

Sample Introduction 'R' Us

Since 1974, Meinhard nebulizers have been the industry standard: the best performance; the best value. Today, Meinhard nebulizers are standard on the largest selling ICP and ICPMS instruments. Our High Efficiency Nebulizer is the top-rated glass microconcentric nebulizer. Our Direct Injection High Efficiency Nebulizer is unmatched.

Since 2003, we have offered all of our nebulizers in quartz as well as borosilicate glass, for more demanding low-background measurements.

A new high-purity quartz version, the TQH series, will be available in April. Designed primarily for ICPMS use, these will provide the lowest possible elemental



background as demanded by the semiconductor industry.

Meinhard Glass Products wants to be your source for total sample introduction solutions. We are pleased to offer nebulizers in Teflon PFA and polypropylene from Elemental Scientific. These microconcentric nebulizers are especially use-

ful for small-volume samples and highly-corrosive solutions like HF. The Noordermeer v-groove nebulizer can handle suspended solids of 10% or more without clogging. The Burgener MiraMist® in Teflon extends that capability to highly-corrosive solutions.

Meinhard Glass Products manufactures all kinds of spray chambers in glass and quartz: Scott double-pass, conical, cyclonic, double-pass cyclonic. We can fit your instrument or custom manufacture for your needs. We also offer Scott double-pass spray chambers from ESI in Teflon PFA for ultra-high-purity and corrosion resistance. ESI's cyclonic spray chambers in polypropylene are just the thing for ICP analysis of HF solutions.

Meinhard Glass Products has torches for all ICP and ICPMS instruments that are currently available, along with torches for instruments that have been out of production for ten years or more. Our quality is guaranteed; our prices are unrivaled.

If you would like to talk to our sample introduction experts, call or email. We will be pleased to work with you to get the most out of your ICP or ICPMS sample introduction system.

New Autosampler

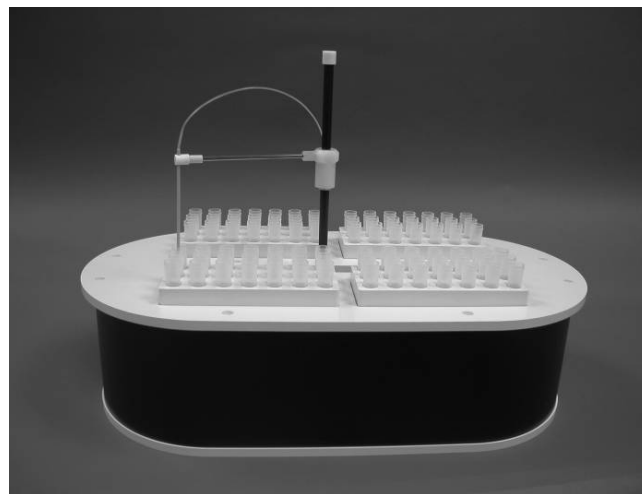
Clean, fast, flexible and small are some of the best terms to describe the new series of autosamplers from Elemental Scientific. Excellent value is another.

Developed as part of ESI's cleanroom concept, these new autosamplers feature all-fluoropolymer construction in the sample flow path for superior acid and solvent resistance. Sealed electrical components ensure a long life.

ESI's autosamplers are clean and fast. All mechanical and metal parts have been isolated below the sample rack table to prevent sample contamination from wearing parts. ESI's unique integrated autosampler probe design does away with tubing connections that leak or come apart, while providing a rigid probe that does not require a guide, eliminating another common source of cross-contamination. The sampling arm moves between sample racks, not over them, using linear/polar control to obtain simultaneous changes in X-Y coordinates. Both the SC2 series and the SC14 series feature dual flow-through rinse stations – for two separate and constantly replenished rinse solutions.

The SC2 series is a full-featured version with a small footprint that can suit virtually any laboratory. Standard rack sizes range from 96-well microtiter plates to 21-positions racks for

50 mL containers. The normal configuration has 10 standard positions, 2 rinse positions, and 4 rack positions. The software allows for the mixing of rack sizes and custom layouts. An optional HEPA filter cabinet will prevent contamination from external sources. (continued on Page 3)



Big Sale on TJA Torches!

Here is an opportunity to stock up on TJA's ceramic base torches. Until July 31, 2005, Meinhard Glass Products will offer a 10% discount from our already low Special Value Pricing. Also, when you consider that TJA's ceramic base torches are expen-

sive, know that they can often be repaired at a substantial savings – we have discounted those prices too! Find your torch in the list below, then give us a call or place your order directly at www.meinhard.com.

TJA #	MGP #	Description	Sale
12643202	ML127506	Radial Base Torch Kit, Low Flow, 1.5 Center Tube	\$436.50
12644002	ML127506/N	Radial Base Torch, Low Flow, No Center Tube	\$385.20
	ML127506/R	Rebuild of user-supplied torch 127506/12644002	\$244.80
12643201	ML127507	Radial Base Torch Kit, High Flow, 1.5 Center Tube	\$436.50
12644001	ML127507/N	Radial Base Torch, High Flow, No Center Tube	\$385.20
	ML127507/R	Rebuild of user-supplied torch 127507/12644001	\$244.80
12512401	ML127508	Radial Base Torch Kit, High Flow, 1.0 Center Tube	\$436.50
12643203	ML127510	Trace Axial Base Torch Kit, 1.5 Center Tube	\$454.50
12644003	ML127510/N	Trace Axial Base Torch Body, No Center Tube	\$404.10
	ML127510/R	Rebuild of user-supplied torch 127510/12644003	\$274.50
13856200	ML127511	DUO Axial Base Torch Kit, w/Hole, 1.5 Center Tube	\$491.40
12644005	ML127511/N	DUO Axial Base Torch, w/Hole, No Center Tube	\$441.00
	ML127511/R	Rebuild of user-supplied torch 127511/12644005	\$333.90
12512405	ML127512	Radial Base Torch Kit, Slotted, 1.0 Center Tube	\$454.50
12644006	ML127512/N	Radial Base Torch Body, Slotted, No Center Tube	\$404.10
12643204	ML127513	Radial Base Torch Kit, Slotted, 1.5 Center Tube	\$454.50
12540701	ML125040	Qtz 1.0 mm Center Tube, for Base Torch	\$83.70
12540700	ML125041	Qtz 1.5 mm Center Tube, for Base Torch	\$83.70
13650201	ML125042	Qtz 2.0 mm Center Tube, for Base Torch	\$83.70
13650202	ML125043	Qtz 2.4 mm Center Tube, for Base Torch	\$85.50

New Digital Perimax Peristaltic Pump

The Spetec Perimax pump head has long been known as the best of the best, the re-designed Perimax pump base now offers additional and improved functionality and better value. The new Perimax incorporates a remote control that accepts both analog and digital control signals from the host instrument providing the broadest scope of instrument compatibility. New functionality includes control of speed, as well as fast-flush and direction. The drive unit features a stepper-motor with a low-backlash gear reduction assembly. Power is user-selectable for 115/230 VAC at 50/60 Hz. While Spetec has added a lot to the capability of the Perimax, the price remains the same.

The pump is available as the Perimax 12 and the Perimax 16, which differ only in the pump head employed. The Perimax 12 has a pump head with 12 rollers and 1 to 6 channels of controlled liquid flow ranging from 0.004 to 40 mL/min, with standard tubing sizes. Individually adjustable channels accommodate a wide variety of tubing sizes and materials to maximize liquid handling flexibility.

Spetec's innovative Perimax 16 incorporates 16 rollers in two phase-displaced sets to provide 1 to 3 channels of pulse-free liquid flow. There are two half-channels of 8 rollers each, in which the sets are offset by 180 degrees. Incoming flow is split

into a line for each half-channel and then recombined downstream. Consequently, a pulsation peak in one half-channel corresponds to a trough in the other, which leads to combined flow that is pulsation-free!

See the new Perimax at Pittcon or contact us for more details.



New Autosampler (continued from Page 1)

The SC14 series offers the highest sample capacity for unattended overnight runs, with the smallest per-sample footprint. Using conventional off-the-shelf racks, the SC14 can handle more than 1,200 samples. When equipped with microtiter plates, more than 2,900 samples can be handled. Major options include a traveling rinse station to reduce sample-to-sample time, a flow-injection rapid analysis unit to further reduce sample-to-sample time, and a HEPA filter cabinet to exclude external contaminants.

Competitively priced from \$7,700 for the SC2 and \$9,900 for the SC14, with industry-leading performance and flexibility, these new autosamplers from ESI offer exceptional value. See both models at Pittcon or contact Meinhard Glass Products for more information.



Spetec Portable Cleanroom Technology

Demo Unit available at 25% off list!

With a particle isolation factor of more than 10,000 (for particles $\geq 0.5 \mu\text{m}$), the new FBS series of low-cost laminar flow boxes from Spetec provide superior, local cleanroom conditions. They are ideal for isolation of the sample introduction areas and autosamplers used with ultrasensitive techniques such as ICPMS and ETV-AA, to minimize the possibility of atmospheric contamination.

Designed for benchtop use, the FBS series laminar flow boxes are available in sizes ranging from 24" x 14" x 28" to 72" x 24" x 28", and start at about \$3,300. Available accessories include: an exhaust system, conventional interior lighting, UV lighting for biohazard control, laboratory cabinets, and a frame base with casters in powder coat or stainless steel. The basic filter module can also be suspended from the ceiling to create an air curtain in doorways, or equipped with heavy-duty vinyl curtains to facilitate access to an otherwise isolated instrument. These portable cleanrooms are suitable for sample storage and sample preparation where contamination control is essential.

When the FBS series is equipped with an exhaust system to remove furnace vapors, it will fully accommodate most commercial GFAA instruments providing clean room operating conditions in an ordinary laboratory.



The Model FBS-37 demonstration benchtop unit (see photo) has a sample compartment that measures 24" w x 24" d x 27" h. Although US list price is \$4,450, this unit is currently available at \$3,338 FOB Golden, Colorado.

Contact Meinhard Glass Products for additional information.

Solving Analytical Challenges with Direct Injection Nebulization

The Direct Injection High Efficiency Nebulizer (DIHEN) is rapidly gaining acceptance for its unique ability to facilitate the analysis of highly volatile solvents and very small sample volumes, and to effect selective detection in chromatographic effluents. The Meinhard® High Efficiency Nebulizer has been conclusively shown to be the best of the microconcentric nebulizers. When this design is adapted to a direct injection configuration in the DIHEN, essentially 100% of the sample is transported to the plasma. cone-bulizers, providing the smallest droplet size and highest transport efficiency. As a result, substantial improvements in sensitivity can also be obtained.

The DIHEN is particularly effective for chromatographic detection by ICPMS and for analysis of small-volume samples by ICPMS and ICP. Direct injection has been identified as the most efficient, most interference-free means of introducing highly volatile

hydrocarbon solvents into an ICP for optical or MS detection.



Using a Meinhard-designed adapter with your conventional demountable torch, the DIHEN replaces the injector. It is inserted through the center of the torch until the nozzle is set to 2 – 4 mm below the top of the inner tube. At a normal carrier flow of 0.2 – 0.4 L/min (about 50 psi), the DIHEN will naturally aspirate at 30 – 150 $\mu\text{L}/\text{min}$ and deliver 100% of the sample to the plasma

Please see www.meinhard.com or call for further information.

Meinhard Glass Products

A Division of Analytical Reference Materials International Corporation
700 Corporate Circle, Suite A
Golden, CO 80401 USA

Tel: (303) 277-9776 Fax: (303) 216-2649
Email: Sales@Meinhard.com
Web: www.meinhard.com

INSIDE THIS ISSUE!

Sample Introduction 'R' Us

Sale on TJA Torches

**10% DISCOUNT WHEN YOU
FAX THIS PAGE WITH YOUR
ORDER**

**PLEASE FAX THIS PAGE,
WITH CORRECTIONS, TO
REMAIN ON OUR MAILING
LIST**

FAX-O-GRAM

Please indicate your interests, then fax this form back to (303) 216-2649

Catalog Type:

- Meinhard Glass Products Catalog
- Metal CRMs for OE and XRF
- ARMI and ALCAN Catalogs

Customer Classification:

- Commercial Lab
- Labs / Producer / General Industry
- Academia
- Other — (Please list in comments area)

Please Respond:

- I need additional information.
- Please contact me.
- Please leave me alone.

Method of Analysis:

- ICP / ICPMS
- OE Spectroscopy
- XRF Spectroscopy
- Other — (Please list in comments area)

Comments:

Name

Address

Phone

E-mail Address

Quick ISO 9000 Quality Survey

- Products:** Excellent Good Fair Poor
Services: Excellent Good Fair Poor

1-800-Meinhard