	Methanol	70435
(12)	Monuron	Methanol	70757
(13)	Neburon	Methanol	70765
(14)	Oxamyl	Methanol	70424
(15)	Propham	Methanol	70819
(16)	Propoxur	Methanol	70498
(17)	Siduron	Methanol	70833
(18)	Swep	Methanol	71112

**All Part #'s    \$22 / 1 mL**

METHOD  
**8321B****SOLVENT-EXTRACTABLE NON-  
VOLATILE COMPOUNDS BY HPLC  
THERMOSPRAY MSD  
OR UV DETECTION**

This method covers the use of high performance liquid chromatography (HPLC), coupled with both thermospray-mass spectrometry (TS-MS) and an ultraviolet (UV) detector, for the determination of a variety of solvent-extractable nonvolatile compounds, including dyes, organophosphorus compounds, phenoxyacid herbicides, and carbamates.

**CHLORINATED PHENOXYACID HERBICIDES****EPA Method 8321B Standard #1***100 ug/mL in Acetonitrile*

- (1) Dalapon
- (2) Dicamba
- (3) 2,4-D
- (4) Dichlorprop
- (5) 2,4,5-T
- (6) Silvex (2,4,5-TP)
- (7) Dinoseb
- (8) 2,4-DB
- (9) 2,4-D, butoxyethanol ester
- (10) 2,4-D, ethylhexyl ester
- (11) 2,4,5-T, butyl ester
- (12) 2,4,5-T, butoxyethanol ester

**Part # 82480 \$40/ 1 mL****EPA Method 8321B Standard #2***10 mg/mL in Acetonitrile*

- (1) MCPA
- (2) MCPP

**Part # 82481 \$40/ 1 mL****ORGANO-PHOSPHORUS PESTICIDES****8140 / 8321B Pesticide Mix***200 ug/mL in Ethyl acetate*

- |                         |                                     |
|-------------------------|-------------------------------------|
| (1) Bolstar (Sulprofos) | (8) Malathion                       |
| (2) Chlorpyrifos        | (9) Mevinphos                       |
| (3) Diazinon            | (10) Monocrotophos (Azodrin)        |
| (4) Dichlorvos (Vapona) | (11) Parathion methyl               |
| (5) Dimethoate          | (12) Phorate                        |
| (6) EPN                 | (13) Tetraethylpyrophosphate (TEPP) |
| (7) Ethoprop (Mocap)    | (14) Tokuthion (Prothiophos)        |

**Part # 91592 \$45/ 1 mL**

**SOLVENT EXTRACTABLE  
NONVOLATILE COMPOUNDS BY  
HPLC/PARTICLE BEAM/MASS  
SPECTROMETRY (HPLC/PB/MS)**

METHOD  
**8325**

This method describes the use of high performance liquid chromatography (HPLC), coupled with particle beam (PB) mass spectrometry (MS), for the determination of benzidines and nitrogen-containing pesticides in water and wastewater.

**EPA METHOD 8325  
ANALYTES**

*1000 ug/mL each in Acetonitrile: Water [1:1]*

- (1) Benzidine
- (2) Benzoylprop ethyl
- (3) Caffeine
- (4) Carbaryl
- (5) o-Chlorophenyl thiourea
- (6) 3,3'-Dichlorobenzidine
- (7) 3,3'-Dimethoxybenzidine
- (8) 3,3'-Dimethylbenzidine
- (9) Diuron
- (10) Ethylene thiourea
- (11) Linuron
- (12) Monuron
- (13) Rotenone
- (14) Siduron

**Part # 30080     \$40/ 1 mL**

**EPA METHOD 8325  
SURROGATE STANDARD**

*1000 ug/mL each in Acetonitrile: Water [1:1]*

- (1) Benzidine-d8
- (2) 3,3'-Dichlorobenzidine-d6

**Part # 82483     \$125/ 1 mL**



METHOD  
**8330A****NITROAROMATICS AND  
NITRAMINES BY HPLC****EPA METHOD 8330A  
CALIBRATION STANDARD - MIX #1***100 ug/mL In Acetonitrile*

- (1) 2-Amino-4,6-dinitrotoluene
- (2) 1,3-Dinitrobenzene
- (3) 2,4-Dinitrotoluene
- (4) HMX
- (5) Nitrobenzene
- (6) RDX
- (7) 1,3,5-Trinitrobenzene
- (8) 2,4,6-Trinitrotoluene (TNT)

**Part # 83525    \$45/ 1 mL****EPA METHOD 8330A  
CALIBRATION STANDARD - MIX #2***100 ug/mL In Acetonitrile*

- (1) 4-Amino-2,6-dinitrotoluene
- (2) 2,6-Dinitrotoluene
- (3) 2-Nitrotoluene
- (4) 3-Nitrotoluene
- (5) 4-Nitrotoluene
- (6) Tetryl

**Part # 83526    \$45/ 1 mL****SURROGATE STANDARD***1000 ug/mL In Methanol*

1,2-Dinitrobenzene

**Part # 70911    \$22/ 1 mL****INTERNAL STANDARD***1000 ug/mL In Methanol*

3,4-Dinitrotoluene

**Part # 71773    \$22/ 1 mL**

**NITROAROMATICS AND  
NITRAMINES BY HPLC**METHOD  
**8330A****All solutions are in Acetonitrile at 1000 ug/mL**

	<b>Part #</b>	<b>Compound</b>	<b>Conc. ug/mL</b>	<b>Price /mL</b>
(1)	79069	2-Amino-4,6-dinitrotoluene	1000	\$22
(2)	79070	4-Amino-2,6-dinitrotoluene	1000	\$22
(3)	79071	1,3-Dinitrobenzene	1000	\$22
(4)	79072	2,4-Dinitrotoluene	1000	\$22
(5)	79073	2,6-Dinitrotoluene	1000	\$22
(6)	79074	HMX	1000	\$22
(7)	79075	Nitrobenzene	1000	\$22
(8)	79076	2-Nitrotoluene	1000	\$22
(9)	79077	3-Nitrotoluene	1000	\$22
(10)	79078	4-Nitrotoluene	1000	\$22
(11)	79079	RDX	1000	\$22
(12)	79080	Tetryl	1000	\$22
(13)	79081	1,3,5-Trinitrobenzene	1000	\$22
(14)	79082	2,4,6-Trinitrotoluene(TNT)	1000	\$22

METHOD

**8430****ANALYSIS OF BIS(2-CHLOROETHYL)  
ETHER AND HYDROLYSIS PRODUCTS  
BY DIRECT AQUEOUS INJECTION  
GC/FT-IR**

This method provides procedures for the identification and quantitation of bis(2-chloroethyl) ether and its hydrolysis compounds in aqueous matrices by direct aqueous injection (DAI) and gas chromatography with detection by a fourier transform infrared spectrometer (GC/FT-IR).

**EPA METHOD 8430  
CALIBRATION MIX***1000 ug/mL in Water*

- (1) Bis(2-chloroethyl) ether (BCEE)
- (2) 2-Chloroethanol (CE)
- (3) 2-(2-Chloroethoxy)ethanol (2CEE)
- (4) Diethylene glycol (DEG)
- (5) Ethylene glycol (EG)

**Part # 82484    \$45/ 1 mL**

**TOTAL RECOVERABLE PETROLEUM  
HYDROCARBONS BY INFRARED  
SPECTROPHOTOMETRY**

METHOD

**8440**

Method 8440 is used for the measurement of total recoverable petroleum hydrocarbons (TRPHs) extracted with supercritical carbon dioxide from sediment, soil and sludge samples using Method 3560.

Soil samples are extracted with supercritical carbon dioxide using Method 3560. Interferences are removed with silica gel, either by shaking the extract with loose silica gel, or by passing it through a silica gel solid-phase extraction cartridge. After infrared (IR) analysis of the extract, TRPHs are quantitated by direct comparison with standards.

**TOTAL PETROLEUM HYDROCARBONS**

- (1) 2,2,4-Trimethylpentane (Iso-octane) (31.5%)
- (2) n-Hexadecane (34.5%)
- (2) Chlorobenzene (34.0%)

**Part # 71127 \$35/ 5 mL**

# APPENDIX IX

## APPENDIX IX VOLATILES

### Mix #1

*2000 ug/mL in Methanol*

- |                                  |                                |
|----------------------------------|--------------------------------|
| (1) Benzene                      | (19) trans-1,3-Dichloropropene |
| (2) Bromodichloromethane         | (20) 1,4-Dioxane               |
| (3) Bromoform                    | (21) Ethylbenzene              |
| (4) Carbon disulphide            | (22) Iodomethane               |
| (5) Carbon tetrachloride         | (23) Dichloromethane           |
| (6) Chlorobenzene                | (24) Pentachloroethane         |
| (7) Chlorodibromomethane         | (25) Styrene                   |
| (8) Chloroform                   | (26) 1,1,1,2-Tetrachloroethane |
| (9) 1,2-Dibromo-3-chloropropane  | (27) 1,1,2,2-Tetrachloroethane |
| (10) 1,2-Dibromoethane           | (28) Tetrachloroethene         |
| (11) Dibromomethane              | (29) Toluene                   |
| (12) trans-1,4-Dichloro-2-butene | (30) 1,1,1-Trichloroethane     |
| (13) 1,1-Dichloroethane          | (31) 1,1,2-Trichloroethane     |
| (14) 1,2-Dichloroethane          | (32) Trichloroethene           |
| (15) 1,1-Dichloroethene          | (33) 1,2,3-Trichloropropane    |
| (16) trans-1,2-Dichloroethene    | (34) o-Xylene                  |
| (17) 1,2-Dichloropropane         | (35) m-Xylene                  |
| (18) cis-1,3-Dichloropropene     | (36) p-Xylene                  |

**Part # 82401     \$50/ 1 mL**

### MIX #2

*2000 ug/mL  
in Methanol:Water (9:1)*

- (1) Acetone
- (2) 2-Butanone
- (3) 2-Hexanone
- (4) 4-Methyl-2-pentanone

**Part # 82402     \$25/ 1 mL**

### MIX #3

*2000 ug/mL In Methanol*

- (1) Ethyl methacrylate
- (2) Methyl methacrylate

**Part # 82407     \$25/ 1 mL**

### MIX #4

*20,000 ug/mL in Water*

Vinyl acetate

**Part # 82472     \$30/ 1 mL**

**APPENDIX IX VOLATILES**

**APPENDIX IX**

*Continued*

**MIX #5**

*At stated concentrations in Methanol*

(1) Acetonitrile	2000
(2) Acrylonitrile	2000
(3) Allyl chloride (3-Chloropropene)	2000
(4) 1,4-Dioxane	10000
(5) Methacrylonitrile	2000
(6) Isobutyl alcohol (iso-Butanol)	10000
(7) Propionitrile	2000

**Part # 82419 \$30/ 1 mL**

**MIX #6 GASES**

*2000 ug/mL in Methanol*

- (1) Bromomethane
- (2) Chloroethane
- (3) Chloromethane
- (4) Dichlorodifluoromethane
- (5) Trichlorofluoromethane
- (6) Vinyl chloride

**Part # 30058 \$25/ 1 mL**

**MIX #7**

*2000 ug/mL in Methanol*

Chloroprene (2-Chloro-1,3-butadiene)

**Part # 90565 \$25/ 1 mL**

**ACROLEIN**

*1000 ug/mL in Water*

**Part # 79005 \$30/ 1 mL**

# APPENDIX IX

*Continued*

## APPENDIX IX SEMI-VOLATILES

### MIX #1

*2000 ug/mL in Methylene chloride*

- (1) Bis(2-chloroethoxy) methane
- (2) Bis(2-chloroethyl) ether
- (3) Bis(2-ethylhexyl) phthalate
- (4) Bis(2-chloroisopropyl) ether
- (5) 4-Bromophenylphenyl ether
- (6) Butyl benzyl phthalate
- (7) 4-Chlorophenylphenyl ether
- (8) Diethyl phthalate
- (9) Dimethyl phthalate
- (10) Di-n-butyl phthalate
- (11) Di-n-octyl phthalate
- (12) N-Nitrosodimethylamine
- (13) N-Nitrosodi-n-propylamine
- (14) N-Nitrosodiphenylamine

**Part # 10001     \$45/ 1 mL**

### MIX #2

*2000 ug/mL in Methylene chloride*

- (1) Azobenzene
- (2) 2-Chloronaphthalene
- (3) 1,2-Dichlorobenzene
- (4) 1,4-Dichlorobenzene
- (5) 1,3-Dichlorobenzene
- (6) 2,6-Dinitrotoluene
- (7) 2,4-Dinitrotoluene
- (8) Hexachlorobenzene
- (9) Hexachlorobutadiene
- (10) Hexachlorocyclopentadiene
- (11) Hexachloroethane
- (12) Isophorone
- (13) Nitrobenzene
- (14) 1,2,4-Trichlorobenzene

**Part # 10002     \$45/ 1 mL**

### MIX #4

*2000 ug/mL in Methylene chloride*

- (1) Benzoic acid
- (2) 2-Methylphenol
- (3) 4-Methylphenol
- (4) 2,4,5-Trichlorophenol

**Part # 10004     \$30/ 1 mL**

### MIX #5

*2000 ug/mL in Methylene chloride*

- (1) Aniline
- (2) Benzyl alcohol
- (3) 4-Chloroaniline
- (4) Dibenzofuran
- (5) 2-Methylnaphthalene
- (6) 2-Nitroaniline
- (7) 3-Nitroaniline
- (8) 4-Nitroaniline

**Part # 10005     \$30/ 1 mL**

## APPENDIX IX SEMI-VOLATILES

APPENDIX  
IX*Continued***MIX #7***2000 ug/mL in Methylene chloride*

- |                                |                                |
|--------------------------------|--------------------------------|
| (1) 4-Chloro-3-methylphenol    | (8) 2-Nitrophenol              |
| (2) 2-Chlorophenol             | (9) 4-Nitrophenol              |
| (3) 2,4-Dichlorophenol         | (10) Pentachlorophenol         |
| (4) 2,6-Dichlorophenol         | (11) Phenol                    |
| (5) 2,4-Dimethylphenol         | (12) 2,4,6-Trichlorophenol     |
| (6) 2,4-Dinitrophenol          | (13) 2,3,4,6-Tetrachlorophenol |
| (7) 4,6-Dinitro-2-methylphenol |                                |

**Part # 10018      \$40/ 1 mL****MIX #8***2000 ug/mL in Methylene chloride*

- (1) Acetophenone
- (2) 4-Aminobiphenyl
- (3) 1-Chloronaphthalene
- (4) 7,12-Dimethylbenz(a)anthracene
- (5) Pentachlorobenzene
- (6) Pentachloronitrobenzene
- (7) 1,2,4,5-Tetrachlorobenzene

**Part # 82501      \$30/ 1 mL****MIX #9***2000 ug/mL in Methylene chloride*

- (1) Ethylmethanesulfonate
- (2) Methylmethanesulfonate

**Part # 82502      \$25/ 1 mL****3-Methylcholanthrene***1000 ug/mL in  
Methylene chloride***Part # 70488      \$22/ 1 mL****MIX #10***2000 ug/mL each in Methylene chloride*

- |                                |                              |
|--------------------------------|------------------------------|
| (1) p-Dimethylaminoazobenzene  | (7) N-Nitrosodi-n-butylamine |
| (2) a,a-Dimethylphenethylamine | (8) N-Nitrosopiperidine      |
| (3) Diphenylamine              | (9) Phenacetin               |
| (4) 1,4-Phenylenediamine       | (10) 2-Picoline              |
| (5) 1-Naphthylamine            | (11) Pronamide               |
| (6) 2-Naphthylamine            |                              |

**Part # 82503      \$35/ 1 mL**



# APPENDIX IX

*Continued*

## APPENDIX IX SEMI-VOLATILES

### MIX #11

*2000 ug/mL in Acetone*

- (1) Isosafrole
- (2) Safrole
- (3) Phthalic anhydride

**Part # 82703 \$25/ 1 mL**

### MIX #12

*2000 ug/mL in Acetone*

- (1) Isodrin
- (2) Hexachlorophene
- (3) Hexachloropropene
- (4) Pyridine

**Part # 82705 \$25/ 1 mL**

### MIX #13

*2000 ug/mL in Methylene chloride*

- (1) 3,3'-Dichlorobenzidine
- (2) 3,3'-Dimethylbenzidine (o-Tolidine)
- (3) 1,3-Dinitrobenzene
- (4) 1,4-Naphthoquinone
- (5) Pyridine
- (6) o-Toluidine
- (7) 1,3,5-Trinitrobenzene

**Part # 82707 \$40/ 1 mL**

### MIX #14

*2000 ug/mL in Methylene chloride*

- (1) 2-Acetylaminofluorene
- (2) 4-Nitroquinoline-1-oxide
- (3) N-Nitrosodiethylamine
- (4) N-Nitroso-N-methylethylamine
- (5) N-Nitrosomorpholine
- (6) N-Nitrosopyrrolidine
- (7) 5-Nitro-o-toluidine

**Part # 82708 \$30/ 1 mL**

### 3-Methylphenol

*1000 ug/mL in Methylene chloride*

**Part # 70215 \$22/ 1 mL**

### Methapyriline HCl

*1000 ug/mL in Methanol*

**Part # 70402 \$22/ 1 mL**

Mixes 1-13 contain the following compounds **not included** in the Appendix IX List:

- (1) Azobenzene
- (2) Benzoic acid
- (3) Carbazole
- (4) 1-Chloronaphthalene
- (5) Phthalic anhydride

**APPENDIX IX PESTICIDES**

**APPENDIX IX**

*Continued*

**MIX #1**

*2000 ug/mL in Toluene/Hexane [1:1]*

- |              |                          |                                    |
|--------------|--------------------------|------------------------------------|
| (1) Aldrin   | (7) 4,4'-DDE             | (13) Endrin                        |
| (2) a-BHC    | (8) 4,4'-DDT             | (14) Endrin aldehyde               |
| (3) b-BHC    | (9) Dieldrin             | (15) Endrin ketone                 |
| (4) g-BHC    | (10) Endosulfan I        | (16) Heptachlor                    |
| (5) d-BHC    | (11) Endosulfan II       | (17) Heptachlor epoxide (isomer B) |
| (6) 4,4'-DDD | (12) Endosulfan sulphate | (18) Methoxychlor                  |

**Part # 10013     \$70/ 1 mL**

**MIX #2**

*2000 ug/mL  
in Hexane:Toluene [1:1]*

- (1) Dimethoate
- (2) Disulfoton
- (3) Famphur
- (4) Parathion ethyl
- (5) Parathion methyl
- (6) Phorate
- (7) Sulfotep
- (8) Thionazin (Zinophos)
- (9) O,O,O-Triethylphosphorothioate

**Part # 82720     \$40/ 1 mL**

**MIX #3**

*2000 ug/mL in Toluene*

- (1) Chlorobenzilate
- (2) Di-allate
- (3) Dinoseb (2-sec-Butyl-4,6-dinitrophenol)
- (4) Kepone

**Part # 82721     \$40/ 1 mL**

**MIX #4**

**CHLORDANE**

*2000 ug/mL in Methanol*

**Part # 16208     \$25/ 1 mL**

**MIX #5**

**TOXAPHENE**

*4000 ug/mL in Methanol*

**Part # 17208     \$25/ 1 mL**

**MIX #6**

**ARAMITE**

*2000 ug/mL in Hexane*

**Part # 70482     \$50/ 1 mL**

Mixes 1-6 contain the following compound **not included** in the Appendix IX List:

# APPENDIX IX

*Continued*

## APPENDIX IX HERBICIDES & PCB'S

### HERBICIDE MIX

*At stated concentrations in MTBE*

(1)	2,4-D (2,4-Dichlorophenoxyacetic acid)	5000
(2)	Silvex (2,4,5-TP)	1200
(3)	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	1200

**Part # 90598      \$35/ 1 mL**

### AROCLOR MIXES

*All mixes 1000 ug/mL*

<i>Aroclor</i>	<i>Part # Hexane</i>	<i>Part # Methanol</i>	<i>Price</i>
1016	90123	70015	\$22/ 1 mL
1221	90124	70016	\$22/ 1 mL
1232	90125	70017	\$22/ 1 mL
1242	90126	70018	\$22/ 1 mL
1248	90127	70019	\$22/ 1 mL
1254	90128	70020	\$22/ 1 mL
1260	90129	70021	\$22/ 1 mL
<b>Set of 7</b>	<b>91130</b>	<b>91131</b>	<b>\$125/ 7x1 mL</b>

## APPENDIX IX COMPOUNDS

APPENDIX  
IX*Continued*

ABSOLUTE STANDARDS offers the following compounds, first published as a collection in the July 9, 1987 Federal Register Vol. 52, No. 131, to assist in the identification of the organic contaminants that the EPA has regulated for groundwater monitoring.

*The following individual solutions are available, in the solvents listed and at the concentrations shown.*

**Please call for quotes on Custom Mixtures**

<b>Part#</b>	<b>Compound</b>	<b>Concentration</b>	<b>Price/ 1mL</b>
X9001	Acenaphthene	100 ug/mL in Methanol	22.00
X9002	Acenaphthylene	100 ug/mL in Methanol	22.00
X9003	Acetone	100 ug/mL in Methanol/Water[9:1]	22.00
X9004	Acetophenone	100 ug/mL in Methylene Chloride	22.00
X9005	Acetonitrile	100 ug/mL in Methanol	22.00
X9006	2-Acetylaminofluorene	100 ug/mL in Methylene chloride	22.00
X9008	Acrylonitrile	100 ug/mL in Methanol	22.00
X9009	Aldrin	100 ug/mL in Methanol	22.00
X9010	Allyl chloride	100 ug/mL in Methanol	22.00
X9011	4-Aminobiphenyl	100 ug/mL in Methylene chloride	22.00
X9012	Aniline	100 ug/mL in Methanol	22.00
X9013	Anthracene	100 ug/mL in Methanol	22.00
X9159	Aroclor 1016	100 ug/mL in Methanol	22.00
X9160	Aroclor 1221	100 ug/mL in Methanol	22.00
X9161	Aroclor 1232	100 ug/mL in Methanol	22.00
X9162	Aroclor 1242	100 ug/mL in Methanol	22.00
X9163	Aroclor 1248	100 ug/mL in Methanol	22.00
X9164	Aroclor 1254	100 ug/mL in Methanol	22.00
X9165	Aroclor 1260	100 ug/mL in Methanol	22.00
X9166	Aroclor 1262	100 ug/mL in Methanol	22.00
X9167	Aroclor 1268	100 ug/mL in Methanol	22.00
X9015	Benzene	100 ug/mL in Methanol	22.00
X9016	Benzo(a)anthracene	100 ug/mL in Methanol	22.00
X9017	Benzo(b)fluoranthene	100 ug/mL in Methanol	22.00
X9018	Benzo(k)fluoranthene	100 ug/mL in Methylene chloride	22.00
X9019	Benzo(g,h,i)perylene	100 ug/mL in Methylene chloride	22.00
X9020	Benzo(a)pyrene	100 ug/mL in Methanol	22.00
X9021	Benzyl alcohol	100 ug/mL in Methanol	22.00
X9022	a-BHC	100 ug/mL in Methanol	22.00
X9023	b-BHC	100 ug/mL in Methanol	22.00

# APPENDIX IX

*Continued*

## APPENDIX IX COMPOUNDS

Part#	Compound	Concentration	Price/1 mL
X9024	d-BHC	100 ug/mL in Methanol	22.00
X9025	g-BHC	100 ug/mL in Methanol	22.00
X9026	Bis(2-chloroethoxy) methane	100 ug/mL in Methylene chloride	22.00
X9027	Bis(2-chloroethyl) ether	100 ug/mL in Methanol	22.00
X9028	Bis(2-chloroisopropyl) ether	100 ug/mL in Methylene chloride	22.00
X9029	Bis(2-ethylhexyl) phthalate	100 ug/mL in Methanol	22.00
X9030	Bromodichloromethane	100 ug/mL in Methanol	22.00
X9031	Bromoform	100 ug/mL in Methanol	22.00
X9032	Bromomethane	100 ug/mL in Methanol	22.00
X9033	4-Bromophenyl phenyl ether	100 ug/mL in Methanol	22.00
X9034	Benzyl butyl phthalate	100 ug/mL in Methanol	22.00
X9035	Carbon disulphide	100 ug/mL in Methanol	22.00
X9036	Carbon tetrachloride	100 ug/mL in Methanol	22.00
X9037	Chlordane	100 ug/mL in Methanol	22.00
X9038	4-Chloroaniline	100 ug/mL in Methanol	22.00
X9039	Chlorobenzene	100 ug/mL in Methanol	22.00
X9040	Chlorobenzilate	100 ug/mL in Iso-octane	22.00
X9041	4-Chloro-3-methyl phenol	100 ug/mL in Methanol	22.00
X9042	Chloroethane	100 ug/mL in Methanol	22.00
X9043	Chloroform	100 ug/mL in Methanol	22.00
X9044	Chloromethane	100 ug/mL in Methanol	22.00
X9045	2-Chloronaphthalene	100 ug/mL in Methanol	22.00
X9046	2-Chlorophenol	100 ug/mL in Methanol	22.00
X9047	4-Chlorophenyl phenyl ether	100 ug/mL in Methanol	22.00
X9048	2-Chloro-1,3-butadiene	100 ug/mL in Methanol	22.00
X9049	Chrysene	100 ug/mL in Methylene chloride	22.00
X9050	m-Cresol	100 ug/mL in Methylene chloride	22.00
X9051	o-Cresol	100 ug/mL in Methylene chloride	22.00
X9052	p-Cresol	100 ug/mL in Methylene chloride	22.00
X9053	2,4-D methyl ester	100 ug/mL in Methanol	22.00
X9054	4,4'-DDD	100 ug/mL in Methanol	22.00
X9055	4,4'-DDE	100 ug/mL in Methanol	22.00
X9056	4,4'-DDT	100 ug/mL in Methanol	22.00
X9057	Diallate	100 ug/mL in Methanol	22.00
X9058	Dibenzo(a,h)anthracene	100 ug/mL in Methanol	22.00

## APPENDIX IX COMPOUNDS

APPENDIX  
IX*Continued*

Part#	Compound	Concentration	Price/1 mL
X9059	Dibenzofuran	100 ug/mL in Methanol	22.00
X9060	Dibromochloromethane	100 ug/mL in Methanol	22.00
X9061	1,2-Dibromo-3-chloropropane	100 ug/mL in Methanol	22.00
X9062	Dibromomethane	100 ug/mL in Methanol	22.00
X9063	1,2-Dibromoethane	100 ug/mL in Methanol	22.00
X9064	Di-n-butyl phthalate	100 ug/mL in Methanol	22.00
X9065	1,2-Dichlorobenzene	100 ug/mL in Methanol	22.00
X9066	1,3-Dichlorobenzene	100 ug/mL in Methanol	22.00
X9067	1,4-Dichlorobenzene	100 ug/mL in Methanol	22.00
X9068	3,3'-Dichlorobenzidine	100 ug/mL in Methanol	22.00
X9069	trans-1,4-Dichloro-2-butene	100 ug/mL in Methanol	22.00
X9070	Dichlorodifluoromethane	100 ug/mL in Methanol	22.00
X9071	1,1-Dichloroethane	100 ug/mL in Methanol	22.00
X9072	1,2-Dichloroethane	100 ug/mL in Methanol	22.00
X9073	1,1-Dichloroethene	100 ug/mL in Methanol	22.00
X9074	trans-1,2-Dichloroethene	100 ug/mL in Methanol	22.00
X9075	Methylene chloride	100 ug/mL in Methanol	22.00
X9076	2,4-Dichlorophenol	100 ug/mL in Methanol	22.00
X9077	2,6-Dichlorophenol	100 ug/mL in Methylene Chloride	22.00
X9078	1,2-Dichloropropane	100 ug/mL in Methanol	22.00
X9079	cis-1,3-Dichloropropene	100 ug/mL in Methanol	22.00
X9080	trans-1,3-Dichloropropene	100 ug/mL in Methanol	22.00
X9081	Dieldrin	100 ug/mL in Methanol	22.00
X9082	Diethyl phthalate	100 ug/mL in Methanol	22.00
X9083	Dimethoate	100 ug/mL in Methanol	22.00
X9084	4-Dimethylaminoazobenzene	100 ug/mL in Methylene Chloride	22.00
X9085	7,12-Dimethylbenz(a)anthracene	100 ug/mL in Methylene Chloride	22.00
X9086	3,3'-Dimethylbenzidine (o-Tolidine)	100 ug/mL in Methylene Chloride	22.00
X9087	a,a-Dimethylphenethylamine	100 ug/mL in Methylene Chloride	22.00
X9088	2,4-Dimethylphenol	100 ug/mL in Methanol	22.00
X9089	Dimethyl phthalate	100 ug/mL in Methanol	22.00
X9090	1,3-Dinitrobenzene	100 ug/mL in Methylene Chloride	22.00
X9091	4,6-Dinitro-2-methyl phenol	100 ug/mL in Methanol	22.00
X9092	2,4-Dinitrophenol	100 ug/mL in Methanol	22.00
X9093	2,4-Dinitrotoluene	100 ug/mL in Methanol	22.00

# APPENDIX IX

*Continued*

## APPENDIX IX COMPOUNDS

Part#	Compound	Concentration	Price/1mL
X9094	2,6-Dinitrotoluene	100 ug/mL in Methanol	22.00
X9095	Dinoseb	100 ug/mL in Methanol	22.00
X9096	Di-n-octyl phthalate	100 ug/mL in Methanol	22.00
X9097	p-Dioxane	100 ug/mL in Methanol	22.00
X9098	Diphenylamine	100 ug/mL in Methylene Chloride	22.00
X9099	Disulfoton	100 ug/mL in Methanol	22.00
X9100	Endosulfan I	100 ug/mL in Toluene	22.00
X9101	Endosulfan II	100 ug/mL in Toluene	22.00
X9102	Endosulfan sulfate	100 ug/mL in Toluene	22.00
X9103	Endrin	100 ug/mL in Toluene	22.00
X9104	Endrin aldehyde	100 ug/mL in Toluene	22.00
X9105	Ethylbenzene	100 ug/mL in Methanol	22.00
X9106	Ethyl methacrylate	100 ug/mL in Methanol	22.00
X9107	Ethyl methane sulfonate	100 ug/mL in Methylene Chloride	22.00
X9108	Famphur	100 ug/mL in Methanol	22.00
X9109	Fluoranthene	100 ug/mL in Methanol	22.00
X9110	Fluorene	100 ug/mL in Methanol	22.00
X9111	Heptachlor	100 ug/mL in Methanol	22.00
X9112	Heptachlor epoxide(isomer B)	100 ug/mL in Methanol	22.00
X9113	Hexachlorobenzene	100 ug/mL in Acetone	22.00
X9114	Hexachlorobutadiene	100 ug/mL in Methanol	22.00
X9115	Hexachlorocyclopentadiene	100 ug/mL in Methanol	22.00
X9116	Hexachloroethane	100 ug/mL in Methanol	22.00
X9117	Hexachlorophene	100 ug/mL in Toluene	22.00
X9118	Hexachloropropene	100 ug/mL in Methanol	22.00
X9119	2-Hexanone	100 ug/mL in Methanol/Water[9:1]	22.00
X9120	Indeno(1,2,3-cd)pyrene	100 ug/mL in Methanol	22.00
X9121	2-Methyl-1-propanol	100 ug/mL in Methanol	22.00
X9122	Isodrin	100 ug/mL in Methanol	22.00
X9123	Isophorone	100 ug/mL in Methano	22.00
X9124	Isosafrole	100 ug/mL in Methylene Chloride	22.00
X9125	Kepone	100 ug/mL in Acetone	22.00
X9126	Methacrylonitrile	100 ug/mL in Methanol	22.00
X9127	Methapyrilene hydrochloride	100 ug/mL in Methylene Chloride	22.00
X9128	4,4'-Methoxychlor	100 ug/mL in Methanol	22.00

## APPENDIX IX COMPOUNDS

APPENDIX  
IX*Continued*

Part#	Compound	Concentration	Price/1 mL
X9129	3-Methylcholanthrene	100 ug/mL in Methylene chloride	22.00
X9130	Methyl ethyl ketone	100 ug/mL in Methanol/Water[9:1]	22.00
X9131	Methyl iodide	100 ug/mL in Methanol	22.00
X9132	Methyl methacrylate	100 ug/mL in Methanol	22.00
X9133	Methyl methane sulfonate	100 ug/mL in Methylene chloride	22.00
X9134	2-Methylnaphthalene	100 ug/mL in Methylene chloride	22.00
X9135	Methyl parathion	100 ug/mL in Methanol	22.00
X9136	4-Methyl-2-pentanone	100 ug/mL in Methanol/Water[9:1]	22.00
X9137	Naphthalene	100 ug/mL in Methanol	22.00
X9138	1,4-Naphthoquinone	100 ug/mL in Methylene chloride	22.00
X9139	1-Naphthylamine	100 ug/mL in Methylene chloride	22.00
X9140	2-Naphthylamine	100 ug/mL in Methylene chloride	22.00
X9141	2-Nitroaniline	100 ug/mL in Methanol	22.00
X9142	3-Nitroaniline	100 ug/mL in Methanol	22.00
X9143	4-Nitroaniline	100 ug/mL in Methanol	22.00
X9144	Nitrobenzene	100 ug/mL in Methanol	22.00
X9145	2-Nitrophenol	100 ug/mL in Methanol	22.00
X9146	4-Nitrophenol	100 ug/mL in Methanol	22.00
X9147	4-Nitroquinoline-1-oxide	100 ug/mL in Methylene chloride	22.00
X9148	N-Nitrosodi-n-butylamine	100 ug/mL in Methylene chloride	22.00
X9149	N-Nitrosodiethylamine	100 ug/mL in Methylene chloride	22.00
X9150	N-Nitrosodimethylamine	100 ug/mL in Methylene chloride	22.00
X9152	N-Nitrosodi-n-propylamine	100 ug/mL in Methylene chloride	22.00
X9153	N-Nitrosomethylethylamine	100 ug/mL in Methylene chloride	22.00
X9154	N-Nitrosomorpholine	100 ug/mL in Methylene chloride	22.00
X9155	1-Nitrosopiperidine	100 ug/mL in Methylene chloride	22.00
X9156	1-Nitrosopyrrolidine	100 ug/mL in Methylene chloride	22.00
X9157	5-Nitro-o-toluidine	100 ug/mL in Methylene chloride	22.00
X9158	Parathion	100 ug/mL in Methanol	22.00
X9174	Pentachlorobenzene	100 ug/mL in Methanol	22.00
X9175	Pentachloroethane	100 ug/mL in Methanol	22.00
X9176	Pentachloronitrobenzene	100 ug/mL in Methanol	22.00
X9177	Pentachlorophenol	100 ug/mL in Methanol	22.00
X9178	Phenacetin	100 ug/mL in Methylene chloride	22.00



# APPENDIX IX

*Continued*

## APPENDIX IX COMPOUNDS

Part#	Compound	Concentration	Price/1 mL
X9179	Phenanthrene	100 ug/mL in Methanol	22.00
X9180	Phenol	100 ug/mL in Methylene chloride	22.00
X9181	1,4-Phenylenediamine	100 ug/mL in Methanol	22.00
X9182	Phorate	100 ug/mL in Methanol	22.00
X9183	2-Picoline	100 ug/mL in Methanol	22.00
X9184	Pronamide	100 ug/mL in Methylene chloride	22.00
X9185	Propionitrile	100 ug/mL in Methanol	22.00
X9186	Pyrene	100 ug/mL in Methanol	22.00
X9187	Pyridine	100 ug/mL in Methanol	22.00
X9188	Safrole	100 ug/mL in Methanol	22.00
X9189	Silvex	100 ug/mL in MTBE	22.00
X9190	Styrene	100 ug/mL in Methanol	22.00
X9197	Sulfotep	100 ug/mL in Methanol	22.00
X9191	2,4,5-Trichlorophenoxyacetic acid	100 ug/mL in Methanol	22.00
X9192	1,2,4,5-Tetrachlorobenzene	100 ug/mL in Methanol	22.00
X9193	1,1,1,2-Tetrachloroethane	100 ug/mL in Methanol	22.00
X9194	1,1,2,2-Tetrachloroethane	100 ug/mL in Methanol	22.00
X9195	Tetrachloroethene	100 ug/mL in Methanol	22.00
X9196	2,3,4,6-Tetrachlorophenol	100 ug/mL in Methylene chloride	22.00
X9198	Thionazin	100 ug/mL in Methanol	22.00
X9199	Toluene	100 ug/mL in Methanol	22.00
X9200	o-Toluidine	100 ug/mL in Methylene chloride	22.00
X9201	Toxaphene	100 ug/mL in Methanol	22.00
X9202	1,2,4-Trichlorobenzene	100 ug/mL in Methanol	22.00
X9203	1,1,1-Trichloroethane	100 ug/mL in Methanol	22.00
X9204	1,1,2-Trichloroethane	100 ug/mL in Methanol	22.00
X9205	Trichloroethene	100 ug/mL in Methanol	22.00
X9206	Trichlorofluoromethane	100 ug/mL in Methanol	22.00
X9207	2,4,5-Trichlorophenol	100 ug/mL in Methanol	22.00
X9208	2,4,6-Trichlorophenol	100 ug/mL in Methanol	22.00
X9209	1,2,3-Trichloropropane	100 ug/mL in Methanol	22.00
X9210	O,O,O-Triethylphosphorothioate	100 ug/mL in Methanol	22.00
X9211	sym-Trinitrobenzene	100 ug/mL in Methanol	22.00
X9213	Vinyl chloride	100 ug/mL in Methanol	22.00
X9214	Xylenes (Mixed Isomers)	100 ug/mL in Methanol	22.00
X9215	2,4,5-TP methyl ester	100 ug/mL in Methanol	22.00
X9216	2,4,5-T methyl ester	100 ug/mL in Methanol	22.00

## APPENDIX IX COMPOUNDS

APPENDIX  
IX*Continued*

Part#	Compound	Concentration	Price/1 mL
X9217	Anisole	100 ug/mL in Methanol	22.00
X9218	tert-Butanol	100 ug/mL in Methanol	22.00
X9219	Diethyl ether	100 ug/mL in Methanol	22.00
X9220	n-Propylbenzene	100 ug/mL in Methanol	22.00
X9221	p-Xylene	100 ug/mL in Methanol	22.00
X9222	o-Xylene	100 ug/mL in Methylene chloride	22.00
X9223	m-Xylene	100 ug/mL in Methanol	22.00
X9224	Benzo(a)pyrene	100 ug/mL in Acetone	22.00
X9225	cis-Chlordane	100 ug/mL in Acetone	22.00
X9226	trans-Chlordane	100 ug/mL in Acetone	22.00

**Browse our INORGANIC SECTION  
in the BLUE PAGES**

**for:**

**Single component metal solutions for ICP & AA**

**CLP Mixes**

**EPA Methods**

**Wet Chemical Methods**

**Anion Single component standards and mixes**

**ASTM  
D-1319****STANDARDS FOR HYDROCARBON  
TYPES IN LIQUID PETROLEUM  
PRODUCTS BY FLUORESCENT  
INDICATOR ADSORPTION****Paraffins - ASTM 1319**

<b>Analyte</b>	<b>Vol. %</b>
(1) n-Pentane	8
(2) n-Hexane	9
(3) Cyclohexane	15
(4) n-Heptane	14
(5) 2,3-Dimethylpentane	14
(6) Isooctane	16
(7) n-Octane	14
(8) n-Decane	7

**Part # 51097 \$40/ 1 mL**

**Aromatics - ASTM 1319**

<b>Analyte</b>	<b>Vol. %</b>
(1) Benzene	4
(2) Toluene	32
(3) Ethylbenzene	8
(4) p-Xylene	8
(5) o-Xylene	8
(6) m-Xylene	16
(7) 1,2,4-Trimethylbenzene	8
(8) 1,3,5-Trimethylbenzene	8
(9) 1,2,4,5-Tetramethylbenzene	4
(10) Naphthalene	4

**Part # 51098 \$40/ 1 mL**

**Olefins- ASTM 1319**

<b>Analyte</b>	<b>Vol. %</b>
(1) 1-Pentene	33.3
(2) 2,3,-Dimethyl-2-butene	33.3
(3) 1-Heptene	33.3

**Part # 51099 \$40/ 1 mL**

**SULFUR IN PETROLEUM PRODUCTS  
BY X-RAY SPECTROMETRY/ X-RAY  
FLUORESCENCE/OXIDATIVE  
MICROCOULOMETRY**

**ASTM**  
**D-2622 / D-3120**  
**D4294/ D-5453**

**Sulfur in Heavy Weight Mineral Oil**

Analyte	Wt.%	(ug/g)	Part#	Price
Di-n-butyl sulfide as S	0.000	Blank	51148	\$55/5 mL
Di-n-butyl sulfide as S	0.010	100	51149	\$55/5 mL
Di-n-butyl sulfide as S	0.10	1000	51150	\$55/5 mL
Di-n-butyl sulfide as S	1.00	10000	51151	\$55/5 mL

**Sulfur in Light Weight Mineral Oil**

Analyte	Wt.%	(ug/g)	Part#	Price
Di-n-butyl sulfide as S	0.000	Blank	51152	\$55/5 mL
Di-n-butyl sulfide as S	0.010	100	51153	\$55/5 mL
Di-n-butyl sulfide as S	0.10	1000	51154	\$55/5 mL
Di-n-butyl sulfide as S	1.00	10000	51155	\$55/5 mL

**Sulfur in #2 Diesel Fuel**

Analyte	Wt.%	(ug/g)	Part#	Price
Di-n-butyl sulfide as S	0.000	Blank	51156	\$55/5 mL
Di-n-butyl sulfide as S	0.010	100	51157	\$55/5 mL
Di-n-butyl sulfide as S	0.10	1000	51158	\$55/5 mL
Di-n-butyl sulfide as S	1.00	10000	51159	\$55/5 mL

**Sulfur in Isooctane**

Analyte	Wt.%	(ug/g)	Part#	Price
Di-n-butyl sulfide as S	0.000	Blank	51160	\$55/5 mL
Di-n-butyl sulfide as S	0.001	10	51161	\$55/5 mL
Di-n-butyl sulfide as S	0.010	100	51162	\$55/5 mL
Di-n-butyl sulfide as S	0.10	1000	51163	\$55/5 mL

# ASTM

## D-2789 / D-3524

### HYDROCARBON TYPES IN LOW OLEFINIC GASOLINE BY GCMS / DIESEL FUEL DILUENT IN USED DIESEL ENGINE OILS BY GC

#### ASTM 2789 Synthetic Mixture

<i>Analyte</i>	<i>Vol. %</i>
(1) 2-Methylpentane	7.2
(2) 2,4-Dimethylpentane	9.4
(3) n-Octane	16.6
(4) Methylcyclopentane	7.1
(5) Methylcyclohexane	10.0
(6) cis-1,2-Dimethylcyclohexane	15.5
(7) Benzene	7.7
(8) Toluene	10.0
(9) p-Xylene	16.5

**Part # 51100 \$40/ 1 mL**

#### Diesel Fuel Diluent ASTM D-3524

<i>Analyte</i>	<i>Wt. %</i>	<i>Part#</i>	<i>Price</i>
#2 Diesel	10		
30 W Motor Oil	90	<b>51101</b>	<b>\$35/1 mL</b>
#2 Diesel	5		
30 W Motor Oil	95	<b>51102</b>	<b>\$35/1 mL</b>
#2 Diesel	1		
30 W Motor Oil	99	<b>51103</b>	<b>\$35/1 mL</b>

#### Column Resolution Mix ASTM D-3524

*(w/v) each in n-Heptane*

(1) n-Decane	1.0 %
(2) n-Octadecane	2.0 %

**Part # 51104 \$30/ 1 mL**

#### Column Test Mix ASTM D-2887/D-3524

*(w/v) each in n-Octane*

(1) n-Hexadecane	1.0 %
(2) n-Octadecane	1.0 %

**Part # 51052 \$30/ 1 mL**

## SIMULATED DISTILLATION & FIRE DEBRIS ANALYSIS

**ASTM  
D-2887, 3710,  
1387-90**

### Column Test Mix ASTM D2887

*Varied ug/mL  
in Carbon disulphide*

<i>Analyte</i>	<i>ug/mL</i>
(1) n-Hexane	600
(2) n-Heptane	600
(3) n-Octane	800
(4) n-Nonane	800
(5) n-Decane	1200
(6) n-Undecane	1200
(7) n-Dodecane	1200
(8) n-Tetradecane	1200
(9) n-Hexadecane	1000
(10) n-Octadecane	500
(11) n-Eicosane	200
(12) n-Tetracosane	200
(13) n-Octacosane	100
(14) n-Dotriacontane	100
(15) n-Hexatriacontane	100
(16) n-Tetracontane	100
(17) n-Tetratetracontane	100

**Part # 51051 \$35/ 1 mL**

*\* Can not Ship via Air*

### Column Test Mix ASTM D-2887/D-3524

*(w/v) each in n-Octane*

(1) n-Hexadecane	1.0%
(2) n-Octadecane	1.0%

**Part # 51052 \$30/ 1 mL**

### Column Resolution Test Mix ASTM D1387-90

*2000 ug/mL  
in Methylene chloride*

- (1) n-Hexane
- (2) n-Octane
- (3) n-Decane
- (4) n-Dodecane
- (5) n-Tetradecane
- (6) n-Hexadecane
- (7) n-Octadecane
- (8) n-Eicosane
- (9) Toluene
- (10) 1,2,4-Trimethylbenzene
- (11) 2-Ethyltoluene
- (12) 3-Ethyltoluene
- (13) p-Xylene

**Part # 51053 \$30/ 1 mL**

### Calibration Mix ASTM D3710

<i>Analyte</i>	<i>% V/V</i>
(1) 2-Methylbutane	10
(2) n-Pentane	8
(3) 2-Methylpentane	6
(4) n-Hexane	6
(5) 2,4-Dimethylpentane	6
(6) n-Heptane	10
(7) Toluene	12
(8) n-Octane	5
(9) p-Xylene	14
(10) n-Propylbenzene	5
(11) n-Decane	4
(12) n-Butylbenzene	4
(13) n-Dodecane	4
(14) n-Tridecane	2
(15) n-Tetradecane	2
(16) n-Pentadecane	2

**Part # 51054 \$35/ 1 mL**

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**ASTM**  
**D-3230 / D-3231**

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**SALTS IN CRUDE OIL / PHOSPHORUS  
IN GASOLINE****Salts in Crude Oil**

*Varied (ug/mL) in  
1-Butanol:Methanol [60:40]*

- |                        |    |
|------------------------|----|
| (1) Calcium chloride   | 10 |
| (2) Magnesium chloride | 20 |
| (3) Sodium chloride    | 70 |

**Part # 51105    \$40/ 1 mL**

**Phosphorus**

*1000 ug/mL in Water*

**Part # 54195    \$25/ 100 mL**

**Part # 54595    \$50/ 500 mL**

**DETERMINATION OF BENZENE AND  
TOLUENE IN FINISHED MOTOR AND  
AVIATION GASOLINE BY GC**

**ASTM  
D-3606**

**Benzene and Toluene Calibration Blends  
ASTM D-3606**

<i>Part#</i>	<i>Calibration Level</i>	<i>Analytes in Vol%</i>		
		<b>Benzene</b>	<b>Toluene</b>	<b>Isooctane</b>
<b>51106</b>	Level 1	5.0	20	75
<b>51107</b>	Level 2	2.5	15	82.5
<b>51108</b>	Level 3	1.25	10	88.75
<b>51109</b>	Level 4	0.67	5.0	94.33
<b>51110</b>	Level 5	0.33	2.5	97.17
<b>51111</b>	Level 6	0.12	1.0	98.88
<b>51112</b>	Level 7	0.06	0.5	99.44

**Individual Calibration Levels**                      **\$25/ 1 mL**  
**7 Level Calibration Set - P# 51113**                      **\$150/ 7 x 1 mL**

**Internal Standard**  
*1000 ug/mL in Isooctane*

2-Butanone (MEK)

**Part # 79253    \$22/ 1 mL**



# ASTM D-4059

## ANALYSIS OF POLYCHLORINATED BIPHENYLS IN INSULATING LIQUIDS BY GC

### Aroclor in Transformer Oil

<i>Analyte</i>	<i>Conc. (mg/kg)</i>	<i>Part#</i>	<i>Pri ce</i>
Aroclor 1016	50	61016	\$30/1 mL
Aroclor 1016	500	62016	\$30/1 mL
Aroclor 1221	50	61221	\$30/1 mL
Aroclor 1221	500	62221	\$30/1 mL
Aroclor 1232	50	61232	\$30/1 mL
Aroclor 1232	500	62232	\$30/1 mL
Aroclor 1242	10	60242	\$30/1 mL
Aroclor 1242	50	61242	\$30/1 mL
Aroclor 1242	500	62242	\$30/1 mL
Aroclor 1248	10	60248	\$30/1 mL
Aroclor 1248	50	61248	\$30/1 mL
Aroclor 1248	500	62248	\$30/1 mL
Aroclor 1254	10	60254	\$30/1 mL
Aroclor 1254	50	61254	\$30/1 mL
Aroclor 1254	500	62254	\$30/1 mL
Aroclor 1260	10	60260	\$30/1 mL
Aroclor 1260	50	61260	\$30/1 mL
Aroclor 1260	500	62260	\$30/1 mL

### Aroclor Free Univolt N-61 Type II Transformer Oil

**Part # 60000     \$75/ 100 mL**

**TRACE ETHYLENE GLYCOL IN USED  
ENGINE OIL**

**ASTM  
D-4291**

**Ethylene glycol**

*1000 ug/mL in Water*

Ethylene glycol

**Part # 79088      \$22/ 1 mL**

**Ethylene glycol**

*10000 ug/mL in Water*

Ethylene glycol

**Part # 92295      \$25/ 1 mL**

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**ASTM  
D-4629**

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**TRACE NITROGEN IN LIQUID PETROLEUM  
HYDROCARBONS BY SYRINGE / INLET  
OXIDATIVE COMBUSTION AND  
CHEMILUMINESCENCE DETECTION**

**Trace Nitrogen  
in Low Boiling Solvent**

*100 ug/mL in Isooctane*

Pyridine as N

(Nitrogen @ 100 ug/mL)

(Pyridine @ 565 ug/mL)

**Part # 51117 \$25/ 1 mL**

**Trace Nitrogen  
in High Boiling Solvent**

*100 ug/mL in Toluene:Acetone [9:1]*

Carbazole as N

(Nitrogen @ 100 ug/mL)

(Carbazole @ 1195 ug/mL)

**Part # 51118 \$25/ 1 mL**

**DETERMINATION OF AROMATICS IN  
FINISHED GASOLINE BY GAS  
CHROMATOGRAPHY**

**ASTM  
D-4420**

**Aromatics in Gasoline Blends  
ASTM D-4420**

*Analytes in Vol%*

<b>Part#</b>	<b>Benzene</b>	<b>Toluene</b>	<b>Total Xylenes</b>	<b>n-Butylbenzene</b>	<b>Isooctane</b>
<b>51114</b>	0.05%	0.5%	5.0%	30%	64.45%
<b>51115</b>	0.75%	5.0%	20.00%	10.00%	64.25%
<b>51116</b>	5.00%	25.00%	3.00%	2.50%	64.50%

**Each Part# \$35/ 1 mL**

# ASTM D-4815

## OXYGENATES IN GASOLINE

### ASTM D-4815-Calibration Mix (With Internal Standard)

<i>Analyte</i>	Mix 1	Mix 2	Mix 2	Mix 2	Mix 5
	<u>Wt. %</u>	<u>Wt. %</u>	<u>Wt. %</u>	<u>Wt. %</u>	<u>Wt. %</u>
(1) Ethanol	2.85	0.10	5.70	8.55	11.40
(2) t-Butanol	0.10	2.85	5.70	7.60	11.40
(3) Methyl <i>tert</i> -butyl ether	19.00	14.25	9.50	4.75	0.10
(4) t-Pentanol	1.19	4.75	2.38	3.56	0.10
(5) Isooctane/xylene (65:35)	71.86	73.05	71.72	70.54	72.00
(6) 1,2-Dimethoxyethane	5.00	5.00	5.00	5.00	5.00
<b>Part #</b>	<b>51058</b>	<b>51059</b>	<b>51060</b>	<b>51061</b>	<b>51062</b>
<b>Individual Calibration Mixes</b>				<b>\$30/ 1 mL</b>	
<b>P# 51063</b>	<b>Calibration Mix 1- Mix 5 Set</b>			<b>\$100/ 5 x 1 mL</b>	

### ASTM D-4815-Calibration Mix (No Internal Standard)

<i>Analyte</i>	Mix 1	Mix 2	Mix 2	Mix 2	Mix 5
	<u>Wt. %</u>	<u>Wt. %</u>	<u>Wt. %</u>	<u>Wt. %</u>	<u>Wt. %</u>
(1) Ethanol	3.00	0.10	6.00	9.00	12.00
(2) t-Butanol	0.10	3.00	6.00	8.00	12.00
(3) Methyl <i>tert</i> -butyl ether	20.00	15.00	10.00	5.00	0.10
(4) t-Pentanol	1.25	5.00	2.50	3.75	0.10
(5) Isooctane/xylene (65:35)	75.65	76.90	75.50	74.25	75.80
<b>Part #</b>	<b>51064</b>	<b>51065</b>	<b>51066</b>	<b>51067</b>	<b>51068</b>
<b>Individual Calibration Mixes</b>				<b>\$30/ 1 mL</b>	
<b>P# 51069</b>	<b>Calibration Mix 1- Mix 5 Set</b>			<b>\$100/ 5 x 1 mL</b>	

## OXYGENATES IN GASOLINE

ASTM  
D-4815Quantitative Peak ID Mix  
ASTM D4815

<i>Analyte</i>	<i>Wt. %</i>
(1) Methylcyclopentane	4.00
(2) Methanol	7.30
(3) Ethanol	7.30
(4) Isopropanol	7.30
(5) tert-Butanol	7.30
(6) n-Propanol	7.30
(7) Methyl <i>tert</i> -butyl ether	4.00
(8) sec-Butanol	7.30
(9) Diisopropyl ether	4.00
(10) Isobutanol	7.30
(11) Ethyl <i>tert</i> -butyl ether	4.00
(12) tert-Pentanol	7.30
(13) 1,2-Dimethoxyethane	6.00
(14) n-Butanol	7.30
(15) Benzene	5.00
(16) tert-Amyl methyl ether	7.30

**Part # 51070 \$30/ 1 mL**

Valve Timing Mixture  
ASTM D4815

<i>Analyte</i>	<i>Wt. %</i>
(1) Methylcyclopentane	10
(2) Diisopropyl ether	10
(3) Ethyl <i>tert</i> -butyl ether	10
(4) Methyl <i>tert</i> -butyl ether	10
(5) n-Hexane	60

**Part # 51071 \$30/ 1 mL**

Internal Standard  
ASTM D4815

1,2-Dimethoxyethane (neat) 100%

**Part # 51072 \$25/ 1 mL**

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**ASTM  
D-4929**

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**DETERMINATION OF ORGANIC  
CHLORIDE CONTENT IN CRUDE OIL**

**Chlorine  
in Crude Oil**

*100 ug/mL in Isooctane*

Chlorobenzene as Cl

(Chlorine @ 100 ug/mL)

(Chlorobenzene @ 3174 ug/mL)

**Part # 51119    \$25/ 1 mL**

**TRACE METALS IN PETROLEUM  
COKE BY ATOMIC ABSORPTION /  
ICP-AES**

**ASTM**  
**D-5056 / D-5184**  
**D-5600 / D-5863**

## 1,000 ug/mL Single Components for AA

Element	Matrix	Part#	\$/100mL	Part#	\$/500mL
Aluminum	Al	Al(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57013	25	58013 65
Barium	Ba	Ba(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57056	25	58056 65
Calcium	Ca	CaCO <sub>3</sub> /HNO <sub>3</sub>	57020	25	58020 65
Iron	Fe	Fe(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57026	25	58026 65
Magnesium	Mg	Mg(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57012	25	58012 65
Manganese	Mn	Mn(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57025	25	58025 65
Nickel	Ni	Ni(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57028	25	58028 65
Silicon	Si	(NH <sub>4</sub> ) <sub>2</sub> SiF <sub>6</sub> /HNO <sub>3</sub>	57014	25	58014 65
Sodium	Na	NaNO <sub>3</sub> /HNO <sub>3</sub>	57011	25	58011 65
Titanium	Ti	(NH <sub>4</sub> ) <sub>2</sub> TiF <sub>6</sub> /tr.HF	57022	25	58022 65
Vanadium	V	NH <sub>4</sub> VO <sub>3</sub> /HNO <sub>3</sub>	57023	25	58023 65
Zinc	Zn	Zn(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57030	25	58030 65

### Water Blank

*ASTM Type I H<sub>2</sub>O*

**Part # 52000      \$20/ 100mL**

**Part # 53000      \$40/ 500mL**

### HCl Acid Blank

*Matrix 5% HCl*

**Part # 52001      \$20/ 100mL**

**Part # 53001      \$40/ 500mL**

### Nitric Acid Blank

*Matrix 5% HNO<sub>3</sub>*

**Part # 52002      \$20/ 100mL**

**Part # 53002      \$40/ 500mL**



**ASTM  
D-5134****DETAILED ANALYSIS OF PETROLEUM  
NAPHTHAS THROUGH N-NONANE BY  
CAPILLARY GAS CHROMATOGRAPHY****Column Evaluation Mix  
ASTM D-5134**

<i>Analyte</i>	<i>W/W%</i>
(1) Toluene	0.5
(2) n-Heptane	1
(3) 2,3,3-Trimethylpentane	1
(4) 2-Methylheptane	1
(5) 4-Methylheptane	1
(6) n-Octane	1
(7) 2-Methylpentane	94.5

**Part # 51120 \$40/ 1 mL****Linearity Check Mix  
ASTM D-5134**

<i>Analyte</i>	<i>Wt %</i>
(1) n-Hexane	10
(2) n-Heptane	10
(3) n-Octane	10
(4) n-Nonane	10
(5) Benzene	10
(6) Toluene	10
(7) 2-Methylhexane	10
(8) 2,4-Dimethylhexane	10
(9) 2-Methylheptane	10
(10) 2,4-Dimethylheptane	10

**Part # 51121 \$40/ 1 mL**

**DETERMINATION OF BOILING RANGE  
DISTRIBUTION OF CRUDE PETROLEUM BY  
GAS CHROMATOGRAPHY**

**ASTM  
D-5307**

**Quantitative Crude Oil Standard  
ASTM D-5307**

*2000 ug/mL in Carbon disulfide*

- |                   |                          |
|-------------------|--------------------------|
| (1) n-Decane      | (9) n-Octadecane         |
| (2) n-Undecane    | (10) n-Eicosane          |
| (3) n-Dodecane    | (11) n-Tetracosane       |
| (4) n-Tridecane   | (12) n-Octacosane        |
| (5) n-Tetradecane | (13) n-Dotriacontane     |
| (6) n-Pentadecane | (14) n-Hexatriacontane   |
| (7) n-Hexadecane  | (15) n-Tetracontane      |
| (8) n-Heptadecane | (16) n-Tetratetracontane |

**Part # 51122    \$45/ 1 mL**

**Column Test Mix  
ASTM D-2887/D-3524/  
D-5307**

*(w/v) each in n-Octane*

- |                  |      |
|------------------|------|
| (1) n-Hexadecane | 1.0% |
| (2) n-Octadecane | 1.0% |

**Part # 51052    \$25/ 1 mL**

**Internal Standard  
ASTM D-5307**

<i>Analyte</i>	<i>W/W%</i>
(1) n-Tetradecane	25
(2) n-Pentadecane	25
(3) n-Hexadecane	25
(4) n-Heptadecane	25

**Part # 51124    \$35/ 1 mL**

**ASTM  
D-5441-93****REFERENCE STANDARDS FOR  
MTBE IMPURITIES****MTBE Contaminant Mix  
High Concentration ASTM D5441***1 % w/w in MTBE*

- (1) tert-Amyl methyl ether
- (2) tert-Butanol
- (3) tert-Butyl ethyl ether
- (4) 4,4-Dimethyl-2-neopentyl-1-pentene
- (5) Methanol
- (6) 2-Methylbutane
- (7) 2-Methyl-2-butene
- (8) 2,2',4,6,6'-Pentamethyl-3-heptene
- (9) Pentane
- (10) cis-2-Pentene
- (11) trans-2-Pentene
- (12) 2,4,4-Trimethyl-1-pentene

**Part # 51055 \$35/ 1 mL****MTBE Contaminant Mix  
Low Concentration ASTM D5441***0.1 % w/w in MTBE*

- (1) tert-Amyl methyl ether
- (2) tert-Butanol
- (3) tert-Butyl ethyl ether
- (4) 4,4-Dimethyl-2-neopentyl-1-pentene
- (5) Methanol
- (6) 2-Methylbutane
- (7) 2-Methyl-2-butene
- (8) 2,2',4,6,6'-Pentamethyl-3-heptene
- (9) Pentane
- (10) cis-2-Pentene
- (11) trans-2-Pentene
- (12) 2,4,4-Trimethyl-1-pentene

**Part # 51056 \$35/ 1 mL****MTBE Resolution Test Mix  
ASTM D5441***1 % w/w in MTBE*

- (1) trans-2-Pentene
- (2) tert-Butanol
- (3) cis-2-Pentene

**Part # 51057 \$25/ 1 mL**

**ANALYSIS OF PETROLEUM WAXES  
BY GAS CHROMATOGRAPHY**

**ASTM  
D-5442**

**Petroleum Waxes Linearity Standard  
ASTM D-5442**

*1000 ug/mL in Cyclohexane*

(1)	n-Hexadecane	C16
(2)	n-Octadecane	C18
(3)	n-Eicosane	C20
(4)	n-Docosane	C22
(5)	n-Tetracosane	C24
(6)	n-Hexacosane	C26
(7)	n-Octacosane	C28
(8)	n-Triacontane	C30
(9)	n-Dotriacontane	C32
(10)	n-Hexatriacontane	C36
(11)	n-Tetracontane	C40
(12)	n-Tetratetracontane	C44

**Part # 51125 \$45/ 1 mL**

**Petroleum Waxes Internal Standard  
ASTM D-5442**

*0.5 Wt. % in Cyclohexane*

n-Hexadecane C16

**Part # 51126 \$25/ 1 mL**

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**ASTM  
D-5480**

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**MOTOR OIL VOLATILITY BY GAS  
CHROMATOGRAPHY**

**Engine Oil Volatility Standard  
ASTM D-5480**

*1000 ug/mL in Carbon disulfide*

- (1) n-Decane
- (2) n-Dodecane
- (3) n-Hexadecane
- (4) n-Octadecane
- (5) n-Tetracosane

**Part # 51128 \$35/ 1 mL**

*\* Can not Ship via Air*

**Aromatics Quantitative Internal Standard  
ASTM D-5580**

*in Isooctane*

2-Hexanone      10.0 Wt. %

**Part # 51127 \$30/ 1 mL**

**DETERMINATION OF BTEX, C9 AND  
HEAVIER AROMATICS, AND TOTAL  
AROMATICS IN FINISHED GASOLINE BY GAS  
CHROMATOGRAPHY**

**ASTM  
D-5580**

**Aromatics Quantitative Calibration Mixes  
ASTM D-5580**

<i>Analyte</i>	<i>Wt. %</i>	<i>Part#</i>	<i>Price</i>
Benzene	0.10	<b>51129</b>	<b>\$35/1 mL</b>
Toluene	15.0		
Ethylbenzene	0.50		
o-Xylene	1.00		
1,2,4-Trimethylbenzene (C9)	1.00		
Isooctane	82.40		
		<b>51130</b>	<b>\$35/1 mL</b>
Benzene	0.50	<b>51131</b>	<b>\$35/1 mL</b>
Toluene	10.0		
Ethylbenzene	1.00		
o-Xylene	2.50		
1,2,4-Trimethylbenzene (C9)	10.0		
Isooctane	76.0		
		<b>51132</b>	<b>\$35/1 mL</b>
Benzene	1.00	<b>51133</b>	<b>\$35/1 mL</b>
Toluene	5.00		
Ethylbenzene	2.50		
o-Xylene	10.0		
1,2,4-Trimethylbenzene (C9)	0.50		
Isooctane	81.00		
		<b>51132</b>	<b>\$35/1 mL</b>
Benzene	2.00	<b>51132</b>	<b>\$35/1 mL</b>
Toluene	2.50		
Ethylbenzene	5.00		
o-Xylene	5.00		
1,2,4-Trimethylbenzene (C9)	5.00		
Isooctane	80.50		
		<b>51133</b>	<b>\$35/1 mL</b>
Benzene	5.00	<b>51133</b>	<b>\$35/1 mL</b>
Toluene	1.00		
Ethylbenzene	10.00		
o-Xylene	0.50		
1,2,4-Trimethylbenzene (C9)	2.50		
Isooctane	81.00		

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**ASTM  
D-5769**

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**BENZENE, TOLUENE, & TOTAL  
AROMATICS IN FINISHED GASOLINE  
BY GC MSD****ASTM D 5769 INTERNAL STANDARD MIX***3 Components (no solvent) [varied Wt.]*

	Analyte	Mix Ratio
(1)	Benzene-d6	2 mL
(2)	Ethylbenzene-d10	2 mL
(3)	Naphthalene-d8	1 g

**Part # 51084 \$25/ 1 mL**

**BENZENE, TOLUENE, & TOTAL AROMATICS IN FINISHED GASOLINE BY GC MSD**

**ASTM D-5769**

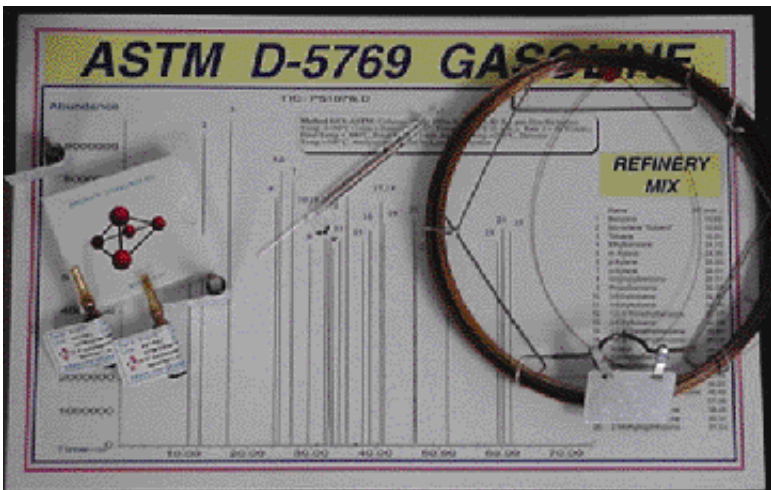
**ASTM D 5769 QC Mix & Internal Standard**

*16 Components (no solvent) [varied Wt. %]*

	Analyte	Wt. %
(1)	n-Hexane	12
(2)	n-Heptane	17
(3)	n-Octane	17
(4)	n-Decane	12
(5)	n-Dodecane	5
(6)	Isooctane	12
(7)	Benzene	1
(8)	Toluene	9
(9)	Ethylbenzene	3
(10)	m-Xylene	3
(11)	o-Xylene	3
(12)	1,2,4-Trimethylbenzene	3
(13)	1,2,4,5-Tetramethylbenzene	3

	Internal Standards	Mix Ratio
(IS -1)	Benzene-d6	2 mL
(IS -2)	Ethylbenzene-d10	2 mL
(IS -3)	Naphthalene-d8	1 g

**Part # 51082 \$35 / 1mL**





# BIOFUELS

## FATTY ACID METHYL ESTERS BLENDED WITH AUTOMOTIVE FUELS FOR USE IN DIESEL ENGINES

The use of Fatty Acid Methyl Esters (FAME) as an alternate source to automotive fuel in diesel engines is being investigated. FAME mixes produced from rapeseed oil are used as either a concentrate or are blended with diesel fuel as an extender. The European Standard prEN: 14214:2002 outlines the methods whereby the efficiency and stability of these blends are tested.

### Biodiesel Fuel

**Solutions are \$35/ 1mL in Methylene chloride or \$35/ 1mL Neat**

*Rapeseed oil is blended with #2 Diesel Fuel*

<u>Biodiesel</u>	<u>Blend %</u>	<u>Part#</u>	<u>Concentration</u>
B100	100%	51190	NEAT
B50	50%	51191	20 mg/mL
B20	20%	51192	20 mg/mL
B10	10%	51193	20 mg/mL
B5	5%	51194	20 mg/mL
B1	1%	51195	20 mg/mL
<b>KIT</b>	<b>6 X 1 mL</b>	<b>51196</b>	<b>\$195</b>

### Diesel Standard

*20 mg/mL in Methylene chloride*

#2 Fuel Oil Diesel

**Part # 51006    \$25/ 1 mL**

### Methanol

*20 mg/mL in Water*

**Part # 90620    \$25/ 1 mL**

### Glycerol Standard

*10 mg/mL in Water*

**Part # 93954    \$30/ 1 mL**

**CANADIAN COUNCIL OF THE  
MINISTERS OF THE ENVIRONMENT  
(CCME)**

**CANADA  
CCME**

**CCME F1  
SURROGATE STANDARD**

*1000 ug/mL in Methanol*

n-Undecane

**Part # 70965 \$22/ 1 mL**

**CCME F1  
RETENTION TIME MARKER**

*2000 ug/mL in Methanol*

- (1) n-Decane
- (2) n-Hexane
- (3) Toluene

**Part # 60033 \$25/ 1 mL**

**CCME  
PAH CALIBRATION MIX**

*2000 ug/mL in Methylene chloride*

- |                            |                            |
|----------------------------|----------------------------|
| (1) Benzo(a)anthracene     | (6) Fluoranthene           |
| (2) Benzo(a)pyrene         | (7) Indeno(1,2,3-cd)pyrene |
| (3) Benzo(b)fluoranthene   | (8) Napthalene             |
| (4) Benzo(k)fluoranthene   | (9) Phenanthrene           |
| (5) Dibenzo(a,h)anthracene | (10) Pyrene                |

**Part # 60034 \$35/ 1 mL**

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**CANADA**

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**CANADIAN DRINKING WATER  
CARBAMATE & PESTICIDE MIXES****CANADIAN DRINKING WATER  
CARBAMATES MIX***100 ug/mL in Methanol*

- |                |                |
|----------------|----------------|
| (1) Aldicarb   | (4) Carbofuran |
| (2) Bendiocarb | (5) Triallate  |
| (3) Carbaryl   |                |

**Part # 60038    \$30/ 1 mL****CANADIAN DRINKING WATER  
CHLORINATED PESTICIDES MIX***200 ug/mL in Hexane:Toluene [1:1]*

- |                 |                         |
|-----------------|-------------------------|
| (1) Aldrin      | (8) 4,4'-DDT            |
| (2) g-BHC       | (9) Dieldrin            |
| (3) a-Chlordane | (10) Heptachlor         |
| (4) g-Chlordane | (11) Heptachlor epoxide |
| (5) 2,4'-DDE    | (12) Methoxychlor       |
| (6) 4,4'-DDE    | (13) Oxychlordane       |
| (7) 2,4'-DDT    | (14) Trifluralin        |

**Part # 60039    \$35/ 1 mL****CANADIAN DRINKING WATER  
ORGANOPHOSPHORUS PESTICIDES MIX***1000 ug/mL in Ethyl acetate*

- |                               |                     |
|-------------------------------|---------------------|
| (1) Azinphos methyl (Guthion) | (5) Parathion ethyl |
| (2) Chlorpyrifos              | (6) Phorate         |
| (3) Diazinon                  | (7) Temephos        |
| (4) Dimethoate                | (8) Terbufos        |
| (5) Malathion                 |                     |

**Part # 60040    \$35/ 1 mL**

## CANADIAN DRINKING WATER VOLATILE & HERBICIDE MIXES

# CANADA

### CANADIAN DRINKING WATER VOLATILES MIX

*2000 ug/mL in Methanol*

- |                          |                         |
|--------------------------|-------------------------|
| (1) Benzene              | (11) 1,1-Dichloroethene |
| (2) Bromodichloromethane | (12) Ethylbenzene       |
| (3) Bromoform            | (13) Methylene chloride |
| (4) Carbon tetrachloride | (14) Tetrachloroethene  |
| (5) Chlorobenzene        | (15) Toluene            |
| (6) Chloroform           | (16) Trichloroethene    |
| (7) Dibromochloromethane | (17) m-Xylene           |
| (8) 1,2-Dichlorobenzene  | (18) o-Xylene           |
| (9) 1,4-Dichlorobenzene  | (19) p-Xylene           |
| (10) 1,2-Dichloroethane  |                         |

**Part # 60035 \$40/ 1 mL**

### CANADIAN DRINKING WATER TRIAZINE HERBICIDES MIX

*500 ug/mL in Acetone*

- |                 |                |
|-----------------|----------------|
| (1) Alachlor    | (5) Metribuzin |
| (2) Atrazine    | (6) Prometryne |
| (3) Cyanizine   | (7) Simazine   |
| (4) Metolachlor |                |

**Part # 60036 \$30/ 1 mL**

### CANADIAN DRINKING WATER PHENOXYACID HERBICIDES MIX

*100 ug/mL in MTBE*

- |                        |                                |
|------------------------|--------------------------------|
| (1) Bromoxynil         | (7) Pentachlorophenol          |
| (2) 2,4-D              | (8) Picloram                   |
| (3) Dicamba            | (9) 2,4,5-T                    |
| (4) 2,4-Dichlorophenol | (10) 2,3,4,6-Tetrachlorophenol |
| (5) Diclofop methyl    | (11) 2,4,6-Trichlorophenol     |
| (6) Dinoseb            |                                |

**Part # 60037 \$35/ 1 mL**

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**CANADA**

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**CANADIAN ATLANTIC PROVINCES  
RBCA EPH & VPH MIXES****RBCA EPH MIX***2000 ug/mL in Methanol*

- |                    |                     |
|--------------------|---------------------|
| (1) Acenaphthene   | (7) n-Dotriacontane |
| (2) Anthracene     | (8) n-Heneicosane   |
| (3) Benzo(a)pyrene | (9) n-Hexadecane    |
| (4) Chrysene       | (10) n-Octacosane   |
| (5) n-Decane       | (11) Naphthalene    |
| (6) n-Dodecane     |                     |

**Part # 60041    \$35/ 1 mL****RBCA EPH  
SURROGATE STANDARD***1000 ug/mL in Methylene chloride*

- (1) Dotriacontane
- (2) Isobutylbenzene

**Part # 60042    \$25/ 1 mL****RBCA VPH MIX***2000 ug/mL in Methanol*

- |                             |                             |
|-----------------------------|-----------------------------|
| (1) Benzene                 | (7) n-Octane                |
| (2) n-Decane                | (8) Toluene                 |
| (3) Ethylbenzene            | (9) 1,2,4-Trimethylbenzene  |
| (4) n-Heptane               | (10) 1,3,5-Trimethylbenzene |
| (5) n-Hexane                | (11) o-Xylene               |
| (6) 1-Methyl-3-ethylbenzene | (12) p-Xylene               |

**Part # 60043    \$35/ 1 mL****RBCA VPH  
SURROGATE STANDARD***1000 ug/mL in Methanol*

Isobutylbenzene

**Part # 71038    \$22/ 1 mL**

**MUNICIPAL & INDUSTRIAL  
STRATEGY FOR ABATEMENT  
(CANADA)**

**CANADA  
MISA**

**BASE/NEUTRALS EXTRACTABLES  
MIX #1**

*2000 ug/mL in Methylene chloride*

- |                            |                               |
|----------------------------|-------------------------------|
| (1) Acenaphthene           | (14) Fluoranthene             |
| (2) Acenaphthylene         | (15) Fluorene                 |
| (3) Anthracene             | (16) Indeno (1,2,3-cd) pyrene |
| (4) Benzo (b) fluoranthene | (17) Indole                   |
| (5) Benzo (g,h,i) perylene | (18) 1-Methylnaphthalene      |
| (6) Benzo (k) fluoranthene | (19) 2-Methylnaphthalene      |
| (7) Benzo(a)anthracene     | (20) Naphthalene              |
| (8) Benzo(a)pyrene         | (21) 5-Nitroacenaphthene      |
| (9) Camphene               | (22) Perylene                 |
| (10) 1-Chloronaphthalene   | (23) Phenanthrene             |
| (11) 2-Chloronaphthalene   | (24) Pyrene                   |
| (12) Chrysene              | (25) Biphenyl                 |
| (13) Dibenz(a,h)anthracene |                               |

**Part # 60026      \$70/ 1 mL**

**MIX #2**

*2000 ug/mL in Methylene chloride*

- (1) Benzyl butyl phthalate
- (2) Di-n-butyl phthalate
- (3) Bis(2-ethylhexyl) phthalate
- (4) Di-n-octyl phthalate

**Part # 60027      \$25/ 1 mL**

**MIX #3**

*2000 ug/mL in Methylene chloride*

- (1) 4-Bromophenylphenyl ether
- (2) Bis(2-chloroethyl) ether
- (3) Bis(2-chloroisopropyl) ether
- (4) 4-Chlorophenylphenyl ether
- (5) Diphenyl ether

**Part # 60028      \$25/ 1 mL**

**MIX #4**

*2000 ug/mL in Methylene chloride*

- (1) Bis(2-chloroethoxy) methane
- (2) 2,6-Dinitrotoluene
- (3) 2,4-Dinitrotoluene
- (4) Diphenylamine
- (5) N-Nitrosodi-n-propylamine
- (6) N-Nitrosodiphenylamine
- (7) Diethanolamine
- (8) N-Nitrosodimethylamine

**Part # 60029      \$30/ 1 mL**

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**CANADA**  
**MISA**

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**MUNICIPAL & INDUSTRIAL  
STRATEGY FOR ABATEMENT  
(CANADA)****ACID EXTRACTABLES***2000 ug/mL in Methylene chloride*

- |                                |                                |
|--------------------------------|--------------------------------|
| (1) 4-Chloro-3-methyl phenol   | (11) 4-Nitrophenol             |
| (2) 2-Chlorophenol             | (12) Pentachlorophenol         |
| (3) o-Cresol                   | (13) Phenol                    |
| (4) p-Cresol                   | (14) 2,3,4,6-Tetrachlorophenol |
| (5) m-Cresol                   | (15) 2,3,5,6-Tetrachlorophenol |
| (6) 2,4-Dichlorophenol         | (16) 2,4,5-Trichlorophenol     |
| (7) 2,6-Dichlorophenol         | (17) 2,4,6-Trichlorophenol     |
| (8) 2,4-Dimethylphenol         | (18) 2,3,5-Trichlorophenol     |
| (9) 4,6-Dinitro-2-methylphenol | (19) 2,3,4-Trichlorophenol     |
| (10) 2,4-Dinitrophenol         | (20) 2,3,4,5-Tetrachlorophenol |

**Part # 60030     \$65/ 1 mL****NEUTRAL CHLORINATED EXTRACTABLES***2000 ug/mL in Methylene chloride*

- (1) Hexachlorobenzene
- (2) Hexachlorobutadiene
- (3) Hexachlorocyclopentadiene
- (4) Hexachloroethane
- (5) Pentachlorobenzene
- (6) Octachlorostyrene
- (7) 1,2,4,5-Tetrachlorobenzene
- (8) 1,2,3,5-Tetrachlorobenzene
- (9) 1,2,3,4-Tetrachlorobenzene
- (10) 1,2,3-Trichlorobenzene
- (11) 1,2,4-Trichlorobenzene
- (12) 2,4,5-Trichlorotoluene

**Part # 70006     \$35/ 1 mL**

**MUNICIPAL & INDUSTRIAL  
STRATEGY FOR ABATEMENT  
(CANADA)**

**CANADA  
MISA**

**HALOGENATED VOLATILES  
MIX #1 LIQUIDS**

*200 ug/mL in Methanol*

- |                          |                                |
|--------------------------|--------------------------------|
| (1) Bromoform            | (12) trans-1,2-Dichloroethene  |
| (2) Carbon tetrachloride | (13) 1,1-Dichloroethene        |
| (3) Chlorobenzene        | (14) 1,2-Dichloropropane       |
| (4) Chloroform           | (15) cis-1,3-Dichloropropene   |
| (5) Dibromochloromethane | (16) trans-1,3-Dichloropropene |
| (6) 1,2-Dibromoethane    | (17) Methylene chloride        |
| (7) 1,2-Dichlorobenzene  | (18) 1,1,2,2-Tetrachloroethane |
| (8) 1,4-Dichlorobenzene  | (19) Tetrachloroethene         |
| (9) 1,3-Dichlorobenzene  | (20) 1,1,2-Trichloroethane     |
| (10) 1,2-Dichloroethane  | (21) Trichloroethene           |
| (11) 1,1-Dichloroethane  | (22) Bromodichloromethane      |

**Part # 60031      \$30/ 1 mL**

**HALOGENATED VOLATILES  
MIX #2- GASES**

*200 ug/mL in Methanol*

- (1) Bromomethane
- (2) Chloromethane
- (3) Trichlorofluoromethane
- (4) Vinyl chloride

**Part # 70008      \$25/ 1 mL**

**GASES**

*200 ug/mL in Methanol*

- (1) Bromomethane
- (2) Chloroethane
- (3) Chloromethane
- (4) Dichlorodifluoromethane
- (5) Trichlorofluoromethane
- (6) Vinyl chloride

**Part # 30002      \$25/ 1 mL**

**ACROLEIN &  
ACRYLONITRILE**

*1000 ug/mL in Water*

- (1) Acrolein
- (2) Acrylonitrile

**Part # 19099      \$30/ 1 mL**



**CLP**  
**VOLATILES**  
 OLM 04.2/04.3

**CONTRACT LABORATORY**  
**PROGRAM MIXES**  
**JULY '91/MAY 99**  
**STATEMENT OF WORK**

**GC/MS ANALYSIS OF VOLATILES**  
**TARGET COMPOUND LIST MIX #1**

*in Methanol:Water [9:1]*

- |                          |                               |                               |
|--------------------------|-------------------------------|-------------------------------|
| 1) Acetone               | 12) 1,1-Dichloroethane        | 23) Styrene                   |
| 2) Benzene               | 13) trans-1,2-Dichloroethene  | 24) 1,1,2,2-Tetrachloroethane |
| 3) Bromodichloromethane  | 14) cis-1,2-Dichloroethene    | 25) Tetrachloroethene         |
| 4) Bromoform             | 15) 1,1-Dichloroethene        | 26) Toluene                   |
| 5) 2-Butanone            | 16) Dichloromethane           | 27) 1,1,1-Trichloroethane     |
| 6) Carbon disulphide     | 17) 1,2-Dichloropropane       | 28) 1,1,2-Trichloroethane     |
| 7) Carbon tetrachloride  | 18) cis-1,3-Dichloropropene   | 29) Trichloroethene           |
| 8) Chlorobenzene         | 19) trans-1,3-Dichloropropene | 30) m-Xylene                  |
| 9) Chloroform            | 20) Ethylbenzene              | 31) o-Xylene                  |
| 10) Dibromochloromethane | 21) 2-Hexanone                | 32) p-Xylene                  |
| 11) 1,2-Dichloroethane   | 22) 4-Methyl-2-pentanone      |                               |

**Part # 21004 @ 200 ug/mL. \$35/ 1 mL**

**Part # 21014 @ 2000 ug/mL. \$40/ 1 mL**

**OLM 04.2 ADDITIONAL ANALYTES - MIX #2**

*in Methanol*

- |                                    |   |
|------------------------------------|---|
| (1) 1,1,2-Trichlorotrifluoroethane | (7) 1,2-Dichlorobenzene                 |
| (2) Methyl t-butyl ether (MTBE)    | (8) 1,3-Dichlorobenzene                 |
| (3) Cyclohexane                    | (9) 1,4-Dichlorobenzene                 |
| (4) Methylcyclohexane              | (10) 1,2-Dibromo-3-chloropropane (DBCP) |
| (5) Isopropylbenzene               | (11) 1,2,4-Trichlorobenzene             |
| (6) Methyl Acetate                 | (12) 1,2-Dibromoethane                  |

**Part # 92251 200 ug/mL. \$30/ 1 mL**

**Part # 92750 2000 ug/mL. \$35/ 1 mL**

**OLM 04.3 ADDITIONAL ANALYTES - MIX #3**

*in Methanol*

- |                            |
|----------------------------|
| (1) Bromochloromethane     |
| (2) 1,2,3-Trichlorobenzene |
| (3) 1,4-Dioxane            |

**Part # 20327 200 ug/mL. \$25/ 1 mL**

**Part # 21327 2000 ug/mL. \$30/ 1 mL**

**CONTRACT LABORATORY  
PROGRAM MIXES  
MAY 99 STATEMENT OF WORK**

**CLP  
VOLATILES  
OLM 04.2/04.3**

**TARGET COMPOUND LIST - GASES**

*in Methanol*

- |                  |                    |
|------------------|--------------------|
| (1) Bromomethane | (3) Chloromethane  |
| (2) Chloroethane | (4) Vinyl chloride |

**Part # 20008 @ 200 ug/mL. \$25/ 1 mL**  
**Part # 21008 @ 2000 ug/mL. \$30/ 1 mL**  
**Part # 20028 @ 1000 ug/mL. \$25/ 1 mL**

**VINYL ACETATE**

*20 mg/mL in Water*

**Part # 82472 \$30/ 1 mL**

**OLM 04.2 GASES**

*in Methanol*

- |                   |                             |
|-------------------|-----------------------------|
| (1) Bromomethane  | (4) Dichlorodifluoromethane |
| (2) Chloroethane  | (5) Trichlorofluoromethane  |
| (3) Chloromethane | (6) Vinyl chloride          |

**Part # 30002 200 ug/mL. \$25/ 1 mL**  
**Part # 30058 2000 ug/mL. \$25/ 1 mL**

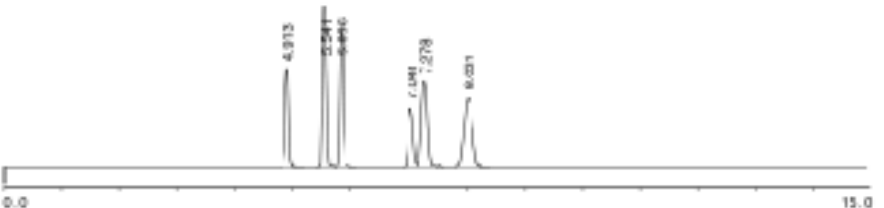
Date: Fri, Jul 25, 2002 4:45 PM  
Data: P30002 L072502-M-015

Sample: Absolute Standards, Inc. QA/QC Analysis by PID/ELCD  
P30002 L072502-M (200ug/mL in MeOH)  
0.5uL standard injection, Range=1  
LMA Method 002.2 - Volatile Gases Mix #1  
6Components

Processing File:  
Method: GC1M9  
Sampling Int: 0.1 Seconds  
Unit:

Method: GC1M9. Detectors: PID (Range=1)/ELCD (Nitrogen mode). Column: Vocol (105m X 0.53mm ID X 3.0 µm film thickness). Flow rates: Helium (carrier) = 10 mL/min., Helium (make-up) = 20 mL/min., Hydrogen (reactor) = 100 mL/min.. Oven Profile: Temp. 1 = 35°C (Time 1 = 9 min.), Temp. 2 = 200°C (Time 2 = 1 min.). Rate = 33°C/min., Injector Temp. = 200°C, PID Temp. = 200°C, ELCD Temp. = 975°C. Analyst: Candice Warren.

- 1 Dichlorodifluoromethane
- 2 Chloromethane
- 3 Vinyl chloride
- 4 Bromomethane
- 5 Chloroethane
- 6 Trichlorofluoromethane



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**CLP**  
**VOLATILES**  
OLM 04.2/04.3

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**CONTRACT LABORATORY**  
**PROGRAM MIXES**  
**JULY '91/MAY 99**  
**STATEMENT OF WORK****PURGEABLE**  
**INTERNAL STANDARD***2500 ug/mL in Methanol*

- (1) Bromochloromethane
- (2) Chlorobenzene-d<sub>5</sub>
- (3) 1,4-Difluorobenzene

**Part # 20009     \$25/ 1 mL****SYSTEM MONITORING**  
**COMPOUNDS**  
**SPIKING SOLUTION***2500 ug/mL in Methanol*

- (1) 4-Bromofluorobenzene
- (2) 1,2-Dichloroethane-d<sub>4</sub>
- (3) Toluene-d<sub>8</sub>

**Part # 20010     \$25/ 1 mL****INSTRUMENT**  
**PERFORMANCE CHECK**  
**SOLUTION***2500 ug/mL in Methanol*

4-Bromofluorobenzene

**Part # 19167     \$25/ 1 mL****VOLATILE**  
**MATRIX SPIKING**  
**SOLUTION***2500 ug/mL in Methanol*

- (1) 1,1-Dichloroethene
- (2) Trichloroethene
- (3) Chlorobenzene
- (4) Benzene
- (5) Toluene

**Part # 19066     \$25/ 1 mL****DEUTERATED**  
**MONITORING COMPOUND***1000 ug/mL in Methanol*1,4-Dioxane-d<sub>8</sub>**Part # 71882     \$22/ 1 mL****HEXADECANE EXTRACTION VOLATILES****MIX #1***2000 ug/mL in Methanol*

- (1) Benzene
- (2) Toluene
- (3) Ethyl benzene
- (4) o-Xylene
- (5) m-Xylene
- (6) p-Xylene

**Part # 20001     \$25/ 1 mL****MIX #2***2000 ug/mL in Methanol*

- (1) Nonane
- (2) Dodecane

**Part # 19202     \$25/ 1 mL**

**CONTRACT LABORATORY  
PROGRAM MIXES  
LOW CONCENTRATION  
SOW 10/92 / 12/00**

**CLP  
VOLATILES  
OLC 03.2**

**MIX #1**

*2000 ug/mL in  
Methanol:Water [9:1]*

- (1) Acetone
- (2) 4-Methyl-2-pentanone
- (3) 2-Butanone
- (4) 2-Hexanone

**Part # 82402 \$25/ 1 mL**

**MIX #2**

*2000 ug/mL in  
Methanol*

- (1) Carbon disulfide
- (2) Benzene
- (3) Ethylbenzene
- (4) Toluene
- (5) o-Xylene
- (6) p-Xylene
- (7) Vinyl acetate

**Part # 20043 \$25/ 1 mL**

**MIX #3**

*2000 ug/mL in  
Methanol*

- (1) 1,1-Dichloroethene
- (2) 1,1-Dichloroethane
- (3) Carbon tetrachloride
- (4) 1,2-Dichloropropane
- (5) Chlorobenzene
- (6) Methylene chloride
- (7) Chloroform
- (8) Trichloroethene
- (9) 1,1,2-Trichloroethane
- (10) m-Xylene

**Part # 20044 \$30/ 1 mL**

**MIX #4**

*2000 ug/mL in  
Methanol*

- (1) trans-1,2-Dichloroethene
- (2) cis-1,2-Dichloroethene
- (3) 1,1,1-Trichloroethane
- (4) 1,2-Dichloroethane
- (5) Bromodichloromethane
- (6) cis-1,3-Dichloropropene
- (7) trans-1,3-Dichloropropene
- (8) Tetrachloroethene
- (9) Dibromochloromethane
- (10) Styrene
- (11) Bromoform
- (12) 1,1,2,2-Tetrachloroethane

**Part # 20045 \$30/ 1 mL**

**MIX #5**

*2000 ug/mL in  
Methanol*

- (1) Bromochloromethane
- (2) 1,2-Dibromoethane
- (3) 1,2-Dichlorobenzene
- (4) 1,3-Dichlorobenzene
- (5) 1,4-Dichlorobenzene
- (6) 1,2-Dibromo-3-chloropropane

**Part # 20046 \$30/ 1 mL**

**MIX #6**

*2000 ug/mL in  
Methanol*

- (1) Chloromethane
- (2) Bromomethane
- (3) Vinyl chloride
- (4) Chloroethane

**Part # 21008 \$30/ 1 mL**

**LAB CONTROL MIX #1**

*2500 ug/mL in Methanol*

- |                               |                            |
|-------------------------------|----------------------------|
| (1) Benzene                   | (7) 1,4-Dichlorobenzene    |
| (2) Bromoform                 | (8) 1,2-Dichloroethane     |
| (3) Carbon tetrachloride      | (9) 1,2-Dichloropropane    |
| (4) cis-1,3-Dichloropropene   | (10) Tetrachloroethene     |
| (5) trans-1,3-Dichloropropene | (11) 1,1,2-Trichloroethane |
| (6) 1,2-Dibromoethane         | (12) Trichloroethene       |

**Part # 20047 \$35/ 1 mL**

**LAB CONTROL****MIX #2**

*5000 ug/mL in Methanol*

Vinyl chloride

**Part # 19246 \$25/ 1 mL**

**INTERNAL STANDARD**

*2500 ug/mL in Methanol*

- (1) 1,4-Dichlorobenzene-d4
- (2) 1,4-Difluorobenzene
- (3) Chlorobenzene-d5

**Part # 20048 \$25/ 1 mL**

**CLP**  
**VOLATILES**  
 OLC 03.2

**CONTRACT LABORATORY**  
**PROGRAM MIXES**  
**DEC. 00 STATEMENT OF WORK**

**OLC 03.2 ADDITIONAL ANALYTES - VOLATILES**

*200 ug/ml in Methanol*

- (1) 1,1,2-Trichlorotrifluoroethane
- (2) Methyl t-butyl ether (MTBE)
- (3) Cyclohexane
- (4) Methylcyclohexane
- (5) Isopropylbenzene
- (6) 1,2,4-Trichlorobenzene
- (7) 1,2,3-Trichlorobenzene

**Part # 19252 \$30/ 1 mL**

**GASES**

*in Methanol*

- |                   |                             |
|-------------------|-----------------------------|
| (1) Bromomethane  | (4) Dichlorodifluoromethane |
| (2) Chloroethane  | (5) Trichlorofluoromethane  |
| (3) Chloromethane | (6) Vinyl chloride          |

**Part # 30002 200 ug/mL. \$25/ 1 mL**

**Part # 30058 2000 ug/mL. \$25/ 1 mL**

**METHYL ACETATE**

*1000 ug/mL in Methanol*

**Part # 71031 \$22/ 1 mL**

**Deuterated Monitoring Compounds**

(1) Vinyl chloride-d <sub>3</sub>	72044	\$35	1000	Methanol
(2) Chloroethane-d <sub>5</sub>	72045	\$22	1000	Methanol
(3) 1,1-Dichloroethene-d <sub>2</sub>	72047	\$50	1000	Methanol
(4) 1,2-Dichloroethane-d <sub>4</sub>	70137	\$22	1000	Methanol
(5) 1,2-Dichloropropane-d <sub>6</sub>	72051	\$40	1000	Methanol
(6) cis / trans-1,3-Dichloropropene-d <sub>4</sub>	72052	\$50	1000	Methanol
(7) Benzene-d <sub>6</sub>	70026	\$22	1000	Methanol
(8) 1,1,2,2-Tetrachloroethane-d <sub>2</sub>	72053	\$22	1000	Methanol
(9) Toluene-d <sub>8</sub>	70282	\$22	1000	Methanol
(10) 1,4-Dioxane-d <sub>8</sub>	71882	\$22	1000	Methanol

**CONTRACT LABORATORY  
PROGRAM MIXES  
QUICK TURNAROUND METHOD**

**CLP  
VOLATILES**

**CALIBRATION MIX #1**

*in Methanol*

- (1) Benzene
- (2) Bromodichloromethane
- (3) 4-Bromofluorobenzene
- (4) Bromoform
- (5) Carbon tetrachloride
- (6) Chloroform
- (7) Chlorobenzene
- (8) 1,1-Dichloroethane
- (9) 1,2-Dichloroethane
- (10) 1,1-Dichloroethene
- (11) cis-1,2-Dichloroethene
- (12) trans-1,2-Dichloroethene
- (13) Ethylbenzene
- (14) 1,1,2,2-Tetrachloroethane
- (15) Tetrachloroethene
- (16) Toluene
- (17) 1,1,1-Trichloroethane
- (18) Trichloroethene
- (19) o-Xylene
- (20) p-Xylene

**Part # 20149 200 ug/mL. \$25/ 1 mL**

**Part # 20049 2000 ug/mL. \$30/ 1 mL**

**CALIBRATION MIX #2**

*5000 ug/mL in Methanol*

Vinyl chloride

**Part # 19246 \$25/ 1 mL**

**SYSTEM MONITORING COMPOUND**

*in Methanol*

4-Bromofluorobenzene

**Part # 19167 2500 ug/mL. \$25/ 1 mL**

**Part # 19367 25000 ug/mL. \$25/ 1 mL**

**CLP**SEMI-VOLATILES  
OLM 04.2/04.3**CONTRACT LABORATORY  
PROGRAM MIXES  
JULY '91 / MAY 99  
STATEMENT OF WORK****TARGET COMPOUND LIST MIXES****BASE NEUTRALS #1***2000 ug/mL in Methylene chloride*

- (1) Bis(2-chloroethoxy) methane
- (2) Bis(2-chloroethyl) ether
- (3) Bis(2-ethylhexyl) phthalate
- (4) Bis(2-chloroisopropyl) ether
- (5) 4-Bromophenylphenyl ether
- (6) Butyl benzyl phthalate
- (7) 4-Chlorophenylphenyl ether
- (8) Diethyl phthalate
- (9) Dimethyl phthalate
- (10) Di-n-butyl phthalate
- (11) Di-n-octyl phthalate
- (12) N-Nitrosodimethylamine
- (13) N-Nitrosodi-n-propylamine
- (14) N-Nitrosodiphenylamine

**Part # 10001     \$45/ 1 mL****BASE NEUTRALS #2***2000 ug/mL in Methylene chloride*

- (1) Azobenzene
- (2) 2-Chloronaphthalene
- (3) 1,2-Dichlorobenzene
- (4) 1,4-Dichlorobenzene
- (5) 1,3-Dichlorobenzene
- (6) 2,6-Dinitrotoluene
- (7) 2,4-Dinitrotoluene
- (8) Hexachlorobenzene
- (9) Hexachlorobutadiene
- (10) Hexachlorocyclopentadiene
- (11) Hexachloroethane
- (12) Isophorone
- (13) Nitrobenzene
- (14) 1,2,4-Trichlorobenzene

**Part # 10002     \$45/ 1 mL****TOXIC SUBSTANCES #1***2000 ug/mL in Methylene chloride*

- (1) Benzoic Acid
- (2) 2-Methylphenol
- (3) 4-Methylphenol
- (4) 2,4,5-Trichlorophenol

**Part # 10004     \$30/ 1 mL****TOXIC SUBSTANCES #2***2000 ug/mL in Methylene chloride*

- (1) Aniline
- (2) Benzyl alcohol
- (3) 4-Chloroaniline
- (4) Dibenzofuran
- (5) 2-Methylnaphthalene
- (6) 2-Nitroaniline
- (7) 3-Nitroaniline
- (8) 4-Nitroaniline

**Part # 10005     \$30/ 1 mL****BENZIDINES***2000 ug/mL in Methanol*

- (1) Benzidine
- (2) 3,3'-Dichlorobenzidine

**Part # 10006     \$25/ 1 mL****OLM 04.3****ADDITIONAL ANALYTE***1000 ug/mL in Methanol*

1,2,4,5-Tetrachlorobenzene

**Part # 70274     \$22/ 1 mL**

**CONTRACT LABORATORY  
PROGRAM MIXES  
JULY '91 / MAY 99  
STATEMENT OF WORK**

**CLP**  
**SEMI-VOLATILES**  
**OLM 04.2/04.3**

**POLYNUCLEAR AROMATIC HYDROCARBONS**

*2000 ug/mL in Methylene chloride*

- |                          |                             |
|--------------------------|-----------------------------|
| (1) Acenaphthene         | (10) Chrysene               |
| (2) Acenaphthylene       | (11) Dibenzo(a,h)anthracene |
| (3) Anthracene           | (12) Fluoranthene           |
| (4) Benzo(a)anthracene   | (13) Fluorene               |
| (5) Benzo(a)pyrene       | (14) Indeno(1,2,3-cd)pyrene |
| (6) Benzo(b)fluoranthene | (15) Naphthalene            |
| (7) Benzo(k)fluoranthene | (16) Phenanthrene           |
| (8) Benzo(g,h,i)perylene | (17) Pyrene                 |
| (9) Carbazole            |                             |

**Part # 10007** **\$65/ 1 mL**

**Part # 10017 "Without Carbazole"** **\$65/ 1 mL**

**CLP - SEMI-VOLATILE ADDITIONAL COMPOUNDS MIX**

*2000 ug/mL in Methylene chloride*

- (1) Aniline
- (2) Benzyl alcohol
- (3) Carbazole
- (4) 4-Chloroaniline
- (5) Dibenzofuran
- (6) 2-Methylnaphthalene
- (7) 2-Nitroaniline
- (8) 3-Nitroaniline
- (9) 4-Nitroaniline
- (10) Pyridine

**Part # 91760** **\$30/ 1 mL**

**Use OLM 04.2  
Calibration Mixes for  
OLC 03.2  
SOW Analysis**



**CLP**SEMI-VOLATILES  
OLM 04.2/04.3**CONTRACT LABORATORY  
PROGRAM MIXES  
JULY '91 / MAY 99  
STATEMENT OF WORK****CLP - SEMI-VOLATILE BASE/NEUTRAL MIX***2000 ug/mL in Methylene chloride*

- |                                   |                                  |
|-----------------------------------|----------------------------------|
| (1) Acenaphthene                  | (23) Diethyl phthalate           |
| (2) Acenaphthylene                | (24) Dimethyl phthalate          |
| (3) Anthracene                    | (25) 2,4-Dinitrotoluene          |
| (4) Azobenzene                    | (26) 2,6-Dinitrotoluene          |
| (5) Benzo(a)anthracene            | (27) Di-n-octyl phthalate        |
| (6) Benzo(b)fluoranthene          | (28) bis(2-Ethylhexyl) phthalate |
| (7) Benzo(k)fluoranthene          | (29) Fluoranthene                |
| (8) Benzo(g,h,i)perylene          | (30) Fluorene                    |
| (9) Benzo(a)pyrene                | (31) Hexachlorobenzene           |
| (10) Benzyl butyl phthalate       | (32) Hexachlorobutadiene         |
| (11) 4-Bromophenyl phenyl ether   | (33) Hexachlorocyclopentadiene   |
| (12) bis(2-Chloroethoxy) methane  | (34) Hexachloroethane            |
| (13) bis(2-Chloroethyl) ether     | (35) Indeno(1,2,3-cd)pyrene      |
| (14) bis(2-Chloroisopropyl) ether | (36) Isophorone                  |
| (15) 2-Chloronaphthalene          | (37) Naphthalene                 |
| (16) 4-Chlorophenyl phenyl ether  | (38) Nitrobenzene                |
| (17) Chrysene                     | (39) N-Nitrosodimethylamine      |
| (18) Dibenzo(a,h)anthracene       | (40) N-Nitrosodiphenylamine      |
| (19) Di-n-butyl phthalate         | (41) N-Nitrosodi-n-propylamine   |
| (20) 1,2-Dichlorobenzene          | (42) Phenanthrene                |
| (21) 1,3-Dichlorobenzene          | (43) Pyrene                      |
| (22) 1,4-Dichlorobenzene          | (44) 1,2,4-Trichlorobenzene      |

**Part # 91759 \$125/ 1 mL****BENZIDINES***2000 ug/mL in Methanol*

- (1) Benzidine
- (2) 3,3'-Dichlorobenzidine

**Part # 10006 \$25/ 1 mL****OLM 04.3****ADDITIONAL ANALYTE***1000 ug/mL in Methanol*

1,2,4,5-Tetrachlorobenzene

**Part # 70274 \$22/ 1 mL**

**CONTRACT LABORATORY  
PROGRAM MIXES  
JULY '91 / MAY 99  
STATEMENT OF WORK**

**CLP**  
**SEMI-VOLATILES**  
**OLM 04.2/04.3**

## OLM 04.2 ADDITIONAL ANALYTES - SEMI-VOLATILES

*2000 ug/mL in Methylene chloride*

- (1) Benzaldehyde
- (2) Acetophenone
- (3) Caprolactam
- (4) Biphenyl
- (5) Atrazine

**Part # 19253**

**\$30/ 1 mL**

## CALIBRATION CHECK COMPOUNDS

### MIX #1

#### BASE/NEUTRAL FRACTION

*2000 ug/mL in Methylene chloride*

- (1) Acenaphthene
- (2) 1,4-Dichlorobenzene
- (3) Hexachlorobutadiene
- (4) N-Nitrosodiphenylamine
- (5) Di-n-octyl phthalate
- (6) Fluoranthene
- (7) Benzo(a)pyrene

**Part # 82507      \$30/ 1 mL**

### MIX #2

#### ACID FRACTION

*2000 ug/mL in Methylene chloride*

- (1) 4-Chloro-3-methylphenol
- (2) 2,4-Dichlorophenol
- (3) 2-Nitrophenol
- (4) Phenol
- (5) Pentachlorophenol
- (6) 2,4,6-Trichlorophenol

**Part # 82508      \$30/ 1 mL**

## SYSTEM PERFORMANCE CHECK COMPOUNDS

*2000 ug/mL in Methylene chloride*

- (1) N-Nitrosodi-n-propylamine
- (2) Hexachlorocyclopentadiene
- (3) 2,4-Dinitrophenol
- (4) 4-Nitrophenol

**Part # 82509      \$30/ 1 mL**

## GPC CALIBRATION MIXTURES

*in Methylene chloride (mg/mL)*

- |                                 |     |
|---------------------------------|-----|
| (1) Corn Oil                    | 250 |
| (2) Bis(2-ethylhexyl) phthalate | 10  |
| (3) Methoxychlor                | 2   |
| (4) Perylene                    | 0.2 |
| (5) Sulfur                      | 0.8 |

**Part # 20041      \$30/ 5 mL**

**Call Toll-Free 800-368-1131**

**CLP**  
SEMI-VOLATILES  
OLM 04.2/04.3

**CONTRACT LABORATORY  
PROGRAM MIXES  
JULY '91 / MAY 99  
STATEMENT OF WORK**

**PHENOLS**

*2000 ug/mL in Methylene chloride*

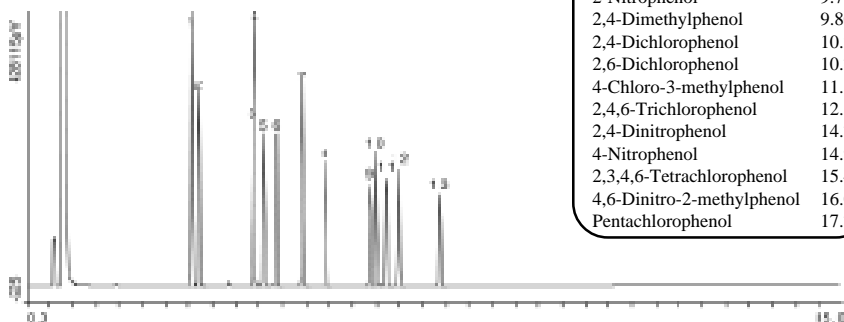
- |                                |                                |
|--------------------------------|--------------------------------|
| (1) 4-Chloro-3-methylphenol    | (8) 2-Nitrophenol              |
| (2) 2-Chlorophenol             | (9) 4-Nitrophenol              |
| (3) 2,4-Dichlorophenol         | (10) Pentachlorophenol         |
| (4) 2,6-Dichlorophenol         | (11) Phenol                    |
| (5) 2,4-Dimethylphenol         | (12) 2,4,6-Trichlorophenol     |
| (6) 2,4-Dinitrophenol          | (13) 2,3,4,6-Tetrachlorophenol |
| (7) 2-Methyl-4,6-dinitrophenol |                                |

**Part # 10018      \$40/ 1 mL**

LAB: 10018, 01/11/91, 01/11/91, 01/11/91  
Date: 1/11/91, 1/11/91, 1/11/91

Sample: Absolute Standards, Inc. GC/MS Analysis by FID  
1001818 Levels: 2000 ug/mL in methylene chloride  
Standard Injection: 0.1 µL, Range: 0  
CLP Semi-Volatiles Mix #8 - Phenols  
EPA Method 8270 GC/MS  
10 Components

Processing File: GC4-110-Process File  
Method: GC4-M1  
Sampling Into: 0.1 Seconds  
Date:



**Method** GC4-M1: Column: SPB-5 (30m X 0.53mm X 1.5 µm film thickness), Flow rates: Helium (carrier) = 10 mL/min., Helium (make-up) = 15 mL/min., Hydrogen (make-up) = 40 mL/min., air (make-up) = 200 mL/min., Temp 1 = 50°C (1 min.), Temp 2 = 300°C (9 min.), Rate = 10°C/min., Injector = 200°C, FID = 300°C. Analysis performed by Nicole Davis.

**Retention Time (min)**

Retention Time (min)	Retention Time (min)
Phenol	7.16
2-Chlorophenol	7.44
2-Nitrophenol	9.70
2,4-Dimethylphenol	9.80
2,4-Dichlorophenol	10.22
2,6-Dichlorophenol	10.73
4-Chloro-3-methylphenol	11.83
2,4,6-Trichlorophenol	12.83
2,4-Dinitrophenol	14.72
4-Nitrophenol	14.94
2,3,4,6-Tetrachlorophenol	15.41
4,6-Dinitro-2-methylphenol	16.04
Pentachlorophenol	17.72

**CONTRACT LABORATORY  
PROGRAM MIXES  
JULY '91 / MAY 99  
STATEMENT OF WORK**

**CLP**  
**SEMI-VOLATILES**  
**OLM 04.2/04.3**

**CLP - SEMI-VOLATILE ACID MIX**

*2000 ug/mL in Methylene chloride*

- (1) Benzoic acid
- (2) 4-Chloro-3-methylphenol
- (3) 2-Chlorophenol
- (4) o-Cresol (2-Methylphenol)
- (5) p-Cresol (4-Methylphenol)
- (6) 2,4-Dichlorophenol
- (7) 2,4-Dimethylphenol
- (8) 4,6-Dinitro-2-methylphenol
- (9) 2,4-Dinitrophenol
- (10) 2-Nitrophenol
- (11) 4-Nitrophenol
- (12) Pentachlorophenol
- (13) Phenol
- (14) 2,4,5-Trichlorophenol
- (15) 2,4,6-Trichlorophenol

**Part # 91761    \$50/ 1 mL**

**Use OLM 04.2  
Calibration Mixes for  
OLC 03.2  
SOW Analysis**

**Deuterated Monitoring Compounds**

(1)	2-Chlorophenol-d <sub>4</sub>	70084	\$22	1000	Methanol
(2)	Nitrobenzene-d <sub>5</sub>	70229	\$22	1000	Methanol
(3)	2-Nitrophenol-d <sub>4</sub>	72076	\$22	1000	Methanol
(4)	2,4-Dichlorophenol-d <sub>3</sub>	72077	\$35	1000	Methanol
(5)	Dimethylphthalate-d <sub>4</sub>	72060	\$40	1000	Methanol
(6)	Acenaphthylene-d <sub>8</sub>	72059	\$22	1000	Methanol
(7)	Fluorene-d <sub>10</sub>	71490	\$22	1000	MeCl <sub>2</sub>
(8)	2-Methyl-4,6-dinitrophenol-d <sub>2</sub>	72081	\$40	1000	Methanol
(9)	Anthracene-d <sub>10</sub>	70014	\$22	1000	MeCl <sub>2</sub>
(10)	Pyrene-d <sub>10</sub>	71390	\$22	1000	Methanol
(11)	Benzo(a)pyrene-d <sub>12</sub>	71739	\$50	1000	MeCl <sub>2</sub>

**CLP**SEMI-VOLATILES  
OLM 04.2/04.3**CONTRACT LABORATORY  
PROGRAM MIXES  
JULY '91 / MAY 99  
STATEMENT OF WORK****JULY '91 SOW SURROGATE STANDARDS****ACID SURROGATE  
STANDARD***2000 ug/mL in Methanol*

- (1) 2-Fluorophenol
- (2) Phenol-d<sub>6</sub>
- (3) 2,4,6-Tribromophenol
- (4) 2-Chlorophenol-d<sub>4</sub>

**Part # 20005 \$25/ 1 mL****BASE-NEUTRALS  
SURROGATE STANDARD***1000 ug/mL in Methylene chloride*

- (1) 2-Fluorobiphenyl
- (2) p-Terphenyl-d<sub>14</sub>
- (3) Nitrobenzene-d<sub>5</sub>
- (4) 1,2-Dichlorobenzene-d<sub>4</sub>

**Part # 20006 \$25/ 1 mL****APR '89 SOW SURROGATE STANDARD****ACID SURROGATE  
STANDARD***2000 ug/mL in Methanol*

- (1) 2-Fluorophenol
- (2) Phenol-d<sub>6</sub>
- (3) 2,4,6-Tribromophenol

**Part # 20015 \$25/ 1 mL****BASE-NEUTRALS  
SURROGATE STANDARD***1000 ug/mL in Methylene chloride*

- (1) 2-Fluorobiphenyl
- (2) p-Terphenyl-d<sub>14</sub>
- (3) Nitrobenzene-d<sub>5</sub>

**Part # 20016 \$25/ 1 mL****HIGH CONC. SURROGATE STANDARD****ACID SURROGATE  
STANDARD***10,000 ug/mL in Methanol*

- (1) 2-Fluorophenol
- (2) Phenol-d<sub>6</sub>
- (3) 2,4,6-Tribromophenol

**Part # 21015 \$60/ 1 mL****BASE-NEUTRALS  
SURROGATE STANDARD***5000 ug/mL in Methylene chloride*

- (1) 2-Fluorobiphenyl
- (2) p-Terphenyl-d<sub>14</sub>
- (3) Nitrobenzene-d<sub>5</sub>

**Part # 21016 \$60/ 1 mL****MATRIX STANDARD SPIKING SOLUTIONS****ACIDS***2000 ug/mL in Methanol*

- (1) Pentachlorophenol
- (2) Phenol
- (3) 2-Chlorophenol
- (4) 4-Chloro-3-methylphenol
- (5) 4-Nitrophenol

**Part # 19072 \$25/ 1 mL****BASES/NEUTRALS***1000 ug/mL in Methanol*

- (1) 1,2,4-Trichlorobenzene
- (2) Acenaphthene
- (3) 2,4-Dinitrotoluene
- (4) Pyrene
- (5) N-Nitroso-di-n-propylamine
- (6) 1,4-Dichlorobenzene

**Part # 19073 \$25/ 1 mL****INSTRUMENT PERFORMANCE CHECK SOLUTION***2500 ug/mL in Methylene chloride*

Decafluorotriphenylphosphine

**Part # 43126 \$25/ 1 mL**

**CONTRACT LABORATORY  
PROGRAM MIXES  
JULY '91 / MAY 99  
STATEMENT OF WORK**

**CLP**  
**SEMI-VOLATILES**  
**OLM 04.2/04.3**

**INTERNAL STANDARDS**

*4000 ug/mL in Methylene chloride*

- (1) Acenaphthene-d<sub>10</sub>
- (2) Chrysene-d<sub>12</sub>
- (3) 1,4-Dichlorobenzene-d<sub>4</sub>
- (4) Naphthalene-d<sub>8</sub>
- (5) Perylene-d<sub>12</sub>
- (6) Phenanthrene-d<sub>10</sub>

**Part # 10009     \$50/ 1 mL**

**GC CALIBRATION STANDARD**

*2500 ug/mL in Methylene chloride*

- (1) Phenol
- (2) Phenanthrene
- (3) Di-n-octyl phthalate

**Part # 19175     \$25/ 1 mL**

**GC/MS CALIBRATION STANDARDS**

*At stated concentrations in Methylene chloride*

COMPOUND	ug/mL	Part#	Price/ 1 mL
<b>Benzidine</b>	500	43024	\$22
<b>Pentachlorophenol</b>	250	43025	\$22
<b>DFTPP</b>	250	43026	\$22
<b>MIX #1</b>		43027	\$25
Benzidine	500		
DFTPP	250		
<b>MIX #2</b>		43028	\$25
Pentachlorophenol	250		
DFTPP	250		

**SET OF ALL 5 GC/MS MIXES ABOVE**  
**Part # 43029     \$50/ 5 x 1 mL**

**TUNING STANDARD**

*500 ug/mL in Methylene chloride*

- (1) Benzidine
- (3) 4,4'-DDT
- (2) Pentachlorophenol
- (4) DFTPP

**Part # 43030     \$25/ 1 mL**

**CLP**  
SEMI-VOLATILES  
OLC 03.2

**CONTRACT LABORATORY  
PROGRAM MIXES  
LOW CONCENTRATION  
SOW 10/92 / 12/00**

**PHENOL CALIBRATION MIXES**

*2000 ug/mL in Methylene chloride*

**MIX #1**

- (1) 2,4-Dinitrophenol
- (2) Pentachlorophenol
- (3) 4,6-Dinitro-2-methylphenol
- (4) 2,4,6-Tribromophenol
- (5) 4-Nitrophenol
- (6) 2,4,5-Trichlorophenol

**Part # 20055 \$25/ 1 mL**

**MIX #2**

- (1) 2-Chlorophenol
- (2) 4-Chloro-3-methylphenol
- (3) 2,4-Dichlorophenol
- (4) 2,4-Dimethylphenol
- (5) 2-Fluorophenol
- (6) 2-Methylphenol
- (7) 4-Methylphenol
- (8) 2-Nitrophenol
- (9) Phenol
- (10) Phenol-d<sub>6</sub>
- (11) 2,4,6-Trichlorophenol

**Part # 20056 \$30/ 1 mL**

**ANILINE  
CALIBRATION MIXES**

**MIX #1**

*2000 ug/mL in  
Methylene chloride*

- (1) 2-Nitroaniline
- (2) 3-Nitroaniline
- (3) 4-Nitroaniline

**Part # 20058 \$25/ 1 mL**

**MIX #2**

*2000 ug/mL in Methylene chloride  
4-Chloroaniline*

**Part # 20059 \$25/ 1 mL**

**INTERNAL STANDARDS**

*4000 ug/mL in  
Methylene chloride*

- (1) Acenaphthene-d<sub>10</sub>
- (2) Chrysene-d<sub>12</sub>
- (3) 1,4-Dichlorobenzene-d<sub>4</sub>
- (4) Naphthalene-d<sub>8</sub>
- (5) Perylene-d<sub>12</sub>
- (6) Phenanthrene-d<sub>10</sub>

**Part # 10009 \$50/ 1 mL**

**1,2,4,5-Tetrachlorobenzene**

*1000 ug/mL in Methanol*

**Part # 70274 \$22/ 1 mL**

**BASE/NEUTRAL  
CONTROL SAMPLE**

*1000\* ug/mL in Toluene*

- (1) Benzo(a)pyrene
- (2) Bis(2-chloroethyl) ether
- (3) 4-Chloroaniline \*(2000 ug/mL)
- (4) Diethyl phthalate
- (5) 2,4-Dinitrotoluene
- (6) Hexachlorobenzene
- (7) Hexachloroethane
- (8) Isophorone
- (9) Naphthalene
- (10) N-Nitrosodiphenylamine
- (11) N-Nitroso-di-n-propylamine
- (12) 1,2,4-Trichlorobenzene

**Part # 20066 \$30/ 1 mL**

**ACID CONTROL  
SAMPLE**

*2000 ug/mL in Methanol*

- (1) Phenol
- (2) 2-Chlorophenol
- (3) 2,4,6-Trichlorophenol

**Part # 20057 \$25/ 1 mL**

**ACID SURROGATE MIX**

*varied ug/mL in Methanol*

- |                       |      |
|-----------------------|------|
| Phenol-d <sub>6</sub> | 1000 |
| 2-Fluorophenol        | 1000 |
| 2,4,6-Tribromophenol  | 3000 |

**Part # 20065 \$25/ 1 mL**

**CONTRACT LABORATORY  
PROGRAM MIXES  
QUICK TURNAROUND METHOD**

**CLP  
SEMI-VOLATILES**

**PHENOLS CALIBRATION MIXES**

- |                             |                                |
|-----------------------------|--------------------------------|
| (1) 2-Bromophenol           | (9) 4,6-Dinitro-2-methylphenol |
| (2) 2-Chlorophenol          | (10) 2-Nitrophenol             |
| (3) 4-Chloro-3-methylphenol | (11) 4-Nitrophenol             |
| (4) 2,4-Dichlorophenol      | (12) Pentachlorophenol         |
| (5) 2,4-Dimethylphenol      | (13) Phenol                    |
| (6) 2,4-Dinitrophenol       | (14) 2,3,4,6-Tetrachlorophenol |
| (7) 2-Methylphenol          | (15) 2,4,6-Trichlorophenol     |
| (8) 3-Methylphenol          |                                |

**Part # 20050 @ 2500 ug/mL in Acetonitrile. \$30/ 1 mL**

**Part # 20051 @ 2500 ug/mL in Methylene chloride. \$30/ 1 mL**

**PAH CALIBRATION MIX**

*1000 ug/mL in Methylene chloride*

- |                          |                             |
|--------------------------|-----------------------------|
| (1) Acenaphthene         | (9) Chrysene                |
| (2) Acenaphthylene       | (10) Dibenzo(a,h)anthracene |
| (3) Anthracene           | (11) Fluoranthene           |
| (4) Benzo(a)anthracene   | (12) Fluorene               |
| (5) Benzo(a)pyrene       | (13) Indeno(1,2,3-cd)pyrene |
| (6) Benzo(b)fluoranthene | (14) Naphthalene            |
| (7) Benzo(g,h,i)perylene | (15) Phenanthrene           |
| (8) 2-Bromonaphthalene   | (16) Pyrene                 |

**Part # 20052 \$40/ 1 mL**

**SYSTEM MONITORING COMPOUNDS**

**SOLUTION #1**

*20,000 ug/mL in Methanol*

2-Bromophenol

**Part # 20053 \$25/ 1 mL**

**SOLUTION #2**

*20,000 ug/mL in Methanol*

2-Bromonaphthalene

**Part # 20054 \$25/ 1 mL**



**CLP**PESTICIDES & PCB'S  
OLM 04.2/04.3**CONTRACT LABORATORY  
PROGRAM MIXES  
MAY 99  
STATEMENT OF WORK****CLP Pesticides****MIXTURE "A" 5/99 3/90 SOW***Conc. (ug/mL) in Hexane:Toluene*

(1)	a-BHC	8
(2)	Heptachlor	8
(3)	g-BHC	8
(4)	Endosulfan I	8
(5)	Dieldrin	16
(6)	Endrin	16
(7)	4,4'-DDD	16
(8)	4,4'-DDT	16
(9)	Methoxychlor	80
(10)	Tetrachloro-m-xylene	8
(11)	Decachlorobiphenyl	16

**Part # 20226 \$30/ 1 mL****10X Concentration****Part # 20126 \$35/ 1 mL****MIXTURE "B" 5/99 3/90 SOW***Conc. (ug/mL) in Hexane:Toluene*

(1)	b-BHC	8
(2)	d-BHC	8
(3)	Aldrin	8
(4)	Heptachlor epoxide (isomer B)	8
(5)	a-Chlordane	8
(6)	g-Chlordane	8
(7)	4,4'-DDE	16
(8)	Endosulfan sulphate	16
(9)	Endrin aldehyde	16
(10)	Endrin ketone	16
(11)	Endosulfan II	16
(12)	Tetrachloro-m-xylene	8
(13)	Decachlorobiphenyl	16

**Part # 20219 \$30/ 1 mL****10X Concentration****Part # 20119 \$35/ 1 mL**

**CONTRACT LABORATORY  
PROGRAM MIXES  
MAY 99  
STATEMENT OF WORK**

**CLP**  
PESTICIDES & PCB'S  
OLM 04.2/04.3

**PERFORMANCE EVALUATION MIXTURES**

*At the stated concentrations (ug/mL)*

**5/99 3/90 SOW**

*in Hexane:Toluene*

(1)	a-BHC	1
(2)	b-BHC	1
(3)	g-BHC	1
(4)	4,4'-DDT	10
(5)	Endrin	5
(6)	Methoxychlor	25
(7)	Decachlorobiphenyl	2
(8)	Tetrachloro-m-xylene	2

**Part # 19160 \$25/ 1 mL**

**02/88 SOW**

*100 ug/mL in Hexane*

(1)	Aldrin	100
(2)	4,4'-DDT	100
(3)	Endrin	100
(4)	Dibutylchlorendate	100

**Part # 20038 \$25/ 1 mL**

**RESOLUTION CHECK MIXTURE**

*At the stated concentrations (ug/mL) in Hexane:Toluene*

(1)	g-Chlordane	1	(6)	Endrin ketone	2
(2)	Endosulfan I	1	(7)	Methoxychlor	10
(3)	4,4'-DDE	2	(8)	Tetrachloro-m-xylene	2
(4)	Dieldrin	2	(9)	Decachlorobiphenyl	2
(5)	Endosulfan sulphate	2			

**Part # 19161 \$25/ 1 mL**

**MATRIX SPIKE MIXTURES**

*At the stated concentrations (ug/mL) in Acetone*

**5/99 3/90 SOW**

(1)	g-BHC	50
(2)	4,4'-DDT	100
(3)	Endrin	100
(4)	Heptachlor	50
(5)	Aldrin	50
(6)	Dieldrin	100

**Part # 20020 \$25/ 1 mL**

**02/88 SOW**

(1)	g-BHC	200
(2)	4,4'-DDT	500
(3)	Endrin	500
(4)	Heptachlor	200
(5)	Aldrin	200
(6)	Dieldrin	500

**Part # 20039 \$25/ 1 mL**

**TOXAPHENE STANDARD**

*1000 ug/mL in Hexane*

**Part # 20021 \$22/ 1 mL**

**CHLORDANE STANDARD**

*1000 ug/mL in Hexane*

**Part # 20022 \$22/ 1 mL**

**CLP**

PESTICIDES & PCB'S  
OLM 04.2/04.3

**CONTRACT LABORATORY  
PROGRAM MIXES  
MAY 99  
STATEMENT OF WORK**

**AROCLOR MIXES @ 1000 ug/mL**

Aroclor	Part # Hexane	Part # Methanol	Price/ 1 mL
1016	90123	70015	\$22
1221	90124	70016	\$22
1232	90125	70017	\$22
1242	90126	70018	\$22
1248	90127	70019	\$22
1254	90128	70020	\$22
1260	90129	70021	\$22
1262	90165	70444	\$22
1268	90166	N/A	\$22

**SURROGATE  
SPIKE SOLUTION**

*200 ug/mL in Acetone*

- (1) Tetrachloro-m-xylene
- (2) Decachlorobiphenyl

**Part # 20023 \$25/ 1 mL**

**FLORISIL CARTRIDGE  
CHECK SOLUTION**

*1000 ug/mL in Acetone*

2,4,5-Trichlorophenol

**Part # 20024 \$22/ 1 mL**

**GPC CALIBRATION MIXTURES**

*At the stated concentrations (mg/mL) in Methylene chloride*

(1) Corn Oil	250	(1) Bis(2-ethylhexyl) phthalate	40
(2) Bis(2-ethylhexyl) phthalate	10	(2) Pentachlorophenol	40
(3) Methoxychlor	2		
(4) Perylene	0.2		
(5) Sulfur	0.8		

**Part # 90877 \$25/ 5 mL**

**Part # 20041 \$30/ 5 mL**

**LABORATORY CONTROL MIX**

*At stated concentrations (ug/mL) in Acetone*

(1) g-BHC	10
(2) Heptachlor epoxide (isomer B)	10
(3) g-Chlordane	10
(4) Dieldrin	20
(5) 4,4'-DDE	20
(6) Endosulfan sulfate	20
(7) Endrin	20

**Part # 20061 \$25/ 1 mL**

**CONTRACT LABORATORY  
PROGRAM MIXES  
QUICK TURNAROUND METHOD**

**CLP**  
**PESTICIDES &  
PCB'S**  
*Continued*

**CALIBRATION SOLUTION**

*25 ug/mL in Hexane/Toluene [1:1]*

- |                    |                         |
|--------------------|-------------------------|
| (1) Aldrin         | (12) Endosulfan sulfate |
| (2) a-BHC          | (13) Endrin             |
| (3) b-BHC          | (14) Endrin aldehyde    |
| (4) d-BHC          | (15) Endrin ketone      |
| (5) g-BHC          | (16) Heptachlor         |
| (6) 4,4'-DDD       | (17) Heptachlor epoxide |
| (7) 4,4'-DDE       | (isomer B)              |
| (8) 4,4'-DDT       | (18) Methoxychlor       |
| (9) Dieldrin       | (19) a-Chlordane        |
| (10) Endosulfan I  | (20) g-Chlordane        |
| (11) Endosulfan II | (21) Decachlorobiphenyl |

**Part # 20062 \$30/ 1 mL**

**TOXAPHENE MIX**

*1000 ug/mL in Hexane*

**Part # 20021 \$22/ 1 mL**

**AROCLOR 1016/1260 MIX**

*1000 ug/mL in Hexane*

**Part # 20064 \$25/ 1 mL**

**System Monitoring  
Solution #1**

*200 ug/mL in Acetone*

Decachlorobiphenyl

**Part # 80831 \$22/ 1 mL**

**System Monitoring  
Solution #2**

*125 ug/mL in Acetone*

Decachlorobiphenyl

**Part # 20063 \$22/ 1 mL**

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**FERMENTATION  
MIXES**


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**FERMENTATION MIXES  
FOR HPLC**
**Alcoholic Beverage/Fermentation Components**
*100 ug/mL in Water*

- |                       |                         |
|-----------------------|-------------------------|
| (1) Acetaldehyde      | (19) n-Butanol          |
| (2) Methanol          | (20) Ethyl isobutyrate  |
| (3) Propanal          | (21) 3-methyl-2-butanol |
| (4) Acetone           | (22) 3-Pentanol         |
| (5) Methyl acetate    | (23) 2-Pentanol         |
| (6) Ethanol           | (24) Isobutyl acetate   |
| (7) Isobutanal        | (25) Ethyl butyrate     |
| (8) Butanal           | (26) Butyl acetate      |
| (9) Isopropanol       | (27) 2-methyl-1-butanol |
| (10) Ethyl acetate    | (28) Acetic acid        |
| (11) n-Propanol       | (29) n-Pentanol         |
| (12) Isopentanal      | (30) Isoamyl acetate    |
| (13) sec-Butanol      | (31) Furfural           |
| (14) Pentanal         | (32) Propionic acid     |
| (15) Ethyl propionate | (33) Hexanol            |
| (16) Propyl acetate   | (34) Isobutyric acid    |
| (17) Isobutanol       | (35) Butyric acid       |
| (18) Acetal           |                         |

**Part # 67028    \$75/ 1 mL**

**HPLC FERMENTATION STANDARD**
*Varied ug/mL in Water*

- |                               |        |
|-------------------------------|--------|
| (1) Dextrin                   | 50000  |
| (2) D-Maltotriose             | 5000   |
| (3) D-(+)-Maltose monohydrate | 10000  |
| (4) alpha-D-Glucose           | 40000  |
| (5) beta-D-(-)-Fructose       | 5000   |
| (6) Succinic acid             | 5000   |
| (7) L-(+)-Lactic acid         | 3000   |
| (8) Glycerol                  | 10000  |
| (9) Acetic acid, Glacial      | 1000   |
| (10) Methanol                 | 11684  |
| (11) Ethanol                  | 117195 |

**Part # 93025    \$75/ 1 mL**

**FERMENTATION MIXES  
FOR HPLC****FERMENTATION  
MIXES****HPLC FERMENTATION STANDARD***Varied ug/mL in Water*

(1)	Maltooligosaccharide	2500
(2)	D-Maltotriose	5000
(3)	D-(+)-Maltose monohydrate	20000
(4)	alpha-D-Glucose	40000
(5)	beta-D-(-)-Fructose	5000
(6)	Succinic acid	5000
(7)	L-(+)-Lactic acid	10000
(8)	Glycerol	20000
(9)	Acetic acid, Glacial	10000
(10)	Methanol	7866
(11)	Ethanol	78900

**Part # 93042     \$75/ 1 mL****FERMENTATION ACIDS MIX***200 ug/mL in Water*

(1)	Acetic acid	200
(2)	Levulinic acid	200
(3)	Formic acid	200

**Part # 67033     \$30/ 1 mL****Ethanol***117 mg/mL in Water***Part # 93956     \$30/ 1 mL**

# FOODS & FLAVORS

## SUGAR MIXES

### Sugars

*100 ug/mL in Water*

(1) Glyceraldehyde	100
(2) Rhamnitol	100
(3) Fucitol	100
(4) Ribitol	100
(5) Arabinitol	100
(6) Xylitol	100
(7) Mannitol	100
(8) Galactitol	100
(9) Glucitol	100
(10) Inositol	100
(11) N-Acetyl-o-galactosamine	100
(12) N-Acetyl-o-glucosamine	100
(13) 2-Keto-3-deoxyoctonate	100

**Part # 67019 \$45/ 1 mL**

### Mono & Disaccharides

*100 ug/mL in Water*

(1) Fructose	100
(2) Glucose	100
(3) Sucrose	100
(4) Maltose	100
(5) Lactose	100

**Part # 67026 \$40/ 1 mL**

### Sugar Alcohols

*100 ug/mL in Water*

(1) L-Arabinose	100
(2) Xylitol	100
(3) D-Arabinitol	100
(4) D-Mannose	100
(5) L-Sorbose	100
(6) D-Glucose	100
(7) D-Glucitol	100
(8) Inositol	100

**Part # 67027 \$40/ 1 mL**

### Sugars- Carbohydrates

*100 ug/mL in Water*

(1) Rhamnitol	100
(2) Fucitol	100
(3) Ribitol	100
(4) Arabinitol	100
(5) Mannitol	100
(6) Galactitol	100
(7) Glucitol	100
(8) Inositol	100

**Part # 67020 \$45/ 1 mL**

### Complex Sugars

*Varied (ug/mL) in Water*

(1) L-Arabinose	100
(2) D-Ribose	100
(3) L-Ribose	100
(4) D-Xylose	100
(5) D-Fructose	100
(6) D-Galactose	100
(7) D-Glucose	100

**Part # 67025 \$40/ 1 mL**

### Sucrose Calibration Mix

*600 ug/mL in Water*

(1) Sucrose
(2) alpha-D-Glucose
(3) D-(-)-Fructose

**Part # 67034 \$30/ 1 mL**

## SUGAR MIXES

## FOODS & FLAVORS

### Carbohydrate Calibration Mix

*10,000 ug/mL in Water*

(1)	D-(+)-Cellobiose	10000
(2)	alpha-D-Glucose	10000
(3)	D-(+)-Xylose	10000
(4)	L-(+)-Arabinose	10000
(5)	D-(+)-Galactose	10000
(6)	D-(+)-Mannose	10000

**Part # 67035    \$40/ 1 mL**

### Carbohydrate Mix- Low Level

*1500 ug/mL in Water*

(1)	D-(+)-Cellobiose	1500
(2)	alpha-D-Glucose	1500
(3)	D-(+)-Xylose	1500
(4)	L-(+)-Arabinose	1500
(5)	D-(+)-Galactose	1500
(6)	D-(+)-Mannose	1500

**Part # 67036    \$35/ 1 mL**

### Carbohydrate Mix- High Level

*72,000 ug/mL in Water*

(1)	D-(+)-Cellobiose	72000
(2)	alpha-D-Glucose	72000
(3)	D-(+)-Xylose	72000
(4)	L-(+)-Arabinose	72000
(5)	D-(+)-Galactose	72000
(6)	D-(+)-Mannose	72000

**Part # 67037    \$45/ 1 mL**



# Forensic Science

## FUELS AND ACCELERANTS

All solutions are \$22/ 1 mL

### Motor Fuels and Oils

Part #	Compound	Solvent	Conc. ug/mL
71359	Unleaded Gasoline 93 Octane	in Methanol	1000
71358	Unleaded Gasoline 87 Octane	in Methanol	1000
71362	#1 Fuel Oil Diesel	in Methylene chloride	1000
71364	#2 Fuel Oil Diesel	in Methylene chloride	1000
71901	SAE 5-30W Motor Oil	in Methylene chloride	1000
71902	SAE 10-30W Motor Oil	in Methylene chloride	1000
71748	SAE 10-40W Motor Oil	in Methylene chloride	1000
71903	SAE 20-50W Motor Oil	in Methylene chloride	1000
71904	Motor Oil Composite Standard	in Methylene chloride	1000
71537	SAE 30 W motor oil	in Methylene chloride	1000
71538	SAE 40 W motor oil	in Methylene chloride	1000
71539	SAE 50 W motor oil	in Methylene chloride	1000

### Heating Fuels and Oils

71363	#2 Fuel Oil (Home Heating)	in Methylene chloride	1000
71367	Kerosene	in Methylene chloride	1000

### Aviation Fuels and Oils

71360	Jet A Fuel (Aviation)	in Methylene chloride	1000
71560	JP-4 Fuel	in Methylene chloride	1000
71561	JP-5 Fuel	in Methylene chloride	1000
71562	JP-8 Fuel	in Methylene chloride	1000
71563	JPTS	in Methylene chloride	1000
71593	Hydraulic oil	in Methylene chloride	1000

## FUELS AND ACCELERANTS (CONT.)

## Forensic Science

All solutions are \$22/ 1mL

### Household & Industrial Solvents

71519	Lacquer thinner	in Methylene chloride	1000
71518	Mineral spirits	in Methylene chloride	1000
71521	Naphtha	in Methylene chloride	1000
71522	Turpentine	in Methylene chloride	1000
71523	Stoddard	in Methylene chloride	1000
71520	Paint Thinner	in Methylene chloride	1000
70421	Urethane	in Methylene chloride	1000
70962	n-Hexane	in Methanol	1000
70307	o-Xylene	in Methanol	1000
70306	m-Xylene	in Methanol	1000
70308	p-Xylene	in Methanol	1000
70281	Toluene	in Methanol	1000
70025	Benzene	in Methanol	1000
71187	Iso-octane (2,2,4-Trimethylpentane)	in Methanol	1000

### ASTM E1618 Fire Debris Analysis

*200 ug/mL in Carbon disulfide*

- (1) n-Decane
- (2) n-Eicosane
- (3) o-Ethyltoluene
- (4) n-Hexane
- (5) n-Octane
- (6) Toluene
- (7) p-Xylene
- (8) n-Dodecane
- (9) m-Ethyltoluene
- (10) n-Hexadecane
- (11) n-Octadecane
- (12) n-Tetradecane
- (13) 1,2,4-Trimethylbenzene

**Part # 51095 \$30/ 1 mL**

*\* Can not Ship via Air*

### BTEX & MTBE

*200 ug/mL in Methanol*

- (1) Benzene
- (2) Toluene
- (3) Ethyl benzene
- (4) o-Xylene
- (5) m-Xylene
- (6) p-Xylene
- (7) MTBE (methyl t-butyl ether)

**Part # 90728 \$25/ 1 mL**

# Forensic Science

## ALCOHOL MIXES

### Alcohol Standard 1

*10 mg/mL in Water*

- (1) Methanol
- (2) Ethyl Alcohol (Ethanol)
- (3) n-Propanol
- (4) Isopropanol (2-Propanol)

**Part # 92271    \$30/ 1 mL**

### Alcohol Standard 2

*20 mg/mL in Water*

- (1) n-Butanol
- (2) Ethyl Alcohol (Ethanol)
- (3) Isobutanol
- (4) Isopropanol (2-Propanol)
- (5) Methanol
- (6) n-Propanol

**Part # 91701    \$30/ 1 mL**

### Alcohol Standard 3

*1 mg/mL in Water*

- (1) Amyl alcohol
- (2) Ethyl Alcohol (Ethanol)
- (3) Isopropanol (2-Propanol)
- (4) Methanol

**Part # 92482    \$30/ 1 mL**

### Alcohol Standard 4

*10 mg/mL in Water*

- (1) Methanol
- (2) Ethyl Alcohol (Ethanol)
- (3) Acetone
- (4) Isopropanol (2-Propanol)
- (5) 2-Butanone (MEK)
- (6) 4-Methyl-2-pentanone (MIBK)
- (7) Ethylene glycol

**Part # 92565    \$30/ 1 mL**

### Alcohol Standard 5

*10 mg/mL in Water*

- (1) Acetaldehyde
- (2) Methanol
- (3) Acetone
- (4) Ethanol
- (5) Isopropanol (2-Propanol)
- (6) n-Propanol (1-Propanol)

**Part # 82446    \$30/ 1 mL**

**GUN SHOT RESIDUE ANALYSIS /  
PAINTCHIP ANALYSIS**

**Forensic  
Science**

**Gun Shot Residue Analysis**

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Ba	50
Sb	2.0
Pb	50

**Part # 52326      \$125/ 100 mL**

**Part # 53326      \$325/ 500 mL**

**Single Element Kit**

**(3 x 100ml bottles @ 1000 ug/mL Each)**

Element	Matrix
Antimony    Sb	Sb <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub> tr.Tartaric acid
Barium        Ba	Ba(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Lead          Pb	Pb(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>

**Part # 52257      \$50/ 3 x 100 mL**

**Paint Chip Analysis**

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Ti	100
Pb	5

**Part # 52138      \$20/ 100 mL**

**Part # 53138      \$40/ 500 mL**

**Single Element Kit**

**(2 x 100ml bottles @ 1000 ug/mL Each)**

Element	Matrix
Titanium    Ti	(NH <sub>4</sub> ) <sub>2</sub> TiF <sub>6</sub> /HNO <sub>3</sub> /tr.HF
Lead         Pb	Pb(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>

**Part # 52258      \$35/ 2 x 100 mL**

# Forensic Science

## NITROAROMATICS AND NITRAMINES

### CALIBRATION STANDARD - MIX #1

*100 ug/mL in Acetonitrile*

- (1) 2-Amino-4,6-dinitrotoluene
- (2) 1,3-Dinitrobenzene
- (3) 2,4-Dinitrotoluene
- (4) HMX
- (5) Nitrobenzene
- (6) RDX
- (7) 1,3,5-Trinitrobenzene
- (8) 2,4,6-Trinitrotoluene (TNT)

**Part # 83525    \$45/ 1 mL**

### CALIBRATION STANDARD - MIX #2

*100 ug/mL In Acetonitrile*

- (1) 4-Amino-2,6-dinitrotoluene
- (2) 2,6-Dinitrotoluene
- (3) 2-Nitrotoluene
- (4) 3-Nitrotoluene
- (5) 4-Nitrotoluene
- (6) Tetryl

**Part # 83526    \$45/ 1 mL**

### Surrogate Standard

*1000 ug/mL In Methanol*

1,2-Dinitrobenzene

**Part # 70911    \$22/ 1 mL**

### Internal Standard

*1000 ug/mL In Methanol*

3,4-Dinitrotoluene

**Part # 71773    \$22/ 1 mL**

## NITROAROMATICS AND NITRAMINES

## Forensic Science

Part#	Compound	Concentration	Price/1 mL
79069	2-Amino-4,6-dinitrotoluene	1000 ug/mL in Acetonitrile	22.00
79070	4-Amino-2,6-dinitrotoluene	1000 ug/mL in Acetonitrile	22.00
79240	1,2,4-Butanetriol-1,4-dinitrate	100 ug/mL in Acetonitrile	50.00
79241	1,2,4-Butanetriol trinitrate	100 ug/mL in Acetonitrile	50.00
70911	1,2-Dinitrobenzene	1000 ug/mL in Methanol	22.00
79071	1,3-Dinitrobenzene	1000 ug/mL in Acetonitrile	20.00
79242	2,2'-Dinitrodiphenylamine	1000 ug/mL in Acetonitrile	50.00
79243	2,4'-Dinitrodiphenylamine	1000 ug/mL in Acetonitrile	50.00
79244	4,4'-Dinitrodiphenylamine	1000 ug/mL in Acetonitrile	50.00
82447	Dinitroethylene glycol	100 ug/mL in Acetonitrile	50.00
79245	1,2-Dinitroglycerin	1000 ug/mL in Acetonitrile	75.00
79246	1,3-Dinitroglycerin	1000 ug/mL in Acetonitrile	75.00
79072	2,4-Dinitrotoluene	1000 ug/mL in Acetonitrile	22.00
79073	2,6-Dinitrotoluene	1000 ug/mL in Acetonitrile	22.00
79247	3,4-Dinitrotoluene	1000 ug/mL in Acetonitrile	22.00
79074	HMX	1000 ug/mL in Acetonitrile	22.00
79248	1-Mononitroglycerin	1000 ug/mL in Acetonitrile	75.00
79249	2-Mononitroglycerin	1000 ug/mL in Acetonitrile	75.00
79075	Nitrobenzene	1000 ug/mL in Acetonitrile	22.00
79076	2-Nitrotoluene	1000 ug/mL in Acetonitrile	22.00
79077	3-Nitrotoluene	1000 ug/mL in Acetonitrile	22.00
79078	4-Nitrotoluene	1000 ug/mL in Acetonitrile	22.00
79250	Pentaerythritol tetranitrate (PETN)	1000 ug/mL in Acetonitrile	50.00
79251	1,2-Propanediol dinitrate	100 ug/mL in Acetonitrile	50.00
79079	RDX	1000 ug/mL in Acetonitrile	22.00
79080	Tetryl	1000 ug/mL in Acetonitrile	22.00
79081	1,3,5-Trinitrobenzene	1000 ug/mL in Acetonitrile	22.00
79252	Trinitroglycerin	1000 ug/mL in Acetonitrile	75.00
79082	2,4,6-Trinitrotoluene (TNT)	1000 ug/mL in Acetonitrile	22.00

# HSL

## EPA HAZARDOUS SUBSTANCE LIST

### VOLATILES

*2000 ug/mL in Methanol*

- (1) Acetone
- (2) 2-Butanone
- (3) Carbon Disulphide
- (4) 2-Hexanone
- (5) 4-Methyl-2-pentanone
- (6) Styrene
- (7) Vinyl acetate
- (8) o-Xylene

**Part # 60001     \$30/ 1 mL**

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**MINNESOTA DEPARTMENT OF  
HEALTH LIST OF VOLATILES  
(METHOD 465)**

**MINNESOTA  
HEALTH LIST  
VOLATILES**

**MIX #1 LIQUIDS - REVISION 'D'**

- |                                  |                                |                                     |
|----------------------------------|--------------------------------|-------------------------------------|
| (1) Acetone                      | (22) 1,3-Dichlorobenzene       | (43) Naphthalene                    |
| (2) Allyl chloride               | (23) 1,4-Dichlorobenzene       | (44) n-Propylbenzene                |
| (3) Benzene                      | (24) 1,1-Dichloroethane        | (45) Styrene                        |
| (4) Bromobenzene                 | (25) 1,2-Dichloroethane        | (46) 1,1,1,2-Tetrachloroethane      |
| (5) Bromochloromethane           | (26) 1,1-Dichloroethene        | (47) 1,1,2,2-Tetrachloroethane      |
| (6) Bromodichloromethane         | (27) cis-1,2-Dichloroethene    | (48) Tetrachloroethene              |
| (7) Bromoform                    | (28) trans-1,2-Dichloroethene  | (49) Tetrahydrofuran                |
| (8) n-Butyl benzene              | (29) 1,2-Dichloropropane       | (50) Toluene                        |
| (9) sec-Butyl benzene            | (30) 1,3-Dichloropropane       | (51) 1,2,3-Trichlorobenzene         |
| (10) tert-Butyl benzene          | (31) 1,1-Dichloropropene       | (52) 1,2,4-Trichlorobenzene         |
| (11) Carbon tetrachloride        | (32) cis-1,3-Dichloropropene   | (53) 1,1,1-Trichloroethane          |
| (12) Chlorobenzene               | (33) trans-1,3-Dichloropropene | (54) 1,1,2-Trichloroethane          |
| (13) Chlorodibromomethane        | (34) 2,2-Dichloropropane       | (55) Trichloroethene                |
| (14) Chloroform                  | (35) Ethylbenzene              | (56) 1,2,3-Trichloropropane         |
| (15) 2-Chlorotoluene             | (36) Ethyl ether               | (57) 1,1,2-Trichlorotrifluoroethane |
| (16) 4-Chlorotoluene             | (37) Hexachlorobutadiene       | (58) 1,2,4-Trimethylbenzene         |
| (17) Cumene (Isopropylbenzene)   | (38) p-Isopropyl toluene       | (59) 1,3,5-Trimethylbenzene         |
| (18) 1,2-Dibromo-3-chloropropane | (39) Methylene chloride        | (60) o-Xylene                       |
| (19) Dibromomethane              | (40) Methyl ethyl ketone       | (61) m-Xylene                       |
| (20) 1,2-Dibromoethane           | (41) Methyl isobutyl ketone    | (62) p-Xylene                       |
| (21) 1,2-Dichlorobenzene         | (42) Methyl tert-butyl ether   |                                     |

**Part # 60005 20 ug/mL in Methanol/Water [9:1]. \$40/ 1 mL**

**Part # 61005 200 ug/mL in Methanol/Water [9:1]. \$65/ 1 mL**

**MIX #2 GASES -REVISION 'D'**

*20 ug/mL in Methanol*

- (1) Bromomethane
- (2) Chloroethane
- (3) Chloromethane
- (4) Dichlorodifluoromethane
- (5) Dichlorofluoromethane
- (6) Trichlorofluoromethane
- (7) Vinyl chloride

**Part # 60006 \$25/ 1 mL**

**INTERNAL STANDARD**

*2000 ug/mL in Methanol*

1-Chloro-4-fluorobenzene

**Part # 60013 \$25/ 1 mL**

**SURROGATE STANDARD**

*200 ug/mL sin Methanol*

- (1) 1-Chloro-2-fluorobenzene
- (2) 1,1-Dichloropropane
- (3) Fluorobenzene

**Part # 60015 \$25/ 1 mL**



## MINNESOTA HEALTH LIST VOLATILES

## MINNESOTA DEPARTMENT OF HEALTH LIST OF VOLATILES (METHOD 465)

### HIGH CONCENTRATION MIXES FOR PACKED COLUMN ANALYSES

#### MIX #1

*200 ug/mL in Methanol*

- |                          |                              |                               |
|--------------------------|------------------------------|-------------------------------|
| (1) Allyl chloride       | (5) 1,2-Dichloroethane       | (9) 1,1,1,2-Tetrachloroethane |
| (2) Carbon tetrachloride | (6) 1,2-Dichloropropane      | (10) 1,1,2-Trichloroethane    |
| (3) Chlorobenzene        | (7) Dichloromethane          | (11) Trichloroethene          |
| (4) 1,4-Dichlorobenzene  | (8) trans-1,2-Dichloroethene | (12) m-Xylene                 |

**Part # 60008     \$30/ 1 mL**

#### MIX #2

*200 ug/mL in Methanol*

- |                          |                         |                                |
|--------------------------|-------------------------|--------------------------------|
| (1) Benzene              | (5) Dibromomethane      | (9) 1,1-Dichloropropene        |
| (2) Bromodichloromethane | (6) 1,2-Dibromoethane   | (10) Methyl ethyl ketone       |
| (3) Chloroform           | (7) 1,3-Dichlorobenzene | (11) 1,1,2,2-Tetrachloroethane |
| (4) Chlorodibromomethane | (8) 1,1-Dichloroethane  | (12) o-Xylene                  |

**Part # 60009     \$30/ 1 mL**

#### MIX #3

*200 ug/mL in Methanol/Water [9:1]*

- |                            |                               |                                     |
|----------------------------|-------------------------------|-------------------------------------|
| (1) Acetone                | (7) trans-1,3-Dichloropropene | (13) 1,1,1-Trichloroethane          |
| (2) Bromoform              | (8) Diethyl ether             | (14) 2,3-Dichloro-1-propene         |
| (3) 1,2-Dichlorobenzene    | (9) Ethylbenzene              | (15) 1,1,2,2-Tetrachloroethane      |
| (4) 1,1-Dichloroethene     | (10) Isopropylbenzene         | (16) Tetrahydrofuran                |
| (5) cis-1,2-Dichloroethene | (11) 4-Methyl-2-pentanone     | (17) 1,1,2-Trichlorotrifluoroethane |
| (6) cis-1,3Dichloropropene | (12) Toluene                  | (18) p-Xylene                       |

**Part # 60010     \$30/ 1 mL**

#### GASES -MIX #4

*200 ug/mL in Methanol*

- (1) Bromomethane
- (2) Chloroethane
- (3) Chloromethane
- (4) Dichlorodifluoromethane
- (5) Dichlorofluoromethane
- (6) Trichlorofluoromethane
- (7) Vinyl chloride

**Part # 60011     \$30/ 1 mL**

#### MIX #5

*200 ug/mL in Methanol/Water [9:1]*

- (1) Acetone
- (2) Allyl chloride
- (3) Ethyl ether
- (4) 2-Butanone
- (5) Dichlorofluoromethane
- (6) 4-Methyl-2-pentanone
- (7) Methyl-t-butyl ether
- (8) Tetrahydrofuran
- (9) 1,1,2-Trichlorotrifluoroethane

**Part # 60014     \$30/ 1 mL**

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# Organo- Tin

---

## ORGANO-TIN STANDARDS

### Butyltin Chloride Standard

*2000 ug/mL in Methylene chloride*

- (1) Butyltin trichloride
- (2) Dibutyltin dichloride
- (3) Tetra-butyltin
- (4) Tributyltin chloride

**Part # 82485    \$40/ 1 mL**

### Phenyltin Chloride Standard

*2000 ug/mL in Methylene chloride*

- (1) Diphenyltin dichloride
- (2) Phenyltin trichloride
- (3) Tetraphenyltin
- (4) Triphenyltin chloride

**Part # 82486    \$40/ 1 mL**

### Tributyltin Chloride Calibration Mix

*2000 ug/mL in Methylene chloride*

**Part # 82487    \$30/ 1 mL**

### Tetrapentyltin Internal Standard

*2000 ug/mL in Methylene chloride*

**Part # 82489    \$30/ 1 mL**

Above mixes are applicable to Method 8323 for the detection of organotin compounds (as the cation) in water and biological tissue matrices by micro-LC coupled with electrospray ion trap MS.

## PCB CONGENERS SOLUTIONS AND NEATS

## PCB's

### INDIVIDUAL PCB CONGENERS

100 ug/mL in Iso-octane. \$22/ 1 mL

(BZ#)		(BZ#)	
Part #	Congener	Part #	Congener
66001	2-Chlorobiphenyl	66042	2,2',3,4'-Tetrachlorobiphenyl
66002	3-Chlorobiphenyl	66043	2,2',3,5'-Tetrachlorobiphenyl
66003	4-Chlorobiphenyl	66044	2,2',3,5'-Tetrachlorobiphenyl
66004	2,2'-Dichlorobiphenyl	66045	2,2',3,6'-Tetrachlorobiphenyl
66005	2,3-Dichlorobiphenyl	66046	2,2',3,6'-Tetrachlorobiphenyl
66006	2,3'-Dichlorobiphenyl	66047	2,2',4,4'-Tetrachlorobiphenyl
66007	2,4-Dichlorobiphenyl	66048	2,2',4,5'-Tetrachlorobiphenyl
66008	2,4'-Dichlorobiphenyl	66049	2,2',4,5'-Tetrachlorobiphenyl
66009	2,5-Dichlorobiphenyl	66050	2,2',4,6'-Tetrachlorobiphenyl
66010	2,6-Dichlorobiphenyl	66051	2,2',4,6'-Tetrachlorobiphenyl
66011	3,3'-Dichlorobiphenyl	66052	2,2',5,5'-Tetrachlorobiphenyl
66012	3,4-Dichlorobiphenyl	66053	2,2',5,6'-Tetrachlorobiphenyl
66013	3,4'-Dichlorobiphenyl	66054	2,2',6,6'-Tetrachlorobiphenyl
66014	3,5-Dichlorobiphenyl	66055	2,3,3',4'-Tetrachlorobiphenyl
66015	4,4'-Dichlorobiphenyl	66056	2,3,3',4'-Tetrachlorobiphenyl
66016	2,2',3-Trichlorobiphenyl	66057	2,3,3',5'-Tetrachlorobiphenyl
66017	2,2',4-Trichlorobiphenyl	66058	2,3,3',5'-Tetrachlorobiphenyl
66018	2,2',5-Trichlorobiphenyl	66059	2,3,3',6'-Tetrachlorobiphenyl
66019	2,2',6-Trichlorobiphenyl	66060	2,3,4,4'-Tetrachlorobiphenyl
66020	2,3,3'-Trichlorobiphenyl	66061	2,3,4,5'-Tetrachlorobiphenyl
66021	2,3,4-Trichlorobiphenyl	66062	2,3,4,6'-Tetrachlorobiphenyl
66022	2,3,4'-Trichlorobiphenyl	66063	2,3,4',5'-Tetrachlorobiphenyl
66023	2,3,5-Trichlorobiphenyl	66064	2,3,4',6'-Tetrachlorobiphenyl
66024	2,3,6-Trichlorobiphenyl	66065	2,3,5,6'-Tetrachlorobiphenyl
66025	2,3',4-Trichlorobiphenyl	66066	2,3',4,4'-Tetrachlorobiphenyl
66026	2,3',5-Trichlorobiphenyl	66067	2,3',4,5'-Tetrachlorobiphenyl
66027	2,3',6-Trichlorobiphenyl	66068	2,3',4,5'-Tetrachlorobiphenyl
66028	2,4,4'-Trichlorobiphenyl	66069	2,3',4,6'-Tetrachlorobiphenyl
66029	2,4,5-Trichlorobiphenyl	66070	2,3',4',5'-Tetrachlorobiphenyl
66030	2,4,6-Trichlorobiphenyl	66071	2,3',4',6'-Tetrachlorobiphenyl
66031	2,4',5-Trichlorobiphenyl	66072	2,3',5,5'-Tetrachlorobiphenyl
66032	2,4',6-Trichlorobiphenyl	66073	2,3',5',6'-Tetrachlorobiphenyl
66033	2',3,4-Trichlorobiphenyl	66074	2,4,4',5'-Tetrachlorobiphenyl
66034	2',3,5-Trichlorobiphenyl	66075	2,4,4',6'-Tetrachlorobiphenyl
66035	3,3',4-Trichlorobiphenyl	66076	2',3,4,5'-Tetrachlorobiphenyl
66036	3,3',5-Trichlorobiphenyl	66077	3,3',4,4'-Tetrachlorobiphenyl
66037	3,4,4'-Trichlorobiphenyl	66078	3,3',4,5'-Tetrachlorobiphenyl
66038	3,4,5-Trichlorobiphenyl	66079	3,3',4,5'-Tetrachlorobiphenyl
66039	3,4',5-Trichlorobiphenyl	66080	3,3',5,5'-Tetrachlorobiphenyl
66040	2,2',3,3'-Tetrachlorobiphenyl	66081	3,4,4',5'-Tetrachlorobiphenyl
66041	2,2',3,4-Tetrachlorobiphenyl	66082	2,2',3,3',4-Pentachlorobiphenyl

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## PCB's

PCB CONGENERS  
SOLUTIONS AND NEATS

## INDIVIDUAL PCB CONGENERS

100 ug/mL in Iso-octane. \$22/ 1 mL

(BZ#)

Part #

Congener

66083	2,2',3,3',5-Pentachlorobiphenyl
66084	2,2',3,3',6-Pentachlorobiphenyl
66085	2,2',3,4,4'-Pentachlorobiphenyl
66086	2,2',3,4,5-Pentachlorobiphenyl
66087	2,2',3,4,5'-Pentachlorobiphenyl
66088	2,2',3,4,6-Pentachlorobiphenyl
66089	2,2',3,4,6'-Pentachlorobiphenyl
66090	2,2',3,4',5-Pentachlorobiphenyl
66091	2,2',3,4',6-Pentachlorobiphenyl
66092	2,2',3,5,5'-Pentachlorobiphenyl
66093	2,2',3,5,6-Pentachlorobiphenyl
66094	2,2',3,5,6'-Pentachlorobiphenyl
66095	2,2',3,5',6-Pentachlorobiphenyl
66096	2,2',3,6,6'-Pentachlorobiphenyl
66097	2,2',3',4,5-Pentachlorobiphenyl
66098	2,2',3',4,6-Pentachlorobiphenyl
66099	2,2',4,4',5-Pentachlorobiphenyl
66100	2,2',4,4',6-Pentachlorobiphenyl
66101	2,2',4,5,5'-Pentachlorobiphenyl
66102	2,2',4,5,6'-Pentachlorobiphenyl
66103	2,2',4,5',6-Pentachlorobiphenyl
66104	2,2',4,6,6'-Pentachlorobiphenyl
66105	2,3,3',4,4'-Pentachlorobiphenyl
66106	2,3,3',4,5-Pentachlorobiphenyl
66107	2,3,3',4,5'-Pentachlorobiphenyl
66108	2,3,3',4,5'-Pentachlorobiphenyl
66109	2,3,3',4,6-Pentachlorobiphenyl
66110	2,3,3',4',6-Pentachlorobiphenyl
66111	2,3,3',5,5'-Pentachlorobiphenyl
66112	2,3,3',5,6-Pentachlorobiphenyl
66113	2,3,3',5',6-Pentachlorobiphenyl
66114	2,3,4,4',5-Pentachlorobiphenyl
66115	2,3,4,4',6-Pentachlorobiphenyl
66116	2,3,4,5,6-Pentachlorobiphenyl
66117	2,3,4',5,6-Pentachlorobiphenyl
66118	2,3',4,4',5-Pentachlorobiphenyl
66119	2,3',4,4',6-Pentachlorobiphenyl
66120	2,3',4,5,5'-Pentachlorobiphenyl
66121	2,3',4,5',6-Pentachlorobiphenyl
66122	2',3,3',4,5-Pentachlorobiphenyl
66123	2',3,4,4',5-Pentachlorobiphenyl

(BZ#)

Part #

Congener

66124	2',3,4,5,5'-Pentachlorobiphenyl
66125	2',3,4,5,6'-Pentachlorobiphenyl
66126	3,3',4,4',5-Pentachlorobiphenyl
66127	3,3',4,5,5'-Pentachlorobiphenyl
66128	2,2',3,3',4,4'-Hexachlorobiphenyl
66129	2,2',3,3',4,5-Hexachlorobiphenyl
66130	2,2',3,3',4,5'-Hexachlorobiphenyl
66131	2,2',3,3',4,6-Hexachlorobiphenyl
66132	2,2',3,3',4,6'-Hexachlorobiphenyl
66133	2,2',3,3',5,5'-Hexachlorobiphenyl
66134	2,2',3,3',5,6-Hexachlorobiphenyl
66135	2,2',3,3',5,6'-Hexachlorobiphenyl
66136	2,2',3,3',6,6'-Hexachlorobiphenyl
66137	2,2',3,4,4',5-Hexachlorobiphenyl
66138	2,2',3,4,4',5'-Hexachlorobiphenyl
66139	2,2',3,4,4',6-Hexachlorobiphenyl
66140	2,2',3,4,4',6'-Hexachlorobiphenyl
66141	2,2',3,4,5,5'-Hexachlorobiphenyl
66142	2,2',3,4,5,6-Hexachlorobiphenyl
66143	2,2',3,4,5,6'-Hexachlorobiphenyl
66144	2,2',3,4,5',6-Hexachlorobiphenyl
66145	2,2',3,4,6,6'-Hexachlorobiphenyl
66146	2,2',3,4',5,5'-Hexachlorobiphenyl
66147	2,2',3,4',5,6-Hexachlorobiphenyl
66148	2,2',3,4',5,6'-Hexachlorobiphenyl
66149	2,2',3,4',5',6-Hexachlorobiphenyl
66150	2,2',3,4',6,6'-Hexachlorobiphenyl
66151	2,2',3,5,5',6-Hexachlorobiphenyl
66152	2,2',3,5,6,6'-Hexachlorobiphenyl
66153	2,2',4,4',5,5'-Hexachlorobiphenyl
66154	2,2',4,4',5,6'-Hexachlorobiphenyl
66155	2,2',4,4',6,6'-Hexachlorobiphenyl
66156	2,3,3',4,4',5-Hexachlorobiphenyl
66157	2,3,3',4,4',5'-Hexachlorobiphenyl
66158	2,3,3',4,4',6-Hexachlorobiphenyl
66159	2,3,3',4,5,5'-Hexachlorobiphenyl
66160	2,3,3',4,5,6-Hexachlorobiphenyl
66161	2,3,3',4,5',6-Hexachlorobiphenyl
66162	2,3,3',4',5,5'-Hexachlorobiphenyl
66163	2,3,3',4',5,6-Hexachlorobiphenyl
66164	2,3,3',4',5',6-Hexachlorobiphenyl

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## PCB CONGENERS SOLUTIONS AND NEATS

## PCB's

### INDIVIDUAL PCB CONGENERS

100 ug/mL in Iso-octane. \$22/ 1 mL

(BZ#)

Part #Congener

66165	2,3,3',5,5',6-Hexachlorobiphenyl
66166	2,3,4,4',5,6-Hexachlorobiphenyl
66167	2,3',4,4',5,5'-Hexachlorobiphenyl
66168	2,3',4,4',5',6-Hexachlorobiphenyl
66169	3,3',4,4',5,5'-Hexachlorobiphenyl
66170	2,2',3,3',4,4',5-Heptachlorobiphenyl
66171	2,2',3,3',4,4',6-Heptachlorobiphenyl
66172	2,2',3,3',4,5,5'-Heptachlorobiphenyl
66173	2,2',3,3',4,5,6-Heptachlorobiphenyl
66174	2,2',3,3',4,5,6'-Heptachlorobiphenyl
66175	2,2',3,3',4,5',6-Heptachlorobiphenyl
66176	2,2',3,3',4,6,6'-Heptachlorobiphenyl
66177	2,2',3,3',4',5,6-Heptachlorobiphenyl
66178	2,2',3,3',5,5',6-Heptachlorobiphenyl
66179	2,2',3,3',5,6,6'-Heptachlorobiphenyl
66180	2,2',3,4,4',5,5'-Heptachlorobiphenyl
66181	2,2',3,4,4',5,6-Heptachlorobiphenyl
66182	2,2',3,4,4',5,6'-Heptachlorobiphenyl
66183	2,2',3,4,4',5',6-Heptachlorobiphenyl
66184	2,2',3,4,4',6,6'-Heptachlorobiphenyl
66185	2,2',3,4,5,5',6-Heptachlorobiphenyl
66186	2,2',3,4,5,6,6'-Heptachlorobiphenyl

(BZ#)

Part #Congener

66187	2,2',3,4',5,5',6-Heptachlorobiphenyl
66188	2,2',3,4',5,6,6'-Heptachlorobiphenyl
66189	2,3,3',4,4',5,5'-Heptachlorobiphenyl
66190	2,3,3',4,4',5,6-Heptachlorobiphenyl
66191	2,3,3',4,4',5',6-Heptachlorobiphenyl
66192	2,3,3',4,5,5',6-Heptachlorobiphenyl
66193	2,3,3',4',5,5',6-Heptachlorobiphenyl
66194	2,2',3,3',4,4',5,5'-Octachlorobiphenyl
66195	2,2',3,3',4,4',5,6-Octachlorobiphenyl
66196	2,2',3,3',4,4',5,6'-Octachlorobiphenyl
66197	2,2',3,3',4,4',6,6'-Octachlorobiphenyl
66198	2,2',3,3',4,5,5',6-Octachlorobiphenyl
66199	2,2',3,3',4,5,6,6'-Octachlorobiphenyl
66200	2,2',3,3',4,5',6,6'-Octachlorobiphenyl
66201	2,2',3,3',4,5,5',6'-Octachlorobiphenyl
66202	2,2',3,3',5,5',6,6'-Octachlorobiphenyl
66203	2,2',3,4,4',5,5',6-Octachlorobiphenyl
66204	2,2',3,4,4',5,6,6'-Octachlorobiphenyl
66205	2,3,3',4,4',5,5',6-Octachlorobiphenyl
66206	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl
66207	2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl
66208	2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl
66209	2,2',3,3',4,4',5,5',6'-Decachlorobiphenyl

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## PCB's

PCB CONGENERS  
SOLUTIONS AND NEATS

## Group 1a PCB Mix-Aroclor Toxicity

*10 ug/mL in Iso-octane*

- |     |                                   |       |
|-----|-----------------------------------|-------|
| (1) | 3,3',4,4'-Tetrachlorobiphenyl     | [77]  |
| (2) | 3,3',4,4',5-Pentachlorobiphenyl   | [126] |
| (3) | 3,3',4,4',5,5'-Hexachlorobiphenyl | [169] |

**Part # 66211 \$30/ 1 mL**

## Group 1b PCB Mix- Mix Type Inducers

*10 ug/mL in Iso-octane*

- |     |                                   |       |     |                                      |       |
|-----|-----------------------------------|-------|-----|--------------------------------------|-------|
| (1) | 2,3,3',4,4'-Pentachlorobiphenyl   | [105] | (4) | 2,2',3,4,4',5'-Hexachlorobiphenyl    | [138] |
| (2) | 2,3',4,4',5-Pentachlorobiphenyl   | [118] | (5) | 2,3,3',4,4',5-Hexachlorobiphenyl     | [156] |
| (3) | 2,2',3,3',4,4'-Hexachlorobiphenyl | [128] | (6) | 2,2',3,3',4,4',5-Heptachlorobiphenyl | [170] |

**Part # 66212 \$30/ 1 mL**

## Group 2 PCB Toxicity Mix (Animal Tissue)

*10 ug/mL in Iso-octane*

- |     |                                   |       |     |  |       |
|-----|-----------------------------------|-------|-----|--|-------|
| (1) | 2,2',3,4,5'-Pentachlorobiphenyl   | [87]  | (5) | 2,2',3,4,4',5,5'-Heptachlorobiphenyl   | [180] |
| (2) | 2,2',4,4',5-Pentachlorobiphenyl   | [99]  | (6) | 2,2',3,4,4',5',6-Heptachlorobiphenyl   | [183] |
| (3) | 2,2',4,5,5'-Pentachlorobiphenyl   | [101] | (7) | 2,2',3,3',4,4',5,5'-Octachlorobiphenyl | [194] |
| (4) | 2,2',4,4',5,5'-Hexachlorobiphenyl | [153] |     |  |       |

**Part # 66213 \$30/ 1 mL**

## Group 3 PCB Mix- (Low Toxicity)

*10 ug/mL in Iso-octane*

- |     |                               |      |      |  |       |
|-----|-------------------------------|------|------|--|-------|
| (1) | 2,2',5-Trichlorobiphenyl      | [18] | (6)  | 2,4,4',5-Tetrachlorobiphenyl           | [74]  |
| (2) | 2,2',3,5'-Tetrachlorobiphenyl | [44] | (7)  | 2,2',3,5,5',6-Hexachlorobiphenyl       | [151] |
| (3) | 2,2',4,5'-Tetrachlorobiphenyl | [49] | (8)  | 2,2',3,3',4',5,6-Heptachlorobiphenyl   | [177] |
| (4) | 2,2',5,5'-Tetrachlorobiphenyl | [52] | (9)  | 2,2',3,4',5,5',6-Heptachlorobiphenyl   | [187] |
| (5) | 2,3',4',5-Tetrachlorobiphenyl | [70] | (10) | 2,2',3,3',4,5,5',6'-Octachlorobiphenyl | [201] |

**Part # 66214 \$30/ 1 mL**

## PCB CONGENER SOLUTIONS AND NEATS

## PCB's

### Group 4 PCB Mix- (Mix Type/ Low Incidence)

*10 ug/mL in Iso-octane*

(1) 3,4,4'-Trichlorobiphenyl	[37]	(6) 2,3,3',4,4',5'-Hexachlorobiphenyl	[157]
(2) 3,4,4',5-Tetrachlorobiphenyl	[81]	(7) 2,3,3',4,4',6-Hexachlorobiphenyl	[158]
(3) 2,3,4,4',5-Pentachlorobiphenyl	[114]	(8) 2,3',4,4',5,5'-Hexachlorobiphenyl	[167]
(4) 2,3',4,4',6-Pentachlorobiphenyl	[119]	(9) 2,3',4,4',5',6-Hexachlorobiphenyl	[168]
(5) 2',3,4,4',5-Pentachlorobiphenyl	[123]	(10) 2,3,3',4,4',5,5'-Heptachlorobiphenyl	[189]

**Part # 66215 \$30/ 1 mL**

### PCB Congener Standard

*10 ug/mL in Iso-octane*

(1) 2,4,4'-Trichlorobiphenyl	[28]	(5) 2,2',3,4,4',5'-Hexachlorobiphenyl	[138]
(2) 2,2',5,5'-Tetrachlorobiphenyl	[52]	(6) 2,2',4,4',5,5'-Hexachlorobiphenyl	[153]
(3) 2,2',4,5,5'-Pentachlorobiphenyl	[101]	(7) 2,2',3,4,4',5,5'-Heptachlorobiphenyl	[180]
(4) 2,3',4,4',5-Pentachlorobiphenyl	[118]		

**Part # 92366 \$30/ 1 mL**

### DCMA-PCB Congener Mix

*Varied ug/mL in Hexane*

<i>Congener</i>	<i>BZ#</i>	<i>ug/mL</i>
(1) 2-Chlorobiphenyl	[1]	100
(2) 3,3'-Dichlorobiphenyl	[11]	100
(3) 2,4,5-Trichlorobiphenyl	[29]	10
(4) 2,2',4,4'-Tetrachlorobiphenyl	[47]	10
(5) 2,3',4,5',6-Pentachlorobiphenyl	[121]	10
(6) 2,2',3,3',6,6'-Hexachlorobiphenyl	[136]	10
(7) 2,2',3,4,5,5',6-Heptachlorobiphenyl	[185]	5
(8) 2,2',3,3',4,4',5,5'-Octachlorobiphenyl	[194]	5
(9) 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	[206]	5
(10) 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	[209]	5

**Part # 66210 \$40/ 1 mL**



## PCB's

PCB CONGENERS  
SOLUTIONS AND NEATS**AROCLOR MIXES***All mixes 1000 ug/mL. 1 mL.*

<b>AROCLOR</b>	<b>Part # Hexane</b>	<b>Part # Methanol</b>	<b>Price/ 1 mL</b>
1016	90123	70015	\$22
1221	90124	70016	\$22
1232	90125	70017	\$22
1242	90126	70018	\$22
1248	90127	70019	\$22
1254	90128	70020	\$22
1260	90129	70021	\$22
<b>Set of 7</b>	<b>91130</b>	<b>91131</b>	<b>\$125</b>

**Aroclor in Transformer Oil Univolt N-61 Type II. \$30/ 1 mL**

<b>Part #</b>	<b>Aroclor</b>	<b>Conc (mg/kg)</b>
61016	Aroclor 1016	50
62016	Aroclor 1016	500
61221	Aroclor 1221	50
62221	Aroclor 1221	500
61232	Aroclor 1232	50
62232	Aroclor 1232	500
61242	Aroclor 1242	50
62242	Aroclor 1242	500
61248	Aroclor 1248	50
62248	Aroclor 1248	500
61254	Aroclor 1254	50
62254	Aroclor 1254	500
61260	Aroclor 1260	50
62260	Aroclor 1260	500

## PHARMACEUTICALS AND NATURAL PRODUCTS

## PHARM. & NATURAL PRODUCTS

### Analgesics

*Varied (ug/mL) in Methanol*

- |                          |     |
|--------------------------|-----|
| (1) Dextromethorphan     | 100 |
| (2) Acetylsalicylic acid | 50  |

**Part # 67000     \$35/ 1 mL**

### Sinus Medications

*100 ug/mL in Methanol*

- |                      |     |
|----------------------|-----|
| (1) Pseudoephedrine  | 100 |
| (2) Paracetamol      | 100 |
| (3) Chlorpheniramine | 100 |

**Part # 67001     \$35/ 1 mL**

### Tricyclic Antidepressants

*100 ug/mL in Methanol*

- |                   |     |
|-------------------|-----|
| (1) Amitriptyline | 100 |
| (2) Imipramine    | 100 |
| (3) Trimipramine  | 100 |

**Part # 67002     \$35/ 1 mL**

### Antihistamines

*100 ug/mL in Methanol*

- |                      |     |
|----------------------|-----|
| (1) Maleic acid      | 100 |
| (2) Doxylamine       | 100 |
| (3) Chlorpheniramine | 100 |
| (4) Carbinoxamine    | 100 |

**Part # 67003     \$40/ 1 mL**

### Cardiac Drugs

*Varied (ug/mL) in Methanol*

- |                  |     |
|------------------|-----|
| (1) Procainamide | 50  |
| (2) Pindolol     | 30  |
| (3) Oxprenolol   | 50  |
| (4) Dipyridamole | 100 |
| (5) Diltiazem    | 30  |
| (6) Verapamil    | 50  |
| (7) Digoxin      | 50  |
| (8) Lidoflazine  | 50  |
| (9) Flunarizine  | 50  |
| (10) Nifedipine  | 50  |

**Part # 67005     \$45/ 1 mL**

### Cephalosporins

*100 ug/mL in Methanol*

- |                |     |
|----------------|-----|
| (1) Cefadroxil | 100 |
| (2) Cefaclor   | 100 |
| (3) Cephalexin | 100 |

**Part # 67004     \$35/ 1 mL**

### Cold Remedy Ingredients

*Varied (ug/mL) in Methanol*

- |                     |     |
|---------------------|-----|
| (1) Pseudoephedrine | 50  |
| (2) Acetaminophen   | 100 |

**Part # 67006     \$35/ 1 mL**

### Antibiotics

**(Fluoroquinolones)**

*100 ug/mL in Water*

- |                   |     |
|-------------------|-----|
| (1) Ciprofloxacin | 100 |
| (2) Lomefloxacin  | 100 |

**Part # 67007     \$35/ 1 mL**

**PHARM.  
&  
NATURAL  
PRODUCTS**

**PHARMACEUTICALS  
AND NATURAL PRODUCTS**

**Anti-Inflammatory Drugs**

*Varied (ug/mL) in Methanol*

(1) Hydrochlorothiazide	50
(2) Oxyphenbutazone	100
(3) Furosemide	100
(4) Phenylbutazone	100

**Part # 67008 \$40/ 1 mL**

**Anti-hypertensive Drugs  
(Beta/Calcium Channel Blockers)**

*100 ug/mL in Methanol*

(1) Captopril	100
(2) Pindolol	100
(3) Nifedipine	100
(4) Diltiazem	100
(5) Verapamil	100

**Part # 67009 \$40/ 1 mL**

**Antihypertensive  
ACE Inhibitors**

*100 ug/mL in Methanol*

(1) Enalapril	100
(2) Lisinopril	100
(3) Captopril	100

**Part # 67010 \$35/ 1 mL**

**Anti-Ulcer Compounds**

*100 ug/mL in Methanol*

(1) Ranitidine	100
(2) Cimetidine	100
(3) Famotidine	100

**Part # 67011 \$35/ 1 mL**

**Anti-Inflammatory Drugs  
Non-Steroidal**

*100 ug/mL in Methanol*

(1) Piroxicam	100
(2) Sulindac	100
(3) Tolmetin	100
(4) Ketoprofen	100
(5) Indomethacin	100
(6) Ibuprofen	100
(7) Diclofenac	100
(8) Mefanamic acid	100

**Part # 67012 \$45/ 1 mL**

**Antihypertensives-Diuretics**

*100 ug/mL in Methanol*

(1) Atenolol	100
(2) Amiloride	100
(3) Hydrochlorothiazide	100
(4) Caffeine	100

**Part # 67013 \$35/ 1 mL**

## PHARMACEUTICALS AND NATURAL PRODUCTS

## PHARM. & NATURAL PRODUCTS

### Catecholamines

*100 ug/mL in Methanol*

- |                              |     |
|------------------------------|-----|
| (1) Norepinephrine           | 100 |
| (2) Epinephrine              | 100 |
| (3) 3,4-Dihydroxybenzylamine | 100 |
| (4) Dopamine                 | 100 |

**Part # 67014     \$35/ 1 mL**

### Sulfa Drugs

*100 ug/mL in Methanol*

- |                    |     |
|--------------------|-----|
| (1) Sulfanilamide  | 100 |
| (2) Sulfathiazole  | 100 |
| (3) Sulfamerazine  | 100 |
| (4) Sulfamethazine | 100 |

**Part # 67015     \$35/ 1 mL**

### Tricyclic Antidepressants

*100 ug/mL in Methanol*

- |                   |     |
|-------------------|-----|
| (1) Trimipramine  | 100 |
| (2) Doxepin       | 100 |
| (3) Amitriptyline | 100 |
| (4) Imipramine    | 100 |
| (5) Nortriptyline | 100 |
| (6) Desipramine   | 100 |

**Part # 67016     \$40/ 1 mL**

### β-Lactam Antibiotics

*100 ug/mL in Methanol*

- |                  |     |
|------------------|-----|
| (1) Amoxicillin  | 100 |
| (2) Ampicillin   | 100 |
| (3) Piperacillin | 100 |
| (4) Penicillin G | 100 |
| (5) Penicillin V | 100 |
| (6) Cloxacillin  | 100 |

**Part # 67017     \$40/ 1 mL**

### Antioxidants- Tocopherol

*100 ug/mL in Methanol*

- |                        |     |
|------------------------|-----|
| (1) δ-tocopherol       | 100 |
| (2) gamma-tocopherol   | 100 |
| (3) alpha-tocopherol   | 100 |
| (4) tocopherol acetate | 100 |

**Part # 67018     \$35/ 1 mL**

### Antioxidants

*100 ug/mL in Acetone*

- |                                    |  |
|------------------------------------|--|
| (1) Butylated hydroxytoluene (BHT) |  |
| (2) Butylated hydroxyanisole (BHA) |  |
| (3) Tert-butyl hydroquinone (TBHQ) |  |
| (4) n-Propyl gallate (PG)          |  |

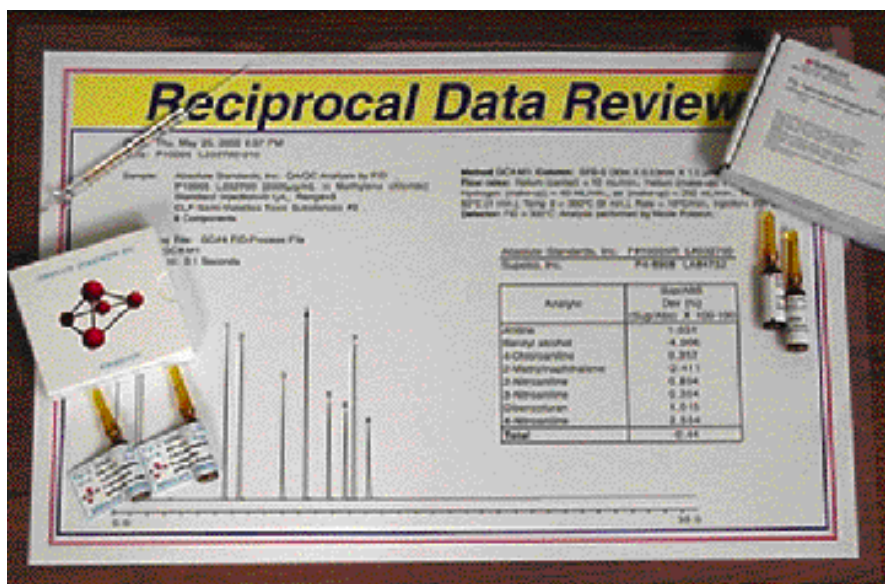
**Part # 67021     \$35/ 1 mL**

RDaR™

## 3RD PARTY - RDaR™ ANALYTICAL REFERENCE MATERIALS

### Section 1, Introduction

Absolute Standards, Inc. (Absolute), Hamden, CT, and Supelco, Inc. (Supelco), Bellefonte, PA, cooperatively conduct Reciprocal Data Review (RDaR™) on leading organic reference standards for use in environmental testing. Under a special RDaR™ agreement, Supelco and Absolute have established each other as independent references and referees for finished product quality control of chemical standards.



Customers have long desired that standards from various sources match in quality. While Supelco and Absolute are the same from lot to lot and year to year, competing products may vary. Because our customers must verify calibration using independent standards, they are forced to purchase almost identical products from several different vendors, comparing them to another standard until they find a match. But now, thanks to RDaR™, there's a better way.

**3RD PARTY - RDaR™  
ANALYTICAL  
REFERENCE MATERIALS**

**RDaR™**

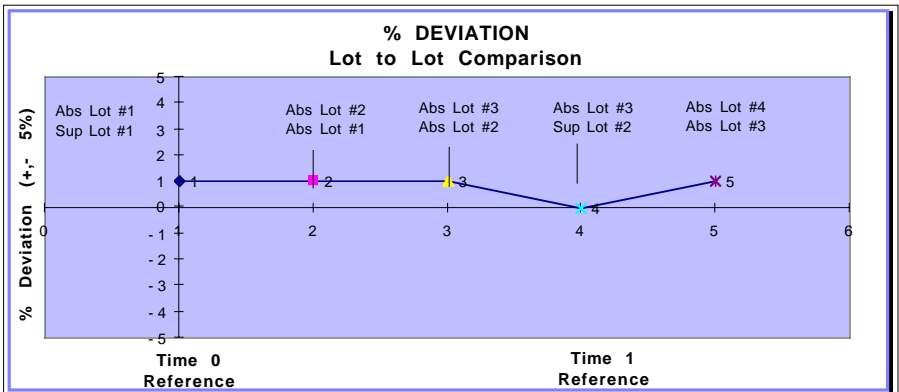
Now available are selected products that are manufactured in accordance with the following international guidelines: ISO 9001, ISO/IEC Guide 25, 30, 31, 34, & 35. The products are independently manufactured, tested and REVIEWED at both laboratories. Currently about 200 products are available as RDaR™.

Supelco and Absolute Standards are independent companies manufacturing chemical standards under separate and often unique processes. The RDaR™ concept is applied by Supelco and Absolute in an effort to reduce the variation between commercial reference standards. Note that Supelco and Absolute are not related companies, and no money is exchanged between the two companies as part of RDaR™.

**Section 2, How RDaR™ Works**

Under RDaR™, Supelco and Absolute exchange chemical standards as they are produced. To establish comparability through RDaR™, analytical comparison and data review are completed for recently produced batches of standards. Samples from Supelco and comparative Absolute standards are exchanged at no charge. Supelco and Absolute use the exchanged samples as part of the routine testing process for RDaR™ products. This process is ongoing for both companies. So every time you purchase a RDaR™ product you are assured that a comparable product exists from a separate, independent, manufacturer.

	ABS Lot #1	ABS Lot #2	ABS Lot #3	ABS Lot #3	ABS Lot #4
%Dev	SUP Lot #1	ABS Lot #1	ABS Lot #2	SUP Lot #2	ABS Lot #3
Relative	1	0	0	1	0
Actual Time 0	1	1	1	0	1



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**RDaR™**

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**3RD PARTY - RDaR™  
ANALYTICAL  
REFERENCE MATERIALS**

RDaR™ products are first reviewed by both Supelco and Absolute for formulation and concentration. Peak identities in compared products are confirmed, and analyte concentrations are studied. All RDaR™ analyses are chromatographed sequentially; **HOT (History, Ours, Theirs)** Absolute Standards' (**O**ur) part number was analyzed in triplicate preceded by a triplicate injection of an Absolute Standards' previous (**H**istory) lot, then followed by the comparable Supelco part number (**T**heirs). All nine chromatograms are scrupulously reviewed for variations in the retention times, area counts and for relative response factors. Analytes are identified and the coefficients of variation are calculated. This enables our clients to review "*the Numbers*" and make a determination as to the suitability of these reference materials for their specific application. This procedure saves money, effort and time as well as satisfying your QA/QC compliance needs for a Third Party standard. An example of a lot to lot comparison is shown in the table on the previous page.

RDaR™ products are further reviewed for conformance. As part of the RDaR™ process, Supelco acts as an independent third party reviewer of Absolute products, and Absolute acts as an independent third party reviewer of Supelco products. Both companies review products to insure that the manufacturing and testing protocols were accurately followed. Under RDaR™ you not only receive products which are unique in the industry, but receive products which exceed Third Party Review criteria as defined under ISO.

### **Section 3, How to Get RDaR™ Products**

When you purchase a RDaR™ product you receive not only the highest quality reference standard available, you also get the assurance that it is comparable to another manufacturer. Shipped with every RDaR™ product is a data packet that includes: a certificate of analysis (stating all of the data you've grown to expect), and a comparability certificate summarizing the comparison of the two standards. And as with all Supelco and Absolute manufactured standards, a weight report describing the complete manufacturing traceability.

You can always purchase high quality Absolute RDaR™ products through Absolute Standards, Inc. But note, you can also purchase both Absolute and Supelco standards through Supelco.

## 3RD PARTY - RDaR™ ANALYTICAL REFERENCE MATERIALS

## RDaR™ VOLATILES

This is a general-purpose method for the simultaneous identification and measurement of purgeable VOCs in drinking water, raw source water, or drinking water in any stage of treatment. It is applicable to a wide range of organic compounds (including the four trihalomethane disinfection by-products) that have sufficient volatility and low water-solubility to be removed efficiently from water samples by purge and trap procedures.

### LIQUIDS

(1) Benzene	(19) 1,2-Dichlorobenzene	(37) Naphthalene
(2) Bromobenzene	(20) 1,4-Dichlorobenzene	(38) n-Propylbenzene
(3) Bromochloromethane	(21) 1,1-Dichloroethane	(39) Styrene
(4) Bromodichloromethane	(22) 1,2-Dichloroethane	(40) 1,1,1,2-Tetrachloroethane
(5) Bromoform	(23) cis-1,2-Dichloroethene	(41) 1,1,2,2-Tetrachloroethane
(6) n-Butyl benzene	(24) trans-1,2-Dichloroethene	(42) Tetrachloroethene
(7) tert-Butyl benzene	(25) 1,1-Dichloroethene	(43) Toluene
(8) sec-Butyl benzene	(26) 1,3-Dichloropropane	(44) 1,2,3-Trichlorobenzene
(9) Carbon tetrachloride	(27) 1,2-Dichloropropane	(45) 1,2,4-Trichlorobenzene
(10) Chlorobenzene	(28) 2,2-Dichloropropane	(46) 1,1,1-Trichloroethane
(11) Chloroform	(29) 1,1-Dichloropropene	(47) 1,1,2-Trichloroethane
(12) 4-Chlorotoluene	(30) cis-1,3-Dichloropropene	(48) Trichloroethene
(13) 2-Chlorotoluene	(31) trans-1,3-Dichloropropene	(49) 1,2,3-Trichloropropane
(14) 1,2-Dibromo-3-chloro-propane	(32) Ethyl benzene	(50) 1,2,4-Trimethylbenzene
(15) Dibromochloromethane	(33) Hexachlorobutadiene	(51) 1,3,5-Trimethylbenzene
(16) 1,2-Dibromoethane	(34) Isopropyl benzene	(52) o-Xylene
(17) Dibromomethane	(35) p-Isopropyl toluene	(53) m-Xylene
(18) 1,3-Dichlorobenzene	(36) Methylene chloride	(54) p-Xylene

**Part # 30001R 200 ug/mL in Methanol. \$55/ 1 mL**

**Part # 32001R 2000 ug/mL in Methanol. \$110/ 1 mL**

### GASES

- (1) Bromomethane
- (2) Chloroethane
- (3) Chloromethane
- (4) Dichlorodifluoromethane
- (5) Trichlorofluoromethane
- (6) Vinyl chloride

**Part # 30002R 200 ug/mL in Methanol. \$30/ 1 mL**

**Part # 30058R 2000 ug/mL in Methanol. \$35/ 1 mL**



**RDaR™  
VOLATILES****3RD PARTY - RDaR™  
ANALYTICAL  
REFERENCE MATERIALS****MIX #2***2000 ug/mL in Methanol*

- |                            |                              |
|----------------------------|------------------------------|
| (1) Bromodichloromethane   | (4) 1,1-Dichloroethene       |
| (2) Dibromochloromethane   | (5) trans-1,2-Dichloroethene |
| (3) cis-1,2-Dichloroethene | (6) Methylene chloride       |

**Part # 30059R     \$30/ 1 mL****MIX# 3***2000 ug/mL in Methanol*

- |                          |                           |
|--------------------------|---------------------------|
| (1) Bromochloromethane   | (6) 1,1-Dichloroethane    |
| (2) Bromoform            | (7) 2,2-Dichloropropane   |
| (3) Carbon tetrachloride | (8) Tetrachloroethene     |
| (4) Chloroform           | (9) 1,1,1-Trichloroethane |
| (5) Dibromomethane       |                           |

**Part # 30060R     \$30/ 1 mL****MIX #4***2000 ug/mL in Methanol*

- |                                 |                                |
|---------------------------------|--------------------------------|
| (1) 1,2-Dibromo-3-chloropropane | (8) 1,1-Dichloropropene        |
| (2) 1,2-Dibromoethane (EDB)     | (9) Hexachlorobutadiene        |
| (3) 1,2-Dichloroethane          | (10) 1,1,1,2-Tetrachloroethane |
| (4) 1,2-Dichloropropane         | (11) 1,1,2,2-Tetrachloroethane |
| (5) 1,3-Dichloropropane         | (12) 1,1,2-Trichloroethane     |
| (6) cis-1,3-Dichloropropene     | (13) Trichloroethene           |
| (7) trans-1,3-Dichloropropene   | (14) 1,2,3-Trichloropropane    |

**Part # 30061R     \$35/ 1 mL****MIX #5***2000 ug/mL in Methanol*

- |                         |                             |
|-------------------------|-----------------------------|
| (1) Benzene             | (8) Toluene                 |
| (2) Bromobenzene        | (9) 1,2,3-Trichlorobenzene  |
| (3) n-Butyl benzene     | (10) 1,2,4-Trichlorobenzene |
| (4) Ethylbenzene        | (11) 1,2,4-Trimethylbenzene |
| (5) p-Isopropyl toluene | (12) 1,3,5-Trimethylbenzene |
| (6) Naphthalene         | (13) m-Xylene               |
| (7) Styrene             |                             |

**Part # 30062R     \$35/ 1 mL**

**3RD PARTY - RDaR™  
ANALYTICAL  
REFERENCE MATERIALS**

**RDaR™  
VOLATILES**

**MIX #6**

*2000 ug/mL in Methanol*

- |                         |                         |
|-------------------------|-------------------------|
| (1) tert-Butyl benzene  | (7) 1,2-Dichlorobenzene |
| (2) sec-Butyl benzene   | (8) 1,4-Dichlorobenzene |
| (3) Chlorobenzene       | (9) Isopropylbenzene    |
| (4) 4-Chlorotoluene     | (10) n-Propylbenzene    |
| (5) 2-Chlorotoluene     | (11) o-Xylene           |
| (6) 1,3-Dichlorobenzene | (12) p-Xylene           |

**Part # 30063R      \$35/ 1 mL**

**MIX #7**

*2000 ug/mL in Methanol*

- |                          |                            |
|--------------------------|----------------------------|
| (1) Benzene              | (7) 1,4-Dichlorobenzene    |
| (2) Bromodichloromethane | (8) 1,2-Dichloroethane     |
| (3) Bromoform            | (9) 1,1-Dichloroethene     |
| (4) Carbon tetrachloride | (10) 1,1,1-Trichloroethane |
| (5) Chloroform           | (11) Trichloroethene       |
| (6) Dibromochloromethane | (12) Vinyl chloride        |

**Part # 30064R      \$35/ 1 mL**

**MIX #8**

*2000 ug/mL in Methanol*

- (1) Chlorobenzene
- (2) 1,2-Dichlorobenzene
- (3) cis-1,2-Dichloroethene
- (4) trans-1,2-Dichloroethene
- (5) 1,2-Dichloropropane
- (6) Ethylbenzene
- (7) Styrene
- (8) Tetrachloroethene
- (9) Toluene
- (10) o-Xylene
- (11) m-Xylene
- (12) p-Xylene

**Part # 30065R      \$35/ 1 mL**

**KETONES MIX**

*2000 ug/mL in  
Methanol:Water (9:1)*

- (1) Acetone
- (2) 2-Butanone
- (3) 2-Hexanone
- (4) 4-Methyl-2-pentanone

**Part # 82402R      \$25/ 1mL**

**P# 30067R**

*VOC KIT*

*\$150.00/ 8 x 1 mL ampules*

(Includes:30058R, 30059R, 30060R, 3006R1, 30062R, 30063R, 30064R, 30065R)

# RDaR™ SEMI- VOLATILES

## 3RD PARTY - RDaR™ ANALYTICAL REFERENCE MATERIALS

Method 8270 is used to determine the concentration of semivolatile organic compounds in extracts prepared from all types of solid waste matrices, soils and ground water. Direct injection of a sample may be used in limited applications.

Method 8270 can be used to quantify most neutral, acidic and basic organic compounds that are soluble in methylene chloride and capable of being eluted, without derivatization, as sharp peaks from a GC fused silica capillary column coated with a slightly polar silicone phase. Such compounds include polynuclear aromatic hydrocarbons and pesticides, phthalate esters, organo-phosphate esters, nitrosamines, haloethers, aldehydes, ethers, ketones, anilines, pyridines, quinolines, aromatic nitro compounds, and phenols including nitrophenols.

### MIX #1

*2000 ug/mL in Methylene chloride*

- |                                  |                                |
|----------------------------------|--------------------------------|
| (1) Bis(2-chloroethoxy) methane  | (8) Diethyl phthalate          |
| (2) Bis(2-chloroethyl) ether     | (9) Dimethyl phthalate         |
| (3) Bis(2-ethylhexyl) phthalate  | (10) Di-n-butyl phthalate      |
| (4) Bis(2-chloroisopropyl) ether | (11) Di-n-octyl phthalate      |
| (5) 4-Bromophenyl phenyl ether   | (12) N-Nitrosodimethylamine    |
| (6) Butyl benzyl phthalate       | (13) N-Nitrosodi-n-propylamine |
| (7) 4-Chlorophenyl phenyl ether  | (14) N-Nitrosodiphenylamine    |

**Part # 10001R     \$55/ 1mL**

### MIX #2

*2000 ug/mL in Methylene chloride*

- |                         |                                |
|-------------------------|--------------------------------|
| (1) Azobenzene          | (8) Hexachlorobenzene          |
| (2) 2-Chloronaphthalene | (9) Hexachlorobutadiene        |
| (3) 1,2-Dichlorobenzene | (10) Hexachlorocyclopentadiene |
| (4) 1,3-Dichlorobenzene | (11) Hexachloroethane          |
| (5) 1,4-Dichlorobenzene | (12) Isophorone                |
| (6) 2,4-Dinitrotoluene  | (13) Nitrobenzene              |
| (7) 2,6-Dinitrotoluene  | (14) 1,2,4-Trichlorobenzene    |

**Part # 10002R     \$55/ 1 mL**

### MIX #3

*2000 ug/mL in Toluene/Hexane 1:1*

- |              |                          |                         |
|--------------|--------------------------|-------------------------|
| (1) Aldrin   | (7) 4,4'-DDE             | (13) Endrin             |
| (2) a-BHC    | (8) 4,4'-DDT             | (14) Endrin aldehyde    |
| (3) b-BHC    | (9) Dieldrin             | (15) Endrin ketone      |
| (4) g-BHC    | (10) Endosulfan I        | (16) Heptachlor         |
| (5) d-BHC    | (11) Endosulfan II       | (17) Heptachlor epoxide |
| (6) 4,4'-DDD | (12) Endosulfan sulphate | (isomer B)              |
|              |                          | (18) Methoxychlor       |

**Part # 10013R     \$85/ 1 mL**

**3RD PARTY - RDaR™  
ANALYTICAL  
REFERENCE MATERIALS**

**RDaR™  
SEMI-  
VOLATILES**

**MIX #4***2000 ug/mL in Methylene chloride*

- (1) Benzoic acid
- (2) 2-Methylphenol
- (3) 4-Methylphenol
- (4) 2,4,5-Trichlorophenol

**Part # 10004R \$40/ 1 mL****MIX #6***2000 ug/mL in Methanol*

- (1) Benzidine
- (2) 3,3'-Dichlorobenzidine

**Part # 10006R \$25/ 1 mL****MIX #7***2000 ug/mL in Methylene chloride*

- |                          |                             |
|--------------------------|-----------------------------|
| (1) Acenaphthene         | (10) Chrysene               |
| (2) Acenaphthylene       | (11) Dibenzo(a,h)anthracene |
| (3) Anthracene           | (12) Fluoranthene           |
| (4) Benzo(a)anthracene   | (13) Fluorene               |
| (5) Benzo(a)pyrene       | (14) Indeno(1,2,3-cd)pyrene |
| (6) Benzo(b)fluoranthene | (15) Naphthalene            |
| (7) Benzo(g,h,i)perylene | (16) Phenanthrene           |
| (8) Benzo(k)fluoranthene | (17) Pyrene                 |
| (9) Carbazole            |                             |

**Part # 10007R \$75/ 1 mL****Part # 10017R \$75 / 1 mL "Without Carbazole"****MIX #8***2000 ug/mL in Methylene chloride*

- |                                |                                |
|--------------------------------|--------------------------------|
| (1) 4-Chloro-3-methylphenol    | (8) 2-Nitrophenol              |
| (2) 2-Chlorophenol             | (9) 4-Nitrophenol              |
| (3) 2,4-Dichlorophenol         | (10) Pentachlorophenol         |
| (4) 2,6-Dichlorophenol         | (11) Phenol                    |
| (5) 2,4-Dimethylphenol         | (12) 2,4,6-Trichlorophenol     |
| (6) 2,4-Dinitrophenol          | (13) 2,3,4,6-Tetrachlorophenol |
| (7) 2-Methyl-4,6-dinitrophenol |                                |

**Part # 10018R \$50/ 1 mL**

---

**RDaR™  
SEMI-  
VOLATILES**


---

**3RD PARTY - RDaR™  
ANALYTICAL  
REFERENCE MATERIALS**
**Internal Standards***in Methylene chloride*

- (1) Acenaphthene-d10
- (2) Chrysene-d12
- (3) 1,4-Dichlorobenzene-d4
- (4) Naphthalene-d8
- (5) Perylene-d12
- (6) Phenanthrene-d10

**Part # 10009R 4000 ug/mL \$75/ 1 mL****Part # 10019R 2000 ug/mL \$55/ 1 mL****CARBAMATES FOR METHOD 531.1****Individual Analytes @ [100 ug/mL] \$25/ 1mL****Set of 10 x 1 mL @ [100 ug/mL] Part # 30041R in Methanol \$150**

		<b>Methanol</b>
(1)	Aldicarb	30141R
(2)	Aldicarb sulfone	30241R
(3)	Aldicarb sulfoxide	30341R
(4)	Baygon	30441R
(5)	Carbaryl	30541R
(6)	Carbofuran	30641R
(7)	3-Hydroxycarbofuran	30741R
(8)	Methiocarb	30841R
(9)	Methomyl	30941R
(10)	Oxamyl	31041R

**ANALYTES  
MIXTURE***100 ug/mL in Methanol***Part # 30042R \$45/ 1 mL**

**3RD PARTY - RDaR™  
ANALYTICAL  
REFERENCE MATERIALS**

**RDaR™  
PCB'S**

**PCB'S IN HEXANE**

**AROCLOR 1016**  
*1000 ug/mL in Hexane*  
**Part # 90123R \$25/1 mL**

**AROCLOR 1221**  
*1000 ug/mL in Hexane*  
**Part # 90124R \$25/1 mL**

**AROCLOR 1232**  
*1000 ug/mL in Hexane*  
**Part # 90125R \$25/1 mL**

**AROCLOR 1242**  
*1000 ug/mL in Hexane*  
**Part # 90126R \$25/1 mL**

**AROCLOR 1248**  
*1000 ug/mL in Hexane*  
**Part # 90127R \$25/1 mL**

**AROCLOR 1254**  
*1000 ug/mL in Hexane*  
**Part # 90128R \$25/1 mL**

**AROCLOR 1260**  
*1000 ug/mL in Hexane*  
**Part # 90129R \$25/1 mL**

**PCB'S IN METHANOL**

**AROCLOR 1016**  
*1000 ug/mL in Methanol*  
**Part # 70015R \$25/1 mL**

**AROCLOR 1221**  
*1000 ug/mL in Methanol*  
**Part # 70016R \$25/1 mL**

**AROCLOR 1232**  
*1000 ug/mL in Methanol*  
**Part # 70017R \$25/1 mL**

**AROCLOR 1242**  
*1000 ug/mL in Methanol*  
**Part # 70018R \$25/1 mL**

**AROCLOR 1248**  
*1000 ug/mL in Methanol*  
**Part # 70019R \$25/1 mL**

**AROCLOR 1254**  
*1000 ug/mL in Methanol*  
**Part # 70020R \$25/1 mL**

**AROCLOR 1260**  
*1000 ug/mL in Methanol*  
**Part # 70021R \$25/1 mL**

---

**RDAR™**

---

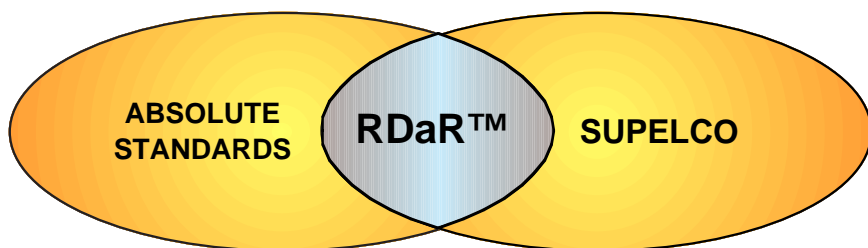
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## 3RD PARTY - RDaR™ ANALYTICAL REFERENCE MATERIALS

# RDAR™

This product conforms to the definitions and specifications for Certified Reference Materials (CRM's) as described in the following documents: ISO 9001, ISO/IEC Guides 17025, 30, 31, 34, and 35. Absolute Standards, Inc. and Supelco, Inc. have tested and reciprocally reviewed the analytical data for these products. They are approved for sale as third party reviewed standards. Absolute Standards, Inc. and Supelco, Inc. have met established specifications under the terms of agreement for **Reciprocal Data Review (RDaR™)**.

**Method GC4-M1:** Column: SPB-5 (30m X 0.53mm X 1.5 µm film thickness), Flow rates: Helium (carrier) = 10 mL/min., Helium (make-up) = 15 mL/min., Hydrogen (make-up) = 40 mL/min., air (make-up) = 200 mL/min., Temp 1 = 50°C (1 min.), Temp 2 = 300°C (9 min.), Rate = 10°C/min., Injector=200°C, FID = 300°C. Analysis performed by Nicole Davis.

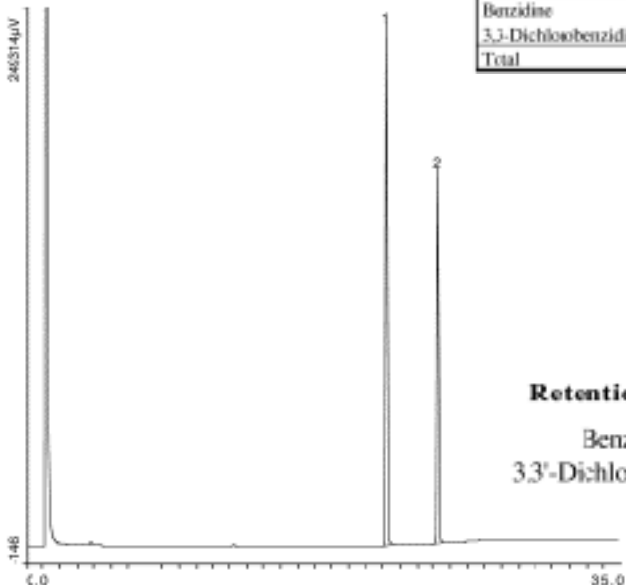
Date: Thu, Jul 18, 2002 2:16 PM  
Data: P10006 L371202-017

Sample: Absolute Standards, Inc. QA/QC Analysis by FID  
P10006 L071202 [2000µg/mL in Methanol]  
Standard Injection=0.1µL, Range=3  
CLP Semi-Volatiles - Benzidine  
SOW July '91

Processing File: GC4-FID-Process File  
Method: GC4-M1  
Sampling Int: 0.1 Seconds  
Data:

Absolute Standards, Inc. P#10006R L#071202  
Supelco, Inc. P#4-8906 LA95505

Analyte	Sup/Abs
	Dev(%) (Sup/Abs) X 100 - 100
Benzidine	-1.57
3,3-Dichlorobenzidine	1.66
Total	-0.25





Method  
**TCLP**  
**(1311)**

## TOXICITY CHARACTERISTIC LEACHING PROCEDURE

### VOLATILE SPIKING MIX

*At stated concentrations (ug/mL) in Methanol:Water [9:1]*

- |      |                      |       |
|------|----------------------|-------|
| (1)  | Benzene              | 5000  |
| (2)  | 2-Butanone           | 10000 |
| (3)  | Carbon tetrachloride | 5000  |
| (4)  | Chlorobenzene        | 5000  |
| (5)  | Chloroform           | 5000  |
| (6)  | 1,4-Dichlorobenzene  | 5000  |
| (7)  | 1,2-Dichloroethane   | 5000  |
| (8)  | 1,1-Dichloroethene   | 5000  |
| (9)  | Tetrachloroethene    | 5000  |
| (10) | Trichloroethene      | 5000  |

**Part # 19236      \$30/ 1 mL**

### VINYL CHLORIDE

*5000 ug/mL in Methanol*

**Part # 19246      \$25/ 1 mL**

### SEMI-VOLATILES SPIKING MIX

*2000 ug/mL in Methylene chloride*

- (1) o-Cresol
- (2) m-Cresol
- (3) p-Cresol
- (4) 1,4-Dichlorobenzene
- (5) 2,4-Dinitrotoluene
- (6) Hexachlorobenzene
- (7) Hexachlorobutadiene
- (8) Hexachloroethane
- (9) Nitrobenzene
- (10) Pentachlorophenol
- (11) Pyridine
- (12) 2,4,5-Trichlorophenol
- (13) 2,4,6-Trichlorophenol

**Part # 19207      \$30/ 1 mL**

**TOXICITY CHARACTERISTIC  
LEACHING PROCEDURE**

Method  
**TCLP  
(1311)**

**HERBICIDE SPIKING MIX**

*2000 ug/mL*

- (1) 2,4-D
- (2) 2,4,5-TP

**Part # 19219 (Underivatized in Acetone) \$25/ 1 mL**  
**Part # 19249 (Methyl derivatives in Hexane) \$25/ 1 mL**

**PESTICIDE SPIKING MIXES**

**MIX #1**

*2000 ug/mL*

- (1) Endrin
- (2) Heptachlor
- (3) Heptachlor epoxide (isomer B)
- (4) Lindane
- (5) Methoxychlor

**Part# 18208 in Methanol \$25/ 1 mL**  
**Part# 18218 in Hexane \$25/ 1 mL**

**MIX #2  
CHLORDANE**

*2000 ug/mL*

**Part# 16208 in Methanol \$25/ 1 mL**  
**Part# 16218 in Hexane \$25/ 1 mL**

**MIX #3  
TOXAPHENE**

*4000 ug/mL*

**Part# 17208 in Methanol \$25/ 1 mL**  
**Part# 17218 in Hexane \$25/ 1 mL**

Method  
**TCLP**  
**(1312)**

**SYNTHETIC PRECIPITATION  
 LEACHING PROCEDURE**

**INDIVIDUAL STOCK SOLUTIONS**

*Each solution 1000 ug/mL in indicated solvent*

	<i>Compound</i>	<i>Solvent</i>	<i>Part #</i>
(1)	Acetone	Methanol : Water [9:1]	79004
(2)	Benzene	Methanol	70025
(2)	n-Butyl alcohol	Methanol	70453
(3)	Carbon disulfide	Methanol	70060
(4)	Carbon tetrachloride	Methanol	70061
(5)	Chlorobenzene	Methanol	70068
(5)	Chloroform	Methanol	70076
(6)	1,2-Dichloroethane	Methanol	70136
(7)	1,1-Dichloroethene	Methanol	70138
(8)	Ethyl acetate	Methanol	70464
(9)	Ethylbenzene	Methanol	70176
(10)	Ethyl ether	Methanol	70153
(11)	Isobutanol	Methanol	70445
(12)	Methanol	Water	71209
(13)	Methylene chloride	Methanol	70212
(14)	Methyl ethyl ketone	Methanol : Water [9:1]	70053
(15)	Methyl isobutyl ketone	Methanol : Water [9:1]	70210
(16)	Tetrachloroethene	Methanol	70279
(17)	Toluene	Methanol	70281
(18)	1,1,1-Trichloroethane	Methanol	70291
(19)	Trichloroethene	Methanol	70293
(20)	Trichlorofluoromethane	Methanol	70294
(21)	1,1,2-Trichlorotrifluoroethane	Methanol	70474
(22)	Vinyl chloride	Methanol	70305
(23)	o-Xylene	Methanol	70307
(24)	m-Xylene	Methanol	70306
(25)	p-Xylene	Methanol	70308

**ALL PART #'S      \$22/ 1 mL**

**SYNTHETIC PRECIPITATION  
LEACHING PROCEDURE**

Method  
**TCLP  
(1312)**

**1312 SEMI-VOLATILES**

*2000 ug/mL in Methylene chloride*

- |                            |                          |
|----------------------------|--------------------------|
| (1) Acenaphthene           | (8) 2,4-Dinitrophenol    |
| (2) beta-BHC               | (9) 2,4-Dinitrotoluene   |
| (3) gamma-BHC (Lindane)    | (10) o-Cresol            |
| (4) bis-2-Chloroethylether | (11) 2,4-Dimethylphenol  |
| (5) 2-Chlorophenol         | (12) Hexachlorobenzene   |
| (6) 1,2-Dichlorobenzene    | (13) Hexachlorobutadiene |
| (7) 1,4-Dichlorobenzene    | (14) Nitrobenzene        |

**Part # 19250    \$30/ 1 mL**

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USP METHOD

**467**

## DETERMINATION OF RESIDUAL ORGANIC SOLVENTS IN PHARMACEUTICAL PREPARATIONS

**International USP 467***Conc. (ug/mL) in Methanol*

(1) Acetonitrile	500
(2) Benzene	1000
(3) Chloroform	500
(4) 1,2-Dichloroethane	1000
(5) 1,4-Dioxane	1000
(6) Methylene chloride	5000
(7) Pyridine	1000
(8) Trichloroethene	1000

**Part # 82455 \$40/ 1 mL****USP Organic Volatile Impurities Mix***Conc. (ug/mL) in Methanol*

(1) Benzene	1000
(2) Chloroform	500
(3) 1,4-Dioxane	1000
(4) Methylene chloride	5000
(5) Trichloroethene	1000

**Part # 82456 \$35/ 1 mL****USP Organic Volatile Impurities Mix (High Conc.)***Conc. (ug/mL) in DMSO*

(1) Benzene	1000
(2) Chloroform	500
(3) 1,4-Dioxane	1000
(4) Methylene chloride	5000
(5) Trichloroethene	1000

**Part # 82457 \$40/ 1 mL****USP Organic Volatile Impurities Mix (Low Conc.)***Conc. (ug/mL) in DMSO*

(1) Benzene	100
(2) Chloroform	50
(3) 1,4-Dioxane	100
(4) Methylene chloride	500
(5) Trichloroethene	100

**Part # 82458 \$40/ 1 mL**

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# UST

Absolute Standards has updated and expanded its UST section. We now offer a more extensive list of current state specific methods, as well as petrochemical mixes. Keep in mind that we can also formulate your own custom designed mix.

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# UST

## PETRO- CHEMICALS

### GASOLINE COMPONENT & HYDROCARBON MIXTURES

#### GASOLINE COMPONENT MIX #1

*2000 ug/mL in Methanol*

- |                            |                              |
|----------------------------|------------------------------|
| (1) 2-Methylbutane         | (11) o-Xylene                |
| (2) m-Xylene               | (12) Ethylbenzene            |
| (3) 2,2,4-Trimethylpentane | (13) Benzene                 |
| (4) Toluene                | (14) p-Xylene                |
| (5) 2-Methylpentane        | (15) 2,3-Dimethylbutane      |
| (6) 1,2,4-Trimethylbenzene | (16) n-Hexane                |
| (7) n-Pentane              | (17) 1-Methyl-3-ethylbenzene |
| (8) 2,3,4-Trimethylpentane | (18) 1-Methyl-4-ethylbenzene |
| (9) 2,3,3-Trimethylpentane | (19) 3-Methylhexane          |
| (10) 3-Methylpentane       |                              |

**Part # 90222     \$35/ 1 mL**

#### GASOLINE COMPONENT MIX #2

*Varied concentrations in Methanol*

<i>Component</i>	<i>Conc. (ug/mL)</i>
(1) 2-Methylpentane	1500
(2) 2,2,4-Trimethylpentane	1500
(3) Heptane	500
(4) Benzene	500
(5) Toluene	1500
(6) Ethylbenzene	500
(7) m-Xylene	1000
(8) p-Xylene	1000
(9) o-Xylene	1000
(10) 1,2,4-Trimethylbenzene	1000

**Part # 90221     \$30/ 1 mL**

#### BTEX

*200 ug/mL in Methanol*

- (1) Benzene
- (2) Toluene
- (3) Ethyl benzene
- (4) o-Xylene
- (5) m-Xylene
- (6) p-Xylene
- (7) MTBE

**Part # 90728     \$25/ 1 mL**

#### BTEX IN GASOLINE 87 OCTANE

*20 mg/mL in Methanol*

**Part # 51146     \$40/ 1 mL**

**GASOLINE COMPONENT &  
HYDROCARBON MIXTURES**

**UST  
PETRO-  
CHEMICALS**

**HYDROCARBON MIX #1**

*2000 ug/mL in Methanol*

C<sub>6</sub> - C<sub>15</sub> n-Hydrocarbons

**Part # 90137     \$30/ 1 mL**

**HYDROCARBON MIX #2**

*2000 ug/mL in Methylene chloride*

C<sub>6</sub> - C<sub>28</sub> n-Hydrocarbons

**Part # 90814     \$40/ 1 mL**

**HYDROCARBON MIX #3**

*1000 ug/mL in Methylene Chloride*

C<sub>8</sub> - C<sub>20</sub> n-Hydrocarbons

**Part # 90967     \$40/ 1 mL**

**HYDROCARBON MIX #4**

*2000 ug/mL in Methylene chloride*

C<sub>6</sub> - C<sub>32</sub> n-Hydrocarbons

**Part # 91259     \$75/ 1 mL**

**DIESEL STANDARD**

*2000 ug/mL in Hexane*

C<sub>10</sub> - C<sub>28</sub> n-Hydrocarbons, Excluding C<sub>27</sub>

**Part # 90138     \$35/ 1 mL**

**VOLATILE GRO MIX**

*2000 ug/mL in Methanol*

- (1) Benzene
- (2) n-Decane
- (3) Ethyl benzene
- (4) n-Heptane
- (5) n-Hexane
- (6) n-Nonane
- (7) n-Octane
- (8) n-Pentane
- (9) Toluene
- (10) 1,2,4-Trimethylbenzene
- (11) 1,3,5-Trimethylbenzene
- (12) o-Xylene
- (13) m-Xylene
- (14) p-Xylene

**Part # 92555     \$75/ 1 mL**

**GASOLINE ADDITIVES  
MIXTURE**

*1000 ug/mL in Methylene chloride*

- (1) Dibromomethane
- (2) 1,2-Dichloroethane
- (3) Ethylene dibromide
- (4) Methyl tert-butyl ether

**Part # 51173     \$30/ 1 mL**



# UST PETRO- CHEMICALS

## INTERNAL STANDARDS AND SURROGATES APPLICABLE TO UST METHODOLOGIES

	<b>Gasoline Range</b>	<b>Part #</b>	<b>Price</b>	<b>ug/mL</b>	<b>Solvent</b>
(1)	4-Bromofluorobenzene	70048	\$22	1000	Methanol
(2)	4-Bromofluorobenzene	90804	\$25	20000	Methanol
(3)	a,a,a-Trifluorotoluene	70299	\$22	1000	Methanol
(4)	a,a,a-Trifluorotoluene	19297	\$25	20000	Methanol
(5)	1-Chlorooctane	72087	\$22	1000	Methanol
(6)	1-Chloro-4-fluorobenzene	70905	\$22	1000	Methanol

	<b>Diesel Range</b>	<b>Part #</b>	<b>Price</b>	<b>ug/mL</b>	<b>Solvent</b>
(1)	p-Terphenyl	71227	\$22	1000	MeCl <sub>2</sub>
(2)	p-Terphenyl	91296	\$35	4000	MeCl <sub>2</sub>
(3)	o-Terphenyl	71225	\$22	1000	Methanol
(4)	o-Terphenyl	91720	\$35	10000	Methanol
(5)	o-Terphenyl	91738	\$30	5000	MeCl <sub>2</sub>
(6)	2-Fluorobiphenyl	70187	\$20	1000	Methanol
(7)	2-Fluorobiphenyl	12009	\$30	4000	MeCl <sub>2</sub>
(8)	5-a-Androstane	70372	\$22	1000	Methanol
(9)	5-a-Androstane	91740	\$30	4000	MeCl <sub>2</sub>
(10)	1-Chlorooctadecane	71604	\$22	1000	Acetone

### RETENTION TIME MARKER SOLUTIONS

*2000 ug/mL in Methylene chloride*

*2000 ug/mL in Methylene chloride*

- (1) n-Hexane
- (2) n-Decane
- (3) n-Dodecane

- (1) n-Decane
- (2) n-Pentacosane
- (3) n-Hexatriacontane

**Part # 51172 \$25/ 1 mL**

**Part # 51183 \$25/ 1 mL**

### LUST RETENTION TIME STANDARD

*2000 ug/mL in Methylene chloride*

- (1) n-Hexane
- (2) n-Decane
- (3) n-Dodecane
- (4) n-Tetracosane
- (5) n-Octacosane
- (6) n-Triacontane
- (7) n-Tetracontane

**Part # 51184 \$30/ 1 mL**

**GASOLINE, DIESEL, JET,  
HOUSEHOLD,  
INDUSTRIAL SOLVENTS**

**UST  
PETRO-  
CHEMICALS**

**MOTOR FUELS AND OILS      \$25/ 1 mL**

<b>Part #</b>	<b>Compound</b>	<b>Solvent</b>	<b>Conc. (mg/mL)</b>
51001	Unleaded Gasoline 93 Octane	in methanol	20
51010	Unleaded Gasoline 87 Octane	in methanol	20
51006	#2 Fuel Oil Diesel	in methylene chloride	20
51016	#2 Fuel Oil Diesel	in methanol	20
51030	SAE 30 W motor oil	in methylene chloride	20
51040	SAE 40 W motor oil	in methylene chloride	20
51050	SAE 50 W motor oil	in methylene chloride	20
51094	Motor Oil Composite Standard	in methylene chloride	50

**Heating Fuels and Oils**

51020	#2 Fuel Oil Home Heating	in methylene chloride	20
51022	Kerosene K2	in methylene chloride	20

**Aviation Fuels and Oils**

51023	Jet A Fuel (Aviation)	in methylene chloride	20
51003	JP-4 Fuel	in methylene chloride	20
51004	JP-5 Fuel	in methylene chloride	20
51007	JP-8 Fuel	in methylene chloride	20
51011	JP-TS	in methylene chloride	20
51014	Hydraulic oil	in methylene chloride	20

**Household & Industrial Solvents**

51015	Lacquer thinner	in methylene chloride	20
51018	Mineral spirits	in methylene chloride	20
51019	Naphtha	in methylene chloride	20
51024	Turpentine	in methylene chloride	20
51025	Stoddard	in methylene chloride	20

**All solutions are \$25/ 1mL**

# UST

## PETRO- CHEMICALS

### OIL REMEDIATION PROTOCOL SPILL RISK ASSESSMENT

#### OIL ANALYSIS STANDARD

100 ug/mL in Hexane/Methylene Chloride (9:1)

- |                    |                         |                             |
|--------------------|-------------------------|-----------------------------|
| (1) n-Decane       | (16) n-Pentacosane      | (31) Fluoranthene           |
| (2) n-Undecane     | (17) n-Hexacosane       | (32) Pyrene                 |
| (3) n-Dodecane     | (18) n-Heptacosane      | (33) Chrysene               |
| (4) n-Tridecane    | (19) n-Octacosane       | (34) Benzo(b)fluoranthene   |
| (5) n-Tetradecane  | (20) n-Nonacosane       | (35) Benzo(k)fluoranthene   |
| (6) n-Pentadecane  | (21) n-Triacontane      | (36) Benzo(e)pyrene         |
| (7) n-Hexadecane   | (22) n-Hentriacontane   | (37) Benzo(a)pyrene         |
| (8) n-Heptadecane  | (23) n-Dotriacontane    | (38) Perylene               |
| (9) n-Octadecane   | (24) n-Tritriacontane   | (39) Indeno(1,2,3 cd)pyrene |
| (10) n-Nonadecane  | (25) n-Tetratriacontane | (40) Dibenzo(a,h)anthracene |
| (11) n-Eicosane    | (26) n-Pentatriacontane | (41) Benzo (g,h,i)perylene  |
| (12) n-Heneicosane | (27) Naphthalene        | (42) Pristane               |
| (13) n-Docosane    | (28) Fluorene           | (43) Phytane                |
| (14) n-Tricosane   | (29) Dibenzothiophene   | (44) Anthracene             |
| (15) n-Tetracosane | (30) Phenanthrene       |                             |

**Part # 90311 \$60/ 1 mL**

#### ALIPHATIC OIL ANALYSIS - MIX #1

200 ug/mL in Methylene Chloride

- |                   |                    |                         |
|-------------------|--------------------|-------------------------|
| (1) n-Decane      | (11) n-Eicosane    | (20) n-Nonacosane       |
| (2) n-Undecane    | (12) n-Heneicosane | (21) n-Triacontane      |
| (3) n-Dodecane    | (13) n-Docosane    | (22) n-Hentriacontane   |
| (4) n-Tridecane   | (14) n-Tricosane   | (23) n-Dotriacontane    |
| (5) n-Tetradecane | (15) n-Tetracosane | (24) n-Tritriacontane   |
| (6) n-Pentadecane | (16) n-Pentacosane | (25) n-Tetratriacontane |
| (7) n-Hexadecane  | (17) n-Hexacosane  | (26) n-Pentatriacontane |
| (8) n-Heptadecane | (18) n-Heptacosane | (27) Pristane           |
| (9) n-Octadecane  | (19) n-Octacosane  | (28) Phytane            |
| (10) n-Nonadecane |                    |                         |

**Part # 91942 \$85/ 1 mL**

#### FUEL OIL DEGRADATION MIXTURE

2000 ug/mL in Methylene chloride

- (1) n-Heptadecane
- (2) n-Octadecane
- (3) Pristane
- (4) Phytane

**Part # 51147 \$30/ 1 mL**

**OIL & GREASE /  
TOTAL PETROLEUM  
HYDROCARBONS (TPH)**

**UST  
PETRO-  
CHEMICALS**

**OIL & GREASE  
EPA METHOD 1664**

*8 mg/mL (Total) in Acetone*

- (1) n-Hexadecane
- (2) Stearic acid

**Part # 91958 \$65/ 100 mL**

**TOTAL PETROLEUM HYDROCARBONS  
EPA METHOD 418.1**

- (1) 2,2,4-Trimethylpentane (Iso-octane) (31.4%)
- (2) n-Hexadecane (35.1%)
- (2) Chlorobenzene (33.5%)

**Part # 71127 \$35/ 5 mL**

**OIL & GREASE- EPA METHOD 413**

*1 mg/mL (Total) in n-Propanol / Glycerol*

- (1) Paraffin Oil
- (2) Cooking oil (Soy)

**Part # 54135 \$25/ 100 mL**

# UST

## PETRO- CHEMICALS

### SKINNER LIST FOR REFINERY WASTE

#### VOLATILES

*200 ug/mL in Methanol/Water [9:1]*

- |                             |                            |
|-----------------------------|----------------------------|
| (1) Benzene                 | (9) Ethylbenzene           |
| (2) Carbon disulphide       | (10) Ethylene dibromide    |
| (3) Chlorobenzene           | (11) Methyl ethyl ketone   |
| (4) Chloroform              | (12) Styrene               |
| (5) 1,2-Dichloroethane      | (13) Toluene               |
| (6) 1,1-Dichloroethane      | (14) Tetrachloroethene     |
| (7) 1,4-Dioxane             | (15) 1,1,1-Trichloroethane |
| (8) Methyl tert-butyl ether | (16) Trichloroethene       |
|                             | (17) Xylenes (total)       |

**Part # 60054     \$40/ 1 mL**

#### SEMI-VOLATILES BASE/NEUTRALS EXTRACTABLES

*200 ug/mL in Methylene chloride*

- |                                |                                      |
|--------------------------------|--------------------------------------|
| (1) Anthracene                 | (15) Diethyl phthalate               |
| (2) Benzo(a)anthracene         | (16) 7,12-Dimethylbenzo(a)anthracene |
| (3) Benzo(b)fluoranthene       | (17) Dimethyl phthalate              |
| (4) Benzo(j)fluoranthene       | (18) Di-n-butyl phthalate            |
| (5) Benzo(k)fluoranthene       | (19) Di-n-octyl phthalate            |
| (6) Benzo(a)pyrene             | (20) Indene                          |
| (7) Bis(2-ethylhexyl)phthalate | (21) Fluoranthene                    |
| (8) Butyl benzyl phthalate     | (22) 6-Methyl chrysene               |
| (9) Chrysene                   | (23) 1-Methylnaphthalene             |
| (10) Dibenzo(a,h)acridine      | (24) Naphthalene                     |
| (11) Dibenzo(a,h)anthracene    | (25) Phenanthrene                    |
| (12) 1,2-Dichlorobenzene       | (26) Pyrene                          |
| (13) 1,3-Dichlorobenzene       | (27) Pyridine                        |
| (14) 1,4-Dichlorobenzene       | (28) Quinoline                       |

**Part # 60003     \$95/ 1 mL**

#### ACID EXTRACTABLES

*200 ug/mL in Methylene chloride*

- |                        |                       |
|------------------------|-----------------------|
| (1) o-Cresol           | (5) 2,4-Dinitrophenol |
| (2) m-Cresol           | (6) 4-Nitrophenol     |
| (3) p-Cresol           | (7) Phenol            |
| (4) 2,4-Dimethylphenol | (8) Thiophenol        |

**Part # 60004     \$30/ 1 mL**

## ALASKA METHOD 101- GRO IN WATER AND SOIL

## UST STATE METHODS

The Alaska 101 method is designed to measure the concentration of gasoline range organics, (GRO) in water and soil. In particular, this method is applicable to n-alkanes ranging from the beginning of C6 to the beginning of C10 in volatile petroleum products with analysis using capillary column GC-FID or PID/FID.

### GRO STANDARD C6-C10

*2000 ug/mL in  
Methylene Chloride*

- (1) n-Hexane
- (2) n-Heptane
- (3) n-Octane
- (4) n-Nonane
- (5) n-Decane

**Part # 51134 \$30/ 1 mL**

### BTEX

*200 ug/mL in  
Methanol*

- (1) Benzene
- (2) Toluene
- (3) Ethyl benzene
- (4) o-Xylene
- (5) m-Xylene
- (6) p-Xylene
- (7) MTBE

**Part # 90728 \$25/ 1 mL**

### UNLEADED GASOLINE 87 OCTANE

*20 mg/mL in Methylene chloride*

**Part # 51028 \$25/ 1 mL**

### UNLEADED GASOLINE 93 OCTANE

*20 mg/mL in Methylene chloride*

**Part # 51035 \$25/ 1 mL**

### AK101 RETENTION TIME VERIFICATION STANDARD

*2000 ug/mL in Methylene chloride*

- (1) n-Hexane
- (2) n-Decane

**Part # 51171 \$25/ 1 mL**

### AK101 INTERNAL STANDARD

*1000 ug/mL in Methanol*

1-Chloro-4-fluorobenzene

**Part # 70905 \$22/ 1 mL**

### AK101 SURROGATE STANDARD

*20 mg/mL in Methanol*

4-Bromofluorobenzene

**Part # 90804 \$25/ 1 mL**

### AK101 SURROGATE STANDARD

*20 mg/mL in Methanol*

a,a,a-Trifluorotoluene

**Part # 19297 \$25/ 1 mL**

# UST STATE METHODS

## ALASKA METHOD 102- DRO IN WATER AND SOIL

The Alaska 102 method is designed to measure the concentration of diesel range organics, (DRO) C10-C25, in water and soil. In particular, this method is applicable to semi-volatile petroleum products with analysis using capillary column GC-FID.

### AK-102 DRO STANDARD C10-C25

*2000 ug/mL in Methylene Chloride*

- (1) n-Decane
- (2) n-Undecane
- (3) n-Dodecane
- (4) n-Tridecane
- (5) n-Tetradecane
- (6) n-Pentadecane
- (7) n-Hexadecane
- (8) n-Heptadecane
- (9) n-Octacosane
- (10) n-Nonadecane
- (11) n-Eicosane
- (12) n-Heneicosane
- (13) n-Docosane
- (14) n-Tricosane
- (15) n-Tetracosane
- (16) n-Pentacosane

**Part # 51175 \$55/ 1 mL**

### AK102 DRO RETENTION TIME WINDOW STANDARD

*2000 ug/mL in Methylene chloride*

- (1) n-Decane
- (2) n-Pentacosane

**Part # 51174 \$25/ 1 mL**

### AK-102 DRO SURROGATE STANDARD

*2000 ug/mL in Methanol*

o-Terphenyl

**Part # 91125 \$25/ 1 mL**

### AK-102 DRO INTERNAL STANDARD

*1000 ug/mL in Methanol*

5-alpha-androstane

**Part # 70372 \$22/ 1 mL**

## ALASKA METHOD 103- RRO IN SOIL

## UST STATE METHODS

The Alaska 103 method is designed to measure the concentration of residual range organics, (RRO) C25-C36, in soil. In particular, this method is applicable to heavy petroleum products including lubricating and motor oils. Analysis employs capillary column GC-FID.

### AK-103 RRO STANDARD C25-C36

*1000 ug/mL in Methylene Chloride*

- (1) n-Pentacosane
- (2) n-Hexacosane
- (3) n-Heptacosane
- (4) n-Octacosane
- (5) n-Nonacosane
- (6) n-Triacontane
- (7) n-Hentriacontane
- (8) n-Dotriacontane
- (9) n-Tritriacontane
- (10) n-Tetratriacontane
- (11) n-Pentatriacontane
- (12) n-Hexatriacontane

**Part # 51176 \$55/ 1 mL**

### AK-103 RRO RETENTION TIME WINDOW SOLUTION

*2000 ug/mL in Methylene chloride*

- (1) n-Pentacosane
- (2) n-Hexatriacontane

**Part # 51177 \$25/ 1 mL**

### AK-103 RRO CALIBRATION STANDARD

*Equal weight%*

30W Motor Oil/ 40W Motor Oil [1:1]

**Part # 51178 \$35/ 1 mL**

### AK-103 RRO SURROGATE STANDARD

*2000 ug/mL in Methylene chloride*

n-Triacontane-d62

**Part # 51180 \$50/ 1 mL**



# UST STATE METHODS

## ARIZONA 8015AZ

### GRO STANDARD C6-C10

*2000 ug/mL in  
Methylene Chloride*

- (1) n-Hexane
- (2) n-Heptane
- (3) n-Octane
- (4) n-Nonane
- (5) n-Decane

**Part # 51134 \$30/ 1 mL**

### SURROGATE STANDARD

*1000 ug/mL in Methanol  
o-Terphenyl*

**Part # 71225 \$22/ 1 mL**

### RETENTION TIME

#### Verification Standard

*2000 ug/mL in Methylene chloride*

- (1) n-Decane
- (2) n-Docosane
- (3) n-Dotriacontane

**Part # 51136 \$25/ 1 mL**

### DRO & ORO STANDARD C10-C32

*2000 ug/mL in Methylene Chloride*

- (1) n-Decane
- (2) n-Undecane
- (3) n-Dodecane
- (4) n-Tridecane
- (5) n-Tetradecane
- (6) n-Pentadecane
- (7) n-Hexadecane
- (8) n-Heptadecane
- (9) n-Octacosane
- (10) n-Nonadecane
- (11) n-Eicosane
- (12) n-Heneicosane
- (13) n-Docosane
- (14) n-Tricosane
- (15) n-Tetracosane
- (16) n-Pentacosane
- (17) n-Hexacosane
- (18) n-Heptacosane
- (19) n-Octacosane
- (20) n-Nonacosane
- (21) n-Triacontane
- (22) n-Hentriacontane
- (23) n-Dotriacontane

**Part # 51135 \$55/ 1 mL**

### 8015AZ CALIBRATION STANDARD

*10 mg/mL in Methylene chloride*

- (1) #2 Diesel
- (2) 10W 30 Motor Oil

**Part # 51096 \$40/ 1 mL**

## CALIFORNIA PVOC/ WIP

**UST**  
**STATE**  
**METHODS**

## STATE OF CALIFORNIA PVOC METHOD

*2000 ug/mL in Methanol*

- |                          |              |
|--------------------------|--------------|
| (1) Benzene              | (5) o-Xylene |
| (2) Toluene              | (6) m-Xylene |
| (3) Ethylbenzene         | (7) p-Xylene |
| (4) Methyl-t-butyl ether |              |

**Part # 90326 \$25/ 1 mL**
**OXYGENATES IN  
 GASOLINE MIX #1**
*2500 ug/mL in Methanol*

- (1) tert-Amyl methyl ether
- (2) tert-Butyl ethyl ether
- (3) Di-isopropyl ether
- (4) Methyl tert-butyl ether (MTBE)

**Part # 92005 \$30/ 1 mL****METHANOL***10 mg/mL in Water***Part # 91684 \$25/ 1 mL****ETHANOL***10 mg/mL in Water***Part # 91683 \$25/ 1 mL**
**OXYGENATES IN  
 GASOLINE MIX #2**
*2000\* ug/mL in Methanol*

- (1) tert-Amyl methyl ether
- (2) tert-Butyl ethyl ether
- (3) Di-isopropyl ether
- (4) Methyl tert-butyl ether (MTBE)
- (5) \* tert-Butanol @ [20,000 ug/mL]

**Part # 92450 \$40/ 1 mL****GLYCOLS STANDARD***5000 ug/mL in Water*

- (1) Ethylene glycol
- (2) Propylene glycol

**Part # 91766 \$25/ 1 mL**
**PURGEABLE AROMATICS  
 LOS ANGELES COUNTY**
**WELL INVESTIGATION PROGRAM (WIP)**

- |                         |                             |
|-------------------------|-----------------------------|
| (1) Benzene             | (7) Methyl tert-butyl ether |
| (2) Chlorobenzene       | (8) Toluene                 |
| (3) Ethylbenzene        | (9) o-Xylene                |
| (4) 1,2-Dichlorobenzene | (10) m-Xylene               |
| (5) 1,3-Dichlorobenzene | (11) p-Xylene               |
| (6) 1,4-Dichlorobenzene |                             |

**Part # 19098 200 ug/mL in Methanol. \$30/ 1 mL****Part # 19198 2000 ug/mL in Methanol. \$40/ 1 mL**

**UST**  
**STATE**  
**METHODS**

**CONNECTICUT EPH**

**CONNECTICUT**  
**n-HYDROCARBONS (EPH)**

*2000 ug/mL in Hexane*

- (1) n-Nonane
- (2) n-Decane
- (3) n-Dodecane
- (4) n-Tetradecane
- (5) n-Hexadecane
- (6) n-Octadecane
- (7) n-Nonadecane
- (8) n-Eicosane
- (9) n-Docosane
- (10) n-Tetracosane
- (11) n-Hexacosane
- (12) n-Octacosane
- (13) n-Triacontane
- (14) n-Hexatriacontane

**Part # 91488 \$40/ 1 mL**

**FLORIDA TPH**

**UST  
STATE  
METHODS**

**FLORIDA-PRO -TOTAL PETROLEUM HYDROCARBONS**

*100 ug/mL in Methylene chloride*

C<sub>8</sub> - C<sub>40</sub> n-Hydrocarbons (Even # Carbons)

**Part # 91407    \$40 / 1 mL**

**FL TPH  
RETENTION TIME MARKER  
SOLUTION**

*2000 ug/mL in Methylene chloride*

- (1) n-Hexane
- (2) n-Decane
- (3) n-Dodecane

**Part # 51172    \$25/ 1 mL**

**FL TPH  
SURROGATE STANDARD**

*1000 ug/mL in Toluene*

n-Nonatriacontane

**Part # 71407    \$22/ 1 mL**

*See Massachusetts UST section (p.351-354)  
for other applicable mixes.*

**UST  
STATE  
METHODS****IOWA OA-1**

IOWA- OA-1 is applicable for the determination of volatile petroleum hydrocarbons found in gasoline in water and soil. Such volatile organic constituents are analyzed by purge and trap gas chromatography with detection by FID or FID/PID.

**IOWA OA-1  
RETENTION TIME  
MARKER SOLUTION**

*2000 ug/mL in Methylene chloride*

- (1) n-Hexane
- (2) n-Decane
- (3) n-Dodecane

**Part # 51172 \$25/ 1 mL**

**UNLEADED GASOLINE  
87 OCTANE**

*20 mg/mL in Methylene chloride*

**Part # 51028 \$25/ 1 mL**

**UNLEADED GASOLINE  
93 OCTANE**

*20 mg/mL in Methylene chloride*

**Part # 51035 \$25/ 1 mL**

**IOWA BTEX MIX**

*2000 ug/mL in Methanol*

- |                   |                      |
|-------------------|----------------------|
| (1) Benzene       | (6) Isopropylbenzene |
| (2) Toluene       | (7) o-Xylene         |
| (3) Ethyl benzene | (8) m-Xylene         |
| (4) MTBE          | (9) p-Xylene         |
| (5) Naphthalene   |                      |

**Part # 51181 \$35/ 1 mL**

## IOWA OA-2

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**UST**  
**STATE**  
**METHODS**


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IOWA- OA-2 is applicable for the gas chromatographic determination of low volatile petroleum products and related organic constituents found in water and solid matrices. Identity may be determined using GC/MS and chromatographic overlaying is acceptable.

Part #	Compound	Solvent	mg/mL
51006	#2 Fuel Oil Diesel	in methylene chloride	20
51016	#2 Fuel Oil Diesel	in methanol	20
51030	SAE 30 W motor oil	in methylene chloride	20
51040	SAE 40 W motor oil	in methylene chloride	20
51050	SAE 50 W motor oil	in methylene chloride	20
51094	Motor Oil Composite Standard	in methylene chloride	50
51020	#2 Fuel Oil Home Heating	in methylene chloride	20
51022	Kerosene K2	in methylene chloride	20
51014	Hydraulic oil	in methylene chloride	20
51015	Lacquer thinner	in methylene chloride	20
51018	Mineral spirits	in methylene chloride	20
51019	Naphtha	in methylene chloride	20
51024	Turpentine	in methylene chloride	20
51025	Stoddard	in methylene chloride	20

**All Petroleum products- \$25/ 1mL**

**IOWA OA-2**  
**RETENTION TIME MARKER SOLUTION**

*2000 ug/mL in Methylene chloride*

- (1) n-Decane
- (2) n-Pentacosane
- (3) n-Hexatriacontane

**Part # 51183 \$25/ 1 mL**

# UST STATE METHODS

## MAINE GRO & DRO

### GRO ANALYTES

1000 ug/mL in Methanol

- (1) Benzene
- (2) Toluene
- (3) Ethyl benzene
- (4) o-Xylene
- (5) m-Xylene
- (6) p-Xylene
- (7) 1,2,4-Trimethylbenzene
- (8) 1,3,5-Trimethylbenzene
- (9) MTBE
- (10) Napthalene

### DRO ANALYTES

in Hexane

- (1) Decane
- (2) Dodecane
- (3) Tetradecane
- (4) Hexadecane
- (5) Octadecane
- (6) Eicosane
- (7) Docosane
- (8) Tetracosane
- (9) Hexacosane
- (10) Octacosane

**Part # 90379 \$30/ 1 mL**

**Part # 90322 @ 2000 ug/mL \$30/ 1 mL**

**Part # 91034 @ 10000 mg/mL \$45/ 1 mL**

### GASOLINE COMPONENTS

Varied Concentrations in Methanol

Component	(ug/mL)
(1) Benzene	500
(2) Toluene	1500
(3) Ethyl benzene	500
(4) o-Xylene	1000
(5) m-Xylene	1000
(6) p-Xylene	1000
(7) 1,2,4-Trimethylbenzene	1000
(8) 2,2,4-Trimethylpentane	1500
(9) Heptane	500
(10) 2-Methylpentane	1500

**Part # 90221 \$30/ 1 mL**

### SURROGATE STANDARDS

DRO	o-Terphenyl	71225	\$22	1000	Methanol
DRO	o-Terphenyl	91125	\$25	2000	Methanol
DRO	p-Terphenyl	71227	\$22	1000	MeCl <sub>2</sub>
DRO	5-alpha-androstane	70372	\$22	1000	Methanol
GRO	4-Bromofluorobenzene	70048	\$22	1000	Methanol
GRO	4-Bromofluorobenzene	19267	\$25	2000	Methanol
*GRO	a,a,a-Trifluorotoluene	70299	\$22	1000	Methanol

\*(Soil Matrix)

**MASSACHUSETTS EPH**  
**REV 1.1**

**UST**  
**STATE**  
**METHODS**

**Aromatic Hydrocarbons**  
**(EPH)**

*2000 ug/mL in Methylene chloride*

- (1) Acenaphthene
- (2) Acenaphthylene
- (3) Anthracene
- (4) Benzo(a)anthracene
- (5) Benzo(a)pyrene
- (6) Benzo(b)fluoranthene
- (7) Benzo(k)fluoranthene
- (8) Benzo(g,h,i)perylene
- (9) Chrysene
- (10) Dibenzo(a,h)anthracene
- (11) Fluoranthene
- (12) Fluorene
- (13) Indeno(1,2,3-cd)pyrene
- (14) 2-Methylnaphthalene
- (15) Naphthalene
- (16) Phenanthrene
- (17) Pyrene

**Part # 51073    \$50/ 1 mL**  
**Part # 50003    \$200/ 5 mL**

**n-Hydrocarbons**  
**(EPH)**

*2000 ug/mL in Hexane*

- (1) n-Nonane
- (2) n-Decane
- (3) n-Dodecane
- (4) n-Tetradecane
- (5) n-Hexadecane
- (6) n-Octadecane
- (7) n-Nonadecane
- (8) n-Eicosane
- (9) n-Docosane
- (10) n-Tetracosane
- (11) n-Hexacosane
- (12) n-Octacosane
- (13) n-Triacontane
- (14) n-Hexatriacontane

**Part # 91488    \$40/ 1 mL**  
**Part # 93459    \$175/ 5 mL**

**LABORATORY METHOD BLANKS (LMB)**

**Water Blank LMB (VPH)**

*40 mL in VOA Vial*

**Part # 51091    \$22/ 40 mL**

**Soil LMB (Organics)**

*10 g in VOA Vial*

**Part # 91915    \$50/ 10 g**



# UST STATE METHODS

## MASSACHUSETTS EPH REV 1.1

### Matrix Spike (EPH)

*200 ug/mL in*

*Hexane:Methylene chloride[9:1]*

- (1) Acenaphthene
- (2) Acenaphthylene
- (3) Anthracene
- (4) Benzo(a)anthracene
- (5) Benzo(a)pyrene
- (6) Benzo(b)fluoranthene
- (7) Benzo(k)fluoranthene
- (8) Benzo(g,h,i)perylene
- (9) Chrysene
- (10) Dibenzo(a,h)anthracene
- (11) Fluoranthene
- (12) Fluorene
- (13) Indeno(1,2,3-cd)pyrene
- (14) 2-Methylnaphthalene
- (15) Naphthalene
- (16) Phenanthrene
- (17) Pyrene
- (18) n-Nonane
- (19) n-Decane
- (20) n-Dodecane
- (21) n-Tetradecane
- (22) n-Hexadecane
- (23) n-Octadecane
- (24) n-Nonadecane
- (25) n-Eicosane
- (26) n-Docosane
- (27) n-Tetracosane
- (28) n-Hexacosane
- (29) n-Octacosane
- (30) n-Triacontane
- (31) n-Hexatriacontane

**Part # 51074 \$40/ 1 mL**

### Matrix Spike (EPH)

*2000 ug/mL in Methylene chloride*

- (1) n-Nonane
- (2) n-Tetradecane
- (3) n-Nonadecane
- (4) n-Eicosane
- (5) n-Octacosane
- (6) Acenaphthene
- (7) Anthracene
- (8) Chrysene
- (9) Naphthalene
- (10) Pyrene

**Part # 91489 \$40/ 1 mL**

### Fractionation Surrogate (EPH)

*2000 ug/mL in Hexane*

- (1) 2-Fluorobiphenyl
- (2) 2-Bromonaphthalene

**Part # 51089 \$25/ 1 mL**

### Surrogate Spike (EPH)

*2000 ug/mL in Acetone*

- (1) o-Terphenyl
- (2) 1-Chlorooctadecane

**Part # 51075 \$25/ 1 mL**

### Petroleum Reference Standard #2 Fuel Oil Diesel (EPH)

*1 mg/mL in Hexane*

**Part # 51092 \$22/ 1 mL**

**MASSACHUSETTS VPH**  
**REV 1.1**

**UST**  
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**VPH Primary Calibration Spike**

*Varied ug/mL in Methanol*

(1) Benzene	500
(2) Toluene	1500
(3) Ethyl benzene	500
(4) o-Xylene	1000
(5) m-Xylene	1000
(6) p-Xylene	1000
(7) 1,2,4-Trimethylbenzene	1000
(8) Methyl tert-butyl ether	1500
(9) Naphthalene	1000
(10) n-Pentane	1000
(11) 2-Methylpentane	1500
(12) 2,2,4-Trimethylpentane	1500
(13) n-Nonane	1000
(14) 2,5-Dibromotoluene	1000
(15) n-Decane	1000
(16) n-Butylcyclohexane	1000

**Part # 51166 \$50/ 1 mL**

**VPH Primary Calibration**

*2000 ug/mL in Methanol*

(1) Benzene
(2) Toluene
(3) Ethyl benzene
(4) o-Xylene
(5) m-Xylene
(6) p-Xylene
(7) 1,2,4-Trimethylbenzene
(8) Methyl tert-butyl ether (MTBE)
(9) Naphthalene
(10) n-Pentane
(11) 2-Methylpentane
(12) 2,2,4-Trimethylpentane
(13) n-Nonane
(14) n-Decane
(15) n-Butylcyclohexane

**Part # 51167 \$50/ 1 mL**

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**UST**  
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**MASSACHUSETTS VPH**  
**REV 1.1****VPH Matrix Spike***50 ug/mL in Methanol*

- (1) Benzene
- (2) Toluene
- (3) Ethyl benzene
- (4) o-Xylene
- (5) m-Xylene
- (6) p-Xylene
- (7) 1,2,4-Trimethylbenzene
- (8) Methyl tert-butyl ether
- (9) Naphthalene
- (10) n-Pentane
- (11) 2-Methylpentane
- (12) 2,2,4-Trimethylpentane
- (13) n-Nonane
- (14) 2,5-Dibromotoluene
- (15) n-Decane
- (16) n-Butylcyclohexane

**Part # 93624 \$35/ 1 mL****VPH Surrogate Spike***5000 ug/mL in Methanol*

2,5-Dibromotoluene

**Part # 91771 \$25/ 1 mL****LABORATORY METHOD BLANKS (LMB)****Water Blank LMB (VPH)***40 mL in VOA Vial***Part # 51091 \$22/ 40 mL****Soil LMB (Organics)***10 g in VOA Vial***Part # 91915 \$50/ 10 g**

**MICHIGAN GRO**

**UST  
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METHODS**

**MICHIGAN GRO MIX**

*14 components @ 2000 ug/mL in Methanol*

- |                             |                             |
|-----------------------------|-----------------------------|
| (1) Benzene                 | (8) Naphthalene             |
| (2) 1,2-Dibromoethane       | (9) Toluene                 |
| (3) 1,2-Dichloroethane      | (10) 1,2,4-Trimethylbenzene |
| (4) Ethylbenzene            | (11) 1,3,5-Trimethylbenzene |
| (5) Isopropylbenzene        | (12) o-Xylene               |
| (6) 2-Methylnaphthalene     | (13) m-Xylene               |
| (7) Methyl tert-butyl ether | (14) p-Xylene               |

**Part # 51182    \$40/ 1 mL**

# UST STATE METHODS

## MISSISSIPPI GRO & DRO

### GRO Standard

*Varied ug/mL in Methanol*

(1)	Benzene	5000
(2)	Toluene	15000
(3)	Ethyl benzene	5000
(4)	o-Xylene	10000
(5)	m-Xylene	10000
(6)	p-Xylene	10000
(7)	1,2,4-Trimethylbenzene	10000
(8)	2-Methylpentane	15000
(9)	2,2,4-Trimethylpentane	15000
(10)	n-Heptane	5000

**Part # 51179 \$40/ 1 mL**

### Tennessee / Mississippi Diesel Standard

**\*C10-C28**

*\*does not include C27*

*2000 ug/mL in Hexane*

- (1) Decane
- (2) Undecane
- (3) Dodecane
- (4) Tridecane
- (5) Tetradecane
- (6) Pentadecane
- (7) Hexadecane
- (8) Heptadecane
- (9) Octadecane
- (10) Nonadecane
- (11) Eicosane
- (12) Heneicosane
- (13) Docosane
- (14) Tricosane
- (15) Tetracosane
- (16) Pentacosane
- (17) Hexacosane
- (18) Octacosane

**Part # 90138 \$35/ 1 mL**

## NEW JERSEY &amp; NEW YORK

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**UST**  
**STATE**  
**METHODS**


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**NJ-TRPH***200 ug/mL in Methylene Chloride*

- |                    |                          |
|--------------------|--------------------------|
| (1) n-Decane       | (15) n-Tetracosane       |
| (2) n-Undecane     | (16) n-Pentacosane       |
| (3) n-Dodecane     | (17) n-Hexacosane        |
| (4) n-Tridecane    | (18) n-Heptacosane       |
| (5) n-Tetradecane  | (19) n-Octacosane        |
| (6) n-Pentadecane  | (20) n-Nonacosane        |
| (7) n-Hexadecane   | (21) n-Triacontane       |
| (8) n-Heptadecane  | (22) n-Hentriacontane    |
| (9) n-Octadecane   | (23) n-Dotriacontane     |
| (10) n-Nonadecane  | (24) n-Tritriacontane    |
| (11) n-Eicosane    | (25) n-Tetraatriacontane |
| (12) n-Heneicosane | (26) n-Pentatriacontane  |
| (13) n-Docosane    | (27) Pristane            |
| (14) n-Tricosane   | (28) Phytane             |

**Part # 91942 \$85/ 1 mL****NYSDEC STARS VOA***16 components @ 2000 ug/mL in Methanol*

- |                          |                             |
|--------------------------|-----------------------------|
| (1) Benzene              | (9) Naphthalene             |
| (2) n-Butylbenzene       | (10) n-Propylbenzene        |
| (3) sec-Butylbenzene     | (11) Toluene                |
| (4) tert-Butylbenzene    | (12) 1,2,4-Trimethylbenzene |
| (5) Ethylbenzene         | (13) 1,3,5-Trimethylbenzene |
| (6) Isopropylbenzene     | (14) o-Xylene               |
| (7) 4-Isopropyltoluene   | (15) m-Xylene               |
| (8) Methyl t-butyl ether | (16) p-Xylene               |

**Part # 92028 \$35/ 1 mL****NYSDEC STARS PAH***16 components @ 2000 ug/mL in Methylene chloride*

- |                        |   |
|------------------------|---|
| (1) Naphthalene        | (9) Benzo(b)fluoranthene                  |
| (2) Anthracene         | (10) Benzo(k)fluoranthene                 |
| (3) Fluorene           | (11) Chrysene                             |
| (4) Phenanthrene       | (12) Benzo(a)pyrene                       |
| (5) Pyrene             | (13) Benzo(g,h,i)perylene                 |
| (6) Acenaphthene       | (14) Indeno(1,2,3-cd)perylene             |
| (7) Benzo(a)anthracene | (15) Dibenz(a,h)anthracene                |
| (8) Fluoranthene       | (16) *Acenaphthylene(*additional analyte) |

**Part # 10007 \$65/ 1 mL**

# UST STATE METHODS

## NORTHWEST REGION TPH METHODS

NWTPH-HCID is a screening method for the qualification of the presence of petroleum producers. Upon this determination, method NWTPH-Gx and/or method NWTPH-Dx may be employed for the quantification of gasoline and diesel, respectively.

### NWTPH-HCID Retention Time Mix

*2500 ug/mL in Methylene chloride*

- (1) n-Dodecane
- (2) n-Tetracosane
- (3) Toluene

**Part # 51137    \$25/ 1 mL**

### NWTPH-HCID Surrogate Mix

*5000 ug/mL in Methylene chloride*

- (1) 4-Bromofluorobenzene
- (2) n-Pentacosane

**Part # 51138    \$25/ 1 mL**

### NWTPH-Gx Surrogate Mix

*2500 ug/mL in Methylene chloride*

- (1) 4-Bromofluorobenzene
- (2) 1,4-Difluorobenzene

**Part # 51139    \$25/ 1 mL**

NWTPH-Dx Surrogates	Part #	Price	ug/mL	Solvent
(1) 2-Fluorobiphenyl	12009	\$30	4000	MeCl <sub>2</sub>
(2) o-Terphenyl	91738	\$30	5000	MeCl <sub>2</sub>
(3) p-Terphenyl	91296	\$35	4000	MeCl <sub>2</sub>
(4) n-Pentacosane	70977	\$22	1000	MeCl <sub>2</sub>

**PENNSYLVANIA PVOC**

**UST**  
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**Pennsylvania PVOC Method**

*2000 ug/mL in Methanol*

- (1) Benzene
- (2) Toluene
- (3) Ethyl benzene
- (4) o-Xylene
- (5) m-Xylene
- (6) p-Xylene
- (7) Methyl tert-butyl ether (MTBE)
- (8) Naphthalene
- (9) Isopropyl benzene
- (10) 1,2-Dibromoethane
- (11) 1,2-Dichloroethane

**Part # 92061 \$30/ 1 mL**



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**UST**  
**STATE**  
**METHODS**

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**TENNESSEE GRO**

The TN GRO method measures the concentration of C6-C12 n-alkanes in water and soil. Analysis of such gasoline range organics is performed by purge and trap GC-FID or FID/PID for the measurement of BTEX.

**Tennessee GRO Standard***Varied ug/mL in Methanol*

(1)	Benzene	5000
(2)	Toluene	15000
(3)	Ethyl benzene	5000
(4)	o-Xylene	10000
(5)	m-Xylene	10000
(6)	p-Xylene	10000
(7)	1,2,4-Trimethylbenzene	10000
(8)	2-Methylpentane	15000
(9)	2,2,4-Trimethylpentane	15000
(10)	n-Heptane	5000

**Part # 51179 \$40/ 1 mL****Gasoline Standard***20 mg/mL in Methanol*

87 Octane Unleaded Gasoline

**Part # 51010 \$25/ 1 mL****TN GRO****Surrogate Spike***20 mg/mL in Methanol*

Isopropyltoluene

**Part # 32341 \$25/ 1 mL**

## TENNESSEE EPH

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**UST**  
**STATE**  
**METHODS**


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The TN EPH method measures the amount of Extractable Petroleum Hydrocarbons in water and soil. Analysis of n-alkanes C12-C40 in the mid to late range petroleum products is performed by GC-FID.

**Tennessee / Mississippi  
 Diesel Standard**
**\*C10-C28***\*does not include C27**2000 ug/mL in Hexane*

- (1) Decane
- (2) Undecane
- (3) Dodecane
- (4) Tridecane
- (5) Tetradecane
- (6) Pentadecane
- (7) Hexadecane
- (8) Heptadecane
- (9) Octadecane
- (10) Nonadecane
- (11) Eicosane
- (12) Heneicosane
- (13) Docosane
- (14) Tricosane
- (15) Tetracosane
- (16) Pentacosane
- (17) Hexacosane
- (18) Octacosane

**Part # 90138 \$35/ 1 mL**
**TN EPH  
 Surrogate Spike**
*2000 ug/mL in Methanol*

o-Terphenyl

**Part # 91125 \$22/ 1 mL****n-Hydrocarbon Mix***100 ug/mL in Methylene chloride*C<sub>8</sub> - C<sub>40</sub> n-Hydrocarbons (Even # Carbons)**Part # 91407 \$40/ 1 mL**
**TN EPH  
 by GC/FID**
*10 mg/mL in Methylene chloride*

10W 30 Oil/ #2 Diesel Fuel [1:1]

**Part # 51096 \$40/ 1 mL**
**TN EPH  
 Laboratory Control Sample**
*20 mg/mL in Methylene chloride*

#2 Fuel Oil Diesel

**Part # 51006 \$25/ 1 mL**
**TN EPH  
 Internal Standard**
*1000 ug/mL in Methanol*

5-alpha-androstane

**Part # 70372 \$22/ 1 mL**

# UST STATE METHODS

## TEXAS TNRCC METHODS 1005 & 1006

### TX1005 Retention Marker Mix

*500 ug/mL in n-Pentane*

- (1) n-Hexane
- (2) n-Decane
- (3) n-Dodecane
- (4) n-Octacosane
- (5) n-Pentatriacontane

**Part # 92934 \$50/ 1 mL**

### TX1005 Surrogate Mix

*10 mg/mL in n-Pentane*

- (1) 1-Chlorooctadecane
- (2) 1-Chlorooctane

**Part # 51043 \$35/ 5 mL**

### TX 1005 Surrogate Spike C6-C12 Range

*1000 ug/mL in Acetone*

1-Chlorooctadecane

**Part # 71674 \$22/ 1 mL**

### TX 1005 Surrogate Spike >C12 Range

*1000 ug/mL in Methanol*

o-Terphenyl

**Part # 71225 \$22/ 1 mL**

### TNRCC 1005 TPH as Petroleum Hydrocarbons

*2000 ug/mL in Methylene chloride*

C6-C28 inclusive

**Part # 90814 \$40/ 1 mL**

### TX1005/ 1006 TPH Calibration Standard

*in n-Pentane*

- (1) #2 Fuel Oil (Diesel)
- (2) Unleaded Gasoline 87 Octane

**Part # 93035 20 mg/mL \$50/ 1 mL**

**Part # 92804 10 mg/mL \$40/ 1 mL**

### TX 1005 Surrogate Spike C6-C12 Range

*1000 ug/mL in Methanol*

a,a,a-Trifluorotoluene

**Part # 70299 \$22/ 1 mL**

### TX 1005 Surrogate Spike >C12 Range

*1000 ug/mL in Methanol*

2-Fluorobiphenyl

**Part # 70187 \$22/ 1 mL**

**WASHINGTON VPH**

**UST  
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**WA VPH Standard**

*1000 ug/mL in Methanol*

- (1) Benzene
- (2) n-Decane
- (3) n-Dodecane
- (4) Ethylbenzene
- (5) n-Hexane
- (6) 1-Methylnaphthalene
- (7) Methyl tert-butyl ether (MTBE)
- (8) Naphthalene
- (9) n-Octane
- (10) n-Pentane
- (11) Toluene
- (12) 1,2,3-Trimethylbenzene
- (13) m-Xylene
- (14) o-Xylene
- (15) p-Xylene

**Part # 51140 \$35/ 1 mL**

**WA VPH Marker Standard**

*1000 ug/mL in Methanol*

- (1) n-Decane
- (2) n-Dodecane
- (3) n-Hexane
- (4) 1-Methylnaphthalene
- (5) Naphthalene
- (6) n-Octane
- (7) n-Pentane
- (8) Toluene

**Part # 51141 \$30/ 1 mL**

**WA VPH  
SURROGATE STANDARD**

*5000 ug/mL in Methanol*

2,5-Dibromotoluene

**Part # 91771 \$25/ 1 mL**

# UST STATE METHODS

## WASHINGTON EPH

### WA EPH Aromatic Hydrocarbons

1000 ug/mL in Methylene Chloride

- (1) Acenaphthene
- (2) Benzo(g,h,i)perylene
- (3) Naphthalene
- (4) Pyrene
- (5) Toluene
- (6) 1,2,3-Trimethylbenzene

**Part # 51142 \$30/ 1 mL**

### WA EPH Aliphatic Hydrocarbons

1000 ug/mL in Hexane

- (1) n-Octane
- (2) n-Decane
- (3) n-Dodecane
- (4) n-Hexadecane
- (5) n-Heneicosane
- (6) n-Tetratriacontane

**Part # 51143 \$30/ 1 mL**

### WA EPH Fractionation Check Mix

25 ug/mL in Hexane

- (1) n-Octane
- (2) n-Decane
- (3) n-Dodecane
- (4) n-Hexadecane
- (5) n-Heneicosane
- (6) n-Tetratriacontane
- (7) Acenaphthene
- (8) Acenaphthylene
- (9) Anthracene
- (10) Benzo(a)anthracene
- (11) Benzo(b)fluoranthene
- (12) Benzo(k)fluoranthene
- (13) Benzo(g,h,i)perylene
- (14) Chrysene
- (15) Dibenzo(a,h)anthracene
- (16) Fluoranthene
- (17) Fluorene
- (18) Indeno(1,2,3-cd)pyrene
- (19) Naphthalene
- (20) Phenanthrene
- (21) Pyrene
- (22) Benzo(a)pyrene

**Part # 51144 \$50/ 1 mL**

### WA EPH Matrix Spike Mix

250 ug/mL in Acetone

- (1) n-Decane
- (2) n-Dodecane
- (3) n-Hexadecane
- (4) n-Heneicosane
- (5) Acenaphthene
- (6) Anthracene
- (7) Benzo(a)pyrene
- (8) Benzo(g,h,i)perylene
- (9) Naphthalene
- (10) Pyrene

**Part # 51145 \$35/ 1 mL**

### WA EPH Surrogate mix

2000 ug/mL in Acetone

- (1) o-Terphenyl
- (2) 1-Chlorooctadecane

**Part # 51075 \$25/ 1 mL**

### Internal Standard 1,2,3-Trimethylbenzene

1000 ug/mL in Methanol

**Part # 70944 \$22/ 1 mL**

## WISCONSIN GRO & DRO

## UST STATE METHODS

### GRO ANALYTES

*1000 ug/mL in Methanol*

- (1) Benzene
- (2) Toluene
- (3) Ethyl benzene
- (4) o-Xylene
- (5) m-Xylene
- (6) p-Xylene
- (7) 1,2,4-Trimethylbenzene
- (8) 1,3,5-Trimethylbenzene
- (9) MTBE
- (10) Napthalene

**Part # 90379    \$30/ 1 mL**

### DRO ANALYTES

*in Hexane*

- (1) Decane
- (2) Dodecane
- (3) Tetradecane
- (4) Hexadecane
- (5) Octadecane
- (6) Eicosane
- (7) Docosane
- (8) Tetracosane
- (9) Hexacosane
- (10) Octacosane

**Part # 90322 @ 2000ug/mL    \$30/ 1 mL**

**Part # 91034 @ 10 mg/mL    \$45/ 1 mL**

### GASOLINE COMPONENTS

*Varied Concentrations in Methanol*

<i>Component</i>	<i>(ug/mL)</i>
(1) Benzene	500
(2) Toluene	1500
(3) Ethyl benzene	500
(4) o-Xylene	1000
(5) m-Xylene	1000
(6) p-Xylene	1000
(7) 1,2,4-Trimethylbenzene	1000
(8) 2,2,4-Trimethylpentane	1500
(9) Heptane	500
(10) 2-Methylpentane	1500

**Part # 90221    \$30/ 1 mL**

### SURROGATE STANDARDS

DRO	o-Terphenyl	71225	\$22	1000	Methanol
DRO	o-Terphenyl	91125	\$25	2000	Methanol
DRO	p-Terphenyl	71227	\$22	1000	MeCl <sub>2</sub>
DRO	5-alpha-androstane	70372	\$22	1000	Methanol
GRO	4-Bromofluorobenzene	70048	\$22	1000	Methanol
GRO	4-Bromofluorobenzene	19267	\$25	2000	Methanol
*GRO	a,a,a-Trifluorotoluene	70299	\$22	1000	Methanol

\* (Soil Matrix)

# WATER PROTOCOL

## EPA CONSENT DECREE WATER PROTOCOL

### PURGEABLE MIXTURES

#### MIX A

200 ug/mL in Methanol

- (1) Carbon tetrachloride
- (2) Chlorobenzene
- (3) Chloroform
- (4) Dibromochloromethane
- (5) 1,1-Dichloroethane
- (6) 1,1-Dichloroethene
- (7) 1,2-Dichloropropane
- (8) Methylene chloride
- (9) Tetrachloroethene
- (10) 1,1,2-Trichloroethane
- (11) Trichloroethene
- (12) Trichlorofluoromethane

**Part # 19232 \$30/ 1 mL**

#### MIX B

200 ug/mL in Methanol

- (1) Benzene
- (2) Bromodichloromethane
- (3) Bromoform
- (4) 1,2-Dichloroethane
- (5) trans-1,2-Dichloroethene
- (6) cis-1,3-Dichloropropene
- (7) trans-1,3-Dichloropropene
- (8) Ethyl benzene
- (9) 1,1,2,2-Tetrachloroethane
- (10) Toluene
- (11) 1,1,1-Trichloroethane

**Part # 19233 \$30/ 1 mL**

#### MIX C

200 ug/mL in Methanol

- (1) Bromomethane
- (2) Chloroethane
- (3) Chloromethane
- (4) Dichlorodifluoromethane
- (5) Vinyl chloride

**Part # 91333 \$25/1 mL**

#### MIX D

2000 ug/mL in Methanol

2-Chloroethyl vinyl ether

**Part # 82408 \$25/ 1 mL**

#### Acrolein

1000 ug/mL in Water

**Part # 79005 \$30/ 1 mL**

#### Acrylonitrile

1000 ug/mL in Methanol

**Part # 79007 \$22/ 1 mL**

#### Internal Standard

20 mg/mL in Methanol

- (1) Bromochloromethane
- (2) 1,4-Dichlorobutane
- (3) 2-Bromo-1-chloropropane

**Part # 19094 \$25/ 1 mL**

### Pesticide & PCB Mix

At stated concentrations (ug/mL) in Methanol

(1) Aldrin	100	(9) Dieldrin	200
(2) a-BHC	100	(10) Endosulfan I	200
(3) b-BHC	100	(11) Endosulfan II	200
(4) g-BHC	100	(12) Endosulfan sulfate	600
(5) d-BHC	100	(13) Endrin	200
(6) 4,4'-DDD	600	(14) Endrin aldehyde	600
(7) 4,4'-DDE	200	(15) Heptachlor	100
(8) 4,4'-DDT	600	(16) Heptachlor epoxide (isomer B)	100

**Part # 41001 \$30/ 1 mL**

### Chlordane & Toxaphene

At stated concentrations in Methanol.

- (1) Chlordane 20 ug/mL
- (2) Toxaphene 200 ug/mL

**Part # 41002 \$25/ 1 mL**

#### Aroclor Mix #1

200 ug/mL in Methanol

- (1) Aroclor 1016
- (2) Aroclor 1232
- (3) Aroclor 1248
- (4) Aroclor 1260

**Part # 41003 \$25/ 1 mL**

#### Aroclor Mix #2

200 ug/mL in Methanol

- (1) Aroclor 1221
- (2) Aroclor 1242
- (3) Aroclor 1254

**Part # 41004 \$25/ 1 mL**

## EPA CONSENT DECREE WATER PROTOCOL

## WATER PROTOCOL

### BASE/ NEUTRAL MIXTURES

#### MIX #1

*500 ug/mL in Methylene chloride*

- (1) Acenaphthene
- (2) Benzo(b)fluoranthene
- (3) 4-Bromophenyl phenyl ether
- (4) Di-n-butyl phthalate
- (5) Bis(2-chloroethyl) ether
- (6) Bis(2-chloroisopropyl) ether
- (7) 1,4-Dichlorobenzene
- (8) 3,3'-Dichlorobenzidine
- (9) Dimethyl phthalate
- (10) 2,6-Dinitrotoluene
- (11) Bis(2-ethylhexyl) phthalate
- (12) Nitrobenzene

**Part # 19114    \$30/ 1 mL**

#### MIX #3

*500 ug/mL in Methylene chloride*

- (1) Azobenzene
- (2) Benzyl butyl phthalate
- (3) 2-Chloronaphthalene
- (4) Fluoranthene
- (5) Hexachlorocyclopentadiene
- (6) Hexachloroethane
- (7) Isophorone
- (8) N-Nitrosodi-n-propylamine
- (9) N-Nitrosodiphenylamine
- (10) Phenanthrene
- (11) 1,2,4-Trichlorobenzene

**Part # 19116    \$30/ 1 mL**

#### MIX #2

*500 ug/mL in Methylene chloride*

- (1) Acenaphthene
- (2) Anthracene
- (3) Benzo(a)anthracene
- (4) Bis(2-chloroethoxy) methane
- (5) Chrysene(5)
- (6) Dibenzo(a,h)anthracene
- (7) 1,3-Dichlorobenzene
- (8) 1,2-Dichlorobenzene
- (9) Diethyl phthalate
- (10) 2,4-Dinitrotoluene
- (11) Fluorene
- (12) Hexachlorobenzene
- (13) Hexachlorobutadiene
- (14) Naphthalene
- (15) Pyrene

**Part # 19115    \$30/ 1 mL**

#### MIX #4

*500 ug/mL in Methylene chloride*

- (1) Benzidine
- (2) Benzo(a)pyrene
- (3) Benzo(g,h,i)perylene
- (4) Benzo(k)fluoranthene
- (5) 4-Chlorophenyl phenyl ether
- (6) Di-n-octyl phthalate
- (7) Indeno(1,2,3-cd)pyrene
- (8) N-Nitrosodimethylamine

**Part # 19117    \$30/ 1 mL**

### ACID MIXTURE

	<i>(ug/mL)</i>
(1) 4-Chloro-3-methyl phenol	2500
(2) 2-Chlorophenol	500
(3) 2,4-Dichlorophenol	500
(4) 2,4-Dimethylphenol	500
(5) 2-Methyl-4,6-dinitrophenol	2500
(6) 2,4-Dinitrophenol	1500
(7) 2-Nitrophenol	500
(8) 4-Nitrophenol	2500
(9) Pentachlorophenol	2500
(10) Phenol	500
(11) 2,4,6-Trichlorophenol	1500

**Part # 19092 in Methanol    \$30/ 1 mL**

**Part # 40010 in Methylene Chloride    \$30/ 1 mL**

### Internal Standard

*2000 ug/mL in  
Methylene chloride*

Anthracene-d<sub>10</sub>

**Part # 43106    \$25/ 1mL**



# CUSTOM STANDARD QUOTATION REQUEST FORM

Rev #: 1, Date Revised: 01/01/02 - Catalog.

Photocopy at 125 % For Future Use

**Fax To:** Page \_\_\_\_\_ of \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_  
(800) 410-2577, Technical Service Dept, Absolute Standards, Inc.

**From:**  
Company Contact: \_\_\_\_\_

Company Name: \_\_\_\_\_

Company Address: \_\_\_\_\_

Company Phone: \_\_\_\_\_

Company Fax/Email: \_\_\_\_\_

**Product Description:** \_\_\_\_\_

**Solvent:** \_\_\_\_\_

**Analysis Required - additional charge - (circle one):** yes no

**Date Required:** \_\_\_\_/\_\_\_\_/\_\_\_\_

**Requested Quantity (circle one):** ORGANIC 5 x 1 mL 10 x 1 mL Other x mL

INORGANIC 1 x 100 mL 1 x 500 mL Other x mL

#	Component(s)	CAS # (optional)	Conc. (ug/mL)
(1)	_____	_____	_____
(2)	_____	_____	_____
(3)	_____	_____	_____
(4)	_____	_____	_____
(5)	_____	_____	_____
(6)	_____	_____	_____
(7)	_____	_____	_____
(8)	_____	_____	_____
(9)	_____	_____	_____
(10)	_____	_____	_____

**Absolute Standards, Inc. • ISO 9001/ 17025 ANSI-RAB Accredited  
P.O. Box 5585, Hamden, CT 06518 • Phone (800) 368-1131**

# INORGANIC STANDARDS

# INORGANIC

Included in this blue section are reference materials for calibration of the following instruments: AA, ICP, ICP-MS, IC, IE & several wet chemical methods. Method references are indicated wherever possible. The CLP section has been updated to include the new revisions. However, if you do not see something you need, please call us. We may already have the material, or can produce a custom blend.



## **AbsoluteGrade™ - Specifications**

- Suitable for ICP AES, DCP AES, ICP MS, High-Accuracy AA Flame or Graphite Furnace work.
- Manufactured Using the Highest-Purity Starting Materials Available (typically 99.999%).
- Digestion in Acid-Cleaned PTFE Labware to Prevent Possible Contamination.
- Class A Volumetric Glassware Used for Pipetting and Diluting where applicable.
- Signed Certificate of Analysis Included with Every Standard.
- Traceable to NIST.
- Formulation Uncertainty Provided for Every Analyte
- Density Measurement Allows wt/wt Use.
- Verification of Impurities in Both Starting Materials and Final Solutions.
- Immediate Shipment from Stock.
- Total U.S. "Right To-Know", and O.S.H.A. compliance.
- Cost-Effective Packaging.

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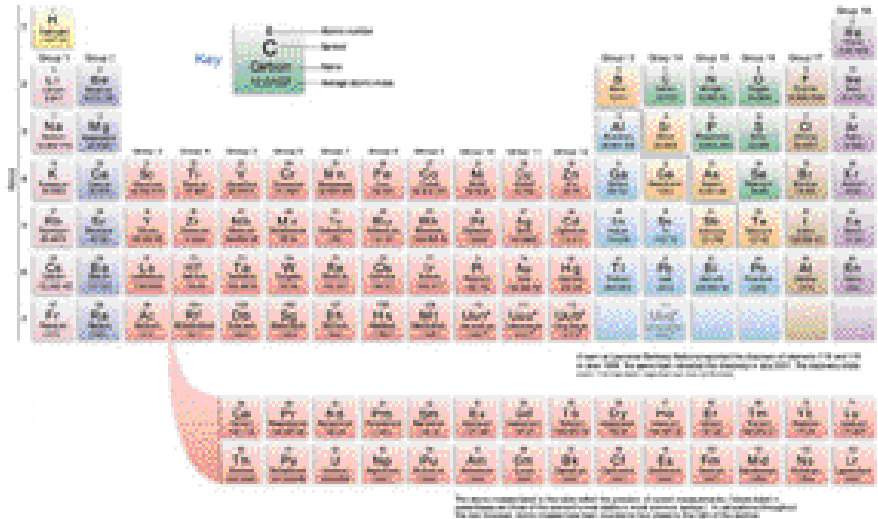
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**INORGANIC**

**Periodic Table**

**Absolute's state of the art ICP-MS allows our chemists to verify just about every element on the Periodic Table.**



**Our rigorous Quality Control routine not only ensures that the target elements are accurate, but also that the solution is free from trace impurities.**

# Certificate of Analysis

## ABSOLUTE STANDARDS, INC.



ISO 9001 DLS ANSI-RAB ACCREDITED



### Certificate of Analysis

**Conformance:** The "Certificate of Analysis" and the "Certified Weight Report" fulfill the requirements in the current versions of: ISO Guides (9001, 24, 31, 34, 17025) & NIST-NVLAP Handbook 150-19.

**Health & Safety:** See the attached MSDS & Certified Weight Report before use.

**Intended Use:** This Analytical Reference Material (ARM<sup>®</sup>) is intended primarily for use in the characterization of unknowns & the establishment of response factors by qualified personnel. Typical instrumental organic assays include: GC & LC, and inorganic assays include: ICP & AA. The product is for laboratory use only.

**Certified Values:** In production, gravimetric/volumetric readings are certified to be within  $\pm 0.5\%$  of the stated value and are valid between 18°C & 30°C. The measured uncertainty can be found on the Certified Weight Report. All product weighings are performed on an analytical balance that is calibrated to NIST Traceable standard weights & certified by the manufacturer. The volumetric glassware used is Class "A" type & conforms to ASTM E-288 unless otherwise stated. The solvents & compounds used are of the highest practical purity & typically meet or exceed ACS Reagent Grade & ACS Standards Grade specifications.

**Homogeneity & Stability:** No heterogeneity was observed in the preparation, packaging & storage of this standard. Expiration dates can be found on the Certified Weight Report.

**Purity & Identity:** Purity determinations are performed using at least one analytical technique. Identity assays are typically performed using two dissimilar methods.

Organic solutions & neat are typically formulated from materials whose purity & identity have been characterized by GC-MSD & LC-PDA techniques with comparison to a NIST Traceable library of mass spectra when available. Additional characterization techniques may include but are not limited to: refractive index measurements of liquids, melting point measurements of solids, & GC-FID, ECD, PID, ELCD, NPD, LC-PDA measurements for purity.

Inorganic solutions & neat are typically formulated from materials whose purity & identity have been characterized by ICPMS with comparison to a NIST Standard Reference Material when available. Additional characterization techniques may include but are not limited to: titrimetry, and densitometry, AA or ICP.

Final solutions are subjected to instrumental analysis to support the gravimetric values when appropriate. The data for the quality assurance testing is published with the Certified Weight Report. Typical instrumental organic assays include GC and LC. Inorganic assays include ICPMS, titrimetry, and densitometry.

**Storage:** Sealed ampules and other containers should be stored in the dark at temperatures above the freezing point of the solution and not more than 30°C. Certification by Absolute Standards, Inc. is typically valid for 5 years from the date of manufacture (Lot Number). Certified values are not applicable to opened ampules or to materials stored in re-sealable containers. See the "Certified Weight Report" for specific values.

**Usage:** Ampules & bottles should be brought to room temperature (18 to 30°C) before opening. Sonication may be required for high concentration solutions. After opening, care should be exercised to avoid concentration changes owing to evaporation of the solvent or essential components. We recommend that a suitable re-sealable container be available before opening an ampule to decant the standard for short-term storage.

**Legal Notice:** Warranty of products are as described when shipped. No warranty as to fitness for any particular application is expressed or implied. Errant shipments and/or quality claims must be made within 10 days of receipt. Liability is limited solely to the replacement of the product or refund of purchase price.

**Certifying Officer:** Stephen J. Arpie, M.S. Director *Stephen J. Arpie*

Absolute Standards, Inc. • 44 Rosotto Drive • Hamden, CT 06514

Voice: 1-203-281-2917 • Fax: 1-203-281-2922

email: [quality@absolutestandards.com](mailto:quality@absolutestandards.com) • www: <http://www.absolutestandards.com>

Document Identification: Certificate of Analysis Rev 5, Date Issued: 01/01/2006

View the next two pages for a complete representation of a typical data package.

**CERTIFIED  
WEIGHT  
REPORT**

**AbsoluteGrade™  
SPECIFICATIONS**

ABSOLUTE STANDARDS, INC • 44 ROSSOTTO DRIVE • HAMDEN, CT 06514 • (800)-368-1131

ISO 9001 Quality System registered  
DLS ANSI/RAB Accredited

CERTIFIED WEIGHT REPORT:

Part Number: **53084**  
 Lot Number: **070102**  
 Description: **QC Standard 1**

Lot # **L135898**  
**N37G05**

Solvent(s):  
 Nitric Acid  
 Hydrofluoric acid

2.0% 20.0  
 0.025% 0.25  
 (mL)

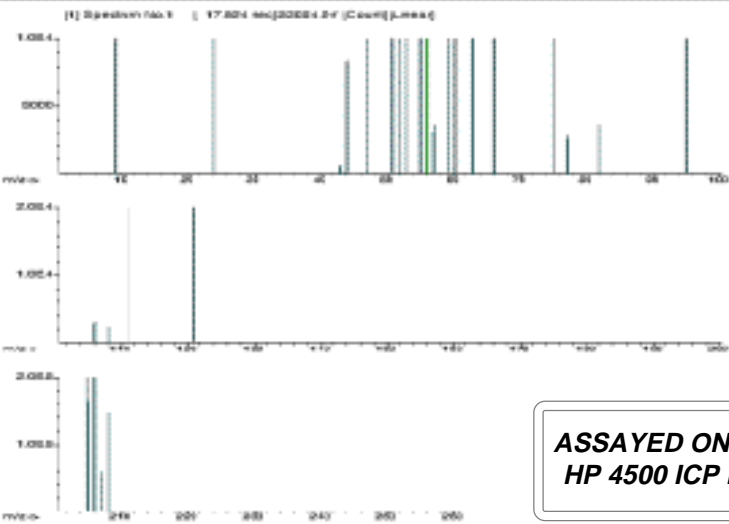
Nominal Concentration (µg/mL): **100**

*Lawrence Barry*  
 Formulated By: **Lawrence Barry** 070102

*Pedro L. Rentas*  
 Reviewed By: **Pedro L. Rentas** 070102

Weight(s) shown below were combined and diluted to : **999.88** 5E-05 Balance Uncertainty  
**0.025** 0.025 Flask Uncertainty

Compound	Part Number	Lot Number	Dilution Factor	Initial Volume	Initial Uncertainty	Pipette	Initial Conc (µg/mL)	Final Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	MSDS Information		
										CAS#	OSHA PEL (TWA)	LD50
1. Beryllium acetate (Be)	57104	051100	0.0100	10.00	0.006		10000.04	100.0	0.002334	19049-40-2	0.002 ug/m3	N/A
2. Calcium carbonate (Ca)	58120	012202	0.0100	10.00	0.006		10000.82	100.0	0.002334	00471-34-1	7 mg/m3	N/A
3. Cadmium nitrate (Cd)	58148	091400	0.0100	10.00	0.006		10000.19	100.0	0.002002	10022-68-1	0.2 mg/m3	N/A
4. Chromium nitrate nonahydrate (Cr)	58124	040901	0.0100	10.00	0.006		10000.34	100.0	0.002002	07789-02-8	0.5 mg/m3	ori-rat 3250mg/kg
5. Cobalt nitrate (Co)	57127	020901	0.0100	10.00	0.006		10000.54	100.0	0.002002	10026-22-9	5 mg/m3	ori-rat 694 mg/kg
6. Copper nitrate (Cu)	58129	062001	0.0100	10.00	0.006		10003.59	100.0	0.002001	03251-23-8	N/A	ori-rat 940 mg/kg
7. Iron (III) Nitrate Nonahydrate	58126	061002	0.0100	10.00	0.006		10001.80	100.0	0.002003	07782-61-8	7 mg/m3	N/A
8. Lead nitrate (Pb)	57182	032900	0.0100	10.00	0.006		9999.67	100.0	0.002002	10099-74-8	0.05 mg/m3	500 mg/kg
9. Magnesium nitrate (Mg)	58112	110601	0.0100	10.00	0.006		10000.20	100.0	0.002002	10377-60-3	7 mg/m3	N/A
10. Manganese nitrate (Mn)	57125	060800	0.0100	10.00	0.006		10000.37	100.0	0.002002	15710-66-4	5 mg/m3	N/A
11. Ammonium molybdate (Mo)	58142	082901	0.0100	10.00	0.006		10000.17	100.0	0.002002	13106-76-8	N/A	ori-rat 333 mg/kg
12. Nickel nitrate (Ni)	58128	102600	0.0100	10.00	0.006		10000.03	100.0	0.002002	10377-66-9	5 mg/m3	N/A
13. Selenium oxide (Se)	58134	011900	0.0100	10.00	0.006		10001.32	100.0	0.002002	07746-08-4	0.2 mg/m3	N/A
14. Thallium nitrate (Tl)	57181	120700	0.0100	10.00	0.006		10000.34	100.0	0.002002	10102-45-1	5 mg/m3	N/A
15. Ammonium hexafluorotitanate (Ti)	57122	042400	0.0100	10.00	0.006		9999.90	100.0	0.002002	16962-40-6	N/A	N/A
16. Ammonium Metavanadate (V)	58123	110701	0.0100	10.00	0.006		10000.32	100.0	0.002002	07803-55-6	1.0 mg/m3	ori-rat 630 mg/kg
17. Zinc nitrate (Zn)	58130	041101	0.0100	10.00	0.006		10000.21	100.0	0.002002	10196-18-6	1 mg/m3	ori-rat 1190mg/kg
18. Antimony Oxide (Sb)	58151	071001	0.0100	10.00	0.006		10000.04	100.0	0.002002	07440-36-0	5.0 mg/m3	N/A
19. Arsenic (As)	58133	062000	0.0100	10.00	0.006		10000.48	100.0	0.002002	07440-38-2	0.2 mg/m3	N/A



# AbsoluteGrade™ SPECIFICATIONS

## CERTIFIED WEIGHT REPORT

**Absolute Standards, Inc.**

44 Rossetto Drive • Hayden, CT • 06514 • (800) 368-1131

ISO 9001 Quality System Registered

DLS ANSI-RAB Accredited

**AbsoluteGrade™ Solution**

Part# 58084

Lot# 070102

**Certified Concentration (µg/mL)**

(µg/mL)	(4-µg/mL)
100.0	0.002

The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise specified.

**TRACEABILITY DOCUMENTATION:****A) Chemical/Chemical Analysis:**

Method	Traceability	Concentration
EDTA Titration	NIST SRM 923 Lead Nitrate	N/A
Gravimetric Analysis	NIST Weights	N/A
Redox Titration	NIST SRM 1364 Potassium Dichromate	N/A
Volumetric Titration	NIST SRM 999 Potassium Chloride	N/A

**B) Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):**

This analytical solution was used against the appropriate NIST SRMs.

**Trace Metals Verification by ICP-MS (µg/mL)**

Al	<DL	Cd	>	Cy	<DL	Hf	<DL	Li	<DL	Nb	>	Pb	<DL	Se	>	Th	<DL	W	<DL
As	>	Co	<DL	Er	<DL	Ho	<DL	K	<DL	Mn	<DL	Rc	<DL	Si	<DL	Tl	<DL	U	<DL
Ba	<DL	Ce	<DL	Kr	<DL	La	<DL	Mo	<DL	Pr	<DL	Rh	<DL	Sr	<DL	Ti	>	Y	>
Be	<DL	Cu	<DL	Lr	<DL	Mg	<DL	Ni	<DL	Sm	<DL	Ru	<DL	Ta	<DL	Tm	<DL	Yb	<DL
Bi	<DL	Cr	>	Os	<DL	P	>	Hg	<DL	Pd	<DL	Sb	<DL	Tb	<DL	V	<DL	Zn	<DL
Bk	<DL	Fe	>	Pb	<DL	Rb	<DL	Ir	<DL	Pf	<DL	Sn	<DL	Tc	<DL	Zr	<DL		<DL
Bs	<DL	Ca	>	Sg	<DL	Sc	<DL	Sr	<DL	Ag	<DL	Ta	<DL	Te	<DL		<DL		<DL
C	<DL	Cl	>	Ta	<DL	Tb	<DL	Tl	<DL	Al	<DL	Tm	<DL	U	<DL		<DL		<DL
D	<DL	Fl	>	Tb	<DL	Tm	<DL	Tl	<DL	Br	<DL	Tm	<DL	U	<DL		<DL		<DL
E	<DL	Fr	>	Tm	<DL	Tm	<DL	Tl	<DL	C	<DL	Tm	<DL	U	<DL		<DL		<DL
F	<DL	Li	>	Tm	<DL	Tm	<DL	Tl	<DL	Ca	<DL	Tm	<DL	U	<DL		<DL		<DL
G	<DL	Na	>	Tm	<DL	Tm	<DL	Tl	<DL	Co	<DL	Tm	<DL	U	<DL		<DL		<DL
H	<DL	K	>	Tm	<DL	Tm	<DL	Tl	<DL	Fe	<DL	Tm	<DL	U	<DL		<DL		<DL
I	<DL	Rb	>	Tm	<DL	Tm	<DL	Tl	<DL	Mn	<DL	Tm	<DL	U	<DL		<DL		<DL
J	<DL	Sr	>	Tm	<DL	Tm	<DL	Tl	<DL	Ni	<DL	Tm	<DL	U	<DL		<DL		<DL
K	<DL	Zr	>	Tm	<DL	Tm	<DL	Tl	<DL	Cu	<DL	Tm	<DL	U	<DL		<DL		<DL
L	<DL	Hf	>	Tm	<DL	Tm	<DL	Tl	<DL	Zn	<DL	Tm	<DL	U	<DL		<DL		<DL
M	<DL	Mo	>	Tm	<DL	Tm	<DL	Tl	<DL	As	<DL	Tm	<DL	U	<DL		<DL		<DL
N	<DL	Ru	>	Tm	<DL	Tm	<DL	Tl	<DL	Sr	<DL	Tm	<DL	U	<DL		<DL		<DL
O	<DL	Rh	>	Tm	<DL	Tm	<DL	Tl	<DL	Y	<DL	Tm	<DL	U	<DL		<DL		<DL
P	<DL	Pd	>	Tm	<DL	Tm	<DL	Tl	<DL	Ag	<DL	Tm	<DL	U	<DL		<DL		<DL
Q	<DL	Ag	>	Tm	<DL	Tm	<DL	Tl	<DL	Se	<DL	Tm	<DL	U	<DL		<DL		<DL
R	<DL	Cd	>	Tm	<DL	Tm	<DL	Tl	<DL	Te	<DL	Tm	<DL	U	<DL		<DL		<DL
S	<DL	Hg	>	Tm	<DL	Tm	<DL	Tl	<DL	Bi	<DL	Tm	<DL	U	<DL		<DL		<DL
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V	<DL	Po	>	Tm	<DL	Tm	<DL	Tl	<DL	Co	<DL	Tm	<DL	U	<DL		<DL		<DL
W	<DL	At	>	Tm	<DL	Tm	<DL	Tl	<DL	Ni	<DL	Tm	<DL	U	<DL		<DL		<DL
X	<DL	Rn	>	Tm	<DL	Tm	<DL	Tl	<DL	Cu	<DL	Tm	<DL	U	<DL		<DL		<DL
Y	<DL	Fr	>	Tm	<DL	Tm	<DL	Tl	<DL	Zn	<DL	Tm	<DL	U	<DL		<DL		<DL
Z	<DL	Ac	>	Tm	<DL	Tm	<DL	Tl	<DL	As	<DL	Tm	<DL	U	<DL		<DL		<DL
AA	<DL	Th	>	Tm	<DL	Tm	<DL	Tl	<DL	Sr	<DL	Tm	<DL	U	<DL		<DL		<DL
AB	<DL	Pa	>	Tm	<DL	Tm	<DL	Tl	<DL	Y	<DL	Tm	<DL	U	<DL		<DL		<DL
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AD	<DL	Np	>	Tm	<DL	Tm	<DL	Tl	<DL	Se	<DL	Tm	<DL	U	<DL		<DL		<DL
AE	<DL	Pu	>	Tm	<DL	Tm	<DL	Tl	<DL	Te	<DL	Tm	<DL	U	<DL		<DL		<DL
AF	<DL	Am	>	Tm	<DL	Tm	<DL	Tl	<DL	Bi	<DL	Tm	<DL	U	<DL		<DL		<DL
AG	<DL	Cm	>	Tm	<DL	Tm	<DL	Tl	<DL	Pb	<DL	Tm	<DL	U	<DL		<DL		<DL
AH	<DL	Bk	>	Tm	<DL	Tm	<DL	Tl	<DL	Cr	<DL	Tm	<DL	U	<DL		<DL		<DL
AI	<DL	Cf	>	Tm	<DL	Tm	<DL	Tl	<DL	Mn	<DL	Tm	<DL	U	<DL		<DL		<DL
AJ	<DL	Es	>	Tm	<DL	Tm	<DL	Tl	<DL	Co	<DL	Tm	<DL	U	<DL		<DL		<DL
AK	<DL	Fm	>	Tm	<DL	Tm	<DL	Tl	<DL	Ni	<DL	Tm	<DL	U	<DL		<DL		<DL
AL	<DL	Md	>	Tm	<DL	Tm	<DL	Tl	<DL	Cu	<DL	Tm	<DL	U	<DL		<DL		<DL
AM	<DL	Mc	>	Tm	<DL	Tm	<DL	Tl	<DL	Zn	<DL	Tm	<DL	U	<DL		<DL		<DL
AN	<DL	Lr	>	Tm	<DL	Tm	<DL	Tl	<DL	As	<DL	Tm	<DL	U	<DL		<DL		<DL
AO	<DL	101	>	Tm	<DL	Tm	<DL	Tl	<DL	Sr	<DL	Tm	<DL	U	<DL		<DL		<DL
AP	<DL	102	>	Tm	<DL	Tm	<DL	Tl	<DL	Y	<DL	Tm	<DL	U	<DL		<DL		<DL
AQ	<DL	103	>	Tm	<DL	Tm	<DL	Tl	<DL	Ag	<DL	Tm	<DL	U	<DL		<DL		<DL
AR	<DL	104	>	Tm	<DL	Tm	<DL	Tl	<DL	Se	<DL	Tm	<DL	U	<DL		<DL		<DL
AS	<DL	105	>	Tm	<DL	Tm	<DL	Tl	<DL	Te	<DL	Tm	<DL	U	<DL		<DL		<DL
AT	<DL	106	>	Tm	<DL	Tm	<DL	Tl	<DL	Bi	<DL	Tm	<DL	U	<DL		<DL		<DL
AV	<DL	107	>	Tm	<DL	Tm	<DL	Tl	<DL	Pb	<DL	Tm	<DL	U	<DL		<DL		<DL
AW	<DL	108	>	Tm	<DL	Tm	<DL	Tl	<DL	Cr	<DL	Tm	<DL	U	<DL		<DL		<DL
AX	<DL	109	>	Tm	<DL	Tm	<DL	Tl	<DL	Mn	<DL	Tm	<DL	U	<DL		<DL		<DL
AY	<DL	110	>	Tm	<DL	Tm	<DL	Tl	<DL	Co	<DL	Tm	<DL	U	<DL		<DL		<DL
AZ	<DL	111	>	Tm	<DL	Tm	<DL	Tl	<DL	Ni	<DL	Tm	<DL	U	<DL		<DL		<DL
BA	<DL	112	>	Tm	<DL	Tm	<DL	Tl	<DL	Cu	<DL	Tm	<DL	U	<DL		<DL		<DL
BB	<DL	113	>	Tm	<DL	Tm	<DL	Tl	<DL	Zn	<DL	Tm	<DL	U	<DL		<DL		<DL
BC	<DL	114	>	Tm	<DL	Tm	<DL	Tl	<DL	As	<DL	Tm	<DL	U	<DL		<DL		<DL
BD	<DL	115	>	Tm	<DL	Tm	<DL	Tl	<DL	Sr	<DL	Tm	<DL	U	<DL		<DL		<DL
BE	<DL	116	>	Tm	<DL	Tm	<DL	Tl	<DL	Y	<DL	Tm	<DL	U	<DL		<DL		<DL
BF	<DL	117	>	Tm	<DL	Tm	<DL	Tl	<DL	Ag	<DL	Tm	<DL	U	<DL		<DL		<DL
BG	<DL	118	>	Tm	<DL	Tm	<DL	Tl	<DL	Se	<DL	Tm	<DL	U	<DL		<DL		<DL
BH	<DL	119	>	Tm	<DL	Tm	<DL	Tl	<DL	Te	<DL	Tm	<DL	U	<DL		<DL		<DL
BI	<DL	120	>	Tm	<DL	Tm	<DL	Tl	<DL	Bi	<DL	Tm	<DL	U	<DL		<DL		<DL
BJ	<DL	121	>	Tm	<DL	Tm	<DL	Tl	<DL	Pb	<DL	Tm	<DL	U	<DL		<DL		<DL
BK	<DL	122	>	Tm	<DL	Tm	<DL	Tl	<DL	Cr	<DL	Tm	<DL	U	<DL		<DL		<DL
BL	<DL	123	>	Tm	<DL	Tm	<DL	Tl	<DL	Mn	<DL	Tm	<DL	U	<DL		<DL		<DL
BM	<DL	124	>	Tm	<DL	Tm	<DL	Tl	<DL	Co	<DL	Tm	<DL	U	<DL		<DL		<DL
BN	<DL	125	>	Tm	<DL	Tm	<DL	Tl	<DL	Ni	<DL	Tm	<DL	U	<DL		<DL		<DL
BO	<DL	126	>	Tm	<DL	Tm	<DL	Tl	<DL	Cu	<DL	Tm	<DL	U	<DL		<DL		<DL
BP	<DL	127	>	Tm	<DL	Tm	<DL	Tl	<DL	Zn	<DL	Tm	<DL	U	<DL		<DL		<DL
BQ	<DL	128	>	Tm	<DL	Tm	<DL	Tl	<DL	As	<DL	Tm	<DL	U	<DL		<DL		<DL
BR	<DL	129	>	Tm	<DL	Tm	<DL	Tl	<DL	Sr	<DL	Tm	<DL	U	<DL		<DL		<DL
BS	<DL	130	>	Tm	<DL	Tm	<DL	Tl	<DL	Y	<DL	Tm	<DL	U	<DL		<DL		<DL
BT	<DL	131	>	Tm	<DL	Tm	<DL	Tl	<DL	Ag	<DL	Tm	<DL	U	<DL		<DL		<DL
BV	<DL	132	>	Tm	<DL	Tm	<DL	Tl	<DL	Se	<DL	Tm	<DL	U	<DL		<DL		<DL
BW	<DL	133	>	Tm	<DL	Tm	<DL	Tl	<DL	Te	<DL	Tm	<DL	U	<DL		<DL		<DL
BX	<DL	134	>	Tm	<DL	Tm	<DL	Tl	&lt										



# SINGLE COMPONENT SOLUTIONS

## PLASMA EMISSION SPECTROSCOPY REFERENCE STANDARDS

### 1,000 ug/mL Single Components for ICP/AA

Element		Matrix	Part#	\$/100mL	Part#	\$/500mL
Aluminum	Al	Al(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57013	25	58013	65
Antimony	Sb	Sb <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub> tr.Tartaric acid	57051	25	58051	65
Arsenic	As	As <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57033	25	58033	65
Barium	Ba	Ba(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57056	25	58056	65
Beryllium	Be	Be <sub>4</sub> O(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>6</sub> /HNO <sub>3</sub>	57004	25	58004	65
Bismuth	Bi	Bi(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57083	25	58083	65
Boron	B	H <sub>3</sub> B <sub>3</sub> O <sub>3</sub> /H <sub>2</sub> O	57005	25	58005	65
Cadmium	Cd	Cd(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57048	25	58048	65
Calcium	Ca	CaCO <sub>3</sub> /HNO <sub>3</sub>	57020	25	58020	65
Carbon	C	C(Citric Acid)/HNO <sub>3</sub>	57006	25	58006	65
Cerium	Ce	Ce(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57058	25	58058	65
Cesium	Cs	CsNO <sub>3</sub> /HNO <sub>3</sub>	57055	25	58055	65
Chromium	Cr	Cr(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57024	25	58024	65
Chromium-Cr <sup>6+</sup>	Cr <sup>6+</sup>	(NH <sub>4</sub> ) <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> /H <sub>2</sub> O	54161	25	54172	65
Cobalt	Co	Co(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57027	25	58027	65
Copper	Cu	Cu(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57029	25	58029	65
Dysprosium	Dy	Dy <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57066	25	58066	75
Erbium	Er	Er <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57068	25	58068	75
Europium	Eu	Eu <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57063	25	58063	75
Gadolinium	Gd	Gd <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57064	25	58064	75
Gallium	Ga	Ga <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57031	75	58031	150
Germanium	Ge	(NH <sub>4</sub> ) <sub>2</sub> GeF <sub>6</sub> /tr, HF	57032	25	58032	65
Gold	Au	NH <sub>4</sub> AuCl <sub>4</sub> /HCL	57079	75	58079	150
Hafnium	Hf	Hf <sub>2</sub> O <sub>3</sub> /HCl	57072	30	58072	75
Holmium	Ho	Ho <sub>3</sub> O <sub>3</sub> /HNO <sub>3</sub>	57067	25	58067	75
Indium	In	In <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57049	25	58049	65
Iridium	Ir	IrCl <sub>3</sub> /HCl	57077	75	58077	150
Iron	Fe	Fe(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57026	25	58026	65
Iron-Ferrous	Fe <sup>2+</sup>	(NH <sub>4</sub> )Fe <sub>2</sub> -(SO <sub>4</sub> ) <sub>2</sub> /H <sub>2</sub> SO <sub>4</sub>	54141	25	54174	65
Iron-Total	Fe	[Fe <sup>2+</sup> ]+[Fe <sup>3+</sup> ]/H <sub>2</sub> SO <sub>4</sub>	54140	25	54173	65
Lanthanum	La	LaCl/HNO <sub>3</sub>	57057	25	58057	65
Lead	Pb	Pb(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57082	25	58082	65
Lithium	Li	LiNO <sub>3</sub> /HNO <sub>3</sub>	57003	25	58003	65
Lithium 6 <sup>+</sup>	Li 6 <sup>+</sup>	Li <sub>6</sub> +NO <sub>3</sub> /HNO <sub>3</sub>	59021	200	59097	1000
Lutetium	Lu	Lu <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57071	30	58071	75
Magnesium	Mg	Mg(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57012	25	58012	65
Manganese	Mn	Mn(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57025	25	58025	65
Mercury	Hg	Hg(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57080	25	58080	65
Mercury-Organic	Hg	MeHgCl/HNO <sub>3</sub>	54170	25	54171	65
Mercury-Total	Hg	Hg(NO <sub>3</sub> ) <sub>2</sub> +MeHgCl/HNO <sub>3</sub>	54004	25	54168	65

## PLASMA EMISSION SPECTROSCOPY REFERENCE STANDARDS

## SINGLE COMPONENT SOLUTIONS

### 1,000 ug/mL Single Components for ICP/AA

Element		Matrix	Part#	\$/100mL	Part#	\$/500mL
Molybdenum	Mo	(NH <sub>4</sub> )MoO <sub>4</sub> /H <sub>2</sub> O	57042	25	58042	65
Neodymium	Nd	Nd <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57060	25	58060	75
Nickel	Ni	Ni(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57028	25	58028	65
Niobium	Nb	(NH <sub>4</sub> )NbF <sub>6</sub> /tr.HF	57041	25	58041	65
Palladium	Pd	Pd/HNO <sub>3</sub>	57046	125	58046	200
Phosphorus	P	(NH <sub>4</sub> )H <sub>2</sub> PO <sub>4</sub> /HNO <sub>3</sub>	57015	25	58015	65
Platinum	Pt	[Pt(NH <sub>3</sub> ) <sub>4</sub> ](NO <sub>3</sub> ) <sub>2</sub> /HCL	57078	75	58078	150
Potassium	K	KNO <sub>3</sub> /HNO <sub>3</sub>	57019	25	58019	65
Praesodymium	Pr	Pr <sub>6</sub> O <sub>11</sub> /HNO <sub>3</sub>	57059	25	58059	75
Rhenium	Re	Re/HNO <sub>3</sub>	57075	50	58075	150
Rhodium	Rh	RhCl <sub>3</sub> /HCl	57045	100	58045	400
Rubidium	Rb	RbNO <sub>3</sub> /HNO <sub>3</sub>	57037	25	58037	75
Ruthenium	Ru	RuCl <sub>3</sub> /HNO <sub>3</sub>	57044	75	58044	150
Samarium	Sm	Sm <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57062	25	58062	75
Scandium	Sc	Sc(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57021	75	58021	150
Selenium	Se	SeO <sub>2</sub> /HNO <sub>3</sub>	57034	25	58034	65
Silica	SiO <sub>2</sub>	SiO <sub>2</sub> /NaOH	54159	25	54169	75
Silicon	Si	(NH <sub>4</sub> ) <sub>2</sub> SiF <sub>6</sub> /HNO <sub>3</sub>	57014	25	58014	65
Silver	Ag	AgNO <sub>3</sub> /HNO <sub>3</sub>	57047	25	58047	65
Sodium	Na	NaNO <sub>3</sub> /HNO <sub>3</sub>	57011	25	58011	65
Strontium	Sr	Sr(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57038	25	58038	65
Sulfur	S	(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> /H <sub>2</sub> O	57016	25	58016	65
Tantalum	Ta	NH <sub>4</sub> TaF <sub>6</sub> /tr.HF	57073	25	57073	75
Tellurium	Te	TeO <sub>2</sub> /HCl	57052	25	58052	150
Terbium	Tb	Tb <sub>4</sub> O <sub>7</sub> /HNO <sub>3</sub>	57065	25	58065	75
Thallium	Tl	TlNO <sub>3</sub> /HNO <sub>3</sub>	57081	25	58081	65
Thorium	Th	Th(NO <sub>3</sub> ) <sub>4</sub> /HNO <sub>3</sub>	57090	25	57090	65
Thulium	Tm	Tm <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57069	30	58069	75
Tin	Sn	(NH <sub>4</sub> )SnF <sub>6</sub> /HNO <sub>3</sub> /HCL	57050	25	58050	65
Titanium	Ti	(NH <sub>4</sub> ) <sub>2</sub> TiF <sub>6</sub> /HNO <sub>3</sub> /tr.HF	57022	25	58022	65
Tungsten	W	(NH <sub>4</sub> ) <sub>2</sub> WO <sub>4</sub> /H <sub>2</sub> O	57074	25	58074	65
Uranium	U	U <sub>3</sub> O <sub>8</sub> /HNO <sub>3</sub>	57092	25	57092	65
Vanadium	V	NH <sub>4</sub> VO <sub>3</sub> /HNO <sub>3</sub>	57023	25	58023	65
Ytterbium	Yb	Yb <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57070	25	58070	75
Yttrium	Y	Y <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57039	25	58039	65
Zinc	Zn	Zn(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57030	25	58030	65
Zirconium	Zr	ZrO <sub>2</sub> /HNO <sub>3</sub>	57040	25	58040	65

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# SINGLE COMPONENT SOLUTIONS

## PLASMA EMISSION SPECTROSCOPY REFERENCE STANDARDS

### 10,000 ug/mL Single Components for ICP/AA

Element		Matrix	Part#	\$/100mL	Part#	\$/500mL
Aluminum	Al	Al(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57113	75	58113	150
Antimony	Sb	Sb <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub> tr.Tartaric acid	57151	75	58151	150
Arsenic	As	As <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57133	75	58133	150
Barium	Ba	Ba(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57156	75	58156	150
Beryllium	Be	Be <sub>4</sub> O(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>6</sub> /HNO <sub>3</sub>	57104	75	58104	150
Bismuth	Bi	Bi(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57183	75	58183	150
Boron	B	H <sub>3</sub> BO <sub>3</sub> /H <sub>2</sub> O	57105	75	58105	150
Cadmium	Cd	Cd(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57148	75	58148	150
Calcium	Ca	CaCO <sub>3</sub> /HNO <sub>3</sub>	57120	75	58120	150
Carbon	C	C(Citric Acid)/HNO <sub>3</sub>	57106	75	58106	150
Cerium	Ce	Ce(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Cesium	Cs	CsNO <sub>3</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Chromium	Cr	Cr(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57124	75	58124	150
Chromium-Cr <sup>6+</sup>	Cr <sup>6+</sup>	(NH <sub>4</sub> ) <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> /H <sub>2</sub> O	54175	75	54176	150
Cobalt	Co	Co(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57127	75	58127	150
Copper	Cu	Cu(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57129	75	58129	150
Dysprosium	Dy	Dy <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Erbium	Er	Er <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Europium	Eu	Eu <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Gadolinium	Gd	Gd <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Gallium	Ga	Ga <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Germanium	Ge	(NH <sub>4</sub> ) <sub>2</sub> GeF <sub>6</sub> /tr, HF	NA	NA	NA	NA
Gold	Au	NH <sub>4</sub> AuCl <sub>4</sub> /HCL	57179	300	58179	600
Hafnium	Hf	Hf <sub>2</sub> O <sub>3</sub> /HCl	NA	NA	NA	NA
Holmium	Ho	Ho <sub>3</sub> O <sub>3</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Indium	In	In <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Iridium	Ir	IrCl <sub>3</sub> /HCl	NA	NA	NA	NA
Iron	Fe	Fe(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57126	75	58126	150
Iron-Ferrous	Fe <sup>2+</sup>	(NH <sub>4</sub> )Fe <sub>2</sub> +(SO <sub>4</sub> ) <sub>2</sub> /H <sub>2</sub> SO <sub>4</sub>	NA	NA	NA	NA
Iron-Total	Fe	[Fe <sup>2+</sup> ]+[Fe <sup>3+</sup> ]/H <sub>2</sub> SO <sub>4</sub>	NA	NA	NA	NA
Lanthanum	La	LaCl/HNO <sub>3</sub>	NA	NA	NA	NA
Lead	Pb	Pb(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57182	75	58182	150
Lithium	Li	LiNO <sub>3</sub> /HNO <sub>3</sub>	57103	75	58103	150
Lithium 6 <sup>+</sup>	Li 6 <sup>+</sup>	Li <sub>6</sub> +NO <sub>3</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Lutetium	Lu	Lu <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Magnesium	Mg	Mg(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57112	75	58112	150
Manganese	Mn	Mn(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57125	75	58125	150
Mercury	Hg	Hg(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57180	75	58180	150
Mercury-Organic	Hg	MeHgCl/HNO <sub>3</sub>	NA	NA	NA	NA
Mercury-Total	Hg	Hg(NO <sub>3</sub> ) <sub>2</sub> +MeHgCl/HNO <sub>3</sub>	54178	100	NA	NA

## PLASMA EMISSION SPECTROSCOPY REFERENCE STANDARDS

## SINGLE COMPONENT SOLUTIONS

### 10,000 ug/mL Single Components for ICP/AA

Element	Matrix	Part#	\$/100mL	Part#	\$/500mL
Molybdenum	Mo (NH <sub>4</sub> )MoO <sub>4</sub> /H <sub>2</sub> O	57142	75	58142	150
Neodymium	Nd Nd <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Nickel	Ni Ni(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57128	75	58128	150
Niobium	Nb (NH <sub>4</sub> )NbF <sub>6</sub> /tr.HF	NA	NA	NA	NA
Palladium	Pd Pd/HNO <sub>3</sub>	57146	500	58146	900
Phosphorus	P (NH <sub>4</sub> )H <sub>2</sub> PO <sub>4</sub> /HNO <sub>3</sub>	57115	75	58115	150
Platinum	Pt [Pt(NH <sub>3</sub> ) <sub>4</sub> ](NO <sub>3</sub> ) <sub>2</sub> /HCL	57178	300	58178	600
Potassium	K KNO <sub>3</sub> /HNO <sub>3</sub>	57119	75	58119	150
Praesodymium	Pr Pr <sub>6</sub> O <sub>11</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Rhenium	Re Re/HNO <sub>3</sub>	NA	NA	NA	NA
Rhodium	Rh RhCl <sub>3</sub> /HCl	NA	NA	NA	NA
Rubidium	Rb RbNO <sub>3</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Ruthenium	Ru RuCl <sub>3</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Samarium	Sm Sm <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Scandium	Sc Sc(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Selenium	Se Se <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57134	75	58134	150
Silica	SiO <sub>2</sub> SiO <sub>2</sub> /NaOH	NA	NA	NA	NA
Silicon	Si (NH <sub>4</sub> ) <sub>2</sub> SiF <sub>6</sub> /HNO <sub>3</sub>	57114	75	58114	150
Silver	Ag AgNO <sub>3</sub> /HNO <sub>3</sub>	57147	75	58147	150
Sodium	Na NaNO <sub>3</sub> /HNO <sub>3</sub>	57111	75	58111	150
Strontium	Sr Sr(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57138	75	58138	150
Sulfur	S (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> /H <sub>2</sub> O	57116	75	58116	150
Tantalum	Ta NH <sub>4</sub> TaF <sub>6</sub> /tr.HF	NA	NA	NA	NA
Tellurium	Te TeO <sub>2</sub> /HCl	NA	NA	NA	NA
Terbium	Tb Tb <sub>4</sub> O <sub>7</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Thallium	Tl TlNO <sub>3</sub> /HNO <sub>3</sub>	57181	75	58181	150
Thorium	Th Th(NO <sub>3</sub> ) <sub>4</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Thulium	Tm Tm <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Tin	Sn (NH <sub>4</sub> )SnF <sub>6</sub> /HNO <sub>3</sub> /HCL	57150	75	58150	150
Titanium	Ti (NH <sub>4</sub> ) <sub>2</sub> TiF <sub>6</sub> /HNO <sub>3</sub> /tr.HF	57122	75	58122	150
Tungsten	W (NH <sub>4</sub> ) <sub>2</sub> WO <sub>4</sub> /H <sub>2</sub> O	57174	75	58174	150
Uranium	U U <sub>3</sub> O <sub>8</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Vanadium	V NH <sub>4</sub> VO <sub>3</sub> /HNO <sub>3</sub>	57123	75	58123	150
Ytterbium	Yb Yb <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	NA	NA	NA	NA
Yttrium	Y Y <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57139	75	58139	150
Zinc	Zn Zn(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>	57130	75	58130	150
Zirconium	Zr Zr <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57140	75	58140	150

[For Additional Concentrations & Matrices Visit](#)

[AbsoluteStandards.com](http://AbsoluteStandards.com)

[Or Call our Technical Department \(203\) 281-2917](#)

## KITS

ELEMENT/ GROUP  
KITS**Group I Elements Starter Kit  
(5 x 100ml bottles @ 1000ug/mL Each)**

Element		Matrix
Lithium	Li	LiNO <sub>3</sub> /HNO <sub>3</sub>
Sodium	Na	NaNO <sub>3</sub> /HNO <sub>3</sub>
Potassium	K	KNO <sub>3</sub> /HNO <sub>3</sub>
Rubidium	Rb	RbNO <sub>3</sub> /HNO <sub>3</sub>
Cesium	Cs	CsNO <sub>3</sub> /HNO <sub>3</sub>

**Part # 52253 \$80/ 5 x 100 mL****Group II Elements Starter Kit  
(5 x 100ml bottles @ 1000ug/mL Each)**

Element		Matrix
Beryllium	Be	Be <sub>4</sub> O(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>6</sub> /HNO <sub>3</sub>
Magnesium	Mg	Mg(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Calcium	Ca	CaCO <sub>3</sub> /HNO <sub>3</sub>
Strontium	Sr	Sr(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Barium	Ba	Ba(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>

**Part # 52255 \$80/ 5 x 100 mL****Transition Metals Starter Kit  
(9 x 100ml bottles @ 1000ug/mL Each)**

Element		Matrix
Titanium	Ti	(NH <sub>4</sub> ) <sub>2</sub> TiF <sub>6</sub> /HNO <sub>3</sub> /tr.HF
Vanadium	V	NH <sub>4</sub> VO <sub>3</sub> /HNO <sub>3</sub>
Chromium	Cr	Cr(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>
Manganese	Mn	Mn(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Iron	Fe	Fe(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>
Cobalt	Co	Co(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Nickel	Ni	Ni(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Copper	Cu	Cu(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Zinc	Zn	Zn(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>

**Part # 52256 \$150/ 9 x 100 mL**

## ELEMENT/ GROUP KITS

## KITS

### Method 200.7 Complete Single Element Kit (32 x 100ml bottles @ 1000ug/mL Each)

Element	Symbol	Matrix
Aluminum	Al	Al(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>
Antimony	Sb	Sb <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub> tr. Tartaric acid
Arsenic	As	As <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>
Barium	Ba	Ba(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Beryllium	Be	Be <sub>4</sub> O(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>6</sub> /HNO <sub>3</sub>
Boron	B	H <sub>3</sub> BO <sub>3</sub> /H <sub>2</sub> O
Cadmium	Cd	Cd(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Calcium	Ca	CaCO <sub>3</sub> /HNO <sub>3</sub>
Cerium	Ce	Ce(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>
Chromium	Cr	Cr(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>
Cobalt	Co	Co(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Copper	Cu	Cu(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Iron	Fe	Fe(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>
Lead	Pb	Pb(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Lithium	Li	LiNO <sub>3</sub> /HNO <sub>3</sub>
Magnesium	Mg	Mg(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Manganese	Mn	Mn(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Mercury	Hg	Hg(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Molybdenum	Mo	(NH <sub>4</sub> ) <sub>2</sub> MoO <sub>4</sub> /H <sub>2</sub> O
Nickel	Ni	Ni(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Phosphorus	P	(NH <sub>4</sub> ) <sub>2</sub> H <sub>2</sub> PO <sub>4</sub> /HNO <sub>3</sub>
Potassium	K	KNO <sub>3</sub> /HNO <sub>3</sub>
Selenium	Se	SeO <sub>2</sub> /HNO <sub>3</sub>
Silica	SiO <sub>2</sub>	SiO <sub>2</sub> /NaOH
Silver	Ag	AgNO <sub>3</sub> /HNO <sub>3</sub>
Sodium	Na	NaNO <sub>3</sub> /HNO <sub>3</sub>
Strontium	Sr	Sr(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Thallium	Tl	TlNO <sub>3</sub> /HNO <sub>3</sub>
Tin	Sn	(NH <sub>4</sub> ) <sub>2</sub> SnF <sub>6</sub> /HNO <sub>3</sub> /HCL
Titanium	Ti	(NH <sub>4</sub> ) <sub>2</sub> TiF <sub>6</sub> /HNO <sub>3</sub> /HNO <sub>3</sub> /tr. HF
Vanadium	V	NH <sub>4</sub> VO <sub>3</sub> /HNO <sub>3</sub>
Zinc	Zn	Zn(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>

**Part # 52250    \$550/ 32 x 100 mL**

## KITS

ELEMENT/ GROUP  
KITS

**Method 200.8**  
**Complete Single Element Kit**  
**(21 x 100ml bottles @ 1000ug/mL Each)**

<b>Element</b>		<b>Matrix</b>
Aluminum	Al	Al(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>
Antimony	Sb	Sb <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub> tr. Tartaric acid
Arsenic	As	As <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>
Barium	Ba	Ba(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Beryllium	Be	Be <sub>4</sub> O(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>6</sub> /HNO <sub>3</sub>
Cadmium	Cd	Cd(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Chromium	Cr	Cr(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>
Cobalt	Co	Co(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Copper	Cu	Cu(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Lead	Pb	Pb(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Manganese	Mn	Mn(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Mercury	Hg	Hg(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Molybdenum	Mo	(NH <sub>4</sub> )MoO <sub>4</sub> /H <sub>2</sub> O
Nickel	Ni	Ni(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Selenium	Se	SeO <sub>2</sub> /HNO <sub>3</sub>
Silver	Ag	AgNO <sub>3</sub> /HNO <sub>3</sub>
Thallium	Tl	TlNO <sub>3</sub> /HNO <sub>3</sub>
Thorium	Th	Th(NO <sub>3</sub> ) <sub>4</sub> /HNO <sub>3</sub>
Uranium	U	U <sub>3</sub> O <sub>8</sub> /HNO <sub>3</sub>
Vanadium	V	NH <sub>4</sub> VO <sub>3</sub> /HNO <sub>3</sub>
Zinc	Zn	Zn(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>

**Part # 52251 \$380/ 21 x 100 mL**

**Lanthanide Metals Starter Kit**  
**(14 x 100ml bottles @ 1000ug/mL Each)**

<b>Element</b>		<b>Matrix</b>
Lanthanum	La	LaCl/HNO <sub>3</sub>
Cerium	Ce	Ce(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>
Praesodymium	Pr	Pr <sub>6</sub> O <sub>11</sub> /HNO <sub>3</sub>
Neodymium	Nd	Nd <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>
Samarium	Sm	Sm <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>
Europium	Eu	Eu <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>
Gadolinium	Gd	Gd <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>
Terbium	Tb	Tb <sub>4</sub> O <sub>7</sub> /HNO <sub>3</sub>
Dysprosium	Dy	Dy <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>
Holmium	Ho	Ho <sub>3</sub> O <sub>3</sub> /HNO <sub>3</sub>
Erbium	Er	Er <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>
Thulium	Tm	Tm <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>
Ytterbium	Yb	Yb <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>
Lutetium	Lu	Lu <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>

**Part # 52254 \$240/ 14 x 100 mL**

**CALIBRATION AND  
MATRIX BLANKS****MATRIX  
BLANKS****MATRIX BLANKS**

Blank solutions are prepared with High-Purity Acids and ASTM Type I Water. Blanks can be used to dilute your multi-element standards to run directly to establish your baseline. An Aqua Regia Blank can be prepared by mixing one part Nitric Acid Blank with three parts HCl Acid Blank.

**Water Blank***ASTM Type I H<sub>2</sub>O*

<b>Part # 52000</b>	<b>\$20/ 100mL</b>
<b>Part # 53000</b>	<b>\$40/ 500mL</b>

**HCl Acid Blank***Matrix 5% HCl*

<b>Part # 52001</b>	<b>\$20/ 100mL</b>
<b>Part # 53001</b>	<b>\$40/ 500mL</b>

**Nitric Acid Blank***Matrix 5% HNO<sub>3</sub>*

<b>Part # 52002</b>	<b>\$20/100mL</b>
<b>Part # 53002</b>	<b>\$40/500mL</b>



## MATRIX MODIFIERS

## GFAA-MATRIX MODIFIERS

### MATRIX MODIFIERS

Matrix Modifiers suppress background interferences and help enhance sensitivity by changing the behavior of the element or the matrix in solution with respect to temperature. These modifiers help prevent the loss of certain elements during pyrolysis by converting the target to a less volatile form. This allows a more optimum graphite furnace program to be utilized.

#### Palladium and Magnesium Nitrate Modifier

Starting Material Pd & Mg(NO<sub>3</sub>)<sub>2</sub>

*Matrix 0.3%(3 mg/mL) Pd & 0.2%(2 mg/mL) Mg in 5% HNO<sub>3</sub>*

**Part # 52311      \$250/100mL**

**Part # 53311      \$450/500mL**

#### Palladium Nitrate Modifier

Starting Material Pd

*Matrix 1%(10 mg/mL) in 2% HNO<sub>3</sub>*

**Part # 57146      \$500/100mL**

**Part # 58146      \$900/500mL**

#### Magnesium Nitrate Modifier

Starting Material Mg(NO<sub>3</sub>)<sub>2</sub>

*Matrix 2%(20 mg/mL) in 5% HNO<sub>3</sub>*

**Part # 52004      \$125/100mL**

**Part # 53004      \$200/500mL**

#### Nickel Nitrate Modifier

Starting Material Ni(NO<sub>3</sub>)<sub>2</sub>

*Matrix 5%(50 mg/mL) in 5% HNO<sub>3</sub>*

**Part # 52003      \$250/100mL**

**Part # 53003      \$350/500mL**

#### Ammonium Nitrate Modifier

Starting Material NH<sub>4</sub>NO<sub>3</sub>

*Matrix 2%(20 mg/mL) in H<sub>2</sub>O*

**Part # 52309      \$250/100mL**

**Part # 53309      \$350/500mL**

#### Ammonium Dihydrogen Phosphate Modifier

Starting Material (NH<sub>4</sub>)H<sub>2</sub>PO<sub>4</sub>

*Matrix 10%(100 mg/mL) in H<sub>2</sub>O*

**Part # 52005      \$350/100mL**

**Part # 53005      \$500/500mL**

#### Calcium Nitrate Modifier

Starting Material Ca(NO<sub>3</sub>)<sub>2</sub> • 4H<sub>2</sub>O

*Matrix 2%(20 mg/mL) in 5% HNO<sub>3</sub>*

**Part # 52310      \$250/100mL**

**Part # 53310      \$350/500mL**

#### Lanthanum Nitrate Modifier

Starting Material LaNO<sub>3</sub>

*Matrix 5%(50 mg/mL) in 5% HNO<sub>3</sub>*

**Part # 52312      \$250/100mL**

**Part # 53312      \$350/500mL**

#### Lanthanum Chloride Modifier

Starting Material LaCl<sub>3</sub>

*Matrix 5%(50 mg/mL) in 5% HCl*

**Part # 52313      \$250/100mL**

**Part # 53313      \$350/500mL**

## GFAA CALIBRATION AND SPIKING SOLUTIONS

## GFAA STANDARDS

### GRAPHITE FURNACE AA CALIBRATION AND SPIKING

#### GFAA Calibration

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sb	100
As	50
Cd	10
Pb	50
Se	100
Tl	50

**Part # 52314      \$85/100 mL**  
**Part # 53314      \$190/500 mL**

#### GFAA Initial Calibration Verification (2nd Source)

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sb	50
As	25
Cd	5
Pb	25
Se	50
Tl	25

**Part # 52315      \$85/100 mL**  
**Part # 53315      \$190/500 mL**

#### GFAA Spike Standard

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sb	100
As	40
Cd	5
Pb	20
Se	10
Tl	50

**Part # 52316      \$85/100 mL**  
**Part # 53316      \$190/500 mL**

#### GFAA Mercury Standard

*Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Hg	100

**Part # 57280      \$25/100 mL**  
**Part # 58280      \$50/500 mL**

METHOD

**CLP**

ILM 05.2

**USEPA CONTRACT LABORATORY  
PROGRAM STATEMENT OF WORK  
FOR INORGANIC ANALYSIS****Analytical Methods for Inductively Coupled Plasma -  
Atomic Emission Spectroscopy (ICP-AES)**

ACRONYM	DESCRIPTION
Cal	Calibration Standards
CCV	Continuing Calibration Verification: To ensure calibration accuracy during each analysis, run a CCV standard for every wavelength used for each analyte.
CRQL	Contract Required Quantation Limit
CRI	Standard prepared at the CRQL level
ICB/CCB	Initial and Continuing Calibration Blank
ICS	Interference Check Sample: To verify inter-element and background correction factors, the Contractor shall analyze and report the results for the ICS, for all elements on the Target Analyte List (TAL), and for all interferents (target and non-target), at the beginning and end of each analysis run, but not before the ICV. In addition, the Contractor shall analyze and report the results for the ICS at a frequency of not less than once per 20 analytical samples per analysis run.
ICV	Initial Calibration/Verification: Immediately after each of the ICP-AES systems have been calibrated, the accuracy of the initial calibration shall be verified and documented for every analyte by the analysis of the ICV solution(s) at each wavelength used.

**ICP-AES SOLUTION STANDARDS FOR  
THE SUPERFUND CONTRACT  
LABORATORY PROGRAM**

METHOD

**CLP**

ILM 05.2

**INSTRUMENT CALIBRATION STANDARDS**

**Calibration Std. I  
5 Components**

*100 ug/mL in 5% HNO<sub>3</sub>.*

- Be
- Cd
- Mn
- Pb
- Zn

**Part # 52149      \$65/100 mL**  
**Part # 53149      \$130/500 mL**

**Calibration Std. II  
5 Components**

*100 ug/mL in 5% HNO<sub>3</sub>.*

- Ba
- Co
- Cu
- Fe
- V

**Part # 52150      \$65/100 mL**  
**Part # 53150      \$130/500 mL**

**Calibration Std. III  
2 Components**

*100 ug/mL in 5% HNO<sub>3</sub>.*

- As
- Se

**Part # 52151      \$40/100 mL**  
**Part # 53151      \$80/500 mL**

**Calibration Std. IV  
6 Components**

*100 ug/mL in 5% HNO<sub>3</sub>.*

- Al
- Ca
- Cr
- K
- Na
- Ni

**Part # 52152      \$65/100 mL**  
**Part # 53152      \$130/500 mL**

**Calibration Std. V  
4 Components**

*100 ug/mL in 5% HNO<sub>3</sub>.*

- Ag
- Mg
- Sb
- Tl

**Part # 52153      \$65/100 mL**  
**Part # 53153      \$130/500 mL**

METHOD

**CLP**

ILM 05.2

**ICP-AES SOLUTION STANDARDS FOR  
THE SUPERFUND CONTRACT  
LABORATORY PROGRAM**

### INITIAL CALIBRATION VERIFICATION (ICV)

After the instrument is calibrated, the calibration must be verified at each wavelength to be used for analysis. It is necessary only to select those elements for verification that are to be subsequently analyzed.

#### ICP-AES

##### Verification Std. 1

12 Components

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Ba	100
Be	40
Cd	50
Co	100
Cu	100
Fe	100
Pb	100
Mn	100
Ni	100
Ag	20
Tl	100
Zn	100

**Part # 52017      \$95/100 mL**  
**Part # 53017      \$190/500 mL**

#### ICP-AES

##### Verification Std. 2

10 Components

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Al	100
Sb	100
As	100
Ca	1000
Cr	100
Mg	1000
K	1000
Se	100
Na	1000
V	100

**Part # 52018      \$95/100 mL**  
**Part # 53018      \$190/500 mL**

**ICP-AES SOLUTION STANDARDS FOR  
THE SUPERFUND CONTRACT  
LABORATORY PROGRAM**

METHOD

**CLP**

ILM 05.2

**CONTINUING CALIBRATION VERIFICATION (CCV)**

Continuing Calibration Verification: To ensure calibration accuracy during each analysis, run a CCV standard for every wavelength used for each analyte.

**ICP-AES  
Continuing Calibration  
Verification Standard  
(CCV)**

**22 COMPONENTS**

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Ca	2500
Mg	2500
K	2500
Na	2500
Al	200
Ba	200
Fe	100
Co	50
V	50
Ni	40
Cu	25
Zn	20
Mn	15
Cr	10
Ag	10
Be	10
Cd	10
Pb	10
As	10
Se	10
Tl	10
Sb	60

**Part # 52154      \$95/100 mL**  
**Part # 53154      \$190/500 mL**

METHOD

**CLP**

ILM 05.2

## ICP-AES SOLUTION STANDARDS FOR THE SUPERFUND CONTRACT LABORATORY PROGRAM

### CONTRACT REQUIRED QUANTITATION LIMITS (CRQL's)

A standard must be run at double the Contract Required Quantation Limit (CRQL) or at two times the Instrument Detection Limits (IDL), whichever is greater. This standardization must be performed at the beginning and end of each batch of samples; or at least twice in an 8 hour shift. All elements to be analyzed must be verified except Al, Ba, Ca, Fe, Mg, Na, and K. The CRI Mix 1 contains all the required elements on the Target Analyte List (TAL) in their appropriate concentration ratios. The standard should be diluted by a factor of 1000 prior to use in the "two times CRI" run for ICP analysis. CRI Mix 2 is designed for ICPs equipped with ultrasonic nebulizers and offers all the elements of interest at two times the CRQL level.

#### CRI Mix 1

##### 15 Components

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sb	120
As	120
Be	10
Cd	10
Cr	20
Co	100
Cu	50
Pb	120
Mn	30
Ni	80
Se	120
Ag	20
Tl	120
V	100
Zn	40

**Part # 52022      \$125/100 mL**

**Part # 53022      \$250/500 mL**

#### CRI Mix 2

##### 15 Components

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sb	120
As	20
Be	10
Cd	10
Cr	20
Co	100
Cu	50
Pb	6
Mn	30
Ni	80
Se	10
Ag	20
Tl	20
V	100
Zn	40

**Part # 52023      \$125/100 mL**

**Part # 53023      \$250/500 mL**

**ICP-AES SOLUTION STANDARDS FOR  
THE SUPERFUND CONTRACT  
LABORATORY PROGRAM**

METHOD

**CLP**

ILM 05.2

## INTERFERENCE CHECKS

Inter-element and background correction factors must be verified at the beginning and end of each analysis run, or at least twice in an 8 hour shift. Two solutions are required for the interference check: the interferent alone (solution "A<sup>1</sup>"), and the combination of interferents and analytes (solution "AB<sup>1</sup>"). "A<sup>1</sup>" is prepared by diluting Interferents A by a factor of 5. Solution "AB<sup>1</sup>" is prepared by producing a combined solution of Interferents A diluted by a factor of 5 and Analytes B diluted by a factor of 100. For example, combine 20 mL of Interferents A with 1.0 mL of analytes B and dilute the mixture to 100 mL with the calibration blank.

### Interferents A

#### 4 Components

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Al	2500
Ca	2500
Fe	1000
Mg	2500

**Part # 52024      \$95/100 mL**

**Part # 53024      \$190/500 mL**

### Interferents B

#### 12 Components

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Ag	100
Ba	50
Be	50
Cd	100
Co	50
Cr	50
Cu	50
Mn	50
Ni	100
Pb	100
V	50
Zn	100

**Part # 52025      \$95/100 mL**

**Part # 53025      \$190/500 mL**



METHOD

**CLP**

ILM 05.2

## ICP-AES SOLUTION STANDARDS FOR THE SUPERFUND CONTRACT LABORATORY PROGRAM

### SPIKE SAMPLE ANALYSIS

In Spike Sample Analysis, a spike containing the required elements in their respective required amounts, is added to the sample prior to addition of any reagents, digestion, distillation, etc.

#### Spike Sample Standard 1

**18 Components**

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Al	200
Sb	50
As	200
Ba	200
Be	5
Cd	5
Cr	20
Co	50
Cu	25
Fe	100
Pb	50
Mn	50
Ni	50
Se	200
Ag	5
Tl	200
V	50
Zn	50

**Part # 52028      \$280/100 mL**

**Part # 53028      \$560/500 mL**

#### Spike Sample Standard 3 (Soil)

**16 Components**

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sb	100
As	400
Ba	400
Be	10
Cd	10
Cr	40
Co	100
Cu	50
Pb	100
Mn	100
Ni	100
Se	400
Ag	10
Tl	400
V	100
Zn	100

**Part # 52031      \$160/100 mL**

**Part # 53031      \$320/500 mL**

**ICP-MS SOLUTION STANDARDS FOR  
THE SUPERFUND CONTRACT  
LABORATORY PROGRAM**

METHOD

**CLP**

ILM 05.2

**Analytical Methods for Inductively Coupled Plasma -  
Mass Spectrometry (ICP-MS)**

**Calibration Standard**

**23 Components**

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Al	100
Sb	100
As	100
Ba	100
Be	100
Bi	100
Cd	100
Cr	100
Co	100
Cu	100
In	100
Pb	100
Mg	100
Mn	100
Ni	100
Sc	100
Se	100
Ag	100
Tb	100
Tl	100
V	100
Y	100
Zn	100

**Part # 52155      \$95/100 mL**

**Part # 53155      \$190/500 mL**

METHOD

**CLP**

ILM 05.2

## ICP-MS SOLUTION STANDARDS FOR THE SUPERFUND CONTRACT LABORATORY PROGRAM

### Tuning Standard

#### 5 Components

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Be	100
Mg	100
Co	100
In	100
Pb	100

**Part # 52156      \$45/100 mL**

**Part # 53156      \$90/500 mL**

## INTERNAL STANDARDS

Element		Matrix	Part#	Conc. (ug/mL)	\$/100mL	Part#	\$/500mL
Bismuth	Bi	Bi(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57083	1000	25	58083	65
Indium	In	In <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57049	1000	25	58049	65
Holmium	Ho	Ho <sub>3</sub> O <sub>3</sub> /HNO <sub>3</sub>	57067	1000	25	58067	75
Lithium	Li	LiNO <sub>3</sub> /HNO <sub>3</sub>	57003	1000	25	58003	65
Lutetium	Lu	Lu <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57071	1000	30	58071	75
Rhodium	Rh	RhCl <sub>3</sub> /HCl	57045	1000	100	58045	400
Scandium	Sc	Sc(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57021	1000	75	58021	150
Terbium	Tb	Tb <sub>4</sub> O <sub>7</sub> /HNO <sub>3</sub>	57065	1000	25	58065	75
Yttrium	Y	Y <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57039	1000	25	58039	65

**ICP-MS SOLUTION STANDARDS FOR  
THE SUPERFUND CONTRACT  
LABORATORY PROGRAM**

METHOD

**CLP**

ILM 05.2

**ICV / CCV STANDARDS**

**ICP-MS / ICV Standard**

**23 Components**

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Al	50
Sb	50
As	50
Ba	50
Be	50
Bi	50
Cd	50
Cr	50
Co	50
Cu	50
In	50
Pb	50
Mg	50
Mn	50
Ni	50
Sc	50
Se	50
Ag	50
Tb	50
Tl	50
V	50
Y	50
Zn	50

**Part # 52157**

**\$95/100 mL**

**Part # 53157**

**\$190/500 mL**

**ICP-MS / CCV Standard**

**23 Components**

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Al	10
Sb	10
As	10
Ba	10
Be	10
Bi	10
Cd	10
Cr	10
Co	10
Cu	10
In	10
Pb	10
Mg	10
Mn	10
Ni	10
Sc	10
Se	10
Ag	10
Tb	10
Tl	10
V	10
Y	10
Zn	10

**Part # 52158**

**\$95/100 mL**

**Part # 53158**

**\$190/500 mL**

METHOD

**CLP**

ILM 05.2

**ICP-MS SOLUTION STANDARDS FOR  
THE SUPERFUND CONTRACT  
LABORATORY PROGRAM**

**CONTRACT REQUIRED QUANTITATION LIMITS (CRQL's)**

**CRI Standard**

**23 Components**

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Al	0.1
Sb	0.1
As	0.1
Ba	0.1
Be	0.1
Bi	0.1
Cd	0.1
Cr	0.1
Co	0.1
Cu	0.1
In	0.1
Pb	0.1
Mg	0.1
Mn	0.1
Ni	0.1
Sc	0.1
Se	0.1
Ag	0.1
Tb	0.1
Tl	0.1
V	0.1
Y	0.1
Zn	0.1

**Part # 52159      \$95/100 mL**

**Part # 53159      \$190/500 mL**

**ICP-MS SOLUTION STANDARDS FOR  
THE SUPERFUND CONTRACT  
LABORATORY PROGRAM**

METHOD

**CLP**

ILM 05.2

**INTERFERENCE CHECK SOLUTIONS (ICS)**

**ICP-MS / Interferents A**

**12 Components**

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Al	100
Ca	100
Fe	100
Mg	100
K	100
Na	100
P	100
SO <sub>4</sub>	100
C	200
Cl	1000
Mo	2
Ti	2

**Part # 52160      \$95/100 mL**  
**Part # 53160      \$190/500 mL**

**ICP-MS / Interferents B**

**20 Components**

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Sb	20
As	20
Ba	20
Bi	20
Cd	20
Cr	20
Co	20
Cu	20
In	20
Pb	20
Mn	20
Ni	20
Sc	20
Se	20
Ag	20
Tb	20
Tl	20
V	20
Y	20
Zn	20

**Part # 52161      \$110/100 mL**  
**Part # 53161      \$220/500 mL**

METHOD

**CLP**

ILM 05.2

**ICP-MS SOLUTION STANDARDS FOR  
THE SUPERFUND CONTRACT  
LABORATORY PROGRAM**

In Spike Sample Analysis, a spike containing the required elements in their respective required amounts, is added to the sample prior to addition of any reagents, digestion, distillation, etc.

**ICP-MS / Spike Sample****17 Components***Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Al	2000
Sb	100
As	40
Ba	2000
Be	50
Cd	50
Cr	200
Co	500
Cu	250
Pb	20
Mn	500
Ni	500
Se	10
Ag	50
Tl	50
V	500
Zn	500

**Part # 52162      \$110/100 mL****Part # 53162      \$220/500 mL**

**USEPA CONTRACT LABORATORY  
PROGRAM STATEMENT OF WORK  
FOR INORGANIC ANALYSIS**

METHOD

**CLP**

ILM 05.2

## Cold Vapor Mercury Analysis

Element	Conc. (ug/mL)	Part#	\$/100mL	Part#	\$/500mL
Inorganic Mercury	10	57880	25	58880	50
Inorganic Mercury	20	52009	25	53009	50
Inorganic Mercury	100	57280	25	58280	50
Inorganic Mercury	200	57380	25	58380	50
Inorganic Mercury	1000	57080	25	58080	65
Inorganic Mercury	10000	57180	75	58180	150
Organic Mercury	100	54006	25	NA	NA
Organic Mercury	1000	54170	25	54171	50
Total Mercury	100	54005	25	NA	NA
Total Mercury	1000	54004	25	54168	50
Total Mercury	10000	54178	100	NA	NA

## Total Cyanide Analysis

Analyte	Conc. (ug/mL)	Part#	\$/100mL	Part#	\$/500mL
Simple Cyanide	1000	59017	20	54012	90
Total Cyanide	1000	54150	20	NA	NA
Free & Complexed Cyanide	1000	54165	20	NA	NA

Simple Cyanide is formulated with Potassium Cyanide (KCN), no distillation is required.

Total Cyanide is formulated with Potassium Ferricyanide (III), distillation is required before analysis can be performed.

Free & Complexed Cyanide is formulated with both materials



METHOD

**CLP**

ILM 05.3

**ICP-AES SOLUTION STANDARDS FOR  
THE SUPERFUND CONTRACT  
LABORATORY PROGRAM  
WATER MATRIX**

**ICP-AES ICV****Water/Soil Matrix****22 Components***Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Al	200
Sb	60
As	10
Ba	200
Be	5
Cd	5
Ca	5000
Cr	10
Co	50
Cu	25
Fe	100
Pb	10
Mg	5000
Mn	15
Ni	40
K	5000
Se	35
Ag	10
Na	5000
Tl	25
V	50
Zn	60

**Part # 52163      \$125/100 mL****Part # 53163      \$250/500 mL****ICP-AES CCV****Water/Soil Matrix****20 Components***Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Al	100
Sb	30
As	5
Ba	100
Ca	2500
Cr	5
Co	25
Cu	12.5
Fe	50
Pb	5
Mn	7.5
Mg	2500
Ni	20
K	2500
Se	17.5
Ag	5
Na	2500
Tl	12.5
V	25
Zn	30

**Part # 52164      \$125/100 mL****Part # 53164      \$250/500 mL**

**ICP-AES SOLUTION STANDARDS FOR  
THE SUPERFUND CONTRACT  
LABORATORY PROGRAM  
WATER MATRIX**

METHOD

**CLP**

ILM 05.3

**ICP-AES CRI Mix****Water Matrix****15 Components***Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sb	60
As	10
Be	5
Cd	5
Cr	10
Co	50
Cu	25
Pb	10
Mn	15
Ni	40
Se	35
Ag	10
Tl	25
V	50
Zn	60

**Part # 59370 \$125/100 mL****Part # 53165 \$250/500 mL****ICP-AES Spike Sample****Water Matrix****18 Components***Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Al	200
Sb	10
As	4
Ba	200
Be	5
Cd	5
Cr	20
Co	50
Cu	25
Fe	100
Pb	2
Mn	50
Ni	50
Se	5
Ag	5
Tl	5
V	50
Zn	50

**Part # 52166 \$125/100 mL****Part # 53166 \$250/500 mL**

METHOD

**CLP**

ILM 05.3

**ICP-AES SOLUTION STANDARDS FOR  
THE SUPERFUND CONTRACT  
LABORATORY PROGRAM  
WATER MATRIX**

**ICP-AES****Interferents A****Water Matrix****4 Components***Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Al	2500
Ca	2500
Fe	1000
Mg	2500

**Part # 52024 \$95/100 mL****Part # 53024 \$190/500 mL****ICP-AES****Interferents B****Water Matrix****16 Components***Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Ag	200
As	100
Ba	500
Be	500
Cd	1000
Co	500
Cr	500
Cu	500
Mn	500
Ni	1000
Pb	50
Sb	600
Se	50
Tl	100
V	500
Zn	1000

**Part # 52167 \$125/100 mL****Part # 53167 \$250/500 mL**

Combine  
Interferents Mix A & B  
for ICSAB.  
Dilute Interferents A Mix  
into Interferents B Mix in  
a 1:10 ratio.

**ICP-AES SOLUTION STANDARDS FOR  
THE SUPERFUND CONTRACT  
LABORATORY PROGRAM  
SOIL MATRIX**

METHOD

**CLP**

ILM 05.3

**ICP-AES ICV  
Water/Soil Matrix**

**22 Components***Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Al	200
Sb	60
As	10
Ba	200
Be	5
Cd	5
Ca	5000
Cr	10
Co	50
Cu	25
Fe	100
Pb	10
Mg	5000
Mn	15
Ni	40
K	5000
Se	35
Ag	10
Na	5000
Tl	25
V	50
Zn	60

**Part # 52163 \$125/100 mL**  
**Part # 53163 \$250/500 mL**

**ICP-AES CCV  
Water/Soil Matrix**

**20 Components***Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Al	100
Sb	30
As	5
Ba	100
Ca	2500
Cr	5
Co	25
Cu	12.5
Fe	50
Pb	5
Mn	7.5
Mg	2500
Ni	20
K	2500
Se	17.5
Ag	5
Na	2500
Tl	12.5
V	25
Zn	30

**Part # 52164 \$125/100 mL**  
**Part # 53164 \$250/500 mL**

METHOD

**CLP**

ILM 05.3

**ICP-AES SOLUTION STANDARDS FOR  
THE SUPERFUND CONTRACT  
LABORATORY PROGRAM  
SOIL MATRIX**

**ICP-AES CRI****Soil Matrix****16 Components***Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sb	600
As	100
Ba	500
Be	50
Cd	50
Cr	100
Co	500
Cu	250
Pb	100
Mn	150
Ni	400
Se	350
Ag	100
Tl	250
V	500
Zn	600

**Part # 52168      \$125/100 mL****Part # 53168      \$250/500 mL****ICP-AES Spike****Soil Matrix****16 Components***Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sb	200
As	80
Ba	4000
Be	100
Cd	100
Cr	400
Co	1000
Cu	500
Pb	40
Mn	1000
Ni	1000
Se	100
Ag	100
Tl	100
V	1000
Zn	1000

**Part # 52169      \$125/100 mL****Part # 53169      \$250/500 mL**

**See page 402 for Interferants Mixes.**

**ICP-MS SOLUTION STANDARDS FOR  
THE SUPERFUND CONTRACT  
LABORATORY PROGRAM  
WATER MATRIX**

METHOD

**CLP**

ILM 05.3

**ICP-MS**

**ICV**

**Water Matrix**

**16 Components**

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sb	20
As	10
Ba	100
Be	10
Cd	10
Cr	20
Co	10
Cu	20
Pb	10
Mn	10
Ni	10
Se	50
Ag	10
Tl	10
V	10
Zn	20

**Part # 52170 \$125/100 mL**

**Part # 53170 \$250/500 mL**

**ICP-MS / CRQL  
CHECK STANDARD-CRI**

**Water Matrix**

**16 Components**

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sb	20
As	10
Ba	100
Be	10
Cd	10
Cr	20
Co	10
Cu	20
Pb	10
Mn	10
Ni	10
Se	50
Ag	10
Tl	10
V	10
Zn	20

**Part # 52171 \$125/100 mL**

**Part # 53171 \$250/500 mL**

**The CRI and ICV mixes are identical in element and concentration, but are prepared from separate source raw materials as specified by the method.**

METHOD

**CLP**

ILM 05.3

**ICP-MS SOLUTION STANDARDS FOR  
THE SUPERFUND CONTRACT  
LABORATORY PROGRAM  
WATER MATRIX**

**ICP-MS CCV****Water Matrix****16 Components***Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sb	10.0
As	5.0
Ba	50
Be	5.0
Cd	5.0
Cr	10.0
Co	5.0
Cu	10.0
Pb	5.0
Mn	5.0
Ni	5.0
Se	25.0
Ag	5.0
Tl	5.0
V	5.0
Zn	10.0

**Part # 52172    \$125/100 mL**  
**Part # 53172    \$250/500 mL**

**ICP-MS / Spike Sample****Water Matrix****16 Components***Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sb	100
As	40
Ba	2000
Be	50
Cd	50
Cr	200
Co	500
Cu	250
Pb	20
Mn	500
Ni	500
Se	10
Ag	50
Tl	50
V	500
Zn	500

**Part # 52173    \$125/100 mL**  
**Part # 53173    \$250/500 mL**

**See page 399 for Mercury and Cyanide Standards**

**ICP-MS SOLUTION STANDARDS FOR  
THE SUPERFUND CONTRACT  
LABORATORY PROGRAM  
WATER MATRIX**

METHOD

**CLP**

ILM 05.3

**ICP-MS / Interferents A****Water Matrix****12 Components***Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Al	1000
Ca	1000
Fe	1000
Mg	1000
K	1000
Na	1000
P as PO <sub>4</sub> <sup>3-</sup>	1000
S as SO <sub>4</sub> <sup>2-</sup>	1000
C	2000
Cl	10000
Mo	20
Ti	20

**Part # 52174      \$125/100 mL****Part # 53174      \$250/500 mL****ICP-MS / Interferents B****Water Matrix****15 Components***Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Sb	20
As	20
Ba	20
Cd	20
Cr	20
Co	20
Cu	20
Pb	20
Mn	20
Ni	20
Se	20
Ag	20
Tl	20
V	20
Zn	20

**Part # 52175      \$125/100 mL****Part # 53175      \$250/500 mL**

Dilute and Combine  
Interferents Mix A & B  
for Mix ICSAB.  
Interferents A Mix is 10X  
the method specification  
& Interferents B Mix is  
1000X.



METHOD

**CLP**

ILM 06.X

**ICP-MS SOLUTION STANDARDS FOR  
THE SUPERFUND CONTRACT  
LABORATORY PROGRAM  
SOIL MATRIX**

ILM 06.X has the same target analyte list as ILM 05.3, however specifications for ICP-MS in soil are given.

**ICP-MS ICV****Soil Matrix****16 Components***Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sb	100
As	50
Ba	500
Be	50
Cd	50
Cr	100
Co	50
Cu	100
Pb	50
Mn	50
Ni	50
Se	250
Ag	50
Tl	50
V	50
Zn	100

**Part # 52176     \$125/100 mL****Part # 53176     \$250/500 mL****ICP-MS CRI****Soil Matrix****16 Components***Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sb	100
As	50
Ba	500
Be	50
Cd	50
Cr	100
Co	50
Cu	100
Pb	50
Mn	50
Ni	50
Se	250
Ag	50
Tl	50
V	50
Zn	100

**Part # 52177     \$125/100 mL****Part # 53177     \$250/500 mL**

**The CRI and ICV mixes are identical in element and concentration, but are prepared from separate source raw materials as specified by the method.**

**ICP-MS SOLUTION STANDARDS FOR  
THE SUPERFUND CONTRACT  
LABORATORY PROGRAM  
SOIL MATRIX**

METHOD

**CLP**

ILM 06.X

**ICP-MS CCV  
Soil Matrix**

**16 Components**

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Sb	50
As	25
Ba	250
Be	25
Cd	25
Cr	50
Co	25
Cu	50
Pb	25
Mn	25
Ni	25
Se	125
Ag	25
Tl	25
V	25
Zn	50

**Part # 52178      \$125/100 mL**

**Part # 53178      \$250/500 mL**

Method  
**TCLP**  
**(1311)**

**TOXICITY CHARACTERISTIC  
LEACHATE PROCEDURE (TCLP)**

**TOXICITY CHARACTERISTIC LEACHATE PROCEDURE  
(TCLP) STANDARD**

For use in accordance with the "Toxicity Characteristic Rule Regulatory Levels" issued in the Federal Register 55, 1.1846 March 1990: Method 1311.

**(TCLP) Standard**

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
As	25
Ba	500
Cd	5
Cr	25
Pb	25
Se	5
Ag	25
Hg*	20

\*Hg is a separate solution.

**(TCLP) GFAA Standard**

*Matrix 2% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
As	25
Pb	25
Se	5

**Part # 52008      \$50/100 mL**  
**Part # 53008      \$100/500 mL**

**Part # 52006      \$95/100 mL**  
**Part # 53006      \$190/500 mL**

**(TCLP) Standard for ICP**

*Matrix 2% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Ba	500
Cd	5
Cr	25
Ag	25

**Part # 52007      \$65/100 mL**  
**Part # 53007      \$130/500 mL**

**(TCLP) Cold Vapor Standard**

*Matrix 2% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Hg	20

**Part # 52009      \$25/100 mL**  
**Part # 53009      \$50/500 mL**

## SYNTHETIC PRECIPITATION LEACHING PROCEDURE

Method  
**TCLP  
(1312)**

Element	Matrix	Part#	Conc. (mg/mL)	\$/100mL	Part#	\$/500mL
Cadmium	Cd Cd(NO3)2/HNO3	57048	1.0	25	58048	65
Cadmium	Cd Cd(NO3)2/HNO3	57148	10.0	75	58148	150
Lead	Pb Pb(NO3)2/HNO3	57082	1.0	25	58082	65
Lead	Pb Pb(NO3)2/HNO3	57182	10.0	75	58182	150

### TCLP 1312 METALS

*Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Cd	1000
Pb	5000

**Part # 52148      \$40/100 mL**

**Part # 53148      \$80/500 mL**

**Visit us on the Web at**  
**[www.AbsoluteStandards.com](http://www.AbsoluteStandards.com)**

**6010A**

REV-1,7/92

**6010B**

REV-2,12/96

**MULTI-ELEMENT SOLUTION  
STANDARDS FOR  
SW-846 METHODS - ICP-AES**

**MULTI-ELEMENT CALIBRATION STANDARDS**

**Calibration Standards Set 1-6**

**Part # 52042 \$310/100 mL**

**Part # 53042 \$620/500 mL**

**Calibration Std. 1**

*Matrix 2% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Be	50
Cd	150
Pb	500
Mn	100
Se	200
Zn	150

**Part # 52043 \$80/100 mL**

**Part # 53043 \$160/500 mL**

**Calibration Std. 2**

*Matrix 2% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Ba	100
Co	100
Cu	100
Fe	1000
V	100

**Part # 52044 \$80/100 mL**

**Part # 53044 \$160/500 mL**

**Calibration Std. 3**

*Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
As	500
Mo	100

**Part # 52045 \$60/100 mL**

**Part # 53045 \$120/500 mL**

**Calibration Std. 4**

*Matrix 2% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Al	200
Ca	1000
Cr	20
Li	100
Ni	20
K	400
Na	200
Sr	10

**Part # 52046 \$90/100 mL**

**Part # 53046 \$180/500 mL**

**Calibration Std. 5**

*Matrix 2% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Sb	200
Mg	1000
Ag	50
Tl	200

**Part # 52047 \$80/100 mL**

**Part # 53047 \$160/500 mL**

**Calibration Std. 6**

*Matrix 2% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
P	200

**Part # 57315 \$20/100 mL**

**Part # 58315 \$50/500 mL**

**MULTI-ELEMENT SOLUTION  
STANDARDS FOR  
SW-846 METHODS - ICP-AES**

**6010A  
REV-1,7/92  
6010B  
REV-2,12/96**

## INTERFERENCE STANDARDS

Interference Standards are used to set or confirm that the appropriate background correction intervals have been set for sequential ICP spectrometers & that the proper inter-element correction factors are set for simultaneous ICP spectrometer systems.

### Interference Standards Set

Includes one each of  
Interference Standards 1,2,3,4,5

**Part # 52038      \$320/100 mL**  
**Part # 53038      \$640/ 500mL**

#### Interference Std. 1

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
As	100
Ba	30
Be	10
Cd	30
Cr	30
Co	30
Cu	30
Pb	100
Mn	20
Hg	5
Ni	30
K	3000
Se	50
Ag	30
Tl	100
V	30
Zn	30

**Part # 52039      \$230/100 mL**  
**Part # 53039      \$460/500 mL**

#### Interference Std. 2

*Matrix 2% HNO<sub>3</sub>. tr Tartaric acid*

Element	Conc.(ug/mL)
Sb	1000

**Part # 57051      \$25/100 mL**  
**Part # 58051      \$65/500 mL**

#### Interference Std. 3

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Li	300
Mo	300
P	1000
Sr	200
Ti	1000

**Part # 52050      \$80/100 mL**  
**Part # 53050      \$160/500 mL**

#### Interference Std. 4

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Al	400
Ca	2000
Fe	2000
Mg	1000

**Part # 52041      \$50/100 mL**  
**Part # 53041      \$100/500 mL**

#### Interference Std. 5

*Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Na	5000

**Part # 57911      \$50/100 mL**  
**Part # 58911      \$100/500 mL**

**6020/  
6020A**
**MULTI-ELEMENT SOLUTION  
STANDARDS FOR  
SW-846 METHODS - ICP-MS**

Method 6020/ 6020A is applicable to the determination of metals in low concentrations (sub-ppb) in water and waste extracts using ICP-MS.

**EPA Method 6020/ 6020A**
**MIX A**
**12 Components**
*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
C	1000
Cl	10000
Al	500
Ca	1500
Fe	1250
Mg	500
Na	1250
P	500
K	500
S	500
Mo	10
Ti	10

**EPA Method 6020/ 6020A**
**MIX B**
**11 Components**
*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
As	1.0
Cd	1.0
Cr	2.0
Co	2.0
Cu	2.0
Mn	2.0
Ni	2.0
Se	1.0
Ag	0.5
V	2.0
Zn	1.0

**Part # 59219**     **\$175/100 mL**  
**Part # 59249**     **\$525/500 mL**

**Part # 52331**     **\$125/100 mL**  
**Part # 53331**     **\$250/500 mL**

**ICP-MS Internal  
Standards**

Element	Matrix	Part#	(ug/mL)	\$/100mL	Part#	\$/500mL
Bismuth	Bi	Bi(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57083	1000	25	58083    65
Indium	In	In <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57049	1000	25	58049    65
Holmium	Ho	Ho <sub>3</sub> O <sub>3</sub> /HNO <sub>3</sub>	57067	1000	25	58067    75
Lithium	Li <sup>6+</sup>	Li <sup>6+</sup> NO <sub>3</sub> /HNO <sub>3</sub>	59021	1000	200	59097   1000
Rhodium	Rh	RhCl <sub>3</sub> /HCl	57045	1000	100	58045    400
Scandium	Sc	Sc(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57021	1000	75	58021    150
Terbium	Tb	Tb <sub>4</sub> O <sub>7</sub> /HNO <sub>3</sub>	57065	1000	25	58065    75
Yttrium	Y	Y <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57039	1000	25	58039    65

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METHOD  
**200.7**

Rev 5.0

**MULTI-ELEMENT SOLUTION  
STANDARDS FOR  
SW-846 METHODS- ICP-AES**

**MIXED CALIBRATION STANDARDS**

EPA Method 200.7 covers the Determination of Metals and Trace Elements in Water and Wastes by ICP Atomic Emission Spectroscopy.

**Mixed Calibration Std. 1**

*10 Components*

*Matrix 5% HNO<sub>3</sub>/ tr.HF.*

Element	Conc.(ug/mL)
Ag	50
As	1000
B	100
Ba	100
Ca	1000
Cd	200
Cu	200
Mn	200
Sb	500
Se	500

**Part # 52335      \$80/100 mL**

**Part # 53335      \$160/500 mL**

**Mixed Calibration Std. 4**

*6 Components*

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Al	1000
Cr	500
Hg	200
Si	1000
Sn	400
Zn	500

**Part # 52056      \$80/ 100 mL**

**Part # 53056      \$160/ 500 mL**

**Mixed Calibration Std. 2**

*6 Components*

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
K	2000
Li	500
Mo	1000
Na	1000
Sr	100
Ti	1000

**Part # 52336      \$75/100 mL**

**Part # 53336      \$150/500 mL**

**Mixed Calibration Std. 3**

*4 Components*

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Ce	200
Co	200
V	200
P	1000

**Part # 52337      \$75/100 mL**

**Part # 53337      \$150/500 mL**

**Mixed Calibration Std. 5**

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Be	100
Fe	1000
Pb	1000
Mg	1000
Ni	200
Tl	500

**Part # 52057      \$110/100 mL**

**Part # 53057      \$220/500 mL**

**MULTI-ELEMENT SOLUTION  
STANDARDS FOR  
SW-846 METHODS - ICP-AES**

METHOD  
**200.7**

Various Revisions

The **Plasma Solution** is used to determine the optimum height above the load coil for viewing the plasma in EPA Method 200.7, Section 7.6.

The **Tuning Solution** is used to determine the optimum height above the load coil for viewing the plasma in EPA Method 200.7, Section 7.7.

**Plasma Solution**

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
As	100
Pb	100
Se	200
Tl	200

**Part # 52058      \$50/100 mL**

**Part # 53058      \$100/500 mL**

**Tuning Solution**

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Cu	100
Pb	100

**Part # 52059      \$40/100 mL**

**Part # 53059      \$80/500 mL**

The **Laboratory Performance Check Solution Set** is used to evaluate the performance of the instrument system in EPA Method 200.7, Section 7.8.

**LPC Solution Set**

*Matrix 5% HNO • Dilution : 1 to 100*

**P#52306 LPC-1**

Element	Conc. (ug/mL).
Ag	50
Al	200
As	200
B	200
Ba	200
Be	200
Ca	200
Cd	200
Co	200
Cr	200

**P#52307 LPC-2**

Element	Conc. (ug/mL).
Cu	200
Fe	200
Hg	200
K	1000
Li	200
Mg	200
Mn	200
Mo	200
Na	200
Ni	200

**P#52308 LPC-3**

Element	Conc. (ug/mL).
P	1000
Pb	200
Sb	200
Se	1000
Si	200
Sn*	200
Sr	200
Tl	200
V	200
Zn	200

\* (supplied as a separate solution)

**Part # 52060      \$400/100 mL**

**Part # 53060      \$800/500 mL**

## METHOD

**200.7**

## Various Revisions

**MULTI-ELEMENT SOLUTION  
STANDARDS FOR  
SW-846 METHODS - ICP-AES**

The Spectral Interference Check Solutions consist of higher-level, concentrated, selected method analytes and are used to evaluate the laboratory's procedure for correcting known inter-element spectral interferences.

**SIC 1** is used to evaluate the Mo inter-element spectral correction factors on the analytes Al, Sb, Se, Sn, and V.

**SIC 1***Matrix H<sub>2</sub>O.*

Dilution : 1 to 10

Element	Conc.(ug/mL)
Mo	500

**Part # 57642      \$20/100 mL****Part # 58642      \$50/500 mL**

**SIC 2** is used to evaluate the Co, Cr, Mn, V, Cu, inter-element spectral correction factors on the analytes Pb, Sb, Mo, As, V, and Zn.

**SIC 2***Matrix 2% HNO<sub>3</sub>.*

Dilution : 1 to 10

Element	Conc. (ug/mL)	Corresponding Interference
Co	100	Pb
Cr	200	Sb
Mn	200	Mo
V	200	As, Be
Cu	400	Zn

**Part # 52061      \$50/100 mL****Part # 53061      \$100/500 mL**

**SIC 3** is used to evaluate the Ni, Al, Fe, inter-element spectral correction factors on the analytes Sb, Zn, As, Ag, Mn, V, Cr.

**SIC 3***Matrix 2% HNO<sub>3</sub>.*

Dilution : 1 to 10

Element	Conc. (ug/mL)	Corresponding Interference
Ni	200	Sb, Zn
Al	300	As
Fe	1500	Ag, Cr, Mn, V

**Part # 52062      \$40/100 mL****Part # 53062      \$80/500 mL**

**MULTI-ELEMENT SOLUTION  
STANDARDS FOR  
SW-846 METHODS - ICP-AES**

METHOD  
**200.7**  
Various Revisions

### LABORATORY FORTIFYING SOLUTION (LFS)

The Laboratory Fortifying Solution is used in the preparation of the laboratory-fortified blank and the laboratory-fortified sample matrix solutions. The **Laboratory-Fortified Blank (LFB)** is an aliquot of reagent grade water to which known quantities of the method analytes are added in the laboratory. The **LFB** is analyzed exactly like a sample to determine whether method performance is within acceptable control limits. The **Laboratory-Fortified Sample Matrix (LFM)** is an aliquot of an environmental sample to which known quantities of the method analytes are added in the laboratory. The **LFM** is analyzed exactly like a sample to determine whether the sample matrix contributes bias to the analytical result.

#### LFS Solution Set

*Matrix 5% HNO<sub>3</sub>. • Dilution : 1 to 100*

LFS-1		LFS-2		LFS-3	
Element	Conc. (ug/mL).	Element	Conc. (ug/mL).	Element	Conc. (ug/mL).
Ag	25	Cu	250	Sb	250
Al	250	Fe	250	Se	250
As	250	Hg	50	Si	250
B	250	K	250	Sn*	100
Ba	250	Li	250	Sr	250
Be	50	Mn	100	Tl	250
Cd	100	Mo	250	V	100
Co	100	Ni	500	Zn	250
Cr	250	Pb	250		

\* (supplied as a separate solution)

**Part # 52063      \$180/100 mL**

**Part # 53063      \$360/500 mL**

Note:

- The analytes Ca, Mg, and Na are not included in the Fortifying Solution due to their widely varying concentrations in environmental samples
- The analytes B & Si should be disregarded if the samples are processed and diluted in borosilicate labware due to contamination from borosilicate glass.

METHOD  
**200.7**

Various Revisions

**MULTI-ELEMENT SOLUTION  
STANDARDS FOR  
SW-846 METHODS - ICP-AES**

**Spiking Standard 1**

*Matrix H<sub>2</sub>O*

Element	Conc.(ug/mL)
B	500
Mo	500
Si	2000

**Part # 52064 \$80/100 mL**

**Part # 53064 \$160/500 mL**

**Spiking Standard 2**

*Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Ca	1000
Mg	2000
K	10,000
Na	3000

**Part # 52065 \$90/100 mL**

**Part # 53065 \$180/500 mL**

**Spiking Standard 3**

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Al	2000
Ba	2000
Be	50
Cr	200
Co	500
Cu	250
Fe	1000
Mn	500
Ni	500
Ag	50
V	500
Zn	500

**Part # 52066 \$180/100 mL**

**Part # 53066 \$360/500 mL**

**Spiking Standard 4**

*Matrix 2% HNO<sub>3</sub> tr Tartaric Acid*

Element	Conc.(ug/mL)
Sb	500

**Part # 57651 \$20/100 mL**

**Part # 58651 \$50/500 mL**

**Spiking Standard 5**

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
As	2000
Cd	50
Pb	500
Se	2000
Tl	2000

**Part # 52067 \$100/100 mL**

**Part # 53067 \$200/500 mL**

**Spiking Standards Set**

Includes one each of  
Spiking Standards 1,2,3,4,5

**Part # 52068 \$400/100 mL**

**Part # 53068 \$800/ 500mL**

**Mercury Standard**

*Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Hg	200

**Part # 57380 \$25/100 mL**

**Part # 58380 \$50/500 mL**

**MULTI-ELEMENT SOLUTION  
STANDARDS FOR  
SW-846 METHODS - ICP-AES**

METHOD

**200.7**

Various Revisions

**Spiking Standard 1***Matrix H<sub>2</sub>O*

Element	Conc.(ug/mL)
B	400
Mo	200
Si	2000
P	400

**Part # 52069 \$90/100 mL****Part # 53069 \$180/500 mL****Spiking Standard 2***Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Ca	10,000
Mg	10,000
K	10,000
Na	10,000

**Part # 52070 \$120/100 mL****Part # 53070 \$240/500 mL****Spiking Standard 4***Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sb	200

**Part # 57351 \$20/100 mL****Part # 58351 \$50/500 mL****Spiking Standard 5***Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
As	200
Cd	100
Pb	200
Se	400
Tl	400

**Part # 52071 \$100/100 mL****Part # 53071 \$200/500 mL****Spiking Standard 3***Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Al	200
Ba	200
Be	100
Cr	100
Co	200
Cu	200
Fe	400
Li	200
Mn	100
Ni	200
Ag	200
Sr	400
Sn	200
V	200
Zn	200

**Part # 52072 \$180/100 mL****Part # 53072 \$360/500 mL****Spiking Standards Set**Includes one each of  
Spiking Standards 1,2,3,4,5**Part # 52073 \$400/100 mL****Part # 53073 \$800/ 500mL****Mercury Standard***Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Hg	200

**Part # 57380 \$25/100 mL****Part # 58380 \$50/500 mL**

METHOD

**200.7**

Various Revisions

**MULTI-ELEMENT SOLUTION  
STANDARDS FOR  
SW-846-200.7 & SDWA 1310, NPDWR**

## DRINKING WATER STANDARDS

These standards are for use in drinking water compliance monitoring and for the analysis of ground and surface water requiring determination at drinking water contaminant levels. Refer to the US EPA SW-846, Method 1310 and US National Primary Drinking Water Regulations 40 CFR Part 141. The Second Drinking Water Metals Standard includes all metals required for US Appendix 200.7 for analysis by ICP Spectroscopy.

### Drinking Water Standards Set

Includes one each of  
Primary and Secondary Standards

**Part # 52074      \$140/100 mL**

**Part # 53074      \$280/500 mL**

#### Primary

#### Drinking Water Metals

*Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
As	10
Ba	100
Cd	5
Cr	10
Pb	10
Se	5
Ag	10
Hg	10

**Part # 52075      \$80/100 mL**

**Part # 53075      \$160/500 mL**

#### Secondary

#### Drinking Water Metals

*Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Cu	100
Fe	30
Mn	5
Zn	500

**Part # 52076      \$65/100 mL**

**Part # 53076      \$130/500 mL**

**MULTI-ELEMENT SOLUTION  
STANDARDS FOR  
SW-846 METHODS 200.7 & 6010**

METHOD  
**200.7**  
Various Revisions

### INSTRUMENT WAVELENGTH STANDARDS

For calibration and verification of wavelength accuracy and stability in sequential and simultaneous ICP Spectrometers. Also for use in US EPA SW-846, Method 6010 section 5.6 and Method 200.7 section 7.6.1.

#### Instrument Wavelength Standard

*Matrix 2% HNO<sub>3</sub>*

Al	100	Mg	100
As	100	Mn	100
Cd	100	Ni	100
Cr	100	K	100
Co	100	Na	100
Cu	100	Zn	100
Fe	100	Y	600
Pb	100		

**Part # 52081                      \$110/100 mL**

**Part # 53081                      \$220/500 mL**

#### Instrument Std. 3

*Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
As	20
La	20
Li	20
Cr	20
Mn	20
Mo	20
Ni	20
P	100
K	100
Sc	20
Na	20

**Part # 52079                      \$90/100 mL**

**Part # 53079                      \$180/500 mL**

#### Instrument Std. 3B

*Matrix 2% HCl*

Element	Conc.(ug/mL)
As	20
La	20
Li	20
Mn	20
Mo	20
Ni	20
P	100
K	100
Sc	20
Na	20
S	100

**Part # 59030                      \$75/100 mL**



METHOD  
**200.7**  
**6010**

**MULTI-ELEMENT SOLUTION  
STANDARDS FOR  
SW-846 METHODS 200.7 & 6010**

**QUALITY CONTROL STANDARDS**

Quality control standards are used to check standard curves, perform inter-element correction and other spectral interference checks. Also used in US EPA Method 200.7 and 600/482-055 "Technical Additions to Methods for Chemical Analysis of Water and Wastes." Available both individually and as a complete set.

**QC Standard 1**  
**19 Components**  
*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sb	100
As	100
Be	100
Ca	100
Cd	100
Cr	100
Co	100
Cu	100
Fe	100
Pb	100
Mg	100
Mn	100
Mo	100
Ni	100
Se	100
Tl	100
Ti	100
V	100
Zn	100

**Part # 52084      \$175/100 mL**

**Part # 53084      \$350/500 mL**

**QC Standard 2**  
**21 Components**  
*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sb	100
As	100
Be	100
Ca	100
Cd	100
Cr	100
Co	100
Cu	100
Fe	100
Pb	100
Li	100
Mg	100
Mn	100
Mo	100
Ni	100
Se	100
Sr	100
Tl	100
Ti	100
V	100
Zn	100

**Part # 52085      \$190/100 mL**

**Part # 53085      \$380/500 mL**

**MULTI-ELEMENT SOLUTION  
STANDARDS FOR  
SW-846 METHODS 200.7 & 6010**

**METHOD  
200.7  
6010**

**QC Standard 3  
15 Components**

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Al	100
Ba	100
Ca	100
Cd	100
Cr	100
Co	100
Cu	100
Fe	100
Pb	100
Mg	100
Mn	100
Ni	100
Na	100
Ti	100
Zn	100

**Part # 52086 \$170/100 mL**

**Part # 53086 \$340/500 mL**

**Calibration Standards Set**

Includes one each of Quality  
Control Standard 1, 3, 5.

**Part # 52089 \$310/100 mL**

**Part # 53089 \$620/500 mL**

**Calibration Standards Set**

Includes one each of Quality  
Control Standard 2, 3, 4.

**Part # 52090 \$310/100 mL**

**Part # 53090 \$620/500 mL**

**QC Standard 4  
7 Components**

*Matrix 2% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Al	100
Ba	100
B	100
K	1000
Si	50
Ag	100
Na	100

**Part # 52087 \$80/100 mL**

**Part # 53087 \$160/500 mL**

**QC Standard 5  
7 Components**

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Al	100
Ba	100
B	100
K	1000
Si	500
Ag	50
Na	100

**Part # 52088 \$80/100 mL**

**Part # 53088 \$160/500 mL**

METHOD

**200.8****MULTI-ELEMENT  
TUNING STANDARDS****ICP-MS Tuning & Internal Standards Rev 5.5**

These multi-element standards are designed to assist the operator in calibration of the instrument or verification of the mass range.

**ICP-MS Tuning Standard 1***Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Be	10
Co	10
In	10
Pb	10
Mg	10

**Part # 52122      \$50/100 mL****Part # 53122      \$200/500 mL****ICP-MS Tuning Standard 2***Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Li	10
Y	10
Ce	10
Tl	10

**Part # 52123      \$50/100 mL****Part # 53123      \$200/500 mL**

## ICP-MS INTERNAL STANDARDS

METHOD

**200.8**

### ICP-MS Internal Standards

These internal standard stock solutions are used for: addition to blanks; calibration standards; as samples for internal standardization; and for use in US EPA SW-846 Method 200.8. Dilute 10 mL to 100 mL before using.

Element	Matrix	Part#	(ug/mL)	\$/100mL	Part#	\$/500mL
Bismuth	Bi	Bi(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57283	100	20	58283 50
Indium	In	In <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57249	100	20	58249 50
Holmium	Ho	Ho <sub>3</sub> O <sub>3</sub> /HNO <sub>3</sub>	57067	1000	25	58067 75
Lithium	Li <sup>6+</sup>	Li <sup>6+</sup> NO <sub>3</sub> /HNO <sub>3</sub>	59036	100	100	59037 300
Rhodium	Rh	RhCl <sub>3</sub> /HCl	57245	100	100	58245 300
Scandium	Sc	Sc(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>	57221	100	20	58221 50
Terbium	Tb	Tb <sub>4</sub> O <sub>7</sub> /HNO <sub>3</sub>	57265	100	20	58265 50
Yttrium	Y	Y <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>	57239	100	20	58239 50

#### Method 200.8 Rev 5.5 ICP-MS Internal Standard *Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sc	10
Y	10
In	10
Tb	10
Bi	10

**Part # 52332      \$50/100 mL**  
**Part # 53332      \$200/500 mL**

#### Multi-Element Internal Standard *Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Bi	10
Ho	10
In	10
Li	10
Sc	10
Tb	10
Y	10

**Part # 52319      \$65/100 mL**  
**Part # 53319      \$200/500 mL**

METHOD

**200.8****MULTI-ELEMENT  
SOLUTION STANDARDS****ICP-MS CALIBRATION STANDARDS REV 5.5**

These multi-element standards are designed to assist the ICP-MS operator in performing concentration verification checks.

**Method 200.8**  
**ICP-MS Calibration Standard 1**  
**19 Components**

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Al	10
Sb	10
As	10
Be	10
Cd	10
Cr	10
Co	10
Cu	10
Pb	10
Mn	10
Hg	5
Mo	10
Ni	10
Se	50
Tl	10
Th	10
U	10
V	10
Zn	10

**Part # 52333**      **\$150/100 mL**

**Part # 53333**      **\$300/500 mL**

**Method 200.8**  
**ICP-MS Calibration Standard 2**  
**2 Components**

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Ba	10
Ag	10

**Part # 52334**      **\$40/100 mL**

**Part # 53334**      **\$80/500 mL**

**Method 200.8**  
**ICP-MS Calibration Standard 3**

*Matrix 2% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Hg	5

**Part # 59388**      **\$25/100 mL**

## MULTI-ELEMENT SOLUTION STANDARDS

METHOD

# 200.8

### ICP-MS VERIFICATION STANDARD

#### ICP-MS Verification Stand. 1

##### 26 Components

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Al	10
As	10
Ba	10
Be	10
Bi	10
Ca	10
Cd	10
Cr	10
Co	10
Cu	10
Fe	10
Ga	10
Pb	10
Li	10
Mg	10
Mn	10
Hg*Separate solution	10
Ni	10
K	10
Se	10
Na	10
Ag	10
Sr	10
Tl	10
V	10
Zn	10

**Part # 52100      \$180/100 mL**

**Part # 53100      \$380/500 mL**

*\*Part# 57880 is included (Hg @ 100ug/mL)*

#### ICP-MS Verification Stand. 2

*Matrix H<sub>2</sub>O*

Element	Conc.(ug/mL)
B	10
Mo	10
S	10
Si	10
Ti	10
W	10

**Part # 52101**

**\$60/100 mL**

**Part # 53101**

**\$120/500 mL**

#### ICP-MS Verification Set

Includes one each of ICP-MS  
Verification 1 and 2.

**Part # 52102**

**\$220/100 mL**

**Part # 52302**

**\$440/500 mL**

METHOD

**200.8****MULTI-ELEMENT SOLUTION  
INTERFERENCE CHECK SOLUTIONS****ICP-MS Interference Check Solution A  
12 Components***Matrix in 2%-HNO<sub>3</sub>/ tr. HF*

Element	Conc.(ug/mL)
Al	500
Ca	500
Fe	500
Mg	500
Na	500
P	500
K	500
S	500
C	1000
Cl	3600
Mo	10
Ti	10

**Part # 52114      \$100/100 mL****Part # 53114      \$450/500 mL****ICP-MS Interference Check Solution B  
11 Components***Matrix in 2%-HNO<sub>3</sub>/ tr. HF*

Element	Conc.(ug/mL)
As	0.100
Cd	0.050
Cr	0.100
Co	0.200
Cu	0.100
Ni	0.200
Mn	0.100
Se	0.100
Ag	0.100
V	0.200
Zn	0.100

**Part # 52115      \$100/100 mL****Part # 53115      \$450/500 mL**

**MULTI-ELEMENT SOLUTIONS /  
MEMORY CHECK SOLUTIONS**

METHOD

**200.8**
**Memory Check Solutions**

Method 6020 CLP-M requires that a memory test be performed after calibration of the ICP-MS and before performing any analysis. Combine mixes A and B in equal ratios. This test will determine any memory problems that will affect the quality of the data.

**ICP-MS Memory Check  
Solution A**
**14 Components**
*Matrix in 2%-HNO<sub>3</sub>/ tr. HF*

Element	Conc.(ug/mL)
Al	1000
Mg	1000
Na	1000
C	2000
Cl	7200
S	1000
Ti	20
Sb	20
Be	20
Cr	20
Mn	20
Ni	20
V	20
Zn	20

**Part # 52116      \$100/100 mL**
**Part # 53116      \$450/500 mL**
**ICP-MS Memory Check  
Solution B**
**14 Components**
*Matrix in 2%-HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Ca	1000
Fe	1000
K	1000
P	1000
Mo	20
As	20
Ba	20
Cd	20
Co	20
Cu	20
Pb	20
Se	20
Ag	20
Tl	20

**Part # 52117      \$100/100 mL**
**Part # 53117      \$450/500 mL**



## ICP-MS

MULTI-ELEMENT  
SOLUTION STANDARDS

## Multi-Element Solution 1

## 29 Components

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Ag	10
Al	10
As	10
Ba	10
Be	10
Bi	10
Ca	10
Cd	10
Co	10
Cr	10
Cs	10
Cu	10
Fe	10
Ga	10
In	10
K	10
Li	10
Mg	10
Mn	10
Na	10
Ni	10
Pb	10
Rb	10
Se	10
Sr	10
Tl	10
U	10
V	10
Zn	10

**Part # 52133**     **\$180/100 mL****Part # 53133**     **\$360/500 mL**

## Multi-Element Solution 2

## 17 Components

*Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Ce	10
Dy	10
Er	10
Eu	10
Gd	10
Ho	10
La	10
Lu	10
Nd	10
Pr	10
Sc	10
Sm	10
Tb	10
Th	10
Tm	10
Y	10
Yb	10

**Part # 52134**     **\$200/100 mL****Part # 53134**     **\$400/500 mL**

## MULTI-ELEMENT SOLUTION STANDARDS

## ICP-MS

### Multi-Element Solution 3 10 Components

*Matrix 10% HCL / 1% HNO3.*

Element	Conc.(ug/mL)
Au	10
Hf	10
Ir	10
Pd	10
Pt	10
Rh	10
Ru	10
Sb	10
Sn	10
Te	10

**Part # 52135      \$250/100 mL**

**Part # 53135      \$500/500 mL**

### Multi-Element Solution 4 12 Components

*Matrix H2O tr. HF*

Element	Conc.(ug/mL)
B	10
Ge	10
Mo	10
Nb	10
P	10
Re	10
S	10
Si	10
Ta	10
Ti	10
W	10
Zr	10

**Part # 52136      \$150/100 mL**

**Part # 53136      \$300/500 mL**

### Multi-Element Solution 5 1 Component

*Matrix 2% HNO3.*

Element	Conc.(ug/mL)
Hg	10

**Part # 57880      \$25/100 mL**

**Part # 58880      \$50/500 mL**

### ICP-MS Solution Kit

Includes one each of  
Multi-Element 1, 2, 3, 4, & 5.

**Part # 52137      \$650/5X100 mL**

**Part # 53137      \$1300/5X500 mL**

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 METHOD  
**200.9**


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**DETERMINATION OF TRACE  
 ELEMENTS BY STABILIZED  
 TEMPERATURE  
 GRAPHITE FURNACE AA**

**Method 200.9**  
**Complete Single Element Kit**  
**(16 x 100ml bottles @ 1000ug/mL Each)**

Element	Matrix
Aluminum	Al Al(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>
Antimony	Sb Sb <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub> tr.Tartaric acid
Arsenic	As As <sub>2</sub> O <sub>3</sub> /HNO <sub>3</sub>
Beryllium	Be Be <sub>4</sub> O(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>6</sub> /HNO <sub>3</sub>
Cadmium	Cd Cd(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Chromium	Cr Cr(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>
Cobalt	Co Co(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Copper	Cu Cu(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Iron	Fe Fe(NO <sub>3</sub> ) <sub>3</sub> /HNO <sub>3</sub>
Lead	Pb Pb(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Manganese	Mn Mn(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Nickel	Ni Ni(NO <sub>3</sub> ) <sub>2</sub> /HNO <sub>3</sub>
Selenium	Se SeO <sub>2</sub> /HNO <sub>3</sub>
Silver	Ag AgNO <sub>3</sub> /HNO <sub>3</sub>
Thallium	Tl TlNO <sub>3</sub> /HNO <sub>3</sub>
Tin	Sn (NH <sub>4</sub> ) <sub>2</sub> SnF <sub>6</sub> /HNO <sub>3</sub> /HCL

**Part # 52252 \$280/ 16 x 100 mL**

**Palladium and Magnesium Nitrate Modifier**

Starting Material Pd & Mg(NO<sub>3</sub>)<sub>2</sub>

*Matrix 0.3%(3 mg/mL) Pd & 0.2%(2 mg/mL) Mg in 5% HNO<sub>3</sub>*

**Part # 52311 \$250/100mL**

**Part # 53311 \$450/500mL**

## METALS BY INDUCTIVELY COUPLED PLASMA ATOMIC EMISSION SPECTROSCOPY AND ATOMIC ABSORPTION SPECTROSCOPY

METHOD  
**1620**

The method is a consolidation of US EPA Methods 200.7 (ICP for trace elements), 204.2 (Sb), 206.2 (As), 239.2 (Pb), 270.2 (Se), 279.2 (Tl), 245.5 (Hg), 245.1 (Hg), and 245.2(Hg). The method is used for analysis of trace elements by ICP atomic emission spectroscopy and GFAA spectroscopy, for analysis of mercury by CVAA spectroscopy, and as a semi-quantitative ICP screen for specified elements.

### EPA 1620 Standard 1

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Mn	100
Be	100
Cd	100
Pb	100
Zn	100

**Part # 52139 \$60/100 mL**  
**Part # 53139 \$120/500 mL**

### EPA 1620 Standard 4

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Ca	100
Na	100
Al	100
Cr	100
Ni	100

**Part # 52142 \$60/100 mL**  
**Part # 53142 \$120/500 mL**

### EPA 1620 Standard 2

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Ba	100
Cu	100
Fe	100
V	100
Y	100
Co	100

**Part # 52140 \$60/100 mL**  
**Part # 53140 \$120/500 mL**

### EPA 1620 Standard 5

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Sb	100
B	100
Mg	100
Ag	100
Tl	100
Ti	100

**Part # 52143 \$60/100 mL**  
**Part # 53143 \$120/500 mL**

### EPA 1620 Standard 3

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Mo	100
As	100
Se	100

**Part # 52141 \$50/100 mL**  
**Part # 53141 \$100/500 mL**

### Tin

### EPA 1620 Standard 6

*Matrix 2% HNO<sub>3</sub>/ 6% HCL*

Element	Conc.(ug/mL)
Sn	100

**Part # 57250 \$20/100 mL**  
**Part # 58250 \$50/500 mL**

METHOD

**1636****DETERMINATION OF HEXAVALENT  
CHROMIUM BY ION  
CHROMATOGRAPHY**

This method is for the determination of dissolved hexavalent chromium (as CrO) in ambient waters at EPA water quality criteria (WQC) levels using ion chromatography (IC). This method was developed by integrating the analytical procedures in EPA Method 218.6 with the quality control (QC) and sample handling procedures necessary to avoid contamination and ensure the validity of analytical results during sampling and analysis for metals at EPA WQC levels.

**Hexavalent Chromium (Cr<sup>6+</sup>)***1000 ug/mL in Water***Part # 54161      \$20/100 mL****Part # 54172      \$50/500 mL****Hexavalent Chromium (Cr<sup>6+</sup>)***10 mg/mL in Water***Part # 54175      \$75/100 mL****Part # 54176      \$150/500 mL**

See the Green Section  
for Performance Evaluation Samples

**DETERMINATION OF TRACE  
ELEMENTS IN AMBIENT WATERS BY  
INDUCTIVELY COUPLED PLASMA —  
MASS SPECTROMETRY**

METHOD

**1638**

This method is for the determination of dissolved elements in ambient waters at EPA water quality criteria (WQC) levels using inductively coupled plasma-mass spectrometry (ICP-MS). It may also be used for determination of total recoverable element concentrations in these waters.

**Method 1638 Mix A***Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sb	10
Cd	10
Cu	10
Pb	10
Ni	10
Se	10
Tl	10
Zn	10

**Part # 52144**     **\$60/100 mL**  
**Part # 53144**     **\$120/500 mL**

**Silver (Ag)****Method 1638/1640 Mix B***Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Ag	20

**Part # 57847**     **\$20/100 mL**  
**Part # 58847**     **\$50/500 mL**

**Internal Standard***Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sc	10
Y	10
In	10
Tb	10
Bi	10

**Part # 52145**     **\$60/100 mL**  
**Part # 53145**     **\$120/500 mL**

**ICP-MS Tuning Std. 1***Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Be	10
Co	10
In	10
Pb	10
Mg	10

**Part # 52122**     **\$50/100 mL**  
**Part # 53122**     **\$200/500 mL**

METHOD

**1640**

**DETERMINATION OF TRACE  
ELEMENTS IN AMBIENT WATERS BY  
ON-LINE CHELATION  
PRECONCENTRATION ICP-MS**

This method is for the determination of dissolved elements in ambient waters at EPA water quality criteria (WQC) levels using on-line chelation preconcentration and inductively coupled plasma-mass spectrometry (ICP-MS). It may also be used for determination of total recoverable element concentrations in these waters.

**Method 1640 Mix A***Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
As	10
Cd	10
Cu	10
Pb	10
Ni	10
Zn	10

**Silver (Ag)****Method 1638/1640 Mix B***Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Ag	20

**Part # 57847      \$20/100 mL****Part # 58847      \$50/500 mL****Part # 52146      \$50/100 mL****Part # 53146      \$100/500 mL****Internal Standard***Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Sc	10
Y	10
In	10
Tb	10
Bi	10

**Part # 52145      \$60/100 mL****Part # 53145      \$120/500 mL****Method 1640 Tuning Std.***Matrix 2% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Ni	10
Y	10
In	10
Tb	10
Pb	10

**Part # 52147      \$50/100 mL****Part # 53147      \$100/500 mL**

**N-HEXANE EXTRACTABLE MATERIAL (HEM; OIL  
AND GREASE) AND SILICA GEL TREATED N-  
HEXANE EXTRACTABLE MATERIAL BY  
EXTRACTION AND GRAVIMETRY**

METHOD

**1664**

As a party to the Montreal Protocol on Substances that Deplete the Ozone Layer and as required by law under the Clean Air Act Amendments of 1990 (CAAA), the United States is committed to controlling and eventually phasing out the use of chlorofluorocarbons (CFCs). In support of these efforts, Method 1664 was developed by the United States Environmental Protection Agency Office of Science and Technology to replace previously used gravimetric procedures that employed Freon-113, a Class I CFC, as the extraction solvent for the determination of oil and grease and non-polar material.

This method is for determination of n-hexane extractable material (HEM; oil and grease) and n-hexane extractable material that is not adsorbed by silica gel (SGT-HEM; non-polar material) in surface and saline waters and industrial and domestic aqueous wastes. Extractable materials that may be determined are relatively non-volatile hydrocarbons, vegetable oils, animal fats, waxes, soaps, greases, and related materials. The method is based on prior Environmental Protection Agency (EPA) methods for determination of "oil and grease" and "total petroleum hydrocarbons"

**EPA Method 1664  
(Oil & Grease)***8000 (ug/mL) in Acetone*

- (1) n-Hexadecane
- (2) Stearic acid

**Part # 91958      \$65/100mL**

For the corresponding  
Performance Testing sample,  
use P#55084.  
Please see page 497  
in the GREEN section.



## METHOD

**600/4-79-020****MULTI-ELEMENT SOLUTION  
STANDARDS FOR  
GROUNDWATER AND WASTEWATER****GROUNDWATER AND WASTEWATER STANDARDS**

These may be used either as standards or as a means of checking an individual analyst's accuracy and precision. Refer to the US EPA Methods Manual, 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes" for the appropriate Trace Metals I, II, III procedures.

**Trace Metals Set**

Includes one each of  
Trace Metals 1, 2, and 3.

**Part # 52091      \$240/100 mL****Part # 53091      \$480/500 mL****Trace Metals 1***Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Al	500
As	100
Be	100
Cd	25
Cr	100
Co	100
Cu	100
Fe	100
Pb	100
Mn	100
Hg	5
Ni	100
Se	25
V	250
Zn	100

**Part # 52092      \$130/100 mL****Part # 53092      \$260/500 mL****Trace Metals 2***Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Sb	20
Ag	10
Tl	20

**Part # 52093      \$50/100 mL****Part # 53093      \$100/500 mL****Trace Metals 3***Matrix 2% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Ba	500
Ca	500
Mg	100
Mo	500
K	100
Na	500

**Part # 52094      \$75/100 mL****Part # 53094      \$150/500 mL**

## MULTI-ELEMENT SOLUTION STANDARDS FOR TOXIC METALS IN FISH

METHOD

**600/4-79-020**

### ALTERNATE WATER & WASTEWATER STANDARDS

#### Alternate Metals Set

Includes one each of  
Alternate Metals 1 and 2.

**Part # 52095      \$120/100 mL**  
**Part # 53095      \$240/500 mL**

#### Alternate Metals 2

*Matrix 2% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Ca	500
Mg	100
K	100
Na	500

**Part # 52097      \$90/100 mL**  
**Part # 53097      \$180/500 mL**

#### Alternate Metals 1

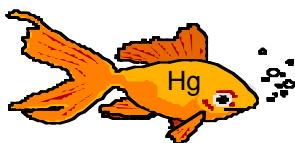
*Matrix 2% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
Al	20
Sb	5
Be	5
Co	10
Cu	10
Fe	20
Mn	10
Ni	10
Tl	5
V	20
Zn	10

**Part # 52096      \$60/100 mL**  
**Part # 53096      \$120/500 mL**

### TRACE METALS IN FISH

For use in methods for the sampling and analysis of priority pollutants in sediments and fish tissue. Refer to the US EPA Methods Manuals, 600/4-79-020 and 600/4-81-055 for the appropriate procedures.



#### Trace Metals in Fish

*Matrix 5% HNO<sub>3</sub>.*

Element	Conc.(ug/mL)
As	100
Cd	5
Cr	20
Cu	50
Pb	10
Hg	100
Ni	2
Se	10
Zn	1000

**Part # 52098      \$90/100 mL**  
**Part # 53098      \$180/500 mL**

**MISC.****MISCELLANEOUS METAL  
STANDARDS****Misc. Spike Solution #1***Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
Co	1000
Sr	1000
Al	1000
Ba	1000
Cd	1000
Cr	1000
Cu	1000
Se	1000
V	1000
Be	1000
As	1000

**Part # 59045      \$250/100 mL****Misc. Spike Solution #2***Matrix 5% HNO<sub>3</sub>*

Element	Conc.(ug/mL)
B	1000
Fe	1000
Pb	1000
Mn	1000
Mo	1000
Ni	1000
Tl	1000
Zn	1000
Ag	200
Sb	1000

**Part # 59046      \$250/100 mL****Spike Solution Set**Includes one each of Solution  
#1 & #2.**Part # 52259      \$400/100 mL**

**MISCELLANEOUS METAL STANDARDS**

**MISC.**

**Metals Mix**

*Matrix 2% HNO<sub>3</sub>*

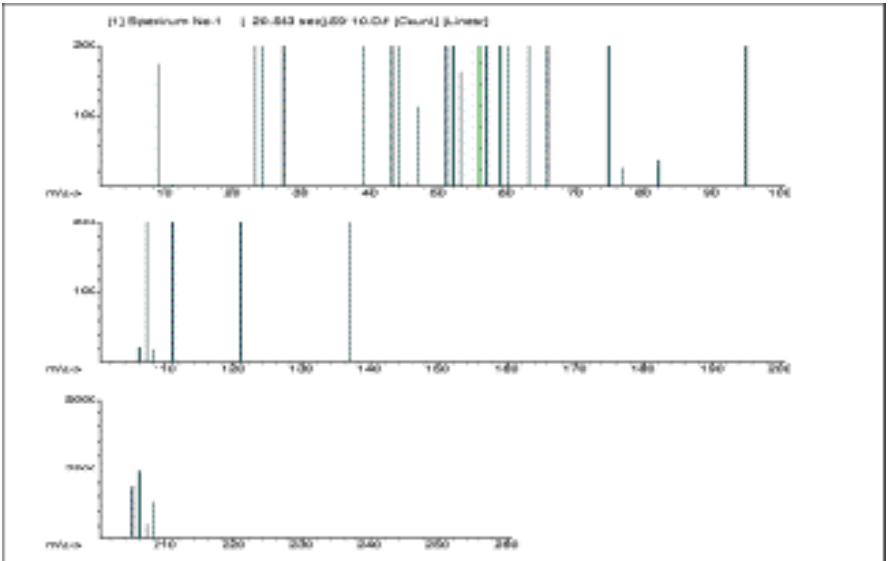
Element	Conc.(ug/mL)	Element	Conc.(ug/mL)
Fe	1000	Cr	10
K	1000	Cu	10
Ca	1000	Mn	10
Na	1000	Mo	10
Mg	1000	Ni	10
Ag	10	Pb	10
Al	10	Sb	10
As	10	Se	10
Ba	10	Tl	10
Be	10	V	10
Cd	10	Zn	10
Co	10	Ti	10

**Part # 59110**

**\$195/100 mL**

**Part # 59153**

**\$500/500 mL**



METHOD

**300.0****DETERMINATION OF INORGANIC ANIONS BY ION CHROMATOGRAPHY****EPA Method 300.0 Anions  
Single Components***1000 ug/mL in Water.*

<b>Calibration Mixes</b>	<b>Part#</b>	<b>100 mL</b>	<b>Part#</b>	<b>500mL</b>
Chloride	54101	\$20	54501	\$90
Fluoride	54102	\$20	54502	\$90
Nitrate as N	54103	\$20	54503	\$50
Nitrite as N	54104	\$20	54504	\$50
Ortho-phosphate as P	54105	\$20	54505	\$90
Sulfate	54106	\$20	54506	\$90
Bromide	54107	\$20	54507	\$90
Bromate	54108	\$20	54508	\$90
Chlorite	54109	\$20	54509	\$90
Chlorate	54110	\$20	54510	\$90

**Complete set of all 10 solutions****Part # 54000      \$150/100 mL****Part # 54500      \$750/500 mL****Sodium Carbonate****Eluent 100 x Concentrate***0.5 M in Water.***Part # 54127      \$25/100 mL****Part # 54527      \$100/500 mL****Sodium Bicarbonate****Eluent 100 x Concentrate***0.5 M in Water.***Part # 54128      \$25/100 mL****Part # 54528      \$100/500 mL****EPA Method 300.0 Eluent 100 x Concentrate***Varied Molarity in Water. 100 mL*

(1) Sodium carbonate      0.18 M

(2) Sodium bicarbonate      0.17 M

**Part # 54129      \$25/100 mL****Part # 54529      \$100/500 mL**

## DETERMINATION OF INORGANIC ANIONS BY ION CHROMATOGRAPHY

METHOD

# 300.0

A small volume of sample, typically 2 to 3 mL, is introduced into an ion chromatograph. The anions of interest are separated and measured, using a system comprised of a guard column, separator column, suppressor device, and conductivity detector. The main differences between Method A and B are the separator columns, guard columns and eluents. In order to use this method for solids, an extraction procedure must be performed. Stability of the solutions must be closely monitored. Store the materials at 4°C.

### EPA Method 300.0 Anions

#### Mix A

*1000 ug/mL in Water.*

- (1) Bromide
- (2) Chloride
- (3) Fluoride
- (4) Nitrate as N
- (5) Nitrite as N
- (6) Ortho-phosphate as P
- (7) Sulfate

**Part # 52118**

**\$50/100 mL**

**Part # 53118**

**\$200/500 mL**

### EPA Method 300.0 Anions

#### Mix A Alternate

*1000 ug/mL in Water.*

- (1) Bromide
- (2) Chloride
- (3) Fluoride
- (4) Nitrate as N
- (5) Ortho-phosphate as P
- (6) Sulfate

**Part # 52320**

**\$50/100 mL**

**Part # 53320**

**\$200/500 mL**

### EPA Method 300.0 Anions

#### Mix B

*1000 ug/mL in Water.*

- (1) Chlorite
- (2) Chlorate
- (3) Bromate

**Part # 52119**

**\$25/100 mL**

**Part # 53119**

**\$100/500 mL**

METHOD  
**300.0**

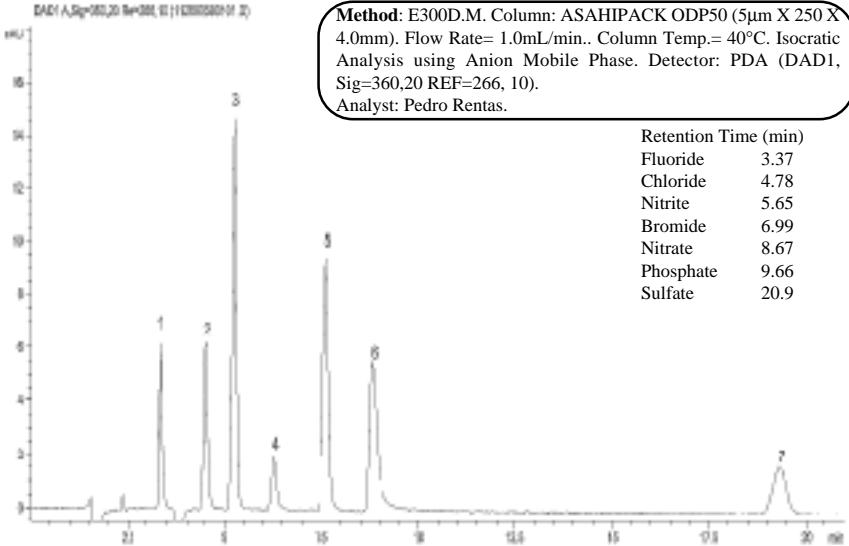
**DETERMINATION OF INORGANIC ANIONS BY ION CHROMATOGRAPHY**

**EPA Method 300.0 Anions  
MIX A**

*Varied ug/mL in Water.*

(1) Bromide	20
(2) Chloride	20
(3) Fluoride	10
(4) Nitrate as N	20
(5) Nitrite as N	20
(6) Ortho-phosphate as P	30
(7) Sulfate	30

**Part # 59010      \$50/100 mL**  
**Part # 59095      \$200/500 mL**



**DETERMINATION OF INORGANIC  
ANIONS BY ION CHROMATOGRAPHY**

METHOD

**300.0**

**EPA Method 300.0 Anions**

*Varied ug/mL in Water.*

(1) Bromide	200
(2) Chloride	200
(3) Fluoride	100
(4) Nitrate as N	200
(5) Nitrite as N	200
(6) Ortho-phosphate as P	300
(7) Sulfate	300

**Part # 59011      \$100/100 mL**

**Part # 59096      \$200/500 mL**

**Sulphide**

*1000 ug/mL in Water.*

**Part # 54139      \$30/100 mL**

**Part # 54163      \$100/500 mL**

**Chloride (Cl)**

**From CaCl<sub>2</sub>**

*1000 ug/mL in Water.*

**Part # 54155      \$20/100 mL**



METHOD

**300.0****DETERMINATION OF INORGANIC ANIONS BY ION CHROMATOGRAPHY****INORGANIC DISINFECTION BY-PRODUCTS****Inorganic Chlorinated Disinfection  
By-Products***1000 ug/mL in Water.*

- (1) Chlorate ( $\text{ClO}_3^-$ )
- (2) Chlorite ( $\text{ClO}_2^-$ )

**Part # 52105      \$35/100 mL****Part # 53105      \$95/500 mL****Inorganic Brominated Disinfection  
By-Products***1000 ug/mL in Water.*

- (1) Bromate ( $\text{BrO}_3^-$ )
- (2) Bromide ( $\text{Br}^-$ )

**Part # 52106      \$35/100 mL****Part # 53106      \$95/500 mL****Anions***100 ug/mL in Water.*

- (1) Nitrate ( $\text{NO}_3^-$ )-as N
- (2) Nitrite ( $\text{NO}_2^-$ )-as N
- (3) Fluoride ( $\text{F}^-$ )
- (4) Orthophosphate ( $\text{PO}_4^{3-}$ )-as P

**Part # 52107      \$50/100 mL****Part # 53107      \$150/500 mL**

## DETERMINATION OF INORGANIC CATIONS BY ION CHROMATOGRAPHY

METHOD  
**300.0**

### Ohio Monthly QC Calibration Check

*Varied ug/mL in Water.*

Fluoride

**Part # 59076      \$25/100 mL**

**Part # 59176      \$60/500 mL**

### Inorganic Cations Ion Chromatography

#### Single Components

*1000 ug/mL - \$20 /100 mL*

54112	Ammonium, NH <sub>4</sub> <sup>+</sup>	in Water.
54113	Ammonium as N	in Water.
57056	Barium, Ba <sup>2+</sup>	in 2% HNO <sub>3</sub> .
57020	Calcium, Ca <sup>2+</sup>	in 2% HNO <sub>3</sub> .
57003	Lithium, Li <sup>+</sup>	in 2% HNO <sub>3</sub> .
57012	Magnesium, Mg <sup>2+</sup>	in 2% HNO <sub>3</sub> .
57019	Potassium, K <sup>+</sup>	in 2% HNO <sub>3</sub> .
57011	Sodium, Na <sup>+</sup>	in 2% HNO <sub>3</sub> .
57038	Strontium, Sr <sup>2+</sup>	in 2% HNO <sub>3</sub> .

***Complete set of all 9 solutions,  
use Part # 54001 \$130  
SAVE \$50.***

### Additional Inorganic Cations Ion Chromatography

#### Single Components

*1000 ug/mL - \$20/ 100 mL*

54154	Calcium (Ca <sup>2+</sup> )	in Water.
54157	Magnesium, (Mg <sup>2+</sup> )	in Water.
54158	Potassium, (K <sup>+</sup> )	in Water.
54149	Sodium, (Na <sup>+</sup> )	in Water.

---

METHOD  
**314.0/  
314.1**

---

**DETERMINATION OF PERCHLORATE  
BY ION CHROMATOGRAPHY**

Method 314.0 was developed for the determination of perchlorate in drinking water by ion chromatography coupled with suppressed conductivity detection.

Method 314.1 employs the use of inline column concentration/matrix elimination ion chromatography coupled with suppressed conductivity detection for the determination of perchlorate in drinking water.

**Method 314 Calibration**

*1000 ug/mL in Water*

Sodium Perchlorate ( $\text{NaClO}_4^-$ )

**Part # 57001 \$35/100 mL**

**Part # 54164 \$150/500 mL**

*100 ug/mL in Water*

Sodium Perchlorate ( $\text{NaClO}_4^-$ )

**Part # 59344 \$35/100 mL**

**Laboratory Synthetic  
Sample Matrix Blank (pH 8.6)**

*1000 ug/mL in Water*

- (1) Bicarbonate ( $\text{HCO}_3^-$ )
- (2) Chloride ( $\text{Cl}^-$ )
- (3) Sulfate ( $\text{SO}_4^{2-}$ )

**Part # 54205 \$50/100 mL**

**Laboratory Synthetic  
Sample Matrix Blank (pH 10)**

*25 mg/mL in Water*

- (1) Carbonate ( $\text{CO}_3^{2-}$ )
- (2) Chloride ( $\text{Cl}^-$ )
- (3) Sulfate ( $\text{SO}_4^{2-}$ )

**Part # 59206 \$60/100 mL**

**DETERMINATION OF PERCHLORATE  
BY ION CHROMATOGRAPHY / MASS  
SPECTROSCOPY & NaCl <sup>18</sup>O<sub>4</sub><sup>-</sup> AS AN  
INTERNAL STANDARD**

METHOD

**332.0**

Rev 1.0

Method 332.0 was developed for the determination of low levels of perchlorate in drinking water by ion chromatography coupled with suppressed conductivity and electrospray ionization mass spectroscopy. To improve the accuracy and performance of this method, <sup>18</sup>-Oxygen enriched perchlorate is utilized as an internal standard.

**Method 332.0 Calibration***1000 ug/mL in Water*Sodium Perchlorate (NaClO<sub>4</sub><sup>-</sup>)**Part # 57001 \$35/100 mL****Part # 54164 \$150/500 mL***100 ug/mL in Water.*Sodium Perchlorate (NaClO<sub>4</sub><sup>-</sup>)**Part # 59344 \$35/100 mL****Method 332.0 Calibration  
Internal Standard***1 ug/mL in Water*Sodium Perchlorate(<sup>18</sup>O) -(NaCl <sup>18</sup>O<sub>4</sub><sup>-</sup>)**Part # 54022 \$30/ 1 mL****Laboratory Synthetic  
Sample Matrix Blank (pH 10)***25 mg/mL in Water*

- (1) Carbonate (CO<sub>3</sub><sup>2-</sup>)
- (2) Chloride (Cl<sup>-</sup>)
- (3) Sulfate (SO<sub>4</sub><sup>2-</sup>)

**Part # 59206 \$60/100 mL**

METHOD

**353.2****DETERMINATION OF NITRATE-  
NITRITE NITROGEN BY  
AUTOMATED COLORIMETRY**

This method covers the determination of nitrite singly, or nitrite and nitrate combined in drinking, ground, and surface waters, and domestic and industrial wastes. Stability of the solution must be closely monitored. Detection is by colorimetry. Typical stability is only 1 month. Store the materials at 4°C.

**EPA Method 353.2 Anions Mix***1000 ug/mL in Water.*

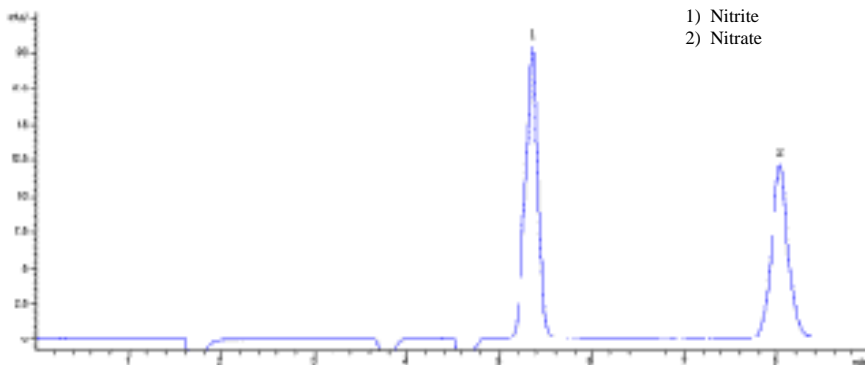
- (1) Nitrate as N
- (2) Nitrite as N

**Part # 52120      \$20/100 mL****Part # 53120      \$100/500 mL****EPA Method 353.2 Anions Mix***Varied ug/mL in Water.*

- (1) Nitrate as N      1000
- (2) Nitrite as N      500

**Part # 54162      \$20/100 mL****Part # 54521      \$100/500 mL**

**Method:** E300D.M. Column: ASAHIPACK ODP50 (5µm X 250 X 4.0mm). Flow Rate= 1.0mL/min.. Column Temp.= 40°C. Isocratic Analysis using Anion Mobile Phase. Detector: PDA (DAD1, Sig=360,20 REF=266, 10).  
Analyst: Pedro Rentas.



**MISCELLANEOUS  
ORGANIC ACIDS / WET CHEMICAL  
CALIBRATION STANDARDS**

METHOD

**Misc.****Acetic Acid (Acetate)***1000 ug/mL in Water.***Part # 54116     \$35/100 mL****Part # 54516     \$150/500 mL****Formic Acid (Formate)***1000 ug/mL in Water.***Part # 54117     \$35/100 mL****Part # 54517     \$150/500 mL****Oxalic Acid (Oxalate)***1000 ug/mL in Water.***Part # 54196     \$35/100 mL****Part # 54596     \$150/500 mL****Organic Acids Mix***1000 ug/mL in Water.*

- (1) Acetic acid
- (2) Formic acid
- (3) Methoxyacetic acid
- (4) Oxalic acid

**Part # 59294     \$350/500 mL****Tetramethyl Ammonium Hydroxide***1000 ug/mL in Water.***Part # 54118     \$35/100 mL****Part # 54518     \$150/500 mL****Total Organic Carbon (TOC)  
& Sulphate***1000 ug/mL in Water.***Part # 54148     \$20/100 mL****Organic Nutrients**

TKN as N, Total Phosphorus as P

*1000 ug/mL in Water***Part # 54152     \$20/100 mL****Inorganic Nutrients**NH<sub>4</sub> as N, NO<sub>3</sub> as N, PO<sub>4</sub> as P*1000 ug/mL in Water***Part # 54153     \$20/100 mL**

METHOD

**Misc.**
**WET CHEMICAL CALIBRATION  
MISCELLANEOUS EPA & STANDARD  
METHODS**

The following section contains several Wet Chemical Reference Materials that can be used as quality control checks or to generate calibration curves. A few popular EPA/SW-846 and Standard Methods are depicted for easy reference. Absolute Standards, Inc. has also generated a completely searchable web-based index of EPA analytes and methods. Please see our web site:

**WWW.AbsoluteStandards.com**

<b>TEST PARAMETER</b>	<b>EPA/ SW-846 STD. METH.</b>	
<b>Conductance @ 25 °C</b> <i>1000 uMHOS/cm in Water.</i> <b>Part # 54131     \$20/100 mL</b>	<b>120.1</b> <b>9050A</b>	<b>2510B</b>
<b>pH of 6</b> <i>in Water.</i> <b>Part # 54119     \$20/100 mL</b>	<b>150 (1-2)</b> <b>9040B</b> <b>9041A 9045C</b>	<b>4500-H<sup>+</sup>-B</b>
<b>Residual Free Chlorine</b> <i>1000 ug/mL in Water.</i> <b>Part # 54124     \$20/100 mL</b>	<b>330 (1-4)</b>	<b>4500-Cl (B-I)</b>
<b>Alkalinity as CaCO<sub>3</sub></b> <i>1000 ug/mL in Water.</i> <b>Part # 54142     \$20/100 mL</b> <b>Part # 54242     \$75/500 mL</b>	<b>310 (1-2)</b>	<b>2320B</b> <b>2330C</b> <b>4500-CO<sub>2</sub>-B,D</b>
<b>Color</b> <i>500 Color Units in 10% HCl/H<sub>2</sub>O.</i> Potassium Chloroplatinate Cobaltous Chloride hexahydrate <b>Part # 54255     \$250/100 mL</b>	<b>110.1</b> <b>110.2</b> <b>110.3</b>	<b>HACH 8025</b>

**WET CHEMICAL CALIBRATION  
MISCELLANEOUS EPA & STANDARD  
METHODS**

METHOD  
**Misc.**

<b>TEST PARAMETER</b>	<b>EPA/ SW-846 STD. METH.</b>	
<b>Turbidity</b> <i>400 NTU in Water.</i> <b>Part # 54122    \$20/20 mL</b>	180.1	2130B
<b>Phenolics (Total) 4AAP</b> <i>1000 ug/mL in Water.</i> <b>Part # 54136    \$25/100 mL</b>	420 (1-4) 9065 9066 9067	5530 (B-D)
<b>Hexavalent Chromium (Cr 6<sup>+</sup>)</b> <i>1000 ug/mL in Water.</i> <b>Part # 54161    \$20/100 mL</b> <b>Part # 54172    \$50/500 mL</b>	61 218, (4-6) 1636, 1669 3060A, 7195 7196A, 7197 7198, 7199	3500-Cr
<b>Oil &amp; Grease</b> <i>1000 ug/mL in n-Propanol/Glycerol.</i> <b>Part # 54135    \$25/100 mL</b>	413.1 413.2	
<b>Oil &amp; Grease (TPH)</b> <i>4130 ug/mL in Freon 113</i> Iso-octane Hexadecane Chlorobenzene <b>Part # 90416    \$25/1 mL</b>	418.1	
<b>Oil &amp; Grease</b> <i>8 mg/mL in Acetone.</i> <b>Part # 91958    \$65/100 mL</b>	1664 9070A	



METHOD

**Misc.**

**WET CHEMICAL CALIBRATION  
MISCELLANEOUS EPA & STANDARD  
METHODS**

<b>TEST PARAMETER</b>	<b>EPA/ SW-846 STD. METH.</b>	
<p style="text-align: center;"><b>Calcium Hardness</b> <i>1000 ug/mL in 1% HCl.</i></p> <p><b>Part # 54143     \$20/100 mL</b></p>	130 (1-2)	2340 (B-C)
<p style="text-align: center;"><b>Total Hardness</b> <i>1000 ug/mL in Water.</i></p> <p><b>Part # 54156     \$20/100 mL</b> <b>Part # 54597     \$90/500 mL</b></p>	130 (1-2)	2340 (B-C)
<p style="text-align: center;"><b>Simple Cyanide as KCN</b> <i>1000 ug/mL in Water/NaOH.</i></p> <p><b>Part # 59017     \$20/100 mL</b></p>	335.1 9014 9213 OIA-16-77	4500-CN (D-F,I,K)
<p style="text-align: center;"><b>Total Cyanide as Potassium Ferricyanide</b> <i>1000 ug/mL in Water/NaOH.</i></p> <p><b>Part # 54150     \$20/100 mL</b></p>	335 (2-4)	4500-CN (C-F)
<p style="text-align: center;"><b>Simple &amp; Total Cyanide</b> <i>1000 ug/mL in Water/NaOH.</i></p> <p><b>Part # 54165     \$20/100 mL</b></p>	See Above	See Above
<p style="text-align: center;"><b>Perchlorate</b> <i>1000 ug/mL in Water.</i></p> <p><b>Part # 57001     \$35/100 mL</b> <b>Part # 54164     \$150/500 mL</b></p>	9058	4110 (B-C)

**WET CHEMICAL CALIBRATION  
MISCELLANEOUS EPA & STANDARD  
METHODS**

METHOD  
**Misc.**

<b>TEST PARAMETER</b>	<b>EPA/ SW-846 STD. METH.</b>	
<b>MBAS</b> <i>1000 ug/mL in Water.</i> <b>Part # 54160    \$20/20 mL</b>	425.1	5540C
<b>UV 254 Absorbance/DOC as KHP</b> <i>100 ug/mL in Water.</i> <b>Part # 54166    \$20/100 mL</b>		5910B
<b>Non-Filterable Solids (TSS)</b> <i>100 mg Neat</i> <b>Part # 54134    \$20/ 100 mg</b>	160.2	2540D
<b>Total Dissolved Solids (TDS)</b> <i>1000 ug/mL in Water.</i> <b>Part # 54125    \$20/100 mL</b>	160.1	2540C
<b>Total Solids</b> <i>100 mg Neat</i> <b>Part # 54167    \$20/ 100 mg</b>	See Above	See Above
<b>Total Organic Halides (TOX) as 2,4,6-Trichlorophenol</b> <i>Cl @ 100 ug/mL</i> <b>Part # 54194 in Water    \$20/ 20 mL</b> <b>Part # 54243 in Methanol \$20/ 20 mL</b>	9020B 9022	5320B

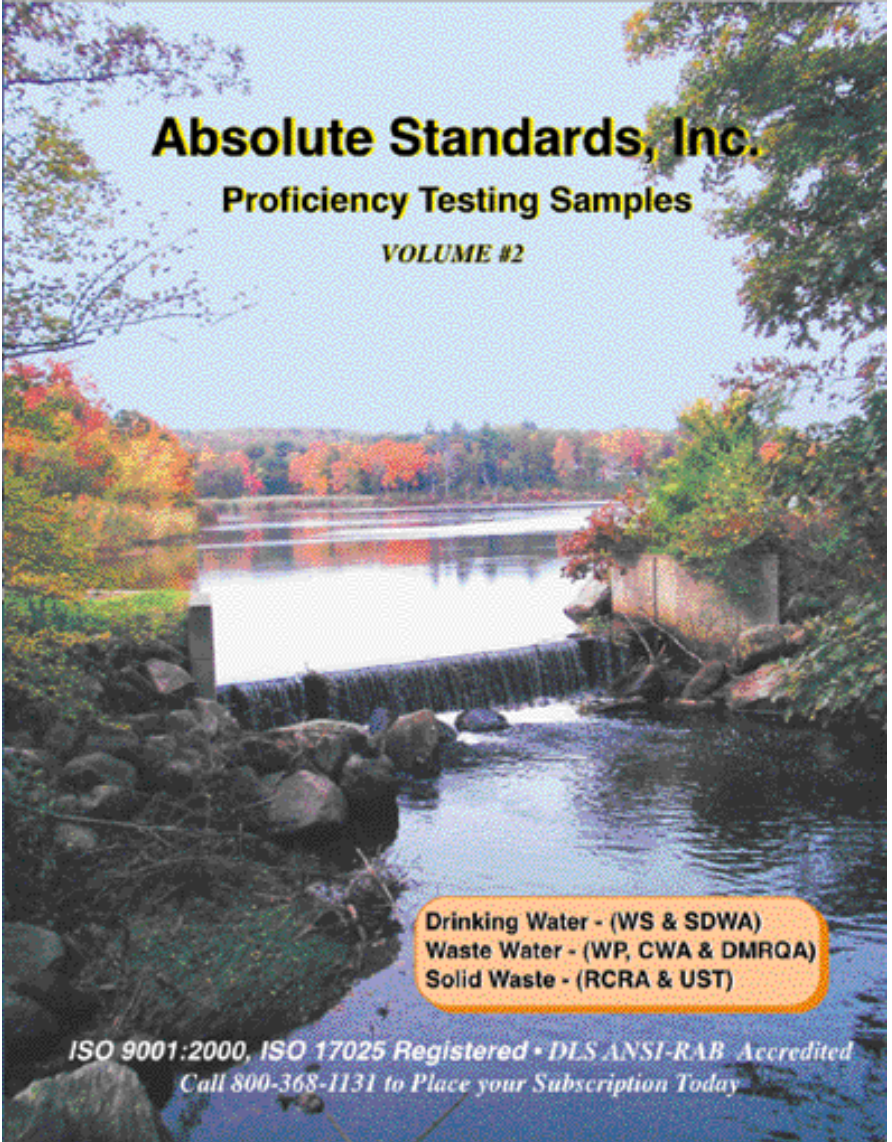
METHOD

**Misc.**

**WET CHEMICAL CALIBRATION  
MISCELLANEOUS EPA & STANDARD  
METHODS**

<b>TEST PARAMETER</b>	<b>EPA/ SW-846 STD. METH.</b>	
<b>Total Kjeldahl Nitrogen from Glycine</b> <i>1000 ug/mL in Water</i> <b>Part # 54132 \$20/100 mL</b>	<b>351 (1-4)</b> <b>1687</b> <b>1688</b>	<b>4500-Norg (B-C)</b>
<b>Total Phosphorus as P</b> <i>1000 ug/mL in Water</i> <b>Part # 54133 \$20/100 mL</b>	<b>365 (2-4)</b>	<b>4500-P-E</b>
<b>Phosphate (PO<sub>4</sub><sup>3-</sup>) as P</b> <i>1000 ug/mL in Water</i> <b>Part # 54105 \$20/100 mL</b> <b>Part # 54505 \$90/500 mL</b>	<b>60</b> <b>300.0</b> <b>6010B</b> <b>7580</b>	<b>4110B,C</b> <b>4500-P (B-F)</b>
<b>Total Organic Carbon (TOC) from KHP</b> <i>1000 ug/mL in Water.</i> <b>Part # 59179 \$20/100 mL</b>	<b>415 (1-2)</b> <b>9060</b>	<b>5310 (B-D)</b>
<b>Total Organic Carbon (TOC) from Sucrose</b> <i>1000 ug/mL in 1% HCl/Water.</i> <b>Part # 54126 \$20/100 mL</b>	<b>415 (1-2)</b> <b>9060</b>	<b>5310 (B-D)</b>
<b>Silica (SiO<sub>2</sub>)</b> <i>1000 ug/mL in Water / tr. NaOH</i> <b>Part # 54159 \$20/100 mL</b> <b>Part # 54169 \$75/500 mL</b>	<b>200.7</b> <b>200.15</b> <b>370.1</b>	<b>4500-Si (B-G)</b>

# AbsoluteGrade™ Performance Evaluation Program



# AbsoluteGrade™ Performance Evaluation Program

You can *Trust* Absolute Standards  
with your Performance Evaluation needs.

The selection of a PT Provider is a critical component to any quality program. While testing laboratories are obligated to follow analytical methods as written and to employ method-specified quality control procedures, the choice of a PT provider is not necessarily straightforward.

Care must be taken to investigate a performance evaluation manufacturer thoroughly. Since significant decisions are based on the results of your analytical data, confidence in your PT provider is essential.

At Absolute Standards we understand our role in the environmental process and take this responsibility seriously. We have undergone extensive 3<sup>rd</sup> party audits to ensure that the quality of our products exceeds your expectations.

To learn more about these quality products and how they can solve your compliance issues, call:

Nicole Davis, PT Coordinator  
(800) 368-1131  
NicoleADavis@mac.com

# AbsoluteGrade™

## Performance Evaluation Program

### PT Sample Types

Performance Evaluation samples are offered in three different formats to meet your accreditation needs.

#### **EX**ternal Accreditation PT samples.

**EX**ternal Study reports shall be scored by Absolute Standards and mailed to each participant and designated accreditation body.

- 1) *Formal Studies* (Begin on the 15<sup>th</sup> of each quarter and have a 45 day test period)
- 2) *QuickTurnAround™ (QTA)*. Corrective action samples

#### **IN**ternal Practice PT samples.

- 3) *Internal Practice Samples (IN)*.

These QC practice sets are designed to aid in analyst training or to be used as internal quality control standards.

---

### How to Order your PT samples...

- Enter **Part #**
- Select **PT Type** (Formal Study, QTA, Internal)
- Input your **USEPA Lab ID #**
- Indicate the state **Accrediting Authority** to submit the PT reports to. (If External)
- Send **Order**; (see Order Form on the next page)
  - [www.AbsoluteStandards.com](http://www.AbsoluteStandards.com)
  - Call: 800-368-1131,
  - Fax: 800-410 2577,
  - Email: [CustomerServ@AbsoluteStandards.com](mailto:CustomerServ@AbsoluteStandards.com)

# ORDER FORM

# AbsoluteGrade™ PT Program

PHOTO COPY FOR FUTURE USE (ENLARGE 1.25%)

Part Number	Accreditation EX = External PT* IN = Internal PT**	Study Period Study # (25-32) or QuickTurnAround	Unit Price	Extended Price
WS.WP.RCRA.	STUDY 25	STUDY 26	STUDY 27 (DMR-QA)	STUDY 28
OPEN	January 15	April 15	July 15	October 15
CLOSE	March 1	May 30	August 29	November 29
WS.WP.RCRA.	STUDY 29	STUDY 30	STUDY 31 (DMR-QA)	STUDY 32
OPEN	January 15	April 15	July 15	October 15
CLOSE	March 1	May 30	August 29	November 29
Account #:				Subtotal
P O #:				Shipping (UPS Ground) \$10.00
Credit Card #:				2T Sales Tax add 6%
Expiration:				Total Order
<p>*ExternalPT samples can be purchased in 2 ways: 1. <b>FormalStudies</b> samples are for laboratory accreditation. They have fixed Open/Closed dates as shown above. Select the Study # that you wish to participate in. Report forms must be returned to Absolute Standards by midnight on the close date; or as 2. <b>QuickTurnAround(QTA)</b> samples are for interim accreditation or corrective action and are shipped at the time of order. **InternalPT samples are for practice or routine QC. These samples ship with the assigned values so the laboratory can assess their analytical performance. InternalPT samples can be shipped during a Study Period, with QTA Samples, or anytime for routine quality control checks.</p>				
Ship To:				Bill To:
Address:				Address:
Address:				Address:
City, State, Zip:				City, State, Zip:
Name of Company Technical Contact:				
Address:				Phone:
Address:				Fax:
City, State, Zip:				Email:
USEPA Lab ID (mandatory), ex. CT####1				
Designate Accreditation office(s):				
Note(s):				

# AbsoluteGrade™

## Performance Evaluation Program

### Reporting Results...

Using Absolute's *onLINE WebPT™* internet service for reporting performance evaluation results is easy, quick, and reliable.

- Prepare the PT sample per the instructions at the top of each Data Report Form.
- Perform the analysis.
- Log on to [www.AbsoluteStandards.com](http://www.AbsoluteStandards.com) and report your results. (Each customer is automatically registered to use the service.)

ID	Component	Met. Code	Test #	Reported #	Analysis Date	Value
0001	Bromochloromethane				mm/dd/yyyy	g/g
0002	Bromoform				mm/dd/yyyy	g/g
0003	Carbon tetrachloride				mm/dd/yyyy	g/g
0004	Chlorobenzene				mm/dd/yyyy	g/g
0005	Chloroform				mm/dd/yyyy	g/g
0006	Dibromochloromethane				mm/dd/yyyy	g/g
0007	1,2-Dibromoethane				mm/dd/yyyy	g/g
0008	Methylene chloride				mm/dd/yyyy	g/g
0009	Trichloroethane				mm/dd/yyyy	g/g
0010	1,1,1-Trifluoroethane				mm/dd/yyyy	g/g
0011	Tetrachloroethane				mm/dd/yyyy	g/g

- The on-line form looks exactly like the paper version making quality control effortless and dependable.
- You have the flexibility to enter and edit your results any time during the 45 day study period. Your results shall be marked final at 12 AM (midnight) on the study close date.
- Your report shall be sent to you via Email in Adobe Acrobat Reader format within 21 days of the study close date.
- The same report shall be sent to your Accreditation Authority.

We understand how important these analyses are to your company & its accreditation. That is why Absolute Standards places a high priority on Quality, Integrity, & Customer Service. If you have any questions, please call Lance Boynton, Quality Director: (203)-281-2917.



# Certificates & Accreditations

Since the USEPA privatized the performance evaluation program, changes in the federal, state, and local regulations have been dynamic. With our NVLAP/NELAC accreditations, Absolute Standards has been at the forefront in designing and implementing proficiency test schemes. Furthermore, our employees hold prominent positions in several trade associations and actively participate in forums that affect the performance testing industry. Thus you can depend on Absolute Standards for compliant Performance Evaluation samples, defensible data, and unparalleled technical support



# Certificates & Accreditations

Please visit our website at [www.AbsoluteStandards.com](http://www.AbsoluteStandards.com) to download a current copy of our Certificates.



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# DRINKING WATER KIT

Test	Price	Part#	Page
<b>TOTAL WS KIT</b>	<b>\$1800</b>	<b>38181</b>	<b>-</b>
<b>ORGANIC KIT</b>	<b>\$1040</b>	<b>38182</b>	<b>-</b>
Carbamates		38003	473
EDB/DBCP/TCP		38012	471
Regulated VOC's		38022	470
Unregulated VOC's		38023	470
Trihalomethanes		38025	471
Organochlorine Pesticides		38026	474
Toxaphene		38027	474
Organonitrogen Pesticides #1		38028	474
Organonitrogen Pesticides #2		38129	474
Chlordane		38029	474
Herbicides Mix #1		38030	477
Herbicides Mix #2		38173	477
PAH [Benzo(a)pyrene]		38033	476
PAH's		38132	476
PCB's		38034	473
Endothall		38035	475
Glyphosate		38037	475
Haloacetic acids		38038	472
Chloral hydrate		38039	472
Phthalates		38130	476
Diquat/Paraquat		38131	475
Oxygenates		38150	471
Molinate/Thiobencarb		38163	474
<b>INORGANIC KIT</b>	<b>\$745</b>	<b>55148</b>	<b>-</b>
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Bromate & Bromide		55010	479
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Perchlorate		55099	480
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\*\*NO substitutions on kits will be made.

# NON-POTABLE WATER KIT

Test	Price	Part#	Page
<b>TOTAL WP KIT</b>	<b>\$2100</b>	<b>38183</b>	<b>-</b>
<b>WP - ORGANIC KIT</b>	<b>\$1060</b>	<b>38184</b>	<b>-</b>
PAH's [Low Level]		38010	487
PCB's in Water		38043	489
PCB's in Transformer Oils		38044	489
Chlordane		38046	488
Semi-Volatiles		38069	486
Volatiles		38083	484
Diesel Range Organics		38114	512
Gasoline Range Organics		38116	512
Organochlorine Pesticides		38122	488
Toxaphene		38125	488
Herbicide Mix #1		38126	490
Herbicide Mix #2		38136	490
Ketones		38134	485
Organophosphorus Pesticides		38135	488
Total Petroleum Hydrocarbons		38165	512
Nitroaromatics		38172	487
<b>INORGANIC KIT</b>	<b>\$1120</b>	<b>55149</b>	<b>-</b>
Trace Metals #1		55024	492
Trace Metals #2		55025	492
Tin		55095	492
Hexavalent Chromium (Cr <sup>6+</sup> )		55096	493
Silica		55100	493
Conductance		55026	496
Nutrients #1 (NH <sub>4</sub> <sup>+</sup> /NO <sub>3</sub> <sup>-</sup> /PO <sub>4</sub> <sup>3-</sup> )		55035	494
Nutrients #2 (TKN/Total P)		55064	494
Oil and Grease		55037	497
Total Phenolics (4AAP)		55038	494
Sulphide		55042	498
Demands		55055	494
pH		55061	496
Total Residual Chlorine		55062	496
Total Cyanide		55065	496
MBAS		55083	496
Turbidity		55101	496
Acidity		55129	496
Color		55140	496
Total Solids		55085	497
Volatile Solids		55086	497
Settleable Solids		55087	497
NO <sub>3</sub> <sup>-</sup> , NO <sub>2</sub> <sup>-</sup> , NO <sub>3</sub> <sup>-</sup> & NO <sub>2</sub> <sup>-</sup> as N		55130	498
Anions		55131	498
Total Organic Halides (TOX)		55133	497
Minerals #1		55144	495
Minerals #2		55145	495

\*\*NO substitutions on kits will be made.

**Call Toll-Free 800-368-1131**

# WS PROGRAM

## DRINKING WATER VOLATILES

### WS Regulated Volatiles

*23 Components in Methanol. 2 mL*

Chlorobenzene	p-Xylene
1,2-Dichlorobenzene	Benzene
cis-1,2-Dichloroethene	Carbon tetrachloride
trans-1,2-Dichloroethene	1,4-Dichlorobenzene
1,2-Dichloropropane	1,2-Dichloroethane
Ethyl benzene	1,1-Dichloroethene
Styrene	Methylene chloride
Tetrachloroethene	1,1,1-Trichloroethane
Toluene	1,1,2-Trichloroethane
1,2,4-Trichlorobenzene	Trichloroethene
o-Xylene	Vinyl chloride
m-Xylene	

<b>Blind PT</b>	<b>Part # 38022-EX</b>	<b>\$55</b>
<b>Practice PT</b>	<b>Part # 38022-IN</b>	<b>\$55</b>
<b>Calibration Mix*</b>	<b>Part # 92104</b>	<b>\$40</b>

*\*100 ug/mL in Methanol. 1 mL*

### WS Unregulated Volatiles

*31 Components in Methanol. 2 mL*

Bromobenzene	2,2-Dichloropropane
Bromochloromethane	1,1-Dichloropropene
Bromomethane	cis-1,3-Dichloropropene
n-Butylbenzene	trans-1,3-Dichloropropene
sec-Butylbenzene	Trichlorofluoromethane
tert-Butylbenzene	Hexachlorobutadiene
Chloroethane	Isopropylbenzene
Chloromethane	4-Isopropyltoluene
2-Chlorotoluene	n-Propylbenzene
4-Chlorotoluene	1,1,1,2-Tetrachloroethane
Dibromomethane	1,1,2,2-Tetrachloroethane
1,3-Dichlorobenzene	1,2,3-Trichlorobenzene
1,1-Dichloroethane	1,2,4-Trimethylbenzene
Dichlorodifluoromethane	1,2,3-Trichloropropane
1,3-Dichloropropane	1,3,5-Trimethylbenzene
Methyl tert-butyl ether (MTBE)	

<b>Blind PT</b>	<b>Part # 38023-EX</b>	<b>\$75</b>
<b>Practice PT</b>	<b>Part # 38023-IN</b>	<b>\$75</b>
<b>Calibration Mix*</b>	<b>Part # 92101</b>	<b>\$50</b>

*\*100 ug/mL in Methanol. 1 mL*

# DRINKING WATER VOLATILES

# WS PROGRAM

## WS Trihalomethanes

4 Components  
in Methanol. 2 mL

Chloroform  
Dibromochloromethane  
Bromodichloromethane  
Bromoform

Blind PT	Part # 38025-EX	\$40
Practice PT	Part # 38025-IN	\$40
Calibration Mix*	Part # 40002	\$25

\*200 ug/mL in Methanol. 1 mL

## SDWA EDB/DBCP/TCP

3 Components  
in Methanol. 2 mL

1,2-Dibromoethane (EDB)  
1,2-Dibromo-3-chloropropane (DBCP)  
1,2,3-Trichloropropane

Blind PT	Part # 38012-EX	\$40
Practice PT	Part # 38012-IN	\$40
Calibration Mix*	Part # 30096	\$25

\*200 ug/mL in Methanol. 1 mL

## SDWA Oxygenates

7 Components in Methanol. 2 mL

t-Butyl ethyl ether  
t-Amyl methyl ether  
Isopropyl ether  
1,1,2-Trichlorotrifluoroethane  
Methyl tert-butyl ether (MTBE)  
n-Propylbenzene  
t-Butanol

Blind PT	Part # 38150-EX	\$50
Practice PT	Part # 38150-IN	\$50
Calibration Mix*	Part # 92718	\$40

\*200 ug/mL in Methanol. 1 mL

## SDWA Carbon Disulfide, MIBK & Naphthalene

3 Components in  
Methanol:Water. 2 mL

Carbon disulfide  
4-Methyl-2-pentanone (MIBK)  
Naphthalene

Blind PT	Part # 38164-EX	\$50
Practice PT	Part # 38164-IN	\$50
Calibration Mix*	Part # 70060	\$22

\*Carbon disulfide 1000 ug/mL in Methanol. 1 mL

Calibration Mix**	Part # 70210	\$22
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\*\*MIBK 1000 ug/mL in MeOH:H<sub>2</sub>O. 1 mL

Calibration Mix***	Part # 70222	\$22
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\*\*\*Naphthalene 1000 ug/mL in Methanol. 1 mL



# WS PROGRAM

## DRINKING WATER DISINFECTION BY-PRODUCTS

### WS Haloacetic Acids

*6 Components in MTBE. 2 mL*

Bromochloroacetic acid  
Dibromoacetic acid  
Dichloroacetic acid  
Monobromoacetic acid  
Monochloroacetic acid  
Trichloroacetic acid

<b>Blind PT</b>	<b>Part # 38038-EX</b>	<b>\$55</b>
<b>Practice PT</b>	<b>Part # 38038-IN</b>	<b>\$55</b>
<b>Calibration Mix*</b>	<b>Part # 91836</b>	<b>\$35</b>

\*Free acids 100 ug/mL in MTBE. 1 mL

<b>Calibration Mix**</b>	<b>Part # 91837</b>	<b>\$35</b>
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\*\*Methyl derivatives 100 ug/mL in MTBE. 1 mL

### WS Chloral hydrate

*1 Component in MTBE. 2 mL*

<b>Blind PT</b>	<b>Part # 38039-EX</b>	<b>\$40</b>
<b>Practice PT</b>	<b>Part # 38039-IN</b>	<b>\$40</b>
<b>Calibration Mix*</b>	<b>Part # 70335</b>	<b>\$22</b>

\*1000 ug/mL in MTBE. 1 mL

### SDWA Chlorinated DBP'S

*7 Components in MTBE. 2 mL*

Trichloroacetonitrile  
Dichloroacetonitrile  
Bromochloroacetonitrile  
Dibromoacetonitrile  
1,1-Dichloro-2-propanone  
1,1,1-Trichloro-2-propanone  
Chloropicrin

<b>Blind PT</b>	<b>Part # 38009-EX</b>	<b>\$40</b>
<b>Practice PT</b>	<b>Part # 38009-IN</b>	<b>\$40</b>
<b>Calibration Mix*</b>	<b>Part # 30095</b>	<b>\$30</b>

\*2000 ug/mL in MTBE. 1 mL

# DRINKING WATER AROCLORS/ CARBAMATES

# WS PROGRAM

## WS Aroclor

*in Acetone. 2 mL*

Quantification as

"Decachlorobiphenyl"

& Aroclor Identification

**Blind PT**    **Part # 38034-EX**    **\$40**  
**Practice PT**    **Part # 38034-IN**    **\$40**  
**Calibration Mixes** (see table below).

## SDWA Aroclor

*in Acetone. 2 mL*

Quantification as

"Aroclor"

**Blind PT**    **Part # 38133-EX**    **\$40**  
**Practice PT**    **Part # 38133-IN**    **\$40**  
**Calibration Mixes** (see table below).

*P#38034 & P#38133 each contain 1 of the 7 possible aroclors listed below.*

### Calibration Mixes for PCB's in Acetone

	Part #	Price	ug/mL
(1) Aroclor 1016	91866	\$22	100
(2) Aroclor 1221 (Methanol)	X9160	\$22	100
(3) Aroclor 1232	91867	\$22	100
(4) Aroclor 1242	91868	\$22	100
(5) Aroclor 1248	91869	\$22	100
(6) Aroclor 1254	91870	\$22	100
(7) Aroclor 1260	91834	\$22	100
(8) Decachlorobiphenyl	91835	\$22	100

## SDWA Carbamates

*10 Components in Methanol. 2 mL*

Aldicarb	Methomyl
Aldicarb sulfoxide	3-Hydroxycarbofuran
Aldicarb sulfone	Oxamyl (Vydate)
Carbaryl	Baygon
Carbofuran	Methiocarb

**Blind PT**            **Part # 38003-EX**    **\$50**  
**Practice PT**        **Part # 38003-IN**    **\$50**  
**Calibration Mix\***    **Part # 30042**        **\$35**

*\*100 ug/mL in Methanol. 1mL*

# WS PROGRAM

## DRINKING WATER PESTICIDES

### WS Organochlorine Pesticides

11 Components in Acetone. 2 mL

g-BHC  
Endrin  
4,4'-Methoxychlor  
Aldrin  
Dieldrin  
Heptachlor  
Heptachlor epoxide (isomer B)  
Hexachlorobenzene  
Hexachlorocyclopentadiene  
Propachlor  
Trifluralin

Blind PT            Part # 38026-EX   \$60  
Practice PT        Part # 38026-IN   \$60  
Calibration Mix\*   Part # 92100       \$35

\*100 ug/mL in Acetone. 1 mL

### WS Toxaphene

in Acetone. 2 mL

Blind PT    Part # 38027-EX   \$40  
Practice PT   Part # 38027-IN   \$40  
Calibration Mix\*   Part # 91823       \$22  
\*100 ug/mL in Acetone. 1 mL

### WS Chlordane

in Acetone. 2 mL

Blind PT    Part # 38029-EX   \$40  
Practice PT   Part # 38029-IN   \$40  
Calibration Mix\*   Part # 91824       \$22

\*100 ug/mL in Acetone. 1 mL

### WS Organonitrogen Pesticides

3 Components in Acetone. 2 mL

Alachlor  
Atrazine  
Simazine

Blind PT            Part # 38028-EX   \$40  
Practice PT        Part # 38028-IN   \$40  
Calibration Mix\*   Part # 91110       \$25

\*100 ug/mL in Acetone. 1 mL

### SDWA Organonitrogen Pesticides

5 Components in Methanol. 2 mL

Bromacil  
Butachlor  
Metolachlor  
Metribuzin  
Prometon

Blind PT            Part # 38129-EX   \$50  
Practice PT        Part # 38129-IN   \$50  
Calibration Mix\*   Part # 91424       \$30

\*100 ug/mL in Methanol. 1 mL

### SDWA Molinate & Thiobencarb

2 Components in Methanol. 2 mL

Blind PT            Part # 38163-EX   \$40  
Practice PT        Part # 38163-IN   \$40  
Calibration Mix\*   Part # 70221       \$22

\*Molinate 1000 ug/mL in Methanol. 1 mL

Calibration Mix\*\*   Part # 70857       \$22

\*\*Thiobencarb 1000 ug/mL in Methanol. 1 mL

# DRINKING WATER SOC'S

# WS PROGRAM

## SDWA Diquat & Paraquat

*2 Components in Water. 2 mL*

Blind PT            Part # 38131-EX    \$50

Practice PT       Part # 38131-IN    \$50

Calibration Mix\* Part # 31079    \$25

*\*2000 ug/mL in water. 1 mL*

## WS Glyphosate

*in Water. 2 mL*

Glyphosate (n-Phosphonomethyl glycine)

Blind PT    Part # 38037-EX    \$40

Practice PT    Part # 38037-IN    \$40

Calibration Mix\*    Part # 70503    \$22

*\*1000 ug/mL in Water. 1 mL*

## WS Endothall

*in Acetone. 2 mL*

Blind PT    Part # 38035-EX    \$40

Practice PT    Part # 38035-IN    \$40

Calibration Mix\*    Part # 70504    \$22

*\*Endothall acid 1000 ug/mL in Acetone. 1 mL*

Calibration Mix\*\*    Part # 71103    \$22

*\*\* Dimethyl Endothall 1000 ug/mL in Methanol. 1 mL*

Calibration Mix\*\*\*    Part # 70505    \$22

*\*\*\* PFPH Derivative 1000 ug/mL in MTBE. 1 mL*

**DON'T WAIT TILL  
THE LAST MINUTE  
TO RUN YOUR  
SAMPLES...**



# WS PROGRAM

## DRINKING WATER SEMI-VOLATILES

### SDWA PAH's

*17 Components in Acetone. 2 mL*

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

<b>Blind PT</b>	<b>Part # 38132-EX</b>	<b>\$75</b>
<b>Practice PT</b>	<b>Part # 38132-IN</b>	<b>\$75</b>
<b>Calibration Mix*</b>	<b>Part # 10017</b>	<b>\$65</b>

\*2000 ug/mL in Methylene chloride. 1mL

<b>Calibration Mix**</b>	<b>Part # 70081</b>	<b>\$22</b>
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\*\*2-Chloronaphthalene 1000 ug/mL in Methanol. 1mL

### WS PAH Benzo(a)pyrene

*in Acetone. 2 mL*

<b>Blind PT</b>	<b>Part # 38033-EX</b>	<b>\$40</b>
<b>Practice PT</b>	<b>Part # 38033-IN</b>	<b>\$40</b>
<b>Calibration Mix*</b>	<b>Part # 91833</b>	<b>\$22</b>

\*1000 ug/mL in Acetone. 1 mL

### SDWA Phthalates

*7 Components in Methanol. 2 mL*

Benzyl butyl phthalate  
Di-n-butyl phthalate  
Diethyl phthalate  
Dimethyl phthalate  
Di-n-octyl phthalate  
bis(2-Ethylhexyl) phthalate  
bis(2-Ethylhexyl) adipate

<b>Blind PT</b>	<b>Part # 38130-EX</b>	<b>\$60</b>
<b>Practice PT</b>	<b>Part # 38130-IN</b>	<b>\$60</b>
<b>Calibration Mix*</b>	<b>Part # 30012</b>	<b>\$30</b>

\*200 ug/mL in Methanol. 1mL

### WS Dioxin

*in Acetone. 2 mL*

2,3,7,8-Tetrachloro-dibenzodioxin

<b>Blind PT</b>	<b>Part # 38040-EX</b>	<b>\$100</b>
<b>Practice PT</b>	<b>Part # 38040-IN</b>	<b>\$100</b>
<b>Calibration Mix*</b>	<b>Part # 19149</b>	<b>\$100</b>

\*100 ug/mL in Toluene. 1 mL

# DRINKING WATER HERBICIDES

# WS PROGRAM

## WS Herbicides Mix #1

(FREE ACIDS)

8 Components in MTBE. 2 mL

2,4-D	Dalapon
2,4,5-TP, "Silvex"	Dicamba
Pentachlorophenol	Dinoseb
Acifluorfen	Picloram

<b>Blind PT</b>	<b>Part # 38030-EX</b>	<b>\$60</b>
<b>Practice PT</b>	<b>Part # 38030-IN</b>	<b>\$60</b>
<b>Calibration Mix*</b>	<b>Part # 92102</b>	<b>\$35</b>
*Free acids 100 ug/mL in MTBE. 1mL		
<b>Calibration Mix**</b>	<b>Part # 92103</b>	<b>\$35</b>
**Methyl derivatives 100 ug/mL in Hexane. 1mL		

## SDWA Herbicides Mix #2

(FREE ACIDS)

8 Components in MTBE. 2 mL

Bentazon	3,5-Dichlorobenzoic Acid
Chloramben	Dichlorprop
2,4,5-T	4-Nitrophenol
2,4-DB	Dacthal (2,3,5,6-Tetrachloroterephthalic acid)

<b>Blind PT</b>	<b>Part # 38173-EX</b>	<b>\$80</b>
<b>Practice PT</b>	<b>Part # 38173-IN</b>	<b>\$80</b>
<b>Calibration Mix*</b>	<b>Part # 92479</b>	<b>\$35</b>
*Free acids 100 ug/mL in MTBE. 1mL		
<b>Calibration Mix**</b>	<b>Part # 92480</b>	<b>\$35</b>
**Methyl derivatives 100 ug/mL in Hexane. 1mL		

# WS PROGRAM

## DRINKING WATER MINERALS

### SDWA Minerals #1

*4 Components in Water. 20 mL*

Alkalinity as CaCO<sub>3</sub>

Sodium (Na<sup>+</sup>)

Potassium (K<sup>+</sup>)

Chloride (Cl<sup>-</sup>)

**Blind PT                      Part # 55122-EX   \$50**

**Practice PT                Part # 55122-IN   \$50**

Calibrations 100mL in H <sub>2</sub> O	Part #	Price	ug/mL
Alkalinity as CaCO <sub>3</sub>	54154	\$20	1000
Sodium	54157	\$20	1000
Potassium	54143	\$20	1000
Chloride	54156	\$20	1000

### SDWA Minerals #2

*5 Components in Water. 20 mL*

Calcium (Ca<sup>2+</sup>)

Magnesium (Mg<sup>2+</sup>)

Calcium Hardness as CaCO<sub>3</sub>

Total Hardness as CaCO<sub>3</sub>

Total Dissolved Solids (TDS)

**Blind PT                      Part # 55123-EX   \$50**

**Practice PT                Part # 55123-IN   \$50**

Calibrations 100mL in H <sub>2</sub> O	Part #	Price	ug/mL
Calcium	54154	\$20	1000
Magnesium	54157	\$20	1000
Calcium Hardness as CaCO <sub>3</sub>	54143	\$20	1000
Total Hardness as CaCO <sub>3</sub>	54156	\$20	1000
Total Dissolved Solids (TDS)	54125	\$20	1000

# DRINKING WATER DISINFECTION BY-PRODUCTS

# WS PROGRAM

## WS Inorganic Chlorinated Disinfection By Products

*2 Components in Water. 5 mL*

Chlorate ( $\text{ClO}_3^-$ )

Chlorite ( $\text{ClO}_2^-$ )

Blind PT	Part # 55009-EX	\$40
Practice PT	Part # 55009-IN	\$40
Calibration Mix*	Part # 52105	\$35

*\*1000 ug/mL in Water. 100 mL*

## WS Inorganic Brominated Disinfection By Products

*2 Components in Water. 5 mL*

Bromate ( $\text{BrO}_3^-$ )

Bromide ( $\text{Br}^-$ )

Blind PT	Part # 55010-EX	\$40
Practice PT	Part # 55010-IN	\$40
Calibration Mix*	Part # 52106	\$35

*\*1000 ug/mL in Water. 100 mL*



# WS PROGRAM

## DRINKING WATER ANIONS

### WS Anions

*5 Components in Water. 20 mL*

Nitrate (NO <sub>3</sub> <sup>-</sup> )-as N	Fluoride (F <sup>-</sup> )
Nitrite (NO <sub>2</sub> <sup>-</sup> )-as N	Orthophosphate (PO <sub>4</sub> <sup>3-</sup> )-as P
Nitrate (NO <sub>3</sub> <sup>-</sup> ) & Nitrite (NO <sub>2</sub> <sup>-</sup> ) as N	

<b>Blind PT</b>	<b>Part # 55011-EX</b>	<b>\$50</b>
<b>Practice PT</b>	<b>Part # 55011-IN</b>	<b>\$50</b>
<b>Calibration Mix*</b>	<b>Part # 52107</b>	<b>\$50</b>

*\*100 ug/mL in Water. 100 mL*

### WS Sulphate & Total Organic Carbon (TOC)

*2 Components in Water. 20 mL*

Sulphate (SO<sub>4</sub><sup>2-</sup>)  
Total Organic Carbon (TOC)

<b>Blind PT</b>	<b>Part # 55070-EX</b>	<b>\$40</b>
<b>Practice PT</b>	<b>Part # 55070-IN</b>	<b>\$40</b>
<b>Calibration Mix*</b>	<b>Part # 54148</b>	<b>\$20</b>

*\*1000 ug/mL in Water. 100 mL*

### SDWA Perchlorate

*1 Component in Water. 5 mL*

<b>Blind PT</b>	<b>Part # 55099-EX</b>	<b>\$40</b>
<b>Practice PT</b>	<b>Part # 55099-IN</b>	<b>\$40</b>
<b>Calibration Mix*</b>	<b>Part # 57001</b>	<b>\$35</b>

*\*1000 ug/mL in Water. 100 mL*

# DRINKING WATER METALS

# WS PROGRAM

## WS Trace Elements #1

*12 Elements in 5% HNO<sub>3</sub>, 20 mL*

Antimony	(Sb)	Copper	(Cu)
Arsenic	(As)	Lead	(Pb)
Barium	(Ba)	Total Mercury*	(Hg)
Beryllium	(Be)	Nickel	(Ni)
Cadmium	(Cd)	Selenium	(Se)
Chromium	(Cr)	Thallium	(Tl)

\*Contains organic & inorganic Mercury

Blind PT	Part # 55012-EX	\$50
Practice PT	Part # 55012-IN	\$50
Calibration Mix*	Part # 52127	\$95

*\*100 ug/mL in 5% HNO<sub>3</sub>, 100 mL*

## WS Trace Elements #2

*4 Elements in 5% HNO<sub>3</sub>, 20 mL*

Boron	(B)
Manganese	(Mn)
Molybdenum	(Mo)
Zinc	(Zn)

Blind PT	Part # 55013-EX	\$40
Practice PT	Part # 55013-IN	\$40
Calibration Mix*	Part # 52128	\$50

*\*100 ug/mL in 5% HNO<sub>3</sub>, 100 mL*

## WS Trace Elements #3

*5 Elements in 5% HNO<sub>3</sub>, 20 mL*

Aluminum	(Al)
Iron	(Fe)
Magnesium	(Mg)
Silver	(Ag)
Vanadium	(V)

Blind PT	Part # 55079-EX	\$60
Practice PT	Part # 55079-IN	\$60
Calibration Mix*	Part # 52327	\$50

*\*100 ug/mL in 5% HNO<sub>3</sub>, 100 mL*

# WS PROGRAM

## DRINKING WATER METALS

### SDWA Silica

*in Water. 20 mL*

Blind PT	Part # 55082-EX	\$40
Practice PT	Part # 55082-IN	\$40
Calibration Mix*	Part # 54159	\$20

*\*1000 ug/mL in trace NaOH/Water. 100 mL*

### SDWA Hexavalent Chromium (Cr<sup>6+</sup>)

*in Water. 20 mL*

Blind PT	Part # 55112-EX	\$75
Practice PT	Part # 55112-IN	\$75
Calibration Mix*	Part # 54161	\$20

*\*1000 ug/mL in Water. 100 mL*

### Drinking Water Flame AA Metals Mix

*8 Elements in 5% HNO<sub>3</sub>. 20 mL*

Chromium (Cr)	Aluminum (Al)
Copper (Cu)	Iron (Fe)
Nickel (Ni)	Silver (Ag)
Zinc (Zn)	Vanadium (V)

Blind PT	Part # 55137-EX	\$80
Practice PT	Part # 55137-IN	\$80

*Formulated  
at higher  
concentrations.  
Check with your  
Accrediting  
Authority for  
approval.*

# DRINKING WATER MISCELLANEOUS WET CHEMISTRY

# WS PROGRAM

## WS pH

*in Water. 20 mL*

Blind PT	Part # 55016-EX	\$25
Practice PT	Part # 55016-IN	\$25
Calibration Mix*	Part # 54119	\$20

*\*pH 6 @ 25°C in Water 100 mL.*

## WS Turbidity

*in Water. 20 mL*

Blind PT	Part # 55021-EX	\$40
Practice PT	Part # 55021-IN	\$40
Calibration Mix*	Part # 54122	\$20

*\*400 NTU's in Water 20 mL.*

## WS Residual Free Chlorine

*in Water. 20 mL*

Blind PT	Part # 55023-EX	\$40
Practice PT	Part # 55023-IN	\$40
Calibration Mix*	Part # 54124	\$20

*\*1000 ug/mL in Water 100 mL.*

## SDWA Total Chlorine

*in Water. 20 mL*

Blind PT	Part # 55124-EX	\$50
Practice PT	Part # 55124-IN	\$50
Calibration Mix*	Part # 54124	\$20

*\*1000 ug/mL in Water. 100 mL*

## WS Cyanide

*in Water/NaOH. 20 mL*

Blind PT	Part # 55022-EX	\$40
Practice PT	Part # 55022-IN	\$40
Calibration Mix*	Part # 59017	\$20

*\*1000 ug/mL in Water / NaOH 100 mL.*

## SDWA Conductance @ 25 °C

*in Water. 20 mL*

Blind PT	Part # 55080-EX	\$25
Practice PT	Part # 55080-IN	\$25
Calibration Mix*	Part # 54131	\$20

*\*1000 umho/cm in Water. 100 mL*

## SDWA UV 254 Absorbance & Dissolved Organic Carbon

*in Water. 20 mL*

Blind PT	Part # 55098-EX	\$40
Practice PT	Part # 55098-IN	\$40
Calibration Mix*	Part # 54166	\$20

*\*100 ug/mL in Water. 100 mL*

## SDWA MBAS

*in Water. 20 mL*

Blind PT	Part # 55106-EX	\$40
Practice PT	Part # 55106-IN	\$40
Calibration Mix*	Part # 54160	\$20

*\*1000 ug/mL in Water. 20 mL*

## SDWA Corrosivity (Langlier's Index)

*in Water. 2 X 20 mL*

Blind PT	Part # 55121-EX	\$60
Practice PT	Part # 55121-IN	\$60

## SDWA Color

*in HCl/ Water. 100 mL*

*Whole Volume*

Blind PT	Part # 55150-EX	\$50
Practice PT	Part # 55150-IN	\$50
Calibration Mix*	Part # 54255	\$250

*\*500 Color Units in 10% HCl. 100 mL*

# WP PROGRAM

## NON-POTABLE WATER VOLATILES

### CWA Volatiles in Non-Potable Water

65 Components

*Methanol Concentrate to be spiked by laboratory into water.*

Benzene	1,4-Dichlorobenzene	n-Propylbenzene
Bromobenzene	Dichlorodifluoromethane	Styrene
Bromochloromethane	1,1-Dichloroethane	1,1,1,2-Tetrachloroethane
Bromodichloromethane	1,2-Dichloroethane	1,1,2,2-Tetrachloroethane
Bromoform	1,1-Dichloroethene	Tetrachloroethene
Bromomethane	trans-1,2-Dichloroethene	Toluene
sec-Butyl benzene	cis-1,2-Dichloroethene	1,2,3-Trichlorobenzene
tert-Butyl benzene	1,2-Dichloropropane	1,2,4-Trichlorobenzene
n-Butyl benzene	1,3-Dichloropropane	1,1,1-Trichloroethane
Carbon disulfide	2,2-Dichloropropane	1,1,2-Trichloroethane
Carbon tetrachloride	1,1-Dichloropropene	Trichloroethene
Chlorobenzene	trans-1,3-Dichloropropene	Trichlorofluoromethane
Chloroethane	cis-1,3-Dichloropropene	1,2,3-Trichloropropane
Chloroform	Ethyl benzene	1,2,4-Trimethylbenzene
Chloromethane	Hexachlorobutadiene	1,3,5-Trimethylbenzene
2-Chlorotoluene	Hexachloroethane	Vinyl chloride
4-Chlorotoluene	Isopropylbenzene	p-Xylene
Dibromochloromethane	p-Isopropyl toluene	o-Xylene
1,2-Dibromo-3-chloropropane	Methyl tert-butyl ether (MTBE)	m-Xylene
1,2-Dibromoethane	4-Methyl-2-pentanone (MIBK)	
Dibromomethane	Methylene chloride	
1,2-Dichlorobenzene	Naphthalene	
1,3-Dichlorobenzene	Nitrobenzene	

<b>Blind PT</b>	<b>Part # 38083-EX</b>	<b>\$150</b>
<b>Practice PT</b>	<b>Part # 38083-IN</b>	<b>\$150</b>

<b>Calibration Mix(s)</b>	<b>Part # 35002</b> 200 ug/mL in Methanol. 1mL	<b>\$50</b>
	<b>Part # 70210</b> MIBK @ 1000 ug/mL in Methanol:Water [9:1]. 1mL	<b>\$22</b>
	<b>Part # 70060</b> Carbon disulfide@ 1000 ug/mL in Methanol. 1mL	<b>\$22</b>
	<b>Part # 70199</b> Hexachloroethane@ 1000 ug/mL in Methanol. 1mL	<b>\$22</b>
	<b>Part # 70228</b> Nitrobenzene@ 1000 ug/mL in Methanol. 1mL	<b>\$22</b>

### CWA Acrolein & Acrylonitrile

*2 Components in Water. 2 mL*

<b>Blind PT</b>	<b>Part # 38123-EX</b>	<b>\$60</b>
<b>Practice PT</b>	<b>Part # 38123-IN</b>	<b>\$60</b>
<b>Calibration Mix*</b>	<b>Part # 19099</b>	<b>\$30</b>

*\*1000 ug/mL in Water. 1 mL*

# NON-POTABLE WATER VOLATILES

# WP PROGRAM

## CWA Oxygenates

*7 Components in Methanol. 2 mL*

t-Butyl ethyl ether (ETBE)	Methyl tert-butyl ether (MTBE)
t-Amyl methyl ether (TAME)	n-Propylbenzene
Isopropyl ether (DIPE)	t-Butanol
1,1,2-Trichlorotrifluoroethane (FREON 113)	

<b>Blind PT</b>	<b>Part # 38157-EX</b>	<b>\$50</b>
<b>Practice PT</b>	<b>Part # 38157-IN</b>	<b>\$50</b>
<b>Calibration Mix*</b>	<b>Part # 92718</b>	<b>\$40</b>

*\*200 ug/mL in Methanol. 1mL*

## CWA BTEX & MTBE

*7 Components in Methanol. 2 mL*

Benzene	o-Xylene
Toluene	m-Xylene
Ethyl benzene	p-Xylene
Methyl t-butyl ether (MTBE)	

<b>Blind PT</b>	<b>Part # 38166-EX</b>	<b>\$40</b>
<b>Practice PT</b>	<b>Part # 38166-IN</b>	<b>\$40</b>
<b>Calibration Mix*</b>	<b>Part # 90728</b>	<b>\$25</b>

*\*200 ug/mL in Methanol. 1mL*

## CWA Ketones

*4 Components in Methanol. 2 mL*

Acetone	2-Hexanone
2-Butanone	4-Methyl-2-pentanone

<b>Blind PT</b>	<b>Part # 38134-EX</b>	<b>\$60</b>
<b>Practice PT</b>	<b>Part # 38134-IN</b>	<b>\$60</b>
<b>Calibration Mix*</b>	<b>Part # 82402</b>	<b>\$25</b>

*\*2000 ug/mL in MeOH:Water [9:1]. 1 mL*

## CWA 2-Chloroethyl vinyl ether

*in Methanol. 2 mL*

<b>Blind PT</b>	<b>Part # 38128-EX</b>	<b>\$40</b>
<b>Practice PT</b>	<b>Part # 38128-IN</b>	<b>\$40</b>
<b>Calibration Mix*</b>	<b>Part # 70074</b>	<b>\$22</b>

*\*1000 ug/mL in Methanol. 1 mL*

# WP PROGRAM

## NON-POTABLE WATER SEMI-VOLATILES

### Semi-Volatiles in Non-Potable Water

73 Components

*Methanol Concentrate to be spiked by laboratory into water.*

bis(2-Chloroethyl) ether	Hexachloroethane	2-Methylnaphthalene
bis(2-Chloroisopropyl) ether	Hexachlorocyclopentadiene	Naphthalene
bis(2-Chloroethoxy) methane	1,2,4-Trichlorobenzene	Phenanthrene
4-Bromophenyl phenyl ether	Carbazole	Pyrene
4-Chlorophenyl phenyl ether	2,4-Dinitrotoluene	4-Chloro-3-methylphenol
N-Nitrosodiphenylamine	2,6-Dinitrotoluene	2-Chlorophenol
N-Nitrosodi-n-propylamine	Isophorone	2,4-Dichlorophenol
Benzyl butyl phthalate	Nitrobenzene	2,6-Dichlorophenol
bis(2-Ethylhexyl) phthalate	Acenaphthene	2,4-Dimethylphenol
Diethyl phthalate	Acenaphthylene	2,4-Dinitrophenol
Dimethyl phthalate	Anthracene	4,6-Dinitro-2-methylphenol
Di-n-butyl phthalate	Benzo(a)anthracene	o-Cresol (2-Methylphenol)
Di-n-octyl phthalate	Benzo(a)pyrene	m-Cresol (3-Methylphenol)
4-Chloroaniline	Benzo(b)fluoranthene	p-Cresol (4-Methylphenol)
2-Nitroaniline	Benzo(g,h,i)perylene	2-Nitrophenol
3-Nitroaniline	Benzo(k)fluoranthene	4-Nitrophenol
4-Nitroaniline	Chrysene	Pentachlorophenol
2-Chloronaphthalene	Dibenzo(a,h)anthracene	Phenol
Dibenzofuran	Fluoranthene	2,4,5-Trichlorophenol
1,2-Dichlorobenzene	Fluorene	2,4,6-Trichlorophenol
1,3-Dichlorobenzene	1-Chloronaphthalene	2,3,4,6-Tetrachlorophenol
1,4-Dichlorobenzene	Indeno(1,2,3-cd)pyrene	N-Nitrosodimethylamine
Hexachlorobutadiene	3,3'-Dichlorobenzidine	Aniline
Hexachlorobenzene	Benzidine	Benzyl Alcohol
		Pyridine

**Blind PT**

**Part # 38069-EX**

**\$150**

**Practice PT**

**Part # 38069-IN**

**\$150**

#### Calibration Mixes @ 2000µg/mL:

<b>Part # 10001</b>	Base/Neutrals #1 in Methylene chloride. 1mL	<b>\$45</b>
<b>Part # 10002</b>	Base/Neutrals #2 in Methylene chloride. 1mL	<b>\$45</b>
<b>Part # 10005</b>	Toxic Substances #2 in Methylene chloride. 1mL	<b>\$30</b>
<b>Part # 10006</b>	Benzidines in Methanol. 1mL	<b>\$25</b>
<b>Part # 10017</b>	PAH's in Methylene chloride. 1mL	<b>\$65</b>
<b>Part # 10018</b>	Phenols in Methylene chloride. 1mL	<b>\$40</b>

# NON-POTABLE WATER SEMI-VOLATILES

# WP PROGRAM

## CWA Nitroaromatics

14 Components in Acetonitrile. 2 mL

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

<b>Blind PT</b>	<b>Part # 38172-EX</b>	<b>\$150</b>
<b>Practice PT</b>	<b>Part # 38172-IN</b>	<b>\$150</b>
<b>Calibration Mix *1</b>	<b>Part # 83525</b>	<b>\$45</b>
<b>Calibration Mix *2</b>	<b>Part # 83526</b>	<b>\$45</b>

\*100 ug/mL in Acetonitrile. 1 mL

## CWA Low Level PAH'S

16 Components in Acetone. 2 mL

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

<b>Blind PT</b>	<b>Part # 38010-EX</b>	<b>\$75</b>
<b>Practice PT</b>	<b>Part # 38010-IN</b>	<b>\$75</b>
<b>Calibration Mix*</b>	<b>Part # 40016</b>	<b>\$30</b>

\*100 ug/mL in Acetonitrile. 1 mL

## CWA Dioxin

in Acetone. 2 mL

2,3,7,8-Tetrachloro-dibenzodioxin

<b>Blind PT</b>	<b>Part # 38186-EX</b>	<b>\$100</b>
<b>Practice PT</b>	<b>Part # 38186-IN</b>	<b>\$100</b>
<b>Calibration Mix*</b>	<b>Part # 19149</b>	<b>\$100</b>

\*100 ug/mL in Toluene. 1 mL



# WP PROGRAM

## NON-POTABLE WATER PESTICIDES

### WP Chlordane

*in Acetone. 2 mL*

Blind PT	Part # 38046-EX	\$40
Practice PT	Part # 38046-IN	\$40
Calibration Mix*	Part # 91824	\$22

*\*100 ug/mL in Acetone. 1 mL*

### CWA Toxaphene

*in Acetone. 2 mL*

Blind PT	Part # 38125-EX	\$40
Practice PT	Part # 38125-IN	\$40
Calibration Mix*	Part # 91823	\$22

*\*100 ug/mL in Acetone. 1 mL*

### CWA Organochlorine Pesticides

*21 Components in MTBE. 2 mL*

Aldrin	Endosulfan I
a-BHC	Endosulfan II
b-BHC	Endosulfan sulfate
d-BHC	Endrin
g-BHC (Lindane)	Endrin aldehyde
a-Chlordane	Endrin ketone
g-Chlordane	Heptachlor
4,4'-DDD	Heptachlor epoxide
4,4'-DDE	Methoxychlor
4,4'-DDT	trans-Nonachlor
Dieldrin	

Blind PT	Part # 38122-EX	\$95
Practice PT	Part # 38122-IN	\$95
Calibration Mix*	Part # 30006	\$35

*\*100 ug/mL in Hexane:Toluene [1:1]. 1 mL*

### CWA Organophosphorus Pesticides

*8 Components in Acetone. 2 mL*

Azinphosmethyl	Ethion
Demeton (Total O:S isomers)	Malathion
Diazinon	Parathion ethyl
Disulfoton	Parathion methyl

Blind PT	Part # 38135-EX	\$60
Practice PT	Part # 38135-IN	\$60
Calibration Mix*	Part # 40011	\$30

*\*1000 ug/mL in Acetone:Hexane [1:1]. 1 mL*

## NON-POTABLE WATER PCB MIXES

## WP PROGRAM

### WP Aroclor in Water

*in Acetone. 2 x 2 mL Kit*

*Kit contains Part # 38091 & 38094*

*Both parts must be analyzed!*

<b>Blind PT</b>	<b>Part # 38043-EX</b>	<b>\$40</b>
<b>Practice PT</b>	<b>Part # 38043-IN</b>	<b>\$40</b>
<b>Calibrations @100 ug/mL in Acetone. 1 mL</b>		

Calibrations for PCB's	Part #	Price
(1) Aroclor 1016	91866	\$22
(2) Aroclor 1221(in MeOH)	X9160	\$22
(3) Aroclor 1232	91867	\$22
(4) Aroclor 1242	91868	\$22
(5) Aroclor 1248	91869	\$22
(6) Aroclor 1254	91870	\$22
(6) Aroclor 1260	91834	\$22

### WP Aroclor in Transformer Oil

*in Transformer oil. 2 x 2 mL Kit*

*Kit contains Part # 38092 & 38095*

*Both parts must be analyzed!*

<b>Blind PT</b>	<b>Part # 38044-EX</b>	<b>\$40</b>
<b>Practice PT</b>	<b>Part # 38044-IN</b>	<b>\$40</b>
<b>Calibrations @50 mg/kg in Transformer oil. 1 mL</b>		

Calibrations for PCB's	Part #	Price
(1) Aroclor 1016	61016	\$30
(2) Aroclor 1242	61242	\$30
(3) Aroclor 1254	61254	\$30
(4) Aroclor 1260	61260	\$30

# WP PROGRAM

## NON-POTABLE WATER HERBICIDES/ CARBAMATES

### CWA Herbicides Mix #1

8 Components in MTBE. 2 mL

(FREE ACIDS)

2,4-D	Dalapon
2,4,5-TP, "Silvex"	Dicamba
Pentachlorophenol	Dinoseb
Acifluorfen	Picloram

**Blind PT** Part # 38126-EX \$80

**Practice PT** Part # 38126-IN \$80

**Calibration Mix\*** Part # 92102 \$35

\* Free acids 100 ug/mL in MTBE. 1 mL

**Calibration Mix\*\*** Part # 92103 \$35

\*\*Methyl derivatives 100 ug/mL in Hexane. 1 mL

### CWA Herbicides Mix #2

8 Components in MTBE. 2 mL

(FREE ACIDS)

Bentazon	3,5-Dichlorobenzoic Acid
Chloramben	Dichlorprop
Dacthal	4-Nitrophenol
2,4-DB	2,4,5-T

**Blind PT** Part # 38136-EX \$80

**Practice PT** Part # 38136-IN \$80

**Calibration Mix\*** Part # 92479 \$35

\* Free acids 100 ug/mL in MTBE. 1 mL

**Calibration Mix\*\*** Part # 92480 \$35

\*\*Methyl derivatives 100 ug/mL in Hexane. 1 mL

### CWA Carbamates

5 Components in Methanol. 2 mL

Carbofuran	Propham
Methomyl	Diuron
Oxamyl (Vydate)	

**Blind PT** Part # 38156-EX \$50

**Practice PT** Part # 38156-IN \$50

**Calibration Mix\*** Part # 30170 \$30

\*1000 ug/mL in Methanol. 1 mL

**National Environmental Laboratory  
Accreditation Conference**

**PT  
NELAC**

**About NELAC...**

NELAC is a standards-setting body that was established, with the support of the Environmental Protection Agency (EPA), in 1990. The goal of this conference is to support a National Environmental Laboratory Accreditation Program (NELAP) by helping to ensure that environmental laboratory data is generated within a quality system that consists of nationally accepted standards. NELAP provides a mechanism for the cooperation between the different states, federal agencies and the accredited laboratories.

Currently, NELAC has compiled a list of environmentally important analytes in drinking water, wastewater, and solid waste that fall outside the scope of the NIST/NVLAP program. Many states and federal agencies require that these additional analytes be successfully analyzed to maintain approval in their region, twice annually under the present NELAC standards. In addition, many accrediting authorities may require analysis per method, per matrix, per analyte or any combination of the three. At Absolute we understand that balancing this information between different programs can be cumbersome. That is why we play an active role in several committees within the calibration community to better answer any questions you might encounter.

Absolute Standards maintains a NELAC Performance Testing (PT) line of blind samples in drinking water, wastewater, and solid waste that are manufactured according to the latest NELAC requirements.

**You can rely on Absolute Standards to ensure that your laboratory stays current & compliant with the dynamic NELAC regulations.**

**Contact our technical staff to aid you with your regulatory needs. (800) 368-1131**

# WP PROGRAM

## NON-POTABLE WATER METALS

### WP Trace Elements #1

14 Elements in 5% HNO<sub>3</sub>. 20 mL

Aluminum (Al)	Lead (Pb)
Arsenic (As)	Manganese (Mn)
Cadmium (Cd)	Nickel(Ni)
Chromium (Cr)	Selenium (Se)
Cobalt (Co)	Vanadium (V)
Copper (Cu)	Zinc (Zn)
Iron (Fe)	Mercury (Hg)*
	*organic & inorganic Mercury

<b>Blind PT</b>	<b>Part # 55024-EX</b>	<b>\$60</b>
<b>Practice PT</b>	<b>Part # 55024-IN</b>	<b>\$60</b>
<b>Calibration Mix*</b>	<b>Part # 52129</b>	<b>\$60</b>
<i>*100 ug/mL in 5%HNO<sub>3</sub>. 100mL</i>		

### WP Trace Elements #2

9 Elements in 5% HNO<sub>3</sub>. 20 mL

Antimony (Sb)	Silver (Ag)
Beryllium (Be)	Strontium (Sr)
Boron (B)	Thallium (Tl)
Barium (Ba)	Titanium (Ti)
Molybdenum (Mo)	

<b>Blind PT</b>	<b>Part # 55025-EX</b>	<b>\$50</b>
<b>Practice PT</b>	<b>Part # 55025-IN</b>	<b>\$50</b>
<b>Calibration Mix</b>	<b>*Part # 52130</b>	<b>\$50</b>
<i>*100 ug/mL in 5%HNO<sub>3</sub>. 100mL</i>		

### Single Element Metals

	Element	Blind PT		Practice PT		Calibration	
		Part #	\$/20 mL	Part #	\$/20 mL	Part #	\$/100 mL
(1)	Gold	55091	\$100	55091	\$100	57079	\$75
(2)	Platinum	55092	\$100	55092	\$100	57078	\$75
(3)	Tin	55095	\$40	55095	\$40	57050	\$25

# NON-POTABLE WATER METALS

# WP PROGRAM

## CWA Hexavalent Chromium (Cr<sup>6+</sup>)

*in Water. 20 mL*

Blind PT	Part # 55096-EX	\$40
Practice PT	Part # 55096-IN	\$40
Calibration Mix*	Part # 54161	\$20

*\*1000 ug/mL in Water. 100 mL*

## CWA Silica

*in Water. 20 mL*

Blind PT	Part # 55100-EX	\$40
Practice PT	Part # 55100-IN	\$40
Calibration Mix*	Part # 54159	\$20

*\*1000 ug/mL in trace NaOH/Water. 100 mL*

## CWA Flame AA Metals Mix

*13 Elements in 5% HNO<sub>3</sub>. 20 mL*

*Formulated at higher concentrations. Check with your Accrediting Authority for approval.*

Aluminum (Al)	Vanadium (V)
Cadmium (Cd)	Beryllium (Be)
Chromium (Cr)	Molybdenum (Mo)
Cobalt (Co)	Thallium (Tl)
Copper (Cu)	Silver (Ag)
Lead (Pb)	Barium (Ba)
Nickel (Ni)	

Blind PT	Part # 55136-EX	\$80
Practice PT	Part # 55136-IN	\$80

# WP PROGRAM

## NON-POTABLE WATER NUTRIENTS/ DEMANDS/ TOTAL PHENOLICS

### WP Organic Nutrients

*in Water. 20 mL*

Total Kjeldahl Nitrogen (TKN as N)

Total Phosphorus as P

<b>Blind PT</b>	<b>Part # 55064-EX</b>	<b>\$40</b>
<b>Practice PT</b>	<b>Part # 55064-IN</b>	<b>\$40</b>
<b>Calibration Mix*</b>	<b>Part # 54152</b>	<b>\$20</b>

*\*1000 ug/mL in Water. 100 mL*

### WP Inorganic Nutrients

*in Water. 20 mL*

Ammonia(NH<sub>3</sub>) as N

Nitrate (NO<sub>3</sub><sup>-</sup>) as N

Phosphate (PO<sub>4</sub><sup>3-</sup>) as P

<b>Blind PT</b>	<b>Part # 55035-EX</b>	<b>\$40</b>
<b>Practice PT</b>	<b>Part # 55035-IN</b>	<b>\$40</b>
<b>Calibration Mix*</b>	<b>Part # 54153</b>	<b>\$20</b>

*\*1000 ug/mL in Water. 100 mL*

### WP Demands

*in Water. 20 mL*

Total Organic Carbon (TOC)

Chemical Oxygen Demand (COD)

Biological Oxygen Demand (BOD)

Carbonaceous Biological Oxygen Demand (CBOD)

<b>Blind PT</b>	<b>Part # 55055-EX</b>	<b>\$40</b>
<b>Practice PT</b>	<b>Part # 55055-IN</b>	<b>\$40</b>

### WP Phenolics (Total) 4AAP

*in Water. 20 mL*

<b>Blind PT</b>	<b>Part # 55038-EX</b>	<b>\$30</b>
<b>Practice PT</b>	<b>Part # 55038-IN</b>	<b>\$30</b>
<b>Calibration Mix*</b>	<b>Part # 54136</b>	<b>\$25</b>

*\*1000 ug/mL in Water. 100 mL*

# NON-POTABLE WATER MINERALS

# WP PROGRAM

## CWA Minerals #1

*in Water. 20 mL*

Calcium (Ca<sup>2+</sup>) Chloride (Cl<sup>-</sup>)  
Magnesium (Mg<sup>2+</sup>) Calcium Hardness as CaCO<sub>3</sub>  
Total Hardness as CaCO<sub>3</sub>  
Total Dissolved Solids (TDS)

**Blind PT Part # 55144-EX \$50**  
**Practice PT Part # 55144-IN \$50**

**Calibration Mixes\* 1000 ug/mL in Water. 100 mL**

	<b>Part #</b>	<b>Price</b>
Calcium (Ca <sup>2+</sup> )	54154	\$20
Magnesium (Mg <sup>2+</sup> )	54157	\$20
Total Hardness	54156	\$20
Chloride (Cl <sup>-</sup> )	54155	\$20
Calcium Hardness as CaCO <sub>3</sub>	54143	\$20
Total Dissolved Solids (TDS)	54125	\$20

## CWA Minerals #2

*in Water. 20 mL*

Alkalinity as CaCO<sub>3</sub> Fluoride (F<sup>-</sup>)  
Sodium (Na<sup>+</sup>) Sulphate (SO<sub>4</sub><sup>2-</sup>)  
Potassium (K<sup>+</sup>)

**Blind PT Part # 55145-EX \$50**  
**Practice PT Part # 55145-IN \$50**

**Calibration Mixes\* 1000 ug/mL in Water. 100 mL**

	<b>Part #</b>	<b>Price</b>
Alkalinity as CaCO <sub>3</sub>	54142	\$20
Sodium (Na <sup>+</sup> )	54121	\$20
Potassium (K <sup>+</sup> )	54158	\$20
Fluoride (F <sup>-</sup> )	54102	\$20
Sulphate (SO <sub>4</sub> <sup>2-</sup> )	54106	\$20



# WP PROGRAM

## NON-POTABLE WATER MISCELLANEOUS WET CHEMISTRY

### WP Total Cyanide

*in Water/NaOH. 20 mL*

Blind PT	Part # 55065-EX	\$40
Practice PT	Part # 55065-IN	\$40
Calibration Mix*	Part # 54150	\$20

*\*1000 ug/mL in Water/NaOH. 100 mL*

### WP pH

*in Water. 20 mL*

Blind PT	Part # 55061-EX	\$25
Practice PT	Part # 55061-IN	\$25
Calibration Mix*	Part # 54119	\$20

*\*pH 6.0 @ 25°C in Water. 100 mL*

### WP Conductance @ 25°C

*in Water. 20 mL*

Blind PT	Part # 55026-EX	\$25
Practice PT	Part # 55026-IN	\$25
Calibration Mix*	Part # 54131	\$20

*\*1000 umho/cm in Water. 100 mL*

### WP Total Residual Chlorine

*in Water. 20 mL*

Blind PT	Part # 55062-EX	\$40
Practice PT	Part # 55062-IN	\$40
Calibration Mix*	Part # 54124	\$20

*\*1000 ug/mL in Water. 100 mL*

### CWA MBAS

*in Water. 20 mL.*

Blind PT	Part # 55083-EX	\$40
Practice PT	Part # 55083-IN	\$40
Calibration Mix*	Part # 54160	\$20

*\*1000 ug/mL in Water. 20 mL*

### CWA Turbidity

*in 0 NTU Water. 20 mL.*

Blind PT	Part # 55101-EX	\$40
Practice PT	Part # 55101-IN	\$40
Calibration Mix*	Part # 54122	\$20

*\*400 NTU's in Water. 20 mL*

### CWA Color

*in Water. 100 mL*

Blind PT	Part # 55140-EX	\$50
Practice PT	Part # 55140-IN	\$50
Calibration Mix*	Part # 54255	\$250

*\*500 Color Units in 10% HCl. 100 mL*

### CWA UV 254 Absorbance & Dissolved Organic Carbon

*in Water. 20 mL*

Blind PT	Part # 55088-EX	\$40
Practice PT	Part # 55088-IN	\$40
Calibration Mix*	Part # 54166	\$20

*\*100 ug/mL in Water. 100 mL*

### CWA Cyanide Total & Amenable

*in Water. 20 mL*

Blind PT	Part # 55132-EX	\$60
Practice PT	Part # 55132-IN	\$60

### CWA Acidity

*in Water. 20 mL*

Blind PT	Part # 55129-EX	\$40
Practice PT	Part # 55129-IN	\$40

**NON-POTABLE WATER  
MISCELLANEOUS  
WET CHEMISTRY/ SOLIDS**

**WP  
PROGRAM**

**WP Oil & Grease  
(ParaffinOil/ Cooking Oil)**

*n-Propanol. 2 mL*

Blind PT	Part # 55037-EX	\$40
Practice PT	Part # 55037-IN	\$40
Calibration Mix*	Part # 54135	\$25

*\*1000ug/mL in n-Propanol. 100 mL*

**Oil & Grease- Method 1664  
(n-Hexadecane/Stearic acid)**

*in Acetone. 20 mL*

Blind PT	Part # 55084-EX	\$65
Practice PT	Part # 55084-IN	\$65
Calibration Mix*	Part # 91958	\$65

*\*8000 ug/mL in Acetone. 100 mL*

**CWA Total Organic Halides  
TOX**

*in Water. 20 mL*

Blind PT	Part # 55133-EX	\$60
Practice PT	Part # 55133-IN	\$60
Calibration Mix*	Part # 54194	\$20

*\*100 ug/mL in Water. 20 mL*

**CWA Solids**

*Neat.*

Total Suspended Solids

Total Dissolved Solids

Total Solids

Blind PT	Part # 55085-EX	\$50
Practice PT	Part # 55085-IN	\$50

**CWA Settleable Solids**

*Neat.*

Blind PT	Part # 55087-EX	\$50
Practice PT	Part # 55087-IN	\$50

**CWA Volatile Solids**

*Neat.*

Blind PT	Part # 55086-EX	\$50
Practice PT	Part # 55086-IN	\$50

# WP PROGRAM

## NON-POTABLE WATER ANIONS

### CWA Anions

*4 Components in Water. 5 mL*

Bromate ( $\text{BrO}_3^-$ )

Bromide ( $\text{Br}^-$ )

Chlorate ( $\text{ClO}_3^-$ )

Chlorite ( $\text{ClO}_2^-$ )

**Blind PT** Part # 55131-EX \$60

**Practice PT** Part # 55131-IN \$60

**Calibration Mix\*** Part # 52105 \$35

\*  $\text{ClO}_3^-$  &  $\text{ClO}_2^-$  1000 ug/mL in Water. 100 mL

**Calibration Mix\*** Part # 52106 \$35

\*\*  $\text{BrO}_3^-$  &  $\text{Br}^-$  1000 ug/mL in Water. 100 mL

### CWA Nitrate & Nitrite

*in Water. 20 mL*

Nitrate as N

Nitrite as N

Nitrate and Nitrite as N

**Blind PT** Part # 55130-EX \$40

**Practice PT** Part # 55130-IN \$40

**Calibration Mix\*** Part # 52120 \$20

\*1000 ug/mL in Water. 100 mL

### CWA Perchlorate

*in Water. 5 mL*

**Blind PT** Part # 55116-EX \$40

**Practice PT** Part # 55116-IN \$40

**Calibration Mix\*** Part # 57001 \$35

\*1000 ug/mL in Water. 100 mL

### CWA Sulphide

*in Water. 20 mL*

**Blind PT** Part # 55042-EX \$50

**Practice PT** Part # 55042-IN \$50

**Calibration Mix\*** Part # 54139 \$30

\*1000 ug/mL in Water. 100 mL

## DISCHARGE MONITORING- REPORT QUALITY ASSURANCE

## DMRQA PROGRAM

The Discharge Monitoring Report-Quality Assurance program is a federal program, mandatory for major permit holders as designated under the Clean Water Act by the National Pollutant Discharge Elimination System (NPDES) . As a result of this program, your data and performance are used by the USEPA to ensure the safety of our nation’s water supplies thus making your annual participation crucial. Moreover, while the purpose of the DMR-QA program is for the USEPA to assess your analytical and reporting abilities, you may benefit for other reasons. For example, this is a good way for you to evaluate your own procedures and techniques and those of your contract laboratory.

As you know, the DMR-QA time period is during the summer and Absolute offers its 45 day DMR-QA study from **July 15-August 29**. The process begins in the spring when you receive your DMR-QA Announcement from the USEPA. This important letter provides you with instructions, deadlines, reporting forms, and contact information for the program coordinator and your regional authorities.

(Please note, if you do not receive this packet or misplace it, additional copies can be obtained via the web at: [www.epa.gov/compliance/monitoring/programs/cwa/dmr/index.html](http://www.epa.gov/compliance/monitoring/programs/cwa/dmr/index.html))

Absolute is committed to keeping you compliant by meeting our reporting deadline which is 21 days from the study close date. Therefore, you can expect to receive your results by September 20 and can be confident that they have been reported to your accrediting authority. If you, or your contract laboratory happen to fail one or more parameters, a corrective action is required by early December as stated in the DMR-QA letter. You or your contract laboratory may purchase and perform corrective action samples during our Oct. 15-Nov. 29 study and expect your results in early December. Please notify us at the time of order that this is a DMR-QA make-up sample. You may also purchase a Quick Turn Around (QTA) sample to satisfy your requirements. Call us for additional information and as always, you may contact your local accrediting authority for assistance.

**DMR-QA Study**  
**Starts July 15**  
**Closes August 29**



<b>DMR-QA Kit</b>		
<i>Set of 10 Includes:</i>		
55024	55055	
55035	55061	
55037	55062	
55038	55064	
55039	55065	
<b>DMR-QA Kit</b>	<b>Part # 55074</b>	<b>\$350</b>

# DMRQA PROGRAM

## DISCHARGE MONITORING- REPORT QUALITY ASSURANCE

### DMRQA pH

*in Water. 20 mL*

Blind PT	Part # 55061-EX	\$25
Practice PT	Part # 55061-IN	\$25
Calibration Mix*	Part # 54119	\$20

*\*pH 6.0 @25°C in Water. 100 mL*

### DMRQA Total Residual Chlorine

*in Water. 20 mL*

Blind PT	Part # 55062-EX	\$40
Practice PT	Part # 55062-IN	\$40
Calibration Mix*	Part # 54124	\$20

*\*1000 ug/mL in Water. 100 mL*

### WP Demands

*in Water. 20 mL*

Total Organic Carbon (TOC)  
Chemical Oxygen Demand (COD)  
Biological Oxygen Demand (BOD)  
Carbonaceous Biological Oxygen Demand (CBOD)

Blind PT	Part # 55055-EX	\$40
Practice PT	Part # 55055-IN	\$40

### DMRQA Non-Filterable Residue (TSS)

*Neat. 1g*

Blind PT	Part # 55039-EX	\$30
Practice PT	Part # 55039-IN	\$30
Calibration Mix*	Part # 54134	\$20

*\*100 mg Neat*

### DMRQA Oil & Grease

*n-Propanol. 2 mL*

Blind PT	Part # 55037-EX	\$40
Practice PT	Part # 55037-IN	\$40
Calibration Mix*	Part # 54135	\$25

*\*1000 ug/mL in n-Propanol. 100 mL*

## DISCHARGE MONITORING- REPORT QUALITY ASSURANCE

## DMRQA PROGRAM

### DMRQA Trace Elements

*14 Elements in 5% HNO<sub>3</sub>. 20 mL*

Aluminum (Al)	Lead (Pb)
Arsenic (As)	Manganese (Mn)
Cadmium (Cd)	Nickel(Ni)
Chromium (Cr)	Selenium (Se)
Cobalt (Co)	Vanadium (V)
Copper (Cu)	Zinc (Zn)
Iron (Fe)	Mercury (Hg)*

\*Contains organic & inorganic Hg

Blind PT	Part # 55024-EX	\$60
Practice PT	Part # 55024-IN	\$60
Calibration Mix*	Part # 52129	\$60

*\*100 ug/mL in 5%HNO<sub>3</sub>. 100mL*

### WP Organic Nutrients

*in Water. 20 mL*

Total Kjeldahl Nitrogen (TKN as N)  
Total Phosphorus as P

Blind PT	Part # 55064-EX	\$40
Practice PT	Part # 55064-IN	\$40
Calibration Mix*	Part # 54152	\$20

*\*1000 ug/mL in Water. 100 mL*

### WP Inorganic Nutrients

*in Water. 20 mL*

Ammonia (NH<sub>3</sub>) as N  
Nitrate (NO<sub>3</sub><sup>-</sup>) as N  
Phosphate (PO<sub>4</sub><sup>3-</sup>) as P

Blind PT	Part # 55035-EX	\$40
Practice PT	Part # 55035-IN	\$40
Calibration Mix*	Part # 54153	\$20

*\*1000 ug/mL in Water. 100 mL*

### DMRQA Total Cyanide

*in Water/NaOH. 20 mL*

Blind PT	Part # 55065-EX	\$40
Practice PT	Part # 55065-IN	\$40
Calibration Mix*	Part # 54150	\$20

*\*1000 ug/mL in Water/NaOH. 100 mL*

### DMRQA Phenolics (Total) 4AAP

*in Water. 20 mL*

Blind PT	Part # 55038-EX	\$30
Practice PT	Part # 55038-IN	\$30
Calibration Mix*	Part # 54136	\$25

*\*1000 ug/mL in Water. 100 mL*

## RCRA

**RESOURCE CONSERVATION  
RECOVERY ACT-  
VOLATILES IN SOIL**
**RCRA Volatiles in Soil**
*65 Components, Whole Volume*
*Pre-Spiked Sample. 10g*

Benzene	1,3-Dichlorobenzene	Naphthalene
Bromobenzene	1,4-Dichlorobenzene	Nitrobenzene
Bromochloromethane	Dichlorodifluoromethane	n-Propylbenzene
Bromodichloromethane	1,1-Dichloroethane	Styrene
Bromoform	1,2-Dichloroethane	1,1,1,2-Tetrachloroethane
Bromomethane	1,1-Dichloroethene	1,1,2,2-Tetrachloroethane
sec-Butyl benzene	trans-1,2-Dichloroethene	Tetrachloroethene
tert-Butyl benzene	cis-1,2-Dichloroethene	Toluene
n-Butyl benzene	1,2-Dichloropropane	1,2,3-Trichlorobenzene
Carbon disulfide	1,3-Dichloropropane	1,2,4-Trichlorobenzene
Carbon tetrachloride	2,2-Dichloropropane	1,1,1-Trichloroethane
Chlorobenzene	1,1-Dichloropropene	1,1,2-Trichloroethane
Chloroethane	trans-1,3-Dichloropropene	Trichloroethene
Chloroform	cis-1,3-Dichloropropene	Trichlorofluoromethane
Chloromethane	Ethyl benzene	1,2,3-Trichloropropane
2-Chlorotoluene	Hexachlorobutadiene	1,2,4-Trimethylbenzene
4-Chlorotoluene	Hexachloroethane	1,3,5-Trimethylbenzene
Dibromochloromethane	Isopropylbenzene	Vinyl chloride
1,2-Dibromo-3-chloropropane	p-Isopropyl toluene	m-Xylene
1,2-Dibromoethane	4-Methyl-2-pentanone (MIBK)	p-Xylene
Dibromomethane	Methyl tert-butyl ether (MTBE)	o-Xylene
1,2-Dichlorobenzene	Methylene chloride	

<b>Blind PT</b>	<b>Part # 38084-EX</b>	<b>\$200</b>
<b>Practice PT</b>	<b>Part # 38084-IN</b>	<b>\$200</b>
<b>Calibration Mix*</b>	<b>Part # 35002</b>	<b>\$50</b>

\*200 ug/mL in Methanol. 1mL

<b>Part # 70210</b>	MIBK @ 1000 ug/mL in Methanol:Water [9:1]. 1mL	<b>\$22</b>
<b>Part # 70060</b>	Carbon disulfide @ 1000 ug/mL in Methanol. 1mL	<b>\$22</b>
<b>Part # 70199</b>	Hexachloroethane @ 1000 ug/mL in Methanol. 1mL	<b>\$22</b>
<b>Part # 70228</b>	Nitrobenzene @ 1000 ug/mL in Methanol. 1mL	<b>\$22</b>

# RESOURCE CONSERVATION RECOVERY ACT- VOLATILES IN SOIL

## RCRA

### Ketones in Soil

*4 Components, Whole Volume*

*Pre-Spiked Sample. 10g*

Acetone  
2-Butanone (MEK)  
2-Hexanone  
4-Methyl-2-pentanone (MIBK)

<b>Blind PT</b>	<b>Part # 38167-EX</b>	<b>\$80</b>
<b>Practice PT</b>	<b>Part # 38167-IN</b>	<b>\$80</b>
<b>Calibration Mix*</b>	<b>Part # 82402</b>	<b>\$25</b>

*\*2000 ug/mL in Methanol:Water [9:1]. 1mL*

### Halogenated Volatiles in Soil

*21 Components, Whole Volume*

*Pre-Spiked Sample. 10g*

bis(2-Chloroisopropyl) ether	1,2-Dichloroethane
Bromobenzene	1,1,1,2-Tetrachloroethane
Bromoform	1,1,2,2-Tetrachloroethane
Carbon tetrachloride	Tetrachloroethene
Chloroform	1,2,4-Trichlorobenzene
Chloromethane	1,1,1-Trichloroethane
1,2-Dichlorobenzene	1,1,2-Trichloroethane
1,3-Dichlorobenzene	Trichloroethene
1,4-Dichlorobenzene	1,2,3-Trichloropropane
Dichlorodifluoromethane	Vinyl chloride
1,1-Dichloroethane	

<b>Blind PT</b>	<b>Part # 38159-EX</b>	<b>\$150</b>
<b>Practice PT</b>	<b>Part # 38159-IN</b>	<b>\$150</b>



## RCRA

## RESOURCE CONSERVATION RECOVERY ACT- VOLATILES IN SOIL

### RCRA Oxygenates in Soil

*7 Components, Whole Volume*

*Pre-Spiked Sample. 10g*

t-Butyl ethyl ether (ETBE)  
t-Amyl methyl ether (TAME)  
Isopropyl ether (DIPE)  
1,1,2-Trichlorotrifluoroethane (FREON 113)  
Methyl tert-butyl ether (MTBE)  
n-Propylbenzene  
t-Butanol

<b>Blind PT</b>	<b>Part # 38169-EX</b>	<b>\$80</b>
<b>Practice PT</b>	<b>Part # 38169-IN</b>	<b>\$80</b>
<b>Calibration Mix*</b>	<b>Part # 92718</b>	<b>\$40</b>

*\*200 ug/mL in Methanol. 1mL*

### Ethanol & Methanol in Soil

*2 Components, Whole Volume*

*Pre-Spiked Sample. 10g*

Ethanol  
Methanol

<b>Blind PT</b>	<b>Part # 38180-EX</b>	<b>\$125</b>
<b>Practice PT</b>	<b>Part # 38180-IN</b>	<b>\$125</b>

### BTEX & MTBE in Soil

*5 Components, Whole Volume*

*Pre-Spiked Sample. 10g*

Benzene  
Ethyl benzene  
Toluene  
Methyl tert-butyl ether (MTBE)  
Total Xylenes

<b>Blind PT</b>	<b>Part # 38161-EX</b>	<b>\$80</b>
<b>Practice PT</b>	<b>Part # 38161-IN</b>	<b>\$80</b>
<b>Calibration Mix*</b>	<b>Part # 90728</b>	<b>\$25</b>

*\*200 ug/mL in Methanol. 1mL*

# RESOURCE CONSERVATION RECOVERY ACT- PESTICIDES IN SOIL

## RCRA

### Organochlorine Pesticides in Soil

*21 Components, Whole Volume*

*Pre-Spiked Sample. 10g*

Aldrin	Endosulfan I
a-BHC	Endosulfan II
b-BHC	Endosulfan sulfate
d-BHC	Endrin
g-BHC (Lindane)	Endrin aldehyde
a-Chlordane	Endrin ketone
g-Chlordane	Heptachlor
4,4'-DDD	Heptachlor epoxide
4,4'-DDE	4,4'-Methoxychlor
4,4'-DDT	trans-Nonachlor
Dieldrin	

<b>Blind PT</b>	<b>Part # 38101-EX</b>	<b>\$150</b>
<b>Practice PT</b>	<b>Part # 38101-IN</b>	<b>\$150</b>
<b>Calibration Mix*</b>	<b>Part # 30006</b>	<b>\$35</b>

*\*100 ug/mL in Hexane:Toluene [1:1]. 1mL*

### Organophosphorus Pesticides in Soil

*7 Components, Whole Volume*

*Pre-Spiked Sample. 10g*

Diazinon	Phorate
Dichlorvos	Ronnel
Disulfoton	Stirophos
Malathion	

<b>Blind PT</b>	<b>Part # 38151-EX</b>	<b>\$150</b>
<b>Practice PT</b>	<b>Part # 38151-IN</b>	<b>\$150</b>
<b>Calibration Mix*</b>	<b>Part # 94092</b>	<b>\$45</b>

*\*100 ug/mL in Acetone:Hexane[1:1]. 1mL*

## RCRA

## RESOURCE CONSERVATION RECOVERY ACT- PESTICIDES/ PCB'S IN SOIL

### Chlordane in Soil

*1 Component, Whole Volume*

*Pre-Spiked Sample. 10g*

Blind PT	Part # 38141-EX	\$125
Practice PT	Part # 38141-IN	\$125
Calibration Mix*	Part # 91824	\$22

*\*100 ug/mL in Acetone. 1mL*

### Toxaphene in Soil

*1 Component, Whole Volume*

*Pre-Spiked Sample. 10g*

Blind PT	Part # 38066-EX	\$125
Practice PT	Part # 38066-IN	\$125
Calibration Mix*	Part # 91823	\$22

*\*100 ug/mL in Acetone. 1mL*

### Aroclor in Soil

*1 Component, Whole Volume*

*Pre-Spiked Sample. 10g*

Blind PT	Part # 38142-EX	\$125
Practice PT	Part # 38142-IN	\$125

Calibration Mixes for PCB's	Part #	Price	ug/mL
(1) Aroclor 1016	91866	\$22	100
(2) Aroclor 1221	X9160	\$22	100
(2) Aroclor 1232	91867	\$22	100
(3) Aroclor 1242	91868	\$22	100
(4) Aroclor 1248	91869	\$22	100
(5) Aroclor 1254	91870	\$22	100
(6) Aroclor 1260	91834	\$22	100

# RESOURCE CONSERVATION RECOVERY ACT- HERBICIDES/CARBAMATES IN SOIL

## RCRA

### Herbicide Acids in Soil

*8 Components, Whole Volume*

*Pre-Spiked Sample. 10g*

Dicamba  
 Silvex (2,4,5-TP)  
 2,4-D (2,4-Dichlorophenoxyacetic acid)  
 2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)  
 Dalapon  
 Dinoseb  
 Pentachlorophenol  
 2,4-DB [4-(2,4-Dichlorophenoxy)butyric acid]

<b>Blind PT</b>	<b>Part # 38146-EX</b>	<b>\$150</b>
<b>Practice PT</b>	<b>Part # 38146-IN</b>	<b>\$150</b>
<b>Calibration Mix 1*</b>	<b>Part # 92102</b>	<b>\$35</b>
<b>Calibration Mix 2*</b>	<b>Part # 92479</b>	<b>\$35</b>
*Free acids 100 ug/mL in MTBE. 1mL		
<b>Calibration Mix 1**</b>	<b>Part # 92103</b>	<b>\$35</b>
<b>Calibration Mix 2**</b>	<b>Part # 92480</b>	<b>\$35</b>
**Methyl Derivatives 100 ug/mL in Hexane. 1mL		

### Carbamates in Soil

*12 Components, Whole Volume*

*Pre-Spiked Sample. 10g*

Aldicarb	Methomyl
Aldicarb sulfone	Methiocarb
Aldicarb sulfoxide	Baygon (Propoxur)
Carbaryl	Diuron
Carbofuran	Dioxacarb
3-Hydroxycarbofuran	Promecarb

<b>Blind PT</b>	<b>Part # 38158-EX</b>	<b>\$150</b>
<b>Practice PT</b>	<b>Part # 38158-IN</b>	<b>\$150</b>

## RCRA

# RESOURCE CONSERVATION RECOVERY ACT- SEMI-VOLATILES IN SOIL

## RCRA Semi-Volatiles in Soil

*73 Components, Whole Volume*

*Pre-Spiked Sample. 10g*

bis(2-Chloroethyl) ether	1,4-Dichlorobenzene	Fluoranthene
bis(2-Chloroisopropyl) ether	Hexachlorobenzene	Fluorene
bis(2-Chloroethoxy) methane	Hexachlorobutadiene	Indeno(1,2,3-cd)pyrene
4-Bromophenyl phenyl ether	Hexachloroethane	2-Methylnaphthalene
4-Chlorophenyl phenyl ether	Hexachlorocyclopentadiene	Naphthalene
N-Nitrosodiphenylamine	1,2,4-Trichlorobenzene	Phenanthrene
N-Nitrosodi-n-propylamine	Carbazole	Benzidine
N-Nitrosodimethylamine	2,4-Dinitrotoluene	3,3'-Dichlorobenzidine
Benzyl butyl phthalate	2,6-Dinitrotoluene	4-Chloro-3-methylphenol
bis(2-Ethylhexyl) phthalate	Isophorone	2-Chlorophenol
Diethyl phthalate	Benzyl alcohol	2,4-Dichlorophenol
Dimethyl phthalate	Nitrobenzene	2,6-Dichlorophenol
Di-n-butyl phthalate	Pyrene	2,4-Dimethylphenol
Di-n-octyl phthalate	Acenaphthene	2,4-Dinitrophenol
Aniline	Acenaphthylene	4,6-Dinitro-2-methylphenol
Pyridine	Anthracene	o-Cresol (2-Methylphenol)
4-Chloroaniline	1-Chloronaphthalene	m-Cresol (3-Methylphenol)
2-Nitroaniline	Benzo(a)anthracene	p-Cresol (4-Methylphenol)
3-Nitroaniline	Benzo(a)pyrene	2-Nitrophenol
4-Nitroaniline	Benzo(b)fluoranthene	4-Nitrophenol
2-Chloronaphthalene	Benzo(g,h,i)perylene	Pentachlorophenol
Dibenzofuran	Benzo(k)fluoranthene	Phenol
1,2-Dichlorobenzene	Chrysene	2,4,5-Trichlorophenol
1,3-Dichlorobenzene	Dibenzo(a,h)anthracene	2,4,6-Trichlorophenol
		2,3,4,6-Tetrachlorophenol

<b>Blind PT</b>	<b>Part # 38068-EX</b>	<b>\$200</b>
<b>Practice PT</b>	<b>Part # 38068-IN</b>	<b>\$200</b>

### Calibrations @ 2000 ug/mL

<b>Part # 10001</b>	Base/Neutrals #1 in Methylene chloride. 1mL	<b>\$45</b>
<b>Part # 10002</b>	Base/Neutrals #2 in Methylene chloride. 1mL	<b>\$45</b>
<b>Part # 10005</b>	Toxic Substances #2 in Methylene chloride. 1mL	<b>\$30</b>
<b>Part # 10006</b>	Benzidines in Methanol. 1mL	<b>\$25</b>
<b>Part # 10017</b>	PAH's in Methylene chloride. 1mL	<b>\$65</b>
<b>Part # 10018</b>	Phenols in Methylene chloride. 1mL	<b>\$40</b>

# RESOURCE CONSERVATION RECOVERY ACT- SEMI-VOLATILES IN SOIL

## RCRA

### RCRA PAH's in Soil

*22 Components, Whole Volume*

*Pre-Spiked Sample. 10g*

Acenaphthene	Dibenzo(a,h)anthracene
Acenaphthylene	2,4-Dinitrotoluene
Anthracene	2,6-Dinitrotoluene
Benzo(a)anthracene	Fluoranthene
Benzo(a)pyrene	Fluorene
Benzo(b)fluoranthene	Indeno(1,2,3-cd)pyrene
Benzo(g,h,i)perylene	Isophorone
Benzo(k)fluoranthene	Naphthalene
Carbazole	Nitrobenzene
2-Methylnaphthalene	Phenanthrene
Chrysene	Pyrene

**Blind PT**                      **Part # 38171-EX**      **\$200**

**Practice PT**                    **Part # 38171-IN**      **\$200**

**Calibration Mix\***            **Part # 10007**          **\$65**

\*2000 ug/mL in Methylene chloride. 1mL

**Calibration Mix\*\***          **Part # 70214**          **\$22**

\*\*2-Methylnaphthalene 1000 ug/mL in Methanol. 1mL

### Nitroaromatics in Soil

*14 Components, Whole Volume*

*Pre-Spiked Sample. 10g*

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

**Blind PT**                      **Part # 38155-EX**      **\$150**

**Practice PT**                    **Part # 38155-IN**      **\$150**

**Calibration Mix \*1**          **Part # 83525**          **\$45**

**Calibration Mix \*2**          **Part # 83526**          **\$45**

\*100 ug/mL in Acetonitrile. 1mL

**RCRA****RESOURCE CONSERVATION  
RECOVERY ACT-  
METALS IN SOIL****RCRA Metals in Soil  
Mix #1***22 Elements, Whole Volume  
Pre-Spiked Sample. 10g*

Antimony (Sb)	Mercury (Hg)
Arsenic (As)	Molybdenum (Mo)
Barium (Ba)	Nickel (Ni)
Beryllium (Be)	Selenium (Se)
Boron (B)	Silver (Ag)
Cadmium (Cd)	Strontium (Sr)
Chromium (Cr)	Thallium (Tl)
Cobalt (Co)	Tin (Sn)
Copper (Cu)	Titanium (Ti)
Lead (Pb)	Vanadium (V)
Manganese (Mn)	Zinc (Zn)

**Blind PT** Part # 55102-EX \$150  
**Practice PT** Part # 55102-IN \$150

**RCRA Metals in Soil  
Mix #2***6 Elements, Whole Volume  
Pre-Spiked Sample. 10g*

Aluminum (Al)
Calcium (Ca)
Iron (Fe)
Potassium (K)
Magnesium (Mg)
Sodium (Na)

**Blind PT** Part # 55103-EX \$150  
**Practice PT** Part # 55103-IN \$150

**RCRA Chromium VI (Cr<sup>6+</sup>)  
in Soil***1 Component, Whole Volume  
Pre-Spiked Sample. 10g*

**Blind PT** Part # 55104-EX \$95  
**Practice PT** Part # 55104-IN \$95  
**Calibration Mix\*** Part # 54161 \$20

*\*1000 ug/mL in Water. 100mL***RCRA Cyanide in Soil***1 Component, Whole Volume  
Pre-Spiked Sample. 10g*

**Blind PT** Part # 55105-EX \$95  
**Practice PT** Part # 55105-IN \$95  
**Calibration Mix\*** Part # 59017 \$20

*\*1000 ug/mL in Water. 100mL*

**RESOURCE CONSERVATION  
RECOVERY ACT-  
ANIONS/ NUTRIENTS IN SOIL**

**RCRA**

**RCRA Anions in Soil**

*6 Components, Whole Volume  
Pre-Spiked Sample. 10g*

Bromide (Br)	Nitrate (NO <sub>3</sub> <sup>-</sup> ) as N	
Chloride (Cl)	Phosphate (PO <sub>4</sub> <sup>3-</sup> ) as P	
Fluoride (F)	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	
<b>Blind PT</b>	<b>Part # 55141-EX</b>	<b>\$125</b>
<b>Practice PT</b>	<b>Part # 55141-IN</b>	<b>\$125</b>

**RCRA Nutrients in Soil**

*4 Components, Whole Volume  
Pre-Spiked Sample. 10g*

TOC	NH <sub>3</sub> as N	
TKN	Total Phosphorus	
<b>Blind PT</b>	<b>Part # 55142-EX</b>	<b>\$145</b>
<b>Practice PT</b>	<b>Part # 55142-IN</b>	<b>\$145</b>

**RCRA Perchlorate in Soil**

*Whole Volume  
Pre-Spiked Sample. 10g*

<b>Blind PT</b>	<b>Part # 55143-EX</b>	<b>\$125</b>
<b>Practice PT</b>	<b>Part # 55143-IN</b>	<b>\$125</b>
<b>Calibration Mix*</b>	<b>Part # 57001</b>	<b>\$35</b>

*\*1000 ug/mL in Water. 100mL*

**RCRA Soils Kit**

*Set of 9 Includes:*

38068	55102
38084	55103
38101	55104
38142	55105
38146	

**RCRA Soils Kit    Part # 38185    \$1180**

**\*\*NO substitutions on kits will be made.**

**Call Toll-Free 800-368-1131**



# UST

## GASOLINE/DIESEL/ TPH WATER AND SOIL

### 93 Octane Gasoline as TPH in Water

*in Methanol. 2 mL*

Blind PT	Part # 38116-EX	\$60
Practice PT	Part # 38116-IN	\$60
Calibration Mix*	Part # 51001	\$25

*\*20 mg/mL in Methanol. 1 mL*

### 93 Octane Gasoline as TPH in Soil

*Whole Volume*

*Pre-Spiked Sample. 10g*

Blind PT	Part # 38117-EX	\$80
Practice PT	Part # 38117-IN	\$80
Calibration Mix*	Part # 51001	\$25

*\*20 mg/mL in Methanol. 1 mL*

### #2 Diesel Fuel as TPH in Water

*in Methanol. 2 mL*

Blind PT	Part # 38114-EX	\$60
Practice PT	Part # 38114-IN	\$60
Calibration Mix*	Part # 51016	\$25

*\*20 mg/mL in Methanol. 1 mL*

### #2 Diesel Fuel as TPH in Soil

*Whole Volume*

*Pre-Spiked Sample. 10g*

Blind PT	Part # 38115-EX	\$80
Practice PT	Part # 38115-IN	\$80
Calibration Mix*	Part # 51016	\$25

*\*20 mg/mL in Methanol. 1 mL*

### TPH in Water-Method 418.1

*in Freon113. 2 mL*

Iso-octane  
Hexadecane  
Chlorobenzene

Blind PT	Part # 38165-EX	\$60
Practice PT	Part # 38165-IN	\$60
Calibration Mix*	Part # 90416	\$25

*\*4130 ug/mL in Freon 113. 1 mL*

### TPH in Soil-Method 418.1

*Whole Volume*

*Pre-Spiked Sample. 10g*

Iso-octane  
Hexadecane  
Chlorobenzene

Blind PT	Part # 55120-EX	\$80
Practice PT	Part # 55120-IN	\$80
Calibration Mix*	Part # 90416	\$25

*\*4130 ug/mL in Freon 113. 1 mL*

## STATE SPECIFIC METHODS

## UST

## RCRA METHOD 8015AZ

*2 Components, Whole Volume**Pre-Spiked Sample. 10g*

#2 Diesel

10W 30 Motor Oil

<b>Blind PT</b>	<b>Part # 38168-EX</b>	<b>\$120</b>
<b>Practice PT</b>	<b>Part # 38168-IN</b>	<b>\$120</b>
<b>Calibration Mix*</b>	<b>Part # 51096</b>	<b>\$40</b>

*\*10 mg/mL in Methylene chloride. 1 mL*

## VPH in Water

*in Methanol. 2 mL*

C9-C10 Aromatics

C5-C8 Aliphatics

C9-C12 Aliphatics

<b>Blind PT</b>	<b>Part # 38118-EX</b>	<b>\$80</b>
<b>Practice PT</b>	<b>Part # 38118-IN</b>	<b>\$80</b>
<b>Calibration Mix*</b>	<b>Part # 51167</b>	<b>\$50</b>

*\*2000 ug/mL in Methanol. 1 mL*

## VPH in Soil

*Whole Volume**Pre-Spiked Sample. 10g*

C9-C10 Aromatics

C5-C8 Aliphatics

C9-C12 Aliphatics

<b>Blind PT</b>	<b>Part # 38119-EX</b>	<b>\$95</b>
<b>Practice PT</b>	<b>Part # 38119-IN</b>	<b>\$95</b>
<b>Calibration Mix*</b>	<b>Part # 51167</b>	<b>\$50</b>

*\*2000 ug/mL in Methanol. 1 mL*

## EPH in Water

*in MeCl<sub>2</sub>:Hexane. 2 mL*

C11-C22 Aromatics

C9-C18 Aliphatics

C19-C36 Aliphatics

TPH

<b>Blind PT</b>	<b>Part # 38174-EX</b>	<b>\$125</b>
<b>Practice PT</b>	<b>Part # 38174-IN</b>	<b>\$125</b>
<b>Calibration Mix*</b>	<b>Part # 51073</b>	<b>\$50</b>

*\*2000 ug/mL in Methylene chloride. 1mL*

<b>Calibration Mix**</b>	<b>Part # 91488</b>	<b>\$40</b>
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*\*\*2000 ug/mL in Hexane. 1mL*

## EPH in Soil

*Whole Volume**Pre-Spiked Sample. 10g*

C11-C22 Aromatics

C9-C18 Aliphatics

C19-C36 Aliphatics

TPH

<b>Blind PT</b>	<b>Part # 38175-EX</b>	<b>\$175</b>
<b>Practice PT</b>	<b>Part # 38175-IN</b>	<b>\$175</b>
<b>Calibration Mix*</b>	<b>Part # 51073</b>	<b>\$50</b>

*\*2000 ug/mL in Methylene chloride. 1mL*

<b>Calibration Mix**</b>	<b>Part # 91488</b>	<b>\$40</b>
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*\*\*2000 ug/mL in Hexane. 1mL*

**VPH & EPH are MA Rev 1.1 Compliant,  
but also meet other states' requirements.**

**RCRA****RESOURCE CONSERVATION  
RECOVERY ACT-  
MISCELLANEOUS IN SOIL****RCRA Corrosivity in Soil  
pH Determination***Whole Volume  
Pre-Spiked Sample. 10g*

Blind PT	Part # 55127-EX	\$80
Practice PT	Part # 55127-IN	\$80

**RCRA Flashpoint / Ignitability***3 x 20 mL, Whole Volume*

Blind PT	Part # 55126-EX	\$80
Practice PT	Part # 55126-IN	\$80

**RCRA Reactive Cyanide in Soil***1 Component, Whole Volume  
Pre-Spiked Sample. 10g*

Blind PT	Part # 55146-EX	\$125
Practice PT	Part # 55146-IN	\$125
Calibration Mix*	Part # 59017	\$20

*\*1000 ug/mL in Water. 100mL***RCRA Reactive Sulphide in Soil***1 Component, Whole Volume  
Pre-Spiked Sample. 10g*

Blind PT	Part # 55147-EX	\$125
Practice PT	Part # 55147-IN	\$125
Calibration Mix*	Part # 54139	\$30

*\*1000 ug/mL in Water. 100mL*



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# NOTES

# NOTES

# NOTES



# CUSTOM STANDARD QUOTATION REQUEST FORM

Rev #: 1, Date Revised: 01/01/02 - Catalog.

**Photocopy at 125 % For Future Use**

**Fax To:** Page \_\_\_\_\_ of \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_  
(800) 410-2577, Technical Service Dept, Absolute Standards, Inc.

**From:**  
Company Contact: \_\_\_\_\_

Company Name: \_\_\_\_\_

Company Address: \_\_\_\_\_

Company Phone: \_\_\_\_\_

Company Fax/Email: \_\_\_\_\_

**Product Description:** \_\_\_\_\_

**Solvent:** \_\_\_\_\_

**Analysis Required - additional charge - (circle one):** yes    no

**Date Required:** \_\_\_\_/\_\_\_\_/\_\_\_\_

**Requested Quantity (circle one):** ORGANIC    5 x 1 mL    10 x 1 mL    Other    x    mL

INORGANIC    1 x 100 mL    1 x 500 mL    Other    x    mL

#	Component(s)	CAS # (optional)	Conc. (ug/mL)
(1)	_____	_____	_____
(2)	_____	_____	_____
(3)	_____	_____	_____
(4)	_____	_____	_____
(5)	_____	_____	_____
(6)	_____	_____	_____
(7)	_____	_____	_____
(8)	_____	_____	_____
(9)	_____	_____	_____
(10)	_____	_____	_____