

Application Compendium for Environmental Testing

**ACHIEVE RELIABLE,
ROBUST, AND ACCURATE
ENVIRONMENTAL ANALYSIS**



Agilent Technologies

CONFIDENTLY MEASURE ORGANIC AND INORGANIC CHEMICALS IN AIR, SOIL, AND WATER

As part of their monitoring programs, environmental regulatory agencies require reporting of the types and concentrations of organic and inorganic compounds discharged into air and water. Similarly, the concentration of organic materials present in soil collected from construction project areas, remediation projects, or sludge shipped to solid waste facilities for treatment and/or disposal require analysis of the chemical load.

Today's challenges have never been greater, whether analyzing contaminants in wastewater and purity of drinking water, measuring indoor air quality, responding to natural or man-made disasters, or identifying emerging contaminants. Environmental analysis must be done more reliably, more efficiently, and with even higher quality results than ever before.

Agilent offers over 40 years of environmental analysis and regulatory expertise. If you are involved in the measurement of organic and inorganic chemicals in water, soil, or air, Agilent has the right solution—instruments, chromatography workstations, consumables, and services designed specifically to meet your needs.

What's Inside?

This compendium highlights environmental applications to help you find the right analytical solutions, thus build confidence and reliability in all of your analytical measurements.

For your convenience you will find a table within each section that allows you to search for Application Notes by the analyte targeted in the application.

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AIR ANALYSIS

Effective air analysis is critical in a variety of applications and environments. Whether for greenhouse gas monitoring or for maintaining air supply quality in buildings, mines, or other environments, detecting and measuring a wide range of airborne contaminants is a vital, ongoing challenge.

There are numerous health hazards associated with toxic air contaminants as well as significant monitoring difficulties due to the particle size, scarcity, and matrix complexity. As regulations have become more stringent, it is important that analysts can quickly and easily gather uniform samples and execute multiple testing methods to detect an increasing list of harmful substances.

Agilent provides a complete air analysis solution to meet these challenges. Our instruments, along with complementary pre-configured analyzers, help your labs perform effective air sampling, desorption, testing, and data analysis efficiently, while achieving lower detection limits.

GC and GC/MS

- Determination of Total VOCs in Indoor Air using a 7667A Mini TD and 7820A GC
[5991-1536EN](#)
- Detection of VOCs in Polluted Air by a Mini TD and 5975T LTM GC/MS
[5991-1500EN](#)
- Low ppm Level Sulfur Dioxide Analysis in Air using the Agilent 490 Micro GC
[5991-5171EN](#)
- Rapid and Sensitive Determination of Airborne N-Nitrosamines using the CTS, TSP, and a 5975T LTM GC/MS
[5991-1554EN](#)
- Rapid Field Sampling of Airborne Compounds using the CTS, TSP, and an 5975T LTM GC/MS
[5991-1519EN](#)
- The Analysis of Landfill Gas Compounds using TD GC/MS and a RTL Database
[5991-2825EN](#)
- Optimizing Analytical Performance and Extending the Application Range of TD for Monitoring Air Indoors and Inside Vehicle Cabins
[5991-2827EN](#)

- Using the CIA Advantage for Automated Cryogen-Free Analysis of Canister Air and Gas
[5991-2842EN](#)
- EPA Method TO-17 for Monitoring “Air Toxics” in Ambient Air using Sorbent Tubes and Automated, Cryogen-free TD
[5991-2828EN](#)
- Round-the-clock, Online, and Cryogen-free Monitory of Hydrocarbons from Acetylene to Trimethylbenzene in Ambient Air
[5991-2823EN](#)
- Analysis of Canister Air Samples using Cryogen-free TD in Compliance with US EPA Method TO-15
[5991-2829EN](#)
- Evaluation of a “Soil Gas” Sorbent Tube for Improving the Measurement of Volatile and Semi-volatile Fuel Vapors in Soil Contaminated Land
[5991-2824EN](#)
- Air Monitoring – Advantages and Applications of Canisters and Tubes
[5991-2826EN](#)

LC AND LC/MS

- Carbonyl-DNPH Derivatives in Indoor and In-car Air by UHPLC and QQQ LC/MS
[5991-2125EN](#)

SPECTROSCOPY

- High-Throughput Semiquantitative Screening of Ambient Air by ORS-ICP-MS and ISIS
[5989-6123EN](#)

ANALYTE TABLE

- Air Analysis Analyte Table
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AIR ANALYSIS ANALYTE TABLE

The following table allows you to search for Application Notes by Analyte. Click on the title or publication number to jump to a specific Application Note.

ANALYTE	TECHNIQUE	APPLICATION NOTE		
Ambient/Volatiles	GC/MS	Detection of VOCs in Polluted Air by a Mini TD and 5975T LTM GC/MS	5991-1500EN	
		Low ppm Level Sulfur Dioxide Analysis in Air using the Agilent 490 Micro GC	5991-5171EN	
		Rapid and Sensitive Determination of Airborne N-Nitrosamines using the Agilent CTS, TSP and 5975T LTM GC/MS	5991-1554EN	
		Rapid Field Sampling of Airborne Compounds using the Agilent CTS, TSP, and 5975T LTM GC/MS	5991-1519EN	
		The Analysis of Landfill Gas Compounds using TD GC/MS and a RTL Database	5991-2825EN	
	TD-GC/MS	Using the CIA Advantage for Automated Cryogen-free Analysis of Canister Air and Gas	5991-2842EN	
		EPA Method TO-17 for Monitoring "Air Toxics" in Ambient Air using Sorbent Tubes and Automated, Cryogen-free TD	5991-2828EN	
		Round-the-clock, Online, and Cryogen-free Monitory of Hydrocarbons from Acetylene to Trimethylbenzene in Ambient Air	5991-2823EN	
		Analysis of Canister Air Samples using Cryogen-free TD in Compliance with US EPA Method TO-15	5991-2829EN	
		Evaluation of a "Soil Gas" Sorbent Tube for Improving the Measurement of Volatile and Semi-volatile Fuel Vapors in Soil Contaminated Land	5991-2824EN	
		Air Monitoring – Advantages and Applications of Canisters and Tubes	5991-2826EN	
		ICP-MS	High-Throughput Semiquantitative Screening of Ambient Air by ORS-ICP-MS and ISIS	5989-6123EN
Indoor/Volatiles	GC	Determination of Total VOCs in Indoor Air using a 7667A Mini TD and 7820A GC	5991-1536EN	
	GC/MS	Optimizing Analytical Performance and Extending the Application Range of TD for Monitoring Air Indoors and Inside Vehicle Cabins	5991-2827EN	
	LC/MS/MS	Carbonyl-DNPH Derivatives in Indoor and In-car Air by UHPLC and QQQ LC/MS	5991-2125EN	

SOIL ANALYSIS

The analysis of soil contaminants and the determination of their effects on human health and crop growth are critically important areas of environmental monitoring. In addition, regulations are becoming increasingly stringent and the list of harmful substances that must be tested for is growing, requiring the most accurate and sensitive soil analysis solutions with very low detection limits.

The scope of soil monitoring can range from the analysis of trace toxic metals to organic contaminants, including polycyclic aromatic hydrocarbons (PAHs). Petroleum hydrocarbons and a wide variety of pesticides and herbicides must also be tested for, and the methods used are required to be efficient, cost-effective, and robust to ensure regulatory compliance.

Agilent has a wide range of laboratory and field equipment to ensure the highest standards of soil analysis.

GC AND GC/MS

- MTBE Residue in Environmental Water and Soil Analysis by the 7820 GC-FID
[5991-4191EN](#)
- Comparison of GC/MS/MS using the 7000 GC-QQQ and GC/HRMS for Trace Analysis of Dioxins in Environmental Samples
[5991-5158EN](#)
- Determination of Volatile Aromatic Compounds in Soil by Manual SPME and the 5975T LTM GC/MSD
[5990-6398EN](#)

LC AND LC/MS

- Trace Analysis of Explosives in Soil using the 1290 Infinity LC with a Max-Light 60-mm Cartridge Cell
[5990-6871EN](#)
- Analysis of PAHs in Soil According to EPA 8310 Method with UV and FLD
[5990-8414EN](#)

SPECTROSCOPY

- Rapid Measurement of Major, Minor, and Trace Levels in Soils using the 730-ES
[10-035](#)
- Analysis of Soil Extracts using the 725-ES
[10-034](#)
- Determination of Exchangeable Cations in Soil Extracts using the 4100 MP-AES
[5991-0048EN](#)
- Determination of Metals in Soil by MP-AES using DTPA Extraction
[5991-2961EN](#)
- Determination of Metals in Soils using the 4100 MP-AES
[5990-8914EN](#)
- Direct Determination of Cu, Fe, Mn, P, Pb, and Ti in HF Acid-digested Soils using the 4200 MP-AES
[5991-5991EN](#)

- Routine Soil Analysis using an 8800 ICP-QQQ
[5991-6409EN](#)
- Elemental Analysis of River Sediment using the 4200 MP-AES
[5991-6161EN](#)
- Determination of Mercury in a Certified Reference Sludge Material using the 710-ES
[10-036](#)

LC COLUMNS AND SUPPLIES

- Analysis of PAHs in Soil with Bond Elut QuEChERS AOAC Kit and HPLC-FLD
[5990-5452EN](#)

ANALYTE TABLE

- Soil Analysis Analyte Table
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SOIL ANALYSIS ANALYTE TABLE

The following table allows you to search for Application Notes by Analyte. Click on the title or publication number to jump to a specific Application Note.

ANALYTE	TECHNIQUE	APPLICATION NOTE	
Cations	MP-AES	Determination of Exchangeable Cations in Soil Extracts using the 4100 MP-AES	5991-0048EN
Elemental Analysis	ICP-OES	Rapid Measurement of Major, Minor, and Trace-Levels in Soils using the 730-ES	10-035
		Elemental Analysis of River Sediment using the Agilent 4200 MP-AES	5991-6161EN
Explosives	ICP-MS	Routine Soil Analysis using an Agilent 8800 ICP-QQQ	5991-6409EN
	LC LC/LSD	Trace Analysis of Explosives in Soil using the 1290 Infinity LC with a Max-Light 60-mm Cartridge Cell	5990-6871EN
Mercury	ICP-OES	Determination of Mercury in a Certified Reference Sludge Material using the 710-ES	10-036
Metals	MP-AES	Determination of Metals in Soil by MP-AES using DTPA Extraction	5991-2961EN
		Determination of Metals in Soil using the 4100 MP-AES	5990-8914EN
		Direct Determination of Cu, Fe, Mn, P, Pb, and Ti in HF Acid-digested Soils using the Agilent 4200 MP-AES	5991-5991EN
Micronutrients	ICP-OES	Analysis of Soil Extracts Using the 725-ES	10-034
Semi-volatiles/Dioxins	GC/MS/MS	Comparison of GC/MS/MS using the 7000 GC-QQQ and GC/HRMS for Trace Analysis of Dioxins in Environmental Samples	5991-5158EN
Semi-volatiles/PAHs	LC-FLD	Analysis of PAHs in Soil with Bond Elut QuEChERS AOAC Kit and HPLC-FLD	5990-5452EN
	LC-UV-FL	Analysis of PAHs in Soil According to EPA 8310 Method with UV and FLD	5990-8414EN
Volatiles	GC/MS	Determination of Volatile Aromatic Compounds in Soil by Manual SPME and 5975T LTM GC/MSD	5990-6398EN
Volatiles/MTBE	GC-FID	MTBE Residue in Environmental Water and Soil Analysis by the 7820 GC-FID	5991-4191EN

WATER ANALYSIS

Like you, Agilent is committed to ensuring the quality of our water supply as well as understanding that this essential resource is both limited and in jeopardy. Clean water sources are running dry, chemical contamination threatens existing supplies, and emerging hazards are being recognized every year.

With more than 40 years of environmental analysis and regulatory expertise, we provide high-productivity, high-throughput tools to help you efficiently and reliably monitor water quality. In fact, our solutions are unrivaled in their ability to identify a wide range of compounds in ultra-low concentrations, down to parts per trillion.

With optimized solutions for organic and inorganic detection, the most sensitive detectors on the market, and strategies for minimizing matrix interference, Agilent can help you achieve the selectivity and low limits of detection you need to confidently measure the chemical contaminants that threaten the global water supply.

GC, GC/MS, AND GC/MS/MS

- Analysis of Semivolatile Organic Compounds Using the Agilent Intuvo 9000 Gas Chromatograph
[5991-7256EN](#)
- Analysis of Semivolatile System Suitability, Technology Advantage: Agilent Intuvo 9000 GC with Agilent 5977 MSD
[5991-7183N](#)
- Analysis of Semivolatiles Intuvo Guard Chip Protection, Technology Advantage: Agilent Intuvo 9000 GC with Agilent 5977 MSD
[5991-7182EN](#)
- Agilent JetClean: In-situ GC/MS Ion Source Cleaning and Conditioning
[5991-7254EN](#)
- Halogenated Pesticides According to EPA 625
[A02393](#)
- MTBE Residue in Water and Soil Analysis by the 7820 GC-FID
[5991-4191EN](#)
- Evaluation of EPA Method 524.3: Analysis of VOCs in Drinking Water using GC/MS
[SI-02032](#)
- Organophosphorus Pesticides - Separation of EPA 8140 and 8141 Pesticides
[A00615](#)
- Sensitive and Reproducible Detection of PAHs using the 5977A Series GC/MSD
[5991-1811EN](#)
- A Turn-key Solution for Screening Environmental Water Samples on the 5977 GC/MS
[5991-4127EN](#)
- Determination of SVOCs in Drinking Water using the 5977A Series GC/MSD
[5991-2127EN](#)
- EPA Method 8270 for SVOC Analysis on the 5977A Series GC/MSD
[5991-2153EN](#)
- Analysis of VOCs in Environmental Waters using the 7697A Headspace and 7890B/5977A GC/MS
[5991-3927EN](#)
- Cooperation with China Academy of Urban Planning and Design for VOC Measurement of Drinking Water with the 5975T LTM GC/MSD
[5991-3140EN](#)
- Analysis of Volatile Halogenated and Aromatic Hydrocarbons and Organophosphorus Pesticides in Water with a 7890B GC and an 7697A Headspace Sampler
[5991-2787EN](#)
- Analysis of Nitrosamines in Drinking Water using the 5977A GC/MSD
[5991-1970EN](#)
- Analysis of NDMA in Water using QQQ GC/MS
[5991-1801EN](#)
- Monitoring for 'Taste and Odor Compounds' Including Geosmin and MIB in Potable Water using the 7000 QQQ GC/MS
[5991-3721EN](#)
- N-Nitrosamines in Water by Isotope Dilution GC/MS/MS using the 7000B QQQ GC/MS in EI Mode
[5991-1818EN](#)
- Phthalate Esters According to EPA 8060
[A01966](#)
- Analyzing Wastewater Effluents for PAH's and PBDE's using the 7000 QQQ GC/MS
[5991-4681EN](#)

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WATER ANALYSIS

- High sensitivity GC/MS/MS Analysis of Nonpolar Organic Compounds In Water using the 7000 QQQ GC/MS
[5991-4680EN](#)
- Identification and Quantitation of PCB Aroclor Mixtures using the 7000B QQQ GC/MS
[5991-3537EN](#)
- Direct GC Determination of Acrylamide in Water using the Agilent 7000B QQQ GC/MS
[5991-5297EN](#)

LC, LC/MS, and LC/MS/MS

- Comparison of Direct Injection and Online SPE for Quantification by LC/MS of Trace-Level Herbicides in Water
[5991-2140EN](#)
- Detection of Trace-Level Herbicides in Drinking, Surface, and Ground Water using the 1200 Infinity Online SPE Solution
[5991-2405EN](#)
- Analysis of Trace-Level Herbicides from Water Samples with the 1200 Infinity Online SPE Solution
[5991-2773EN](#)
- Detection of Basic and Acidic Pesticides and Herbicides at Trace-Levels by Online SPE LC/MS in Drinking Water
[5991-4177EN](#)
- High Sensitivity Detection of Pesticides in Water using Online SPE Enrichment
[5991-0871EN](#)
- Comparison of Online SPE Analysis and Direct Injection of Trace-Level Estrogens in Drinking Water with the 6460 and 6490 QQQ LC/MS Systems
[5991-3440EN](#)
- Optimizing Detection of Steroids in Wastewaters using the 6490 QQQ LC/MS with iFunnel Technology
[5990-9978EN](#)
- Analysis of Pharmaceutical Compounds in Water—The Agilent 1200 Infinity Series Online SPE Solution
[5991-5107EN](#)
- Monitoring for Pharmaceuticals in Surface Water using Direct Aqueous Injection on the 6490 LC/MS
[5991-4394ENE](#)
- High-Throughput Method Development for Aldehydes and Ketones using a 1290 Infinity LC System and a ZORBAX StableBond HD Column
[5990-5793EN](#)
- Seamless Method Transfer of EPA Method 8330A/B for Nitroaromatics from a 1200 Series LC to the 1290 Infinity LC using ISET
[5991-1194EN](#)
- Using 1290 Infinity Series LC Method Development and MassHunter Software for Analysis of Environmental Samples
[5991-2581EN](#)
- Pesticide Analysis using a 1290 Infinity LC System with a 6140 Single Quadrupole LC/MS
[5990-5794EN](#)
- Analysis of TORCs in Water by Direct Injection using the 6490 LC/MS/MS with Pos/Neg Switching
[5991-2732EN](#)
- High Sensitivity HPLC Analysis of CECs in Water using the 6460 QQQ LC/MS System
[5991-1412EN](#)
- Monitoring for Haloacetic Acids in Treated Waters using Direct Aqueous Injection on the 6460 LC/MS
[5991-3629EN](#)
- Determination of EDCs in Drinking Water at Sub ng/L Levels using the 6495 QQQ LC/MS
[5991-4685EN](#)
- Adapting EPA Method 8330B for Analysis of Explosives in Water to SPE and LC/MS/MS
[5991-0676EN](#)
- Quantification of Trace-Level Herbicides in Drinking Water with the 1200 Infinity Series Online SPE Solution and QQQ MS Detection
[5991-1738EN](#)
- Analysis of Glyphosate and AMPA in Drinking Water with the 1200 Infinity Series Online SPE Solution
[5991-3208EN](#)
- Determination of Trace-Level Herbicide Metabolites with a 1200 Infinity Series Online SPE System with the 6490 QQQ MS
[5991-2776EN](#)
- Trace Analysis of Chlorinated Herbicides in Water with Online Enrichment
[5990-6922EN](#)
- EPA Method 538: Determination of Organic Contaminants in Drinking Water by Direct Aqueous Injection with the 6460 QQQ LC/MS
[5990-9670EN](#)
- High Sensitivity HPLC Analysis of Perchlorate in Tap Water using a 6460 QQQ LC/MS
[5991-1387EN](#)
- Analysis of Polyfluorinated Compounds in Environmental Samples using the 6460 QQQ LC/MS/MS
[5991-3675EN](#)
- LVI-LC/MS/MS for Trace-Level Detection of Illicit and Prescribed Drugs in Municipal

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Wastewaters

[5990-4622EN](#)

- Improved Analysis of Trace Hormones in Drinking Water (EPA 539) using the 6460 QQQ LC/MS
[5991-2473EN](#)
- Detection of Trace-Level Pharmaceuticals from Drinking Water with the 1200 Infinity Online-SPE Solution
[5991-2335EN](#)
- Ultrasensitive EPA Method 1694 with the 6460 LC/MS/MS with Jet Stream Technology for PPCPs in Water
[5990-4605EN](#)
- Direct Aqueous Analysis of Pharmaceuticals in Water at ppt Levels by LC/MS/MS with the 6490 QQQ LC/MS System with Ion Funnel Technology
[5990-6431EN](#)
- Identification of Unknown Microcystins in Alberta Lake Water
[5991-4444EN](#)
- High Resolution MS (LC/Q-TOF/MS) for the Detection of Pharmaceuticals in Water
[5991-3261EN](#)
- Environmental Profiling of River Water using Q-TOF LC/MS and MPP Software
[5991-3967EN](#)
- Screening for CECs in Water using LC/QTOF and MPP Software
[5991-4417EN](#)
- Using a Chlorine Filter for Accurate-Mass Data Analysis of Environmental Samples
[5990-9431EN](#)
- Analysis of Environmental Samples with Ultra High Definition LC/Q-TOF MS and Accurate Mass
[5990-6430EN](#)
- Sensitive LC/MS Quantitation of TORCs in Water with Online SPE Enrichment
[5991-1849EN](#)
- Quantitation of Trace-Level Emerging Contaminants in Water using Online SPE with LC/MS/MS
[5991-2731EN](#)
- Highly Sensitive Detection of PPCPs in Water using a 6495 QQQ MS
[5991-5425EN](#)
- Sensitive Determination of Polycyclic Aromatic Hydrocarbons in Tap Water
[5991-6288EN](#)
- An Automated System for the Routine Clean-up of Environmental (Mussel tissue) Samples Prior to Instrument Analysis
[5991-5321EN](#)
- Monitoring of Bisphenol A and its Analogues in Environmental Matrices using the 6550 Q-TOF LC/MS
[5991-5490EN](#)
- Identification of a Panel of 20 Indicator Compounds in Wastewater Effluent using Rapid, Direct Injection LC/MS/MS on the 6490 QQQ LC/MS
[5991-6114EN](#)
- EPA Method 543 Selected Organic Contaminants by Online SPE with LC/MS/MS
[5991-4633EN](#)
- Automated Online SPE for LC/MS/MS Analysis of Trace Organic Contaminants in Water
[5991-6115EN](#)
- Monitoring for Metaldehyde in Raw, Process and Potable Waters using Direct Aqueous Injection on the Agilent 6490 LC/MS/MS
[5991-5745EN](#)
- Trace Level Determination of PFOS, PFOA, and HBCD in Drinking Water by LC/MS/MS
[5991-5669EN](#)
- Determination of Amitrole in Surface and Ground Water using the 6495 LC-QQQ
[5991-5454EN](#)

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WATER ANALYSIS

SPECTROSCOPY

- Examine Presence, Formation, and Transformation of Volatile Halogenated Organic Species in Wastewater using GC-ICP-MS
[5991-4398EN](#)
- Ultra-Trace Analysis of Beryllium in Water and Industrial Hygiene Samples by ICP-MS
[5989-5438EN](#)
- Performance of the 7900 ICP-MS with UHMI for High Salt Matrix Analysis
[5991-4257EN](#)
- The Ultratrace Determination of Iodine 129 in Aqueous Samples using the Agilent 7700x ICP-MS with Oxygen Reaction Mode
[5990-8171EN](#)
- The 7900 ICP-MS Simplifies Drinking Water Analysis
[5991-4938EN](#)
- Maximizing Productivity for High Matrix Sample Analysis using the 7900 ICP-MS with ISIS 3
[5991-5208EN](#)
- Using Qualifier Ions to Improve ICP-MS Data Quality for Waste Water Analysis
[5990-5890EN](#)
- Simple, Reliable Analysis of High Matrix Samples According to US EPA Method 6020A using the 7700x ICP-MS
[5990-5514EN](#)
- Analysis of Flue Gas Desulfurization

Wastewaters by the 7700x ICP-MS

[5990-8114EN](#)

- Online Isotope Dilution Analysis with the 7700 Series ICP-MS: Analysis of Trace Elements in High Matrix Samples
[5990-9171EN](#)
- Single Particle Analysis of Nanomaterials using the 7900 ICP-MS
[5991-4401EN](#)
- The Ultratrace Determination of Iodine 129 using the 8800 QQQ ICP-MS in MS/MS Mode
[5991-0321EN](#)
- Determination of Mercury with Online Addition of Stannous Chloride using an Axial ICP-OES
[SI-01319](#)
- Ultra-fast Determination of Trace Elements in Water, Conforming to US EPA 200.7 using the 5100 SVDV ICP-OES
[5991-4821EN](#)
- Analysis of Environmental Samples with the 710-ES Following US EPA Guidelines
[IO-039](#)
- Analysis of Environmental Samples with the 730-ES Following US EPA Guidelines
[IO-038](#)
- Environmental Sample Analysis by Axial

ICP-OES Following US EPA Guidelines

[ICPES-29](#)

- A Comparison of GC-ICP-MS and HPLC-ICP-MS for the Analysis of Organotin Compounds
[5988-6697EN](#)
- Low-level Speciated Analysis of Cr(III) and Cr(VI) using LC(IC)-ICP-MS
[5990-9366EN](#)
- Determination of Iopromide in Environmental Waters by ICP-MS
[5991-1044EN](#)
- Determination of Organic and Inorganic Selenium Species using HPLC-ICP-MS
[5989-7073EN](#)
- Determination of Methyl Mercury in Water and Soil by HPLC-ICP-MS
[5989-3572EN](#)
- Analysis of Oils in Water using the Agilent Cary 630 FTIR
[5991-4372EN](#)
- High Throughput, Low Cost Analysis of Environmental Samples According to US EPA 6010C using the 5100 SVDV ICP-OES
[5991-5921EN](#)
- A Routine Method for the Quantitative Measurement of Trace Metals in Water Samples
[5991-5320EN](#)
- Quantification of Complex Polycyclic Petroleum Oils in Water with Cary Eclipse Fluorescence Spectrophotometer
[5991-3166EN](#)

GC COLUMNS AND SUPPLIES

- Sub µg/L Level Analysis of Chlorinated Pesticide and Herbicide in Water by

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WATER ANALYSIS

GC/ μ ECD using DB-35ms UI and DB-XLB Columns

[5990-9735EN](#)

- Endrin and DDT Breakdown Evaluation using an Agilent Inert Flow Path Solution
[5991-1862EN](#)
- CLP and EPA Methods for Pesticides in Water using DB-CLP1/DB-CLP2 Columns
[5991-0615EN](#)
- Separation of 27 EU and US EPA Regulated PAHs on Select PAH Column
[SI-02281](#)
- Phenols According to EPA 528
[A01984](#)
- Agilent Inert Flow Path Enhancements: Impact on Semi-volatile Analysis
[5991-2745EN](#)
- Analysis of EPA Method 8270D Semi-volatiles using the DB-UI 8270D GC Column
[5991-1505EN](#)
- Competitive Column Inertness Analysis with Active Basic Compounds
[5991-4626EN](#)
- EPA 8270 Semi-volatile Analysis on an Agilent FactorFour VF-5ms GC Column
[SI-02365](#)

• Extra Fast Separation of 16 US EPA 610 Regulated PAHs on Agilent J&W Select PAH

[SI-02282](#)

• Trace Analysis of Volatile Organic Acids with the DB-624UI GC Column

[5991-0845EN](#)

LC COLUMNS AND SUPPLIES

- Analysis of DNPH-derivatized Aldehydes and Ketones on 1 mm id Columns with the 1290 Infinity LC System
[5991-0515EN](#)
- Analysis of Positional Isomers with Agilent Poroshell 120 PFP Columns
[5991-4373EN](#)
- EPA 8330A Analysis of Explosives using Poroshell 120 EC-CN and EC-C18 Columns
[5991-1682EN](#)
- Rapid Method Development for 18 PAH Compounds with an Agilent RRHD Eclipse PAH Column
[5990-8432EN](#)
- Fast Analysis of Environmental Phenols with Poroshell 120 EC-C18 Columns
[5990-6156EN](#)
- Determination of Phenols in Drinking Water with Bond Elut Plexa SPE and HPLC
[5990-9730EN](#)

• Solid Phase Extraction of Organophosphorus Pesticides in Water with Bond Elut PPL

[5991-5304EN](#)

SAMPLE PREP WORKBENCH

- Automated Clean-up for Mineral Oil Analysis using the 7696A Sample Prep WorkBench
[5990-9163EN](#)
- Generation of Calibration Standards for EPA Method 8082 using the 7696A Sample Prep WorkBench
[5991-0646EN](#)
- Using the Agilent 7696A Sample Prep WorkBench for the analysis of estrone by QQQ GC/MS
[5991-1695EN](#)
- Automated Clean-up of PCB extracts from Waste Oil using the Agilent 7696A Sample Prep WorkBench
[5990-9164EN](#)
- Generation of AQA Standards for EPA Method 8270 using the 7696A Sample Prep WorkBench
[5991-0973EN](#)

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The following table allows you to search for Application Notes by Analyte. Click on the title or publication number to jump to a specific Application Note.

ANALYTE	TECHNIQUE	APPLICATION NOTE	
Aldehydes/Ketones	LC	Analysis of DNPH-derivatized Aldehydes and Ketones on 1 mm id Columns with the 1290 Infinity LC System	5991-0515EN
	LC-DAD	High-Throughput Method Development for Aldehydes and Ketones using a 1290 Infinity LC System and a ZORBAX StableBond HD Column	5990-5793EN
Beryllium	ICP-MS	Ultra-Trace Analysis of Beryllium in Water and Industrial Hygiene Samples by ICP-MS	5989-5438EN
CECs	LC/MS/MS	High Sensitivity HPLC Analysis of CECs in Water using the 6460 QQQ LC/MS System	5991-1412EN
CECs/ POPs	LC/MS/MS	Analysis of ToxCs in Water by Direct Injection using the 6490 LC/MS/MS with Pos/Neg Switching	5991-2732EN
CECs/ PPCPs	SPE LC/MS/MS	Sensitive LC/MS Quantitation of ToxCs in Water with Online SPE Enrichment	5991-1849EN
Chromium	HPLC-ICP-MS	A Comparison of GC-ICP-MS and HPLC-ICP-MS for the Analysis of Organotin Compounds	5988-6697EN
Disinfection By-Products/ Haloacetic Acids	LC/QQQ	Monitoring for Haloacetic Acids in Treated Waters using Direct Aqueous Injection on the 6460 LC/QQQ	5991-3629EN
Disinfection By-Products Nitrosamines	GC/MSD	Analysis of Nitrosamines in Drinking Water using the 5977A GC/MSD	5991-1970EN
	GC/MS/MS	Analysis of NDMA in Water using QQQ GC/MS	5991-1801EN
Drinking Water/Geosmin/2-MIB	GC/MS/MS	Monitoring for 'Taste and Odor Compounds' Including Geosmin and MIB in Potable Water using the 7000 QQQ	5991-3721EN
Drinking Water/Nitrosamines	GC/MS/MS	N-Nitrosamines in Water by Isotope Dilution GC/MS/MS using the 7000B QQQ GC/MS in EI Mode	5991-1818EN
Drinking Water/Volatiles	GC/MS	Evaluation of EPA Method 524.3: Analysis of VOCs in Drinking Water using GC/MS	SI-02032
Endocrine Disruptors	LC/MS/MS	Determination of EDCs in Drinking Water at Sub ng/L Levels using the 6495 QQQ LC/MS	5991-4685EN
Element	ICP-MS	Performance of the Agilent 7900 ICP-MS with UHMI for High Salt Matrix Analysis	5991-4257EN
Element/Chromium	LC(IC)-ICP-MS	Low-level Speciated Analysis of Cr(III) and Cr(VI) Using LC(IC)-ICP-MS	5990-9366EN
EPA CCL/ PPCPs	LC/MS/MS	Quantitation of Trace-Level Emerging Contaminants in Water Using Online SPE with LC/MS/MS	5991-2731EN
Explosives	LC/MS/MS	Adapting EPA Method 8330B for Analysis of Explosives in Water to SPE and LC/MS/MS	5991-0676EN
		EPA 8330A Analysis of Explosives using Agilent Poroshell 120 EC-CN and EC-C18 Columns	5991-1682EN
Explosives/ Nitroaromatics	LC-DAD	Seamless Method Transfer of EPA Method 8330A/B for Nitroaromatics from a 1200 Series LC to the 1290 Infinity LC using ISET	5991-1194EN
		Analysis of Positional Isomers with Agilent Poroshell 120 PFP Columns	5991-4373EN
Halogenated Organics	GC-ICP-MS	Examine Presence, Formation, and Transformation of Volatile Halogenated Organic Species in Wastewater using GC-ICP-MS	5991-4398EN
Herbicides	LC	Comparison of Direct Injection and Online SPE for Quantification by LC/MS of Trace-Level Herbicides in Water	5991-2140EN
		Detection of Trace-Level Herbicides in Drinking, Surface and Ground Water using the 1200 Infinity Series Online SPE Solution	5991-2405EN
		Analysis of Trace-Level Herbicides from Water Samples with the 1200 Infinity Series Online SPE Solution	5991-2773EN

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		Quantification of Trace-Level Herbicides in Drinking Water with the 1200 Infinity Series Online SPE Solution and QQQ MS Detection	5991-1738EN
		Analysis of Glyphosate and AMPA in Drinking Water with the 1200 Infinity Series Online SPE Solution	5991-3208EN
		Determination of Trace-Level Herbicide Metabolites with a 1200 Infinity Series Online SPE System with the 6490 QQQ MS	5991-2776EN
		Trace Analysis of Chlorinated Herbicides in Water with Online Enrichment	5990-6922EN
Imaging Agents	ICP-MS	Determination of Iopromide in Environmental Waters by ICP-MS	5991-1044EN
Inorganics	HPLC-ICP-MS	Determination of Organic and Inorganic Selenium Species using HPLC-ICP-MS	5989-7073EN
Iodine	ICP-MS	The Ultratrace Determination of Iodine 129 using the 8800 QQQ ICP-MS in MS/MS Mode	5991-0321EN
	ICP-MS/MS		
Mercury	ICP-OES	Determination of Mercury With Online Addition of Stannous Chloride using an Axial ICP-OES	SI-01319
Metals/Elements	ICP-MS	The 7900 ICP-MS Simplifies Drinking Water Analysis	5991-4938EN
		Maximizing Productivity for High Matrix Sample Analysis using the 7900 ICP-MS with ISIS 3	5991-5208EN
		Using Qualifier Ions to Improve ICP-MS Data Quality for Waste Water Analysis	5990-5890EN
		Simple, Reliable Analysis of High Matrix Samples According to US EPA Method 6020A using the Agilent 7700x ICP-MS	5990-5514EN
		Analysis of Flue Gas Desulfurization Wastewaters by Agilent 7700x ICP-MS	5990-8114EN
		Online isotope dilution analysis with the 7700 Series ICP-MS: Analysis of trace elements in high matrix samples	5990-9171EN
		A Routine Method for the Quantitative Measurement of Trace Metals in Water Samples	5991-5320EN
		Ultra-fast Determination of Trace Elements in Water, Conforming to US EPA 200.7 using the 5100 SVDV ICP-OES	5991-4821EN
		Analysis of Environmental Samples with the 710-ES Following US EPA Guidelines	IO-039
		Analysis of Environmental Samples with the 730-ES Following US EPA Guidelines	IO-038
Methyl Mercury	HPLC-ICP-MS	Environmental Sample Analysis by Axial ICP-OES Following US EPA Guidelines	ICPES-29
		High Throughput, Low Cost Analysis of Environmental Samples According to US EPA 6010C using the 5100 SVDV ICP-OES	5991-5921EN
		Determination of Methyl Mercury in Water and Soil by HPLC-ICP-MS	5989-3572EN
		Single Particle Analysis of Nanomaterials using the Agilent 7900 ICP-MS	5991-4401EN
Nanoparticles	ICP-MS	EPA Method 538: Determination of Organic Contaminants in Drinking Water by Direct Aqueous Injection with the 6460 QQQ LC/MS	5990-9670EN
		Monitoring of Bisphenol A and its Analogues in Environmental Matrices using the 6550 Q-TOF LC/MS	5991-5490EN
Non-volatile	LC/MS/MS	High Sensitivity HPLC Analysis of Perchlorate in Tap Water using a 6460 QQQ LC/MS/MS	5991-3675EN
		Trace Level Determination of PFOS, PFOA, and HBCD in Drinking Water by LC/MS/MS	5991-5669EN

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		Halogenated Pesticides According to EPA 625	A02393
	GC/MS	CLP and EPA Methods for Pesticides in Water using DB-CLP1/DB-CLP2 Columns	5991-0615EN
		Organophosphorus Pesticides - Separation of EPA 8140 and 8141 Pesticides	A00615
	LC	High Sensitivity Detection of Pesticides in Water Using Online SPE Enrichment	5991-0871EN
		Solid Phase Extraction of Organophosphorus Pesticides in Water with Bond Elut PPL	5991-5304EN
LC/MS	Pesticide Analysis using a 1290 Infinity LC System with a 6140 Single Quadrupole LC/MS	5990-5794EN	
Pesticides/Herbicides	GC-ECD	Sub µg/L Level Analysis of Chlorinated Pesticide and Herbicide in Water by GC/µECD using DB-35ms UI and DB-XLB Columns	5990-9735EN
	LC/MS	Detection of Basic and Acidic Pesticides and Herbicides at Trace-Levels by Online SPE LC/MS in Drinking Water	5991-4177EN
	LC/MS/MS	Monitoring for Metaldehyde in Raw, Process and Potable Waters using Direct Aqueous Injection on the Agilent 6490 LC/MS/MS	5991-5745EN
		EPA Method 543 Selected Organic Contaminants by Online SPE with LC/MS/MS	5991-4633EN
Petroleum Hydrocabons	Sample Prep Workbench GC-FID	Automated Clean-up for Mineral Oil Analysis using the Agilent 7696A Sample Prep WorkBench	5990-9163EN
PFA's	LC/MS/MS	Analysis of Polyfluorinated Compounds in Environmental Samples using the 6460 QQQ LC/MS/MS	5991-3675EN
Pharmaceuticals/Drugs of Abuse	LC/MS/MS	LVI-LC/MS/MS for Trace-Level Detection of Illicit and Prescribed Drugs in Municipal Wastewaters	5990-4622EN
Phthalates	GC/MS/MS	Phthalate Esters According to EPA 8060	A01966
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		Optimizing Detection of Steroids in Wastewaters using the 6490 QQQ LC/MS with iFunnel Technology	5990-9978EN
	LC/MS/MS	Improved Analysis of Trace Hormones in Drinking Water (EPA 539) using the 6460 QQQ LC/MS	5991-2473EN
	Sample Prep Workbench GC/MS/MS	Generation of Calibration Standards for EPA Method 8082 using the Agilent 7696A Sample Prep WorkBench	5991-0646EN
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		Monitoring for Pharmaceuticals in Surface Water using Direct Aqueous Injection on the Agilent 6490 LC/QQQ	5991-4394ENE
	LC/MS/MS	Detection of Trace-Level Pharmaceuticals from Drinking Water with the 1200 Infinity Online-SPE Solution	5991-2335EN
		Ultrasensitive EPA Method 1694 with the 6460 LC/MS/MS with Jet Stream Technology for PPCPs in Water	5990-4605EN
		Direct Aqueous Analysis of Pharmaceuticals in Water at ppt Levels by LC/MS/MS with the 6490 QQQ LC/MS System with Ion Funnel Technology	5990-6431EN
		Highly Sensitive Detection of PPCPs in Water using a 6495 QQQ MS	5991-5425EN
		Identification of a Panel of 20 Indicator Compounds in Wastewater Effluent Using Rapid, Direct Injection LC/MS/MS on the 6490 QQQ LC/MS	5991-6114EN
Automated Online SPE for LC/MS/MS Analysis of Trace Organic Contaminants in Water	5991-6115EN		
Semi-volatiles	Sample Prep Workbench GC/MS	Generation of AQA Standards for EPA Method 8270 using the 7696A Sample Prep WorkBench	5991-0973EN
	GC/MS	Analysis of Semivolatile Organic Compounds Using the Agilent Intuvo 9000 Gas Chromatograph	5991-7256EN
		Analysis of Semivolatile System Suitability, Technology Advantage: Agilent Intuvo 9000 GC with Agilent 5977 MSD	5991-7183EN
		Analysis of Semivolatiles Intuvo Guard Chip Protection, Technology Advantage: Agilent Intuvo 9000 GC with Agilent 5977 MSD	5991-7182EN
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		Agilent Inert Flow Path Enhancements: Impact on Semi-volatile Analysis	5991-2745EN
		Analysis of EPA Method 8270D Semi-volatiles using the DB-UI 8270D GC Column	5991-1505EN
		Competitive Column Inertness Analysis with Active Basic Compounds	5991-4626EN
		Determination of SVOCs in Drinking Water using the 5977A Series GC/MSD	5991-2127EN
		EPA 8270 Semi-volatile Analysis on a FactorFour VF-5ms GC Column	SI-02365
		EPA Method 8270 for SVOC Analysis on the 5977A Series GC/MSD	5991-2153EN
	GC/MS/MS	Extra Fast Separation of 16 US EPA 610 Regulated PAHs on Agilent J&W Select PAH	SI-02282
	LC	An Automated System for the Routine Clean-up of Environmental (Mussel tissue) Samples Prior to Instrument Analysis	5991-5321EN
LC-DAD	Using 1290 Infinity Series LC Method Development and MassHunter Software for Analysis of Environmental Samples	5991-2581EN	
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		High sensitivity GC/MS/MS Analysis of Nonpolar Organic Compounds In Water using the 7000 QQQ GC/MS	5991-4680EN
		Separation of 27 EU and US EPA Regulated PAHs on Agilent J&W Select PAH Columns	SI-02281
	LC	Rapid Method Development for 18 PAH Compounds with an RRHD Eclipse PAH Column	5990-8432EN
		Sensitive Determination of Polycyclic Aromatic Hydrocarbons in Tap Water	5991-6288EN
FTIR	Quantification of Complex Polycyclic Petroleum Oils in Water with Cary Eclipse Fluorescence Spectrophotometer	5991-3166ENE	
Semi-volatiles/Phenols	GC/MS/SP	Phenols according to EPA 528	A01984
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		Determination of Phenols in Drinking Water with Bond Elut Plexa SPE and HPLC	5990-9730EN
Toxins	LC/MS/MS	Identification of Unknown Microcystins in Alberta Lake Water	5991-4444EN
Unknowns	LC/Q-TOF/MS	Environmental Profiling of River Water Using Q-TOF LC/MS and Mass Profiler Software	5991-3967EN
		Screening for CECs in Water using LC/QTOF and MPP Software	5991-4417EN
		Using a Chlorine Filter for Accurate-Mass Data Analysis of Environmental Samples	5990-9431EN
		Analysis of Environmental Samples with Ultra High Definition LC/Q-TOF MS and Accurate Mass	5990-6430EN
Unknowns/Pharmaceuticals	LC/Q-TOF/MS	High Resolution MS (LC/Q-TOF/MS) for the Detection of Pharmaceuticals in Water	5991-3261EN
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		Cooperation with China Academy of Urban Planning and Design for VOC Measurement of Drinking Water with the 5975T LTM GC/MSD	5991-3140EN
	GC/MS/MS	Direct GC Determination of Acrylamide in Water using the 7000B QQQ GC/MS	5991-5297EN
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