SPECTROSCOPY

Your Essential Resource for Supplies

The Measure of Confidence

Agilent Technologies

SPECTROSCOPY

Satisfy your growing demand to screen large numbers of samples, faster

The acquisition of Varian – a company with more than 60 years of spectroscopy innovation – has made Agilent your single source for atomic and molecular spectroscopy supplies.

We even retained the familiar Varian part numbers for easy, error-free ordering, and we're continuing to expand the portfolio.

240FS AA Fast Sequential
Atomic Absorption Spectrometer

Agilent 730 Series ICP-OES

Agilent 7700e ICP-MS

Our product range now includes:

- **Atomic Absorption supplies** that help you lower detection limits. Our research and development efforts have also led to innovations such as single-element and solid-cathode multi-element lamps, along with high-intensity UltrAA lamps.
- **ICP-OES supplies** that deliver reliable results for complex matrices. From spray chambers and brackets...to nebulizers, torches, and peristaltic pump tubing...Agilent ICP-OES supplies help you confidently determine major and trace elements in samples such as food, water, and soil.
- **ICP-MS supplies** for confident trace analysis. Agilent ICP-MS supplies continually push the boundaries of design and innovation, helping you reduce interferences and improve productivity.
- **MP-AES supplies** and accessories that maintain the superior performance of our revolutionary MP-AES – a system that literally runs on air.
- **Molecular supplies** that ensure high performance, non-destructive measurements for quantitative analysis and spectral imaging. From high quality UV cuvettes, flow cells or fiber optic probes for solution measurement, sample holders for direct measurement to source lamps, cell holders, reference materials and other critical parts, Agilent Molecular supplies help you discover, characterize, and test a variety of solid, liquid, organic and inorganic materials.

And remember, all Agilent supplies are engineered or selected by our experienced instrument design teams, manufactured to our demanding specifications, and tested under the strictest conditions. They are also backed by unmatched technical support – plus a 90-day warranty from the date of shipment.

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PUT MORE THAN 40 YEARS OF RELENTLESS INNOVATION BEHIND YOUR EVERY RESULT

By continually raising the standards for technologies that support your routine analyses, Agilent's R&D efforts have led to breakthroughs such as:

- **New GC columns** that help you achieve higher levels of inertness and column-to-column reproducibility
- **LC column choices** that deliver the sensitivity and reliability you need for demanding applications
- **Cutting-edge sample preparation products** that promote reliable extraction and concentration
- **Fresh atomic and molecular spectroscopy ideas** for identifying and confirming targets and unknowns

Longtime Agilent customers have experienced our commitment firsthand. And now, we look forward to demonstrating how Agilent's approach to relentless innovation can work to your advantage, too.

CHEMICAL ANALYSIS SOLUTIONS

Food

From high-volume screening of vegetables for large numbers of pesticides to rapid identification of pathogens, Agilent understands the analytical needs of food producers, shippers, and regulators. When a new toxin appears, we deploy substantial resources to quickly help customers develop robust and reliable methods. Agilent's leading separations, mass spectrometry, and spectroscopy solutions are emerging as valuable food testing techniques.

Environmental

Agilent offers more than 40 years of environmental testing and regulatory expertise. We help government and private labs with the full range of assays, from routine testing of soils for heavy metals to detection of pharmaceuticals in groundwater, in concentrations down to parts per trillion.

Energy and Fuels

Agilent collaborates closely with process industry customers to offer analytical systems that meet their needs for separation, detection, throughput, and support. We'll even preconfigure custom or standard analyzers so they arrive at the lab ready-to-go. Agilent's expertise in both chemical analysis and life science is a powerful combination for researching and producing biofuels, including a wide range of analytical techniques for fatty acid methyl esters (FAMEs). Our newly-expanded portfolio also offers powerful tools for developing and producing photovoltaic films and solar panels.

Forensics

Because the careers of world class athletes and many other individuals hinge on drug testing, it's critical that those doing the testing have the highest level of confidence in the results. Forensics analysts worldwide have grown to depend on Agilent tools for accuracy, reliability, and speed in this high stakes, high-throughput field. Our best selling GC, GC/MS and popular LC and LC/MS are workhorses in forensics labs.

Traditional Lab Informatics

The ways labs generate and store data profoundly affect their efficiency. Agilent offers a rich, integrated suite of software products built on a set of customer-driven architectural values with the Agilent OpenLAB Laboratory Software Suite. OpenLAB delivers superior performance, open systems integration and investment protection. Our commitment is to deliver more value across each step in the life cycle of scientific data – from data collection and analysis to interpretation and management.

Materials Science

Agilent offers a newly expanded portfolio of instruments used for the research, manufacturing and testing of advanced materials, from precision optics to pulp, paper and polymers. Tools for chromatography, atomic absorption spectroscopy, molecular spectroscopy, X-ray crystallography, and nuclear magnetic resonance all support continuous progress in materials science.

LIFE SCIENCE SOLUTIONS

Biopharmaceutical

As "multi-omics" studies gain momentum in the search for new therapeutics, Agilent is uniquely positioned to provide the instruments, reagents, and powerful software needed for performing experiments in multiple disciplines and combining the massive amounts of data into biological insight.

Pharmaceutical

Drug manufacturing requires the accuracy, sensitivity and high throughput of other analytical applications, along with the demands of regulatory record-keeping and validation requirements. Agilent provides a potent combination of rugged, high-throughput tools and unmatched compliance services. Agilent now offers the market-leading family of dissolution apparatus and sampling systems that pair perfectly with our HPLC and UV systems.

Proteomics

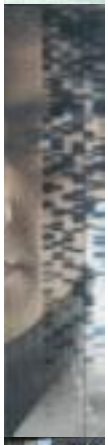
Research into how large sets of proteins affect the health of an organism requires special sets of analytical tools. Agilent has built a formidable arsenal of liquid chromatograph/mass spectrometers, bioinformatics systems, multiple affinity protein removal columns, and OFFGEL electrophoresis for protein identification and protein biomarker discovery. Accurate-Mass mass spectrometry and the microfluidic HPLC-Chip/MS are two Agilent innovations speeding the work of proteomics researchers around the globe.

Metabolomics

Collections of small molecules are increasingly being seen as rich sources of biomarkers, but studying metabolites presents many challenges. The need for speed, accuracy, and powerful interpretation capabilities in looking at chemical profile snapshots is underscored because molecules are constantly entering, leaving or changing within the metabolome. Agilent's GC, LC, NMR and MS portfolios, along with our excellent bioinformatics offerings, user-customizable METLIN metabolite database for LC/MS, and the industry's first commercial GC/MS retention time locked metabolite library align well with needs of metabolomics researchers.

Genomics

Agilent is a global leader in microarrays, scanners, and reagents used in a wide variety of genomic-based disease research experiments. Our SureSelect Target Enrichment System dominates the category, streamlining next generation sequencing studies worldwide. Agilent offers a wide range of catalog microarrays and a highly-developed capability to produce custom arrays featuring ink jet-based SurePrint fabrication and the eArray on-line design tool. All Agilent microarrays feature highly sensitive, selective 60-mer probes. With as many as eight arrays printed on a standard 1 x 3 in. slide, the cost per experiment becomes very affordable.



Life Science Informatics

Mirroring its extensive instrument portfolio, Agilent offers the industry's most extensive suite of bioinformatics software, helping users derive knowledge from complex genomic, proteomic, metabolomic and other biological data. This includes DNA Analytics for analyzing CGH, ChIP and methylation microarray data. The GeneSpring suite includes informatics software for microarray-based gene expression data, genotyping data, and GeneSpring MS, which are useful for analyzing mass spec data from proteomics and metabolomics experiments and comparing complex datasets to explore biological questions from multiple perspectives.

Lab Automation

To meet the skyrocketing demand for more throughput and automation, Agilent has substantially expanded its lab automation offerings. The Agilent line of liquid handlers and microplate processors are designed to streamline high-volume life science workflows. Agilent is also continually upgrading its advanced autosamplers for LC, GC, LC/MS and GC/MS, adding functionality and speed to reflect the performance of its advanced instruments.

Vacuum Technology

Agilent works with customers to solve vacuum challenges from experiments in high-energy physics to developing systems for producing flat panel displays. Agilent manufactures vacuum systems used in its own mass spectrometry instruments as well as those of other manufacturers. Agilent's vacuum technology has been proven by the most powerful physics experiment ever built, CERN's Large Hadron Collider machine, which was used in the discovery of the Higgs boson particle.

Get the Agilent Service Guarantee

Should your instrument require service while covered by an Agilent service agreement, we guarantee repair or we will replace your instrument for free.

No other company offers this level of commitment to keep your lab up and running at peak efficiency.

Laboratory decision makers and users ranked Agilent as their first choice for general laboratory compliance services.

Agilent Service and Support for Instrument Systems

Focus on what you do best

For over 40 years, Agilent has been building and maintaining the instruments you count on to stay competitive and successful. Trust us to protect your investment with a broad portfolio of services, backed by a global network of experienced service professionals dedicated to the productivity of your lab.

Agilent Advantage Service Plans

The best service available for your Agilent instruments

Agilent offers a flexible range of service plans so that you can choose the level of coverage that is best for your lab.

- **Agilent Advantage Gold** – Priority-one coverage for ultimate uptime and productivity
- **Agilent Advantage Silver** – Comprehensive coverage for dependable laboratory operations
- **Agilent Advantage Bronze** – Total repair coverage at a fixed annual price
- **Agilent Repair Service** – Basic coverage for reliable instrument repair

Agilent Advantage service plans include Agilent Remote Advisor for real-time remote monitoring and diagnostics. Through secure internet connections, you can interact with Agilent service professionals, receive detailed asset reports, and configure text or email alerts to notify you before problems occur – helping you to maximize instrument uptime and optimize laboratory workflows.

Agilent Compliance Services

Equipment qualification that meets the most stringent requirements

Enterprise Edition Compliance was developed to streamline compliance across your entire lab. Used globally in regulated labs, including standards organizations and regulatory agencies, Enterprise Edition enables you to:

- Improve qualification efficiency by automating protocols across platforms to ensure greater efficiency and minimize regulatory risk
- Standardize your entire compliance operation with robust test designs that work with all your instruments
- Add, remove or reconfigure tests based upon your unique user requirements
- Significantly reduce staff review time with consistently formatted, computer generated, tamper-proof reports

Agilent Education and Consulting Services

Our best minds, working for you

Make the most of your instrument with training and consulting from the same experts who designed the instruments, software and processes you use every day.

- Classroom and on-site training in instrument operation, troubleshooting and maintenance
- Customized consulting services to meet your lab's unique needs

The Agilent Value Promise – 10 Years of Guaranteed Value

In addition to continually evolving products, we offer something else unique to the industry – our 10-year value guarantee. The Agilent Value Promise guarantees you at least 10 years of instrument use from your date of purchase, or we will credit you with the residual value of the system toward an upgraded model. Not only does Agilent ensure a reliable purchase now, but we also ensure that your investment is just as valuable in the future.

For more detailed information,
please go to **www.agilent.com/chem/services**
or contact your local Agilent Services and Support representative.

Technical Support at work for you

Have a hardware, software, application, instrument repair or troubleshooting question? Agilent's technical experts are available to answer your questions. With years of laboratory experience, our technical support specialists can provide in-depth knowledge and experience.

For questions pertaining to supplies found in this catalog, contact your local Agilent office or Authorized Agilent Distributor or visit **www.agilent.com/chem/techsupport**

Need more information?

Visit **www.agilent.com/chem/contactus** to:

- Locate your nearest Agilent office or distributor for expert technical support.
- Get fast sales and product assistance by phone. Simply use the scroll-down menu to select your country.
- Receive email assistance using our convenient online forms.

AGILENT ATOMIC SPECTROSCOPY PORTFOLIO

New Technologies, More Possibilities

Agilent has changed the atomic spectroscopy landscape. Remarkable innovations like the ICP-QQQ with unique MS/MS capabilities and MP-AES have added even more application opportunities to those already offered by Agilent ICP-MS, ICP-OES, and AA solutions.

Atomic Absorption (AA) Spectrometers

Extend your productivity, performance, and output boundaries

Agilent AA instruments are suitable for routine analysis where reliability and simple operation are vital. With the world's fastest flame AA, the world's most sensitive furnace AA, user-friendly software, and unbeaten instrument ruggedness, you can be sure you're getting answers you can trust.

Microwave Plasma-Atomic Absorption Spectrometer (MP-AES)

Say goodbye to expensive and flammable gases. Say hello to enhanced productivity.

The safer, cost efficient Agilent 4100 MP-AES has higher sensitivity with detection limits down to sub µg/L levels, speed that goes beyond flame Atomic Absorption, and no combustible gases. Best of all, the revolutionary Agilent 4100 MP-AES runs on air, without flammable or expensive gas supply, dramatically reducing your operating costs.

Agilent 700 Series ICP-OES

The world's most productive high-performance simultaneous ICP-OES

Our 700 Series ICP-OES features temperature-controlled optics with no moving parts, which ensures stability and long-term precision. In addition, Agilent's superior plasma performance allows direct analysis of samples ranging from organic solvents to industrial waste and brines, minimizing sample preparation times. With extended dynamic range, robust plasma, and one-step measurement of major, minor, and trace elements, the Agilent 700 Series ICP-OES gives you maximum confidence in your results.

Agilent 7700 Series ICP-MS

Extraordinary design, unparalleled performance

As ICP-MS has evolved into the premier technique for trace-metals analysis, Agilent has been at the forefront of development, design, and innovation. With our 7700 Series, Agilent continues to shape the ICP-MS landscape by increasing performance, reducing interferences and improving productivity – all while making the technology easier to use, maintain, and service.

Agilent 8800 Triple Quadrupole ICP-MS

Transforming ICP-MS technology

The Agilent 8800 is a truly ground-breaking instrument that transforms the ICP-MS landscape. Combining the proven capabilities of ICP-MS with the unique power of MS/MS, the 8800 Triple Quadrupole ICP-MS is a new analytical tool that can handle even the most difficult samples and applications with ease. With MS/MS, the 8800 Triple Quadrupole ICP-MS unlocks the potential of reaction cell chemistry to remove spectral interferences, delivering greater accuracy and more consistent results – particularly in complex sample matrices.

AGILENT MOLECULAR SPECTROSCOPY PORTFOLIO

Distinctly Better Solutions

Agilent provides an extensive portfolio of molecular spectroscopy solutions. With over 60 years of experience, Agilent brings you UV-Vis-NIR, FTIR, and Fluorescence Spectroscopy products engineered to help you discover, characterize, and test a variety of solid, liquid, organic and inorganic materials. Take advantage of powerful analysis routines for reliable results with built-in ease-of-use to ensure your productivity.

Agilent Cary Eclipse Fluorescence

Superior fluorescence sensitivity and fast kinetics

The Agilent Cary Eclipse Spectrophotometer with unique Xenon flash lamp technology delivers superior sensitivity with fiber optics, high signal-to-noise, and fast kinetic measurement capabilities. Combined with room light immunity and a wide range of options including polarization and a microplate reader, the Cary Eclipse is sensitive, accurate and flexible. With a range of measurement options, you can be sure that the Cary Eclipse is the ideal workhorse for all your analytical needs.

Agilent Cary 600 Series FTIR

Unrivaled analytical performance

The Agilent Cary 600 Series FTIR provides unrivaled analytical performance under real-world conditions. From bench-top instruments offering the highest spectral resolution and signal-to-noise (S/N) performance to dedicated portable analyzers, there is an instrument to suit every need and simplify your workflow. The Agilent Cary 660 FTIR is a high-performance spectrometer suitable for your routine and research analysis. The Agilent Cary 670/680 FTIR offer the highest performance for researchers in fields such as polymers/materials, pharmaceuticals, biotechnology and academia.

Agilent Cary 630 FTIR

Innovative, intuitive, reliable

The compact Agilent Cary 630 FTIR spectrometer is innovative, intuitive, and reliable, providing superior quantitative and qualitative information for routine analysis of solids, liquids, and gases. With a wide range of sample interfaces and high performing optics – including our unique DialPath for measuring liquids – the compact Agilent Cary 630 FTIR will give you accurate results – fast.

FTIR Microscopy and Imaging

See more than ever – fast

The Agilent Cary 610/620 FTIR microscope is the highest performing, most versatile FTIR microscope and spectrochemical imaging system available. Featuring the industry's largest field of view, unique field expanding optics, and the highest spatial resolution, Agilent FTIR Imaging systems analyze samples in seconds without compromise. Agilent's Cary 610 features a single element detector, making it ideal for characterizing small and heterogeneous samples. Agilent's Cary 620 utilizes true Focal Plane Array (FPA[1]) imaging, enabling you to collect hundreds to thousands of spectra simultaneously. Suitable for a diverse range of applications including polymers/materials, pharmaceuticals, biotechnology, chemicals and forensics, it provides an efficient workflow for intuitive and comprehensive imaging and data manipulation.

[1]This product is regulated by the U.S. Department of State under the International Traffic in Arms Regulations, 22 CFR 120-130 ("ITAR"). An export license from the U.S. government is therefore required to export this product from the United States, and other ITAR restrictions apply to the shipment, use, service and other aspects of this product and the FTIR instrument in which it is used.

UV-Vis and UV-Vis-NIR Spectrophotometers

You can do it all with a Cary spectrophotometer

The Agilent Cary range of UV-Vis and UV-Vis-NIR spectrophotometers are renowned for their superior performance, flexibility and ease-of-use. With unsurpassed photometric accuracy and a wide range of flexible accessories, the series is designed to meet your application requirements now and in the future. The instruments vary in capabilities from the budget-priced Cary 60 to the industry-leading Cary 6000i and from scanning spectrophotometers to the photodiode-array-based 8453.

Agilent hollow cathode lamps

Agilent uncoded hollow cathode lamps provide economical operation, superb performance and are compatible with all Agilent and most AA systems from other manufacturers (except PE). Agilent manufactures its' own lamps to ensure optimum purity, stable operation and long lifetime.

Turn to page 11.

Inert OneNeb universal nebulizer for ICP-OES and MP-AES

The OneNeb nebulizer is an inert, high efficiency universal nebulizer that is virtually indestructible, provides superb tolerance to high levels of dissolved solids and tolerant to most sample matrices determined using ICP-OES and MP-AES, including high acids, HF digests and organic solvents. It replaces a conventional glass concentric nebulizer and is compatible with most conventional cyclonic spray chambers.

Turn to pages 39-41.

ICP-MS Interface cones for superior, reproducible performance

Optimum performance of your ICP-MS is critically dependent on the size, shape and condition of the interface cones. They provide the ideal combination of matrix tolerance and high sensitivity. Agilent cones ensure optimum performance and maximum uptime. Don't risk performance problems with non genuine cones. Agilent also offers a trade-in credit against return of used Pt cones when purchasing replacements, ensuring cost savings for you and reducing your lab's environmental impact.

Turn to pages 70-71.

Atomic Absorption

Agilent provides a comprehensive range of consumables for Atomic Absorption, designed to maintain the high performance of your AA instrument. In addition, Agilent continues to research and manufacture an extensive range of single-element and solid-cathode multi-element lamps, plus high-intensity UltrAA lamps for superior cost-effective performance.

240FS AA Fast Sequential
Atomic Absorption Spectrometer

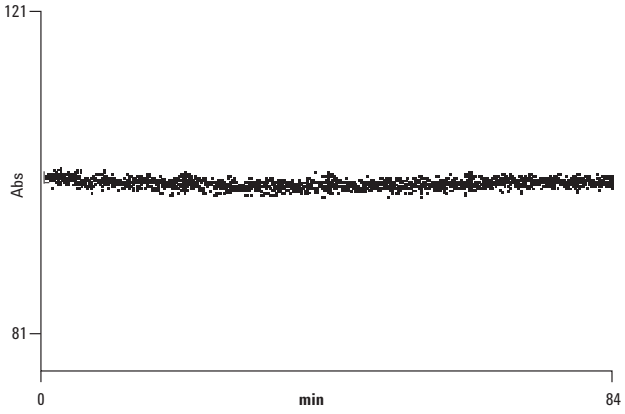
Hollow Cathode Lamps

Agilent hollow cathode lamps provide optimal signal-to-noise performance, permitting determinations at even lower levels with the most demanding applications. We manufacture our lamps and instruments to guarantee quality and reliability, and ensure they are optimized to deliver the best performance from your AA. Our lamps provide high spectral purity because of purified materials, an extended processing cycle and factory lamp conditioning procedures. These ensure minimal lamp warm-up time and good stability during operation.

Economical operation is assured by the long lamp life, typically exceeding 8000 mA hours, over and above our factory conditioning and testing service.

Consistent performance is also assured. All lamps are tested to confirm that the emission intensity exceeds a minimum level. No lamp leaves our factory without having satisfied our demanding test standards. These tests ensure that you receive quality lamps that can provide optimum signal-to-noise and stable performance throughout the life of the lamp.

H.C.L. Drift Test



The trace shows the variation in emission intensity from a lamp over 1 hour 24 minutes. The steady trace demonstrates the superb stability and low drift achieved when using our hollow cathode lamps (after a suitable warm-up period).

Coded Single Element Lamps

- High performance – manufactured from the purest cathode materials
- Easier to use – element coded for automatic lamp recognition, preventing errors
- Stable operation – extended processing ensures minimal warm-up and good lamp stability

Coded Single Element Lamp, Cu, 5610101400

Coded Single Element Lamps

Element	Part No.	Element	Part No.
Aluminum – Al	5610100100	Neodymium – Nd	5610103600
Antimony – Sb	5610100200	Nickel – Ni	5610103700
Arsenic – As	5610100300	Niobium – Nb	5610103800
Barium – Ba	5610100400	Osmium – Os	5610103900
Beryllium – Be	5610100500	Palladium – Pd	5610104000
Bismuth – Bi	5610100600	Phosphorus – P	5610107700
Boron – B	5610100700	Platinum – Pt	5610104100
Cadmium – Cd	5610100800	Potassium – K	5610104200
Calcium – Ca	5610101000	Praseodymium – Pr	5610104300
Cerium – Ce	5610101100	Rhenium – Re	5610104400
Cesium – Cs	5610100900	Rhodium – Rh	5610104500
Chromium – Cr	5610101200	Rubidium – Rb	5610104600
Cobalt – Co	5610101300	Ruthenium – Ru	5610104700
Copper – Cu	5610101400	Samarium – Sa	5610104800
Dysprosium – Dy	5610101500	Scandium – Sc	5610104900
Erbium – Er	5610101600	Selenium – Se	5610105000
Europium – Eu	5610101700	Silicon – Si	5610105100
Gadolinium – Gd	5610101800	Silver – Ag	5610105200
Gallium – Ga	5610101900	Sodium – Na	5610105300
Germanium – Ge	5610102000	Strontium – Sr	5610105400
Gold – Au	5610102100	Tantalum – Ta	5610105500
Hafnium – Hf	5610102200	Tellurium – Te	5610105600
Holmium – Ho	5610102300	Terbium – Tb	5610105700
Indium – In	5610102500	Thallium – Tl	5610105800
Iridium – Ir	5610102600	Thulium – Tm	5610106000
Iron – Fe	5610102700	Tin – Sn	5610106100
Lanthanum – La	5610102800	Titanium – Ti	5610106200
Lead – Pb	5610102900	Tungsten – W	5610106300
Lithium – Li	5610103000	Vanadium – V	5610106500
Lutetium – Lu	5610103100	Ytterbium – Yb	5610106600
Magnesium – Mg	5610103200	Yttrium – Y	5610106700
Manganese – Mn	5610103300	Zinc – Zn	5610106800
Mercury – Hg	5610103400	Zirconium – Zr	5610106900
Molybdenum – Mo	5610103500		

Uncoded Single Element Lamps

- No element coding for economical operation
- Compatible with all Agilent and most other AA systems
- Same excellent performance as provided by Agilent coded single element lamps

Uncoded Single Element Lamps

Element	Part No.	Element	Part No.
Aluminum – Al	5610122000	Neodymium – Nd	5610125500
Antimony – Sb	5610122100	Nickel – Ni	5610125600
Arsenic – As	5610122200	Niobium – Nb	5610125700
Barium – Ba	5610122300	Osmium – Os	5610125800
Beryllium – Be	5610122400	Palladium – Pd	5610125900
Bismuth – Bi	5610122500	Phosphorus – P	5610126000
Boron – B	5610122600	Platinum – Pt	5610126100
Cadmium – Cd	5610122700	Potassium – K	5610126200
Calcium – Ca	5610122900	Praseodymium – Pr	5610126300
Cerium – Ce	5610123000	Rhenium – Re	5610126400
Cesium – Cs	5610122800	Rhodium – Rh	5610126500
Chromium – Cr	5610123100	Rubidium – Rb	5610126600
Cobalt – Co	5610123200	Ruthenium – Ru	5610126700
Copper – Cu	5610123300	Samarium – Sa	5610126800
Dysprosium – Dy	5610123400	Scandium – Sc	5610126900
Erbium – Er	5610123500	Selenium – Se	5610127000
Europium – Eu	5610123600	Silicon – Si	5610127100
Gadolinium – Gd	5610123700	Silver – Ag	5610127200
Gallium – Ga	5610123800	Sodium – Na	5610127300
Germanium – Ge	5610123900	Strontium – Sr	5610127400
Gold – Au	5610124000	Tantalum – Ta	5610127500
Hafnium – Hf	5610124100	Tellurium – Te	5610127600
Holmium – Ho	5610124200	Terbium – Tb	5610127700
Indium – In	5610124400	Thallium – Tl	5610127800
Iridium – Ir	5610124500	Thulium – Tm	5610128000
Iron – Fe	5610124600	Tin – Sn	5610128100
Lanthanum – La	5610124700	Titanium – Ti	5610128200
Lead – Pb	5610124800	Tungsten – W	5610128300
Lithium – Li	5610124900	Vanadium – V	5610128500
Lutetium – Lu	5610125000	Ytterbium – Yb	5610128600
Magnesium – Mg	5610125100	Yttrium – Y	5610128700
Manganese – Mn	5610125200	Zinc – Zn	5610128800
Mercury – Hg	5610125300	Zirconium – Zr	5610128900
Molybdenum – Mo	5610125400		

Uncoded single element lamp, Au, 5610124000

Convenient Multi-Element Lamps

- Primary lines checked to avoid and minimize spectral interferences
- Save time by eliminating lamp warm-up, when switching elements
- Same excellent performance as provided by Agilent single element lamps

Coded multi-element lamp, Cu/Fe/Mn/Zn, 5610109600

Coded Multi-Element Lamps – for automatic lamp recognition, preventing errors

Element	Part No.
Aluminum/Calcium/Magnesium – Al/Ca/Mg	5610108800
Calcium/Magnesium – Ca/Mg	5610107100
Cobalt/Chromium/Copper/Iron/Manganese/Nickel – Co/Cr/Cu/Fe/Mn/Ni	5610107600
Cobalt/Molybdenum/Lead/Zinc – Co/Mo/Pb/Zn	5610109800
Copper/Iron/Manganese/Zinc – Cu/Fe/Mn/Zn	5610109600
Copper/Iron/Silicon/Zinc – Cu/Fe/Si/Zn	5610109700
Copper/Zinc – Cu/Zn	5610119200
Silver/Cadmium/Lead/Zinc – Ag/Cd/Pb/Zn	5610108700
Silver/Chromium/Copper/Iron/Nickel – Ag/Cr/Cu/Fe/Ni	5610109500
Sodium/Potassium – Na/K	5610107000

Uncoded multi-element lamp, Co/Cr/Cu/Fe/Mn/Ni, 5610129200

Uncoded Multi-Element Lamps – for economical operation and universal compatibility

Element	Part No.
Barium/Chromium – Ba/Cr	5610133500
Calcium/Magnesium – Ca/Mg	5610129100
Cobalt/Chromium/Copper/Iron/Manganese/Nickel – Co/Cr/Cu/Fe/Mn/Ni	5610129200
Copper/Zinc – Cu/Zn	5610129300
Sodium/Potassium – Na/K	5610129000

High Intensity UltrAA Coded Single Element Lamps

High intensity UltrAA lamp, As, 5610108100

- Emission intensity is increased by 3-5 times, for lower noise
- Sensitivity is increased by up to 40%, due to the sharper emission profile, allowing determinations at even lower levels
- Element coded for automatic lamp recognition, preventing errors

UltrAA lamps are high-intensity, boosted discharge hollow cathode lamps. They use the standard lamp current, but apply an additional boost discharge within the lamp to increase the emission intensity. The boost current is supplied from a secondary control module (either integrated into the instrument or supplied from an external module).

UltrAA lamps are manufactured from the purest cathode materials, and every lamp is QA/QC tested to guarantee performance and reliability. These lamps are coded for automatic lamp recognition (except for 50/55 AA, SpectrAA-50/55 and SpectrAA-5 models), eliminating the risk of time-consuming errors when reprogramming the lamp position.

High Intensity UltrAA Coded Single Element Lamps

Element	Part No.
Antimony – Sb	5610108000
Arsenic – As	5610108100
Bismuth – Bi	5610134200
Boron – B	5610135700
Cobalt – Co	5610134100
Copper – Cu	5610109100
Germanium – Ge	5610134300
Gold – Au	5610109000
Iron – Fe	5610108600
Lead – Pb	5610108200
Manganese – Mn	5610133700
Nickel – Ni	5610108500
Palladium – Pd	5610135800
Platinum – Pt	5610135900
Selenium – Se	5610108300
Silicon – Si	5610133400
Tellurium – Te	5610134000
Thallium – Tl	5610108400
Tin – Sn	5610133900

High Intensity UltrAA Multi-Element Lamps

- Unique combinations of compatible elements extend the versatility and performance of any AA spectrometer
- Save time by avoiding the need to warm up a new lamp
- Same excellent performance as provided by Agilent single element lamps

High intensity UltrAA lamp, Ag/Cd/Pb/Zn, 5610108900

High Intensity UltrAA Coded Multi-Element Lamps

Element	Part No.
Aluminum/Calcium/Magnesium – Al/Ca/Mg	5610133600
Cobalt/Chromium/Copper/Iron/Manganese/Nickel – Co/Cr/Cu/Fe/Mn/Ni	5610134500
Cobalt/Molybdenum/Lead/Zinc – Co/Mo/Pb/Zn	5610135200
Copper/Iron/Manganese/Zinc – Cu/Fe/Mn/Zn	5610135000
Copper/ Iron/Silicon/Zinc – Cu/Fe/Si/Zn	5610135100
Copper/Zinc – Cu/Zn	5610134600
Silver/Cadmium/Lead/ Zinc – Ag/Cd/Pb/Zn	5610108900
Silver/Chromium/Copper/Iron/Nickel – Ag/Cr/Cu/Fe/Ni	5610134900

High intensity UltrAA lamp, As/Cu/Fe, 5610135300

High Intensity UltrAA Uncoded Multi-Element Lamps

Element	Part No.
Arsenic/Copper/Iron – As/Cu/Fe	5610135300
Nickel/Selenium – Ni/Se	5610135400

Background Correction Lamps

Deuterium background correction lamps provide accurate and fast correction over the widest possible absorbance range and are QC-selected for optimal lifetime.

Deuterium lamp, 5610021800

Background Correction Lamps

Element	Part No.
Deuterium background correction lamp for AA systems	5610021800

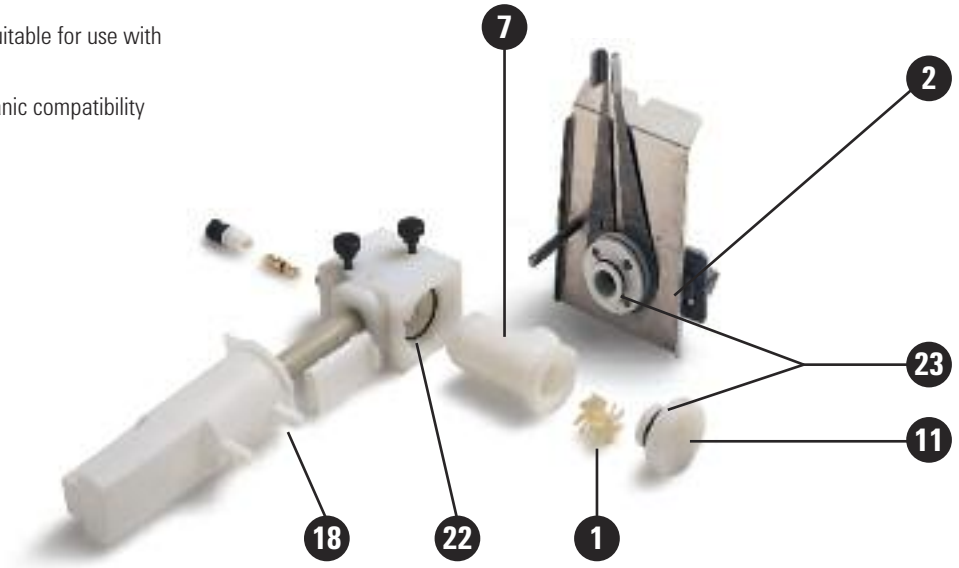
TIPS & TOOLS

Deuterium background correction is only usable over the range from 185 to ~ 430 nm. At higher wavelengths, there is no usable output from the lamp

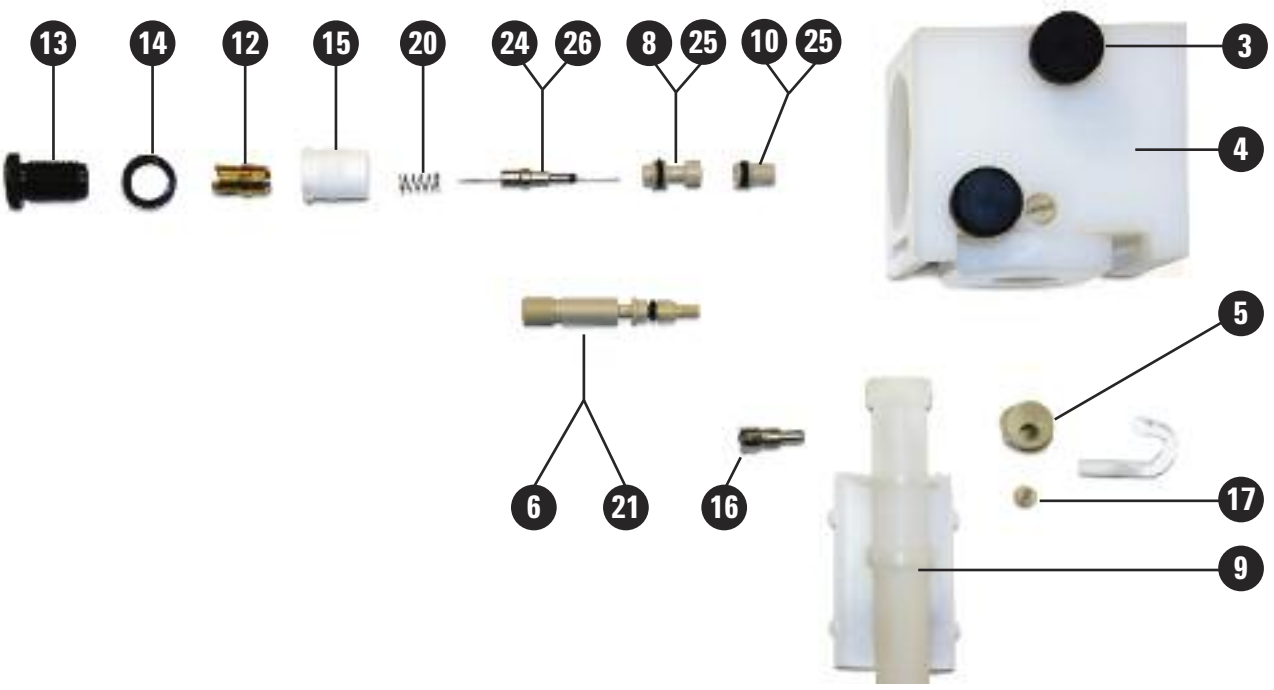
Flame Atomization System

Mark 7 Spray Chambers

- Simple-to-use twist and lock assembly makes for easy cleaning and routine maintenance
- Flexible operation with the capability to tune performance using the externally adjustable impact bead, fit mixing paddles for better precision, or both
- Inert construction makes spray chamber suitable for use with aqueous and organic solutions
- Fit organic resistant O-rings to ensure organic compatibility



Complete Mark 7 spray chamber assembly, 110634490



Exploded view of nebulizer block from the Mark 7 spray chamber

Item — Mark 7 Spray Chamber

Item	Description	Part No.
	Complete Mark 7 spray chamber assembly	110634490
1	Mixing paddle, fluorinated, 1/pk	110637000
	Mixing paddles, fluorinated, 5/pk	9910093600
2	Mark 7 air/acetylene burner	210164000
	Mark 7 nitrous oxide/acetylene burner	210164100
7	Spray chamber body, fluorinated	6210092090
11	Pressure relief bung, fluorinated	1610118800
18	Kit, fluorinated liquid trap, drain tube with integrated float and magnet	9910105800
22	O-ring spray chamber, nitrile	6910037000
22	O-ring spray chamber, organic solvent compatible	6910036800
23	O-ring spray chamber bung, nitrile	6910010500
23	O-ring spray chamber bung organic solvent compatible	6910013100

Item — Nebulizer components for Mark 7 Spray Chamber

Item	Description	Part No.
3	Spray chamber screw mounting	1510226600
4	Nebulizer block, fluorinated (excludes integrated nebulizer)	9910093100
5	Clamp bead adjuster	810133400
6	Screw bead adjuster	1510225000
8	Nebulizer capillary guide	810134400
9	Kit, fluorinated liquid trap, drain tube with integrated float and magnet	9910105800
10	Venturi nebulizer, PEEK	1610117390
12	Clamp bush guide	810134300
13	Screw capillary adjuster	1510226800

(Continued)

Item — Nebulizer components for Mark 7 Spray Chamber

Item	Description	Part No.
14	Nut lock M12 x 0.5	1510226700
15	Bearing bush nebulizer	310046600
16	Screw lock dog point M8	1510226000
17	Screw M6 x 6 Ertalyte	1510226500
18	Kit, fluorinated liquid trap, drain tube with integrated float and magnet	9910105800
20	Spring nebulizer	4610017400
21	O-ring screw bead adjuster, nitrile	6910000100
21	O-ring screw bead adjuster organic solvent compatible	6910036900
24	O-ring 1/32 in id x 3/32 in od x 1/32 in nitrile	6910009700
25	O-ring 3/16 in id x 5/16 in od x 1/16 in nitrile	6910009800
25	O-ring 3/16 in id x 5/16 in od x 1/16 in organic solvent compatible	6910013600
26	Nebulizer Capillary Kit Includes capillary assembly, capillary guide, nebulizer spring, nebulizer cleaning wire, Hi-Vac capillary tubing and standard capillary tubing	9910093000
	Glass impact beads, 5/pk	9910025700
	PTFE impact beads (for use with HF digests), 5/pk	9910053300
	Mark 7 O-ring kit, for aqueous samples Includes O-rings to suit screw bead adjuster (1 ea), nebulizer capillary assembly (1 ea), capillary guide and venturi (7 ea), spray chamber bung and burner (3 ea), and nebulizer block (1 ea).	9910093400
	Mark 7 O-ring kit, for organic solvents Includes O-rings to suit screw bead adjuster (1 ea), nebulizer capillary assembly (1 ea), capillary guide and venturi (2 ea), spray chamber bung and burner (2 ea), and nebulizer block (1 ea).	9910093500
	Drain tubing for aqueous solutions, per meter, 2 m length required	3710009200
	Venturi extraction tool	7210027700
	Nebulizer capillary extraction tool	7210027600
	Stand for Mark V, VI and 7 spray chambers	9910049800

Mark 7 Flame Atomization System Operating Kit

Typical operation supplies required for moderate use of Flame Atomic Absorption Spectrometer Systems with Mark 7 spray chamber.

Mark 7 Flame Atomization System Operating Kit

Description	Kit Quantity	Unit	Part No.
Mark 7 operating supplies kit			190034100
Kit Contents			
Venturi nebulizer, PEEK	1		1610117390
Nebulizer Capillary Kit Includes capillary assembly, capillary guide, nebulizer spring, nebulizer cleaning wire, Hi-Vac capillary tubing and standard capillary tubing	1		9910093000
Nebulizer block, fluorinated (excludes integrated nebulizer)	4		9910093100
Glass impact beads	1	5/pk	9910025700
High solids capillary tubing	1	3 m	9910024800
Mark 7 O-ring kit, for aqueous samples Includes O-rings to suit screw bead adjuster (1 ea), nebulizer capillary assembly (1 ea), capillary guide and venturi (7 ea), spray chamber bung and burner (3 ea), and nebulizer block (1 ea).	1		9910093400
Mixing paddles, fluorinated	1	5/pk	9910093600
Burner cleaner strips	1	100/pk	9910053900

TIPS & TOOLS

The best way to clean the burner is to polish the burner inside the burner slot using the burner cleaning strips and a liquid metal polish (like "Brasso"). Then clean the outside of the burner slot with a clean rag. Then sonicate for a few minutes in a detergent solution, rinse and dry. Ensure the burner is dry before refitting and igniting the flame. To avoid damaging the bead when replacing, ensure the adjusting screw is turned full clockwise. Then fit the bead and tighten the locking screw.

Burners

The Mark 7 burner fits all current AA instruments and the earlier SpectrAA series instruments and is compatible with the Mark V, VI and 7 spray chambers.

Mark 7 air/acetylene burner, 210164000

Burners

Description	Part No.
Mark 7 air/acetylene burner	210164000
Mark 7 nitrous oxide/acetylene burner	210164100
Burner cleaner strips, 100/pk	9910053900

Capillary spares kit, 9910024500

Nebulizers and Nebulizer Maintenance

Description	Use With	Part No.
Barrel nebulizer, adjustable	Mark V and VI spray chambers	9910043500
Barrel nebulizer, high vacuum	Mark V and VI spray chambers	9910043700
Spare tantalum venturi kit	Mark V and VI spray chambers	9910024400
Pt/Ir capillary spares kit Includes capillary assembly, capillary guide, nebulizer spring, nebulizer tool, nebulizer cleaning wire, Hi-Vac capillary tubing and standard capillary tubing	Mark V and VI spray chambers	9910024500
High solids capillary tubing, 3 m	Mark V, VI and 7 spray chambers	9910024800
High vacuum capillary tubing, 3/pk	Mark V, VI and 7 spray chambers	9910044000
Nebulizer Capillary Kit Includes capillary assembly, capillary guide, nebulizer spring, nebulizer cleaning wire, Hi-Vac capillary tubing and standard capillary tubing	Mark 7 spray chamber	9910093000
Nebulizer cleaning wire, 3 x 0.3 m lengths	Mark V, VI and 7 spray chambers	9910024700
Nebulizer O-ring kit	Barrel nebulizers	9910035200

High solids capillary tubing, 9910024800

Nebulizer cleaning wire, 9910024700

Impact Beads

Description	Use With	Unit	Part No.
Glass impact beads	Mark V/VI/7 spray chambers	5/pk	9910025700
PTFE impact beads (for use with HF digests)	Mark V/VI/7 spray chambers	5/pk	9910053300

Glass impact beads, 9910025700

PTFE impact beads, 9910053300

High vacuum capillary tubing, 9910044000

Mark VI Flame Atomization System Operating Kit

Typical operation supplies required for moderate use of Flame Atomic Absorption Spectrometer Systems with the Mark VI spray chamber.

Mark VI Flame Atomization System Operating Kit – For use with aqueous samples

Description	Kit Quantity	Unit	Part No.
Mark VI operating supplies kit			190024800
Kit Contents			
Spare tantalum venturi kit	1		9910024400
Pt/Ir capillary spares kit	1		9910024500
Barrel nebulizer, high vacuum	1	1/ea	9910043700
Nebulizer O-ring kit	1		9910035200
High vacuum capillary tubing	1	3 m	9910044000
O-ring/gasket kit	1		9910026500
Mixing paddles	1	5/pk	9910063600
Burner cleaner strips	1	100/pk	9910053900

Mark VI Standard Spray Chambers

The Mark VI spray chamber was used with older model instruments. It has many of the design features and benefits of the Mark 7 design.

Mark VI Standard Spray Chambers – For use with aqueous samples

Description	Part No.
O-ring/gasket kit	9910026500
Mixing paddles, 5/pk	9910063600
Liquid trap and float assembly	110315690
Drain tubing for aqueous solutions, per meter, 2 m length required	3710009200
Nebulizer bung assembly Requires nebulizer	110351990
Complete Mark VI spray chamber assembly Requires nebulizer	110351790

Liquid trap and float assembly, 110315690

Liquid trap and float assembly, 9910061600

Mark VI Universal Spray Chamber – For use with organic solvents*

Description	Part No.
O-ring/gasket kit	9910045700
Mixing paddles, 5/pk	9910063600
Liquid trap and float assembly	9910061600
Nebulizer bung assembly Requires nebulizer	9910063200
Pressure relief bung	9910063100
Drain tubing for organic solvents, nitrile rubber, per meter, 2 m length required	3710011700
Complete universal spray chamber and liquid trap assembly Requires nebulizer	9910061100

*Also suitable for use with aqueous solutions

Nebulizer bung assembly, 9910063200

SPS 3 Autosampler for AA, MP-AES, ICP-OES and UV/Vis instruments (shown with diluter fitted)

SPS 3 Autosampler Supplies

Agilent's fast spectroscopy autosampler meets the diverse requirements of high-throughput analytical laboratories.

SPS 3 Start-up and Operating Supplies Kit

Description	Kit Quantity	Unit	Part No.
SPS 3 start-up and operating supplies kit			190065400
Kit Contents			
0.8 mm id inert probe, PTFE sleeved	1	Each	9910111900
Pump tubing, PVC Solvaflex, 3-bridged, gray/gray	2	12/pk	3710049000
Silicon tubing, 1 mm id, per m	1	Each	3710026400
Nalgene tubing, per m	2	Meter	3710031500
Nebulizer capillary tubing, per m	2	Meter	2410020500
Rinse reservoir, 12 L	1	Each	6610011800
Polypropylene tubes, 16 mm od	1	1000/pk	190049700
Sample rack for 30 mm od tubes, 21 positions	3	Each	6610026600
Polypropylene sample tubes, 50 mL	1	500/pk	190065200

Autosampler cover, 910245400

Internal purge kit, 9910120200

Optional Accessories for SPS 3

Description	Comments	Part No.
Autosampler cover, transparent	Prevents contamination of samples and standards from dust and drafts Has provision for optional purge connection and/or exhaust outlet to enable removal of corrosive or solvent fumes	910245400
Internal purge kit	Includes all components required to purge inside of cover with inert gas Includes flow meter, regulator, tubing and instructions	9910120200
Exhaust port connection	Installs on rear panel of cover and allows safe removal of corrosive or solvent fumes; suitable for connection to 2 in (50 mm) diameter exhaust ducting	9910130600

Test Tubes

Description	Unit	Part No.
Polypropylene tubes, 16 mm od	125/pk	3710051100
	1000/pk	190049700
Polypropylene test tubes, 17 mm od, 16.5 mL	1000/pk	00000001600L

Polypropylene test tubes, 3710051100

Digestion Tubes

Description	Unit	Part No.
Digestion tubes, screw capped, 30 mm od, 50 mL polyethylene	500/pk	190047900

Digestion tubes, screw capped, 190047900

Probes

Description	Part No.
0.8 mm id inert probe, PTFE sleeved For use with AA instruments (without diluter)	9910111900
1.0 mm id inert probe, PTFE sleeved For use with AA, MP-AES, ICP-OES and UV/Vis instruments (or with diluter)	9910112000
1.3 mm id inert probe, PTFE sleeved For use with viscous solutions and high matrix samples	9910130900

0.8 mm id inert probe, PTFE sleeved, 9910111900

Sample rack, 6610026400

Standard rack for 29 mm od tubes, 810167000

Rack overlay for 60 position sample rack, 6610026100

Racks

Description	Part No.
Sample Racks	
Sample rack for 13 mm od tubes, 90 positions	6610026400
Sample rack for 16 mm od tubes, 60 positions	6610025400
Sample rack for 20 mm od tubes, 40 positions	6610025500
Sample rack for 25 mm od tubes, 24 positions	6610026500
Sample rack for 30 mm od tubes, 21 positions	6610026600
Spare Standards Racks	
Standard rack for 16 mm od tubes, 11 positions	810166900
Standard rack for 29 mm od tubes, 6 positions	810167000
Rack Overlays for Sample Racks	
Rack overlay for 60 position sample rack Allows 13 mm od tubes to be used in 60 position rack (Qty 2 recommended per rack)	6610026100
Rack overlay for 40 position sample rack Allows 18 mm od tubes to be used in 40 position rack (Qty 2 recommended per rack)	6610026000

Diluter Spares

Description	Part No.
Syringe-to-valve tube kit	9910062700
Replacement tubing kit for auto diluter, screw fittings Includes all tubing and connectors	9910083100
Rinse reservoir, 12 L	6610011800

Rinse reservoir, 6610011800

Diluter Maintenance Supplies

Description	Part No.
Syringe, 20 mL	4710003000
Syringe-to-valve tube kit	9910062700
Replacement tubing kit for auto diluter, bung fittings Includes all tubing and connectors	9910059100
Replacement tubing kit for auto diluter, screw fittings Includes all tubing and connectors	9910083100

Tubing

Description	Use With	Part No.
Nalgene tubing, per m	For outlet rinse vessel	3710031500
Pump tubing, PVC Solvaflex, 3-bridged, gray/gray, 12/pk	For use with aqueous samples on AA, MP-AES and ICP-OES instruments	3710049000
Pump tubing Santoprene, 3-bridged, gray/gray, 12/pk	For ketone-based solvents on AA, MP-AES and ICP-OES instruments	3710057500
Replacement spill tray		6610025100

Pump tubing, PVC Solvaflex, 3710049000

Replacement spill tray, 6610025100

SIPS 20 Sample Introduction Pump System for flame AA

SIPS 10/20 pump tubing, 9910075900

Constant pressure head bottle, rectangular, 110533590

Pump bands, 9910077600

SIPS 20 3-way tee piece assembly, 110585790

SIPS 10/20 Supplies

The Sample Introduction Pump System (SIPS) is an innovative sample introduction and dilution system for flame AA that eliminates the task of manual preparation of multiple calibration standards, providing fast, accurate on-line dilution of over range samples.

SIPS 10/20 Maintenance Supplies

Description	Part No.
SIPS 10/20 pump tubing, 6/pk	9910075900
Tubing kit, to connect constant pressure head bottle to tee piece	9910076100
Constant pressure head bottle, rectangular, 1 L	110766690
Constant pressure head bottle, rectangular, 500 mL	110533590
Pump bands, 10/pk	9910077600
SIPS 10 2-way tee piece assembly	110651090
SIPS 20 3-way tee piece assembly	110585790

SIPS 10/20 Operating Supplies Kit

Description	Kit Contents	Part No.
SIPS 10/20 operating supplies kit	Includes 2 constant pressure bottles, 500 mL (110533590); 1 L diluent bottle (6610014600); SIPS 3-way tee piece assembly for SIPS 20 (110585790); SIPS pump tubing, 6/pk (9910075900); SIPS tubing kit (9910076100); SIPS pump bands, 10/pk (9910077600)	190025400

VGA 77 Supplies

The Vapor Generation Accessory (VGA 77) is ideal for µg/L determination of Hg and the hydride-forming elements.

VGA 77 Vapor Generation Accessory

Hydride Modules*

Description	Part No.
AA hydride module VGA 77	9910062100
ICP hydride module VGA 77P	9910062200

*A separate hydride module should be used exclusively for Hg determinations to reduce cross contamination

AA hydride module VGA 77, 9910062100

Operating Supplies Kit

Description	Kit Contents	Part No.
VGA 77 operating supplies kit	Includes 2 Tubing and connectors (9910061900); 2 packs pump tubes, black/black, 12/pk (3710027200); 2 packs pump tubes, purple/black, 12/pk (3710027300); pump bed kit (9910050700); gas liquid separator (9910071100); mercury flow-through cell (9910040700); 2 boxes hydride absorption cells, 2/box (9910040000); spare plumbing module (9910062100)	190025200

Absorption Cells

Description	Use With	Part No.
Flow through mercury absorption cell, single cell	VGA-76/77	9910040700
Hydride absorption cells, quartz, 2/pk	VGA-76/77	9910040000

Flow through mercury absorption cell, 9910040700

Hydride absorption cells, quartz, 9910040000

Tubing and connector kit, 9910061900

Transfer Tubing, VGA-76/77, 3710026390

AA Gas-liquid separator for VGA 77, 9910071100

Tubing

Description	Use With	Part No.
Reagent pump tubing, black/black, 12/pk	VGA-76/77	3710027200
Sample pump tubing, purple/black, 12/pk	VGA-76/77	3710027300
Tubing and connector kit Includes 1 sample and 2 reagent peristaltic pump tubes, inlet tubing for sample and reagents (3 x 0.4 m lengths), connectors, acid resistant connecting tubing, gas inlet tubing to gas-liquid separator, reaction coil and O-ring strap to secure gas-liquid separator	VGA 77	9910061900
Drain tubing for gas-liquid separator to waste per meter, 2 m length required	VGA-76/77	3710009200
Transfer tubing Gas-liquid separator to absorption cell	VGA-76/77	3710026390
Tubing and connector kit Includes 1 sample and 2 reagent peristaltic pump tubes, inlet tubing for sample and reagents (3 x 0.4 m lengths), connectors, acid resistant connecting tubing, gas inlet tubing to gas-liquid separator and reaction coil	VGA-76	9910039900

Gas-liquid Separators

Description	Use With	Part No.
Gas-liquid separator	VGA 77 for AA	9910071100
	VGA 77P for ICP	9910062000
	VGA-76 for AA	9910040200
	VGA-76 for ICP	9910056900

VGA-76/77 Miscellaneous Supplies

Description	Part No.
Reagent vessel and cap, PE 500 mL	6610011600
Pump tube beds kit	9910050700
VGA cell support for Mark 7 burner	110654990
VGA cell support for Mark VI burner	110375990
Bracket to mount VGA 77 on the 700 Series ICP-OES	410427590
Spare thumbscrews to secure VGA 77 mounting bracket to 700 Series ICP-OES (Qty 4 required)	1510267900

Gas-liquid separator, 9910062000

Reagents for VGA-76/77 Operation

Description	Part No.
Sodium tetrahydroborate, 500 g	8210029100

Pump tube beds kit, 9910050700

280Z dedicated graphite furnace
Atomic Absorption Spectrometer

Graphite Furnace Parts and Supplies

Maximize your uptime by keeping one of these kits handy.

GTA 120 Deuterium furnace operating supplies kit, 190067900

Kits for GTA 120 Furnace System

Description			Part No.
GTA 120 Deuterium furnace operating supplies kit			190067900
Kit Contents	**Kit Quantity**	**Unit**	**Part No.**
Graphite electrodes For GTA 120	2	1 pair	6310003400
Graphite shroud For GTA 120	1		6310003100
Omega platform tubes, pyrolytically coated	5	10/pk	6310003700
Syringe, 100 µL	1		4710003200
Capillary assembly	1	5/pk	9910115100
Glass beakers, 25 mL	1	5/pk	6610008200
Sample vials, 2 mL, conical polyethylene	2	1000/pk	9910028200

GTA 110 Deuterium furnace operating supplies kit, 190024900

Kits for GTA 100/GTA 110 Furnace Systems

Description			Part No.
GTA 110 Deuterium furnace operating supplies kit			190024900
GTA 110 Zeeman furnace operating supplies kit			190025000
Kit Contents	**Kit Quantity**	**Unit**	**Part No.**
Omega platform tubes, pyrolytically coated	5	10/pk	6310003700
Syringe, 100 µL	1		4710002300
Plunger for 100 µL syringe, PTFE tipped	1		4710003100
Capillary assembly	1	5/pk	9910032300
Glass beakers, 25 mL	1	5/pk	6610008200
Sample vials, 2 mL, conical polyethylene	2	1000/pk	9910028200
And			
Graphite electrodes For GTA-95/96/97/100/110	2	1 pair	6310001600
Or			
Graphite electrodes For GTA-96/100/110 Zeeman	2	1 pair	6310001700

Graphite shroud for GTA 120, 6310003100

Graphite Tubes and Platforms

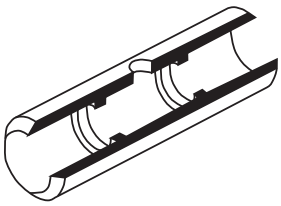
- High purity graphite reduces spurious absorption from trace contaminants and improves signal-to-noise
- Every tube is hand-checked for reproducible and reliable results
- Perform fewer repeats and increase productivity

Graphite tubes are quality tested to ensure each batch passes our demanding performance specifications for contamination, sensitivity, precision, electrical resistance and lifetime.

Use partitioned tubes for general purpose work and when you need the best detection limits with samples that have low background. These are also ideal when measuring organic solutions, or samples with low viscosity that may spread throughout the tube, potentially degrading precision.

Omega platform tubes combine ease-of-use with perfect atomization: the integrated platform ensures the perfect thermal profile to produce dense atom clouds for good signal-to-noise ratios and the best detection limits.

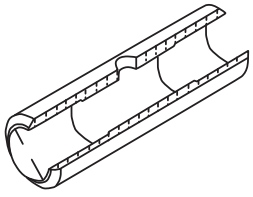
The combination of the solid pyrolytic platforms and plateau tubes provide continuity with older methods, and gives the best platform effect. This ensures best performance with samples that have high background or interferences. More operator skill is required for best results.



Partitioned tubes, 6310001200

Omega platform tubes, 6310003700

Solid pyrolytic graphite platforms, 6310001300



Plateau tubes, 6310001100

Graphite Tubes and Platforms

Description	Unit	Part No.
Partitioned tubes, pyrolytically coated	10/pk	6310001200
Omega platform tubes, pyrolytically coated	10/pk	6310003700
Solid pyrolytic graphite platforms Only for plateau tubes, 6310001100	10/pk	6310001300
Plateau tubes, pyrolytically coated Only for pyrolytic platforms, 6310001300	10/pk	6310001100

Graphite Electrodes

Graphite electrodes for GTA 120, 6310003400

Graphite electrodes for GTA-95/96/97/100/110, 6310001600

- Spare electrodes maximize uptime
- Good electrical contact ensures optimum performance and maximize tube life
- High purity graphite reduces spurious absorption from trace contaminants and improves signal-to-noise

Graphite Electrodes

Description	Unit	Part No.
Graphite electrodes for GTA 120	1 pair	6310003400
Graphite electrodes for GTA 120 Zeeman	1 pair	6310003500
Graphite electrodes for GTA-95/96/97/100/110	1 pair	6310001600
Graphite electrodes for GTA-96/100/110 Zeeman	1 pair	6310001700

TIPS & TOOLS

Easy, Reliable pH Testing, Designed for Chromatographers

Agilent now offers a full line of pH meters and electrodes. Designed for chromatographers, these pH meters offer intuitive user design and exceptional ruggedness for your lab. Learn more at **www.agilent.com/chem/phmeters**

Graphite Shrouds

Graphite Shrouds

Description	Part No.
Graphite shroud for GTA 120	6310003100
Graphite shroud for GTA 120 Zeeman	6310003600
Graphite shroud for GTA-95/96/97/100/110	6310001800
Graphite shroud for GTA-96/100/110 Zeeman	6310001900

Graphite shroud for GTA 120, 6310003100

Graphite shroud for GTA 120 Zeeman, 6310003600

Graphite Furnace Tools

Graphite Furnace Tools

Description	Part No.
Electrode extractor tool for GTA-96/97/100/110/120, 2 draw bars	9910031200
Shroud removal tool for GTA-96/97/100/110/120	9910033300
Electrode extractor tool for GTA-96/100/110/120 Zeeman, 2 draw bars	9910049300
Shroud removal tool for GTA-96/100/110/120 Zeeman	9910050400

Electrode extractor tool, 9910031200

Programmable Sample Dispensers (PSD) used with Graphite Furnace AA

Sample vials, 2 mL, 9910028200

Glass beakers, 6610008200

Plastic beakers, 9910115600

Carousel adaptors, 9910054200

High capacity carousel kit, 9910113100

Spares and Supplies

Description	Use With	Part No.
Sample vials, 1.1 mL, polyethylene, 2000/pk	PSD 120 high capacity sample carousel	6610025900
Sample vials, 2 mL, conical polyethylene, 1000/pk	PSD-95/96/97/100/120	9910028200
Glass beakers, 25 mL, 5/pk	PSD-95/96/97/100	6610008200
Plastic beakers, 10 mL, 5/pk	PSD 120	9910115600
Rinse bottle, Nalgene, 1 L	PSD-97/100/120	6610012100
Cap for rinse bottle	PSD-97/100/120	1610094600
Capillary assembly, 5/pk	PSD 120	9910115100
	PSD-95/96/97/100	9910032300
Carousel adaptors, 5/pk Allows use of 2 mL sample vials in the central carousel locations	PSD-96/97/100	9910054200
Syringe, 100 µL	PSD 120	4710003200
	PSD-95/96/97/100	4710002300
Plunger for 100 µL syringe, PTFE tipped	PSD-95/96/97/100/120	4710003100
Replacement carousel plate	PSD 100/120	5410029700
Replacement carousel plate for 130 sample carousel	PSD 120	5410046300
Furnace workhead viewing mirror	GTA 110/120	9910091200
Furnace workhead viewing mirror	GTA-96/97/100	9910032700

Optional Accessories for Graphite Furnace AAS

Description	Use With	Part No.
GTA viewing and fume extraction accessory Mounts on sample compartment to remove fumes from the GTA workhead and improves viewing of the tube for easier alignment; connects to a 150 mm (6 in.) or 125 mm (5 in.) exhaust duct	GTA 120	210190000
High capacity carousel kit Includes carousel disk (130 samples), 1.1 mL vials (2000/pk) and five 10mL plastic beakers for bulk solutions	GTA 120	9910113100
Bubble-free syringe update kit	PSD-97/100	9910116800

ICP-OES

Agilent is the recognized world leader and innovator in ICP-OES with thousands of systems installed worldwide. Agilent's 700 Series ICP-OES systems feature our unique CCD detector, innovative ICP Expert II software, and your choice of axial or radial configurations. Our ICP range can handle both routine and the most challenging applications. A choice of sample introduction options and a wide range of performance and productivity enhancing accessories and options make Agilent systems the fastest and most flexible ICP-OES systems available today. Agilent's 700 series ICP-OES are compatible with a range of supplies designed to extend the capabilities of the instruments.

715 Series ICP-OES Spectrometer

Sample Compartment Spray Chambers and Brackets

- Single-pass glass cyclonic spray chamber for good signal-to-noise performance with excellent washout
- Double-pass glass cyclonic spray chamber provides improved plasma stability with organic and high TDS samples
- Sturman-Masters spray chamber is inert, minimizes interferences and improves stability with high TDS samples

Sample Compartment Kits

Description	Part No.	For axial ICP	For radial ICP
Sample compartment O-ring kit Includes all O-rings for spray chamber area, demountable torch, and ASA	9910057200		
Sample compartment/torch box tube connection kit Includes all tubing for spray chamber area and spare nipples for drain (excluding pump tubing)	9910057100		
Tubing and connectors kit Includes two packs of standard peristaltic pump tubing, snap connectors and other connectors used in sample compartment and torch box area; ideal for spare start-up kit		9910097500	9910105400
Molding drip tray for 700 Series ICP-OES	6210113000		

Sample compartment O-ring kit, 9910057200

Sample compartment/torch box tube connection kit, 9910057100

Sample Compartment Spray Chambers and Brackets

Description	Use With	Part No.
Single-pass glass cyclonic spray chamber for axial ICP-OES Needs mounting bracket	Routine aqueous samples where best signal-to-noise performance is required	2010081700
Double-pass glass cyclonic spray chamber, suitable for all ICP-OES Needs mounting bracket	Organic solvents and high matrix or high TDS samples	7910043700
Cooled double-pass glass cyclonic action spray chamber with cooling gallery Includes mounting bracket for Liberty Series I/II, Vista and 700 Series ICP-OES instruments; requires, but does not include, a refrigerated water recirculator for subambient operation	Ideal for use with highly volatile organic solvents	9910070400
Sturman-Masters spray chamber, white Needs mounting bracket	Samples dissolved in hydrofluoric acid (HF) or when using the V-groove nebulizer for fusions or slurries	110593190
Bracket for mounting glass cyclonic spray chambers	715/725/735 radial, Vista-PRO radial and early axial, Vista-MPX radial and Liberty Series II radial and early axial models	110611700
	710/720/730 axial, Vista-PRO axial, Vista-MPX axial and Liberty Series II axial models	110665200
Bracket for mounting Sturman-Masters spray chamber	715/725/735 radial, Vista-PRO radial and early axial, Vista-MPX radial models and Liberty Series II radial and early axial models	410298400
	710/720/730 axial, Vista-PRO axial, Vista-MPX axial and Liberty Series II axial models	410328600

Sturman Masters Spray Chamber Supplies

Description	Part No.
Nebulizer holder (to suit 6 mm od concentric nebulizer)	810128100
Internal baffle for spray chamber	1610114600
Drain fitting assembly for spray chamber	110593000
Sample aerosol outlet to torch	1610114800
O-ring for drain and aerosol outlet	6910006000
O-ring for spray chamber body	6910017400
O-ring for nebulizer fitting	6910019800

Single pass cyclonic spray chamber, 2010081700

Double pass glass cyclonic spray chamber, 7910043700

Sturman-Masters spray chamber, 110593190

Nebulizers and Accessories

- Manufactured to fine tolerances for reproducible and stable sample uptake
- Tight specifications deliver fine droplets for best signal intensity and optimum signal-to-noise
- Fewer repeats means less downtime and improved productivity

Concentric glass nebulizer (SeaSpray), 2010096400

Nebulizers and Accessories

Description	Application	Part No.
OneNeb inert concentric nebulizer	Ideal for routine analysis of samples up to 25% TDS with good precision and better sensitivity than a SeaSpray; inert construction makes it suitable for most solution types	2010126900
Concentric glass nebulizer (SeaSpray) Includes sample and gas inlet fittings	Routine analysis of samples to 20% TDS	2010096400
K-style (Conikal) concentric glass nebulizer Includes sample and gas inlet fittings	Routine analysis of organic solvents and samples to 5% TDS	2010106800
Micro-concentric glass nebulizer (MicroMist), 0.4 mL/min uptake Includes sample and gas inlet fittings	Small sample volumes	2010126000
Inert V-groove nebulizer kit for use with Sturman-Masters spray chamber Includes tubing and fittings	Samples with hydrofluoric acid, fusions, slurries or >20% TDS	9910057400
Concentric glass slurry nebulizer	Slurry samples with particles to 150 µm, or >20% TDS	2010097600
High flow concentric glass slurry nebulizer for Liberty Series II axial systems	Slurry samples or those >20% TDS	2010097700
High flow K-style (Conikal) concentric glass nebulizer for Liberty Series II axial systems Includes gas inlet fittings	Routine analysis of samples to 5% TDS	2010081600

(Continued)

OneNeb inert concentric nebulizer, 2010126900

Inert V-groove nebulizer kit, 9910057400

K-style (Conikal) nebulizer, 2010106800

Nebulizers and Accessories

Description	Application	Part No.
Sample inlet (EzyFit) fitting for concentric glass nebulizer on axial ICP-OES, 0.75 mm id x 1.3 mm od capillary tubing, 10/pk		9910107700
Sample inlet (EzyFit) fitting for concentric glass nebulizer on radial ICP-OES, 0.75 mm id x 1.6 mm od capillary tubing, 10/pk	Suitable for SVS1 accessory	1610136400
Gas inlet connector (EzyLok) for concentric glass nebulizer		9910127800
Y-piece connector for online addition of internal standard/ionization buffer		1610132400
Nebulizer cleaner	Suitable for conventional concentric nebulizer	G3266-80020
Nebulizer bung O-ring , 7/32 in. id x 11/32 in. od		6910008200
Nalgene tubing, per m, 1/8 in. id x 1/4 in. od	Connects argon supply to nebulizer	3710031500
Nebulizer gas connector	Connects nebulizer gas supply tubing to gas outlet connector on instrument	1610085300
Auxiliary gas connector	Connects auxiliary gas supply tubing to gas outlet connector on instrument	1610085600
Speedy clamp	Secures gas supply tubing to nebulizer or auxiliary gas connector, Qty 2 required	810103200

Sample inlet (EzyFit) fitting, 9910107700

Gas inlet connector (EzyLok), 9910127800

Y-piece connector, 1610132400

TIPS & TOOLS

The OneNeb universal nebulizer can be used with HF, high dissolved solids, organic solvents and low flow applications. Provides improved sensitivity too. See OneNeb application note, *Evaluation of a novel nebulizer using an ICP-OES* (publication number 5990-8340EN)

Torches

- Ignite easily and stay lit, reducing downtime
- Even and stable plasma delivers reproducible results
- Guard your instrument warranty to protect your investment

Low flow axial quartz torch with
2.4 mm id injector tube, 2010090400

One Piece Axial Torches

Description	Application	Part No.
Low flow quartz torch with 2.4 mm id injector tube	Routine analysis of aqueous samples <10% TDS	2010090400
Low flow quartz torch with 0.8 mm id injector tube	Routine analysis of volatile organic solvents, e.g. gasoline	2010104700
Low flow quartz torch with 1.4 mm id injector tube	Routine analysis of organic solvents, e.g. kerosene, xylene and white spirit	2010104800
High solids torch with Agilent injector design, 2.4 mm id	Routine analysis of samples to 25% TDS	2010094800
Extended length high solids torch with Agilent injector design, 2.4 mm id	Routine analysis of samples to 25% TDS	2010104600
Sheath gas high solids torch with Agilent injector design, 2.4 mm id Used with the AGM 1 oxygen addition accessory (P/N 10055900) for better performance than the extended high solids torch	Routine analysis of samples to 25% TDS	2010122400

One Piece Radial Torches

Description	Application	Part No.
Low flow quartz torch with 1.4 mm id injector tube	Routine analysis of aqueous samples <10% TDS	2010069690
Low flow quartz torch with 0.8 mm id injector tube, annealed for greater strength	Routine analysis of volatile organic solvents, e.g. gasoline	2010117400
Low flow quartz torch with 1.4 mm id injector tube, annealed for greater strength	Routine analysis of organic solvents, e.g. kerosene, xylene and white spirit	2010117500
High solids torch with Agilent injector design, 1.8 mm id	Routine analysis of samples to 25% TDS	2010095000

High solids axial torch with Agilent injector design,
2010094800

Sheath gas high solids torch for axial ICP,
2010122400

Low flow quartz torch for radial ICP, 2010069690

High solids torch with Agilent injector design
for radial ICP, 2010095000

Spare quartz torch bonnet, 2010070790

Transfer tube FEP for axial ICP, 7910051590

Torch Spares

Description	Part No.
Spare quartz torch bonnet for radial ICP-OES	2010070790
GazFit fittings 6 mm id for one-piece and semi-demountable ICP-OES torches, 4/pk	9910107100
Transfer tube FEP cyclone spray chamber for radial ICP	7910051290
Transfer tube FEP Sturman-Masters spray chamber for radial ICP	7910051490
Transfer tube FEP for axial ICP (suitable for cyclone and Sturman-Masters spray chambers)	7910051590
Silicon pump tubing, 3/16 in. id x 5/16 in. od, per m Connects the torch plasma and auxiliary gas lines to the argon supply	2410023800
Tubing, 1/4 in. id, spray chamber to torch, per m	3710033400

Pre-optics cone for Vista/700 Series axial ICP-OES, 3610007300

Cones for Axial ICP-OES

Description	Part No.
Finger nut for cone	1510220200
Pre-optics cone for Vista/700 Series axial ICP-OES	3610007300
Pre-optics cone for Liberty Series axial ICP-OES	3610006200
Esteele cleaning powder For cleaning interface cone on axially-viewed ICP-OES	8110002800

Semi-demountable inert axial torch assembly kit, 9910084700

Semi-demountable inert radial torch assembly kit, 9910056800

Semi-demountable and Fully Demountable Torches

Description	Part No.
Semi-demountable inert axial torch assembly kit	9910084700*
Semi-demountable inert radial torch assembly kit	9910056800*
Fully demountable axial torch assembly kit Includes torch and bracket kit	9910106300
Fully demountable radial torch assembly kit Includes torch and bracket kit	9910106400

*Application: Samples with free HF when used with an inert alumina injector (2410067590); for volatile organic solvents, use narrow bore 0.8 mm id quartz injector (2010077500)

Fully demountable axial torch assembly kit, 9910106300

Fully demountable radial torch assembly kit, 9910106400

Spares for Semi-demountable Torches

Description	Part No.
Spare semi-demountable quartz torch body for axial ICP-OES	2010083400
Spare semi-demountable quartz torch body for radial ICP-OES	2010072900
Injector holder kit Includes O-rings	9910057300
Alumina injector tube, 1.8 mm	2410067590
Quartz injector tube, 1.4 mm	9910057000
Quartz injector tube, 0.8 mm	2010077500

Spares for Fully Demountable Torches

Description	Part No.
Spare fully demountable axial torch body	7910044400
Spare full demountable radial torch body	7910044500
Quartz outer tube, axial	2010095200
Quartz intermediate tube, axial and radial	2010095300
Quartz outer tube, radial body	2010095500
Quartz outer tube for high solids, radial	2010120300
Ceramic outer tube, radial	2010095800
O-rings kit	9910108200
Alumina injector, 1.8 mm, axial or radial	2010095900
Quartz injector, 1.0 mm, radial	2010096000
Quartz injector, 1.5 mm id, radial	2010095600
Quartz injector, 2.4 mm, axial	2010095400

Spare semi-demountable quartz torch body, 2010072900

Injector holder kit, 9910057300

Alumina injector tube, 2410067590

Quartz injector tube, 0.8 mm, 2010077500

Spare full demountable radial torch body, 7910044500

Quartz intermediate tube, axial and radial, 2010095300

Quartz outer tube, radial body, 2010095500

Alumina injector, 1.8 mm, axial or radial, 2010095900

Peristaltic pump tubing, 3710034400

Tubing

Peristaltic Pump Tubing

Peristaltic Pump Tubing Chemical Compatibility	
Tubing	**Recommendations**
Standard PVC tubes	Suitable for all aqueous solutions, medium-concentrated acids and bases
Solvent Flexible (Solvaflex)	Suitable for kerosene, white spirit, alcohols, medium-highly concentrated acids and bases
Viton	Suitable for gasoline, naptha, toluene, xylene (aromatic hydrocarbons), highly concentrated acids and bases
Marprene	Suitable for ketone-based solvents including MIBK and DIBK

Common Peristaltic Pump Tubing Dimensions		
Bridge Colors	**Inner Diameter (mm)**	**Inner Diameter (in.)**
Orange/Red	0.19	0.0075
Orange/Blue	0.25	0.010
Orange/Green	0.38	0.015
Orange/Yellow	0.51	0.020
Orange/White	0.64	0.025
Black/Black	0.76	0.030
Orange/Orange	0.89	0.035
White/White	1.03	0.040
Red/Red	1.14	0.045
Grey/Grey	1.30	0.050
Yellow/Yellow	1.42	0.055
Yellow/Blue	1.52	0.060
Blue/Blue	1.65	0.065
Green/Green	1.85	0.070
Purple/Purple	2.06	0.080
Purple/Black	2.29	0.090
Purple/Orange	2.54	0.100

Length 16 in. (406 mm), Bridge Interval 6 in. (152 mm)

Standard pump tubing sizes used with Agilent ICP-OES systems for aqueous samples	
Axial ICP-OES*	
Sample	White/White
Drain	Blue/Blue
Internal Standard	Orange/White

*For organic solvents and high matrix samples, the sample pump tube used would be smaller in diameter e.g. black/black

Radial ICP-OES*	
Sample	Grey/Grey
Drain	Blue/Blue
Internal Standard	Orange/White

*For organic solvents and high matrix samples, the sample pump tube used would be smaller in diameter e.g. black/black

PVC Tubing for Aqueous Samples

Description	Part No.
Peristaltic pump tubing, orange/white, 12/pk	3710046900
Peristaltic pump tubing, black/black, 12/pk	3710027200
Peristaltic pump tubing, white/white, 12/pk	3710034400
Peristaltic pump tubing, grey/grey, 12/pk	3710034500
Peristaltic pump tubing, blue/blue, 12/pk	3710034600
Replacement Tubing for Aqueous Samples	
Tubing, spray chamber to torch, per m	3710033400
Tubing, spray chamber to peri-pump waste line (Sturman-Masters spray chamber), per m	3710033900
Tubing, spray chamber to peri-pump waste line (glass cyclonic spray chamber), per m	3710024600
Nebulizer capillary tubing, per m	2410020500

Peristaltic pump tubing, 3710034400

Peristaltic pump tubing, 3710047000

PVC SolvaFlex Tubing for Low Volatile Organic Samples

Description	Part No.
Peristaltic pump tubing, black/black, 12/pk	3710034800
Peristaltic pump tubing, white/white, 12/pk	3710035000
Peristaltic pump tubing, grey/grey, 12/pk	3710035200
Peristaltic pump tubing, purple/black, 12/pk	3710047000
Replacement Tubing for Low Volatile Organic Samples	
Tubing, spray chamber to torch, per m	3710037800
Tubing, spray chamber to peri-pump waste line (Sturman-Masters spray chamber), per m	3710035300
Tubing, spray chamber to peri-pump waste line (glass cyclonic spray chamber), per m	3710035400
Nebulizer capillary tubing, per m	2410020500

Peristaltic pump tubing, 3710044100

Marprene Tubing for Ketone-Based Organic Samples

Description	Part No.
Peristaltic pump tubing, orange/yellow, 6/pk	3710044000
Peristaltic pump tubing, black/black, 6/pk	3710044100
Peristaltic pump tubing, white/white, 6/pk	3710044200
Peristaltic pump tubing, grey/grey, 6/pk	3710044300
Peristaltic pump tubing, blue/blue, 6/pk	3710044400
Replacement Tubing for Ketone-Based Organic Samples	
Tubing, spray chamber to torch, per m	3710037800
Tubing, spray chamber to peri-pump waste line (Sturman-Masters spray chamber), per m	3710035300
Tubing, spray chamber to peri-pump waste line (glass cyclonic spray chamber), per m	3710035400
Nebulizer capillary tubing, per m	2410020500

Peristaltic pump tubing, 3710043600

Viton Tubing for Aromatic Organic Samples

Description	Part No.
Peristaltic pump tubing, orange/yellow, 12/pk	3710043500
Peristaltic pump tubing, black/black, 12/pk	3710043600
Peristaltic pump tubing, white/white, 12/pk	3710043700
Peristaltic pump tubing, grey/grey, 12/pk	3710043800
Peristaltic pump tubing, blue/blue, 12/pk	3710043900
Peristaltic pump tubing, orange/yellow, 6/pk	3710053500
Peristaltic pump tubing, black/black, 6/pk	3710053600
Peristaltic pump tubing, white/white, 6/pk	3710053700
Peristaltic pump tubing, grey/grey, 6/pk	3710053800
Peristaltic pump tubing, blue/blue, 6/pk	3710053900

Internal Standard Kit

The Internal Standard Kit enables online addition of internal standard. It includes:

- One pack standard PVC pump tubing
- One pack EzyFit sample inlet connectors, 10/pk
- Five Y piece connectors
- Connecting tubing

Internal standard kit 2 with orange/white tubing, 9910124100

Internal Standard Kit

Description	Part No.
Internal standard kit 1 with black/black pump tubing	9910124000
Internal standard kit 2 with orange/white pump tubing	9910124100

Tubing Kits

Aqueous Samples and High Dissolved Solids

The ICP-OES tubing kit for aqueous samples and high dissolved solids includes:

- Two packs standard PVC peristaltic pump tubing, 12/pk (one each blue/blue and white/white for the axial ICP kits, and one each grey/grey and blue/blue for the radial ICP kits)
- One FEP transfer tube (spray chamber to torch)
- Drain tubing, 1 m
- Tubing for waste line from spray chamber, 1 m
- One pack EzyFit sample inlet connectors, 10/pk
- Nebulizer capillary tubing, 2 m length
- Barb connectors for joining tubing (5 ea 1/16 to 1/8 in id and 5 ea 1/16 to 1/16 in id)
- Connecting tubing, 0.5 m

Aqueous tubing kit 1 for axial ICP-OES, 9910123600

Aqueous Samples and High Dissolved Solids

Description	Use With	Part No.
Aqueous tubing kit 1 – axial	OneNeb/SeaSpray/K-style nebulizers and double- or single-pass cyclonic spray chamber	9910123600
Aqueous tubing kit 1 – radial	OneNeb/SeaSpray/K-style nebulizers and double- or single-pass cyclonic spray chamber	9910123700
Aqueous tubing kit 2 – axial	OneNeb/V-groove nebulizer and Sturman-Masters spray chamber	9910123800
Aqueous tubing kit 2 – radial	OneNeb/V-groove nebulizer and Sturman-Masters spray chamber	9910123900

Low Volatile Organic Solvents

The ICP-OES tubing kit for low volatile organic solvents includes:

- Two packs PVC Solva-flex peristaltic pump tubing, 12/pk (one each black/black and white/white)
- One FEP transfer tube (spray chamber to torch)
- Drain tubing, 1 m
- Tubing for waste line from spray chamber, 1 m
- One pack EzyFit sample inlet connectors, 10/pk
- Nebulizer capillary tubing, 2 m
- Barb connectors for joining tubing (5 ea 1/16 to 1/8 in id and 5 ea 1/16 to 1/16 in id)

Organics tubing kit 1 for radial ICP-OES, 9910124300

Low Volatile Organic Solvents

Description	Use With	Part No.
Organics tubing kit 1 – axial	OneNeb/SeaSpray nebulizer and double-pass cyclonic spray chamber	9910124200
Organics tubing kit 1 – radial	OneNeb/SeaSpray nebulizer and double-pass cyclonic spray chamber	9910124300
Organics tubing kit 2 – axial	OneNeb/V-groove nebulizer and Sturman-Masters spray chamber	9910124400
Organics tubing kit 2 – radial	OneNeb/V-groove nebulizer and Sturman-Masters spray chamber	9910124500

Organics tubing kit 3 for radial ICP-OES, 9910124700

Aromatic Organic Solvents

The ICP-OES tubing kit for aromatic organic solvents includes:

- Two packs viton peristaltic pump tubing, 12/pk (one each black/black and white/white)
- One FEP transfer tube (spray chamber to torch)
- Drain tubing, 1 m
- Tubing for waste line from spray chamber, 1 m
- OnePack EzyFit sample inlet connectors, 10/pk
- Nebulizer capillary tubing, 2 m
- Barb connectors for joining tubing (5 ea 1/16 to 1/8 in id and 5 ea 1/16 to 1/16 in id)

Aromatic Organic Solvents

Description	Use With	Part No.
Organics tubing kit 3 – axial	OneNeb/SeaSpray nebulizer and double-pass cyclonic spray chamber	9910124600
Organics tubing kit 3 – radial	OneNeb/SeaSpray nebulizer and double-pass cyclonic spray chamber	9910124700
Organics tubing kit 4 – axial	OneNeb/V-groove nebulizer and Sturman-Masters spray chamber	9910124800
Organics tubing kit 4 – radial	OneNeb/V-groove nebulizer and Sturman-Masters spray chamber	9910124900

Ketone-Based Organic Solvents

The ICP-OES tubing kit for ketone-based organic solvents includes:

- Two packs Marprene peristaltic pump tubing, 6/pk (one each black/black and white/white)
- One FEP transfer tube (spray chamber to torch)
- Drain tubing, 1 m
- Tubing for waste line from spray chamber, 1 m
- One pack EzyFit sample inlet connectors, 10/pk
- Nebulizer capillary tubing, 2 m
- Barb connectors for joining tubing (5 ea 1/16 to 1/8 in id and 5 ea 1/16 to 1/16 in id)

Organics tubing kit 6 for radial ICP-OES, 9910125300

Ketone-Based Organic Solvents

Description	Use With	Part No.
Organics tubing kit 5 – axial	OneNeb/SeaSpray nebulizer and double-pass cyclonic spray chamber	9910125000
Organics tubing kit 5 – radial	OneNeb/SeaSpray nebulizer and double-pass cyclonic spray chamber	9910125100
Organics tubing kit 6 – axial	OneNeb/V-groove nebulizer and Sturman-Masters spray chamber	9910125200
Organics tubing kit 6 – radial	OneNeb/V-groove nebulizer and Sturman-Masters spray chamber	9910125300

Volatile organics tubing kit – radial, 9910125500

Volatile Organic Samples

The ICP-OES tubing kit for volatile organic samples includes:

- Two packs Viton peristaltic pump tubing, 6/pk (one each black/black and white/white)
- Transfer tube (spray chamber to torch), 1 m
- Drain tubing, 1 m
- Tubing for waste line from spray chamber, 1 m
- One pack EzyFit sample inlet connectors, 10/pk
- Nebulizer capillary tubing, 2 m
- Barb connectors for joining tubing (5 ea 1/16 to 1/8 in id and 5 ea 1/16 to 1/16 in id)
- Connecting tubing, 1 m

Volatile Organic Samples

Description	Use With	Part No.
Volatile organics tubing kit – axial	OneNeb/SeaSpray nebulizer, cooled spray chamber and full length torch	9910125400
Volatile organics tubing kit – radial	OneNeb/SeaSpray nebulizer, cooled spray chamber and annealed (organics) torch or semi-demountable torch	9910125500

Applications Kits

Spare Sample Introduction Kits

These sample introduction kits include:

- Nebulizer
- Spray chamber
- Mounting bracket
- FEP transfer tube (spray chamber to torch)
- Nebulizer gas connector with connecting tubing and 2 tubing clamps

Axial ICP-OES

Description	Nebulizer, Spray Chamber	Part No.
Aqueous samples kit	SeaSpray nebulizer, single-pass glass cyclonic spray chamber	9810039790
High sensitivity kit for aqueous samples	OneNeb nebulizer, single-pass glass cyclonic spray chamber	9810046690
Flexible kit for use with high solids or organic solvents	OneNeb nebulizer, double-pass glass cyclonic spray chamber	9810046590
Common organic solvents kit	Conikal (K style) nebulizer, single-pass glass cyclonic spray chamber	9810039890
Volatile organic solvents kit	SeaSpray nebulizer, double-pass glass cyclonic spray chamber	9810039690

Radial ICP-OES

Description	Nebulizer, Spray Chamber	Part No.
High solids kit	SeaSpray nebulizer, double-pass glass cyclonic spray chamber	9810039590
High sensitivity kit for high solids	OneNeb nebulizer, double-pass glass cyclonic spray chamber	9810046490
Inert high solids kit (use with HF/fusions)	V-groove nebulizer, Sturman-Masters double-pass cyclonic spray chamber	9810039490
Inert high sensitivity kit for high solids (use with HF/fusions)	OneNeb nebulizer, Sturman-Masters double-pass cyclonic spray chamber	9810046390

High solids kit 2 – radial, 9910125900

High Dissolved Solids

The application kits for high dissolved solids include:

- Nebulizer
- Spray chamber
- Mounting bracket
- Agilent high-solids torch (unless otherwise stated)
- Argon saturator accessory
- ICP-OES tubing kit includes two packs peristaltic pump tubing (12/pk), one FEP transfer tube (spray chamber to torch), drain tubing (1 m length), tubing for waste line from spray chamber (1 m length), one pack Ezyfit sample inlet connectors (10/pk), nebulizer capillary tubing (2 m length), Barb connectors for joining tubing (5 ea 1/16 to 1/8 in id and 5 ea 1/16 to 1/16 in id) and connecting tubing (0.5 m length).

High Dissolved Solids

Description	Nebulizer, Spray Chamber	Part No.
High solids kit 1 – axial	SeaSpray nebulizer, double-pass glass cyclonic spray chamber	9910125600
High solids kit 1 – radial	SeaSpray nebulizer, double-pass glass cyclonic spray chamber	9910125700
High solids kit 2 – axial	V-groove nebulizer, Sturman-Masters spray chamber	9910125800
High solids kit 2 – radial	V-groove nebulizer, Sturman-Masters spray chamber	9910125900
High solids kit 3 – axial	V-groove nebulizer, Sturman-Masters spray chamber, sheath gas high-solids torch with Agilent injector design (2.4 mm id), AGM 1 auxiliary gas module for flow control over sheath gas flow	9910141000

Inert Sample Introduction Systems

The inert sample introduction systems kit is for solutions with free HF and includes:

- V-groove nebulizer
- Double-pass Sturman-Masters spray chamber
- Mounting bracket
- Semi-demountable torch with 1.8 mm id alumina injector
- ICP-OES tubing kit includes two packs peristaltic pump tubing (12/pk), one FEP transfer tube (spray chamber to torch), drain tubing (1 m length), tubing for waste line from spray chamber (1 m length), one pack Ezyfit sample inlet connectors (10/pk), nebulizer capillary tubing (2 m length), Barb connectors for joining tubing (5 ea 1/16 to 1/8 in id and 5 ea 1/16 to 1/16 in id) and connecting tubing (0.5 m length).

Inert Sample Introduction Systems

Description	Nebulizer, Spray Chamber	Part No.
Inert kit – axial	V-groove nebulizer, Sturman-Masters spray chamber	9910126000
Inert kit – radial	V-groove nebulizer, Sturman-Masters spray chamber	9910126100
Inert kit – radial	Excludes spray chamber and mounting bracket	9910126200

Inert kit – radial, 9910126100

Ketone-Based Organic Solvents

The application kits for ketone-based organic solvents include:

- Nebulizer
- Spray chamber
- Mounting bracket
- One-piece torch with 1.4 mm id injector
- ICP-OES tubing kit includes two packs peristaltic pump tubing (6/pk), one FEP transfer tube (spray chamber to torch), drain tubing (1 m length), tubing for waste line from spray chamber (1 m length), one pack Ezyfit sample inlet connectors (10/pk), nebulizer capillary tubing (2 m length), Barb connectors for joining tubing (5 ea 1/16 to 1/8 in id and 5 ea 1/16 to 1/16 in id) and connecting tubing (0.5 m length).

AGM 1 oxygen accessory (P/N 10055900) is recommended when analyzing organic solvents on axial ICP-OES.

Organics kit 6 – radial, 9910127400

Ketone-Based Organic Solvents

Description	Nebulizer, Spray Chamber	Part No.
Organics kit 5 – axial	Glass concentric (Conikal) nebulizer, double-pass glass cyclonic spray chamber	9910127100
Organics kit 5 – radial	Glass concentric (Conikal) nebulizer, double-pass glass cyclonic spray chamber, annealed torch	9910127200
Organics kit 6 – axial	V-groove nebulizer, double-pass Sturman-Masters spray chamber	9910127300
Organics kit 6 – radial	V-groove nebulizer, double-pass Sturman-Masters spray chamber, annealed torch	9910127400

Volatile Organics

The volatile organics kit reduces vapor pressure that can destabilize the plasma and lead to signal loss. The kit includes:

- Glass concentric (Conikal) nebulizer
- Water-cooled spray chamber
- Mounting bracket
- One-piece torch with 0.8 mm id injector
- ICP-OES tubing kit includes two packs peristaltic pump tubing (6/pk), transfer tube (spray chamber to torch) 1 m length, drain tubing (1 m length), tubing for waste line from spray chamber (1 m length), one pack Ezyfit sample inlet connectors (10/pk), nebulizer capillary tubing (2 m length), Barb connectors for joining tubing (5 ea 1/16 to 1/8 in id and 5 ea 1/16 to 1/16 in id) and connecting tubing (0.5 m length).

AGM 1 oxygen accessory (P/N 10055900) is recommended when analyzing volatile organic solvents. Cooled spray chamber requires a refrigerated, water recirculator able to cool fluid down to -10 °C for analysis of volatile organic solvents such as gasoline and naphtha.

Volatile Organics

Description	Nebulizer, Spray Chamber	Part No.
Volatile organics kit – axial	Glass concentric (Conikal) nebulizer, water-cooled spray chamber	9910127500
Volatile organics kit – radial	Glass concentric (Conikal) nebulizer, water-cooled spray chamber, annealed torch	9910127600

Volatile organics kit – radial, 9910127600

Common Organic Solvents

The application kits for common organic solvents include:

- Nebulizer
- Spray chamber
- Mounting bracket
- One-piece torch with 1.4 mm id injector
- The ICP-OES tubing kit includes two packs of peristaltic pump tubing (12/pk), one FEP transfer tube (spray chamber to torch), drain tubing (1 m length), tubing for waste line from spray chamber (1 m length), one pack Ezyfit sample inlet connectors (10/pk), nebulizer capillary tubing (2 m length), Barb connectors for joining tubing (5 ea 1/16 to 1/8 in id and 5 ea 1/16 to 1/16 in id) and connecting tubing (0.5 m length).

Organics kit 1 – radial, 9910126400

AGM 1 oxygen accessory (P/N 10055900) is recommended when analyzing organic solvents on axial ICP-OES.

Common Organic Solvents

Description	Application	Nebulizer, Spray Chamber	Part No.
Organics kit 1 – axial	Common, low volatility organic solvents, e.g. kerosene, xylene and white spirit	Glass concentric (Conikal) nebulizer, double-pass glass cyclonic spray chamber	9910126300
Organics kit 1 – radial	Common, low volatility organic solvents, e.g. kerosene, xylene and white spirit	Glass concentric (Conikal) nebulizer, double-pass glass cyclonic spray chamber, annealed torch	9910126400
Organics kit 2 – axial	High particulate samples dissolved in common, low volatility organic solvents, e.g. kerosene, xylene and white spirit	V-groove nebulizer, double-pass Sturman-Masters spray chamber	9910126500
Organics kit 2 – radial	High particulate samples dissolved in common, low volatility organic solvents, e.g. kerosene, xylene and white spirit	V-groove nebulizer, double-pass Sturman-Masters spray chamber, annealed torch	9910126600

SVS 1 and SVS 2 Switching Valves for ICP-OES

The SVS 1 and SVS 2 Switching Valve Systems are innovative sample introduction systems for ICP-OES that improve productivity and reduce memory effects by rinsing while the next sample is introduced. Excess sample is diverted away from the spray chamber, reducing sample carry-over. The SVS 2 doubles ICP-OES productivity by loading the next solution into a sample loop during the rinse phase, using a high speed pump.

SVS 1 Supplies

Description	Part No.
Replacement 4-port valve. Replace every 4-6 months, depending on usage	3610010100
Flangeless fittings (Qty 4 required)	1610136500
Ferrules (Qty 4 required)	1610136600
Sample inlet (EzyFit) fitting for concentric glass nebulizer on radial ICP-OES	1610136400
Capillary tubing, PFA, 0.0625 in x 0.02 in id	3710052400

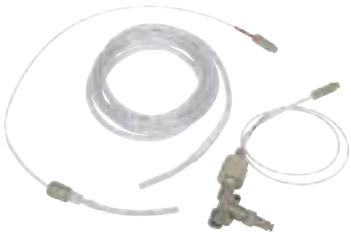
Replacement 4-port valve, 3610010100

Flangeless fittings, 1610136500

Ferrules (Qty 4 required), 1610136600

SVS 2 sample loop, 1.0 mL, 9910143400

SVS 2 tubing kit, 7910063800



Tubing kit for SVS 2 Fast Uptake Pump, 3710066700

SVS 2 Supplies

Description	Part No.
Nebulizer Ezyfit connector for SVS 0.75 mm id x 1.6 mm od tubing (10/pk)	1610146100
Replacement triple stack 4-port valve Replace every 12 months, depending on usage	3610023100
SVS 2 sample loop, 0.25 mL	9910143200
SVS 2 sample loop, 0.5 mL	9910143300
SVS 2 sample loop, 1.0 mL	9910143400
SVS 2 sample loop, 1.5 mL	9910143500
SVS 2 sample loop, 2.0 mL	9910143600
SVS 2 sample loop, 2.5 mL	9910143700
SVS 2 sample loop, 3.0 mL	9910143800
SVS 2 sample loop, 3.5 mL	9910143900
SVS 2 tubing kit Includes SVS2 carrier/rinse tubing, 300 mm (tubing color coded blue), SVS2 internal standard tubing, 300 mm (tubing color coded yellow), loop link, 80 mm (tubing color coded green/green), SVS2 internal standard link, 120 mm (tubing color coded gray/brown), SVS2 sample loop – volume 1.0 mL (tubing color coded black/black) and 2 x ¼ in 28 super flangeless fitting plus 2 x 1-16 in super flangeless ferrules	7910063800
Replacement wiper seal kit for SVS 2 Fast Uptake Pump Replace every 12 months, depending on usage. Requires pump seal installation tool P/N 7910046600	7910064500
Tubing kit for SVS 2 Fast Uptake Pump Includes PVC 2.5 mm id waste tubing, 1.5 m, PVC 2.5 mm id inlet tubing, 50 mm, valve waste tubing, 320 mm (tubing color coded red), bubble injector tubing, 400 mm, bubble injector tee piece and bubble injector 1-way valve	3710066700

ICP-MS

As ICP-MS has evolved to become the premier technique for trace metals analysis, Agilent has been at the forefront of development and design, introducing many important innovations. With the 8800 Series Triple Quadrupole ICP-MS, the innovative MS/MS operation provides precise control of reaction processes in the collision/reaction cell ensuring better performance than conventional reaction cell ICP-MS. This new technology delivers unrivaled flexibility for solving difficult applications.

7700 Series ICP-MS

ICP-MS Maintenance Schedule

Item	Actions/Comments	Typical Schedule
Argon gas	Check argon gas pressure and volume	Daily
Drain vessel	Check, empty if required	
Peristaltic pump tubing	Check for damage/deterioration	
Sampling cone, skimmer cone	Check orifice for foreign matter, deformation and enlargement Clean if required	Weekly
Foreline pump (rotary pump)	Check oil level and color Check mist filter for presence of oil	Monthly
Nebulizer	Run nebulizer test, take appropriate action as indicated	
Shield contact	Clean	
Cooling water	Check water level and condition	
Extraction/Omega lenses	Clean	3-6 Months
Other ion lenses	Clean	6 Months
Foreline pump (rotary pump)	Change oil	
Rotary pump oil mist filter	Check/replace mist filter	Annually
Penning gauge (7500 Series)	Clean and replace when necessary	
Water strainer	Check and clean	
Octopole	Clean	
Sample introduction area, e.g. spray chamber, end cap	Clean	Periodically
Torch	Clean and replace when necessary	
Electron multiplier	Evaluate and replace when necessary	
Plasma gas, auxiliary gas tubing	Check and replace when necessary	
Argon gas filter	Replace 2 years after installation	
Graphite gasket	Replace when surface or shape is damaged	

Sample Introduction Supplies

Sample Line Supplies

Description	Specifications	Use	Unit	7700 Part No.	7500 Part No.
Peri-pump sample tubing, Tygon	1.02 mm id, 40 cm	Standard for sample introduction	12/pk	G1833-65569	G1833-65569
Peri-pump tubing for ISTD, flared end, 2 stopper, blue/orange	0.25 mm id	Standard for 7700/8800 Series	12/pk	G3280-67047	G3280-67047
Peri-pump tubing for ISTD, flared end, 2 stopper, red/orange	0.19 mm id	Standard for 7500 Series	12/pk	G3280-67008	G3280-67008
Peri-pump tubing, Fluran, 3 stopper, yellow/blue	1.52 mm id	For xylene analysis	1/pk	5042-4799	5042-4799
Peri-pump tubing, silicone	1.02 mm id, 16 in L		6/pk	G1820-65217	G1820-65217
Peri-pump ISTD tubing, Tygon	0.19 mm id, 40 cm		12/pk		G1833-65571
Peri-pump drain tubing, Ismaprene	1.52 mm id, 0.75 wall, 40 cm		12/pk	G1833-65570	G1833-65570
Sample tubing, PFA	0.5 mm id, 1.6 mm od, 5 m		1/pk	G1820-65105	G1820-65105
	0.2 mm id, 1.6 mm od, 70 cm		3/pk	G1833-65573	G1833-65573
	0.15 mm id, 1.6 mm od, 70 cm		3/pk	G1833-65572	G1833-65572
Sample tubing with PEEK guide, PFA	0.3 mm id, 1.6 mm od, 70 cm		5/pk	G1820-65531	G1820-65531
	0.2 mm id, 1.6 mm od, 70 cm		5/pk	G1820-65527	G1820-65527
	0.15 mm id, 1.6 mm od, 70 cm		5/pk	G1820-65526	G1820-65526
ISTD tubing, PFA	0.3 mm id, 1.6 mm od, 3 m	For online ISTD addition	1/pk	G1820-65478	G1820-65478
Online ISTD addition kit			1/pk	G3280-60590	G1833-65071
Plastic tubing cutter			1/pk	8710-1930	8710-1930
Sample tray			1/pk	G3280-40103	
Plug for cross joint			3/pk	G3138-65129	G3138-65129
PTFE nut for cross joint		For 1.6 mm od tubing	10/pk	5064-8023	5064-8023
Front and back ferrule		For 1.6 mm od tubing	10/pk	5064-8024	5064-8024

Peri-pump sample tubing, Tygon, G1833-65569

Sample tubing, PFA, G1820-65105

Plastic tubing cutter, 8710-1930

Nebulizers and Supplies

Description	Specifications	Use	Unit	7700 Part No.	7500 Part No.
MicroMist Nebulizer	Borosilicate glass	Standard on 7700x/e, 8800 and 7500cx/ce. Suitable for most sample types except those containing HF or suspended particulates. When ordered for the 7500a, the spray chamber end cap (P/N G1833-65475) is also required.	1/pk	G3266-65003	G3266-65003
Sample tubing	0.25 mm id, 700 mm, with connector	For MicroMist Nebulizer	10/pk	G3266-80010	G3266-80010
Sample tubing	0.5 mm id, 700 mm, with connector	For MicroMist Nebulizer	10/pk	G3266-80011	G3266-80011
Carrier gas connector		For MicroMist Nebulizer	1/pk	G3266-80015	G3266-80015
Nebulizer cleaner		For MicroMist Nebulizer	1/pk	G3266-80020	G3266-80020
MicroFlow Nebulizer	PFA, 200 µL/min	For analysis of high purity and HF samples	1/pk	G3139-65100	G3139-65100
MicroFlow Nebulizer with I-AS probe	PFA, 200 µL/min	Standard on 7700s, 8800 semicon configuration and 7500s. For analysis of high purity and HF samples when using the Integrated Autosampler (sample uptake tube terminates as a sampling probe).	1/pk	G3139-65102	G3139-65102
MicroFlow Nebulizer	PFA, 20-50 µL/min		1/pk	G3139-65106	G3139-65106
MicroFlow Nebulizer with I-AS probe	PFA, 20-50 µL/min		1/pk	G3139-65108	G3139-65108
Carrier gas line connector		For MicroFlow Nebulizer	2/pk	G1833-65583	G1833-65583

(Continued)

MicroMist Nebulizer, G3266-65003

Sample tubing, G3266-80010

Carrier gas connector, G3266-80015

Nebulizer cleaner, G3266-80020

MicroFlow Nebulizer with I-AS probe, G3139-65102

Carrier gas line connector, G1833-65583

Nebulizers and Supplies

Description	Specifications	Use	Unit	7700 Part No.	7500 Part No.
Mira Mist Nebulizer	PTFE		1/pk	G3161-80000	G3161-80000
Mira Mist Nebulizer	PEEK	For high solids applications such as environmental, geological, etc. Not for semiconductor use since it does not self aspirate. When ordered for the 7500a, the spray chamber end cap (G1833-65475) is also required (included with 7500cx/cs).	1/pk	G3161-80001	G3161-80001
Babington Nebulizer	Includes Viton O-ring, PTFE sample tubing, and connector	Use to introduce samples with high matrix and high total salts. Clean when contaminated or when orifices are clogged.	1/pk		G1820-60453
End cap for Babington Nebulizer, polypropylene	Includes Viton O-rings	Replace when memory effects do not disappear after cleaning. Insert nebulizer in middle of end cap all the way through. Attach end cap to spray chamber with "TOP" mark facing up.	1/pk		G1833-65476
Babington Nebulizer removal tool			1/pk		G1820-65345
PFA Concentric Nebulizer	PFA 50 µL/min	Recommended for VPD and high matrix semiconductor, specifically Si matrices above 100 mg/L, and for H_3PO_4. Use in free aspiration mode.	1/pk	G3285-80002	
PFA Concentric Nebulizer with I-AS probe	PFA 50 µL/min	Recommended for VPD and high matrix semiconductor, specifically Si matrices above 100 mg/L, and for H_3PO_4. Use in free aspiration mode.	1/pk	G3285-80003	
Concentric Nebulizer, Pyrex	Use with P/N G1820-65052 Argon gas connector, P/N G1820-60160 Connector kit, P/N G1820-65121 end cap	Use with clean samples only. Not resistant to hydrochloric acid. Clean with a 5% HNO_3 (v/v) bath; do not use ultrasonic bath.	1/pk	G1820-65030	G1820-65030
Concentric Nebulizer, quartz	Use with P/N G1820-65337 Quartz spray chamber, P/N G1820-80237 Quartz connecting pipe	Recommended for trace analysis of clean samples. Lower contamination level than Pyrex. Clean using 5% HNO_3 (v/v) bath; do not use ultrasonic bath.	1/pk	G1820-65138	G1820-65138
Connector for carrier gas line, polypropylene	4 mm tubing, includes ferrule and O-ring	For gas line connection to Concentric Nebulizer	1/pk	G1820-65052	G1820-65052

(Continued)

Polypropylene connector, G1820-65052

Nebulizers and Supplies

Description	Specifications	Use	Unit	7700 Part No.	7500 Part No.
Sample tubing with connector, PTFE	Tool included	For Babington Nebulizer, replace when heavily contaminated by high matrix samples.	1/pk		G1820-65276
Sample line connector	Includes Viton O-ring	Connects Concentric Nebulizer with sample line. Port with large hole connects to nebulizer; smaller port connects with sample tubing.		G1820-60160	G1820-60160
Union fitting	4 mm tubing	For PFA Concentric Nebulizer	1/pk	5064-8078	5064-8078
Ferrule and Viton O-ring kit for carrier gas line connector		For Babington/Concentric Nebulizer	1/pk	G1820-65533	G1820-65533
End cap for Concentric Nebulizer, PTFE	Includes Viton O-rings	Connects the Concentric Nebulizer (Pyrex or Quartz) with the spray chamber. For MicroMist, MicroFlow, and other concentric nebulizers.	1/pk		G1833-65475
O-rings for Babington Nebulizer, Viton		Used to create seal between Babington Nebulizer and end cap.	4/pk		G1820-65199
O-ring kit for Concentric Nebulizer, Viton	2 sizes, 10 each		20/pk	G1820-65491	G1820-65491
O-rings for Concentric Nebulizer, for organic solvents (3 types)			4/pk	G1820-65520	G1820-65520
O-rings for end cap, Viton		Use for the end cap of the Babington Nebulizer, Cross Flow Nebulizer and Concentric Nebulizer.	5/pk		G1820-65198
O-rings for end cap, for organic solvents			2/pk		G1820-65518
CrossFlow Nebulizer	Includes bushing, carrier gas line connector, blend gas line connector, sample tubing, and gas line tubings with inner sleeves	Standard nebulizer for the inert kit. Resistant to hydrofluoric acid. Set carrier gas pressure to 500 kPa (5 kg/cm^2). Clean with 5% HNO_3 (v/v) bath. Replace when memory effects remain after cleaning.			G1833-65462
O-ring A for concentric nebulizer	Perfluoro, 1.07 mm id		5/pk	G3280-67115	
O-ring B for concentric nebulizer	Perfluoro, 3.8 mm id		5/pk	G3280-67116	

Ferrule and Viton O-ring kit for carrier gas line connector, G1820-65533

PFA inert kit, sapphire, 2.5 mm id, G4912-68000

End cap, G3285-80020

Connector tube with gas port, G4912-80016

Sapphire injector for PFA inert kit, 2.5 mm id injector, G3285-80034

PFA Inert Sample Introduction Kit Supplies

The PFA inert sample introduction kits replaces the standard quartz sample introduction parts with those suitable for the analysis of high purity and HF samples. Kit includes endcap (PFA), spray chamber (PFA), connecting pipe, demountable torch with PFA base and torch injector (either Pt or sapphire). The kit with the sapphire injector is recommended for volatile organic solvents. The kit with the Pt injector is recommended for semiconductor applications. Requires but does not include a nebulizer. The PFA nebulizer is recommended and should be ordered separately

PFA Inert Sample Introduction Kit Supplies

Description	7700 Part No.	7500 Part No.
PFA inert kit, sapphire, 2.5 mm id Torch included	G4912-68000	
PFA inert kit, platinum, 2.5 mm id Torch included	G4912-68001	
PFA inert kit, sapphire, 1.5 mm id Torch included	G4912-68002	
PFA inert kit, platinum, 1.5 mm id Torch included	G4912-68003	
Inert sample introduction kit, sapphire, 2.5 mm id Torch not included		G3285-80014
Inert sample introduction kit, platinum, 2.5 mm id Torch not included		G3285-80015
Inert sample introduction kit, sapphire, with O_2 port, 1.5 mm id Torch not included		G3285-80016
Inert sample introduction kit, platinum, with O_2 port, 1.5 mm id Torch not included		G3285-80017
End cap	G3285-80020	G3285-80020
Spray chamber	G3285-80021	G3285-80021
Drain tube	G4912-80014	G3285-80022
Long connector tube	G3285-80024	G3285-80024
Connector tube with gas port	G4912-80016	G3285-80023
O-ring for injection assembly, 10/pk	G3285-80085	G3285-80085
Sapphire injector for PFA inert kit, 2.5 mm id injector	G3285-80034	G3285-80034
Platinum injector for PFA, 2.5 mm id	G3285-80035	G3285-80035
Sapphire injector for PFA inert kit, 1.5 mm id injector	G4912-80010	
Sapphire injector for PFA inert kit with O_2 port, 1.5 mm id		G3285-80036
Platinum injector for PFA inert kit, 1.5 mm id injector	G4912-80011	G3285-80037
Demountable torch (no injector)	G4912-80013	G4912-80013

PP Inert Sample Introduction Kit Supplies

Description	7500 Part No.
Spray chamber, polypropylene (sapphire tube)	G1833-65463
Inert torch, quartz, without injector	G1833-65422
Platinum injector for inert torch, 2.0 mm id	G1833-65409
Platinum injector for inert torch, 2.5 mm id	G1833-65415
Platinum injector for inert torch, 1.5 mm id	G1833-65416

HMI Kit Supplies for 7500 Series

Description	Part No.
Plug for make-up gas connector	G3270-20067
Inner sleeve	5022-1703
Gas connector	5042-4774
End cap assembly	G3270-60207
Torch, 2.5 mm, 2 projections	G3270-80043
Quartz connector tube with dilution port for HMI	G3270-80024
Quartz connector tube (straight)	G3270-80025
Connector rod, oxygen	G3270-80026

Connector rod, dilution, G3270-80024

Spray Chambers

Description	Use	Unit	7700 Part No.	7500 Part No.
Spray chamber, double pass design, quartz	Standard for 7700/8800 Series and 7500 Series		G3280-80008	G1820-65337
End cap for spray chamber			G3280-60008	
Connector for gas line at end cap			5042-4775	
Plug for make-up gas connector			G3270-20067	
End cap nut for nebulizer connection			0535-1082	
Drain tubing assembly			G3280-60555	
Drain tubing	Tubing between peri-pump tubing and drain tank		G1820-65515	G1820-65515
Drain tubing, Tygon, 3/32 x 5/32 in, 5 m			G3160-67000	
Drain tank, polyethylene, 4 L			5042-4769	5042-4769
Drain tank with PVC connector, 1 L			G1820-65016	G1820-65016
Drain tank for organic solvents			G1820-65505	G1820-65505
Drain tubing kit Includes 2 connectors, 1 bushing, 1 tubing (4 mm id, 12 cm)	Tubing between spray chamber and peri-pump tubing		G1833-65411	G1833-65411
Bushing at spray chamber drain, Viton		5/pk		G1820-65482
Bushing at spray chamber drain, for organic solvents	For use with organic solvents			G1820-65504
Connector for spray chamber drainage, polypropylene				G1820-65503
Spray chamber	For ultra trace B analysis		G3280-80503	G3270-80300
Connector, quartz	Between spray chamber and torch			G1833-65426
Connector, polypropylene	Between spray chamber and torch			G1833-65464
T-connector for optional gas introduction, quartz	Between spray chamber and torch			G1833-65427
O-rings for polypropylene connector, Viton		10/pk		G1833-65480
Clamps	Used to hold connectors	2/pk		G1833-65430
Tygon tubing, 3 m	For drain to drain tank		G3280-60077	G3280-60077
Organic solvent introduction kit for 7700 Series Replaces the standard quartz torch, sample introduction and drain parts with those suitable for analysis of volatile organic solvents. Includes quartz torch with 1.5 mm id injector (1.0 mm id torch is not supplied, but is available for volatile organics), sample tubing with guide (5 pcs 0.15 mm id x 70 cm length and 5 pcs 0.2 mm id x 70 cm length), sample tubing (0.3 mm id x 3 m length) peristaltic pump tubing for drain (30 pcs) and organic solvent warning label. A quartz concentric nebulizer is also recommended (not supplied). A Pt sampling cone is also required, when O2 Carrier Gas is added to allow analysis of organic solvents.			G3280-60580	

End cap for spray chamber, G3280-60008

Spray chamber, quartz, G3280-80008

Connector for gas line at end cap, 5042-4775

Drain tubing assembly, G3280-60555

Torch and Components

Description	Specifications	Use	7700 Part No.	7500 Part No.
Torch, quartz	2.5 mm id	Standard for 7700/8800 Series and 7500 Series Not suitable for samples containing hydrofluoric acid	G3280-80053	G3270-80043
Torch, quartz	1.5 mm id, taper type	For use with organic solvents. Not suitable for samples containing hydrofluoric acid	G3280-80080	G1833-65424
Torch, quartz	1.0 mm id, taper type	For use with organic solvents. Not suitable for samples containing hydrofluoric acid	G3280-80081	G1833-65425
Shield plate, long life		Use with the bonnet.	G1833-65419	G1833-65419
Bonnet (quartz ring for shield torch)		Use with shield plate (P/N G1833-65406 or P/N G1833-65419) for Shield Torch system	G1833-65421	G1833-65421
RF coil			G3280-60638	G1833-65432
Alignment plate for RF coil			G1833-66011	G1833-66011
Quartz connector tube with dilution port for HMI			G3270-80024	G3270-80024
Quartz connector tube (straight)			G3270-80025	G3270-80025
Clamps, 2/pk		Used to hold connectors	G1833-65430	G1833-65430

See PFA Inert Sample Introduction Kit Supplies table for the torch for inert kit

TIPS & TOOLS

The torch must be completely dried before installing and igniting the plasma. Replace if chipped, cracked or distorted.

Torch, quartz, G3280-80053

Bonnet for Shield Torch, G1833-65421

Connector rod, dilution, G3270-80024

Interface Cones and Ion Lenses

Interface Cone Guide for Agilent 7700 Series ICP-MS/8800 Triple Quad ICP-MS			
Description	**Part No.**	**7700x/e and 8800**	**7700s and 8800 semicon**
Sampling cone			
Nickel sampling cone	G3280-67040	Std	✓
Platinum sampling cone	G3280-67036	✓	Std
Nickel plated sampling cone	G3280-67061	✓	✓
Platinum sampling cone, 18 mm insert	G3280-67056	✓	✓
Skimmer cone			
Nickel skimmer cone	G3280-67041	Std	
Platinum skimmer cone	G3280-67060	✓	
Platinum skimmer cone, nickel base	G3280-67063	✓	
Platinum skimmer cone, copper base	G3280-67064		Std
Nickel skimmer cone	G3280-67066		✓
Platinum skimmer cone, nickel base	G3280-67065		✓
Copper skimmer cone	G3280-67067		✓
Skimmer base			
Skimmer base, stainless steel	G3280-60608	Std	
Skimmer base, brass	G3280-60621	✓	
Skimmer base, brass	G1833-65590		Std
Skimmer base, stainless steel	G1833-65591		✓
Skimmer base (offset), brass, for special application	G3280-60381		✓

Key

✓: Compatible Part
Std: Fitted as standard when instrument shipped from factory

Sampling cone, nickel, G3280-67040

Platinum sampling cone, G3280-67036

TIPS & TOOLS

Did you know you can save money and help the environment by returning your used Agilent platinum ICP-MS cones? Find out more about the trade-in credits on used Pt cones for the 7700/8800/7500 ICP-MS at **www.agilent.com/chem/ptcone**

Recommendations on What Cone to Use		
Type of Cone	**For Which Model?**	**Recommended Application**
Nickel (Ni) sample/skimmer cones	Standard on 7700x/e and 8800	Suitable for most common applications. Provides most economical operation
Ni-plated sampling cone		For samples containing > 0.5% HCl, or for routine operation with HMI with max. aerosol dilution ratio
Platinum sample/skimmer cones	Standard on 7700s and 8800 semicon configuration. Optional for other models	Required for analysis of aggressive acids (esp. HF) and when O_2/Ar option gas is used for analysis of organic solvents
Pt skimmer with Ni base		Recommended for organics analysis. Requires the brass skimmer base
Pt skimmer with Cu base	Standard on 7700s and 8800 semicon configuration	Recommended for the lowest LODs and for higher matrix samples. Requires the brass skimmer base

Skimmer cone, nickel, G3280-67041

Platinum skimmer cone, G3280-67060

Skimmer base, stainless steel, G3280-60608

Interface Cone Guide for Agilent 7500 Series								
Description	**Part No.**	**7500a**	**7500i**	**7500s**	**7500c**	**7500ce/cx**	**7500cs**	**T-mode**
Sampling cone								
Nickel sampling cone	G1820-65238	Std	Std	✓	Std	Std	✓	
Platinum sampling cone, 10 mm insert	G1820-65239	✓	✓	Std	✓	✓	Std	
Platinum sampling cone, 18 mm insert	G1820-65360	✓	✓	✓	✓	✓	✓	
Nickel sampling cone for T-mode	G1820-65480	T-mode	T-mode	T-mode				✓
Skimmer cone								
Nickel skimmer cone	G1820-65050	Std	Std	✓				
Nickel skimmer cone	G3270-65024					Std		
Nickel skimmer cone	G1833-65497				Std		✓	
Platinum skimmer cone	G1820-65237	✓	✓	Std				
Platinum skimmer cone	G1833-65092				✓			
Platinum skimmer cone	G1833-65132						Std	
Platinum skimmer cone (Ni base)	G3270-60106					✓	✓	
Copper skimmer cone	G3270-60643						✓	
Nickel skimmer cone for T-mode	G1820-65481	T-mode	T-mode	T-mode				✓
Skimmer base								
Stainless steel base for nickel skimmer	G1833-65407	Std	Std	✓				✓
Stainless steel base for nickel skimmer	G1833-65591					Std	✓	
Stainless steel base for nickel skimmer	G1833-65498				Std			
Brass base for platinum skimmer	G1833-65408	✓	✓	Std				
Brass base for platinum skimmer	G1833-65505				✓			
Brass base for platinum skimmer	G1833-65590					✓	Std	

Key

✓: Compatible Part
Std: Fitted as standard when instrument shipped from factory

NOTES:

- 18 mm Pt cone insert is recommended for measuring H_2SO_4 above 2%
- Pt T-mode cones are not available
- T-mode is not used with ORS models

Sampling and Skimmer Cone Supplies

Description	7700/8800 Part No.	7500 Part No.
Interface wrench for sampling cone	G3280-01507	G1833-65405
Retaining ring for sampling cone	G3280-20504	
Graphite gasket for sampling cone, 3/pk	G3280-67009	
Interface wrench for skimmer cone removal	G3280-60502	G1833-65079
Screws for skimmer base, 4/pk	G1820-65435	G1820-65435
Cone cleaning detergent, 1 gallon	5188-5359	5188-5359
Alumina powder, abrasive, 1 kg	8660-0791	8660-0791
Cotton swab, ultra-fine cone bud shape, both ends, 100/pk	9300-2574	9300-2574
O-ring for sampling cone, Viton		G1820-65025

Interface wrench for sampling cone, G3280-01507

Retaining ring for sampling cone, G3280-20504

Ion Lens System Components for 7700/8800 Series

Description	Part No.
7700x/e and 8800	
Extraction-offset lens assembly	G3280-67039
Extraction lens 1	G3280-60612
Extraction lens 2	G3280-60613
Omega bias lens	G3280-01650
Omega lens	G3280-60609
Screw and spacer kit for x-lens	G3280-67037
Spacer (deflect/plated b), 4/pk	G3280-67110
7700s and 8800 semicon configuration	
Extraction-omega lens assembly	G3280-67035
Extraction lens 1	G1833-65592
Extraction lens 2	G1833-65593
Omega bias lens	G3280-20646
Omega lens	G3280-20653
Screw and spacer kit for s-lens	G3280-67038

Extraction-offset lens assembly, G3280-67039

Octopole, G3280-67045

Ion Lens System Components for 7700/8800 Series

Description	Part No.
7700x/s/e and 8800 series	
Reaction cell assembly	G3280-60650
Octopole	G3280-67045
Cell focus lens	G3280-20633
Cell entrance lens	G3280-20618
Cell exit lens	G3280-20664
Screw/spacer/O-ring for cell	G3280-67044
Tubing for cell gas	G3280-20663
Deflect lens	G3280-20628
Plate bias	G3280-60615
Polishing paper kit Waterproof sheets, #400 and #1200, 5 of each	G1833-65404
Manual vent valve	G3280-67046
Offset skimmer tool	G3280-60671

Ion Lens System Components for 7500 Series

Description	Part No.
7500a/i/s/c/cs	
Plate bias (for Eagle Q-pole)	G1833-65494
Plate bias (for Slim ring Q-pole)	G1833-65444
Polishing paper kit Waterproof sheets, #400 and #1200, 5 of each	G1833-65404
7500a/i/s	
Extraction lens 1	G1833-65417
Extraction lens 2	G1833-65413
Omega lens assembly	G1833-65418
Screw kit for Extraction lens	G1833-65024
Screw kit for Omega lens	G1833-65025

(Continued)

Extraction lens 1, G1833-65417

Extraction lens 2, G1833-65413

Ion Lens System Components for 7500 Series

Description	Part No.
7500c	
Einzel lens 1	G1833-65500
Einzel lens 2	G1833-65501
Einzel lens 3	G1833-65502
Extraction lens	G1833-65499
Octopole	G1833-65094
Octopole assembly (includes cell entrance/exit without O-ring)	G1833-65503
Screw and spacer kit for extraction Einzel lens	G1833-65578
Screw kit for reaction cell	G1833-65088
Tubing for reaction gas, 2/pk	G1833-65089
7500ce/cx	
O-ring for reaction cell	G1833-66035
Extraction-Omega lens assembly	G3270-65023
Extraction lens 1	G3270-65028
Extraction lens 2	G3270-65029
Omega lens	G3270-65030
Omega bias lens	G3270-65031
Screw and spacer kit for Extraction and Omega lens	G3270-60639

(Continued)

Ion Lens System Components for 7500 Series

Description	Part No.
7500cs	
Extraction lens 1	G1833-65592
Extraction lens 2	G1833-65593
Extraction-Omega lenses assembly	G1833-65596
Omega bias lens	G1833-65594
Omega lens	G1833-65595
Screw and spacer kit for ion lens	G1833-65125
Cell entrance lens	G1833-65598
Cell exit lens	G1833-66000
Cell focus lens	G1833-65597
7500cs/ce/cx	
Focus lens for Q-pole	G1833-65599
Octopole	G1833-65133
Octopole assembly (includes cell focus, cell entrance/exit, and QP focus)	G1833-65134
Reaction cell assembly	G1833-66001
Screw and spacer kit for reaction cell	G1833-65138
Plate bias for S/N JP14100050 – JP14100313	G1833-65513
Plate bias for S/N JP14100314 or later	G1833-65562
Reaction cell assembly, stainless steel	G3270-65060
O-ring for reaction cell, 2/pk	G3270-65036

Electron multiplier, 5190-0108

Electron Multipliers

Description	8800 Part No.	7700 Part No.	7500 Part No.
Electron multiplier (ETP)			5184-1983
Electron multiplier (HPK)			G1833-65575
Electron multiplier	5190-0123	5190-0108	

Vacuum System Supplies

- When plasma is ON, check pump oil level every three months
- Maintain oil level between Max and Min levels on the gauge
- Standard frequency for changing the oil is approximately every six months

Oil mist filter element for E2M18, 1535-4970

Odor element for oil mist filter, 5063-9153

Vacuum System Supplies

Description	Unit	7700/8800 Part No.	7500 Part No.
Oil mist filter element for E2M18		1535-4970	1535-4970
Oil mist filter kit for E1M18/E2M28		3162-1056	3162-1056
O-Ring for vacuum chamber, Viton		5042-4790	5042-0901
Odor element for oil mist filter	5/pk	5063-9153	5063-9153
Foreline pump (rotary pump) oil, 4 L	1 gal	6040-0798	6040-0798
Foreline pump (rotary pump) oil, Inland 45, 1 L	1 liter	6040-0834	6040-0834
Foreline pump fluid (Fomblin06/6) 1 L for use with strong acid samples	1 liter	5069-4478	5069-4478
Electrode kit for penning gauge			G1820-81013
Tube AIM gauge			G1820-81012
O-rings for vent valve, Viton	2/pk		G1833-65332

WARNINGS & CAUTION

Be careful when changing oil because it may have absorbed dangerous substances. The oil in the foreline pump (rotary pump) on the interface side of a 7700/8800/7500 equipped with a hydrofluoric acid resisting introduction system is especially dangerous.

DO NOT TOUCH THE OIL WITH BARE HANDS.

Tray B, 53 position for 18 mL vials, PP, G3160-80061

Peristaltic pump tubing set with connectors, G3160-65326

Autosampler Supplies

The Integrated Autosampler is ideal for ultra-trace analysis and small sample volumes (as low as 0.5 mL). It features a pumped rinse station and offers flexible rack configurations with a max. capacity of 89 vials, plus 3 rinse vials.

Integrated Autosampler(I-AS) Supplies

Description	Unit	Common Part No.
Tray A, 89 position for 6 mL vials, PP		G3160-80060
Tray B, 53 position for 18 mL vials, PP		G3160-80061
Tray C, 18 position for 50 mL vials, PP		G3160-80062
Tray D, 79 x 2 mL + 10 x 18 mL positions, PP		G3160-80063
Tray E, 79 x 6 mL + 10 x 18 mL positions, PP		G3160-80064
Tray F, 15 position for use in special semiconductor applications, holds 15 vials of up to 48 mm od x 55 mm high, PP		G3160-80065
PFA vials, 1.5 mL for use with Tray D	10/pk	G3160-65317
6 mL polypropylene vials, for use with Tray A and E	200/pk	G3160-65303
18 mL polypropylene vials, for use with Tray B, D and E	55/pk	G3160-65304
50 mL polypropylene vials, for use with Tray C	20/pk	G3160-65305
2 mL polyethylene vial, for use with Tray D	200/pk	G3160-65315
PFA needle, 0.3 mm id, standard probe		G3160-65306
Rinsing bottle, 100 mL	3/pk	G3160-65307
Tray cover		G3160-65321
Rinse fluid inlet/outlet tubing (for I-AS with diaphragm pump)		G3160-65320
PFA Needle, 0.8 mm id, for use with the ISIS		G3160-65324
Tubing holder, PEEK, for use with MicroFlow nebulizer (without a sampling probe) and 2 mL vials		G3160-65325
Needle holder		G3160-80041
Holder for carry tray cover		G3160-60015
Peristaltic pump tubing set with connectors	1 set	G3160-65326
Peristaltic pump tubing set with connectors	5 sets	G3160-65327
Drain tubing, Tygon, from peristaltic pump to rinse bottle or drain bottle	2 pieces	G3160-65328
Serial-USB converter cable for use with G7201A MassHunter		G3160-80200

ASX-500 Series Autosampler Supplies

The ASX-500 Series Autosampler is fully automated, making it ideal for medium to high sample throughput applications. It features a pumped rinse station and offers flexible rack configurations with a max. capacity of 4 racks providing up to 360 vial positions with 5 x 250 mL bottle positions and bottles for rinse and tune solutions.

ASX-500 Series Autosampler Supplies

Description	Common Part No.
Sample rack, 21 position, 50 mL vials	G3286-80103
Sample rack, 24 position, 30 mL vials	G3286-80104
Sample rack, 40 position, 20 mL vials	G3286-80105
Sample rack, 60 position, 14 mL vials	G3286-80106
Sample rack, 90 position, 8 mL vials	G3286-80107
Sample probe, 0.8 mm id (red band)	G3286-80100
Sample probe, 0.3 mm id (black band)	G3286-80101
Sample probe, 0.5 mm id (blue band)	G3286-80102
Carbon fiber sample probe, 0.8 mm id (red band)	G3286-80110
Carbon fiber sample probe, 0.3 mm id (black band)	G3286-80111
Carbon fiber sample probe, 0.5 mm id (blue band)	G3286-80112
Rinse/drain tubing hookup kit	G3286-80117
Drain pump tubing and connector kit (Tygon)	G3286-80118
Z-axis drive assembly with nylon cable	G3286-80230
Rinse station	G3286-80224
USB 2.0 cable (10 ft.) for use with G7201A MassHunter	G1680-63720

ASX-520 Autosampler

Sample rack, 60 position, G3286-80106

Sample probe, G3286-80102

Drain pump tubing and connector kit (Tygon), G3286-80118

Rinse station, G3286-80224

Peripherals Supplies

The Agilent Integrated Sample Introduction System (ISIS) provides the highest sample throughput, using either high-speed uptake with constant flow nebulization or discrete sampling using a six-port valve and sample loop with time resolved acquisition. This allows for advanced sample handling and sample delivery options for advanced applications. The ISIS also simplifies handling of high matrix samples by reducing interface exposure to sample matrix. This means less signal drift and improved precision plus less frequent cone cleaning.

Agilent Integrated
Sample Introduction System (ISIS)

ISIS Supplies

Description	Specifications	Unit	7700 Part No.	7500 Part No.
Comprehensive spares for ISIS Provides a complete set of spare sample lines and connectors, plus fittings, mixing coil, block adaptors, clamps and tray. Includes Qty 1 of these components (unless listed otherwise): Sample tubing (0.5 mm id x 5 m length, 0.3 mm id x 3 m length, 2.0 mm id x 5 m length, 0.8 mm id x 5 m length), peristaltic pump tubing (0.89 mm id, 3 stoppers, Tygon, 12/pk), peristaltic pump tubing (flared end, Tygon, 2 stopper (Blue/Orange), 0.25 mm id, 12/pk), peristaltic pump tubing (1.02 mm id, 2 stoppers, Tygon, 12/pk), peristaltic pump tubing (flared end, Tygon, 2 stopper (Blue/Orange), 0.25 mm id, 12/pk), tubing adapter 2/pk, 2 x tag for tubing identification (10/pk), Tee joint, Cross joint, Union joint, PTFE nut for 3 mm od tubing (10/pk), Front and Back Ferrule for 3 mm od Tubing (10/pk), PTFE nut for 1.6 mm od tubing (10/pk), Front and Back Ferrule for 1.6 mm od Tubing (10/pk) and Tubing Clamp (Small-10/pk, Large-5/pk), Spiral Tubing 5 m			G4911-67001	G3138-65006
Preconfigured tubing kit for auto dilution Includes set of sample lines and connectors for auto-dilution			G4911-68201	G3138-65024
Preconfigured tubing kit for discrete sampling Includes set of sample lines and connectors for discrete sampling			G4911-68202	G3138-65025
Preconfigured kit (high-throughput)				G3138-65023
Peristaltic pump tubing, Tygon	0.89 mm id, 3 stops	12/pk	5064-8014	5064-8014
Peristaltic pump tubing	0.25 mm id, 2 stops, flared end	12/pk	G4911-67000	
Peristaltic pump tubing, Tygon	0.25 mm id, 3 stops	12/pk		5064-8034
Peristaltic pump tubing, Tygon	0.25 mm id, 2 stops	12/pk		5064-8015
Peristaltic pump tubing, Tygon	1.02 mm id, 2 stops	12/pk	5064-8028	5064-8028
Peristaltic pump tubing, Tygon	2.29 mm id, 2 stops	12/pk	5043-0010	5043-0010
Peristaltic pump tubing adapter		2/pk	5064-8026	5064-8026
Peristaltic pump tubing adapter	2.29 mm id		G4911-20021	

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ISIS Supplies

Description	Specifications	Unit	7700 Part No.	7500 Part No.
Sample tubing, PTFE	0.8 mm id, 1.6 mm od		5064-8016	5064-8016
Sample tubing, PTFE	2 mm id, 3 mm od		5064-8020	5064-8020
Sample tubing, PFA	0.5 mm id, 1.6 mm od, 5 m	1/pk		G1820-65105
ISTD tubing, PFA	0.3 mm id, 1.6 mm od, 3 m	1/pk		G1820-65478
T-joint			5064-8017	5064-8017
T-joint with earth block			G3280-67062	
Cross joint			5064-8018	5064-8018
Union joint			5064-8019	5064-8019
PTFE nut	For 3 mm od tubing	10/pk	5064-8021	5064-8021
Front and back ferrule	For 3 mm od tubing	10/pk	5064-8022	5064-8022
PTFE nut for cross joint	For 1.6 mm od tubing	10/pk	5064-8023	5064-8023
Front and back ferrule	For 1.6 mm od tubing	10/pk	5064-8024	5064-8024
Tubing adapter				G3138-65158
Tubing clamp			5064-8027	5064-8027
Spiral tubing, 5 m			5064-8029	5064-8029
Wrench for valve maintenance			5064-8032	5064-8032
Tag for tubing identification		10/pk	5064-8033	5064-8033
APG remote cable			5182-2581	5182-2581
Joint holder				G3138-65102
Joint holder for nebulizer pump			G4911-01201	
Joint holder for ISIS Pump			G3138-65103	G3138-65103
Sample line connector				G3138-65104
Rotor seal for valve			G3138-65117	G3138-65117
Nut for valve		6/pk	G3138-65118	G3138-65118
Ferrule for valve		6/pk	G3138-65119	G3138-65119
Mixer			G3138-65121	G3138-65121
Sample loop, 100 µL			G3138-65122	G3138-65122
Plastic tray				G3138-65125
Tray for ISIS			G4911-60011	

Front and back ferrule, 5064-8024

ISIS Hydride Generation Accessory Supplies

Description	Specifications	Unit	Common Part No.
Hydride generation kit for 7700/8800 Series with ISIS (Enables hydride generation analysis with improved sensitivity with hydride forming elements such as As, Se and Sb, and for Hg using the vapor-generation technique)			G4911-68210
Gas/Liquid separator set Includes separator gas chamber, membrane filter O-ring, separator holder, exclusive concentric nebulizer, O-ring for nebulizer, cyclone chamber and membrane filters (5/pk)			G3138-65130
Separator gas chamber			G3138-65131
O-ring for filter			G3138-65132
Membrane filter		10/pk	G3138-65137
Separator holder			G3138-65133
Exclusive concentric nebulizer			G3138-65134
O-ring for nebulizer		2/pk	G3138-65135
Cyclone chamber			G3138-65136
Peristaltic pump tubing, PharMed	2.54 mm id, 2 stops	6/pk	G3138-65128
Tubing for gas line	3 mm id, 4 mm od, 5 m		G3138-65138
Plug for cross joint		3/pk	G3138-65129
Reducing union connector	8 x 4 mm		G3138-65144
Reducing union connector	6 x 3 mm		G3138-65139
Reducing union connector	6 x 4 mm		G3138-65140
Plug for carrier gas connector	4 mm od	3/pk	G3138-65141
Y connector for pump tubing	2.5 mm id	5/pk	G3138-65143

Separator gas chamber, G3138-65131

Membrane filter, G3138-65137

Consumables Kits for 7700/8800 Series

Description	Kit Contents	Part No.
Basic consumables kit for 7700x/e and 8800 ICP-MS	Includes peri-pump tubing for sample introduction, 12/pk; peri-pump tubing for drain, 1.52 mm, 12/pk; peri-pump tubing for ISTD, 0.19 mm, 12/pk; sample tubing, PFA, 0.5 mm id, 1/6 mm od, 5 m; torch, quartz, 2.5 mm id; graphite gasket for sampling cone, 3/pk; and vacuum pump oil	G3280-67003
Comprehensive spares for 7700x/e and 8800 ICP-MS	Includes Qty 1 of these components (unless listed otherwise): sample peristaltic pump tubing (2 x 12/pk), drain peristaltic pump tubing (12/pk), Int. Std. flared end peristaltic pump tubing (2 x 12/pk), sample tubing (0.5 mm id x 5 m length), sample tubing for MicroMist nebulizer (10/Pk), on-line Int. Std. addition kit, drain tube assembly, spray chamber, tubing for spray chamber drain, ball joint connector, gas connector for dilution gas port, carrier gas connector for MicroMist, plug for dilution gas port, clamp (2/pk), carrier gas tubing, torch with 2.5 mm id injector, long life shield plate, bonnet for shield torch, plasma/aux. gas tubing, inner sleeve (qty 2), gas line connector, work coil, graphite gaskets for sampling cone (pk/3), Ni sampling cone (Qty 2), Ni skimmer cone (Qty 2), screw and spacer kit for x-lens, screw/spacer O-ring, PTFE tubing for internal reaction gas line, octopole assay, polishing paper for ion lens and interface (pk/5), oil mist filter element and rotary pump oil (Qty 2 x 1 L).	G3280-67004
Comprehensive spares for 7700s and 8800 semicon configuration ICP-MS	Includes Qty 1 of these components (unless listed otherwise): sample peristaltic pump tubing (2 x 12/pk), drain peristaltic pump tubing (12/pk), Int. Std. flared end peristaltic pump tubing (2 x 12/pk), sample tubing (0.5 mm id x 5 m length), On-line Int. Std. Addition Kit, drain tube assembly, spray chamber, tubing for spray chamber drain, ball joint connector, gas connector for dilution gas port, carrier gas connector for MicroMist, plug for dilution gas port, clamp (2/pk), carrier gas tubing, torch with 2.5 mm id injector, long life shield plate, bonnet for shield torch, plasma/aux. gas tubing, inner sleeve (qty 2), work coil, graphite gaskets for sampling cone (pk/3), Pt sampling cone, Pt skimmer cone, screw and spacer kit for s-lens, screw/spacer O-ring, PTFE tubing for internal reaction gas line, Octopole assay, polishing paper for ion lens and interface (pk/5), oil mist filter element and rotary pump oil (Qty 2 x 1 L).	G3280-67007
Comprehensive spares for 7700e ICP-MS	Includes Qty 1 of these components (unless listed otherwise): sample peristaltic pump tubing (2 x 12/pk), drain peristaltic pump tubing (12/pk), Int. Std. flared end peristaltic pump tubing (2 x 12/pk), sample tubing (0.5 mm id x 5 m length), sample tubing for MicroMist nebulizer, On-line Int. Std. Addition Kit, drain tube assembly, spray chamber, gas connector for dilution gas port, carrier gas connector for MicroMist, clamp (2/pk), carrier gas tubing, torch with 2.5 mm id injector, long life shield plate, bonnet for shield torch, plasma/aux. gas tubing, inner sleeve, gas line connector, work coil, graphite gaskets for sampling cone (pk/3), Ni sampling cone (Qty 2), Ni skimmer cone (Qty 2), screw and spacer kit for x-lens, screw/spacer O-ring, PTFE tubing for reaction gas line, Octopole assay, polishing paper for ion lens and interface (pk/5), oil mist filter element and rotary pump oil (Qty 2 x 1 L).	G3280-67085

GC Interface Supplies for 7500 Series

Description	Part No.
Injector assembly	G3158-65001
Torch	G3158-65007
Stainless steel pipe (Sulfinert) for GC-ICP-MS interface, 1/16 in	G3158-65003

GC Interface Supplies for 7700/8800 Series

Description	Part No.
Transfer line for GC interface	G3158-80060
Injector assembly for GC interface	G3158-80050
Torch for GC interface	G3158-80074
Pre-heating pipe with connector, stainless steel, 1/16 in	G3158-80080
Stainless steel pipe, 1/16 in (Sulfinert, 1.05 m)	G3158-80081
Vespel/Graphite reducing ferrule (1/8 in to 1/16 in, VG1, 10/pk)	0100-1344
Vespel/Graphite ferrule (1/4 in, VG1, 10/pk)	0100-1331
Vespel/Graphite ferrule for 320 µm columns (0.5 mm, VG1, 10/pk)	5062-3506
Vespel/Graphite ferrule (1/16 in, VG2, 10/pk)	0100-1379
PFA tubing, 1/8 in, 2 m	G3158-60010
3-way manual valve	G3158-80024
Swagelok plug, stainless steel, 1/8 in	0100-0071
Nut with pipe	G3158-80009
Stainless steel tee for O_2 gas mix, 1/8 in	0100-0542

Speciation Columns and Supplies

Description	Notes	Part No.
As speciation column for drinking water		G3154-65001
As speciation column for urine		G3288-80000
As speciation guard column		G3154-65002
Cr speciation column for drinking water		G3268-80001*
Comprehensive LC connection kit	Suitable for LC-ICP-MS applications other than Cr in water and As in water/urine. This is a comprehensive pack of tubing and connectors required to set up LC-ICP-MS. Includes sample Tubing (5 x PFA 0.15 mm id x 0.7 m length, 1 x PTFE 0.8 mm id x 0.5 m length, 1 x PTFE 2.0 mm id x 5 m length), Peristaltic Pump Tubing (Tygon, 3-stop, 0.89 mm id, 12/pk), 2 x Tee Joint, 5 x Union Joint, PTFE Nut for 3 mm od tubing (10/pk), Front and Back Ferrule for 3 mm od Tubing (10/pk), PTFE Nut for 1.6 mm od tubing (10/pk), Front and Back Ferrule for 1.6 mm od Tubing (10/pk), 2 x Peristaltic Pump Tubing Adapters, APG Remote cable, Gender changer Connector D9S-FF and Manual/setup guide	G1833-65200
Basic LC connection kit	Includes sample tubing (PFA, 0.3 mm id, 1.6 mm od, 3 m), 2 union joints, 3 x PEEK finger-tight fitting - 1/16 in x 10-32 male nut (2/pk), APG remote cable and gender changer connector D9S-FF	G1820-65541
Total consumption nebulizer for capillary LC interface		G3280-80602
Single pass spray chamber for capillary LC interface		G3280-80603

*Cr speciation handbook, P/N G3268-90001

Miscellaneous Supplies

Description	Part No.
7700 maintenance video DVD	G3280-60910
Cooling water hose, 10 m	G1833-65429
Strainer for cooling water	G1833-66024
Poly-clear fluid for G3292A chiller	G3292-80010
Fluid filter for G3292A chiller	G3292-80109
Air filter for G3292A chiller	G3292-80112
Filter for cooling water for 7500 Series	G1820-65018
Water filter connector for 7500 Series	G1820-80430
O-ring for water filter cartridge for 7500 Series	G1833-66042

Strainer for cooling water, G1833-66024

Gas Line Supplies

Gas Line Supplies

Description	Specifications	Use	Unit	7700 Part No.	7500 Part No.
Plasma/aux tubing with inner sleeve	0.2 m		2/pk	G3280-67023	
Connectors for plasma/aux gas lines, PTFE	6 mm and 4 mm	For gas line connection to torch	1/ea	G1820-65027	G1820-65027
Inner sleeve for carrier/aux/blend gas line	CTFE	For gas line connection to connector	5/pk		5042-0922
Inner sleeve for plasma gas line	CTFE	For gas line connection to connector	5/pk		5042-0923
Carrier/make-up/dilution gas tubing				G3280-67022	
Gas connector for dilution gas port		For dilution gas line connection to dilution port		0100-2583	
Argon gas tubing kit	1/4 in od, 5 m, inner sleeve, connector	For external line			G1820-65023
Tubing for carrier/blend gas, PTFE	3 mm id, 4 mm od, 35 cm	For gas line connection to nebulizer	2/pk		G1833-65414
Plasma and auxiliary gas line tubing	3.17 mm id, 6.35 mm od, 35 cm (plasma) 2.38 mm id, 3.96 mm od, 35 cm (aux)	For gas line connection to torch	2/pk		G3270-65021
Argon humidifier				G3270-80029	G3270-80029
Ar gas filter				G1820-80341	G1820-80341
Ar clean gas filter		For semicon applications		5064-8092	5064-8092
Ar gas tubing kit for 7700x/e and 8800		For external line		G3280-60160	
Ar gas tubing kit for 7700s and 8800 semicon configuration		For external line		G3280-60163	
Stainless steel tubing	1/8 in od, 6 m	For external cell gas line		G3270-65035	G3270-65035

Plasma/aux tubing with inner sleeve, G3280-67023

Connectors for plasma/aux, G1820-65027

Carrier/make-up/dilution gas tubing, G3280-67022

Ultra Clean ICP-MS Traps

Description	Part No.
Agilent Gas Clean GC/MS filter	CP17973
Viton O-rings, two sets	CP7983

Agilent Gas Clean GC/MS filter, CP17973

Gas Regulators – US only

Description	Part No.
Regulator for Helium gas	0101-1398
Regulator for Hydrogen gas	0101-1399
Regulator for Argon gas	0101-1400
Regulator for NH_3/He gas	5188-5374

Gas Line Connectors for 7500 Series

Description	Specifications	Use	7500 Part No.
Connector for end cap and gas line		For gas line connection to nebulizer	5063-5263
Connectors for plasma/aux gas lines, PTFE	6 mm and 4 mm	For gas line connection to torch	G1820-65027
Connector for carrier gas line, PTFE	4 mm tubing, includes ferrule and O-ring	For gas line connection to Babington Nebulizer	G1820-65214
Connector for carrier gas line, polypropylene	4 mm tubing, includes ferrule and O-ring	For gas line connection to Concentric Nebulizer	G1820-65052
Connector for blend gas line, polypropylene, 2/pk	4 mm tubing	For gas line connection to Crossflow/Babington Nebulizer	G1820-65119
Connector for make-up gas line, polypropylene	4 mm tubing, Luer type	For gas line connection to Crossflow/Babington Nebulizer	G1833-65477
Union fitting	4 mm tubing	For PFA Concentric Nebulizer	5064-8078

Polypropylene connector, G1820-65052

PTFE connector, G1820-65214

Connector for blend gas line, G1820-65119

4100 Microwave
Plasma-Atomic Emission Spectrometer

MP-AES

Agilent has revolutionized atomic spectroscopy with the introduction of an instrument that doesn't just redefine a category – it creates a new one!

The Agilent 4100 Microwave Plasma-Atomic Emission Spectrometer runs entirely on air, which means your lab can eliminate flammable and expensive gases. It's safer and more cost efficient than other spectrometers. The 4100 MP-AES enables superior detection and can perform unattended multi-element analyses.

Agilent provides all of the supplies and accessories you need for the 4100 MP-AES.

Easy-fit torch, G8000-70002

Torch clamp, G8000-64140

Concentric nebulizer, G8000-70004

Nebulizer gas connector, G8000-64142

OneNeb inert concentric nebulizer, 2010126900

Agilent 4100 MP-AES Supplies

4100 MP-AES Torch Supplies

Description	Part No.
Easy-fit torch	G8000-70002
Torch clamp	G8000-64140

4100 MP-AES Nebulizers and Supplies

Description	Part No.
Concentric nebulizer for use with aqueous solutions and normal digests	G8000-70004
Nebulizer gas connector Connects to gas outlet on instrument	G8000-64142
OneNeb inert concentric nebulizer for use with HF solutions and organic solvents	2010126900

4100 MP-AES Spray Chambers and Supplies

Description	Part No.
Single-pass glass cyclonic spray chamber	G8000-70006
Double-pass glass cyclonic spray chamber for use with organic solvents	G8000-70007
Drain tube kit	G8000-64143
Inert single-pass cyclonic spray chamber for use with HF solutions	G8000-70008

Single-pass glass cyclonic spray chamber, G8000-70006

4100 MP-AES Peristaltic Pump Tubing

Description	Unit	Part No.
Pump tubing, PVC, white/white for sample	12/pk	3710034400
Pump tubing, PVC, blue/blue for spray chamber waste	12/pk	3710034600
Pump tubing, Solvaflex, blue/blue	12/pk	3710067900
Pump tubing, Solvaflex, orange/green	12/pk	3710068000

Double pass spray chamber, G8000-70007

4100 MP-AES Miscellaneous Supplies

Description	Part No.
Pre-optic window	G8000-64112
Inlet cooling air filter	G8000-68002
Onboard argon bottle for plasma ignition	G8000-70001
Air inlet filter kit for Agilent 4107 Nitrogen Generator Includes 1 each of the replacement filter elements - the large 5 micron particle filter (white filter element), the small 1 micron particle filter (blue filter element) and the activated carbon filter (mesh filter element).	G8001-64004

Inlet cooling air filter, G8000-68002

Multi-Mode Sample Introduction System (MSIS)

Multi-Mode Sample Introduction System (MSIS)

The MSIS provides simultaneous vapor generation of environmentally sensitive elements including As, Se and Hg with low µg/L detection limits. It provides better performance through thin film hydride technology, while offering a choice of three modes that eliminates changeover and allows routine and hydride elements to be determined using the same setup.

Description	Part No.
Multi-Mode Sample Introduction System (MSIS)	G8000-63003

External Gas Control Module (EGCM)

External Gas Control Module (EGCM)

Add the EGCM to enable determination of organic solvents and sulfur. The EGCM injects air into the plasma, minimizing carbon build up and reducing background.

Description	Part No.
External Gas Control Module (EGCM)	G8000-63005

Organics Kit

The 4100 MP-AES Organics Kit includes all items required to adapt the 4100 for determination of organic solvents.

Description	Part No.
4100 MP-AES Organics Kit Includes External Gas Control Module (EGCM), OneNeb nebulizer and solvent resistant tubing	G8000-68004

AA/MP-AES, ICP-OES & ICP-MS Standards

Agilent offers a comprehensive range of single and multi-element standards, ionization buffers and environmental standards for atomic spectroscopy. With the assurance of NIST traceability, Agilent's selection of standard mixes offers accurate, reliable calibrations at great value.

All of Agilent's atomic spectroscopy standards are prepared to exacting specifications that ensure consistency. Every solution is manufactured using high purity starting materials, which are regularly tested in accordance with NIST guidelines to provide traceability.

- Give you confidence in your AAS, ICP-OES or ICP-MS and MP-AES results
- Standards shipped from stock to maximize uptime
- Supplied with a Material Safety Data Sheet (MSDS) and Certificate of Analysis for complete assurance
- All standards packaged in a pre-leached HDPE bottle, secured with a tamper-evident seal

AA, MP-AES and ICP-OES Standards

Wavelength Calibration Solutions for 700 Series and Vista Series ICP-OES and MP-AES

Description	Part No.
Wavelength calibration solution for ICP-OES and MP-AES: 500 mL, contains 50 mg/L Al, As, Ba, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Se, Sr, Zn and 500 mg/L K in 5 % HNO_3 + tr HF Dilute 10 times prior to use	6610030000
Wavelength calibration solution for ICP-OES and MP-AES: 500 mL, contains 5 mg/L Al, As, Ba, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Se, Sr, Zn and 50 mg/L K in 5 % HNO_3 + tr HF Ready to use	6610030100

Wavelength calibration solution for ICP-OES and MP-AES, 6610030100

Multi-Element Calibration Standards

Description	Part No.
Calibration mix 1: 125 mL, contains 100 mg/L Sb, Mo, Sn and Tl in 2 % HNO_3 + 0.5 % HF	6610030500
Calibration mix 2: 125 mL, contains 100 mg/L Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Se, Tl, Th, U, V and Zn in 5 % HNO_3	6610030600
Calibration mix majors: 125 mL, contains 500 mg/L Ca, Fe, K, Mg and Na in 5 % HNO_3	6610030700
Calibration mix 3, organic: 100 mL, contains 500 mg/L Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, Mg, Mn, Na, Ni, P, Pb, Si, Sn, Ti, V and Zn in mineral oil	6610030200

Copper, 8200201301

Single Element Standards for AA/MP-AES

Supplied in 100 mL bottles. Concentration = 1,000 mg/L (0.1%). One mL of solution contains 1 mg of metal.

Description	Part No.	Description	Part No.
Aluminum	8200200001	Manganese	8200203101
Antimony	8200200101	Mercury	8200203201
Arsenic	8200200201	Molybdenum	8200203301
Barium	8200200301	Nickel	8200203501
Beryllium	8200200401	Palladium	8200203801
Bismuth	8200200501	Platinum	8200203901
Boron	8200200601	Potassium	8200204001
Cadmium	8200200701	Selenium	8200204801
Calcium	8200200801	Silver	8200205001
Cesium	8200201001	Sodium	8200205101
Chromium	8200201101	Strontium	8200205201
Cobalt	8200201201	Silicon	8200205301
Copper	8200201301	Tellurium	8200205401
Europium	8200201601	Thallium	8200205601
Gold	8200202001	Tin	8200205901
Indium	8200202301	Titanium	8200206001
Iron	8200202501	Tungsten	8200206101
Lead	8200202701	Vanadium	8200206301
Lithium	8200202801	Zinc	8200206601
Magnesium	8200203001	Zirconium	8200206701

Buffers/Ionization Suppressant for Flame AA

Supplied in 500 mL bottles

Description	Part No.
Cesium buffer solution – 1% 10,000 mg/L Cs in 2-5% nitric acid	190064500
Lanthanum Buffer Solution – 10% 100,000 mg/L La in 2-5% HNO_3	8200206901
Potassium Buffer Solution – 10% 100,000 mg/L K in 2-5% HNO_3	8200206801
Strontium Buffer Solution – 10% 100,000 mg/L Sr in 2-5% HNO_3	8200207001

Cesium buffer solution – 1%, 190064500

Matrix Modifiers for Graphite Furnace AA

Supplied in 100 mL bottles

Description	Part No.
Ammonium nitrate 5% ammonium nitrate in 2% nitric acid	190024000
Ammonium phosphate 40% ammonium dihydrogen phosphate in water	190024100
Nickel nitrate 5000 mg/L nickel in 5% nitric acid	190024200
Palladium nitrate 2000 mg/L palladium in 2-5% nitric acid	190024300

Palladium nitrate, 190024300

Calcium, 190026409

Single Element Standards for ICP-OES/MP-AES

Supplied in 100 mL bottles. Concentration = 10,000 mg/L (1.0 %). One mL of solution contains 10 mg of metal.

Description	Part No.	Description	Part No.
Aluminum	190026401	Molybdenum	190026422
Antimony	190026402	Nickel	190026423
Arsenic	190026403	Phosphorus	190026424
Barium	190026404	Platinum	190026425
Beryllium	190026405	Potassium	190026426
Bismuth	190026406	Selenium	190026428
Boron, 5,000 mg/L	190026407	Silicon	190026429
Cadmium	190026408	Silver	190026430
Calcium	190026409	Sodium	190026431
Cesium	190026410	Strontium	190026432
Chromium	190026411	Sulfur	190026433
Cobalt	190026412	Tantalum	190026434
Copper	190026413	Thallium	190026435
Gold	190026414	Tin	190026436
Iron	190026415	Titanium	190026437
Lead	190026417	Vanadium	190026439
Lithium	190026418	Yttrium	190026449
Magnesium	190026419	Zinc	190026440
Manganese	190026420	Zirconium	190026441
Mercury	190026421		

Environmental Standards for ICP-OES

Supplied in 500 mL bottles

Description	Application	Part No.
INTF-A Quality Control standard Contains Al, Ca & Mg at 5,000 mg/L; Fe at 2,000 mg/L	Interference check standard; for preparation of EPA CLP standards ICSA and ICSAB	190064800
ICV-7 Quality Control standard Contains Ca, Mg, K & Na at 5000 mg/L; Al & Ba at 200 mg/L; Fe at 100 mg/L; Sb at 60 mg/L; Co & V at 50 mg/L; Ni at 40 mg/L; Cu at 25 mg/L; Zn at 20 mg/L; Mn at 15 mg/L; As, Cr, Ag & Tl at 10 mg/L; Be, Cd, Pb & Se at 5 mg/L	Initial/continuing calibration verification standard; for EPA CLP analyses	190064900
QCSTD-27 Quality Control standard Contains Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Si, Ag, Sr, Na, Tl, Ti, V & Zn at 100 mg/L	Quality control standard; for environmental analyses	190065000
ANALT-B Quality Control standard Contains Cd, Ni, Pb, Ag & Zn at 100 mg/L; Ba, Be, Co, Cr, Cu, Mn & V at 50 mg/L	Interference check standard; for preparation of EPA CLP standard ICSAB	190065100

Internal Standard/Ionization Suppressant for ICP-OES/MP-AES

Description	Unit	Part No.
Cesium buffer solution – 1% 10,000 mg/L Cs in 2-5% nitric acid	500 mL bottle	190064500
Cesium buffer solution - 10% 100,000 mg/L Cs in 2-5% nitric acid	500 mL bottle	190064600
Yttrium solution - 1% 10,000 mg/L Also used for instrument optimization	500 mL bottle	190064700
Cesium buffer solution – 1% 10,000 mg/L Cs in 2-5% nitric acid	500 mL bottle	190064500
ICP internal standard Contains 100 mg/L ^{6}Li, Sc, Y, In, Tb and Bi in 5 % HNO_3	125 mL bottle	6610030400

Cesium buffer solution – 1%, 190064500

ICP-MS Standards

Installation and Checkout Standards

Description	Part No.
ICP-MS Checkout Solutions for 7700, 8800 and 7500 ce/cx/cs system installation kit Contains tuning solution, dual mode (1), dual mode (2), wash, and water blank solutions	5185-5850
ICP-MS Checkout Solutions for 7500s system installation kit Contains tuning solution, dual mode (1), dual mode (2), abundance sensitivity (1), abundance sensitivity (2), detection limit solution, high sensitivity tune, wash, and water blank solutions	5184-3564
ICP-MS Checkout Solutions for 7500a/i/c system installation kit Contains tuning solution, dual mode (1), dual mode (2), wash, and water blank solutions	5184-3565

Stock Tuning Solution, 5188-6564

Tuning Solutions

Description	Part No.
PA Tuning Solution Kit: Tuning 1: 20 mg/L each of Zn, Be, Cd, As; 10 mg/L each of Ni, Pb, Mg; 5 mg/L each of Tl, Na, Al, U, Cu, Th, Ba, Co, Sr, V, Cr, Mn, ^{6}Li, Sc, In, Lu, Bi; 2.5 mg/L each of Y, Yb; matrix 2-5% HNO_3 Tuning 2: 10 mg/L each of Mo, Sb, Sn, Ge, Ru, Pd; 5 mg/L of Ti, Ir; matrix 10% HCl and 1% HNO_3 with trace amounts of HF	5188-6524
Stock Tuning Solution: Li, Y, Ce, Tl and Co; 100 mL, 10 mg/L; matrix 2% HNO_3	5188-6564
Stock Tuning Solution: Li, Mg, Y, Ce, Tl and Co; 100 mL, 10 mg/L; matrix 2% HNO_3	5190-0465
Tuning Solution: Li, Y, Ce, Tl and Co; 2 x 500 mL, 10 µg/L; matrix 2% HNO_3	5184-3566
Tuning Solution: Li, Mg, Y, Ce, Tl, Co; 2 x 500 mL, 1 µg/L; matrix 2% HNO_3	5185-5959

Multi-Element Calibration Standards

Description	Part No.
Multi-Element Calibration Standard-1, 100 mL: 10 mg/L of Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Nd, Pr, Sc, Sm, Tb, Th, Tm, Y, Yb; matrix 5% HNO_3	8500-6944
Multi-Element Calibration Standard-2A, 2 x 100 mL: 1 bottle: 10 mg/L of Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cs, Cu, Fe, Ga, K, Li, Mg, Mn, Na, Ni, Pb, Rb, Se, Sr, Tl, U, V, Zn; matrix 5% HNO_3 2 bottle: 10mg/L Hg in 5% HNO_3	8500-6940
Multi-Element Calibration Standard-3, 100 mL: 10 mg/L of Sb, Au, Hf, Ir, Pd, Pt, Rh, Ru, Te, Sn; matrix 10% HCl/1% HNO_3	8500-6948
Multi-Element Calibration Standard-4, 100 mL: 10 mg/L of B, Ge, Mo, Nb, P, Re, S, Si, Ta, Ti, W, Zr; matrix H_2O/trace HF	8500-6942

Single Element Standards

Description	Part No.
Bismuth, 100 mL, 10 mg/L	8500-6936
Cobalt, 100 mL, 10 mg/L	8500-6947
Gold, 100 mL, 10 mg/L	8500-7000
Indium, 100 mL, 10 mg/L	8500-6946
Mercury, 100 mL, 10 mg/L	8500-6941
Rhodium, 100 mL, 10 mg/L	8500-6945

Interference Check Mixes

Description	Part No.
6020 Interference Check Solution A, 100 mL: 20,000 mg/L of Cl; 3,000 mg/L of Ca; 2,500 mg/L each of Fe, Na; 2,000 mg/L of C; 1,000 mg/L each of Al, Mg, P, K, S; 20 mg/L each of Ti, Mo; matrix 5% HNO_3 with trace amounts of HF	5188-6526
6020 Interference Check Solution B, 100 mL: 20 mg/L each of Cr, Co, Cu, Mn, Ni, V; 10 mg/L each of As, Cd, Se, Zn; 5 mg/L of Ag; matrix 5% HNO_3	5188-6527

Environmental Standards

Description	Part No.
Environmental Calibration Standard, 100 mL: 1,000 mg/L of Fe, K, Ca, Na, Mg; 10 mg/L of Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, Th, U; matrix 10% HNO_3	5183-4688
Initial Calibration Verification Standard, 100 mL: 1,000 mg/L of Fe, K, Ca, Na, Mg, Sr; 10 mg/L of Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, Th, U; matrix 5% HNO_3	5183-4682
Internal Standard Mix, 100 mL: 100 mg/L of ^{6}Li, Sc, Ge, Rh, In, Tb, Lu, Bi; matrix 10% HNO_3	5188-6525
Internal Standard Mix, 100 mL: 10 mg/L of ^{6}Li, Sc, Ge, Y, In, Tb, Bi; matrix 5-10% HNO_3	5183-4681
Environmental Spike Mix, 100 mL: 1,000 mg/L of Fe, K, Ca, Na, Mg; 100 mg/L of Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, U; matrix 5% HNO_3	5183-4687

The Agilent Cary range of UV-Vis and UV-Vis-NIR spectrophotometers

Agilent 8453 UV-VIS & Cary UV-VIS-NIR Supplies

Agilent 8453 UV-Vis and Cary UV-Vis and UV-Vis-NIR spectrophotometers are synonymous with excellence and high performance. Our range of consumables for these products includes high quality cuvettes and flow cells, fiber optic probes, lamps and detectors.

The genuine Agilent cells, tubing, fittings and supplies in this section have been tested with the Agilent 8453 and Cary range for reliable and repeatable results. Agilent UV-Vis cells and supplies are manufactured in an ISO 9001-certified environment. Additionally, Agilent UV-Vis cells are supplied with a certificate of analysis, so you can be confident that it will conform to stringent protocols such as NIST, GLP, GMP and NAMAS.

This section will help you identify the cells that fit your unique applications. You will also learn how to enhance your lab's productivity by choosing the correct spectrophotometer equipment, tubing, fittings, and dissolution testing supplies.

Cell tray, 5063-6577

UV-Vis and UV-Vis/NIR Flow Cells and Cuvettes

Cell Materials

Cells are available in four materials. Select the cell material depending on the wavelength range of your measurements.

For applications with a wavelength range of interest in the visible range, use our lower priced Agilent optical quality glass cells, made from exceptionally pure raw materials. Quartz glass gives transmission values of >80% between 200 nm and 2500 nm for an empty cell. Optical glass gives transmission values of >80% between 330 nm and 2500 nm for an empty cell.

Material	Wavelength (nm)
Quartz	170 to 2700
Infrasil Quartz (NIR)	220 to 3800
Optical Glass	334 to 2500
Polystyrene (disposable)	340 to 800

Cell Shapes

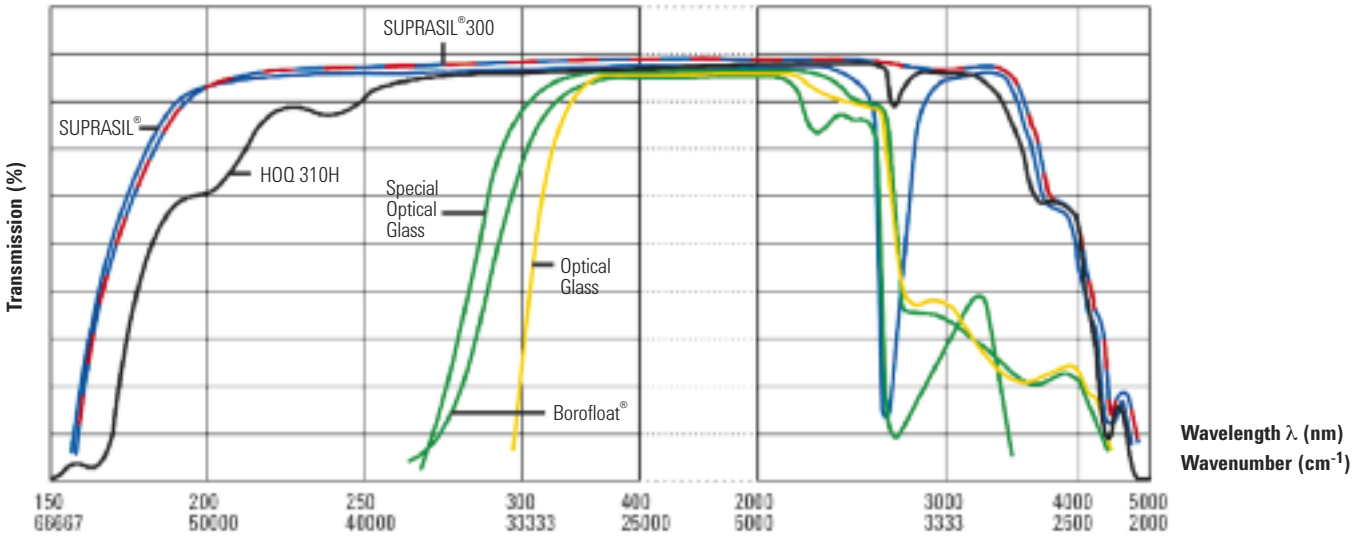
Rectangular Cells

Rectangular cells are the most commonly used cell type and vary in shape from square to longer rectangles, depending on the cell path length. We offer standard cells, semi-micro cells with about 40% of the volume of a standard cell of the same path length, microcells with about 20% of the volume of a standard cell, sub-micro and ultra-micro cells that have microliter volumes, and disposable cells. Semi-micro cells can be used with all Cary 100/300/4000/5000/6000 multicell holders and with all standard single cell holders. In addition, they can be used with the Temperature Probe Accessory for cell temperature monitoring.

Cells sold as matched pairs are used for most UV-Vis and UV-Vis-NIR routine analyses. Matched pairs ensure these cells will give a similar absorbance or transmission reading when empty or filled with water.

Long path length cells are ideal for use when extra sensitivity is needed for low concentration samples. These cells must be used with the long path length rectangular cell holder.

Transmission of empty cells made of different materials



Cell tray, 5063-6577

Cell Volumes

Macro Cells

The macro cell, which is defined by DIN 58963 as a rectangular cell with an inner width greater than 5 mm, has emerged as the standard for photometry. The most widely used macro cell is a rectangular cell with outer dimensions of 45 x 12.5 mm (height x width). The length of the cell is dependent on the desired path length. Macro or standard cells have about the same wall thickness on all sides, and are used for most liquid UV-Vis and UV-Vis-NIR measurements. They require the largest sample size for a given path length.

Semi-micro Cells

Semi-micro cells have an inner width of 4 mm to 2 mm. The thickness of the base is 9 mm. Semi-micro cells also have thicker side walls to reduce the volume to about 40% of the volume of a standard cell of the same path length. These cells are useful when only small sample volumes are available for testing. Cells that are black self-masking are listed with their aperture size. The aperture is located at the correct Z-height for both Agilent 8453 and the Cary UV-Vis and UV-Vis spectrophotometers – but note that the 8453 uses a different Z-height, so check compatibility. Semi-micro cells can be used with Cary 100/300 and 4000/5000/6000 multicell holders and with all standard single cell holders. They can also be used with the Temperature Probe Accessory for cell temperature monitoring. The semi-micro cell, with a stirring well for a magnetic stirring bar, is suitable for all Cary 100/300 and 4000/5000/6000 series Peltier thermostatted multicell and single cell holders.

Microcells

Microcells have thicker sidewalls to reduce the volume to about 20% of the volume of a standard cell of the same path length. These cells are useful when limited sample volumes are available for testing.

Ultra-micro Cells

Ultra-micro cells are specifically designed for use in the µL range (with typical volumes in the 5 to 135 µL range). They fit into any standard cell holder and have the advantage of requiring much smaller sample volumes – so they're ideal for highly concentrated samples, highly absorbing solvents or when sample volumes are very limited. These quartz cells offer low volume, short path length and excellent heat transfer. They are ideal for temperature-controlled work, and all except the 1 mm path length cell can be used with the Temperature Probe. Cells that are black self-masking are listed with their aperture size. The cells are constructed so that filling and emptying can be easily accomplished with commonly available pipette tips. Ultra-micro cells with Eppendorf pipette filling/emptying are designed to handle extremely small volumes. When only a minimum amount of sample is available, these cells provide a filling volume only slightly larger than the measuring chamber volume.

Macro Cells

Macro cell with PTFE lid

Macro Cells with PTFE Lid

Path Length (mm)	Ext. Dimensions (mm)	Int. Dimensions (mm)	Volume (µL)	Part No. Glass	Part No. Quartz
Use with 8453 UV-Vis					
1	45 x 12.5 x 3.5	44.5 x 9.5	350	5063-6546	
					5061-3384
2	45 x 12.5 x 4.5	44.5 x 9.5	700	5063-6547	
					5061-3385
5	45 x 12.5 x 7.5	44.5 x 9.5	1750	5063-6548	
					5061-3386
10	45 x 12.5 x 12.5	44.5 x 9.5	3500	5063-6549	
					5061-3387
10	45 x 12.5 x 12.5	44.5 x 9.5	3500	5063-6550*	
					1000-0544*
20	45 x 12.5 x 22.5	44.5 x 9.5	7000	5063-6551	
					5063-6553
50	45 x 12.5 x 52.5	44.5 x 9.5	17500	5063-6552	
					5063-6554
Use with Cary 50/60/100/300/4000/5000/6000i					
10	45 x 12.5 x 12.5	44.5 x 10	3500	6610008800*	
					6610000800*
					6618000100 (Infrasil Quartz)
20	45 x 12.5 x 22.5	44.5 x 10	7000	6610016500	6610016200
50	45 x 12.5 x 52.5	42 x 9.5	17500	6610016400	
					6610016100
100	45 x 12.5 x 102.5	42 x 9.5	35000		6610016000
				6610016300	

*Matched pair

Macro cell with PTFE lid, 6610000800

Macro Cells with PTFE Stopper

Path Length (mm)	Ext. Dimensions (mm)	Int. Dimensions (mm)	Volume (µL)	Part No. Glass	Part No. Quartz
Use with 8453 UV-Vis					
5	48 x 12.5 x 7.5	42 x 9.5	1750		5063-6557
10	48 x 12.5 x 12.5	42 x 9.5	3500	5063-6556	
					5062-2477
Use with Cary 50/60/100/300/4000/5000/6000i					
10	48 x 12.5 x 12.5	44.5 x 10	3500		6610001100*

Spacers are required for cells with an outer depth of less than 12.5 mm to hold them securely in the cell holder.

*Matched pair

Macro cell with PTFE stopper

Disposable Polystyrene Cells

Disposable polystyrene cells are useable from 340 to 800 nm, are economical, can be used with magnetic stirrers, but cannot be used at elevated temperatures.

Disposable Cells

Description	Cell Type	Cell Material	Volume (mL)	Path Length (mm)	Sample Chamber Width (mm)	Unit	Part No.
Standard cell	Rectangular	Polystyrene	3.5	10	10	500/pk	6610018800
Microcell	Rectangular	Polystyrene	1.5	10	4	500/pk	6610018700

Standard cell, disposable, 6610018800

Microcell, polystyrene, 6610018700

Agilent high-precision cells are tested to meet the highest optical standards. Every Agilent cell comes with a test certificate, ensuring that the following areas have been tested and are within specifications:

- Homogeneity of the raw material
- Dimensional and angle tolerances of the component parts
- Flatness of the optical surfaces
- Transmission of the cells

Semi-micro Cells

Semi-micro cell with PTFE lid

Semi-micro cell with PTFE stopper

Semi-micro Cells with PTFE Lid

Path Length (mm)	Ext. Dimensions (mm)	Int. Dimensions (mm)	Volume (µL)	Part No. Glass	Part No. Quartz
Use with 8453 UV-Vis					
10	45 x 12.5 x 12.5	41.8 x 2	700		5061-3391
		36 x 4	1000	5063-6558	
					5063-6559
Use with Cary 50/60 only **Top section features two black walls and two translucent side walls**					
10	45 x 12.5 x 12.5	2 x 2	40		6610019500
5	45 x 12.5 x 12.5	0.8 x 0.8	5		6610019400

Semi-micro Cells with PTFE Stopper

Path Length (mm)	Ext. Dimensions (mm)	Int. Dimensions (mm)	Volume (µL)	Part No. Glass	Part No. Quartz
Use with 8453 UV-Vis					
10	46 x 12.5 x 12.5	37 x 4	1000	5063-6560	
					5063-6561
Use with Cary 50/60/100/300/4000/5000/6000i **Self masking black walls**					
5	45 x 12.5 x 12.5	33 x 4	450		6610019800*
2	45 x 12.5 x 12.5	33 x 4	180		6610019700*
1	45 x 12.5 x12.5	33 x 4	90		6610019600*
10	48 x 12.5 x 12.5	44.5 x 4	1400		6610001800
			1300		6610015400**
		33 x 4	900		6610012700*
Use with Cary 50/60 only **Top section features two black walls and two translucent side walls**					
10	48 x 12.5 x 12.5	2 x 2	135		6610021100***
10	48 x 12.5 x 12.5	2 x 2	135		6610021000***

*Matched pair

**Use with magnetic stirrer bars (P/N 6610018900)

***2 mm aperture

Sub-micro Cells

Sub-micro cell, black wall

Sub-micro Cells

Path Length (mm)	Ext. Dimensions (mm)	Int. Dimensions (mm)	Volume (µL)	Part No. Quartz
Use with Cary 50/60/100/300/4000/5000/6000i				
5	45 x 12.5 x 12.5	2 x 2	40	6610024000***
10	45 x 12.5 x 12.5	2 x 2	80	6610024100***
	45 x 12.5 x 12.5	2 x 2.5	50	6610010400***[I]

***2 mm aperture

[I]Features 2 black walls and 2 translucent side walls

Ultra-micro Cells

Ultra-micro cell with PTFE stopper

Ultra-micro Cells with PTFE Stopper

Path Length (mm)	Ext. Dimensions (mm)	Aperture (mm)	Center Height (mm)	Volume (µL)	Filling Volume (µL)	Part No. Quartz
Use with 8453 UV-Vis						
2	45 x 12.5 x 12.5	2.5 x 2	15	10	20	5062-2497
10	45 x 12.5 x 12.5	2.5 x 2	15	50	70	5062-2496
Use with Cary 50/60/100/300/4000/5000/6000i						
1	45 x 12.5 x 12.5	1 x 1	20	8		6610023900
10	48 x 12.5 x 12.5	1 x 1	20	10		6610013800

Ultra-micro cell with Eppendorf filling

Ultra-micro Cells with Eppendorf Pipette Filling/Emptying

Path Length (mm)	Ext. Dimensions (mm)	Aperture (mm)	Center Height (mm)	Volume (µL)	Filling Volume (µL)	Part No. Quartz
Use with 8453 UV-Vis						
0.1	40 x 12.5 x 12.5	1 x 5	15	0.5	5	5063-6562
1	40 x 12.5 x 12.5	1 x 5	15	5.0	10	5063-6563
5	40 x 12.5 x 12.5	0.8 round	15	2.5	5	5063-6564
10	40 x 12.5 x 12.5	0.8 round	15	5.0	10	5063-6565

Cylindrical Cells

A cylindrical cell is a cell with plane-parallel optical surfaces whose inner volume is cylindrical in shape, and has a longitudinal axis parallel to the direction of the radiation beam. They are recommended when sample volume is not a limitation and when very short to long path lengths are needed. All cylindrical cells can be used with the cylindrical cell holder or the thermostatted cylindrical cell holder. Cylindrical cells are available as standard cells, long path length cells for extra sensitivity when measuring low concentrations, and microcells, suitable for concentrated samples, or to overcome solvent absorbance (e.g. water in the NIR or low UV regions).

Cylindrical cell with PTFE stoppers, 6610002300

Cylindrical Cells with 2 PTFE Stoppers

Path Length (mm)	Ext. Dimensions (mm)	Int. Dimensions (mm)	Volume (mL)	Part No. Glass	Part No. Quartz
Use with 8453 UV-Vis					
100	102.5 x 22	19	28	5063-6566	
					5061-3392
Use with Cary 50/60/100/300/4000/5000/6000i					
10	12.5 x 22	19	2.8		6618000600[1]
50	52.5 x 22	19	14.1		6610002200
100	102.5 x 22	19	28.2		6610002300

[1]Has only a single PTFE stopper

Flow-through Cells

Flow cells allow the sample to pass through the cell and are connected to the sample source via tubing. Long path length flow cells are useful for low concentration samples and require the long path length rectangular cell holder. They can be used with a Cary 100/300 series Routine Sampler Accessory or a Cary 50/60 series Sipper. Sub-micro flow cells are suitable for use with the Cary 100/300 series Routine Sampler Accessory.

Until recently, flow-through cells had measuring chambers that were either rectangular or circular in shape. These shapes were dictated by limitations in the manufacturing process and did not offer the best geometry for clean flushing and reduction of contamination. Agilent has developed oval aperture cells that combine low volume with excellent flow characteristics. These oval flow cells are strongly recommended for automated analyses such as dissolution testing. Black quartz is used in the vicinity of the aperture to ensure that no light passes through the side walls of the cell.

Round aperture flow cell

Flow-through Cells with Round Aperture and Screw Fitting Connection

Path Length (mm)	Ext. Dimensions (mm)	Aperture (mm)	Center Height (mm)	Volume (µL)	Part No. Quartz
Use with 8453 UV-Vis					
10	35 x 12.5 x 12.5	2	15	30	0100-1224
	35 x 12.5 x 12.5	3	15	80	0100-1225
Use with Cary 50/60/100/300/4000/5000/6000i					
10	35 x 12.5 x 12.5	3	20	80	6610008900

NOTES:

Flow-through cells do not include tubing/fittings.

Flow-through Cells with Rectangular Aperture and Screw Fitting Connection

Path Length (mm)	Ext. Dimensions (mm)	Aperture (mm)	Center Height (mm)	Volume (µL)	Part No. Quartz
Use with 8453 UV-Vis					
0.1	35 x 12.5 x 12.5	17.5 x 3.5	15	6.2	5188-8003
0.2	35 x 12.5 x 12.5	17.5 x 3.5	15	12.4	5188-8004
0.5	35 x 12.5 x 12.5	17.5 x 3.5	15	31	5188-8005
1	35 x 12.5 x 12.5	17.5 x 3.5	15	62	5061-3396
2	35 x 12.5 x 12.5	17.5 x 3.5	15	124	5061-3397
5	35 x 12.5 x 12.5	12.5 x 3.5	15	230	5065-9918
10	35 x 12.5 x 12.5	11 x 3.5	15	390	5061-3398
10	35 x 12.5 x 12.5	8 x 2	15	160	5062-2476
Use with Cary 50/60/100/300/4000/5000/6000i					
10	35 x 12.5 x 12.5	4 x 11	20	390	6610012600
50	35 x 12.5 x 12.5	3 x 6	20	1000	6610010000
100	45 x 12.5 x 12.5	3 x 6	20	2100	6610010100
Use with Cary 50/60 only					
1	40 x 12.5 x 12.5	6.5 x 11	20	113	6610019900
2	40 x 12.5 x 12.5	6.5 x 11	20	227	6610020000
5	40 x 12.5 x 12.5	6.5 x 11	20	568	6610020100
10	40 x 12.5 x 12.5	6.5 x 11	20	715	6610020200
Use with Cary 100, 300					
1	40 x 12.5 x 12.5	6.5 x 11	20	113	6610014100
2	40 x 12.5 x 12.5	6.5 x 11	20	227	6610014200
10	40 x 12.5 x 12.5	6.5 x 11	20	715	6610015200

Rectangular aperture flow cell

Flow-through Cells with Oval Aperture and Screw Fitting Connection

Path Length (mm)	Ext. Dimensions (mm)	Aperture (mm)	Center Height (mm)	Volume (µL)	Part No. Quartz
Use with 8453 UV-Vis					
1	39 x 12.5 x 12.5	8 x 3	15	40	5063-6570
1	40 x 12.5 x 12.5	8 x 3	15	40	5065-9907
2	39 x 12.5 x 12.5	8 x 3	15	80	5063-6571
5	39 x 12.5 x 12.5	8 x 3	15	200	5063-6572
10	39 x 12.5 x 12.5	8 x 3	15	430	5063-6573

Oval aperture flow cell

Cell Holders and Accessories

Standard cell holder, 08451-60104

Long path-length cell holder, 89076C

Thermostattable cell holder, 89054A

Cell Holders and Bases

Description	Use With	Part No.
Standard cell holder	8453	08451-60104
Long path-length cell holder	8453	89076C
Thermostattable cell holder	8453	89054A
Cell stirring module for thermostattable cell holder	8453	89055A
Cell base	Cary 50/60	110648190
Cell holder, spare	Cary 50/60	110645090
Cell holder base	Cary 400 and 500	10048100
Cell holder base	Cary 4000/5000/6000i	110716190
Standard cell holder, 10 mm Includes cell lifter and cell height adjustment screw. Supplied as standard with Cary 100/300 and Cary 5000/6000i	All Cary	110260190
Standard cell holder, 10 mm, with Z-height adjustment from 0-20 mm Supplied as standard with Cary 4000	All Cary except Cary 50/60	110721900
Test Tube Holder allows use of 16 mm od test tubes in the sample compartment instead of conventional cuvettes	Cary 50/60	7910033500
Long pathlength rectangular cell holder Holds 20, 50 and 100 mm rectangular cells and rectangular flowcells	All Cary	110059900

(Continued)

Cell stirring module, 89055A

Standard cell holder, 10 mm, 110260190

Cell holder base, 110716190

Cell base, 110648190

Cary 50/60 cell holder, spare, 110645090

Standard cell holder, 110721900

Cell Holders and Bases

Description	Use With	Part No.
Variable pathlength cell holder For use with rectangular cells of 5, 10, 20, 30, 40 and 50 mm pathlength and a Solid Sample Holder. Must be fitted in slide-mount Solid Sample Holder kit in Cary 50/60 (P/N 10072300) or Cary 100/300 (P/N 10046500)	All Cary	210125300
Variable pathlength cell holder For use with rectangular cells up to 100 mm pathlength and a Solid Sample Holder. Must be fitted in slide-mount Solid Sample Holder kit in Cary 50/60 (P/N 10072300) or Cary 100/300 (P/N 10046500)	All Cary	6610014000
Dual rectangular thermostattable cell holder Allows thermostatting of standard 10 mm pathlength cuvettes with height 45 mm. Requires the Ext. Sample Compartment and an external water bath	All Cary	10046800
Cylindrical single cell holder, ambient Allows use of cylindrical cells with up to 100 mm pathlength	All Cary	110026900
Dual cylindrical thermostattable cell holder Allows use of cylindrical cells with up to 100 mm pathlength. Requires Ext. Sample Compartment and an external water bath	All Cary	10046700

Variable pathlength cell holder, 210125300

Cylindrical single cell holder, ambient, 110026900

Spacer for 2 mm cell, 5061-3389

Spacers*

Description	Part No.
Spacer for 1 mm cell	5061-3388
Spacer for 2 mm cell	5061-3389
Spacer for 5 mm cell	5061-3390

*Spacers are required to hold cells with an outer depth of less than 12.5 mm in the cell holder

Spacer for 5 mm cell, 5061-3390

Miscellaneous

Description	Unit	Part No.
Magnetic stirring bar*	2/pk	9301-1161
Magnetic stirrer bar, PTFE, star type		7418000400
Magnetic stirrer bars, 7 x 2 mm	10/pk	6610018900
Cell cleaning solution	1 L	5062-8529
Lens cleaning paper, lint free	50/pk	9300-0761
Tray for 16 cells	10 mm	5063-6577

*For use with Agilent 89054A cell-stirring multicell transport and Agilent 89090A Peltier temperature controller. Stirring bars are used with cells having internal dimensions of 10 x 10 mm (W x D) and cell holders with magnetic stirring capability.

Lens cleaning paper, lint free, 9300-0761

Magnetic stirring bar, 9301-1161

Cell tray, 5063-6577

Cell cleaning solution, 5062-8529

Agilent 8453 UV-Vis Supplies

8453 Tubings and Fittings

Description	Unit	Part No.
PTFE tubing, 1.6 mm od	10 m	5041-2191
Pump tubing, 2.06 mm id	12/pk	5041-2166
Pump tubing, 1.3 mm id	12/pk	5041-2184
Pump tubing, 2.8 mm id	12/pk	5041-2185
Tefzel ferrules and stainless steel lock rings, 1/16 in	10/pk	5022-2154
Union, 1/4-28 thread, polypropylene	10/pk	5022-2155
Cell fittings, black (4 short and 4 long)	8/pk	5022-2156
Conical adapter kit	2/pk	5022-2157
PTFE nuts for 1/16 in od tubing	10/pk	5022-2158
Tubing, heat exchanger, FEP	12 cm	5042-1336
1/16 in PEEK fittings and ferrules for 8-port valve	10/pk	5042-1337
Mounting tool for flangeless nut		0100-1710

8453A UV-Visible Spectrophotometer

Union, 5022-2155

Cell fittings (black), 5022-2156

Conical adapter kit, 5022-2157

PTFE nuts, 5022-2158

PEEK fittings and ferrules, 5042-1337

8453 Instrument Parts and Supplies

Deuterium lamp assembly, 2140-0605

Tungsten lamp assembly, G1103-60001

Deuterium lamp assembly, 08452-60104

Optical filter kit, G1120-68707

Stirring module kit, G1120-60006

Spectrophotometer Lamps

Description	Part No.
Deuterium lamp assembly, 8453	2140-0605
Tungsten lamp assembly	G1103-60001

G1120A 8-Position Multicell Transport Supplies

Description	Part No.
Optical filter kit Set of three optical filters to prevent photosensitive samples from being irradiated by UV light (265 and 295 nm cut-off and UV roll-off filter)	G1120-68707
Stirring module kit Stirrer is driven by circulating water from water bath (not included)	G1120-60006
Magnetic stirring bar for use with 10 x 10 mm (W x D) cells, 2/pk	9301-1161
Multicell transport adjustment tool	89075-23800
Plastic cover kit	G1120-68708

89090A Peltier Temperature Controller Supplies

Description	Part No.
Union, cell holder	5021-1870
Flow cell, 10 mm, 8 x 2 mm aperture, 160 µL	5062-2476
Quartz cuvette, 10 mm, with PTFE stopper	5062-2477
Tubing, heat exchanger, FEP	5042-1336
Magnetic stirring bar	9301-1161

Tubing, heat exchanger, FEP, 5042-1336

Needle, beveled edge for G1811A, G1811-23200

Autosampler Supplies

Description	Part No.
Needle, beveled edge for G1811A	G1811-23200
Test tubes, 12 x 100 mm, 250/pk	5022-6531
Autosampler tubing and fittings kit	5042-1334

Sipper tubing kit, 5042-1333

Sipper Supplies

Description	Part No.
Sipper tubing kit	5042-1333
Flow cell, 10 mm, 80 µL	0100-1225
Cassette, fixed pressure	5041-2167
Cassette, variable pressure	5042-1356

Autosampler tubing and fittings kit, 5042-1334

Cassette, fixed pressure, 5041-2167

Cassette, variable pressure, 5042-1356

Multicell tubing kit, 5042-1330

Valve tubing kit, 5042-1331

Dissolution probes kit, 5042-1332

PEEK fittings and ferrules, 5042-1337

8 port valve for dissolution system, 5063-6575

Dissolution filters for 1/8 in probe, 5181-1246

8453 Dissolution Testing Supplies

Dissolution Testing Supplies for 8453A

Description	Part No.
Multicell system tubing kit	5042-1330
Valve tubing kit for one bath	5042-1331
Dissolution probes kit, 0.9 mm id, tubes with fittings	5042-1332
1/16 in PEEK fittings and ferrules for 8-port valve, 10/pk	5042-1337
8-port valve for dissolution system	5063-6575
Rotor seal for 5063-6575 valve (UV-Vis) dissolution system	5067-1539
Dissolution filters for 1/8 in probe, 45 µm pore size, 1000/pk	5181-1246

Agilent Cary UV-Vis & UV-Vis-NIR Supplies

Cary Fiber Optic Probes

Cary 5000 UV-Vis-NIR Spectrophotometer

Fiber Optic Probes

Use With	Description	Part No.
Cary 50/60 Wavelength range 200-1100 nm	Fiber optic dip probe, stainless steel, body only Requires stainless steel tip	7910035700
	Fiber optic dip probe, stainless steel, fixed 10 mm path tip	7910036400
	Fiber optic dip probe, stainless steel, replaceable 10 mm path tip	7910036500
	Fiber optic dip probe, Torlon Probe, 7.9 mm in diameter by 159 mm length	7910029900
	Fiber optic dip probe, Torlon, body only Probe is 7.9 mm in diameter by 144 mm length (excluding tip). Not recommended for use with solutions that would attack epoxy, requires torlon tip	7910032600
	Fiber optic dip probe, 7.9 mm in diameter by 159 mm in length Torlon, replaceable 10 mm path tip	7910035100
	Fiber optic dip probe, 12.7 mm in diameter by 70 mm in length, quartz construction for use with corrosive samples, fixed 10 mm path length	7910030300
	Fiber optic micro probe, 3.05 mm diameter by 140 mm length, fixed 10 mm path length. Not recommended for use with strong acids	7910035600
	Hand-held fiber optic remote read probe, 6.35 mm in diameter by 104 mm in length, stainless steel, replaceable 10 mm path tip	7910030200

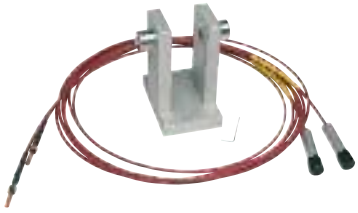
(Continued)

Cary 60 UV-Vis Spectrophotometer

Fiber optic dip probe, fixed 10 mm path length, 7910036400

Fiber optic dip probe, Torlon, body only, 7910032600

Hand-held fiber optic probe with replaceable tip, 9910076600



Transmission probe and holder, 9910076700

Fiber Optic Probes

Use With	Description	Part No.
Cary 100/300	Hand-held fiber optic probe, quartz, long body 265 mm length, 10 mm pathlength. Suitable for use up to 150 °C and with corrosive acids	7910032100
	UV-Vis reflectance probe and probe holder for measuring total reflectance from a sample surface. Illumination area is 1 mm	7910036200
	Absorbance dip probe with switch, stainless steel, 10 mm path length	9910085000
	Absorbance dip probe with switch and coupler, stainless steel, 10 mm path length	9910085100
	UV-Vis reflectance probe	7910035500
Cary 50/60/100/300	Hand-held fiber optic probe, 6.35 mm diameter by 104 mm length. Includes shield	9910076600
	Hand-held fiber optic probe, quartz, corrosion resistant, 12.7 mm diameter, 10 mm path length	9910080800
	Transmission probe and holder. Suitable for transmission measurements on solid translucent materials e.g. glass	9910076700
	Versi remote read fiber optics probe with replaceable quartz tips. Can be hand held or mounted on the Cary Fiber Optic Dip Probe Coupler. Ideally suited for samples that are corrosive, toxic, radioactive or cross contamination	190055700
Cary 4000/5000/6000i	UV-Vis reflectance probe, 2 m for measuring total reflectance from a sample surface. Illumination area is 2 mm	9910069300
	UV-Vis absorption probe, stainless steel, 2 m, 10 mm path length	9910069400
	UV-Vis transmission probe and holder, 2 x 3 m fibers	9910069600
	UV-Vis & Vis-NIR transmission probes and holder kit, 2 x 3 m fibers	9910076500
	UV-Vis-NIR transmission probe and holder, 2 x 3 m fibers	9910076400
	UV-Vis-NIR absorption probe, stainless steel, 2 m, 10 mm path length	9910069500

Replaceable Tips and Miscellaneous Supplies

The stainless steel probe tips are suitable for use with the two stainless steel dip probes – either the stainless steel probe body (P/N 7910035700) or the stainless steel probe with the replaceable tip (P/N 7910036500).

The Torlon probe tips are suitable for use with the Torlon probe body (P/N 7910032600) or the Torlon fiber optic dip probe with the replaceable tip (P/N 7910035100). They feature a single arm design to reduce bubble formation. The tip is 7.9 mm in diameter and is suitable for operation in temperatures up to 85 °C.

Replaceable tip, stainless steel, 10 mm path length, 7910035800

Replaceable tip, Torlon, 20 mm path length, 7910034600

Replaceable Tips and Miscellaneous Supplies

Use With	Description	Part No.
Cary 50/60	Replaceable tip, stainless steel, 2 mm path length	7910036000*
	Replaceable tip, stainless steel, 5 mm path length	7910035900*
	Replaceable tip, stainless steel, 10 mm path length	7910035800*
	Replaceable tip, stainless steel, 40 mm path length	7910036100*
	Replaceable tip, Torlon, 2 mm path length	7910032800**
	Replaceable tip, Torlon, 5 mm path length	7910032900**
	Replaceable tip, Torlon, 10 mm path length	7910033000**
	Replaceable tip, Torlon, 20 mm path length	7910034600**
	Replaceable tip, Torlon, 40 mm path length	7910034500**
All Cary	10 mm pathlength tips to suit the Versi remote fiber optics probe p/n 190055700	190055900
	Fiber optic alignment loop	7910027200
	Fiber optic probe light shield. Provides light immunity for fiber optic probes used with Cary 100/300	7910028900
	UV-Vis reflectance probe holder, spare	9910068500

*For use with stainless steel dip probe body p/n 7910035700 or 7910036500

**For use with Torlon probe body p/n 7910032600 or 7910035100

Kits and Supplies for UV-Vis and UV-Vis-NIR Accessories

Cary temperature probe accessory

Accessory Supplies

Description	Part No.
Temperature Probe Accessory Supplies	
Probe holder Rectangular end probes (4 ea) are supplied, suitable for use in standard 10 mm rectangular cuvettes	9910066800
Probe holder, tapered end Tapered end probes (4 ea) are supplied, suitable for use in microcells	9910066900
Short extension lead for probe holder Required for mounting the probe inside the sample compartment	110381100
Long extension lead for probe holder Required for mounting the probe outside the sample compartment	110380500
O-ring kit for the probe holder	9910067000
Cary 50/60 Solid Sample Holder Accessory Supplies	
End holder Side mounting support for the Solid Sample Holder for Cary 50/60, Used to position the polarizer/depolarizer or other accessories	810137000
Solid Sample Holder Spares Kit #2 Includes 2 x V plate 3 x 45 mm, 2 x V plate 6 x 45 mm plus assorted screws and nuts for fixing samples onto the sliding plates on the sample holder	9910056200
Cary 100/300 Solid Sample Holder Accessory Supplies	
Film Holder Spares Kit #1 Includes 4 x magnetic strips, 20 x V plates, gel-boat holders, 2 x resting plates, 8 x masks and 4 x clamps	9910064600
Solid Sample Holder Spares Kit #1 Includes 10 mm aperture sample slide holder, 5 mm aperture sample slide holder, 1 mm aperture sample slide holder, 2 x V plate 3 x 45 mm, 2 x V plate 6 x 45 mm plus assorted screws and nuts for fixing samples onto the sliding plates on the sample holder	9910059400
Solid Sample Holder Spares Kit #2 Includes 2 x V plate 3 x 45 mm, 2 x V plate 6 x 45 mm plus assorted screws and nuts for fixing samples onto the sliding plates on the sample holder	9910056200

(Continued)

Accessory Supplies

Description	Part No.
Cary 4000/5000/6000 Solid Sample Holder Accessory Supplies	
Film Holder Spares Kit #1 Includes 4 x magnetic strips, 20 x V plates, gel-boat holders, 2 x resting plates, 8 x masks and 4 x clamps	9910064600
Solid sample end support Solid sample mount for the attachment of polarizers, depolarizers or apertures to the standard Solid Sample Mounting accessory for the Cary 4000/5000/6000	5810008100
Solid sample masking aperture 1 mm Replacement aperture plate with 1 mm hole	410204100
Solid sample masking aperture 5 mm Replacement aperture plate with 5 mm hole	410204300
Solid sample masking aperture 10 mm Replacement aperture plate with 10 mm hole	410203900
Solid sample mounting plate Provides attachment points for solid sample supports	410204500
Solid Sample Holder Spares Kit #1 Includes 10 mm aperture sample slide holder, 5 mm aperture sample slide holder, 1 mm aperture sample slide holder, 2 x V plate 3 x 45 mm, 2 x V plate 6 x 45 mm plus assorted screws and nuts for fixing samples onto the sliding plates on the sample holder	9910059400
Solid Sample Holder Spares Kit #2 Includes 2 x V plate 3 x 45 mm, 2 x V plate 6 x 45 mm plus assorted screws and nuts for fixing samples onto the sliding plates on the sample holder	9910056200
Diffuse Reflectance Accessory (DRA) Supplies	
Cary 100/300 Internal DRA Supplies	
Powder cell holder kit Includes a pre-packed PTFE powder cell for use as a reflectance standard and powder cell holder. Quartz window covers sample so holder can be positioned at port of sphere	7910036600
10 mm pathlength cuvette holder for DRA-CA-30I Suitable for positioning 10 mm pathlength cells in the transmittance port	7910028200
50 mm pathlength cuvette holder for DRA-CA-30I Suitable for positioning 50 mm pathlength cells in the transmittance port	7910028300
Fabric sample holder for DRA-CA-30 I Includes UG11 filter	7910027900
Light trap (for performing 0% T baseline correction)	7910028100
Transmittance sample holder for DRA-CA-30I	7910028000
Calibrated 1 inch diameter 99% Spectralon reflectance standard for DRA-CA-30I	7910036900

(Continued)

Cary 100/300 diffuse reflectance accessory

Cary 4000/5000/6000 solid sample holder

Accessory Supplies

Description	Part No.
Diffuse Reflectance Accessory (DRA) Supplies	
Cary 100/300 External DRA Supplies	
Powder cell holder kit for DRA-CA-30 Includes a pre-packed PTFE powder cell for use as a reflectance standard and powder cell holder. Quartz window covers sample so holder can be positioned at port of sphere	7910037000
Transmission cuvette holder for DRA-CA-30 Suitable for positioning 10 mm pathlength cells in the transmittance port	7910037100
Reflectance cuvette holder for DRA-CA-30 Suitable for positioning 10 mm pathlength cells in the reflectance port	7910037200
Variable angle center mount sample holder, clip type Allows samples to be positioned at the center of the DRA for measurement. The clip style holder is suitable for mounting thin and flexible samples. The holder incorporates a rotating dial so the user can quickly set the desired incidence angle to the nearest 1 degree	7910037400
Variable angle center mount sample holder, jaw type Allows samples to be positioned at the center of the DRA for measurement. The jaw style holder is suitable for mounting rigid, opaque samples such as mirrors and painted samples. The holder incorporates a rotating dial so the user can quickly set the desired incidence angle to the nearest 1 degree	7910037300
Variable angle center mount cuvette holder Suitable for mounting a standard 10 mm pathlength cuvette inside the sphere. The holder incorporates a rotating dial so the user can quickly set the desired incidence angle to the nearest 1 degree	7910037500
Cary 4000/5000/6000 Internal DRA Supplies	
Small reference disk PTFE packed diffuse reflectance disk 2 inches in diameter	410198890
Cuvette holder Suitable for both transmission and reflectance measurements using 10 mm pathlength cells	210187900
Powder cell kit Includes a pre-packed PTFE powder cell for use as a reflectance standard, powder cell holder, funnel and small sample holder	9910111400

(Continued)

Accessory Supplies

Description	Part No.
Diffuse Reflectance Accessory (DRA) Supplies	
Cary 4000/5000/6000 External DRA Supplies	
Large reference disk PTFE packed diffuse reflectance disk 2 inches in diameter	410143990
Center mount cuvette holder Suitable for mounting a standard 10 mm pathlength cuvette inside the sphere normal to the incident beam. Ideal for measuring turbid samples such as proteins and other biological solutions	7910038700
External mount cuvette holder Suitable for measuring the transmission or absorbance of liquid samples using standard 10 mm pathlength cuvettes. Mounts on the transmission holder and can be positioned in either the sample or reference beams	7910038300
Center mount holder clip type Allows samples to be positioned at the center of the DRA for measurement. The clip style holder is suitable for mounting thin and flexible samples. The holder incorporates a rotating dial so the user can quickly set the desired incidence angle to the nearest 1 degree	7910047600
Center mount holder jaw type Allows samples to be positioned at the center of the DRA for measurement. The jaw style holder is suitable for mounting rigid, opaque samples such as mirrors and painted samples. The holder incorporates a rotating dial so the user can quickly set the desired incidence angle to the nearest 1 degree	7910047500
Powder cell holder Allows reflectance measurements of powdered samples and samples. Mounts on the standard sample holder against the reflectance port. Includes a pre-packed PTFE powder cell for use as a reflectance standard and an empty powder cell holder for sample. Sample is retained by a plunger	7910047700
Small spot kit Consists of an iris, mirror assembly and 3 lens options to focus the beam to a smaller diameter spot at the selected measurement location. The beam size is ~ 3 mm diameter at the transmission position and 3.5 mm tall by 1.5 mm wide at the reflectance position	7910047200
Miscellaneous Accessory Supplies	
Powder cell holder for Reflectance Accessory Stainless steel cell with removable quartz window for containing loose powders for diffuse reflectance measurements	110374900
Aperture mask kit for the Variable Angle Specular Reflectance Accessory Contains 2 each of the 2, 10 and 20 mm sample holder and 2 x 1 inch disk holder	9910064700
Attenuation filter kit for the Variable Angle Specular Reflectance Accessory	9910047700

Cary 4000/5000/6000
diffuse reflectance accessory

Deuterium lamp, 5610021800

Cary Source Lamps

Agilent offers high quality lamps that produce top level performance for your Cary spectrophotometer.

Xenon lamp module, 110639690

Source Lamps

Description	Use With	Part No.
Deuterium UV lamp	Cary 100/300	5610021800
Visible source lamp	Cary 100/300	5610021700
Xenon lamp module	Cary 50/60	110639690
UV source lamp, less than 190 nm	Cary 400	5610135500
Deuterium UV lamp	Cary 4000 to 6000i	110713990
Visible QI lamp	Cary 4000 to 6000i	5610013900

Cary Tubing

D2 UV lamp, 110713990

Visible source lamp, 5610021700

Tubing

Description	Part No.
Silicon pump tubing, 3/16 in id x 5/16 in od, per m Tubing only, no connectors	2410023800
Peristaltic pump tubing replacement kit for the Routine Sampler Accessory. Includes silicon pump tubing and fittings	9910052900
PTFE tubing (to sample) for Routine Sampler Accessory, per m	3710030800
Silicon tubing, used to connect Routine Sampler Accessory to flow cells, per m	3710026400
Dissolution tubing spares kit, Cary 50	6610020500
Dissolution tubing spares kit, Cary 100/300	6610020600

UV Filters, Standards and Reagents

Optical Filters

Description	Part No.
Attenuator filter kit with neutral density screens and blue filter Includes two blue glass filters, three neutral density screens of 0.5, 1.0 and 1.5 Abs, and holder	9910047700
Holmium oxide filter	118020790
Holmium oxide/didymium glass filter kit Includes one each holmium oxide and didymium glass filters in a 10 mm rectangular cell holder	10030200
Certified holmium glass filter Holmium glass filter mounted in a 10 mm rectangular holder with certificate	2010094300
Certified didymium glass filter Didymium glass filter mounted in a 10 mm rectangular holder with certificate	2010094400
Photometric linearity neutral density filter kit Contains one tandem cell holder and two each neutral density filters of 0.3, 0.5, 1.0 and 1.5 absorbance	9910056100

Photometric linearity neutral density filter kit, 9910056100

OQ/PV chemical standards kit I, 5063-6503

OQ/PV chemical standards kit II, 5063-6521

OQ/PV hardware kit, 5063-6523

Tubing kit for UV-Vis OQ/PV test, 5063-6522

Caffeine OQ/PV sample for dissolution test, 5042-6476

Standards & Reagents

Our chemical standards and accessory kits provide an inexpensive and time-saving solution for operational qualification and performance verification (OQ/PV) of UV-Vis spectrophotometers. The kits are designed for analysts who need to conform closely to both quality and regulatory requirements when performing UV-Vis measurements.

The chemical kits can be used with any UV-Vis spectrophotometer and consist of pre-prepared solutions in sealed ampoules. The solutions are traceable to NIST standards and specified by the European Pharmacopeia (EP) and include holmium oxide for wavelength accuracy measurement; potassium dichromate for photometric accuracy measurement; sodium nitrite, sodium iodide and potassium chloride for stray light measurements at 340, 220 and 198 nm; and toluene in hexane for resolution measurement. Each standard includes a Certificate of Analysis for traceability.

8453 Certified Calibration Standards and Accessory Kits

Description	Part No.
OQ/PV Chemical Standards Kit I (for photometric accuracy, stray light and resolution measurements) Contains 10 ampoules 10 mL each of 2 dichromate, 2 sulfuric acid, 1 sodium nitrite, 1 sodium iodide, 1 potassium chloride, 1 toluene in hexane, 2 hexane	5063-6503
OQ/PV Chemical Standards Kit II (for wavelength accuracy) Contains three ampoules 10 mL each of 2 perchloric acid, 1 holmium oxide in perchloric acid	5063-6521
OQ/PV Hardware Kit Contains two flow cells, cell passivating fluid, tubing kit, MCT adjustment tool, temperature sensor support, syringes and OQ/PV manual	5063-6523
Tubing Kit for UV-Vis OQ/PV Test Contains tubings, fittings and adapter to flush flow cell	5063-6522
Caffeine OQ/PV sample for dissolution test, 150 mg/L caffeine in water, 500 mL	5042-6476

8453 Checkout Samples

Description	Part No.
Test sample for UV-Vis (caffeine solution, 10 µg/mL in water)	5063-6524

Cary Standards

Description	Notes	Part No.
Calibrated solution standards kit	Solution validation test kit. Includes Potassium dichromate 60 mg/L plus perchloric acid blank, Holmium Perchlorate 4% in 10% perchloric acid, Potassium Chloride solution 12 g/L Sodium Iodide – 1% solution plus water blank for stray light solutions, Toluene/Hexane Mixture plus a Hexane Blank. Each solution is sealed in a quartz cuvette. A certificate of traceability and performance is included for each solution.	9910085200
Calibrated color standard, 2 in od, 4 per set	Includes four colored standards with values traceable to NIST. Certified values are in 10 nanometer increments from 380-830 nm.	9910084300
Certified diffuse reflectance wavelength and wave number standard	Wavelength/wavenumber accuracy standard that contains a mixture of rare earth oxides of known wavelengths/wavenumbers. Certificated values are given in wavelengths/ wavenumbers.	9910081100
Certified diffuse reflectance wavelength standard	Wavelength accuracy standard that contains a mixture of rare earth oxides of known wavelengths. Certificated values are given in wavelengths	9910080900
Certified diffuse reflectance wavenumber standard	Wavelength accuracy standard that contains a mixture of rare earth oxides of known wavenumbers. Certificated values are given in wavenumbers	9910081000
Certified reference standard 1404 for USP certification	NIST traceable standards for USP testing. The set contains solution of Holmium Oxide wavelength standard; three neutral density glass transmission standards nominal 10%, 20%, and 30% T; and a solution of Potassium Dichromate as a photometric standard, nominal 1 AU at 235 nm	190034200
Certified reference standard, full certification	Certification standards for full performance testing includes p/n 110820790 Holmium Oxide Filter, P/N 9910056000 Cary Double Aperture Kit, P/N 9910056100 Neutral Density Photometric Linearity Filter Kit, P/N 9910085200 Calibrated Solution Standards Kit and P/N 190032100 CRM 400 Neutral Density Standards	190034300
Certified specular reflectance standard, 1 in od	First surface mirror 1" x 1" square	190012800
Certified Neutral Density standards, set of 3	Includes set of three neutral density glass filters required for the determination of photometric accuracy. Traceable to NIST.	190032100
Certified ND diffuse reflectance standard, set of 8	Certified neutral gray diffuse reflectance standards 2 inch in diameter. NIST traceable over the wavelength range 250-2500 nm	190061700
Certified Neutral Density standards, set of 3	Set of three neutral density glass filters required for the determination of photometric accuracy. Traceable to NIST.	190032100

The Agilent Cary Eclipse
fluorescence spectrophotometer

Agilent Cary Eclipse Fluorescence Supplies

Agilent's fluorescence spectrophotometers are augmented by a wide range of accessories and supplies, including a fast filter accessory, solid sampler holder, 96- and 384-well microplates, and fiber optic probes and couplers.

Kits and Supplies for Fluorescence Accessories

Fura-2 filters for Ca^{++} measurements,
7910043800

Indo-1 filters for Ca^{++} measurements,
7910043900

Fast Filter Accessory Supplies

The Fast Filter Accessory quickly adapts the Cary Eclipse to a filter based instrument for measurement of rapid intracellular ion movements into and out of cells using ratiometric fluorescent probes. Such measurements are used in processes exhibiting fast kinetics that cannot be measured using high-speed scanning monochromators. A pair of bandpass filters appropriate to the fluorophore under investigation must be mounted in the fast filter accessory. Agilent offers filter pairs appropriate for measurement of the calcium binding dyes Fura-2 and Indo-1. The filters are 25 mm in diameter and are mounted in a black anodized aluminum ring.

Fast Filter Accessory Supplies

Description	Part No.
Fura-2 filters for Ca^{++} measurements (340 and 380 nm bandpass filters, 20 nm SBW) Requires fast filter accessory	7910043800
Indo-1 filters for Ca^{++} measurements (405 and 495 nm bandpass filters, 20 nm SBW) Requires fast filter accessory	7910043900

Description	Part No.
Solid Sample Holder Accessory Supplies	
Edge Mounting Sample Holder Used with Solid Sample Holder accessory. Allows measurement of optical components including optical filters and other samples that cannot be mounted using the standard solid sample holder kit. Consists of an adjustable sample clamp plate, 2 additional sample brackets, a sliding bracket, ball driver and positioning screws (4 ea)	9910102900
Powder Cell and Single Crystal Holder Used with Solid Sample Holder accessory. Allows measurement of powders and a variety of small crystals, gems and rocks. Consists of a mounting bracket, positioning screws (4 ea), cylindrical powder holder shell and powder holder lid, sample cups (2 ea), silica disks and a crystal holder bracket	9910103000
Cuvette Sample Holder Used with Solid Sample Holder accessory. Allows measurement of liquid samples located in traditional cuvettes. Consists of a cuvette holder for standard 10 mm pathlength cuvettes and mounting screws (2 ea) to secure the cuvette holder to the solid sample holder mounting plate. Allows for flexible front face cuvette measurements at a variety of angles for highly scattering or absorbing samples	9910103100
Temperature Probe Accessory Supplies	
Probe holder Rectangular end probes (4 ea) are supplied, suitable for use in standard 10 mm rectangular cuvettes	9910066800
Probe holder, tapered end Tapered end probes (4 ea) are supplied, suitable for use in microcells	9910066900
Short Extension Lead for Probe holder Required for mounting the probe inside the sample compartment	110381100
Long Extension Lead for Probe holder Required for mounting the probe outside the sample compartment	110380500

Cary 4000/5000/6000 solid sample holder

Base Plate for Custom Accessories

This base plate incorporates locating holes and the Cary Eclipse rapid lockdown mechanism common to most Eclipse accessories. It can be used to mount custom accessories in the Eclipse sample compartment.

Base Plate for Custom Accessories

Description	Part No.
Base plate for custom accessories, fluorescence	210167490

Base plate for custom accessories, fluorescence, 210167490

Fluorescence Cuvettes and Flow Cells

Flow cell, 2 x 2 mm emission window, 6610023700

Triangular Microcell, stoppered, square base, 6610021200

Triangular Microcell, open top, square base, 6610021300

Rectangular cells are the most commonly used cell type. We offer standard cells, sub-micro cells with about 40% of the volume of a standard cell of the same path length and microcells with about 20% of the volume of a standard cell. Low volume triangular cells that fit directly into the standard 10 mm cuvette holder are also available. The microcell cuvettes are ideal for use when you have only a small amount of sample.
All the listed cuvettes have the optimum Z-height (the distance between the base of the cell and the center of the light beam) for the Cary Eclipse fluorescence spectrophotometer.

Cuvettes and Flow Cells

Cell Type	Description	Cell Material	Volume	Path Length (mm)	Part No.
Flow Cell	Flow cell, 2 x 2 mm emission window	Far UV quartz	40 µL	10	6610023700
Rectangular	Fluorescence cell, open top, pair	Far UV quartz	3.5 mL	10	6610000900*
	Fluorescence cell, stoppered, pair	Far UV quartz	3.5 mL	10	6610001200*
	Fluorescence cell, anaerobic	Far UV quartz	3 mL	10	6610021400
	Fluorescence cell, two sides mirrored with black-backed mirrored sides	Far UV quartz	3 mL	10	6610023500
	Sub-micro cell, 4 x 10 mm window	Far UV quartz	400 µL	10	6610021500
	Sub-micro cell, 2 x 2 mm window	Far UV quartz	40 µL	10	6610021600
	Sub-micro cell, low head space, stoppered	Far UV quartz	40 µL	10	6610024200
Triangular	Microcell, stoppered, square base	Far UV quartz	1.7 mL	10	6610021200
	Microcell, open top, square base	Far UV quartz	1.7 mL	10	6610021300

*Matched pair

Cell Holder and Base

Description	Part No.
Cell holder, fluorescence	110664700
Cell holder base, fluorescence	210167200

Microplates

Our microplates are available in white for best overall well-to-well reproducibility, or black for the lowest background signal levels. Both types have high binding surfaces that bind medium and large biomolecules (greater than 10 kDa) that have hydrophobic and/or ionic groups. These microplates are recommended for the Cary Eclipse Microplate Reader Accessory.

96-well Microplates

Surface Treatment	Sterile	Color	Unit	Part No.
High binding	No	White	10/pk	6610022400
High binding	No	Black	10/pk	6610022500
High binding	No	White	100/pk	6610022800
High binding	No	Black	100/pk	6610022900
Untreated	Yes	White	10/pk	6610022300

96-well microplate, 6610022300

384-well Microplates

Surface Treatment	Sterile	Color	Unit	Part No.
High binding	No	White	10/pk	6610022600
High binding	No	Black	10/pk	6610022700
High binding	No	White	100/pk	6610023000
High binding	No	Black	50/pk	6610023100

Fiber Optic Probes and Couplers

Fiber Optic Probes and Couplers

Description	Notes	Part No.
Fiber optic dip probe coupler accessory, fluorescence	Allows a fiber optic dip probe to be connected using SMA 906 connectors. Includes a remote read connection to enable read triggering from the probe mounting arm. Requires the fiber optic dip probe (P/N 7910043100)	10076800
Fiber optic coupler accessory, fluorescence	Allows a remote read fiber optic probe to be connected using SMA 906 connectors. Allows remote sample measurement. Requires the remote read fiber optic probe (P/N 7910043000)	10076700
Fiber optic dip probe, fluorescence	Stainless steel fiber optic dip probe. For use with Fiber Optic Dip Probe Coupler Accessory. Probe tips must be ordered separately. Select from the Fluorescence fiber optic liquid tips kit for quantitative work and the Fluorescence fiber optic probe tip for solids	7910043100
Fiber optic remote read 2 m probe, fluorescence	Hand-held stainless steel fiber optic probe with remote read switch. For use with Fiber Optic Coupler Accessory. Probe tips must be ordered separately. Select from the Fluorescence fiber optic liquid tips kit for quantitative work and the Fluorescence fiber optic probe tip for solids	7910043000

Tips for Fiber Optic Probes

Description	Kit Contents	Part No.
Fluorescence fiber optic liquid tips kit	Includes two stainless steel liquid probe tips with black quartz bases, angled to minimize back-scattering. 10 and 20 mm pathlengths	9910104500
Fluorescence fiber optic solid tip kit	Includes stainless steel probe tip for solids designed to bring the light into the sample at 30 degrees to minimize back-scattered excitation	7910043200

Fiber optic dip probe coupler accessory, fluorescence, 10076800

Transmission probe and holder, 10076700

Fiber optic remote read 2 m probe, fluorescence, 7910043000

Fluorescence fiber optic liquid tips kit, 9910104500

Fluorescence fiber optic solid tip kit, 7910043200

Standards and Reference Materials

Standards and Reference Materials

Description	Part No.
Water filled fluorescence cuvette, sealed Used for signal-to-noise measurements of Raman band of water	6610021800
Silica Diffuser, spare	110674800
Neutral density attenuator 1.5 Abs, spare	110677500
Rhodamine B in polymer block	6610021900
Europium in polymer block	6610022200
Rhodamine B, concentrated solution sealed in triangular cuvette Saturated Rhodamine B solution in triangle cell for collecting excitation correction factors	6610021700
Holmium perchlorate 4% in perchloric acid, sealed in a quartz cuvette Sealed cell used to measure wavelength accuracy on the emission monochromator. Requires cell holder P/N 110678600. Includes certificate of traceability and performance	6610022100
Cell holder for holmium perchlorate cuvette Special cell holder for mounting a cuvette before the standard cell holder. This accessory is used for mounting the Holmium Perchlorate for the wavelength accuracy test. This allows the diffuser to be positioned in the standard cell holder and the Perchlorate cell to be positioned in this cell holder. Required for Cary Eclipse wavelength accuracy test using holmium perchlorate solution	110678600
Fluorescence samples, set of six hydrocarbons in polymer blocks Four have broad fluorescence bands for 300-700 nm, and two have sharp emission bands for wavelength calibration and bandpass checking; Samples include Anthracence/Napthalene, Ovalene, p-Terphenyl, Tetraphenyl butadiene, Compound 610 and Rhodamine B in PMMA block	6610010300
Fluorescence demonstration kit Includes Europium in polymer block, ovalene in polymer block, a sealed water cuvette, and an empty 10 x 10 mm fluorescence cuvette	9910101900

Silica Diffuser, spare, 110674800

Rhodamine B, concentrated solution sealed in triangular cuvette, 6610021700

The Agilent Cary 610/620 FTIR

Agilent Cary Series FTIR Supplies

Agilent's world-renowned Cary product line now encompasses both portable and inlab routine and research grade FTIR, in addition to the traditional UV-Vis and UV-Vis-NIR and Fluorescence techniques. With this addition, Agilent can now offer you a comprehensive range of molecular spectroscopy solutions. Agilent's FTIR products are engineered to help you discover, characterize, and test a variety of solid, liquid, organic and inorganic materials. Take advantage of powerful analysis routines for reliable results with built-in ease-of-use to ensure your productivity. Our range of consumables for these products includes desiccant, replacement windows and sources, filters, crystals and high quality reference sources such as polystyrene test films.

Replacement desiccant cartridge for spectrometer, 899-1794

Funnel for liquid nitrogen, 013-4422

KBr window assembly for sample compartment, 110834990

Window retaining ring, 810207300

Cary Series FTIR Instrument Supplies and Sources

Cary Series FTIR Instrument Supplies and Sources

Description	Part No.
Replacement desiccant cartridge for spectrometer Used to prevent water vapor diffusing into the spectrometer enclosure. Replace when the indicator crystals turn pink	899-1794
Funnel for liquid nitrogen Used for pouring liquid nitrogen when cryogenically cooled detectors (MCT or InSb) are installed	013-4422
Sample compartment filter kit Includes 12.5%, 25% and 50% filters	9910141100
KBr window assembly for sample compartment	110834990
Window retaining ring	810207300
KRS5 window assembly for sample compartment	110835000
Simple polystyrene test card (uncertified)	883-9120
Source assembly Mid-IR	110805990
NIR source lamp	5610136500

Agilent Cary 610/620 FTIR Imaging Supplies

Description	Part No.
Replacement Ge crystal for Slide-on ATR accessory	099-1925-1
Replacement Diamond crystal for Slide-on ATR accessory	099-1925-3

Agilent Cary 630 FTIR System Supplies

Description	Part No.
Replacement infrared source with purge fitting	G8043-67400
Replacement dessicant cartridge with purge fitting	G8043-67401
KBr window with removal tool and purge fitting	G8043-67402
ZnSe window with removal tool and purge fitting	G8043-67403
Polystyrene disks for Diffuse Reflectance sampling accessory	G8043-67404
Polystyrene film for Diamond ATR/Transmission sampling accessory	G8043-67405
Polystyrene film for TumbIIR/DialPath sampling accessory	G8043-67406
Replacement flat tip for Diamond ATR	G8043-67483
Replacement pellet tip for Diamond ATR	G8043-67484

Agilent 4200 FlexScan FTIR System Supplies

Description	Part No.
Diffuse gold reflectance reference cap for diffuse reflectance	0023-300
Polystyrene frequency reference cap for diffuse reflectance	0023-301
Diffuse gold reflectance reference cap for external reflectance	0023-304
Polystyrene frequency reference cap for external reflectance	0023-305
Mirrored stainless steel reflectance reference cap for external reflectance	0023-307

Agilent Cary 630 FTIR

Replacement infrared source with purge fitting, G8043-67400

KBr window with removal tool and purge fitting, G8043-67402

Replacement ZnSe sample cell assembly, 013-5353

Viton pump tubing, 815-0631

Replacement Batteries for Hand-held FTIR System Supplies

Description	Part No.
Hand-held PC battery Used with Agilent 4100 ExoScan, 4200 FlexScan and 4500 Series Portable FTIR systems	800-2004
Lithium-ion battery Used with Agilent 4100 ExoScan and 4200 FlexScan FTIR systems	800-2005

Agilent Oil Analyzer Supplies

Description	Part No.
24 Bottle Autosampler Rack Holds bottles of up to 2 in diameter in a 3 row by 8 column configuration	697-5392-1
40 Bottle Autosampler Rack Holds bottles of up to 1 5/8 in diameter in a 4 row by 10 column configuration	697-5392-2
55 Bottle Autosampler Rack Holds bottles of up to 1 1/16 in diameter in a 5 row by 11 column configuration	697-5392-3
Replacement ZnSe sample cell assembly	013-5353
Polystyrene card	884-2829
Replacement pump head, easy load	899-1599
Viton pump tubing	815-0631
Tygon fuel tubing	815-0639
PTFE tubing	815-0616
Tool/Parts Kit for Oil Analyzer Includes 2 x 400 mesh stainless steel filters, 2 foot length of 3/32 in x 5/32 in PTFE tubing, 2 foot length of Viton pump tubing, 4 foot length of Tygon fuel tubing, wash bottle, 3 x 1 gallon capacity plastic bottle, 2 x 3/8 in id Viton O-rings, wrenches for filter holder and probe fittings	013-4825-1

FTIR Standards

Description	Part No.
Polystyrene test film, NIST traceable Set of 2 polystyrene test films each mounted to 2 in x 4 in cardstock holder that fit in the universal slide mount. Inc. certificate of traceability to five (5) NIST 1921b frequencies	925-0128
KBr powder, spectroscopic grade, 100 g	HARRICK-KBR-100

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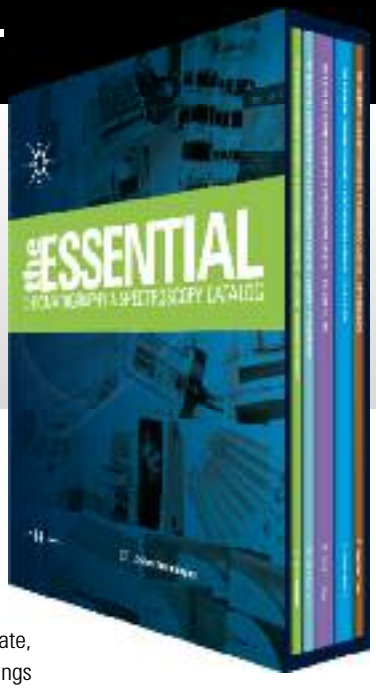

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