Environmental Analysis Solutions

Chemistry & Consumables

Waters

THE SCIENCE OF WHAT'S POSSIBLE.™

SURFACE WATER MONITORING

REMEDIATION MONITORING

EMISSIONS TESTING

INDUSTRIAL EFFLUENT MONITORING

[working to keep the environment safe]

Environmental quality issues are complex, challenging, and ever expanding. Across the globe, regulatory agencies are increasing the amount of environmental testing required to ensure public safety. Understanding the complex nature of this type of analysis, Waters Corporation is committed to working with its worldwide partners to keep the environment safe.

As a world leader in separation science, Waters Corporation works with governments, research organizations, and industrial partners to resolve a wide variety of environmental concerns. Employing cutting-edge technologies and techniques, Waters is working to keep the environment and communities safe. Whether engaged in the testing of air, water, or soil, Waters has solutions for any environmental analysis.

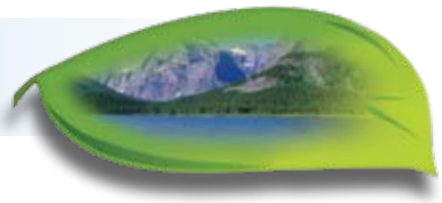
DRINKING WATER MONITORING

WASTEWATER TESTING

SOIL TESTING

INDOOR AIR MONITORING

[WATER]



Is my water safe?

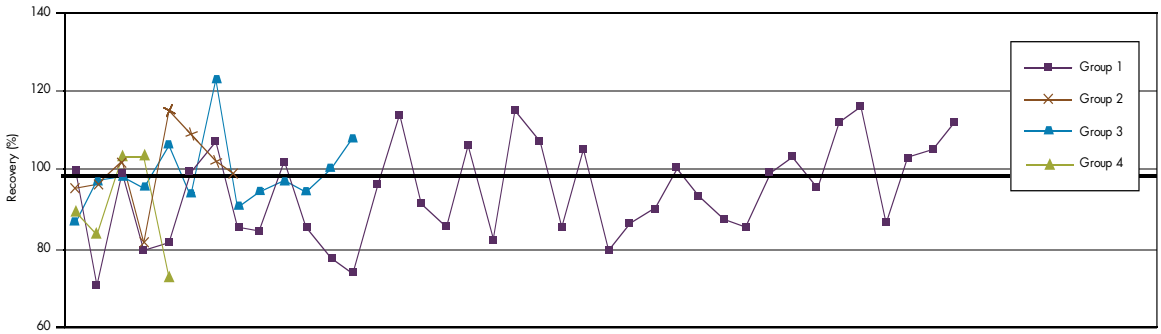
This is a question people all over the world ask every day. The quality of water, whether it is used for drinking, irrigation, or recreational purposes, posses significant challenges. Issues, such as emerging contaminants and lower regulatory limits, drives the demand for new and more sensitive analytical methods. Waters Corporation, in conjunction with government scientists and regulatory bodies, is an active partner in the effort to maintain the highest water quality possible. Employing new and innovative analytical technologies, we are proud to help improve the quality of life for individuals worldwide.

PHARMACEUTICALS IN DRINKING WATER

Recent news coverage has raised concerns over the presence of pharmaceutical compounds in public drinking water supplies. These reports focused on a number of issues, including the lack of adequate testing and reporting of these chemicals. Addressing a portion of this problem, the United States Environmental Protection Agency (US EPA) recently released Method 1694 for the testing of "Pharmaceuticals and Personal Care Products in Water, Soil, Sediment, and Biosolids by HPLC/MS/MS".

Waters is pleased that EPA Method 1694 uses our Environmental Analysis Solutions. Working with researchers worldwide, we strive to stay at the forefront of these important issues and provide the tools required to ensure public safety. Supporting environmental innovations is critical to our success and we are dedicated to solving problems such as these.

Average Recovery for Each Analyte (5 Replicates/Samples)*



EPA Method 1694 uses four distinct analyses, encompassing four analyte groups. This presents a significant challenge in terms of the consistency of the results. The solid-phase extraction (SPE) recoveries seen for Oasis® HLB sorbent met this challenge, leading to its adoption for this method.

EPA METHOD 1694 ANALYSIS KIT

Waters EPA Method 1694 Analysis Kit includes the XTerra® MS C_{18}, Atlantis® HILIC columns, and Oasis HLB cartridges; all of which are specified in the EPA Method.

*Published by the United States Environmental Protection Agency.

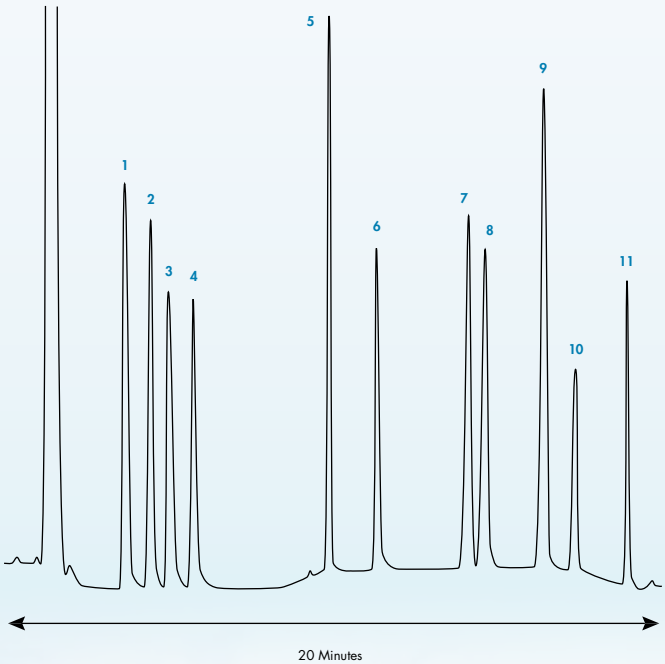
CARBAMATE PESTICIDE ANALYSIS

When used with the Waters Carbamate Analysis System, the Carbamate Analysis column provides a guaranteed analysis of the carbamate pesticides that exceeds the sensitivity required by AOAC Method 985.23. The baseline resolution and high sensitivity of this separation, coupled with the optimized system configuration, provide state-of-the-art analysis of carbamates. The separation of 11 carbamate pesticides and carbamate metabolites is accomplished in 20 minutes.

CARBAMATE ANALYSIS KIT

Waters Carbamate Analysis Kit includes the Waters Carbamate column, as specified in EPA Method 531.2, sample preparation cartridges, and carbamate reference standards for drinking water and wastewater.

Standard Chromatogram for 25 ppb for each Analyte



Compounds:
1. Aldicarb sulfoxide
2. Aldicarb sulfone
3. Oxamyl
4. Methomyl
5. 3-Hydroxy Carbofuran
6. Aldicarb
7. Propoxur
8. Carbofuran
9. Carbaryl
10. 1-Naphthol
11. Methiocarb

LC Conditions:

Column:	Carbamate Analysis column 3.9 x 150 mm
Instument:	Waters Alliance® system for carbamate analysis
Part Number:	WAT035577
Mobile Phase:	Water/methanol/acetonitrile complex gradient
Flow Rate:	1.5 mL/min
Sample:	10 ng of each analyte on column
Injection Volume:	400 µL
Post-Column Addition:	OPA/NaOH @ 0.5 mL/min
Detector:	Model 470 Fluorescence Detector Excitation: 339 nm lambda Emission: 445 nm lambda
Data:	Waters Empower™ software

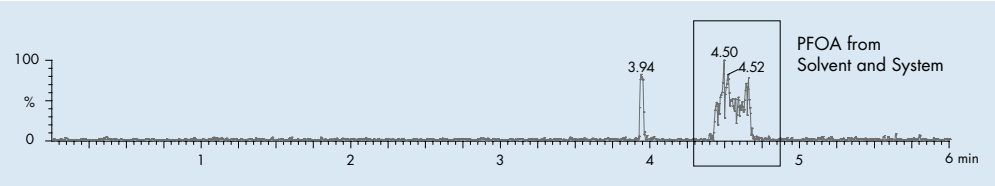
[WATER]

PFC ANALYSIS

Perfluorinated Compounds (PFCs), including PFOA and PFOS, are a group of industrial surfactants that have shown indications of being carcinogenic. Used mostly in household products, these compounds are found throughout the industrial world. Ongoing studies are focused on determining the scope of the pollution and developing alternative chemical compounds.

One of the principal challenges in detecting these chemicals is that they are found in a wide variety of common laboratory products and instrumentation. Waters has developed a methodology using a PFC Isolation Column that separates background PFC contaminants from those associated with the sample being analyzed. In this way, accurate and extremely low levels of PFC compounds, including PFOA and PFOS, can be analyzed.

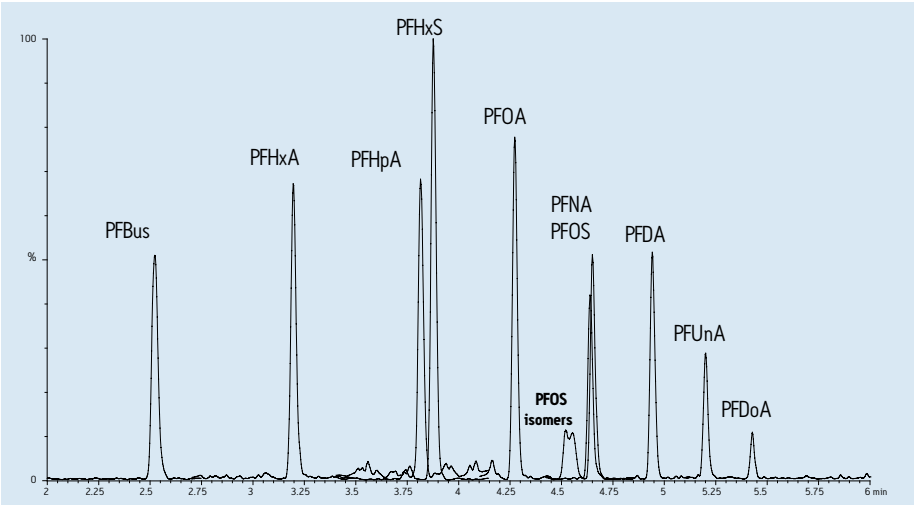
PFOA from the Solvent and Instrument is Isolated from that Associated with the Sample



In order to isolate background PFC compounds contributed by sources other than the analytical sample, from tubing for instance, a PFC Isolation Column is utilized. This column separates and "holds up" the contaminants from the system so that they appear after the chromatogram of the sample is complete.

UPLC® System:	ACQUITY UPLC® /TQD Mass Spectrometer
Column:	ACQUITY UPLC BEH C_{18}, 2.1x 50 mm
Part Number:	186002350
Software:	MassLynx™ 4.1
Mobile Phase A:	2 mM ammonium acetate in water/MeOH [95:5]
Mobile Phase B:	MeOH
Weak Wash:	25% MeOH in water (500 µL)
Strong Wash:	MeOH (500 µL)
Seal Wash:	90:10 Water:MeOH (5 min)
Column Temperature:	50 °C
Injection:	10 µL (full loop)

PFCs Spiked Bottled Water Sample



Overlay chromatogram of the 10 primary MRM transitions. SPE enrichment factor (250)

ACQUITY PFC ANALYSIS KIT

Waters ACQUITY® PFC Analysis Solutions include Oasis SPE cartridges, PFC calibration and reference standards, certified vials, and ACQUITY UPLC columns and instrumentation.

ENDOCRINE DISRUPTOR ANALYSIS

Endocrine disrupting compounds (EDCs) have become important emerging contaminants due to their presence in the environment and concerns about possible estrogenic effects to wildlife and humans. This group of compounds includes pesticides, polychlorinated biphenyls (PCBs), dioxins, furans, and steroid hormones. Alkylphenols, such as Bisphenol A, are a result of industrial activity and have been shown to be present in both water and food (as it is used in the manufacturing of packaging materials). Following recent studies, many actions have been taken to reduce EDCs in the environment. In particular, Bisphenol A has been eliminated from many packing materials and plastic products.

Analysts are challenged with meeting detection limits at ng/L levels for endocrine disruptors. Using Oasis HLB glass solid-phase extraction (SPE) cartridges, specially made for low level environmental samples, combined with ACQUITY UPLC/MS/MS, Waters scientists have developed a rapid and sensitive solution for this critical analysis.

Oasis HLB Extraction Method

Oasis HLB Extraction Cartridge, 200 mg;1-D (LOQ = 50 ppt)
Part Number: 186000683 (Glass Recommended)

Prepare Sample

Condition/Equilibrate:
3 mL $CH_3OC(CH_3)_3$;3 mL CH_3OH; 3 mL H_2O

Load:
Up to 500 mL sample

Wash:
3 mL CH_3OH/H_2O (5/95)

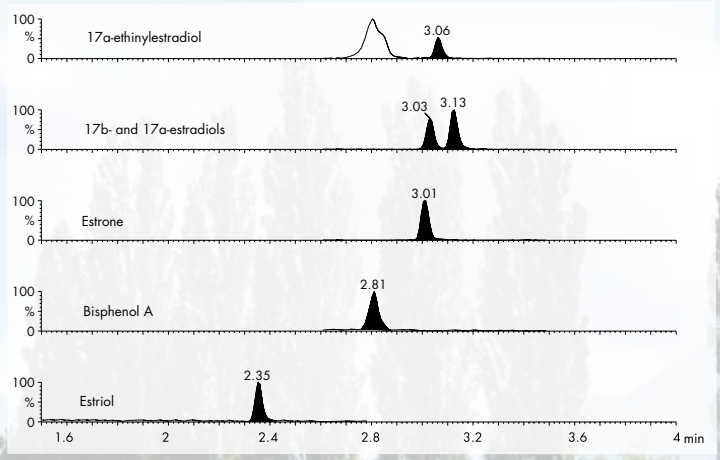
Elute:
6 mL $CH_3OH/CH_3OC(CH_3)_3$ (10/90)

For GC analysis, dry extract over Na_2SO_4, then adjust to 1 mL

For LC analysis, dry and exchange to CH_3CN, then adjust to 1 mL

LC Conditions:		
LC System:	ACQUITY UPLC System	
Column:	ACQUITY UPLC BEH C_8 Column, 2.1 x 50 mm, 1.7 µm	
Part Number:	186002350	
Mobile Phase A:	Water + 0.1% NH_4OH	
Mobile Phase B:	Methanol + 0.1% NH_4OH	
Gradient:	Time (min)	%A
	0.00	90
	0.50	90
	4.00	5
	5.00	5
	5.10	90
Column Temperature:	40 °C	
Flow Rate:	450 µL/min	
Injection Volume:	20 µL full loop	
Total Run Time:	8 min	

MS Conditions:	
MS System:	Quattro Premier™ XE Mass Spectrometer
Ionization Mode:	ESI-
Capillary Voltage:	2000 V
Desolvation Gas:	Nitrogen, 800 L/Hr at 400 °C
Cone Gas:	Nitrogen, 20 L/Hr
Source Temperature:	120 °C
Collision Gas:	Argon, 3.5 x 10^{-3} mBar
Acquisition Mode:	Multiple Reaction Monitoring (MRM)



Sensitivity and selectivity of the Quattro Premier XE for 50 ng/L estrogens and Bisphenol A in matrix-matched river water.

[SOIL]

What is in the ground?

From agricultural planning to building permits and groundwater monitoring, what is in the ground is an important consideration. The contamination of soil is caused by the presence of man-made chemicals that are introduced into the natural environment. The application of pesticides, oil and fuel spills, leaching of landfill wastes, and the direct discharge of industrial wastes are all primary causes for soil pollution. The concern around the presence of these chemicals relates to health risks both from direct exposure and contamination of food and water supplies.

Waters Corporation, with its wide variety of sample preparation devices, has been actively supporting soil remediation and testing worldwide. Designed to be cost-effective and reproducible, our environmental solutions have been selected by leading government and academic scientists as key tools in their efforts to clean up the environment.

EXPLOSIVE RESIDUES

Explosive residues in soil or water present significant environmental concerns. Military sites around the world have produced, stockpiled, expended, and disposed of explosives for many years. Containing nitroaromatic and nitramine compounds, these munitions can pose a significant human health risk. Careful monitoring of these compounds is required both at active military facilities, as well as locations undergoing decommissioning and remediation.

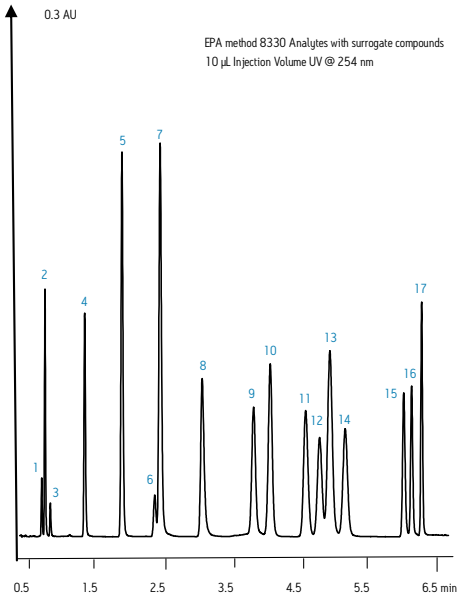
Isolation of Explosive Residues in Contaminated Soil

Oasis HLB Extraction Method

Oasis HLB Extraction Cartridge, 6 cc, 200 mg

Condition/Equilibrate: 4 mL methanol/4 mL water
Load: 500-1000 mL sample
Wash: 2 mL of 5:35:60 NH_4OH/methanol/water
Load: Up To 500 mL sample
Re-Equilibrate: 1 mL water
Air Dry: 5 minutes
Elute: 2 mL 15:85 water/acetonitrile
Adjust to exactly 5 mL with 0.1% formic acid in water

10 ppm analyte mixture as follows:



Compounds:
1. 2,6-Diamino-4-Nitrotoluene
2. HMX
3. 2,4-Diamino-6-Nitrotoluene
4. RDX
5. 1,3,5-Trinitrotoluene
6. 1,2-Dinitrobenzene
7. 1,3-Dinitrobenzene
8. Nitrobenzene
9. Tetryl
10. 2,4,6-Trinitrotoluene
11. 2-Amino-4,6-Dinitrotoluene
12. 4-Amino-2,6-Dinitrotoluene
13. 2,4-Dinitrotoluene
14. 2,6-Dinitrotoluene
15. 2-Nitrotoluene
16. 4-Nitrotoluene
17. 3-Nitrotoluene

Explosives analysis using the ACQUITY UPLC column, 2.1 x 100 mm, 1.7 µm BEH C_{18}. A water:methanol gradient from 31 to 60% methanol at a flow rate of 0.5 mL/min was used. Detection was UV @ 254 nm. Sample was a 5 µL injection.

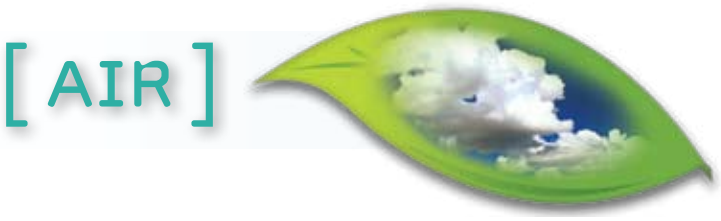
SOIL REFERENCE STANDARDS

Waters is pleased to provide a range of soil reference standards to assist in assuring the accuracy of your analyses, including bank soils, inorganics in soil, and organics in soil. Also available are reference standards for PCBs in soil, oil and water, hydrocarbon fuels in water and soil, and total petroleum hydrocarbons in water and soil.

ERA

CERTIFIED VIALS

Waters provides a wide selection of certified vials, verified to two levels of cleanliness: GCMS and LCMS. Improve your accuracy and sensitivity by optimizing your sample handling.



What is the air quality today?

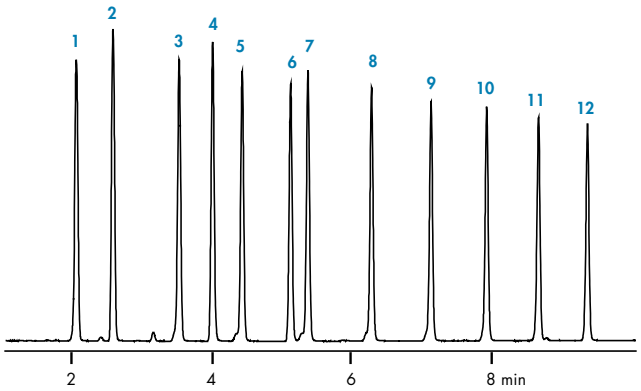
In many parts of the world, this question is asked on a daily basis and featured in news reports so individuals may plan their day accordingly. The quality of the air we breathe is influenced by a wide variety of factors, including human activities (automobiles, burning of coal and oil, etc.) and natural occurrences (wildfires, dust, etc.). Regardless of the source, there are a wide variety of health concerns associated with poor air, requiring regular monitoring and reporting. Waters offers comprehensive solutions for air analysis, through innovative sample preparation products, state-of-the art instrumentation, and standards.

ALDEHYDES AND KETONES

Aldehydes and ketones are products of combustion that permeate the environment. A number of these compounds are known carcinogens, and as a result, numerous regulatory methods have been developed for their analysis.

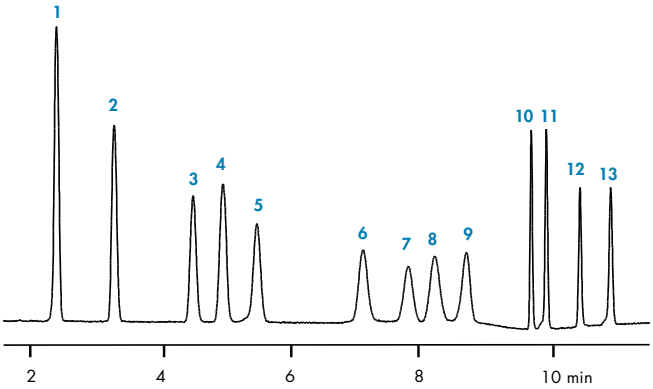
The method on the following page demonstrates Waters methods for this analysis that can reduce the analysis time by as much as 75%. In addition to the increased throughput, excellent chromatographic resolution is achieved for both the indoor air method (EPA Method 554 and 8315) and auto exhaust method (California Method 1004).

EPA Method 554, 8315 A-Option 1-Analytes 20 ppm as DNPH Derivatives



Compounds:
1. Formaldehyde
2. Acetaldehyde
3. Propanal
4. Crotonaldehyde
5. Butanal
6. Cyclohexanone
7. Pentanal
8. Hexanal
9. Heptanal
10. Octanal
11. Nonanal
12. Decanal

California Method 1004 Analytes, 0.75 ppm as Parent Compounds



Compounds:
1. Formaldehyde
2. Acetaldehyde
3. Acetone
4. Acrolein
5. Propanal
6. Crotonaldehyde
7. Methyl ethyl ketone
8. Methacrolein
9. Brutanal
10. Benzaldehyde
11. Pentanal
12. m-Tolialdehyde
13. Hexanal

UPLC Conditions:

UPLC System:	ACQUITY UPLC System
Column:	Waters ACQUITY UPLC BEH Phenyl, 2.1 x 100 mm, 1.7 µm @ 35 °C
Part Number:	186004052
Weak Wash:	5% acqueous acetonitrile - 800 µL
Strong Wash:	50% acqueous acetonitrile - 500 µL
Eluent:	A - 90:10 water - THF (stabilized)* B - acetonitrile
Flow Rate:	0.5 mL/min
Sample Temperature:	25 °C
Injection Mode:	Full loop
Loop size:	5 µL (5 µL injection volume), use 15 µL needle.
Detection:	UV @ 360 nm Allow 2 minute equilibration between injections.

* Mix 900 mL water and 100 mL stabilized tetrahydrofuran (THF), filter and degas.

AIR AND EMISSIONS REFERENCE STANDARDS

Increase your confidence and verify the accuracy of your air and emissions testing with Waters Air and Emissions Certified Reference Standards, including volatiles, semivolatiles, inorganics, and metals.

SEP-PAK DNPH CARTRIDGES

The most sensitive and specific method for analyzing aldehydes and keytones is based on their reaction with 2,4-dinitrophenylhydrazine (DNPH) and the subsequent analysis of the hydrazone derivatives by LC methods. Sep-Pak® DNPH cartridges meet the requirements of EPA Method TO-11A, JPM HLW, and ISO 16000 and provide an excellent device for sample collection.

OZONE SCRUBBER CARTRIDGES

Ozone has been shown to interfere with the analysis of carbonyl compounds in air samples. Waters Ozone Scrubber cartridges are intended to be used in series combination with the Sep-Pak DNPH cartridges and will eliminate ozone interference.

XPOSURE ALDEHYDE SAMPLER CARTRIDGES

For the monitoring of aldehydes in indoor air, XPoSure™ cartridges provide greater than 95% collection efficiencies for all aldehydes at flows of up to a liter per minute. With low backgrounds and consistent performance, these cartridges are the most sensitive active samplers available.

CERTIFIED REFERENCE MATERIALS AND QC STANDARD SOLUTIONS

With the addition of Environmental Resource Associates (ERA) to the Waters family, we are pleased to provide a wide range of Certified Reference Materials (CRMs) and QC Standards for your environmental testing needs. Based upon the highest levels of technical and manufacturing excellence, these products ensure accurate results. For your convenience, we have listed the analytical techniques and EPA methods (as well as several other widely utilized methods) supported by our CRM and QC Standards offering in the form of a Quick Reference Chart.

EPA Methods

EPA Method Number			
5	413.1	548	8091
5a	413.2	549	8141
5b	418	550	8151
5d	418.1	551	8260
5f	425.1	552	8270
6	502.2	555	8280
7	504	608	8290
8	505	610	8310
0010	506	613	8318
13a	507	614	8330
12	508	619	8440
14	508a	622	9071B
26	508.1	625	CTM 027
26a	515.1	632	TO-04A
29	515.2	633	TO-10A
0030	515.3	1613	TO-11A
0031	515.4	1664	TO-13A
0061/7119	521	3050	TO-14
101A	524.2	3051	TO-15
110.1	525	4020	TO-17
110.2	525.2	5520	
110.3	529	8015	
160.4	531.1	8021	
200.8	535	8081	
331.2	547	8082	

Other Methods

ASTM D5673-03
California ELAP Requirements
CARB Method 425
Long Term 2 Enhanced Surface Water Treatment Rule
SDWA Quantitative Methods
Standard Method 2120B
Standard Method 2120C
Standard Method 2120E
Standard Method 2540E
Standard Method 3125
Standard Method 5910B
Standard Method 9215B

Certified Reference Materials/QC Standards Quick Reference Chart

Waters is pleased to be able to provide Certified Reference Materials and/or QC Standards for the following analytical techniques:

- Atomic-Absorption Spectrometry (AA)
- Colorimetric
- Inductively-Coupled Plasma with Optimcal-Emission Spectroscopy (ICP-OES)
- Inductively-Coupled Plasma - Mass Spectrometry (ICP-MS)
- Ion Chromatography (IC)
- Infrared Spectroscopy (IR)
- Gravimetric
- Nephelometric
- Titrimetric
- Ion-Selectivity Electrodes (ISE)
- Distillation
- Purge and Trap
- Whole-Effluent Testing (WET)
- Gas Chromatography (GC)
- High Performance Liquid Chromatography (HPLC)
- Ultra Performance Liquid Chromatography (UPLC)
- Resource Conservation and Recovery Act Methods (RCRA)
- Superfund Methods

ERA

Literature References

For more information on Waters Environmental Analysis products and methods, visit **www.waters.com/environment** to download or requested printed copies of the following documents:

Environmental Chromatography Methods Guide
(Literature code: 720002543EN)

Environmental Analysis Catalog
(Literature code: 720002639EN)

Sorbent Selection Guide for Solid-Phase Extraction Wall Chart
(Literature code: 720002007EN)

SOLID-PHASE EXTRACTION SOLUTIONS

In addition to our complete Environmental Analysis Solutions, Waters also supplies solid-phase extraction products that can be used with EPA Methods. Featuring our revolutionary Oasis and classic Sep-Pak technologies, we can proved fast, reliable extractions of your environmental samples. For your convenience, we have listed EPA Methods and the corresponding Waters SPE cartridges below in the form of two quick reference charts.

Florisil SPE Quick Reference Chart

EPA Method Number					
430	608.2	622.1	639	8061	8141
506	609	629	645	8080	
509	611	632	646	8081	
515.1	614	633.1	1656	8111	
606	617	636	1658	8121	
607	619	638	8032	8131	

SPE Quick Reference Chart

EPA Method Number	Priority Pollutant	SPE Cartridge
504	1,2-Dibromoethane (EDB); 1,2, Dibromo-3-Chloropropane (DBCP)	Sep-Pak Silica
506	Phthalate, Adipate Esters	Sep-Pak C_{18}
507	Nitrogen, Phosphorus Pesticides	Sep-Pak C_{18}
508.1	Chlorinated Pesticides	Sep-Pak C_{18}
513	Dioxin	Sep-Pak C_{18}
525	Organic Compounds	Sep-Pak C_{18}/Oasis HLB
532	Phenylurea	Sep-Pak C_{18}
535	Chloroacetanilide, Acetamide Herbicide Degradates	Oasis HLB
547	Glyphosate	Oasis MAX
548	Endothall	Sep-Pak C_{18}/Oasis HLB
549	Diquat, Paraquat	Sep-Pak C_8/Oasis WCX
550.1	Polycyclic Aromatic Hydrocarbons	Sep-Pak C_{18}
552.1	Haloacetic Acids, Dalapon	Oasis HLB, Oasis MAX
553	Benzidines	Sep-Pak C_{18}
554	Carbonyl Compounds	Sep-Pak Silica
555	Chlorinated Acids	Sep-Pak Silica
608	Organochlorine Pesticides/ PCBs	Sep-Pak C_{18}
625	Acids, Base/Neutrals	Oasis HLB
629	Cyanazine	Oasis HLB
632	Carbamate, Urea Pesticides	Oasis MCX
1613	Dioxins, Furnas	Sep-Pak C_{18}
1614	Brominated Diphenyl Ethers	Sep-Pak C_{18}
1657	Organophosphorus Pesticides	Sep-Pak C_{18}
1668	Chlorinated Biphenyl Congeners	Sep-Pak C_{18}
1694	Pharmaceuticals, Personal Care Products	Oasis HLB
8080	Organochlorine Pesticides/ PCBs	Sep-Pak C_{18}
8082	PCBs	Sep-Pak C_{18}
8315a	Carbonyl Compounds	Sep-Pak C_{18}
8318a	n-Methylcarbamates	Oasis HLB
8330	Nitroaromatics, Nitramines	Pora-Pak RDX
8440	Petroleum Hydrocarbons	Sep-Pak Silica
TO-11A	Formaldehyde	Sep-Pak DNPH
Emerging Contaminants		
PFOS, PFOA		Oasis WAX
Pharmaceutical Compounds		Oasis HLB
Endocrine Disruptors		Oasis HLB

European Union Water Framework Directive – SPE Solutions

EU Number	Name of Priority Substance	Oasis HLB Cartridges
240-110-8	Alachlor	60 mg/3 mL
240-110-8	Alachlor	60 mg/3 mL
204-371-1	Anthracene	200 mg/6 mL
217-617-8	Atrazine	200 mg/6 mL
207-432-0	Chlorfenvinphos	200 mg/6 mL
220-864-4	Chlorpyrifos	200 mg/6 mL
204-211-0	Di(2-ethylhexyl)phthalate(DEHP) (also bis[ethylhexyl] phthalate)	200 mg/6 mL
206-354-4	Diuront	200 mg/6 mL
204-079-4	Endosulfan	60 mg/3 mL
N/A	(alpha-endosulfan)	60 mg/3 mL
205-912-4	Fluoranthene	200 mg/6 mL
204-273-9	Hexachlorobenzene	60 mg/3 mL
201-765-5	Hexachlorobutadiene	60 mg/3 mL
210-158-9	Hexachlorocyclohexane	60 mg/3 mL
200-401-2	(gamma-isomer, Lindane)	60 mg/3 mL
251-835-4	Isoproturon	200 mg/6 mL
202-049-5	Naphthalene	200 mg/6 mL
246-672-0	Nonylphenols	200 mg/6 mL
203-199-4	(4-[para]-nonylphenol)	200 mg/6 mL
217-302-5	Octylphenols	200 mg/6 mL
N/A	(4-[1,1',3,3'-tetramethylbutyl]-phenol) AKA para-tert-octylphenol	200 mg/6 mL
210-172-5	Pentachlorobenzene	60 mg/3 mL
231-152-8	Pentachlorophenol (PCP)	60 mg/3 mL
N/A	Polyaromatic hydrocarbons	200 mg/6 mL
200-028-5	(Benzo[a]pyrene)	200 mg/6 mL
205-911-9	(Benzo[b]fluoranthene)	200 mg/6 mL
205-883-8	(Benzo[g,h,i]perylene)	200 mg/6 mL
205-916-6	(Benzo[k]fluoranthene)	200 mg/6 mL
205-893-2	(Indeno[1,2,3-cd]pyrene)	200 mg/6 mL
204-535-2	Simazine	60 mg/3 mL
216-428-8	Trifluralin	60 mg/3 mL
		Sep-Pak Cartridges
211-704-4	Tributyltin compounds	C_{18}

Sales Offices

Austria and European Export (Central South Eastern Europe, CIS and Middle East) 43 1 877 18 07

Australia 61 2 9933 1777

Belgium 32 2 726 1000

Brazil 55 11 5094-3788

Canada 1 800 252 4752 x2205

China 86 10 8586 8899

CIS/Russia +7 495 3367000

Czech Republic 420 2 617 1 1384

Denmark 45 46 59 8080

Finland 09 5659 6288

France 33 1 30 48 72 00

Germany 49 6196 400600

Hong Kong 852 29 64 1800

Hungary 36 1 350 5086

India and India Subcontinent
91 80 2837 1900

Ireland 353 1 448 1500

Italy 39 02 265 0983

Japan 81 3 3471 7191

Korea 82 2 820 2700

Mexico 52 55 5200 1860

The Netherlands 31 76 508 7200

Norway 47 6 384 60 50

Poland 48 22 833 4400

Puerto Rico 1 787 747 8445

Singapore 65 6273 1221

Spain 34 93 600 9300

Sweden 46 8 555 11 500

Switzerland 41 56 676 70 00

Taiwan 886 2 2543 1898

United Kingdom 44 208 238 6100

All other countries:
Waters Corporation U.S.A.
1 508 478 2000
1 800 252 4752

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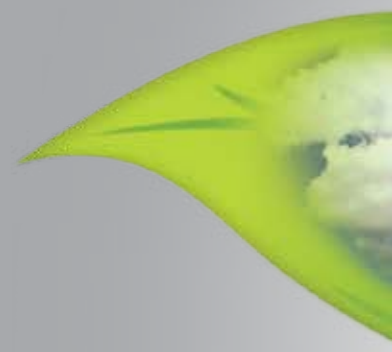

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The quality management system of Waters' manufacturing facilities in Taunton, Massachusetts and Wexford, Ireland complies with the International Standard ISO 9001:2000 Quality Management and Quality Assurance Standards. Waters' quality management system is periodically audited by the registering body to ensure compliance.