### ICP-OES/ICP-MS SUPPLIES & ACCESSORIES

torches



coils

cones



spray chambers



nebulizers



accessories



### **NEBULIZERS FOR AQUEOUS AND ORGANICS ANALYSES**

### SeaSpray - The High Performance Nebulizer

The SeaSpray glass concentric nebulizer offers outstanding nebulization efficiency for trace level analyses. It offers the highest sensitivity and freedom from clogging while nebulizing solutions with high salt levels.

- Material: Borosilicate glass
- High physical reproducibility ~ 1%
- High TDS tolerance, typically up to 20%
- High tolerance to particulates, typically up to 75µm
- Low RSDs due to highly accurate construction
- Standard available uptake: 0.4mL/min and 2mL/min

SeaSpray U-Series nebulizers with sample uptake 2mL/min are supplied with: 1 x NFT-075 UniFit connector (sample tube 0.75mm ID x 1.3mm OD x 700mm long).

SeaSpray U-series nebulizers with sample uptake 0.4mL/min are supplied with: 1 x NFT-050 UniFit connector (sample tube 0.5mm ID x 1.3mm OD x 700mm long).

### MicroMist - The Low Uptake Nebulizer for all ICPs

The MicroMist micro-uptake glass concentric nebulizer offers high performance for limited sample volumes. It also reduces matrix effects when used with Glass Expansion's Cinnabar spray chamber.

- Material: Borosilicate glass
- High physical reproducibility ~ 1%
- TDS tolerance, typically up to 15%
- Low RSDs due to highly accurate construction
- Standard available uptake: 0.05, 0.1, 0.2, 0.4 & 0.6mL/min

MicroMist U-Series nebulizers with sample uptakes 0.2 – 0.6mL/min are fitted with: 1 x NFT-050 UniFit connector (1.3mm OD x 0.50mm ID x 700mm long sample tubing).

MicroMist U-Series nebulizers with sample uptakes 0.05 - 0.1mL/min are fitted with:  $1 \times NFT-025$  UniFit connector (1.3mm OD x 0.25mm ID x 700mm long sample tubing).

### Conikal - An Economical Option

The Conikal concentric nebulizer gives reproducible results for routine ICP analyses.

- Material: Borosilicate glass
- High physical reproducibility ~ 1%
- TDS tolerance, typically up to 5%
- High tolerance to particulates, typically up to 75µm
- Low RSDs due to highly accurate construction
- Standard available uptakes 1 & 2mL/min

Conikal U-Series nebulizers with sample uptake 2mL/min are supplied with: 1 x NFT-075 UniFit connector (sample tube 0.75mm ID x 1.3mm OD x 700mm long).

Conikal U-Series nebulizers with sample uptake 1mL/min are supplied with: 1 x NFT-050 UniFit connector (sample tube 0.5mm ID x 1.3mm OD x 700mm long).

### Slurry - For Slurries or Suspensions

The Slurry glass concentric nebulizer is ideal for specialised applications requiring the aspiration of slurries or suspensions. Its capillary bore is 50% larger than standard concentrics. This reduces the possibility of particle blockage, while giving excellent signal stability.

- Material: Borosilicate glass
- High physical reproducibility ~ 1%
- TDS tolerance, typically ~1%
- High tolerance to particulates, typically up to 150μm
- Low RSDs due to highly accurate construction
- Slurry nebulizers have a natural liquid uptake of 4mL/min but operate best between 1.5 and 2.5ml /min

All Slurry U-Series nebulizers listed in this catalog are supplied with: 1 x NFT-075 UniFit connector (sample tube 0.75mm ID x 1.3mm OD x 700mm long).







Conikal U-Series nebulizer with

UniFit sample connector and EzyLok side arm.

### **NEBULIZERS FOR HF ANALYSES**

### **DuraMist - For Routine High Precision HF Analyses**

The DuraMist concentric nebulizer is the most economical nebulizer for high precision analyses involving samples digested in HE\*

- Material: HF Resistant PEEK
- High physical reproducibility ~ 2%
- High tolerance to particulates, up to 75µm depending on uptake
- High TDS tolerance, typically up to 20%
- · Low RSDs due to concentric geometry
- Uses only standard ICP argon supply pressures
- Standard 6mm size fits standard cyclonic spray chambers. Adaptors are available for Scott type spray chambers
- Standard available uptakes: 0.4 and 1.0mL/min

DuraMists with sample uptakes 0.4 and 1.0mL/min are supplied with 1 x NFT-050, UniFit Connector with 1.3mm OD x 0.50mm ID x 700mm long sample tubing.

### PolyCon - For Routine High Precision HF Analyses

The PolyCon concentric nebulizer is for ICP-OES analyses involving samples digested in HF.

- Material: HF Resistant Polyimide
- High physical reproducibility ~ 2%
- High tolerance to particulates, up to 75µm depending on uptake
- TDS tolerance, typically up to 5%
- Low RSDs due to concentric geometry
- Uses only standard ICP argon supply pressures
- Standard 6mm size fits standard cyclonic spray chambers. Adaptors are available for Scott type spray chambers
- Standard available uptakes: 0.05, 0.1, 0.2, 0.4, 0.6, 0.8, & 2 mL/min

PolyCons with sample uptakes 0.05 - 0.1mL/min are supplied with 1.3mm OD x 0.25mm ID x 700mm long sample tubing. PolyCons with sample uptakes 0.2 - 0.8mL/min are supplied with 1.3mm OD x 0.50mm ID x 700mm long sample tubing. PolyCons with sample uptake 2 mL/min are supplied with 1.3mm OD x 0.75mm ID x 700mm long sample tubing.

### OpalMist - Ideal For ICP-MS

The OpalMist PFA concentric nebulizer is the nebulizer of choice for ICP-MS analyses requiring exceptional purity or chemical resistance to HF, alkalis and organics. It also provides excellent results for trace analyses and freedom from clogging with high salt concentration.

- Material: PFA
- High physical reproducibility ~ 3%
- Strong and consistent self-aspiration
- High tolerance to particulates, up to 75µm depending on uptake
- High TDS tolerance, typically up to 30%
- Low RSDs due to concentric geometry
- Uses only standard ICP argon supply pressures
- Standard 6mm size fits standard cyclonic spray chambers. Adaptors are available for Scott type spray chambers
- Standard available uptakes: 0.05, 0.1, 0.2, 0.4, 0.6, 0.8 & 2mL/min

OpalMists with sample uptakes 0.05 - 0.1mL/min are supplied with 1.3mm OD x 0.25mm ID x 700mm long sample tubing. OpalMists with sample uptakes 0.2 - 0.8mL/min are supplied with 1.3mm OD x 0.50mm ID x 700mm long sample tubing. OpalMists with sample uptake 2mL/min are supplied with 1.3mm OD x 0.75mm ID x 700mm long sample tubing.

### Ceramic VeeSpray - Handles High Particle and TDS Loads Best

The Ceramic VeeSpray nebulizer is made from alumina ceramic, making it ideal for HF analyses. It provides reproducible performance when working with samples containing large particulates. It has the same 6mm diameter as the standard concentric nebulizer and the alumina material makes it the most robust and abrasion resistant ICP nebulizer.

- Material: 99.8% Alumina Ceramic
- High physical reproducibility ~ 1%
- TDS tolerance, typically up to 30%
- High tolerance to particulates, typically up to 300µm
- Must be pumped does not self aspirate
- Design uptake range: 0.6 3mL/min. Operates best between 1.5 and 2.5mL/min

All Ceramic VeeSpray nebulizers listed in this catalog are supplied with 1.6mm OD  $\times$  0.75mm ID  $\times$  700mm long sample tubing.



The DuraMist is recommended for

samples containing up to 5% HF. For samples with higher concentrations

of HF, we recommend the OpalMist

PFA nebulizer.



### SPRAY CHAMBERS - HIGHEST QUALITY, UNIFORMITY AND EFFECTIVENESS



### Helix - The Modern Interface Between Nebulizer and Spray Chamber

Most ICP spectrometers rely on an O-Ring seal between the nebulizer and the spray chamber. This design may result in extended washout times due to dead volume around the seal. The Helix eliminates dead volume, resulting in faster washout times and higher sample throughput. Also, even the most chemically resistant O-Rings are prone to wear and tear and require regular replacement. They also tend to bond to a glass nebulizer, making the nebulizer difficult to remove. To eliminate all of these problems, Glass Expansion has developed Helix – the user friendly nebulizer/spray chamber interface.

- · Faster washout times due to elimination of dead volume around the nebulizer seal
- No O-Rings to replace
- Totally inert impervious to organic solvents and strong acids
- Smooth nebulizer insertion and removal
- Special release/lock mechanism seals the chamber
- Positive stop to ensure correct nebulizer position

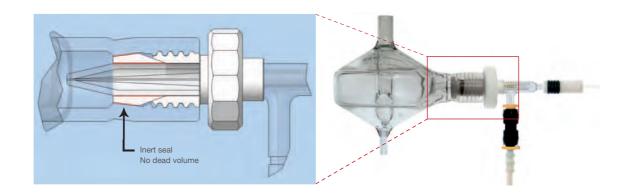
Helix fittings can only be used with Glass Expansion spray chambers incorporating the Helix side arm. They cannot be used with spray chambers designed with an O-Ring seal.

Part numbers for Helix glass spray chambers can be identified by the letters HE at the end, as in 20-809-0224HE. All of the glass spray chambers in this catalog are supplied with Helix. All of the PTFE and PFA spray chambers in this catalog are supplied with a Helix. They do not have the HE suffix since they are not available without Helix.

### The Secrets of the Glass Expansion Spray Chamber

Only Glass Expansion spray chambers provide all of these benefits:

- Cyclonic design for best sensitivity and precision
- Helix nebulizer interface
- Minimal dead volume for reduced carryover, faster washout and higher sample throughput
- Precise ridge on wall for efficient drainage
- · Convenient UniFit drain connector



### Tracey Cyclonic – An Industry Standard

The Tracey cyclonic spray chamber is Glass Expansion's standard glass cyclonic spray chamber. It gives the best sensitivity and lowest memory effects for standard ICP analyses.

- Material: Borosilicate glass
- Volume: 50mL
- High sensitivity and reduced matrix effects
- Physical reproducibility ~1%
- · Faster washout than older coaxial chamber designs
- Low RSDs due to highly accurate construction
- Application uptake range 0.2 to 3.0mL/min

### **HF** resistant Tracey TFE spray chamber

Made from HF resistant PTFE, the Tracey TFE spray chamber is ideal for use with the PolyCon, OpalMist, DuraMist or Ceramic VeeSpray nebulizers. Volume 50mL.

### Tracey PFA44 spray chamber

The Tracey PFA44 spray chamber is made from high purity PFA and is ideal for ultra-trace ICP-MS analyses where ultra-pure sample introduction components are required. Volume 44mL.





Tracey spray chamber P/N 20-809-0224HE shown.

Tracey TFE spray chamber P/N 20-809-2506 shown.

The interior of both the Tracey TFE and Tracey PFA44 has the proprietary Stediflow surface treatment which improves the wettability of the surface and ensures efficient drainage. Without the Stediflow treatment, droplets tend to form on the surface and degrade both sensitivity and precision.

### Twister Cyclonic - Reduces Solvent Load

The Twister 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.

- Material: Borosilicate glass
- Volume: 50mL
- Physical reproducibility ~1%
- Low RSDs due to highly accurate construction
- Application uptake range 0.2 to 3.0 mL/min
- Produces smaller mean droplet size



### Cinnabar Cyclonic – The Low-Volume Spray Chamber for All ICPs

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

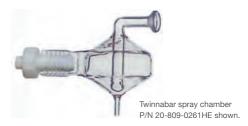
- Material: Borosilicate glass
- Volume: 20mL
- Physical reproducibility ~1%
- Matrix effects 5 times lower than with coaxial chambers
- Low RSDs due to highly accurate construction
- Application uptake range ~20 to 400 μL/min
- Ideal for use with MicroMist nebulizers



### Twinnabar Cyclonic – Low Volume, Low Solvent Load

The Twinnabar spray chamber is a low volume spray chamber with a central transfer tube (or baffle), combining the benefits of the Twister and the Cinnabar. It combines excellent precision with a very fast washout.

- Material: Borosilicate glass
- Volume: 20mL
- Physical reproducibility ~1%
- Low RSDs due to highly accurate construction
- Application uptake range 20 to 400 μL/min



### **UniFit Drain Connector**

For your convenience and safety, each Glass Expansion spray chamber with standard 4mm drain tube is supplied with a UniFit connector P/N UFT-075. The UniFit connector efficiently connects a 0.75mm ID x 1.3mm OD drain tube to the spray chamber.



### **NEBULIZER ADAPTORS FOR SPRAY CHAMBERS**

### **Replacement Parts for Spray Chambers with Helix**

All glass spray chambers with HE at the end of the part number and all Tracey TFE and Tracey PFA44 HF-resistant spray chambers are supplied with Helix. Replacement Helix Seals P/N 70-100-0237 (pack of 4) and Helix Locking Screw P/N 70-100-0152 are available.



Twister spray chamber with Helix P/N 20-809-0285HF shown



Tracey TFE spray chamber with Helix P/N 20-809-2506 shown



Helix Seal P/N 70-100-0237



Helix Locking Screw P/N 70-100-0152

### Replacement Nebulizer Adaptors for Glass Spray Chambers with O-Ring Seal

Glass Tracey and Twister spray chambers with O-Ring seal come standard with nebulizer adaptor P/N 21-808-0256.

Glass Cinnabar and Twinnabar spray chambers with O-Ring seal come standard with nebulizer adaptor P/N 21-808-0259.





### **TORCHES - INNOVATIVE AND INSPIRATIONAL**

### **D-Torch\* Demountable Torch**

The D-Torch is a revolutionary new demountable torch design. It provides the benefits of a fully demountable torch at a significantly lower cost. Interchangeable outer tubes made of quartz or ceramic are available. The quartz tube is ideal for most aqueous applications and, since the outer tube is usually the first to wear, you can make a significant saving by replacing just the outer tube rather than the whole torch. The ceramic outer tube is of particular benefit for the analysis of samples with high salt content or wear metals in engine oils, where quartz outer tubes often suffer from short lifetime. The ceramic outer tube has a much longer lifetime, greatly reducing interruptions and downtime due to torch failure. The D-Torch uses the same mounting system as the standard fixed torch so there is no additional cost or complexity to install it.

- Demountable outer tube why replace the entire torch when just the outer tube wears?
- Interchangeable quartz and ceramic outer tubes.
- Much lower cost than other demountable torches.
- Interchangeable injectors for aqueous, organics, high dissolved solids or HF applications.

Please contact enquiries@geicp.com for information on the availability of the D-Torch for your ICP.

\* The D-Torch is covered by US Patent 7,847,210 B2



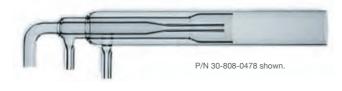


### **Semi Demountable Torches**

- · Highly accurate construction
- Lower running costs than 1-piece torches

Usually comprises a quartz torch body, a torch adaptor, an injector and GazFit connectors. All these parts are replaceable, making the semi demountable torch more cost effective than the fixed quartz torch.

Essentially the design of the torch for standard analyses and HF analyses is the same, with the exception of the injector material. The torch for aqueous and organics analyses comes with a quartz injector, while the torch for HF analyses comes with an alumina injector. Hence simply interchange between quartz and alumina injectors for appropriate analyses. Several internal diameters for both quartz and alumina injectors are available.



### **Fixed Quartz Torches (One Piece)**

- Precise quartz construction
- Wide range held in stock
- High dimensional accuracy
- · Supported by Glass Expansion expertise



### **GazFit Connectors**

Now there's a better way to connect argon tubes. GazFit connectors provide reliable attachment of argon tubes without adhesion. Available to suit torches with 4mm, 5mm, 6mm and 8mm OD side arms.

Note: GazFit connectors are only suitable for torches with tolerances of no more than  $\pm -0.15$ mm on the diameter of the side arms. All Glass Expansion torches meet this specification.

### RF COILS - MORE EFFICIENT ENERGY TRANSFER

### Why Change Your RF Coil?

- Regular replacement of corroded coils reduces the load on the RF generating system.
- Changing corroded coils increases energy transfer, resulting in a more robust plasma and generally higher analytical line intensities.



P/N 70-900-1000G shown.

### Advantages of Glass Expansion RF Coils

- · High quality and consistent plating of our coils promotes extended coil life.
- Each coil is supplied on a plastic former ensuring correct dimensions and easier installation.
- · Each coil is supplied in a special protective container to ensure correct dimensions are maintained, and the coil arrives corrosion free.
- Correct alignment of the RF Coil with respect to the torch body reduces devitrification of the outer tube.
- · Reusable alignment tools ensure correct installation every time. Our CD with Do-it-yourself instructions saves time.

### The Role of the RF Coil

The RF Coil is a critical component in the electrical system used to generate an argon plasma. There are three factors affecting the role of the RF Coil in transferring energy:

- Concentricity and alignment these are very important in producing a correctly shaped plasma. The Glass Expansion RF Coil installation tools make this possible every time.
- Correct dimensions being part of the RF system, the coil dimensions are important in the tuning of the circuit. Slight changes in dimensions can produce small changes in resistance or inductance and are normally compensated for in the tuning circuitry of the system.
- Base metal/plating the most efficient conductor of RF energy is pure silver followed by annealed copper. There is very little
  difference in the conductivity of these materials, however there is a great deal of difference in cost. Copper is used as the
  base material of all commercially available coils but different manufacturers use different plating materials. Silver has the best
  conductance and gold the best corrosion resistance.

The main problem with an RF Coil is corrosion, whether from heat or chemical oxidation. Corrosion reduces the conductivity of the coil, reducing the efficiency of energy transfer to the plasma and increasing the stress applied to other components in the RF generating system.



Copper, Silver and Gold RF Coils.

If heat is the biggest problem then the best way to deal with this is to use a coil that is plated in a highly reflective material such as silver. Silver plating however does produce a tarnish appearance after a period of use. To obtain the best life out of a coil in this situation, the coil should be cleaned frequently with a tarnish remover. This will eventually lead to the removal of the silver plating but if the tarnish is not removed excessive heat can build up, leading to the plating flaking away from the copper tubing.

Chemical corrosion is best dealt with using a gold-plated coil. The plating process is critical in the performance of the coil. Gold plating can produce a porous coating, which allows a chemical attack on the copper tubing, thereby rendering the plating useless. The plating process used in the production of the Glass Expansion gold plated coils is designed to remove the porous effect yet still maintain the high purity plating. For even better corrosion resistance, Glass Expansion can supply Teflon-coated coils for some models.

Periodic cleaning of your coil will extend the lifetime and produce a more consistent plasma. It will also reduce stress on the RF generator.

### Glass Expansion Installation Kits for RF Coils

### Save the cost of a service call

- Incorrect alignment of the torch in the coil will dramatically reduce torch life. The Glass Expansion Installation Kits help ensure correct alignment and maximum torch life.
- Correct alignment of the RF Coil with respect to the torch body reduces devitrification of the outer tube.
- Re-usable alignment tools are available separately to ensure correct installation of the coil every time.
- Our easy to follow Do-It-Yourself installation instructions save you time, and the cost of a service call.

### All kits contain:

- An Installation Kit Aligns coil to torch mounting bracket.
- Required Spanner/s Designed specifically for each instrument.
- CD with Do-It-Yourself instructions.



### **ASSIST**

### The Assist syringe-driven sample introduction system

Assists you with faster throughput

Assists you with improved accuracy

Assists you with better precision



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Assist Premium Package (2 syringe units) KT-1076
Assist Basic Package (1 syringe unit) KT-1100
Assist Oils Package (3 syringe units) KT-1095

The Assist is an automated sample introduction system for ICP-OES or ICP-MS. It consists of purpose-built programmable syringe drives with an integrated valve system. The Assist delivers the highest level of accuracy, stability and sample throughput by controlling the delivery of both sample and internal standard or diluent, eliminating the inaccuracies and pulsations caused by peristaltic pumps. The Assist provides you with:

**Twice the sample throughput.** The rinse time, stabilization time and the time for the sample to move from the autosampler to the nebulizer are all reduced. This reduces the time for a typical analysis by at least half.

**Better precision.** The sample is delivered by a precisely controlled syringe, eliminating the signal pulsation problem which occurs with the usual peristaltic pump delivery system.

**Better accuracy.** The internal standard is delivered by a second precision syringe drive, ensuring that the ratio of internal standard to sample is accurately maintained. The fluctuations in this ratio that occur when the internal standard is delivered by peristaltic pump are eliminated, greatly improving the analytical accuracy.

**Automatic dilution.** The second syringe drive can also be used to deliver a diluent, enabling accurate dilution by a factor of up to 20:1 to be carried out automatically.

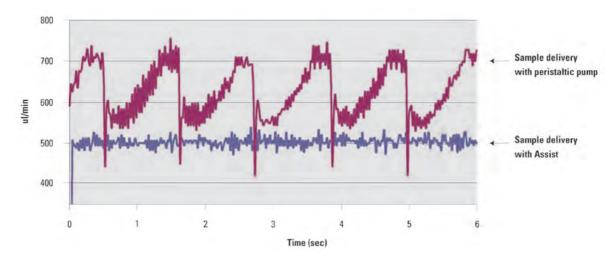
**Reduced carryover.** The sample does not contact any peristaltic pump tubing and the sample path is totally inert. This allows for a faster rinse and reduces carryover.

Low sample and internal standard usage. The volumes required are substantially reduced, resulting in lower cost of reagents and less wastage.

Flexibility in the selection of the ratio of sample to internal standard. The syringe system allows you to use sample to internal standard ratios of up to 20:1 and still get accurate correction.

**Longer life of consumables.** The lower sample volume and reduced analysis time mean that you save on consumables such as torches and ICP-MS cones as well as argon.

**Compatibility.** The Assist software is configured to operate with almost all models of ICP-MS, ICP-OES and autosampler.



### Configured to suit your application

The Assist is a modular system of syringe drives and switching valves and it can be configured to suit specific applications.

**Premium Package.** This is the most common system and is the system described above. It incorporates two syringe drives and a Niagara switching valve. It provides for the inline delivery and mixing of the sample and internal standard or diluent. P/N KT-1076

**Basic Package.** This system is used when inline delivery of internal standard or diluent is not required. It incorporates a single syringe drive and a Niagara switching valve. It provides all of the benefits listed above with the exception of those relating to delivery of internal standard or diluent. P/N KT-1100

**Oils Package.** This system is configured specifically for the analysis of wear metals in raw (undiluted) lubricating oils. It incorporates three syringe drives and a Niagara switching valve. It takes a sample of the oil, mixes it with a diluent such as kerosene and precisely delivers the diluted oil to the ICP spectrometer. It eliminates the need for manual dilutions and increases the speed of analysis. P/N KT-1095

### **ISOMIST**



### **IsoMist Programmable Temperature Spray Chamber**

### The Ultimate Spray Chamber for ICP-MS and ICP-OES

The IsoMist Programmable Temperature Spray Chamber, provides the benefits of a temperature-controlled ICP sample introduction system in a compact, convenient package.

### **Peltier Effect Temperature Control**

The temperature is electronically controlled using a powerful inbuilt Peltier device. You can select any temperature between -10°C and +60°C in 1°C increments to provide the optimum conditions for any application. The rapid response of the Peltier device allows a spray chamber temperature of -5°C to be reached within 15 minutes.

### **Versatile Computer Interface**

For maximum convenience, the IsoMist can be controlled from your PC via a Bluetooth® wireless interface or a standard USB network connection. The spray chamber temperature can be monitored through a temperature versus time plot on your PC screen. And, for regulatory compliance, the temperature versus time data file can be saved with your results. If these features are not required, once the temperature has been programmed, the IsoMist can be run in stand-alone mode without a PC connection.

### Reduced Oxide Interferences in ICP-MS

By introducing the sample at low temperature, the IsoMist reduces oxide levels, resulting in fewer interferences and improved detection limits.

### **Perfect for Volatile Organics**

The temperature can be set as low as -10°C to reduce the solvent load on the plasma and allow the straightforward ICP-MS or ICP-OES analysis of even the most volatile organic solvents.

### **Constant Temperature Improves Stability**

By holding the spray chamber at a constant temperature, the IsoMist significantly improves long-term signal stability, increasing the likelihood of calibration checks passing.

### **Heating Mode Enhances Sensitivity**

The sensitivity for many applications is enhanced by running the spray chamber at an elevated temperature, a feature that is particularly important for samples with limited volume.

### **Proven Cyclonic Spray Chamber**

The IsoMist incorporates the proven Twister cyclonic spray chamber, combining excellent sensitivity and precision with exceptionally fast washout. The Helix nebulizer interface has zero dead volume and provides for convenient nebulizer insertion and removal. This system is compatible with the full range of Glass Expansion nebulizers.

### **Completely Self-Contained Ergonomic Package**

The compact design includes a rugged, low maintenance, chemically-resistant polypropylene housing. It provides a much more convenient alternative to a jacketed spray chamber with an external chiller because it does not require an external source of coolant. It is compatible with almost all ICP-MS and ICP-OES models.

### **Optional PFA and Quartz Spray Chambers**



The IsoMist can be used with PFA or quartz spray chambers in addition to the standard glass Twister spray chamber. Please contact enquiries@geicp.com for information on a suitable PFA or quartz spray chamber for your IsoMist.

The IsoMist can also be ordered with a PFA or quartz spray chamber installed in place of the standard glass spray chamber. Simple add a "P" for PFA or a "Q" for quartz to the part number for the standard kit, eg. KT-1010P for PFA or KT-1010Q for quartz.

### **Ordering Information**

We have established an IsoMist Kit for common ICP-OES and ICP-MS models. Each kit contains the IsoMist module, encapsulated Twister spray chamber, torch interface and mounting bracket (if required). Please select the kit to match your ICP from the following:

### **IsoMist Programmable Temperature Spray Chamber Kits**

	Please email us at enquiries@geicp.com if your model is not listed.				
	IsoMist				
	IsoMist Kit for Agilent 7500	KT-1010			
	IsoMist Kit for Agilent 7700	KT-1103			
	IsoMist Kit for Agilent 4500	KT-1053			
	IsoMist Kit for Agilent (Varian) 700-ES or Vista Axial	KT-1014			
	IsoMist Kit for Agilent (Varian) 700-ES or Vista Radial	KT-1022			
	IsoMist Kit for Agilent (Varian) 700-ES or Vista Axial All Glass System	KT-1054			
	IsoMist Kit for Agilent (Varian) 700-ES or Vista Radial All Glass System	KT-1055			
	IsoMist Kit for Bruker (Varian) 800-MS	KT-1017			
	IsoMist Kit for GBC OptiMass	KT-1042			
	IsoMist Kit for Horiba Jobin Yvon	KT-1064			
	IsoMist Kit for PerkinElmer Optima 4300/5300/7300V	KT-1011			
	IsoMist Kit for PerkinElmer Optima 2000/4000/5000/7000DV	KT-1012			
	IsoMist Kit for PerkinElmer Optima 3000 Axial/DV	KT-1063			
	IsoMist Kit for PerkinElmer NexION 300	KT-1096			
	IsoMist Kit for PerkinElmer Elan	KT-1013			
	IsoMist Kit for Shimadzu	KT-1067			
	IsoMist Kit for Thermo iCAP 6000 Duo	KT-1015			
	IsoMist Kit for Thermo iCAP 6000 Radial	KT-1021			
	IsoMist Kit for Thermo Iris Axial/Duo	KT-1018			
	IsoMist Kit for Thermo Iris Radial	KT-1058			
	IsoMist Kit for Thermo Finnigan Element	KT-1020			
	IsoMist Kit for Thermo (VG) PlasmaQuad	KT-1023			
	IsoMist Kit for Thermo X Series	KT-1025			
	IsoMist Basic Kit ROL	KT-1024			
	IsoMist Basic Kit LOL	KT-1027			
	IsoMist Basic Kit EROL (for Spectro)	KT-1029			

### **TRUFLO**

### **TruFlo Sample Monitor**

### Eliminates guesswork

### **Reduces sample repeats**

### Sounds out-of-range alarm

### Is suitable for all ICP-OES and ICP-MS models

### TruFlo Sample Monitor TruFlo Sample Monitor 0-4mL/min 70-803-0643 TruFlo Sample Monitor for HF 0-4mL/min 70-803-0890

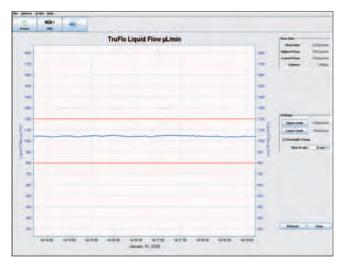


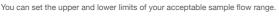
### Do you ever need to repeat the analysis of a sample due to:

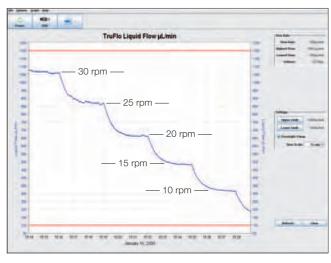
- A blocked nebulizer?
- Worn peristaltic pump tubing?
- Incorrect pressure of the pump tubing clamp?

With the digital display of the TruFlo Sample Monitor, you always know the actual rate of sample uptake to your nebulizer. This enhances the day-to-day reproducibility of your results and reduces the need to repeat measurements due to a blocked nebulizer, worn pump tubing or incorrect clamping of the pump tube. And the borosilicate glass sample path ensures that there is no memory effect or sample contamination. The TruFlo can even sound an alarm if the sample uptake is outside your specified limits.

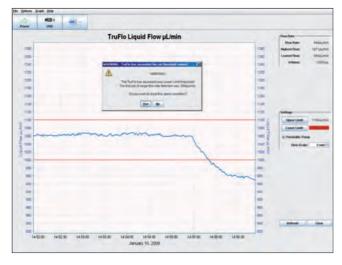
The actual sample flow is shown on the TruFlo's inbuilt digital display and a graph of the flow versus time can also be displayed on your computer.



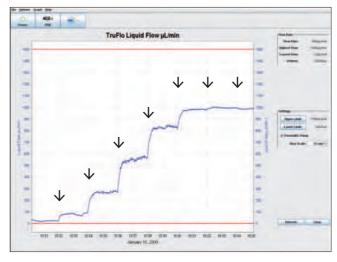




You always know the actual sample flow and you do not need to worry about converting pump revolutions to sample flow.



You receive a warning on the screen, as well as an audible alarm, if the sample flow moves outside the acceptable range.



The realtime flow display enables you to optimise the pressure on the peristaltic pump tubing. The clamp was tightened by  $\frac{1}{2}$  turn at each arrow.

### **NIAGARA II**

### **Niagara II Rapid Rinse Accessory**

Most ICP systems incorporate an autosampler. With these systems there is a significant delay between the time when the autosampler probe enters the sample and the time when the sample reaches the nebulizer and further time is lost as the probe moves between sample and rinse. If these delays could be eliminated, the analysis time per sample could be reduced significantly and the sample throughput increased.

### This is what the Niagara II Rapid Rinse Accessory achieves.

The second generation Niagara II provides all of the benefits of the original Niagara in a more compact easier-to-use design. It begins the rinsing of the nebulizer and spray chamber the instant the sample measurement is completed and continues to rinse until the next sample is ready. Thus the rinse is carried out in time that is usually wasted waiting for the sample solution to flow from the autosampler to the nebulizer. The time that is saved is around 30% for a typical analysis. This significantly reduces the cost per sample for busy laboratories such as those analyzing environmental, geochemical and oil samples.

The Niagara II is compatible with most ICP-OES and ICP-MS spectrometers and autosamplers.

### Niagara II Rapid Rinse Accessory

KT-1073

If you do not have a spare channel for the rinse solution on your peristaltic pump, we can supply a three-channel pump as follows:

### Peristaltic Pump for Niagara, 3 Channel

70-808-1394



### **NIAGARA PLUS**

### **Niagara Plus**

### Halve your operating costs

### Reduce your environmental footprint

### **Double your sample throughput**

The Niagara Plus uses Flow Injection technology to reduce analysis time, environmental impact and operating cost:

- Lower argon consumption
- Reduced cost of consumables such as torches, cones,RF coils, pump tubing, acids, standards and chemicals
- Lower power consumption
- · Reduced stress on RF system and lower maintenance cost
- Less down-time for cleaning carbon from torch when analyzing organics
- · Less chemical waste to dispose of

In addition to the cost and environmental benefits, the Niagara Plus delivers a major improvement in analytical performance:

- Twice the sample throughput for a typical analysis
- Half the normal sample volume
- Automatic addition of the internal standard simplifies sample preparation
- Inert sample path reduces carryover the sample does not contact any peristaltic pump tubing
- Constant flow of solution to the plasma maintains plasma stability and reduces stabilization times
- Compact design easily interfaces to almost all models of ICP-MS and ICP-OES



### Niagara Plus

Niagara Plus

KT-1074

The Niagara Plus requires a 1.0mm ID autosampler probe for optimum performance. Select one of the following probes:

### **Autosampler Probes**

Teflon Encapsulated Carbon Fibre Probe 1.0mm ID (suitable for Cetac ASX-520)

70-803-0793

Teflon Encapsulated Carbon Fibre Probe 1.0mm ID (suitable for PerkinElmer S-10 or AS-93+) 70-803-0816

Teflon Encapsulated Carbon Fibre Probe 1.0mm ID (suitable for Agilent (Varian) SPS-3 or AIM-3600) 70-803-0853

If your autosampler is not listed here, please contact Glass Expansion at enquiries@geicp.com.

The Niagara Plus package includes:

- Niagara II module
- Positive displacement pump
- · Adjustable mounting bracket
- · USB to guad serial converter
- All required cables and tubing
- USB memory stick with operating software and instructions

Samples typically analyzed in an hour.



... and with Niagara Plus

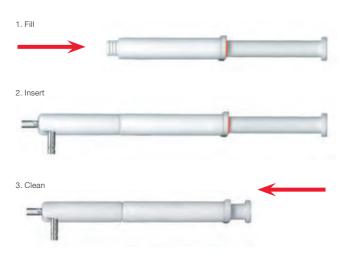
### **OTHER ACCESSORIES**

### The Eluo Nebulizer Cleaning Tool

Particle build-up in a nebulizer capillary and tip causes sample flow to be constricted, thereby reducing nebulizer efficiency and performance. Previously there was no simple way to effectively clean and unblock nebulizers. Now, blocked nebulizers can be safely and easily restored to optimum performance with a revolutionary cleaning instrument – the Eluo.

The Eluo is designed to efficiently deliver a cleanser through the nebulizer capillary to dislodge particle build-up and thoroughly clean the nebulizer. One simple action does it all. No more messy procedures, waiting overnight or shattered nebulizers in ultrasonic baths. Cleaning your nebulizer is as easy as 1, 2, 3.

- 1. Fill your Eluo with Methanol.
- 2. Insert your nebulizer, tip first, into the Eluo
- 3. Clean your nebulizer by pressing the Plunger down.



The Eluo is available for Glass Expansion concentric glass and HF-resistant nebulizers.

### Eluo Nebulizer Cleaning Tool

Eluo Nebulizer Cleaning Tool (glass concentric nebulizers)	70-ELUO
Eluo Nebulizer Cleaning Tool (new OpalMist, PolyCon or DuraMist)	70-ELUO-OPD
Eluo Nebulizer Cleaning Tool (old OpalMist or PolyCon)	70-ELUO-OP
Eluo Plunger	703-0070
Eluo Barrel	703-0058
Eluo Nebulizer Holder (glass concentric nebulizers)	703-0069
Eluo OPD Nebulizer Holder (new OpalMist, PolyCon or DuraMist)	70-803-0932
Eluo OP Nebulizer Holder (old OpalMist or PolyCon)	703-0074
Eluo O-ring Kit (2 sets)	70-0806

### **Capricorn Argon Humidifier**

The Argon Humidifier is commonly used in ICP analyses involving samples with high dissolved solids concentration. Helping to prevent salt build-up inside the sample introduction system, the Argon Humidifier allows uninterrupted and maintenance free operation. The Glass Expansion Capricorn combines ease of operation, high performance and safety.

- The rugged and durable casing enhances safety.
- The built-in pressure indicator serves as a diagnostic so you always know when the chamber is pressurized.
- An optional easy-to-use bypass toggle allows you to take the Capricorn off-line without disconnecting argon lines.
- Maximum and minimum fill marks ensure that you are always operating under optimum conditions.
- A rugged bubbling frit ensures maximum saturation of the argon.





Capricorn Argon Humidifier without bypass

Capricorn Argon Humidifier with bypass

Capricorn Argon Humidifier	
Capricorn Argon Humidifier without bypass	70-808-1000
Capricorn Argon Humidifier with bypass	70-808-1226
Capricorn Argon Humidifier with bypass for Spectro	70-803-0518
Capricorn Argon Humidifier with bypass for Agilent (Varian)	70-803-0608
Capricorn Argon Humidifier with bypass for PerkinElmer	70-803-0570
Capricorn Argon Humidifier with bypass for Thermo	70-803-0634

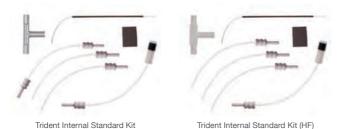
### **Trident In-Line Reagent Additions Kits**

Internal standards are often used to improve stability. The internal standardization process involves the addition of a known concentration of a particular element to every sample. This can be a very time-consuming procedure. The Glass Expansion Trident Kits allow the internal standard to be automatically mixed with each sample during sample introduction, thus saving considerable sample preparation time.

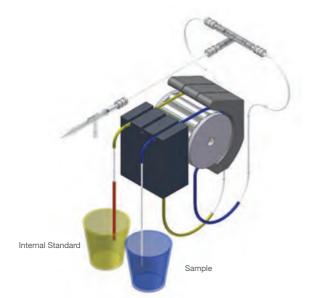
The sample and internal standard are pumped simultaneously using parallel channels of the peristaltic pump and mixed in a glass or polypropylene mixing t-piece. The ratio of internal standard flow to sample flow is set by the ratio of the area of the two peristaltic pump tubes. The pump tubes are usually chosen so that the internal standard flow is around 10% – 20% of the sample flow.

Check the Trident Dilution Factor Calculator on our website to find out the sample and internal standard dilution factors for selected combinations of pump tubing.

The peristaltic pump tubing is not supplied as part of the Internal Standard Kit but can be ordered separately.



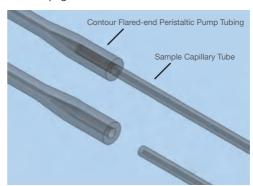
60-808-1150



### Contour Flared-end Peristaltic Pump Tubing

It can be quite difficult to insert the sample and internal standard capillary tubes into the peristaltic pump tubes. This is particularly so for the internal standard pump tube due to its small ID (usually 0.2 to 0.4mm). To facilitate this connection, Glass Expansion supplies Contour flared-end pump tubing. The flared end of this pump tubing allows larger capillary tubing to be inserted. Gripping paper is supplied with the Internal Standard Kit to enable both tubes to be gripped firmly while they are being joined.

Ordering details for Contour Flared-end Peristaltic Pump Tubing can be found on page 94.



### **Safety Gloves**



### Safety Gloves

Safety Gloves, Small Safety Gloves, Medium Safety Gloves, Large SAFEGLOVE-sml SAFEGLOVE-med SAFEGLOVE-lge

### Safety Glasses



### Safety Glasses

**SAFEGLASS** 

For your protection, always use safety gloves and glasses when handling glass.

### **EzyGlide Cloth**

The EzyGlide Cloth is used to lubricate fully demountable torch tubes. Promotes easy insertion / removal of tubes.



### O-Ring Tool

60-808-1185

With older-style spray chambers which incorporate O-Rings, it is common for the O-Rings to bond to the glass making them difficult to remove. The O-Ring Tool makes removal of O-Rings much easier.



### O-Ring Removal Tool

50-100-1636

Animal feed, Chemicals and fertilizers, Clinical and forensic materials, Drinking, ground and surface water, Food and drink, Geological without HF, Metals, Plants, Soil and sediment without HF, Waste water and sludge

### ARG-1-USS04X

SeaSpray U-Series Nebulizer 0.4mL/min

### KT-1010

IsoMist Kit for Agilent 7500



### AT1002-Ni

Nickel Skimmer Cone for 4500/7500a



### AT1002C-Ni

Nickel Skimmer Cone - 7500c



### 30-807-0542

Quartz Torch with 2.5mm Injector for Agilent 7500, 2 Projections, HMI Compatible



### AT1002CE-Ni

Nickel Skimmer Cone - 7500ce



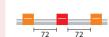
### 31-808-2577

Quartz Torch Bonnet for Agilent 7500/7700



### 0.19-OR3B-F

Contour Flared End PVC Pump Tube 3tag 0.19mm ID Orange/Red (PKT 6)



### 70-900-7500S

RF Coil Silver for Agilent 7500



### 1.02-WHT3B-F

Contour Flared End PVC Pump Tube 3tag 1.02mm ID White/White (PKT 6)



### 70-900-7500T

RF Coil Installation Tool for Agilent 7500



### 1.52-PH-3

PharMed Pump Tube 3tag 1.52mm ID Yellow/Blue (PKT 12)



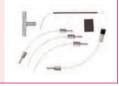
### AT1001-Ni

Nickel Sampler Cone for Agilent 4500/7500



### 60-808-1185

Trident Internal Standard Kit



### Brines and salts

### ARG-1-USS04X

SeaSpray U-Series Nebulizer 0.4mL/min



### 70-900-7500T

RF Coil Installation Tool for Agilent 7500



### KT-1010

IsoMist Kit for Agilent 7500



### AT1006-Pt

Platinum Sampler Cone for Agilent 4500/7500 (10mm insert)



### 30-807-0542

Quartz Torch with 2.5mm Injector for Agilent 7500, 2 Projections, HMI Compatible



### AT1008-Pt

Platinum Skimmer Cone for Agilent 4500/7500



### 31-808-2577

Quartz Torch Bonnet for Agilent 7500/7700



### AT1008C-Pt

Platinum Skimmer Cone - 7500c



### 70-900-7500G

RF Coil Gold for Agilent 7500



### AT1008CS-Pt

Platinum Skimmer Cone, Copper Base - 7500cs, 7500ce



### Brines and salts (continued) 0.19-OR3B-F 60-808-1185 Contour Flared End PVC Pump Tube 3tag Trident Internal Standard Kit 0.19mm ID Orange/Red (PKT 6) 1.02-WHT3B-F Contour Flared End PVC Pump Tube 3tag 70-808-1226 1.02mm ID White/White (PKT 6) Capricorn Argon Humidifier with bypass 1.52-PH-3 PharMed Pump Tube 3tag 1.52mm ID Yellow/Blue (PKT 12) Geological with HF, Soil and sediment with HF ARG-1-PFA04X AT1008-Pt OpalMist Nebulizer 0.4mL/min Platinum Skimmer Cone for Agilent 4500/7500





### Isotopic Analysis of Minerals (continued)

### 70-900-7500T

RF Coil Installation Tool for Agilent 7500



### AT1008CS-Pt

Platinum Skimmer Cone, Copper Base - 7500cs, 7500ce



### AT1006-Pt

Platinum Sampler Cone for Agilent 4500/7500 (10mm insert)

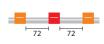


### 0.19-OR3B-F

1.02-WHT3B-F

Contour Flared End PVC Pump Tube 3tag 0.19mm ID Orange/Red (PKT 6)

Contour Flared End PVC Pump Tube 3tag



### AT1008-Pt

Platinum Skimmer Cone for Agilent 4500/7500



### 1.52-PH-3

PharMed Pump Tube 3tag 1.52mm ID Yellow/Blue (PKT 12)

1.02mm ID White/White (PKT 6)



### AT1008C-Pt

Platinum Skimmer Cone - 7500c



### 60-808-1185

Trident Internal Standard Kit



### Petrochemicals

### ARG-1-USS04X

SeaSpray U-Series Nebulizer 0.4mL/min



### AT1001-Ni

Nickel Sampler Cone for Agilent 4500/7500



### KT-1010

IsoMist Kit for Agilent 7500



### AT1002-Ni

Nickel Skimmer Cone for 4500/7500a



### 30-807-0516

Quartz Torch with 1.0mm Injector for Agilent7500



### AT1002C-Ni

Nickel Skimmer Cone - 7500c



### 31-808-2577

Quartz Torch Bonnet for Agilent 7500/7700



### AT1002CE-Ni

Nickel Skimmer Cone - 7500ce



### 70-900-7500T

70-900-7500S

RF Coil Installation Tool for Agilent 7500

RF Coil Silver for Agilent 7500



### 60-808-1185

Trident Internal Standard Kit



### Semiconductors

### ARG-1-PFA04X

OpalMist Nebulizer 0.4mL/min



### 30-808-3068

Semi Demountable Torch for Agilent 4500/7500



### KT-1010P

IsoMist Kit with PFA Spray Chamber for Agilent 7500



### 31-808-2577

Quartz Torch Bonnet for Agilent 7500/7700



### 31-808-2580

Sapphire Injector 2.4mm



### Semiconductors (continued) 70-900-7500S AT1008CS-Pt RF Coil Silver for Agilent 7500 Platinum Skimmer Cone, Copper Base - 7500cs, 7500ce 70-900-7500T RF Coil Installation Tool for Agilent 7500 0.19-OR3B-F Contour Flared End PVC Pump Tube 3tag 0.19mm ID Orange/Red (PKT 6) AT1006-Pt 1.02-WHT3B-F Platinum Sampler Cone for Agilent Contour Flared End PVC Pump Tube 3tag 4500/7500 (10mm insert) 1.02mm ID White/White (PKT 6) 1.52-PH-3

### AT1008-Pt Platinum Skimmer Cone for Agilent 4500/7500

PharMed Pump Tube 3tag 1.52mm ID Yellow/Blue (PKT 12)



AT1008C-Pt Platinum Skimmer Cone - 7500c



### 60-808-1185 Trident Internal Standard Kit



### PRODUCT LIST

Nebulizers		
SeaSpray 400µl/min uptake MicroMist	ARG-1-USS04X	
400µl/min uptake 200µL/min uptake 100µl/min uptake	ARG-1-UM04X ARG-1-UM02X ARG-1-UM01Q	
50µl/min uptake  OpalMist	ARG-1-UM005Q	
400µl/min uptake 200µl/min uptake	ARG-1-PFA04X ARG-1-PFA02X	-
100µl/min uptake 50µl/min uptake	ARG-1-PFA01Q ARG-1-PFA005Q	

ARG-1-UM04X ARG-1-UM02X ARG-1-UM01Q ARG-1-UM005Q	
ARG-1-PFA04X ARG-1-PFA02X ARG-1-PFA01Q ARG-1-PFA005Q	7

Spray Chambers	
Twister with Aux. Port 50mL Cyclonic 20-809-2574HE Requires adaptor kit KT-1006.	
Tracey PFA44 with Aux. Port  44mL Cyclonic 20-809-2578  Suitable for use with HF.  Requires adaptor kit KT-1006.	
Adaptor Kit Adaptor Kit KT-1006	



٦	orches		
S	Semi Demountable 1	Torch	
		30-808-3068	
C	Comprises:		
Т	orch Body, Quartz	31-808-3051	o/tood
Т	orch Adaptor	31-808-3067	
	apered Quartz	31-808-0773	
G	GazFit Connectors	0.47,0004	
(I	PKT 4)	GAZ-0604	

### PRODUCT LIST

Torches (continue	.d)	
Fixed Torch for 7500		
Quartz Torch, 2.5mm Injector, 2 Projections, HMI compatible	30-807-0542	
Standard Quartz Torch, 2.5mm Injector	30-808-0816	4
Standard Quartz Torch, 1.5mm Injector	30-808-1211	
Standard Quartz Torch, 1.0mm Injector	30-807-0516	
Quartz Injectors For Demountable Torch	Semi	
Tapered Quartz Injector 1.5mm	31-808-0771	
Tapered Quartz Injector 1.8mm	31-808-0772	
Tapered Quartz Injector 2.4mm	31-808-0773	
Capillary Quartz Injector 4.0mm	31-808-2502	
Bonnet Quartz Torch Bonnet	31-808-2577	
Connector Quartz Connector	31-808-2799	
Semi Demountable		
Alumina Injector		
Camaniana	30-808-3069	
Comprises: Torch Body, Quartz	31-808-3051	el I
Torch Adaptor	31-808-3067	
Tapered Alumina Injecto 2.4mm	r 31-808-0776	
GazFit Connectors (PKT 4)	GAZ-0604	
HF-resistant Injector Semi Demountable		
Tapered Alumina Injecto 1.5mm	r 31-808-0774	
Tapered Alumina Injecto 1.8mm	r 31-808-0775	
Tapered Alumina Injecto 2.4mm	r 31-808-0776	
Sapphire Injector 2.4mm	31-808-2580	

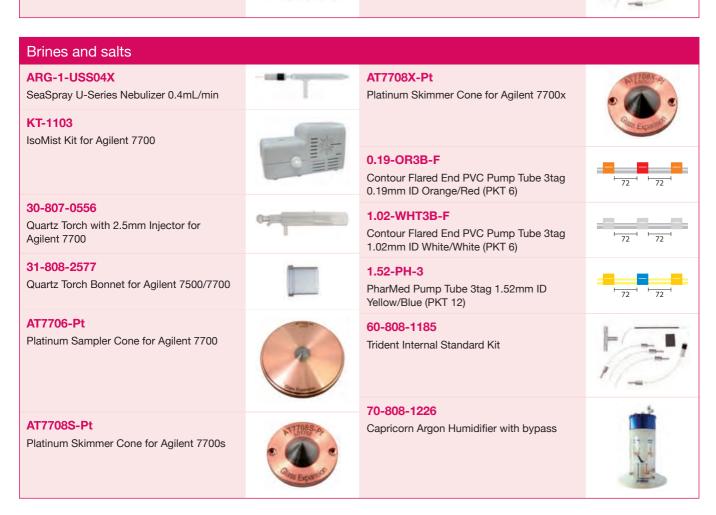
RF Coils		
RF Coil Gold	70-900-7500G	~
RF Coil Silver	70-900-7500S	~

### RF Coils (continued) Installation Kit Installation Kit 70-900-7500T

Conco	
Cones	
Nickel Sampler	
(Agilent p/n G1820-65238) AT1001-Ni	
Nickel Skimmer - 4500, 7500a	6
(Agilent p/n G1820-65265,	
G1820-65050) AT1002-Ni	
Platinum Sampler, 10mm Insert	
(Agilent p/n G1820-65239) AT1006-Pt	
Platinum Skimmer	
(Agilent p/n G1820-65237) AT1008-Pt	
Nickel Skimmer - 7500c	
(Agilent p/n G1833-65497) AT1002C-Ni	
Platinum Skimmer - 7500c	100
(Agilent p/n G1833-65092) AT1008C-Pt	
Nickel Sampler - T-mode	
(Agilent p/n G1820-65480) AT1001T-Ni	
Nickel Skimmer - T-mode	\$1007.A
(Agilent p/n G1820-65481) AT1002T-Ni	- (4) -
	Expansion
Nickel Skimmer - 7500ce	4000
(Agilent p/n G3270-65024) AT1002CE-Ni	000
( ig.is.ii p/ii dozro docza) //ii idozoc i	Santa Par
Platinum Skimmer, Copper Base	2 10
- 7500cs, 7500ce	
(Agilent p/n G1883-65132) AT1008CS-Pt	10
Long Life Shield Plate, 7500/7700	
(Agilent p/n G1833-65419) AT5004	
Platinum Skimmer, Nickel Base,	1
7500cs, 7500ce	. 100
(Agilent p/n G3270-60106) AT1008CS-Pt/Ni	0 51

Animal feed, Chemicals and fertilizers, Clinical and forensic materials, Drinking, ground and surface water, Food and drink, Geological without HF, Metals, Plants, Soil and sediment without HF, Waste water and sludge

### ARG-1-USS04X AT7702S-Ni SeaSpray U-Series Nebulizer 0.4mL/min Nickel Skimmer Cone for Agilent 7700s KT-1103 IsoMist Kit for Agilent 7700 AT7702X-Ni Nickel Skimmer Cone for Agilent 7700x 30-807-0556 0.19-OR3B-F Quartz Torch with 2.5mm Injector Contour Flared End PVC Pump Tube 3tag for Agilent 7700 0.19mm ID Orange/Red (PKT 6) 1.02-WHT3B-F 31-808-2577 Contour Flared End PVC Pump Tube 3tag Quartz Torch Bonnet for Agilent 7500/7700 1.02mm ID White/White (PKT 6) 1.52-PH-3 PharMed Pump Tube 3tag 1.52mm ID AT7701-Ni Yellow/Blue (PKT 12) Nickel Sampler Cone for Agilent 7700 60-808-1185 Trident Internal Standard Kit



### Geological with HF, Soil and sediment with HF ARG-1-PFA04X AT7708X-Pt OpalMist Nebulizer 0.4mL/min Platinum Skimmer Cone for Agilent 7700x KT-1103P IsoMist Kit with PFA Spray Chamber for Agilent 7700 0.19-OR3B-F Contour Flared End PVC Pump Tube 3tag 0.19mm ID Orange/Red (PKT 6) 31-808-2577 1.02-WHT3B-F Quartz Torch Bonnet for Agilent 7500/7700 Contour Flared End PVC Pump Tube 3tag 1.02mm ID White/White (PKT 6) AT7706-Pt Platinum Sampler Cone for Agilent 7700 1.52-PH-3 PharMed Pump Tube 3tag 1.52mm ID Yellow/Blue (PKT 12) 60-808-1150 AT7708S-Pt Trident Internal Standard Kit for HF solutions Platinum Skimmer Cone for Agilent 7700s



### Petrochemicals ARG-1-USS04X AT7701-Ni SeaSpray U-Series Nebulizer 0.4mL/min Nickel Sampler Cone for Agilent 7700 KT-1103 IsoMist Kit for Agilent 7700 AT7702S-Ni Nickel Skimmer Cone for Agilent 7700s AT7702X-Ni 30-807-0558 Nickel Skimmer Cone for Agilent 7700x Quartz Torch with 1.0mm Injector for Agilent 7700 60-808-1185 31-808-2577 Trident Internal Standard Kit Quartz Torch Bonnet for Agilent 7500/7700



### PRODUCT LIST

### **Nebulizers SeaSpray** 400µl/min uptake ARG-1-USS04X **MicroMist** ARG-1-UM04X 400µl/min uptake 200µL/min uptake ARG-1-UM02X 100µl/min uptake ARG-1-UM01Q 50µl/min uptake ARG-1-UM005Q **OpalMist** 400µl/min uptake ARG-1-PFA04X 200µl/min uptake ARG-1-PFA02X ARG-1-PFA01Q 100µl/min uptake 50µl/min uptake ARG-1-PFA005Q

### **IsoMist**

### IsoMist Programmable Temperature Spray Chamber

IsoMist Kit for Agilent 7700

KT-1103



### **Spray Chambers**

### Twister with Aux. Port

50mL Cyclonic 20-809-2574HE

Requires adaptor kit KT-1104.



### **Tracey PFA44 with Aux. Port**

44mL Cyclonic 20-809-2578

Suitable for use with HF. Requires adaptor kit KT-1104.



### **Adaptor Kit**

Adaptor Kit for 7700 KT-1104

# Torches Fixed Torch for 7700 Quartz Torch, 2.5mm Injector 30-807-0556 Quartz Torch, 1.5mm Injector 30-807-0557 Quartz Torch, 1.0mm Injector 30-807-0558 Bonnet Quartz Torch Bonnet 31-808-2577

# Cones Nickel Sampler - 7700 (Agilent p/n G3280-67040) AT7701-Ni Nickel Skimmer - 7700x (Agilent p/n G3280-67041) AT7702X-Ni Nickel Skimmer - 7700s (Agilent p/n G3280-67066) AT7702S-Ni Nickel Plated Sampler - 7700 (Agilent p/n G3280-67061) AT7701-Ni/Ni Platinum Sampler - 7700 (Agilent p/n G3280-67036) AT7706-Pt

### Platinum Sampler - 7700 (18mm insert)

(Agilent p/n G3280-67056) AT7706A-Pt

### Copper Skimmer - 7700s

(Agilent p/n G3280-67067) AT7702S-Cu



### Platinum Skimmer - 7700x

(Agilent p/n G3280-67060) AT7708X-Pt



### Platinum Skimmer with Nickel Base - 7700x

(Agilent p/n G3280-67063) AT7708X-Pt/Ni



### Platinum Skimmer - 7700s

(Agilent p/n G3280-67064) AT7708S-Pt



### Platinum Skimmer with Nickel Base - 7700s

(Agilent p/n G3280-67065) AT7708S-Pt/Ni



### Retaining Ring for Agilent 7700 Sampler Cone

(Agilent p/n G3280-20504) AT7704



### Graphite Gasket for Agilent 7700 Sampler Cone (PKT 3)

(Agilent p/n G3280-67009) AT7703



### Animal feed, Chemicals and fertilizers, Food and drink, Geological without HF, Metals, Plants, Soil and sediment without HF, Waste water and sludge **ARG-07-USS2** 70-900-1004T SeaSpray U-Series Nebulizer 2mL/min RF Coil Installation Tool for 700-ES Series Axial 20-809-0600HE Tracey Spray Chamber with Helix 0.25-OB-F Contour Flared End PVC Pump Tube 2tag 0.25mm ID Orange/Blue (PKT 6) 30-808-0478 0.76-BLK-F Quartz Torch with 90° bend and 2.3mm Contour Flared End PVC Pump Tube 2tag Injector 0.76mm ID Black/Black (PKT 6) 70-900-1000G 1.14-RED-F RF Coil Gold for Vista Axial Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6) 70-900-1000T RF Coil Installation Tool for Vista Axial 60-808-1185 Trident Internal Standard Kit 70-900-1004G RF Coil Gold for 700-ES Series Axial

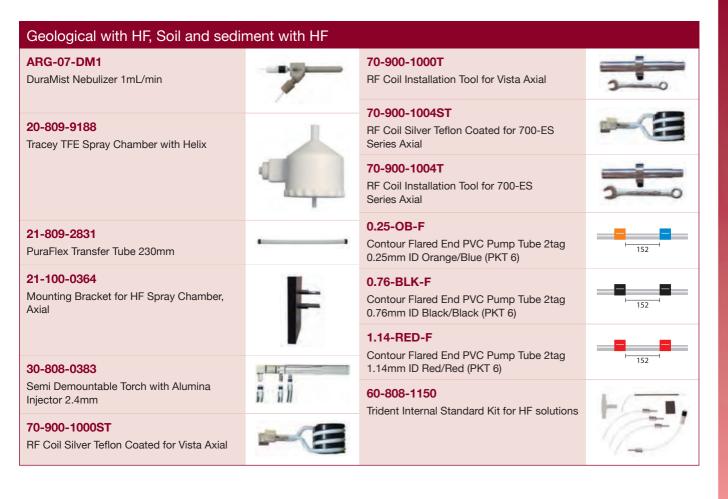


Clinical and forensic materials				
ARG-07-USS04 SeaSpray U-Series Nebulizer 0.4mL/min	-	<b>70-900-1000G</b> RF Coil Gold for Vista Axial		
<b>20-809-0285HE</b> Twister Spray Chamber with Helix		70-900-1000T RF Coil Installation Tool for Vista Axial	3	
<b>30-808-0478</b> Quartz Torch with 90° bend and 2.3mm Injector	1	70-900-1004G RF Coil Gold for 700-ES Series Axial	-	

Series Axial

Clinical and forensic materials (continued)				
70-900-1004T RF Coil Installation Tool for 700-ES Series Axial	200	1.14-RED-F Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	152	
0.19-OR-F Contour Flared End PVC Pump Tube 2tag 0.19mm ID Orange/Red (PKT 6)	152	60-808-1185 Trident Internal Standard Kit		
0.38-OG-F Contour Flared End PVC Pump Tube 2tag 0.38mm ID Orange/Green (PKT 6)	152		1	

Drinking, ground and surface water					
ARG-07-USS2 SeaSpray U-Series Nebulizer 2mL/min	-	<b>70-900-1004G</b> RF Coil Gold for 700-ES Series Axial	- S		
20-809-0600HE Tracey Spray Chamber with Helix					
		70-900-1004T  RF Coil Installation Tool for 700-ES  Series Axial	2		
30-808-0478	The state of the s	Correct / Wildi			
Quartz Torch with 90° bend and 2.3mm Injector		0.76-BLK-F			
<b>70-900-1000G</b> RF Coil Gold for Vista Axial		Contour Flared End PVC Pump Tube 2tag 0.76mm ID Black/Black (PKT 6)	152		
		1.14-RED-F			
70-900-1000T  RF Coil Installation Tool for Vista Axial	3-0	Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	152		



Petrochemicals				
ARG-07-UM06 MicroMist U-Series Nebulizer 0.6mL/min	-	<b>70-900-1000T</b> RF Coil Installation Tool for Vista Axial	300	
KT-1014 IsoMist Kit for Varian 700-ES or Vista Axial	ost Kit for Varian 700-ES or Vista Axial  7  88-1346 82 Torch with 90° bend and 0.8mm 80  7  80  80  80  80  80  80  80  80	<b>70-900-1004G</b> RF Coil Gold for 700-ES Series Axial		
30-808-1346		70-900-1004T  RF Coil Installation Tool for 700-ES Series Axial	2	
Quartz Torch with 90° bend and 0.8mm Injector		0.76-BLK-SF-F Contour Flared End Solva Flex Pump Tube	140	
<b>70-900-1000G</b> RF Coil Gold for Vista Axial		2tag 0.76mm ID Black/Black (PKT 6)  1.14-RED-SF-F  Contour Flared End Solva Flex Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	140	

Wear Metals in oil				
ARG-07-US6 Slurry U-Series Nebulizer 4mL/min	-	70-900-1000T RF Coil Installation Tool for Vista Axial	3	
<b>20-809-0285HE</b> Twister Spray Chamber with Helix		<b>70-900-1004G</b> RF Coil Gold for 700-ES Series Axial	<b>E</b>	
30-808-1346		70-900-1004T  RF Coil Installation Tool for 700-ES Series Axial	200	
Quartz Torch with 90° bend and 0.8mm Injector		0.76-BLK-SF-F Contour Flared End Solva Flex Pump Tube 2tag 0.76mm ID Black/Black (PKT 6)	140	
<b>70-900-1000G</b> RF Coil Gold for Vista Axial		1.14-RED-SF-F Contour Flared End Solva Flex Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	140	

### PRODUCT LIST

Conikal		
2mL/min uptake	ARG-07-UC2	
SeaSpray		
2mL/min uptake	ARG-07-USS2	
Slurry		
4mL/min uptake	ARG-07-US6	
MicroMist		
600µL/min uptake	ARG-07-UM06	
200µL/min uptake	ARG-07-UM02	
100µL/min uptake	ARG-07-UM01	
50µL/min uptake	ARG-07-UM005	

Nebulizers (continued)					
OpalMist					
2mL/min uptake	ARG-07-PFA2				
600µL/min uptake	ARG-07-PFA06				
200μL/min uptake	ARG-07-PFA02	-			
100μL/min uptake	ARG-07-PFA01				
50μL/min uptake	ARG-07-PFA005				
DuraMist		-			
1mL/min uptake	ARG-07-DM1	-			
400μL/min uptake	ARG-07-DM04				
VeeSpray - Ceramic		_			
Standard	ARG-07-CV6				

### PRODUCT LIST

### **IsoMist**

### **IsoMist Programmable Temperature Spray Chamber**

KT-1014

KT-1054

IsoMist Kit for 700-ES

or Vista Axial

IsoMist Kit for 700-ES

or Vista Axial. All glass system

### Spray Chambers

### **Tracey**

20-809-0600HE 50mL Cyclonic



### **Twister**

50mL Cyclonic 20-809-0285HE



### Cinnabar

20mL Cyclonic 20-809-0183HE



### **Twinnabar**

20mL Cyclonic 20-809-0448HE



### **Tracey TFE**

50mL Cyclonic 20-809-9188

Suitable for use with HF.



### **Mounting Bracket -HF Spray Chamber**

21-100-0364



### **PuraFlex Transfer Tube**

21-809-2831

Connects spray chamber to torch. Requires adjustable mount 21-100-0215, or for HF, 21-100-0364.



### **Torches**

### **Fixed Torches (Quartz one piece)**

Quartz Torch with

90° Bend 30-808-0478

Quartz Torch (High Solids, short) with

90° Bend 30-808-9983

Quartz Torch (High Solids, Full-Length)

with 90° Bend 30-807-0528



### Torches (continued)

### **Semi Demountable Torch**

30-808-0379

### Comprises:

Quartz Torch Body 31-808-0353

Tapered Quartz Injector

31-808-0400 2.4mm

Torch Adaptor 31-808-0863

GazFit Connectors (PKT 4) - for 6mm

GAZ-06 OD side arms

GazFit Connectors (PKT 2) - for 8mm

GAZ-08 torch adaptor



Quartz Torch Body - Short

31-808-0177 (for high solids)

Tapered Quartz Injector

1.0mm 31-808-0544

Tapered Quartz Injector

31-808-0543 1.5mm

Tapered Quartz Injector 1.8mm

31-808-0545 Tapered Quartz Injector

2.4mm

31-808-0400





### **Axial ABC Fully Demountable Torch**

30-808-0878

### Comprises:

Torch Body & Case

Assembly 31-808-1231

Quartz Injector 2.4mm

Fully Demountable 31-808-0926

Tube Intermediate

Fully Demountable 31-808-0908

**Tube Outer Fully** 

Demountable Axial 31-808-0841

**ABC Vista Axial** 

Swivel Adaptor 31-808-0798

Kit O-Rings Fully

Demountable Torch 70-0805

### **ABC Fully Demountable Torch Options**

Tapered Quartz Injector

1.0mm Fully Demountable 31-808-0925

Tapered Quartz Injector

1.5mm Fully Demountable 31-808-0906 Tapered Quartz Injector

1.8mm Fully Demountable 31-808-9988

Tapered Quartz Injector 2.4mm Fully Demountable

31-808-0926 Capillary Quartz Injector

2.4mm

Outer Tube Fully Demountable Axial (High Solids) 31-808-1307

31-808-1244

Mounting Bracket Varian

Axial ABC Fully

31-808-1094 Demountable Torch

Ceramic Injector 1.5mm

Fully Demountable 31-808-9201

Ceramic Injector 1.8mm

31-808-0928 Fully Demountable

Ceramic Injector 2.4mm

Fully Demountable 31-808-9202



### PRODUCT LIST

Torches (continue	d)	
Fixed Torches for All		
Quartz Torch with 2.3mm Injector and Right Angle Ball Joint	30-808-0540	
Quartz Torch with 1.8mm Capillary Injector - (for oil analysis) and Right Angle Ball Joint	30-808-0887	m
Quartz Torch (High Solids) with 2.3mm Injector and Right Angle Ball Joint	30-808-1255	
Quartz Torch (organics) with 0.8mm Injector and Right Angle Ball Joint	30-808-8216	
Semi Demountable 1 Alumina Injector	Forch with	
	30-808-0383	
Comprises:		
Quartz Torch Body	31-808-0353	
Tapered Alumina Injector 2.4mm	31-808-0401	T TA
Torch Adaptor	31-808-0863	H H H
GazFit Connectors (PKT 4) - for 6mm OD side arms	GAZ-06	
GazFit Connectors (PKT 2)- for 8mm torch adaptor	GAZ-08	
HF Resistant Injecto Semi Demountable		
Tapered Alumina Injector 1.8mm	31-808-0814	
Tapered Alumina Injector 2.4mm	31-808-0401	
Sapphire Injector 2.4mm	31-808-1426	

RF Coils (continu		
RF Coil Silver 700ES	70-900-1004S	
RF Coil Silver, Teflon Coated 700ES	70-900-1004ST	
Installation kit 700ES	70-900-1004T	3

Kits		
Axial All Glass Syste		
	KT-8045A	
Kit Comprises:		
Twister Spray Chamber	20-809-9199HE	
Quartz Torch RA/FS13 & 2.3mm Injector	30-808-0540	
Glass Transfer Tube-206 + JC-13 Clip	, 31-809-0274	
Adjustable Mount	21-100-0215	L 3-
All Glass System Opti Jacketed Spray Chambe Adjustable Mount		4
Quartz Torch, High Solids, RA/FS13 + 2.3mm injector	21-808-1255	
Quartz Torch, RA/FS13 + 1.8mm Capillary injector	21-808-0887	
Quartz Torch, Organics, RA/FS13 + 0.8mm injector	21-808-8216	

RF Coils		
RF Coil Gold Vista	70-900-1000G	
RF Coil Silver Vista	70-900-1000S	<b>:</b>
RF Coil Silver, Teflon Coated Vista	70-900-1000ST	
Installation kit Vista	70-900-1000T	3
RF Coil Gold 700ES	70-900-1004G	

### Animal feed, Chemicals and fertilizers, Drinking, ground and surface water, Food and drink, Geological without HF, Metals, Plants, Soil and sediment without HF, Waste water and sludge

debiogreal without III, Wetals, I lants, boll and sediment without III, Waste water and sludge			
ARG-07-USS2 SeaSpray U-Series Nebulizer 2mL/min	-	70-900-1001T  RF Coil Installation Tool for Vista Radial	1
20-809-0600HE	11		
Tracey Spray Chamber with Helix		<b>70-900-1005G</b> RF Coil Gold for 700-ES Series Radial	
30-808-3052 D-Torch for 700-ES or Vista Radial (without injector)		<b>70-900-1005T</b> RF Coil Installation Tool for 700-ES Series Radial	
31-808-3058 Tapered Quartz Injector for D-Torch 1.5mm	-	0.76-BLK-F Contour Flared End PVC Pump Tube 2tag 0.76mm ID Black/Black (PKT 6)	152
<b>70-900-1001G</b> RF Coil Gold for Vista Radial		1.14-RED-F Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	152

Brines and salts			
ARG-07-USS2 SeaSpray U-Series Nebulizer 2mL/min	-	70-900-1005ST  RF Coil Silver Teflon Coated for 700-ES  Series Radial	
20-809-0285HE Twister Spray Chamber with Helix		<b>70-900-1005T</b> RF Coil Installation Tool for 700-ES Series Radial	
30-808-3052 D-Torch for 700-ES or Vista Radial (without injector)	I	0.76-BLK-F Contour Flared End PVC Pump Tube 2tag	
31-808-3058 Tapered Quartz Injector for D-Torch 1.5mm	-	0.76mm ID Black/Black (PKT 6)	152
31-808-3092 Ceramic Outer Tube for D-Torch		Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	152
70-900-1001ST  RF Coil Silver Teflon Coated for Vista Radial		<b>70-803-0608</b> Capricorn Argon Humidifier with bypass	
70-900-1001T RF Coil Installation Tool for Vista Radial		for Varian models	-11-

Clinical and forensic materials			
ARG-07-USS04 SeaSpray U-Series Nebulizer 0.4mL/min	-	31-808-3058 Tapered Quartz Injector for D-Torch 1.5mm	-
<b>20-809-0285HE</b> Twister Spray Chamber with Helix		<b>70-900-1001G</b> RF Coil Gold for Vista Radial	
30-808-3052 D-Torch for 700-ES or Vista Radial (without injector)		70-900-1001T  RF Coil Installation Tool for Vista Radial	

### Clinical and forensic materials (continued) 70-900-1005G RF Coil Gold for 700-ES Series Radial 70-900-1005T RF Coil Installation Tool for 700-ES Series Radial 0.38-OG-F Contour Flared End PVC Pump Tube 2tag 0.38mm ID Orange/Green (PKT 6) 1.14-RED-F Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)



Ceramic Outer Tube for D-Torch		1.14mm ID Red/Red (PKT 6)	152
Petrochemicals			
ARG-07-UM06 MicroMist U-Series Nebulizer 0.6mL/min	-	70-900-1001T RF Coil Installation Tool for Vista Radial	
KT-1022 IsoMist Kit for 700-ES or Vista Radial	· ·		1
ISSNING THE IST TOO ES OF VISIA HAGIA		<b>70-900-1005G</b> RF Coil Gold for 700-ES Series Radial	
30-808-3052 D-Torch for 700-ES or Vista Radial (without injector)	TI -	<b>70-900-1005T</b> RF Coil Installation Tool for 700-ES Series Radial	
31-808-3195 Tapered Quartz Injector for D-Torch 0.8mm	-	0.76-BLK-SF-F	
31-808-3092 Ceramic Outer Tube for D-Torch		Contour Flared End Solva Flex Pump Tube 2tag 0.76mm ID Black/Black (PKT 6)	140
<b>70-900-1001G</b> RF Coil Gold for Vista Radial	5	1.14-RED-SF-F Contour Flared End Solva Flex Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	140

Wear Metals in oil			
ARG-07-US6 Slurry U-Series Nebulizer 4mL/min	-	<b>70-900-1001T</b> RF Coil Installation Tool for Vista Radial	
20-809-0285HE			20
Twister Spray Chamber with Helix		<b>70-900-1005G</b> RF Coil Gold for 700-ES Series Radial	
30-808-3052 D-Torch for 700-ES or Vista Radial (without injector)		70-900-1005T RF Coil Installation Tool for 700-ES Series Radial	
31-808-3195			
Tapered Quartz Injector for D-Torch 0.8mm  31-808-3092  Ceramic Outer Tube for D-Torch		0.76-BLK-SF-F Contour Flared End Solva Flex Pump Tube 2tag 0.76mm ID Black/Black (PKT 6)	140
<b>70-900-1001G</b> RF Coil Gold for Vista Radial		1.14-RED-SF-F Contour Flared End Solva Flex Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	140

IsoMist

IsoMist Programmable Temperature Spray Chamber

IsoMist Kit for 700-ES or Vista Radial

IsoMist Kit for 700-ES or Vista Radial

### PRODUCT LIST

Nebulizers		
Conikal 2mL/min uptake	ARG-07-UC2	
SeaSpray 2mL/min uptake	ARG-07-USS2	
Slurry		
4mL/min uptake	ARG-07-US6	-
MicroMist		
600µL/min uptake	ARG-07-UM06	
200µL/min uptake	ARG-07-UM02	
100μL/min uptake	ARG-07-UM01	
50µL/min uptake	ARG-07-UM005	
OpalMist		
2mL/min uptake	ARG-07-PFA2	
600µL/min uptake	ARG-07-PFA06	-
200µL/min uptake	ARG-07-PFA02	
100μL/min uptake	ARG-07-PFA01	
50µL/min uptake	ARG-07-PFA005	
DuraMist		
1mL/min uptake	ARG-07-DM1	-
400μL/min uptake	ARG-07-DM04	7
VeeSpray - Ceramio Standard	ARG-07-CV6	-

All Glass System	KT-1055	
Spray Chamber	'S	
<b>Tracey</b> 50mL Cyclonic	20-809-0600HE	
<b>Twister</b> 50mL Cyclonic	20-809-0285HE	
Cinnabar 20mL Cyclonic	20-809-0183HE	
<b>Twinnabar</b> 20mL Cyclonic	20-809-0448HE	

KT-1022

### PRODUCT LIST



	21-809-2735	
Connects spray chambe		
Requires adjustable mou	unt 21-809-2555.	
Torches		
D-Torch Demountab	le Torch	
D-Torch with Quartz Outer Tube	30-808-3052	
Comprises:		_
Base and Inner Tube	31-808-3146	
Quartz Outer Tube	31-808-3062	11
Retaining Ring for Outer Tube	31-808-2818	
Retaining Ring for Injector	31-808-2921	
Tapered Quartz Inject	ors	
Tapered Quartz Injector 1.5mm	31-808-3058	-
Tapered Quartz Injector 0.8mm	31-808-3195	
Ceramic Outer Tube		
	31-808-3092	
Tapered Quartz Inject with Ball Joint	or 1.5mm	10-
	31-808-3150	
Alumina Injector 1.8m	nm	
	31-808-3160	
Semi Demountable	Torch	
	30-808-0542	
Comprises:		
Torch Body, Quartz	31-808-0541	
Torch Adaptor 8/44	31-808-2638	8 9
Tapered Quartz Injector 1.5mm	31-808-0543	11 11
GazFit Connectors		
(PKT 4) for 6mm OD side arms	GAZ-06	

Torches (continued)	)	
Quartz Injectors for Semi-Demountable Tord Tapered Quartz Injector	ch	
1.0mm 3	31-808-0544	
Tapered Quartz Injector 1.5mm	31-808-0543	
Tapered Quartz Injector 1.8mm 3	31-808-0545	
Tapered Quartz Injector 2.4mm 3	31-808-0400	
ABC Fully Demountab	le Torch	
3	30-808-0805	
Comprises: Torch Body & Case Assembly 3	31-808-1231	
Quartz Injector 1.5mm Fully Demountable 3	31-808-0906	
Tube Intermediate Fully Demountable	31-808-0908	
Tube Outer Fully Demountable Radial 3	31-808-0907	
Polypropylene 8mm Joint Adaptor 3	31-808-0498	
Kit O-Rings Fully Demountable Torch 7	70-0805	7 7
ABC Torch Options		
	31-808-0925	
	31-808-0906	
	31-808-9988	
	31-808-0926	
Mounting Bracket for Vista Radial ABC Fully Demountable Torch 3	31-808-0500	
HF Resistant Options for Fully Demountable Torce		
Ceramic Injector 1.5mm Fully Demountable 3	31-808-9201	
Ceramic Injector 1.8mm Fully Demountable	31-808-0928	
Ceramic Injector 2.4mm Fully Demountable 3	31-808-9202	
Ceramic Outer Tube, Fully Demountable Radial 3	31-808-0927	
Fixed Torches		
Quartz Torch, Low Flow, 1.5mm Injector	30-800-0015	
Quartz Torch, High Solids, 1.8mm Injector	80-808-1182	A. A.
Quartz Torch, 0.8mm Injector 3	80-807-0539	

### Torches (continued) **Other Products** Quartz Torch Bonnet 31-800-0003 Semi Demountable Torch HF 30-808-0942 Comprises: Torch Body, Quartz 31-808-0541 Torch Adaptor 8/44 31-808-2638 Tapered Alumina Injector 1.8mm 31-808-0938 GazFit Connectors (PKT 4) for 6mm OD side arms GAZ-06

RF Coils		
RF Coil Gold Vista	70-900-1001G	
RF Coil Silver Vista	70-900-1001S	
RF Coil Silver, Teflon Coated Vista	70-900-1001ST	
<b>Installation kit</b> Vista	70-900-1001T	
RF Coil Gold 700ES	70-900-1005G	
RF Coil Silver 700ES	70-900-1005S	
RF Coil Silver, Teflon Coated 700ES	70-900-1005ST	
Installation kit 700ES	70-900-1005T	

## Kits Radial All Glass System Kit KT-8046A Kit Comprises: Twister Spray Chamber 20-809-9199HE Radial Torch with Ball Joint and 1.5mm Injector 30-808-0875 Glass Transfer Tube-160, + JC-13 Clip 31-809-0549



Jacketed Spray Chamber

Adjustable Mount 21-100-0217

21-100-0200

Quartz Torch with Ball Joint and 1.8mm

Adjustable Mount

Injector High Solids 30-807-0536

Animal feed, Chemicals and fertilizers, Food and drink, Geological without HF, Metals, Plants, Soil and sediment without HF, Waste water and sludge ARG-1-USS2 70-900-5000T SeaSpray U-Series Nebulizer 2mL/min RF Coil Installation Tool for JY

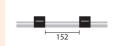
### 20-808-8882HE

Tracey Spray Chamber with Helix



### 0.76-BLK-F

Contour Flared End PVC Pump Tube 2tag 0.76mm ID Black/Black (PKT 6)



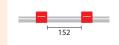
### 70-900-5000S

RF Coil Silver for JY



### 1.14-RED-F

Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)



### Brines and salts

### ARG-1-USS2

SeaSpray U-Series Nebulizer 2mL/min



### 0.76-BLK-F

Contour Flared End PVC Pump Tube 2tag 0.76mm ID Black/Black (PKT 6)



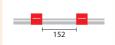
### 20-809-0222HE

Twister Spray Chamber with Helix



### 1.14-RED-F

Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)



### 70-900-5000G

RF Coil Gold for JY



### 70-808-1226

Capricorn Argon Humidifier with bypass



### 70-900-5000T

RF Coil Installation Tool for JY



### Clinical and forensic materials

### ARG-1-USS04

SeaSpray U-Series Nebulizer 0.4mL/min



### 70-900-5000T

RF Coil Installation Tool for JY



### 20-809-0222HE

Twister Spray Chamber with Helix



### 0.38-OG-F

Contour Flared End PVC Pump Tube 2tag 0.38mm ID Orange/Green (PKT 6)



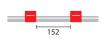
### 70-900-5000S

RF Coil Silver for JY



### 1.14-RED-F

Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)



### Drinking, ground and surface water

### ARG-1-UC1

Conikal U-Series Nebulizer 1mL/min



### 70-900-5000T

RF Coil Installation Tool for JY



### 20-808-8882HE

Tracey Spray Chamber with Helix



### 0.76-BLK-F

Contour Flared End PVC Pump Tube 2tag 0.76mm ID Black/Black (PKT 6)



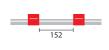
### 70-900-5000S

RF Coil Silver for JY



### 1.14-RED-F

Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)



# Geological with HF, Soil and sediment with HF ARG-1-DM1 DuraMist Nebulizer 1mL/min 20-809-2506 Tracey TFE Spray Chamber with Helix 0.76-BLK-F Contour Flared End PVC Pump Tube 2tag 0.76mm ID Black/Black (PKT 6) 1.14-RED-F Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)





### PRODUCT LIST

Nebulizers		
Conikal		
1mL/min uptake	ARG-1-UC1	
SeaSpray		
2mL/min uptake	ARG-1-USS2	
Slurry		
4mL/min uptake	ARG-1-US6	-
MicroMist		1
400µL/min uptake	ARG-1-UM04	
200µL/min uptake	ARG-1-UM02	
100µL/min uptake	ARG-1-UM01	
50µL/min uptake	ARG-1-UM005	

Nebulizers (continued)		
OpalMist		
2mL/min uptake	ARG-1-PFA2	
400µL/min uptake	ARG-1-PFA04	-
200µL/min uptake	ARG-1-PFA02	-
100µL/min uptake	ARG-1-PFA01	
50µL/min uptake	ARG-1-PFA005	
DuraMist		-
1mL/min uptake	ARG-1-DM1	
400μL/min uptake	ARG-1-DM04	7
VeeSpray - Cerami	C	•
Standard	ARG-1-CV6	
		12

# IsoMist **IsoMist Programmable Temperature Spray Chamber**

IsoMist Kit for

Horiba Jobin Yvon KT-1064



Spray Chambers		
<b>Tracey</b> 50mL Cyclonic	20-808-8882HE	
Twister		T
50mL Cyclonic	20-809-0222HE	
Cinnabar		T
20mL Cyclonic	20-809-0164HE	
Tracey TFE		Y
50mL Cyclonic	20-809-2506	
Suitable for use with HF.		

Spray Chambers		
<b>Tracey</b> 50mL Cyclonic	20-808-8882HE	
<b>Twister</b> 50mL Cyclonic	20-809-0222HE	
Cinnabar 20mL Cyclonic	20-809-0164HE	
Tracey TFE 50mL Cyclonic Suitable for use with HF.	20-809-2506	

Components for JY Designed Demountable Torch			
Quartz Inner Tube	31-808-0118		
Quartz Outer Tube	31-808-8123		
Torch Bonnet	31-800-0023	80	

HF Resistant Components for JY Designed Demountable Torch	
Alumina Inner Tube 31-808-0571	
Alumina Injector Tube 2.9mm 31-808-0567	

RF Coils		
RF Coil Gold	70-900-5000G	
RF Coil Silver	70-900-5000S	
Installation kit	70-900-5000T	<b>*</b>

Animal feed, Chemicals and fertilizers, Clinical and forensic materials, Drinking, ground and surface water, Food and drink, Geological without HF, Metals, Plants, Soil and sediment without HF, Waste

### water and sludge ARG-1-USS04 70-900-2006T RF Coil Installation Tool for PE Elan SeaSpray U-Series Nebulizer 0.4mL/min 6000/9000 Series KT-1013 PE2011-Ni IsoMist Kit for PerkinElmer Elan Nickel Sampler Cone for Elan 30-807-0540 PE2012-Ni D-Torch with Quartz Outer Tube for Elan Nickel Skimmer Cone for Elan 31-800-0012 **Quartz Torch Bonnet** 0.25-OB-F Contour Flared End PVC Pump Tube 2tag 31-807-0004 0.25mm ID Orange/Blue (PKT 6) Tapered Quartz Injector 2.0mm 0.76-BLK-F (for non-DRC models) Contour Flared End PVC Pump Tube 2tag 0.76mm ID Black/Black (PKT 6) 31-808-0806 Tapered Quartz Injector with Ball Joint 1.14-RED-F 2.0mm (for DRC models) Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6) 70-900-2006C 60-808-1185 RF Coil Copper for PE Elan 6000/9000 Series Trident Internal Standard Kit

ARG-1-USS04 SeaSpray U-Series Nebulizer 0.4mL/min	-	31-808-0806  Tapered Quartz Injector with Ball Joint 2.0mm (for DRC models)	=
<b>KT-1013</b> IsoMist Kit for PerkinElmer Elan		70-900-2006C  RF Coil Copper for PE Elan 6000/9000  Series	
<b>30-807-0540</b> D-Torch with Quartz Outer Tube for Elan	-	<b>70-900-2006T</b> RF Coil Installation Tool for PE Elan 6000/9000 Series	3-01
31-808-2849 Ceramic Outer Tube for D-Torch		PE2013-Pt Platinum Sampler Cone for Elan	
31-800-0012 Quartz Torch Bonnet	80		
31-807-0004		PE2014-Pt Platinum Skimmer Cone for Elan	

# D.25-OB-F Contour Flared End PVC Pump Tube 2tag 0.25mm ID Orange/Blue (PKT 6) O.76-BLK-F Contour Flared End PVC Pump Tube 2tag 0.76mm ID Black/Black (PKT 6) To-803-0570 Capricorn Argon Humidifier with bypass for PerkinElmer models 1.14-RED-F Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)



Isotopic Analysis of Minerals			
ARG-1-USS04 SeaSpray U-Series Nebulizer 0.4mL/min	-	31-800-0012 Quartz Torch Bonnet	8
KT-1013 IsoMist Kit for PerkinElmer Elan		31-807-0004 Tapered Quartz Injector 2.0mm (for non-DRC models)	
30-807-0540 D-Torch with Quartz Outer Tube for Elan	-	31-808-0806 Tapered Quartz Injector with Ball Joint 2.0mm (for DRC models)	<b>=</b>

### Isotopic Analysis of Minerals (continued) 70-900-2006C 0.25-OB-F RF Coil Copper for PE Elan 6000/9000 Contour Flared End PVC Pump Tube 2tag Series 0.25mm ID Orange/Blue (PKT 6) 0.76-BLK-F 70-900-2006T Contour Flared End PVC Pump Tube 2tag 0.76mm ID Black/Black (PKT 6) RF Coil Installation Tool for PE Elan 6000/9000 Series PE2013-Pt 1.14-RED-F Platinum Sampler Cone for Elan Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6) 60-808-1185 Trident Internal Standard Kit PE2014-Pt Platinum Skimmer Cone for Elan

Petrochemicals			
ARG-1-USS04 SeaSpray U-Series Nebulizer 0.4mL/min	-	70-900-2006T  RF Coil Installation Tool for PE Elan 6000/9000 Series	3-01
KT-1013 IsoMist Kit for PerkinElmer Elan		PE2011-Ni Nickel Sampler Cone for Elan	and the same of th
<b>30-807-0540</b> D-Torch with Quartz Outer Tube for Elan	-	PE2012-Ni	
31-808-2849 Ceramic Outer Tube for D-Torch		Nickel Skimmer Cone for Elan	
31-800-0012 Quartz Torch Bonnet	8	0.25-OB-SF-F Contour Flared End Solva Flex Pump Tube 2tag 0.25mm ID Orange/Blue (PKT 6)	140
31-808-0789 Tapered Quartz Injector 1.2mm (for non-DRC models)		0.76-BLK-SF-F Contour Flared End Solva Flex Pump Tube 2tag 0.76mm ID Black/Black (PKT 6)	140
31-808-3125 Tapered Quartz Injector with Ball Joint 0.85mm (for DRC models)	H	1.14-RED-SF-F Contour Flared End Solva Flex Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	140
<b>70-900-2006C</b> RF Coil Copper for PE Elan 6000/9000 Series		60-808-1185 Trident Internal Standard Kit	1

### Semiconductors ARG-1-PFA04 PE2013-Pt OpalMist Nebulizer 0.4mL/min Platinum Sampler Cone for Elan KT-1013P IsoMist Kit with PFA Spray Chamber for PerkinElmer Elan PE2014-Pt Platinum Skimmer Cone for Elan 30-807-0540 D-Torch with Quartz Outer Tube for Elan 31-808-2849 0.25-OB-F Ceramic Outer Tube for D-Torch Contour Flared End PVC Pump Tube 2tag 0.25mm ID Orange/Blue (PKT 6) 31-800-0012 Quartz Torch Bonnet 0.76-BLK-F Contour Flared End PVC Pump Tube 2tag 0.76mm ID Black/Black (PKT 6) 31-808-2803 Sapphire Injector 2.0mm 1.14-RED-F 70-900-2006C Contour Flared End PVC Pump Tube 2tag RF Coil Copper for PE Elan 6000/9000 1.14mm ID Red/Red (PKT 6) Series 60-808-1185 Trident Internal Standard Kit 70-900-2006T RF Coil Installation Tool for PE Elan 6000/9000 Series

# PRODUCT LIST

Nebulizers		
SeaSpray		
400µL/min uptake	ARG-1-USS04	
MicroMist		_
400µL/min uptake	ARG-1-UM04	
200µL/min uptake	ARG-1-UM02	
100µL/min uptake	ARG-1-UM01	
50µL/min uptake	ARG-1-UM005	
OpalMist		
400µL/min uptake	ARG-1-PFA04	
200µL/min uptake	ARG-1-PFA02	
100µL/min uptake	ARG-1-PFA01	
50µL/min uptake	ARG-1-PFA005	

### **IsoMist IsoMist Programmable Temperature Spray Chamber** IsoMist Kit for PerkinElmer Elan KT-1013



### Spray Chambers

### Spray Chambers - Suitable for Torch adaptor 31-808-0827 or 31-808-2825

The following spray chambers are suitable for torch adaptors 31-808-0827 (equivalent PerkinElmer P/N N8120116) or 31-808-2825 (equivalent PerkinElmer P/N W1013266). These torch adaptors are usually used with non-DRC Elan models, or with Elan DRC models using an HF-resistant sample introduction system. They require the Elan Screw Mount CSC Adaptor, part number 21-808-0389, for secure mounting.

<b>Tracey</b> 50mL Cyclonic	20-809-0224HE	

**Twister** 50mL Cyclonic 20-809-0578HE



# Spray Chambers (continued) Cinnabar 20mL Cyclonic 20-809-0162HE **Twinnabar** 20mL Cyclonic 20-809-0491HE **Tracey PFA44** 44mL Cyclonic 20-809-2509 With ScrewLok. Suitable for use with HF **Other Adaptors** Elan Screw Mount **CSC** Adaptor 21-808-0389 Elan Adaptor Nut 21-808-0388 Elan Screw Mount CSC Adaptor with Aux Port 21-809-2733 Spray Chambers – Suitable for Torch adaptor 31-808-0825 or 31-808-2824 The following spray chambers are suitable for torch adaptors 31-808-0825 (equivalent PerkinElmer P/N WE023951) or 31-808-2824 (equivalent PerkinElmer P/N W1012406). This adaptor is usually used with DRC Elan models. **Twister** 50mL Cyclonic 20-809-0296HE Cinnabar 20mL Cyclonic 20-809-0322HE Helix Nebulizer Adaptor 6/35 21-808-1010 For PE Scott style spray chambers.

Torches		
D-Torch with Quartz		
Comprises:	30-807-0540	
Base and Inner Tube	31-808-2847	
Quartz Outer Tube	31-808-2848	
Retaining Ring	31-808-2818	
Ceramic Outer Tube	<b>for D-Torch</b> 31-808-2849	
Quartz Torch Standard Quartz Torch	30-808-8107	
High Efficiency Quartz Torch	31-808-2784	
Quartz Injectors (nor	DRC)	
Tapered Quartz Injector 1.0mm	31-808-0370	
Tapered Quartz Injector 1.2mm	31-808-0789	
Tapered Quartz Injector 1.5mm	31-807-0006	
Tapered Quartz Injector 1.8mm	31-807-0005	
Tapered Quartz Injector 2.0mm	31-807-0004	
These injectors are suital adaptors 31-808-0827 (e PerkinElmer P/N N81201 31-808-2825 (equivalent P/N W1013266). These a usually used with non-DF	quivalent 16) or PerkinElmer daptors are	
Quartz Injectors (DR	C Versions)	
Tapered Quartz Injector with Ball Joint, 2.0mm	31-808-0806	
Tapered Quartz Injector with Ball Joint, 1.5mm	31-808-0851	
Tapered Quartz Injector with Ball Joint, 0.85mm	31-808-3125	E
These injectors are suital adaptors 31-808-0825 (e PerkinElmer P/N WE0238 31-808-2824 (equivalent P/N W1012406). These a usually used with DRC E	quivalent 951) or PerkinElmer daptors are	
Torch Adaptor		
Elan DRC Torch Adaptor		
This adaptor is suitable for a ball joint	or injectors with	W
Torch Adaptor		
Cassette Mount Adaptor for Ball Joint Injector	31-808-2824	
This adaptor is suitable for a ball joint.	or injectors with	

Torches (continued)	
Torch Adaptor Elan Torch Adaptor 31-808-0827 This adaptor is suitable for injectors without a ball joint	
Torch Adaptor  PFA Cassette Mount Adaptor 31-808-2825  This adaptor is suitable for injectors without a ball joint.	
Other Components  Quartz Bonnet for Elan 31-800-0012	80
HF Resistant Injectors Tapered Alumina Injector 1.5mm 31-807-0044 Tapered Alumina Injector 1.8mm 31-807-0045	
Tapered Alumina Injector 2.0mm 31-807-0060	
Sapphire Injector 2.0mm 31-808-2803  Platinum Injector 2.0mm 31-808-2972	
These injectors are suitable for torch	

Cones (continued	d)	
Platinum Sampler (PE p/n WE02-7802)	PE2013-Pt	6
Platinum Skimmer (PE p/n WE02-7803)	PE2014-Pt	
Insertion Tool (PE p/n WE01-7142)	PE6000	
Sampler Cone O-Ri (PE p/n N812-0511)	ing (PKT 5) PE5011	
Skimmer Cone O-R (PE p/n N812-0512)	Ring (PKT 5) PE5012	

RF Coils		
RF Coil for Elan Silver	6000/9000 Series 70-900-2006S	
RF Coil for Elan Copper	6000/9000 Series 70-900-2006C	
	for Elan 6000/9000 Kit 70-900-2006T	3-0F

adaptor 31-808-0827 (equivalent PerkinElmer P/N N8120116) or 31-808-2825 (equivalent PerkinElmer

P/N W1013266).

Cones		
Nickel Sampler (PE p/n WE02-1140)	PE2011-Ni	
Nickel Skimmer (PE p/n WE02-1137)	PE2012-Ni	

Animal feed, Chemicals and fertilizers, Clinical and forensic materials, Drinking, ground and surface water, Food and drink, Geological without HF, Metals, Plants, Soil and sediment without HF, Waste water and sludge **ARG-1-USS04** PE3011-Ni SeaSpray U-Series Nebulizer 0.4mL/min Nickel Sampler Cone for NexION KT-1096 IsoMist Kit for PerkinElmer NexION PE3012-Ni Nickel Skimmer Cone for NexION 30-807-0540 D-Torch with Quartz Outer Tube for Elan/ 0.25-OB-F NexION Contour Flared End PVC Pump Tube 2tag 0.25mm ID Orange/Blue (PKT 6) 31-808-0806 0.76-BLK-F Tapered Quartz Injector with ball joint 2mm (suitable for Elan DRC/NexION) Contour Flared End PVC Pump Tube 2tag 0.76mm ID Black/Black (PKT 6) 70-900-2006C 1.14-RED-F RF Coil Copper for PE Elan/NexION Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6) 60-808-1185 Trident Internal Standard Kit 70-900-2006T

Brines and salts			
ARG-1-USS04 SeaSpray U-Series Nebulizer 0.4mL/min		PE3014-Pt Platinum Skimmer Cone for NexION	
KT-1096 IsoMist Kit for PerkinElmer NexION	※		Ligaria .
		<b>0.25-OB-F</b> Contour Flared End PVC Pump Tube 2tag	_
<b>30-807-0540</b> D-Torch with Quartz Outer Tube for Elan/		0.25mm ID Orange/Blue (PKT 6)	152
NexION		0.76-BLK-F	
31-808-2849 Ceramic Outer Tube for D-Torch		Contour Flared End PVC Pump Tube 2tag 0.76mm ID Black/Black (PKT 6)	152
31-808-0806		1.14-RED-F	
Tapered Quartz Injector with ball joint 2mm (suitable for Elan DRC/NexION)		Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	152
70-900-2006C	AW	60-808-1185	
RF Coil Copper for PE Elan/NexION		Trident Internal Standard Kit	
70-900-2006T			1/
RF Coil Installation Tool for PE Elan/NexION	01	70-803-0570	. 6
PE3013-Pt Platinum Sampler Cone for NexION		Capricorn Argon Humidifier with bypass for PerkinElmer models	17 =

### Geological with HF, Soil and sediment with HF ARG-1-PFA04 PE3013-Pt OpalMist Nebulizer 0.4mL/min Platinum Sampler Cone for NexION KT-1096P IsoMist Kit with PFA Spray Chamber for PerkinElmer NexION PE3014-Pt Platinum Skimmer Cone for NexION 30-807-0540 D-Torch with Quartz Outer Tube for Elan/ NexION 0.25-OB-F Contour Flared End PVC Pump Tube 2tag 31-808-2849 0.25mm ID Orange/Blue (PKT 6) Ceramic Outer Tube for D-Torch 0.76-BLK-F 31-807-0060 Contour Flared End PVC Pump Tube 2tag 0.76mm ID Black/Black (PKT 6) Tapered Alumina Injector 2.0mm 1.14-RED-F 70-900-2006C Contour Flared End PVC Pump Tube 2tag RF Coil Copper for PE Elan/NexION 1.14mm ID Red/Red (PKT 6) 60-808-1150 Trident Internal Standard Kit for HF solutions 70-900-2006T RF Coil Installation Tool for PE Elan/NexION

ARG-1-USS04 SeaSpray U-Series Nebulizer 0.4mL/min	-	PE3013-Pt Platinum Sampler Cone for NexION	
KT-1096 IsoMist Kit for PerkinElmer NexION	%E=		
		PE3014-Pt Platinum Skimmer Cone for NexION	
<b>30-807-0540</b> D-Torch with Quartz Outer Tube for Elan/			On County
NexION	П	0.25-OB-F Contour Flared End PVC Pump Tube 2tag	
31-808-0806		0.25mm ID Orange/Blue (PKT 6)	152
Tapered Quartz Injector with ball joint 2mm (suitable for Elan DRC/NexION)	H	0.76-BLK-F Contour Flared End PVC Pump Tube 2tag	152
70-900-2006C		0.76mm ID Black/Black (PKT 6)	
RF Coil Copper for PE Elan/NexION		1.14-RED-F Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	152
		60-808-1185 Trident Internal Standard Kit	-
<b>70-900-2006T</b> RF Coil Installation Tool for PE Elan/NexION		3	

ARG-1-USS04 SeaSpray U-Series Nebulizer 0.4mL/min	-	PE3011-Ni Nickel Sampler Cone for NexION	
KT-1096 IsoMist Kit for PerkinElmer NexION	※一員		
		PE3012-Ni Nickel Skimmer Cone for NexION	
<b>30-807-0540</b> D-Torch with Quartz Outer Tube for Elan/ NexION			Best Country
31-808-2849 Ceramic Outer Tube for D-Torch		0.25-OB-SF-F Contour Flared End Solva Flex Pump Tube 2tag 0.25mm ID Orange/Blue (PKT 6)	140
31-808-3125 Tapered Quartz Injector with ball joint 0.85mm (suitable for Elan DRC/NexION)	•=	0.76-BLK-SF-F Contour Flared End Solva Flex Pump Tube 2tag 0.76mm ID Black/Black (PKT 6)	140
<b>70-900-2006C</b> RF Coil Copper for PE Elan/NexION		1.14-RED-SF-F Contour Flared End Solva Flex Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	140
		60-808-1185 Trident Internal Standard Kit	-
<b>70-900-2006T</b> RF Coil Installation Tool for PE Elan/NexION			1



Nebulizers		
SeaSpray 400µL/min uptake	ARG-1-USS04	
MicroMist 400μL/min uptake 200μL/min uptake 100μL/min uptake 50μL/min uptake	ARG-1-UM04 ARG-1-UM02 ARG-1-UM01 ARG-1-UM005	
OpalMist 400μL/min uptake 200μL/min uptake 100μL/min uptake 50μL/min uptake	ARG-1-PFA04 ARG-1-PFA02 ARG-1-PFA01 ARG-1-PFA005	-

# IsoMist

# IsoMist Programmable Temperature Spray Chamber

IsoMist Kit for PerkinElmer NexION KT-1096



### Spray Chambers

### **Twinnabar**

20mL Cyclonic 20-809-0491HE

Suitable for adaptor 31-808-2825 and injectors without ball joint.



### Torches

### **D-Torch with Quartz Outer Tube**

30-807-0540

Comprises:

Base and Inner Tube 31-808-2847

Quartz Outer Tube 31-808-2848

Retaining Ring 31-808-2818

### **Ceramic Outer Tube for D-Torch**

31-808-2849



### **Quartz Torch**

Standard Quartz Torch 30-808-8107

High Efficiency Quartz

Torch 31-808-2784



### Torches (continued)

### **Quartz Injectors (non DRC)**

Tapered Quartz Injector

1.0mm 31-808-0370

Tapered Quartz Injector

1.2mm 31-808-0789

Tapered Quartz Injector

1.5mm 31-807-0006

Tapered Quartz Injector

1.8mm 31-807-0005

Tapered Quartz Injector

2.0mm 31-807-0004

These injectors are suitable for torch adaptor 31-808-2825 (equivalent PerkinElmer P/N W1013266).

### **Quartz Injectors (DRC Versions)**

Tapered Quartz Injector

with Ball Joint, 2.0mm 31-808-0806

Tapered Quartz Injector

with Ball Joint, 1.5mm 31-808-0851

Tapered Quartz Injector with Ball Joint, 0.85mm 31-808-3125

These injectors are suitable for torch adaptor 31-808-2824 (equivalent PerkinElmer P/N W1012406).

### **Torch Adaptor**

Cassette Mount Adaptor for Ball

Joint Injector 31-808-2824

This adaptor is suitable for injectors with a ball joint.

### **Torch Adaptor**

PFA Cassette Mount

Adaptor 31-808-2825

This adaptor is suitable for injectors

without a ball joint.

### **HF Resistant Injectors**

Tapered Alumina Injector

1.5mm 31-807-0044

Tapered Alumina Injector 1.8mm

Tapered Alumina Injector

31-807-0045

2.0mm 31-807-0060

Sapphire Injector 2.0mm 31-808-2803

Platinum Injector 2.0mm 31-808-2972

These injectors are suitable for torch adaptor 31-808-2825 (equivalent PerkinElmer P/N W1013266).



Cones		
Nickel Sampler (PE p/n W1033612)	PE3011-Ni	1
Nickel Skimmer (PE p/n W1026356)	PE3012-Ni	<b>O</b>
Platinum Sampler (PE p/n W1033614)	PE3013-Pt	
Platinum Skimmer (PE p/n W1026907)	PE3014-Pt	<b>O</b>
Hyper Skimmer (PE p/n W1033995)	PE3015-Al	



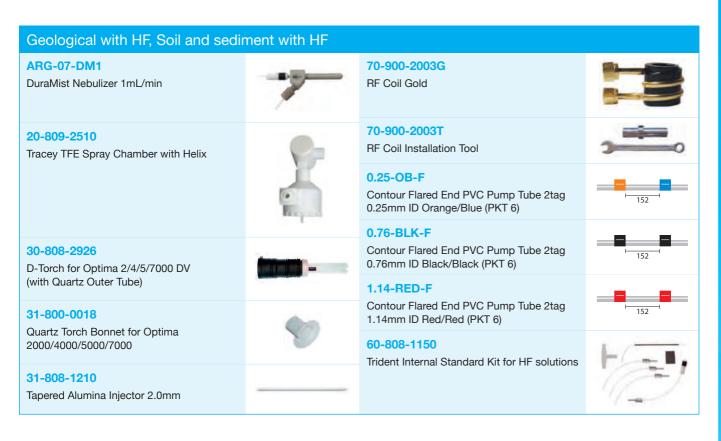
### Animal feed, Chemicals and fertilizers, Food and drink, Geological without HF, Metals, Plants, Soil and sediment without HF, Waste water and sludge **ARG-07-USS2** 70-900-2003T SeaSpray U-Series Nebulizer 2mL/min RF Coil Installation Tool 20-809-0434HE Tracey Spray Chamber with Helix 0.25-OB-F Contour Flared End PVC Pump Tube 2tag 0.25mm ID Orange/Blue (PKT 6) 0.76-BLK-F 30-808-2926 Contour Flared End PVC Pump Tube 2tag D-Torch for Optima 2/4/5/7000 DV 0.76mm ID Black/Black (PKT 6) (with Quartz Outer Tube) 31-800-0018 1.14-RED-F Quartz Torch Bonnet for Optima Contour Flared End PVC Pump Tube 2tag 2000/4000/5000/7000 1.14mm ID Red/Red (PKT 6) 31-807-0075 60-808-1185 Tapered Quartz Injector 2.0mm Trident Internal Standard Kit 70-900-2003S RF Coil Silver



# Clinical and forensic materials ARG-07-USS04 SeaSpray U-Series Nebulizer 0.4mL/min 20-809-0208HE Twister Spray Chamber with Helix 31-800-0018 Quartz Torch Bonnet for Optima 2000/4000/5000/7000

### Clinical and forensic materials (continued) 31-807-0075 0.38-OG-F Tapered Quartz Injector 2.0mm Contour Flared End PVC Pump Tube 2tag 0.38mm ID Orange/Green (PKT 6) 70-900-2003S RF Coil Silver 1.14-RED-F Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6) 70-900-2003T 60-808-1185 RF Coil Installation Tool Trident Internal Standard Kit 0.19-OR-F Contour Flared End PVC Pump Tube 2tag 0.19mm ID Orange/Red (PKT 6)





### Petrochemicals **ARG-07-UM06** 31-808-0939 MicroMist U-Series Nebulizer 0.6mL/min Capillary Quartz Injector 1.0mm 70-900-2003S KT-1012 RF Coil Silver IsoMist Kit for PerkinElmer Optima 2000/4000/5000/7000 DV 70-900-2003T RF Coil Installation Tool 30-808-2926 0.76-BLK-SF-F D-Torch for Optima 2/4/5/7000 DV (with Quartz Outer Tube) Contour Flared End Solva Flex Pump Tube 2tag 0.76mm ID Black/Black (PKT 6) 31-800-0018 1.14-RED-SF-F Quartz Torch Bonnet for Optima Contour Flared End Solva Flex Pump Tube 2000/4000/5000/7000 140 2tag 1.14mm ID Red/Red (PKT 6)

Wear Metals in oil			
ARG-07-US6 Slurry U-Series Nebulizer 4mL/min		31-808-1154 Tapered Quartz Injector 1.2mm	
20-809-0446HE Twister Spray Chamber with Helix (Organics)		<b>70-900-2003S</b> RF Coil Silver	
		<b>70-900-2003T</b> RF Coil Installation Tool	-
30-808-2926 D-Torch for Optima 2/4/5/7000 DV (with Quartz Outer Tube)		0.76-BLK-SF-F Contour Flared End Solva Flex Pump Tube 2tag 0.76mm ID Black/Black (PKT 6)	140
<b>31-800-0018</b> Quartz Torch Bonnet for Optima 2000/4000/5000/7000	8	1.14-RED-SF-F Contour Flared End Solva Flex Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	140

Conikal		
2mL/min uptake	ARG-07-UC2	
SeaSpray		
2mL/min uptake	ARG-07-USS2	
Slurry		
4mL/min uptake	ARG-07-US6	-
MicroMist		
600μL/min uptake	ARG-07-UM06	
200µL/min uptake	ARG-07-UM02	
100μL/min uptake	ARG-07-UM01	
50µL/min uptake	ARG-07-UM005	

Nebulizers (contin	ued)	
OpalMist		
2mL/min uptake	ARG-07-PFA2	
600μL/min uptake	ARG-07-PFA06	
200μL/min uptake	ARG-07-PFA02	4
100μL/min uptake	ARG-07-PFA01	
50μL/min uptake	ARG-07-PFA005	
DuraMist		-
1mL/min uptake	ARG-07-DM1	
400μL/min uptake	ARG-07-DM04	
VeeSpray - Ceramic		_
Standard	ARG-07-CV6	

### IsoMist

# IsoMist Programmable Temperature Spray Chamber

IsoMist Kit for PerkinElmer Optima 2000/4000/ 5000/7000DV KT-1012



Chroi	/ Chambers
OUIG	

п	u	_	_	~	
•		М		е	v.

50mL Cyclonic 20-809-0434HE



### **Twister**

50mL Cyclonic (Aqueous)

20-809-0208HE

With 7mm baffle.



### **Twister**

50mL Cyclonic (Organics)

20-809-0446HE

With 4mm baffle.



### **Twister**

50mL Cyclonic with Aux. port

20-809-0004HE



### **Cinnabar**

20mL Cyclonic

20-809-9121HE



### **Twinnabar**

20mL Cyclonic

20-809-9120HE



### Tracey TFE

50mL Cyclonic

20-809-2510

Suitable for use with HF.

Plugs directly into cassette mount.



### **Torches**

### **D-Torch with Quartz Outer Tube**

30-808-2926

### Comprises:

Base and Inner Tube 31-808-2981
Quartz Outer Tube 31-808-2986

Retaining Ring 31-808-2818

### **Quartz Torches**

Quartz Torch -

JAZ with single slot 30-808-0845

Quartz Torch

without slot 30-808-1122

Quartz Torch (short)

without slot 30-808-0845S

Quartz Torch

1.0mm

with 3 slots 30-808-1470

### **Quartz Injectors**

Quartz Capillary Injector

31-808-0939

Quartz Tapered Injector

1.2mm 31-808-1154

Quartz Capillary Injector

1.8mm 31-808-0794

Quartz Tapered Injector

2.0mm 31-807-0075

Quartz Tapered Injector

3.0mm 31-808-2506

### **HF Resistant Injectors**

Tapered Alumina Injector

2.0mm 31-808-1210

Tapered Alumina Injector

2.4mm 31-808-2771

Sapphire Injector

2.0mm 31-808-2774

Torch Bonnet 2000/4000/5000/7000

31-800-0018



Radial Purge Window Short (32mm) for 2000DV or 3300DV

31-808-8098



Axial Purge Window (17mm disk) for 4000/5000/7000DV

31-808-0551



Radial Purge Window for 4000/5000DV (Pre Nov. 2004)

31-800-0024

Radial Purge Window for 2000DV, Long

31-808-2631



Torches (continued)	
Axial Purge Window for 2000DV or 3000XL (32mm disk) 31-808-2649	
Copper Foil for Torch Body (PKT 10) 31-808-2645	连
Radial Purge Window for 5000/ 7000DV (Post Nov. 2004) 31-808-2788	

RF Coils		
RF Coil Gold	70-900-2003G	
RF Coil Silver	70-900-2003S	
Installation Kit	70-900-2003T	-

31-800-0018

Quartz Torch Bonnet for Optima

### Animal feed, Chemicals and fertilizers, Food and drink, Geological without HF, Metals, Plants, Soil and sediment without HF, Waste water and sludge **ARG-07-USS2** 31-807-0050 SeaSpray U-Series Nebulizer 2mL/min Tapered Quartz Injector 2.0mm 70-900-2003S 20-809-0495HE RF Coil Silver Twister Spray Chamber with Helix 70-900-2003T RF Coil Installation Tool 30-808-2832 D-Torch for Optima 4300/5300/7300V 0.76-BLK-F (with Quartz Outer Tube)

Contour Flared End PVC Pump Tube 2tag

Contour Flared End PVC Pump Tube 2tag

0.76mm ID Black/Black (PKT 6)

1.14-RED-F



Clinical and forensic materials				
ARG-07-USS04 SeaSpray U-Series Nebulizer 0.4mL/min	-	<b>31-800-0018</b> Quartz Torch Bonnet for Optima 2000/4000/5000/7000	8	
20-809-0495HE Twister Spray Chamber with Helix		31-807-0050 Tapered Quartz Injector 2.0mm 70-900-2003S RF Coil Silver		
30-808-2832 D-Torch for Optima 4300/5300/7300V (with Quartz Outer Tube)		70-900-2003T RF Coil Installation Tool	-	

### Clinical and forensic materials (continued)

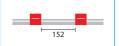
### 0.38-OG-F

Contour Flared End PVC Pump Tube 2tag 0.38mm ID Orange/Green (PKT 6)



### 1.14-RED-F

Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)



### Drinking, ground and surface water

### **ARG-07-UC2**

Conikal U-Series Nebulizer 2mL/min



### 31-807-0050

Tapered Quartz Injector 2.0mm



### 20-809-0495HE

Twister Spray Chamber with Helix



### 70-900-2003S

RF Coil Silver



### 30-808-2832

D-Torch for Optima 4300/5300/7300V (with Quartz Outer Tube)



### 70-900-2003T

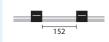
RF Coil Installation Tool





### 0.76-BLK-F

Contour Flared End PVC Pump Tube 2tag 0.76mm ID Black/Black (PKT 6)



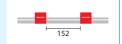
### 31-800-0018

Quartz Torch Bonnet for Optima 2000/4000/5000/7000



### 1.14-RED-F

Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)



### Geological with HF, Soil and sediment with HF

### **ARG-07-DM1**

DuraMist Nebulizer 1mL/min



### 31-808-1352

70-900-2003G RF Coil Gold

Tapered Alumina Injector 2.0mm



### 20-809-2507

Tracey TFE Spray Chamber with Helix



### 70-900-2003T

RF Coil Installation Tool



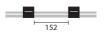
### 30-808-2832

D-Torch for Optima 4300/5300/7300V (with Quartz Outer Tube)



### 0.76-BLK-F

Contour Flared End PVC Pump Tube 2tag 0.76mm ID Black/Black (PKT 6)



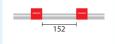
### 31-808-2815

Ceramic Outer Tube for D-Torch, Optima 4300/5300/7300V



### 1.14-RED-F

Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)



### Petrochemicals

### **ARG-07-LIM06**

MicroMist U-Series Nebulizer 0.6mL/min



### 31-808-2815

Ceramic Outer Tube for D-Torch, Optima 4300/5300/7300V



### KT-1011

IsoMist Kit for PerkinElmer Optima 4300/5300/7300V



# 31-808-0119

Tapered Quartz Injector 1.0mm



### 30-808-2832

D-Torch for Optima 4300/5300/7300V (with Quartz Outer Tube)



# 70-900-2003T

70-900-2003S RF Coil Silver

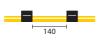
RF Coil Installation Tool



### Petrochemicals (continued)

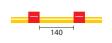
### 0.76-BLK-SF-F

Contour Flared End Solva Flex Pump Tube 2tag 0.76mm ID Black/Black (PKT 6)



### 1.14-RED-SF-F

Contour Flared End Solva Flex Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)



Wear Metals in oil			
ARG-07-US6 Slurry U-Series Nebulizer 4mL/min	-	31-808-0119 Tapered Quartz Injector 1.0mm	
20-809-0495HE Twister Spray Chamber with Helix		<b>70-900-2003S</b> RF Coil Silver	
	W. Carlotte	70-900-2003T RF Coil Installation Tool	-
30-808-2832 D-Torch for Optima 4300/5300/7300V (with Quartz Outer Tube)		0.76-BLK-SF-F Contour Flared End Solva Flex Pump Tube 2tag 0.76mm ID Black/Black (PKT 6)	140
<b>31-808-2815</b> Ceramic Outer Tube for D-Torch, Optima 4300/5300/7300V		1.14-RED-SF-F Contour Flared End Solva Flex Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	140

# **PRODUCT LIST**

### **Nebulizers Conikal** 2mL/min uptake ARG-07-UC2 **SeaSpray** ARG-07-USS2 2mL/min uptake **Slurry** 4mL/min uptake ARG-07-US6 **MicroMist** 600µL/min uptake ARG-07-UM06 200µL/min uptake ARG-07-UM02 ARG-07-UM01 100µL/min uptake ARG-07-UM005 50µL/min uptake **OpalMist** ARG-07-PFA2 2mL/min uptake 600µL/min uptake ARG-07-PFA06 200µL/min uptake ARG-07-PFA02 100µL/min uptake ARG-07-PFA01 ARG-07-PFA005 50µL/min uptake **DuraMist** ARG-07-DM1 1mL/min uptake ARG-07-DM04 400µL/min uptake **VeeSpray - Ceramic** ARG-07-CV6 Standard

### **IsoMist**

# IsoMist Programmable Temperature Spray Chamber

IsoMist Kit for PerkinElmer Optima 4300/5300/7300V



### **Spray Chambers**

### **Twister**

50mL Cyclonic 20-809-0495HE

KT-1011



### **Tracey TFE**

50mL Cyclonic 20-809-2507

Suitable for use with HF.



Torches		
D-Torch Demountab	le Torch	
D-Torch for 4300/5300/7300V	30-808-2832	_
Comprises:		
Base and Inner Tube	31-808-2809	- 1
Quartz Outer Tube	31-808-2821	
Retaining Ring	31-808-2818	
Quartz Torch Quartz Torch - three slot	30-807-0064	
Quartz Injectors		
Tapered Quartz Injector 1.0mm	31-808-0119	
Tapered Quartz Injector 1.5mm	31-808-0124	
Tapered Quartz Injector 1.8mm	31-807-0008	
Tapered Quartz Injector 2.0mm	31-807-0050	
These injectors are suita fixed torch and D-Torch.		
HF Resistant Injecto	rs	
Tapered Alumina Injecto 1.5mm	r 31-807-0051	
Tapered Alumina Injecto 1.8mm	r 31-807-0052	
Tapered Alumina Injecto 2.0mm	r 31-808-1352	
Capillary Alumina Injecto		
2.0mm	31-808-2625	
These injectors are suita fixed torch and D-torch.	ble for both the	
Torch Bonnet	31-800-0018	80
Purge Extension Wir		
.5. 1000, 0000, 1000	31-808-1345	
Torch Adaptor with	Auxiliary Port 31-808-2503	
Option for D-Torch Ceramic Outer Tube	31-808-2815	0.00

RF Coils		
RF Coil Gold	70-900-2003G	
RF Coil Silver	70-900-2003S	
Installation Kit	70-900-2003T	<b>—</b>

Animal feed, Chemicals and fertilizers, Drinking, ground and surface water, Food and drink, Geological without HF, Metals, Plants, Soil and sediment without HF, Waste water and sludge

### ARG-1-USS2

SeaSpray U-Series Nebulizer 2mL/min



21-808-8214

Drain Device



20-808-8881HE

Tracey Spray Chamber with B14 Drain with Helix



30-807-0534

Quartz Mini Torch for Shimadzu ICPE-9000



30-808-1179

Standard Quartz Torch, 1.5mm injector for Shimadzu ICPS-7500/8100



# Brines and salts

ARG-1-USS2

SeaSpray U-Series Nebulizer 2mL/min



30-807-0518

Quartz Torch ICPS-7500/8100/9000, 1.8mm injector for High TDS for Shimadzu



20-809-9119HE

Twister Spray Chamber with B14 Drain with Helix



70-808-1226

Capricorn Argon Humidifier with bypass



### 21-808-8214

Drain Device



### Clinical and forensic materials

ARG-1-USS04

SeaSpray U-Series Nebulizer 0.4mL/min



21-808-8214

Drain Device



20-809-9119HE

Twister Spray Chamber with B14 Drain with Helix



30-807-0518

Quartz Torch ICPS-7500/8100/9000, 1.8mm injector for High TDS for Shimadzu



### Geological with HF, Soil and sediment with HF

### ARG-1-DM1

DuraMist Nebulizer 1mL/min



21-809-2540

HF Drain Device



### 20-809-2508

Tracey TFE Spray Chamber with B14 Drain and Helix



### 21-809-2839

Mounting Bracket for HF Spray Chamber



### 30-808-8039

Semi Demountable Torch with Alumina Injector for Shimadzu 7500/8100



# Petrochemicals ARG-1-UM04 MicroMist U-Series Nebulizer 0.4mL/min KT-1067 IsoMist Kit for Shimadzu 30-807-0519 Quartz Torch ICPS-7500/8100/9000, 1.0mm injector for Organics for Shimadzu



Wear Metals in oil			
ARG-1-US6 Slurry U-Series Nebulizer 4mL/min	-	<b>21-808-8214</b> Drain Device	16
20-809-9119HE Twister Spray Chamber with B14 Drain	Ī		
with Helix		30-807-0519	
		Quartz Torch ICPS-7500/8100/9000, 1.0mm injector for Organics for Shimadzu	

IsoMist

IsoMist Programmable Temperature Spray Chamber

IsoMist Kit Shimadzu

# PRODUCT LIST

Nebulizers		
Conikal 1mL/min uptake	ARG-1-UC1	
SeaSpray 2mL/min uptake	ARG-1-USS2	
Slurry 4mL/min uptake	ARG-1-US6	-
MicroMist 400µL/min uptake	ARG-1-UM04	
200μL/min uptake	ARG-1-UM02	
100µL/min uptake	ARG-1-UM01	
50µL/min uptake	ARG-1-UM005	
OpalMist		
2mL/min uptake	ARG-1-PFA2	
400µL/min uptake	ARG-1-PFA04	
200µL/min uptake	ARG-1-PFA02	-
100µL/min uptake	ARG-1-PFA01	
50µL/min uptake	ARG-1-PFA005	
DuraMist		-
1mL/min uptake	ARG-1-DM1	-
400μL/min uptake	ARG-1-DM04	
VeeSpray - Ceramic Standard	ARG-1-CV6	-

Spray Chambers		
Tracey 50mL Cyclonic With B14 gravity drain.	20-808-8881HE	
Twister 50mL Cyclonic With B14 gravity drain.	20-809-9119HE	
Twister 50mL Cyclonic	20-809-0222HE	

KT-1067

Spray Chambers	(continued)	
Cinnabar 20mL Cyclonic	20-809-0164HE	
Drain Device	21-808-8214	M
Tracey TFE 50mL Cyclonic Suitable for use with HF.	20-809-2506	
Tracey TFE 50mL Cyclonic With B14 gravity drain. Suitable for use with HF.	20-809-2508	1
HF Drain Device	21-809-2540	
Glass Transfer Tube, Chamber to ICP-900		
Mounting bracket fo Chamber	r <b>HF Spray</b> 21-809-2839	E

Mounting bracket for Chamber	or HF Spray 21-809-2839	E
Torches		
Semi Demountable	Torch (HF) 30-808-8039	
Comprises: Semi Demountable Torch Body	31-808-1258	
Semi Demountable Torch Adaptor	31-808-1260	00
Tapered Alumina Injecto 1.5mm	or 31-808-0013	11
Joint Clip B14-Nickel	KCM-14	
GazFit Connectors (PKT 4) for 4mm OD side arms	GAZ-04	

Torches (continue	d)	
HF Resistant Injecto	rs	
Tapered Alumina Injector 1.5mm	31-808-0013	
Tapered Alumina Injector 1.8mm	31-808-0015	
Quartz Torches		
Quartz Torch Standard 1.5mm Injector (Suitable for ICPS-7500/8100)	30-808-1179	
Quartz Torch for Organic		
1.0mm Injector (Suitable for ICPS-7500/8100/9000)	30-807-0519	77
Quartz Torch for High TDS, 1.8mm Injector (Suitable for ICPS-7500/8100/9000)	30-807-0518	
Quartz Torches		
Quartz Torch 1.2mm Injector (Suitable for ICPM-8500)	30-808-9986	
Quartz Torch 1.5mm Injector(Suitable for ICPM-8500)	30-808-1090	
Quartz Torches	30-606-1090	440
Quartz Torch L Shape (Suitable for ICPS-7000)	30-808-1091	
Quartz Torches Quartz Mini Torch		1
(Suitable for ICPE-9000)	30-807-0534	

# Tools and connectors to make life easier for the ICP operator



UniFit Connector – connects the sample tube to the nebulizer





Spray chamber drain connector



Reagent Tube with PTFE Sinker (P/N 70-803-0752)



EzyLok Kit – connects the argon line to the nebulizer



O-Ring Removal Tool



Helix interface between nebulizer and spray chamber



Fluka RBS-25 Cleaning Solution (P/N FLUKA25)



Eluo Nebulizer Cleaning Tool

Animal feed, Chemicals and fertilizers, Food and drink, Geological without HF, Metals, Plants, Soil and sediment without HF, Waste water and sludge			
ARG-07-USS2 SeaSpray U-Series Nebulizer 2mL/min		0.25-OB-F Contour Flared End PVC Pump Tube 2tag 0.25mm ID Orange/Blue (PKT 6)	152
20-809-0439HE Tracey Spray Chamber with Helix (Long Neck)	[°	<b>0.89-ORG-F</b> Contour Flared End PVC Pump Tube 2tag 0.89mm ID Orange/Orange (PKT 6)	152
		1.14-RED-F Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	152
30-808-0317  Quartz Torch 2.5mm injector, 4mm OD side arms for Spectro EOP		60-808-1185 Trident Internal Standard Kit	1

Brines and salts			
ARG-07-USS2 SeaSpray U-Series Nebulizer 2mL/min		0.89-ORG-F Contour Flared End PVC Pump Tube 2tag 0.89mm ID Orange/Orange (PKT 6)	152
20-809-0243HE Twister Spray Chamber with Long Neck and Helix		1.14-RED-F Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	152
		60-808-1185 Trident Internal Standard Kit	-
<b>30-808-0317</b> Quartz Torch 2.5mm injector, 4mm OD side arms for Spectro EOP		70-803-0518	11/_
0.25-OB-F Contour Flared End PVC Pump Tube 2tag 0.25mm ID Orange/Blue (PKT 6)	152	Capricorn Argon Humidifier with bypass for Spectro	

Clinical and forensic materials			
ARG-07-USS04 SeaSpray U-Series Nebulizer 0.4mL/min	-	0.19-OR-F Contour Flared End PVC Pump Tube 2tag 0.19mm ID Orange/Red (PKT 6)	152
20-809-0243HE Twister Spray Chamber with Long Neck and Helix	T <sup>o</sup>	0.44-GY-F Contour Flared End PVC Pump Tube 2tag 0.44mm ID Green/Yellow (PKT 6)	152
		1.14-RED-F Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	152
30-808-0317  Quartz Torch 2.5mm injector, 4mm OD side arms for Spectro EOP		60-808-1185 Trident Internal Standard Kit	

Drinking, ground and surface water			
ARG-07-UC2 Conikal U-Series Nebulizer 2mL/min		<b>30-808-0317</b> Quartz Torch 2.5mm injector, 4mm OD side arms for Spectro EOP	-
20-809-0439HE Tracey Spray Chamber with Helix (Long Neck)	oray Chamber with Helix	0.89-ORG-F Contour Flared End PVC Pump Tube 2tag 0.89mm ID Orange/Orange (PKT 6)	152
		1.14-RED-F Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	152

Geological with HF, Soil and sedir	ment with HF		
ARG-07-DM1 DuraMist Nebulizer 1mL/min	7	0.89-ORG-F Contour Flared End PVC Pump Tube 2tag 0.89mm ID Orange/Orange (PKT 6)	152
20-809-2506 Tracey TFE Spray Chamber with Helix	I	1.14-RED-F Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	152
		21-809-2582 PuraFlex Transfer Tube	
30-808-1467 Semi Demountable Torch for Spectro EOP		60-808-1150 Trident Internal Standard Kit for HF solutions	F ( - 1.
0.25-OB-F Contour Flared End PVC Pump Tube 2tag 0.25mm ID Orange/Blue (PKT 6)	152		(

Petrochemicals			
ARG-07-UM06 MicroMist U-Series Nebulizer 0.6mL/min	-	30-808-8005  Quartz Torch 1.8mm injector for Spectro EOP	-
KT-1029 IsoMist Basic Kit EROL	= 1/2	0.89-ORG-SF-F Contour Flared End Solva Flex Pump Tube 2tag 0.89mm ID Orange/Orange (PKT 6)	140
		1.14-RED-SF-F Contour Flared End Solva Flex Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	140

Wear Metals in oil			
ARG-07-US6 Slurry U-Series Nebulizer 4mL/min		30-808-8005 Quartz Torch 1.8mm injector for Spectro EOP	-
20-809-0243HE Twister Spray Chamber with Long Neck and Helix	To	0.89-ORG-SF-F Contour Flared End Solva Flex Pump Tube 2tag 0.89mm ID Orange/Orange (PKT 6)	140
		1.14-RED-SF-F Contour Flared End Solva Flex Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	140

Nebulizers		
Conikal 2mL/min uptake	ARG-07-UC2	
SeaSpray 2mL/min uptake	ARG-07-USS2	
Slurry 4mL/min uptake	ARG-07-US6	-
MicroMist 600µL/min uptake	ARG-07-UM06	
200µL/min uptake	ARG-07-UM02	
100μL/min uptake	ARG-07-UM01	
50μL/min uptake	ARG-07-UM005	
OpalMist		
2mL/min uptake	ARG-07-PFA2	
600µL/min uptake	ARG-07-PFA06	-
200µL/min uptake	ARG-07-PFA02	
100μL/min uptake	ARG-07-PFA01	
50μL/min uptake	ARG-07-PFA005	
DuraMist		
1mL/min uptake	ARG-07-DM1	
400μL/min uptake	ARG-07-DM04	
VeeSpray - Ceramic Standard	ARG-07-CV6	-

IsoMist	
IsoMist Programmable Temperature Spray Chamber	
IsoMist Kit EROL KT-1029	

Spray Chambers		
Tracey 50mL Cyclonic	20-809-0439HE	
Twister 50mL Cyclonic	20-809-0243HE	

Spray Chambers (continued)	
Tracey TFE 50mL Cyclonic 20-809-2506 Suitable for use with HF. Requires Transfer Tube 21-809-2582.	
PuraFlex Transfer Tube 21-809-2582	

Torches		
Quartz Torches EOP Quartz Torch with 2.5mm Injector	30-808-0317	•
Quartz Torches EOP Fixed Sheath Gas Torch with 3.0mm Injector	30-808-1165	
Quartz Torches EOP Quartz Torch with 1.8mm Injector	30-808-8005	
Semi Demountable Torch for Spectro EOP Comprises: SDT Quartz Torch Body	n 30-808-1467	
Tapered Alumina Injector 2.4mm SDT Adaptor	31-808-1195 31-808-1459	

Animal feed, Chemicals and fertilizers, Food and drink, Geological without HF, Metals, Plants, Soil and sediment without HF, Waste water and sludge			
ARG-07-USS2 SeaSpray U-Series Nebulizer 2mL/min		31-808-2974 Tapered Quartz Injector 1.8mm for Spectro Radial D-Torch	
20-808-8882HE Tracey Spray Chamber with Helix	77	<b>31-800-1008</b> Quartz Bonnet	0
	T	0.89-ORG-F Contour Flared End PVC Pump Tube 2tag 0.89mm ID Orange/Orange (PKT 6)	152
30-808-2928 D-Torch for Spectro Radial (without injector)	-	1.14-RED-F Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	152

Brines and salts			
ARG-07-USS2 SeaSpray U-Series Nebulizer 2mL/min	-	<b>31-800-1008</b> Quartz Bonnet	0
20-809-0222HE	豆		
Twister Spray Chamber with Helix		0.89-ORG-F Contour Flared End PVC Pump Tube 2tag 0.89mm ID Orange/Orange (PKT 6)	152
30-808-2928 D-Torch for Spectro Radial (without injector)	-	1.14-RED-F Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	152
31-808-2973 Ceramic Outer Tube for Spectro Radial D-Torch		70-803-0518 Capricorn Argon Humidifier with bypass for Spectro	
31-808-2974 Tapered Quartz Injector 1.8mm for Spectro Radial D-Torch		·	-1

Clinical and forensic materials			
ARG-07-USS04 SeaSpray U-Series Nebulizer 0.4mL/min		31-808-2974 Tapered Quartz Injector 1.8mm for Spectro Radial D-Torch	
20-809-0222HE Twister Spray Chamber with Helix		<b>31-800-1008</b> Quartz Bonnet	0
		0.44-GY-F Contour Flared End PVC Pump Tube 2tag 0.44mm ID Green/Yellow (PKT 6)	152
30-808-2928 D-Torch for Spectro Radial (without injector)	-	1.14-RED-F Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	152

Drinking, ground and surface water			
ARG-07-UC2 Conikal U-Series Nebulizer 2mL/min	•	20-808-8882HE Tracey Spray Chamber with Helix	

APPLICATION PAC	INAGEO		
Drinking, ground and surface wat	er (continued)		
30-808-2928 D-Torch for Spectro Radial (without injector) 31-808-2974 Tapered Quartz Injector 1.8mm for Spectro		0.89-ORG-F Contour Flared End PVC Pump Tube 2tag 0.89mm ID Orange/Orange (PKT 6)	152
Radial D-Torch  31-800-1008  Quartz Bonnet	8	1.14-RED-F Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	152
Geological with HF, Soil and sedin	nent with HF		
ARG-07-DM1 DuraMist Nebulizer 1mL/min	7	31-808-2963 Tapered Alumina Injector 1.8mm for Spectro Radial D-Torch	
20-809-2506 Tracey TFE Spray Chamber with Helix		<b>31-800-1008</b> Quartz Bonnet	0
30-808-2928 D-Torch for Spectro Radial (without injector)	-	0.89-ORG-F Contour Flared End PVC Pump Tube 2tag 0.89mm ID Orange/Orange (PKT 6)	152
31-808-2973 Ceramic Outer Tube for Spectro Radial D-Torch		1.14-RED-F Contour Flared End PVC Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	152
Petrochemicals			
ARG-07-UM06 MicroMist U-Series Nebulizer 0.6mL/min		31-808-2974 Tapered Quartz Injector 1.8mm for Spectro Radial D-Torch	
KT-1029 IsoMist Basic Kit EROL		<b>31-800-1008</b> Quartz Bonnet	0
30-808-2928 D-Torch for Spectro Radial (without injector)	-	0.89-ORG-SF-F Contour Flared End Solva Flex Pump Tube 2tag 0.89mm ID Orange/Orange (PKT 6)	140
31-808-2973 Ceramic Outer Tube for Spectro Radial D-Torch		1.14-RED-SF-F Contour Flared End Solva Flex Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	140
Wear Metals in oil			
ARG-07-US6 Slurry U-Series Nebulizer 4mL/min		31-808-2974 Tapered Quartz Injector 1.8mm for Spectro Radial D-Torch	
20-809-0222HE Twister Spray Chamber with Helix		<b>31-800-1008</b> Quartz Bonnet	8
30-808-2928 D-Torch for Spectro Radial (without injector)	-	0.89-ORG-SF-F Contour Flared End Solva Flex Pump Tube 2tag 0.89mm ID Orange/Orange (PKT 6)	140
31-808-2973 Ceramic Outer Tube for Spectro Radial D-Torch		1.14-RED-SF-F Contour Flared End Solva Flex Pump Tube 2tag 1.14mm ID Red/Red (PKT 6)	140

Nebulizers		
Conikal		
2mL/min uptake	ARG-07-UC2	
SeaSpray		
2mL/min uptake	ARG-07-USS2	
Slurry		- 10
4mL/min uptake	ARG-07-US6	
MicroMist	ADC 07 LIM06	
600µL/min uptake	ARG-07-UM06	
200µL/min uptake	ARG-07-UM02	
100µL/min uptake	ARG-07-UM01	
50μL/min uptake	ARG-07-UM005	
OpalMist		
2mL/min uptake	ARG-07-PFA2	
600µL/min uptake	ARG-07-PFA06	-
200µL/min uptake	ARG-07-PFA02	
100μL/min uptake	ARG-07-PFA01	
50μL/min uptake	ARG-07-PFA005	
DuraMist		-
1mL/min uptake	ARG-07-DM1	
400µL/min uptake	ARG-07-DM04	
VeeSpray - Ceramic		
Standard	ARG-07-CV6	

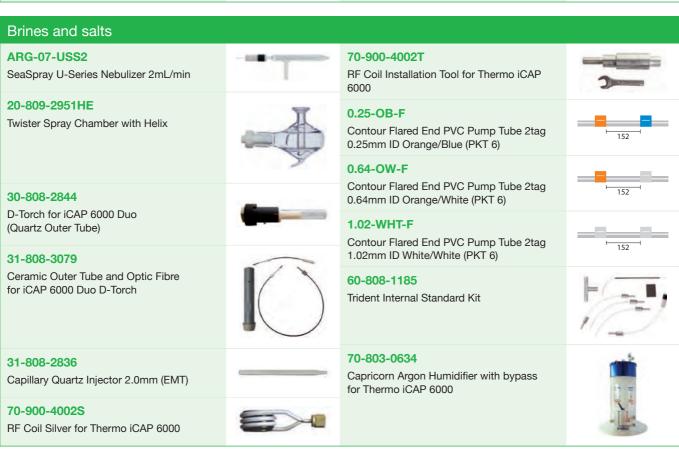
IsoMist	
IsoMist Programmable Temperature Spray Chamber IsoMist Kit EROL KT-1029	

Spray Chambe	rs	
<b>Tracey</b> 50mL Cyclonic	20-808-8882HE	
<b>Twister</b> 50mL Cyclonic	20-809-0222HE	
Cinnabar 20mL Cyclonic	20-809-0164HE	

Spray Chambers (continued)	
Tracey TFE 50mL Cyclonic 20-809-2506	I
Suitable for use with HF.	
	-

Torches		
D-Torch	20, 202, 2022	
Communication	30-808-2928	
Comprises:  Base and Inner Tube	31-808-2942	_
Quartz Outer Tube	31-808-2939	
Injector Adaptor	31-808-3177	
Injector Ferrule	31-808-2962	
Retaining Ring	31-808-2818	
	0. 000 20.0	
D-Torch Options Tapered Quartz Injector		
1.8mm	31-808-2974	
D-Torch Options		
Tapered Alumina Injector	•	
1.8mm	31-808-2963	
<b>D-Torch Options</b>		
Ceramic Outer Tube	31-808-2973	
Quartz Torches		
Quartz Torch with		
1.8mm Injector	30-808-0240	
Quartz Torch with  1.0mm Injector	30-808-1202	1
Quartz Torch with		
2.5mm Injector	/	
(with gas fittings)	30-807-0524	
Semi Demountable		
	30-807-0535	
Comprises:		
Semi Demountable Torch Quartz Body	31-808-2795	
Tapered Alumina Injector		
1.8mm	31-808-2793	
SDT Adaptor	31-808-2796	
Components for Spe		
Semi-Demountable	Torch	
Radial Demountable Torch Tube Assembly		
with 3 gas inlets	30-808-0488-3	
Quartz Injector for		
Spectro Demountable Torch 1.5mm	31-808-1203	
Quartz Injector for		
Spectro Demountable	21 000 0071	
Torch 1.8mm	31-808-0071	
Quartz Injector for Spectro Demountable		
Torch 2.5mm	31-808-1204	

### Animal feed, Chemicals and fertilizers, Food and drink, Geological without HF, Metals, Plants, Soil and sediment without HF, Waste water and sludge **ARG-07-USS2** 70-900-4002T SeaSpray U-Series Nebulizer 2mL/min RF Coil Installation Tool for Thermo iCAP 20-809-2665HE 0.25-OB-F Tracey Spray Chamber with Helix Contour Flared End PVC Pump Tube 2tag 0.25mm ID Orange/Blue (PKT 6) 0.64-OW-F Contour Flared End PVC Pump Tube 2tag 30-808-2844 0.64mm ID Orange/White (PKT 6) D-Torch for iCAP 6000 Duo 1.02-WHT-F (Quartz Outer Tube) Contour Flared End PVC Pump Tube 2tag 1.02mm ID White/White (PKT 6) 31-808-2836 Capillary Quartz Injector 2.0mm (EMT) 60-808-1185 Trident Internal Standard Kit 70-900-4002S RF Coil Silver for Thermo iCAP 6000



ARG-07-USS04 SeaSpray U-Series Nebulizer 0.4mL/min		31-808-2836 Capillary Quartz Injector 2.0mm (EMT)	
20-809-2951HE Twister Spray Chamber with Helix		70-900-4002S RF Coil Silver for Thermo iCAP 6000	
30-808-2844 D-Torch for iCAP 6000 Duo (Quartz Outer Tube)	-	70-900-4002T RF Coil Installation Tool for Thermo iCAP 6000	2

# Clinical and forensic materials (continued) 0.19-OR-F Contour Flared End PVC Pump Tube 2tag 0.19mm ID Orange/Red (PKT 6) 1.02-WHT-F Contour Flared End PVC Pump Tube 2tag 1.02mm ID White/White (PKT 6) 60-808-1185

0.38-OG-F

Contour Flared End PVC Pump Tube 2tag 0.38mm ID Orange/Green (PKT 6)

### Drinking, ground and surface water **ARG-07-UC2** 70-900-4002S Conikal U-Series Nebulizer 2mL/min RF Coil Silver for Thermo iCAP 6000 20-809-2665HE 70-900-4002T Tracey Spray Chamber with Helix RF Coil Installation Tool for Thermo iCAP 6000 0.64-OW-F Contour Flared End PVC Pump Tube 2tag 30-808-2844 0.64mm ID Orange/White (PKT 6) D-Torch for iCAP 6000 Duo (Quartz Outer Tube) 1.02-WHT-F 31-808-2836 Contour Flared End PVC Pump Tube 2tag 1.02mm ID White/White (PKT 6)

Trident Internal Standard Kit

### Capillary Quartz Injector 2.0mm (EMT) Geological with HF, Soil and sediment with HF ARG-07-DM1 70-900-4002S DuraMist Nebulizer 1mL/min RF Coil Silver for Thermo iCAP 6000 70-900-4002T RF Coil Installation Tool for Thermo iCAP 20-809-3469 6000 Tracey TFE Spray Chamber with Helix 0.25-OB-F Contour Flared End PVC Pump Tube 2tag 0.25mm ID Orange/Blue (PKT 6) 30-808-2844 0.64-OW-F D-Torch for iCAP 6000 Duo Contour Flared End PVC Pump Tube 2tag (Quartz Outer Tube) 0.64mm ID Orange/White (PKT 6) 31-808-3079 1.02-WHT-F Ceramic Outer Tube and Optic Fibre Contour Flared End PVC Pump Tube 2tag for iCAP 6000 Duo D-Torch 1.02mm ID White/White (PKT 6) 60-808-1150 Trident Internal Standard Kit for HF solutions 31-808-2835 Alumina Injector 2.0mm (EMT)





Wear Metals in oil			
ARG-07-US6 Slurry U-Series Nebulizer 4mL/min	-	31-808-2833 Tapered Quartz Injector 1.0mm (EMT)	<del>-  </del>
20-809-2951HE Twister Spray Chamber with Helix	vister Spray Chamber with Helix 0-808-2844	<b>70-900-4002S</b> RF Coil Silver for Thermo iCAP 6000	
30-808-2844		<b>70-900-4002T</b> RF Coil Installation Tool for Thermo iCAP 6000	>
D-Torch for iCAP 6000 Duo (Quartz Outer Tube)		0.64-OW-SF-F	
31-808-3079 Ceramic Outer Tube and Optic Fibre	178	Contour Flared End Solva Flex Pump Tube 2tag 0.64mm ID Orange/White (PKT 6)	140
for iCAP 6000 Duo D-Torch	1.02-WHT-SF-F Contour Flared End Solva Flex Pump Tube 2tag 1.02mm ID White/White (PKT 6)	140	

# PRODUCT LIST

Nebulizers		
Conikal 2mL/min uptake	ARG-07-UC2	
SeaSpray 2mL/min uptake	ARG-07-USS2	
Slurry 4mL/min uptake	ARG-07-US6	_
MicroMist		
600µL/min uptake 200µL/min uptake	ARG-07-UM06 ARG-07-UM02	
100µL/min uptake	ARG-07-UM01 ARG-07-UM005	
oopeniin aptako	7410 07 0111000	
OpalMist		
2mL/min uptake	ARG-07-PFA2	
600µL/min uptake	ARG-07-PFA06	
200µL/min uptake	ARG-07-PFA02	-
100µL/min uptake	ARG-07-PFA01	
50µL/min uptake	ARG-07-PFA005	

Nebulizers (continued)				
DuraMist 1mL/min uptake 400µL/min uptake	ARG-07-DM1 ARG-07-DM04	7		
VeeSpray - Cerami Standard	C ARG-07-CV6	-		

# IsoMist Programmable Temperature Spray Chamber IsoMist Kit for Thermo iCAP 6000 Duo KT-1015



Spray Chambers (continued)				
Twister 50mL Cyclonic	20-809-2951HE			
Tracey TFE 50mL Cyclonic (Suitable for HF)	20-809-3469	2		
Adaptor Right Angle With Ball Joint	21-809-2761			

Torches (continue	d)	
Tapered Alumina Injector 1.5mm	31-808-2787	
Alumina Injector 2.0mm	31-808-2786	
Sapphire Injector 2.0mm	31-808-2804	
Other Products  Duo Periscope Window	31-808-2677	

Torches		
D-Torch Demountab	le Tareb	
D-Torch Demountab	ie forch	
Outer Tube	30-808-2844	
Comprises:		
Base and Inner Tube	31-808-2932	
Quartz Outer Tube	31-808-2840	
Retaining Ring	31-808-2707	
Injector Adaptor	31-808-2895	
Injector Ferrule	31-808-2897	
Injectors for D-Torch	a & EMT Torch	
Tapered Quartz Injector		
1.0mm	31-808-2833	
Tapered Quartz Injector 1.5mm	31-808-2834	Total .
Capillary Quartz Injector		
2.0mm	31-808-2836	
Alumina Injector 2.0mm	31-808-2835	
Ceramic Outer Tube Fibre for D-Torch	and Optic	
	31-808-3079	
Comprises:		
Ceramic Outer Tube	31-808-2863	
Optic Fibre 170mm	31-808-2933	
Optic Fibre 450mm	31-808-3117	
Quartz Torch		
EMT Design	31-808-2811	
Quartz Torch		
Old Design	31-808-2676	
Injectors for Old Des	sign Torch	
Tapered Quartz Injector	31-808-2719	
Tapered Quartz Injector	01 000-2119	
1.5mm	31-808-2702	
Capillary Quartz Injector		
2.0mm	31-808-2675	

RF Coils		
RF Coil Gold, Teflon Coated	70-900-4002G	
RF Coil Silver, Teflon Coated	70-900-4002S	
Installation Kit	70-900-4002T	>

Animal feed, Chemicals and fertilizers, Food and drink, Geological without HF, Metals, Plants, Soil and sediment without HF, Waste water and sludge			
ARG-07-USS2 SeaSpray U-Series Nebulizer 2mL/min	-	<b>70-900-4002S</b> RF Coil Silver for Thermo iCAP 6000	
20-809-2665HE Tracey Spray Chamber with Helix		<b>70-900-4002T</b> RF Coil Installation Tool for Thermo iCAP 6000	
30-808-2877  D-Torch for iCAP 6000 Radial		0.64-OW-F Contour Flared End PVC Pump Tube 2tag 0.64mm ID Orange/White (PKT 6)	152
(Quartz Outer Tube)  31-808-2834  Tapered Quartz Injector 1.5mm (EMT)		1.02-WHT-F Contour Flared End PVC Pump Tube 2tag 1.02mm ID White/White (PKT 6)	152

Tapered Quartz Injector 1.5mm (EMT)		1.02mm ib writte/writte (FK1 6)	
Brines and salts			
ARG-07-USS2 SeaSpray U-Series Nebulizer 2mL/min	-	70-900-4002S RF Coil Silver for Thermo iCAP 6000	
20-809-2951HE Twister Spray Chamber with Helix		<b>70-900-4002T</b> RF Coil Installation Tool for Thermo iCAP 6000	3
30-808-2877	9	0.64-OW-F Contour Flared End PVC Pump Tube 2tag 0.64mm ID Orange/White (PKT 6)	152
D-Torch for iCAP 6000 Radial (Quartz Outer Tube)		1.02-WHT-F Contour Flared End PVC Pump Tube 2tag 1.02mm ID White/White (PKT 6)	152
31-808-2881 Ceramic Outer Tube for Radial iCAP 6000 D-Torch		70-803-0634 Capricorn Argon Humidifier with bypass for Thermo iCAP 6000	23 19
31-808-2836 Capillary Quartz Injector 2.0mm (EMT)			-1

Clinical and forensic materials			
ARG-07-USS04 SeaSpray U-Series Nebulizer 0.4mL/min	-	<b>70-900-4002S</b> RF Coil Silver for Thermo iCAP 6000	
20-809-2951HE Twister Spray Chamber with Helix		<b>70-900-4002T</b> RF Coil Installation Tool for Thermo iCAP 6000	2
<b>30-808-2877</b> D-Torch for iCAP 6000 Radial		0.38-OG-F Contour Flared End PVC Pump Tube 2tag 0.38mm ID Orange/Green (PKT 6)	152
(Quartz Outer Tube)  31-808-2836  Capillary Quartz Injector 2.0mm (EMT)		1.02-WHT-F Contour Flared End PVC Pump Tube 2tag 1.02mm ID White/White (PKT 6)	152

Drinking, ground and surface water			
ARG-07-UC2 Conikal U-Series Nebulizer 2mL/min	•	70-900-4002S RF Coil Silver for Thermo iCAP 6000	
20-809-2665HE Tracey Spray Chamber with Helix	P 6000 Radial	<b>70-900-4002T</b> RF Coil Installation Tool for Thermo iCAP 6000	)
<b>30-808-2877</b> D-Torch for iCAP 6000 Radial		0.64-OW-F  Contour Flared End PVC Pump Tube 2tag 0.64mm ID Orange/White (PKT 6)	152
(Quartz Outer Tube)  31-808-2834  Tapered Quartz Injector 1.5mm (EMT)		1.02-WHT-F Contour Flared End PVC Pump Tube 2tag 1.02mm ID White/White (PKT 6)	152





# APPLICATION PACKAGES

Wear Metals in oil			
ARG-07-US6 Slurry U-Series Nebulizer 4mL/min	-	31-808-2833 Tapered Quartz Injector 1.0mm (EMT)	(1710)
20-809-2951HE Twister Spray Chamber with Helix	I	70-900-4002S RF Coil Silver for Thermo iCAP 6000	
		<b>70-900-4002T</b> RF Coil Installation Tool for Thermo iCAP 6000	2
30-808-2877 D-Torch for iCAP 6000 Radial (Quartz Outer Tube)		0.64-OW-SF-F Contour Flared End Solva Flex Pump Tube 2tag 0.64mm ID Orange/White (PKT 6)	140
31-808-2881 Ceramic Outer Tube for Radial iCAP 6000 D-Torch		1.02-WHT-SF-F Contour Flared End Solva Flex Pump Tube 2tag 1.02mm ID White/White (PKT 6)	140

**IsoMist** 

IsoMist Programmable Temperature Spray Chamber

IsoMist Kit for Thermo

iCAP 6000 Radial

# PRODUCT LIST

Nebulizers		
Conikal 2mL/min uptake	ARG-07-UC2	
SeaSpray 2mL/min uptake	ARG-07-USS2	
Slurry 4mL/min uptake	ARG-07-US6	-
MicroMist		
600μL/min uptake	ARG-07-UM06	
200μL/min uptake	ARG-07-UM02	
100μL/min uptake	ARG-07-UM01	
50µL/min uptake	ARG-07-UM005	
OpalMist		
2mL/min uptake	ARG-07-PFA2	
600µL/min uptake	ARG-07-PFA06	-
200µL/min uptake	ARG-07-PFA02	4
100μL/min uptake	ARG-07-PFA01	
50μL/min uptake	ARG-07-PFA005	
DuraMist		-
1mL/min uptake	ARG-07-DM1	
400µL/min uptake	ARG-07-DM04	1
VeeSpray - Ceramic		
Standard	ARG-07-CV6	

# Tracey 50mL Cyclonic 20-809-2665HE Twister 50mL Cyclonic 20-809-2951HE Tracey TFE 50mL Cyclonic 20-809-9198 Suitable for use with HF. Straight Ball Joint Adaptor 21-809-2723

KT-1021

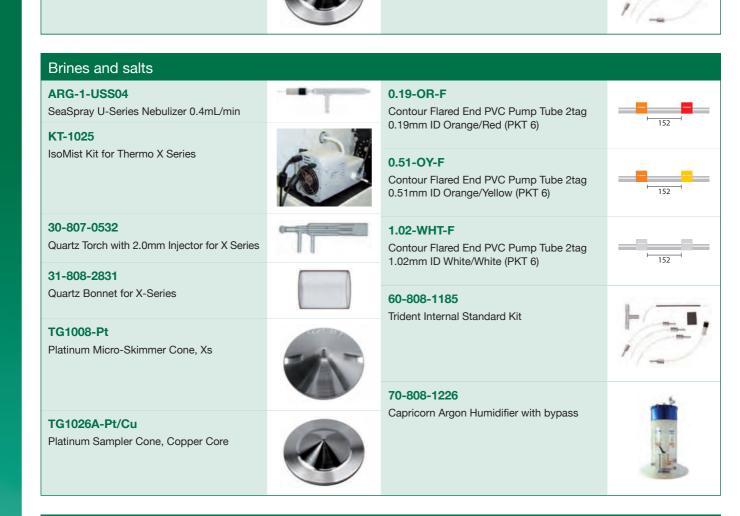
# PRODUCT LIST

Torches		
D-Torch Demountab		
Comprises: Base and Inner Tube Quartz Outer Tube Retaining Ring Injector Adaptor	30-808-2877 31-808-2932 31-808-2878 31-808-2707 31-808-2895	
Injector Ferrule	31-808-2897	
Injectors for D-Torch Tapered Quartz Injector 1.0mm (EMT) Tapered Quartz Injector 1.5mm (EMT) Capillary Quartz Injector 2.0mm (EMT)	<b>&amp; EMT Torch</b> 31-808-2833 31-808-2834 31-808-2836	
Alumina Injector 2.0mm (EMT)	31-808-2835	
Quartz Torch Quartz Torch (EMT)	31-808-2810	R 4
Quartz Torch Quartz Torch (Old Design)	31-808-2692	
Injectors for Old Des Demountable Torch Tapered Quartz Injector 1.0mm Tapered Quartz Injector 1.5mm Capillary Quartz Injector 2.0mm	31-808-2719 31-808-2702 31-808-2675	====
Tapered Alumina Injector 1.5mm Alumina Injector 2.0mm Sapphire Injector 2.0mm	31-808-2787 31-808-2786	
Options for D-Torch Ceramic Outer Tube	31-808-2881	

RF Coils		
RF Coil Gold, Teflon Coated	70-900-4002G	
RF Coil Silver, Teflon Coated	70-900-4002S	
Installation Kit	70-900-4002T	)

#### APPLICATION PACKAGES

Animal feed, Chemicals and fertilizers, Drinking, ground and surface water, Food and drink, Geological without HF, Metals, Plants, Soil and sediment without HF, Waste water and sludge TG1022-Ni ARG-1-USS04 SeaSpray U-Series Nebulizer 0.4mL/min Nickel Skimmer Cone, Xi, Xt IsoMist Kit for Thermo X Series 0.19-OR-F Contour Flared End PVC Pump Tube 2tag 0.19mm ID Orange/Red (PKT 6) 0.51-OY-F 30-808-1279 Contour Flared End PVC Pump Tube 2tag Quartz Torch with 1.5mm Injector for X Series 0.51mm ID Orange/Yellow (PKT 6) 31-808-2831 1.02-WHT-F Quartz Bonnet for X-Series Contour Flared End PVC Pump Tube 2tag 1.02mm ID White/White (PKT 6) TG1021-Ni/Cu 60-808-1185 Nickel Sampler Cone, Copper Core Trident Internal Standard Kit



# Clinical and forensic materials ARG-1-USS04 SeaSpray U-Series Nebulizer 0.4mL/min KT-1025 IsoMist Kit for Thermo X Series 30-807-0532 Quartz Torch with 2.0mm Injector for X Series 31-808-2831 Quartz Bonnet for X-Series

#### Clinical and forensic materials (continued) TG1021-Ni/Cu 0.51-OY-F Nickel Sampler Cone, Copper Core Contour Flared End PVC Pump Tube 2tag 0.51mm ID Orange/Yellow (PKT 6) 1.02-WHT-F Contour Flared End PVC Pump Tube 2tag TG1022-Ni 1.02mm ID White/White (PKT 6) Nickel Skimmer Cone, Xi, Xt 60-808-1185 Trident Internal Standard Kit 0.19-OR-F Contour Flared End PVC Pump Tube 2tag 0.19mm ID Orange/Red (PKT 6)





#### APPLICATION PACKAGES

#### Semiconductors ARG-1-PFA04 TG1026A-Pt/Cu OpalMist Nebulizer 0.4mL/min Platinum Sampler Cone, Copper Core KT-1025P IsoMist Kit with PFA Spray Chamber 0.19-OR-F for Thermo X Series Contour Flared End PVC Pump Tube 2tag 0.19mm ID Orange/Red (PKT 6) 0.51-OY-F 30-808-1257 Contour Flared End PVC Pump Tube 2tag Semi Demountable Torch (Platinum Injector) 0.51mm ID Orange/Yellow (PKT 6) for X-Series 31-808-2831 1.02-WHT-F Quartz Bonnet for X-Series Contour Flared End PVC Pump Tube 2tag 1.02mm ID White/White (PKT 6) TG1008-Pt 60-808-1185 Platinum Micro-Skimmer Cone, Xs Trident Internal Standard Kit

Petrochemicals			
ARG-1-USS04 SeaSpray U-Series Nebulizer 0.4mL/min	-	TG1022-Ni Nickel Skimmer Cone, Xi, Xt	
KT-1025 IsoMist Kit for Thermo X Series	-6		
ISOMIST NICTOL THEINIO A Series		<b>0.25-OB-SF-F</b> Contour Flared End Solva Flex Pump Tube 2tag 0.25mm ID Orange/Blue (PKT 6)	140
<b>30-808-1279</b> Quartz Torch with 1.5mm Injector for X Series		0.51-OY-SF-F Contour Flared End Solva Flex Pump Tube 2tag 0.51mm ID Orange/Yellow (PKT 6)	140
<b>31-808-2831</b> Quartz Bonnet for X-Series		1.02-WHT-SF-F Contour Flared End Solva Flex Pump Tube 2tag 1.02mm ID White/White (PKT 6)	140
TG1021-Ni/Cu Nickel Sampler Cone, Copper Core		60-808-1185 Trident Internal Standard Kit	-

#### PRODUCT LIST

Nebulizers		
SeaSpray		
400µL/min uptake	ARG-1-USS04	
MicroMist		_
400µL/min uptake	ARG-1-UM04	
200µL/min uptake	ARG-1-UM02	
100µL/min uptake	ARG-1-UM01	
50µL/min uptake	ARG-1-UM005	
OpalMist		
400µL/min uptake	ARG-1-PFA04	
200µL/min uptake	ARG-1-PFA02	
100µL/min uptake	ARG-1-PFA01	
50µL/min uptake	ARG-1-PFA005	

#### Torches (continued) **Injector Options** Tapered Alumina Injector 31-808-1013 1.5mm Platinum Injector 31-808-1256 1.5mm Sapphire Injector 2.0mm 31-808-3001 **Other Products** Quartz Bonnet 31-808-2831

# **IsoMist IsoMist Programmable Temperature Spray Chamber** IsoMist Kit for Thermo X Series KT-1025

Spray Chambers	3	
Twister 50mL Cyclonic	20-809-0293HE	
Twinnabar 20mL Cyclonic	20-809-0536HE	

- 1		
Twister 50mL Cyclonic	20-809-0293HE	
Twinnabar 20mL Cyclonic	20-809-0536HE	
Torches		
Fixed Torch (Quar	tz One Piece)	
Quartz Torch with 1.5mm Injector	30-808-1279	
Quartz Torch with 2.0mm Injector	30-807-0532	
Semi Demountabl	e Torch (HF)	
	30-808-0998	
Comprises:		
X-Series Semi		

31-808-1009

31-808-0984

31-808-1013

GAZ-06

Demountable Torch

Tapered Alumina Injector

**GazFit Connectors** 

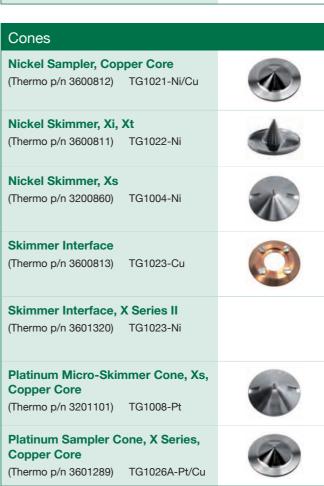
X-Series Semi Demountable Torch

Body

Adaptor

1.5mm

(PKT 4)



# **NEBULIZER TUBING & CONNECTORS**

EL-1

#### EzyLok Kit for Nebulizer Gas Side Arm

#### Comprises:

EzyLok Connector for 4mm Tubing QSM-4
EzyLok 6mm Hose Adaptor 70-808-0735
Hose Clip, 6mm SNP-1

#### Sample Tube Connectors (PKT 10)

	UniFit P/N	EzyFit P/N
0.25mm ID x 1.27mm OD x 700mm long	NFT-025	EZT-025
0.25mm ID x 1.27mm OD x 2000mm long	NFT2-025	EZT2-025
0.50mm ID x 1.27mm OD x 700mm long	NFT-050	EZT-050
0.50mm ID x 1.27mm OD x 2000mm long	NFT2-050	EZT2-050
0.75mm ID x 1.27mm OD x 700mm long	NFT-075	EZT-075
0.75mm ID x 1.27mm OD x 2000mm long	NFT2-075	EZT2-075
0.75mm ID x 1.27mm OD x 1500mm long	NFTS-075	EZTS-075
0.07mm ID x 1/16" OD x 700mm long	NFT-16-07	EZT-16-07
0.13mm ID x 1/16" OD x 700mm long	NFT-16-13	EZT-16-13
0.18mm ID x 1/16" OD x 700mm long	NFT-16-18	EZT-16-18
0.25mm ID x 1/16" OD x 700mm long	NFT-16-25	EZT-16-25
0.25mm ID x 1/16" OD x 1500mm long	NFTS-16-25	EZTS-16-25
0.50mm ID x 1/16" OD x 700mm long	NFT-16-50	EZT-16-50
0.50mm ID x 1/16" OD x 1500mm long	NFTS-16-50	EZTS-16-50
0.75mm ID x 1/16" OD x 700mm long	NFT-16-75	EZT-16-75
0.75mm ID x 1/16" OD x 1500mm long	NFTS-16-75	EZTS-16-75
Tefzel 0.5mm ID x 1.3mm OD x 700mm long	NFTFE-050	EZTFE-050
0.3mm ID x 0.75mm OD x 700mm long	NFT-0703	EZT-0703





#### **PFA Sample Tubing**

ų		
	0.25mm ID x 1.27mm OD x 10m long	STT-025
	0.50mm ID x 1.27mm OD x 10m long	STT-050
	0.75mm ID x 1.27mm OD x 10m long	STT-075
	0.25mm ID x 1/16" OD x 10m long	STT-16-25
	0.50mm ID x 1/16" OD x 10m long	STT-16-50
	0.75mm ID x 1/16" OD x 10m long	STT-16-75
	0.3mm ID x 0.75mm OD x 10m long	STT-0703
	0.13mm ID x 1.27mm OD x 10m long	PFT-013
	0.18mm ID x 1.27mm OD x 10m long	PFT-018
	0.07mm ID x 1/16" OD x 10m long	PFT-16-07
	0.13mm ID x 1/16" OD x 10m long	PFT-16-13
	0.18mm ID x 1/16" OD x 10m long	PFT-16-18
	1/8" ID x 1/4" OD x 1m long	1/4PFA-HW
	Tefzel 0.5mm ID x 1.3mm OD x 10m long	TFE-050

#### Other Tubing & Clips

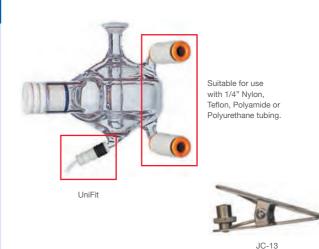
·	
VeeSpray Nebulizer Sample Tubing (PKT 10)	VSS-075
VeeSpray Screw & O-Rings Kit (PKT 10 of each)	VKT-0118
PolyCon/VeeSpray Sample Tube O-rings (PKT 10)	V-001
Nebulizer Pressure Hose Clips (PKT 10)	SNP-1
Sample tubing 0.25mm ID x 1.27mm OD x 700mm long, for 0.05 and 0.1ml/min OpalMist and PolyCon (PKT 10)	70-808-0360
Opanviist and PolyCon (PKT 10)	70-000-0300

#### FITTINGS & CONNECTORS FOR SPRAY CHAMBERS

O-Rings & Seals	
Helix Seal (PKT 4)	70-100-0237
Helix Locking Screw	70-100-0152
Nebulizer Spacer	21-100-0246
O-ring set for Large Adaptor (Tracey, Twister)	70-808-0501
O-ring set for Small Adaptor (Cinnabar, Twinnabar)	21-808-0818
Teflon coated Viton O-Rings for spray chamber, nebulizer seal (PKT 10)	VT-009
Teflon coated Viton O-Rings for spray chamber, 12mm small adaptor seal (PKT 5)	VT-9/1.5
Teflon coated Viton O-Rings for spray chamber, 16mm large adaptor seal (PKT 10)	VT-10/2
Silicon o-rings for spray chamber, nebulizer seal (PKT 10)	S-009



#### Clips & Connectors Metal Ball Joint Clip JC-13 (to connect spray chamber and torch) Nickel Joint Clip B14 (to connect spray chamber and drain adaptors) KCM-14 Nickel Joint Clip KCM29 (to connect spray chamber and drain adaptors) KCM-29 EzyLok Connector for Jacketed Spray Chamber Coolant Arm Tubing (PKT 4) QSM-1/4-4 UniFit Connector with sample tube, 0.75mm ID x 1/16" OD x 700mm long (PKT 3) UFT-16-75 UniFit Connector with sample tube, 0.75mm ID x 1.3mm OD x 700mm long (PKT 3) UFT-075 UniFit Connector with sample tube, 0.86mm ID x 2mm OD x 480mm long (PKT 3) UFT-2-86



#### **CONNECTORS FOR TORCHES**

GazFit Connectors		
GazFit Connectors (PKT 2), for 8mm OD arm	GAZ-08	
GazFit Connectors (PKT 4), for 6mm OD torch side arms	GAZ-06	
GazFit Connectors (PKT 4), 2 for 6mm OD torch side arms, 2 for 4mm OD torch side arms	GAZ-0604	
GazFit Connectors (PKT 4), for 5mm OD torch side arms	GAZ-05	
GazFit Connectors (PKT 4), for 4mm OD torch side arms	GAZ-04	
GazFit connectors are only suitable for torches with tolerances of no more than +/- 0.15mm on the diameter of the side arms.		
All Glass Expansion torches meet this specification.		

# **O-Rings** Viton O-Rings for demountable torch

ball joint connectors (PKT 10) 70-V-011



#### **PVC PERISTALTIC PUMP TUBING**

All tubes made from Tygon R3603/R3607 or equivalent. Supplied in packs of 12 tubes.

#### Special Properties:

Inexpensive all-round tubing for general laboratory applications.

#### Advantages:

Transparent.

Resistant to almost all inorganic materials

Does not age.

Low gas permeability. Smooth inner surface.

#### Limitations:

Potential leaching of plasticizers.



#### PVC, 2 Bridged (152mm between tags)

•		
Tag Colours	ID (mm)	P/N
orange/black	0.13	0.13-OBLK
orange/red	0.19	0.19-OR
orange/blue	0.25	0.25-OB
orange/green	0.38	0.38-OG
green/yellow	0.44	0.44-GY
orange/yellow	0.51	0.51-OY
white/yellow	0.57	0.57-WY
orange/white	0.64	0.64-OW
black/black	0.76	0.76-BLK
orange/orange	0.89	0.89-ORG
white/black	0.95	0.95-WBLK
white/white	1.02	1.02-WHT
white/red	1.09	1.09-WR
red/red	1.14	1.14-RED
red/grey	1.22	1.22-RGRY
grey/grey	1.30	1.30-GRY
yellow/yellow	1.42	1.42-YLW
yellow/blue	1.52	1.52-YB
blue/blue	1.65	1.65-BLU
blue/green	1.75	1.75-BG
green/green	1.85	1.85-GRN
purple/purple	2.06	2.06-PUR
purple/black	2.29	2.29-PBLK
purple/orange	2.54	2.54-PO
purple/white	2.79	2.79-PW
black/white	3.17	3.17-BLKW

#### PVC, 3 Bridged (72mm between tags)

Tag Colours	ID (mm)	P/N
orange/black	0.13	0.13-OBLK3B
orange/red	0.19	0.19-OR3B
orange/blue	0.25	0.25-OB3B
orange/green	0.38	0.38-OG3B
green/yellow	0.44	0.44-GY3B
orange/yellow	0.51	0.51-OY3B
white/yellow	0.57	0.57-WY3B
orange/white	0.64	0.64-OW3B
black/black	0.76	0.76-BLK3B
orange/orange	0.89	0.89-ORG3B
white/black	0.95	0.95-WBLK3B
white/white	1.02	1.02-WHT3B
white/red	1.09	1.09-WR3B
red/red	1.14	1.14-RED3B
red/grey	1.22	1.22-RGRY3B
grey/grey	1.30	1.30-GRY3B
yellow/yellow	1.42	1.42-YLW3B
yellow/blue	1.52	1.52-YB3B
blue/blue	1.65	1.65-BLU3B
green/green	1.85	1.85-GRN3B
purple/purple	2.06	2.06-PUR3B
purple/black	2.29	2.29-PBLK3B
purple/orange	2.54	2.54-PO3B
purple/white	2.79	2.79-PW3B
black/white	3.17	3.17-BLKW3B

#### **SOLVA PERISTALTIC PUMP TUBING**

All tubes made from Tygon 4040 or equivalent.

Supplied in packs of 12 tubes.

Special tubing for hydrocarbons,

#### **Special Properties:**

petroleum products and distillates.

#### Solva, 2 Bridged (140mm between tags)

Tag Colours	ID (mm)	P/N
orange/blue	0.25	0.25-OB-SF
orange/green	0.38	0.38-OG-SF
orange/yellow	0.51	0.51-OY-SF
orange/white	0.64	0.64-OW-SF
black/black	0.76	0.76-BLK-SF
orange/orange	0.89	0.89-ORG-SF
white/white	1.02	1.02-WHT-SF
red/red	1.14	1.14-RED-SF
grey/grey	1.30	1.30-GRY-SF

#### Advantages:

Specially formulated to transport hydrocarbons, petroleum products and distillates.

Ideal for gasoline, kerosene, heating oils, cutting liquids and coolants based on glycols.

Low gas permeability

#### Limitations:

Not recommended for strong acids and alkalies, foodstuffs, beverages and medicines.

Potential leaching of plasticizers.

Tag Colours	ID (mm)	P/N
yellow/yellow	1.42	1.42-YLW-SF
yellow/blue	1.52	1.52-YB-SF
blue/blue	1.65	1.65-BLU-SF
green/green	1.85	1.85-GRN-SF
purple/purple	2.06	2.06-PUR-SF
purple/black	2.29	2.29-PBLK-SF
purple/orange	2.54	2.54-PO-SF
purple/white	2.79	2.79-PW-SF

#### VITON® PERISTALTIC PUMP TUBING

All tubes made from Fluran HC F-5500-A or equivalent.

#### **Special Properties:**

Special tubing for concentrated acids and corrosive solvents.

#### Advantages:

High chemical resistance. Low gas permeability. Wide temperature range.

#### Limitations:

Limited service life.



# Viton®, 2 Bridged (127mm between tags)

Tag Colours	ID (mm)	P/N
orange/yellow	0.51	VS0.51-OY
orange/white	0.64	VS0.64-OW
black/black	0.76	VS0.76-BLK
orange/orange	0.89	VS0.89-ORG
white/white	1.02	VS1.02-WHT
red/red	1.14	VS1.14-RED
grey/grey	1.30	VS1.30-GRY
yellow/yellow	1.42	VS1.42-YLW
yellow/blue	1.52	VS1.52-YB
blue/blue	1.65	VS1.65-BLU
green/green	1.85	VS1.85-GRN
purple/purple	2.06	VS2.06-PUR
purple/black	2.29	VS2.29-PBLK
purple/orange	2.54	VS2.54-PO
purple/white	2.79	VS2.79-PW

Supplied in packs of 12 tubes

#### Viton® Tubing without Stoppers

ID (mm)	Wall (mm)	P/N
1.00	1.00	V-1
1.50	0.75	V-1.5
2.00	1.00	V-2
3.00	1.00	V-3

Supplied in rolls

All tubes made from Tygon MHSL 2001.

#### Special Properties:

Environmental-friendly tubing especially designed for solvents. Suitable for MIBK.

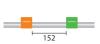
TYGON® MH PERISTALTIC PUMP TUBING

#### Advantages:

High chemical resistance. Low gas permeability. Wide temperature range.

#### Limitations:

Limited service life.



#### Tygon® MH Tubing, 2 Bridged (152mm between tags)

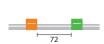
Tag Colours	ID (mm)	P/N
orange/green	0.38	0.38-ORG-MH
orange/white	0.64	0.64-OW-MH
white/white	1.02	1.02-WHT-MH
yellow/blue	1.52	1.52-YB-MH
purple/purple	2.06	2.06-PUR-MH
purple/white	2.79	2.79-PW-MH

Supplied in packs of 6 tubes

#### Tygon® MH Tubing, Continuous

ID (mm)	P/N
0.38	0.38-ORGM
0.64	0.64-OWM
1.02	1.02-WHTM
1.52	1.52-YBM
2.06	2.06-PURM
2.79	2.79-PWM

Supplied in rolls of 10 metres



#### Tygon® MH Tubing, 2 Bridged (72mm between tags)

Tag Colours	ID (mm)	P/N
orange/green	0.38	0.38-ORG-MH3
orange/white	0.64	0.64-OW-MH3
white/white	1.02	1.02-WHT-MH3
yellow/blue	1.52	1.52-YB-MH3
purple/purple	2.06	2.06-PUR-MH3
purple/white	2.79	2.79-PW-MH3

Supplied in packs of 6 tubes

#### **CONTOUR FLARED END PVC PERISTALTIC PUMP TUBING**

All tubes made from Tygon R3603/R3607 or equivalent.

Supplied in packs of 6 tubes.

#### **Special Properties:**

Inexpensive all-round tubing for general laboratory applications.

#### Advantages:

Transparent.

Resistant to almost all inorganic materials

Does not age.

Low gas permeability. Smooth inner surface. Limitations:

Potential leaching of plasticizers.



PVC, 2 Bridged (152mm between tags)

(102111111 Bottiroon tago)		
Tag Colours	ID (mm)	P/N
orange/black	0.13	0.13-OBLK-F
orange/red	0.19	0.19-OR-F
orange/blue	0.25	0.25-OB-F
orange/green	0.38	0.38-OG-F
green/yellow	0.44	0.44-GY-F
orange/yellow	0.51	0.51-OY-F
white/yellow	0.57	0.57-WY-F
orange/white	0.64	0.64-OW-F
black/black	0.76	0.76-BLK-F
orange/orange	0.89	0.89-ORG-F
white/black	0.95	0.95-WBLK-F
white/white	1.02	1.02-WHT-F
white/red	1.09	1.09-WR-F
red/red	1.14	1.14-RED-F
red/grey	1.22	1.22-RGRY-F
grey/grey	1.30	1.30-GRY-F
yellow/yellow	1.42	1.42-YLW-F
yellow/blue	1.52	1.52-YB-F
blue/blue	1.65	1.65-BLU-F
blue/green	1.75	1.75-BG-F
green/green	1.85	1.85-GRN-F
purple/purple	2.06	2.06-PUR-F
purple/black	2.29	2.29-PBLK-F
purple/orange	2.54	2.54-PO-F
purple/white	2.79	2.79-PW-F
black/white	3.17	3.17-BLKW-F



# PVC, 3 Bridged (72mm between tags)

orange/black 0.13 0.13-OBLK3B-F orange/red 0.19 0.19-OR3B-F orange/blue 0.25 0.25-OB3B-F orange/green 0.38 0.38-OG3B-F green/yellow 0.44 0.44-GY3B-F orange/yellow 0.51 0.51-OY3B-F white/yellow 0.57 0.57-WY3B-F orange/white 0.64 0.64-OW3B-F black/black 0.76 0.76-BLK3B-F orange/orange 0.89 0.89-ORG3B-F white/black 0.95 0.95-WBLK3B-F white/white 1.02 1.02-WHT3B-F white/red 1.09 1.09-WR3B-F red/red 1.14 1.14-RED3B-F red/grey 1.22 1.22-RGRY3B-F grey/grey 1.30 1.30-GRY3B-F yellow/yellow 1.42 1.42-YLW3B-F yellow/yellow 1.42 1.42-YLW3B-F green/green 1.85 1.85-GRN3B-F purple/black 2.29 2.29-PBLK3B-F	Tag Colours	ID (mm)	P/N
orange/blue 0.25 0.25-OB3B-F orange/green 0.38 0.38-OG3B-F green/yellow 0.44 0.44-GY3B-F orange/yellow 0.51 0.51-OY3B-F white/yellow 0.57 0.57-WY3B-F orange/white 0.64 0.64-OW3B-F black/black 0.76 0.76-BLK3B-F orange/orange 0.89 0.89-ORG3B-F white/black 0.95 0.95-WBLK3B-F white/white 1.02 1.02-WHT3B-F white/red 1.09 1.09-WR3B-F red/red 1.14 1.14-RED3B-F red/grey 1.22 1.22-RGRY3B-F grey/grey 1.30 1.30-GRY3B-F yellow/yellow 1.42 1.42-YLW3B-F yellow/yellow 1.52 1.52-YB3B-F blue/blue 1.65 1.65-BLU3B-F green/green 1.85 1.85-GRN3B-F purple/purple 2.06 2.06-PUR3B-F	orange/black	0.13	0.13-OBLK3B-F
orange/green 0.38 0.38-OG3B-F green/yellow 0.44 0.44-GY3B-F orange/yellow 0.51 0.51-OY3B-F white/yellow 0.57 0.57-WY3B-F orange/white 0.64 0.64-OW3B-F black/black 0.76 0.76-BLK3B-F orange/orange 0.89 0.89-ORG3B-F white/black 0.95 0.95-WBLK3B-F white/white 1.02 1.02-WHT3B-F white/red 1.09 1.09-WR3B-F red/red 1.14 1.14-RED3B-F red/grey 1.22 1.22-RGRY3B-F grey/grey 1.30 1.30-GRY3B-F yellow/yellow 1.42 1.42-YLW3B-F yellow/blue 1.52 1.52-YB3B-F blue/blue 1.65 1.65-BLU3B-F green/green 1.85 1.85-GRN3B-F purple/purple 2.06 2.06-PUR3B-F	orange/red	0.19	0.19-OR3B-F
green/yellow 0.44 0.44-GY3B-F orange/yellow 0.51 0.51-OY3B-F white/yellow 0.57 0.57-WY3B-F orange/white 0.64 0.64-OW3B-F black/black 0.76 0.76-BLK3B-F orange/orange 0.89 0.89-ORG3B-F white/black 0.95 0.95-WBLK3B-F white/white 1.02 1.02-WHT3B-F white/red 1.09 1.09-WR3B-F red/red 1.14 1.14-RED3B-F red/grey 1.22 1.22-RGRY3B-F grey/grey 1.30 1.30-GRY3B-F yellow/yellow 1.42 1.42-YLW3B-F yellow/blue 1.52 1.52-YB3B-F blue/blue 1.65 1.65-BLU3B-F green/green 1.85 1.85-GRN3B-F purple/purple 2.06 2.06-PUR3B-F	orange/blue	0.25	0.25-OB3B-F
orange/yellow 0.51 0.51-OY3B-F white/yellow 0.57 0.57-WY3B-F orange/white 0.64 0.64-OW3B-F black/black 0.76 0.76-BLK3B-F orange/orange 0.89 0.89-ORG3B-F white/black 0.95 0.95-WBLK3B-F white/white 1.02 1.02-WHT3B-F white/red 1.09 1.09-WR3B-F red/red 1.14 1.14-RED3B-F red/grey 1.22 1.22-RGRY3B-F grey/grey 1.30 1.30-GRY3B-F yellow/yellow 1.42 1.42-YLW3B-F yellow/blue 1.52 1.52-YB3B-F blue/blue 1.65 1.65-BLU3B-F green/green 1.85 1.85-GRN3B-F purple/purple 2.06 2.06-PUR3B-F	orange/green	0.38	0.38-OG3B-F
white/yellow         0.57         0.57-WY3B-F           orange/white         0.64         0.64-OW3B-F           black/black         0.76         0.76-BLK3B-F           orange/orange         0.89         0.89-ORG3B-F           white/black         0.95         0.95-WBLK3B-F           white/white         1.02         1.02-WHT3B-F           white/red         1.09         1.09-WR3B-F           red/red         1.14         1.14-RED3B-F           red/grey         1.22         1.22-RGRY3B-F           grey/grey         1.30         1.30-GRY3B-F           yellow/yellow         1.42         1.42-YLW3B-F           yellow/blue         1.52         1.52-YB3B-F           blue/blue         1.65         1.65-BLU3B-F           green/green         1.85         1.85-GRN3B-F           purple/purple         2.06         2.06-PUR3B-F           purple/black         2.29         2.29-PBLK3B-F	green/yellow	0.44	0.44-GY3B-F
orange/white         0.64         0.64-OW3B-F           black/black         0.76         0.76-BLK3B-F           orange/orange         0.89         0.89-ORG3B-F           white/black         0.95         0.95-WBLK3B-F           white/white         1.02         1.02-WHT3B-F           white/red         1.09         1.09-WR3B-F           red/red         1.14         1.14-RED3B-F           red/grey         1.22         1.22-RGRY3B-F           grey/grey         1.30         1.30-GRY3B-F           yellow/yellow         1.42         1.42-YLW3B-F           yellow/blue         1.52         1.52-YB3B-F           blue/blue         1.65         1.65-BLU3B-F           green/green         1.85         1.85-GRN3B-F           purple/purple         2.06         2.06-PUR3B-F           purple/black         2.29         2.29-PBLK3B-F	orange/yellow	0.51	0.51-OY3B-F
black/black 0.76 0.76-BLK3B-F orange/orange 0.89 0.89-ORG3B-F white/black 0.95 0.95-WBLK3B-F white/white 1.02 1.02-WHT3B-F white/red 1.09 1.09-WR3B-F red/red 1.14 1.14-RED3B-F red/grey 1.22 1.22-RGRY3B-F grey/grey 1.30 1.30-GRY3B-F yellow/yellow 1.42 1.42-YLW3B-F yellow/blue 1.52 1.52-YB3B-F blue/blue 1.65 1.65-BLU3B-F green/green 1.85 1.85-GRN3B-F purple/purple 2.06 2.06-PUR3B-F	white/yellow	0.57	0.57-WY3B-F
orange/orange         0.89         0.89-ORG3B-F           white/black         0.95         0.95-WBLK3B-F           white/white         1.02         1.02-WHT3B-F           white/red         1.09         1.09-WR3B-F           red/red         1.14         1.14-RED3B-F           red/grey         1.22         1.22-RGRY3B-F           grey/grey         1.30         1.30-GRY3B-F           yellow/yellow         1.42         1.42-YLW3B-F           yellow/blue         1.52         1.52-YB3B-F           blue/blue         1.65         1.65-BLU3B-F           green/green         1.85         1.85-GRN3B-F           purple/purple         2.06         2.06-PUR3B-F           purple/black         2.29         2.29-PBLK3B-F	orange/white	0.64	0.64-OW3B-F
white/black 0.95 0.95-WBLK3B-F white/white 1.02 1.02-WHT3B-F white/red 1.09 1.09-WR3B-F red/red 1.14 1.14-RED3B-F red/grey 1.22 1.22-RGRY3B-F grey/grey 1.30 1.30-GRY3B-F yellow/yellow 1.42 1.42-YLW3B-F yellow/blue 1.52 1.52-YB3B-F blue/blue 1.65 1.65-BLU3B-F green/green 1.85 1.85-GRN3B-F purple/purple 2.06 2.06-PUR3B-F purple/black 2.29 2.29-PBLK3B-F	black/black	0.76	0.76-BLK3B-F
white/white         1.02         1.02-WHT3B-F           white/red         1.09         1.09-WR3B-F           red/red         1.14         1.14-RED3B-F           red/grey         1.22         1.22-RGRY3B-F           grey/grey         1.30         1.30-GRY3B-F           yellow/yellow         1.42         1.42-YLW3B-F           yellow/blue         1.52         1.52-YB3B-F           blue/blue         1.65         1.65-BLU3B-F           green/green         1.85         1.85-GRN3B-F           purple/purple         2.06         2.06-PUR3B-F           purple/black         2.29         2.29-PBLK3B-F	orange/orange	0.89	0.89-ORG3B-F
white/red 1.09 1.09-WR3B-F  red/red 1.14 1.14-RED3B-F  red/grey 1.22 1.22-RGRY3B-F  grey/grey 1.30 1.30-GRY3B-F  yellow/yellow 1.42 1.42-YLW3B-F  yellow/blue 1.52 1.52-YB3B-F  blue/blue 1.65 1.65-BLU3B-F  green/green 1.85 1.85-GRN3B-F  purple/purple 2.06 2.06-PUR3B-F  purple/black 2.29 2.29-PBLK3B-F	white/black	0.95	0.95-WBLK3B-F
red/red 1.14 1.14-RED3B-F red/grey 1.22 1.22-RGRY3B-F grey/grey 1.30 1.30-GRY3B-F yellow/yellow 1.42 1.42-YLW3B-F yellow/blue 1.52 1.52-YB3B-F blue/blue 1.65 1.65-BLU3B-F green/green 1.85 1.85-GRN3B-F purple/purple 2.06 2.06-PUR3B-F purple/black 2.29 2.29-PBLK3B-F	white/white	1.02	1.02-WHT3B-F
red/grey 1.22 1.22-RGRY3B-F grey/grey 1.30 1.30-GRY3B-F yellow/yellow 1.42 1.42-YLW3B-F yellow/blue 1.52 1.52-YB3B-F blue/blue 1.65 1.65-BLU3B-F green/green 1.85 1.85-GRN3B-F purple/purple 2.06 2.06-PUR3B-F purple/black 2.29 2.29-PBLK3B-F	white/red	1.09	1.09-WR3B-F
grey/grey 1.30 1.30-GRY3B-F  yellow/yellow 1.42 1.42-YLW3B-F  yellow/blue 1.52 1.52-YB3B-F  blue/blue 1.65 1.65-BLU3B-F  green/green 1.85 1.85-GRN3B-F  purple/purple 2.06 2.06-PUR3B-F  purple/black 2.29 2.29-PBLK3B-F	red/red	1.14	1.14-RED3B-F
yellow/yellow         1.42         1.42-YLW3B-F           yellow/blue         1.52         1.52-YB3B-F           blue/blue         1.65         1.65-BLU3B-F           green/green         1.85         1.85-GRN3B-F           purple/purple         2.06         2.06-PUR3B-F           purple/black         2.29         2.29-PBLK3B-F	red/grey	1.22	1.22-RGRY3B-F
yellow/blue 1.52 1.52-YB3B-F blue/blue 1.65 1.65-BLU3B-F green/green 1.85 1.85-GRN3B-F purple/purple 2.06 2.06-PUR3B-F purple/black 2.29 2.29-PBLK3B-F	grey/grey	1.30	1.30-GRY3B-F
blue/blue 1.65 1.65-BLU3B-F green/green 1.85 1.85-GRN3B-F purple/purple 2.06 2.06-PUR3B-F purple/black 2.29 2.29-PBLK3B-F	yellow/yellow	1.42	1.42-YLW3B-F
green/green 1.85 1.85-GRN3B-F  purple/purple 2.06 2.06-PUR3B-F  purple/black 2.29 2.29-PBLK3B-F	yellow/blue	1.52	1.52-YB3B-F
purple/purple         2.06         2.06-PUR3B-F           purple/black         2.29         2.29-PBLK3B-F	blue/blue	1.65	1.65-BLU3B-F
purple/black 2.29 2.29-PBLK3B-F	green/green	1.85	1.85-GRN3B-F
	purple/purple	2.06	2.06-PUR3B-F
nurrele/orongo 0.54 0.54 DOOD F	purple/black	2.29	2.29-PBLK3B-F
purple/orange 2.54 2.54-PO3B-F	purple/orange	2.54	2.54-PO3B-F
purple/white 2.79 2.79-PW3B-F	purple/white	2.79	2.79-PW3B-F
black/white 3.17 3.17-BLKW3B-F	black/white	3.17	3.17-BLKW3B-F

#### **CONTOUR FLARED END SOLVA PERISTALTIC PUMP TUBING**

All tubes made from Tygon 4040 or equivalent.

Supplied in packs of 6 tubes.

#### **Special Properties:**

Special tubing for hydrocarbons, petroleum products and distillates.

#### Advantages:

Specially formulated to transport hydrocarbons, petroleum products and distillates.

Ideal for gasoline, kerosene, heating oils, cutting liquids and coolants based on glycols.

Low gas permeability.

#### Limitations:

Not recommended for strong acids and alkalies, foodstuffs, beverages and medicines.

Potential leaching of plasticizers.



# Solva, 2 Bridged (140mm between tags)

#### asca on giyoois.

Tag Colours	ID (mm)	P/N
yellow/yellow	1.42	1.42-YLW-SF-F
yellow/blue	1.52	1.52-YB-SF-F
blue/blue	1.65	1.65-BLU-SF-F
green/green	1.85	1.85-GRN-SF-F
purple/purple	2.06	2.06-PUR-SF-F
purple/black	2.29	2.29-PBLK-SF-F
purple/orange	2.54	2.54-PO-SF-F
purple/white	2.79	2.79-PW-SF-F

# CONTOUR FLARED END VITON® PERISTALTIC PUMP TUBING

All tubes made from Fluran HC F-5500-A or equivalent.

#### **Special Properties:**

Special tubing for concentrated acids and corrosive solvents.

#### Advantages:

High chemical resistance. Low gas permeability. Wide temperature range.

#### Limitations:

Limited service life.



# Viton®, 2 Bridged (127mm between tags)

Tag Colours	ID (mm)	P/N
orange/yellow	0.51	VS0.51-OY-F
orange/white	0.64	VS0.64-OW-F
black/black	0.76	VS0.76-BLK-F
orange/orange	0.89	VS0.89-ORG-F
white/white	1.02	VS1.02-WHT-F
red/red	1.14	VS1.14-RED-F
grey/grey	1.30	VS1.30-GRY-F
yellow/yellow	1.42	VS1.42-YLW-F
yellow/blue	1.52	VS1.52-YB-F
blue/blue	1.65	VS1.65-BLU-F
green/green	1.85	VS1.85-GRN-F
purple/purple	2.06	VS2.06-PUR-F
purple/black	2.29	VS2.29-PBLK-F
purple/orange	2.54	VS2.54-PO-F
purple/white	2.79	VS2.79-PW-F

Supplied in packs of 6 tubes

# CONTOUR FLARED END TYGON® MH PERISTALTIC PUMP TUBING

All tubes made from Tygon MHSL 2001.

#### **Special Properties:**

Environmental-friendly tubing especially designed for solvents. Suitable for MIBK.

#### Advantages:

High chemical resistance. Low gas permeability. Wide temperature range.

#### Limitations:

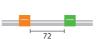
Limited service life.



#### Tygon® MH Tubing, 2 Bridged (152mm between tags)

Tag Colours	ID (mm)	P/N
orange/green	0.38	0.38-ORG-MH-F
orange/white	0.64	0.64-OW-MH-F
white/white	1.02	1.02-WHT-MH-F
yellow/blue	1.52	1.52-YB-MH-F
purple/purple	2.06	2.06-PUR-MH-F
purple/white	2.79	2.79-PW-MH-F

Supplied in packs of 6 tubes



#### Tygon® MH Tubing, 2 Bridged (72mm between tags)

Tag Colours	ID (mm)	P/N
orange/green	0.38	0.38-ORG-MH3-F
orange/white	0.64	0.64-OW-MH3-F
white/white	1.02	1.02-WHT-MH3-F
yellow/blue	1.52	1.52-YB-MH3-F
purple/purple	2.06	2.06-PUR-MH3-F
purple/white	2.79	2.79-PW-MH3-F

Supplied in packs of 6 tubes

#### **Contour Flared-end Peristaltic Pump Tubing**

It can be quite difficult to insert the sample tubing into the peristaltic pump tubes. This is particularly so for pump tubing with a small ID. To facilitate this connection, Glass Expansion supplies Contour flared-end pump tubing. The flared end of this pump tubing allows the larger capillary tubing to be inserted into the smaller pump tubing.

Any of the pump tubing that we normally supply can be supplied with flared end. Simply add "-F" to the end of the part number (eg. 0.38-OG-F). The flared-end tubing is supplied in packs of 6.