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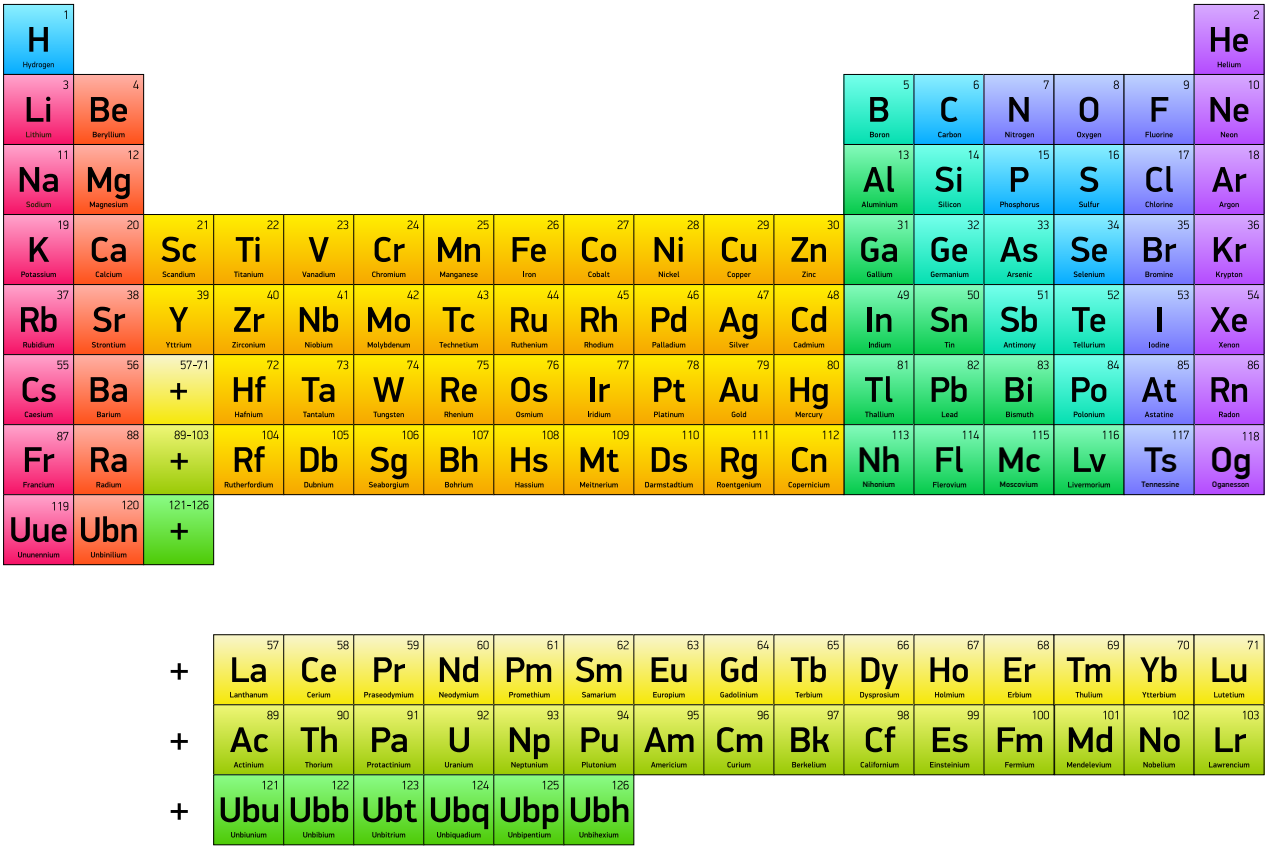
2020 Atomic Spectroscopy Consumables and Supplies

AA | ICP-OES | ICP-MS | General Supplies | Reference Materials | Sample Preparation

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For the Better

What is Atomic Spectroscopy?

Atomic spectroscopy is the technique for determining the elemental composition of an analyte by its electromagnetic or mass spectrum. Several analytical techniques are available (Atomic Absorption [AA], Inductively Coupled Plasma Optical Emission Spectroscopy [ICP-OES], Inductively Coupled Plasma Mass Spectrometry [ICP-MS]), and selecting the most appropriate one is the key to achieving accurate, reliable, real-world results. Proper selection requires a basic understanding of each technique since each has its individual strengths and limitations. It also requires a clear understanding of your laboratory's analytical requirements.



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Atomic Spectroscopy

PerkinElmer is the world leader in atomic spectroscopy solutions for atomic absorption (AA), inductively coupled plasma optical emission spectroscopy (ICP-OES) and inductively coupled plasma mass spectrometry (ICP-MS). With instruments that are the industry standard worldwide, PerkinElmer accessories, consumables, methods and application support meet the most demanding requirements and are the preferred choice in thousands of laboratories globally.

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- Unsurpassed matrix tolerance with vertical torch design
- Superior sensitivity and resolution for all elements of interest
- Extended linear range with dual view technology

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- Simultaneous detection of all wavelengths at all times with no storage or sample time penalty with Universal Data Acquisition
- High throughput enabled by dual view technology, simultaneous data acquisition and low routine maintenance

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NexION 1000 ICP-MS

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The NexION 1000 features:

- Dedicated SMARTintro™ sample introduction module with integrated AMS for high dissolved solids
- Three quadrupoles and the Universal Cell's ability to switch between Collision and Reaction modes with a single gas offer efficient interference removal, requiring minimal switching times
- Extended Dynamic Range to detect high- and low-level elements in a single sample run
- Industry's fastest data acquisition speed (100,000 points/sec) to handle any particle size
- Triple Cone Interface with Quadrupole Ion Deflector deliver no maintenance beyond the cones

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NexION 2000 ICP-MS

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- Extended Dynamic Range to detect high-and low-level elements in a single sample run
- Three quadrupoles, three gas channels and three modes of operation combine to offer better interference removal, delivering better detection limits/ improved data accuracy
- Industry's fastest data acquisition speed (100,000 points/sec) to handle any particle size
- Triple Cone Interface with Quadrupole Ion Deflector deliver no maintenance beyond the cones

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Atomic Absorption

PerkinElmer offers a wide selection of superior quality products designed to work with your PerkinElmer instruments. Our precision designed products deliver the peace of mind that comes from knowing that you'll get the results you need.

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Hollow Cathode and Electrodeless Discharge Lamps

PerkinElmer has over 40 years of expertise designing and manufacturing Hollow Cathode Lamps. PerkinElmer offers a full range of single-element and multi-element Hollow Cathode Lamps and high intensity Electrodeless Discharge Lamps for those elements for which they are more effective.



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Nebulizers

Nebulizers are a critical part of the Flame AA sample introduction system and our nebulizers are designed to support a variety of samples.



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Graphite Furnace Autosampler Supplies

To keep your Graphite Furnace Autosampler operating smoothly, PerkinElmer offers a complete selection of consumables and supplies.



VIEW PAGE

HGA and THGA Graphite Components

The heart of the Furnace AA system is not only the furnace itself but the graphite components that go into it. Our exclusive PerkinElmer graphite products provide the performance and consistency that furnace applications require.



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Flow Injection System Supplies

PerkinElmer offers a complete line of genuine replacement parts for the FIAS, FIMS and MHS systems.



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Features and Benefits:

- Long Life: PerkinElmer's larger lamp volume results in longer lamp lifetime
- Automation: PerkinElmer coded lamps allow automatic setup
- Electronic Lamp Timer: When combined with a PinAAcle instrument and Syngistix Software the lamp life is automatically recorded for easy viewing
- Easy Installation: It's as simple as sliding the lamp into the instrument's lamp bracket or turret
- Complete Compatibility: Lumina hollow cathode lamps can be used with PerkinElmer's entire range of atomic absorption spectrometers
- Testing: Every lamp is thoroughly tested before leaving the factory
- Quality: Carefully selected materials used in the manufacturing of our lamps avoid spectral interference
- Design: Our design provides you with the low detection limits needed for your most difficult determinations
- Selection: PerkinElmer offers a wide selection of single-element and multi-element lamps
- Easy To Order: It's easy to find the right lamp for your analytical needs – simply use the selection charts on this page or visit our website for a complete listing
- Warranty: The performance of every PerkinElmer lamp is fully warranted* (see next page for details).

Lumina Single-Element Hollow Cathode Lamps

Element Name	Element Symbol	Lumina Lamp Part No.	Lumina Lamp with Intensitron® Adapter Part No.
Aluminum	Al	**N3050103**	**N3050303**
Antimony	Sb	**N3050170**	**N3050370**
Arsenic	As	**N3050105**	**N3050305**
Barium	Ba	**N3050109**	**N3050309**
Beryllium	Be	**N3050110**	
Bismuth	Bi	**N3050111**	
Boron	B	**N3050108**	
Cadmium	Cd	**N3050115**	**N3050315**
Calcium	Ca	**N3050114**	**N3050314**
Chromium	Cr	**N3050119**	**N3050319**
Cobalt	Co	**N3050118**	
Copper	Cu	**N3050121**	**N3050321**
Dysprosium	Dy	**N3050122**	
Erbium	Er	**N3050123**	
Europium	Eu	**N3050124**	
Gadolinium	Gd	**N3050129**	
Gallium	Ga	**N3050128**	
Germanium	Ge	**N3050130**	
Gold	Au	**N3050107**	
Hafnium	Hf	**N3050133**	
Holmium	Ho	**N3050135**	
Indium	In	**N3050137**	
Iridium	Ir	**N3050138**	
Iron	Fe	**N3050126**	**N3050326**
Lanthanum	La	**N3050141**	
Lead	Pb	**N3050157**	**N3050357**
Lithium	Li	**N3050142**	
Magnesium	Mg	**N3050144**	**N3050344**
Manganese	Mn	**N3050145**	**N3050345**
Mercury	Hg	**N3050134**	
Molybdenum	Mo	**N3050146**	
Neodymium	Nd	**N3050150**	
Nickel	Ni	**N3050152**	**N3050352**
Niobium	Nb	**N3050149**	
Palladium	Pd	**N3050158**	
Phosphorus	P	**N3050155**	
Platinum	Pt	**N3050162**	
Potassium	K	**N3050139**	**N3050339**
Praseodymium	Pr	**N3050161**	
Rhenium	Re	**N3050165**	**N3050365**
Rhodium	Rh	**N3050166**	
Ruthenium	Ru	**N3050168**	

Chart continues on next page

Element Name	Element Symbol	Lumina Lamp Part No.	Lumina Lamp with Intensitron® Adapter Part No.
Samarium	Sm	**N3050174**	
Scandium	Sc	**N3050171**	
Selenium	Se	**N3050172**	
Silicon	Si	**N3050173**	
Silver	Ag	**N3050102**	**N3050302**
Sodium	Na	**N3050148**	**N3050348**
Strontium	Sr	**N3050176**	
Tantalum	Ta	**N3050177**	
Tellurium	Te	**N3050180**	
Terbium	Tb	**N3050178**	
Thallium	Tl	**N3050183**	
Thulium	Tm	**N3050184**	
Tin	Sn	**N3050175**	
Titanium	Ti	**N3050182**	
Tungsten	W	**N3050187**	
Vanadium	V	**N3050186**	
Ytterbium	Yb	**N3050190**	
Yttrium	Y	**N3050189**	
Zinc	Zn	**N3050191**	**N3050391**
Zirconium	Zr	**N3050192**	

PERKINELMER EXCLUSIVE 6/24 WARRANTY*

Lumina™ Hollow Cathode Lamps

1. We warrant that during the first six months or after 5,000 milliampere-hours of operation, whichever comes first, from initial date of shipment, the lamps will meet or exceed the intensity and absorption specifications to which all new lamps are tested.
2. All our hollow cathode lamps are warranted to light and emit the spectra of the element indicated for two years or 5,000 milliampere-hours of operation from the date of the shipment, whichever comes first.
3. If any lamp fails before the expiration of the warranty period, it will be replaced free of charge.

*The lamp warranty is void for lamps which sustain physical damage or are operated at power levels substantially above or below the power level recommended on the lamp label. The lamp warranty may vary in different countries.

Lumina Multi-Element Hollow Cathode Lamps

Element Name	Element Symbol	Lumina Lamp Part No.
Two-element Lamps		
Silver, Gold	Ag, Au	**N3050201**
Calcium, Magnesium	Ca, Mg	**N3050202**
Calcium, Zinc	Ca, Zn	**N3050203**
Potassium, Sodium	K, Na	**N3050204**
Platinum, Ruthenium	Pt, Ru	**N3050205**
Tin, Tellurium	Sn, Te	**N3050206**
Three-element Lamps		
Calcium, Magnesium, Zinc	Ca, Mg, Zn	**N3050208**
Copper, Iron, Nickel	Cu, Fe, Ni	**N3050209**
Four-element Lamps		
Copper, Iron, Manganese, Zinc	Cu, Fe, Mn, Zn	**N3050212**
Five-element Lamps		
Silver, Chromium, Copper, Iron, Nickel	Ag, Cr, Cu, Fe, Ni	**N3050213**
Cobalt, Chromium, Copper, Manganese, Nickel	Co, Cr, Cu, Mn, Ni	**N3050214**
Six-element Lamps		
Cobalt, Chromium, Copper, Iron, Manganese, Nickel	Co, Cr, Cu, Fe, Mn, Ni	**N3050217**
Seven-element Lamps		
Aluminum, Calcium, Copper, Iron, Magnesium, Silicium, Zinc	Al, Ca, Cu, Fe, Mg, Si, Zn	**N3050218**

Electrodeless Discharge Lamps



Features and Benefits:

- Brightness: EDLs are much brighter and, in some cases, provide better sensitivity than comparable hollow cathode lamps
- Precision: EDLs offer lower detection limits and are preferred for analyses that are 'noisy' due to weak hollow cathode emission
- Long Life: System 2 EDLs are long-lived for exceptional cost-effectiveness
- Automation: PerkinElmer coded lamps allow automatic set-up on systems with automated turret
- Quality: Carefully selected materials used in the manufacturing of our lamps avoid spectral interference
- Testing: Every lamp is thoroughly tested
- Design: Our design provides you with the low detection limits needed for your most difficult determinations
- Warranty: The performance of every PerkinElmer lamp is fully warranted*

PERKINELMER EXCLUSIVE WARRANTY*

System 2 Electrodeless Discharge Lamps

1. We warrant that during the first six months or after 500 hours of operation, whichever comes first, from initial date of shipment, the lamps will meet or exceed the intensity and absorption specifications to which all new lamps are tested.
2. All our Electrodeless Discharge Lamps are warranted to light and emit the spectra of the element indicated for two years or 1,000 hours of operation from the initial date of shipment, whichever comes first.
3. If any lamp fails before the expiration of the warranty period, it will be replaced free of charge.

* The lamp warranty is void for lamps that sustain physical damage or are operated at power levels substantially above or below the power level recommended on the lamp label. The lamp warranty may vary in different countries.

EDLs provide greater light output and longer life than corresponding HCLs

For certain elements such as Arsenic and Selenium, EDLs will also provide improved sensitivity and lower detection limits. System 2 electrodeless discharge lamps provide the optimized spectral output needed to get the maximum performance from PerkinElmer atomic absorption spectrometers.

EDLs are typically much brighter and, in some cases, provide better sensitivity than comparable HCLs. EDLs are preferred for certain volatile elements. They offer better precision and lower detection limits for analyses that are 'noisy' due to weak hollow cathode emission. PerkinElmer System 2 EDLs consist of the element or a salt of the element sealed in a quartz bulb containing an inert gas atmosphere. When an RF field of sufficient power is applied, the inert gas is ionized and the coupled energy vaporizes the element and excites the atoms inside the bulb, resulting in the emission of the characteristic spectrum.

PerkinElmer's System 2 EDLs consist of a driver and a lamp sleeve. Depending on the instrument, one or two EDL lamps can be on at the same time. The driver connects to the instrument's RF power supply (if applicable), or the external power supply if needed. The lamp sleeve contains the pre-aligned bulb for the element of interest. The sleeve has the same exterior dimensions as the PerkinElmer HCLs, allowing System 2 EDLs to be used in the same lamp mounts and turrets.

The locking pin on the lamp driver prevents operation without the lamp sleeve correctly installed on the driver.

Electrodeless Discharge Lamps are an ideal source for determining volatile elements.



System 2 EDL
with Coded Adapter



AAnalyst
Coded Adapter

Electrodeless Discharge Lamps

Element Name	Element Symbol	System 2 EDL with Coded Adapter Part No.	AAnalyst Coded Adapter Part No.
Antimony	Sb	**N3050670**	**N3050869**
Arsenic	As	**N3050605**	**N3050860**
Bismuth	Bi	**N3050611**	**N3050861**
Cadmium	Cd	**N3050615**	**N3050862**
Cesium	Cs	**N3050620**	**N3050863**
Germanium	Ge	**N3050630**	**N3050864**
Lead	Pb	**N3050657**	**N3050867**
Mercury	Hg	**N3050634**	**N3050865**
Phosphorus	P	**N3050655**	**N3050866**
Rubidium	Rb	**N3050664**	**N3050868**
Selenium	Se	**N3050672**	**N3050870**
Tellurium	Te	**N3050680**	**N3050872**
Thallium	Tl	**N3050683**	**N3050873**
Tin	Sn	**N3050675**	**N3050871**
Zinc	Zn	**N3050691**	**N3050874**

EDL Driver Assembly required



EDL Driver Assembly
Part No. **03030997**

EDL Driver Assemblies

Description	Part No.
For AAnalyst™ 200/400	**N3150131**
EDL Lamp Adapter AAnalyst 200/400 to PinAAcle Adapter cable to allow custom AAnalyst 200/400 EDL lamp drivers to plug into PinAAcle instruments	**N3180626**
System 2 EDL driver with a short cable For use with PinAAcle and other instruments that have a built in EDL power supply. Adapter **N3150303** is also needed if used on the AAnalyst 200/400	**03030997**
Driver with a long cable For use with the external power supply, but has the same plug connector as **03030997**. Requires adapter **N3150303** if used with the AAnalyst 200/400	**03030793**

EDL Driver Components

Description	Part No.
Driver Assembly Adapter Cable Allows System 2 EDL Drivers (**03030793** and **03030997**) to be used on an AAnalyst 200/400	**N3150303**
Extension cable for **03030997** if a longer length is needed	**03030998**

Background Corrector Sources

For Instrument Models	Source Type	Part No.
PinAAcle 500/900	Deuterium	**N3160811**
AAnalyst 200/400	Deuterium	**B3150169**
AAnalyst 700/800	Deuterium	**B0148615**

Lamp Adapters and Supplies

Small Diameter Lamp Adapter Kit

Permits the use of hollow cathode lamps of smaller diameter than the PerkinElmer 2 in. diameter hollow cathode lamps used in PerkinElmer atomic absorption spectrometers. Note that the adapter has an 8-pin connector for the lamp and the cable terminates with a 9-pin connector which requires **N3050197** to be compatible with AAnalyst and PinAAcle instruments.



Small Diameter Lamp Adapter Kit
Part No. **N3051050**

For a full selection of Lamp Adapters and supplies please visit our website.

Description	Part No.
Small Diameter Lamp Adapter Kit	**N3051050**

Non-Coded Intensitron Lamp Plug Adapter

Allows non-coded Intensitron lamps (03036XXX series, 9-pin) and other 9-pin lamps to be used with PinAAcle and AAnalyst instruments (4-pin).



Non-Coded Intensitron Lamp Plug Adapter
Part No. **N3050197**

Description	Part No.
Non-Coded Intensitron Lamp Plug Adapter	**N3050197**

Red Filter

Linearizes working curves for potassium, lithium, rubidium and cesium. Recommended for Rb and Cs determinations by flame emission. Passes only wavelengths longer than 650 nm.

Description	Part No.
Red Filter	**02901518**

Atomax Hollow Cathode Lamps



Features and Benefits:

- Experts: Expertise designing and manufacturing quality lamps for over 40 years. A brand you can trust
- Compatibility: Compatible with other manufacturer's instruments – tested and approved
- Lifetime: Long lifetime and performance. As the world's leading AA supplier, we know how to build lamps that provide maximum light output and spectral purity for optimum performance
- Quality: Every lamp ships with Certificate of Quality
- Testing: Lamps are thoroughly tested before leaving the factory
- Raw Materials: Carefully selected materials used in the manufacturing of our lamps avoid spectral interference
- Clean: Lamps are built to stringent specifications in a state-of-the-art lamp manufacturing facility. Great quality every time
- Design: Our design provides you with the low detection limits needed for your most difficult determinations
- Value: Equivalent or better performance than your current lamp at a great price

Atomax™ 1.5 in. AA Lamps from PerkinElmer, the World Leader in Atomic Absorption

Atomax 1.5 in. hollow cathode lamps are crafted to the same high standards that have made PerkinElmer 2 in. Lumina™ hollow cathode lamps the best in the industry. Drawing on more than 40 years of HCL design and manufacturing expertise, Atomax lamps now offer laboratories around the world a dependable, top-quality lighting source, regardless of the brand of AA instruments used.

Value-Priced and Fully Compatible with 1.5 in. Format AA Instruments

PerkinElmer 2-pin non-coded Atomax lamps are designed to fit most commercially available atomic absorption instruments including Agilent®, Thermo®, Shimadzu®, GBC®, Analytic Jena®, Hitachi® and many more. Combining affordability and industry-wide compatibility allows users of other brands of AAs to benefit from PerkinElmer's proven lamp performance. Each lamp is thoroughly tested to ensure that it will stand up to the most demanding requirements. Atomax lamps represent an exceptional value and our money-back guarantee means you can order with complete confidence.

Tested and Validated for Highest Quality Performance

All 1.5 in. Atomax hollow cathode lamps are thoroughly tested to ensure maximum light output and spectral purity. Comparative results show that Atomax lamps provide equal or better performance than other AA lamps in the market. Precision engineered for high sensitivity, stable light output, low noise, and long life, you can rely on Atomax lamps for the accurate results you need.

Every Atomax lamp includes a certificate of quality, our promise of outstanding performance levels from the leader in AA.





PERKINELMER EXCLUSIVE 6/24 WARRANTY*

Atomax™ Hollow Cathode Lamps

1. We warrant that during the first six months for 5,000 milliampere-hours of operation, whichever comes first, from initial date of shipment, the lamps will meet or exceed the intensity and absorption specifications to which all new lamps are tested.
2. All of our hollow cathode lamps are warranted to light and emit the spectra of the element indicated for two years or 5,000 milliampere hours of operation from the date of the shipment, whichever comes first.
3. If any lamp fails before the expiration of the warranty period, it will be replaced free of charge.

* The lamp warranty is void for lamps which sustain physical damage or are operated at power levels substantially above or below the power level recommended on the lamp label. The lamp warranty may vary in different countries.

Element	Symbol	Part No.
Aluminum	Al	**N2025301**
Antimony	Sb	**N2025347**
Arsenic	As	**N2025302**
Barium	Ba	**N2025305**
Beryllium	Be	**N2025306**
Bismuth	Bi	**N2025307**
Boron	B	**N2025304**
Cadmium	Cd	**N2025309**
Calcium	Ca	**N2025308**
Cesium	Cs	**N2025312**
Chromium	Cr	**N2025311**
Cobalt	Co	**N2025310**
Copper	Cu	**N2025313**
Dysprosium	Dy	**N2025314**
Erbium	Er	**N2025315**
Europium	Eu	**N2025316**
Gadolinium	Gd	**N2025319**
Gallium	Ga	**N2025318**
Germanium	Ge	**N2025320**
Gold	Au	**N2025303**
Hafnium	Hf	**N2025321**
Holmium	Ho	**N2025323**
Indium	In	**N2025324**

Element	Symbol	Part No.
Iridium	Ir	**N2025325**
Iron	Fe	**N2025317**
Lanthanum	La	**N2025327**
Lead	Pb	**N2025339**
Lithium	Li	**N2025328**
Lutetium	Lu	**N2025329**
Magnesium	Mg	**N2025330**
Manganese	Mn	**N2025331**
Mercury	Hg	**N2025322**
Molybdenum	Mo	**N2025332**
Neodymium	Nd	**N2025335**
Nickel	Ni	**N2025336**
Niobium	Nb	**N2025334**
Osmium	Os	**N2025337**
Palladium	Pd	**N2025340**
Phosphorus	P	**N2025338**
Platinum	Pt	**N2025342**
Potassium	K	**N2025326**
Praseodymium	Pr	**N2025341**
Rhenium	Re	**N2025344**
Ruthenium	Ru	**N2025346**
Rhodium	Rh	**N2025345**
Rubidium	Rb	**N2025343**

Element	Symbol	Part No.
Samarium	Sm	**N2025351**
Scandium	Sc	**N2025348**
Selenium	Se	**N2025349**
Silicon	Si	**N2025350**
Silver	Ag	**N2025300**
Sodium	Na	**N2025333**
Strontium	Sr	**N2025353**
Tantalum	Ta	**N2025354**
Terbium	Tb	**N2025355**
Tellurium	Te	**N2025356**
Thallium	Tl	**N2025359**
Thorium	Th	**N2025357**
Thulium	Tm	**N2025360**
Tin	Sn	**N2025352**
Titanium	Ti	**N2025358**
Tungsten	W	**N2025362**
Vanadium	V	**N2025361**
Ytterbium	Yb	**N2025364**
Yttrium	Y	**N2025363**
Zinc	Zn	**N2025365**
Zirconium	Zr	**N2025366**

Graphite for Non-PerkinElmer Instruments can be found in the graphite section.



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Burner System Components



An efficient burner system is essential for obtaining optimal performance from your AA instrument, and proper maintenance is required to obtain precise and accurate determinations.

Features and Benefits:

- 100% titanium burner heads, an exclusive PerkinElmer feature that provides maximum corrosion resistance when analyzing any type of sample
- Burner chambers constructed of inert, wettable plastic to allow for proper drainage of excess sample and minimize sample carryover of previous analyses
- Multivaned flow spoilers remove large sample droplets from the nebulized spray and reduce susceptibility to analytical interference
- Gaskets designed for use with aqueous and organic samples. Choose from synthetic rubber gaskets for aqueous solutions and Corkprene or KALREZ gaskets for organic solutions
- PinAAcle uses the same Burner Heads as AAnalyst series. The latest design has a hole on the rim for ease of rotation during operation. The handle is provided with the instrument

Burner Heads

Single-slot Nitrous Oxide-acetylene 5 cm

The 5 cm nitrous oxide burner head is required for nitrous oxide-acetylene operation. This burner head can also be used with air-acetylene or rotated to provide reduced sensitivity.

Description	Part No.
Single-slot Nitrous Oxide-acetylene 5 cm	**N0400100**

Single-slot Air-acetylene 10 cm

The 10 cm burner head is designed to be used with the air-acetylene flame. Because of its long burner path length, it provides the best sensitivity for air-acetylene elements. This is the standard burner head that is shipped with all PinAAcle flame instruments.

Description	Part No.
Single-slot Air-acetylene 10 cm	**N0400102**

Single-slot Air-acetylene 5 cm

A 5 cm air-acetylene burner head is available for applications in which reduced sensitivity is required. It can be rotated to provide further sensitivity reduction, and it has a wide slot to prevent clogging.

Description	Part No.
Single-slot Air-acetylene 5 cm	**N0400101**

Three-slot Air-acetylene 10 cm

The three-slot burner head is designed to be used when analyzing samples with high concentrations of dissolved solids. The three-slot burner head is not compatible with some older gas control systems.

Description	Part No.
Three-slot Air-acetylene 10 cm	**N0400103**

Burner Head Cleaning Tool

Description	Part No.
Burner Head Cleaning Tool	**03031573**

Burner Head Adjustment Tool

Description	Part No.
Burner Head Adjustment Tool	**N3161240**

Single-slot Nitrous Oxide-acetylene 5 cm



Single-slot Air-acetylene 5 cm



Single-slot Air-acetylene 10 cm



Three-slot Air-acetylene 10 cm

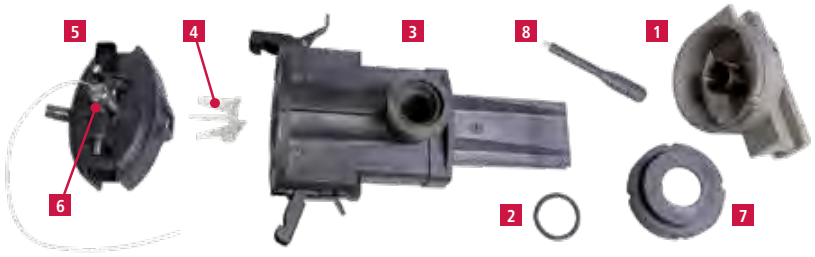


Burner Head Adjustment Tool



PinAAcle Burner System Components

1. Burner Head
2. Burner Head O-Ring
3. Mixing Chamber
4. Flow Spoiler
5. End Cap Assembly
6. Stainless Steel Nebulizer
7. Retaining Ring
8. Burner Head Adjustment Tool



PinAAcle Burner System Components

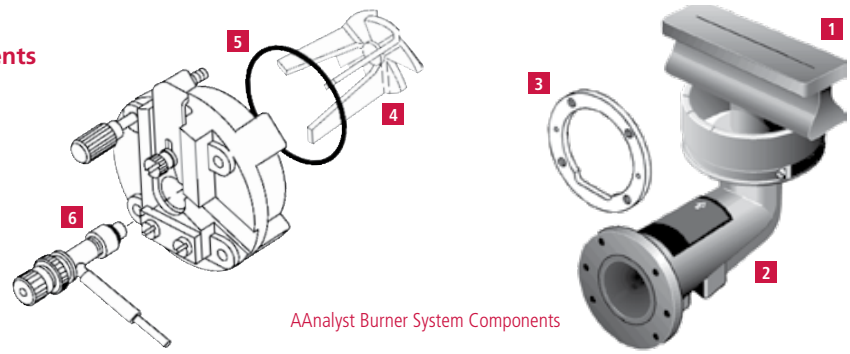
Burner System Components

Description	PinAAcle 500/900 Part No.	AAnalyst 100/200/300/400/700/800 Part No.
Viton Burner Head O-Ring Kit, 0.984 in. x 0.139 in. **09200079** O-Ring (3), **09200078** Super O-Lube (1)	**09902219**	**09902219**
Burner Mixing Chamber Assembly (Note: PinAAcle assembly includes components 2, 3 and 7; AAnalyst component 2 only.)	**N3160506**	**00570948**
Burner Chamber Holder	**N3160809**	
Clamping Ring		**N0401171**
Flow Spoiler	**00572561**	**00572561**
Viton O-Ring for End Cap Gas Lines (Neb., Aux., Fuel) 0.312 in. x 0.070 in. (Qty. 4 required)	**09200253**	
Viton O-Ring for End Cap 1.892 in. x 0.103 in.	**09902147**	**09902147**
Kalrez O-Ring for End Cap Gas Lines (Neb., Aux., Fuel) 0.312 in. x 0.070 in. (Qty. 4 required)	**09200275**	
Kalrez O-Ring for End Cap 1.892 in. x 0.103 in.	**09200277**	**09200277**
Organics (Corkprene) O-Ring for End Cap	**00472014**	**00472014**
End Cap Assembly with Viton O-Rings (for use with metal body nebulizers)	**N3160505**	**00570984**
End Cap Assembly with Kalrez O-Rings (for use with metal body nebulizers)	**N3160188**	
End Cap Assembly with Viton O-Rings (for use with plastic body nebulizers)	**N3160511**	**N0370392**
End Cap Assembly with Kalrez O-Rings (for use with plastic body nebulizers)	**N3160189**	
End Cap Assembly Impact Bead (for use with metal body nebulizers)	**N3160545**	
Burner Gasket Kit for End Cap Assembly **00570984; 00472014** (5), **09902147** (3), **09902219** (1), **09902236** (3), **09902240** (3)		**00470988**
Drain Tubing – Tygon Tubing with FEP lining	**02507987**	**02507987**
Pyrex Impact Bead Used with End Caps for Metal Body Nebulizers	**00572615**	**00572615**
Seal Plug for the **00572615** Pyrex Impact Bead used with end caps for metal body nebulizers	**N3161224**	**00572624**
O-Ring for seal plug in end caps with Impact Bead (Qty. 2 required)	**09902236**	**09902240**
Burner Drain Assembly for Organic Solutions	**N3160683*** **	**N3150230***
Burner Drain Assembly (includes tubing and drain interlock, drain bottle **09200486** not included)		**N2011074***
Burner Drain Assembly (includes tubing and drain interlock, drain bottle **09200486** not included)	**N0400058*** **	**N0400058****
Wide Mouth 15 L Drain Bottle	**09200486**	**09200486**

*For AAnalyst 700/800, **For AAnalyst 200/400, ***Also compatible with AAnalyst 100/200/300/400

AAnalyst Burner System Components

1. Burner Head
2. Burner Mixing Chamber
3. Clamping Ring
4. Flow Spoiler
5. End Cap O-Ring
6. End Cap Assembly



AAnalyst Burner System Components

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Nebulizers



PinAAcle Removable Burner Assembly allows switching between analytical techniques in a matter of seconds on flame/furnace combination instruments



PinAAcle High-Sensitivity Nebulizer
Part No. **N3160144**



High-Sensitivity Nebulizer with Pt/Ir Capillary

The nebulizer is one of the most important components in a flame AA spectrometer

Sample solutions, with differing physical properties, must be converted into an aerosol of small, similarly-sized droplets. This places great demands on the design of the nebulizer.

All PerkinElmer nebulizer assemblies are adjustable for optimized performance and include easily-interchanged capillary assemblies for simple, reduced-cost maintenance. PerkinElmer nebulizers are manufactured to exacting tolerances to provide maximum sensitivity. Universal, or, 'standard' nebulizers are less expensive than the corresponding high-sensitivity nebulizers and provide a lower level of sensitivity. The universal, or, 'standard' nebulizers typically provide better precision and reduced 'carryover' interference when used with solutions that contain high dissolved solids content of higher analyte concentrations.

High-Sensitivity Nebulizer with Pt/Ir Capillary

Our high-precision nebulizer maximizes stability and sensitivity, even for the toughest matrices. The nebulizer is adjustable so a wide variety of sample matrices – aqueous or organic, acidic or basic, diluted or concentrated – can be analyzed under optimum conditions. This high-sensitivity nebulizer is fabricated with inert plastic materials for maximum performance and corrosion resistance.



High-Sensitivity Nebulizer

- Provides maximum sensitivity, precision and freedom from analytical interferences
- The high-sensitivity nebulizer with platinum/iridium capillary is for most solutions, but not for precious metal samples containing aqua regia
- High-sensitivity nebulizer with tantalum capillary used for solutions containing aqua regia



Metal Body Corrosion-Resistant Nebulizers

- For all solutions containing hydrofluoric acid or aqua regia
- For all solutions containing high concentrations of dissolved solids
- All internal components in contact with solutions are constructed of plastic to resist corrosion from concentrated acids
- Reduced performance compared with stainless steel or platinum/rhodium nebulizers



Metal Body Platinum Alloy Nebulizers

- Recommended for most concentrated acids containing >5% acid
- Includes a platinum alloy needle assembly and a tantalum venturi
- Provides maximum chemical resistance
- Not suitable for use with aqua regia or hydrofluoric acid



Plastic Body GemTip™ Nebulizers

- Corrosion-resistant and can be used to aspirate almost all solutions, even those solutions containing a high percentage of acids
- Designed to obtain optimum sensitivity, detection limits and precision with flame atomic absorption for both air-acetylene and nitrous oxide-acetylene flames



Metal Body Stainless Steel Nebulizers

- For most solutions containing <5% acid, providing exceptional performance and durability
- Excellent performance (precision and signal-to-noise ratio)





Nebulizer Assemblies and Spares

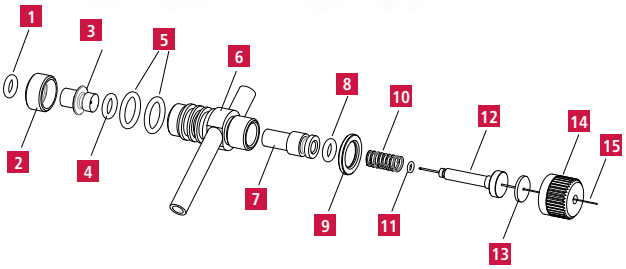
Metal Body Nebulizer Parts for PinAAcle AA Instruments

For Nebulizers with Part Nos. **N3160143** and **N3160158**

	Description	Part No.
1	O-Ring sealing Nebulizer to End Cap	09926068
	Solvent Resistant O-Ring Sealing Nebulizer to End Cap	09200274
2	Cap	N3161057
3	Venturi	03031810
4	O-Ring for Venturi	09902047
	Solvent Resistant O-Ring for Venturi	09200273
5	O-Rings for Nebulizer Body (Each nebulizer requires a quantity of 2)	09902015
	Solvent Resistant O-Rings for Nebulizer Body (Each nebulizer requires a quantity of 2)	09200276
6	Nebulizer Body	N3160133
7	Nebulizer Insert	03031812
8	O-Ring for Nebulizer Insert	09902047
	Solvent Resistant O-Ring for Nebulizer Insert	09200273
9	Locking Ring	N3161006
10	Spring	03031806
11	O-Ring for Capillary Needle Assembly	09902102
	Solvent Resistant O-Ring for Capillary Needle Assembly	09200271
12	Capillary Needle Assembly with O-Ring	03030354
	Solvent Resistant Capillary Needle Assembly with O-Ring	N3160153
13	PTFE Washer	03031802
14	Fine Adjustment Nut	03031460
15	Sample Capillary	09908265



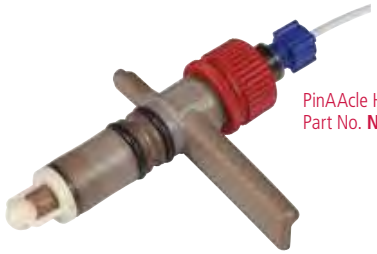
PinAAcle Stainless Steel Nebulizer
Part No. **N3160143**



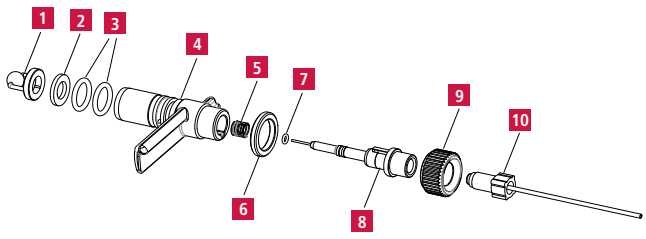
Plastic Body Nebulizer Parts for PinAAcle AA Instrument

For Nebulizers with Part Nos. **N3160144, N3160152** and **N3160159**

	Description	Part No.
1	Impact Bead	B0505086
2	Spacer	B3150531
3	O-Rings for Nebulizer Body (Each nebulizer requires a quantity of 2)	09902015
	Solvent Resistant O-Rings for Nebulizer Body (Each nebulizer requires a quantity of 2)	09200276
4	Plastic Nebulizer Body	
5	Spring	09920483
6	Locking Ring	N3151205
7	O-Ring for Capillary Needle Assembly	09926127
	Solvent Resistant O-Ring for Capillary Needle Assembly	09200272
8	Pt/Ir Capillary Needle Assembly with Spring and O-Ring	B3150525
	Solvent Resistant Pt/Ir Capillary Needle Assembly with Spring and O-Ring	N3160154
9	Fine Adjustment Nut	B3150462
10	Sample Tubing	B3150458



PinAAcle High-Sensitivity Nebulizer
Part No. **N3160144**



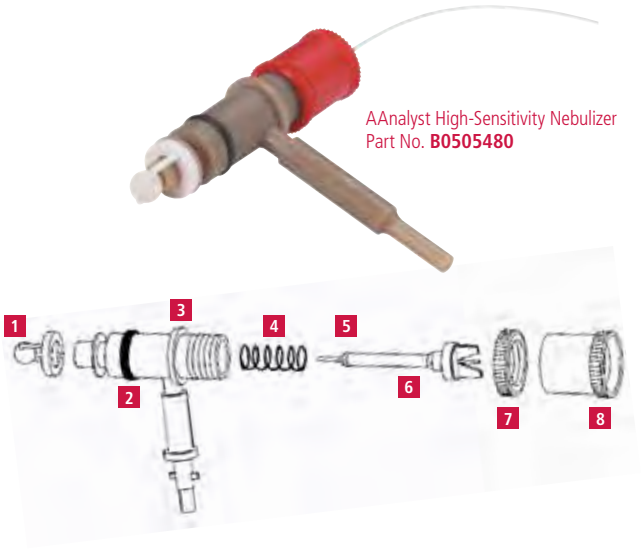
Plastic Body Nebulizer Parts for AAnalyst AA Instruments

AAnalyst 100/300/200/400/700/800* High-Sensitivity Nebulizer Parts

For Nebulizers with Part Nos. **B0505480** and **B0505590**

	Description	Part No.
1	Impact Bead	**B0505086**
2	Solvent Resistant O-Ring for Nebulizer Body	**B0174378**
3	Nebulizer Body	**B0506666**
4	Spring	**B0165332**
5	Solvent Resistant O-Ring for Capillary Assembly	**B0190672**
6	Pt/Ir Capillary Assembly	**B0501022**
7	Locking Ring	**B0501025**
8	Fine Adjustment Nut	**B0501026**

*This nebulizer requires the use of end cap assembly



AAnalyst High-Sensitivity Nebulizer
Part No. **B0505480**

AAnalyst 200/400/700*/800* High-Sensitivity Nebulizer Parts

For Nebulizers with Part Nos. **N3150188** and **N2010250**

	Description	Part No.
1	Impact Bead	**B0505086**
	Nebulizer Spacer (not pictured)	**B3150531**
2	O-Rings for Nebulizer Body (Each nebulizer requires a Qty. of 2)	**09902015**
	Solvent Resistant O-Rings for Nebulizer Body (Each nebulizer requires a Qty. of 2)	**09200276**
3	Nebulized Body	–
4	Spring	**09920483**
5	O-Ring for Capillary Assembly	**09926127**
	Solvent Resistant O-Ring for Capillary Assembly	**09200272**
6	Pt/Ir Capillary Assembly with O-Ring	**B3150525**
	Tantalum Capillary Assembly with Solvent Resistant O-Ring and Spring	**N3160146**
7	Locking Ring	**N3151205**
8	Fine Adjustment Nut	**B3150462**
N/A	O-Ring for Sample Tube (Each sample tube requires a Qty. 2)	**B0507708**
N/A	Solvent Resistant O-Ring for Sample Tube (Each sample tube a Qty. 2)	**09200369**
N/A	Solvent Resistant O-Ring Kit (Includes 1 x **09200272**, 2 x **09200276** and 2 x **09200369**)	**N2010246**

*Requires End Cap Assembly **N0370392**



AAnalyst High-Sensitivity
Nebulizer with Pt/Ir Capillary
Part No. **N3150188**

Metal Body Nebulizer Parts for AAnalyst 200/400*, 100/300/700/800**

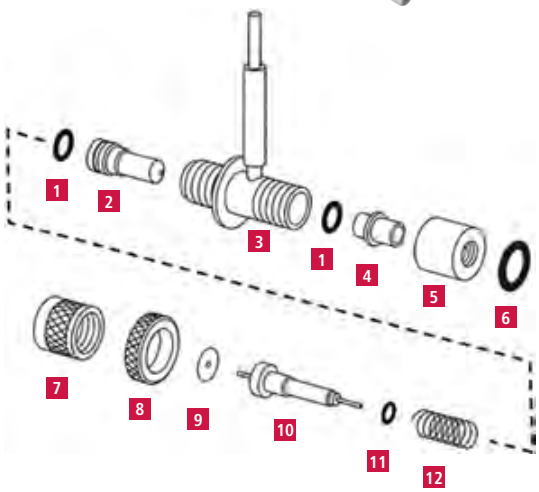
For Nebulizers with Part Nos. **03030404, 03030299** and **03030352**

	Description	Part No.
1	O-Ring for Insert/Venturi (Each nebulizer requires a quantity of 2)	09902005
	Solvent Resistant O-Rings for Insert/Venturi (Each nebulizer requires a quantity of 2)	09200273
2	Insert	03031812
3	Nebulizer Body	03030353
4	Venturi for Corrosion Resistant Nebulizer	03031920
	Venturi for Platinum Alloy Nebulizer	03033124
	Venturi for Stainless Steel Nebulizer	03031810
5	Front End Cap	03031808
6	O-Ring for Front End Cap	09902239
	Solvent Resistant O-Ring for Front End Cap	09200274
7	Fine Adjustment Nut	03031460
8	Locking Ring	03031456
9	Washer	03031802
10	Capillary Assembly for Corrosion Resistant Nebulizer	03030402
	Capillary Assembly for Platinum Alloy Nebulizer	03030433
	Capillary Assembly for Stainless Steel Nebulizer	03030354
11	O-Ring for Capillary Assembly	09902102
	Solvent Resistant O-Ring for Capillary Assembly	09200271
12	Spring	03031806
N/A	O-Ring Kit (Includes 5 x **09902005**, 3 x **09902102**, 5 x **09902239**, 2 x **03031802**)	N9300065
N/A	Solvent Resistant O-Ring Kit (Includes 1 x **09200271**, 2 x **09200273** and 1 x **09200274**)	N2010247

* AAnlayst 200/400 Require End Cap **00570984** ** For AAnalyst spectrometers shipped starting Fall 1999



AAnalyst Stainless Steel Nebulizer
Part No. **03030352**



GemTip Nebulizers for AAnalyst 100/300/200*/400*/700**/800**

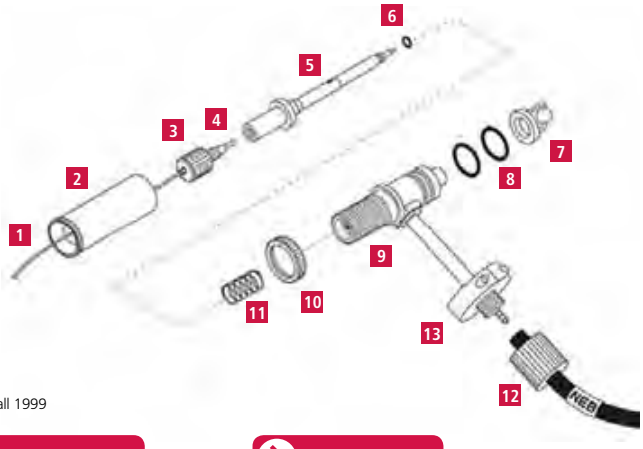
For Nebulizers with Part Nos. **N0370394** and **N0370393**

	Description	Part No.
1	Capillary Tubing	09908265
2	Fine Adjustment Nut	N0371492
3	Gland Nut	N0371505
4	PTFE Tubing	09985708
5	Capillary Assembly for Universal GemTip Nebulizers	N0371520
	Capillary Assembly for High-Sensitivity GemTip Nebulizers	N0371522
6	O-Ring for Capillary Assembly	09926083
7	Impact Bead for High-Sensitivity GemTip Nebulizer	B0505086
8	O-Ring for Nebulizer Body	09902015
	Solvent Resistant O-Ring for Nebulizer Body	B0174378
9	Body Assembly for Universal GemTip Nebulizer	N0370398
	Body Assembly for High-Sensitivity Nebulizer	N0370399
10	Locking Nut	N0371493
11	Spring	09902473
12	Connector Nut	N0371485
13	Magnet Holder Assembly	N1010215

* AAnlayst 200/400 Require End Cap **N0370392** ** For AAnalyst 700/800 Instruments Shipped before Fall 1999



Universal GemTip Nebulizer
Part No. **N0370394**



Kalrez O-Ring Kits for Sampling Accessories

Description	Part No.
Nebulizer, End Cap and Burner Head O-Ring Kit for Plastic Nebulizer for PinAAcle AA. Includes: **09200272** (1), **09200275** (4), **09200276** (2), **09200277** (1), **09200278** (1), **09200369** (2)	**N3160157**
Nebulizer, End Cap and Burner Head O-Ring Kit for Stainless Steel Nebulizer for PinAAcle AA. Includes: **09200271** (1), **09200273** (2), **09200274** (1), **09200275** (4), **09200276** (2) , **09200277** (1), **09200278** (1)	**N3160156**
Nebulizer O-Ring Kit for Stainless Steel Nebulizer for PinAAcle AA. Includes: **09200271** (1), **09200273** (2), **09200274** (1), **09200276** (2)	**N3160192**
Nebulizer O-Ring Kit, fits Stainless Steel Nebulizers **03030358** and **03030352**. Includes: **09200271** (1), **09200273** (2), **09200274** (1)	**N2010247**
Nebulizer O-Ring Kit for Plastic Nebulizer for PinAAcle AA. Includes: **09200272** (1), **09200276** (2), **09200369** (2)	**N3160193**
Nebulizer O-Ring Kit for AA200/400 Nebulizer **N2010250**. Includes: **09200272** (1), **09200276** (2), **09200369** (2)	**N2010246**
End Cap O-Ring Kit for PinAAcle AA. Includes: **09200275** (4), **09200277** (1)	**N3160194**
End Cap O-Ring Kit for AAnalyst 700/800 End Cap, **00570984**. Includes: **09200277** (1), **09200341** (2), **09200342** (2)	**N2010245**

PinAAcle Nebulizers and Assemblies Quick Reference

Description	Type	Needle	O-Ring Type	Complete Assembly	End Cap Assembly	Replacement Needle Assembly
Plastic High Sensitivity (standard)	Aqueous	Platinum/Iridium	Viton	**N3160144**	**N3160511**	**B3150525**
Plastic High Sensitivity	Aqueous or Organics	Platinum/Iridium	Kalrez	**N3160159**	**N3160189**	**N3160154**
Plastic High Sensitivity (suitable for aqua regia in addition to organics)	Aqueous or Organics	Tantalum	Kalrez	**N3160152**	**N3160189**	
Stainless Steel (standard)	Aqueous	Stainless	Viton	**N3160143**	**N3160505**	**03030354**
Stainless Steel	Aqueous or Organics	Stainless	Kalrez	**N3160158**	**N3160188**	**N3160153**
Stainless Steel	Aqueous	Plastic	Viton		**N3160505**	**03030402**
Stainless Steel	Aqueous	Platinum Alloy	Viton		**N3160505**	**03030133**

Description	Type	Burner Drain Assembly	Drain Bottle
Drain Assembly	Aqueous	**N0400058**	**09200486**
Drain Assembly	Organics	**N3160683**	**09200486**

AAnalyst Nebulizers and Assemblies Quick Reference

Description	Type	Needle	O-Ring Type	Complete Assembly	End Cap Assembly	Replacement Needle Assembly
High-Sensitivity Plastic Body	Aqueous or Organics	Tantalum	Kalrez	**N2010250**		**N3160146**
Plastic Body	Aqueous	Platinum/Iridium	Viton	**N3150188**	**N0370392**	**N3150525**
High-Sensitivity Plastic Body	Aqueous or Organic	Platinum/Iridium	Kalrez	**B0505480**	**N0370392**	**B0501022**
High-Sensitivity Plastic Body	Aqueous or Organic	Tantalum	Kalrez	**B0505590**	**N0370392**	
Stainless Steel Body	Aqueous	Stainless Steel	Viton	**03030352**	**00570984**	**03030354**
Corrosion Resistant Metal Body	Aqueous or Organic	Tantalum	Kalrez	**03030404**	**00570984**	**03030402**
Platinum Alloy Nebulizer	Aqueous	Platinum/Iridium	Kalrez	**03030299**	**00570984**	**03030433**
Universal GemTip	Aqueous	Plastic with Sapphire Tip	Viton	**N0370394**	**N0370392**	**N0371520**
High-Sensitivity GemTip	Aqueous or Organic	Plastic with Sapphire Tip	Kalrez	**N0370393**	**N0370392**	**N0371522**

Nebulizer Accessories

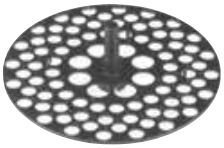
Description	Part No.
Capillary Tubing	**09908265**
Nebulizer Cleaning Wires Pkg. 5	**03030135**
Nebulizer Grease	**03030405**


Nebulizer Capillary Tubing

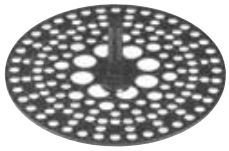

Nebulizer Cleaning Wires


Nebulizer Grease

Autosampler Cups and Supplies



88-Position Tray



148-Position Tray

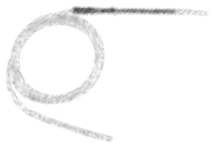


Furnace Autosampler Trays

For a quick change to another series of samples, a second sample tray is recommended.

For Model AS-800/AS-900

Description	Part No.
88-Position Tray, Polypropylene 80 sample locations for 2.0, 2.5 or 3.5 mL sample cups. Each sample tray also has 8 positions for 7.0 mL reagent containers	**B3001507**
148-Position Tray, Polypropylene 132 sample locations for 1.2 mL sample cups and eight locations for 2.5 or 3.5 mL sample cups. Each sample tray also has 8 positions for 7.0 mL reagent containers. One is provided with the autosampler	**B3001506**
Cover	**B3001505**
Pipette Arm	**B3002046**



Furnace Sampling Probe

Made of PTFE, these are capable of pipetting a variety of corrosive matrices and organic solutions.

Features and Benefits

- Works well with solvent and acid-resistant sampling components
- PTFE pipette tips and capillaries reduce contamination
- Easy replacement

Description	Part No.
For Models AS-60/AS-70/AS-71/AS-72/AS-800/AS-900	**B0129258**
Cutting Tool for Furnace Sampling Probe	**B0510268**

Reagent Containers

For blank solutions, reagent solutions or matrix modifiers.

Description	Part No.
Round Reagent Containers For Models AS-40/AS-60/AS-70/AS-71/AS-72. 25 mL polypropylene. Suitable for organic solutions	**B0101164**
30 mL Polystyrene – Not for organic solutions	**B0102332**
Cloverleaf-shaped Reagent Containers For Models AS-60/AS-70/AS-71/AS-72. 30 mL polypropylene	**B0132799**

Graphite Furnace Autosampler Cups

Sample cups are of heavy-duty construction to prevent cracking or tipping. Their conical design allows for use of nearly the entire sample.

Your Choice of Materials:

- **Polystyrene** – Clear, recommended for use with most aqueous solutions
- **Polyethylene** – Translucent, low-density, recommended for use with most aqueous solutions
- **PTFE** – Recommended for use with most concentrated acids including HF, and for analyses where the lowest detection levels are required
- **Polypropylene** – Translucent; preferred for most solvents

Volume	Composition	Qty.	Part No.
1.2 mL*	Polypropylene	2,000	**B0510397**
2.0 mL	Polyethylene	1,000	**B0087056**
2.0 mL	Polystyrene	1,000	**B0119079**
2.0 mL	PTFE	30	**B0087600**
2.5 mL	Polypropylene	1,000	**B3001566**
3.5 mL	Polystyrene	100	**B0129303**
7.0 mL**	Polypropylene	100	**B3001567**

* For use with AS-71/72/800/900 ** For use with AS-800/AS-900



Pliers and Accessories

Description	Part No.
For 1.2 mL sample cups.	**B0510398**
Drain Bottle without Cap 2 L	**B0104344**
Rinse Bottle	**B0104281**

Check Valves

Description	Aqueous Part No.	Organics Part No.
Check Valve Inlet	**B3002007**	**B0105973**
Check Valve Outlet	**B3002006**	**B0105974**
Inlet and Outlet Kit	**B3001485**	

Air Compressors

AA Ultra Quiet Oil-Less Air Compressor

PerkinElmer is expanding its compressor product portfolio to include an industrial grade, quiet, oil-less compressor for dependable and clean air supply. With the addition of a water separator with a 5 micron particle filter, no liquid transfers into the air supply, providing you with contaminant free air. Each quiet, vibration free compressor comes standard with an internally and externally coated air tank with automatic condensate drain system and collection bottle. The AA Ultra Quiet Oil-Less Air Compressor features a low operating sound level of 60 dB and comes completely outfitted to operate the PerkinElmer Atomic Absorption (AA) Spectrometers.

Features and Benefits

- Completely quiet oil-less operation
- Delivers clean and dry instrument grade air
- Water separator with 5 micron particle filter assures no liquid transfer
- Specialty coated cylinders and high temperature piston rings for long service life
- Durable air tank with automatic condensate drain, internal coating and 5 year warranty
- Low annual operating costs
- 2-year system warranty
- A complete compressed air station incorporating an outlet pressure regulator, tank and outlet pressure gauge, shut off ball valve, ASME safety valve, and pressure switch allowing for complete automatic operation



ISO 13485-2008 Certified

RoHS Compliant



Specifications	
Horse Power	1 HP
Output CFM	4.2 CFM
Output L	120 L/min
Max Pressure PSI	120 PSI
Max Pressure Bar	8 bar
Max Current 110 V	7.8 Amps
Max Current 220 V	3.8 Amps
Noise Level	60 db/A
Tank Size Gallons	6
Tank Size L	24
Dimensions	16 in. x 16 in. x 21 in.
Weight	53.8 lbs.
Packed Dimensions	20 in. x 20 in. x 25 in.
Packed Weight	65.8 lbs.

Description	Part No.
Compressor 115V/60Hz	**N9306345**
Compressor 220V/50-60Hz	**N9306346**
Replacement Air Intake Filter	**N0777870**
Micron Dryer Filter Element	**N0777871**

THGA Graphite Tubes

THGA Graphite Tubes with Advanced Platform™

The exclusive and patented Advanced Platform design offers an alternative to our Standard Integrated Platform design. With the current Integrated Platform design, the platform attaches to the tube wall along a single side that runs the length of the platform. The new Advanced Platform design suspends the platform in the tube using three small pins in a triangular layout. This has the advantage of minimizing wall contact and reducing thermal conduction from the tube walls resulting in even and rapid heating almost exclusively from thermal radiation, an ideal platform.



Advanced Platform Features

- Even and rapid heating
- Improved sensitivity for some applications
- Improved batch to batch reliability
- Exclusive and patented design – only from PerkinElmer!

Description	Advanced Platform Part No.	Advanced Platform with End Caps Part No.
5-Pack	**N9307830**	**N9307832**
10-Pack **NEW**	**N9304644**	**N9304645**
20-Pack	**N9307831**	**N9307833**



Standard THGA Graphite Tubes



Today's analysts expect exceptional analytical performance from their graphite furnace atomic absorption spectrometers. That performance must be reproducible from day to day with respect to sensitivity (characteristic mass), accuracy and precision. The graphite tube, the heart of the graphite furnace, plays a vital role in the overall stability of an analysis. In order to assure stable analytical conditions from one atomization cycle to the next and from graphite tube to graphite tube, all graphite parts – contacts, tubes and platforms – must be subject to strict quality control by both the instrument manufacturer and the graphite manufacturer.

PerkinElmer's unique, transversely-heated graphite tube includes an integrated platform. The exceptionally uniform temperature distribution obtained with transverse heating significantly reduces or eliminates condensation of the sample matrix components and 'memory' effects and improves the atomization efficiency for refractory elements.

Standard THGA Graphite Tubes with End Caps

For improved characteristic mass with volatile and medium refractory elements such as Ag, As, Cd, Co, Cr, Cu, Pb, Se and Tl, the THGA graphite tubes with end caps are recommended. Note: THGA graphite tubes with end caps are not recommended for refractory elements such as V or Ba.



Features and Benefits

- Improved detection limits for volatile and medium refractory elements
- Faster drying for complex matrices due to enlarged dosing hole

Description	Standard THGA Part No.	Standard THGA with End Caps Part No.
5-Pack	**B3000641**	**B3000653**
10-Pack **NEW**	**N9304642**	**N9304643**
20-Pack	**B0504033**	**B3000655**
100-Pack	**N3110147**	

UltraClean THGA Graphite Tubes

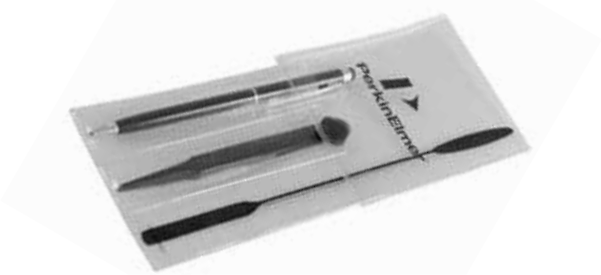


For the lowest possible detection limits, residual contaminant levels may not be low enough to meet your requirements. For the most demanding analyses, PerkinElmer offers UltraClean THGA graphite tubes – delivering exceptionally low levels of contamination due to advanced high-temperature gas-phase cleaning procedures. UltraClean graphite tubes offer unmatched analytical advantages for special applications such as the determination of extremely low traces of Na, Ca, Fe, Cr and Ni in ultra-clean reagents used in the semiconductor industry, and ultra-trace analyses of environmental, clinical, or food samples.

Features and Benefits

- UltraClean THGA graphite tubes have the lowest possible contamination levels due to extensive high-temperature gas-phase cleaning procedures
- UltraClean THGA graphite tubes are tested and specified for blank levels of Cr, Ni, V, Mo, Ti (<0.003 integrated absorbance units) and Na, Fe, Al, Si, Ca (<0.0005 integrated absorbance units)

Description	Part No.
5-Pack	**B3140361**
20-Pack	**B3140362**



Three-Piece Sample Preparation Tool Kit

Stainless-Steel tools are coated with an inert carbon surface so they will not transfer trace metals to graphite tubes or the sample that is being handled. Tool kit comes with one straight tweezer, one spatula and a customized PerkinElmer pen.

Features and Benefits

- Metal-free handling of graphite and solid samples
- Coating leaves a non-porous surface on the tools that is easy to clean
- Coated tools have a temperature resistance up to 400°C

Description	Part No.
Three-Piece Sample Preparation Tool Kit	**N9304648**

THGA Contact Cylinders



These graphite contact cylinders are engineered for a precise fit so that variations in electrical contact – which might affect the analytical performance – are reduced to a minimum. Contact cylinders with a modified injection port area help to minimize condensation and improve analytical performance with difficult matrices.

Standard THGA Graphite Contact Cylinders

Description	Part No.
1 Pair	**B0504035**
5 Pairs	**B0504036**

Modified THGA Contact Cylinders

Description	Part No.
1 Pair	**B3002103**
5 Pairs	**B3002102**



Accessories and Spare Parts

Description	Part No.
O-Ring (behind Contact Cylinder, front and back)	**B0500748**
Contact Cylinder Removal Tools	**B3120405**
THGA Filter Cartridge AA600 Fume Extractor Qty. 50	**B0509065**
Spare Graphite Tip for Fume Extraction System	**B0506722**
Pliers	**09907925**
THGA Quartz Window	**B0198005**
THGA Quartz Window O-Ring	**B0501236**





THGA Instrument Mirror

Used to optimize drying temperatures and times.

Description	Part No.
THGA Instrument Mirror	**B0851900**

HGA Graphite Tubes

The production of high-quality graphite components requires stringent quality control. To ensure high quality and consistency, a specific grade of high-density base graphite material has been developed for PerkinElmer's exclusive use. This base graphite material is used for the manufacturing of all PerkinElmer graphite tubes.

Selection and careful control of raw materials are extremely important. The composition and the microstructure of the base graphite material determine the specific resistivity of the tube and its heating characteristics.

When you purchase graphite supplies from PerkinElmer, you get the results of our many years of experience with quality graphite parts.

The proper performance, maintenance and serviceability of our graphite furnace systems can be assured only through the use of genuine PerkinElmer graphite components.

Pyrocoated Advanced Platform Graphite Tubes



The exclusive and patented Advanced Platform design offers an alternative to our Standard Integrated Platform design. With the current Integrated Platform design, the platform attaches to the tube wall along a single side that runs the length of the platform. The new Advanced Platform design suspends the platform in the tube using three small pins in a triangular layout. This has the advantage of minimizing wall contact and reducing thermal conduction from the tube walls resulting in even and rapid heating almost exclusively from thermal radiation, an ideal platform.

Advanced Platform Features

- Even and rapid heating
- Improved sensitivity for some applications
- Improved batch to batch reliability
- Exclusive and patented design – only from PerkinElmer!

Graphite Tubes with Advanced Platform

Description	Part No.
5-Pack	**N9307834**
10-Pack **NEW**	**N9304646**
20-Pack	**N9307835**



Pyrocoated Graphite Tubes with Integrated Platforms

Proven in labs throughout the world, graphite tubes with integrated platforms provide superior performance and are easy to use. Graphite tubes with integrated platforms are machined from one piece of graphite and are totally pyrocoated, providing exceptional tube-to-tube reproducibility. The spherically-shaped platform accommodates up to 50 µL of sample.

Features and Benefits

- Provide STPF conditions for volatile and nonvolatile refractory elements due to the significantly higher heating rates of tube and platform, which can be used for all elements
- Offer an extra measure of convenience versus manually inserting a separate platform
- Provide longer life with many aggressive sample matrices, such as concentrated acids

Pyrocoated Graphite Tubes with Integrated Platforms

Description	Part No.
5-Pack	**B3001262**
10-Pack **NEW**	**N9304647**
20-Pack	**B3001264**
40-Pack	**N9300651**

Pyrocoated Graphite Tubes*

Description	Part No.
5-Pack	**B0105197**
10-Pack	**B0135653**
20-Pack	**B3000342**
20-Pack (Forked Platform)	**B0505057**
50-Pack	**B0091504**

*Not compatible with L'vov platforms.

Grooved Pyrocoated Graphite Tubes

Internally grooved to accept L'vov platforms.
Does not include platform.

Description	Part No.
5-Pack	**B0137111**
10-Pack	**B0121092**
20-Pack	**B3001254**

L'vov Platforms



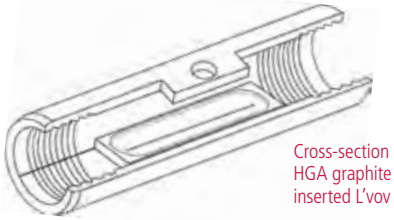
The L'vov platform is a small plate of solid pyrocoated graphite that is inserted into the graphite tube. It has a slight depression in the center, which can accommodate up to 50 µL of solution. The function of the L'vov platform is to isolate the sample from the tube walls to allow more reproducible atomization of the sample through indirect heating. The platform heats primarily by the radiation given off from the tube walls. Sample vaporization and atomization occur after the tube reaches a steady-state temperature.

Use of the L'vov platform provides

- Vaporization into a higher temperature gas atmosphere producing more free atoms, which reduce interferences
- Longer tube life because aggressive samples are only in contact with the solid pyrolytic graphite platform

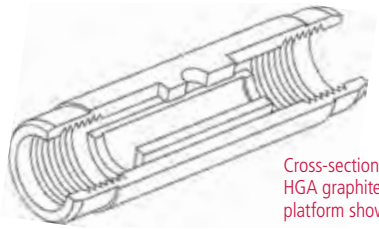
Description	Part No.
20-Pack	**B3001256**

Pyrocoated Graphite Tube with L'vov Platform



Cross-section of the PerkinElmer HGA graphite tube with manually inserted L'vov platform shown.

Pyrocoated Graphite Tube with Integrated Platforms



Cross-section of the PerkinElmer HGA graphite tube with integrated platform shown.

Contact Cylinders



The graphite contact cylinders used in the HGA Graphite Furnace are engineered for a precise fit so that variations in electrical contact – which might affect the analytical performance – are reduced to a minimum. The graphite contacts are shaped so that they completely encase the graphite tube. Thus, the graphite tube is located in a defined inert environment, which ensures uniform heating conditions and long tube lifetime.

Contact Cylinders

For HGA-900/850/800/700/600/300/PinAAcle H Furnaces. Includes left-hand Contact, right-hand Contact, Shield Ring.

Description	Part No.
1 Set	**B0128495**
5 Sets	**B3130086**

HGA Contact Removal Tool

Description	Part No.
HGA 900/AA 700/800/PinAAcle 900	**B3121301**

HGA Instrument Mirror



Used to optimize drying temperatures and times.

Description	Part No.
HGA Instrument Mirror	**B0080259**



Matrix Modifiers for Graphite Furnace AA

PerkinElmer provides you with the maximum performance and the lowest possible detection limits with our high-quality matrix modifiers. PerkinElmer matrix modifiers thermally stabilize the analyte, allowing higher pyrolysis temperatures to be used, reducing background absorption and eliminating potential interferences.

Features and Benefits

- High-purity compounds minimize the risk of contamination
- Optimum graphite furnace program can be used due to reduced analyte volatility

Matrix Modifiers

Modifiers	Concentration	Volume	Part No.
$Mg(NO_3)_2$	1% Mg (as nitrate)	100 mL	**B0190634**
Pd	1% Pd (as nitrate)	50 mL	**B0190635**
$NH_4H_2PO_4$	10% $NH_4H_2PO_4$	100 mL	**N9303445**

AA Graphite for Non-PerkinElmer Instruments



PerkinElmer supplies a wide range of graphite tubes for non-PerkinElmer instrumentation. Graphite tubes are made with the highest quality material guaranteed to work for your AA instrument.

Use the convenient tables below to identify the compatible graphite furnace tube for your AA instrument.

GBC Instruments

Description	Qty./Pack	GBC Part No.	Part No.
Standard Tube, Pyrolytically Coated	10	**99-0059-00**	**N9304600**
Platform, Pyrolytically Coated	10	**99-0060-00**	**N9304601**
Standard Tube, Coated, with Omega-Platform	10	**99-0342-00**	**N9304602**
Electrode Contacts	2	**99-0061-00**	**N9304603**
Shroud	1	**45-0004-00**	**N9304604**

Hitachi® Instruments

Description	Qty./Pack	Hitachi Part No.	Part No.
Standard Tube, Pyrolytically Coated	10	**180-7444**	**N9304605**
Standard Tube, Uncoated	10	**180-7400**	**N9304606**
Standard Platform, Pyrolytically Coated	10	**180-7404**	**N9304607**
Tube for Extended Injection Volume, Pyrolytically Coated	10	**190-6003**	**N9304608**
Contacts, AD 20 mm	2	**180-7401**	**N9304609**
Zeeman Contacts, AD 18 mm	2	**172-8805**	**N9304610**
Omega Tube	10	**N/A**	**N9304611**

Shimadzu® Instruments

Description	Qty./Pack	Shimadzu Part No.	Part No.
Standard Tube, Pyrolytically Coated (90° contact cone)	10	**206-50588**	**N9304612**
Standard Tube, Uncoated (90° contact cone)	10	**206-50587**	**N9304613**
Tube with Built-In Platform, Coated (90° contact cone)	10	**206-5887-02RI**	**N9304614**
Left Electrode with Housing (90° cone)	1	**206-50602**	**N9304615**
Right Electrode (90° cone)	1	**206-50603**	**N9304616**

Thermo® Instruments

Description	Qty./Pack	Thermo Part No.	Part No.
Partridged Tube, Uncoated	10	**9423 393 95031**	**N9304617**
Partridged Tube, Coated	10	**9423 393 95071**	**N9304618**
Partridged Tube, Coated (extended lifetime)	10	**9423 393 95041**	**N9304619**
Zeeman Electrode Contact	2	**9423 393 95161**	**N9304620**
Standard Electrode Contact	2	**9423 393 95011**	**N9304621**
Omega Tube	10	**9423 490 20101**	**N9304622**

Agilent® Instruments

Description	Qty./Pack	Agilent Part No.	Part No.
Plateau Tube, Pyrolytically Coated	10	**63-100011-00**	**N9304623**
Bone Platform, Pyrolytically Coated (for use in plateau tubes)	10	**63-100013-00**	**N9304624**
Partition Tube, Pyrolytically Coated	10	**63-100012-00**	**N9304625**
Partition Tube, Uncoated	10	**63-100015-00**	**N9304626**
Partition Tube, Pyrolytically Coated Extended Life	10	**63-100012-EL**	**N9304627**
Omega-Platform Tube	10	**63-100037-00**	**N9304628**
Shroud	1	**63-100018-00**	**N9304629**
Electrode	2	**63-100016-00**	**N9304630**
Zeeman Shroud	1	**63-100019-00**	**N9304631**
Zeeman Electrode (Older Instruments)	2	**63-100017-00**	**N9304632**
Zeeman Electrode (Newer Instruments)	2	**63-100035-00**	**N9304633**
Zeeman Shroud GTA120, Pyrocoated	1	**63-100036-00**	**N9304634**

See Atomax 1.5 in. Hollow Cathode Lamps for non-PerkinElmer instruments on page 18.



Mercury Analyzer Supplies



PerkinElmer SMS 100 Mercury Analyzer

The SMS 100 is a dedicated mercury analyzer for the determination of total mercury in solid and liquid samples using the principle of thermal decomposition, amalgamation and atomic absorption described in U.S. EPA Method 7473.

The SMS 100 uses a decomposition furnace to release mercury vapor instead of the chemical reduction step used in traditional liquid-based analyzers. Both solid and liquid matrices can be loaded onto the instrument's autosampler and analyzed without acid digestion or sample preparation prior to analysis. Some of the many sample matrices applicable to SMS 100 technology include sludges, sediments, soils, wastewaters, effluents, coal, fly ash, minerals, ores, fertilizers, various foodstuffs, blood, urine and hair.



Amalgamator Tube



Catalyst Tube



Nickel Boat

SMS 100 Consumables and Supplies

Description	Part No.
Nickel Boats (Qty. 42)	N9309017
Quartz Combustion Boats (Qty. 10)	N9309032
Replacement Carbon 500 g	N9309035
Catalyst Tube (Packed)	N9309036
Autosampler Boat Shuttle	N9309019
Exhaust Tubing Assembly	N9309006
Amalgamator Tube	N9309007
Mercury Lamp	N9309010
Hg Vapor Trap Kit with Carbon Material	N9309011
Nafion® Drying Tube	N9309021
Sample Substrate 250 mL	N9309103
Oxygen Two Stage Regulator	N9309004
Oxygen, Nitrogen, Argon Supply	N9309009
UV Windows 1/2 in. d x 1/16 in. t 10-20 w (Qty. 2)	N9309024
O-Ring 1/16 in. ID x 1/16 in. w Viton	N9309025
O-Ring Amalgamator 1/4 in. ID, 3/8 in. OD Viton	N9309026
O-Ring Injector 5/8 in. ID, 3/4 in. OD	N9309027
O-Ring Catalyst Front Viton	N9309028
O-Ring .414D Catalyst Rear	N9309030
O-Ring Kit for SMS 100	N9309029
High Sensitivity Absorption Cell 5 in.	N9309033
Low Sensitivity Absorption Cell 1 in.	N9309034

Spares Kits

Description	Qty.	Part No.
Basic Spares Kit Kit Includes:		N9309109
Amalgamator Tube	1	N9309007
Mercury Source Lamp	1	N9309010
Nafion® Drying Tube	1	N9309021
O-Ring Kit	1	N9309029
Extended Spares Parts Kit Kit Includes:		N9309110
Amalgamator Tube	2	N9309007
Sample Gas Tubing Assembly	1	N9309008
Mercury Source Lamp	1	N9309010
Injector Fork Assembly	1	N9309012
CVAAS Tubing Kit	1	N9309013
Amalgamator Heater Coil	1	N9309066
6 g Krytox® Tube Grease	1	N9309020
Nafion® Drying Tube	1	N9309021
Quartz Windows	6	N9309024
O-Ring Kits	2	N9309029
Window End Caps	8	N9309031
5 in. Optical Cells	2	N9309033
1 in. Optical Cell	1	N9309034

Flow Injection System



FIMS



FIAS

The use of flow injection saves time, money and manpower – while at the same time, extending your analytical flexibility and capabilities.

PerkinElmer carries a wide selection of genuine supplies and accessories for your FIMS-100, FIMS-400, FIAS-100 or FIAS-400. Keeping your system in good working order by using only the best replacement parts is the first step in assuring quality analytical performance. Regular maintenance and/or replacement of consumables such as tubing, connectors and adapters will maximize the lifetime and productivity of your PerkinElmer flow injection system.

Adapters with Internal Thread

1/4 in. (6.4 mm) Internal Screw Thread

Type*	Description	Part No.
A B	A 1.8 mm OD Nipple	B0193342
	B 3.3 mm OD Nipple	B0506716
C	4 mm OD Nipple	B0196850
E	For the Quartz Cell	B0196857
F	0.7 mm OD Pt/Ir Capillary Nipple	B0193873
G	Two Nipples to Connect Tubes to the Pre-Concentration Accessory	B0501580

Connectors

Type*	Description	Part No.
IA	Connector with Nipples for 1.7 to 3.2 mm ID Tubes	B0199233
IB	Connector with Nipples for 2.4 to 3.2 mm ID Tubes	B0196882
II	Connector with 1/4 in. (6.4 mm) Internal Screw Thread	B0196704
IIIA	T-piece with Nipples for 1.5 to 2.5 mm ID Tubes	B0199035
IIIB	T-piece with Nipples for 3.5 to 4.5 mm ID Tubes	B0198201

Adapters with External Thread

1/4 in. (6.4 mm) External Screw Thread

Type*	Description	Part No.
K L	K 1.8 mm OD Nipple	B0507918
	L 2.8 mm OD Nipple	B0507920
M	4 mm OD Nipple	B0507919
N	0.7 mm OD Pt/Ir Capillary Nipple	B0507949
	Screw Plug	B0507921

*Type designation refers to diagrams in instrument manuals

FIAS/FIMS Cell Replacement Parts

Description	Part No.
Complete FIAS Cell and Windows	B0507486
FIAS Cell only (no windows)	B0507487
Quartz Window Assembly for FIAS and FIMS (one window)	B0066549
FIMS Complete Cell and Windows	B0510334
FIMS Cell Only (no windows)	B0510370
FIMS Hg Lamp	B3000243
FIMS Hg Filter Replacement for Hg Scrubber	B3000274

Mixing/Separation Assembly

Complete modular unit, consisting of two mixing manifolds with tubing adapters, a gas liquid separator with a PTFE membrane, five spare PTFE membranes, one PTFE tube (110 mm long) and one PTFE tube (300 mm long).

Description	Part No.
Mixing/Separation Assembly	**B0507957**

Mixing Block

Modular 'building block' type mixing manifold with one mixing channel and three connections, two inlet and one outlet. Made from chemically-resistant plastic. Several of these blocks can be 'plugged' together easily to create a single unit with enhanced mixing capabilities.



Description	Part No.
Mixing Block	**B0507962**

Gas/Liquid Separator

Modular 'building block' type gas-liquid separator made from chemically-resistant plastic. An exchangeable PTFE membrane in the screw cap of the separator prevents liquid from being carried into the quartz cell when working with strong foaming samples.



Description	Part No.
Gas/Liquid Separator	**B0507959**
Glass Gas/Liquid Separator	**B0193772**
Gas/Liquid Separator Holder for Glass Separator	**B0509479**
PTFE Membrane (Pkg. 50)	**B0508306**
Mixing Manifold for Glass Gas/Liquid Separator	**B0187258**
Plug Connector; Mixing Manifold to Gas/Liquid Separator	**B0507960**

Tool, Screw Connectors

Description	Part No.
Tool, Screw Connectors	**B0501315**

Flow Injection Furnace Supplies

Description	Part No.
FIAS-Furnace Sample Transfer Tube	**B0509612**
Quartz Pipette Tip/20 mm (Pkg. 1)	**B0510032**
Silicone Tube	**B0029796**

Sample Loops

Description	Part No.
200 µL	**B0194048**
500 µL	**B0194049**
1,000 µL	**B0501000**

Tubing

Standard PVC clear peristaltic pump tubing has a wall thickness of 0.84 mm.

Three-Stop Peristaltic Pump Tubing, Pkg. 12

Tubing ID	Colour Code	Part No.
0.76 mm	Black/Black	**B0506058**
1.14 mm	Red/Red	**B0193160**
1.52 mm	Yellow/Blue	**B0193161**
2.06 mm	Violet/Violet	**B0199034**
3.18 mm	Black/White	**B0508310**

Solvent Resistant Yellow Peristaltic Pump Tubing, Pkg. 12

Tubing ID	Colour Code	Part No.
1.02 mm	White/White	**B0507692**

PTFE Tubing

Tubing ID	Length	Part No.
0.35 mm	1 m	**B0506060**
0.5 mm	1 m	**B0507020**
0.7 mm	1 m	**B0507021**
1.0 mm	1 m	**B0029792**
1.75 mm	1 m	**B0017998**

PTFE Tubing Assemblies

Tubing ID	Screw Fittings Color	Length	Part No.
0.35 mm	White	60 mm	**B0501594**
1.0 mm	Blue	110 mm	**B0191058**
1.0 mm	Blue	300 mm	**B0198097**
1.0 mm	Blue	700 mm	**B0191059**
1.0 mm	Blue	1,000 mm	**B0191060**
1.75 mm	Black	250 mm	**B0198099**
1.75 mm	Black	450 mm	**B0198100**
3-Dimensional Reactor 0.35 mm (two flanged ends)			**B0501595**

PVC Tubing

Description	Part No.
3 mm ID with 1 mm Wall Thickness, No Fittings	**B0048139**

Price per meter

Silicone Tubing

Description	Part No.
1 m x 5 mm ID, No Fittings	**B0018283**
1 m x 3 mm ID	**B0070126**
For FIMS Cell Exhaust Outlet, 3 m	**B0046948**

Flow Injection Sampling Supplies

Pump Magazines

Description	Part No.
Magazine for Peristaltic Pump One wide (>2 mm) tubing channel	**B0507792**
Magazine for Peristaltic Pump Two narrow (<2 mm) tubing channels	**B0507791**
Pump Roller Assembly	**B3000251**

Alternate Reductant Kit

Permits use of the FIAS-100, FIAS-400 and FIAS-400MS with an alternate reductant (e.g., $SnCl_2$ instead of $NaBH_4$).

Description	Part No.
Alternate Reductant Kit	**B0508594**
Includes:	
Mixing/Separation Assembly	**B0507957**
700 mm Single Flanged PTFE Tubing	**B0191059**
PTFE Tubing (110 mm)	**B0191058**
Red/Red Pump Tubing (Pkg. 12)	**B0193160**
Adapter A	**B0193342**
PTFE Tubing (300 mm)	**B0198097**

FIAS Accessories Case

Includes the most frequently used FIAS supplies, including adapters, pump tubings, connectors, sample loops and PTFE tubings.

Description	Part No.
FIAS Accessories Case	**B3000240**

Flangeless Ferrule

For 1/16 in. tubing, Blue Tefzel®.

Description	Part No.
Flangeless Ferrule	**09903799**

Naflon® Single Tube Dryer

Continuously and highly selectively removes water from gaseous samples without affecting analytes. (Requires separate flow controller).

Description	Part No.
Naflon® Single Tube Dryer	**N9306016**



Switching Valves

Description	Part No.
FI Switching Valve*, 5-Port For on-line pre-concentration. Included with all FIAS systems	**B0507914**
FI Switching Valve*, 8-Port For FIAS-MS	**B0509095**
Push-Button Assembly For manual program actuation with the FIAS-100 and FIAS-400 Included with the FIAS-100	**B0505650**
Disassembly Tool Valve dismantling tool	**B0509590**
One-Way Valve	**B0198111**

* For FI valve repair or replacement parts, please contact your local PerkinElmer Service office.

Electrically Heated Mantle (Cell) Adapter Cables

Description	Part No.
Cable for Adapting New RoHS FIAS/FIMS System to a Non-RoHS Heating Mantle	**N2010255**
Cable for Adapting New RoHS Heating Mantle to a Non-RoHS FIAS/FIMS System	**N2010262**

Mercury/Hydride Systems and Supplies

MHS-15

Mercury/Hydride Systems are well proven accessories for high-sensitivity determinations of mercury and metallic hydride-forming elements, including As, Se, Sb, Te, Bi and Sn by atomic absorption spectroscopy.



- Complete separation of the element being studied from its sample matrix
- Simple, highly specific operating procedures
- Reliable pneumatic control of carrier gas and transport of metallic vapors to the quartz cell
- Conveniently stands adjacent to the sample compartment of the AA spectrometer

MHS-15 Detection Limits

Element	Detection Limit* Absolute (ng) (in 10 mL volume)	Detection Limit* Relative (µg/L) (in 50 mL volume)
As	1.0	0.02
Se	1.0	0.02
Bi	2.0	0.10
Sb	5.0	0.10
Te	2.0	0.05
Hg	1.0	0.02

* EDL lamps were used for all elements

MHS-15 Mercury/Hydride System

Manually operated system for the high-sensitivity determination of Hg and hydride-forming elements. Includes analyzer with sample flask, reagent reservoir, quartz cell and cell holder. Switch allows selection of $NaBH_4$ or $SnCl_2$ reductant solution. No electrical connections are required.

Description	Part No.
MHS-15 Mercury/Hydride System	**B3140760**



Quartz Cell for MHS-10/15
Part No. **B0094415**

Quartz Cells

Description	Part No.
Quartz Cell for MHS-10 and MHS-15 Complete with graphite cooling rings and silicone rubber sleeves	**B0094415**
Quartz Cell for MHS-20 With Windows Without Windows	 **B0097693** **B0097694**
Quartz Window for MHS-20 Quartz Cells	**B0098452**
Universal Quartz Cell Holder To mount MHS-10 or MHS-15 quartz cell on burner system	**B3000350**

Supplies

Description	Part No.
Flashback Arrestor	**B0098640**
Graphite Cooling Ring for Quartz Cells*	**B0094413**
Immersion Tube (Pipette Tip)	**B0094138**
Reductant Reservoir (with cap)	**B0087354**
Reductant Reservoir (without cap)	**B0094032**
Sample Flask**	**B0094321**
Silicone Sleeve for Quartz Cells	**B0098453**
Transfer Hose	**B0094140**

* For MHS-10 and MHS-15 only. ** Specially formed polypropylene reaction vessel with cover.

Inductively Coupled Plasma-OES

PerkinElmer offers a wide selection of superior quality products designed to work with your PerkinElmer instruments. Our precision designed products deliver the peace of mind that comes from knowing that you'll get the results you need.

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Concentric Nebulizers



PerkinElmer offers a complete selection of Nebulizers in a variety of materials for all of your application needs.

Choose from Concentric, MicroFlow, GemCone and GemTip Nebulizers.

VIEW PAGE

Humidifiers



Argon Humidifiers are commonly used in ICP analyses involving samples with high concentrations of dissolved solids. It helps to alleviate salt deposits in the nebulizer and torch injector, allowing uninterrupted and maintenance-free operation.

VIEW PAGE

Spray Chambers



The spray chamber is an integral part of the sample introduction System. Each type of spray chamber has been tested to provide the best performance and analytical results.

Choose from Cyclonic, Baffled Cyclonic, HF Resistant, PFA and Scott Spray Chambers.

VIEW PAGE

Torches



PerkinElmer carefully selects the best materials which provide optimal performance. Torches are specifically designed for your instrument. Trust the consumables engineered for your instruments.

Choose from Demountable Quartz, D-Torch and Ceramic Hybrid Torches.

VIEW PAGE

Injectors



PerkinElmer offers a complete selection of Injectors in various sizes and materials to meet all of your application needs.

Choose from Alumina, Sapphire and Quartz Injectors.

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The Avio 500 ICP-OES - High throughput with low cost of ownership

The Avio® 500 ICP-OES combines the productivity you need with the high-quality performance and faster return on investment your work demands. With high sensitivity and superior resolution, your lab can accomplish more, even when dealing with the most difficult samples. And with the lowest argon consumption of any ICP, simultaneous background correction, and high throughput enabled by Dual View technology, it all comes together to expand the range of what you can accomplish. High throughput. Low cost of ownership. Superior performance. It's everything you want in an ICP-OES system.

For more information, visit perkinelmer.com/avio500

PerkinElmer®
For the Better

Concentric Nebulizers





MEINHARD® Nebulizers

The MEINHARD® concentric nebulizers reflect exacting standards in design and manufacturing. They provide excellent sensitivity and precision for aqueous solutions and samples with few dissolved solids (less than 1%).

MEINHARD® Glass Nebulizers

Type A nebulizers are for high sensitivity.
Type C and K are for high solids. Type K are for low argon flow.

Type	Ar Flow Rate	Uptake Rate	Material	Part No.
Optima 4x00/5x00/7x00/8x00 / Avio 200/500				
A3	1 L/min	3 mL/min	Glass	**00472020**
C1	1 L/min	1 mL/min	Glass	**00472022**
K3	0.7 L/min	3 mL/min	Glass	**N0681574**
K1*	0.7 L/min	1 mL/min	Glass	**N0777707**
K1 LDV	0.7 L/min	1 mL/min	Glass	**N0811287**

Includes: **N0777414**, **N8121036**, **N0777460** *Standard with Avio instrument

MEINHARD® Plus Nebulizers

Type A+ nebulizers are for low dead volume and high sensitivity



- Self aspiration rate 0.5 mL/min with argon flow 1 L/min at 50 PSI (3.4 bar/345 kPa)
- Peristaltic pumped rate 0.1 mL/min to 3.0 mL/min
- *Quartz reduces blank levels compared to glass nebulizers

Type	Ar Flow Rate	Uptake Rate	Material	Part No.
Optima 4x00/5x00/7x00/8x00 / Avio 200/500				
TR+	1 L/min	0.5 mL/min	Glass	**N8122462**
TQP+	1 L/min	0.5 mL/min	Quartz*	**N8122461**

Includes: **N8121039**, **GL54**, **N8121036**, **N0777460**

MEINHARD® SilQ Nebulizers

Type A SilQ+ nebulizers are for ultra-high purity.

- Lowest levels of trace elemental impurities
- Reduced sample contamination
- *Quartz reduces blank levels compared to glass nebulizers

Type	Ar Flow Rate	Uptake Rate	Material	Part No.
Optima 4x00/5x00/7x00/8x00 / Avio 200/500				
SILQ+	1 L/min	0.5 mL/min	*Quartz	**N8122460**

Includes: **N8121039**, **GL54**, **N8121036**, **N0777460**



Nebulizer Solution Fitting
Part No. **N0777414**



Nebulizer Clip
Part No. **N0777460**



PFA Gas Quick Connect
Part No. **N8121036**



Part No. **N8121038**



Part No. **N8121037**



Part No. **N8121039**

MEINHARD® Nebulizer Replacement Parts

Description	Part No.
F5-50 Standard Nebulizer Solution Fitting, 0.5 mm PTFE. 0.5 mm x 70 cm Capillary	**N0777414**
F5-50-026-ZZ Liquid-End Connector Kit, 10 in. Length by 0.020 in. ID x 0.062 in. OD	**N0811288**
Nebulizer Clip for MEINHARD Nebulizers, Qty. 1	**N0777460**
FG PFA Gas Quick Connect	**N8121036**
F0 Encapsulated Micro Tubing, 0.25 mm ID (Green Marker) 70 cm Long Micro Capillary	**N8121038**
F1 Detachable Capillary, 0.80 mm ID (Blue Marker) 70 cm Long Capillary	**N8121037**
F2 Standard Integrated Capillary, 0.5 mm ID (Orange Marker) 70 cm Long Capillary	**N8121039**
MEINHARD Nebulizer Gas Line	**N0791843**
PFA Adapter for Glass Nebulizers	**N8145365**
Quick Disconnect Tubing without Swagelock	**N0770610**
Nebulizer Spacer (Avio)	**N0791438**



Part No. **N8145461**

FAST Valve Connecting Lines for MEINHARD® Plus Nebulizers

Description	Part No.
F0 *FAST* Valve Connecting Line, 0.25 mm ID (Green), 14 cm	**N8145461**
F2 *FAST* Valve Connecting Line, 0.25 mm ID (Green), 14 cm	**N8145346**
F0 *FAST* Valve Connecting Line, 0.5 mm ID (Orange), 14 cm	**N8145462**
F2 *FAST* Valve Connecting Line, 0.5 mm ID (Orange), 14 cm	**N8145347**
F0 *FAST* Valve Connecting Line, 0.25 mm ID (Green), 25 cm	**N8145463**
F2 *FAST* Valve Connecting Line, 0.25 mm ID (Green), 25 cm	**N8145465**
F0 *FAST* Valve Connecting Line, 0.5 mm ID (Orange), 25 cm	**N8145464**
F2 *FAST* Valve Connecting Line, 0.5 mm ID (Orange), 25 cm	**N8145466**

Direct Connection (DC) Nebulizers

The DC (Direct Connection) nebulizer is the latest design. It has a UniFit sample connector which slides easily over the sample arm and an argon connector configured to connect directly to your ICP. Includes Gas Fitting with ratchet connector (**N0811308**).



MicroMist DC Nebulizers

Ar Flow Rate	Uptake Rate	Part No.
Optima 4x00/5x00/7x00/8x00 / Avio 200/500		
0.7 L/min	0.05 mL/min	**N0811303**
0.7 L/min	0.1 mL/min	**N0811302**
0.7 L/min	0.2 mL/min	**N0811301**
0.7 L/min	0.6 mL/min	**N0811300**

SeaSpray DC Nebulizers

Ar Flow Rate	Uptake Rate	Part No.
Optima 4x00/5x00/7x00/8x00 / Avio 200/500		
0.7 L/min	0.4 mL/min	**N0811307**
0.7 L/min	1 mL/min	**N0811306**
0.7 L/min	2 mL/min	**N0811305**

VeeSpray DC Nebulizers

Ar Flow Rate	Uptake Rate	Part No.
Optima 4x00/5x00/7x00/8x00 / Avio 200/500		
0.7 L/min	4 mL/min	**N0811289**

DuraMist DC Nebulizers

Ar Flow Rate	Uptake Rate	Part No.
Optima 4x00/5x00/7x00/8x00 / Avio 200/500		
0.7 L/min	1 mL/min	**N0811291**
0.7 L/min	0.4 mL/min	**N0811292**

OpalMist DC Nebulizers

Ar Flow Rate	Uptake Rate	Part No.
Optima 4x00/5x00/7x00/8x00 / Avio 200/500		
0.7 L/min	2 mL/min	**N0811293**
0.7 L/min	0.6 mL/min	**N0811294**

Conikal DC Nebulizers

Ar Flow Rate	Uptake Rate	Part No.
Optima 4x00/5x00/7x00/8x00 / Avio 200/500		
0.7 L/min	2 mL/min	**N0811298**
0.7 L/min	1 mL/min	**N0811299**

SeaSpray™ Nebulizers

The SeaSpray concentric nebulizer is ideal for samples with high dissolved solids and offers outstanding nebulization efficiency for trace level analyses. Includes UniFit Connector with 0.75 mm ID x 1.3 mm OD x 700 mm long tubing (**N0777512**) and EzyLok Connector Kit (**N0777413**).



Shown with UniFit Connector

Ar Flow Rate	Uptake Rate	Material	Part No.
Optima 4x00/5x00/7x00/8x00 / Avio 200/500			
0.7 L/min	2 mL/min	Glass	**N0775345**

MicroMist™ Nebulizers

The MicroMist micro-uptake glass concentric nebulizer offers high performance for limited sample volumes. MicroMists with sample uptakes 0.2–0.6 mL/min are fitted with a UniFit connector with 1.3 mm OD x 0.50 mm ID x 700 mm long sample tubing (**N0777513**). MicroMists with sample uptakes 0.05–0.1 mL/min are fitted a UniFit connector with 1.3 mm OD x 0.25 mm ID x 700 mm long sample tubing (**N0777514**). EzyLok Connector Kit (**N0777413**) included.

Ar Flow Rate	Uptake Rate	Material	Part No.
Optima 4x00/5x00/7x00/8x00 / Avio 200/500			
0.7 L/min	0.05 mL/min	Glass	**N0775349**
0.7 L/min	0.1 mL/min	Glass	**N0775348**
0.7 L/min	0.2 mL/min	Glass	**N0775347**
0.7 L/min	0.6 mL/min	Glass	**N0775346**

UniFit Connector



EzyFit Connector





EzyLok Kit



Direct Connection Nebulizer Gas Fitting

SeaSpray and MicroMist Nebulizer Replacement Parts

Description	Pkg.	Part No.
UniFit		
0.25 mm ID x 1.3 mm OD x 700 mm	10	**N0777514**
0.50 mm ID x 1.3 mm OD x 700 mm	10	**N0777513**
0.75 mm ID x 1.3 mm OD x 700 mm	10	**N0777512**
1.30 mm OD x 0.75 mm ID x 700 mm	3	**N0774077**
1/16 in. OD x 0.25 mm ID x 700 mm	10	**N0777845**
1/16 in. OD x 0.50 mm ID x 700 mm	10	**N0777846**
1/16 in. OD x 0.75 mm ID x 700 mm	10	**N0777847**
1/16 in. OD x 0.75 mm ID x 700 mm	3	**N0774080**
UniFit-EzyFit Sample Tube	6	**N0777061**
EzyFit		
0.25 mm ID x 1.27 mm OD x 700 mm	10	**N0777437**
0.50 mm ID x 1.27 mm OD x 700 mm	10	**N0777436**
0.75 mm ID x 1.27 mm OD x 700 mm	10	**N0777435**
0.25 mm ID x 1/16 in. OD x 700 mm	10	**N0777464**
0.50 mm ID x 1/16 in. OD x 700 mm	10	**N0777463**
0.50 mm ID x 1/16 in. OD x 700 mm Twin	6	**N0777462**
UniFit-EzyFit Sample Tube	6	**N0777061**
EzyLok Kit		
EzyLok Kit Includes: EzyLok Connector for 4 mm Tubing, EzyLok 6 mm Hose Adaptor, Nebulizer Hose Clip		**N0777413**
Nebulizer Pressure Hose Clips (standard)		**N0773197**
Direct Connection Nebulizer Gas Fitting		
DC Nebulizer Gas Fitting with Ratchet Nebulizer Connector for Avio		**N0811308**

Conikal™ Nebulizer

Ideal for samples containing only moderate concentrations of dissolved salts, no particulates and no hydrofluoric acid. Includes UniFit Connector with 0.75 mm ID x 1.3 mm OD x 700 mm long tubing (**N0777512**) and EzyLok Connector Kit (**N0777413**).

Ar Flow Rate	Uptake Rate	Material	Part No.
Optima 4x00/5x00/7x00/8x00 / Avio 200/500			
0.7 L/min	2 mL/min	Glass	**N0777487**

Slurry™ Nebulizer

Ideal for the analysis of used engine oils for wear metals. A sample which consists of small particulates in liquid matrix is a slurry and is suited to this nebulizer. Includes UniFit Connector with 0.75 mm ID x 1.3 mm OD x 700 mm long tubing (**N0777512**) and EzyLok Connector Kit (**N0777413**).

Ar Flow Rate	Uptake Rate	Material	Part No.
Optima 4x00/5x00/7x00/8x00 / Avio 200/500			
0.7 L/min	4 mL/min	Glass	**N0777488**
0.7 L/min	4 mL/min (DC Nebulizer)	Glass	**N0811304**

VeeSpray™ Nebulizer



The VeeSpray nebulizer is made from alumina ceramic, making it ideal for HF analyses. It provides reproducible performance when working with samples containing large particulates.

Ar Flow Rate	Uptake Rate	Material	Part No.
Optima 4x00/5x00/7x00/8x00 / Avio 200/500			
0.7 L/min	0.6-3.0 mL/min	Alumina Ceramic	**N0777489**

DuraMist™ Nebulizer



The DuraMist is an economical nebulizer for high precision analyses involving samples digested in HF. Recommended for samples containing up to 5% HF.

Ar Flow Rate	Uptake Rate	Material	Part No.
Optima 4x00/5x00/7x00/8x00 / Avio 200/500			
0.7 L/min	0.4 mL/min	PEEK	**N0777713**
0.7 L/min	1.0 mL/min	PEEK	**N0777714**

OpalMist™ Nebulizer



For high precision analyses requiring the highest chemical resistancy of HF, alkalis and organics. The OpalMist is capable of aspirating high concentrations of dissolved solids without clogging. An ideal nebulizer to handle geochemical samples which are typically dissolved in HF and are high is dissolved solids.

Ar Flow Rate	Uptake Rate	Material	Part No.
Optima 4x00/5x00/7x00/8x00 / Avio 200/500			
0.7 L/min	0.6 mL/min	PFA	**N0777735**
0.7 L/min	0.05 mL/min	PFA	**N0777738**
0.7 L/min	0.1 mL/min	PFA	**N0777737**
0.7 L/min	0.2 mL/min	PFA	**N0777736**
0.7 L/min	2 mL/min	PFA	**N0777734**

Mira Mist® and Ari Mist Nebulizers



The PEEK Mira Mist handles most liquids, most flow ranges used in ICP and is one of the most rugged and longest life nebulizers due to its outer body being strong PEEK material. The Ari Mist has a very low sample flow, enhanced parallel path design. Standard pressure (40-50 psi). Black PEEK body, PTFE sample and gas capillaries. Can operate on 0.050 mL/min to 1.0 mL/min. Only for samples that are particulate free.

Description	Uptake Rate	Part No.
Optima 4x00/5x00/7x00/8x00 / Avio 200/500		
PEEK Mira Mist Excellent mist and can handle high level of particulates in sample	0.2 to 2.5 mL/min	**N0775330**
PTFE Mira Mist For samples with high HF, Sulfuric and some other solvents that attack PEEK	0.2 to 2.5 mL/min	**N0777031**
PEEK Ari Mist Very low sample flow, enhanced parallel path design	0.050 to 1.0 mL/min	**N0777032**

Mira Mist® and Ari Mist Nebulizer Replacement Parts

Description	Pkg.	Part No.
0.5 m, 0.44 in. OD x .018 in. ID	1	**N0777111**
0.5 m, 0.44 in. OD x .018 in. ID	10	**N0777112**
2 mm Gas Line with Upchurch Fittings	1	**N0777113**
Mira Mist Quick Release	1	**N0777114**
1/4 in. Adapter	1	**N0777115**
0.44 in. OD x .018 in. ID Polyethylene Tubing 3 m	1	**N0777116**
0.44 in. OD x .018 in. ID Polyethylene Tubing 30 m	1	**N0777117**

High Efficiency MicroFlow Nebulizers

MicroFlow nebulizers are resistant to clogging, reliably self-aspirated or pumped to produce a fine aerosol for high transport efficiency and high sensitivity.

PFA-ST Nebulizers



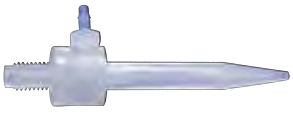
The PFA-ST MicroFlow nebulizer is made from high purity, HF resistant PFA. It has an exchangeable external sample uptake capillary. The sample uptake rate is controlled by the diameter of the external capillary or probe.

Features and Benefits

- Chemically resistant – ideal for strong acids, alkalis and organics
- Can be pumped from < 0.1 mL/min to 3.0 mL/min
- Direct analysis of volatile and non-volatile organic solvents
- Resistant to clogging – reliably self-aspirated or pumped
- Low, spike free background for important elements such as Fe and Ca

Description	Part No.
PFA-ST Nebulizer	**N0777049**
PFA-ST Self-Aspirating Nebulizer for prep*FAST* Systems	**N8145368**

PolyPro-ST Nebulizer



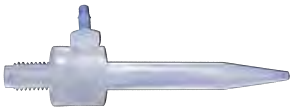
The PolyPro-ST Nebulizer is an HF resistant alternative to the PFA nebulizers but has the same high efficiency aerosol generation.
It is a robust nebulizer that can self aspirate with an exchangeable external sample uptake capillary or be used with a peristaltic pump.

Features and Benefits

- Polypropylene construction
- Hydrofluoric acid resistant
- 0-3 mL/min sample flow rate with peristaltic pumping
- Resistant to clogging and accidental breakage

Description	Part No.
PolyPro-ST Nebulizer	**N0777219**

PFA-ST3 Nebulizer



The PFA-ST3 Nebulizer is designated for superior clog resistance and higher sensitivity compared to the standard PFA nebulizer. The PFA MicroFlow is a high solids large bore nebulizer with external 1/4-28 threaded connector. Ideal for strong acids, high solids, alkalis, organic solvents, soils and high salt solutions.

Features and Benefits

- Produces a fine aerosol for high transport efficiency and high sensitivity
- Low BECs even for concentrated high purity acids (e.g. 49% HF, 69% HNO_3)
- Direct analysis of volatile and non-volatile organic solvents
- Ideal for VPD samples, high purity peroxide and ammonia

Description	Part No.
PFA-ST3 Nebulizer	**N0777676**

apex PFA Nebulizers



apex PFA nebulizers allow self-aspiration at low sample consumption rates with the apex high-sensitivity desolvation system.

Description	Part No.
High Temperature apex-ST PFA MicroFlow Nebulizer with External 1/4-28 Threaded Connector	**N0777375**
High Temperature apex-100 PFA Nebulizer with Integrated 90-150 µL/min Self-Aspiration Capillary	**N0777376**
High Temperature apex-100 PFA Nebulizer with Ultem Manual Sampling Probe, 90-150 µL/min, 80 cm Capillary	**N0777828**

Sample Capillaries for ST Nebulizers



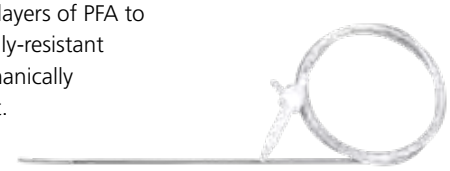
ID	Self-aspiration rate ID (@1 L/m Ar)	Part No.
0.15 mm	20 µL/min (Red)	**N8122382**
0.2 mm	50 µL/min (Purple)	**N8145135**
0.25 mm	100 µL/min (Green)	**N8122383**
0.3 mm	200 µL/min (Yellow)	**N8145136**
0.5 mm	400 µL/min (Orange)	**N8122384**
0.8 mm	700 µL/min (Blue)	**N8145137**
1.0 mm	1 mL/min (Gray)	**N8145138**

Nebulizers with Integrated Probes

These nebulizers self-aspirate at low flow rates with any autosampler and provide the same benefits of the PFA MicroFlow nebulizer. The integrated sampling probe is constructed by encapsulating a rigid support material between layers of PFA to provide a chemically-resistant probe that is mechanically stable and resilient.

PFA MicroFlow Nebulizers with Integrated Autosampler Probes

For environmental/clinical applications. These nebulizers self-aspirate at low flow rates with any autosampler and provide the same benefits of the PFA MicroFlow nebulizer. The integrated sampling probe is constructed by encapsulating a rigid support material between layers of PFA to provide a chemically-resistant probe that is mechanically stable and resilient.



Carbon Fiber support for Environmental/Clinical Applications.

Description	Aspiration Rate @ 1 L/m Ar	Part No.
PFA-20 PFA (Carbon Fiber Support), Length 80 cm	20 µL/min	**N0777214**
PFA-50 PFA (Carbon Fiber Support), Length 80 cm	50 µL/min	**N0777215**
PFA-100 PFA (Carbon Fiber Support), Length 100 cm	100 µL/min	**N0777216**
PFA-200 PFA (Carbon Fiber Support), Length 100 cm	200 µL/min	**N0777217**
PFA-400 PFA (Carbon Fiber Support), Length 100 cm	400 µL/min	**N0777218**

Ultem support for High Purity Semiconductor Applications.

Description	Aspiration Rate @ 1 L/m Ar	Part No.
PFA-20 PFA (Ultem Support), Length 100 cm	20 µL/min	**N8145141**
PFA-50 PFA (Ultem Support), Length 100 cm	50 µL/min	**N8145142**
PFA-100 PFA (Ultem Support), Length 100 cm	100 µL/min	**N8145143**
PFA-200 PFA (Ultem Support), Length 100 cm	200 µL/min	**N8145144**
PFA-400 PFA (Ultem Support), Length 100 cm	400 µL/min	**N8145275**

PFA Nebulizers with Integrated Fluoropolymer Capillaries



Self-aspirating PFA MicroFlow nebulizers are constructed entirely from chemically resistant fluoropolymers ideal for strong acids, alkalis, organics and high-salt solutions. They are resistant to clogging and produce a fine aerosol for high transport efficiency and high sensitivity.

- Integrated capillary for self-aspiration, ideal for low flow, clean applications
- Low, spike-free background for important elements such as Fe and Ca
- Produces a fine aerosol for high transport efficiency and high sensitivity
- Direct analysis of volatile and non-volatile organic solvents

Description	Aspiration Rate @ 1 L/m Ar	Part No.
PFA-20	20 µL/min	**N8122350**
PFA-50	50 µL/min	**N8145102**
PFA-100	100 µL/min	**N8122351**
PFA-200	200 µL/min	**N8145103**
PFA-400	400 µL/min	**N8145104**

Carbon Fiber Probes for ST Nebulizers

ST nebulizer probes connect directly to any ST-type nebulizer. The 1/4-28 threaded fitting provides a secure, zero-dead-volume connection with no additional fittings required.



ID	Aspiration Rate @ 1 L/m Ar	Length	Part No.
0.25 mm	100 µL/min	80 cm	**N0777223**
0.50 mm	400 µL/min	80 cm	**N0777225**
0.25 mm	100 µL/min	150 cm	**N0777826**
0.50 mm	100 µL/min	150 cm	**N0777827**
S10 Autosampler Probe for ST Nebulizers, 0.25 mm	100 µL/min	100 cm	**N8145139**
S10 Autosampler Probe for ST Nebulizers, 0.50 mm	400 µL/min	100 cm	**N8145140**

GemCone and GemTip Nebulizers

GemCone™ Low-Flow Nebulizer



Low-flow GemCones permit lower nebulizer gas flow rates, useful for spectral lines with high excitation energies and for providing a more robust plasma. GemCone Nebulizers require an end cap for use with Scott Spray Chambers.

Description	Part No.
GemCone Low-Flow Nebulizer	**N0770358**

GemCone High Dissolved Solids Nebulizer



High solids GemCones are for samples with high dissolved solids (up to 20%). This conespray nebulizer allows you to analyze samples with higher solids concentration than is possible with a Cross-Flow nebulizer. GemCone nebulizers require an end cap (Part No. **N0680343**) for use with Scott Spray Chambers.

Description	Part No.
GemCone High Dissolved Solids Nebulizer	**N0690670**
GemCone High Dissolved Solids Nebulizer with Quick Disconnect Tubing **(N0770336)**	**N0770720**



GemCone Nebulizer Replacement Parts

Description	Part No.
GemCone Sample Capillary Adapter	**N0371505**
Scott Spray Chamber End Cap for GemCone Nebulizers	**N0680504**
Quick Disconnect Tubing with Swagelock	**N0770336**
Quick Disconnect Tubing without Swagelock	**N0770610**
Capillary Tubing (10 ft.)	**09908265**
PTFE Capillary Tubing (1 ft.)	**09985708**

Argon Flow Rates

Nebulizer	Typical Value	Operating Range
GemTip Cross-Flow	0.6 L/min	0.4-1.3 L/min
Low-Flow GemCone	0.6 L/min	0.4-0.95 L/min
High Flow GemCone	1.0 L/min	0.7-1.0 L/min



GemTip Cross-Flow II Nebulizers

Excellent general purpose nebulizer for the analysis of strong mineral acids (including HF) and samples with less than 5% dissolved solids. It can routinely handle 50% (v/v) solutions of HCl, HNO_3, H_2SO_4, H_2PO_4, 20% (v/v) HF and 30% (v/v) NaOH. Up to 20% NaCl can be aspirated by the nebulizer for 1 hour without clogging. Uses chemically resistant GemTips made of sapphire and ruby in a chemically resistant end cap.

ICP Model	Part No.
Optima 8x00 / Avio 200/500	**N0780546**
Optima 2x00/4x00/5x00/7x00	**N0770546**

GemTip Nebulizer O-Ring Kit

Description	Part No.
GemTip™ Cross-Flow Nebulizer O-Ring Kit Includes: **09902001** Qty. 2, **09902033** Qty. 2, **09902151** Qty. 3, **09921003** Qty. 1, 3 cm of PTFE Sample Tubing	**N9300067**



GemTip Cross-Flow II Nebulizer Tip Kits

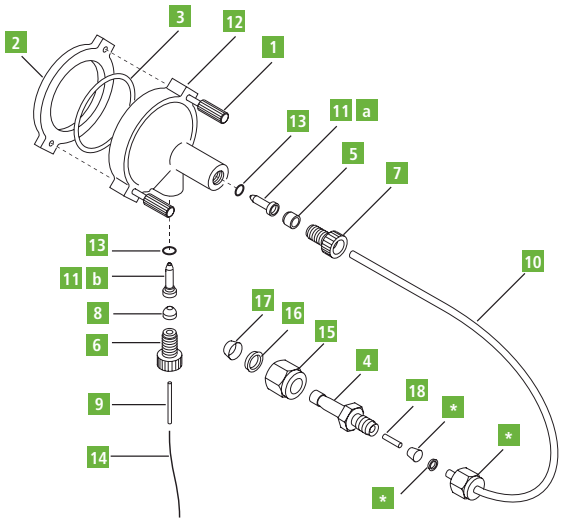
The Tip Kit includes a clear sapphire sample tip and a red ruby argon tip. The tips are constructed of PEEK with the gem inserts noted for maximum corrosion resistance.

ICP Model	Part No.
Optima 8x00 / Avio 200/500	**N0780676**
Optima 2x00/4x00/5x00/7x00	**N0690676**

See next page for GemTip Cross-Flow II Nebulizer Replacement Parts

GemTip Cross-Flow II Nebulizer Replacement Parts

	Description	Part No.
1	Screws (two) – Knurled	**00473539**
2	Ring	**00473543**
3	O-Ring, 18W, 1-3/8 ID, 1-5/8 OD	**09902033**
4	Fitting Reducer 1/8 TBG, 1/4 Port	**09903471**
*	These parts are included with item 4	
5	Ferrule – TBG 1/8 Tefzel	**09920515**
6	Nut – TBG Flanged 0.0625 PEEK	**09920546**
7	Nut – TBG Flanged 0.125 PEEK	**09920545**
8	Ferrule – TBG 1/16 Tefzel	**09920518**
9	Tubing, 0.032 ID x 0.016 Wall, PTFE (per foot)	**09985708**
10	Tubing, 0.06 ID x 1/8 OD, PTFE (per foot)	**02506483**
11	Tip Kit for Cross-Flow Nebulizer Argon and Sample tip (one each) a Argon Tip (Red) b Sample Tip (Clear)	**N0690676**
12	End Cap Cross-Flow Nebulizer	**N8122239**
13	O-Rings (two) 0.126 ID, 0.040 WD, Viton	**09921045**
14	Tubing (10 ft.) – 0.023 ID, Clear	**09908265**
15	Nut – Hex – 0.250 TBG BRS	**09903199**
16	Ferrule – Back 1/4 BRS	**09903104**
17	Ferrule – Front 1/4 BRS	**09903103**
18	Insert – Tubing	**00473578**
	Barbed coupler – Not Shown	**09920186**



Online Mixing Kits



The mixing lit kit for online addition of internal standard is an easy way to use internal standards without having to manually spike each sample with internal standard. The kit can also be used to mix any two reagents for other purposes. The low dead-volume, fluoropolymer mixing tee ensures good mixing at typical flow rates for a wide variety of liquids, including HF.

Includes:

- Low dead-volume, fluoropolymer mixing tee
- 0.25 mm ID (green) for flow rates < 1 mL/min
- 0.5 mm ID (orange) for flow rates > 0.3 mL/min
- Internal standard probe and addition line
- Fluoropolymer peripump fittings
- Peristaltic pump tubing starter pack

Online Dilution:

The online mixing kits include a starter pack of peristaltic pump tubing for the MP² micro peristaltic pump.

Description	Part No.
Online Mixing Kit For use with PFA-ST nebulizers. 0.25 mm ID (Green)	**N8145358**
Online Mixing Kit For use with MEINHARD Plus nebulizers. 0.25 mm ID (Green)	**N8145360**
Online Mixing Kit For use with PFA-ST nebulizers. 0.5 mm ID (Orange)	**N8145359**
Online Mixing Kit For use with MEINHARD Plus nebulizers. 0.5 mm ID (Orange)	**N8145361**
Online Mixing Kit For use with MiraMist and similar nebulizers. 0.5 mm ID (Orange)	**N8145362**
Online Mixing Kit For use with PFA-ST nebulizers. Includes PFA-ST nebulizer. 0.25 mm ID (Green)	**N8145363**
Online Mixing Kit For use with MEINHARD Plus nebulizers. Includes TR+ high sensitivity glass nebulizer. 0.5 mm ID (Orange)	**N8145364**

Part No. **N8145365**



Description	Part No.
PFA Adapter for Glass Nebulizers Allows MEINHARD Plus mixing kit to be used with other types of glass nebulizers	**N8145365**

Nebulizer Cleaners

The Eluo™ Nebulizer Cleaner



The Eluo is designated to efficiently deliver a cleanser through the nebulizer capillary to dislodge particle build-up and thoroughly clean the nebulizer. One simple action does it all. No more messy procedures, waiting overnight or shattered nebulizers in ultrasonic baths.

Description	Part No.
For Newer OpalMist, PolyCon, DuraMist, MEINHARD, Other Glass Nebulizers	**N0777712**
For OLD Style OpalMist or PolyCon Nebulizers	**N0775358**

Pearl Nebulizer Cleaner



With the Pearl, a cleaning solution can be pumped manually in reverse, through both the sample and gas passages. When the wet-cleaning process is finished, rinse with DI water and flush dry with compressed air or inert gas.

Description	Part No.
For Glass and Quartz Concentric Nebulizers	**N8145457**

Syringe Flush Kit



Use syringe and white adapter to back-flush the carrier line or tee-line. Use syringe and red adapter to forward flush the carrier line, the side port of the tee-line and to forward flush the PFA nebulizer. Includes 3 mL syringe, two luer to 1/4-28 adapters.

Description	Part No.
Syringe Flush Kit	**N8121035**

Fused Silica Obstruction Removal Kit



Fused silica obstruction removal kit for ST-type nebulizers. Includes one guide, 10 pieces of fused silica and instructions. Use this kit to safely remove obstructions in all PFA-ST nebulizers for long-term high performance.

Description	Part No.
Nebulizer Obstruction Removal Kit	**N8145236**

Humidifiers

Capricorn Argon Humidifier with Bypass



The Argon Humidifier is commonly used in ICP analyses of samples with very high concentrations of dissolved solids. Helping to prevent salt build-up inside the sample introduction system, the Argon Humidifier allows uninterrupted and maintenance-free operation.

ICP Model	Part No.
Optima 2x00/4x00/5x00/7x00/8x00 / Avio 200/500	**N0775331**

Elegra Argon Humidifier



The Elegra Argon Humidifier helps to alleviate salt deposits in the nebulizer and torch injector, allowing uninterrupted and maintenance-free operation.

ICP Model	Part No.
Optima 2x00/4x00/5x00/7x00/8x00 / Avio 200/500	**N0781598**

pergo Argon Humidifier



The *pergo* improves performance of all concentric nebulizers for the routine analysis of brines, fusion digests and other high-TDS samples. A high-pressure membrane positioned inside a temperature-controlled water reservoir perfuses water vapor into the ICP nebulizer gas stream. By increasing humidity in the argon nebulizer gas, the *pergo* prevents salt deposits at the nebulizer tip, improving short and long-term signal stability. *pergo* 2 dual Argon humidifier is for analyses dealing with high concentrations of dissolved solids on instruments using auxiliary gas. Includes gas line connector kit.

ICP Model	Description	Part No.
Optima/Avio	*pergo* 1 without Nebulizer	**N8145315**
Optima/Avio	*pergo* 1 with MEINHARD Type C Nebulizer	**N8145316**
Optima/Avio	*pergo* 1 with PFA-ST Nebulizer	**N8150427**

Cyclonic Spray Chambers



Standard Cyclonic
Spray Chamber
Part No. **N0776052**



Cyclonic O-Ring Free
Spray Chamber
Part No. **N0775351**

The spray chamber is an integral part of the sample introduction system responsible for filtering the sample mist to permit the appropriate droplet size distribution to reach the plasma.

Standard and 0-Ring Free glass cyclonic spray chambers can be used with either GemCone or concentric glass nebulizers. HF resistant cyclonic spray chambers should be used with GemCone, SeaSpray or MicroMist nebulizers.

Glass Spray Chambers

ICP Model	Type	Part No.
2x00/4x00/5x00/7x00/8x00	Standard*	**N0776052**
2x00/4x00/5x00/7x00/8x00	O-Ring Free	**N0775351**
2x00/4x00/5x00/7x00/8x00	O-Ring Free with Easy-Seal Threaded	**N0772017**

*Standard Cyclonic Spray Chamber (**N0776052**) with Adapter (**N0770614**):
Spray Chamber Kit with Mount Part No. **N0770605**



Quartz Spray Chamber
Part No. **N0777036**

Quartz Spray Chambers

ICP Model	Type	Part No.
2x00/4x00/5x00/7x00/8x00	Non-baffled Cyclonic Spray Chamber	**N0777635**
2x00/4x00/5x00/7x00/8x00	7 mm Baffled Cyclonic Spray Chamber	**N0777036**
2x00/4x00/5x00/7x00/8x00	7 mm Baffled Micro Cyclonic Spray Chamber	**N0777637**
2x00/4x00/5x00/7x00/8x00	5 mm Baffled Micro Cyclonic Spray Chamber with additional gas port	**N0777638**

Include drain line (**N8141425**)



Cinnabar Spray Chamber
Part No. **N0777494**

Cinnabar™ Cyclonic Spray Chamber

The Cinnabar glass spray chamber is a mini-cyclonic spray chamber which gives good sensitivity at very low uptakes. The Cinnabar's design and low volume is ideal for the reduction of memory and matrix effects and very fast washout. Volume 20 mL.

ICP Model	Type	Part No.
2x00/4x00/5x00/7x00/8x00	O-Ring Free	**N0777494**

Twinnabar™ Cyclonic Spray Chamber

The Twinnabar glass cyclonic spray chamber is a low volume spray chamber with baffle combining the benefits of the Twister and the Cinnabar. It combines excellent precision with a very fast washout. Volume 20 mL.

ICP Model	Type	Part No.
2x00/4x00/5x00/7x00/8x00	O-Ring Free	**N0777495**



C2 Cyclonic Spray Chamber
Part No. **N0782012**

C2 Cyclonic Spray Chambers

The C2 dual cyclonic spray chamber improves both sensitivity and precision with its unique dual cyclonic aerosol flow path, improving detection limits. Even at very high sample flow rates, the C2 chamber significantly reduces droplet buildup in the injector that can cause plasma instability or outages.

Description	ICP Model	Part No.
Quartz C2 Dual Cyclonic Spray Chamber Threaded drain port, connection for ESI injector, drain line assembly included	2x00/4x00/5x00 /7x00/8x00	**N0782012**
Quartz Hydride C2 Dual Cyclonic Spray Chamber Threaded drain port, connection for ESI injector, hydride gas port, drain line assembly included	2x00/4x00/5x00 /7x00/8x00	**N0782014**

Baffled Cyclonic Spray Chambers



Baffled Cyclonic Spray Chamber
Part No. **N0791352**



Oxygen Port Spray Chamber
Part No. **N0777731**

The Baffled Cyclonic Spray Chamber features a central transfer tube which acts as a secondary particle separator, helping to separate larger aerosol particles from the sample. This reduces solvent load in the plasma without compromising detection limits.

ICP Model	Type	Part No.
Avio 200/500	O-Ring Free	**N0791352**
Avio 200/500 for Oil Analysis with Oxygen Port	O-Ring Free	**N0770389**
Avio 200 Quartz	O-Ring Free	**N0791841**
Avio 200 Quartz 8 mm PFA Adapter	O-Ring Free	**N0791842**
Avio 500 Quartz 12/5 Socket	O-Ring Free	**N0811900**
Avio 500 Quartz 8 mm PFA Adapter	O-Ring Free	**N0811901**
2x00/4x00/5x00/7x00 DV/8x00	Standard	**N0776053**
2x00/4x00/5x00/7x00 DV/8x00	O-Ring Free	**N0775352**
2x00/4x00/5x00/7x00 DV/8x00 for Oil Analysis (4 mm Baffle)	Standard	**N0776090**
2x00/4x00/5x00/7x00 DV/8x00 for Oil Analysis (4 mm Baffle)	O-Ring Free	**N0775355**
2x00/4x00/5x00/7x00 DV/8x00 for Oil Analysis (4 mm Baffle) with Oxygen Port	O-Ring Free	**N0777731**
4300V/5300V/7300V	Standard	**N0771501**
4300V/5300V/7300V	O-Ring Free	**N0775356**



Metal Ball Joint Clip

Used to connect spray chamber and torch.

Description	Part No.
Metal Ball Joint Clip	**09200593**

Spray Chamber Replacement Parts and Accessories



Part No. **N0770614**



Part No. **N0770600**



Part No. **N0777438**



Part No. **N0777439**



Part No. **N0791438**

Description	Part No.
Cyclonic Spray Chamber Adapter (Optima)	**N0770614**
Mounting Block Only (Optima)	**N0770600**
Drain Adapter Assembly for Scott Spray Chamber Includes the spray chamber fitting and tubing to pump out the waste solution from the spray chamber (does not include the peristaltic pump tubing)	**N0770613**
Carboy, 15 L	**09904991**
Drain Cap Assembly	**N0690271**
EzyLok Connector for Jacketed Spray Chamber, Pkg. 4	**N0774101**
Helix Locking Screw, Pkg. 1	**N0777438**
Helix Seal, Pkg. 4	**N0777439**
Nebulizer Adaptor Plug 16/6 for **N0776052** Spray Chamber	**N0776006**
O-Ring Set for Nebulizer Adaptor Plug 16/6	**N0776007**
O-Ring Kit for Tracey TFE Spray Chamber (**N0777496**) with Helix	**N0777844**
Nebulizer Spacer (Avio)	**N0791438**
Quick-Change Torch Module Support Stand (Optima)	**N0770609**



See Quick Change Torch Modules and Sample Introduction Kits on the following pages

HF Spray Chamber
Part No.
N0777497



HF Spray
Chamber
Part No.
N0777496



Scott Spray Chamber
Part No. **N0770357**





Scott Spray Chamber
Part No. **N0790384**

HF Resistant Spray Chambers

ICP Model	Part No.
Avio 200/500 (with grounding strap)	**N0790373**
4300/5300/7300V TFE PTFE, 50 mL	**N0777497**
2x00/4x00/5x00/7x00 DV/8x00 TFE PTFE, 50 mL	**N0777496**
O-Ring Kit for **N0777496** Spray Chamber	**N0777844**



PFA Spray Chambers

All-purpose spray chambers which offers resistance to hydrofluoric acid. Constructed entirely from chemically inert PFA, the PureChamber is available in low flow format for maximum aerosol transport and high flow format, ideal for ICP-AES applications. The PureCap accepts any 6 mm nebulizer but is ideally suited for the PFA MicroFlow nebulizer providing an O-Ring free PFA sample introduction system.

- Chemically inert PFA construction results in low contamination and long life time
- O-Ring free seal reduces contamination and provides an easy to clean low maintenance system

Description	ICP Model	Part No.
PFA 47 mm M-200	Avio 200/500	**N0791847**
PFA 47 mm M-200 with Gas Port	Avio 200/500	**N0791848**

Scott Spray Chambers

The Scott Spray Chamber is made from a corrosion-resistant material, which is inert to most mineral acids including HF, aqua regia and all organic solvents normally used in ICP analyses. The Scott-type design minimizes pulsations from the peristaltic pump.

ICP Model	Part No.
Avio 200/500	**N0790384**
2x00/4x00/5x00/7x00/8x00	**N0770357**

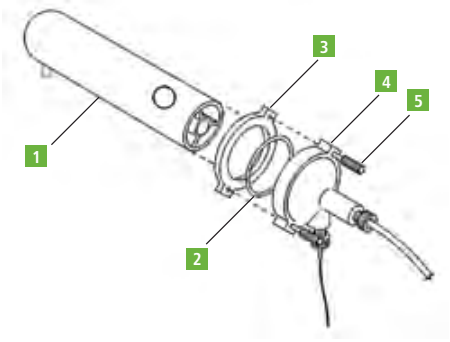
Scott Spray Chamber Replacement Parts

Description	Part No.
Scott Spray Chamber Clamp Adapter (Avio)	**N0790296**
O-Ring	**09902033**
End Cap Ring	**00473543**
End Cap (not complete assembly)	**N0681688**
Knurled Screw Qty. 2	**00473539**

Spray chamber, end cap and associated parts

Illustration shows cross-flow nebulizer end cap assembly Part No. **N0780546**.

	Description	Part No.
1	Scott Spray Chamber	**N0790384**
2	O-Ring	**09902033**
3	End Cap Ring	**00473543**
4	End Cap (not complete assembly)	**N0681688**
5	Knurled Screw (2)	**00473539**



Temperature Controlled Spray Chambers

PC³ Peltier Temperature Controlled Spray Chambers

The PC^{3x} for Avio is a compact, Peltier-heated or cooled inlet system which incorporates the ESI cyclonic spray chamber. In cooling mode the PC^{3x} cools the outer walls of the cyclonic spray chamber that operates at -10°C to +80°C, reducing the water or solvent vapor loading on the plasma, resulting in enhanced stability and performance. In heating mode, sensitivity can be improved for low flow rate applications.

The PC³ is a compact Peltier cooled inlet system which incorporates the ESI cyclonic spray chamber. The peltier within the PC³ is air cooled, as such the system can be connected to any ICP. The PC³ cools the outer walls of the cyclonic spray chamber reducing the water or solvent vapor loading on the plasma resulting in enhanced stability and performance. The PC³-LT operates at -20°C to reduce the solvent load on the plasma for analysis of 100% volatile organic solvents.

Features and Benefits

- Thermal stabilization of spray chamber improves long-term stability
- Default settings of spray chamber temperature (+2°C/ -5°C) for aqueous or organic solvents. Custom temperature settings are available upon request
- Interchangeable quartz, PFA and borosilicate cyclonic spray chambers available
- Fast rinse-out using PFA-ST nebulizer and O-Ring free quartz cyclonic spray chamber
- Reduced oxides

Description	Part No.
PC³ Temperature Controlled Spray Chambers for Avio	
PC^{3x} Peltier Cooled Cyclonic Spray Chamber for Avio 200	**N0790959**
PC³ Peltier Cooled Cyclonic Spray Chamber for Avio 200	**N0790953**
PC^{3x} Peltier Cooled Cyclonic Spray Chamber for Avio 500	**N0810860**
PC³ Temperature Controlled Spray Chambers for Optima	
PC³ Organic Sample Introduction Kit, 1.5 mm Quartz injector	**N0777354**
PC³ Organic Sample Introduction Kit	**N0777355**
HF PC³ Organic Sample Introduction Kit, 1.5 mm Sapphire Injector	**N0777824**
PC³-LT Organic Sample Introduction Kit, 1.0 mm Quartz Injector	**N0777356**
PC³-LT Organic Sample Introduction Kit	**N0777357**
PC^{3x} Complete system	**N0777836**
PC^{3x} System with Baffled Quartz Spray Chamber and connector for ESI Injector*	**N0786019**
PC^{3x} System for Optima V with Baffled Quartz Spray Chamber*	**N0786020**

*Injector and nebulizer are not included.



PC^{3x} Spray Chamber



IsoMist Spray Chamber

IsoMist Temperature Controlled Spray Chambers

The IsoMist Programmable Temperature Controlled Spray Chamber provides the benefits of a temperature-controlled ICP sample introduction system in a compact, convenient package. The temperature is electronically controlled using a powerful inbuilt Peltier device. You can select any temperature between -10°C and +60°C in 1°C increments to provide the optimum conditions for any application. The rapid response of the Peltier device allows a spray chamber temperature of -5°C to be reached within 15 minutes.

The IsoMist XR programmable temperature controlled cyclonic spray chamber now features an improved thermodynamic design providing an extended temperature range and faster cool-down, so your ICP is ready to go sooner. IsoMist XR has a peltier unit with a range of -25°C to +80°C.

Features and Benefits

- Improve Analytical Stability
- Reduce Oxide Formation
- Perfect for Volatile Organics
- Constant Temperature Improves Analytical Stability
- Enhance Sensitivity with Elevated Sample Introduction Temperatures

ICP Model	Description	Part No.
Avio	IsoMist XR Glass	**N0810856**
Avio	IsoMist XR PFA	**N0810857**
Avio	IsoMist XR Quartz	**N0810858**
Optima 4x00/5x00/7x00 DV/8x00	IsoMist XR Glass	**N0780759**
Optima 4x00/5x00/7x00 DV/8x00	IsoMist XR PFA	**N0780760**
Optima 4x00/5x00/7x00 DV/8x00	IsoMist XR Quartz	**N0780761**
Optima 4300/5300/7300 V	IsoMist XR Glass	**N0770755**
Optima 4300/5300/7300 V	IsoMist XR PFA	**N0770756**
Optima 4300/5300/7300 V	IsoMist XR Quartz	**N0770757**

Sample Introduction Quick Change Torch Modules



Part No. **N0790607**



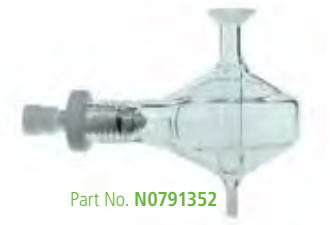
Part No. **N0810606**

Quick Change Torch Module Cyclonic Spray Chamber/Concentric Nebulizer

ICP Model	Part No.
Avio 200 Includes:	**N0790607**
Type K1 Standard Nebulizer	**N0777707**
1 Slot Quartz Torch	**N0790131**
2.0 mm Alumina Injector	**N0791183**
Baffled Cyclonic Spray Chamber	**N0791352**
Torch Body Assembly for Avio 200	**N0790138**
Injector Adapter	**N0790141**
Avio 500 Includes:	**N0810607**
Type K1 Standard Nebulizer	**N0777707**
1 Slot Quartz Torch	**N0790131**
2.0 mm Alumina Injector	**N0791183**
Baffled Cyclonic Spray Chamber	**N0791352**
Torch Body Assembly for Avio 500	**N0810128**
Injector Adapter	**N0790141**

Quick Change Torch Module Scott Spray Chamber/Cross-Flow Nebulizer

ICP Model	Part No.
Avio 200 Includes:	**N0790606**
GemTip Cross-Flow Nebulizer	**N0780546**
1 Slot Quartz Torch	**N0790131**
2.0 mm Alumina Injector	**N0791183**
Scott Spray Chamber	**N0791499**
Torch Body Assembly for Avio 200	**N0790138**
Injector Adapter	**N0790156**
Avio 500 Includes:	**N0810606**
GemTip Cross-Flow Nebulizer	**N0780546**
1 Slot Quartz Torch	**N0790131**
2.0 mm Alumina Injector	**N0791183**
Scott Spray Chamber	**N0791499**
Torch Body Assembly for Avio 500	**N0810128**
Injector Adapter	**N0790156**



Part No. **N0791352**



Part No. **N0770358**

Organics Sample Introduction System

ICP Model	Part No.
Avio 200 Includes:	**N0790611**
GemCone Low-Flow Nebulizer	**N0770358**
Injector Adapter Kit-Cyclonic with O-Rings	**N0790141**
Hybrid XLT 3 Slot Torch Avio	**N0790249**
Alumina Injector 1.2 mm Length Avio	**N0791182**
Baffled Cyclonic Spray Chamber Avio	**N0791352**
Torch Body Assembly for Avio 200	**N0790138**
Avio 500 Includes:	**N0810609**
GemCone Low-Flow Nebulizer	**N0770358**
Injector Adapter Kit-Cyclonic with O-Rings	**N0790141**
Hybrid XLT 3 Slot Torch Avio	**N0790249**
Alumina Injector 1.2 mm Length Avio	**N0791182**
Baffled Cyclonic Spray Chamber Avio	**N0791352**
Torch Body Assembly for Avio 500	**N0810128**



Quick-Change Torch Module with Cyclonic Spray Chamber and Concentric Nebulizer

ICP Model	Part No.
Optima 8x00 Includes:	**N0780607**
MEINHARD Type K1 Nebulizer 1 mL/Min	**N0777707**
1 Slot Quartz Torch	**N0780130**
Alumina Injector 2.0 mm ID	**N0781014**
Polyethylene Tubing, 10 ft.	**09908265**
Adjustable Torch Assembly	**N0770600**
Cyclonic Spray Chamber with Adjustable Mount	**N0770605**
Tubing Assembly	**N0770610**
Optima 2x00/4x00/5x00/7x00 Includes:	**N0770607**
MEINHARD Type C1 Nebulizer 1 mL/Min	**00472022**
Polyethylene Tubing, 10 ft.	**09908265**
1 Slot Quartz Torch	**N0770338**
Adjustable Torch Assembly	**N0770600**
Cyclonic Spray Chamber with Adjustable Mount	**N0770605**
Tubing Assembly	**N0770610**
Alumina Injector 2.0 mm	**N0775177**

Quick-Change Torch Module for HF Analysis

ICP Model	Part No.
Optima 4300V/5300V/7300V Includes:	**N0770911**
GemCone High Dissolved Solids Nebulizer	**N0690670**
Alumina Sample Injector 2.0 mm ID	**N0695362**
Quick Disconnect Tubing	**N0770336**
3 Slot Quartz Torch	**N0771500**
Tracey TFE Spray Chamber Includes: Fittings, O-Rings and Spares	**N0777497**

Quick-Change Torch Module for Oil Analysis

ICP Model	Part No.
Optima 4300V/5300V/7300V Includes:	**N0770910**
GemCone Low-Flow Nebulizer	**N0770358**
Alumina Injector 1.2 mm	**N0771531**
Quick Disconnect Tubing	**N0770336**
3 Slot Quartz Torch	**N0771500**
Baffled Cyclonic Spray Chamber Includes: Fittings, O-Rings and Spares	**N0771501**



Quick-Change Torch Module with Scott Spray Chamber and GemTip Cross-Flow II Nebulizer

ICP Model	Part No.
Optima 8x00 Includes:	**N0780606**
1 Slot Quartz Torch	**N0780130**
GemTip Cross-Flow II Nebulizer	**N0780546**
Alumina Injector 2.0 mm ID	**N0781014**
Scott Spray Chamber	**N0770357**
Optima 2x00/4x00/5x00/7x00 DV Includes:	**N0770606**
1 Slot Quartz Torch	**N0770338**
GemTip Cross-Flow II Nebulizer	**N0770546**
Adjustable Torch Assembly	**N0770600**
Alumina Injector 2.0 mm	**N0775177**
Scott Spray Chamber	**N0770357**

Mounting Block



Mounting block only. Does not include torch, injector, spray chamber or nebulizer.

ICP Model	Part No.
Optima 2x00/4x00/5x00/7x00/8x00	**N0770600**

Quick-Change Torch Module Support Stand



A free-standing support stand to hold your spare Quick-Change Torch Module.

ICP Model	Part No.
Optima 2x00/4x00/5x00/7x00 DV/8x00	**N0770609**

End Cap for Concentric Glass, GemCone and Similar Nebulizers



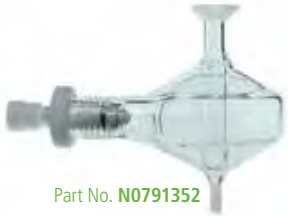
End cap to fit any concentric nebulizer onto a Scott Spray Chamber.

ICP Model	Part No.
Optima 2x00/3x00/4x00/5x00/7x00/8x00 / Avio 200/500	**N0680504**

Sample Introduction Kits



Part No. **N0777707**



Part No. **N0791352**



Part No. **N0780546**



Part No. **N0790384**

Cyclonic/Concentric Kits

ICP Model	Part No.
Avio 200/500 Includes:	**N0790608**
1 Slot Quartz Torch	**N0790131**
2.0 mm ID Alumina Injector	**N0791183**
Baffled Cyclonic Spray Chamber	**N0791352**
MEINHARD® Type K1 Nebulizer	**N0777707**
Injector Adapter	**N0790141**
Optima 8x00 Includes:	**N0780617**
1 Slot Quartz Torch	**N0780130**
2.0 mm ID Alumina Injector	**N0781014**
Glass Cyclonic Spray Chamber	**N0776052**
MEINHARD® Type K1 Nebulizer	**N0777707**
Quartz Torch Copper Ignitor Tape – Qty. 50 pcs.	**N0781097**
Optima 2x00/4x00/5x00/7x00 DV Includes:	**N0770730**
1 Slot Quartz Torch	**N0770338**
Quartz Bonnet	**N0775289**
2.0 mm ID Alumina Injector	**N0775177**
Glass Cyclonic Spray Chamber	**N0776052**
MEINHARD® Type C High Dissolved Solids Nebulizer	**00472022**
Quartz Torch Copper Ignitor Tape – Qty. 120 pcs.	**N0775297**

Scott/Cross-Flow II Kits

ICP Model	Part No.
Avio 200/500 Includes:	**N0790609**
1 Slot Quartz Torch	**N0790131**
2.0 mm ID Alumina Injector	**N0791183**
Scott Spray Chamber	**N0790384**
GemTip™ Cross-Flow II Nebulizer	**N0780546**
Injector Adapter	**N0790156**
Scott Spray Chamber Clamp Adapter	**N0790296**
Optima 8x00 Includes:	**N0780616**
1 Slot Quartz Torch	**N0780130**
2.0 mm ID Alumina Injector	**N0781014**
Scott Spray Chamber	**N0770357**
GemTip™ Cross-Flow II Nebulizer	**N0780546**
Quartz Torch Copper Ignitor Tape – Qty. 50 pcs.	**N0781097**
Optima 2x00/4x00/5x00/7x00 DV Includes:	**N0770731**
1 Slot Quartz Torch	**N0770338**
Quartz Bonnet	**N0775289**
2.0 mm ID Alumina Injector	**N0775177**
Scott Spray Chamber	**N0770357**
GemTip™ Cross-Flow II Nebulizer	**N0770546**
Quartz Torch Copper Ignitor Tape – Qty. 120 pcs.	**N0775297**



Part No. **N0771500**



Part No. **N0772006**

Organics Kits

ICP Model	Qty.	Part No.
Avio 200/500 Includes:		**N0790610**
3 Slot Quartz Torch	2	**N0790249**
1.2 mm ID Alumina Injector (1.2 mm entire length of tube)	2	**N0791182**
Baffled Cyclonic Spray Chamber	1	**N0791352**
GemCone™ Low-Flow Nebulizer	1	**N0770358**
Cyclonic Spray Chamber Adapter	1	**N0790141**
Nebulizer Spacer	1	**N0791438**
Optima 8x00 Includes:		**N0780608**
3 Slot Quartz Torch	2	**N0780132**
1.2 mm ID Alumina Injector	2	**N0781007**
Baffled Cyclonic Spray Chamber 4 mm	1	**N0776090**
Gemcone™ Low-Flow Nebulizer	1	**N0770358**
Cyclonic Spray Chamber Adapter	1	**N0770614**
Injector Adapter Washer	1	**N0776014**
Injector Adapter	1	**N0776091**
Injector Adapter Nut	1	**N0776025**
O-Ring	1	**09902207**
O-Ring 8.74 ID 1.78 WD	2	**09921028**
Optima 2x00/4x00/5x00/7x00 DV Includes:		**N0770420**
3 Slot Quartz Torch	1	**N0772005**
1.2 mm ID Alumina Injector	1	**N0776093**
Baffled Cyclonic Spray Chamber 4 mm	1	**N0776090**
Gemcone™ Low-Flow Nebulizer	1	**N0770358**
Cyclonic Spray Chamber Adapter	1	**N0770614**
Injector Adapter Washer	1	**N0776014**
Injector Adapter Nut	1	**N0776025**
Injector Adapter	1	**N0776091**
O-Ring	1	**09902207**
O-Ring 8.74 ID 1.78 WD	2	**09921028**
Optima 4300 V/5300 V/7300 V Includes:		**N0770732**
3 Slot Quartz Torch	1	**N0771500**
Quartz Bonnet	1	**N0775289**
1.2 mm ID Alumina Injector	1	**N0771531**
Baffled Cyclonic Spray Chamber	1	**N0771501**
GemCone™ Low-Flow Nebulizer	1	**N0770358**
Quartz Torch Copper Ignitor Tape	120	**N0775297**

Oxygen Addition Kits

ICP Model	Qty.	Part No.
Oxygen Addition Kit Avio 200/500 Includes:		**N0790412**
Baffled Cyclonic Spray Chamber 4 mm for Oils with Oxygen Port	1	**N0770389**
Tygon Tubing	25 ft.	**02506516**
Insert	4	**09903094**
Tube Fitting	2	**09903150**
Mass Flow Controller	1	**N0772006**

ICP Model	Qty.	Part No.
DV Oxygen Addition Kit Optima 2x00/4x00/5x00/7x00/8x00 DV Includes:		**N0770689**
Baffled Cyclonic Spray Chamber 4 mm for Oils with Oxygen Port	1	**N0777731**
Tygon Tubing	25 ft.	**02506516**
Insert	4	**09903094**
Tube Fitting	2	**09903150**
Mass Flow Controller	1	**N0772006**
Adapter for Cyclonic Spray Chamber	1	**N0770614**

ICP Model	Qty.	Part No.
V Oxygen Addition Kit Optima 4300 V/5300 V/7300 V Includes:		**N0770965**
Torch Adapter with Auxiliary Oxygen Port	1	**N0774070**
Tygon Tubing Per Ic/0.3 m	25 ft.	**02506516**
Insert	4	**09903094**
Tube Fitting	2	**09903150**
Mass Flow Controller	1	**N0772006**

Hydride Accessory Kit

ICP Model	Qty.	Part No.
Hydride Accessory Kit Avio 200/500 Includes:		**N0810433**
Silicone Tubing ID 5mm Thickness x 2 mm	1	**B0018283**
PVC Tube 3X1 TR 75 Shore	1	**B0048139**
PTFE Tubing, 110 mm	1	**B0191058**
PTFE Tubing, 700 mm	1	**B0191059**
1.52 mm ID Tubing, Blue/Yellow/Blue, Pkg. 12	1	**B0193161**
Adapter A/D with Intern Screw Thread 1.8mm	1	**B0193342**
Adapter C / D = 4,0	1	**B0196850**
Adapter E / D = 6,0	1	**B0196857**
Tubing Connector for FIAS-400MS	2	**B0196882**
PTFE Tubing, 300 mm	2	**B0198097**
Tubing Adapter K	1	**B0507918**
Mixing/Separation Assembly	1	**B0507957**
PTFE Membrane, Pkg. 50	1	**B0508306**
3.18 mm ID, Black/White/Black Pkg. 12	1	**B0508310**
PVC Tubing for 2 mL/mm, P40	1	**N0680375**
Ultrasonic Axial Adapter	1	**N0695426**
Quick Disconnect Tubing for 2000/4000	1	**N0770336**
Glass Ball Joint Adapter	1	**N8126045**

Demountable Quartz Torches



Avio Torch
Part No. **N0790131**

Demountable design using one-piece quartz tubing for plasma and auxiliary gas flow. Torches without slots are recommended for organic solvents. 1-slot torches are the standard torch for aqueous solutions. 3-slot torches are typically used for organic analysis.

ICP Model	No. of Slots	Part No.
Avio 200/500 (Standard Torch)	1	**N0790131**
Avio 200/500 (with PVDF O-Ring-free holder)	1	**N0811908**
Avio 200/500 Organics (not ceramic)	3	**N0790249**
8x00 HybridXLT (ceramic tip)	1	**N0780128**
8x00	0	**N0780133**
8x00 (Standard)	1	**N0780130**
8x00	3	**N0780132**
2x00/4x00/5x00/7x00 DV	0	**N0770343**
2x00/4x00/5x00/7x00 DV (short ver.)	0	**N0770344**
2x00/4x00/5x00/7x00 DV	1	**N0770338**
2x00/4x00/5x00/7x00 DV	3	**N0772005**
2x00/4x00/5x00/7x00 DV Organics	3	**N0772008**
4300V/5300V/7300V	3	**N0771500**
7300 V Organics	3	**N0771561**

Fixed Torches can be found on the next page.

Torch Bonnet



The torch bonnet is used as a spacer between the torch and RF load coil.

ICP Model	Part No.
2x00/4x00/5x00/7x00	**N0775289**

Copper Ignitor Tape

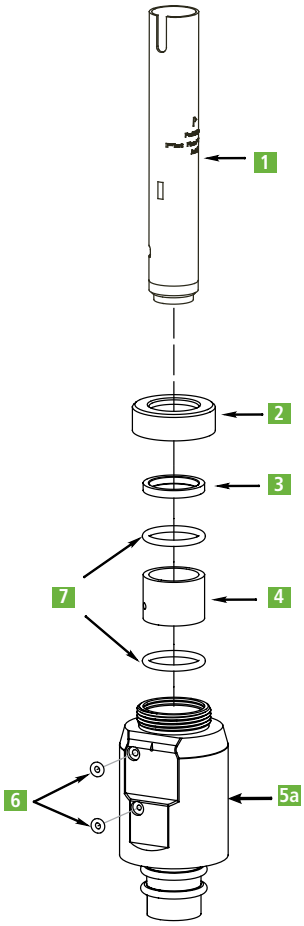


ICP Model	Qty.	Part No.
8x00	50	**N0781097***
2x00/4x00/5x00/7x00	120	**N0775297**

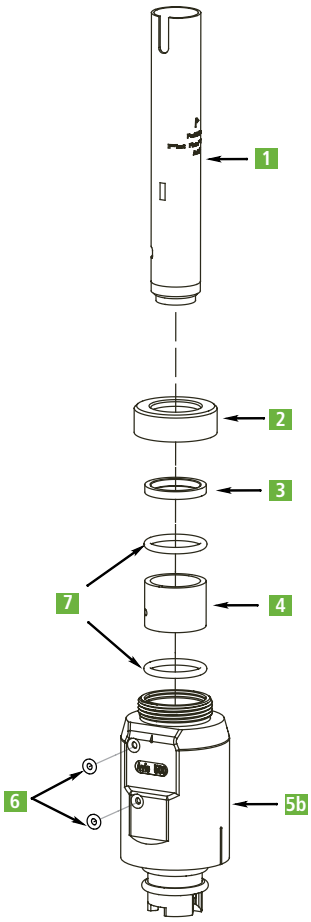
*Ignitor tape for Optima and HybridXLT Torches

Torch Body Assemblies

ICP Model	Part No.
Avio 200	**N0790138**
Avio 500	**N0810128**



Avio 200 Torch Body Assembly
Part No. **N0790138**



Avio 500 Torch Body Assembly
Part No. **N0810128**

Torch Body Assembly Replacement Parts

	Description	Part No.
1	Torch Glass	**N0790131**
2	Knurled Nut	**N0776027**
3	Washer	**N0776028**
4	Spacer	**N0791125**
5a	Cassette for Avio 200 Torch Body Assembly	**N0790214**
5b	Cassette for Avio 500 Torch Body Assembly	**N0810214**
6	O-Ring Color Coded Blue	**N0791334**
7	O-Ring	**09902223**



Torch O-Ring Kits

ICP Model		Part No.
Avio 200/500 O-Ring Kit for Adjustable Torch Includes: 0.799 ID 0.103 WD **09902223** (2) 0.101 ID 0.070 WD **N0791334** (2)		**N0790437**
Avio 200/500 O-Ring Kit for Scott Injector Includes: 8.74 ID 1.78 WD **09200518** (2) 0.239 ID 0.70 WD **09902207** (2) 0.344 ID 0.070 WD **N0791333** (2)		**N0790440**
Avio 200/500 O-Ring Kit for Cyclonic Injector Includes: 0.239 ID 0.70 WD **09902207** (2) 0.301 ID 0.70 WD **09926070** (2) 0.344 ID 0.070 WD **N0791333** (2)		**N0790441**
8x00 Complete O-Ring Kit Includes: 1.171 ID, 0.139 WD **09902131** (1) 0.799 ID, 0.103 WD **09902223** (2) 1.109 ID, 0.139 WD **09921061** (1) 1.046 ID, 0.139 WD **09921062** (1)		**N0780437**
2x00/4x00/5x00/7x00 DV Complete O-Ring Kit Includes: 0.801 ID 0.070 WD **09902045** (1) 1.171 ID 0.139 WD **09902131** (1) 0.799 ID 0.103 WD **09902223** (2) 1.109 ID 0.139 WD **09921061** (1) 1.046 ID 0.139 WD **09921062** (1)		**N0770437**
4300V/5300V/7300V Complete O-Ring Kit Includes: 0.612 ID 0.103 WD **09902155** (1) 0.239 ID 0.070 WD **09902207** (2) 0.364 ID 0.070 WD **09902247** (2) 0.301 ID 0.070 WD **09926070** (1)		**N0770916**
Avio 200/500	0.101 ID, 0.070 WD	**N0791334**
Avio 200/500	0.344 ID, 0.070 WD	**N0791333**
Avio 200/500	8.74 ID, 1.78 WD	**09200518**
2x00/4x00/5x00/7x00 DV/8x00 (Viton)	1.171 ID, 0.139 WD	**09902131**
2x00/4x00/5x00/7x00 DV/8x00 (Viton)	0.799 ID, 0.103 WD	**09902223**
2x00/4x00/5x00/7x00 DV/8x00	1.109 ID, 0.139 WD	**09921061**
2x00/4x00/5x00/7x00 DV/8x00	1.046 ID, 0.139 WD	**09921062**
2x00/4x00/5x00/7x00 DV/8x00	0.801 ID, 0.070 WD	**09902045**
4300V/5300V/7300V (For Ball Joint)	0.301 ID, 0.070 WD	**09926070**
3x00 XL/3x00 DV/3000 SCX	0.239 ID, 0.070 WD	**09902006**
3x00 XL/3x00 DV/3000 SCX	0.364 ID, 0.070 WD	**09902015**
3x00 XL/3x00 DV/3000 SCX	8.74 ID, 1.78 WD	**09921028**
3x00 XL/3x00 DV/3000 SCX/4300V/5300/7300V (Inside)	0.239 ID, 0.070 WD	**09902207**
3x00 XL/3x00 DV/3000 SCX/4300V/5300/7300V (Outside)	0.301 ID, 0.070 WD	**09902247**
All, O-Ring Lube 2 grams		**09200078**
O-Ring Removal Tool		**09220410**

Fixed Torches

One Piece Fixed Quartz Torches with PVDF O-Ring Free Holders



Part No. **N0811902**

The one-piece torch has the injector integrated directly into the torch.

ICP Model	Description	Part No.
Avio 200/500	One Piece Quartz Torch with 1mm injector	**N0811902**
Avio 200/500	One Piece Quartz Torch with 1.5mm injector	**N0811903**
Avio 200/500	One Piece Quartz Torch with 2mm injector	**N0811906**
Avio 200/500	One Piece Quartz Torch with 2.5mm injector	**N0811907**

Ceramic Hybrid XLT Quartz Torch



PerkinElmer's HybridXLT™ torch is the latest addition to the family of PerkinElmer genuine sample introduction components. The ceramic/quartz hybrid design provides the highest performance for your Optima® ICP-OES 8x00 spectrometer. Available only from PerkinElmer, this torch has an extended lifetime of up to 10x your current quartz torch, increasing instrument uptime and decreasing maintenance costs.

Features and Benefits

- Extended Torch Lifetime – up to 10x improvement
- Viewable plasma compared to a full ceramic design
- Ideal for all sample types, except organic solvents
- Increased instrument uptime
- Lower cost per analysis
- Exclusive patented design
- Lower cost than full ceramic torches

Only From PerkinElmer!

ICP Model	No. of Slots	Part No.
8x00	1	**N0780128**

D-Torch Demountable Torch



D-Torch Demountable Torch
Part No. **N0790442**

The D-Torch™ provides a demountable torch design without sacrificing performance or usability. Featuring a torch body with fixed alumina intermediate tube for greater robustness, in addition to a demountable outer tube and injector, the D-Torch significantly reduces torch replacement costs for the analysis of challenging sample matrices.

The optional ceramic outer tube is of particular benefit for ICP applications where a quartz outer tube will suffer from a short lifetime. High TDS applications cause quartz to rapidly devitrify and organic solvents can cause quartz to fracture, whereas the ceramic outer tube will last years under the same conditions.

Features and Benefits

- Analysis of high-matrix solutions (i.e. fusion samples, samples with high-dissolved solids, samples with high-acid content) which can cause early devitrification or sample deposition when using quartz
- Demountable outer tube – With the D-Torch, you need only replace the outer tube
- Interchangeable quartz and ceramic outer tubes
- Interchangeable injectors – choose the optimum injector for your application. Select from quartz for aqueous solutions, narrow bore for organics, wide bore for high dissolved solids or ceramic for HF

D-Torch™ and Replacement Parts

ICP Model	Description	Part No.
Avio 200	D-Torch Complete Assembly with Quartz Outer Tube	**N0790442**
Avio 500	D-Torch Complete Assembly with Quartz Outer Tube	**N0810861**
Avio 200	D-Torch Ceramic Outer Tube (optional)	**N0791303**
Avio 500	D-Torch Ceramic Outer Tube (optional)	**N0811912**
Avio 200	D-Torch Body	**N0791300**
Avio 500	D-Torch Body	**N0811904**
Avio 200/500	D-Torch Outer Tube	**N0791301**
8x00	D-Torch Assembly including Quartz Outer Tube	**N0777840**
8x00	Ceramic Outer Tube (optional)	**N0777880**
8x00	Base and Inner Tube	**N0777841**
8x00	Quartz Outer Tube	**N0777842**
2x00/4x00/5x00/7x00*	DV D-Torch Quartz including Outer Tube	**N0777508**
2x00/4x00/5x00/7x00	DV Base and Inner Tube	**N0777509**
2x00/4x00/5x00/7x00	DV Quartz Outer Tube	**N0777510**
4300/5300/7300V	D-Torch with Quartz Outer Tube	**N0777051**
4300/5300/7300V	Quartz Outer Tube	**N0777053**
4300/5300/7300V	Ceramic Outer Tube	**N0777052**
4300/5300/7300V	Base and Inner Tube	**N0777054**
	Retaining Ring for Outer Tube	**N0777055**
	Copper Tape for D-Torch Outer Tube	**N0777843**
	O-Ring Kit	**N0777715**
	Torch Adapter with Auxiliary Port	**N0774070**

*Ceramic outer tube is not available for this model



Ceramic D-Torch Assembly
Part No. **N0777840**



Ceramic D-Torch with Quartz Outer Tube
Part No. **N0777051**



Base and Inner Tube
Part No. **N0777054**

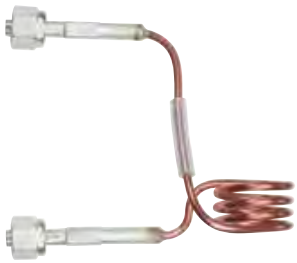


Ceramic Outer Tube
Part No. **N0777880**



Quartz Outer Tube
Part No. **N0777053**

Load Coils and Purge Components



RF Load Coils*

ICP Model	Part No.
2x00/4x00/5x00/7x00 DV	**N0775300**
4300V/5300V/7300V	**N0771536**
3x00 XL/3x00 DV	**N0690772**
3000/3000 SCR/3x00 RL (For instruments manufactured AFTER 9/21/94)	**N0690668**

* Installation by PerkinElmer Service is required, but not included

RF Load Coil Accessories

Description	Part No.
Igniter Spark Gap Assembly for Type II Demountable Torch	**N0680275**
Nylon Igniter Standoff	**09989859**

Purge Component Replacement Parts

Description	Part No.
For 5x00/7100/7200/7300 DV/8300	
O-Ring (for Dual View Radial Purge Tube)	**09200064**
O-Ring (for Dual View Axial Purge Window)	**09902143**
O-Ring (for Torch Clamp on Vertical Torch Module)	**09902155**
DV Axial Window Cap	**N0773084**
DV Axial Window Holder	**N0773090**
For Optima 2100/7000/8000	
O-Ring (for Dual View Radial Purge Tube)	**09921036**
O-Ring (for Dual View Axial Purge Window)	**09921062**
Purge Outlet O-Ring	**09921057**



Nitrogen Purge Gas Generator

Description	Part No.
Nitrogen Purge Gas Generator without Air Compressor, 115V, 60 Hz.	**N0695468**
Nitrogen Purge Gas Generator without Air Compressor, 220 V, 50 Hz.	**N0695469**

Radial Window
Part No. **N0581497**

Axial Window
Part No. **09992731**



Purge Extension Windows

The Axial View Purge Extension Window is a replaceable quartz window that slides into the purge extension between the torch and the optics. The Radial View Purge Extension Window Tube is a replaceable quartz tube that slides into the mount between the torch and the optics for the radial view.

ICP Model	Description	View	Part No.
Avio 200/500	Purge Window	Axial	**09992731**
Avio 200	Purge Window	Radial	**N0690672**
Avio 500	Purge Window	Radial	**N0810346**
Avio 200	Optical Kit (includes Windows O-Rings)	Axial/Radial	**N0790439**
Avio 200 Axial	Flat Mirror Kit	Axial	**N0790196**
Avio 500	Optical Kit (includes Windows and O-Rings)	Axial/Radial	**N0810439**
Avio 500	Flat Mirror Kit	Axial	**N0810194**
2x00/7000/8000	Purge Window	DV Axial	**09992731**
2x00/7000/8000	Purge Window	DV Radial	**N0690672**
2X00 (long tube)	Purge Window	Radial	**B0810377**
3x00/4x00/5x00/7100 /7200/7300 DV /8300	Purge Window	DV Axial	**N0771116**
5x00/7100/7200/7300 DV/8300	Purge Window	DV Radial	**N0770944**
3x00 DV (tube)	Purge Window	DV Axial	**N0691678**
3x00 DV (long tube) (38 mm/1.5 in.)	Purge Window	DV Radial	**N0691689**
3000 SCX/3x00 XL	Purge Window	Axial	**09992731**
3000/3000 SCR/3x00 RL /4300V/5300V/7300V	Purge Window	Radial	**N0581497**
4x00 DV/5x00 DV**	Purge Window	DV Radial	**N0770322**

** Pre November 2004

Injectors



Alumina Injectors

Alumina injectors are corrosion-resistant to all mineral acids including HF and aqua regia. They are also used with less volatile organic solvents, e.g., xylene.

ICP Model	Dimensions	Part No.
Avio 200/500	0.80 mm ID	**N0791180**
Avio 200/500	1.2 mm ID	**N0791181**
Avio 200/500 (1.2 mm entire length of tube)	1.2 mm ID	**N0791182**
Avio 200/500 (standard with Avio instrument)	2.0 mm ID	**N0791183**
8x00	0.80 mm ID	**N0781009**
8x00	1.2 mm ID	**N0781015**
8x00 (1.2 mm entire length of tube)	1.2 mm ID	**N0781007**
8x00	2.0 mm ID	**N0781014**
2x00/4x00/5x00/7x00 DV	0.80 mm ID	**N0775227**
2x00/4x00/5x00/7x00 DV	1.2 mm ID	**N0775228**
2x00/4x00/5x00/7x00 DV (1.2 mm entire length of tube)	1.2 mm ID	**N0776093**
2x00/4x00/5x00/7x00 DV	2.0 mm ID	**N0775177**
4300V/5300V/7300V	1.2 mm ID	**N0771531**
3000/3000 SCR/3x00 RL	0.85 mm ID	**N0582186**
3000/3000 SCR/3x00 RL	1.5 mm ID	**N0582185**
3000/3000 SCR/3x00 RL	2.0 mm ID	**N0582184**
3x00 XL/3x00 DV/3000 SCX /4300V/5300V/7300V	2.0 mm ID	**N0695362**



Sapphire Injectors

Sapphire injectors are ideal for silicon applications

ICP Model	Dimensions	Part No.
Avio 200/500	2.0 mm ID	**N0791184**
8x00	2.0 mm ID	**N0781008**
2x00/4x00/5x00/7x00 DV Sapphire in PFA base, (connects directly to ESI spray chambers)	1.8 mm ID	**N0777044**
2x00/4x00/5x00/7x00 DV	2.0 mm ID	**N0775247**
3000/3000 SCR/3x00 RL	2.0 mm ID	**N0695495**
3x00 XL/3x00 DV/3000 SCX /4300V/5300V/7300V	2.0 mm ID	**N0695494**

Quartz Injectors

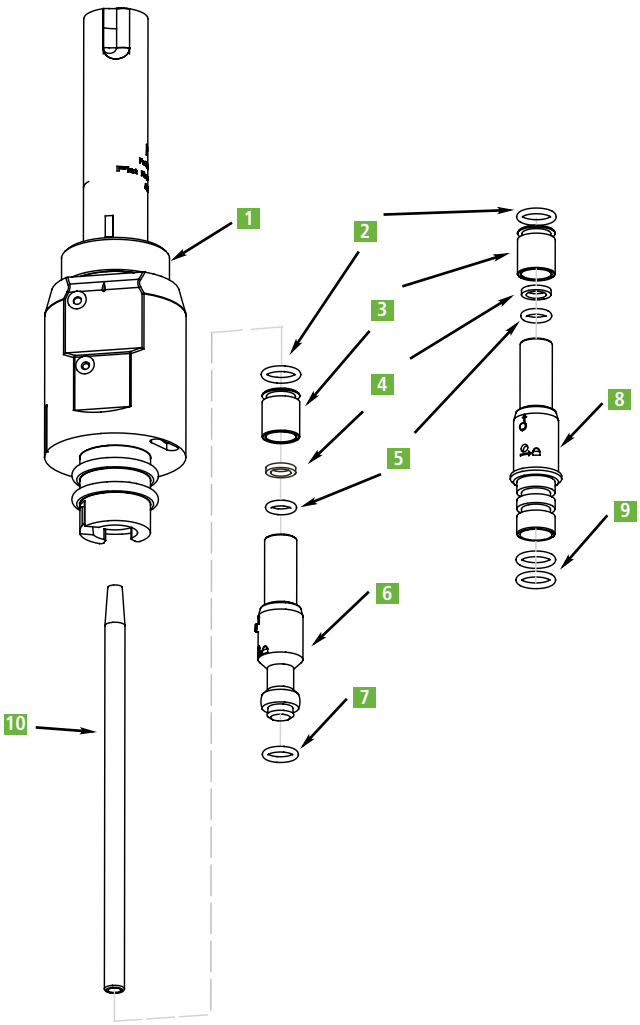
Quartz injectors are designed for organic solvents and non-HF matrices.

ICP Model	Dimensions	Part No.
Avio 200/500	0.80 mm ID	**N0791185**
Avio 200/500	1.2 mm ID	**N0791186**
Avio 200/500 (1.2 mm entire length of tube)	1.2 mm ID	**N0791187**
Avio 200/500	1.6 mm ID	**N0791188**
Avio 200/500	2.0 mm ID	**N0791189**
Avio 200/500	3.0 mm ID	**N0791190**
8x00	0.80 mm ID	**N0781018**
8x00	1.2 mm ID	**N0781019**
8x00 (1.2 mm entire length of tube)	1.2 mm ID	**N0781013**
8x00	1.6 mm ID	**N0781016**
8x00	2.0 mm ID	**N0781050**
8x00	3.0 mm ID	**N0781017**
2x00/4x00/5x00/7x00 DV	0.80 mm ID	**N0775225**
2x00/4x00/5x00/7x00 DV	1.2 mm ID	**N0775226**
2x00/4x00/5x00/7x00 DV	1.6 mm ID	**N0775223**
2x00/4x00/5x00/7x00 DV	2.0 mm ID	**N0775014**
2x00/4x00/5x00/7x00 DV	3.0 mm ID	**N0775224**
4300V/5300V/7300V	0.8 mm ID	**N0695461**
4300V/5300V/7300V	1.2 mm ID	**N0695460**
4300V/5300V/7300V	1.6 mm ID	**N0695449**
4300V/5300V/7300V	2.0 mm ID	**N0695442**

ESI Demountable Injectors

Dimensions	Type	Part No.
For Avio 200/500		
2.0 mm	Platinum	**N0791849**
1.5 mm	Sapphire	**N0791850**
2.0 mm	Sapphire	**N0791851**
For Optima 8x00		
2.0 mm	Platinum	**N0786021**
1.5 mm	Sapphire	**N0782004**
1.8 mm	Sapphire	**N0782005**
1.8 mm with adapter for 7x00	Sapphire	**N0782006**
2.5 mm	Sapphire	**N0786022**
1 mm	Quartz	**N0782007**
1.5 mm	Quartz	**N0782008**
2 mm	Quartz	**N0782009**
2.5 mm	Quartz	**N0782010**
For Optima 4x00, 5x00, 7x00		
1.5mm	Sapphire	**N0777630**
1.8mm	Sapphire	**N0777044**
2.5mm	Sapphire	**N0777374**
1.0mm	Quartz	**N0777631**
1.5mm	Quartz	**N0777632**
2.0mm	Quartz	**N0777633**
2.5mm	Quartz	**N0777634**
2.0mm	Platinum	**N0777373**

Avio Injector Assembly



	Description	Part No.
1	Knurled Nut	
2	O-Ring – Color Coded Blue	**N0791333**
3	Lock Collar	**N0791163**
4	Washer	**N0776014**
5	O-Ring	**09902207**
6	Cyclonic Injector Adapter	**N0790143**
7	O-Ring	**09926070**
8	Scott Injector Adapter	**N0790154**
9	O-Ring	**09200518**
10	Injector 2 mm Alumina	**N0791183**



Avio Injector Assembly Replacement Parts

Description	Part No.
Cyclonic Injector Assembly	**N0790141**
Scott Injector Assembly	**N0790156**
O-Ring Kit for Avio Scott Injector	**N0790440**
O-Ring Kit for Avio Cyclonic Injector	**N0790441**
O-Ring Kit for Avio Torch	**N0790437**
O-Ring Removal Tool	**09220410**

Injector Support Adapters and Replacement Parts

Injector Support Adapters

ICP Model	Spray Chamber	Part No.
Avio 200/500 Includes one of each: **09902207**, **09926070**, **N0791333**, **N0776014**, **N0790143**, **N0791163**	Cyclonic	**N0790141**
Avio 200/500 Includes one of each: **09902207**, **09200518**, **N0791333**, **N0776014**, **N0790154**, **N0791163**	Scott	**N0790156**
2x00/4x00/5x00/7x00 DV 8x00	All	**N0770603**
2x00/4x00/5x00/7x00 DV 8x00*	All	**N0776091**
4300V/5300V/7300V (bottom)	Cyclonic	**N0771526**
4300V/5300V/7300V (top)	Cyclonic	**N0771527**

*For 1.2 mm entire length injectors **N0776093** and **N0781007**

Injector Support Adapter O-Ring Kits

ICP Model	Part No.
Avio 200/500 Cyclonic	**N0790441**
Avio 200/500 Scott	**N0790440**
2x00/4x00/5x00/7x00 DV/8x00	**N0770438**
3000/3000 SCR/3X00 RL	**N0690269**
3x00 XL/3x00 DV/3000 SCX	**N0690769**

Oil-Less Air Compressors

PerkinElmer is expanding its product portfolio to include an industrial grade quiet oil-less compressor with a 2 year manufacturer's warranty for a dependable, clean and dry air supply. Each compressor comes assembled on an internally and externally coated air tank carrying a 5 year manufacturer's warranty. Also included are an optional self-purging regenerative air dryer, aftercooler and 5 micron line filters assuring that the compressed air delivered to the instrument is of highest quality moisture and particle free. One version includes a silencing cabinet resulting in a compressor operating at a very quiet noise level of 55 dB/A. All models are equipped with ASME rated pressure tanks and safety valves, line pressure regulator, gauges and line ball valve for a complete turnkey compressor station.



Air Compressor with Dryer
Part No. **N0777602**





Specifications		
Horse Power		1.5 HP
Output CFM/Output L		6.0 CFM/170 L/min
Max Pressure PSI/Max Pressure Bar		120 PSI/8 bar
Noise Level		72 dB/A, with Enclosure 55 dB/A
Tank Size Gal./Tank Size L		13 Gal./50 L
Dimensions	without Enclosure with Enclosure	25 in. x 18 in. x 29 in. 29 in. x 23 in. x 32 in.
Weight	without Enclosure with Enclosure	97 lbs. 207 lbs.
Packed Dimensions	without Enclosure with Enclosure	28 in. x 21 in. x 29 in. 33 in. x 28 in. x 39 in.

Compressors

Description	115 V/60 Hz Part No.	220 V/50 Hz Part No.	220 V/60 Hz Part No.
Air Compressor	**N0777881**	**N0777882**	**N0777883**
Air Compressor with Dryer	**N0777602**	**N0777603**	**N0777604**
Air Compressor with Dryer in Silencing Cabinet	**N0777605**	**N0777606**	**N0777607**

Product meets both U.S. and Canadian CSA standards. ASME® certified tank
Please note: Silencing cabinet cannot be sold separately

Replacement parts

Description	Part No.
Replacement Air Intake Filter	**N0777608**
Micron Dryer Filter Element	**N0777609**
Replacement Piston Assembly	**N0777610**
Replacement Reed Valve	**N0777611**
Replacement Head Gasket	**N0777612**

FAST High Productivity Systems

The *FAST* is a high-throughput automated sample introduction system for PerkinElmer ICP-OES and ICP-MS. The *FAST* increases productive instrument time by reducing sample uptake, stabilization and rinse steps, allowing you to run more samples each day.

Features and Benefits

- Sample never touches peristaltic pump tubing
- *FAST* uptake, stabilization and washout
- P-Series valve and loop combination has superb washout
- Carrier stream without segmented air bubbles ensures high-precision sample introduction
- Direct integration of MP² peripump and *FAST* valve with instrument

Description	Type	Part No.
2 DX *FAST* DXi System Optima	2 Rack	**N0777618**
4 DX *FAST* DXi System Optima	4 Rack	**N0777612**
2 DX *FAST* DXi System Avio 200	2 Rack	**N0790964**
4 DX *FAST* DXi System Avio 200	4 Rack	**N0790965**
2 DX *FAST* DXi System Avio 500	2 Rack	**N0810870**
4 DX *FAST* DXi System Avio 500	4 Rack	**N0810871**

8 rack and 14 rack *FAST* DXi Systems are also available



4 DX *FAST* DXi System for Optima ICP-OES

prep*FAST* Autodilution and Autocalibration Systems

prep*FAST* is an inline dilution system that automatically performs precise and accurate dilutions for samples and standards, improving laboratory workflow, productivity and data quality.

Features and Benefits

- Autodilution
- Autocalibration
- Automatic IS addition
- Auto QC dilution
- Automatic standard addition

Description	Type	Part No.
2 DX prep*FAST* System Optima	2 Rack	**N0777743**
4 DX prep*FAST* System Optima	4 Rack	**N0777744**
2 DX prep*FAST* System Avio 200	2 Rack	**N0790960**
4 DX prep*FAST* System Avio 200	4 Rack	**N0790961**
2 DX prep*FAST* System Avio 500	2 Rack	**N0810862**
4 DX prep*FAST* System Avio 500	4 Rack	**N0810863**

8 rack and 14 rack prep*FAST* Systems are also available

See page 89 for additional ESI DX Autosamplers



2 DX prep*FAST* System for Avio ICP-OES

Inductively Coupled Plasma-MS

PerkinElmer offers a wide selection of superior quality products designed to work with your PerkinElmer instruments. Our precision designed products deliver the peace of mind that comes from knowing that you'll get the results you need.

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Nebulizers



PerkinElmer offers a complete selection of Nebulizers in a variety of materials for all of your application needs.

Choose from Concentric, MicroFlow and GemClean Nebulizers.

VIEW PAGE

Spray Chambers



The spray chamber is an integral part of the sample introduction System. Each type of spray chamber has been tested to provide the best performance and analytical results.

Choose from Baffled Cyclonic, Scott Spray and PFA Spray Chambers.

VIEW PAGE

Injectors



PerkinElmer offers a complete selection of Injectors in various sizes and materials to meet all of your application needs.

Choose from Quartz and Sapphire Injectors.

VIEW PAGE

Torches



PerkinElmer carefully selects the best materials which provide optimal performance. Torches are specifically designed for your instrument. Trust the consumables engineered for your instruments.

Choose from Demountable Quartz, D-Torch, and Integrated Torch/Injectors.

VIEW PAGE

Cones



PerkinElmer Cones are precision-designed and manufactured providing the best analytical results. Large-orifice sampler and skimmer cones provide superior long-term stability and resist clogging, allowing analysis under both high and low sample-uptake conditions.

Choose from Nickel and Platinum Cones.

VIEW PAGE

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NexION 2000 ICP-MS: Triple quad power meets single quad versatility.

Trace metals in food, nanomaterials in water, impurities in everything from pills to electronic components: These are the sweet spot for the NexION® 2000 ICP-MS. Its sample introduction technology lets you run samples with up to 35% total dissolved solids. Plus, its interference removal capabilities give you the best detection limits for your application. And it delivers superior analysis times and single particle/cell detection capability – at least 10x faster than competitive systems. So the NexION 2000 ICP-MS is up to the most important challenge of all: *Yours*.

For more information, visit perkinelmer.com/NexION2000

PerkinElmer®
For the Better

Concentric Nebulizers

MEINHARD Plus Nebulizers



MEINHARD® Plus Nebulizers have the lowest dead volume of any glass or quartz nebulizer. The low dead volume and high sensitivity provide excellent detection limits and washout.

Each nebulizer comes with the FitKit+ gas and sample quick connect fittings. The connections are made with high-purity PFA, minimizing the chance of contamination during backflow events. The gas connection fits snugly over the maria on the sidearm of the nebulizer.

- Self aspiration rate 0.5 mL/min with argon flow 1 L/min at 50 PSI (3.4 bar/345 kPa)
- Peristaltic pumped rate 0.5 mL/min to 1.0 mL/min
- Includes FG Gas Quick Connect (PFA) and F2 Quick Connect with 0.5 mm ID (orange marker) capillary, 70 cm

Type	ICP-MS Model	Material	Uptake Rate	Part No.
CT R +	NexION 1000/2000	Glass	0.5 mL/min	**N8152373**
CT Q +	NexION 1000/2000	Quartz	0.5 mL/min	**N8152372**
CT SilQ +	NexION 1000/2000	Ultra-High Purity Quartz	0.5 mL/min	**N8152384**
SilQ+	NexION 300/350	Ultra-High Purity Quartz	0.5 mL/min	**N8122460**
TQ+	NexION 300/350	Quartz	0.5 mL/min	**N8122461**
TR+	NexION 300/350	Glass	0.5 mL/min	**N8122462**

Includes FG Gas Quick Connect (**N8121036**) and F2 Quick Connect (**N8121039**) with 0.5 mm ID (orange marker) capillary, 70 cm

MEINHARD® Nebulizers



The MEINHARD Concentric Nebulizer reflects exacting standards in design and manufacturing. Its advantages include simplicity of design and operation, reproducible and self-aligning aerosol and close fabrication control. They provide excellent sensitivity and precision for aqueous solutions and samples with few dissolved solids (less than 1%). MEINHARD Nebulizers are self-aspirating and not to be used with solutions containing hydrofluoric acid. Nebulizers require an end cap (**N0680504**) for use with Scott Spray Chambers.

Type	ICP-MS Model	Material	Uptake Rate	Part No.
Type A0.5	NexION 300/350	Quartz	0.5 mL/min	**N8145011**
Type C0.5	NexION 300/350	Glass	0.5 mL/min	**N8145012**
Type C3	ELAN/NexION 300/350	Glass	3.0 mL/min	**N8102011**
Type K3	ELAN/NexION 300/350	Glass	3.0 mL/min	**N0681574**
Type A3	ELAN/NexION 300/350	Quartz	3.0 mL/min	**WE024371**

Solution Fitting **N8145016** is not included with MEINHARD nebulizers.

Nebulizer Replacement Parts

	Description	Part No.
	Nebulizer Clip for MEINHARD Nebulizers	**N0777460**
	Nebulizer Liquid Connector Kit 4 mm 4 in. length by 0.020 in. ID x 0.062 in. OD flanged onto female CTFE fitting. Includes one male barb CTFE fitting	**N8145016**
	Male Barb CTFE Fitting (Part of **N8145016**)	**N8145017**
	Female Barb CTFE Fitting (Part of **N8145016**)	**N8145018**
	PFA FG Gas Quick Connect	**N8121036**
	F2 Standard Integrated Capillary (0.5 mm ID Orange 70 cm long)	**N8121039**
	F0 Encapsulated Micro Tubing (0.25 mm ID Green 70 cm long)	**N8121038**
	F1 Detachable Capillary (0.80 mm ID Blue 70 cm long)	**N8121037**
	Spray Chamber Drain Fitting	**N8145015**
	PTFE Sample Capillary 0.062 OD x 0.020 ID	**WE024375**
	MEINHARD® Nebulizer Internal Standard Tee	**N8152386**
	MEINHARD® Plus Nebulizer Fitting for Concentric Nebulizer (**N8152378**)	**N8152387**
	MEINHARD® Plus Peripump Union – Male Barb CTFE Fitting	**N8152453**
	MEINHARD® Plus Peripump Union – Female Barb CTFE Fitting	**N8152388**
	MEINHARD® Plus Sample Introduction Line for Concentric Nebulizer	**N8145503**
	MEINHARD® Plus Concentric Nebulizer 6 in. Gas Line	**N8152385**

FAST Valve Connecting Lines

Description	Part No.
FAST Valve Connecting Line for ST-Nebulizer, 0.25 mm ID (Green) Attaches to port #3 of the *FAST* valve, 14 cm	**N0777287**
FAST Valve Connecting Line for ST-Nebulizer, 0.5 mm ID (Orange) Attaches to port #3 of the *FAST* valve, 14 cm	**N0777288**
FAST Valve Connecting Line for ST-Nebulizer, 0.3 mm ID (Yellow) with XL Fitting	**N0777769**
Internal standard line for P7 valve with XL Fitting, 0.5 mm ID (Orange)	**N8145345**
F0 *FAST* Valve Connecting Line for MEINHARD® Plus Nebulizers, 0.25 mm ID (Green)	**N8145461**
F2 *FAST* Valve Connecting Line for MEINHARD® Plus Nebulizers, 0.25 mm ID (Green)	**N8145346**
F0 *FAST* Valve Connecting Line for MEINHARD® Plus Nebulizers, 0.5 mm ID (Orange)	**N8145462**
F2 *FAST* Valve Connecting Line for MEINHARD® Plus Nebulizers, 0.5 mm ID (Orange)	**N8145347**
FAST Valve Connecting Line for PerkinElmer Gem Cone Nebulizer, 0.50 mm ID (Orange)	**N0777659**
FAST Valve Connecting Line for PerkinElmer Gem Cone Nebulizer, 1.00 mm ID (Gray)	**N0777661**
FAST Valve Connecting Line for MIRA MIST Nebulizer, 0.50 mm ID (Orange)	**N0777658**
FAST Valve Connecting Line for MIRA MIST Nebulizer, 1 mm ID (Gray)	**N0777660**

MicroMist Nebulizers



NexION 1000/2000 DC Nebulizer

The MicroMist micro-uptake glass concentric nebulizer offers high performance for limited sample volumes. MicroMists for ELAN/NexION 300/350 are fitted with a UniFit connector with 1.3 OD X 0.50 mm ID x 700 mm long sample tubing. MicroMists for NexION 1000/2000 Direct Connection (DC) Nebulizers are fitted with a UniFit connector and an Argon connector. All NexION 1000/2000 MicroMist Nebulizers include a Gas Fitting with ratchet connector (**N8151079**).

ICP-MS Model	Uptake Rate	Part No.
ELAN/NexION 300/350	0.05 mL/min	**N0775344**
ELAN/NexION 300/350	0.1 mL/min	**N0775343**
ELAN/NexION 300/350	0.2 mL/min	**N0775342**
ELAN/NexION 300/350	0.4 mL/min	**N0775341**
NexION 1000/2000	0.05 mL/min	**N8151076**
NexION 1000/2000	0.1 mL/min	**N8151075**
NexION 1000/2000	0.2 mL/min	**N8151074**
NexION 1000/2000	0.4 mL/min	**N8151073**

SeaSpray Nebulizers

The SeaSpray Concentric Nebulizer is ideal for samples with high dissolved solids and offers outstanding nebulization efficiency for trace level analysis. It offers freedom from clogging while nebulizing solutions near the limit of solubility of most mineral salts and conferring significant sensitivity gains. All SeaSpray Nebulizers are supplied with the EzyLok Argon connector. All NexION 1000/2000 SeaSpray Nebulizers are Direct Connection (DC) and include a Gas Fitting with ratchet connector (**N8151079**).

ICP-MS Model	Uptake Rate	Part No.
ELAN/NexION 300/350	0.4 mL/min	**N0777484**
ELAN/NexION 300/350	1 mL/min Quartz	**N0774069**
ELAN/NexION 300/350	2 mL/min	**N0775340**
NexION 1000/2000	0.4 mL/min	**N8151070**
NexION 1000/2000	1.0 mL/min Quartz	**N8151072**
NexION 1000/2000	2.0 mL/min	**N8151071**

DuraMist Nebulizers



The DuraMist concentric nebulizer is an economical nebulizer for high precision analyses involving samples digested in HF. The DuraMist nebulizer is recommended for samples containing up to 5% HF. For samples with higher concentrations of HF, the OpalMist PFA nebulizer is recommended.

ICP-MS Model	Uptake Rate	Part No.
ELAN/NexION 300/350	0.4 mL/min	**N8121046**
ELAN/NexION 300/350	1.0 mL/min	**N8121045**
NexION 1000/2000	0.4 mL/min	**N8151077**
NexION 1000/2000	1.0 mL/min	**N8151078**

OpalMist Nebulizers



The OpalMist is ideal for the geochemistry and semiconductor industry. Ideal for high precision analyses involving analyses requiring high chemical resistancy to HF, alkalis and organics. It also provides excellent results for trace analyses.

ICP-MS Model	Uptake Rate	Part No.
ELAN/NexION 300/350	0.4 mL/min	**N0777485**
ELAN/NexION 300/350	0.1 mL/min	**N0777486**
ELAN/NexION 300/350	0.2 mL/min	**N8121056**
ELAN/NexION 300/350	0.05 mL/min	**N8121057**
ELAN/NexION 300/350	2 mL/min	**N8121061**

UniFit Connector



EzyFit Connector



Direct Connection Nebulizer Gas Fitting



Connectors for MicroMist and SeaSpray Nebulizers

Description	Pkg.	Part No.
Unifit		
0.25 mm ID x 1.27 mm OD x 700 mm Long	10	**N0777514**
0.50 mm ID x 1.27 mm OD x 700 mm Long	10	**N0777513**
0.75 mm ID x 1.27 mm OD x 700 mm Long	10	**N0777512**
1.30 mm OD x 0.75 mm ID x 700 mm Long	3	**N0774077**
1/16 in. OD x 0.75 mm ID x 700 mm Long	3	**N0774080**
UniFit-EzyFit Sample Tube	6	**N0777061**
EzyFit		
0.25 mm ID x 1.27 mm OD x 700 mm Long	10	**N0777437**
0.50 mm ID x 1.27 mm OD x 700 mm Long	10	**N0777436**
0.75 mm ID x 1.27 mm OD x 700 mm Long	10	**N0777435**
0.25 mm ID x 1/16 in. OD x 700 mm Long	10	**N0777464**
0.50 mm ID x 1/16 in. OD x 700 mm Long	10	**N0777463**
0.50 mm ID x 1/16 in. OD x 700 mm Long Twin	6	**N0777462**
1/16 in. OD x 0.25 mm ID x 700 mm	10	**N0777845**
1/16 in. OD x 0.50 mm ID x 700 mm	10	**N0777846**
1/16 in. OD x 0.75 mm ID x 700 mm	10	**N0777847**
UniFit-EzyFit Sample Tube	6	**N0777061**
Direct Connection Nebulizer Gas Fitting		
1/8 Gas Fitting with Ratchet Nebulizer Connector (DC)	1	**N8151079**

End Cap for Concentric Nebulizers



End cap to fit any concentric nebulizer onto a Scott Spray Chamber.

Description	Part No.
End Cap for Concentric Nebulizers	**N0680504**

High Efficiency MicroFlow Nebulizers

MicroFlow nebulizers are constructed entirely from chemically resistant fluoropolymers, ideal for strong acids, alkalis, organics, high salt solutions and high solid concentrations. They are resistant to clogging, are reliably self-aspirated or pumped and produce a fine aerosol for high transport efficiency and high sensitivity.

PFA-ST Nebulizer



The PFA-ST nebulizer features high purity, HF-resistance and high performance, along with an exchangeable external sample uptake capillary. The sample uptake rate is controlled by the dimension of the external capillary or probe. Chemically resistant – ideal for strong acids, alkalis, organics. Resistant to clogging – reliably self-aspirated or pumped.

ICP-MS Model	Part No.
ELAN/NexION (Concentric)	**N8122192**
ELAN/NexION (Self-Aspirating for prep*FAST*)	**N8145368**

PFA-ST3 Nebulizer



Designed for superior clog resistance and higher sensitivity. PFA-ST3 nebulizer with external threaded connector is a high performance, clog resistant and chemically inert nebulizer for ICP-MS.

ICP-MS Model	Part No.
ELAN/NexION 300/350	**N8145101**

PolyPro-ST Nebulizer



The PolyPro-ST Nebulizer is an HF resistant alternative to the PFA nebulizer. The PolyPro has lower chemical resistance than the PFA nebulizer but has the same high efficiency aerosol generation. A robust nebulizer that can self aspirate with an exchangeable external sample uptake capillary or used with a peristaltic pump.

Description	Part No.
PolyPro-ST Nebulizer	**N0777220**



PFA Nebulizer Replacement Parts

Description	Part No.
Union Fittings for LC to PFA Nebulizer	**N8152478**
PTFE Connection Line for PFA LC Microflow Nebulizer	**N8152479**
0.15 mm ST Capillary Line for PFA Microflow Nebulizer	**N8152480**
PFA Nebulizer Gas Line for PFA-ST Nebulizer	**N8145531**
Sample Introduction Line for PFA-ST Nebulizer	**N8152455**
Internal Standard Addition Tee for ST-Nebulizer, 0.25 mm ID (Green). Attaches to port #3, 14 cm	**N0777294**
Internal Standard Addition Tee for ST-Nebulizer, 0.5 mm ID (Orange). Attaches to port #3, 14 cm	**N0777295**

apex High Temperature Nebulizers

Description	Part No.
High Temperature apex-ST PFA MicroFlow Nebulizer with External 1/4-28 Threaded Connector	**N0777375**
High Temperature apex-100 PFA Nebulizer with Integrated 90-150 µL/min Self-Aspiration Capillary	**N0777376**
High Temperature apex-100 PFA Nebulizer with Ultem Manual Sampling Probe, 90-150 µL/min, 80 cm Capillary	**N0777828**



PTFE Sample Capillaries

For use with ST Nebulizers.

ID	Self-Aspiration Rate	Part No.
0.15 mm Red	20 µL/min	**N8122382**
0.2 mm Purple	50 µL/min	**N8145135**
0.25 mm Green	100 µL/min	**N8122383**
0.3 mm Yellow	200 µL/min	**N8145136**
0.5 mm Orange	400 µL/min	**N8122384**
0.8 mm Blue	700 µL/min	**N8145137**
1.0 mm Gray	1 mL/min	**N8145138**



Carbon Fiber Supported Autosampler Probes for ST Nebulizers

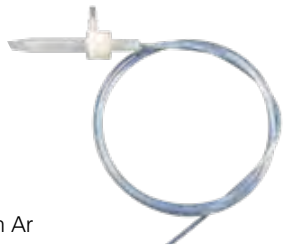
Self-aspiration rate @ 1 L/m Ar

Description	Part No.
0.25 mm ID, Capillary Length 80 cm, Self-Aspiration Rate (@ 1 L/m Ar) 100 µL/min	**N0777223**
0.50 mm ID, Capillary Length 80 cm, Self-Aspiration Rate (@ 1 L/m Ar) 400 µL/min	**N0777225**
0.25 mm ID, Capillary Length 150 cm, Self-Aspiration Rate (@ 1 L/m Ar) 100 µL/min	**N0777826**
0.50 mm ID, Capillary Length 150 cm, Self-Aspiration Rate (@ 1 L/m Ar) 100 µL/min	**N0777827**
Reset Probe Weight Kit. PTFE coated Stainless Steel Weight with Black PEEK Retainer Assembly	**N0786043**

PTFE Autosampler Probes for ST Nebulizers

Description	Part No.
PTFE Sampling Probe Assembly with Carbon Fiber Support and Female Fitting, 0.25 mm ID for ICP-MS. Requires but does not include **N8145017**	**N8145139**
PTFE Sampling Probe Assembly with Carbon Fiber Support and Female Fitting, 0.5 mm ID for ICP/ICP-MS. Requires but does not include **N8145017**	**N8145140**
PTFE Internal Standard Probe, 0.5 mm with Carbon Fiber Support with female nut. Connects to standard addition tee or internal standard line	**N8145344**
PTFE Sampling Probe Assembly with Carbon Fiber Support and Male Screw Fitting, 0.55 mm ID for AA/ICP/ICPMS. For ICP/ICPMS requires but does not include **N8145018***. For AA with a stainless steel nebulizer, the male connect should be removed so that tubing can be directly connected to the nebulizer, no additional tubing is required	**N2024132**

*Keep spare ferrules on hand, **N8145237** Qty. 10



PFA MicroFlow Nebulizers with Integrated Capillaries for NexION 300/350

Measured self-aspiration rate @ 1 L/m Ar

Description	Uptake Rate	Part No.
PFA-20 PFA Nebulizer	20 µL/min	**N8122350**
PFA-50 PFA Nebulizer	50 µL/min	**N8145102**
PFA-100 PFA Nebulizer	100 µL/min	**N8122351**
PFA-200 PFA Nebulizer	200 µL/min	**N8145103**
PFA-400 PFA Nebulizer	400 µL/min	**N8145104**



PFA MicroFlow Nebulizers with Integrated Autosampler Probes for NexION 300/350

Measured self-aspiration rate @ 1 L/m Ar

Description	Uptake Rate	Part No.
PFA-20 PFA (Carbon Fiber Support)	20 µL/min, length 80 cm	**N0777214**
PFA-50 PFA (Carbon Fiber Support)	50 µL/min, length 80 cm	**N0777215**
PFA-100 PFA (Carbon Fiber Support)	100 µL/min, length 100 cm	**N0777216**
PFA-200 PFA (Carbon Fiber Support)	200 µL/min, length 100 cm	**N0777217**
PFA-400 PFA (Carbon Fiber Support)	400 µL/min, length 100 cm	**N0777218**
PFA-20 PFA (Ultem Support)	20 µL/min, length 100 cm	**N8145141**
PFA-50 PFA (Ultem Support)	50 µL/min, length 100 cm	**N8145142**
PFA-100 PFA (Ultem Support)	100 µL/min, length 100 cm	**N8145143**
PFA-200 PFA (Ultem Support)	200 µL/min, length 100 cm	**N8145144**
PFA-400 PFA (Ultem Support)	400 µL/min, length 100 cm	**N8145275**

PFA Nebulizers with Integrated Capillaries for NexION 1000/2000

Measured self-aspiration rate @ 1 L/m Ar

Description	Uptake Rate	Part No.
PFA-20 PFA Nebulizer	20 µL/min	**N8152582**
PFA-50 PFA Nebulizer	50 µL/min	**N8152583**
PFA-100 PFA Nebulizer	100 µL/min	**N8152584**
PFA-200 PFA Nebulizer	200 µL/min	**N8152585**
PFA-400 PFA Nebulizer	400 µL/min	**N8152586**

PFA Nebulizers with Integrated Autosampler Probes for NexION 1000/2000

Measured self-aspiration rate @ 1 L/m Ar

Description	Uptake Rate	Part No.
PFA-20 PFA (Carbon Fiber Support)	20 µL/min, length 80 cm	**N8152587**
PFA-50 PFA (Carbon Fiber Support)	50 µL/min, length 80 cm	**N8152588**
PFA-100 PFA (Carbon Fiber Support)	100 µL/min, length 100 cm	**N8152589**
PFA-200 PFA (Carbon Fiber Support)	200 µL/min, length 100 cm	**N8152590**
PFA-400 PFA (Carbon Fiber Support)	400 µL/min, length 100 cm	**N8152591**
PFA-20 PFA (Ultem Support)	20 µL/min, length 100 cm	**N8152592**
PFA-50 PFA (Ultem Support)	50 µL/min, length 100 cm	**N8152593**
PFA-100 PFA (Ultem Support)	100 µL/min, length 100 cm	**N8152594**
PFA-200 PFA (Ultem Support)	200 µL/min, length 100 cm	**N8152420**
PFA-400 PFA (Ultem Support)	400 µL/min, length 100 cm	**N8152595**

GemClean Nebulizer

GemClean Cross-Flow II Nebulizer



Complete chemically inert Cross-Flow II nebulizer assembly specially processed to reduce BEC levels below 1 ppb. Contains an end cap with a GemTip clear sapphire sample tip and a GemTip red ruby argon tip optimized for ICP-MS.

Description	Part No.
GemClean Cross-Flow II Nebulizer	**N8120516**

Cross-Flow Replacement GemTips and Spares



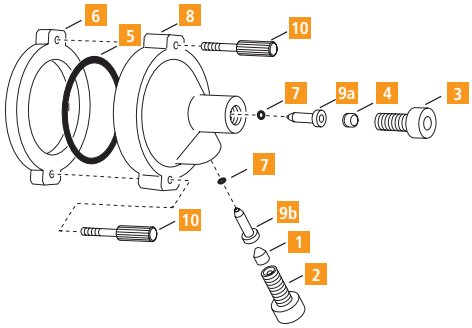
Includes a clear sapphire sample tip and a red ruby argon tip optimized for ICP-MS. Tips are constructed of PEEK for maximum corrosion resistance.

Description	Part No.
Cross-Flow II Replacement GemTips	**N8120515**
Cross-Flow II Nebulizer Argon Ferrule	**09920515**
Cross-Flow II Nebulizer Ferrule Kit*	**N0680612**
Cross-Flow II Nebulizer End Cap	**N8122239**
Cross-Flow II Nebulizer Sample Ferrule	**09920518**
GemTip II O-Ring	**09921045**
End Cap O-Ring	**09902033**
Sample Tubing	**09985708**
Argon Tubing	**09985723**

*Includes **09920515** and **09920518**

GemClean Cross-Flow II Nebulizer Replacement Parts

	Description	Part No.
1	Sample Ferrule – TBG 1/16 Tefzel	**09920518**
2	Nut – TBG PEEK	**09920516**
3	Nut	**09920517**
4	Argon Ferrule – TBG 1/8 Tefzel	**09920515**
5	O-Ring, 18W, 1 3/8 ID, 1 5/8 OD	**09902033**
6	Ring	**00473543**
7	O-Rings (2) 0.126 ID, 0.040 WD, Viton	**09921045**
8	End Cap Cross-Flow II Nebulizer	**N8122239**
9 9a 9b	GemTip Kit for Cross-Flow II Nebulizer (Contains one each: Argon and Sample tip) Red Ruby Nebulizer, Argon Tip Clear Nebulizer Sample Tip	**N8120515**
10	Screws (2) – Knurled	**00473539**



Nebulizer Cleaners

The Eluo™ Nebulizer Cleaner



The Eluo is designated to efficiently deliver a cleanser through the nebulizer capillary to dislodge particle build-up and thoroughly clean the nebulizer.

Description	Part No.
For Newer OpalMist, PolyCon, DuraMist, MEINHARD, Other Glass Nebulizers	**N0777712**
For OLD Style OpalMist or PolyCon Nebulizers	**N0775358**

PFA Nebulizer Obstruction Removal Kit



Obstruction Removal Kit while naturally resistant to obstructions, PFA nebulizers may occasionally require maintenance. Use this kit to safely remove obstructions in all PFA-ST nebulizers for long-term high performance.

Description	Part No.
Nebulizer Obstruction Removal Kit	**N8145236**

Syringe Flush Kit



Use syringe and white adapter to back-flush the carrier line or tee-line. Use syringe and red adapter to forward flush the carrier line, the side port of the tee-line and to forward flush the PFA nebulizer.

Description	Part No.
Syringe Flush Kit Includes 3 mL syringe, two luer to 1/4-28 adapters	**N8121035**

pergo Argon Humidifier

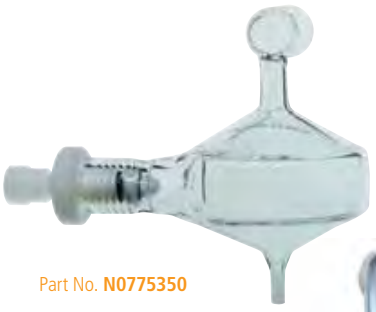


The *pergo* improves performance of all concentric nebulizers for the routine analysis of brines, fusion digests and other high-TDS samples. *pergo* 2 for ICP-MS humidifies both the nebulizer gas flow and the AMS gas flow for optimum performance.

ICP-MS Model	Description	Part No.
ELAN/NexION	*pergo* 1 without Nebulizer	**N8145315**
ELAN/NexION	*pergo* 1 with MEINHARD Type C Nebulizer	**N8145316**
ELAN/NexION	*pergo* 1 with PFA-ST Nebulizer	**N8150427**
ELAN/NexION	*pergo* 2 without Nebulizer	**N8150743**
ELAN/NexION	*pergo* 2 with MEINHARD Type C Plus Nebulizer	**N8150428**
ELAN/NexION	*pergo* 2 with PFA-ST Nebulizer	**N8150429**
NexION 1000/2000	*pergo* 1 NexION 1000/2000 gas line conversion kit	**N8152683**
NexION 1000/2000	*pergo* 2 NexION 1000/2000 gas line conversion kit	**N8152692**

Baffled Cyclonic Spray Chambers

The spray chamber is an integral part of the sample introduction system responsible for filtering the sample mist to permit the appropriate droplet size distribution to reach the plasma. The baffled cyclonic spray chamber features a central transfer tube which acts as a secondary particle separator helping separate larger aerosol particles from the sample. This reduces solvent load in the plasma without compromising detection limits. The distance between the bottom of the baffle and the chamber wall is carefully controlled so that droplets cannot form on the bottom of the baffle. The advantage is smooth draining and improved precision.



Part No. **N0775350**



Part No. **N8152375**



High Sensitivity Spray Chamber with Matrix Gas Port
Part No. **N8152389**

Description	Material	Part No.
For NexION 2000 B		
High Sensitivity All-Purpose Spray Chamber for Non-Hf Samples	Glass	**N8152375**
For NexION 1000 and 2000 C/P		
High Sensitivity Spray Chamber with Matrix Gas Port	Glass	**N8152389**
For NexION 2000 S		
High Sensitivity All-Purpose Spray Chamber for Non-Hf Samples. Provides Excellent Sensitivity, Stability And Ultra-Low Blanks	SilQ	**N8152424**
For NexION 1000 and 2000		
High Sensitivity Spray Chamber with Matrix Gas Port for Applications Requiring Low Levels Of Boron and Silicon Detection	Quartz	**N8152383**
For NexION 300/350		
O-Ring Free Spray Chamber	Quartz	**N8145013**
For ELAN DRC/DRCplus/DRC II		
Spray Chamber	Quartz	**WE025221**
For NexION (Standard with NexION 300/350 Q/X/D)*		
Spray Chamber	Glass	**N8145014**
For ELAN		
Spray Chamber	Glass	**N8122188**
For ELAN/NexION 300/350		
O-Ring Free Spray Chamber	Glass	**N0775350**

UV Light Shields



UV PC³ Light Shield
Part No. **N8152475**

ICP-MS Model	Description	Part No.
NexION 1000/2000 ICP-MS 'B' Configuration	UV Light Shield	**N8152425**
NexION 2000 ICP-MS 'C','P' and 'S' Configurations (for use with PC³)	UV Light Shield	**N8152475**

Asperon™ Spray Chamber



ICP-MS Model	Description	Part No.
NexION 1000/2000	Asperon Spray Chamber	**N8152493**

See page 129 for Single Cell Sample Introduction Kits

Spray Chamber Replacement Parts



Part No. **N8141420**



Part No. **N0777438**



Part No. **N0777439**

Description	Part No.
Threaded Spray Chamber Drain Line PTFE 1/4-28	**N8152456**
Argon Matrix Gas Line for NexION 2000, AMS. For Gas Dilution of High TDS Samples	**N8152374**
Argon Matrix Gas Line for NexION 300/350. For Gas Dilution of High TDS Samples	**N8152720**
Addition Gas Line 0.8 mm ID for NexION 2000. Attaches to AMS Spray Chamber Port	**N8152426**
Addition Gas Line 0.8 mm ID for NexION 2000 47 mm PFA Spray Chamber. Attaches to AMS Spray Chamber Port	**N8152449**
Cyclonic Spray Chamber Matrix Gas Plug	**N8145516**
Spray Chamber Nebulizer Port Plug	**N8145517**
Spray Chamber Outlet Plug	**N8145518**
Long (6 mm) PFA Spray Chamber Secure Nut	**N8145321**
Short (6 mm) PFA Spray Chamber Secure Nut	**N8141420**
Cyclonic Spray Chamber Adapter	**N8152551**
Helix Locking Screw	**N0777438**
Helix Seal Pkg. 4	**N0777439**
O-Ring for Baffled Quartz Cyclonic Spray Chamber	**09210011**





Part No. **N8120124**

Scott Spray Chambers

Complete HF-resistant Scott Spray Chamber
Includes (1) large O-Ring (**WE013060**), (1) Retaining Ring (**WE014081**) and (1) Right-Angled Drain Connector (**WE013119**).

Description	Part No.
For ELAN 9000/6x00/5000/DRC-e/NexION 300/350	
Scott Spray Chamber	**N8120124**
Scott Spray Chamber Large O-Ring	**WE013060**
Scott Spray Chamber Retaining Ring	**WE014081**
End-Cap for Concentric Nebulizer. Ryton Endcap to Fit Nebulizer onto Scott Spray Chamber	**N0680504**



Part No. **N8150450**



Part No. **N8142000**

PFA Spray Chambers

ICP-MS Model	Description	Part No.
NexION 1000/2000	PFA Barrel Spray Chamber Double Pass Spray Chamber for use with HF acid	**N8152390**
NexION 1000/2000	PFA Barrel Spray Chamber with Additional Gas Port Double Pass Spray Chamber for use with HF acid	**N8150450**
NexION 300/350	PFA Spray Chamber with PFA End Cap*	**N8142000**
ELAN	PFA PTFE Spray Chamber	**N8122356**

* Requires PFA body injector **N8122411** or **N8122412** or **N8122413**

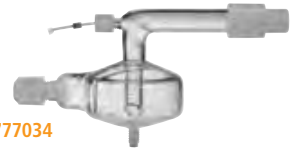
PC³ Replacement Spray Chambers



Part No. **N8145120**

NexION O-Ring Free Baffled Cyclonic PC³ /PC³ˣ Spray Chambers

Description	Part No.
High Purity Quartz Cyclonic Spray Chamber	**N8145120**
Micro Cyclonic Spray Chamber	**N8145121**
Borosilicate Glass Spray Chamber	**N8145119**
PFA Cyclonic Spray Chamber	**N8145122**



Part No. **N0777034**

ELAN Baffled Quartz Cyclonic PC³ Spray Chambers

Description	Part No.
With Auxiliary Gas Port	**N0777034**
Without Auxiliary Gas Port	**N0777035**

Temperature Controlled Spray Chambers



Part No. **N8145314**



Part No. **N8142003**



Part No. **N8145099**

PC³ Peltier Coolers

The PC³ is a small and robust Peltier cooler for ICP-MS cyclonic spray chambers. The cyclonic spray chamber offers the advantages of low memory effects, fast rinseout and high sample transport efficiency. The PC³ cools the outer walls of the cyclonic spray chamber to a constant temperature, enhancing long-term signal stability, reducing polyatomic interferences such as oxides and reducing solvent loading when volatile organic solvents are analyzed. The PC³ has 2 preset temperatures +2 °C / -5 °C and is ideal for analysis of aqueous or aqueous/organic mixtures. The PC³-LT operates at -20 °C to reduce the solvent load on the plasma for analysis of 100% volatile organic solvents.

Description	Injector Size	Temperature	Additional Gas Port	Part No.
NexION 300/350				
PC³ Sample Introduction Kit*	1.5 mm	+2 °C / -5 °C	Yes	**N8142003**
PC³ Sample Introduction Kit with Quartz SSI Cyclonic/ Scott Dual Spray Chamber	1.5 mm	+2 °C / -5 °C	No	**N8145314**
HF PC³ Sample Introduction Kit*	1.5 mm	+2 °C / -5 °C	Yes	**N8145309**
PC³-LT Organic Sample Introduction Kit*	1.0 mm	+2 °C / -20 °C	Yes	**N8145099**
HF PC³-LT Organic Sample Introduction Kit*	1.5 mm	+2 °C / -20 °C	Yes	**N8145310**

* All PC³ kits include a PFA-ST nebulizer (**N8122192**)



Part No. **N8145340**



Part No. **N8152382**

PC³ˣ Peltier Controlled Heated or Cooled Thermally Stabilized Inlet Systems

The PC³ˣ is a compact Peltier heated or cooled inlet system that controls the spray chamber temperature and improves long-term stability. In cooling mode, water or solvent is removed from the aerosol, reducing water or solvent loading on the plasma. In heating mode, sensitivity is increased and volatility-related sample transport effects can be reduced or eliminated.

- Variable temperature control from -10 °C to +80 °C
- Thermal stabilization of spray chamber improves long-term stability
- USB or Bluetooth connectivity
- Remote monitoring and control

ICP-MS Model	Spray Chamber	Part No.
NexION 1000/2000	Not included	**N8152382**
NexION 300/350	Quartz	**N8145340**
NexION 300/350	Quartz	**N8145446**

PC³ˣ Thermally Stabilized Inlet System



The PC³ˣ for the High Performance PFA spray chamber is a compact, Peltier-heated or cooled inlet system that offers the advantages of low memory effects, constant temperature, rapid wash-out and high sample transport efficiency. In cooling mode the PC³ˣ cools the outer walls of the chamber, reducing the water or solvent vapor loading on the plasma, achieving enhanced stability and performance. In heating mode, sensitivity can be improved for low-flow applications. Includes spray chamber and nebulizer.

ICP-MS Model	Description	Part No.
NexION 1000/2000	Includes PFA Nebulizer and Spray Chamber	**N8150446**
NexION 1000/2000	Includes PFA Spray Chamber	**N8150445**

See next page for more Temperature Controlled Spray Chambers

Temperature Controlled Spray Chambers

PC³ Peltier Coolers



The PC³ is a small and robust Peltier cooler for ICP-MS cyclonic spray chambers. The cyclonic spray chamber offers the advantages of low memory effects, fast rinse-out and high sample transport efficiency. The PC³ cools the outer walls of the cyclonic spray chamber to a constant temperature, enhancing long-term signal stability, reducing polyatomic interferences such as oxides and reducing solvent loading when volatile organic solvents are analyzed. The PC³ has two present temperatures +2 °C / -5 °C and is ideal for analysis of aqueous or aqueous/organic mixtures. The PC³-LT operates at +2 °C / -20 °C to reduce the solvent load on the plasma for analysis of 100% volatile organic solvents.

ICP-MS Model	Description	Part No.
ELAN	Cassette Torch Mount	**N8122410**
ELAN	Twist Type Torch Mount	**N8122389**
ELAN	PC3-LT	**N8122452**

IsoMist Temperature Controlled Spray Chambers



The IsoMist Programmable Temperature Controlled Spray Chamber provides the benefits of a temperature-controlled ICP sample introduction system in a compact, convenient package. The temperature is electronically controlled using a powerful inbuilt Peltier device. The rapid response of the Peltier device allows a spray chamber temperature of -5°C to be reached within 15 minutes.

The IsoMist XR programmable temperature controlled cyclonic spray chamber now features an improved thermodynamic design providing an extended temperature range and faster cool-down, so your ICP is ready to go sooner. IsoMist XR has a peltier unit with a range of -25°C to +80°C.

ICP-MS Model	Description	Part No.
NexION 300/350	IsoMist XR Glass	**N8140747**
NexION 300/350	IsoMist XR PFA	**N8140748**
NexION 300/350	IsoMist XR Quartz	**N8140749**

Sample Introduction Kits



Complete high purity sample introduction system for NexION 300/350.
All wetted surfaces are PTFE and Pt. Used by a majority of semiconductor labs worldwide for the analysis of semiconductor grade chemicals and Si wafer samples.

Description	Part No.
PFA-Platinum HF resistant Sample Introduction Kit Includes: Microflow PFA-100 Nebulizers Qty. 2 (**N8122351**), 47 mm PFA Spray Chamber, PFA PureCap Endcap (**N8122357**), Threaded Drain Line (**N8141425**), 2 mm Pt Cassette Injector with PFA Base (**N8122412**), Pt Injector Shield Disc (**N0777366**), Quartz Torch (**N8122006**)	**N8142001**



Complete HF-resistant sample introduction system for NexION 300/350. All wetted surfaces are PTFE and Sapphire. Provides a chemically inert and clean introduction system.

Description	Part No.
PFA-Sapphire HF-Resistant Sample Introduction Kit Includes: 47 mm PFA Spray Chamber, PFA PureCap Endcap (**N8122357**), 1.8 mm Sapphire Injector (**N8122411**), Quartz Torch (**N8122006**), Platinum Shield Disc (**N0777366**), PFA-ST Nebulizer (**N8122192**)	**N8142002**

HF Sample Introduction Kit

Description	Part No.
HF Sample Introduction Kit for NexION 300/350 Includes: Tygon Tubing 0.3 m/per ft. (**02506516**), PTFE Coated O-Ring 0.239 ID x 0.070 WD (**09210011**), PTFE Coated O-Ring 0.364 ID x 0.070 WD (**09210012**), Polyethylene Tubing for AA Neb,10 ft. (**09908265**), PVC Black/Black Tubing 0.76 mm ID, Pkg. 12 (**09908587**), Adapter Kit 1/8x1/8 (**09920379**), Sapphire Injector 2.0 mm 3000/SCR/3x00 RL (**N0695495**), Cross-Flow II Nebulizer End Cap ELAN (**N8120516**), Quartz Torch (**N8122006**), 3.18 mm ID Black/White PVC Pkg. 12 (**N8122012**), HF Sample Introduction Kit (**N8140507**), Spray Chamber Kit Etched (**N8140511**), Injector Nut (**W1012408**), Injector Spacer (**W1012409**), Torch Spacer (**W1012410**), Cassette Torch Mount Adapter (**W1013266**), PTFE O-Ring 5/8 in. ID x 1/8 in. Wide (**W1013545**), Scott Spray Chamber Adapter (**W1024879**)	**N8140507**

Injectors



Part No. **N8125029**



Part No. **N8152444**



Part No. **N8122412**

Quartz Injectors

ICP-MS Model	Dimensions	Part No.
For use when using the HF-Resistant Sample Introduction System (WE024782)		
ELAN/NexION 300/350	1.2 mm ID	**N0681631**
ELAN/NexION 300/350	1.6 mm ID	**00473292**
ELAN/NexION 300/350	2.0 mm ID	**N8125029**



Part No. **WE023948**

Quartz Ball Joint Injectors

ICP-MS Model	Dimensions	Part No.
For use with Pass-Through Ball Joint Injector Support Adapters (WE023951 or W1012406)		
ELAN/NexION 300/350	0.85 mm ID*	**WE027030**
ELAN/NexION 300/350	1.5 mm ID*	**WE027005**
ELAN/NexION 300/350	2.0 mm ID	**WE023948**

*For reduced sample loading



Part No. **N0695495**

Sapphire Injector

Demountable injector for use with the HF-resistant sample introduction system. Not for use with PFA sample introduction system.

ICP-MS Model	Dimensions	Part No.
ELAN/NexION 300/350	2.0 mm	**N0695495**

Torch Injector Replacement Parts for NexION 1000/2000

Description	Part No.
Torch Injector Nut	**N8152451**
Torch Injector Nut Removal Tool	**N8152443**
Torch O-Ring Kit Viton O-Ring Kit Includes 2.8 mm ID (Qty. 4), 14 mm ID (Qty. 1) and 16 mm ID (Qty. 1)	**N8152476**

Injectors for Demountable Torches

Description	Dimensions	Part No.
NexION 1000/2000		
Quartz (Black/Orange/Orange)	1.0 mm	**N8152444**
Quartz (Black/Orange)	1.5 mm	**N8152445**
Quartz (Black)	2.0 mm	**N8152376**
Quartz (Black/Green)	2.5 mm	**N8152446**
Sapphire (Black/Gold/Gold)	1.5 mm	**N8152606**
Sapphire (Black/Gold)	2.0 mm	**N8152447**
Platinum (Gray/Gray/Gray)	1.0 mm	**N8152603**
Platinum (Gray/Gray)	1.5 mm	**N8152604**
Platinum (Gray)	2.0 mm	**N8152429**
NexION 300/350		
Quartz	1.0 mm	**N0777410**
Quartz	1.5 mm	**N8122413**
Quartz	2.0 mm	**N0777457**
Quartz	2.5 mm	**N8145118**
Quartz (O-Ring Free)	1.0 mm	**N8145114**
Quartz (O-Ring Free High TDS)	1.0 mm	**N8145117**
Quartz (O-Ring Free)	1.5 mm	**N8145115**
Quartz (O-Ring Free)	2.0 mm	**N8145116**
Sapphire	1.6 mm	**N8145112**
Sapphire	1.8 mm	**N8122411**
Sapphire	2.5 mm	**N8145338**
Sapphire (O-Ring Free)	1.5 mm	**N8145113**
Sapphire (O-Ring Free)	1.6 mm	**N8145072**
Sapphire (O-Ring Free)	2.5 mm	**N8145339**
Platinum	1.0 mm	**N8145107**
Platinum	1.5 mm	**N8145108**
Platinum	2.0 mm	**N8122412**
Platinum (O-Ring Free)	1.0 mm	**N8145109**
Platinum (O-Ring Free)	1.5 mm	**N8145110**
Platinum (O-Ring Free)	2.0 mm	**N8145111**

Injector Assemblies and Support Adapters can be found on the next page

Injector Assemblies and Support Adapters



Part No. **N8122358**

PFA Injector Assemblies

Description	Recommended Use	Part No.
PFA/Quartz Torch Injector Assembly		
PFA/Quartz Twist Type	1.5 mm ID	**N8122394**
PFA/Quartz Cassette	1.5 mm ID	**N8122413**
PFA/Sapphire Torch Injector Assembly		
PFA/Sapphire Twist Type	1.8 mm ID	**N8122358**
PFA/Sapphire Cassette	1.8 mm ID	**N8122411**
PFA/Platinum Torch Injector Assembly		
PFA/Platinum Twist Type	2.0 mm ID	**N8122359**
PFA/Platinum Cassette	2.0 mm ID	**N8122412**



Part No. **W1012406**



Part No. **N8122007**



Part No. **WE023951**

Injector Support Adapters

ICP-MS Model	Part No.
ELAN DRC/DRCplus/DRC II	
Ball Joint Twist Type Torch Injector Support Adapter	**WE023951**
ELAN DRC II	
Ball Joint Cassette Torch Injector Support Adapter	**W1012406**
ELAN 9000/6x00/5000/DRC-e	
Twist Type Torch Injector Support Adapter	**N8122007**
Twist Type Torch Injector Support Adapter (Assembled with O-Rings)	**N8120116**
ELAN 9000/6x00/5000/DRCs/NexION 300/350	
Injector Support Adapter O-Ring Kit	**N8120100**
Cassette Torch Injector Support Adapter For Non-Ball Joint Injectors	**W1013266**
Ball Joint Cassette Torch Injector Support Adapter	**W1012406**

Injector Support Adapter O-Rings

Position	Torch Type	Part No.
Internal	Twist/Cassette	**09210011**
External (Large)	Cassette	**W1013545**
External	Twist/Cassette	**09210012**
Internal	Cassette (Non-Ball Joint Only)	**N8122010**
Internal	Twist (Non-Ball Joint)	**WE013060**

Injector Adapter Kits and O-Rings

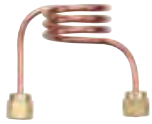
Description	Qty.	Part No.
For NexION 300/350 Injector Adapter Kit Kit Includes:		**N8140360**
Adapter	1	**W1012406**
O-Ring 3/8 in. ID x 1/16 in.	1	**W1008572**
O-Ring 1/4 in. ID x 1/16 in.	1	**W1008573**
Injector Spacer	1	**W1012409**
Injector Nut	1	**W1012408**
For NexION 300/350 Injector Adapter Kit 2 Kit Includes:		**N8140527**
Injector O-Ring 0.239 ID x 0.070 WD	1	**09210011**
O-Ring 0.551 ID x 0.070 WD	1	**N8122010**
O-Ring 3/8 in. ID x 1/16 in.	1	**W1008572**
Adapter	1	**W1012406**
Injector Nut	1	**W1012408**
Injector Spacer	1	**W1012409**
O-Ring 5/8 in. ID x 1/8 in. WD	1	**W1013545**
For ELAN Cassette O-Ring Kit for Injector Support Kit Includes:		**N8120100**
Injector O-Ring 0.239 ID x 0.070 WD	2	**09210011**
Torch O-Ring 0.364 ID x 0.070 WD	2	**09210012**
O-Ring 0.551 ID x 0.070 WD	1	**N8122010**
O-Ring 5/8 in. ID x 1/8 in. WD	1	**W1013545**

Load Coils



LumiCoil™ Plasma Load Coil

ICP-MS Model	Part No.
NexION 1000/2000	**N8150279**



RF Load Coil Assemblies

ICP-MS Model	Part No.
ELAN 9000/6x00/DRCs/NexION 300/350	**WE021816**
ELAN 5000	**WE012411**

Torches



Part No. **N8152473**

Demountable and Fixed Quartz Torches

The one-piece quartz torch has the injector integrated directly into the torch.

Torch	Description	Part No.
NexION 1000/2000		
Demountable Quartz Torch (Black)	Demountable Quartz Torch, PVDF O-Ring Free Holder for Demountable Injectors	**N8152379**
Demountable UHP Quartz Torch (Gray)	Demountable Ultra Pure Quartz Torch, PVDF O-Ring Free Holder for Demountable Injectors	**N8152448**
Demountable Quartz Torch (Organics)	Demountable Quartz Torch for Organic Analysis	**N8152596**
Fixed 2.0 mm Injector UHP Quartz Torch (White)	One Piece Ultra Pure Quartz Torch with 2.0 mm Injector, PVDF O-Ring Free Holder for 'S' Configuration	**N8152428**
Fixed 2.0 mm Injector Quartz Torch (Blue/Purple)	One Piece Quartz Torch with 2.0 mm Injector, PVDF O-Ring Free Holder for 'B' Configuration	**N8152472**
Fixed 2.5 mm Injector Quartz Torch (Green)	One Piece Quartz Torch with 2.5 mm Injector, PVDF O-Ring Free Holder for 'C' Configuration	**N8152473**
Fixed 1.5 mm Injector Quartz Torch (Blue/Blue)	One Piece Quartz Torch with 1.5 mm Injector, PVDF O-Ring Free Holder	**N8152427**
Fixed 1.5 mm Injector Quartz Torch (Orange)	One Piece Quartz Torch with 1.5 mm Injector, PVDF O-Ring Free Holder for Organic Solvents	**N8152616**
Fixed 1.5 mm Injector UHP Quartz Torch (White/White)	One Piece Ultra Pure Quartz Torch with 1.0 mm Injector, PVDF O-Ring Free Holder	**N8152601**
Fixed 1.0 mm Injector Quartz Torch (Orange/Orange)	One Piece Quartz Torch with 1.0 mm Injector, PVDF O-Ring Free Holder for High Volatility Organic Solvents	**N8152474**
Fixed 1.0 mm Injector Quartz Torch (Blue/Blue/Blue)	One Piece Quartz Torch with 1.0 mm Injector, PVDF O-Ring Free Holder	**N8152699**
Fixed 1.0 mm Injector UHP Quartz Torch (White/White/White)	One Piece Ultra Pure Quartz Torch with 1.0 mm Injector, PVDF O-Ring Free Holder	**N8152600**
Torch Injector Nut		**N8152451**
Torch Injector Nut Removal Tool		**N8152443**
Torch O-Ring Kit for Torch Cassette	Viton O-Ring Kit Includes: 2.8 mm ID (Qty. 4), 14 mm ID (Qty. 1) and 16 mm ID (Qty. 1)	**N8152476**

Demountable Quartz Torch

ICP-MS Model	Part No.
ELAN/NexION 300/350	**N8122006**
ELAN (Organics)/NexION 300/350	**N8141315**
ELAN/NexION 300/350 (O-Ring Free for ESI Injectors)	**N8145106**

High Efficiency Demountable Quartz Torch

ICP-MS Model	Part No.
NexION 300/350	**N8145318**
ELAN 9000/6x00/DRCs	**W1008384**

D-Torch Demountable Torch

The D-Torch™ provides a demountable torch design without sacrificing performance or usability. Featuring a torch body with fixed alumina intermediate tube for greater robustness, in addition to a demountable outer tube and injector, the D-Torch significantly reduces torch replacement costs for the analysis of challenging sample matrices.



Part No. **N0777419**



Part No. **N0777415**



Part No. **N0777417**

Description	Part No.
For ELAN/NexION 300/350	
D-Torch Complete with Quartz Outer Tube	**N0777419**
D-Torch Complete with Ceramic Outer Tube	**N0777415**
Base and Inner Tube	**N0777416**
Ceramic Outer Tube	**N0777417**
Quartz Outer Tube	**N0777420**
Retaining Ring	**N0777055**



Torch Alignment Tool

Used to align the torch in the load coil.

ICP-MS Model	Part No.
NexION 1000/2000	**N8157042**
ELAN 9000/6x00/DRCs/NexION 300/350	**WE015554**



Cassette Torch Mount

ICP-MS Model	Part No.
NexION 300/350	**W1037485**
ELAN DRC II	**W1020672**
ELAN 9000/DRC-e	**W1020668**

Does not include Demountable Quartz Torch or Injector.

Sample Introduction Kits for NexION 1000/2000

NexION 2000 SMARTintro sample introduction solutions are tested as a complete unit to ensure intra- and inter-laboratory performance. Each system utilizes specific combinations of sample introduction components and the kits are color-coded according to the application of the user.

SMARTintro Sample Introduction Kit	Description	Part No.
	**PFA-Platinum HF-Resistant Sample Introduction Kit** Kit Includes: PFA Spray Chamber with PFA End Cap (**N8150450**), Cyclonic Spray Chamber Adapter (**N8152551**), Demountable SilQ Torch (**N8152448**), Platinum 2 mm Injector (**N8152429**), Plasma Light Shield (**N8152377**), Cassette Only Platinum (**N8152434**), Gas Line Addition (**N8152449**), Spray Chamber Drain Line 1/4-28 Fitting (**N8152456**), PFA-200 PFA MicroFlow Nebulizer (**N8152420**), Torch Injector Nut Removal Tool (**N8152443**), Torch Injector Nut (**N8152451**)	**N8150033**
	**Organics Sample Introduction Kit (Orange)** Kit Includes: Quartz Nebulizer Type C (**N8152372**), Cyclonic Quartz Spray Chamber (**N8152383**), Quartz 1.5 mm Organics Torch One-Piece (**N8152616**), MEINHARD Nebulizer Sample Line (**N8145503**), Plasma Light Shield (**N8152377**), MEINHARD Internal Standard Nebulizer Tee (**N8152386**), Spray Chamber Light Shield (**N8152425**), Gas Line Addition (**N8152426**), Cassette Only Orange (**N8152435**), Torch Injector Nut Removal Tool (**N8152443**), Torch Injector Nut (**N8152451**), Internal Standard Probe Qty. 2 (**N8152452**), PeriPump Union Male Fitting (**N8152453**), Spray Chamber Drain Line 1/4-28 Fitting (**N8152456**)	**N8150031**
	**Geological Sample Introduction Kit (Gold)** Kit Includes: PeriPump Tubing Starter Kit (**N8150060**), PFA Spray Chamber with PFA End Cap (**N8150450**), Plasma Light Shield (**N8152377**), PFA Nebulizer (**N8152378**), Quartz Torch (**N8152379**), Internal Standard Addition Tee for PFA-ST Nebulizer (**N8152423**), Torch Injector Nut Removal Tool (**N8152443**), Sapphire 2 mm Injector (**N8152447**), Gas Line Addition (**N8152449**), Torch Injector Nut (**N8152451**), Internal Standard Probe Qty. 2 (**N8152452**), Sample Introduction Line for PFA-ST Nebulizer (**N8152455**), Spray Chamber Drain Line 1/4-28 Fitting (**N8152456**), PC^3 Spray Chamber Light Shield (**M8152475**), Cassette Only Gold (**N8152532**)	**N8150040**
	**Sample Introduction Kit for NexION 1000 ICP-MS (Purple)** Kit Includes: MEINHARD Nebulizer Sample Line (**N8145503**), PeriPump Tubing Starter Kit (**N8150060**), Glass Nebulizer Type C (**N8152373**), Matrix Gas Line 9 in. (**N8152374**), Plasma Light Shield (**N8152377**), Glass Cyclonic C3 High Sensitivity Spray Chamber with Matrix Port (**N8152389**), Spray Chamber Light Shield (**N8152425**), Torch Injector Nut Removal Tool (**N8152443**), Torch Injector Nut (**N8152451**), Internal Standard Probe Qty. 2 (**N8152452**), PeriPump Union Male Fitting (**N8152453**), Spray Chamber Drain Line 1/4-28 Fitting (**N8152456**), One Piece 2.0 mm Quartz Torch (**N8152472**), Cassette Only Purple (**N8152533**)	**N8150038**
	**Sample Introduction Kit for NexION 2000 Base Configuration (Blue)** Kit Includes: Glass Nebulizer Type C (**N8152373**), Glass Cyclonic Spray Chamber (**N8152375**), One Piece 2.0 mm Quartz Torch (**N8152472**), MEINHARD Nebulizer Sample Line (**N8145503**), PeriPump Tubing Starter Kit (**N8150060**), Plasma Light Shield (**N8152377**), MEINHARD Internal Standard Nebulizer Tee (**N8152386**), Spray Chamber Light Shield (**N8152425**), Cassette Only Blue (**N8152430**), Torch Injector Nut Removal Tool (**N8152443**), Internal Standard Probe Qty. 2 (**N8152452**), PeriPump Union Male Fitting (**N8152453**), Spray Chamber Drain Line 1/4-28 Fitting (**N8152456**), Torch Injector Nut (**N8152451**)	**N8150034**
	**Sample Introduction Kit for NexION 2000 Core Configuration (Green)** Kit Includes: Glass Nebulizer Type C (**N8152373**), Glass Cyclonic C3 High Sensitivity Spray Chamber with Matrix Port (**N8152389**), Quartz Torch (**N8152473**), MEINHARD Nebulizer Sample Line (**N8145503**), PeriPump Tubing Starter Kit (**N8150060**), Matrix Gas Line 9 in. (**N8152374**), Plasma Light Shield (**N8152377**), PC3 Peltier Cooler (**N8152382**), MEINHARD Internal Standard Nebulizer Tee (**N8152386**), Spray Chamber Light Shield (**N8152425**), Cassette Only Green (**N8152431**), Torch Injector Nut Removal Tool (**N8152443**), Internal Standard Probe Qty. 2 (**N8152452**), PeriPump Union Male Fitting (**N8152453**), Spray Chamber Drain Line 1/4-28 Fitting (**N8152456**), PC^3 Spray Chamber Light Shield (**N8152475**), Torch Injector Nut (**N8152451**)	**N8150035**

SMARTintro Sample Introduction Kit	Description	Part No.
	**Sample Introduction Kit for NexION 2000 Productivity Configuration (Black)** Kit Includes: PFA Nebulizer (**N8152378**), Quartz Torch (**N8152379**), Glass Cyclonic C3 High Sensitivity Spray Chamber with Matrix Port (**N8152389**), Cyclonic Peltier Cooler (**N8152382**), CTFE Liquid Fitting Female (**N8145018**), *FAST* 1 Valve (**N8152359**), MP² Micro Peristaltic Pump with Single *FAST* Valve (**N8152364**), Matrix Gas Line 9 in. (**N8152374**), 2 mm Demountable Quartz Injector (**N8152376**), Plasma Light Shield (**N8152377**), *FAST* Pump Tubing Starter Kit (**N8152380**), Spray Chamber Light Shield (**N8152425**), Cassette Only Black (**N8152433**), Torch Injector Nut Removal Tool (**N8152443**), PFA-ST Nebulizer Sample Introduction Line (**N8152455**), Spray Chamber Drain Line 1/4-28 Fitting (**N8152456**), Spray Chamber Light Shield (**N8152475**), Nuts/Ferrules 1/4-28 for HF Valve Qty.10 (**N0777283**), Sample Loop for Ports 1 and 4, 0.5 mL (**N0777289**), HF Ferrule/Nut Set, 1/4-28 Qty.10 (**N0777297**), 0.8 mm ID Sample Loop PTFE, 300 µL (**N0777430**), 2 mL Sample Loop (**N0777479**), 4 mL Sample Loop (**N0777480**), 1 mL Loop 1 mm ID (**N0777664**), 1.5 mL Loop 1 mm ID (**N0777665**), 0.5 mL Loop 1 mm ID (**N0777666**), L 3 mL Loop 1 mm ID (**N0777667**), Holder with *FAST* Bottles (**N0777777**), RS485 Serial Cable – Power/Communication (**N2024191**), CTFE Female Barb Fitting (**N8145018**), Waste Line for SC-*FAST* (**N8145536**), *FAST* 1 Valve with P7 (**N8152359**), Torch Injector Nut (**N8152451**)	**N8150036**
	**Sample Introduction Kit for NexION 2000 Semi-Conductor Configuration (White)** Kit Includes: PFA Nebulizer (**N8152378**), Quartz SilQ Spray Chamber (**N8152424**), Quartz Fixed Torch (**N8152428**), Cyclonic Peltier Cooler (**N8152382**), CTFE Liquid Fitting Female (**N8145018**), PeriPump Tubing Starter Kit (**N8150060**), Plasma Light Shield (**N8152377**), Internal Standard Addition Tee for PFA ST Nebulizer (**N8152423**), Cassette Only White (**N8152432**), Torch Injector Nut Removal Tool (**N8152443**), Internal Standard Probe Qty. 2 (**N8152452**), PFA-ST Nebulizer Sample Introduction Line (**N8152455**), Spray Chamber Drain Line 1/4-28 Fitting (**N8152456**), Spray Chamber Light Shield (**N8152475**)	**N8150037**

SMARTintro Sample Introduction Modules and Cassettes

SMARTintro Sample Introduction Modules and Cassettes include Cassettes, Torch, PTFE Torch Light Shield and Torch Injector Removal Tool.

	Description	Part No.
	Blue Colored Cassette, One-Piece Quartz Torch, 2.0 mm Quartz Injector	**N8152437**
	Green Colored Cassette, One-Piece Quartz Torch, 2.5 mm Quartz Injector	**N8152438**
	White Colored Cassette, One-Piece SilQ Torch, 2.0 mm Quartz Injector	**N8152439**
	Black Colored Cassette, Demountable Quartz Torch, 2.0 mm Quartz Injector	**N8152440**
	Purple Colored Cassette, One-piece Quartz Torch, 2.0 mm Quartz Injector	**N8152536**
	Platinum Colored Cassette, Demountable Quartz Torch, 2.0 mm Platinum Injector	**N8152441**
	Orange Colored Cassette, One-Piece Quartz Torch, 1.5 mm Quartz Injector	**N8152442**
	Gold Colored Cassette, One-Piece Quartz Torch, 2.0 mm Quartz Injector	**N8152535**

Sample Introduction Cassettes Only

	Color	Part No.
	Blue (Included with NexION 2000 ICP-MS Base 'B' Configuration)	**N8152430**
	Green (Included with NexION 2000 ICP-MS Core 'C' Configuration)	**N8152431**
	White (Included with NexION 2000 ICP-MS High Purity 'S' Configuration)	**N8152432**
	Black (Included with NexION 2000 ICP-MS Productivity 'P' Configuration)	**N8152433**
	Purple (included with NexION 1000 ICP-MS)	**N8152533**
	Platinum (High Purity/HF Resistant)	**N8152434**
	Orange (Organic Solvents)	**N8152435**
	Gold (For Geological Samples)	**N8152532**

Mass Spectrometer Hardware



Part No. **N8145027**



Part No. **N8145000**

SimulScan Dual-Stage Detector

The dual -stage detector is an integral part of the NexION ICP-MS SimulScan™ system. This discrete dynode electron multiplier measures both high- and low-level analytes simultaneously. This conserves valuable or limited samples eliminates the need to perform time-consuming sample dilutions and allows you to quickly characterize unknown samples.

ICP-MS Model	Part No.
NexION 350/1000/2000*	**N8145027**
NexION 300/350**	**N8145000**

* Service installation is required, but not included.
**Not compatible with NexION 350 shipped after March 1, 2016

Original SimulScan Dual-Stage Detector



The original dual-stage detector is an integral part of the ELAN SimulScan™ system. This electron multiplier measures both high- and low-level analytes simultaneously. This conserves valuable or limited samples, eliminates the need to perform time-consuming sample dilutions and allows you to quickly characterize unknown samples.

ICP-MS Model	Part No.
ELAN 9000/6x00/DRCs* Manufactured Prior to April, 2005	**N8125001**

Improved SimulScan Dual-Stage Detector



ELAN instruments produced after April, 2005 have the proper electronics to accept this detector without modification. ELAN instruments manufactured before April, 2005 will require a one-time upgrade to the Detector Electronics (**W1013195**). Using this detector in an instrument without the upgraded electronics will result in higher noise levels and shorter lifetime.

ICP-MS Model	Part No.
ELAN 9000/6x00/DRCs*	**N8125050**

Detector Electronics Upgrade Kit

Boosts detector life at least 20%.

ICP-MS Model	Part No.
ELAN 9000/6x00/DRCs* Manufactured Prior to April, 2005	**W1013195**

* Service installation is required, but not included.

Ion Optics

PerkinElmer offers the industry's only single-ion lens with the exclusive SwiftMount™ II cassette lens mount. No tools are required as the design incorporates a clean capture-and-release concept.

Ion Lens

Description	ICP-MS Model	Part No.
Cassette Ion Lens Upgrade Kit	ELANs Manufactured Before April, 2005	**W1017871**
Series II Ion Lens	ELAN 9000/6x00/DRCs Manufactured After January, 1998	**WE018034**
Ion Lens	ELAN 6000s Manufactured Before January, 1998	**WE014777**
Series II Lens Removal Tool	ELAN 9000/6x00/DRCs Manufactured Between January,1998 and April, 2005	**W1010620**

Series II Ion Lens



Series II ShadowStop



ShadowStop

Description	ICP-MS Model	Part No.
Cassette Lens ShadowStop	ELAN 9000/DRCs Manufactured After April, 2005	**W1013361**
Series II ShadowStop	ELAN 9000/6X00/DRCs Manufactured Between January, 1998 and April, 2005	**WE029011**

Vacuum Pump Fluid for ELAN

For use with roughing pumps.

Pump Model	Part No.
Leybold	**N8122004**
Varian	**N8122308**

Vacuum Pump Fluid for NexION

For use with NexION ICP-MS only. 1 L Fomblin GV80 fluid (perfluoro polyether). 1 L required per pump.

Description	Part No.
NexION Vacuum Pump Fluid	**N8145003**

High Vacuum Silicon Grease

For lubrication of vacuum system O-Rings.

Description	Part No.
High Vacuum Silicon Grease	**09905147**

Cones and Accessories

Sampler and Skimmer Cones

Precision-designed and manufactured, large-orifice sampler and skimmer cones provide superior long-term stability and resist clogging, allowing analysis under both high and low sample-uptake conditions. Nickel is a very rugged, long-lasting material for the majority of sample types, while platinum is the material of choice for more corrosive samples. They have been designed to maximize signal stability and to minimize clogging during extended runs of samples containing high dissolved solids.



NexION Cones



ELAN Cones

Nickel Sampler and Skimmer Cones

ICP-MS Model	Type	Part No.
NexION	Sampler	**W1033612**
NexION	Skimmer	**W1026356**
ELAN 9000/6x00/DRC	Sampler	**WE021140**
ELAN 9000/6x00/DRC	Skimmer	**WE021137**
NexION	Sampler Gasket	**W1040148**

Platinum Sampler and Skimmer Cones*

ICP-MS Model	Type	Part No.
NexION	Sampler	**W1033614**
NexION	Sampler for Sulfur Based Acids/Solvents (18 mm)	**N8145028**
NexION	Skimmer	**W1026907**
NexION	Sampler Gasket	**W1040148**
ELAN 9000/6x00/DRC	Sampler	**WE027802**
ELAN 9000/6x00/DRC	Skimmer	**WE027803**

* Prices subject to change based on volatile precious metal prices.



Hyper Skimmer Cone and Spares

ICP-MS Model	Description	Part No.
NexION	Hyper Skimmer Cone	**W1033995**
NexION	Hyper Skimmer O-Ring	**09902123**
NexION	Hyper Skimmer Screw	**WE027484**



Sampler and Skimmer Cone O-Rings

ICP-MS Model	Type	Qty.	Part No.
ELAN 9000/6x00/DRC	Sampler	5	**N8120511**
ELAN 9000/6x00/DRC	Skimmer	5	**N8120512**



Cone Removal Tool

ICP-MS Model	Part No.
NexION	**W1034694**
ELAN 9000/6x00/DRC	**WE017142**



Part No. **N8145319**



Part No. **N8145320**

ConeGuard Thread Protector

When cleaning cones which have a screw thread, it is important that the thread is not contacted by any corrosive solution. If the thread gets corroded, the cone may not seal correctly or it may bond to the base and be difficult to remove.

ICP-MS Model	Type	Part No.
NexION	Sampler ConeGuard	**N8145319**
NexION	Skimmer ConeGuard	**N8145320**
ELAN	Skimmer ConeGuard	**N8121086**

NexION Consumable Kits



NexION 1000/2000 Consumable Kits

Typical one year's supply of consumables.

Description	Qty.	Part No.					
Configuration			2000 B	2000 C	2000 P	2000 S	1000
NexION 1000/2000 Consumables Kit Part No. Kit Includes:			N8150054	N8150055	N8150056	N8150057	N8150058
Fixed 2.0 mm Injector Quartz Torch (Blue/Purple Mark)	2	**N8152472**	✔				✔
Fixed 2.5 mm Injector Quartz Torch (Green Mark)	2	**N8152473**		✔			
Demountable Quartz Torch PVDF	2	**N8152379**			✔		
2.0 mm Demountable Quartz Injector	2	**N8152376**			✔		
Fixed 2.0 mm Injector UHP Quartz Torch	2	**N8152428**				✔	
Glass Cyclonic High Sensitivity Spray Chamber	1	**N8152375**	✔				
Glass Cyclonic High Sensitivity Spray Chamber with Matrix Gas Port	1	**N8152389**		✔	✔		✔
SilQ Cyclonic High Sensitivity Spray Chamber	1	**N8152424**				✔	
Threaded Spray Chamber Drain Line	2	**N8152456**	✔	✔	✔	✔	✔
Nickel Skimmer Cone	2	**W1026356**	✔	✔	✔		✔
Nickel Sampler Cone	2	**W1033612**	✔	✔	✔		✔
Platinum Skimmer Cone	2	**W1026907**				✔	
Platinum Sample Cone	2	**W1033614**				✔	
Hyper Skimmer Cone	1	**W1033995**	✔	✔	✔	✔	✔
Sampler Cone Gasket	3	**W1040148**	✔	✔	✔	✔	✔
Hyper Skimmer O-Ring	2	**09902123**	✔	✔	✔	✔	✔
Gray/Gray Pump Tubing	2	**N8152415**	✔	✔		✔	✔
Gray/Gray Pump Tubing MP[2]	2	**N8145173**			✔		
Flared PVC 0.51 mm Orange/Yellow Pump Tubing	4	**N8152405**	✔	✔		✔	✔
Flared PVC 0.51 mm Orange/Yellow Pump Tubing MP[2]	4	**N8145150**			✔		
Drain Tubing (ft.)	6	**02506495**	✔	✔	✔	✔	✔
PTFE Sample Uptake Tubing	12	**WE024375**	✔	✔	✔	✔	✔
Sample Introduction Line for PFA-ST Nebulizer	1	**N8152455**			✔	✔	
Sample Introduction Line for Concentric Nebulizer	1	**N8145503**	✔	✔			✔
Female Barb CTFE Fitting	4	**N8152388**	✔	✔	✔	✔	✔
Male Barb CTFE Fitting	4	**N8152453**	✔	✔	✔	✔	✔
Instrument Filter (Left)	2	**N8152167**	✔	✔	✔	✔	✔
Instrument Filter (Right)	2	**N8152136**	✔	✔	✔	✔	✔
Instrument Filter (Rear)	2	**N8152465**	✔	✔	✔	✔	✔
Torch Injector Nut	2	**N8152451**	✔	✔	✔	✔	✔



NexION 300/350Q/X/D Consumable Kits

Typical one year's supply of consumables.

Description	Qty.	Part No.
NexION 300/350Q/X/D Consumables Kit Kit Includes:		**N8140513**
Demountable Quartz Torch	2	**N8122006**
Load Coil	1	**WE021816**
Quartz Ball Joint Injector 2.0 mm ID	2	**WE023948**
Cassette Torch Injector Support Adapter for Ball Joint Injectors	1	**W1012406**
Glass Cyclonic Spray Chamber	1	**N8145014**
Nickel Skimmer Cone	2	**W1026356**
Nickel Sampler Cone	2	**W1033612**
Hyper Skimmer Cone	1	**W1033995**
Sampler Cone Gasket	3	**W1040148**
Hyper Skimmer O-Ring	2	**09902123**
Hyper Skimmer Screw	2	**09919737**
Santoprene® 1.30 mm Gray/Gray Pump Tubing	4	**N0777444**
Flared PVC 0.38 mm Green/Orange Pump Tubing	4	**N0777042**
Drain Tubing (ft.)	6	**02506495**
PTFE Sample Uptake Tubing (cm)	12	**WE024375**
Instrument Filter (left)	2	**W1036712**
Instrument Filter (back right)	2	**W1036713**
Spray Chamber Drain Fitting	2	**N8145015**
Nebulizer Fitting	2	**N8145016**
Male Barb CTFE Fitting	2	**N8145017**
Female Barb CTFE Fitting	2	**N8145018**

NexION 300/350S Consumable Kits

Typical one year's supply of consumables.

Description	Qty.	Part No.
NexION 300/350S Consumables Kit Kit Includes:		**N8140514**
Demountable Quartz Torch	2	**N8122006**
Load Coil	1	**WE021816**
Quartz Ball Joint Injector 2.0 mm ID	2	**WE023948**
Cassette Torch Injector Support Adapter for Ball Joint Injectors	1	**W1012406**
Quartz Cyclonic Spray Chamber	1	**N8145013**
Platinum Skimmer Cone	1	**W1026907**
Platinum Sampler Cone	1	**W1033614**
Hyper Skimmer Cone	1	**W1033995**
Sampler Cone Gasket	3	**W1040148**
Hyper Skimmer O-Ring	2	**09902123**
Hyper Skimmer Screw	2	**09919737**
Santoprene® 1.30 mm Gray/Gray Pump Tubing	4	**N0777444**
Flared PVC 0.38 mm Green/Orange Pump Tubing	4	**N0777042**
Drain Tubing (ft.)	6	**02506495**
PTFE Sample Uptake Tubing (cm)	12	**WE024375**
Instrument Filter (left)	1	**W1036712**
Instrument Filter (back right)	1	**W1036713**
Spray Chamber Drain Fitting	2	**N8145015**
Nebulizer Fitting	2	**N8145016**
Male Barb CTFE Fitting	2	**N8145017**
Female Barb CTFE Fitting	2	**N8145018**

ELAN Consumable Kits



Glass Cyclonic Sample Introduction System for ELAN

Description	Part No.
Glass Cyclonic Sample Introduction System Kit Includes (1 of each):	**N8120518**
Baffled Glass Cyclonic Spray Chamber O-Ring Free	**N0775352**
Cyclonic Spray Chamber Mount	**WE014034**
MicroMist Micro-uptake Glass Concentric Nebulizer 0.2 mL/min	**N0775342**
Quartz Injector 2.0 mm ID	**N8125029**
Tygon Tubing (1 foot)	**02506516**
Insert	**09903094**
1/4 in. Front Ferrule	**09903456**
Fitting	**09903464**
Tube Fitting	**09903465**
Red/Red Standard PVC Tubing 1.14 mm ID (Pkg. 12)	**09908585**
Green/Yellow Flared End PVC Tubing 0.44 mm ID (Pkg. 12)	**N0773113**

Quartz Cyclonic Sample Introduction System for ELAN

Description	Part No.
Quartz Cyclonic Sample Introduction System Kit Includes (1 of each):	**N8120519**
Baffled Quartz Cyclonic Spray Chamber Baffled Quartz Spray Chamber (PTFE O-Ring Type) with Ball Joint	**WE025221**
MicroMist Micro-Uptake Glass Concentric Nebulizer 0.2 mL/min	**N0775342**
Quartz Ball Injector 2.0 mm ID	**WE023948**
Tygon Tubing (1 foot)	**02506516**
Insert	**09903094**
1/4 in. Front Ferrule	**09903456**
Fitting	**09903464**
Tube Fitting	**09903465**
Red/Red Standard PVC Tubing 1.14 mm ID (Pkg. 12)	**09908585**
Green/Yellow Flared End PVC Tubing 0.44 mm ID (Pkg. 12)	**N0773113**
Ball Joint Cassette Torch Injector Support Adapter	**W1012406**
UV Safety Shield	**W1020996**
Connector 1A	**B0199233**

ELAN® DRC-e/9000 Spares Kit

Description	Qty.	Part No.
ELAN® DRC-e/9000 Spares Kit Kit Includes:		**N8120610**
Demountable Quartz Torch	1	**N8122006**
RF Coil Assembly	1	**WE021816**
Alumina Injector 2.0 mm ID	1	**N8126041**
Cross-Flow II Replacement GemTips™	1	**N8120515**
Series II Ion Lens	1	**WE018034**
Nickel Sampler Cones	2	**WE021140**
Nickel Skimmer Cones	2	**WE021137**
Sampler Cone O-Rings (Pkg. 5)	1	**N8120511**
Skimmer Cone O-Rings (Pkg. 5)	1	**N8120512**

ELAN® DRC II Spares Kit

Description	Qty.	Part No.
ELAN® DRC II Spares Kit Kit Includes:		**N8120611**
Demountable Quartz Torch	1	**N8122006**
RF Coil Assembly	1	**WE021816**
Quartz Ball Joint Injector 2.0 mm ID	1	**WE023948**
Series II Ion Lens	1	**WE018034**
Platinum Sampler Cone	1	**WE027802**
Platinum Skimmer Cone	1	**WE027803**
Sampler Cone O-Rings (Pkg. 5)	1	**N8120511**
Skimmer Cone O-Rings (Pkg. 5)	1	**N8120512**

FAST High Productivity Systems

The *FAST* is a high-throughput automated sample introduction system for PerkinElmer ICP-OES and ICP-MS. The *FAST* increases productive instrument time by reducing sample uptake, stabilization and rinse steps, allowing you to run more samples each day.

Features and Benefits

- Sample never touches peristaltic pump tubing
- *FAST* uptake, stabilization and washout
- P-Series valve and loop combination has superb washout
- Carrier stream without segmented air bubbles ensures high-precision sample introduction
- Direct integration of MP² peripump and *FAST* valve with instrument

Description	Type	Part No.
2 DX *FAST* DXi System NexION 350	2 Rack	**N8145074**
4 DX *FAST* DXi System NexION 350	4 Rack	**N8145075**
2 DX *FAST* DXi System NexION 2000 B,C,S / 1000	2 Rack	**N8150478**
4 DX *FAST* DXi System NexION 2000 B,C,S / 1000	4 Rack	**N8150479**

8 rack and 14 rack *FAST* DXi Systems also available.
NexION 2000P ICP-MS includes DXi *FAST* valve; just add **N8150390** (2DX Autosampler) or **N8150391** (4DX Autosampler)



4 DX *FAST* DXi System for NexION 300 and 350 ICP-MS

prep*FAST* Autodilution and Autocalibration Systems

prep*FAST* is an inline dilution system that automatically performs precise and accurate dilutions for samples and standards, improving laboratory workflow, productivity and data quality.

Features and Benefits

- Autodilution
- Autocalibration
- Automatic IS addition
- Auto QC dilution
- Automatic standard addition

Description	Type	Part No.
2 DX prep*FAST* System NexION 350	2 Rack	**N8145280**
4 DX prep*FAST* System NexION 350	4 Rack	**N8145281**
2 DX prep*FAST* System NexION 2000 B,C,S / 1000	2 Rack	**N8150468**
4 DX prep*FAST* System NexION 2000 B,C,S / 1000	4 Rack	**N8150469**
2 DX prep*FAST* System NexION 2000 P	2 Rack	**N8150472**
4 DX prep*FAST* System NexION 2000 P	4 Rack	**N8150473**
8 DX prep*FAST* System NexION 2000 B,C, S/ 1000	8 Rack	**N8150470**
14 DX prep*FAST* System NexION 2000 B,C, S/ 1000	14 Rack	**N8150471**

See page 89 for additional ESI DX Autosamplers



2 DX prep*FAST* System for NexION 2000 ICP-MS

Atomic Spectroscopy General Supplies

PerkinElmer offers a wide selection of superior quality products designed to work with your PerkinElmer instruments. Our precision designed products deliver the peace of mind that comes from knowing that you'll get the results you need.

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Chillers



PerkinElmer offers a PolyScience® WhisperCool™ Recirculating Chiller for your ICP-OES and ICP-MS instruments. The WhisperCool Chiller is designed to deliver quiet and reliable performance over a broad range of operating temperatures and conditions.

VIEW PAGE

Power Conditioners and UPS Systems

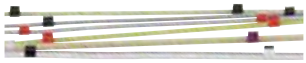




Powervar power quality solutions combine specific technologies that ensure sensitive analytical equipment will operate optimally on a day to day basis and for the long run. Power disturbances can result in quality issues undermining instrument performance and user confidence.

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Peristaltic Pump Tubing



PerkinElmer offers a wide range of high-quality peristaltic pump tubing for all of your AA, ICP-OES and ICP-MS applications. Remember to replace your tubing frequently and always keep spares on hand.

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Autosampler Supplies





PerkinElmer offers a wide variety of Autosampler Racks, Probes and Tubes for your PerkinElmer, Cetac and ESI Autosamplers.

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Benches and Accessory Carts



PerkinElmer offers custom Benches and Accessory carts for your instrumentation and accessories.

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Autosamplers

PerkinElmer offers a wide range of Autosamplers to perform your routine analysis and your high productivity lab.

PerkinElmer S10 Autosampler



Ruggedly designed, the S10 features corrosion-resistant components to ensure long-term reliability, reproducibility and precise performance. The PerkinElmer® S10 autosampler is a computer-controlled, multi-purpose sampling system for AA, ICP-OES and ICP-MS. The autosampler automates standard and sample introduction for instrument calibration and sample analysis, extending the spectrometer's capabilities to those of a fully automated analytical workstation.

Description	Type	Part No.
PerkinElmer S10 Autosampler for AA	3 Rack	**N2020005**
PerkinElmer S10 Autosampler for ICP-OES	3 Rack	**N2020006**
PerkinElmer S10 Autosampler for ICP-MS	3 Rack	**N2020007**

Cetac ASX Autosamplers and Prep Station

More features and improved performance define the latest generation of autosamplers from Teledyne CETAC Technologies. CETAC Automation provides immediate solutions to the various challenges typical in laboratory environments with a variety of products and accessories including autosamplers, autodilutors and liquid handling stations.

Description	Type	Part No.
ASX-280 Autosampler	2 Rack	**N0782036**
ASX-280 Autosampler Oils	2 Rack	**N0780825**
ASX-560 Autosampler	4 Rack	**N0782035**
ASX-860 Extended 8 Rack Autosampler	8 Rack	**N0780826**
ASX-1400 with CETAC 96-Position Racks	4 Rack	**N0771650**
ASX-1400 with Gilson 60-Position Racks	4 Rack	**N0777174**
ASX-1400 with CETAC 80-Position Racks	4 Rack	**N0777175**
ASX-1400 with CETAC 90-Position Racks	4 Rack	**N0777176**
ASX-1400 with PerkinElmer OE4 Racks	4 Rack	**N0777196**
ASX-1600 with CETAC 96-Position Racks	6 Rack	**N0777687**
APS-1650 Automated Preparation Station	4 Rack	**N0777177**



ESI DX Autosamplers

DX Autosampler systems are customizable solutions specially designed for your application needs. We offer a comprehensive selection of sample introduction products for specific trace-metal and non-metal applications, including semiconductor pure chemicals, environmental, clinical, organic solvents, isotope ratio and many other types of trace metal determinations. The DX systems are durable, acid resistant autosamplers which feature dual rinse stations (each with dedicated rinse pump) to eliminate carryover. All DX models may be upgraded to analyze samples up to 3X faster (*FAST*) and with auto dilution (prep3 or prep*FAST*).

DXe models also have dual rinse stations (supplied by one rinse pump) and can be upgraded with 2nd rinse pump with vacuum pump for *FAST* automation.

Description	Type	Part No.
2 DXe Dual Rinse Autosampler	2 Rack	**N0786010**
2 DX *FAST* Ready Dual Rinse Autosampler	2 Rack	**N8150390**
4 DXe Dual Rinse Autosampler	4 Rack	**N0786011**
4 DX *FAST* Ready Dual Rinse Autosampler	4 Rack	**N8150391**
8 DX *FAST* Ready Dual Rinse Autosampler	8 Rack	**N0777342**
8 DX Benchtop *FAST* Ready Dual Rinse Autosampler	8 Rack	**N8145400**
14 DX *FAST* Ready Dual Rinse Autosampler	14 Rack	**N0777319**
14 DX Benchtop *FAST* Ready Dual Rinse Autosampler	14 Rack	**N8145329**



Cooling Systems

PolyScience® WhisperCool™ Refrigerated Chiller

The PolyScience® WhisperCool® Refrigerated Chiller is designed to deliver quiet and reliable performance over a broad range of operating temperatures and conditions. Extremely dependable and energy efficient, it features a -10 to 40 ˚C operating temperature range, built-in process and equipment protection and highly intuitive user interface. This chiller is designed for use on both ICP-OES and ICP-MS instruments.

Features and Benefits

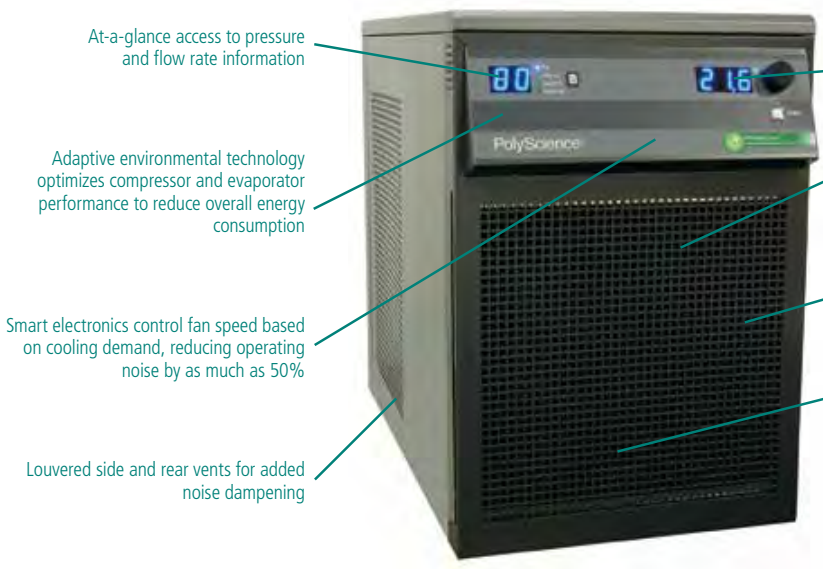
- 50% quieter operation than comparable models (62 dB*)
- 2900 watts (9889 BTU/hour) cooling capacity
- Built-in temperature, pressure and flow rate alarms

* WhisperCool® environmental control reduces operational noise (62 dB)

Part No.		N0772046	N0772045
Electrical Requirements		208-230 V, 60 Hz, 12.2 A	240 V, 50 Hz, 12.2 A
Operating Temperature Range		-10 to 40 ˚C	-10 to 40 ˚C
Temperature Stability		±0.1 ˚C (±1.8 ˚F)	±0.1 ˚C (±1.8 ˚F)
Cooling Capacity	at 20 ˚C at 10 ˚C at 0 ˚C	2900 Watts (9889 BTU/hr) 1925 Watts (6574 BTU/hr) 1000 Watts (3410 BTU/hr)	2650 Watts (9889 BTU/hr) 1900 Watts (6574 BTU/hr) 1200 Watts (3410 BTU/hr)
Compressor		1.0 HP	1.0 HP
Reservoir Capacity		4.2 L	4.2 L
Pump Type		Turbine	Turbine
Maximum Pump Pressure		90 PSI	83 PSI
Maximum Pump Flow		13.2 L/min	13.2 L/min
Dimensions		22 5/8 x 14 1/2 x 27 5/8 in. / 57.6 x 36.8 x 70.2 cm	
Shipping Weight		189 lbs. / 85.7 kg	
Replacement Air Filter		**N0777095** (Air Filter with Frame, 13 x 14 in.)	
ICP Chiller Coolant Mix		**N0776200** (Five Half-gallon bottles)	
ICP-MS Chiller Coolant Mix		**WE016558** (1 L bottles) for ELAN/NexION	
Stainless Steel Strainer for Reservoir		**N0691907**	

ICP Chiller Coolant Mix
Part No: **N0776200**







Noise Enclosures for Vacuum Pumps and Chillers



Vacuum Pump
Noise Enclosure



Vacuum Pump
Noise Reduction Cover

Laboratories can be loud and noise in labs is distracting, stressful and potentially harmful to your hearing. While noise in labs may not be frequently talked about, it is something you should be concerned with.

Our noise reduction enclosures are designed specifically for your instrument. They provide noise reduction performance from -12 db(A) up to -20 db(A), equivalent to a 75% reduction in noise perception! Thick 50 mm Polyurethane acoustic open cell foam covers the interior part of the enclosure, delivering good noise absorption. The wave shape of the foam multiplies the absorption capacity, providing you with a quieter, safer lab.

Vacuum Pump Noise Enclosure For NexION® Leybold SV40 Vacuum Pump

External Dimensions	Centimeters (cm)	Inches (in.)
Depth	67.4	26.5
Width	45.6	17.95
Height	55	21.65
Height with Oil Tray	64.6	25.39
Weight	**Kilograms (kg)**	**Pounds (lbs)**
Enclosure	14	30.8
Oil Tray	8	16.75

Description	Part No.
Noise Enclosure (Dolly not Included)	**N8121068**
Noise Enclosure with Built-In Overheating Temperature Alarm (Dolly not Included)	**N8145407**
Noise Enclosure Dolly (Option)	**N8121069**

Vacuum Pump Noise Reduction Cover

Description	Part No.
Noise Reduction Cover (Dolly not Included)	**MZ321146**
Noise Reduction Cover Dolly (Option)	**MZ321147**

Chiller noise in the lab can be distracting, tiring, irritating and stressful. But many people are unaware of the presence of environmental sound at damaging levels, or at the level on which sound becomes harmful.

Chiller Noise Enclosure Features and Benefits

- Performance: average sound level decrease is – 15 dB(A) (equivalent to a 75% reduction in noise perception)
- Environment friendly noise adsorbing material, oil and water resistant
- Heat exchange controlled by six internal silent fans
- Worldwide electrical compatibility-enclosures are delivered with European, US, Japan and UK plugs
- Easy access to front monitor and switch (the transparent window can be opened)
- Easy water level check (window on the back panel)
- Includes overheating temperature alarm
- The noise reduction is in conformity with the European directive related to low voltage equipment (2006/95/EC) and electromagnetic compatibility (2004/108/EC)

Chiller Noise Enclosure For Polyscience 6000 Series

External Dimensions	Centimeters (cm)	Inches (in.)
Depth	88	34.7
Width	57	23.7
Height	71	30.7

Description	Part No.
Chiller Enclosure	**N0777920**



Chiller Noise Enclosure

Power Conditioners and UPS Systems

PerkinElmer/Powervar power quality solutions combine specific technologies that ensure sensitive analytical equipment will operate optimally on a day to day basis and for the long run. Power disturbances can result in quality issues undermining instrument performance and user confidence. Damaged or compromised components, disrupted processes, lack of reliability – they all add up to frustration, broken schedules and costly downtime. The problem is caused by a host of power disturbances – some visible and many invisible – that threaten your equipment's operation every year. Power 'disturbances' are simply those large and small variations in the quality of the electric power you use day in and day out. Some come from your local utility company, but most are created within your own facility as a result of the distribution and use of electrical power. These variations include high-energy voltage transients, sags and swells, electrical noise and common mode voltage, as well as the power outages everyone witnesses when the lights go out.

Power Conditioners

Features and Benefits

- Conditioners provide clean power at 120, 208, or 240 VAC for loads up to 62 amps
- Dual-output models can protect both high-voltage system loads and low-voltage peripherals at less expense and effort than installing two conditioners
- Protects against: high-voltage surges, common-mode voltage, electrical noise, voltage swells and sags, power outages, unstable AC frequency, ground loops



Instrument Model	Description	Input Voltage	Frequency (Hz)	Part No.
Atomic Absorption				
AAnalyst 100/200/300/400	520 VA	120 V	60	**N9307504**
PinAAcle 500/900 F	840 VA	120 V	60	**N9307517**
AAnalyst 100/200/300/400, PinAAcle 500/900 F	750 VA	220/230 V	50	**N9307521**
AAnalyst 600/800	5.8 kVA	208/240 V	60	**N9307511**
AAnalyst 600/800	6.0 kVA	220/230 V	50	**N9307523**
AAnalyst 700	3.8 kVA	208/240 V	60	**N9307509**
AAnalyst 700	3.6 kVA	220/230 V	50	**N9307522**
PinAAcle 900 H/T/Z	5.8 kVA	208/240 V	60	**N9307760**
PinAAcle 900 H/T/Z	6.0 kVA	220/230 V	50	**N9307523**
PinAAcle 500/900 F	1440 VA	120 V	60	**N9307503**
PinAAcle 500/900 F	1500 VA	220/230 V	50	**N9306752**
Inductively Coupled Plasma-OES				
Optima™ 2x00/4x00/5x00/7x00/8x00, Avio 200/500	3.8 kVA	208/240 V	60	**N9307512**
Optima 2x00/4x00/5x00/7x00/8x00, Avio 200/500	3.6 kVA	220/230 V	50	**N9307522**
Inductively Coupled Plasma-MS				
ELAN® 6x00/9000 Controller Side	3.8 kVA	208/240 V	60	**N9307519**
ELAN 6x00/9000 Controller Side	3.6 kVA	220/230 V	50	**N9307522**
ELAN 6x00/9000 RF Generator Side	5.8 kVA	208/240 V	60	**N9307511**
ELAN 6x00/9000, NexION® RF Generator Side	6.0 kVA	220/230 V	50	**N9307523**
NexION 300/350/1000/2000	5.0 kVA	208/240 V	60	**N0777690**
Titan MPS™				
Titan MPS	2.0 kVA	208/240 V	60	**N9306758**
Titan MPS	2.0 kVA	220/230 V	50	**N9306755**

Power Conditioners include a POWERVAR five-year warranty on parts and labor.

UPS Systems

On-Line Conditioned Uninterruptable Power Supply Systems

With the Security Plus Series, you get much more protection and a higher comfort level than you get with most other UPS systems. The Security Plus Series also provides complete power conditioning and, because the Security Plus Series features on-line inverter design, added peace of mind. And regardless of input fluctuations, the Security Plus Series insures that the output remains continuous and regulated.

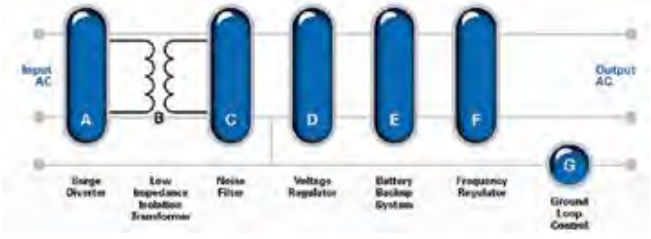


Instrument Model	Description	Input Voltage	Frequency (Hz)	Part No.
Atomic Absorption				
PinAAcle 500	1440 VA	120 V	60	**N9306750**
PinAAcle 500	1440 VA	220/230 V	50	**N0777798**
PinAAcle 900F, AAnalyst 100/200/300/400	800 VA	120 V	60	**N0777681**
PinAAcle 900F,AAnalyst 100/200/300/400	800 VA	220/230 V	50	**N0777689**
AAnalyst 700, HGA 900	5.2 kVA	208/240 V @ 50Hz 220/230 V @ 60Hz	50/60	**N9308150**
PinAAcle 900 T/H/Z	10 kVA	208/240 V @ 50Hz 220/230 V @ 60Hz	50/60	**N9306757**
AAnalyst 600/800	10 kVA	208/240 V @ 50Hz 220/230 V @ 60Hz	50/60	**N0777613**
Inductively Coupled Plasma-OES				
Optima 2x00/4x00/5x00/7x00/8x00, Avio 200/500	5.2 kVA	208/240 V @ 50Hz 220/230 V @ 60Hz	50/60	**N0777511**
Inductively Coupled Plasma-MS				
NexION 300/350/1000/2000	8.0 kVA	208/240 V @ 50Hz 220/230 V @ 60Hz	50/60	**N0777682**
ELAN	12 kVA	208/240 V @ 50Hz 220/230 V @ 60Hz	50/60	**N0777719**

UPS Systems include a POWERVAR three-year warranty (two-year on batteries) on parts and labor.

Extended Run Battery Cabinets

Description	Shipping Weight	Part No.
Extended Run Battery Cabinet 30 min additional run time battery for Optima/Avio. 208/240 Volt, 8 Amp input for internal charger Compatible with: **N0777511** or **N9308150**	413 lbs. (187 kg)	**N0777727**
Extended Run Battery Cabinet 60 min additional run time battery for Optima/Avio. 208/240 Volt, 8 Amp input for internal charger Compatible with: **N0777511** or **N9308150**	497 lbs. (225 kg)	**N0777728**
Extended Battery Cabinet 45 min additional run time battery for NexION. 208/240 Volt input for internal charger Compatible with: **N0777682**	746 lbs. (338 kg)	**N0777729**



The ABC's of power conditioning

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Laboratory Products

Acetylene Regulator



For AA labs, this regulator includes an adapter so that the pressure regulator can be connected to cylinders requiring either CGA 300 or CGA 510 fittings and a connector for attaching the fuel hose assembly supplied with the instrument. Includes hose assembly.

Description	Part No.
Max Inlet Pressure: 400 psig	**03030106**

Air Regulator



For AA labs. Regulator to cylinder CGA no. 590. Includes hose assembly.

Description	Part No.
Max Inlet Pressure: 3,000 psig	**03030264**

Nitrous Oxide Regulator



For use in AA labs with gas cylinders with a CGA 326 connection. Provides pressure control from 350-520 kPA (50-75 psig) and contains an integral thermostatted heater to prevent freezing of the regulator diaphragm.

Description	Part No.
115 V	**03030204**
220 V	**03030349**

Argon/Nitrogen Regulator



For AA and ICP, this regulator can be used with argon or nitrogen and has a CGA 580 fitting. A color-coded hose with 1/4 in. SWAGELOK® fittings is also included.

Description	Part No.
Max Inlet Pressure: 3,000 psig	**03030284**

Matheson Flashback Arrestor



Because acetylene is an extremely unstable gas, users can experience flashbacks at the instrument burner head. The flash arrestor prevents these potentially dangerous flashbacks from reaching the regulator or cylinder.

Description	Part No.
Acetylene Max Operating Pressure: 15 psig	**N9300068**

Hose Assemblies



Hose assemblies for connecting fuel, air and nitrous oxide from supply to instrument.

Description	Part No.
Acetylene, Red Neoprene, 3.7 m (12 ft.)	**00570559**
Air/Argon, Black, 3.7 m (12 ft.)	**00570567**
Nitrous Oxide, Blue, 3.7 m (12 ft.)	**00470258**

Blower and Vent Assembly for AA and ICP

A venting system is required to remove fumes and vapors from the torch of ICP emission spectrometers. A vent is recommended for use over the power supply unit of most ICP spectrometers for removal of dissipated heat.

Use exhaust venting to:

- Protect lab personnel from toxic vapors
- Protect your instrument from corrosive vapors
- Improve stability of the ICP torch



Blower and vent assemblies do not include ducting.

Description	Part No.
110 V PinAAcle/Optima Includes Exhaust Hood, Blower and Adapter	**03030447**
230 V PinAAcle/Optima Includes Exhaust Hood, Blower and Adapter	**03030448**
110 V Avio 200/500 Includes Blower and Adapter	**N0790188**
230 V Avio 200/500 Includes Blower and Adapter	**N0790189**
Flexible Gas Hosing 100 mm ID x 3 m hosing for RF Generator Exhaust Vent	**N0691578**

PerkinElmer service engineers are not permitted to install this unit

Parker Balston® 73-099 AA Gas Purifier



For AA labs, this wall-mounted system designed to purify the compressed air and acetylene gases used in atomic absorption. It consists of two independent filtration systems, one for compressed air and one for acetylene. The unit also has a flashback arrestor on the acetylene line and a pressure regulator on the compressed air line.

The 2-stage air filtration assembly consists of a Balston Grade DX coalescing filter and a Balston Grade BX coalescing filter. Together these filters remove trace amounts of oil, water and particulate contamination (99.99% at 0.01 micron) from the compressed air supply.

Warning, this filter will not protect an instrument from acetylene tanks that have been overfilled with acetone, or from standard sized tanks that are below 85 psi.

Description	Part No.
Parker Balston 73-099 AA Gas Purifier	**N9301398**

Parker Balston® Replacement Filters

Description	Cartridges Part No.	Seal Sets Part No.
1st Air Filter	**N9301710**	**N9301712**
2nd Air Filter	**N9301711**	**N9301712**
Acetylene Filter	**N9301714**	**N9301715**

Balston® 95A Acetylene Filter



For your AA lab, this filter includes a Balston Grade BQ filter cartridge to remove trace amounts of liquid and solid contaminants from the acetylene supply to 99.99% at 0.01 micron. Max working pressure: 15 psig.

Warning, this filter will not protect an instrument from acetylene tanks that have been overfilled with acetone, or from standard sized tanks that are below 85 psi.

Description	Part No.
Acetylene Filter	**N9301399**
Replacement Acetylene Filter Cartridge	**N9301714**

Balston® Air Filter Assembly Type A-82



For AA and ICP labs, this filter is specifically designed to remove water, oil and dirt particles down to 0.6 microns in diameter from compressed air lines. It is recommended for use with oil-type compressors and for removing moisture and dirt particles from air supplied by oil-less compressors. Also recommended to filter argon for the PinAAcle furnace.

Description	Part No.
Air Filter Assembly	**N0580531**
Replacement Filter Cartridge Element	**N0582251**

Air Dryer Filter Assembly with R250 Regulator



To filter compressed air for AA and ICP instrumentation. Replaces **00470652** and **N0770198**.

Description	Part No.
Air Dryer Filter Assembly with R250 Regulator	**N0775325**
Replacement Filter Element	**N9306067**
Float Assembly	**N0777710**
Bowl O-Ring	**N0777328**

Wilkerson® Air Dryer Filter Accessories*

Description	Pre-Filter Part No.	Final Filter Part No.
Filter Elements	**09923464**	**09907120**
Filter Bowls	**N9302199**	**N9302199**
Bowl O-Ring Kit, Final Filter	**N9302197**	**N9301715**

* For Wilkerson Filter PerkinElmer (00470652)

ICP Filter Replacement Parts

ICP Model	Filter Element	Final Filter Part No.
2x00/3x00/4x00/5x00/7x00/8x00	Air Filter in Front of Spectrometer Fan	**09995098**
2x00/3x00/4x00	Water Filter	**09904845**
2x00/3x00/4x00	Cartridge for Water Filter	**09904846**
2x00/4x00/5x00/7x00/8x00	Air Filter for the RF Generator Inlet	**N0775220**
3x00	Washable Air Filter for the RF Generator Inlet	**02509115**
3x00	Disposable Air Filter for the RF Generator Inlet	**09923517**

Instrument Filters

Description	Part No.
For AAnalyst 100/300/PinAAcle 900	**09995097**
For AAnalyst 200/400/600/700/800	**B0501696**
For AAnalyst 600/700/800 (80x80)	**B0502706**
For Optima 2x00/3x00/4x00/5x00/7x00/8x00 Avio 200/500	**09995098**
For NexION 300/350 (Left)	**W1036712**
For NexION 300/350 (Back Right)	**W1036713**
NexION 1000/2000 Instrument Filter (Left)	**N8152167**
NexION 1000/2000 Instrument Filter (Right)	**N8152136**
NexION 1000/2000 Instrument Filter (Back)	**N8152465**

Polyscience Replacement Air Filters

Description	Part No.
Polyscience Air Filter	**N0777359**
Polyscience Air Filter with Frame	**N0777095**
Heat Exchanger Air Filter	**N0777360**

Peristaltic Pump Tubing

PerkinElmer offers a wide range of high-quality peristaltic pump tubing for all of your AA, ICP-OES and ICP-MS applications. Remember to replace your tubing frequently and always keep spares on hand.

Two-Stop Peristaltic Pump Tubing for Optima, Avio and NexION 300/350

ID (mm)	Stop Colors	Standard PVC (Pkg. 12)	Flared PVC (Pkg. 12)	Solvent Flex (Pkg. 12)	Viton® (Pkg .12)	Santoprene® (Pkg. 12)	Silicone (Pkg. 6)
0.19	orange / red	N0695476	N0773111				
0.25	orange / blue	N0773117	N0773112				
0.38	orange / green	N0777110	N0777042	N0777874			
0.44	green / yellow		N0773113				
0.51	orange / yellow		N0777476		N0777446		
0.64	orange / white		N0777711				
0.76	black / black	09908587	N0777043	00473550	N0773118		00473552
1.02	white / white				N0777442		N0777441
1.14	red / red	09908585		09923037	N0773115	N0773119	N0691595
1.3	gray / gray				N0777445	N0777444	N0777443
1.42	yellow / yellow	N0777521					
1.52	yellow / blue	09923536					
1.65	blue / blue				N0777447		
1.85	green / green	N0777518				N0773116	
2.06	purple / purple	N0777561					
2.79	purple / white			02508080			09923448
3.18	black / white	N8122012					

Three-Stop Peristaltic Pump Tubing for FIAS, FIMS and S10

ID (mm)	Stop Colors	Standard PVC Clear (Pkg. 12)	Pharmed Tan (Pkg. 12)	Solvent Resistant Yellow (Pkg. 12)
1.65	black / black / black	B0506058	N0773111	
1.75	white / white / white			B0507692
1.85	red / red / red	B0193160	*B3140730 (Pkg. 6)	
2.06	yellow / blue / yellow	B0193161		
2.2	purple / purple / purple	B0199034		
2.54	purple / white / purple		*B3140721 (Pkg. 6)	
2.79	black / white / black	B0508310		
0.51	orange / yellow / orange	B0506737		



* Used for S10 and AS9X autosamplers

Peristaltic Pump Tubing Starter Kit for NexION 1000/2000 – for Standard Pump

Peripump Tubing Kit (Starter Pack of Tubing Includes 4 of each commonly used sizes) — **Part No. N8150060**

ID (mm)	Stop Colors	Qty.	Type
0.19	orange / red	4	PVC Pure
0.44	green / yellow	4	PVC Pure
0.51	yellow / orange	4	PVC Pure
1.3	gray / gray	4	Santoprene

Standard Pump Tubing – for NexION 1000/2000*

ID (mm)	Stop Colors	PVC Pure (Pkg. 12) Part No.	Solvent Flex (Pkg. 12) Part No.	Santoprene (Pkg. 12) Part No.
0.19	orange / red	N8152401	N8152408	
0.25	orange / blue	N8152402		
0.38	orange / green	N8152403	N8152409	
0.44	green / yellow	N8152404	N8152410	
0.51	orange / yellow	N8152405		
0.64	orange / white	N8152406	N8152411	
0.76	black / black	N8152407	N8152412	
1.14	red / red		N8152413	N8152414
1.3	gray / gray			N8152415

* Excluding NexION 2000 P Configuration

Peristaltic Pump Tubing Starter Kit for NexION 2000 P Configuration – for MP² Pump

Peripump Tubing Kit (Starter Pack of Tubing, Includes 4 of each commonly used sizes)			**Part No.** N8152380
ID (mm)	**Stop Colors**	**Qty.**	**Type**
1.30	gray / gray	4	Santoprene
0.76	black / black	4	PVC Flared
0.51	orange / yellow	4	PVC Flared
0.38	orange / green	4	PVC Flared
0.19	orange / red	4	PVC Flared



MP² Two-Stop Peristaltic Pump Tubing

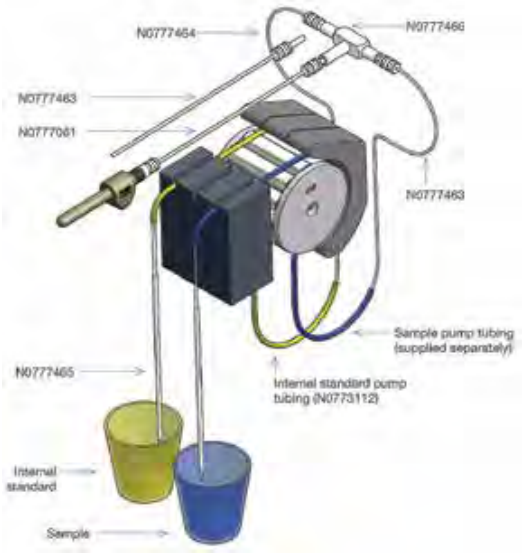
				Non-Flared		Flared	
ID (mm)	**Stop Colors**	**Slope (L/min per RPM)**	**PVC 2-Stop**	**Santoprene 2-Stop**	**Solva 2-Stop**	**PVC 2-Stop**	**Solva 2-Stop**
0.13	orange / black	0.6	N8145145			N8145194	N8145208
0.19	orange / red	1.3	N8145146			N8145195	N8145209
0.27	orange / blue	2.7	N8145147			N8145196	N8145210
0.38	orange / green	4.7	N8145148	N8145171		N8145197	N8145211
0.44	green / yellow	7.6	N8145149			N8145198	N8145212
0.51	orange / yellow	9.5	N8145150			N8145199	N8145213
0.57	white / yellow	11	N8145151			N8145200	N8145214
0.64	orange / white	14	N8145152			N8145201	N8145215
0.76	black / black	19	N8145153	N8145172	N8145176	N8145202	N8145216
0.89	orange / orange	24	N8145154		N8145177	N8145203	N8145217
0.95	white / black	28	N8145155		N8145178	N8145204	N8145218
1.02	white / white	31	N8145156		N8145179	N8145205	N8145219
1.09	white / red	33	N8145157		N8145180	N8145206	N8145220
1.14	red / red	35	N8145158		N8145181	N8145207	
1.22	red / gray	46	N8145159		N8145182		
1.3	gray / gray	47	N8145160	N8145173	N8145183		
1.42	yellow / yellow	50	N8145161		N8145184		
1.52	yellow / blue	51	N8145162	N8145174	N8145185		
1.65	blue / blue	55	N8145163		N8145186		
1.75	blue / green	58	N8145164		N8145187		
1.85	green / green	61	N8145165		N8145188		
2.06	purple / purple	64	N8145166		N8145189		
2.2	purple / black	65	N8145167		N8145190		
2.54	purple / orange	67	N8145168		N8145191		
2.79	purple / white	69	N8145169		N8145192		
3.17	black / white	70	N8145170	N8145175	N8145193		

Internal Standard Kits

In-line Standard Additions kits, one which includes a glass mixing chamber/combiner for solutions which do not contain HF and another which includes an inert mixing chamber/combiner. Both kits are completely modular so that damaged or worn components can easily be replaced. The heart of the kit is the mixing chamber/combiner. It is designed for zero dead volume on the input ends which accommodate the sample and addition lines. The output end is designed with a small mixing chamber so that the sample and added reagent are intimately mixed prior to introduction to the nebulizer. All connections to the mixing chamber/combiner use EzyFit connectors. A sampling probe for the reagent addition bottle is included so that it remains well anchored in the bottle. In-line addition of internal standards and ionization buffers provides an efficient means of accurately and precisely dosing all of your samples without extra effort or the risk of error or contamination. Internal standardization is often used to compensate for physical and mass-space interferences in ICP spectrometry. In many cases, it also enhances short-term and long-term reproducibility.

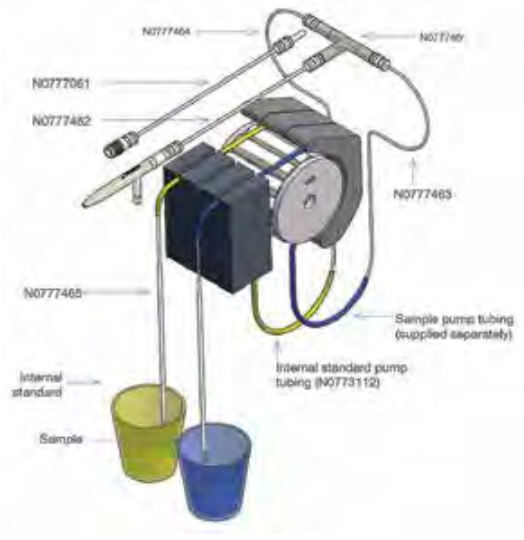
HF-Resistant Internal Standard Kit

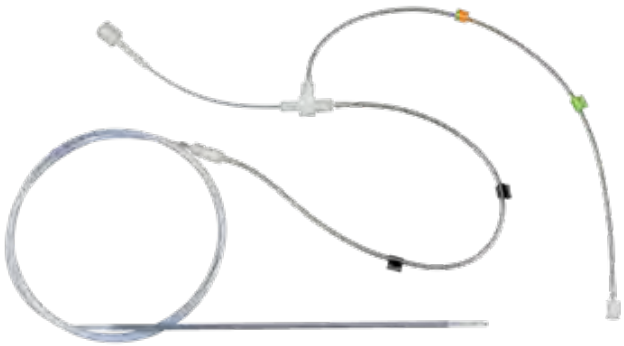
Description	Part No.
HF-Resistant Internal Standard Kit Includes:	**N0774067**
HF Mixing T-Piece	**N0777466**
Internal Standard Sample Probe 0.25 mm ID	**N0777465**
EzyFit Sample Tube 0.5 mm ID	**N0777463**
UniFit-EzyFit Sample Tube	**N0777061**
EzyFit Internal Standard Tube 0.25 mm ID	**N0777464**
Vitex® Gripper Paper – Qty. 6	**N0777848**
Orange/Blue Flared End PVC Tubing 0.25 mm ID – Qty. 12	**N0773112**



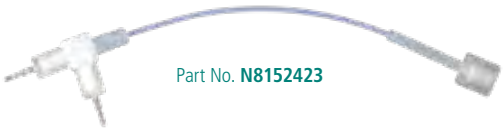
Non HF-Resistant Internal Standard Kit

Description	Part No.
Non HF-Resistant Internal Standard Kit Kit Includes:	**N0774068**
EzyFit Glass Mixing T-piece	**N0777461**
Internal Standard Sample Probe 0.25 mm ID	**N0777465**
EzyFit Sample Tube – Twin	**N0777462**
EzyFit Sample Tube 0.5 mm ID	**N0777463**
EzyFit Internal Standard Tube 0.25 mm ID	**N0777464**
Vitex® Gripper Paper – Qty. 6	**N0777848**
Orange/Blue Flared End PVC Tubing 0.25 mm ID – Qty. 12	**N0773112**
UniFit-EzyFit Sample Tube	**N0777061**





Part No. **N8152571**



Part No. **N8152423**



Part No. **N8152386**

Internal Standard Addition Kits

NexION 1000/ 2000 internal standards kits utilize a low-internal volume mixing tee for in-line addition of internal standard with sample. Utilizing the MP^2 micro peristaltic pump to achieve the highest level of accuracy and precision, the internal standards kit is available for both PFA-ST and MEINHARD® Plus nebulizers.

Includes:

- Fluoropolymer mixing tee (0.5 mm ID)
- Internal standard probes
- Fluoropolymer peripump fittings
- MP^2 peripump tubing

Description	Part No.
Internal Standards Kit for MEINHARD® Plus Nebulizer. Includes PFA Tee, Fittings, IS Probe, SPP Starter Flared Pump Tubing Pack (Orange/Green, Black/Black, Pharmed Gray/Gray)	**N8152421**
Internal Standards Kit for PFA-ST Nebulizer. Includes PFA Tee, Fittings, IS Probe, SPP Starter Flared Pump Tubing Pack (Orange/Green, Black/Black, Pharmed Gray/Gray)	**N8152571**
Organic Solvent IS Kit for Nebulizer. Includes PFA Tee, fittings, IS Probe, SPP Starter Viton Pump Tubing Pack (PVC Orange/Green/ Viton Black/Black, Viton Gray/Gray)	**N8152422**

Internal Standard Addition Tees

NexION 1000/2000 internal standard mixing tee is perfect for online addition of internal standard or online dilution. Achieves excellent mixing with minimal dead volume.

Description	Part No.
Internal Standard Addition Tee 0.5 mm ID (Orange) for PFA-ST Nebulizer	**N8152423**
Internal Standard Addition Tee 0.5 mm ID (Orange) for MEINHARD® Plus Nebulizer	**N8152386**

Fittings

Description	Qty.	Part No.
Black, High-Flow Nut (1/4-28) for *FAST* Valve and 1/16 in. (1.6 mm) Ferrule	10	**N0777283**
White, High-Flow Nut (1/4-28) for *FAST* Valve and 1/8 in. (3.2 mm) Ferrule	10	**N0777297**
1/16 in. (1.6 mm) Ferrule for High-Flow Fitting (1/4-28)	10	**N8145237**
1/8 in. (3.2 mm) Ferrule for High-Flow Fitting (1/4-28)	10	**N8145238**
Black, Low-Flow Nut (M5/10-32) for *FAST* Valve	10	**N0777284**
Female Perilink Fitting, Barbed	1	**N8152388**
Female Perilink Fitting	5	**N0786030**
Male Perilink Fitting, Barbed	1	**N8152453**
Male Perilink Fitting	5	**N0786036**
PFA-ST Nebulizer to Micro Fitting Adapter, PFA	1	**N8145520**
MEINHARD® Plus Nebulizer to Micro Fitting Adapter	1	**N8152387**
Barbed for Low Pressure Applications (Female)	1	**N8145018**
Barbed for High Pressure Applications (Male)	1	**N8145017**
Non-Barbed for Low Pressure Applications (Female)	1	**N0777829**
Non-Barbed for High Pressure Applications (Male)	1	**N0777830**

PerkinElmer Autosampler Supplies



PerkinElmer AS-9x/S10 Sampling Probe Assemblies

Stainless Steel

Description	Part No.
Flame Sampling Probe Assembly, 0.6 mm ID Includes Stainless Steel Sampling Probe and Screw Fitting (**B3000152**) and Flame Capillary (**B3000157** – Replaces **B0196963**) Tubing Assembly	**B3000159**
FIAS™ Sampling Probe Assembly, 0.6 mm ID Includes Stainless Steel Sampling Probe and Screw Fitting (**B3000152**) and FIAS Capillary Tubing Assembly (**B3000158** – Replaces **B0196966**)	**B3000160**
FIAS Standard Sampling Probe Assembly, 1.0 mm ID Includes Stainless Steel Sampling Probe and Screw Fitting (**B3000152**) and FIAS Capillary Tubing Assembly (**B0191060** – Replaces **B0501044**)	**B3000161**

Corrosion-Resistant

Corrosion-resistant probes are suitable for inorganic acids and most organic solvents, except NMP.

Description	Part No.
Flame Sampling Probe Assembly, 0.6 mm ID* Includes Sampling Probe with FEP Tube and Screw Fitting (**B3000055**) and Capillary Tubing Assembly (**B3000157**). Standard with AS93plus/S10	**B3001770**
FIAS Sampling Probe Assembly, 0.6 mm ID* Includes Sampling Probe with FEP Tube and Screw Fitting (**B3000055**) and FIAS Capillary Tubing Assembly (**B3000158**)	**B3001771**
FIAS Standard Sampling Probe Assembly, 1.0 mm ID* Includes Sampling Probe with FEP Tube and Screw Fitting (**B3001769**) and Capillary Tubing Assembly (**B0191060**)	**B3001772**

*This probe cannot be used with AS-90s, with the older sampling probe holder

PTFE

PTFE probes provide laminar flow and are the most resistant to chemical degradation.

Description	Part No.
PTFE Sampling Probe Assembly with Carbon Fiber Support and Female Fitting, 0.25 mm ID for ICP-MS. Requires but does not include **N8145017**	**N8145139**
PTFE Sampling Probe Assembly with Carbon Fiber Support and Female Fitting, 0.5 mm ID for ICP/ICP-MS. Requires but does not include **N8145017**	**N8145140**
PTFE Internal Standard Probe, 0.5mm with Carbon Fiber Support with female nut. Connects to standard addition tee or internal standard line	**N8145344**
PTFE Sampling Probe Assembly with Carbon Fiber Support and Male Screw Fitting, 0.55 mm ID for AA/ICP/ICPMS. For ICP/ICPMS requires but does not include **N8145018***. For AA with a stainless steel nebulizer, the male connect should be removed so that tubing can be directly connected to the nebulizer, no additional tubing is required	**N2024132**
PTFE Flame Sampling Probe Assembly and Male Screw Fitting, 0.8 mm ID for AA. Requires but does not include **B0172053***	**N0777434**
PTFE Flame Sampling Probe Assembly with Carbon Fiber Support and Male Screw Fitting, 1.0 mm ID for FIAS*	**N2024131**

*Keep spare ferrules on hand, **N8145237** Qty. 10



Part No. **B3000152**

Sampling Probe Assembly Components

Description	Part No.
Stainless Steel Sampling Probe with Screw Fitting Requires, but does not include, one of the capillary tubing assemblies described below:	**B3000152**
Flame Capillary Tubing Assembly 1 m Length, 0.6 mm ID, One Fitting (Red)	**B3000157**
FIAS Capillary Tubing Assembly 1 m Length, 0.6 mm ID, Two Fittings (Red)	**B3000158**
FIAS Capillary Tubing Assembly 1 m Length, 1.0 mm ID, Two Fittings (Blue)	**B0191060**
Corrosion-Resistant Probe only 0.6 mm	**B3000055**
Corrosion-Resistant Probe only 1.0 mm	**B3001769**
O-Ring to Hold Probe	**B0172053**
Probe Holder (White Plastic)	**B3000151**

PerkinElmer Autosampler Supplies



PerkinElmer AS-93plus/S10 Sample Racks

Description/Capacity	Sample Vessel Size	Part No.
Tray F – 9/29*[1]	50 mL/15 mL	**B3001647**
Tray E – 90[2]	4.5 mL, 6 mL, 8 mL	**B3140617**
Tray H and Tray F – 60[3]	15 mL, 16 mL	**B3140618**
Tray E, H and Tray G – 21[4]	50 mL	**B3140621**

* AS-93plus/S10 sample trays are polypropylene.

[1] Rack **B3001647** (rinsing-port rack) with rinsing port location (location 0), 8 locations for 50 mL solution containers (calibration and/or test sample solutions) and 29 locations for 15 mL solution containers (test sample solutions)

[2] Rack **B3140617** each with 90 locations for 6 mL and 8 mL solution containers (test sample solutions)

[3] Rack **B3140618** with 60 locations for 15 mL solution containers (test sample solutions)

[4] Rack **B3140621** with 21 locations each for 50 mL solution containers (calibration and/or test sample solutions). Location 0 in the first rack is for the rinsing port

PerkinElmer AS-90/90A/90plus Sample Racks

Description/Capacity	Sample Vessel Size	Part No.
Tray A – 144	4.5 mL, 6 mL, 8 mL	**B3000133**
Tray B – 98*	15 mL, 16 mL	**B3000132**
Blank Tray		**B0501056**

*Polypropylene sample tray

PerkinElmer AS-91 Sample Racks

Description/Capacity	Sample Vessel Size	Part No.
Tray E – 218	4.5 mL, 6 mL, 8 mL	**B0509554**
8 – 50 mL Spots and Tray F – 152 / 8 (160)	15 mL, 16 mL	**B0509555**
Tray G – 55	50 mL	**B0508520**

Trays A, C, E, F and G are powder-coated, corrosion-resistant aluminum

PerkinElmer AS-93plus/S10 Rinsing Kit

Description/Capacity	Part No.
AS-93plus/S10 Rinsing Kit	**B3140236**
Spare Parts	
Rinsing Port	**B3140622**
Adapter M	**B0507919**
Pump Tube – 2.79 mm ID (Pkg. 6) Purple/White	**B3140721**
Pump Tube – 1.14 mm ID (Pkg. 6)	**B3140730**
Tygon® Drain Tube – 2 m Red/Red/Red	**B0018283**
PVC Rinse Liquid Feed Tube – 1 m	**B0048139**
Connector	**B3140715**

Cetac Autosampler Supplies



Cetac Carbon Fiber Autosampler Probes

Description	Part No.
0.5 mm Blue 0.5 mm ID x 108 in. – PTFE	**N0777547**
1.0 mm 2 Blue 1.0 mm ID x 75 in. – PTFE	**N0777568**



Cetac Ultem Autosampler Probes

Description	Part No.
0.5 mm Blue 0.5 mm ID x 108 in. – PTFE	**N0774088**
1.0 mm 2 Blue 1.0 mm ID x 75 in. – PTFE	**N0777565**



Cetac Stainless Steel Autosampler Probe

Description	Part No.
Steel Probe with Screen Tip (100 mesh) Designed for Oil Analysis	**N0771529**

Cetac Autosampler Racks

Rack	Vial Size	Part No.
21-Position, 30.5 mm Square Opening	50 mL	**N0777152**
24-Position, 25.2 mm Square Opening	30 mL	**N0777151**
40-Position, 20.6 mm Square Opening	20 mL	**N0777150**
30-Position Tall Rack, Square Opening	14 mL	**N0777062**
40-Position/Gilson 29	20 mL	**N0777155**
45-Position/120 cc Round Opening (Oils)		**N0777298**
60-Position, 17.0 mm Square Opening	14 mL or 15 mL	**N0777149**
80-Position, Collection Metal for Oil	15 mL	**N0774085**
90-Position, Round Opening	2 mL	**N0777717**
90-Position, 13.5 mm Square Opening	7 mL or 8 mL	**N0777148**
90-Position, 13.3 mm Round Opening	7 mL or 8 mL	**N0777153**
90-Position, 13 mm Collection Metal for Oil	8 mL	**N0777154**
96-Position, 13 mm Collection Metal for Oil	15 mL	**N0777368**

ESI Autosampler Supplies



Part No. **N0777225**



Part No. **N0777214**

ESI Autosampler Probes

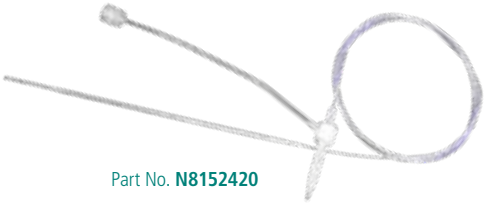
Description	Part No.
Carbon Fiber Autosampler Probes for ST Nebulizers	
Autosampler Probe, 0.15 mm, Capillary Length 80 cm	**N0777221**
Autosampler Probe, 0.2 mm, Capillary Length 80 cm	**N0777222**
Autosampler Probe, 0.25 mm, Capillary Length 80 cm	**N0777223**
Autosampler Probe, 0.25 mm, Capillary Length 150 cm	**N0777826**
Autosampler Probe, 0.3 mm, Capillary Length 80 cm	**N0777224**
Autosampler Probe, 0.5 mm, Capillary Length 80 cm	**N0777225**
Autosampler Probe, 0.5 mm, Capillary Length 150 cm	**N0777827**
Autosampler Probe, 0.8 mm, Capillary Length 80 cm	**N0777226**
Sample Probes	
High Flow, Carbon Fiber Support, 0.8 mm ID (Blue)	**N0777285**
Sample Probe Line Holder	**N0777227**
Carrier Probes	
High Flow, Carbon Fiber Support, 0.5 mm ID (Orange)	**N0777286**

PFA MicroFlow Nebulizers with Integrated Autosampler Probes (carbon fiber support)

ICP Model	Description	Part No.
Optima/Avio/NexION 350	PFA-20 PFA, Capillary Length 80 cm	**N0777214**
NexION 1000/2000	PFA-20 PFA, Capillary Length 80 cm	**N8152587**
Optima/Avio/NexION 350	PFA-50 PFA, Capillary Length 80 cm	**N0777215**
NexION 1000/2000	PFA-50 PFA, Capillary length 80 cm	**N8152588**
Optima/Avio/NexION 350	PFA-100 PFA, Capillary Length 100 cm	**N0777216**
NexION 1000/2000	PFA-100 PFA, Capillary Length 100 cm	**N8152589**
Optima/Avio/NexION 350	PFA-200 PFA, Capillary Length 100 cm	**N0777217**
NexION 1000/2000	PFA-200 PFA, Capillary Length 100 cm	**N8152590**
Optima/Avio/NexION 350	PFA-400 PFA, Capillary Length 100 cm	**N0777218**
NexION 1000/2000	PFA-400 PFA, Capillary Length 100 cm	**N8152591**



Part No. **N8145504**



Part No. **N8152420**

Additional ESI Autosampler Probes

Description	Part No.
PFA *FAST* Sample Probe for High-flow *FAST* Valve, 1.0 mm ID (Gray), 150 cm	**N0777522**
PFA *FAST* Sample Probe for High-flow *FAST* Valve, 0.8 mm ID (Blue), 150 cm	**N0777523**
PFA *FAST* Carrier / Probe *FAST* Valve, 0.5 mm ID (Orange), 150 cm	**N0777286**
PFA Internal Standard Probe for use with Standard Addition Tee 0.5 mm ID (Orange), 150 cm	**N8145344**
Sample Probe with Ultem Support, 0.5 mm ID (Orange). Includes Fluoropolymer Micro Fitting	**N8145504**
Internal Standard Probe with Carbon Fiber Support for NexION 2000, 0.5 mm ID (Orange), 150 cm. Includes Fluoropolymer Micro Fitting	**N8152452**

PFA MicroFlow Nebulizers with Integrated Autosampler Probes (Ultem Support)

ICP Model	Description	Part No.
Optima/Avio/NexION 350	PFA-20 PFA, Capillary Length 100 cm	**N8145141**
NexION 1000/2000	PFA-20 PFA, Capillary Length 100 cm	**N8152592**
Optima/Avio/NexION 350	PFA-50 PFA, Capillary Length 100 cm	**N8145142**
NexION 1000/2000	PFA-50 PFA, Capillary Length 100 cm	**N8152593**
Optima/Avio/NexION 350	PFA-100 PFA, Capillary Length 100 cm	**N8145143**
NexION 1000/2000	PFA-100 PFA, Capillary Length 100 cm	**N8152594**
Optima/Avio/NexION 350	PFA-200 PFA, Capillary Length 100 cm	**N8145144**
NexION 1000/2000	PFA-200 PFA, Capillary Length 100 cm	**N8152420**
Optima/Avio/NexION 350	PFA-400 PFA, Capillary Length 100 cm	**N8145275**
NexION 1000/2000	PFA-400 PFA, Capillary Length 100 cm	**N8152595**

ESI Autosampler Racks and Rack Covers



Part No. **N8145131**



Part No. **N0777231**



Part No. **N0777822**

Description	Size	Diameter	Part No.
Standard Racks			
5-Position Priority Samples Rack for 8 mL, 15 mL, 50 mL, 125 mL and 250 mL Bottles. Fits over DX Rinse Station		60 mm	**N8145317**
5-Position Extra Standards Rack for 3x 50mL Tubes and 2x 250 mL Bottles. Fits over DX Rinse Station		60 mm	**N0782019**
7-Position for 250 mL Bottles. For 4DX Autosampler only		60 mm	**N8122464**
9-Position for 125 mL Bottles. Recommended for prep*FAST*. For 4DX Autosampler only		50 mm	**N0777771**
9-Position for 125 mL Bottles. Recommended for prep*FAST*. For 2DX Autosampler only		50 mm	**N0777772**
10-Position Standards Rack for 20 mL and 50 mL Tubes		28 mm	**N0777228**
10-Position for 30 mL and 60 mL Tubes		31 mm	**N8145131**
Micro Racks			
10-Position Micro Sample Rack for 15 mL and 30 mL Tubes		30 mm	**N8122463**
10-Position for Gemetec/Cetac ASX-100's Racks	2 x 5	61 mm	**N0777253**
21-Position	3 x 7	14 mm	**N0777229**
24-Position	4 x 6	14 mm	**N0777234**
40-Position	4 x 10	14 mm	**N0777230**
60-Position	5 x 12	8 mm	**N0777231**
90-Position	5 x 12	8 mm	**N0777232**
Adapter Plate to adapt Gemetec Rack to ESI DX Autosampler			**N0777235**
Cover for Micro Racks			**N0777233**
Large Racks			
21-Position for 50 mL and 60 mL Tubes	3 x 7	30 mm	**N0777242**
21-Position for 50 mL and 60 mL Tubes – Metal		30 mm	**N0777641**
40-Position	4 x 10	20 mm	**N0777243**
60-Position for 15 mL Tubes – Metal		16 mm	**N0777642**
60-Position	5 x 12	16 mm	**N0777244**
90-Position for 8 mL Tubes – Metal		13 mm	**N0777643**
90-Position 3 Tier for 8 mL Tubes – Metal		13 mm	**N0777644**
90-Position	6 x 15	13 mm	**N0777245**

Description	Size	Diameter	Part No.
Super Racks			
12-Position for 125 mL Bottles. For 2DX Autosampler only	2 x 6	50 mm	**N0777252**
15-Position Super Sample Rack for 250 mL Bottles. For 4DX Autosampler only		60 mm	**N0777823**
20-Position Super Sample Rack for 125 mL Bottles. For 4DX Autosampler only		50 mm	**N0777822**
21-Position. For 2DX Autosampler only	3 x 7	22 mm	**N0777251**
21-Position. For 2DX Autosampler only	3 x 7	28 mm	**N0777250**
21-Position. For 2DX Autosampler only	3 x 7	30 mm	**N0777249**
27-Position. For 2DX Autosampler only	3 x 9	28 mm	**N0777248**
27-Position Super Sample Rack for 30 mL and 60 mL Tubes. For 2DX Autosampler only		31 mm	**N8145130**
60-Position Super Sample Rack for 1 mL, 2 mL and 4 mL Tubes. For 2DX and 4DX Autosamplers		14 mm	**N0777397**
Cover for 60-Position Super Rack			**N0777398**
80-Position. For 2DX Autosampler only	5 x 16	16 mm	**N0777247**

Microtiter Plates

Description	Qty.	Part No.
24 Well, 10 mL, Square Well, Pyramid Bottom	5	**N0777236**
48 Well, 5 mL, Square Well, Pyramid Bottom	5	**N0777237**
48 Well, 7.5 mL, Square Well, Pyramid Bottom	3	**N0777238**
96 Well, 500 µL, Polystyrene	2	**N8145354**
96 Well, 2 mL, Square Well, Pyramid Bottom	5	**N0777239**
X-Piercing Film Cover for 96 Well Microtiter Plate	25	**N8145129**



Part No. **N0777639**

Heated Racks

Description	Size	Part No.
21-Position for 50 mL and 60 mL Tubes – Heated	30 mm	**N0777639**
60-Position for 15 mL Tubes – Heated	16 mm	**N0777640**

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Autosampler Tubes

PerkinElmer translucent polypropylene tubes are designed to provide excellent chemical resistance. PerformR™ 15 mL and 50 mL conical tubes are designed for your routine everyday applications and storage needs. SuperClear™ tubes are made from a unique medical grade resin.



Round Bottom Tubes



Description	Type	Size	Pack	Qty	Part No.
5 mL without Caps	Standard	12 mm x 75 mm	Bulk	500	**B0193235**
8 mL without Caps	Standard	13 mm x 100 mm	Bulk	1200	**N0777156**
8 mL without Caps	Standard	13 mm x 100 mm	250/Bag	1000	**N0777159**
8 mL without Caps	Standard	13 mm x 100 mm	Bulk	1000	**B0508901**
14 mL without Caps	Standard	17 mm x 100 mm	Bulk	1000	**N0777940**
14 mL with Dual-Position, Polyethylene Caps Included	Standard	17 mm x 100 mm	Bulk	1000	**N0777941**
Dual-Position Caps for 14 mL, **N0777940** Tubes (Clear) Caps Only	Standard		Bulk	1000	**N0777942**
14 mL without Caps	Standard	17 mm x 100 mm	250/Bag	1000	**N0777168**
15 mL without Plugs	Standard	17 mm x 100 mm	Bulk	1200	**N0777167**
Plugs for 15 mL **N0777167** Tubes, (Blue) Plugs Only	Standard		Bulk	1200	**N0777599**
15 mL **Graduated** without Plugs	Standard	17 mm x 100 mm	Bulk	2000	**N0777099**
16 mL without Caps	Standard	17 mm x 100 mm	250/Bag	1000	**N9301205**

Conical Bottom Tubes with Graduation



Description	Type	Size	Pack	Qty	Part No.
15 mL with Red Flat Caps, (Standard PerkinElmer S10 Tubes)	Standard	17 mm x 120 mm	50/Bag	500	**B0193233**
15 mL Sterile Tubes, with Teal Flat Caps Attached	Sterile	17 mm x 118 mm	50/Bag	500	**N0774095**
15 mL Metal Free Sterile Tubes with White Flat Caps	Sterile	17 mm x 118 mm	50/Bag	500	**N0776117**
15 mL Metal Free Sterile Tubes Racked with White Flat Caps	Sterile	17 mm x 118 mm	25/Rack	500	**N0776118**
15 mL with Teal Flat Caps Attached	SuperClear	17 mm x 118 mm	50/bag	500	**N0777701**
15 mL with Teal Flat Caps Attached	SuperClear	17 mm x 118 mm	Racked 50/Bag	500	**N0777702**
15 mL with Teal Flat Caps Attached	SuperClear	17 mm x 118 mm	Bulk	500	**N0777703**
15 mL with Teal Flat Caps Attached	SuperClear	17 mm x 118 mm	50/Bag	500	**N0777704**
15 mL with Teal Flat Caps Attached	SuperClear		Racked 50/Bag	500	**N0777705**
15 mL with Teal Plug Caps	SuperClear	17 mm x 118 mm	Bulk	500	**N0777706**
50 mL with Red Flat Caps Attached, (Standard PerkinElmer S10 Tubes), Freestanding	Standard	28 mm x 115 mm	25/Bag	500	**B0193234**
50 mL with Red Flat Caps Attached	Standard	28 mm x 114 mm	25/Bag	300	**N0777901**
50 mL with Teal Flat Caps Attached, Freestanding	PerformR	30 mm x 116 mm	50/Bag	500	**N0777697**
50 mL with Teal Flat Caps Attached, Freestanding	PerformR	30 mm x 116 mm	Bulk	500	**N0777698**
50 mL with Teal Plug Caps Attached, Freestanding	PerformR	30 mm x 116 mm	50/Bag	500	**N0777699**
50 mL with Teal Plug Caps Included, Freestanding	PerformR	30 mm x 116 mm	Bulk	500	**N0777700**
50 mL Sterile Tubes with Teal Flat Caps Attached	Sterile	29 mm x 115 mm	50/Bag	500	**N0774096**
50 mL Metal Free Sterile Tubes with White Flat Caps	Sterile	29 mm x 115 mm	50/Bag	500	**N0776115**
50 mL Metal Free Sterile Tubes Racked with White Flat Caps	Sterile	30 mm x 116 mm	25/Rack	500	**N0776116**
50 mL with Teal Flat Caps Attached	SuperClear	29 mm x 115 mm	50/Bag	500	**N0777691**
50 mL with Teal Flat Caps Attached	SuperClear	29 mm x 115 mm	Racked 50/Bag	500	**N0777692**
50 mL with Teal Flat Caps Included	SuperClear	29 mm x 115 mm	Bulk	500	**N0777693**
50 mL with Teal Plug Caps Attached	SuperClear	29 mm x 115 mm	50/Bag	500	**N0777694**
50 mL with Teal Plug Caps Attached	SuperClear	29 mm x 115 mm	Racked 50/Bag	500	**N0777695**
50 mL with Teal Plug Caps Included	SuperClear	29 mm x 115 mm	Bulk	500	**N0777696**

PFA Sample Vessels



Description	Qty	Part No.
1 mL, 14 mm OD Graduated PFA Micro Vial	10	N0777403
2 mL, 14 mm OD Graduated PFA Micro Vial	10	N0777404
4 mL, 14 mm OD Graduated PFA Micro Vial	10	N0777405
PFA Snap-On Cap for 14 mm Graduated PFA Micro Vials	10	N0777393
PFA Cap with Knob for 14 mm Graduated PFA Micro Vials	10	N0777392
ETFE Tweezers for Removal of PFA Cap with Knob	1	N0777396

PVDF Autosampler Vials



Description	Qty	Part No.
2 mL PVDF Vial	10	N8145473
2 mL PVDF Vial	100	N8145474
2 mL PVDF Vial	1000	N8145475
2 mL Pre-Cleaned PVDF Vial	100	N8145352

PFA Bottles, Vials and Caps





Description	Qty	Part No.
15 mL, 30 mm OD Graduated PFA Vial	10	N8145132
30 mL, 30 mm OD Graduated PFA Vial	10	N8145133
60 mL, 30 mm OD Graduated PFA Vial	10	N8145134
Screw Cap for 30 mm OD Vials	10	N8145105
10 mL, 16 mm OD Graduated PFA Tubes	10	N8145348
PFA Insert Cap for 16 mm PFA Tube, Knurled Grip	10	N8145349
PFA Septum Pierce Cap for 16 mm PFA Tube (PFA-T16), Knurled Grip	10	N8145350
PFA Sheet for Septum Pierce Cap with 16 mm PFA Tube	100	N8145351
PFA Cap for 14 mm Micro Vials	10	N0777402
PFA Cap for 14 mm Micro Vials	100	N8145476
Pre-Cleaned PFA Cap for 14 mm Vials	100	N8145353
20 mL, 28 mm OD PFA Bottle and Cap	5	N0777406
125 mL, 50 mm OD PFA Bottle and Cap with TFM Insert	1	N0777407

Non-PFA Bottles and Vials





Description	Qty	Part No.
20 mL, 20 mm OD Polypropylene Tube with Screw Cap	50	N8145079
20 mL, 20 mm OD Polypropylene Tube with Screw Cap	500	N0777815
8 mL, 13 mm OD Polypropylene Tube with Rounded Bottom	90	N8145125
8 mL, 13 mm OD Polypropylene Tube with Rounded Bottom	500	N0777814
0.5 mL, 8 mm OD Centrifuge Tube	100	N8121043
0.5 mL, 8 mm OD Centrifuge Tube	500	N0777813
4 L, Polypropylene Rinse Container with Filtered Air Inlet	1	N0777258
250 mL, 61 mm OD Polyethylene Wide Mouth Bottle	12	N0777818
250 mL, 61 mm OD Polyethylene Wide Mouth Bottle	100	N0777819
125 mL, 50 mm OD Polyethylene Bottle with Screw Cap	12	N0777820
125 mL, 50 mm OD Polyethylene Bottle with Screw Cap	24	N0777821

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Instrument Benches and Accessory Carts



NexION 350 Bench with
Optional Monitor Arm



Avio 200/500 Bench
Part No. **N0782060**

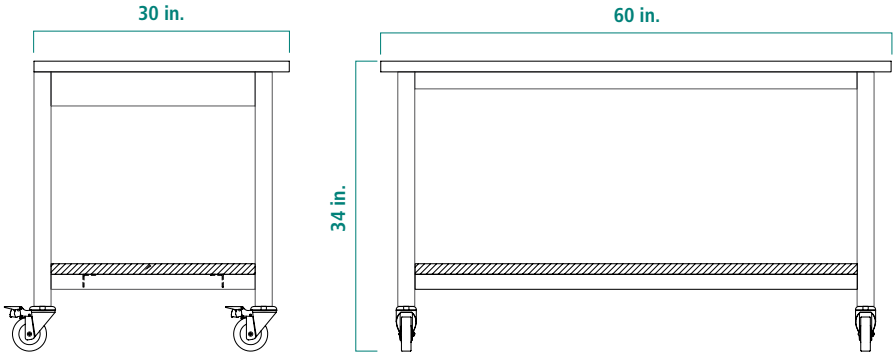


NexION 1000/2000 Bench
Part No. **N8142011**

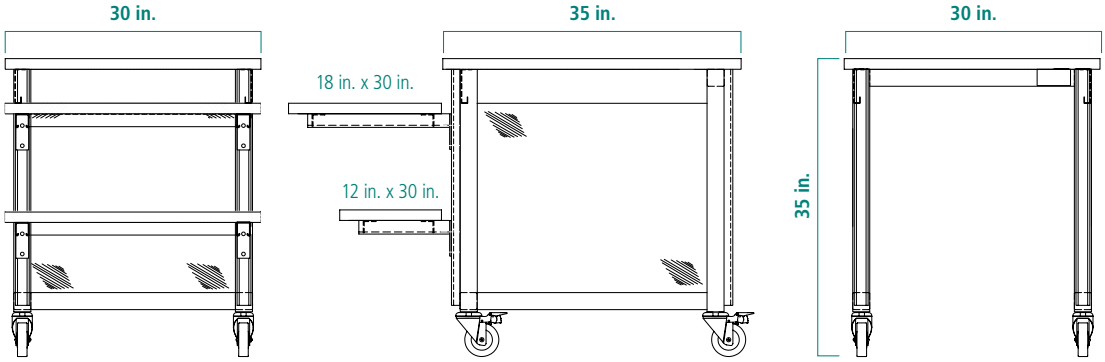
A Customized Approach

Lab space is precious and it can be a challenge to find room for a new instrument or accessory. To make the transition easier, we've customized every bench we offer for your instrument and accessory configuration, enabling you to use your lab space to its full potential. Whether you're making room for a new instrument or replacing an old system, we have a bench solution for you.

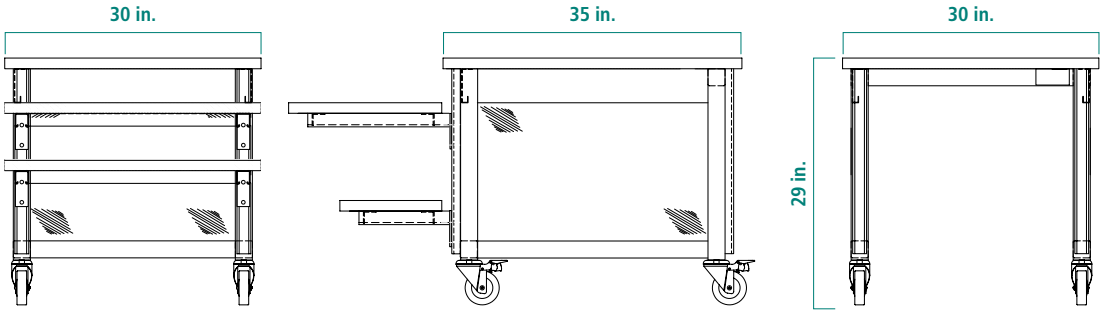
Dimensions (Depth x Width x Height – inches)	Model	Product Line	Part No.
30 x 60 x 34	PinAAcle 500/900	AA	**N0777783**
30 x 35 x 35	Avio 200/500	ICP-OES	**N0782060**
30 x 60 x 35 33 x 21	Optima Basic Optional Large Shelf for Optima Basic Bench (Shelf Only)	ICP-OES ICP-OES	**N0773106** **N0777930**
30 x 60 x 35	Optima Advanced	ICP-OES	**N0771725**
30 x 35 x 29	NexION 1000/2000 Bench Not Including Vacuum Pump Dolly NexION 1000/2000 Vacuum Pump Dolly Only	ICP-MS ICP-MS	**N8142011** **N8142012**
30 x 60 x 29	NexION 350 Bench Including Vacuum Pump Dolly NexION 350 Vacuum Pump Dolly Only	ICP-MS ICP-MS	**N8141230** **N8121069**
26	Monitor Arm for Optima Advanced or NexION 350 Bench	ICP-OES/ICP-MS	**N0771726**
32 x 30 x 29	Titan MPS	AA/ICP-OES/ICP-MS	**N0777900**
16 x 19 x 34	Accessory Cart	Various	**N0777784**
16 x 22 x 34	Accessory Cart	Various	**N0777785**



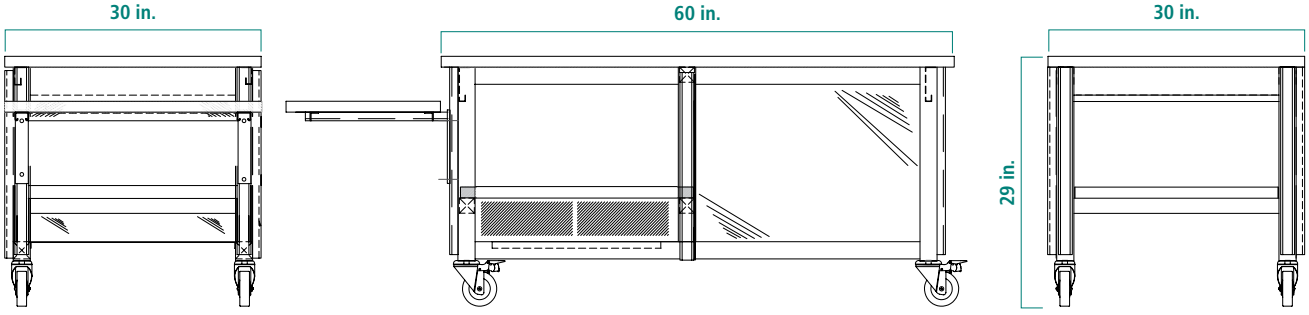
PinAAcle Bench Part No. **N077783**
shown as depth/width/height



Avio 200/500 Bench Part No. **N0782060**
shown as depth/width/height



NexION 1000/2000 Bench Part No. **N8142011**
shown as depth/width/height



NexION 350 Bench Part No. **N8141230**
shown as depth/width/height

Reference Materials

PerkinElmer offers a complete selection of Atomic Spectroscopy reference materials. Each solution is supplied with a comprehensive Certificate of Analysis that documents the quality and reliability.

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PerkinElmer is a leading provider of Atomic Spectroscopy solutions. We've used our expertise to bring you a portfolio of the highest quality standards to enhance your instrument performance. From our Pure and Pure Plus Inorganic Aqueous Standards to our Metallo-Organic Standards, inside this guide you will find a range of standards that are certified and tested to provide you the quality and reliability you expect, for all your application needs.

At PerkinElmer, we're committed to helping you achieve success for your laboratory – starting with the standards you use everyday.

Aqueous Standards

PerkinElmer offers a wide selection of PerkinElmer Pure and Pure Plus Aqueous Standards for all of your application needs.



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Metallo-Organic Standards

PerkinElmer offers a wide selection of Metallo-Organic Standards for all of your application needs.



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Single Cell Sample Introduction Kit

The Single Cell Application Module within PerkinElmer's Syngistix™ for ICP-MS software is the ideal tool for laboratories analyzing metal content in cells, either from bioaccumulation of metals or metallic nanoparticles in solution or measuring the intrinsic metal content of the cell.



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Single-Element Standards



We understand how important standards are to your laboratory. That's why we offer a complete selection of PerkinElmer Pure (AA and ICP-OES) and Pure Plus (ICP-MS) grade Standards supplied with a comprehensive Certificate of Analysis. Each solution is certified to provide you with the quality and reliability you expect, every time.

We offer 1 µg/mL, 10 µg/mL, 1,000 µg/mL and 10,000 µg/mL single-element standards in a variety of volumes and purity levels.

Single-Element Standards – 1,000 µg/mL

Element	Symbol	Matrix	Pure Grade 125 mL Part No.	Pure Grade 500 mL Part No.	Pure Plus Grade 125 mL Part No.
Aluminum	Al	2% HNO_3	**N9300184**	**N9300100**	**N9303726**
Antimony	Sb	2% HNO_3		**N9300101**	
Antimony	Sb	H_2O/0.6% Tart. Acid/Tr. HNO_3	**N9300207**		**N9303750**
Arsenic	As	2% HNO_3	**N9300180**	**N9300102**	**N9303727**
Barium	Ba	2% HNO_3	**N9300181**	**N9300103**	**N9303729**
Beryllium	Be	2% HNO_3	**N9300172**	**N9300104**	**N9303730**
Bismuth	Bi	10% HNO_3	**N9303761**	**N9300105**	**N9303731**
Boron	B	H_2O	**N9303760**	**N9300106**	
Cadmium	Cd	2% HNO_3	**N9300176**	**N9300107**	**N9303734**
Calcium	Ca	2% HNO_3	**N9303763**	**N9300108**	**N9303733**
Carbon	C	H_2O	**N9303762**	**N9300109**	
Cerium	Ce	2% HNO_3	**N9303765**	**N9300110**	
Cesium	Cs	2% HNO_3	**N9303767**	**N9300111**	
Chromium	Cr	2% HNO_3	**N9300173**	**N9300112**	**N9303736**
Cobalt	Co	2% HNO_3	**N9303766**	**N9300113**	**N9303735**
Copper	Cu	2% HNO_3	**N9300183**	**N9300114**	**N9303737**
Dysprosium	Dy	2% HNO_3	**N9303768**	**N9300115**	
Erbium	Er	2% HNO_3	**N9303769**	**N9300116**	
Europium	Eu	2% HNO_3	**N9303770**	**N9300117**	
Gadolinium	Gd	2% HNO_3	**N9303773**	**N9300118**	
Gallium	Ga	2% HNO_3	**N9303772**	**N9300119**	
Germanium	Ge	H_2O/0.16% F-	**N9303774**	**N9300120**	
Gold	Au	10% HCl	**N9303759**	**N9300121**	
Hafnium	Hf	2% HCl	**N9303775**	**N9300122**	
Holmium	Ho	2% HNO_3	**N9303776**	**N9300123**	
Indium	In	2% HNO_3	**N9303777**	**N9300124**	
Iridium	Ir	10% HCl	**N9303778**	**N9300125**	
Iron	Fe	2% HNO_3	**N9303771**	**N9300126**	**N9303738**
Lanthanum	La	2% HNO_3	**N9303780**	**N9300127**	
Lead	Pb	2% HNO_3	**N9300175**	**N9300128**	**N9303748**
Lithium	Li	2% HNO_3	**N9303781**	**N9300129**	
Lutetium	Lu	2% HNO_3	**N9303782**	**N9300130**	
Magnesium	Mg	2% HNO_3	**N9300179**	**N9300131**	**N9303743**
Manganese	Mn	2% HNO_3	**N9303783**	**N9300132**	**N9303744**
Mercury	Hg	10% HNO_3	**N9300174**	**N9300133**	**N9303740**
Molybdenum	Mo	H_2O	**N9303784**	**N9300134**	**N9303745**

Element	Symbol	Matrix	Pure Grade 125 mL Part No.	Pure Grade 500 mL Part No.	Pure Plus Grade 125 mL Part No.
Neodymium	Nd	2% HNO_3	**N9303787**	**N9300135**	
Nickel	Ni	2% HNO_3	**N9300177**	**N9300136**	**N9303747**
Niobium	Nb	H_2O/0.4% HF	**N9303786**	**N9300137**	
Palladium	Pd	10% HCl	**N9303789**	**N9300138**	
Phosphorus	P	H_2O	**N9303788**	**N9300139**	
Platinum	Pt	10% HCl	**N9303791**	**N9300140**	
Potassium	K	2% HNO_3	**N9303779**	**N9300141**	**N9303742**
Praseodymium	Pr	2% HNO_3	**N9303790**	**N9300142**	
Rhenium	Re	H_2O	**N9303793**	**N9300143**	
Rhodium	Rh	10% HCl	**N9303794**	**N9300144**	
Rubidium	Rb	2% HNO_3	**N9303792**	**N9300145**	
Ruthenium	Ru	10% HCl	**N9303795**	**N9300146**	
Samarium	Sm	2% HNO_3	**N9303800**	**N9300147**	
Scandium	Sc	2% HNO_3	**N9303798**	**N9300148**	
Selenium	Se	2% HNO_3	**N9300182**	**N9300149**	**N9303752**
Silicon	Si	H_2O/0.4% F-	**N9303799**	**N9300150**	
Silver	Ag	2% HNO_3	**N9300171**	**N9300151**	**N9303725**
Sodium	Na	2% HNO_3	**N9303785**	**N9300152**	**N9303746**
Strontium	Sr	2% HNO_3	**N9303802**	**N9300153**	
Sulfur	S	H_2O	**N9303796**	**N9300154**	
Tantalum	Ta	H_2O/0.8% HF	**N9303803**	**N9300155**	
Tellurium	Te	10% HNO_3	**N9304385**	**N9304384**	
Terbium	Tb	2% HNO_3	**N9303804**	**N9300157**	
Tin	Sn	20% HCl	**N9303801**	**N9300161**	
Tin	Sn	1% HNO_3/1% HF			**N9303838**
Thallium	Tl	2% HNO_3	**N9300170**	**N9300158**	**N9303755**
Thorium	Th	2% HNO_3			**N9303842**
Thulium	Tm	2% HNO_3	**N9303807**	**N9300160**	
Titanium	Ti	H_2O/0.24% F-	**N9303806**	**N9300162**	**N9303754**
Tungsten	W	H_2O	**N9303809**	**N9300163**	
Uranium	U	2% HNO_3			**N9303844**
Vanadium	V	2% HNO_3	**N9303808**	**N9300165**	**N9303756**
Ytterbium	Yb	2% HNO_3	**N9303811**	**N9300166**	
Yttrium	Y	2% HNO_3	**N9303810**	**N9300167**	
Zinc	Zn	2% HNO_3	**N9300178**	**N9300168**	**N9303758**
Zirconium	Zr	2% HNO_3	**N9303812**	**N9300169**	

Single-Element Pure Plus ICP-MS Grade Standards – 1 µg/mL

Element	Symbol	Matrix	Pure Plus Grade 125 mL Part No.
Aluminum	Al	2% HCl	**N9304200**
Aluminum	Al	2% HNO_3	**N9304201**
Antimony	Sb	5% HCl	**N9304202**
Antimony	Sb	H_2O/Tr. HNO_3/Tr. Tart	**N9304203**
Arsenic	As	2% HCl	**N9304204**
Arsenic	As	2% HNO_3	**N9304205**
Barium	Ba	2% HCl	**N9304206**
Barium	Ba	2% HNO_3	**N9304207**
Beryllium	Be	2% HNO_3	**N9304208**
Bismuth	Bi	2% HNO_3	**N9304209**
Boron	B	H_2O	**N9304210**
Cadmium	Cd	2% HCl	**N9304211**
Cadmium	Cd	2% HNO_3	**N9304212**
Calcium	Ca	2% HCl	**N9304213**
Calcium	Ca	2% HNO_3	**N9304214**
Carbon	C	H_2O	**N9304215**
Cerium	Ce	2% HNO_3	**N9304216**
Cesium	Cs	2% HNO_3	**N9304217**
Chromium	Cr	2% HCl	**N9304218**
Chromium	Cr	5% HNO_3	**N9304219**
Chromium	Cr	H_2O	**N9304220**
Cobalt	Co	2% HCl	**N9304221**
Cobalt	Co	2% HNO_3	**N9304222**
Copper	Cu	2% HCl	**N9304223**
Copper	Cu	2% HNO_3	**N9304224**
Dysprosium	Dy	2% HNO_3	**N9304225**
Erbium	Er	2% HNO_3	**N9304226**
Europium	Eu	2% HNO_3	**N9304227**
Gadolinium	Gd	2% HNO_3	**N9304228**
Gallium	Ga	2% HNO_3	**N9304229**
Germanium	Ge	H_2O	**N9304230**
Gold	Au	1% HNO_3/3% HCL	**N9304231**
Hafnium	Hf	2% HCl	**N9304232**
Holmium	Ho	2% HNO_3	**N9304233**
Indium	In	2% HNO_3	**N9304234**
Iridium	Ir	2% HCl	**N9304235**
Iron	Fe	2% HCl	**N9304236**
Iron	Fe	2% HNO_3	**N9304237**
Lanthanum	La	2% HNO_3	**N9304238**
Lead	Pb	2% HNO_3	**N9304239**
Lithium	Li	2% HCl	**N9304240**
Lithium	Li	2% HNO_3	**N9304241**
Lutetium	Lu	2% HNO_3	**N9304242**
Magnesium	Mg	2% HCl	**N9304243**
Magnesium	Mg	2% HNO_3	**N9304244**
Manganese	Mn	2% HNO_3	**N9304245**

Element	Symbol	Matrix	Pure Plus Grade 125 mL Part No.
Mercury	Hg	2% HNO_3	**N9304246**
Potassium	K	2% HCl	**N9304247**
Potassium	K	2% HNO_3	**N9304248**
Molybdenum	Mo	H_2O	**N9304249**
Niobium	Nb	H_2O/tr HF	**N9304250**
Neodymium	Nd	2% HNO_3	**N9304251**
Nickel	Ni	2% HNO_3	**N9304252**
Palladium	Pd	2% HCl	**N9304253**
Phosphorus	P	H_2O	**N9304254**
Platinum	Pt	2% HCl	**N9304255**
Praseodymium	Pr	2% HNO_3	**N9304256**
Rubidium	Rb	2% HNO_3	**N9304257**
Rhenium	Re	H_2O	**N9304258**
Rhodium	Rh	2% HCl	**N9304259**
Ruthenium	Ru	2% HCl	**N9304260**
Samarium	Sm	2% HNO_3	**N9304261**
Scandium	Sc	2% HNO_3	**N9304262**
Selenium	Se	2% HNO_3	**N9304263**
Silicon	Si	H_2O/Tr. F-	**N9304264**
Silver	Ag	2% HNO_3	**N9304265**
Sodium	Na	2% HCl	**N9304266**
Sodium	Na	2% HNO_3	**N9304267**
Strontium	Sr	2% HCl	**N9304268**
Strontium	Sr	2% HNO_3	**N9304269**
Sulfur	S	H_2O	**N9304270**
Tantalum	Ta	H_2O/tr HF	**N9304271**
Tellurium	Te	5% HCl	**N9304272**
Tellurium	Te	5% HNO_3	**N9304273**
Terbium	Tb	2% HNO_3	**N9304274**
Thallium	Tl	2% HNO_3	**N9304275**
Thorium	Th	2% HNO_3	**N9304276**
Thulium	Tm	2% HNO_3	**N9304277**
Tin	Sn	5% HCl	**N9304278**
Tin	Sn	2% HNO_3/tr HF	**N9304279**
Titanium	Ti	H_2O/tr HF	**N9304280**
Tungsten	W	2% HNO_3/tr HF	**N9304281**
Tungsten	W	H_2O	**N9304282**
Uranium	U	2% HNO_3	**N9304283**
Vanadium	V	2% HCl	**N9304284**
Vanadium	V	2% HNO_3	**N9304285**
Ytterbium	Yb	2% HNO_3	**N9304286**
Yttrium	Y	2% HNO_3	**N9304287**
Zinc	Zn	2% HCl	**N9304288**
Zinc	Zn	2% HNO_3	**N9304289**
Zirconium	Zr	2% HCl	**N9304290**
Zirconium	Zr	2% HNO_3	**N9304291**

Single-Element Pure Plus ICP-MS Grade Standards – 10 µg/mL

Element	Symbol	Matrix	Pure Plus Grade 125 mL Part No.
Bismuth	Bi	2% HNO_3	**N9303731**
Germanium	Ge	H_2O tr HF	**N9303739**
Indium	In	2% HNO_3	**N9303741**
Rhodium	Rh	2% HCl	**N9303749**
Scandium	Sc	2% HNO_3	**N9303751**
Terbium	Tb	2% HNO_3	**N9303753**
Yttrium	Y	2% HNO_3	**N9303757**

Single-Element Pure Standards – 10,000 µg/mL

Element	Symbol	Matrix	Pure Plus Grade 125 mL Part No.	Pure Grade 500 mL Part No.
Aluminum	Al	5% HNO_3	**N9304111**	**N9304110**
Antimony	Sb	20% HCl		**N9304292**
Antimony	Sb	H_2O/Tartaric Acid/Tr HNO_3	**N9304293**	**N9304294**
Arsenic	As	5% HNO_3	**N9304295**	**N9304296**
Barium	Ba	5% HNO_3	**N9304297**	**N9304298**
Beryllium	Be	5% HNO_3	**N9304299**	**N9304300**
Boron	B	H_2O	**N9304301**	**N9304302**
Cadmium	Cd	5% HNO_3	**N9304303**	**N9304304**
Calcium	Ca	5% HNO_3	**N0691581**	**N9303764**
Cerium	Ce	5% HNO_3	**N9304305**	**N9304306**
Cesium	Cs	5% HNO_3	**N9304307**	**N9304308**
Chromium	Cr	5% HNO_3	**N9304309**	**N9304311**
Chromium	Cr	5% HCl		**N9304310**
Chromium	Cr	H_2O		**N9304312**
Cobalt	Co	5% HNO_3	**N9304313**	**N9304314**
Copper	Cu	5% HNO_3	**N9304112**	**N9300283**
Erbium	Er	5% HNO_3		**N9304315**
Gadolinium	Gd	5% HNO_3	**N9304316**	**N9304317**
Iron	Fe	5% HNO_3	**N9304113**	**N9307117**
Lanthanum	La	5% HNO_3	**N9304318**	**N9304319**
Lead	Pb	5% HNO_3	**N9304321**	**N9304320**
Lithium	Li	5% HCl		**N9304322**
Lithium	Li	5% HNO_3	**N9304323**	**N9304324**
Magnesium	Mg	5% HNO_3	**N0691745**	**N9304114**
Manganese	Mn	5% HNO_3	**N9304115**	
Mercury	Hg	10% HNO_3	**N9304325**	**N9304326**
Molybdenum	Mo	H_2O/0.4% HF	**N9304327**	**N9304328**
Nickel	Ni	5% HNO_3	**N9304117**	**N9304116**
Niobium	Nb	H_2O/0.4% HF	**N9304330**	**N9304329**
Phosphorus	P	H_2O	**N9304119**	**N9304118**
Potassium	K	5% HNO_3	**N9304121**	**N9304120**
Rubidium	Rb	2% HNO_3	**N9304331**	**N9304332**
Scandium	Sc	5% HNO_3	**N9304333**	**N9304334**
Selenium	Se	5% HNO_3	**N9304335**	**N9304336**

Pure Grade Standards for AA and ICP-OES

- Analyzed by ICP-OES
- Analyzed by Classical Wet Assay
- 32 trace impurities analyzed by ICP-MS of the final solution and reported on the certificate
- Impurities reported at ppm level
- All Standards are prepared and certified under ISO Guide 34 and ISO 17025



Pure Plus Grade Standards for ICP-MS

- Analyzed by ICP-OES
- Analyzed by Classical Wet Assay
- 67 trace impurities analyzed by ICP-MS of the final solution and reported on the certificate
- Impurities reported at ppb level
- All Standards are prepared and certified under ISO Guide 34 and ISO 17025

Element	Symbol	Matrix	Pure Plus Grade 125 mL Part No.	Pure Grade 500 mL Part No.
Silicon	Si	H_2O/4% F-	**N9304122**	
Silver	Ag	5% HNO_3	**N9304337**	**N9304338**
Sodium	Na	5% HNO_3	**N9304124**	**N9304123**
Strontium	Sr	5% HCl		**N9304339**
Strontium	Sr	5% HNO_3	**N9304340**	**N9304341**
Sulfur	S	H_2O	**N9304126**	**N9304125**
Tantalum	Ta	H_2O		**N9304342**
Tantalum	Ta	H_2O/0.8% HF	**N9304343**	
Tin	Sn	2%/HNO_3/2% HF		**N9304344**
Tin	Sn	20% HCl	**N9304345**	**N9304346**
Titanium	Ti	40% HCl		**N9304347**
Titanium	Ti	H_2O/2.4% F-	**N9304348**	**N9304349**
Tungsten	W	2% HNO_3/5% HF		**N9304350**
Tungsten	W	H_2O	**N9304351**	**N9304352**
Uranium	U	5% HNO_3	**N9304353**	**N9304354**
Vanadium	V	15% HCl		**N9304355**
Vanadium	V	15% HNO_3	**N9304356**	**N9304357**
Yttrium	Y	5% HNO_3	**N9304128**	**N9304127**
Zinc	Zn	5% HNO_3	**N9304129**	
Zirconium	Zr	10% HCl		**N9304358**
Zirconium	Zr	5% HNO_3	**N9304359**	**N9304360**

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Matrix Modifiers and AA Test Mixes

We offer standards specifically for your Atomic Absorption (AA) instrument. From mixed standards to reagents, we have what you need for your AA analysis.



Matrix Modifiers for Graphite Furnace AA

Matrix	Content	Volume	Part No.
$Mg(NO_3)_2$	1% Mg $(NO_3)_2$ (as nitrate)	100 mL	**B0190634**
Pd	1% Pd (as nitrate)	50 mL	**B0190635**
$NH_4H_2PO_4$	10% $NH_4H_2PO_4$	100 mL	**N9303445**

GFAAS Mixed Standard

Matrix	Content	Volume	Part No.
5% HNO_3 with trace HF	100 µg/mL: Al, As, Pb, Sb, Se, Tl 50 µg/mL: Ba, Co, Cu, Ni 20 µg/mL: Cr, Fe, Mn 10 µg/mL: Ag 5 µg/mL: Be, Cd	125 mL	**N9300244**

AA Test Mix

Matrix	Content	Volume	Part No.
2% HCl	50 µg/mL: Ca, Cr, Cu, Fe, Ni 20 µg/mL: K 10 µg/mL: Na, Zn	125 mL	**02900540**

Reagents

Description	Volume	Part No.
Triton® X-100 Wetting Agent	100 mL	**N9300260**
Antifoaming Silicone Emulsion	500 mL	**B0507226**
Glycerol	1 L	**B3141064**

Multi-Element Standards

Our go-to multi-element standards are suitable for your daily laboratory needs. Spanning across a wide range of applications and methods, you'll find the right solution to help you achieve laboratory success.

Multi-Element Standards

Matrix	Content	Volume	Part No.
Multi-Element Solution			
5% HNO_3	1,000 µg/mL: Al, Ca, Fe, Mg	500 mL	**N9307113**
Multi-Element Solution			
5% HNO_3	1,000 µg/mL: K, Na, P	500 mL	**N9307114**
Multi-Element Solution			
2-5% HNO_3	1,000 µg/mL: Mo, Sb, Sn, W, Zr	500 mL	**N9307115**
Multi-Element Solution			
5% HNO_3	1,000 µg/mL: As, Ba, Be, Cd, Cr, Co, Cu, La, Pb, Li, Mn, Ni, Sc, Sr, V, Y, Zn	500 mL	**N9307116**
5% HNO_3/trace HF	100 µg/mL: Ge, Mo, S, Si, Ti	125 mL	**N9308541**
20% HCl/1% HNO_3	100 µg/mL: Au, Cr, Sb, Sn, Te	125 mL	**N9308542**
5% HNO_3	100 µg/mL: Ag, As, B, Ba, Be, Bi, Ca, Cd, Co, Cu, Fe, K, Li, Mg, Mn, Na, Ni, P, Pb, Se, Sr, Tl, U, V, Zn	125 mL	**N9308543**
Multi-Element Solution 1			
2% HNO_3	10 µg/mL: Be, Bi, Ce, Co, In, Mg, Ni, Pb, U	125 mL	**N9300231**
Multi-Element Solution 2			
5% HNO_3	10 µg/mL: Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Nd, Pr, Sc, Sm, Tb, Th, Tm, Y, Yb	125 mL	**N9300232**
Multi-Element Solution 3			
5% HNO_3	10 µg/mL: Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cs, Cu, Fe, Ga, Hg*, In, K, Li, Mg, Mn, Na, Ni, Pb, Rb, Se, Sr, Tl, U, V, Zn *Supplied in separate bottle.	125 mL	**N9300233**
Multi-Element Solution 3 without Mercury			
		125 mL	**N9301720**
Multi-Element Solution 4			
10% HCl/1% HNO_3	10 µg/mL: Au, Hf, Ir, Pd, Pt, Rh, Ru, Sb, Sn, Te	125 mL	**N9300234**
Multi-Element Solution 5			
H_2O/trace HF/ trace HNO_3	10 µg/mL: B, Ge, Mo, Nb, P, Re, S, Si, Ta, Ti, W, Zr	125 mL	**N9300235**
Set of Multi-Element Solutions Includes: (1 bottle of each)			N9300236
	Multi-Element Solution 2	125 mL	**N9300232**
	Multi-Element Solution 3	125 mL	**N9300233**
	Multi-Element Solution 4	125 mL	**N9300234**
	Multi-Element Solution 5	125 mL	**N9300235**
	Water Blank	125 mL	**N9303814**
	Hydrochloric Acid Blank	125 mL	**N9300238**
	2% Nitric Acid Blank	125 mL	**N9300239**

Matrix	Content	Volume	Part No.
PerkinElmer Pure I			
5% HNO_3	400 µg/mL: Tl 200 µg/mL: Bi, In, Pb 150 µg/mL: Ga 100 µg/mL: Al 50 µg/mL: Ag, Ni 25 µg/mL: Cr 20 µg/mL: Cd, Co, Cu, Zn 15 µg/mL: B, Fe 5 µg/mL: Ba, Mn 1 µg/mL: Be, Sr	125 mL	**N9303940**
PerkinElmer Pure IV (Quality Control Standard 23)			
10% HNO_3	1,000 µg/mL: Ag, Al, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, In, K, Li, Mg, Mn, Na, Ni, Pb, Sr, Tl, Zn	125 mL	**N9303941**
PerkinElmer Pure VIII			
5% HNO_3	100 µg/mL: Al, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, K, Li, Mg, Mn, Na, Ni, Pb, Se, Sr, Te, Tl, Zn	125 mL	**N9303942**
PerkinElmer Pure IX			
5% HNO_3	100 µg/mL: As, Be, Pb, Cd, Cr, Ni, Se, Tl	125 mL	**N9303943**
PerkinElmer Pure X			
2% HNO_3	35,000 µg/L: Ca 15,000 µg/L: Mg 8,000 µg/L: Na 3,000 µg/L: K 100 µg/L: B, Fe, Mo, Sr 50 µg/L: As, Ba, Ni, V, Zn 30 µg/L: Mn 25 µg/L: Co, Pb 20 µg/L: Be, Cd, Cr, Cu 10 µg/L: Bi, Se, Tl	125 mL	**N9303944**
8 µg/mL Mercury in 5% HNO_3			
5% HNO_3	8 µg/mL: Hg	125 mL	**N9303954**
PerkinElmer Pure XI			
5% HNO_3	2,500 µg/mL: Zn 900 µg/mL: Cr, Pb 800 µg/mL: Cu 200 µg/mL: Ni 10 µg/mL: Cd	125 mL	**N9303945**
5 µg/mL Mercury in 5% HNO_3			
5% HNO_3	5 µg/mL: Hg	125 mL	**N9303949**
PerkinElmer Pure XIII			
5% HNO_3	500 µg/mL: Al 250 µg/mL: V 100 µg/mL: As, Be, Co, Cr, Cu, Fe, Mn, Ni, Pb, Zn 25 µg/mL: Cd, Se	125 mL	**N9303946**

Multi-Element Standards Continued

Matrix	Content	Volume	Part No.
PerkinElmer Pure XVI (Quality Control Standard, 21 Elements)			
5% HNO_3/trace Tartaric Acid/ trace HF	100 µg/mL: As, Be, Ca, Cd, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sr, Ti, Tl, V, Zn	125 mL	**N9300281**
PerkinElmer Pure XVII			
15% HCl/trace HF	100 µg/mL: Hf, Ir, Sb, Sn, Ta, Tl, Zr	125 mL	**N9303948**
PerkinElmer Pure VI			
1 mol/L HNO_3/ trace Tartaric Acid	10 µg/mL: Ag, Al, Ba, Bi, Cd, Co, Cr, Cu, Ga, K, Li, Mg, Mn, Mo, Na, Ni, Pb, Rb, Sr, Te, Tl, U, V, 100 µg/mL: As, B, Be, Fe, Se, Zn, 1000 µg/mL: Ca	125 mL	**N9307741**
Multi-Element Standard			
10% HNO_3	100 µg/mL: As, Ba, Ca, Cd, Be, Bi, Ce, Cs, Cr, Co, Cu, Dy, Er, Eu, Gd, Ga, Ho, In, La, Pb, Li, Lu, Mn, Nd, Ni, Pr, Rb, Sm, Sc, Se, Sr, Tb, Tl, Th, Tm, U, V, Yb, Y, Zn	125 mL	**N9308544**
Multi-Element Standard A			
5% HNO_3/1% HF/ trace Tartaric Acid	100 µg/mL: Ge, Hf, Mo, Nb, Sb, Sn, Ta, Te, Ti, W, Zr	125 mL	**N9308545**
Multi-Element Standard B			
10% HNO_3	10,000 µg/mL: Ca, K, Mg, Na, P	125 mL	**N9308546**
Multi-Element Standard C			
5% HNO_3	10,000 µg/mL: Al, Fe	125 mL	**N9308547**
Multi-Element Standard D			
5% HCl	10 µg/mL: Au, Pd, Pt	125 mL	**N9308548**
Multi-Element Standard E			
5% HNO_3	10 µg/mL: Ag, Hg	125 mL	**N9308549**

Quality Control Standards

Matrix	Content	Volume	Part No.
Quality Control Standard 1A			
5% HNO_3/trace Tartaric Acid HF	1,000 µg/mL: Sb, Ti	125 mL	**N9304130**
Quality Control Standard 1B			
10% HNO_3	1,000 µg/mL: As, Be, Ca, Cd, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Se, Sr, Ti, Tl, V, Zn	125 mL	**N9304131**
Quality Control Standard, 21 Elements Pure (Pure XVI)			
5% HNO_3/trace Tartaric Acid/ trace HF	100 µg/mL: As, Be, Ca, Cd, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sr, Ti, Tl, V, Zn	125 mL	**N9300281**
Quality Control Standard, 21 Elements Pure Plus			
5% HNO_3/trace Tartaric Acid/ trace HF	100 µg/mL: As, Be, Ca, Cd, Co, Cr, Cu, Fe, Li, Mg, Mn, Mo, Ni, Pb, Sb, Se, Sr, Ti, Tl, V, Zn	125 mL	**N9303837**
Quality Control Standard, 7A Elements			
5% HNO_3/trace HF	1,000 µg/mL: K 500 µg/mL: Si 100 µg/mL: Al, B, Ba, Na 50 µg/mL: Ag	125 mL	**N9300280**

Mixed Calibration Standards

Matrix	Content	Volume	Part No.
Mixed Calibration Standard			
2% HNO_3	50 µg/mL: As, K 10 µg/mL: La, Li, Mn, Ni, Sr, Zn 1 µg/mL: Ba, Mg	500 mL	**N0691579**
Mixed Calibration Standard 1			
2% HNO_3	500 µg/mL: Pb 200 µg/mL: Se 150 µg/mL: Cd, Zn 100 µg/mL: Mn 50 µg/mL: Be	125 mL	**N9300200**
Mixed Calibration Standard 2			
5% HNO_3	10,000 µg/mL: Fe 100 µg/mL: Ba, Co, Cu, V	125 mL	**N9300201**
Mixed Calibration Standard 3			
2% HNO_3/Tr. HF	500 µg/mL: As 100 µg/mL: Mo, Si	125 mL	**N9300202**
Mixed Calibration Standard 4			
5% HNO_3	1,000 µg/mL: Ca 400 µg/mL: K 200 µg/mL: Al, Na 20 µg/mL: Cr, Ni	125 mL	**N9300203**
Mixed Calibration Standard 5			
5% HNO_3/trace Tartaric Acid/ trace HF	1,000 µg/mL: Mg 200 µg/mL: Sb, Tl 100 µg/mL: B 50 µg/mL: Ag	125 mL	**N9300204**

Spike Standards

Matrix	Content	Volume	Part No.
Spike Sample Standard I			
5% HNO_3/trace Tartaric Acid/ trace HF	200 µg/mL: Al, As, Ba, Se, Tl 100 µg/mL: Fe 50 µg/mL: Co, Mn, Ni, Pb, Sb, V, Zn 25 µg/mL: Cu 20 µg/mL: Cr 5 µg/mL: Ag, Be, Cd	125 mL	**N9300230**
Spike Sample Standard I (Water)			
5% HNO_3/trace Tartaric Acid/ trace HF	500 µg/mL: Fe 250 µg/mL: Ba, Zn 100 µg/mL: Co, Cr, Cu, Mn, Ni, Sb, V 50 µg/mL: As, Pb 25 µg/mL: Ag, Be, Cd, Se, Tl	125 mL	**N9303839**
Spike Sample Standard 2 (Soil)			
5% HNO_3/trace Tartaric Acid/ trace HF	250 µg/mL: Ba, Cr, Cu, Zn 150 µg/mL: V 125 µg/mL: Ni 100 µg/mL: Co, Pb, Sb 50 µg/mL: As, Cd 25 µg/mL: Ag, Be, Se, Tl	125 mL	**N9303840**
Spike Sample Standard 3 (for ILM 05.2)			
5% HNO_3/trace Tartaric Acid/ trace HF	200 µg/mL: Al, Ba 50 µg/mL: Co, Mn, Ni, V, Zn 25 µg/mL: Cu 20 µg/mL: Cr 10 µg/mL: Sb 5 µg/mL: Ag, Be, Cd, Tl 4 µg/mL: As 2 µg/mL: Pb 1 µg/mL: Se	125 mL	**N9303841**

Environmental Analysis Standards

We offer a variety of environmental analysis standards for all your environmental application needs.

Environmental Method Sets

Matrix	Content	Volume	Part No.
Environmental Standard Kit for NexION Standard Mode Includes 1 bottle of each:			**N9307118**
5% HNO_3	1,000 µg/mL: Ca, K, Mg, Na	125 mL	**N9307805**
5% HNO_3	1,000 µg/mL: Al, Fe	125 mL	**N9307806**
5% HNO_3/trace Tartaric Acid/ trace HF	100 µg/mL: Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn	125 mL	**N9301721**
2% HNO_3	100 µg/mL: B, Th, U	125 mL	**N9307807**
5% HNO_3	10 µg/mL: Hg	125 mL	**N9300253**
2% HNO_3	50 µg/mL: Sc, Ge 10 µg/mL: Rh, In, Tb	125 mL	**N9308591**
Environmental Standard Kit for NexION KED/DRC Mode Includes 1 bottle of each:			**N9307119**
5% HNO_3	1,000 µg/mL: Ca, K, Mg, Na	125 mL	**N9307805**
5% HNO_3	1,000 µg/mL: Al, Fe	125 mL	**N9307806**
5% HNO_3/trace Tartaric Acid/ trace HF	100 µg/mL: Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn	125 mL	**N9301721**
2% HNO_3	100 µg/mL: B, Th, U	125 mL	**N9307807**
5% HNO_3	10 µg/mL: Hg	125 mL	**N9300253**
2% HNO_3	100 µg/mL: Sc 50 µg/mL: Ge 1 µg/mL: Rh, In, Tb	125 mL	**N9308592**
Environmental Standard Kit for ELAN non-DRC/ Standard ICP-MS Instruments Includes 1 bottle of each:			**N9307111**
5% HNO_3	1,000 µg/mL: Ca, K, Mg, Na	125 mL	**N9307805**
5% HNO_3	1,000 µg/mL: Al, Fe	125 mL	**N9307806**
	100 µg/mL: Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn	125 mL	**N9301721**
2% HNO_3	100 µg/mL: B, Th, U	125 mL	**N9307807**
5% HNO_3	10 µg/mL: Hg	125 mL	**N9300253**
Internal Standard Mix			
5% HNO_3/ trace HCL	50 µg/mL: Sc 20 µg/mL: Ge 10 µg/mL: In, Ir, Li6, Rh, Tb, Y	125 mL	**N9307808**

Matrix	Content	Volume	Part No.
Environmental Standard Kit for ELAN DRC Instruments Includes 1 bottle of each:			**N9307112**
5% HNO_3	1,000 µg/mL: Ca, K, Mg, Na	125 mL	**N9307805**
5% HNO_3	1,000 µg/mL: Al, Fe	125 mL	**N9307806**
5% HNO_3/trace Tartaric acid/ trace HF	100 µg/mL: Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn	125 mL	**N9301721**
2% HNO_3	100 µg/mL: B, Th, U	125 mL	**N9307807**
5% HNO_3	10 µg/mL: Hg	125 mL	**N9300253**
5% HNO_3/trace HCl	Internal Standard Mix 200 µg/mL: Sc 20 µg/mL: Ga 10 µg/mL: In, Ir, Rh, Tm	125 mL	**N9307738**
Contract Lab Program Modification Set Includes 1 bottle of each:			**N9307103**
2% HNO_3/5% HCl	10 µg/mL: Ba, Be, Ce, Co, In, Li, Mg, Pb, Rh, Tl, U, Y	125 mL	**N9303843**
2% HNO_3/trace Tartaric Acid	20 µg/mL: Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Th, Tl, U, V, Zn	125 mL	**N9303816**
5% HNO_3/trace Tartaric Acid/ trace HF	100 µg/mL: Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn	125 mL	**N9301721**
5% HNO_3/trace Tartaric Acid	500 µg/mL: Ca, K, Mg, Na 20 µg/mL: Al, Ba 10 µg/mL: Fe 6 µg/mL: Sb 5 µg/mL: Co, V 4 µg/mL: Ni 2.5 µg/mL: Cu 2 µg/mL: Zn 1.5 µg/mL: Mn 1 µg/mL: Ag, As, Cr, Tl 0.5 µg/mL: Be, Cd, Se 0.3 µg/mL: Pb	125 mL	**N9303819**
2% HNO_3/trace Tartaric Acid/ trace HF	10 µg/mL: Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Sb, Se, Tl, V, Zn	125 mL	**N9303821**
5% HNO_3	10 µg/mL: Hg	125 mL	**N9300253**
2% HNO_3	200 µg/mL: Ca, Fe, K, Mg, Na	125 mL	**N9303822**
2% HNO_3	10 µg/mL: Mo, Th, U	125 mL	**N9303823**
2% HNO_3/trace HF	10 µg/mL: Mo, Sn, Sr, Ti	125 mL	**N9303824**
5% HNO_3/trace HF	21,215 µg/mL: Cl 3,000 µg/mL: Ca 2,500 µg/mL: Fe, Na 2,000 µg/mL: C 1,000 µg/mL: Al, K, Mg, P, S 20 µg/mL: Mo, Ti	125 mL	**N9303827**
2% HNO_3	20 µg/mL: Co, Cr, Cu, Mn, Ni, V 10 µg/mL: As, Cd, Se, Zn 5 µg/mL: Ag	125 mL	**N9303829**

Matrix	Content	Volume	Part No.
5% HNO_3/trace Tartaric Acid/ trace HF	500 µg/mL: Fe 250 µg/mL: Ba, Zn 100 µg/mL: Co, Cr, Cu, Mn, Ni, Sb, V 50 µg/mL: As, Pb 25 µg/mL: Ag, Be, Cd, Se, Tl	125 mL	**N9303839**
5% HNO_3/trace Tartaric Acid/ trace HF	250 µg/mL: Ba, Cr, Cu, Zn 150 µg/mL: V 125 µg/mL: Ni 100 µg/mL: Co, Pb, Sb 50 µg/mL: As, Cd 5 µg/mL: Ag, Be, Se, Tl	125 mL	**N9303840**
5% HNO_3	1,000 µg/mL: Al, Ca, Fe, K, Mg, Na 20 µg/mL: Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Se, Tl, V, Zn	125 mL	**N9303835**
H_2O/trace HF	7,200 µg/mL: Cl 2,000 µg/mL: C 1,000 µg/mL: P, S 20 µg/mL: Mo, Sb, Ti	125 mL	**N9303836**
Calibration Standards Set for Method 6010 Includes 1 bottle of each:			**N9307104**
5% HNO_3	5,000 µg/mL: Ca, K, Mg, Na	125 mL	**N9300218**
5% HNO_3	400 µg/mL: Ni 200 µg/mL: Zn 150 µg/mL: Mn 100 µg/mL: Ag, Cr	125 mL	**N9300219**
5% HNO_3	2,000 µg/mL: Al, Ba 1,000 µg/mL: Fe 500 µg/mL: Co, V 250 µg/mL: Cu 50 µg/mL: Be	125 mL	**N9300220**
5% HNO_3	100 µg/mL: As, Tl 50 µg/mL: Cd, Pb, Se	125 mL	**N9300221**
H_2O/trace HF	10 µg/mL: B, Ge, Mo, Nb, P, Re, S, Si, Ta, Ti, W, Zr	125 mL	**N9300235**
2% HNO_3	1,000 µg/mL: Li	500 mL	**N9300129**
2% HNO_3	1,000 µg/mL: Sb	500 mL	**N9300101**
2% HNO_3	1,000 µg/mL: Sr	500 mL	**N9300153**
20% HCl	1,000 µg/mL: Sn	500 mL	**N9300161**
2% HNO_3	1,000 µg/mL: Cr	500 mL	**N9300112**
2% HNO_3	1,000 µg/mL: Cu	500 mL	**N9300114**
2% HNO_3	1,000 µg/mL: Mn	500 mL	**N9300132**
2% HNO_3	1,000 µg/mL: Ni	500 mL	**N9300136**
H_2O/tr HF	1,000 µg/mL: Ti	500 mL	**N9300162**
2% HNO_3	1,000 µg/mL: V	500 mL	**N9300165**
2% HNO_3	1,000 µg/mL: Al	500 mL	**N9300100**
2% HNO_3	1,000 µg/mL: Ca	500 mL	**N9300108**
2% HNO_3	1,000 µg/mL: Fe	500 mL	**N9300126**
2% HNO_3	1,000 µg/mL: Mg	500 mL	**N9300131**
Internal Standard Set for Method 6010 and 200.7 Includes 1 bottle of each:			**N9307105**
2% HNO_3	1,000 µg/mL: Y	500 mL	**N9300167**
2% HNO_3	1,000 µg/mL: Sc	500 mL	**N9300148**

Matrix	Content	Volume	Part No.
Interference Solutions for Method 6010 Includes 1 bottle of each:			**N9307106**
2% HNO_3	1,000 µg/mL: Al	125 mL	**N9300184**
2% HNO_3	1,000 µg/mL: Ca	500 mL	**N9300108**
2% HNO_3	1,000 µg/mL: Mg	125 mL	**N9300179**
2% HNO_3	1,000 µg/mL: Fe	500 mL	**N9300126**
2% HNO_3	1,000 µg/mL: K	500 mL	**N9300141**
2% HNO_3	1,000 µg/mL: Na	500 mL	**N9300152**
2% HNO_3	1,000 µg/mL: Cr	500 mL	**N9300112**
2% HNO_3	1,000 µg/mL: Cu	500 mL	**N9300114**
2% HNO_3	1,000 µg/mL: Mn	500 mL	**N9300132**
2% HNO_3	1,000 µg/mL: Ni	500 mL	**N9300136**
H_2O/trace HF	1,000 µg/mL: Ti	500 mL	**N9300162**
2% HNO_3	1,000 µg/mL: V	500 mL	**N9300165**
5% HNO_3	5,000 µg/mL: Al, Ca, Mg 2,000 µg/mL: Fe	500 mL	**N9300226**
5% HNO_3/trace Tartaric Acid/ trace HF	100 µg/mL: Cd, Ni, Zn 60 µg/mL: Sb 50 µg/mL: Ba, Be, Co, Cr, Cu, Mn, V 20 µg/mL: Ag 10 µg/mL: As, Tl 5 µg/mL: Pb, Se	125 mL	**N9300227**
5% HNO_3	1,000 µg/mL: Cr, Cu, Mn, Ni, Ti, V	500 mL	**N9300228**
5% HNO_3/trace Tartaric Acid/ trace HF	100 µg/mL: Al, As, B, Mo, Na, Sb, Se, Tl 10 µg/mL: Ca, Fe, Mg, Si	125 mL	**N9300229**
Calibration Standards for Method 200.7 Includes 1 bottle of each:			**N9307107**
5% HNO_3	5,000 µg/mL: Ca, K, Mg, Na	125 mL	**N9300218**
5% HNO_3	400 µg/mL: Ni 200 µg/mL: Zn 150 µg/mL: Mn 100 µg/mL: Ag, Cr	125 mL	**N9300219**
5% HNO_3	2,000 µg/mL: Al, Ba 1,000 µg/mL: Fe 500 µg/mL: Co, V 250 µg/mL: Cu 50 µg/mL: Be	125 mL	**N9300220**
5% HNO_3	100 µg/mL: As, Tl 50 µg/mL: Cd, Pb, Se	125 mL	**N9300221**
H_2O/trace HF	10 µg/mL: B, Ge, Mo, Nb, P, Re, S, Si, Ta, Ti, W, Zr	125 mL	**N9300235**
2% HNO_3	1,000 µg/mL: Li	500 mL	**N9300129**
2% HNO_3	1,000 µg/mL: Sb	500 mL	**N9300101**
2% HNO_3	1,000 µg/mL: Sr	500 mL	**N9300153**
20% HCl	1,000 µg/mL: Sn	500 mL	**N9300161**
Interference Solutions for Method 200.7 Includes 1 bottle of each:			**N9307108**
2% HNO_3	1,000 µg/mL: Al	125 mL	**N9300184**
2% HNO_3	1,000 µg/mL: Ca	500 mL	**N9300108**
2% HNO_3	1,000 µg/mL: Mg	125 mL	**N9300179**
2% HNO_3	1,000 µg/mL: Fe	500 mL	**N9300126**
2% HNO_3	1,000 µg/mL: K	500 mL	**N9300141**
2% HNO_3	1,000 µg/mL: Na	500 mL	**N9300152**
5% HNO_3	5,000 µg/mL: Al, Ca, Mg 2,000 µg/mL: Fe	500 mL	**N9300226**
5% HNO_3/trace Tartaric Acid/ trace HF	100 µg/mL: Cd, Ni, Zn 60 µg/mL: Sb 50 µg/mL: Ba, Be, Co, Cr, Cu, Mn, V 20 µg/mL: Ag 10 µg/mL: As, Tl 5 µg/mL: Pb, Se	125 mL	**N9300227**

Matrix	Content	Volume	Part No.
Environmental EPA Set 1 Includes 1 bottle of each:			**N9307110**
2% HNO_3	500 µg/mL: Pb 200 µg/mL: Se 150 µg/mL: Cd, Zn 100 µg/mL: Mn 50 µg/mL: Be	125 mL	**N9300200**
5% HNO_3	10,000 µg/mL: Fe 100 µg/mL: Ba, Co, Cu, V	125 mL	**N9300201**
2% HNO_3/trace HF	500 µg/mL: As 100 mg/mL: Mo, Si	125 mL	**N9300202**
5% HNO_3	1,000 µg/mL: Ca 400 µg/mL: K 200 µg/mL: Al, Na 20 µg/mL: Cr, Ni	125 mL	**N9300203**
5% HNO_3/trace Tartaric Acid/ trace HF	1,000 µg/mL: Mg 200 µg/mL: Sb, Tl 100 µg/mL: B 50 µg/mL: Ag	125 mL	**N9300204**
5% HNO_3	20,000 µg/mL: K 1,000 µg/mL: As, Pb, Tl 500 µg/mL: Se 300 µg/mL: Ag, Ba, Cd, Co, Cr, Cu, Ni, V, Zn 200 µg/mL: Mn 100 µg/mL: Be	125 mL	**N9300205**
5% HNO_3	100 µg/mL: Hg	125 mL	**N9300223**
5% HNO_3	6,000 µg/mL: Ca 5,000 µg/mL: Fe 3,000 µg/mL: Mgs 1,200 µg/mL: Al 1,000 µg/mL: Na	125 mL	**N9300208**
H_2O/trace HNO_3/0.6% Tartaric Acid	1,000 µg/mL: Sb	125 mL	**N9300207**
5% HNO_3	ASTM® Type I Water	500 mL	**N9307809**
5% HCl	ASTM® Type I Water	500 mL	**N9307810**
Environmental EPA Set 2 Includes 1 bottle of each:			**N9307109**
2% HNO_3	500 µg/mL: Pb 200 µg/mL: Se 150 µg/mL: Cd, Zn 100 µg/mL: Mn 50 µg/mL: Be	125 mL	**N9300200**
5% HNO_3	10,000 µg/mL: Fe 100 µg/mL: Ba, Co, Cu, V	125 mL	**N9300201**
2% HNO_3/trace HF	500 µg/mL: As 100 µg/mL: Mo, Si	125 mL	**N9300202**
5% HNO_3	1,000 µg/mL: Ca 400 µg/mL: K 200 µg/mL: Al, Na 20 µg/mL: Cr, Ni	125 mL	**N9300203**
5% HNO_3/trace Tartaric Acid/ trace HF	1,000 µg/mL Mg 200 µg/mL: Sb, Tl 100 µg/mL: B 50 µg/mL: Ag	125 mL	**N9300204**
5% HNO_3	20,000 µg/mL: K 1,000 µg/mL: As, Pb, Tl 500 µg/mL: Se 300 µg/mL: Ag, Ba, Cd, Co, Cr, Cu, Ni, V, Zn 200 µg/mL: Mn 100 µg/mL: Be	125 mL	**N9300205**
5% HNO_3	6,000 µg/mL: Ca 5,000 µg/mL: Fe 3,000 µg/mL: Mg 1,200 µg/mL: Al 1,000 µg/mL Na	125 mL	**N9300208**
H_2O/trace HNO_3/ 0.6% Tartaric Acid	1,000 µg/mL: Sb	125 mL	**N9300207**
5% HNO_3	ASTM® Type I Water	500 mL	**N9307809**
5% HCl	ASTM® Type I Water	500 mL	**N9307810**

Water Pollutant Standards

Matrix	Content	Volume	Part No.
Primary Drinking Water Metals			
2% HNO_3	100 µg/mL: Ba 10 µg/mL: Ag, As, Cr, Hg*, Pb 5 µg/mL: Cd, Se	125 mL	**N9300216**
Secondary Drinking Water Metals			
2% HNO_3	500 µg/mL: Zn 100 µg/mL: Cu 30 µg/mL: Fe 5 µg/mL: Mn	125 mL	**N9300217**
Trace Metals I			
5% HNO_3	500 µg/mL: Al 250 µg/mL: V 100 µg/mL: As, Be, Co, Cr, Cu, Fe Mn, Ni, Pb, Zn 25 µg/mL: Cd, Se 10 µg/mL: Hg*	125 mL	**N9300211**
Trace Metals II			
2% HNO_3	20 µg/mL: Sb, Tl 10 µg/mL: Ag	125 mL	**N9300212**
Trace Metals III			
2% HNO_3	500 µg/mL: Ba, Ca, Mo, Na 100 µg/mL: K, Mg	125 mL	**N9300213**
Alternate Metals I			
2% HNO_3	20 µg/mL: Al, Fe, V 10 µg/mL: Co, Cu, Mn, Ni, Zn 5 µg/mL: Be, Sb, Tl	125 mL	**N9300214**
Alternate Metals II			
2% HNO_3	500 µg/mL: Ca, Na 100 µg/mL: K, Mg	125 mL	**N9300215**
2% HNO_3	500 µg/mL: Ca, Na 100 µg/mL: K, Mg	500 mL	**N9303952**

Toxicity Characteristic Leachate Procedure (TCLP) Standard

Matrix	Content	Volume	Part No.
TCLP Standard 1			
2% HNO_3	500 µg/mL: Ba 25 µg/mL: Ag, As, Cr, Pb 100 µg/mL: Hg* 5 µg/mL: Cd, Se	500 mL	**N9300241**

*Supplied in separate bottle

Instrument Set-Up and Calibration Standards

From instrument installation to instrument calibration, we provide quality set-up, check and calibration standards to ensure instrument performance.

Instrument Calibration Standards

Matrix	Content	Volume	Part No.
Instrument Calibration Standard 1			
5% HNO_3/trace Tartaric Acid/ trace HF	20 µg/mL: Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Th, Tl, U, V, Zn	125 mL	**N9303816**
Instrument Calibration Standard 2			
5% HNO_3/trace Tartaric Acid/ trace HF	100 µg/mL: Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn	125 mL	**N9301721**
Instrument Calibration Standard 3			
5% HNO_3	1,000 µg/mL: Ca, Fe, K, Mg, Na	125 mL	**N9303818**
Initial Calibration Verification Standard 1			
5% HNO_3/trace Tartaric Acid	1,000 µg/mL: Ca, Fe, K, Mg, Na, Sr 10 µg/mL: Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Tl, V, Zn, Th, U	125 mL	**N9303825**
Initial Calibration Verification Standard 2			
2% HNO_3/trace HF	10 µg/mL: Sn, Ti	125 mL	**N9303826**
ELAN® 6100 DRC Setup/Stab/Masscal Solution			
0.5% HNO_3	10 µg/L: Ba 1 µg/L: Al, Cd, Ce, Cr, Cu, In, Pb, Mg, Mn, Rh, Th	1,000 mL	**N8125035**
ELAN DRC/DRCplus/DRC II Solution Kit Kit Includes:			**N8120541**
	2 x 1,000 mL: Setup/Stability/Masscal Solution		**N8125035**
	2 x 250 mL: Wash Solution		**N8125033**
	1 x 250 mL: Sensitivity/Detection Limit Solution		**N8125034**
	1 x 125 mL: Methanol Blank Solution		**N8125037**
	1 x 125 mL: Chromium in Methanol Solution		**N8125038**
ELAN 9000/6100 Solution Kit Kit Includes:			**N8120522**
	2 x 1,000 mL: Setup/Stability/ Masscal Solution		**N8125030**
	1 x 125 mL: Dual-Detector		**N8125010**
	1 x 1,000 mL: Wash Solution		**N8122038**
	1 x 250 mL: Detection Limit Solution		**N8125031**
ELAN 9000/6100 Setup/Stability/Masscal Solution			
1% HNO_3	10 µg/L: Ba, Cd, Ce, Cu, In, Pb, Mg, Rh, U	1,000 mL	**N8125030**
ELAN 9000/6x00 Dual-Detector Calibration Solution			
1% HNO_3	200 µg/L: Cd, Cu, Pb, Mg, Rh	125 mL	**N8125032**
ELAN 6000/5000 Plasma Setup Solution			
2% HNO_3	10 µg/L: Ba, Cd, Ce, Cu, Ge, Pb, Mg, Rh, Sc, Tb, Tl	1,000 mL	**N8122014**
ELAN 5000 Detection Limit Solution			
2% HNO_3	10 µg/L: Be, Co, Ge, In, Tl, U	125 mL	**N8122017**

SmartTune Standards

Matrix	Content	Volume	Part No.
SmartTune Solution for Standard ELANs/DRC-e			
1% HNO_3	10 µg/L: Ba, Be, Ce, Co, In, Pb, Mg, Rh, U	1,000 mL	**N8125040**
SmartTune Solution for DRC/DRCplus/DRC II			
0.5% HNO_3	10 µg/L: Ba 1 µg/L: Be, Ce, Co, In, Fe, Pb, Mg, Th, U	1,000 mL	**N8125041**
Tuning Solution 1			
2% HNO_3/ 5% HCl	10 µg/mL: Ba, Be, Ce, Co, In, Li, Mg, Pb, Rh, Tl, U, Y	125 mL	**N9303843**
NexION Setup Solution			
1% HNO_3	1 µg/L: Be, Ce, Fe, In, Li, Mg, Pb, U	500 mL	**N8145051**
1% HNO_3	10 µg/L: Be, Ce, Fe, In, Li, Mg, Pb, U	500 mL	**N8145284**

ICP-OES Solutions

Matrix	Volume	Part No.
UV Wavecal Solution	500 mL	**N0582152**
Mixed Calibration Standard	500 mL	**N0691579**
Low UV Standard	250 mL	**N0691580**
Calcium Stray Light Standard	125 mL	**N0691581**
VIS Align Solution	100 mL	**N0691743**
Magnesium Standard Pure	125 mL	**N0691745**
Optima Blank in 2% HNO_3	500 mL	**N0773120**
Instrument Calibration Standard 4	125 mL	**N9300221**
Vis Wavecal Solution	250 mL	**N9302946**

Instrument Setup Solutions

Matrix	Content	Volume	Part No.
Vis Wavecal Solution			
2% HNO_3	50 µg/mL: K 10 µg/mL: La, Li, Mn, Na, Sr 1 µg/mL: Ba, Ca	250 mL	**N9302946**
UV Wavecal Solution			
5% HCl	100 µg/mL: K, P, S 20 µg/mL: As, La, Li, Mn, Mo, Na, Mo, Na, Ni, Sc	250 mL	**N0681470**
5% HCl	100 µg/mL: K, P, S	500 mL	**N0582152**
	20 µg/mL: As, La, Li, Mn, Mo, Na, Ni, Sc 1 µg/mL: Ca		
Low UV Standard			
2% HNO_3	10 µg/mL: Al, P, S	250 mL	**N0691580**
Calcium Stray Light Standard			
H_2O	10,000 µg/mL: Ca	125 mL	**N0691581**
1% HNO_3	10 µg/L: Be, Ce, Fe, In, Li, Mg, Pb, U	500 mL	**N8145284**

Initial Calibration Verification Standards

Matrix	Contents	Volume	Part No.
5% HNO_3/trace Tartaric Acid	500 µg/mL: Ca, K, Mg, Na 200 µg/mL: Al, Ba 100 µg/mL: Fe 60 µg/mL: Sb 50 µg/mL: Co, V 40 µg/mL: Ni 25 µg/mL: Cu 20 µg/mL: Zn 15 µg/mL: Mn 10 µg/mL: Ag, As, Cr, Tl 5 µg/mL: Be, Cd, Se 3 µg/mL: Pb	500 mL	**N9300224**
5% HNO_3/trace Tartaric Acid	500 µg/mL: Ca, K, Mg, Na 200 µg/mL: Al, Ba 100 µg/mL: Fe 60 µg/mL: Sb 50 µg/mL: Co, V 40 µg/mL: Ni 25 µg/mL: Cu 20 µg/mL: Zn 15 µg/mL: Mn 10 µg/mL: Ag, As, Cr, Tl 5 µg/mL: Be, Cd, Se 3 µg/mL: Pb	125 mL	**N9303953**

Instrument Calibration Standards for CLP

Matrix	Content	Volume	Part No.
Instrument Calibration Standard 1			
5% HNO_3	5,000 µg/mL: Ca, K, Mg, Na	125 mL	**N9300218**
Instrument Calibration Standard 2			
5% HNO_3	400 µg/mL: Ni 200 µg/mL: Zn 150 µg/mL: Mn 100 µg/mL: Ag, Cr	125 mL	**N9300219**
Instrument Calibration Standard 3			
5% HNO_3	2,000 µg/mL: Al, Ba 1,000 µg/mL: Fe 500 µg/mL: Co, V 250 µg/mL: Cu 50 µg/mL: Be	125 mL	**N9300220**
Instrument Calibration Standard 4			
5% HNO_3	100 µg/mL: As, Tl 50 µg/mL: Cd, Se 30 µg/mL: Pb	125 mL	**N9300221**

Instrument Calibration Standards for CLP

Matrix	Content	Volume	Part No.
Instrument Check Standard 1			
2% HNO_3/ trace Tartaric Acid/ trace HF	10 µg/mL: Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Sb, Se, Tl, V, Zn	125 mL	**N9303821**
Instrument Check Standard 3			
2% HNO_3	200 µg/mL: Ca, Fe, K, Mg, Na	125 mL	**N9303822**
Instrument Check Standard 4			
2% HNO_3	10 µg/mL: Mo, Th, U	125 mL	**N9303823**
Instrument Check Standard 5			
2% HNO_3/trace HF	10 µg/mL: Mo, Sn, Sr, Ti	125 mL	**N9303824**

Interference Check Standards

Matrix	Content	Volume	Part No.
Interference Check Standard 1			
H_2O/trace HNO_3/ 0.6% Tartaric Acid	1,000 µg/mL: Sb	125 mL	**N9300207**
Interference Check Standard 5			
5% HNO_3	6,000 µg/mL: Ca 5,000 µg/mL: Fe 3,000 µg/mL: Mg 1,200 µg/mL: Al 1,000 µg/mL: Na	125 mL	**N9300208**
Interference Check Standard 18			
5% HNO_3	20,000 µg/mL: K 1,000 µg/mL: As, Pb, Tl 500 µg/mL: Se 300 µg/mL: Ag, Ba, Cd, Co, Cr, Cu, Ni, V, Zn 200 µg/mL: Mn 100 µg/mL: Be, Hg*	125 mL	**N9300205**
Interferents A			
5% HNO_3	5,000 µg/mL: Al, Ca, Mg 2,000 µg/mL: Fe	500 mL	**N9300226**
Alternate Interferents A			
5% HNO_3	1,000 µg/mL: Cr, Cu, Mn, Ni, Ti, V	500 mL	**N9300228**
Analytes B			
5% HNO_3/ trace Tartaric Acid/ trace HF	100 µg/mL: Cd, Ni, Zn 60 µg/mL: Sb 50 µg/mL: Ba, Be, Co, Cr, Cu, Mn, V 20 µg/mL: Ag 10 µg/mL: As, Tl 5 µg/mL: Pb, Se	125 mL	**N9300227**
Alternate Analytes B			
5% HNO_3/ trace Tartaric Acid/ trace HF	100 µg/mL: Al, As, B, Mo, Na, Sb, Se, Tl 10 µg/mL: Ca, Fe, Mg, Si	125 mL	**N9300229**
Interference Check Standards			
H_2O/trace HNO_3/ 0.6% Tartaric Acid	1,000 µg/mL: Sb	500 mL	**N9303797**
Interference Check Solution 1 (for SW-846 and ILM 05.2)			
5% HNO_3/trace HF	10,000 µg/mL: Cl 2,000 µg/mL: C 1,000 µg/mL: Al, Ca, Fe, K, Mg, Na, P, S 20 µg/mL: Mo, Ti	125 mL	**N9303828**
Interference Check Solution 2 (for SW-846)			
2% HNO_3	10 µg/mL: Ag, As, Cd, Co, Cr, Cu, Mn, Ni, Zn	125 mL	**N9303830**
Analytes C (for ILM 05.2)			
2% HNO_3/ trace Tartaric Acid/ trace HF	2 µg/mL: Ag, As, Ba, Be, Cd, Co, Cr, Cu, Hg*, Mn, Ni, Pb, Sb, Se, Tl, V, Zn	125 mL	**N9303831**

*Supplied in separate bottle

Internal Standard Solutions

Matrix	Content	Volume	Part No.
Multi-Element Internal Standard			
2% HNO_3	10 µg/mL: Bi, Ho, In, Li6, Sc, Tb, Y	125 mL	**N9303834**
Multi-Element Internal Standard			
2% HNO_3	10 µg/mL: Bi, Ho, In, Li6, Sc, Tb, Y	100 mL	**N9301722**
Internal Standard Mix			
5-10% HNO_3	10 µg/mL: Bi, Ge, In, Li6, Sc, Tb, Y	125 mL	**N9303832**
Internal Standard Mix			
5-10% HNO_3	10 µg/mL: Bi, Ge, In, Li6, Sc, Tb, Y	500 mL	**N9303833**

Contract Required Detection Limits (CRDL)

Matrix	Content	Volume	Part No.
% HNO_3/ trace Tartaric Acid/ trace HF	120 µg/mL: Sb 100 µg/mL: Co, V 80 µg/mL: Ni 50 µg/mL: Cu 40 µg/mL: Zn 30 µg/mL: Mn 20 µg/mL: Ag, As, Cr, Tl 10 µg/mL: Be, Cd, Se 6 µg/mL: Pb	125 mL	**N9300225**

Performance Verification Standards

Matrix	Content	Volume	Part No.
Methanol Blank Solution			
1% Semiconductor Grade		125 mL	**N8125037**
Chromium in Methanol Solution			
1% Semiconductor Grade Methanol	10 µg/mL: Cr	125 mL	**N8125038**
Selenium Solution			
5% HNO_3	10 µg/mL: Se	250 mL	**N8125039**
NexION 350Q Solution Kit – Non-Cell Kit Includes:			N8140503
1% HNO_3	1 x 250 mL NexION Wash Solution		**N8145050**
	1 x 500 mL NexION Setup Solution		**N8145051**
	1 x 500 mL NexION 300Q Non-cell Stability Solution		**N8145053**
	1 x 100 mL NexION Standard/ DRC Mode Detection Limit Blank Solution		**N8145055**
	1 x 100 mL NexION Standard/ DRC Mode Detection Limit Solution		**N8145056**
	1 x 100 mL NexION Dual Detector Solution		**N8145059**
NexION 350 X/D/S 1000/2000 Solution Kit – Cell Instruments Kit Includes:			N8140504
	1 x 250 mL NexION Wash Solution		**N8145050**
	1 x 500 mL NexION Setup Solution		**N8145051**
	1 x 250 mL NexION KED Setup Solution		**N8145052**
	1 x 500 mL NexION 350X/D/S Cell Stability Solution		**N8145054**
	1 x 100 mL NexION Standard/DRC Mode Detection Limit Blank Solution		**N8145055**
	1 x 100 mL NexION Standard/DRC Mode Detection Limit Solution		**N8145056**
	1 x 100 mL NexION KED Mode Detection Limit Blank Solution		**N8145057**
	1 x 100 mL NexION KED Mode Detection Limit Solution		**N8145058**
	1 x 100 mL NexION Dual Detector Solution		**N8145059**

Performance Verification Standards continued

Matrix	Content	Volume	Part No.
NexION Setup Solution			
1% HNO_3	1 µg/L: Be, Ce, Fe, In, Li, Mg, Pb, U	500 mL	**N8145051**
1% HNO_3	10 µg/L: Be, Ce, Fe, In, Li, Mg, Pb, U	500 mL	**N8145284**
NexION KED Setup Solution			
1% HNO_3	10 µg/mL: Be, Ce, Fe, In, Li, Mg, Pb, U	500 mL	**N8145289**
1% HCl	10 µg/L: Co 1 µg/L: Ce	250 mL	**N8145052**
NexION Fit Spec. Verify Solution			
1% HNO_3	1 mg/L ± 5 % Li, Be, Mg, Fe, In, Ce, Pb, U	125 mL	**N8145049**
Internal Stock Solution			
5% HNO_3	12.5 µg/mL Ni, Sc, Te, Y	100 mL	**N8145419**
Internal Stock Solution			
5% HNO_3	12.5 µg/mL Ni, Sc, Te, Y	500 mL	**N8145420**
Special 1 Pure Plus			
2% HNO_3	200 µg/mL Ca, K, Na, P 40 µg/mL Mg 4 µg/mL Fe, Zn 200 µg/L Cu 100 µg/L Mn 40 µg/L Cr, Mo, Se	100 mL	**N8145421**
Special 2 Pure Plus			
5% HNO_3	1000 µg/mL Ca, K, Na, P 200 µg/mL Mg 20 µg/m: Fe, Zn 1000 µg/: Cr, Mo, Se	100 mL	**N8145422**
NexION 350Q/2000 Non-cell Stability Solution			
1% HNO_3	1 µg/L: Cd, Cu, Mg, Pb	500 mL	**N8145053**
NexION 350X/D/S/1000/2000 Cell Stability Solution			
1% HNO_3	1 µg/L: Cd, Cr, Fe, Mg, Pb 10 µg/L: Co, Cu, In, Se	500 mL	**N8145054**
NexION 1000/2000 Cell Stability Solution without Se			
1% HNO_3	1 µg/L: Cd, Cr, Fe, In, Mg, Pb 10 µg/L: Co, Cu	500 mL	**N8151033**
NexION 350X/D Internal Standard Stock Solution			
2% HNO_3	100 µg/mL: Sc 50 µg/mL: Ge 1 µg/mL: Rh, In, Tb	125 mL	**N9308592**
NexION 350Q Internal Standard Stock Solution			
2% HNO_3	50 µg/mL: Sc, Ge 10 µg/mL: Rh, In, Tb	125 mL	**N9308591**
NexION Standard/DRC Mode Detection Limit Blank Solution			
0.5% HNO_3		100 mL	**N8145055**
NexION Standard/DRC Mode Detection Limit Solution			
0.5% HNO_3	1 µg/L: Be, Ca, Co, Fe, In, U	100 mL	**N8145056**
NexION KED Mode Detection Limit Blank Solution			
1% HCl		100 mL	**N8145057**
NexION KED Mode Detection Limit Solution			
1% HCl	10 µg/L: V, As, Se	100 mL	**N8145058**
NexION Dual Detector Solution			
2% HNO_3	200 µg/L: Al, Ba, Ce, Co, ,Cu, In, Li, Mg, Mn, Ni, Pb, Tb, U, Zn	100 mL	**N8145059**

Performance Verification Standards continued

Matrix	Content	Volume	Part No.
NexION AFT Single-Element Solution			
2% HNO_3	2 µg/L: Fe	100 mL	**N8145060**
NexION AFT Multi-Element Solution			
2% HNO_3	2 µg/L: Ag, Al, As, Ba, Be, Bi, Be, Bi, Ca, Cd, Co, Cr, Cs, Cu, Fe, Ga, In, K, Li, Mg, Mn, Na, Ni, Pb, Rb, Se, Sr, Tl, U, V, Zn	100 mL	**N8145061**
NexION AFT Single-Element Solution (H/He)			
2% HNO_3	10 µg/L Se	125 mL	**N8151037**
NexION AFT Multi-Element Solution (H/He)			
2% HNO_3	10 µg/L Ag, Al, AS, Ba, Be, Bi, Ca, Cd, Co, Cr, Cs, Cu, Fe, Ga, In, K, Li, Mg, Mn, Na, Ni, Pb, Rb, Se, Sr, Tl, U, V, Zn	125 mL	**N8151038**
Cold Plasma Optimization Solution			
0.1% HNO_3	1 µg/L Li, Co, Rb, In, Cs, Pb	250 mL	**N8151032**

Wash Standards and Matrix Blanks

Wash Standards

Matrix	Volume	Part No.
ELAN DRC Wash Solution		
0.5% HNO_3	250 mL	**N8125033**
ELAN 9000/6X00/DRC-e Wash Solution		
1% HNO_3	1,000 mL	**N8122038**
NexION Wash Solution		
1% HNO_3	250 mL	**N8145050**

Matrix Blanks

Matrix	Volume	Part No.
Water Blank		**N8125033**
ASTM® Type I Water, 18 megohm	125 mL	**N9303814**
ASTM® Type I Water, 18 megohm	250 mL	**N9303813**
Hydrochloric Acid Blanks		
2% HCl in ASTM® Type I Water	125 mL	**N9300238**
5% HNO_3 in ASTM® Type I Water	500 mL	**N9308571**
Nitric Acid Blanks		
1% HNO_3 in ASTM® Type I Water	125 mL	**N9303732**
2% HNO_3 in ASTM® Type I Water	500 mL	**N0773120**
2% HNO_3 in ASTM® Type I Water	500 mL	**N9308550**
5% HNO_3 in ASTM® Type I Water	500 mL	**N9308571**

Isotope Standard

Matrix	Content	Volume	Part No.
Lithium 6 Standard			
2% HNO_3	100 mg/L: Li6	125 mL	**N9303955**



Universal Data Calibration Standards Kit

Matrix	Content	Volume	Part No.
Solution Kit Includes 1 bottle of each:			**N9306225**
5% HNO_3	10 µg/mL: Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Nd, Pr, Sm, Sc, Tb, Th, Tm, Y, Yb	125 mL	**N9303816**
5% HNO_3	10 µg/mL: Al, Ag, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cs, Cu, Fe, Ga, Hg*, In, K, Li, Mg, Mn, Na, Ni, Pb, Rb, Se, Sr, Tl, U, V, Zn	125 mL	
10% HCl/ 1% HNO_3	10 µg/mL: Au, Hf, Ir, Pd, Pt, Rh, Ru, Sb, Sn, Te	125 mL	
5% HNO_3	10 µg/mL: Hg*	125 mL	
H_2O /trace HF/ trace HNO_3	10 µg/mL: B, Ge, Mo, Nb, P, Re, S, Si, Ta, Ti, W, Zr	125 mL	

*Supplied in separate bottle

Pharmaceutical Analysis Standards





USP Standards

As a part of our United States Pharmacopeia (USP) compliant offering, we provide calibration and check standards for the analysis of metals in drugs, pharmaceutical substances and raw materials to verify Oral Daily Dose PDE, Parenteral Component Limit and Parenteral Daily Dose PDE.

Our trace metal USP standards can be used to calibrate Arsenic, Cadmium, Lead and Mercury, the four toxic metals as part of the USP regulations. When you couple our accurate and reliable USP standards with your ICP-MS you will remain compliant with the new and changing regulations.

ICH Standards

In conjunction with our United States Pharmacopeia (USP) calibration standards, we offer six calibration standards for the analysis of metals in pharmaceutical materials and products following the International Conference on Harmonization (ICH) guidelines.

The ICH standards verify Elemental Impurities, Precious Metals Impurities and Parenteral Elemental Impurities. Couple our accurate and reliable ICH standards with your ICP-MS and you will remain compliant with the new and changing regulations.

USP and ICH Standards

Matrix	Content	Volume	Part No.
ICH Elemental Impurities Standards Kit – Oral PDEs Kit Includes:			**N9304361**
5% HNO_3/ 2% HCl	ICH Class 1 Elements + Tl – Oral PDE: 30 µg/mL Hg 15 µg/mL As 8 µg/mL Tl 5 µg/mL Cd, Pb	125 mL	**N9304362**
2% HNO_3	ICH Class 2A Elements – Oral and Parenteral PDEs: 200 µg/mL Ni 100 µg/mL V 50 µg/mL Co	125 mL	**N9304363**
2% HCl	100 µg/mL Au	125 mL	**N9303728**
15% HCl	ICH Class 2B Precious Metal Elements (no Os) – All PDEs: 100 µg/mL Ir, Pd, Pt, Rh, Ru	125 mL	**N9304364**
2% HNO_3	ICH Class 2B Se and Ag – Oral PDE: 150 µg/mL Ag, Se	125 mL	**N9304365**
5% HNO_3/trace Tartaric Acid/ trace HF	ICH Class 3 Elements – Oral PDEs: 1100 µg/mL Cr 600 µg/mL Sn 300 µg/mL Cu, Mo 140 µg/mL Ba 120 µg/mL Sb 55 µg/mL Li	125 mL	**N9304366**
2% HNO_3	Internal Standards – All PDEs: 50 µg/mL Ge 20 µg/mL Ga 1 µg/mL In, Tb	125 mL	**N9304367**

Matrix	Content	Volume	Part No.
ICH Elemental Impurities Standards Kit – Parenteral PDEs Kit Includes:			**N9304368**
5% HNO_3/ 2% HCl	ICH Class 1 Elements + Tl – Parenteral PDE: 15 µg/mL As 8 µg/mL Tl 5 µg/mL Pb 3 µg/mL Hg 2 µg/mL Cd	125 mL	**N9304369**
2% HNO_3	ICH Class 2A Elements – Oral and Parenteral PDEs: 200 µg/mL Ni 100 µg/mL V 50 µg/mL Co	125 mL	**N9304363**
2% HCl	100 µg/mL Au	125 mL	**N9303728**
15% HCl	ICH Class 2B Precious Metal Elements (no Os) – All PDEs: 100 µg/mL Ir, Pd, Pt, Rh, Ru	125 mL	**N9304364**
2% HNO_3	ICH Class 2B Se and Ag – Parenteral PDE: 80 µg/mL Se 10 µg/mL Ag	125 mL	**N9304372**
2% HNO_3/trace Tartaric Acid/ trace HF	ICH Class 3 Elements – Parenteral PDEs: 150 µg/mL Mo 110 µg/mL Cr 60 µg/mL Sn 30 µg/mL Cu 70 µg/mL Ba 25 µg/mL Li 9 µg/mL Sb	125 mL	**N9304373**
2% HNO_3	Internal Standards – All PDEs: 50 µg/mL Ge 20 µg/mL Ga 1 µg/mL In, Tb	125 mL	**N9304367**

USP and ICH Standards continued

Matrix	Content	Volume	Part No.
ICH Elemental Impurities Standards Kit – Inhalational PDEs Kit Includes:			N9304375
5% HNO_3/ 2% HCl	ICH Class 1 Elements + Tl – Inhalational PDE: 8 µg/mL Tl 5 µg/mL Pb 2 µg/mL As, Cd 1 µg/mL Hg	125 mL	**N9304376**
2% HNO_3	ICH Class 2A Elements – Inhalational PDEs: 5 µg/mL Ni 3 µg/mL Co 1 µg/mL V	125 mL	**N9304377**
2% HCl	100 µg/mL Au	125 mL	**N9303728**
15% HCl	ICH Class 2B Precious Metal Elements (no Os) – All PDEs: 100 µg/mL Ir, Pd, Pt, Rh, Ru	125 mL	**N9304364**
2% HNO_3	ICH Class 2B Se and Ag – Inhalational PDE: 130 µg/mL Se 7 µg/mL Ag	125 mL	**N9304379**
2% HNO_3/trace Tartaric Acid/ trace HF	ICH Class 3 Elements – Inhalational PDEs: 300 µg/mL Ba 60 µg/mL Sn 30 µg/mL Cu 25 µg/mL Li 20 µg/mL Sb 10 µg/mL Mo 3 µg/mL Cr	125 mL	**N9304380**
2% HNO_3	Internal Standards – All PDEs: 50 µg/mL Ge 20 µg/mL Ga 1 µg/mL In, Tb	125 mL	**N9304367**

Matrix	Content	Volume	Part No.
ICH Class 2B Precious Metal Elements – All PDEs			
15% HCl	ICH Class 2B Precious Metal Elements – All PDEs: 100 µg/mL Ir, Os, Pd, Pt, Rh, Ru	125 mL	**N9304382**

Matrix	Content	Volume	Part No.
Osmium			
15% HCl	100 µg/mL Os	125 mL	**N9304383**

Gold Nanoparticle Standards

Fully characterized gold nanospheres designed for Single Particle-ICP-MS. These particle standards have a nearly perfect spherical shape, narrow size (CV < 5%) and particle number distributions (CV < 5%).

Description	Diameter (nm)	Volume	Part No.
Ultra Uniform Gold Nanospheres Particle Standard 1e7 particles/mL, PEG Carboxyl 0.8 kDa	30	25 mL	**N8151034**
Ultra Uniform Gold Nanospheres Particle Standard 1e7 particles/mL, PEG Carboxyl 0.8 kDa	50	25 mL	**N8151035**
Ultra Uniform Gold Nanospheres Particle Standard 1e7 particles/mL, PEG Carboxyl 0.8 kDa	100	25 mL	**N8151036**

Metallo-Organic Standards

PerkinElmer Metallo-Organic Standards provide a comprehensive solution to your application needs.

Our product offering includes:

- Single and multi-element standards for the analysis of wear metals and metal additives in oil
- Reference materials for used oil analysis of fuel, soot, water, acid number, base number or viscosity
- Sulfur standards made from polysulfide oil
- High purity matrix oils and solvents
- Proficiency testing standards with instant feedback

Each product is shipped with a comprehensive Certificate of Analysis. Our Metallo-Organic Standards have been designed to give you the confidence you need when analyzing difficult samples.



Single-Element, Metallo-Organic Standards

Element	Symbol	Matrix	Size	Part No.
Aluminum 1000 µg/g	Al	Hydrocarbon Oil	50 g	**N9308200**
Aluminum 5000 µg/g	Al	Hydrocarbon Oil	50 g	**N9308729**
Antimony 1000 µg/g	Sb	Hydrocarbon Oil	50 g	**N9308201**
Arsenic 1000 µg/g	As	Hydrocarbon Oil	50 g	**N9308202**
Barium 1000 µg/g	Ba	Hydrocarbon Oil	50 g	**N9308203**
Beryllium 1000 µg/g	Be	Hydrocarbon Oil	50 g	**N9308204**
Bismuth 1000 µg/g	Bi	Hydrocarbon Oil	50 g	**N9308205**
Boron 1000 µg/g	B	Hydrocarbon Oil	50 g	**N9308206**
Cadmium 1000 µg/g	Cd	Hydrocarbon Oil	50 g	**N9308207**
Calcium 1000 µg/g	Ca	Hydrocarbon Oil	50 g	**N9308208**
Calcium 5000 µg/g	Ca	Hydrocarbon Oil	50 g	**N9308322**
Chromium 1000 µg/g	Cr	Hydrocarbon Oil	50 g	**N9308209**
Cobalt 1000 µg/g	Co	Hydrocarbon Oil	50 g	**N9308210**
Copper 1000 µg/g	Cu	Hydrocarbon Oil	50 g	**N9308211**
Iron 1000 µg/g	Fe	Hydrocarbon Oil	50 g	**N9308212**
Lanthanum 1000 µg/g	La	Hydrocarbon Oil	50 g	**N9308213**
Lead 1000 µg/g	Pb	Hydrocarbon Oil	50 g	**N9308214**
Lithium 1000 µg/g	Li	Hydrocarbon Oil	50 g	**N9308215**
Magnesium 1000 µg/g	Mg	Hydrocarbon Oil	50 g	**N9308216**
Manganese 1000 µg/g	Mn	Hydrocarbon Oil	50 g	**N9308217**
Mercury 1000 µg/g	Hg	Hydrocarbon Oil	50 g	**N9308218**
Molybdenum 1000 µg/g	Mo	Hydrocarbon Oil	50 g	**N9308219**

Element	Symbol	Matrix	Size	Part No.
Nickel 1000 µg/g	Ni	Hydrocarbon Oil	50 g	**N9308220**
Phosphorus 1000 µg/g	P	Hydrocarbon Oil	50 g	**N9308221**
Potassium 1000 µg/g	K	Hydrocarbon Oil	50 g	**N9308222**
Scandium 1000 µg/g	Sc	Hydrocarbon Oil	50 g	**N9308223**
Selenium 1000 µg/g	Se	Hydrocarbon Oil	50 g	**N9308224**
Silicon 1000 µg/g	Si	Hydrocarbon Oil	50 g	**N9308225**
Silver 1000 µg/g	Ag	Hydrocarbon Oil	50 g	**N9308226**
Sodium 1000 µg/g	Na	Hydrocarbon Oil	50 g	**N9308227**
Strontium 1000 µg/g	Sr	Hydrocarbon Oil	50 g	**N9308228**
Sulfur 10 µg/g	S	Hydrocarbon Oil	50 g	**N9308229**
Sulfur 100 µg/g	S	Hydrocarbon Oil	50 g	**N9308230**
Sulfur 1000 µg/g	S	Hydrocarbon Oil	50 g	**N9308231**
Thallium 1000 µg/g	Tl	Hydrocarbon Oil	50 g	**N9308232**
Tin 1000 µg/g	Sn	Hydrocarbon Oil	50 g	**N9308233**
Titanium 1000 µg/g	Ti	Hydrocarbon Oil	50 g	**N9308234**
Vanadium 1000 µg/g	V	Hydrocarbon Oil	50 g	**N9308235**
Yttrium 1000 µg/g	Y	Hydrocarbon Oil	50 g	**N9308236**
Yttrium 5000 µg/g	Y	Hydrocarbon Oil	50 g	**N9308323**
Zinc 1000 µg/g	Zn	Hydrocarbon Oil	50 g	**N9308237**
Zirconium 1000 µg/g	Zr	Hydrocarbon Oil	50 g	**N9308238**

Lubricant Guide

For more information on our Lubricants consumables offering visit **www.PerkinElmer.com/lubricants.** You'll find everything from application notes to a comprehensive guide of consumables for all your Lubricants analysis needs.



V-21 Wear Metal Standards

Includes: Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, Mg, Mn, Mo, Na, Ni, P, Pb, Si, Sn, Ti, V, Zn

Description	Matrix	Size	Part No.
V-21 Wear Metals Standard 10 µg/g	Hydrocarbon Oil	100 g	**N9308300**
V-21 Wear Metals Standard 10 µg/g	Hydrocarbon Oil	200 g	**N9308301**
V-21 Wear Metals Standard 10 µg/g	Hydrocarbon Oil	400 g	**N9308324**
V-21 Wear Metals Standard 30 µg/g	Hydrocarbon Oil	100 g	**N9308302**
V-21 Wear Metals Standard 30 µg/g	Hydrocarbon Oil	200 g	**N9308303**
V-21 Wear Metals Standard 30 µg/g	Hydrocarbon Oil	400 g	**N9308325**
V-21 Wear Metals Standard 50 µg/g	Hydrocarbon Oil	100 g	**N9308304**
V-21 Wear Metals Standard 50 µg/g	Hydrocarbon Oil	200 g	**N9308305**
V-21 Wear Metals Standard 50 µg/g	Hydrocarbon Oil	400 g	**N9308326**
V-21 Wear Metals Standard 100 µg/g	Hydrocarbon Oil	100 g	**N9308306**
V-21 Wear Metals Standard 100 µg/g	Hydrocarbon Oil	200 g	**N9308307**
V-21 Wear Metals Standard 100 µg/g	Hydrocarbon Oil	400 g	**N9308327**
V-21 Wear Metals Standard 300 µg/g	Hydrocarbon Oil	100 g	**N9308308**
V-21 Wear Metals Standard 300 µg/g	Hydrocarbon Oil	200 g	**N9308309**
V-21 Wear Metals Standard 300 µg/g	Hydrocarbon Oil	400 g	**N9308328**
V-21 Wear Metals Standard 500 µg/g	Hydrocarbon Oil	100 g	**N9308310**
V-21 Wear Metals Standard 500 µg/g	Hydrocarbon Oil	200 g	**N9308311**
V-21 Wear Metals Standard 500 µg/g	Hydrocarbon Oil	400 g	**N9308329**
V-21 Wear Metals Standard 900 µg/g	Hydrocarbon Oil	100 g	**N9308312**
V-21 Wear Metals Standard 900 µg/g	Hydrocarbon Oil	200 g	**N9308313**
V-21 Wear Metals Standard 900 µg/g	Hydrocarbon Oil	400 g	**N9308330**

V-21+K Wear Metal Standards

Includes: Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, Si, Sn, Ti, V, Zn

Description	Matrix	Size	Part No.
V-21+K Wear Metals Standard 10 µg/g	Hydrocarbon Oil	100 g	**N9308355**
V-21+K Wear Metals Standard 10 µg/g	Hydrocarbon Oil	200 g	**N9308356**
V-21+K Wear Metals Standard 30 µg/g	Hydrocarbon Oil	100 g	**N9308357**
V-21+K Wear Metals Standard 30 µg/g	Hydrocarbon Oil	200 g	**N9308358**
V-21+K Wear Metals Standard 30 µg/g	Hydrocarbon Oil	400 g	**N9308371**
V-21+K Wear Metals Standard 50 µg/g	Hydrocarbon Oil	100 g	**N9308359**
V-21+K Wear Metals Standard 50 µg/g	Hydrocarbon Oil	200 g	**N9308360**
V-21+K Wear Metals Standard 50 µg/g	Hydrocarbon Oil	400 g	**N9308372**
V-21+K Wear Metals Standard 100 µg/g	Hydrocarbon Oil	100 g	**N9308361**
V-21+K Wear Metals Standard 100 µg/g	Hydrocarbon Oil	200 g	**N9308362**
V-21+K Wear Metals Standard 100 µg/g	Hydrocarbon Oil	400 g	**N9308373**
V-21+K Wear Metals Standard 300 µg/g	Hydrocarbon Oil	100 g	**N9308363**
V-21+K Wear Metals Standard 300 µg/g	Hydrocarbon Oil	200 g	**N9308364**
V-21+K Wear Metals Standard 500 µg/g	Hydrocarbon Oil	100 g	**N9308365**
V-21+K Wear Metals Standard 500 µg/g	Hydrocarbon Oil	200 g	**N9308366**
V-21+K Wear Metals Standard 500 µg/g	Hydrocarbon Oil	400 g	**N9308374**
V-21+K Wear Metals Standard 900 µg/g	Hydrocarbon Oil	100 g	**N9308367**
V-21+K Wear Metals Standard 900 µg/g	Hydrocarbon Oil	200 g	**N9308368**

Internal Standards

Description	Matrix	Size	Part No.
Cobalt (Co) Internal Standard, 6%	Mineral Spirits	200 g	**N0776107**
Cobalt (Co) Internal Standard, 6%	Mineral Spirits	400 g	**N9308334**
Cobalt (Co) Internal Standard, 5000 µg/g	Hydrocarbon Oil	50 g	**N9308258**
Cobalt Sulfur-Free Metallo-Organic Concentrate: Co @ approx 3%	Hydrocarbon Oil	400 g	**N9304168**

V-23 Wear Metal Standards

Includes: Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Si, Sn, Ti, V, Zn

Description	Matrix	Size	Part No.
V-23 Wear Metals Standard 10 µg/g	Hydrocarbon Oil	100 g	**N9308239**
V-23 Wear Metals Standard 10 µg/g	Hydrocarbon Oil	200 g	**N0776109**
V-23 Wear Metals Standard 10 µg/g	Hydrocarbon Oil	400 g	**N9308315**
V-23 Wear Metals Standard 30 µg/g	Hydrocarbon Oil	100 g	**N9308241**
V-23 Wear Metals Standard 30 µg/g	Hydrocarbon Oil	200 g	**N9308242**
V-23 Wear Metals Standard 30 µg/g	Hydrocarbon Oil	400 g	**N9308316**
V-23 Wear Metals Standard 50 µg/g	Hydrocarbon Oil	100 g	**N9308243**
V-23 Wear Metals Standard 50 µg/g	Hydrocarbon Oil	200 g	**N0776104**
V-23 Wear Metals Standard 50 µg/g	Hydrocarbon Oil	400 g	**N9308317**
V-23 Wear Metals Standard 100 µg/g	Hydrocarbon Oil	100 g	**N9308245**
V-23 Wear Metals Standard 100 µg/g	Hydrocarbon Oil	200 g	**N0776105**
V-23 Wear Metals Standard 100 µg/g	Hydrocarbon Oil	400 g	**N9308318**
V-23 Wear Metals Standard 300 µg/g	Hydrocarbon Oil	100 g	**N9308247**
V-23 Wear Metals Standard 300 µg/g	Hydrocarbon Oil	200 g	**N9308248**
V-23 Wear Metals Standard 300 µg/g	Hydrocarbon Oil	400 g	**N9308319**
V-23 Wear Metals Standard 500 µg/g	Hydrocarbon Oil	100 g	**N9308249**
V-23 Wear Metals Standard 500 µg/g	Hydrocarbon Oil	200 g	**N0776106**
V-23 Wear Metals Standard 500 µg/g	Hydrocarbon Oil	400 g	**N9308320**
V-23 Wear Metals Standard 900 µg/g	Hydrocarbon Oil	100 g	**N9308251**
V-23 Wear Metals Standard 900 µg/g	Hydrocarbon Oil	200 g	**N9308252**
V-23 Wear Metals Standard 900 µg/g	Hydrocarbon Oil	400 g	**N9308321**

V-26 Wear Metal Standards

Includes: Ag, Al, B, Ba, Bi, Ca, Cd, Cr, Cu, Fe, In, Li, K, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Si, Sn, Ti, V, Zn

Description	Matrix	Size	Part No.
V-26 Wear Metals Standard 10 µg/g	Hydrocarbon Oil	100 g	**N0776130**
V-26 Wear Metals Standard 10 µg/g	Hydrocarbon Oil	200 g	**N0776131**
V-26 Wear Metals Standard 10 µg/g	Hydrocarbon Oil	400 g	**N9308743**
V-26 Wear Metals Standard 30 µg/g	Hydrocarbon Oil	100 g	**N0776132**
V-26 Wear Metals Standard 30 µg/g	Hydrocarbon Oil	200 g	**N0776133**
V-26 Wear Metals Standard 30 µg/g	Hydrocarbon Oil	400 g	**N9308745**
V-26 Wear Metals Standard 50 µg/g	Hydrocarbon Oil	100 g	**N0776134**
V-26 Wear Metals Standard 50 µg/g	Hydrocarbon Oil	200 g	**N0776135**
V-26 Wear Metals Standard 50 µg/g	Hydrocarbon Oil	400 g	**N9308747**
V-26 Wear Metals Standard 100 µg/g	Hydrocarbon Oil	100 g	**N0776136**
V-26 Wear Metals Standard 100 µg/g	Hydrocarbon Oil	100 g	**N0776137**
V-26 Wear Metals Standard 100 µg/g	Hydrocarbon Oil	400 g	**N9308742**
V-26 Wear Metals Standard 300 µg/g	Hydrocarbon Oil	100 g	**N0776138**
V-26 Wear Metals Standard 300 µg/g	Hydrocarbon Oil	200 g	**N0776139**
V-26 Wear Metals Standard 300 µg/g	Hydrocarbon Oil	400 g	**N9308744**
V-26 Wear Metals Standard 500 µg/g	Hydrocarbon Oil	100 g	**N0776140**
V-26 Wear Metals Standard 500 µg/g	Hydrocarbon Oil	200 g	**N0776141**
V-26 Wear Metals Standard 500 µg/g	Hydrocarbon Oil	400 g	**N9308746**
V-26 Wear Metals Standard 900 µg/g	Hydrocarbon Oil	100 g	**N0776142**
V-26 Wear Metals Standard 900 µg/g	Hydrocarbon Oil	200 g	**N0776143**
V-26 Wear Metals Standard 900 µg/g	Hydrocarbon Oil	400 g	**N9308748**

Setup Solutions

Description	Matrix	Size	Part No.
Setup Solution in Hydrocarbon Oil Contents: Be, Ce, Fe, In, Li, Pb @ 10 µg/g	75 cSt Mineral Oil	100 g	**N9308384**
Setup Solution in Hydrocarbon Oil Contents: Be, Ce, Fe, In, Li, Pb @ 10 µg/g	75 cSt Mineral Oil	400 g	**N9308387**

Metal Additive Standards

Description	Matrix	Size	Part No.
Metal Additive Standard 3: Ca @ 5000 µg/g; P, Zn @ 1600 µg/g	Hydrocarbon Oil	100 g	**N9308369**
Metal Additive Standard 3: Ca @ 5000 µg/g; P, Zn @ 1600 µg/g	Hydrocarbon Oil	200 g	**N9308370**
Metal Additive Standard 3: Ca @ 5000 µg/g; P, Zn @ 1600 µg/g	Hydrocarbon Oil	400 g	**N9308552**
Metal Additive Standard 4: Ca @ 5000 µg/g; Mg, P, Zn @ 1600 µg/g	Hydrocarbon Oil	100 g	**N9308259**
Metal Additive Standard 4: Ca @ 5000 µg/g; Mg, P, Zn @ 1600 µg/g	Hydrocarbon Oil	200 g	**N0776108**
Metal Additive Standard 4: Ca @ 5000 µg/g; Mg, P, Zn @ 1600 µg/g	Hydrocarbon Oil	400 g	**N9308333**
Metal Additives Standard: Ca @ 5000 µg/g; P -Phosphorus @ 1600 µg/g, Zn – Zinc (1600) @ 1600 µg/g	Hydrocarbon Oil	200 g	**N9308551**



V-Solv™ ICP Solvent 1 Gallon

Matrix Oils and Solvents

Description	Matrix	Size	Part No.
Hydrocarbon Oil	75 cSt Oil	500 mL	**N0776103**
Hydrocarbon Oil	75 cSt Oil	1 Gal.	**N9308262**
Mineral Oil (low sulfur)	20 cSt Mineral Oil	500 mL	**N9308263**
Mineral Oil (low sulfur)	20 cSt Mineral Oil	1/2 Gal.	**N9308264**
V-Solv™ ICP Solvent	V-Solv™	1 Gal.	**N9308265**
V-Solv™ ICP Solvent	V-Solv™	5 Gal.	**N9308378**
Citrajet Liquid Acid Cleaner		1 Gal.	**N0777063**
Citrajet Liquid Acid Cleaner		5 Gal.	**N0777064**
V-Solv™ + Cobalt ICP Solvent	V-Solv™	1 Gal.	**N9308198**
V-Solv™ + Cobalt ICP Solvent	V-Solv™	5 Gal.	**N9308199**

Acid Number Standards

Description	Matrix	Size	Part No.
Acid Number (AN) Reference Material, 0.1 mg KOH/g	Hydrocarbon Oil	100 g	**N9308160**
Acid Number (AN) Reference Material, 0.1 mg KOH/g	Hydrocarbon Oil	400 g	**N9308161**
Acid Number (AN) Reference Material, 0.5 mg KOH/g	Hydrocarbon Oil	100 g	**N9308166**
Acid Number (AN) Reference Material, 0.5 mg KOH/g	Hydrocarbon Oil	400 g	**N9308167**
Acid Number (AN) Reference Material, 1 mg KOH/g	Hydrocarbon Oil	100 g	**N9308162**
Acid Number (AN) Reference Material, 1 mg KOH/g	Hydrocarbon Oil	400 g	**N9308163**
Acid Number (AN) Reference Material, 1.5 mg KOH/g	Hydrocarbon Oil	100 g	**N9308164**
Acid Number (AN) Reference Material, 1.5 mg KOH/g	Hydrocarbon Oil	400 g	**N9308165**
Acid Number (AN) Reference Material, 2 mg KOH/g	Hydrocarbon Oil	50 g	**N9308170**
Acid Number (AN) Reference Material, 2 mg KOH/g	Hydrocarbon Oil	400 g	**N9308171**
Acid Number (AN) Reference Material, 3 mg KOH/g	Hydrocarbon Oil	50 g	**N9308168**
Acid Number (AN) Reference Material, 3 mg KOH/g	Hydrocarbon Oil	400 g	**N9308169**

Fuel Dilution Standards

Description	Matrix	Size	Part No.
Blank for Diesel Fuel Dilution Standard	75 cSt Hydrocarbon Oil	100 mL	**N9308266**
6% w/w Custom Fuel Dilution Standard	75 cSt Hydrocarbon Oil	100 mL	**N9308741**
Blank for Gas Fuel Dilution Standard	75 cSt Hydrocarbon Oil	100 mL	**N9308270**
100 µg/g Ethylene Glycol Standard	Multi-grade Diesel Engine Oil	80 mL	**N9308388**
500 µg/g Ethylene Glycol Standard	Multi-grade Diesel Engine Oil	80 mL	**N9308389**
600 µg/g Ethylene Glycol QC Standard	Multi-grade Diesel Engine Oil	80 mL	**N9308398**
1000 µg/g Ethylene Glycol Standard	Multi-grade Diesel Engine Oil	80 mL	**N9308396**
2000 µg/g Ethylene Glycol Standard	Multi-grade Diesel Engine Oil	80 mL	**N9308397**
Ethylene Glycol Standards Set	Multi-grade Diesel Engine Oil	6 x 80 mL	**N9308399**
Ethylene Glycol Standards Set	Multi-grade Diesel Engine Oil	80 mL	**N9308379**

Devolatilized Diesel Fuel Standards

Description	Matrix	Size	Part No.
2% w/w Devolatilized Diesel Fuel	75 cSt Hydrocarbon Oil	100 mL	**N9308151**
4% w/w Devolatilized Diesel Fuel	75 cSt Hydrocarbon Oil	100 mL	**N9308152**
5% w/w Devolatilized Diesel Fuel	75 cSt Hydrocarbon Oil	100 mL	**N9308153**
10% w/w Devolatilized Diesel Fuel	75 cSt Hydrocarbon Oil	100 mL	**N9308154**
Custom Fuel Dilution Std. 6% (w/w)	75 cSt Hydrocarbon Oil	100 mL	**N9308155**
2% w/w Devolatilized Gasoline	75 cSt Hydrocarbon Oil	100 mL	**N9308156**
5% w/w Devolatilized Gasoline	75 cSt Hydrocarbon Oil	100 mL	**N9308157**
10% w/w Devolatilized Gasoline	75 cSt Hydrocarbon Oil	100 mL	**N9308158**

Base Number Standards

Description	Matrix	Size	Part No.
Base Number (BN) Reference Material, 6 mg KOH/g	Hydrocarbon Oil	50 g	**N9308554**
Base Number (BN) Reference Material, 6 mg KOH/g	Hydrocarbon Oil	400 g	**N9308181**
Base Number (BN) Reference Material, 10 mg KOH/g	Hydrocarbon Oil	50 g	**N9308555**
Base Number (BN) Reference Material, 10 mg KOH/g	Hydrocarbon Oil	400 g	**N9308173**
Base Number (BN) Reference Material, 15 mg KOH/g	Hydrocarbon Oil	50 g	**N9308174**
Base Number (BN) Reference Material, 30 mg KOH/g	Hydrocarbon Oil	50 g	**N9308176**
Base Number (BN) Reference Material, 30 mg KOH/g	Hydrocarbon Oil	400 g	**N9308177**
Base Number (BN) Reference Material, 40 mg KOH/g	Hydrocarbon Oil	50 g	**N9308178**
Base Number (BN) Reference Material, 70 mg KOH/g	Hydrocarbon Oil	50 g	**N9308182**
Base Number Standard 15 mg KOH/g	Hydrocarbon Oil	400 g	**N9308175**
Base Number Standard 30 mg KOH/g	Hydrocarbon Oil	50 g	**N9308553**
Base Number Standard 40 mg KOH/g	Hydrocarbon Oil	400 g	**N9308179**
Base Number Standard 70 mg KOH/g	Hydrocarbon Oil	400 g	**N9308133**



Dilution Oil



Karl Fischer Standards

Karl Fischer Standards

Nominal Water Concentration (%)	Matrix	Size	Part No.
Karl Fischer Water in Oil, 0.05%	10W30 Motor Oil	100 mL	**N9308298**
Karl Fischer Water in Oil, 0.1%	10W30 Motor Oil	100 mL	**N9308279**
Karl Fischer Water in Oil, 0.5%	10W30 Motor Oil	100 mL	**N9308280**
Karl Fischer Water in Oil, 1.0%	10W30 Motor Oil	100 mL	**N9308281**

Crackle Test Reference Standards

Description	Matrix	Size	Part No.
Crackle Test Reference Standard 0 wt% H_2O	10W30 Motor Oil	100 g	**N9308337**
Crackle Test Reference Standard 0.1 wt% H_2O	10W30 Motor Oil	100 g	**N9308338**
Crackle Test Reference Standard 0.5 wt% H_2O	10W30 Motor Oil	100 g	**N9308339**

Soot Content Standards

Nominal Soot Content Range (%)	Matrix	Size	Part No.
Nominal Soot Content Range: Blank	15W40 Diesel Oil	50 mL	**N9308282**
Nominal Soot Content Range: 0.5-2%	15W40 Diesel Oil	50 mL	**N9308283**
Nominal Soot Content Range: 2-4%	15W40 Diesel Oil	50 mL	**N9308284**
Nominal Soot Content Range: 4-6%	15W40 Diesel Oil	50 mL	**N9308285**

Soot Content Standard Set

Nominal Soot Content Range (%)	Matrix	Size	Part No.
Nominal Soot Content Range: 0.0, 0.5-2, 2-4, 4-6, 6-9, 9-12wt%	15W40 Diesel Oil	6 x 50 mL	**N9308730**

OilExpress Standards

Description	Matrix	Size	Part No.
In-Service Lubricants FT-IR Control Standard	15W40 Diesel Oil	100 mL	**N9308350**
In-Service Lubricants FT-IR Control Standard	15W40 Diesel Oil	500 mL	**N9308375**
OilExpress 4 Test Oil 120 cSt	PAO Oils	500 mL	**N9308351**
OilExpress 4 Test Oil 360 cSt	PAO Oils	100 mL	**N9308352**
OilExpress 4 System Liquid Detergent Additive		100 mL	**N9308354**
OilExpress 4 System Liquid Detergent Additive		500 mL	**N9308376**
OilExpress 4 System Liquid Detergent Additive		1 Gal.	**N9308380**
Pathlength Calibration Fluid (Squalane)		50 mL	**N9308377**
OilExpress 4 Installation Kit (includes **N9308350**, **N9308351**, **N9308352**, **N9308354**, and **N9308377**)			**N9300850**

Viscosity Reference Standards

Description	Matrix	Size	Part No.
Viscosity Standard Reference Kit Kit includes: **N5316001**, **N5316002**, **N5316003**, **N5316004**, **N5316005**	Hydrocarbons	5 x 500 mL	**N5316000**
Nominal Viscosity: 4.5 cSt at 40 °C and 1.6 cSt at 100 °C	Hydrocarbons	500 mL	**N9307740**
Nominal Viscosity: 10 cSt at 40 °C and 2.7 cSt at 100 °C	Hydrocarbons	500 mL	**N5316001**
Nominal Viscosity: 30 cSt at 40 °C and 5.3 cSt at 100 °C	Hydrocarbons	500 mL	**N5316002**
Nominal Viscosity: 30 cSt at 40 °C and 5.3 cSt at 100 °C	Hydrocarbons	1 Gal.	**N5316025**
Nominal Viscosity: 100 cSt at 40 °C and 16.8 cSt at 100 °C	Hydrocarbons	500 mL	**N5316003**
Nominal Viscosity:	Hydrocarbons	1 Gal.	**N5316024**
100 cSt at 40 °C and 16.8 cSt at 100 °C			
Nominal Viscosity: 360 cSt at 40 °C and 42 cSt at 100 °C	Hydrocarbons	500 mL	**N5316004**
Nominal Viscosity: 930 cSt at 40 °C and 82 cSt at 100 °C	Hydrocarbons	500 mL	**N5316005**

Biodiesel Standards

Description	Matrix	Size	Part No.
Biodiesel Blank	B100 Biodiesel	100 mL	**N9308286**
Biodiesel Blank	B100 Biodiesel	500 mL	**N9308287**
Sulfur @ 20 µg/g in Biodiesel	B100 Biodiesel	100 mL	**N9308288**
Metals in Biodiesel – Ca, K, Mg, Na, P @ 20 µg/g	B100 Biodiesel	100 g	**N9308289**
Multi-Element Biodiesel Standard 5 µg/g, Ca, K, Mg, Na, P	B100 Biodiesel	100 g	**N9308726**

Biodiesel Blends

Description	Matrix	Size	Part No.
100% High Cetane Diesel	High Cetane Diesel Fuel	20 mL	**N9308290**
2% (v/v) Biodiesel	High Cetane Diesel Fuel	20 mL	**N9308291**
5% (v/v) Biodiesel	High Cetane Diesel Fuel	20 mL	**N9308292**
10% (v/v) Biodiesel	High Cetane Diesel Fuel	20 mL	**N9308293**
15% (v/v) Biodiesel	High Cetane Diesel Fuel	20 mL	**N9308294**
20% (v/v) Biodiesel	High Cetane Diesel Fuel	20 mL	**N9308295**
100% (v/v) Biodiesel	B100 Biodiesel	20 mL	**N9308296**

Sulfur Standards

Description	Matrix	Size	Part No.
Polysulfide Oil Blank	13 cSt Mineral Oil	500 mL	**N9308390**
Sulfur @ 500 µg/g, from Polysulfide Oil	13 cSt Mineral Oil	500 mL	**N9308391**
Sulfur @ 1000 µg/g, from Polysulfide Oil	13 cSt Mineral Oil	500 mL	**N9308392**
Sulfur @ 5000 µg/g, from Polysulfide Oil	13 cSt Mineral Oil	500 mL	**N9308393**
Sulfur @ 1 wt%, from Polysulfide Oil	13 cSt Mineral Oil	500 mL	**N9308394**
Sulfur @ 5 wt%, from Polysulfide Oil	13 cSt Mineral Oil	500 mL	**N9308395**
Sulfur @ 0 µg/g (Blank)	#2 Diesel Fuel	500 mL	**N9308714**
Sulfur @ 5 µg/g, from Polysulfide Oil	#2 Diesel Fuel	500 mL	**N9308715**
Sulfur @ 10 µg/g, from Polysulfide Oil	#2 Diesel Fuel	500 mL	**N9308716**
Sulfur @ 15 µg/g, from Polysulfide Oil	#2 Diesel Fuel	500 mL	**N9308717**
Sulfur @ 20 µg/g, from Polysulfide Oil	#2 Diesel Fuel	500 mL	**N9308718**
Sulfur @ 25 µg/g, from Polysulfide Oil	#2 Diesel Fuel	500 mL	**N9308719**
Sulfur @ 50 µg/g, from Polysulfide Oil	#2 Diesel Fuel	500 mL	**N9308720**
Sulfur @ 100 µg/g, from Polysulfide Oil	#2 Diesel Fuel	500 mL	**N9308721**
Sulfur @ 500 µg/g, from Polysulfide Oil	#2 Diesel Fuel	500 mL	**N9308722**
Sulfur @ 1000 µg/g, from Polysulfide Oil	#2 Diesel Fuel	500 mL	**N9308723**
Sulfur @ 1500 µg/g, from Polysulfide Oil	#2 Diesel Fuel	500 mL	**N9308724**
Sulfur at 3.00wt% in Heavy Mineral Oil	75 cSt Mineral Oil	100 mL	**N9307739**
Sulfur @10 µg/g in B100 Biodiesel	B100 Biodiesel	100 mL	**N9308727**

Petroleum Physical Test Standard

Description	Matrix	Size	Part No.
ASTM D86 Distillation Standard	Diesel Fuel	500 mL	**N9308728**

Detection Limit Calibration Standard

Description	Matrix	Size	Part No.
Detection Limits Calibration Standard: a, Mg @ 5 µg/g; La, Li, Mn, Ni, Sr, Zn @ 50 µg/g; As, K @ 250 µg/g	Hydrocarbon Oil	4 oz.	**N9307102**

Coolant Standards

Matrix	Content	Volume	Part No.
Custom Standard HI 1A			
3% HNO_3 (v/v)	Al @ 10 µg/mL, Mg @ 20 µg/mL, Ca @ 32 µg/mL, Cu, Fe, Pb, Zn @ 50 µg/mL, B @ 1000 µg/mL, P @2000 µg/mL, K @ 5000 µg/mL, Na @10,000 µg/mL	500 mL	**N9308341**
Custom Standard QC 1A			
3% HNO_3 (v/v)	Al, Cu @5 µg/mL, Mg @ 10 µg/mL, Zn @ 20 µg/mL, Fe, Pb @ 25 µg/mL, Ca @ 50 µg/mL, B @ 250 µg/mL, P @1000 µg/mL, K @ 2500 µg/mL, Na @ 5000 µg/mL	500 mL	**N9308342**
Custom Standard LO 1A			
3% HNO_3 (v/v)	Al, Cu @ 2 µg/mL, Mg, Zn @ 4 µg/mL, Fe, @ 5 µg/mL, Ca, Pb@ 10 µg/mL, B @ 50 µg/mL, P @ 400 µg/mL, K, Na @ 1000 µg/mL	500 mL	**N9308343**
Custom Standard QC 1B			
3% HNO_3 (v/v)/ trace HF	Sn @ 10 µg/mL, Si @ 30 µg/mL, Mo @ 50 µg/mL	500 mL	**N9308344**
Custom Standard LO 1B			
3% HNO_3 (v/v)/ trace HF	Sn @ 5 µg/mL, Si @ 10 µg/mL, Mo @ 20 µg/mL	500 mL	**N9308345**
Custom Standard HI 1B			
3% HNO_3 (v/v)/ trace HF	Sn @ 20 µg/mL, Mo, Si @ 100 µg/mL	500 mL	**N9308346**

Proficiency Testing Standards

Proficiency Testing Program



Proficiency Testing Standards

The Proficiency Testing Program offered by PerkinElmer has been designed to provide laboratories with a method of monitoring their analytical performance as measured against Certified Reference Materials (CRMs).

1. Analyze a sample
2. Report the results online
3. Receive an instant response to submitted values

Confirm the accuracy of your analytical results, quickly, easily and definitively.

Description	Size	Part No.
PTP Standard for Elemental Analysis of Oils	25 g	**N9308314**

Note: Analyze a sample for up to 23 common elements and report the concentrations in µg/g (ppm). Enter all elements or only those that are of interest to you. Results are color-coded pass/fail indications in green (pass), yellow (borderline) and red (fail).

Description	Size	Part No.
Sample for Particle Count Analysis	125 mL	**N9308725**

Note: Particle count PTP test standards includes 8 channels (4,6,8,14,21,38, 50 and 70 µm). One bottle for ISO 11171 only.

Description	Size	Part No.
Viscosity PTP Test Standard	50 mL	**N9308540**

Note: Report viscosity values in cSt at 40 °C, 100 °C, or both

ICP-MS Single Cell Sample Introduction Kits

The Single Cell Application Module within PerkinElmer's Syngistix™ for ICP-MS software is the ideal tool for laboratories analyzing metal content in cells, either from bioaccumulation of metals or metallic nanoparticles in solution or measuring the intrinsic metal content of the cell. This unique combination of hardware and software module allows the differentiation and quantification between the media and cellular fractions of the same analyte. In a single analysis, cell metal or particulate content, cell-containing metal concentration, mass per cell and mass distribution can all be determined without the need for subsequent data processing. Coupled with the NexION® series ICP-MS, the Syngistix Single Cell Application Module is the world's first single cell ICP-MS dedicated software, delivering speed, flexibility, automation and ease-of-use.



Single Cell Micro DX Autosampler



Asperon Spray Chamber





Description	Qty.	Part No.
Single Cell Kit for NexION 1000/2000 Kit Includes:		**N8150032**
Asperon™ Spray Chamber	1	**N8152493**
Spray Chamber Drain Line	1	**N8152494**
Spray Chamber Addition Gas Tee 1/8 Fitting	1	**N8152495**
Nebulizer HEN	1	**N8152496**
Sample Line for HEN MEINHARD® Nebulizer	1	**N8152489**
UV Light Shield	1	**N8152497**
Plasma Light Shield	1	**N8152377**
Fixed 2.0 mm Injector UHP Quartz Torch	1	**N8152428**
Torch Cassette White	1	**N8152432**
Torch Injector Nut	1	**N8152451**
Syngistix Single Cell Software	1	**N8150321**
CTFE Male Barb Fitting	2	**N8145017**
CTFE Female Barb Fitting	2	**N8145018**
Orange/Red 0.19 mm i.d. PVC Pkg.12	1	**N8152401**
MP² PVC Flared 0.19mm Orange/Red Pkg.12	1	**N8145195**
Autosampler Probe 0.15 mm	1	**N0777221**

Description	Part No.
Single Cell Automation Kit for NexION 1000/2000 Kit Includes:	**N8150039**
Includes Single Cell Micro DX Autosampler. Does not include Single Cell Kit (**N8150032**)	

Description	Qty.	Part No.
Single Cell Kit for NexION 350 Kit Includes:		**N8140032**
Asperon™ Spray Chamber	1	**N8152493**
Spray Chamber Drain Line	1	**N8152494**
Sample Line for HEN MEINHARD® Nebulizer	1	**N8152489**
Spray Chamber Gas Fitting	1	**N8142045**
Nebulizer Hen	1	**N8142046**
UV Light Shield	1	**N8142047**
Quartz Injector 2 mm	1	**N8145508**
Syngistix Single Cell Software	1	**N8150321**
CTFE Male Barb Fitting	2	**N8145017**
CTFE Female Barb Fitting	2	**N8145018**
0.19 mm ID Orange/Red Flared PVC Pkg. 12	1	**N0773111**
Autosampler Probe, 0.15 mm	1	**N0777221**
Not Included in the Kit		
Make-up Gas Mass Flow Controller Upgrade		**W1028686**

Description	Part No.
Single Cell Automation Kit for NexION 300/350 Kit Includes:	**N8140039**
Includes Single Cell Micro DX Autosampler. Does not include Single Cell Kit (**N8140032**)	

Sample Preparation Blocks and Titan MPS

Sample preparation is one of the most critical steps in the analytical process. Often accounting for 60% of your timetable, it has a fundamental impact on laboratory throughput and analytical performance. Any errors within the sample preparation process will undermine the quality of your data at all subsequent stages of your analysis. At PerkinElmer, we provide you with a portfolio of sample preparation solutions that ensure sample preparation success.

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Sample Preparation Blocks and Controllers





Better laboratory practices demand modern techniques in sample preparation. In the past, hot plates were used to digest samples where common digestion problems involved rusting, cross contamination of digestion system to sample, and poor sample temperature control.

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Titan MPS Systems



With the Titan MPS™ microwave sample preparation system, we're delivering on the promise of a simple, safe, cost-effective microwave – one that provides the quick return on investment that labs are looking for in these times of constrained budgets. The Titan MPS microwave sample preparation system delivers the instrument-ready solutions you need for high throughput and reliable results.

VIEW PAGE

Tubes and Vessels

PerkinElmer offers a complete selection of consumables and supplies for your Sample Preparation products.

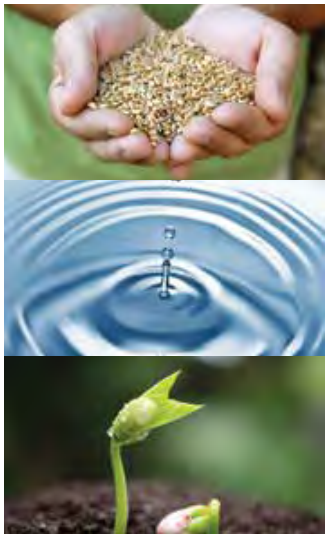
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ORDER ONLINE

Open Digestion



Ideal for: Liquid and solid samples in regulated industries.

Common Applications: water, soil and food testing.

Overview: Open vessel, atmospheric pressure digestion is a common approach to sample preparation for regulatory and compliance laboratories. With the ability to prepare large quantities of samples, open digestion is great for labs with modest digestion requirements that rely on high throughput. Hot block digestion using open vessels meets the regulatory requirements for sample extraction and a number of approved methods are in place to support this.

All PerkinElmer sample preparation blocks are manufactured under a certified ISO 9001: 2008 Quality Management System to meet our high quality requirements.

Upgrade from a Hot Plate: Better laboratory practices demand modern techniques in sample preparation. In the past, hot plates were used to digest samples where common digestion problems involved low throughput, dealing with fragile beakers, cleanliness of glassware, rusting and corrosion, cross contamination of digestion system to sample, loss of volatile elements and poor sample temperature control.



Sample Preparation Blocks

The SPB series of block digestion systems offers the latest in graphite block technology in many different packages. Graphite blocks are PTFE-coated to resist aggressive corrosive attack for guaranteed long life in harsh laboratory environments.

Our sample blocks operate with either a SPB Digital Controller or SPB Touch Controller*. Please select a controller below and the appropriate Start Up Kit* which includes RackLock DigiTUBE®s, disposable watch glasses, DigiFILTER™s and much more. Each SPB Block includes one set of racks.

Description	Capacity	Part No.
SPB 15-40, (115 V/230 V)	40 Tubes/15 mL	**N9300800**
SPB 15-108, (115 V/230 V)	108 Tubes/15 mL	**N9300801**
SPB 50-24, (115 V/230 V)	24 Tubes/50 mL	**N9300802**
SPB 100-12, (115 V/230 V)	12 Tubes/100 mL	**N9300805**
SPB 50-48, (115 V/230 V)	48 Tubes/50 mL	**N9300803**
SPB 100-30, (115 V/230 V)	30 Tubes/100 mL	**N9300806**
SPB 50-72, (230 V)	72 Tubes/50 mL	**N9300804**
SPB 100-42, (230 V)	42 Tubes/100 mL	**N9300807**

*Sold separately



Controllers

The user friendly SPB Digital Controller includes programmable features such as: temperature set-point to 0.1 ˚C, even sample heating and evaporation results, timer shutdown option and programmable alarm for end of cycle.

The SPB Touch Controller includes all of the SPB Digital Controller features and more. Added features include: a graphical representation of the heating profile in real-time to identify the current stage of the method heating program. Safety features include the ability of the controller to monitor the heating cycle of the block to prevent run away situations. The controller allows for the SPB Probe to be calibrated to meet your SOP requirements.

The SPB Probe, used with either the Digital or Touch models, can directly monitor and control the block's heating rate via sample temperature feedback to the controller.

Description	Part No.
SPB Digital Controller	**N9300808**
SPB Touch Controller	**N9300809**



Start Up Kits

PerkinElmer's SPB Start Up kits contain all consumable items required to operate the system including: RackLock DigiTUBE®s and Caps, disposable Watch Glasses, DigiFILTER™s, RackLock Racks and Storage Racks.

Description	DigiTUBEs /Caps	Watch Glasses	Racks	Part No.
Start Up Kit for SPB 15-40	540	–	2	**N9308704**
Start Up Kit for SPB 15-108	540	–	2	**N9308706**
Start Up Kit for SPB 50-24	500	1000	1	**N9308017**
Start Up Kit for SPB 100-12	200	500	1	**N9308011**
Start Up Kit for SPB 50-48	500	1000	2	**N9308002**
Start Up Kit for SPB 100-30	200	500	2	**N9308013**
Start Up Kit for SPB 50-72	500	1000	3	**N9308025**
Start Up Kit for SPB 100-42	200	500	2	**N9308015**



Temperature Probes

Why use a thermometer to monitor and manually adjust sample temperature when a SPB Probe will automatically do the job? The SPB Probe provides direct control and monitoring of actual sample temperature via a corrosion-resistant, PFA-coated temperature probe. Available with different holders in a 6 in. configuration for use with 50 and 100 mL DigiTUBEs. Each probe is supplied with five Probe Watch Glasses and a probe holder.

Description	Qty.	Part No.
SPB Probe 6 in. for 15 mL Tubes	1	**N9308707**
SPB Probe 6 in. for 50 mL Tubes	1	**N9308018**
SPB Probe 6 in. for 100 mL Tubes	1	**N9308009**
SPB Probe Watch Glass (replacement) for 50 mL Tubes	25	**N9308041**
SPB Probe Watch Glass (replacement) for 100 mL Tubes	25	**N9308073**
SPB Probe Holder for DigiTUBEs 15 mL	1	**N9308703**
SPB Probe Holder for DigiTUBEs 50 mL	1	**N9308044**
SPB Probe Holder for DigiTUBEs 100 mL	1	**N9308045**



Automatic Shut-Off System

Designed to shut-off SPB systems with no lab supervision. Ideal for overnight digestions and evaporations where samples require volume reductions (volume control ±2.5 mL). Increase lab efficiency by automatically digesting samples off-hours. Select appropriate Probe for Tube use.

Description	Qty.	Part No.
TempSET, without Probe	1	**N9300810**
TempSET Probe for 50 mL Tubes	1	**N9308023**
TempSET Probe for 100 mL Tubes	1	**N9308029**
TempSET Probe Holder for 100 mL Tubes	1	**N9308065**



DigiFILTER

The vacuum assisted DigiFILTER assembly provides a quick and easy way to filter samples prior to analysis. Increase lab productivity by filtering particulates from digested samples in a matter of seconds directly from the digestion tube. Available with a 0.45 or 1.0 µ hydrophilic PTFE membrane. Field Filtration Kit conforms to Item 8.2 in the EPA 200.7, 200.8 and 200.9 Methods.

Description	Qty.	Part No.
DigiFILTER 0.45 micron for 50 mL DigiTUBEs	100	**N9308031**
DigiFILTER 1.0 micron for 50 mL DigiTUBEs	100	**N9308032**
Field Filtration Kit 0.45 for 50 mL DigiTUBEs Contains: 25 0.45 µ DigiFILTERs, 30 x 50 mL DigiTUBEs, 1 x 6 mL bottle of PlasmaPURE® Nitric acid, 1 x 50 mL storage rack, 1 Sharpie® pen and 2 x 60 mL plastic syringes	1	**N9308033**
DigiFILTER Manifold	1	**N9308034**

Tubes, Caps and Watch Glasses



PerkinElmer offers 50 and 100 mL, disposable, sample digestion tubes with easy-to-read graduations. Accurate 50 or 100 mL graduation is calibrated to meet Class A specifications to allow normalization directly in the tube. RackLock design allows for easy, one-handed closure of leak-free screw cap. All-in-one tubes eliminate the need for five separate vessels: Digestion beakers, volumetric flasks, graduated cylinders, autosampler tubes and storage containers.

DigiTUBEs

DigiTUBE	Dimensions (OD/ID)
15 mL	12 mm x 11 mm
50 mL	30 mm x 28 mm
100 mL	46 mm x 44 mm

Description	Qty.	Part No.
DigiTUBEs 15 mL with RackLock (incl. caps)	1620	**N9308711**
DigiTUBEs 15 mL with RackLock (no caps)	1620	**N9308712**
DigiTUBEs 15 mL with RackLock (incl. caps)	540	**N9308713**
DigiTUBEs 50 mL with RackLock (incl. caps)	750	**N9308008**
DigiTUBEs 50 mL non-RackLock (incl. caps)	750	**N9308037**
DigiTUBEs 50 mL with RackLock (no caps)	750	**N9308340**
DigiTUBEs 100 mL with RackLock (incl. caps)	300	**N9308016**
DigiTUBEs 100 mL non-RackLock (incl. caps)	300	**N9308066**
PTFE Digestion Tube 50 mL (incl. Blue caps)	6	**N9308024**
Tube, Quartz, 62.5 mL, Uncalibrated	6	**N9308048**
Tube, Borosilicate, 62.5 mL, Uncalibrated	6	**N9308049**
Tube, Borosilicate, 62.5 mL, Calibrated at 50 mL	6	**N9308050**

VersaTube™

A unique, patented tube with attached cap – simplifying digestion analysis and no watch glasses are required.

- Integrated cap and vial – single unit design of cap and vial which is easily manipulated with one hand.
- Ability to vent samples with cap – the attached cap can 'lock' open at an angle, which enables venting of your sample if desired. No watch glasses required.
- Certified accuracy of graduations and levels of trace metals – graduations in 5 mL increments to 50 mL, certification of accuracy available.
- Heat resistant homopolymer polypropylene – for good heat resistance and minimal background interference.
- Etched cap surface for writing – provides labeling area on the cap for sample identification.
- Ready to use out of the box – limits possible contamination with improved efficiency.



Screw Caps

Description	Qty.	Part No.
Screw Caps, Blue, for 15 mL DigiTUBEs	540	**N9308705**
Screw Caps, Clear, for 15 mL DigiTUBEs	540	**N9308708**
Screw Caps, Orange, for 50 mL DigiTUBEs	250	**N9308058**
Screw Caps, Red, for 50 mL DigiTUBEs	250	**N9308059**
Screw Caps, Clear, for 50 mL DigiTUBEs	250	**N9308060**
Screw Caps, Yellow, for 50 mL DigiTUBEs	250	**N9308056**
PTFE Screw Cap for PTFE 50 mL Digestion Tube	6	**N9308027**



Watch Glasses

Description	Qty.	Part No.
Disposable Watch Glasses, 50 mL	1000	**N9308003**
Disposable Watch Glasses, 100 mL	500	**N9308030**



Description	Qty.	Part No.
VersaTube 50 mL	500	**N9308383**

SPB Block Racks

For busy labs, additional acid resistant, polycarbonate Racks are available for all SPB systems. Exclusive RackLock feature locks DigiTUBE®s in position within the rack allowing for easy, one-handed closure of screw cap.



Description	Qty.	Part No.
40-Position Rack for SPB 15-40, 15 mL	1	**N9308700**
54-Position Rack for SPB 15-108, 15 mL	1	**N9308701**
12-Position Rack for SPB-100-12, 100 mL	1	**N9308067**
15-Position Rack for SPB-100-30, 100 mL	1	**N9308068**
21-Position Rack for SPB-100-42, 100 mL	1	**N9308069**
24-Position Rack for SPB-50-24, 50 mL	1	**N9308070**
24-Position Rack for SPB-50-48 and SPB-50-72, 50 mL	1	**N9308042**



Foam Storage Rack
Part No. **N9308382**



DigiTUBE Rack

Storage Racks

Description	Qty.	Part No.
Foam Storage Rack 15 mL	5	**N9308702**
Plastic Storage Rack 50 mL	5	**N9308381**
Foam Storage Rack 100 mL	5	**N9308382**

Fume Hoods and Accessories

The bench top fume hoods for SPB systems are the right choice for trace-metal digestions. Made from clear, acid resistant polycarbonate with a solid surface material base, the fume hood eliminates the risk of trace-metal contamination common with traditional fume hoods. HEPA® filters ensure clean input air. The fume hood can be connected to an in-house laboratory exhaust system or used with the SPB blower unit (**N9308022**). Fume hoods come flatpacked to save transport costs and can be assembled in minutes without tools.

Description	Part No.
Fume Hood for SPB 50-24/100-12, 50-48 / 100-30 23.5 in. D x 26 in. W x 20 in. H	**N9308000**
Fume Hood for SPB 50-72/100-42 28 in. D x 27 in. W x 20 in. H Filter for SPB Fume Hoods **N9308078**	**N9308001**
Fume Hood II for Autosampler 23.5 in. D x 26 in. W x 25 in. H	**N9308036**
SPBVAC™ Evacuation Hood, mounts directly on SPB 50-48/SPB 100-30	**N9308021**
SPB Blower Unit, for use with all systems	**N9300811**
Vacuum Pump 20 L/min 115 V	**N9308035**
Vacuum Pump 60 L/min 115 V	**N9308063**
Vacuum Pump 17 L/min 230 V	**N9308331**
Vacuum Pump 58 L/min 230 V	**N9308332**



SPBVAC Block



Part No.
N9308063

Microwave Digestion



Ideal for: Difficult sample types and regulated laboratories.

Common Applications: Plant waste streams, alloys, pigments, simple and precious metal ores and heavy organic samples.

Overview: Microwave digestion provides high-performance, pressure digestion using sealed vessels to deliver complete sample digestion, allowing total elemental measurement. Able to digest difficult sample types quickly and completely, microwave digestion provides the most accurate sample preparation. Using ultra-clean sealed digestion vessels, the Titan MPS avoids loss of volatile analytes and prevents sample contamination from the working environment. With its high performance, microwave digestion is ideal for mining/geologic, environmental, petrochemical and pharmaceutical industries.

The Titan MPS microwave sample preparation system delivers the instrument-ready solutions you need for high throughput and reliable results. With its Direct Pressure Control™ (DPC) and Direct Temperature Control™ (DTC) sensing technologies, the Titan MPS system accurately monitors digestion reactions and the sample temperature in each digestion vessel to provide outstanding reaction control and deliver consistent digestion results.



Titan MPS Systems

Before you prepare your first sample, you'll notice the difference: The Titan MPS is a top-loading microwave sample preparation system protected by hardware interlocks to ensure safety during operation. And it's simple to load and unload samples, which keeps everyone more productive – and saves your lab time and money.

Description	Part No.
Titan MPS Standard Pressure 16-Position, (230V 50/60Hz) Includes: 16-Position turntable, gas containment manifold, 16 standard pressure 75 mL (40 bar) digestion vessels, 15 vessel caps without pressure sensor, 1 vessel cap with pressure sensor, a lip seal forming tool, exhaust hose, consumables for approximately 500 runs, power cord (US)	**N3130100**
Titan MPS High Pressure 8-Position, (230V 50/60Hz) Includes: 8-Position turntable, gas containment manifold, 8 high pressure 100 mL (100 bar) digestion vessels, 8 TFM sample vessel inserts, 8 ceramic pressure jackets, 7 vessel caps without pressure sensor, 1 vessel cap with pressure sensor, a vessel opening station, a lip seal forming tool, exhaust hose, consumables for approximately 500 runs, power cord (US)	**N3130110**



System Accessories

Description	Part No.
External Exhaust System 230V 50/60 Hz Optional accessory for exhausting Titan MPS oven cavity in laboratories that do not have exhaust systems. Includes one 1.5 m exhaust tube. ID 76 mm, OD 82 mm	**N3131009**
Exhaust Tube 1.5 m (one included with Titan)	**N3134015**
Titan MPS Bench The Titan MPS bench is a heavy-duty Chemsurf laminated rolling cart. The top working surface is constructed with durable Chemsurf material, a chemically-resistant laminate specifically designed for applications in laboratories with routine exposure to chemicals. A full lower shelf with durable Chemsurf laminate provides storage space for digestion vessels and other Titan MPS spares and accessories. Locking 4 in. diameter casters provide stability and easy movement. Dimensions: 32 in. D x 30 in. W x 29 in. H	**N0777900**



Part No.
N3131010



Part No.
N3131011

Turntables

Description	Part No.
16-Position Turntable with Standard 75 mL (40 Bar) Digestion Vessels, with DPC (complete)	**N3131010**
16-Position Turntable with Standard 75 mL (40 Bar) Digestion Vessels, without DPC (complete)	**N3131005**
16-Position Turntable for Standard 75 mL (40 Bar) Digestion Vessels (turntable only)	**N3131006**
8-Position Turntable with High Pressure 100 mL (100 Bar) Digestion Vessels, with DPC (complete)	**N3131011**
8-Position Turntable with High Pressure 100 mL (100 Bar) Digestion Vessels, without DPC (complete)	**N3131007**
8-Position Turntable for High Pressure 100 mL (100 Bar) Digestion Vessels (turntable only)	**N3131008**



Part No.
N3133017



Part No.
N3133019

Accessories

Description	Part No.
High Pressure 100 mL (100 Bar) Digestion Vessel Opening Station	**N3133017**
Single Lip Seal Forming Tool for Standard 75 mL (40 Bar) Digestion Vessel Pressure Seals	**N3132015**
8-Position Lip Seal Forming Tool for Standard 75 mL (40 Bar) Digestion Vessel Pressure Seals. Forms up to 8 Seals Simultaneously	**N3132014**
8-Position Lip Seal Forming Tool for High Pressure 100 mL (100 Bar) Digestion Vessel Pressure Seals. Forms up to 8 Seals Simultaneously	**N3133018**
Single Lip Seal Forming Tool for High Pressure 100 mL (100 Bar) Digestion Vessel Pressure Seals. Forms 1 Seal	**N3133019**
PTFE 2 mL Sample Weighing Cup for Use in Standard 75 mL (40 Bar) or High Pressure 100 mL (100 Bar) Digestion Vessel, Qty. 1	**N3134009**
PTFE 2 mL Sample Weighing Cup for Use in Standard 75 mL (40 Bar) or High Pressure 100 mL (100 Bar) Digestion Vessel, Qty. 16	**N3134010**
Vessel Cap Disassembly Tools for Standard 75 mL (40 Bar) Digestion Vessel	**N3134011**
Vessel Cap Disassembly Tools for High Pressure 100 mL (100 Bar) Digestion Vessel	**N3134012**

Part No.
N3132011



Part No.
N3132013

Part No.
N3132015

Vessels and Vessel Caps

Description	Qty.	Part No.
Standard 75 mL (40 Bar) Digestion Vessel with DPC (Complete) Includes: Pressure Seal, Vessel Cap with DPC, Rupture Disc and Vessel Base	1	**N3132010**
Standard 75 mL (40 Bar) Digestion Vessel without DPC. Includes: Pressure Seal, Vessel Cap, Rupture Disc and Vessel Base	1	**N3132009**
Standard 75 mL (40 Bar) Digestion Vessel TFM Base (base only)	1	**N3132011**
TFM Cap for Standard 75 mL (40 Bar) Digestion Vessels without Pressure Sensor	1	**N3132012**
TFM DPC Cap for Standard 75 mL (40 Bar) Digestion Vessels with Pressure Sensor	1	**N3132013**
High Pressure 100 mL (100 Bar) Digestion Vessel without DPC (complete) Includes: Pressure seal, Vessel cap, Rupture Disc, TFM Vessel Insert, Ceramic Pressure Jacket and Vessel Base	1	**N3133012**
High Pressure 100 mL (100 Bar) Digestion Vessel with DPC (complete) Includes: Pressure seal, Closure Cap with DPC, Rupture Disc, TFM Vessel Insert, Ceramic Pressure Jacket and Vessel Base	1	**N3133013**
High Pressure 100 mL (100 Bar) Digestion Vessel Base (base only)	1	**N3133014**
TFM Cap for High Pressure 100 mL (100 Bar) Digestion Vessels without Pressure Sensor	1	**N3133015**
TFM DPC for High Pressure 100 mL (100 Bar) Digestion Vessels with Pressure Sensor	1	**N3133016**



Vessel Rack Holder

Vessel rack holder for Titan 75 mL vessels. Acrylic box holds eight 75 mL vessels.

Description	Part No.
75 mL Vessel Rack Holder	**N3134094**



Part No.
N3132001



Part No.
N3132002



Part No.
N3133011



Part No.
N3134004

Spares and Replacement Parts

Description	Part No.
Rupture Disc for Standard 75 mL (40 Bar) Digestion Vessels. Made of aluminum, set of 25 pcs	**N3132001**
Rupture Disc for High Pressure 100 mL (100 Bar) Digestion Vessels. Made of titanium, set of 10 pcs	**N3133022**
Pressure Seal for Standard 75 mL (40 Bar) Digestion Vessels. Made of TFM, set of 10 pcs	**N3132002**
Pressure Seal for High Pressure 100 mL (100 Bar) Digestion Vessels. Made of TFM, set of 5 pcs	**N3133023**
DPC Glass Prism for Standard or High Pressure Digestion Vessels	**N3132004**
DPC Glass-Ring for Standard 75 mL (40 Bar) Digestion Vessel	**N3132003**
DPC Glass-Ring for High Pressure 100 mL (100 Bar) Digestion Vessel	**N3133003**
DPC Polarization Foil for Digestion Vessel Caps with Pressure Control for Standard 75 mL (40 Bar) and High Pressure 100 mL (100 Bar) Digestion Vessel, set of 24 pcs	**N3132005**
DPC TFM Cap Insert for Standard 75 mL (40 Bar) Digestion Vessel	**N3132006**
DPC TFM Cap Insert for High Pressure 100 mL (100 Bar) Digestion Vessel	**N3133006**
DPC Clamp Screw for Glass Prism for Standard 75 mL (40 Bar) Digestion Vessel	**N3132007**
DPC ClampScrew for Glass Prism for High Pressure 100 mL (100 Bar) Digestion Vessel	**N3133007**
DPC Viton O-Ring (25 x 3 mm) for Digestion Vessel caps with Pressure Control for Standard 75 mL (40 Bar) Digestion Vessel, Qty. 1. Two are required per vessel cap	**N3132008**
DPC O-Ring for Digestion Vessel Caps with Pressure Control for High Pressure 100 mL (100 Bar) Digestion Vessel, Qty. 1. Two are required per vessel cap	**N3133008**
TFM Sample Vessel Insert for High Pressure 100 mL (100 Bar) Digestion Vessel	**N3133009**
Ceramic Pressure Jacket for High Pressure 100 mL (100 Bar) Digestion Vessel	**N3133010**
PEEK Ring Nut for High Pressure 100 mL (100 Bar) Digestion Vessel closure cap. (Left handed threads)	**N3133011**
PEEK Ring Nut Removal Tool	**N3133021**
Turntable Base Ring	**N3134013**

Gas Containment Manifold Spares

Description	Part No.
End Cap Plug for Gas Containment Manifold. Sealing Plug for 8 and 16-Position Gas Containment Manifold to seal the gas collection system at unused vessel positions	**N3134004**
Clamping Screw (PTFE) for the Top Seal of the 8 and 16-Position Gas Containment Manifold	**N3134002**
Lip Seal Ring of the Gas Containment Manifold. PTFE Sealing Ring for use with 8 and 16-Position Gas Containment Manifolds. Seals the top PFA gas tube to the Gas Containment Manifold	**N3134000**
Tube for Connection of Vessel to Gas Containment Manifold (PTFE). PTFE connecting tube for connection to digestion vessels with 8 and 16-Position Gas Containment Manifold	**N3134005**
Connector for Gas Containment Manifold to Digestion Vessel. PTFE connector for use with 8 and 16-Position Gas Containment Manifold	**N3134007**
Gas Containment Manifold PFA Vent Line 1 m	**N3134014**
Gas Containment Manifold Vent Line Replacement O-Ring (Qty. 2)	**N3134072**



Part No. **N3132000**

Consumable Run Kits

Description	Part No.
Run Kit for Standard 75 mL (40 Bar) Digestion Vessels Consumables for Approximately 2500 Digestions with Standard 75 mL (40 Bar) Digestion Vessels Includes: 10 Pressure Seals (**N3132002**), 4 Rupture Discs (**N3132001**), 5 Lip Seal Rings of the Gas Containment Manifold (**N3134000**)	**N3132000**
Run Kit for High Pressure 100 mL (100 Bar) Digestion Vessels Consumables for Approximately 2500 Digestions with High Pressure 100 mL (100 Bar) Digestion Vessels Includes: 10 Pressure Seals (**N3133023**); 7 Rupture Discs (**N3133022**), 50 PEEK Ring Nuts (**N3133011**) 5 Lip Seal Rings of the Gas Containment Manifold (**N3134000**)	**N3133024**

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