

Atomic Spectroscopy

Consumables and Supplies

Genuine PerkinElmer Products — Genuine Value

► VOLUME 4 2010

THE WORLD LEADER IN ATOMIC SPECTROSCOPY



▲ Analyst 800

SAVE on ICP-MS Cones when you purchase 2 or more



interchim - Hotline 33 (0)4 70 03 73 09 - e-mail interchrom@interchim.com - Fax 33 (0)4 70 03 88 55

SAVE on Atomic Spectroscopy Standards when you purchase 2 or more

See pages 53-57



SAVE on Lumina™ Hollow Cathode Lamps when you purchase 2 or more

See pages 6-7



SAVE on 20-packs of HGA Pyrocoated Graphite Tubes

See pages 18-19

SAVE on Torches when ordered with a Spray Chamber or Nebulizer!

See pages 27 or 35



NEW! PerkinElmer Atomax™ 1.5 inch Hollow Cathode Lamps

See pages 4-5



New Investments – Local Support – Proven Quality!

For over 50 years, PerkinElmer has helped our global laboratory partners meet their most demanding application measurement challenges. Our experience in Chromatography, Spectroscopy and Material Characterization gives us a unique advantage in providing holistic and comprehensive solutions for laboratories in universities and key market segments like Environmental, Energy, and Food & Product Safety.

When you order our precision-designed, genuine PerkinElmer consumables and accessories, you can enjoy the peace of mind, ease of ordering, and best-in-class service. You'll get the results you need – accurately and on time. PerkinElmer selects only the highest quality products for our consumables portfolio and invests heavily to test and validate the quality of our products.

Ordering Information

Interchim

211 bis Avenue Kennedy - BP 1140
03103 Montluçon Cedex

Tel 33 (0)4 70 03 88 55

Hotline 33 (0)4 70 03 73 09

email interchrom@interchim.com

Return Goods Policy

Before returning any item to PerkinElmer, please obtain a Return Authorization Number from a customer service representative. Call your local PerkinElmer office and please have the following information ready:

- Our Order Number or your Purchase Order Number
- The PerkinElmer part numbers of the items that you wish to return
- Reason for return

Our customer service representative will provide you with a Return Authorization Number and the return address. We cannot accept any returns without a Return Authorization Number. Policy may vary. Please contact your local PerkinElmer representative for details.

Technical Support

For technical assistance, please contact your local PerkinElmer Customer Care Representative. See local office listings to the left.

Check with your local PerkinElmer Customer Care center for current pricing.

PerkinElmer and the PerkinElmer logo are registered trademarks of PerkinElmer, Inc. All other product and company names mentioned herein may be the trademarks or registered trademarks of their respective owners.

PerkinElmer is not responsible for typographical or photographic errors that may appear in this catalog. We reserve the right to make adjustments or corrections due to changing market conditions, product discontinuations, or typographical or photographic errors in advertisements or product descriptions. Terms and conditions and item availability are subject to change without notice.

Table of Contents

Atomic Absorption

HCL and EDL Lamps	4-9
Burner System Components	10-11
Nebulizers/Nebulizer Components	12-14
Graphite Furnace Supplies	15
HGA Graphite	18-19
THGA Graphite	20-21



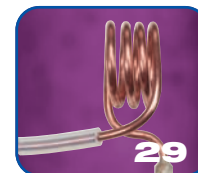
Inductively Coupled Plasma – OES

Nebulizers	22-23
Spray Chambers	24-25
Torches	26-27
Injectors	28
Sample Introduction Supplies	29



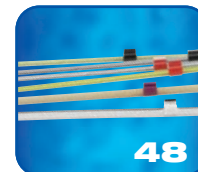
Inductively Coupled Plasma – MS

Nebulizers	30-31
Spray Chambers	32-33
Injectors	34
Torches	35
Mass Spectrometer Hardware	36
Cones	37
Sample Introduction Spares Kits	38



Atomic Spectroscopy

Website	39
Service Plans	40
Line Conditioners	41
Autosampler Supplies	43-45
Flow Injection Supplies	46-47
Tubing	48
Laboratory Products	49-51
Standards	52-57
Sample Preparation Blocks	58-59



NEW! PerkinElmer Atomax 1.5 Inch Hollow

High quality **1.5" Lamps** designed for any **Atomic Absorption Instrument**



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" AA Lamps from PerkinElmer, the World Leader in Atomic Absorption

New Atomax 1.5" hollow cathode lamps are crafted to the same high standards that have made PerkinElmer 2" 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" Format AA Instruments

PerkinElmer Atomax lamps are designed to fit most commercially available atomic absorption instruments including Varian, 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" 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.

Atomax™ Certificate of Quality

High quality equivalent lamps for all major instrument manufacturers.

- ✓ Each lamp is designed and tested to ensure optimal performance on PerkinElmer and other manufacturer's instruments.
- ✓ Rigid quality control assures that all lamps meet the same high standard for intensity, stability, and spectral purity.
- ✓ Test data for each lamp is stored and tracked by serial number allowing performance data to be retrieved on an individual basis rather than conventional batch testing.
- ✓ Carefully selected materials used in the manufacturing of our lamps avoids spectral interference.
- ✓ Every Atomax lamp has a warranty of 5,000 milliamperre-hours.*

* Please refer to warranty card for full details.

Please retain for your records.

000216_03


PerkinElmer
For the Better

PerkinElmer offers a complete selection of **Atomax 1.5" Single-Element Atomic Absorption Lamps**



PerkinElmer Exclusive 6/24 Warranty*

Atomax™ 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.

Element	Symbol	Part No.	Element	Symbol	Part No.	Element	Symbol	Part No.
Aluminum	Al	N2025301	Iridium	Ir	N2025325	Samarium	Sm	N2025351
Antimony	Sb	N2025347	Iron	Fe	N2025317	Scandium	Sc	N2025348
Arsenic	As	N2025302	Lanthanum	La	N2025327	Selenium	Se	N2025349
Barium	Ba	N2025305	Lead	Pb	N2025339	Silicon	Si	N2025350
Beryllium	Be	N2025306	Lithium	Li	N2025328	Silver	Ag	N2025300
Bismuth	Bi	N2025307	Lutetium	Lu	N2025329	Sodium	Na	N2025333
Boron	B	N2025304	Magnesium	Mg	N2025330	Strontium	Sr	N2025353
Cadmium	Cd	N2025309	Manganese	Mn	N2025331	Tantalum	Ta	N2025354
Calcium	Ca	N2025308	Mercury	Hg	N2025322	Terbium	Tb	N2025355
Cesium	Cs	N2025312	Molybdenum	Mo	N2025332	Tellurium	Te	N2025356
Chromium	Cr	N2025311	Neodymium	Nd	N2025335	Thallium	Tl	N2025359
Cobalt	Co	N2025310	Nickel	Ni	N2025336	Thorium	Th	N2025357
Copper	Cu	N2025313	Niobium	Nb	N2025334	Thulium	Tm	N2025360
Dysprosium	Dy	N2025314	Osmium	Os	N2025337	Tin	Sn	N2025352
Erbium	Er	N2025315	Palladium	Pd	N2025340	Titanium	Ti	N2025358
Europium	Eu	N2025316	Phosphorus	P	N2025338	Tungsten	W	N2025362
Gadolinium	Gd	N2025319	Platinum	Pt	N2025342	Vanadium	V	N2025361
Gallium	Ga	N2025318	Potassium	K	N2025326	Ytterbium	Yb	N2025364
Germanium	Ge	N2025320	Praseodymium	Pr	N2025341	Yttrium	Y	N2025363
Gold	Au	N2025303	Rhenium	Re	N2025344	Zinc	Zn	N2025365
Hafnium	Hf	N2025321	Ruthenium	Ru	N2025346	Zirconium	Zr	N2025366
Holmium	Ho	N2025323	Rhodium	Rh	N2025345			
Indium	In	N2025324	Rubidium	Rb	N2025343			

AAAnalyst 50

The AAAnalyst 50 is an entry-level AA that offers double-beam technology to save laboratories time when analyzing a high volume of samples. The instrument is an intuitive, cost-effective solution for routine metals analysis laboratories in a variety of markets ranging from academia to mining and plating. The double-beam system allows shorter warm-up times, improved signal stability and fewer operator adjustments than a single-beam system.

Part No.

N2010520



PerkinElmer AAAnalyst 50

Genuine PerkinElmer Lumina™ Hollow

PerkinElmer has 40 years of expertise designing and manufacturing Hollow Cathode Lamps



Every genuine PerkinElmer Lumina Lamp is designed for use with and tested on, our spectrometers to assure compatibility and the highest performance

To prolong the life of a Lumina Hollow Cathode Lamp (HCL), we produce lamps with larger internal volume so that a greater supply of fill gas at optimum pressure is available. The larger the lamp, the greater the inert gas volume — and the longer the lamp lifetime.

PerkinElmer offers a wide range of single-element and multi-element HCLs, which are ideal for determining most elements by atomic absorption spectroscopy.

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
Bismuth	Bi	N3050111	N3050311
Cadmium	Cd	N3050115	N3050315
Calcium	Ca	N3050114	N3050314
Chromium	Cr	N3050119	N3050319
Cobalt	Co	N3050118	N3050318
Copper	Cu	N3050121	N3050321
Gold	Au	N3050107	N3050307
Iron	Fe	N3050126	N3050326
Lead	Pb	N3050157	N3050357
Magnesium	Mg	N3050144	N3050344
Manganese	Mn	N3050145	N3050345
Mercury	Hg	N3050134	N3050334
Molybdenum	Mo	N3050146	N3050346
Nickel	Ni	N3050152	N3050352
Palladium	Pd	N3050158	N3050358
Potassium	K	N3050139	N3050339
Selenium	Se	N3050172	N3050372
Silicon	Si	N3050173	N3050373
Silver	Ag	N3050102	N3050302
Sodium	Na	N3050148	N3050348
Strontium	Sr	N3050176	N3050376
Tin	Sn	N3050175	N3050375
Titanium	Ti	N3050182	N3050382
Zinc	Zn	N3050191	N3050391

Features and Benefits

- **Long Life:** PerkinElmer's larger lamp volume results in longer lamp lifetime
- **Automation:** PerkinElmer coded lamps allow automatic setup
- **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*

Cathode Lamps for Atomic Absorption

Small Diameter Lamp Adapter Kit

Permits the use of small diameter 8-pin hollow cathode lamps.



Part No.

N3051050

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.



**SPECIAL SAVINGS OFFERS
from Interchim !**

**Save on Hollow
Cathode Lamps**

when you purchase 2 or more!

Delivering **Enhanced Value** and **Outstanding Savings** on the products you use most!

Lumina Multi-Element Hollow Cathode Lamps

Element Name	Element Symbol	Lumina Lamp Part No.	Lumina Lamp with Intensitron® Adapter Part No.
Two-element Lamps			
Calcium, Magnesium	Ca, Mg	N3050202	N3050402
Potassium, Sodium	K, Na	N3050204	N3050404
Three-element Lamps			
Calcium, Magnesium, Zinc	Ca, Mg, Zn	N3050208	N3050408
Copper, Iron, Nickel	Cu, Fe, Ni	N3050209	N3050409
Four-element Lamps			
Copper, Iron, Manganese, Zinc	Cu, Fe, Mn, Zn	N3050212	N3050412
Five-element Lamps			
Silver, Chromium, Copper, Iron, Nickel	Ag, Cr, Cu, Fe, Ni	N3050213	N3050413
Cobalt, Chromium, Copper, Manganese, Nickel	Co, Cr, Cu, Mn, Ni	N3050214	N3050414
Six-element Lamps			
Cobalt, Chromium, Copper, Iron, Manganese, Nickel	Co, Cr, Cu, Fe, Mn, Ni	N305021	N3050417
Seven-element Lamps			
Aluminum, Calcium, Copper, Iron, Magnesium, Silicon, Zinc	Al, Ca, Cu, Fe, Mg, Si, Zn	N3050218	N3050418

System 2 Electrodeless Discharge Lamps

Electrodeless Discharge Lamps

are an ideal source for determining
volatile elements

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.



Electrodeless Discharge Lamps for greater brightness

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 two major components: a dual-channel power supply with matched dual RF driver assemblies, which allows simultaneous, independent operation of two EDLs, and the interchangeable lamp sleeves. 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.

- System 2 EDLs are as easy to use as an HCL. Just install the lamp, turn it on, and set the current. Changing lamps requires only seconds because the pre-aligned bulbs require no additional adjustment.

To ensure operator safety, a built-in interlock prevents lamp operation if the lamp is not properly installed.

Electrodeless Discharge Lamps

Element Name	Element Symbol	System 2 EDL Part No.	AA Analyst Coded Intensitron® 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

Maximum Intensity and Long Life



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*

The 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.

EDL Assemblies and Components

EDL Driver Assemblies

Description	Part No.
For AAnalyst™ 200/400	N3150131
For AAnalyst 600/700/800, SIMAA™ 4110 ZL (short cable)	03030997
For all models except AAnalyst 600/700/800, SIMAA 4110 ZL (long cable)	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 Converts cable on the AAnalyst 600/700/800, SIMAA 4110 Z System 2 EDL Driver Assembly	03030998

Burner System Components for Optimal

PerkinElmer offers a full range of replacement **burner heads** and **mixing chambers**



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.

Burner System Component Features

- 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 to prevent burner 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 rubber O-rings for aqueous solutions or Corkprene or KALREZ® gaskets for organic solutions

Burner Heads

There are four burner heads available for use with the burner system. They are all made of solid titanium, which is corrosion resistant and free of most of the elements commonly determined by atomic absorption.

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.

Part No.

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.

Part No.

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.

Part No.

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.

Part No.

N0400103



Single-slot Nitrous Oxide-acetylene 5 cm



Single-slot Air-acetylene 10 cm



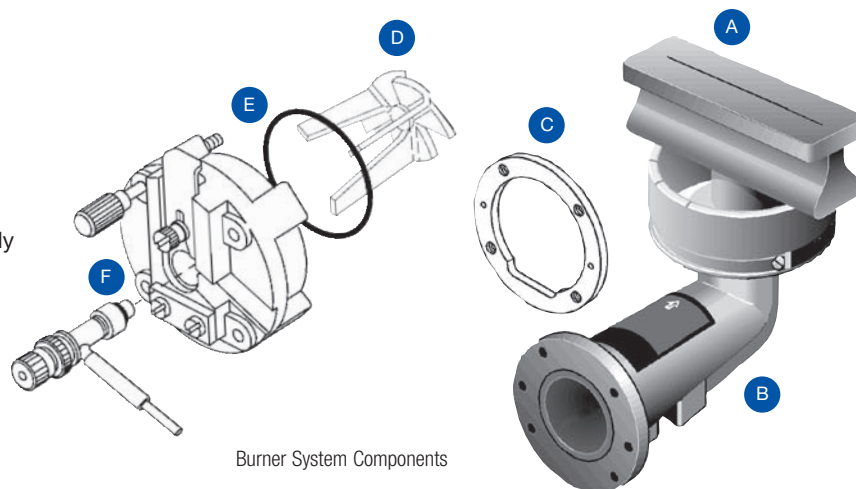
Single-slot Air-acetylene 5 cm



Three-slot Air-acetylene 10 cm

Burner System Components

- A** Burner Head
- B** Burner Mixing Chamber
- C** Clamping Ring
- D** Flow Spoiler
- E** End Cap O-ring
- F** End Cap Assembly



Burner System Components

Burner Heads

Description	Length	Flame Type	For AAnalyst	For 2280, 2380, 3030(B), 3100,	For 1100(B), 2100, 4100
			50/100/200/300/400/700/800	3110, 3300, 4000, 5000, 5100PC	Part No.
Single-slot	5 cm	Nitrous Oxide-Acetylene	N0400100	00400277	B0162669
Single-slot	10 cm	Air-Acetylene	N0400102	00400266	B0162668
Three-slot	10 cm	Air-Acetylene	N0400103	00400289	
Single-slot	5 cm	Air-Acetylene	N0400101		

Burner System Components

Description	For AAnalyst	For 2280, 2380, 3030(B), 3100,	For 1100(B), 2100, 4100
	50/100/200/300/400/700/800	3110, 3300, 4000, 5000, 5100PC	Part No.
Burner Head O-Ring	09902219	09902219	09902219
Burner Mixing Chamber Assembly	00570948	00570948	00570948
Clamping Ring	N0401171	00572616	
Flow Spoiler	00572561	00572561	00572561
End Cap O-Ring Standard	09902147	09902147	B0158690
End Cap O-Ring Organics (Corkprene)	00472014	00472014	B0158598
End Cap O-Ring Organics (KALREZ®)	09921044		
End Cap Assembly	00570984		
End Cap Assembly	N0370392	00570984*	B0151573
Burner Gasket Kit	00470988	00470988	
Drain Tubing	02507987		
Impact Bead	00572615	00572615	B0158616
Seal Plug	00572624	00572624	
O-Ring (¼ in 6 mm i.d.)	09902240	09902240	
O-Ring (½ in 3 mm i.d.)	09902236	09902236	
Burner Drain Assembly (for 50/200/400)	N0400058		
Burner Drain Assembly for Organic Solutions (for 50/200/400)	N3150232		
Burner Drain Assembly (for 700/800)	N2011074		
Burner Drain Assembly for Organic Solutions (for 700/800)	N3150230		
Burner Drain Assembly		00470391	
Burner Drain Assembly (for 3100, 3110, 3300)		N0370149	
Cable and Pin Assembly (for Air-Acetylene)		00400276	00400276
Cable and Pin Assembly (for Nitrous Oxide)		00400275	00400275
Hold-Down Cable		03030130	03030130
Burner Gasket Kit (for aqueous solutions)			B0155546
Burner Gasket Kit (for organic solutions)			B0173404
Burner Head Cleaning Tool	03031573	03031573	03031573

* A different End Cap Assembly (N0370392), is required for use with the High-Sensitivity Nebulizer.

PerkinElmer High-Performance Nebulizers

PerkinElmer nebulizers are available in a variety of configurations to **meet** all of your **analytical needs**



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

For AAnalyst 50/200/400/700*/800*

Our new 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, acid or base, diluted or concentrated — can be analyzed under optimum conditions. This high-sensitivity nebulizer is fabricated entirely of inert plastic materials for maximum performance and corrosion resistance.

*Requires End Cap Assembly (N0370392).

Nebulizer Assembly

Description	Part No.
Nebulizer Assembly	N3150188
Capillary Assembly	B3150458
Impact Bead	B0505086
Nebulizer Spacer	B3150531
Tubing Assembly (1,000 mm) For connecting Autosampler AS-90/AS-93plus	B0191060

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

Nebulizer Assembly with Pt/Ir Capillary

Description	Part No.
For AA100/300/700/800/5100PC/5000/3300/3110/3100	B0505480
For 4100/2100/1100(B)	B0501029

Nebulizer Assembly with Tantalum Capillary

Description	Part No.
For AA100/300/700/800/5100PC/5000/3300/3110/3100	B0505590
For 4100/2100/1100(B)	B0505589



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

Nebulizer Assembly

Description	Part No.
For AA100/300/700/800/5100PC/5000/3300/3110/3100 For 4100/2100/1100(B)	03030404 N3110110

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

Nebulizer Assembly

Description	Part No.
For AA50/100/200/300/400/700/800/5100PC/5000/3300/3110/3100* For 4100/2100/1100(B)	03030299 N3110111

** Requires End Cap Assembly (00570984)*



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

Nebulizer Assembly

Description	Part No.
For AA100/300/700/800/5100PC/5000/3300/3110/3100	N0370394

High-Sensitivity Nebulizer Assembly

Description	Part No.
For AA100/300/700/800/5100PC/5000/3300/3110/3100	N0370393

Stainless Steel Nebulizers

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

Nebulizer Assembly

Description	Part No.
For AA50/100/200/300/400/700/800/5100PC/5000/3300/3110/3100* For 4100/2100/1100(B)	03030352 N3110109

** Requires End Cap Assembly (00570984)*

See the next page for a **full selection** of **Nebulizer parts**



GemTip™ Nebulizer

PerkinElmer offers a **full selection** of **parts** for your nebulizer

Plastic Body Nebulizers

High-Sensitivity Nebulizer with Pt/Ir Capillary¹

Description	For AAnalyst 50/200/400	For AAnalyst 100/300/700/800, 5100 PC, 5000, 3300, 3100	For 4100, 2100, 1100(B)
	Part No.	Part No.	Part No.
Nebulizer Assembly	N3150188	B0505480 ²	B0501029 ²
Capillary Assembly	B3150458	B0501022	B0501022
Impact Bead	B0505086	B0505086	B0505086
Nebulizer Spacer	B3150531		
Nebulizer End Cap		B0501026	B0501026
Locking Ring		B0501025	B0501025
Nebulizer Body		B0506666	B0506668

High-Sensitivity Nebulizer with Tantalum Capillary¹

Description	Part No.	Part No.
Nebulizer Assembly ²	B0505590	B0505589
Capillary Assembly	B0505588	B0505588
Impact Bead	B0505086	B0505086
Nebulizer End Cap	B0501026	B0501026
Locking Ring	B0501025	B0501025
Nebulizer Body	B0506666	B0506668

GemTip™ Nebulizer

Description	Part No.	Part No.
GemTip Nebulizer Assembly	N0370394	
High-Sensitivity GemTip Nebulizer Assembly	N0370393	



Nebulizer Capillary Tubing



Nebulizer Cleaning Wires



Nebulizer Grease

Nebulizer Capillary Tubing

10 ft (3 m) length of 0.58 mm i.d. polyethylene tubing, for use with the stainless steel, platinum/rhodium and GemTip™ Nebulizers.

Part No.

09908265

Nebulizer Cleaning Wires

Made of soft alloy copper, these cleaning wires are specially deburred to prevent scratching the orifices and internal components of the nebulizers while cleaning.

Pkg.

5

Part No.

03030135

Nebulizer Grease

A small quantity of Apiezon®-L grease helps to lubricate the o-ring seals for reassembly and ensures leak-proof operation.

Part No.

03030405

Metal Body Nebulizers

For AAnalyst 100/300/700/800,
5100 PC, 5000, 3300, 3100

For 4100, 2100, 1100(B)

Stainless Steel Nebulizer³

Description	Part No.	Part No.
Nebulizer Assembly	03030352	N3110109
Capillary Assembly	03030354	03030354
Venturi	03031810	N3111159
O-Ring Kit	N9300065	N9300066

Corrosion-Resistant Nebulizer³

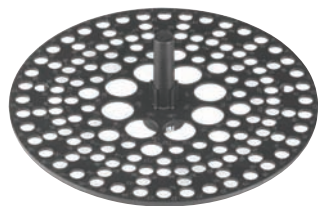
Description	Part No.	Part No.
Nebulizer Assembly	03030404	N3110110
Capillary Assembly	03030402	03030402
Capillary Assembly For AS-51 or AS-50	00570957	00570957
Venturi	03031920	03031920
O-Ring Kit	N9300065	N9300066

Platinum Alloy Nebulizer³

Description	Part No.	Part No.
Nebulizer Assembly	03030299	N3110111
Capillary Assembly ⁴	03030433	03030433
Venturi	03033124	N3111158
O-Ring Kit	N9300065	N9300066

¹ Inert plastic body with red adjusting ring² Requires End Cap Assembly (N0370392)³ Stainless steel body⁴ Etched with a "P" for identification

Autosampler Sample Cups and Supplies



148-Position Tray



88-Position Tray



Autosampler Trays

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

For Model AS-800

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 eight 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 eight positions for 7.0 mL reagent containers. One is provided with the autosampler.	B3001506
Cover	B3001505
Arm	B3002046

For Models AS-60/AS-70/AS-71/AS-72

Description	Part No.
40-Position Tray, Plastic 35 sample locations for 2.0 or 3.5 mL sample cups. Each sample tray has five positions for 30 mL cloverleaf-shaped reagent containers.	B0510417

For Models AS-71 and AS-72

Description	Part No.
80-Position Tray, Plastic 75 sample locations for 1.2 mL sample cups. Each sample tray has five positions for 30 mL cloverleaf-shaped reagent containers.	B0510404

Sampling Capillaries

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

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	B0129258

Special Savings
offers from Interchim
Save when you purchase a
pack of 1,000 Autosampler Cups

Quantity
Discounts
Available!

Please contact Interchim Hotline 33 (0)4 70 03 73 09.

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 and organic solutions
- Teflon®** – 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
2.5 mL	Polypropylene	1,000	B3001566
7.0 mL**	Polypropylene	100	B3001567
2.0 mL	Polyethylene	1,000	B0087056
2.0 mL	Polystyrene	1,000	B0119079
3.5 mL	Polystyrene	100	B0129303
2.0 mL	Teflon®	30	B0087600

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

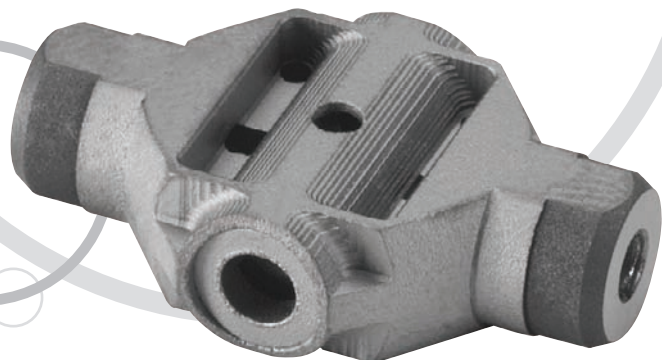
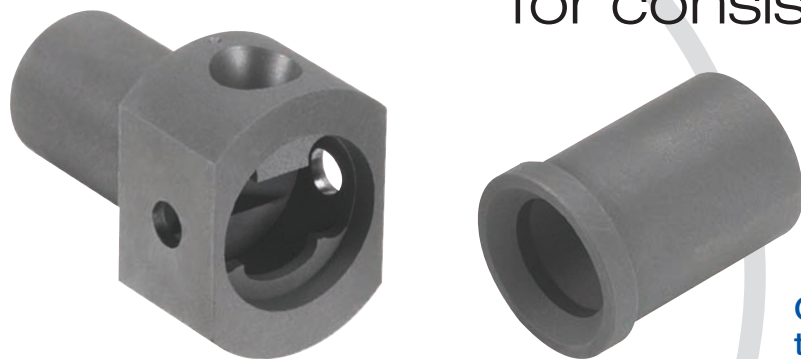
Reagent Containers

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

Trust your Analysis to Genuine PerkinElmer

Rely on **PerkinElmer graphite**
for consistent analytical results.
**Every sample.
Every day.**



Our pyrolytic coating design is critical to achieving high performance

The specified thickness of pyrolytic coating applied to PerkinElmer graphite improves the total resistance of the graphite tube and the temperature distribution within the tube. Improper pyrolytic coating can shorten tube lifetime dramatically.

The microstructure and density of the surface are important parameters for the atomization kinetics of analyte elements. Irreproducible surface qualities will cause changes in the optimal drying, pyrolysis and atomization temperatures, peak shape, and characteristic mass. PerkinElmer's coating specification and quality control ensure consistency from tube to tube.

We start with an exclusive grade of graphite

The production of high-quality graphite components requires stringent quality control. Selection and careful control of raw materials are extremely important.

The composition and the microstructure of the base graphite material determine the resistivity of the tube and its heating characteristics. To ensure high quality and consistency, a specific high-density base graphite material has been developed for use with PerkinElmer graphite furnace systems. This base graphite material is used exclusively for the manufacturing of PerkinElmer's graphite components.

Our tubes are manufactured and tested to the highest quality specifications

During manufacturing, a comprehensive quality testing program, including extensive mechanical, electrical, thermal, and analytical testing procedures, is strictly followed. Each lot of graphite tubes is tested to demanding specifications for lifetime, sensitivity, and precision.

Extensive testing ensures that all graphite components shipped by PerkinElmer provide consistent lot-to-lot performance.



You can depend on our extensive experience

PerkinElmer has over three decades of experience in the design and development of graphite furnace systems and materials. Years of PerkinElmer development have yielded the best possible graphite for atomic absorption. Any other graphite has not been optimized for use with PerkinElmer instruments, and may yield inaccurate analytical results.

Graphite

Do not accept imitations

Graphite components offered by other companies often refer to the PerkinElmer part, implying that these components are made from the same material and provide equivalent performance. This is misleading, as these imitation components are not made from the same base graphite material, nor are they tested to the same demanding quality control specifications. The different base graphite material will alter the temperature calibration, the heating rates and the performance characteristics.



Rely on genuine PerkinElmer graphite

Today's analysts expect exceptional analytical performance from their graphite furnace atomic absorption spectrometers. That performance must be stable and 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 under strict quality control by both the instrument manufacturer and the graphite manufacturer. PerkinElmer graphite components continue to set the industry standard for quality.

The proper performance, maintenance, and serviceability of your graphite furnace system can be assured only through the use of genuine, high-quality PerkinElmer graphite components.



How is high-quality graphite manufactured?

- Select carefully chosen raw materials that are exclusive to PerkinElmer
- Mill and mix the components with precision
- Utilize the proper pressing techniques
- Employ the correct heat treatments at carefully selected times
- Purify materials at multiple times throughout the process
- Apply special coating technology for pyrolytic products
- Test and qualify graphite against rigorous PerkinElmer standards
- Machine patented PerkinElmer designs using specialized techniques

Special Savings offers
from **Interchim** !
Save on 20-packs of
HGA Graphite Tubes!

Please contact Interchim Hotline 33 (0)4 70 03 73 09



HGA Pyrocoated Graphite Tubes and L'vov

We have put **30 years** of **expertise** into the development of our **graphite tubes, contact cylinders** and **platforms**

PerkinElmer tubes are manufactured to the highest quality specifications

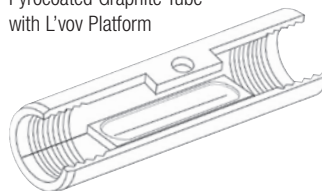
The production of high-quality graphite components requires stringent quality control. To ensure high quality and consistency, a specific grade of high-density base graphite material has been developed for PerkinElmer's exclusive use. This base graphite material is used for the manufacturing of all PerkinElmer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

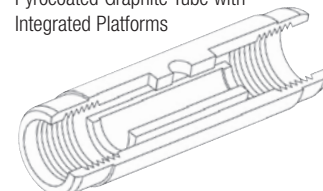
The proper performance, maintenance, and serviceability of our graphite furnace systems can be assured only through the use of genuine PerkinElmer graphite components.

Pyrocoated 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.

Pyrocoated Graphite Tubes

Grooved for use with L'vov Platforms

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

Description	Part No.
5-pack	B0137111
20-pack	B3001254
50-pack	B0109322
100-pack	N3110146

Does not include platform.

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 Furnaces

- Includes left-hand Contact, right-hand Contact, Shield Ring

Description	Part No.
1 set	B0128495
5 sets	B3130086

For Zeeman Furnaces

- Includes left-hand Contact, right-hand Contact

Description	Part No.
1 set	B0116823
5 sets	B0180361



Platforms



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.

L'vov Platforms

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.
5-pack	B0137112
10-pack	B0121091
20-pack	B3001256
50-pack	B0109324
100-pack	N3110145



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.

Modifiers	Concentration	Volume	Part No.
Mg(NO ₃) ₂	1% Mg (as nitrite)	100 mL	B0190634
Pd	1% Pd (as nitrite)	50 mL	B0190635
NH ₄ H ₂ PO ₄	10% NH ₄ H ₂ PO ₄	100 mL	N9303445

SPECIAL SAVINGS OFFERS from Interchim !

Save on HGA Graphite Tube 20-packs!

Please contact Interchim Hotline 33(0)4 70 03 73 09 - interchrom@interchim.com

Delivering **Enhanced Value** and **Outstanding Savings** on the products you use most!

Pyrocoated Graphite Tubes with Integrated Platforms

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.



**PerkinElmer
Exclusive!**

Pyrocoated Graphite Tubes with Integrated Platforms

- 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
20-pack	B3001264
40-pack	N9300651

Pyrocoated Graphite Tubes**

Description	Part No.
5-pack	B0105197
10-pack	B0135653
20-pack	B3000342
50-pack	B0091504

Uncoated Graphite Tubes**

Description	Part No.
5-pack	B0137113
20-pack	B3001253
50-pack	B0070699

**Not compatible with L'vov platforms

THGA Graphite Tubes Only Available from

Our **exclusive design** ensures **even heating** over the entire length of the tube

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.

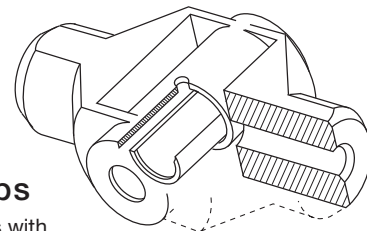
PerkinElmer's unique, transversely-heated graphite tube includes an integrated platform. The exceptionally uniform temperature distribution obtained with transverse heating significantly reduces or eliminates condensation of the sample matrix components and "memory" effects, and improves the atomization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

Standard THGA Graphite Tubes

Description	Part No.
5-pack	B3000641
20-pack	B0504033
100-pack	N3110147

Standard THGA Graphite Tubes with End Caps

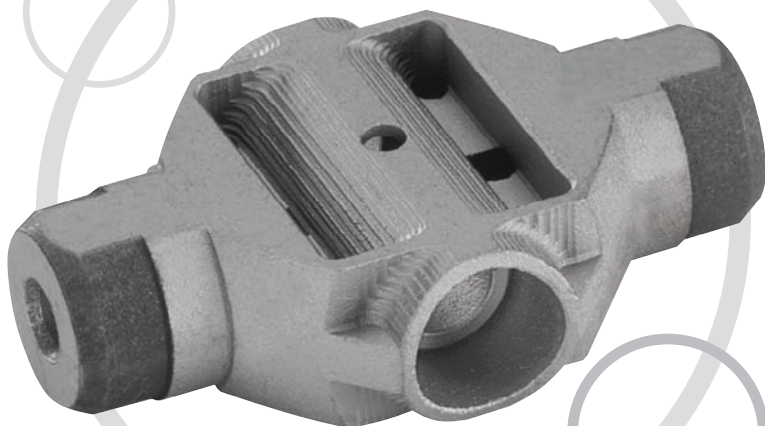
For improved characteristic mass with volatile and medium refractory elements such as Ag, As, Cd, Co, Cr, Cu, Pb, Se and Tl, the THGA graphite tubes with end caps are recommended. Note: THGA graphite tubes with end caps are not recommended for refractory elements such as V or Ba.



Standard THGA Graphite Tubes w/End Caps

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

Description	Part No.
5-pack	B3000653
20-pack	B3000655





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

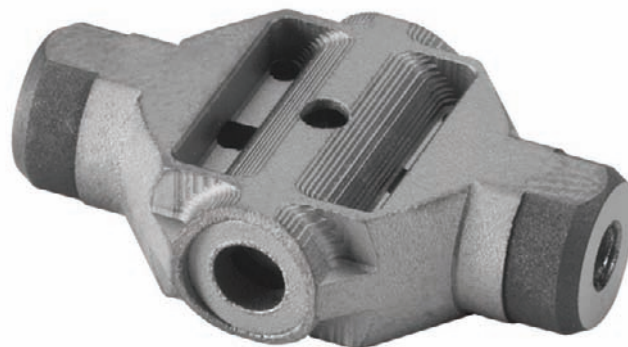
Description	Part No.
1 pair	B0504035
5 pairs	B0504036

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



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.



THGA Instrument Mirror

Used to optimize drying temperatures and times.

Part No.

B0851900

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.



Matrix Modifiers

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

Modifiers	Concentration	Volume	Part No.
Mg(NO ₃) ₂	1% Mg (as nitrite)	100 mL	B0190634
Pd	1% Pd (as nitrite)	50 mL	B0190635
NH ₄ H ₂ PO ₄	10% NH ₄ H ₂ PO ₄	100 mL	N9303445

UltraClean THGA Graphite Tubes

Key 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

SPECIAL SAVINGS OFFERS from Interchim !

Save on Atomic Spectroscopy Standards

when you purchase 2 or more!

Please contact Interchim Hotline 33 (0)4 70 03 73 09 - interchrom@interchim.com

Delivering **Enhanced Value** and **Outstanding Savings** on the products you use most!

Concentric Nebulizers offer high-quality sample introduction for a wide variety of applications



MEINHARD® Nebulizers

The MEINHARD® concentric glass 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 must not be used with solutions containing hydrofluoric acid. PerkinElmer offers three types for ICP-OES, MEINHARD® A, C and K. All require an end cap for use with Ryton® Scott spray chambers.

MEINHARD® Model	Application	Part No.
Type A	General purpose	00472020
Type C	High dissolved solids	00472022
Type K	Reduced flow and organics	N0681574

Description	Part No.
Liquid-End Connector Kit, 4 mm	N0777414
Nebulizer Clip for Meinhard Nebulizers	N0777460

End Cap for Concentric Glass Nebulizers

ICP Model	Part No.
Optima 2X00/3X00/4X00/5X00/7X00	N0680504



PEEK Mira Mist® Nebulizer

The Mira Mist® fits regular spray chambers as a direct replacement for glass concentric nebulizers. Its features include standard pressure (45 psi), low sample flow and enhanced parallel path design.

Description	Uptake Rate	Part No.
PEEK Mira Mist	0.2 to 2.5 mL/min	N0775330
Teflon Mira Mist	0.2 to 2.5 mL/min	N0777031
For samples with high HF, Sulphuric, and some other solvents that attack Peek.		
Ari Mist (low flow)	0.050 to 1.0 mL/min	N0777032
T2100	0.5 to 3.0 mL/min	N0777033
For high levels of undissolved solids such as oil samples, geologic samples, and slurries.		

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 o.d. x 0.50 mm i.d. x 700 mm long sample tubing. MicroMists with sample uptakes 0.05 – 0.1 mL/min are fitted a UniFit connector with 1.3 mm o.d. x 0.25 mm i.d. x 700 mm long sample tubing. All MicroMist nebulizers offered by PerkinElmer are supplied with the EzyLok argon connector.

For Optima 2X00/3X00 XL/3X00 DV/3000 SCX/4X00/5X00/7X00*

Ar Flow Rate	Uptake Rate	Part No.
0.7 L/min	0.05 mL/min	N0775349
0.7 L/min	0.1 mL/min	N0775348
0.7 L/min	0.2 mL/min	N0775347
0.7 L/min	0.6 mL/min	N0775346

For Optima 3000/3000 SCR/3X00 RL*

Ar Flow Rate	Uptake Rate	Part No.
1.0 L/min	0.05 mL/min	N0775344
1.0 L/min	0.1 mL/min	N0775343
1.0 L/min	0.2 mL/min	N0775342
1.0 L/min	0.4 mL/min	N0775341

*Requires Quick Disconnect part no. N0770336.

SeaSpray Nebulizers

The SeaSpray concentric nebulizer is ideal for samples with high dissolved solids and offers outstanding nebulization efficiency for trace level analyses. It offers freedom from clogging while nebulizing solutions to the limit of solubility of most mineral salts and conferring significant sensitivity gains.

For Optima 2X00/3X00 XL/3X00 DV/3000 SCX/4X00/5X00/7X00

Ar Flow Rate	Uptake Rate	Part No.
0.7 L/min	2 mL/min	N0775345

For Optima 3000/3000 SCR/3X00 RL

Ar Flow Rate	Uptake Rate	Part No.
1.0 L/min	2 mL/min	N0775340

New! Concentric Nebulizers

For Optima 2X00/3X00/4X00/5X00/7X00

Type	Uptake Rate	Part No.
Conikal Nebulizer	2 mL/min	N0777487
Slurry Nebulizer	4 mL/min	N0777488
VeeSpray Ceramic Nebulizer	3 mL/min	N0777489
PolyCon Nebulizer	2 mL/min	N0777490

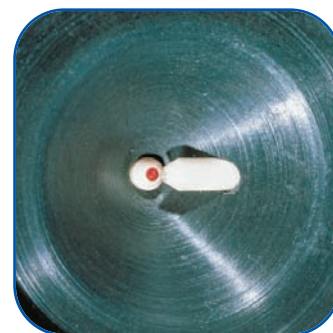
Please see website for more details.

PolyPro ST Nebulizer with Detachable Capillary

This nebulizer is Polypropylene construction and Hydrofluoric acid resistant. 0 – 3 ml/min sample flow rate with peristaltic pumping.

Description	Part No.
PolyPro ST Nebulizer with Detachable Capillary	N0777219
PFA-ST Nebulizer with Detachable Capillary	N0777049

GemCone and GemTip Nebulizers only from PerkinElmer



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, HNO₃, H₂SO₄, H₃PO₄, 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 Ryton® end cap for maximum chemical resistance.

GemCone™ Low-Flow Nebulizers

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 Ryton® Scott Spray Chambers.

GemCone Low-Flow Nebulizers

ICP Model	Part No.
Optima 2X00/4X00/5X00/7X00	N0770358
Optima 3X00	N0690671

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 for use with Ryton® Scott Spray Chambers.

Part No.
N0690670

GemTip Cross-Flow II Nebulizers

ICP Model	Part No.
Optima 2X00/4X00/5X00/7X00	N0770546
Optima 3X00	N0680503

GemTip Cross-Flow II Nebulizer and End Cap Retrofit Kit

This kit includes the GemTip Cross-Flow II Nebulizer, end cap assembly and the fittings required to install the nebulizer for the first time on the Plasma 40/400, Plasma 1000/2000 and Optima™ 3X00 instruments.

Part No.
N0680610



GemTip Cross-Flow Nebulizer Kits

The Tip Kit includes a clear sapphire sample tip (0.012 in i.d.) and a red ruby argon tip (0.009 in i.d.). The tips are constructed of PEEK with the gem inserts noted for maximum corrosion resistance.

GemTip Cross-Flow Nebulizer Kits

Description	Part No.
GemTip Cross-Flow II Tip Kits	N0690676
GemTip Cross-Flow Tip Kits	N0580624
O-Ring Kit for GemTip Cross-Flow Nebulizers	N9300067

GemCone Nebulizer Accessories

Description	Part No.
GemCone Sample Capillary Adapter	N0371505
End Cap for GemCone Nebulizers	N0680504
For Optima 2X00/3X00/4X00/5X00/7X00	
Quick Disconnect Tubing	N0770336
For Optima 2X00/4X00/5X00/7X00	

PerkinElmer Spray Chambers for all of Your

Superior quality Spray Chambers designed to provide maximum sensitivity and efficiency



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 cyclonic spray chamber relies on momentum to efficiently and quickly remove the larger droplets from the sample mist decreasing any opportunity for occlusion or agglomeration of the smaller droplets. The result is higher efficiency, better precision and faster washouts than other spray chamber designs.

Save Time and Expense

- Decreased sample introduction system installation and optimization time due to the preset nature of the spray chamber/nebulizer combination
- More samples per hour due to minimal dead volume and efficient draining

Unique Design Characteristics

- The nebulizer port is oversized so that sample solution cannot build up around the nebulizer as it will in other cyclonic designs. This translates to less carryover, faster washout times and greater productivity from your Optima
- The nebulizer port angle is tightly controlled so that the nebulizer mist impacts on the same chamber wall area in each and every spray chamber. The angle of incidence is critical in determining the efficiency of large droplet removal
- A trace metal free plastic nebulizer adapter is employed to fix the depth of nebulizer insertion at the optimal position. Because of this, there is no need for an operator to move the nebulizer in and out of the port in an effort to locate the "sweet spot"
- Each spray chamber incorporates a precisely-machined ridge along the inside top of the spray chamber. Both the angle and depth of the ridge are critical to performance. The result is efficient draining of sample waste and the elimination of large droplets being swept into the plasma. This eliminates the periodic "spiking" that adversely affects precision and fosters faster washout times

Cyclonic Spray Chambers

Standard and O-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.

ICP Model	Type	Part No.
Optima 2X00/4X00/5X00/7X00	Standard	N0776052
Optima 2X00/4X00/5X00/7X00	O-Ring Free	N0775351
Optima 2X00/4X00/5X00/7X00	HF Resistant	N0777496
Optima 3X00 DV/XL/3000 SCX	Standard	N8122188
Optima 3X00 DV/XL/3000 SCX	O-Ring Free	N0775350

New! Glass Cyclonic Spray Chambers

Type	Model	Part No.
Cinnabar Spray Chamber with Helix	Optima 2/4/5/7X00 DV	N0777494
Twinnabar Spray Chamber with Helix	Optima 2/4/5/7X00 DV	N0777495
Tracey TFE Spray Chamber with Helix	Optima 2/4/5/7X00 DV	N0777496
Tracey TFE Spray Chamber with Helix	Optima 4300/5300/7300 V	N0777497

Please see website for more details.

Applications



Baffled Cyclonic Spray Chamber



Ryton® Scott Spray Chamber

Baffled Cyclonic Spray Chambers

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.

Baffled Cyclonic Spray Chambers

The internal baffle design has two important characteristics:

- 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
- The baffle is cut at a sharp angle so that a large cross-section of the spray chamber is sampled as opposed to a straight cut which would have a very small sampling cross-section. The advantage is more representative sampling and reduced matrix effects

ICP Model	Type	Part No.
Optima 2X00/4X00/5X00/7X00 DV	Standard	N0776053
Optima 2X00/4X00/5X00/7X00 DV	O-Ring Free	N0775352
Optima 2X00/4X00/5X00/7X00 DV for Oil Analysis (4 mm baffle)	Standard	N0776090
Optima 2X00/4X00/5X00/7X00 DV	O-Ring Free, Water-Cooled	N0774100
Optima 2X00/4X00/5X00/7X00 DV for Oil Analysis (4 mm baffle)	O-Ring Free	N0775355
Optima 4300V/5300V/7300V	Standard	N0771501
Optima 4300V/5300V/7300V	O-Ring Free	N0775356
Optima 4300V/5300V/7300V	HF Resistant	N0771550
Optima 5X00/7X00 DV, (7 mm baffle)		N0777036

Drain line included without aux. gas port and it connects directly to ESI injectors.

Organic Sample Introduction Kit

Includes 4mm Baffled Cyclonic Spray Chamber, 3-slot Torch, GemCone low-flow Nebulizer, and 1.2mm Alumina Injector.

Part No.

Optima 2X00/4X00/5X00/7X00 DV

N0770420

Ryton® Scott Spray Chambers

The Ryton® Scott Spray Chamber is made from corrosion-resistant Ryton®, 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. The Type II, two-piece design ensures leak-free performance. The removable inner tube allows the chamber to be easily disassembled for cleaning.

Ryton® Scott Spray Chambers

ICP Model	Part No.
Optima 2X00/4X00/5X00/7X00	N0770357
Optima 3000/3000 SCR/3X00 RL	N0690640
Optima 3X00 DV/XL/3000 SCX	N0690720
Plasma 400 (complete)	N0580542
Plasma 400 (inner tube)	N0582259
Plasma 400 (outer chamber)	N0582258

Ryton® Scott External Spray Chamber Kit

Includes external Ryton® Scott Type II Spray Chamber, 1.2 mm Quartz Injector and appropriate mounting hardware. For use with high-volatility samples.

ICP Model	Part No.
Optima 3X00 Series	N0690289



Metal Ball Joint Clip

Used to connect spray chamber and torch. Includes tension screw.

Part No.

N0773114

UniFit Drain Connector with Tubing for Cyclonic Spray Chambers

Sample Tube Size	Pkg.	Part No.
1/8 in. o.d. x 0.75 mm i.d. x 700 mm	3	N0774080
1.3 mm o.d. x 0.75 mm i.d. x 700 mm	3	N0774077

Quick-change torch modules provide maximum efficiency in your lab



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

Complete torch and sample introduction module including Demountable Single-Slot Torch, mounting block, 2 mm Alumina Injector, Ryton® Scott Spray Chamber and GemTip Cross-Flow II Nebulizer. Useful when a separate sample introduction is required for running different sample types.

Ryton® and GemTip Torch Modules

ICP Model	Part No.
Optima 2X00/4X00/5X00/7X00 DV	N0770606
Optima 3000/3000 SCR/3X00 RL	N0690610
Optima 3X00 DV	N0690812
Optima 3X00 XL/3000 SCX	N0690712



Quick-Change Torch Module Support Stand

A free-standing support stand to hold your spare Quick-Change Torch Module or as a means of conveniently holding your module when working inside the sample compartment.

ICP Model	Part No.
Optima 2X00/4X00/5X00/7X00 DV	N0770609
Optima 3X00	N0690636



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

Complete torch and sample introduction module including complete Single-Slot Demountable Torch, mounting block, 2 mm Alumina Injector, Cyclonic Spray Chamber and MEINHARD® Type C Concentric Nebulizer.

ICP Model	Part No.
Optima 2X00/4X00/5X00/7X00	N0770607

Mounting Block

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

ICP Model	Part No.
Optima 2X00/4X00/5X00/7X00	N0770600

Quick-Change Torch Modules

Description	ICP Model	Part No.
Dry Aerosol Quick-Change Torch Module	Optima 3000/3000 SCR/3X00 RL	N0690638
Dry Aerosol Block and Injector Assembly	Optima 3000/3000 SCR/3X00 RL	N0690637
Dry Aerosol Adapter for Ultrasonic Nebulization	Optima 2X00 DV/3X00 XL/3X00 DV/3000 SCX/4X00 DV/5X00 DV/7X00 DV	N0690770
Quick-Change Torch Module for HF-Resistant Analysis	Optima 4300V/5300V/7300V	N0770911
Quick-Change Torch Module for Used Oil Analysis	Optima 4300V/5300V/7300V	N0770910

Keep a **replacement Torch** on-hand to ensure **maximum uptime** and **performance**



Demountable Quartz Torches

Demountable design using one-piece quartz tubing for plasma and auxiliary gas flow. Available in a wide range of styles from 0 – 3 slots, depending on your instrument and application needs. 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	# of Slots	Part No.
Optima 2X00/4X00/5X00/7X00 DV	0	N0770343
Optima 2X00/4X00/5X00/7X00 DV	0 (short ver.)	N0770344
Optima 2X00/4X00/5X00/7X00 DV	1	N0770338
Optima 2X00/4X00/5X00/7X00 DV	3	N0772005
Optima 3X00 DV	1	N0691662
Optima 3000 SCX/3X00 XL	0	N0695379
Optima 3000/3000 SCR/3X00 RL	1	N0690568
Optima 3000/3000 SCR/3X00 RL and Plasma 400 wear metals analyzer (for organics)	3	N0681690
Optima 4300V/5300V/7300V	3	N0771500
Optima 4300V/5300V/7300V ABC Torch Kit	3	N0774075
Plasma 400*	3	N0580528

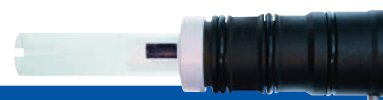
*Not to be used with the Plasma 400 wear metals analyzer.



Torch Bonnets

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

ICP Model	Part No.
Optima 2X00/4X00/5X00/7X00	N0775289
Optima 3000/3000 SCR/3X00 RL (for instruments manufactured BEFORE 9/21/94)	N0695295
Optima 3000/3000 SCR/3X00 RL (for instruments manufactured AFTER 9/21/94)	N0695456
Optima 3X00 XL/3X00 DV	N0691664



Ceramic D-Torch

The ceramic outer tube is of particular benefit for the analysis of wear metals in engine oils, where quartz outer tubes often suffer from short lifetime. It is also beneficial for Si determinations, where quartz outer tubes may produce high background signals.

Description	ICP Model	Part No.
Ceramic D-Torch	Optima 2/4/5/7000 DV	N0777508
Base and Inner Tube for D-Torch	Optima 2/4/5/7000 DV	N0777509
Quartz Outer Tube for D-Torch	Optima 2/4/5/7000 DV	N0777510
Torch Adapter with Auxiliary Port	4300/5300/7300V	N0774070
D-Torch with Quartz Outer Tube	4300/5300/7300V	N0777051
Quartz Outer Tube for D-Torch	4300/5300/7300V	N0777053
Base and Inner Tube for D-Torch	4300/5300/7300V	N0777054
Retaining Ring for D-Torches		N0777055

Copper Ignitor Tape

Includes one strip with 24 squares.



Part No.
N0775297

Torch O-Rings

ICP Model	Location	Dimensions	Part No.
Optima 2X00/3X00/4X00/5X00/7X00 DV	Torch Base Mount	0.612 i.d., 0.103 w.d.	09902155
Optima 2X00/4X00/5X00/7X00 DV O-Ring Kit for Adjustable Torch			N0770437
Optima 3X00 XL/3X00 DV/3000 SCX		0.239 i.d., 0.070 w.d.	09902006
Optima 3X00 XL/3X00 DV/3000 SCX		0.364 i.d., 0.070 w.d.	09902015
Optima 3X00 XL/3X00 DV/3000 SCX		8.74 i.d., 1.78 w.d.	09921028
Optima 3X00 XL/3X00 DV/3000 SCX/4300V/5300V/7300V	Torch Adapter – inside	0.239 i.d., 0.070 w.d.	09902207
Optima 3X00 XL/3X00 DV/3000 SCX/4300V/5300V/7300V	Torch Adapter – outside	0.301 i.d., 0.070 w.d.	09902247
Optima 4300V/5300V/7300V	Ball Joint	0.301 i.d., 0.070 w.d.	09926070
Optima 4300V/5300V/7300V Complete O-Ring Kit Includes (Qty.) Part Number: (1) 09902155, (2) 09902207, (2) 09902247, (1) 09926070			N0770916
Plasma 400			09902152
Plasma 400			09902225

Full selection of Alumina, Quartz and Sapphire Injectors and Support Adapters



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. The 2.0 mm i.d. Alumina injector is shipped standard with all PerkinElmer ICP-OES instruments. A variety of sizes are available as an alternative to the standard injector.

Alumina Injectors

ICP Model	Dimensions	Part No.
Optima 2X00/4X00/5X00/7X00 DV	0.80 mm i.d.	N0775227
Optima 2X00/4X00/5X00/7X00 DV	1.2 mm i.d.	N0775228
Optima 2X00/4X00/5X00/7X00 DV (1.2 mm entire length of tube)	1.2 mm i.d.	N0776093
Optima 2X00/4X00/5X00/7X00 DV	2.0 mm i.d.	N0775177
Optima 3000/3000 SCR/ 3X00 RL/Plasma 400/400 WMA	0.85 mm i.d.	N0582186
Optima 3000/3000 SCR/ 3X00 RL/Plasma 400/400 WMA	1.5 mm i.d.	N0582185
Optima 3000/3000 SCR/ 3X00 RL/Plasma 400/400 WMA	2.0 mm i.d.	N0582184
Optima 3X00 XL/3X00 DV/ 000 SCX/4300V/5300V/7300V	2.0 mm i.d.	N0695362
Optima 4300V/5300V/7300V	1.2 mm i.d.	N0771531



Sapphire Injectors

- Sapphire injectors are ideal for silicon applications

ICP Model	Dimensions	Part No.
Optima 2X00/4X00/5X00/7X00 DV	2.0 mm i.d.	N0775247
Optima 3000/3000 SCR/3X00 RL	2.0 mm i.d.	N0695495
Optima 3X00 XL/3X00 DV 3000 SCX/4300V/5300V/7300V	2.0 mm i.d.	N0695494
Optima 2X00/4X00/5X00/7X00 DV Sapphire in PFA base, (connects directly to ESI spray chambers)	1.8 mm i.d.	N0777044

Quartz Injectors



- Quartz injectors are designed for organic solvents and non-HF matrices
- A variety of sizes are available as an alternative to the standard injector

ICP Model	Dimensions	Part No.
Optima 2X00/4X00/5X00/7X00 DV	0.80 mm i.d.	N0775225
Optima 2X00/4X00/5X00/7X00 DV	1.2 mm i.d.	N0775226
Optima 2X00/4X00/5X00/7X00 DV	1.6 mm i.d.	N0775223
Optima 2X00/4X00/5X00/7X00 DV	2.0 mm i.d.	N0775014
Optima 2X00/4X00/5X00/7X00 DV	3.0 mm i.d.	N0775224
Optima 3000/3000 SCR/3X00 RL/ Plasma 400/400 WMA	1.2 mm i.d.	N0681631
Optima 3000/3000 SCR/3X00 RL	1.6 mm i.d.	N0695448
Optima 3000/3000 SCR/3X00 RL	2.0 mm i.d.	N0695441
Optima 3X00 XL/3X00 DV/ 3000 SCX/4300V/5300V/7300V	0.8 mm i.d.	N0695461
Optima 3X00 XL/3X00 DV/ 3000 SCX/4300V/5300V/7300V	1.2 mm i.d.	N0695460
Optima 3X00 XL/3X00 DV/ 3000 SCX/4300V/5300V/7300V	1.6 mm i.d.	N0695449
Optima 3X00 XL/3X00 DV/ 3000 SCX/4300V/5300V/7300V	2.0 mm i.d.	N0695442
Plasma 400/400 WMA	1.6 mm i.d.	00473292

Injector Support Adapters

ICP Model	Spray Chamber	Part No.
Optima 2X00/4X00/5X00/7X00 DV	All	N0770603
Optima 3000/3000 SCR/3X00 RL	Ryton® Scott	N0695214
Optima 3X00 XL/3X00 DV/ 3000 SCX	Ryton® Scott	N0695400
Optima 3X00 XL/3X00 DV/ 3000 SCX	Cyclonic	N0690780
Optima 4300V/5300V/7300V (bottom)	Cyclonic	N0771526
Optima 4300V/5300V/7300V (top)	Cyclonic	N0771527
Plasma 400/400 WMA	Ryton® Scott	N0582248

Injector Support Adapter O-Ring Kits

ICP Model	Part No.
Optima 2X00/4X00/5X00/7X00 DV	N0770438
Optima 3000/3000 SCR/3X00 RL	N0690269
Optima 3X00 XL/3X00 DV/3000 SCX	N0690769
Plasma 400/400 WMA	N0580539

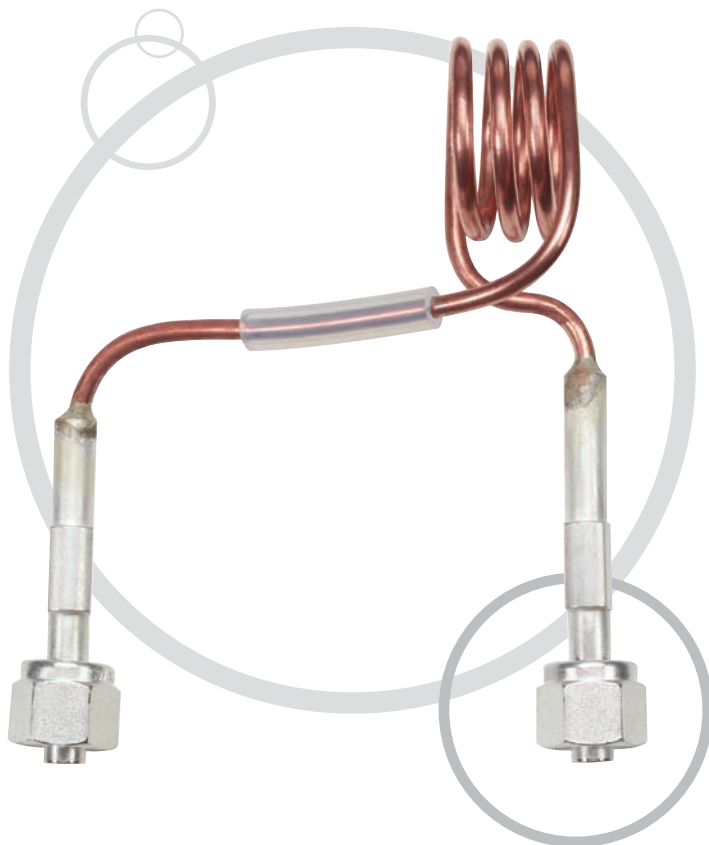
(Includes O-Rings for the Type II Demountable Torch)

Keep your **instrument** operating at peak **efficiency** with **genuine sample introduction** supplies

Ceramic Interface Cone

The Ceramic Interface Cone includes the Ceramic Cone, the Purge Window (09992731) and the Clamp. The Ceramic Cone is used between the plasma and the spectrometer.

ICP Model	Part No.
Optima 3X00 XL/3000 SCX	N0690666



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	View	Part No.
Optima 2X00/7000	DV Axial	09992731
Optima 2X00/7000	DV Radial	B0810377
Optima 3X00 DV (window)	DV Axial	N0771116
Optima 3X00 DV (tube)	DV Axial	N0691678
Optima 3X00 DV (long tube) (38 mm/1.5 in)	DV Radial	N0691689
Optima 3X00 DV (short tube) (32 mm/1.25 in)	DV Radial	N0690672
Optima 3000 SCX/3X00 XL	Axial	09992731
Optima 3000/3000 SCR/3X00 RL	Radial	N0581497
Optima 4300V/5300V/7300V	Radial	N0581497
Optima 4X00/5X00/7100/7200/7300 DV	DV Axial	N0771116
Optima 5X00/7100/7200/7300 DV	DV Radial	N0770944
Optima 4X00 DV/5X00 DV*	DV Radial	N0770322
Plasma 40/400	Radial	N0681234

* Pre November 2004

RF Load Coils*

ICP Model	Part No.
Optima 2X00/4X00/5X00/7X00 DV	N0775300
Optima 3X00 XL/3X00 DV	N0690772
Optima 3000/3000 SCR/3X00 RL (For instruments manufactured BEFORE 9/21/94)	N0690572
Optima 3000/3000 SCR/3X00 RL (For instruments manufactured AFTER 9/21/94)	N0690668
Optima 4300V/5300V/7300V	N0771536
Plasma 400 (Assembly includes Torch Bonnet)	N0680212

* Installation by PerkinElmer Service is required, but not included.



Ceramic Purge Extension

ICP Model	Part No.
Optima 3000/3000 SCR/ 3X00 RL/4300V/5300V/7300V	N0581455

RF Load Coil Accessories

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

High-Performance Nebulizers with Excellent

PerkinElmer **nebulizers** offer **superb sample** introduction for a **wide variety** of **applications**



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. They are not to be used with solutions containing hydrofluoric acid. PerkinElmer offers three types for ICP-MS: MEINHARD® C3, K and A3. All MEINHARD® Nebulizers require an end cap (N0680504) for use with Ryton® Scott Spray Chambers. The Type A3 is an all-quartz concentric nebulizer, and ships standard on the ELAN DRC/DRC^{plus}/DRC II.

Model	Material	AR Flow Rate	Uptake Rate	Part No.
Type C3	Glass	1.0 L/min	3 mL/min	N8102011
Type K	Glass	1.0 L/min	3 mL/min	N0681574
Type A3	Quartz	1.0 L/min	3 mL/min	WE024371

Description	Part No.
Nebulizer Clip for Meinhard Nebulizers	N0777460
4 mm Liquid-End Connector Kit	N0777414

Liquid Connector

Low dead volume PEEK connector for use with MEINHARD® Concentric Nebulizers. Requires 0.062 in (1.59 mm) o.d. tubing (WE024375). Standard on ELAN DRCs. Not required for PFA Teflon® Nebulizers.

Part No.
WE024372



Ryton® End Cap for Concentric Nebulizers

Ryton® end cap to fit any concentric nebulizer onto a Ryton® Scott Spray Chamber.

Part No.
N0680504

MicroMist Nebulizers

The MicroMist micro-uptake glass concentric nebulizer offers high performance for limited sample volumes. MicroMists with sample uptakes 0.2 – 0.4 mL/min are fitted with a UniFit connector with 1.3 o.d. x 0.50 mm i.d. x 700 mm long sample tubing. MicroMists with sample uptakes 0.05 – 0.1 mL/min are fitted with a UniFit connector with 1.3 o.d. x 0.25 mm i.d. x 700 mm long sample tubing. All MicroMist nebulizers offered by PerkinElmer are supplied with the EzyLok argon connector.



MicroMist Nebulizers

AR Flow Rate	Uptake Rate	Part No.
1.0 L/min	0.4 mL/min	N0775341
1.0 L/min	0.2 mL/min	N0775342
1.0 L/min	0.1 mL/min	N0775343
1.0 L/min	0.05 mL/min	N0775344

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.

AR Flow Rate	Uptake Rate	Part No.
1.0 L/min	2 mL/min	N0775340
1.0 L/min	1 mL/min	N0774069
1.0 L/min	0.4 mL/min	N0777484

OpalMist Nebulizers

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

AR Flow Rate	Uptake Rate	Part No.
1.0 L/min	0.4 mL/min	N0777485
1.0 L/min	0.1 mL/min	N0777486

Conikal Nebulizer

Includes UniFit Connector with 0.75 mm i.d. x 1.3 mm o.d. x 700 mm tubing and EzyLok Connector Kit.

AR Flow Rate	Uptake Rate	Part No.
1.0 L/min	3 mL/min	N0773195

Sensitivity and Precision

PFA Teflon® Nebulizers

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. For use with autosamplers. Requires a CTFE union (N8122355) to connect to the UltraClean autosampler probe. All-Teflon® construction, chemically inert. Chemically resistant—ideal for strong acids, alkalis, organics. Resistant to clogging – reliably self-aspirated or pumped. Low, spike-free background for important elements such as:

- Fe and Ca. Produces a fine aerosol for high transport efficiency and high sensitivity
- Analyze all sample types with a single introduction system. Direct analysis of volatile and non-volatile organic solvents
- External threaded interface designed for zero dead volume connections and easy maintenance
- Exchangeable uptake capillaries allow one nebulizer to be used at different self-aspiration rates from 100 to 400 µL/min. Can be pumped from 0.1 to 3 mL/min.

Part No.

N8122192



Teflon® Sample Capillaries

For use with PFA-ST nebulizer.

Size	Uptake Rate	Part No.
0.25 mm i.d.	100 µL/min	N8122383
0.5 mm i.d.	400 µL/min	N8122384

Concentric Teflon® Nebulizers

UltraClean PFA Teflon® Nebulizers. Not for use with autosamplers.

Description	Uptake Rate	Part No.
PFA-20	20 µL/min	N8122350
PFA-100	100 µL/min	N8122351

PFA Nebulizers with Carbon Fiber Probes

For use with SC Autosamplers.

Uptake Rate	Length	Part No.
20 µL	80 cm	N0777214
50 µL	80 cm	N0777215
100 µL	80 cm	N0777216
200 µL	80 cm	N0777217
400 µL	80 cm	N0777218



GemClean Cross-Flow II Nebulizer

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

For Model

ELAN DRcE/9000/6X00/5000/500/250

Part No.

N8120516

Cross-Flow Replacement GemTips and Supplies

Includes a clear sapphire sample tip and a red ruby argon tip optimized for ICP-MS. The tips are constructed of PEEK for maximum corrosion resistance. Used in all GemClean Cross-Flow II nebulizers produced after September, 1998.



Description	Part No.
Cross-Flow Replacement GemTips	N0580624
Cross-Flow II Replacement GemTips	N8120515
O-Ring Kit for Gem Tip Cross-Flow Nebulizers	N9300067
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

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 have 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.

Part No.

N0777220

Superior Quality Spray Chambers for a



PerkinElmer **spray chambers** provide maximum **sensitivity** and **efficiency**

Baffled Quartz Cyclonic Spray Chamber

7 mm baffle, aux. gas port, drain line included and connects directly to ESI injectors. An adapter is needed to connect to other injectors.

Description	Part No.
With Auxillary Gas Port	N0777034
Without Auxillary Gas Port	N0777035

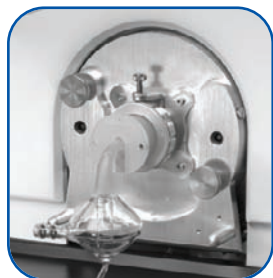
Baffled Cyclonic Spray Chambers

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.

Baffled Quartz Cyclonic Spray Chamber

Baffled Quartz Spray Chamber (Teflon® O-Ring type) with ball joint.

ICP-MS Model	Part No.
ELAN DRC/DRCplus/DRC II	WE025221



O-Ring for Baffled Quartz Cyclonic Spray Chamber

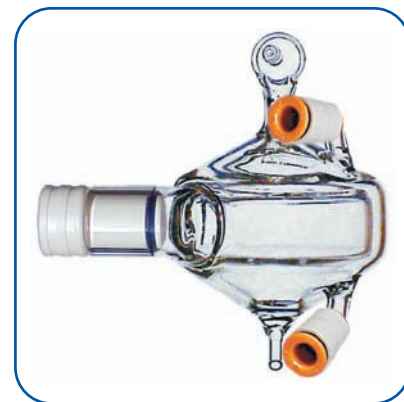
Teflon® coated Viton. Standard on Baffled Quartz Cyclonic Spray Chamber (WE025221).

Part No.
09210011

Water-Cooled Baffled Glass Cyclonic Spray Chambers

The water-cooled design permits the introduction of coolant for temperature control. Thermostatting to constant temperature helps ensure highly reproducible results and long-term stability. Can also be cooled to suppress volatilization,

allowing the direct aspiration of highly volatile solvents such as naphtha and petrol/gasoline. Glass with baffle and oxygen port. Recommended for light organic solvents and chromatography use. Includes Auxiliary Port and Teflon Seals, 50 ml cyclonic, Borosilicate glass.



ICP-MS Model	Part No.
ELAN DRC-e/9000/6X00/5000	N8120180
ELAN DRC/DRC ^{plus} /DRC II	N8120181

Water-Cooled O-Ring Free Baffled Glass Cyclonic Spray Chamber

The o-ring free design eliminates the o-ring seal between the nebulizer and the spray chamber.

ICP-MS Model	Part No.
ELAN DRC-e/9000/6X00/5000	N0775353

Variety of Applications

Cyclonic Spray Chambers

The Cyclonic Spray Chamber relies on momentum to efficiently and quickly remove the larger droplets from the sample mist decreasing any opportunity for occlusion or agglomeration of the smaller droplets. The result is higher efficiency, better precision and faster washouts than other spray chamber designs.

- Decreased sample introduction system installation and optimization time due to the preset nature of the spray chamber/nebulizer combination
- More samples per hour due to minimal dead volume and efficient draining

Unique design characteristics:

- The nebulizer port is oversized so that sample solution cannot build up around the nebulizer as it will in other cyclonic designs
- The nebulizer port angle is tightly controlled so that the nebulizer mist impacts on the same chamber wall area in each and every spray chamber
- Each spray chamber incorporates a precisely machined ridge along the inside top of the spray chamber. This eliminates the periodic "spiking" that adversely affects precision and fosters faster washout times

Glass Cyclonic Spray Chamber Kit

For ELAN DRCe/9000/6X00/5000. Kit contains one Glass Cyclonic Spray Chamber, mounting hardware and instructions. Requires, but does not include, a concentric nebulizer.



Description	Part No.
Glass Cyclonic Spray Chamber Kit	N8120150
Glass Cyclonic Spray Chamber only	N8122188
O-Ring Free Glass Cyclonic Spray Chamber	N0775350

Water-Cooled O-Ring Free Glass Cyclonic Spray Chamber

O-Ring Free Glass Cyclonic Spray Chamber only. Ball joint type.

ICP-MS Model	Part No.
ELAN DRC/DRC ^{ms} /DRC II	N0775354

Twister Cyclonic Spray Chamber

Part No.
N0773196



IsoMist Programmable Temperature Spray Chamber

The IsoMist Programmable Temperature Spray Chamber lets you 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.

Part No.
N0777364

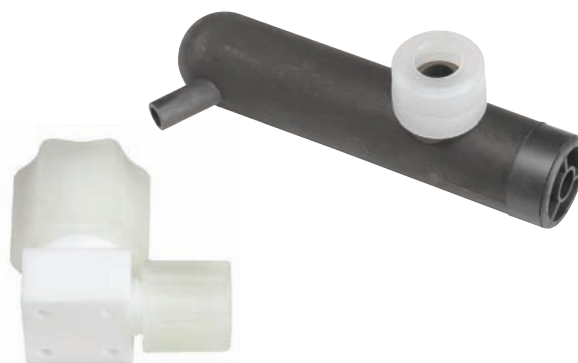
PC³ Spray Chamber

The PC³ cools the outer walls of the Cyclonic Spray Chamber to a constant temperature. This reduces polyatomic ion interferences, such as oxides, for ICP-MS analysis.



ICP-MS Model	Part No.
Cassette Torch Mount	N8122410
Twist Type Torch Mount	N8122389

Ryton[®] Scott Spray Chambers



Ryton[®] Scott Spray Chambers

For ELAN 9000/6X00/5000/DRC-e. Complete HF-resistant Ryton[®] Scott Spray Chamber. Includes (1) large O-Ring (WE013060), (1) Retaining Ring (WE014081) and (1) Right-Angled Drain Connector (WE013119).

Description	Part No.
Ryton [®] Scott Spray Chamber	N8120124
Ryton [®] Scott Spray Chamber Large O-Ring	WE013060
Ryton [®] Scott Spray Chamber Retaining Ring	WE014081

PFA Teflon[®] Scott Spray Chamber

UltraClean, low volume 47 mm Scott Spray Chamber. For use with concentric nebulizers. Requires a PFA injector assembly and the PFA End Cap (N8122357).

Description	Part No.
PFA Teflon [®] Scott Spray Chamber	N8122356

Water-Cooled Glass Scott Spray Chamber

Water-Cooled Glass Scott Spray Chamber included in Heavy Organics Sample Introduction System (N8122132). Recommended for use with heavy organic solvents.

Does not include end cap.

ICP-MS Model	Part No.
ELAN DRCe/9000/6X00/5000	WE013829

Full selection of Alumina, Quartz and Sapphire Injectors and Support Adapters

Alumina Injectors

Alumina injectors are compatible with twist type and cassette torch mounts. They are vacuum baked to reduce contamination.

- 2.0 mm i.d. for use with HF-resistant (Ryton®) sample introduction system. Standard injector for aqueous solutions and less volatile organic solvents
- 1.5 mm i.d. for reduced sample loading with HF-resistant (Ryton®) sample introduction system
- 0.85 mm i.d. for use with volatile organic solutions on the HF-resistant (Ryton®) sample introduction system

Alumina Injectors for ELAN DRC-e/9000/6X00/5000/500

Dimension	Part No.
2.0 mm i.d.	N8126041
1.5 mm i.d.	N8126040
0.85 mm i.d.	N8126039

Quartz Injectors

Quartz Injectors are compatible with twist type and cassette torch mounts. The ELAN DRC II uses a specially designed all-quartz sample introduction system to minimize background contamination levels. The standard 2.0 mm i.d. quartz injector is held by a specially designed pass-through, injector support assembly to minimize contact with materials that could cause sample contamination, a must for determinations made at the parts-per-trillion level.

Quartz Injectors

For the ELAN DRC-e/9000/6X00/5000 when using the HF-Resistant Sample Introduction System (WE024782).

Description	Recommended Use	Part No.
1.2 mm i.d.	Organic Solvents	N0681631
1.6 mm i.d.	Organic Solvents	00473292
2.0 mm i.d.	Clinical Samples	N8125029

Quartz Ball Joint Injectors

For ELAN DRC/DRC^{plus}/DRC II. For use with Pass-Through Ball Joint Injector Support Adapters (WE023951 or W1012406).

Description	Recommended Use	Part No.
0.85 mm i.d.*	Volatile Organics	WE027030
1.5 mm i.d.*	Organics	WE027005
2.0 mm i.d.	General Purpose	WE023948

*For reduced sample loading.

Sapphire Injectors

Sapphire Injector Tube, 2.0 mm i.d.

Demountable injector for use with the HF-resistant (Ryton®) sample introduction system. Not for use with PFA sample introduction system.

Description	Part No.
ELAN DRC-e/9000/6X00/5000	N0695495

PFA Injector Assemblies

PFA/Quartz Torch Injector Assembly

Description	Dimension	Part No.
PFA/Quartz Twist Type	1.5 mm i.d.	N8122394
PFA/Quartz Cassette	1.5 mm i.d.	N8122413

PFA/Sapphire Torch Injector Assembly

Description	Dimension	Part No.
PFA/Sapphire Twist Type	1.8 mm i.d.	N8122358
PFA/Sapphire Cassette	1.8 mm i.d.	N8122411

PFA/Platinum Torch Injector Assembly

Description	Dimension	Part No.
PFA/Platinum Twist Type	2.0 mm i.d.	N8122359
PFA/Platinum Cassette	2.0 mm i.d.	N8122412

Injector Support Adapters

ICP-MS Model	Part No.
ELAN DRC/DRC^{plus}/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 Twist Type Torch Injector Support Adapter (Assembled with O-Rings)	N8122007 N8120116
ELAN 9000/6X00/5000/DRCs Injector Support Adapter O-Ring Kit	N8120100

Injector Support Adapter O-Rings

Position	Torch Type	Part No.
External	Twist/Cassette	09210011
External (large)	Cassette	W1013545
Internal	Twist/Cassette	09210012

Ensure uptime — keep a replacement **Torch** on hand

torches, torch accessories and RF coils



Demountable Quartz Torch

The EasyGlide™ torch mount and alignment system used in the ELAN ICP-MS system is shown on the right. It is a demountable design that incorporates a quartz torch with a fully replaceable sample injector made of fused alumina, quartz or sapphire.

ICP-MS Model	Part No.
ELANs all models	N8122006



High Efficiency Demountable Quartz Torch

Demountable Quartz Torch only. Operates at 25% reduced argon gas flows compared to the Demountable Quartz Torch (N8122006). The ELAN 9000 and 6X00 require the High Efficiency Torch Kit (W1007468) for first time installation.

ICP-MS Model	Part No.
ELAN 9000/6X00/DRCs	W1008384

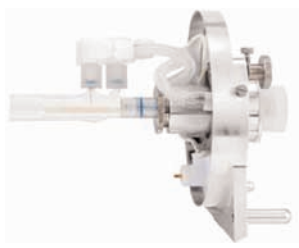
High Efficiency Torch Kit

Includes the High Efficiency Torch (W1008384) and flow restrictors required for use with the ELAN 9000 and 6X00.

ICP-MS Model	Part No.
ELAN 9000 and 6X00	W1007468

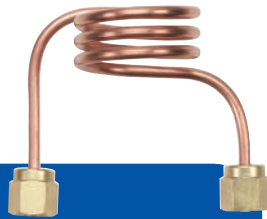
Cassette Torch Mount

The Cassette Torch Mount is an innovative torch design that is fully modular, demountable, rugged and easy to maintain. Now changing torch components is a simple process – no tools are required. Cassette Torch Mount does not include Demountable Quartz Torch or Injector.



ICP-MS Model	Part No.
ELAN DRC II	W1020672
ELAN 9000/DRC-e	W1020668

RF Load Coil Assemblies



ICP-MS Model	Part No.
ELAN 9000/6X00/DRCs	WE021816
ELAN 5000	WE012411

SPECIAL SAVINGS OFFER
from Interchim

Save on Torches

when ordered with a
Spray Chamber or Nebulizer

Please contact Interchim Hotline 33 (0)4 70 03 73 09 - interchrom@interchim.com

Delivering Enhanced Value and Outstanding Savings on the products you use most!

Torch Alignment Tool

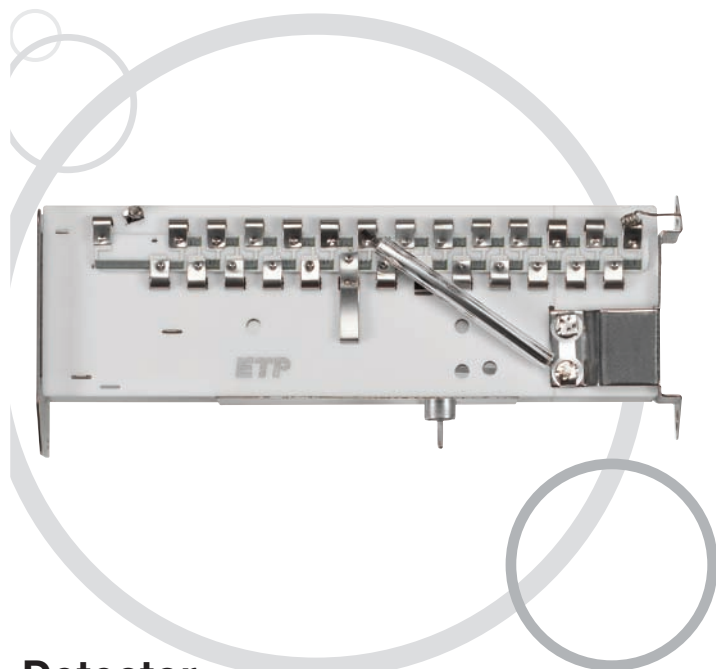
Used to align the torch in the load coil.

ICP-MS Model	Part No.
ELAN 9000/6X00/DRCs	WE015554

Power Amplifier Tube (Ceramic)

ICP-MS Model	Part No.
ELAN 9000/6X00/DRCs and ELAN 5000As manufactured after September, 1992	N0695477

Unique **Detector** and **Ion Optic** design

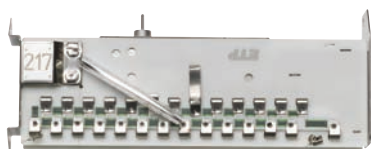


Detector

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. This Detector is designed for use with the ELAN 9000/6X00/DRCs.

ICP-MS Model	Part No.
ELAN 9000/6X00/DRCs* manufactured prior to April, 2005	N8125001



SimulScan Dual-Stage Detector

The improved Dual-Stage Detector is designed for better stability and longer lifetime than its predecessor. 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

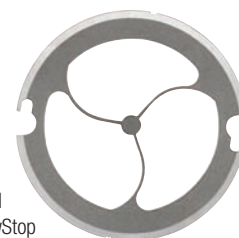
PerkinElmer offers the industry's only single-ion lens with the exclusive SwiftMount™ II cassette lens mount. The plug and play design makes changing the ion lens faster and simpler than ever before. No tools are required as the design incorporates a clean capture-and-release concept.

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 Supplies

Vacuum Pump Oil

For use with roughing pumps. One gallon (3.8 liters).

Pump Model	Part No.
Leybold	N8122004
Varian	N8122308

Fomblin Vacuum Pump Fluid

Description	Size	Part No.
Y14/6	1 kg	N8122265

High Vacuum Silicon Grease

For lubrication of ELAN 9000/6X00/5000/DRCs vacuum system O-Rings.

Part No.
09905147

Tested and approved Sampler and Skimmer Cones

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. The sampler cone, with a 1.1 mm orifice diameter, and the skimmer cone, with a 0.9 mm orifice diameter, are the largest in the industry. They have been designed to maximize signal stability and to minimize clogging during extended runs of samples containing high dissolved solids. The sampler cone, which is continually exposed to the plasma and the sample, utilizes a threadless pop-in, pop-out design for rapid removal.



Nickel Sampler and Skimmer Cone

Nickel Sampler and Skimmer Cones*

ICP-MS Model	Type	Part No.
ELAN 5000	Sampler	WE013087
ELAN 5000	Skimmer	N8122000
ELAN 9000/6X00/DRC	Sampler	WE021140
ELAN 9000/6X00/DRC	Skimmer	WE021137

Platinum Sampler and Skimmer Cones*

ICP-MS Model	Type	Part No.
ELAN 5000	Sampler	N8122025
ELAN 5000	Skimmer	N8122035
ELAN 9000/6X00/DRC	Sampler	WE027802
ELAN 9000/6X00/DRC	Skimmer	WE027803

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



Platinum
Sampler Cone



Platinum
Skimmer Cone

Sampler and Skimmer Cone O-Rings

ICP-MS Model	Type	Qty.	Part No.
ELAN 5000	Sampler	1	N8122003
ELAN 5000	Sampler	20	N8120114
ELAN 5000	Skimmer	1	N8122002
ELAN 5000	Skimmer	20	N8120113
ELAN 9000/6X00/DRC	Sampler	5	N8120511
ELAN 9000/6X00/DRC	Skimmer	5	N8120512

SPECIAL SAVINGS OFFERS from Interchim !

Save on ICP-MS Cones

when you purchase 2 or more!

Please contact Interchim Hotline 33(0)4 70 03 73 09 - interchrom@interchim.com

Delivering **Enhanced Value** and **Outstanding Savings** on the products you use most!

Sampler Cone Aluminum Gasket

One aluminum gasket for ELAN® 5000 sampler cones.

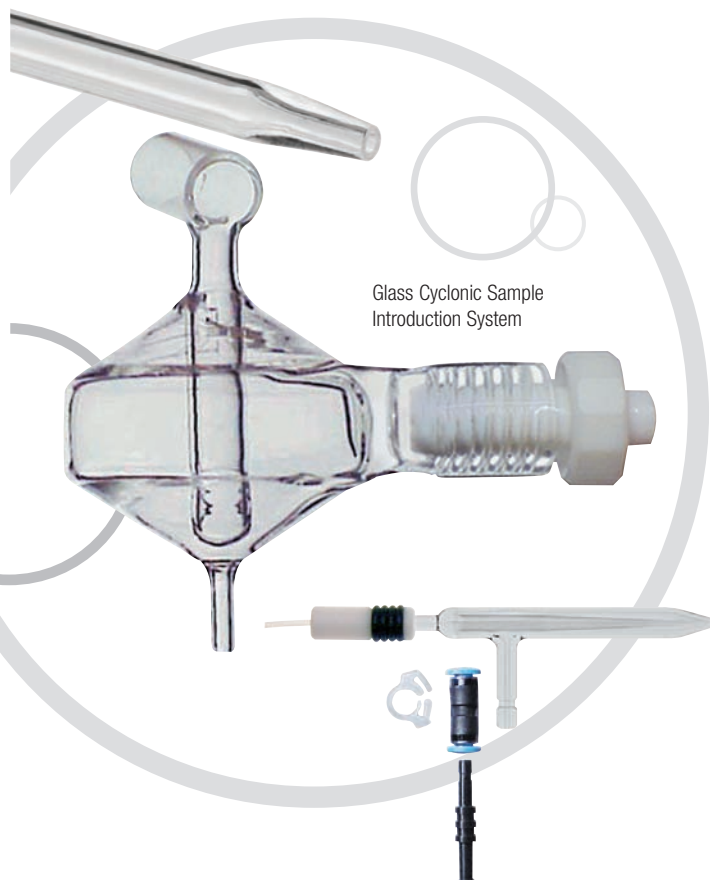
ICP-MS Model	Part No.
ELAN 5000	WE012989

Cone Removal Tool



ICP-MS Model	Part No.
ELAN 5000	N8122040
ELAN 9000/6X00/DRC	WE017142

Sample Introduction Kits provide a complete solution for your ICP-MS Applications



Glass Cyclonic Sample Introduction System

Quartz Cyclonic Sample Introduction System

	Part No.
	N8120519
System Includes:	
Baffled Quartz Cyclonic Spray Chamber	WE025221
Baffled Quartz Spray Chamber (Teflon® O-Ring type) with ball joint.	
MicroMist Micro-uptake Glass Concentric Nebulizer Offers high performance for limited sample volumes. Fitted with an EzyFit connector with 1.3 o.d. x 0.50 mm i.d. x 700 mm long sample tubing.	N0775342
Quartz Ball Injector 2.0 mm i.d.	WE023948
Tygon Tubing (1 foot)	02506516
Insert	09903094
¼ in. Front Ferrule	09903456
Fitting	09903464
Tube Fitting	09903465
Black/Black Standard PVC Tubing 0.76 mm i.d. (Pkg. 12)	09908585
Green/Yellow Flared End PVC Tubing 0.44 mm i.d. (Pkg. 6)	N0773113
Ball Joint Cassette Torch Injector Support Adapter	W1012406
UV Safety Shield	W1020996
Connector 1A	B0199233

Glass Cyclonic Sample Introduction System

	Part No.
	N8120518
System Includes:	
Twister Cyclonic Spray Chamber w/Helix	N0775352
Cyclonic Spray Chamber Mount	WE014034
MicroMist Micro-uptake Glass Concentric Nebulizer Offers high performance for limited sample volumes. Fitted with an EzyFit connector with 1.3 o.d. x 0.50 mm i.d. x 700 mm long sample tubing.	N0775342
Quartz Injector 2.0 mm i.d.	N8125029
Tygon Tubing (1 foot)	02506516
Insert	09903094
¼ in. Front Ferrule	09903456
Fitting	09903464
Tube Fitting	09903465
Black/Black Standard PVC Tubing 0.76 mm i.d. (Pkg. 12)	09908585
Green/Yellow Flared End PVC Tubing 0.44 mm i.d. (Pkg. 6)	N0773113

ELAN Spares Kits Always keep spares on hand!

ELAN® DRC-e/9000 Spares Kit

	Kit Part No.	
	N8120610	
Includes:		
	Qty.	
Demountable Quartz Torch	1	N8122006
RF Coil Assembly	1	WE021816
Alumina Injector 2.0 mm i.d.	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

	Kit Part No.	
	N8120611	
Includes:		
	Qty.	
Demountable Quartz Torch	1	N8122006
RF Coil Assembly	1	WE021816
Quartz Ball Joint Injector 2.0 mm i.d.	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

Dependable Service coverage to enhance your productivity and performance

Maximize instrument performance and uptime

From unplanned repair expenses to lost productivity, few events can be as disruptive as the failure of a key instrument. With a service and support plan from PerkinElmer, your lab will be protected from unplanned downtime and unexpected expense.

Planning for future service needs as part of your new instrument budget proposal or purchase order will enable your laboratory to:

- Fix the cost of ownership of mission critical or revenue generating instrumentation
- Ensure seamless continuation of support when the initial 12-month warranty expires
- Eliminate administration costs incurred by continually renewing contracts
- Avoid having to re-justify maintenance expense at a future date
- Make use of funds now that may not be available in the future

Call your local sales representative to learn more about the PerkinElmer service and support products that the most successful global corporations, research facilities and analytic laboratories use to enhance their performance.



Three service plan options are available to meet your needs

PerkinElmer's range of multi-year service plans eliminates the risk of unbudgeted service expense and ensures instrumentation is maintained to the highest possible standard throughout its lifetime.

Comprehensive

This plan is ideal for laboratories whose financial success depends on the consistent availability and high performance of their scientific instruments.

Basic

This plan is ideal for medium to large laboratories that require predictable instrument performance.

Repair

The Repair service plan is ideal for small to medium laboratories seeking to maximize limited maintenance budgets and maintain instrument performance.

Three Options of Service Plan Packages

PerkinElmer Service Benefits	Comprehensive Maximum Uptime	Basic Managed Expense	Repair Dependable Protection
Core Benefits			
Priority On-Site Response	Within 48 hours		
Preventative Maintenance	2 Annual Visits	1 Annual Visit	
Training	15% off	5% off	
PerkinElmer Certified Parts	100% included	100% included	100% included
Expert Service Engineers	100% included	100% included	100% included
Travel to your Location	100% included	100% included	100% included
Additional Features			
Online Support Resources	100% included	100% included	100% included
Responsive Technical Support	100% included	100% included	100% included
Service History Tracking	100% included	100% included	100% included
Six Sigma & ISO Best Practices	100% included	100% included	100% included

NEW! PowerVar Power Conditioners

Avoid all of the unnecessary costs - financial and otherwise - of equipment downtime

Whatever your business, equipment that crashes can cause real problems for your entire operation.

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.

The vast majority of these disturbances are likely to be unnoticeable, that is, until you have to deal with the expensive consequences. Many types of disturbances can damage sensitive computer systems and other electronic equipment — either immediately or over time. Most can disrupt system operations, causing lockups, lost data, no-trouble-found service calls, and unexplained failures, interrupting system performance and costing you time and money.

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
- All models include POWERVAR's five-year warranty on parts and labor
- High-voltage surges
- Common-mode voltage
- Electrical noise
- Voltage swells and sags
- Power outages.
- Unstable AC frequency
- Ground loops



Choose the model for your instrument

Model	Instruments	Hz	Part No.
5.2 kVA	AA Spectrometer 5100	60	N9307504
3.8 kVA	ELAN 5000/6X00/9000 Controller side	60	N9307519
2.4 kVA	AAnalyst 100/200/300/400	60	N9307506
3.8 kVA	Optima 3X00/AAAnalyst 700	60	N9307509
5.8 kVA	AAAnalyst 600/800/ELAN 5000/6X00/9000 RF Gen side	60	N9307511
3.8 kVA	Optima 2X00/4X00/5X00/7X00	60	N9307512
7.5 kVA	AA Spectrometer 5100/AAAnalyst 100/200/300/400	50	N9307521
3.6 kVA	AAAnalyst 700/Optima 2X00/4X00/5X00/7X00/ELAN Controller side	50	N9307522
6 kVA	AAAnalyst 600/800	50	N9307523
6 kVA	ELAN 5000/6X00/9000 RF Gen side	50	N9307524

Security Plus UPS

5.2 kVA On-Line Conditioned Uninterruptible Power Supply

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.



Description	Part No.
5.2KVA On-Line Conditioned UPS 50/60Hz	N077511
Input	
Voltage (VAC)	200 208 220 230 240
Voltage Range (VAC)	140–230 146–239 154–253 161–264 168–276
Voltage Tolerance	+ 15% ~ -30% before switching to batteries
Frequency (Hz)	50/60
Frequency Tolerance	42 Hz to 69 Hz before switching to batteries
Input PF	> 0.95
Input Current THD	< 5.0%



NEW!

PerkinElmer SMS 100 Mercury Analyzer



Amalgamator Tube



Sample Boat Rack



Catalyst Tube

Mercury analysis directly on solid samples from the undisputed leader in Atomic Spectroscopy

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. Because this approach does not require the conversion of mercury to mercuric ions, lengthy sample pretreatment steps are unnecessary. As a result, there is no need for reagents such as highly corrosive acids, strong oxidizing agents or reducing chemicals...which means, NO hazardous waste disposal. The immediate benefit to the user is a reduction in analysis time, resulting in a significantly lower cost of analysis compared to conventional mercury analyzers. 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.

Features and Benefits

- No Sample Preparation
- Extremely Low Detection Limits
- Full Automation for Maximum Productivity
- Easy to Maintain

SMS 100 Consumables

Description	Part No.
Spares Kit Basic	N9309109
Spares Kit Extended	N9309110
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
Chromosorb® 250 mL	N9309103
Mercury Stock Solution 100 ppm	N9309106



Spares Kits

Description	Qty.	Part No.
Basic Spares Kit		N9309109
Includes:		
Amalgamator tube	1	N9309007
Mercury source lamp	1	N9309010
Nafion® drying tube	1	N9309021
O-ring kit	1	N9309029
Extended Spares Parts Kit		N9309110
Includes:		
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	N9309108
Nafion® drying tube	1	N9309021
Quartz windows	6	N9309024
O-ring kits	2	N9309029
Window end caps	8	N9309031
5 inch optical cells	2	N9309033
1 inch optical cell	1	N9309034

Description

SMS 100 Automated Mercury Analyzer 110V/60Hz
SMS 100 Automated Mercury Analyzer 220V/50Hz

Part No.

N9309000
N9309001

Autosampler **sampling probes** and **components**

AS-90/90A/90plus/91/93plus/S10 Sampling Probe Assemblies

Stainless Steel

Description	Part No.
Flame Sampling Probe Assembly, 0.6 mm i.d. 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 i.d. 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 i.d. 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 i.d.* Includes Sampling Probe with FEP Tube and Screw Fitting (B3000055) and Capillary Tubing Assembly (B3000157).	B3001770
FIAS Sampling Probe Assembly, 0.6 mm i.d.* 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 i.d.* Includes Sampling Probe with FEP Tube and Screw Fitting (B3001769) and Capillary Tubing Assembly (B0191060).	B3001772

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

Used Oil Autosampler Probe

Autosampler probe for the AS-90plus, AS-93plus and S10 Autosamplers. The probe includes a particulate filter on the tip to remove fibers.

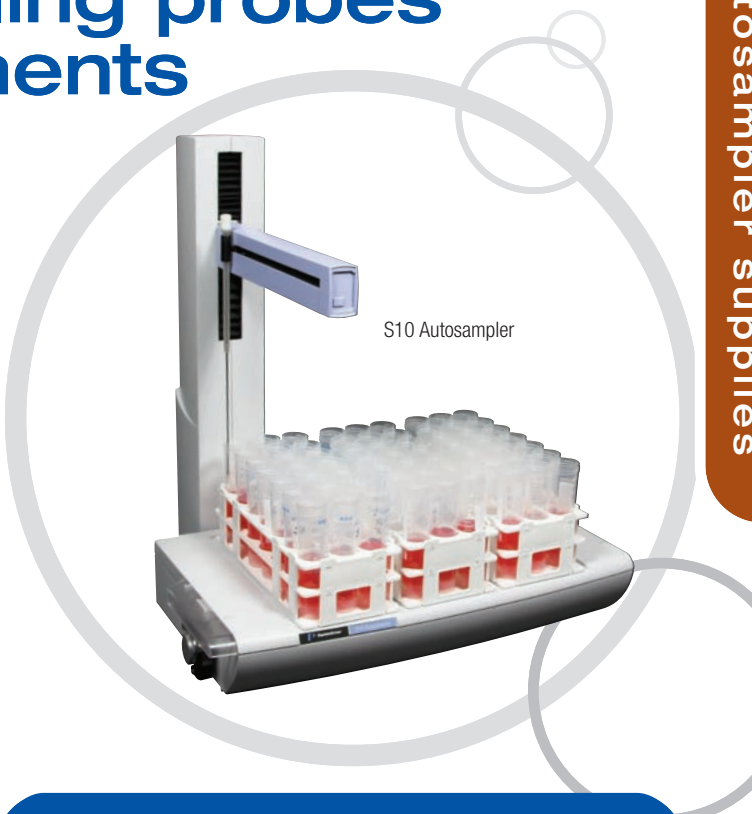
Description	Part No.
Used Oil Autosampler Probe	N0771529

Sampling Probe Assembly Components

Description	Part No.
Stainless Steel Sampling Probe with Screw Fitting <i>Requires, but does not include, one of the capillary tubing assemblies described below.</i>	B3000152
Flame Capillary Tubing Assembly 1 m length, 0.6 mm i.d., one fitting	B3000157
FIAS Capillary Tubing Assembly 1 m length, 0.6 mm i.d., two fittings	B3000158
FIAS Capillary Tubing Assembly 1 m length, 1.0 mm i.d., two fittings	B0191060

Sampling Probe Accessories

Description	Part No.
Cleaning Wire for AS 90/91 Probe	B0505962



ESI Autosampler Probes

Autosampler Probes

Description	Part No.
Autosampler Probe, 0.15 mm	N0777221
Autosampler Probe, 0.20 mm	N0777222
Autosampler Probe, 0.25 mm	N0777223
Autosampler Probe, 0.30 mm	N0777224
Autosampler Probe, 0.50 mm	N0777225
Autosampler Probe, 0.80 mm	N0777226

Sample Probes

Description	Part No.
High Flow, Carbon Fiber Support, 0.8 mm i.d. (blue)	N0777285
Low Flow, Carbon Fiber Support, 0.8 mm i.d. (blue)	N0777266
Sample Probe Line Holder	N0777227

Carrier Probes

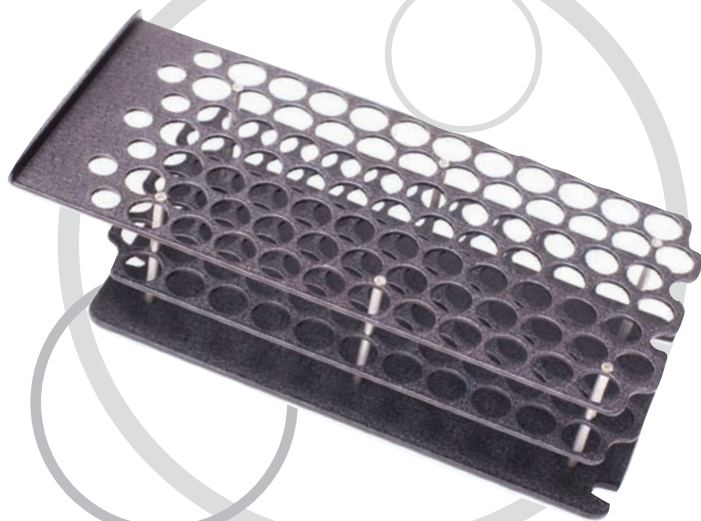
Description	Part No.
High Flow, Carbon Fiber Support, 0.5 mm i.d. (orange)	N0777286
Low Flow, Carbon Fiber Support, 0.5 mm i.d. (orange)	N0777267



Cetac Autosampler Probes

Description	Part No.
Cetac Autosampler Probe, 12 inch length, 0.5 mm i.d.	N0774088
Cetac Stainless Steel Sample Probe with Filter Tip	N0777146

Sample Vials, Racks and Supplies for a



Sample Trays

AS-90/90A/90plus Sample Trays

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
Tray C – 36	50 mL	B3000135
Blank Tray		B0501056

**Polypropylene sample tray.

AS-91 Sample Trays

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

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

AS-93plus/S10 Sample Trays

Description/Capacity	Sample Vessel Size	Part No.
Tray F – 9/29	50 mL/15 mL	B3001647
Tray E – 90	4.5 mL, 6 mL, 8 mL	B3140617
Tray F – 60	15 mL, 16 mL	B3140618
Tray G – 30	50 mL	B3140621

AS-93plus sample trays are polypropylene.

AS-93plus/S10 Rinsing Kit

Description	Part No.
AS-93plus Rinsing Kit	B3140236

Spare Parts

Rinsing Port	B3140622
Adapter M	B0507919
Pump Tube – 2.79 mm i.d. (pkg. 6)	B3140721
Pump Tube – 1.14 mm i.d. (pkg. 6)	B3140730
Tygon® Drain Tube – 2 m	B0509650
PVC Rinse Liquid Feed Tube – 2 m	B0048139
Connector	B3140715

SPECIAL SAVINGS OFFERS from Interchim !

Save on Autosampler Vessels!

Please contact Interchim Hotline 33 (0)4 70 03 73 09

Delivering Enhanced Value and Outstanding Savings on the products you use most!

Sample Vessels

Translucent polypropylene vessels with excellent chemical resistance.



Capacity	Qty.	Part No.
4.5 mL	1,000	N9301204
6 mL*	500	B0193235
8 mL	1,000	B0508901
15 mL*	500	B0193233
16 mL	1,000	N9301205
50 mL*	500	B0193234

*Includes screw caps.

Cetac Autosampler Supplies

Racks

Rack	Vial Size	Part No.
21-Position	50 mL	N0777152
24-Position	30 mL	N0777151
40-Position	20 mL	N0777150
40-Position	20 mL	N0777169
40-Position/Gilson 29	20 mL	N0777155
45-Position/120 cc Sample Rack (oils)		N0777298
60-Position	14 mL	N0777149
80-Position Collection Metal for Oil		N0774085
90-Position	8 mL	N0777148
90-Position (Round Hole)	8 mL	N0777153
90-Position Collection Metal for Oil		N0777154

Polypropylene Vials

Capacity	Size	Qty.	Part No.
8 mL	13 mm x 100 mm	1,000	N0777156
8 mL	13 mm x 100 mm	250	N0777159
12 mL	13 mm x 100 mm	1,000	N0777165
12 mL	13 mm x 100 mm	250	N0777166
14 mL	16 mm x 100 mm	1,000	N0777157
14 mL	16 mm x 100 mm	250	N0777160
15 mL	17 mm x 100 mm	1,000	N0777167
15 mL	17 mm x 100 mm	250	N0777168
20 mL	21.5 mm x 100 mm	500	N0777161
20 mL	21.5 mm x 100 mm	100	N0777163
30 mL	25 mm x 95 mm	500	N0777162
50 mL	30 mm x 115 mm	500	N0777158
50 mL	30 mm x 115 mm	100	N0777164

Variety of Autosamplers

ESI Autosampler Supplies

Racks and Rack Covers

Standard Racks

Description	Size	Diameter	Part No.
10-Position		28 mm	N0777228
24-Position	4 x 6	14 mm	N0777234
Adapter Plate*			N0777235

*For Gemetec/Cetac ASX-100's racks

Micro Racks

Description	Size	Diameter	Part No.
21-Position	3 x 7	14 mm	N0777229
40-Position	4 x 10	14 mm	N0777230
60-Position	5 x 12	8 mm	N0777231
90-Position	5 x 12		N0777232
Cover for Micro Racks			N0777233

Large Racks

Description	Size	Diameter	Part No.
21-Position	3 x 7	30 mm	N0777242
40-Position	4 x 10	20 mm	N0777243
60-Position	5 x 12	16 mm	N0777244
90-Position	6 x 15	13 mm	N0777245

Super Racks

Description	Size	Diameter	Part No.
10-Position*	2 x 5	61 mm	N0777253
12-Position	2 x 6	50 mm	N0777252
21-Position	3 x 7	22 mm	N0777251
21-Position	3 x 7	28 mm	N0777250
21-Position	3 x 7	30 mm	N0777249
27-Position	3 x 9	28 mm	N0777248
80-Position	5 x 16	16 mm	N0777247
120-Position	6 x 20	13 mm	N0777246

*Holds 205 mL bottles.



PFA Bottles and Vials

Description	Size	Dimension	Qty.	Part No.
PFA Ridged Vial for press-on cap	1 mL	24 mm high, 14 mm Tube o.d.	10	N0777403
PFA Ridged Vial for press-on cap	2 mL	36 mm high, 14 mm Tube o.d.	10	N0777404
PFA Ridged Vial for press-on cap	4 mL	60 mm high, 14 mm Tube o.d.	10	N0777405
PFA Graduated Vial	1 mL	24 mm high, 14 mm Tube o.d.	10	N0777399
PFA Graduated Vial	2 mL	36 mm high, 14 mm Tube o.d.	10	N0777400
PFA Graduated Vial	4 mL	60 mm high, 14 mm Tube o.d.	10	N0777401
PFA Bottle	20 mL	60 mm high, 28 mm o.d.	5	N0777406
PFA Bottle	100 mL	105 mm high, 50 mm o.d.	1	N0777407
Press-on Caps		14 mm o.d. PFA Vials	10	N0777393
Dust Protection Caps		14 mm o.d. PFA Vials	10	N0777392
PFA Cap		14 mm vials, press fit	10	N0777402

Sample Loops

Connects to Ports 1 and 4.

Size	Part No.
0.25 mL	N0777046
0.5 mL	N0777289
1 mL	N0777290
2 mL	N0777291
3 mL	N0777292
4 mL	N0777293
500 µL	N0777274
1,000 µL	N0777275
2,000 µL	N0777276

ST Nebulizer Lines

Description	Size	Marker	Part No.
Connects to Port 3	0.15 i.d.	Red	N0777269
Connects to Port 3	0.20 i.d.	Purple	N0777270
Connects to Port 3 (low flow)	0.25 i.d.	Green	N0777271
Connects to Port 3 (high flow)	0.25 i.d.	Green	N0777287
Connects to Port 3	0.30 i.d.	Yellow	N0777272
Connects to Port 3 (low flow)	0.50 i.d.	Orange	N0777273
Connects to Port 3 (high flow)	0.50 i.d.	Orange	N0777288

Tubing, Connectors and Adapters for your

PerkinElmer pioneered the use of **flow injection** techniques for **atomic spectroscopy**



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.

Adapter with Internal Thread

¼ in (6.4 mm) Internal Screw Thread

Type*	Description	Part No.
A B	A 1.8 mm o.d. nipple B 3.3 mm o.d. nipple	B0193342 B0506716
C	4 mm o.d. nipple	B0196850
E	For the quartz cell	B0196857
F	0.7 mm o.d. 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 i.d. tubes	B0199233
IB	Connector with nipples for 2.4 to 3.2 mm i.d. tubes	B0196882
II	Connector with ¼ in (6.4 mm) internal screw thread	B0196704
IIIA	T-piece with nipples for 1.5 to 2.5 mm i.d. tubes	B0199035
IIIB	T-piece with nipples for 3.5 to 4.5 mm i.d. tubes	B0198201

Adapter with External Thread

¼ in (6.4 mm) External Screw Thread

Type*	Description	Part No.
K L	K 1.8 mm o.d. nipple L 2.8 mm o.d. nipple	B0507918 B0507920
M	4 mm o.d. nipple	B0507919
N	0.7 mm o.d. Pt/Ir capillary nipple	B0507949
	Screw Plug	B0507921

* Type designation refers to diagrams in instrument manuals.

Flow Injection System

Tubing

Peristaltic pump tubing has a wall thickness of 0.84 mm. Part numbers are for a package of 12 pieces.

Peristaltic Pump Tubing

Tubing i.d.	Color 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

Peristaltic Pump Tubing, Solvent-Resistant

1.14 mm	White/white	B0507692
---------	-------------	----------

PTFE Tubing

Tubing i.d.	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 i.d.	Screw Fittings		Part No.
	Color	Length	
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 i.d. with 1 mm wall thickness, no fittings <i>Price per meter.</i>	B0048139

Silicone Tubing

Description	Part No.
1 m x 5 mm i.d., no fittings	B0018283
1 m x 3 mm i.d.	B0070126
For FIMS Cell Exhaust Outlet, 3 m	B0046948

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).

Part No.
B0507957

Mixing Blocks

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.

Part No.
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.

Part No.
B0507959

Tool, Screw Connectors

For convenient tightening and loosening of the screw connectors used with PTFE tubing assemblies.

Part No.
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

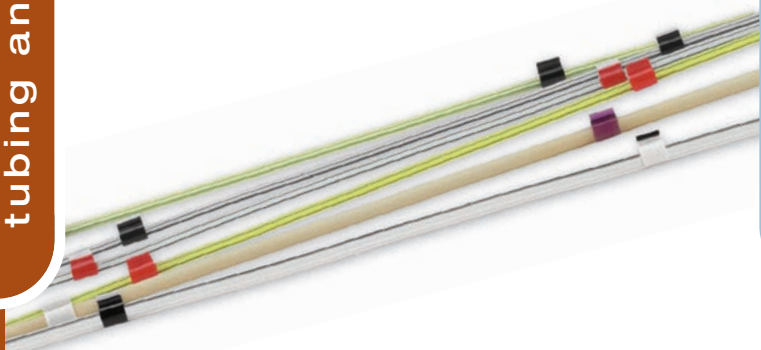
Sample Loops

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

Gas/Liquid Separator Consumables

Description	Part No.
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

Ensure reproducibility by replacing **your tubing** frequently



Standard PVC Tubing

- An economical high-performance material with great versatility for a wide range of uses

Description	Color	Pkg.	Part No.
0.19 mm i.d.	Orange/Red	12	N0695476
0.25 mm i.d.	Orange/Blue	12	N0773117
0.38 mm i.d.	Orange/Green	12	N0777110
0.76 mm i.d.	Black/Black	12	09908587
1.14 mm i.d.	Red/Red	12	09908585
1.52 mm i.d.	Yellow/Blue	12	09923536
3.16 mm i.d.	Black/White	12	N8122012

Flared Tubing

Description	Color	Pkg.	Part No.
0.19 mm i.d.	Orange/Red	12	N0773111
0.25 mm i.d.	Orange/Blue	12	N0773112
0.44 mm i.d.	Green/Yellow	12	N0773113
0.38 mm i.d.	Orange/Green	12	N0777042
0.76 mm i.d.	Black/Black	12	N0777043

Silicone Tubing

- A flexible, long-life translucent material with good chemical and environmental resistance

Description	Color	Pkg.	Part No.
0.76 mm i.d.	Black/Black	6	00473552
1.02 mm i.d.	White/White	6	N0777441
1.14 mm i.d.	Red/Red	6	N0691595
1.30 mm i.d.	Gray/Gray	6	N0777443
2.79 mm i.d.	Purple/White	6	09923448

Solvent Flex Tubing

- A flexible, translucent yellow PVC based compound with particular resistance to petrol and kerosene and many aromatic hydrocarbons

Description	Color	Pkg.	Part No.
0.76 mm i.d.	Black/Black	12	00473550
1.14 mm i.d.	Red/Red	12	09923037

SPECIAL SAVINGS OFFERS from Interchim !

Save when you purchase
2-packs of
ICP Pump Tubing

Please contact Interchim Hotline 33(0)4 70 03 73 09

Delivering **Enhanced Value** and **Outstanding Savings** on the products you use most!

Viton Tubing

- A unique fluoroelastomer with excellent chemical resistance to acids, alkalis, oils, fuels and most aromatic hydrocarbons

Description	Color	Pkg.	Part No.
0.51 mm i.d.	Orange/Yellow	12	N0777446
0.76 mm i.d.	Black/Black	12	N0773118
1.02 mm i.d.	White/White	12	N0777442
1.14 mm i.d.	Red/Red	12	N0773115
1.30 mm i.d.	Gray/Gray	12	N0777445
1.65 mm i.d.	Blue/Blue	12	N0777447

Santoprene® Tubing

- Flexible tough opaque thermoplastic rubber with excellent resistance to both acids and alkalis

Description	Color	Pkg.	Part No.
1.14 mm i.d.	Red/Red	12	N0773119
1.30 mm i.d.	Gray/Gray	12	N0777444
1.85 mm i.d.	Green/Green	12	N0773116

PharMed® Drain Tubing

- Used for drain only

Description	Color	Pkg.	Part No.
2.79 mm i.d.	White/Violet	12	N8122252

Other Tubing

Description	Dimensions	Part No.
Polyethylene Nebulizer Tubing	3 m length, 0.6 mm i.d. x 0.97 mm o.d.	09908265
Teflon® Tubing	1 m length, 1 mm i.d.	B0029792
PTFE Tubing	0.3 m length, 0.79 mm o.d. x 0.41 mm i.d.	09985708

Internal Standard Kits

Includes: Mixing T-piece, Internal Standard Probe, Sample Tubings, Gripper Paper and Orange-Blue Flared End PVC Tubing.

Description	Part No.
Non-HF Resistant Internal Standard Kit	N0774068
HF Resistant Internal Standard Kit	N0774067

Recirculating chillers provide clean and reliable temperature controlled fluid

WhisperCool™ Chiller for ICP-OES and ICP-MS

Water cooling systems (chillers) provide clean, reliable temperature controlled fluid for open tanks or closed loop cooling. The PolyScience WhisperCool Refrigerated Chiller is designed to deliver performance over a broad range of operating temperatures and conditions.

For added operational safety, they also feature audible and visual alarms that alert you instantly when operating parameters exceed pre-set limits. There are even user adjustable high and low temperature limits to help prevent unauthorized set point changes, plus built-in safeties to alert you to low fluid levels and thermal runaway. Extremely dependable and energy efficient, it features a -10° to 40 °C range, built-in process and equipment protection, and highly intuitive.

- Extra-large digital displays
- Temperature and pressure/flow rate readouts
- Low flow alarm
- High and low temperature alarms
- One-touch temperature control
- Quiet operation
- Simple maintenance



Chiller Coolant Mix

Non-glycol coolant, which is made up of five half gallon bottles of distilled water and includes an additive to control black algae and other resistant strains.

Part No.

N0776099

ELAN Coolant Fluid

1 liter bottle. It is essential that this chiller coolant be used with ELAN 9000/6X00/DRC series instruments. Also suitable for organics chillers.

Part No.

WE016558

Heat Exchanger System

Cooling systems for the ELAN 9000/DRC II/e systems. Air cooled recirculator without refrigeration. Not to be placed in areas with temperatures above 30 °C (86 °F). Requires the use of ELAN Coolant Fluid (WE016558).

ICP-MS Power Requirement

120 V, 60 Hz
220/250 V, 50/60 Hz

Part No.

N8122248
N8122247

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



Includes Exhaust Hood, Adapter and Blower. Does not include ducting. PerkinElmer service engineers are not permitted to install this unit.

Description	Part No.
110V	03030447
230V	03030448

Chillers/Recirculating Water Cooling Systems

ICP Model	Power Requirement	Operating Temp.	Flow Rate	Part No.
ELAN 5000/6X00/DRCs	208–230 V, 60 Hz, 8 A	-15° to 40 °C	60 psi: 4.3 gpm/16.3 Lpm	N0772036
ELAN 5000/6X00/DRCs	240 V, 50 Hz, 8.5 A	-15° to 40 °C	60 psi: 4.3 gpm/16.3 Lpm	N0772035
Optima 2X00/4X00/5X00/7X00	208–230 V, 60 Hz, 8 A	-15° to 40 °C	60 psi: 4.3 gpm/16.3 Lpm	N0772036
Optima 2X00/4X00/5X00/7X00	240 V, 50 Hz, 8.5 A	-15° to 40 °C	60 psi: 4.3 gpm/16.3 Lpm	N0772035
Optima 3X00	120 V, 60 Hz, 13.1 A	-5° to 40 °C	60 psi: 1 gpm/3.8 Lpm	N0691883
Optima 3X00	240 V, 50 Hz, 7.3 A	-5° to 40 °C	60 psi: 1 gpm/3.8 Lpm	N0691884

PerkinElmer Factory Tested and Approved

PerkinElmer offers a **full range** of **filters** and **regulators** for your **laboratory**



Acetylene Regulator



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 inch SWAGELOK® fittings is also included.

Description	Part No.
Max inlet pressure: 3,000 psig	03030284

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



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



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.
	03030204

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



Laboratory Products

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 oil, water and particulate contamination (99.99% at 0.01 micron) from the compressed air supply.

Part No.
N9301398

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

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 liquid and solid contaminants from the acetylene supply to 99.99% at 0.01 micron. Max working pressure: 15 psig.

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.

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

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

*For Wilkerson Filter PerkinElmer (00470652)

ICP Filter Replacement Parts

ICP Model	Filter Element	Part No.
2X00/3X00/4X00/5X00/7X00	For Pre-Final	09907122
2X00/3X00/4X00/5X00/7X00	For Final Filter	09923464
2X00/3X00/4X00/5X00/7X00	Water Filter	09904845
2X00/3X00/4X00/5X00/7X00	Cartridge for Water Filter	09904846
2X00/4X00/5X00/7X00	Air Filter for the RF Generator Inlet	N0775220
3X00	Air Filter for the RF Generator Inlet	02509115

Instrument Filters

Description	Part No.
For AAnalyst 100/300	09995097
For AAnalyst 200/400/600/700/800	B0501696
For AAnalyst 600/700/800 (80x80)	B0502706
For Optima 2X00/3X00/4X00/5X00/7X00	09995098

Polyscience Replacement Air Filters

Description	Part No.
Polyscience Chiller Air Filter	N0777359
Heat Exchanger Air Filter	N0777360

PerkinElmer Pure Atomic Spectroscopy

Whatever your application, you can depend on **PerkinElmer Pure Standards** to yield **reliable, accurate results**

PerkinElmer offers a wide selection of atomic spectroscopy calibration standards. Each solution is supplied with a comprehensive Certificate of Analysis that documents the quality and reliability.

Quality

PerkinElmer Pure standards are prepared gravimetrically from high-purity metals and salts, using high-purity reagents.

- ASTM Type I, filtered water minimizes cations, anions and colloids; resistivity is maintained in the 18-megohm range
- Acids used are the highest purity
- Semi-micro analytical balances and Class A volumetric glassware are used and the bottles are subjected to a stringent leaching/cleaning process
- Following preparation, standards are analyzed for the major element as well as trace impurities. The results of the analysis are provided on the Certificate of Analysis

Reliability

Single-element standards are measured by four methods:

1. ICP/ICP-MS analysis of the high pure starting materials for trace impurities (semi-quantitative).
2. Gravimetric, "wet" assay of the major analyte.
3. ICP check of the major analyte.
4. ICP/ICP-MS check of the trace impurities in the final solution.



Safety

We ship standards to comply with both DOT and IATA regulations to ensure their safe delivery to you.

Features

- ISO 9001 accredited by Underwriters Laboratories including comprehensive continuous improvement, product recall, corrective action request and other quality maintenance and improvement programs
- Product labeling meets OSHA, California and EU labeling standards
- Bottles are low-density polyethylene from industry standard Nalge Corporation and are pre-leached and pre-treated for increased product stability and purity
- High-purity acids and ASTM Type I water used in all manufacturing
- Traceability directly to NIST standard reference materials, not independent sources or secondary NIST SRMs
- Wet assays on all single-element products via standard, accepted wet methods and traceable directly to NIST SRM to +/-0.5% of true value and reported on the Certificate of Analysis
- All starting materials tested and confirmed for the absence of interfering anions, e.g. chloride
- Twelve months guaranteed stability +/-0.5% for all major analytes for all products
- Compliance to ISO 17025 quality system requirements. ISO Guide 34

Standards

Single-Element Calibration Standards

Element	Symbol	Matrix	Starting Material	100 mL Part No.	500 mL Part No.
Aluminum	Al	2% HNO ₃	Al(NO ₃) ₃ • 9H ₂ O	N9300184	N9300100
Antimony	Sb	2% HNO ₃	Sb ₂ O ₃	N9300207	N9300101
Arsenic	As	2% HNO ₃	H ₃ AsO ₄ • ½H ₂ O	N9300180	N9300102
Barium	Ba	2% HNO ₃	BaCO ₃	N9300181	N9300103
Beryllium	Be	2% HNO ₃	Be ₄ O(C ₂ H ₃ O ₂) ₆	N9300172	N9300104
Bismuth	Bi	10% HNO ₃	Bi	N9303761	N9300105
Cadmium	Cd	2% HNO ₃	Cd	N9300176	N9300107
Calcium	Ca	2% HNO ₃	CaCO ₃	N9303763	N9300108
Chromium	Cr	2% HNO ₃	Cr(NO ₃) ₃ • 9H ₂ O	N9300173	N9300112
Cobalt	Co	2% HNO ₃	CoCO ₃	N9303766	N9300113
Copper	Cu	2% HNO ₃	Cu	N9300183	N9300114
Gold	Au	10% HCl	Au	N9303759	N9300121
Hafnium	Hf	2% HCl	HfOCl ₂ • 8H ₂ O	N9303775	N9300122
Iron	Fe	2% HNO ₃	Fe	N9303771	N9300126
Lead	Pb	2% HNO ₃	Pb	N9300175	N9300128
Magnesium	Mg	2% HNO ₃	Mg	N9300179	N9300131
Manganese	Mn	2% HNO ₃	Mn(C ₂ H ₃ O ₂) ₃ • 2H ₂ O	N9303783	N9300132
Mercury**	Hg	10% HNO ₃	Hg	N9300174	N9300133
Molybdenum	Mo	H ₂ O	(NH ₄) ₆ Mo ₇ O ₂₄ • 4H ₂ O	N9303784	N9300134
Nickel	Ni	2% HNO ₃	Ni	N9300177	N9300136
Palladium	Pd	10% HCl	(NH ₄) ₂ PdCl ₄	N9303789	N9300138
Phosphorus	P	H ₂ O	NH ₄ H ₂ PO ₄	N9303788	N9300139
Platinum	Pt	10% HCl	H ₂ PtCl ₆ • XH ₂ O	N9303791	N9300140
Potassium	K	2% HNO ₃	KNO ₃	N9303779	N9300141
Scandium	Sc	2% HNO ₃	Sc ₂ O ₃	N9303798	N9300148
Selenium	Se	2% HNO ₃	Se	N9300182	N9300149
Silicon	Si	H ₂ O	(NH ₄) ₂ SiF ₆	N9303799	N9300150
Silver	Ag	2% HNO ₃	Ag	N9300171	N9300151
Sodium	Na	2% HNO ₃	Na ₂ CO ₃	N9303785	N9300152
Sulfur	S	H ₂ O	(NH ₄) ₂ SO ₄	N9303796	N9300154
Tin	Sn	20% HCl	Sn	N9303801	N9300161
Thallium	Tl	2% HNO ₃	TlNO ₃	N9300170	N9300158
Titanium	Ti	H ₂ O	(NH ₄) ₂ TiF ₆	N9303806	N9300162
Yttrium	Y	2% HNO ₃	Y ₂ O ₃	N9303810	N9300167
Zinc	Zn	2% HNO ₃	Zn	N9300178	N9300168

The single element standards listed have a concentration of 1,000 µg/mL in aqueous solution. All 100 mL standards are shipped in 125 mL bottles.

**Also available at 10 µg/mL as Part No. N9300253.



SPECIAL SAVINGS OFFERS
from Interchim !

Save on Atomic Spectroscopy Standards

when you purchase
2 or more!

Please contact Interchim Hotline 33 (0)4 70 03 73 09

Delivering Enhanced Value and Outstanding Savings on the products you use most!

Atomic Spectroscopy Standards for your



Mixed Calibration Standards

Matrix	Contents	Vol.	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	100 mL	N9300200
Mixed Calibration Standard 2			
5% HNO ₃	10,000 µg/mL: Fe 100 µg/mL: Ba, Co, Cu, V	100 mL	N9300201
Mixed Calibration Standard 3			
2% HNO ₃ /tr HF	500 µg/mL: As 100 µg/mL: Mo, Si	100 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	100 mL	N9300203
Mixed Calibration Standard 5			
5% HNO ₃ /tr Tartaric Acid/tr HF	1,000 µg/mL: Mg 200 µg/mL: Sb, Ti 100 µg/mL: B 50 µg/mL: Ag	100 mL	N9300204

Initial Calibration Verification Standard

Matrix	Vol.	Part No.
5% HNO ₃	500 mL	N9300224
Contents:		
500 µg/mL: Ca, Mg, K, Na	50 µg/mL: Co, V	15 µg/mL: Mn
200 µg/mL: Ba, Al	40 µg/mL: Ni	10 µg/mL: As, Cr, Ag, Ti
100 µg/mL: Fe	25 µg/mL: Cu	5 µg/mL: Cd, Se
60 µg/mL: Sb	20 µg/mL: Zn	3 µg/mL: Pb

Instrument Calibration Standards

Matrix	Contents	Vol.	Part No.
Instrument Calibration Standard 1			
5% HNO ₃	5,000 µg/mL: Ca, K, Mg, Na	100 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	100 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	100 mL	N9300220
Instrument Calibration Standard 4			
5% HNO ₃	100 µg/mL: As, Ti 50 µg/mL: Cd, Se 30 µg/mL: Pb	100 mL	N9300221
Low UV Standard			
2% HNO ₃	10 µg/mL: Al, P, S	250 mL	N0691580
Calcium Stray Light Standard			
H ₂ O	10,000 µg/mL: Ca	100 mL	N0691581

Contract Required Detection Limits (CRDL)

Matrix	Vol.	Part No.
5% HNO ₃ /tr Tartaric Acid/tr HF	100 mL	N9300225
Contents:		
120 µg/mL: Sb	50 µg/mL: Cu	20 µg/mL: Ag, As, Cr, Ti
100 µg/mL: Co, V	40 µg/mL: Zn	10 µg/mL: Be, Cd, Se
80 µg/mL: Ni	30 µg/mL: Mn	6 µg/mL: P

Quality Control Standards

Matrix	Contents	Vol.	Part No.
Quality Control Standard, 21 Elements			
5% HNO ₃ /tr Tartaric Acid/tr 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	100 mL	N9300281
Quality Control Standard, 7A Elements			
5% HNO ₃ /tr HF	1,000 µg/mL: K 500 µg/mL: Si 100 µg/mL: Al, B, Ba, Na 50 µg/mL: Ag	100 mL	N9300280

Save on Atomic Spectroscopy Standards

when you purchase
2 or more!

Please contact Interchim Hotline 33 (0)4 70 03 73 09

Delivering Enhanced Value and Outstanding Savings on the products you use most!

Interference Check Standards

Matrix	Contents	Vol.	Part No.
Interference Check Standard 1			
H ₂ O/tr HNO ₃ /0.6% Tartaric Acid	100 µg/mL: Sb	100 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	100 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*	100 mL	N9300205
<i>*Included in separate bottle.</i>			
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 /tr Tartaric Acid/tr 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	100 mL	N9300227
Alternate Analytes B			
5% HNO ₃ /tr Tartaric Acid/tr HF	100 µg/mL: Al, As, B, Mo, Na, Sb, Se, Ti 10 µg/mL: Ca, Fe, Mg, Si	100 mL	N9300229

Spike Sample Analysis

Spike Sample Standard I

Matrix	Vol.	Part No.
5% HNO ₃ /tr Tartaric Acid/tr HF	100 mL	N9300230

Contents:

200 µg/mL: Al, As, Ba, Se, Tl	25 µg/mL: Cu
100 µg/mL: Fe	20 µg/mL: Cr
50 µg/mL: Co, Mn, Ni, Pb, Sb, V, Zn	5 µg/mL: Ag, Be, Cd

Water Pollutant Standards

Matrix	Contents	Vol.	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	100 mL	N9300216
<i>*Included in separate bottle.</i>			
Secondary Drinking Water Metals			
2% HNO ₃	500 µg/mL: Zn 100 µg/mL: Cu 30 µg/mL: Fe 5 µg/mL: Mn	100 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*	100 mL	N9300211
<i>*Included in separate bottle.</i>			
Trace Metals II			
2% HNO ₃	20 µg/mL: Sb, Tl 10 µg/mL: Ag	100 mL	N9300212
Trace Metals III			
2% HNO ₃	500 µg/mL: Ba, Ca, Mo, Na 100 µg/mL: K, Mg	100 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	100 mL	N9300214
Alternate Metals III			
2% HNO ₃	500 µg/mL: Ca, Na 100 µg/mL: K, Mg	100 mL	N9300215

Wavecal Solutions

Matrix	Contents	Vol.	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, Ni, Sc	100 mL	N0681470
5% HCl	100 µg/mL: K, P, S 20 µg/mL: As, La, Li, Mn, Mo, Na, Ni, Sc	500 mL	N0582152

Atomic Spectroscopy Standards for your



SPECIAL SAVINGS OFFERS
from Interchim !

Save on Atomic Spectroscopy Standards

when you purchase
2 or more!

Please contact Interchim Hotline 33 (0)4 70 03 73 09

Delivering **Enhanced Value** and **Outstanding Savings** on the products you use most!

Instrument Calibration Standards

Matrix	Contents	Vol.	Part No.
Instrument Calibration Standard 1			
2% HNO ₃ /tr Tartaric Acid	20 µg/mL: Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Th, Ti, U, V, Zn	100 mL	N9303816
Instrument Calibration Standard 2			
5% HNO ₃ /tr Tartaric Acid/tr 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	100 mL	N9301721
Instrument Calibration Standard 3			
5% HNO ₃	1,000 µg/mL: Fe, K, Ca, Na, Mg	100 mL	N9303818
Initial Calibration Verification Standard 1			
5% HNO ₃ /tr Tartaric Acid	1,000 µg/mL: Fe, K, Ca, Na, Mg, Sr 10 µg/mL: Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Ni, Pb, Sb, Se, Ti, V, Zn, Th, U	100 mL	N9303825
Initial Calibration Verification Standard 2			
2% HNO ₃ /tr HF	10 µg/mL: Sn, Ti	100 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/DRC^{plus}/DRC II Solution Kit			
Solution Kit (Includes items listed below)			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 100 mL: Methanol Blank Solution			N8125037
1 x 100 mL: Chromium in Methanol Solution			N8125038
Elan 9000/6100 Solution Kit			
Solution Kit (Includes items listed below)			N8120522
2 x 1,000 mL: Setup/Stability/Masscal Solution			N8125030
1 x 125 mL: Dual-Detector Calibration Solution			N8125032
1 x 500 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	1,000 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

Instrument Check Standards

Matrix	Contents	Vol.	Part No.
Instrument Check Standard 1			
2% HNO ₃ /tr Tartaric Acid/tr HF	10 µg/mL: Ag, Al, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Sb, Se, Ti, V, Zn	100 mL	N9303821
Instrument Check Standard 3			
2% HNO ₃	200 µg/mL: Ca, Fe, K, Mg, Na	100 mL	N9303822
Instrument Check Standard 4			
2% HNO ₃	10 µg/mL: Mo, Th, U	100 mL	N9303823
Instrument Check Standard 5			
2% HNO ₃ /tr HF	10 µg/mL: Mo, Sn, Sr, Ti	100 mL	N9303824

SmartTune Standards

Matrix	Contents	Vol.	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/DRC^{plus}/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	100 mL	N9303843

Wash Standards

Matrix	Vol.	Part No.
ELAN DRC Wash Solution		
0.5% HNO ₃	250 mL	N8125033
ELAN 9000/6X00/DRC-e Wash Solution		
1% HNO ₃	1 L	N8122038
Water Blank		
ASTM Type I Water, 18 megohm	100 mL	N9303814

ICP Applications



Environmental Method Sets

Environmental Standard Kit for non-DRC/Standard ICP-MS Instruments

Description	Part No.
Environmental Standard Kit for non-DRC/Standard ICP-MS Instruments	N9307111
Contents: (1 bottle each, 100 mL)	
1,000 µg/mL: Ca, Mg, K, Na	
1,000 µg/mL: Al, Fe	
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	
100 µg/mL: B, U, Th	
10 µg/mL: Hg	
Internal Standard Mix	
50 µg/mL: Sc	20 µg/mL: Ge
10 µg/mL: Ir	10 µg/mL: Li6
10 µg/mL: Tb	10 µg/mL: Y

Environmental Standard Kit for DRC Instruments

Description	Part No.
Environmental Standard Kit for DRC Instruments	N9307112
Contents: (1 bottle each, 100 mL)	
1,000 µg/mL: Ca, Mg, K, Na	
1,000 µg/mL: Al, Fe	
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	
100 µg/mL: B, U, Th	
10 µg/mL: Hg	
Internal Standard Mix	
200 µg/mL: Sc	20 µg/mL: Ga
	10 µg/mL: In, Ir, Rh, Tm

Description	Part No.
Contract Lab Program Modification Set	N9307103
Calibration Standard Set for Method 6010	N9307104
Internal Standard Set for Method 6010 & 200.7	N9307105
Interference Solutions for Method 6010	N9307106
Calibration Standards for Method 200.7	N9307107
Interference Solutions for Method 200.7	N9307108
Environmental EPA Set 2	N9307109
Environmental EPA Set 1	N9307110

Please visit www.perkinelmer.com/supplies for complete details.

Internal Standard Solutions

Matrix	Contents	Vol.	Part No.
Multi-Element Internal Standard			
2% HNO ₃	10 µg/mL: Bi, Ho, In, ⁶ Li, Sc, Tb, Y	100 mL	N9303834
Internal Standard Mix			
5-10% HNO ₃	10 µg/mL: ⁶ Li, Sc, Ge, Y, In, Tb, Bi	100 mL	N9303832

Performance Verification Standard

Matrix	Contents	Vol.	Part No.
Methanol Blank Solution			
1% Semiconductor Grade		100 mL	N8125037
Chromium in Methanol Solution			
1% Semiconductor Grade Methanol	10 µg/mL: Cr	100 mL	N8125038
Selenium Solution			
5% HNO ₃	10 µg/mL: Se	250 mL	N8125039

Multi-Element Standards

Matrix	Contents	Vol.	Part No.
Multi-Element Solution 1			
2% HNO ₃	10 µg/mL: Be, Bi, Ce, Co, In, Mg, Ni, Pb, U	100 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	100 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, Ti, U, V, Zn	100 mL	N9300233
<i>*Included in separate bottle.</i>			
Multi-Element Solution 3 without Mercury			
			N9301720
Multi-Element Solution 4			
10% HCl/1% HNO ₃	10 µg/mL: Au, Hf, Ir, Pd, Pt, Rh, Ru, Sb, Sn, Te	100 mL	N9300234
Multi-Element Solution 5			
H ₂ O/tr HF	10 µg/mL: B, Ge, Mo, Nb, P, Re, S, Si, Ta, Ti, W, Zr	100 mL	N9300235

Spike Sample Analysis

Matrix	Vol.	Part No.
Spike Sample Standard 1 (water)		
5% HNO ₃ /tr Tartaric Acid/tr HF	100 mL	N9303839
Contents:		
500 µg/mL: Fe	50 µg/mL: As, Pb	
250 µg/mL: Ba, Zn	25 µg/mL: Ag, Be, Cd, Se, Tl	
100 µg/mL: Co, Cr, Cu, Mn, Ni, Sb, V		
Spike Sample Standard 2 (soil)		
5% HNO ₃ /tr Tartaric Acid/tr HF	100 mL	N9303840
Contents:		
250 µg/mL: Ba, Cr, Cu, Zn	125 µg/mL: Ni	50 µg/mL: As, Cd
150 µg/mL: V	100 µg/mL: Co, Pb, Sb	25 µg/mL: Ag, Be, Se, Tl
Spike Sample Standard 3 (for ILM 05.2)		
5% HNO ₃ /tr Tartaric Acid/tr HF	100 mL	N9303841
Contents:		
200 µg/mL: Al, Ba	20 µg/mL: Cr	4 µg/mL: As
50 µg/mL: Co, Mn, Ni, V, Zn	10 µg/mL: Sb	2 µg/mL: Pb
25 µg/mL: Cu	5 µg/mL: Be, Cd, Ag, Tl	1 µg/mL: Se

Sample Digestion Block Systems

PerkinElmer offers a variety of **Sample Preparation Blocks (SPB)** and accessories for your lab needs



Features and Benefits

- Ideal for any digestion / heating method which requires a temperature below 180 °C
- Provides uniform temperature (+ / - 1.0 °C across the block)
- Delivers even sample evaporation results
- Teflon® Coated Graphite block resists aggressive, corrosive attack
- Choose from 6 different SPB blocks

Better laboratory practices demand modern techniques in sample preparation. In the past, hot plates were used to digest samples where common digestion problems involve rusting, cross contamination of digestion system to sample, and poor sample temperature control. With no exposed metal components and an outer shell manufactured from Kydex plastic, the SPB blocks reduce the chances of sample contamination.

Each system is constructed with a solid, Teflon-coated, graphite block where a flat heater covers 95% of the block's base. This guarantees temperature uniformity and eliminates hot spots found in hot plates. All PerkinElmer sample preparation blocks are manufactured to specific tolerances which operates under a Quality Management System that is certified ISO 9001:2008.

Sample Preparation Blocks

The SPB series of block digestion systems offers the latest in graphite block technology in many different packages. Graphite blocks are Teflon® coated to resist aggressive corrosive attack for guaranteed long life in harsh laboratory environments.

Description	Qty.	Part No.
SPB 50-24, (115 V/ 230V)	24 Tubes / 50 ml	N9308019
SPB 100-12, (115 V/ 230V)	12 Tubes / 100 ml	N9308010
SPB 50-48, (115 V/ 230V)	48 Tubes / 50 ml	N9308004
SPB 100-30, (115 V/ 230V)	30 Tubes / 100 ml	N9308012
SPB 50-72, (230V)	72 Tubes / 50 ml	N9308005
SPB 100-42, (230V)	42 Tubes / 100 ml	N9308014



Controllers

Our sample blocks operate with either a SPB Digital Controller or SPB Touch Controller. 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	N9308006
SPB Touch Controller	N9308007



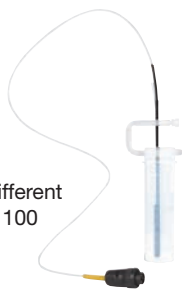
Start Up Kits

PerkinElmer provides SPB Start Up kits containing all consumable items required to operate the system including: RackLock DigiTUBEs, disposable watch glasses, DigiFILTERs, watch glasses, 24 position RackLock rack and storage racks.

Description	Qty.	Part No.
Start Up Kit for SPB 50-24	1	N9308017
Start Up Kit for SPB 100-12	1	N9308011
Start Up Kit for SPB 50-48	1	N9308002
Start Up Kit for SPB 100-30	1	N9308013
Start Up Kit for SPB 50-72	1	N9308025
Start Up Kit for SPB 100-42	1	N9308015

Temperature Probes

Why use 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" configuration for use with 50 and 100 mL DigiTUBE[®]s. Each probe is supplied with 5 Probe Watch Glasses and a probe holder.



Description	Qty.	Part No.
SPB 6" for 50 mL Tubes	1	N9308018
SPB 6" 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

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	N9308020
TempSET Probe for 50 mL Tubes	1	N9308023
TempSET Probe for 100 mL Tubes	1	N9308029

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 micron hydrophilic Teflon[®] membrane.



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*	1	N9308033
DigiFILTER Manifold	1	N9308034
Vacuum Pump 20L / min 115 V	1	N9308035
Vacuum Pump 60L / min 115 V	1	N9308063

* Contains : 25 DigiFILTERs, 30 DigiTUBEs, 1x 6 ml eyedropper bottle to dispense 2 to 3 drops of (1+1) PlasmaPURE Nitric acid, 1 storagerack, 1 Sharpie pen and 2x 60 ml plastic syringes to create a vacuum to filter samples from the collection vessel to the sample tube.

Tubes, Caps & 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.

Tubes

Description	Qty.	Part No.
DigiTUBEs 50 ml with RackLock	750	N9308008
DigiTUBEs 100 ml with RackLock	300	N9308016
Teflon Digestion Tube 50 ml with polypropylene Screw Cap	6	N9308024
Tube, Quartz, 62.5 ml, Uncalibrated	6	N9308048
Tube, BoroSi, 62.5 ml, Uncalibrated	6	N9308049
Tube, BoroSi, 62.5 ml, Calibrated at 50 ml	6	N9308050

Caps

Description	Qty.	Part No.
Screw Caps, Orange, for DigiTUBEs	250	N9308058
Screw Caps, Red, for DigiTUBEs	250	N9308059
Screw Caps, Clear, for DigiTUBEs	250	N9308060
Screw Caps, Yellow, for DigiTUBEs	250	N9308056
Teflon Screw Cap for Teflon Tubes, N9308024 replaces blue cap supplied	6	N9308027

Watch Glasses

Description	Qty.	Part No.
Rack for SPB-100-12, 100 ml	1	N9308067
Rack for SPB-100-30, 100 ml	1	N9308068
Rack for SPB-100-42, 100 ml	1	N9308069
Rack for SPB-50-24, 50 ml	1	N9308070
Rack for SPB-50-48 and SPB-50-72, 50 ml	1	N9308042



PerkinElmer products —
proven quality, reliability
and results.

THE WORLD LEADER IN ATOMIC SPECTROSCOPY

SAVE
on packs of 1,000
Autosampler
Cups or Vials!

See pages 15 and 44



**THGA Graphite
Tubes only from
PerkinElmer!**

See pages 20-21

SAVE on ICP Pump Tubing
when you purchase 2 packs

Ensure reproducibility by replacing your
tubing frequently.

See page 48



**PerkinElmer Sample
Preparation Blocks!**



NEW!
Available in 50 mL and 100 mL sizes.
Teflon®-coated to resist aggressive, corrosive attack.

See pages 58-59



interchim

211 bis Avenue J.F. Kennedy - BP 1140
03103 Montluçon cedex - France
Hotline 33 (0)4 70 03 73 09
Tél 33 (0)4 70 03 88 55 - Fax 33 (0)4 70 03 82 60
e-mail interchrom@interchim.com