
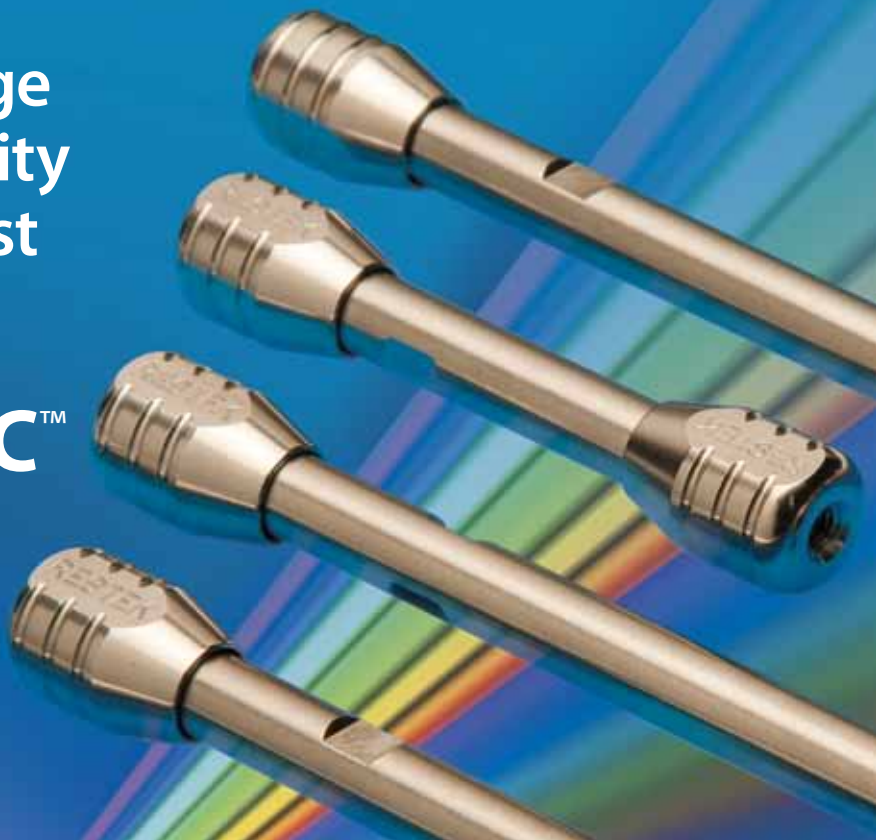


Get the widest range  
of alternate selectivity  
available—with just  
4 columns!

RESTEK  **USLC™**

Ultra Selective  
Liquid Chromatography™

You'll find fast, effective  
method development at  
[www.restek.com/uslc](http://www.restek.com/uslc)



**Come visit  
Restek**

at these upcoming events:

**NOVEMBER 2011**

1–4 | RAFA • Prague, Czech Republic

14–17 | EAS • Somerset, NJ, USA

For the full calendar, go to  
[www.restek.com/events](http://www.restek.com/events)

**What's New!**

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# True Blue Performance

Exceptionally inert, Sky™ inlet liners with a new **state-of-the-art deactivation** improve trace level analysis.

# Sky™

Inlet Liners

- **Increase accuracy and precision** by preventing loss of sensitive analytes—even when using wool.
- **Achieve lower detection limits** for a wide range of active compounds.
- **Ensure liner-to-liner reproducibility** through consistent manufacturing and extensive testing.



Patent pending

**Sky™ inlet liners are available in 1-, 5-, and 25-packs for all common GCs:**

Agilent • PerkinElmer • Shimadzu • Thermo Scientific • Varian

**Choose from a wide variety of configurations and styles:**



2mm Splitless



4mm Cyclo Double Taper Gooseneck



Low Pressure Drop Precision Liner w/Wool



Auto SYS XL PSS Split/Splitless w/Wool



3.5mm Precision Liner w/Wool



3.5mm Single Taper Gooseneck



5mm Straight



5mm Splitless



4mm Split Liner w/Glass Frit



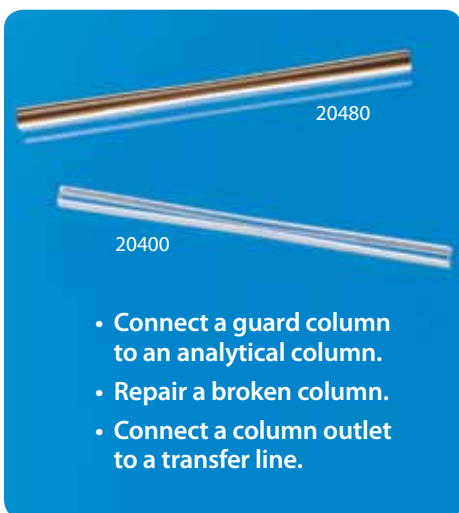
4mm Single Taper Gooseneck

# Gas Generators From Restek

## Affordable, Reliable, and Safe

Save on Hydrogen, Zero Air, Nitrogen,  
and LC/MS Generators as well  
as FID Gas Stations!

Go to [www.restek.com/gas](http://www.restek.com/gas) for more information.



- Connect a guard column to an analytical column.
- Repair a broken column.
- Connect a column outlet to a transfer line.

## Get a Leak-Tight Seal Between Fused Silica Capillary Columns

### Use a Universal Press-Tight® Connector

- Deactivated Press-Tight® connectors maintain complete inertness for the GC flow path.
- Siltek® deactivated connectors are ideal for organochlorine pesticides analysis.
- Fit column ODs from 0.33–0.74 mm (Restek 0.1 mm–0.53 mm ID).

Description	5-pk.	25-pk.	100-pk.
Universal Press-Tight Connectors	20400	20401	20402
Universal Press-Tight Connectors, Deactivated	20429	20430	
Universal Press-Tight Connectors, Siltek Deactivated	20480	20449	

Visit [www.restek.com/press-tight](http://www.restek.com/press-tight) for more!

## Reversible Flip Seal™ inlet seals *last twice as long* for the same price!

- Reversible design lets you flip the inlet seal and use it twice as many times.
- Vespe!® ring embedded in top and bottom surface eliminates need for a washer.
- Highly inert gold- and Siltek®-deactivated seals reduce breakdown and adsorption of active compounds, maximizing component transfer to GC column.
- Lower leak rate compared to original equipment manufacturer's metal inlet seals.

restek innovation!  
Patented



0.8mm ID Flip Seal Dual Vespe! Ring Inlet Seal	2-pk.	10-pk.
Gold-Plated	23407	23409
Siltek Deactivated	23408	23410
1.2mm ID Flip Seal Dual Vespe! Ring Inlet Seal	2-pk.	10-pk.
Gold-Plated	23411	23413
Siltek Deactivated	23412	23414
Flip Seal Dual Vespe! Ring Inlet Seal Kit	qty.	cat.#
Includes: gold-plated 0.8mm ID inlet seal, reducing nut adaptor, 1/16" SS nut	kit	23406

Note: The Flip Seal requires a special reducing nut adaptor fitting, which is included in the kit. The Flip Seal Adaptor can be used with standard 1/16" ferrules.

For a complete product listing, visit [www.restek.com/flip](http://www.restek.com/flip)



# Choose Silcosteel® Regulators for Exceptional Inertness and Corrosion Resistance



Single and dual stage regulators are available with Silcosteel® surface treatment. This proprietary passivation process, developed by SilcoTek™, provides excellent inertness for sulfur and mercury calibration standards and improved corrosion resistance over bare 316L stainless steel or other more expensive alloys.

Silcosteel® treated sampling and transfer systems allow oil and gas exploration companies, chemical and petrochemical plants, and refineries to obtain accurate sulfur and mercury data every time with no delay, sample errors, or false readings, down to part-per-billion (ppb) levels. Analysts charged with monitoring sulfur and mercury levels in process streams can save thousands of dollars in improved yields, better test cycle times, and improved system reliability.

Outlet pressure: 0 to 100 psig      Inlet gauge: 0 to 4000 psig  
 Outlet gauge: 30" – 0 to 200 psig      Outlet assembly: diaphragm valve, 1/4" tube fitting

#### Applications:

- CEM Continuous Emission Monitoring
- Environmental Stack and Gas Emission Standards
- Low level sulfur and mercury analysis
- Reactive or corrosive gases
- Off-shore platform systems
- Corrosive and salt water exposure

Description	qty.	cat.#
<b>Single-Stage Regulator</b>		
CGA 330 (H <sub>2</sub> S and other reduced sulfurs)	ea.	21361-5
CGA 350 (H <sub>2</sub> , P <sub>2</sub> )	ea.	21361-6
CGA 660 (NO, NO <sub>2</sub> , SO <sub>2</sub> )	ea.	21361-11
<b>Dual-Stage Regulator</b>		
CGA 330 (H <sub>2</sub> S and other reduced sulfurs)	ea.	21360-2
CGA 350 (H <sub>2</sub> , P <sub>2</sub> )	ea.	21360-7
CGA 660 (NO, NO <sub>2</sub> , SO <sub>2</sub> )	ea.	21360-12

For other CGA fittings, please contact your local Restek representative.

Our complete line of regulators can be found at [www.restek.com/regulators](http://www.restek.com/regulators)

## Precleaned VOA Sampling Vials Arrive Ready to Use

- Container, liner, and closure cleaned and assembled.
- Open top caps.
- Teflon® faced 0.125" silicone septa.
- Each case lot numbered.

Description	Volume	Color	Material	Screw-Thread Size	qty.	cat.#
Precleaned VOA Vials	20mL	Clear	Glass	24mm/400	72-pk.	21798
Precleaned VOA Vials	20mL	Amber	Glass	24mm/400	72-pk.	21799
Precleaned VOA Vials	40mL	Clear	Glass	24mm/400	72-pk.	21796
Precleaned VOA Vials	40mL	Amber	Glass	24mm/400	72-pk.	21797
Collection Vials for ASE 200	60mL	Clear	Glass	24mm/400	72-pk.	26121
Collection Vials for ASE 200	60mL	Amber	Glass	24mm/400	72-pk.	26122
Replacement Septa, 24mm x 0.125"			Teflon-lined silicone		100-pk.	24694



21798

26122



## Super Septa!

- Preconditioned and ready to use.
- Precision molding assures consistent, accurate fit.
- Do not adhere to hot metal surfaces.
- Packaged in precleaned glass jars.

**Restek IceBlue® Septa**—Usable to 250 °C inlet temperature.

**BTO® Septa\***—Usable to 400 °C inlet temperature.

\* Note: For 17mm injectors, the maximum temperature is 330°C. Due to the injection port temperatures, Restek recommends using only BTO® septa in Thermo Scientific instruments.

## Restek Thermolite® Septa

- Usable to 340 °C inlet temperature.
- Excellent puncturability.
- A Restek exclusive!



Septum Diameter	25-pk.	50-pk.	100-pk.
5mm (3/16")	27120	27121	27122
6mm (1/4")	27123	27124	27125
7mm	27126	27127	27128
8mm	27129	27130	27131
9mm	27132	27133	27134
9.5mm (3/8")	27135	27136	27137
10mm	27138	27139	27140
11mm (7/16")	27141	27142	27143
11.5mm	27144	27145	27146
12.7mm (1/2")	27147	27148	27149
17mm	27150	27151	27152
Shimadzu Plug	27153	27154	27155

Visit [www.restek.com/septa](http://www.restek.com/septa) for a complete listing.

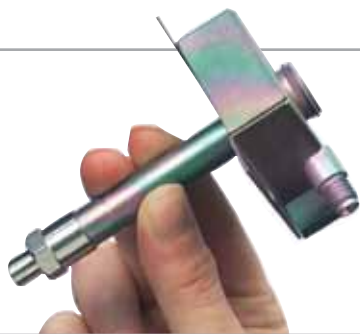
# ProFLOW 6000 Electronic Flowmeter

- Measures volumetric flow for most gases across a range of 0.5–500 mL/min.\*
- Accuracy of  $\pm 2\%$  of flow reading or  $\pm 0.2$  mL/min., whichever is greater.
- NIST traceable calibration.

Description	qty.	cat.#
Restek ProFLOW 6000 Electronic Flowmeter with Hard-Sided Carrying Case	ea.	22656
ProFLOW 6000 Recalibration Service	ea.	22656-R

\*The flowmeter is designed to measure clean, dry, non-corrosive gases.

Visit [www.restek.com/flowmeter](http://www.restek.com/flowmeter) for product features.



## Repair and Upgrade Your Agilent GC!

Did you know that Restek, your trusted source for top-quality GC columns and accessories, also offers a whole line of innovative replacement products for Agilent GCs? From injector to detector, the GC accessory parts you need are at [www.restek.com/gcacc](http://www.restek.com/gcacc)



## Restek Offers a Complete Line of Ferrules for Convenient One-Stop Shopping



### VespeL® Ferrules

- 100% high-temperature polyimide.
- Stable to 350 °C.
- Durable, leak-tight.

### Graphite Ferrules

- Preconditioned to eliminate out-gassing.
- High-purity, high-density graphite.
- Smoother surface and cleaner edges than conventional graphite ferrules.
- No binders to off-gas or adsorb analytes.
- Stable to 450 °C.

### VespeL®/Graphite Ferrules

- 60%/40% VespeL®/graphite blend, offering great sealing and ease of workability.
- Seal with minimal torque, reusable, and preferred for vacuum and high-pressure.
- Stable to 400 °C.
- Recommended for mass spec transfer lines.

### Capillary Ferrules for 1/16-Inch Compression-Type Fittings

Ferrule ID	Fits Column ID	qty.	VespeL	Graphite	VespeL/Graphite
0.3mm		10-pk.	22213	20233	20275
0.4mm	0.10/0.15/0.18/0.25/0.28mm	10-pk.	22214	20200	20211
0.4mm	0.10/0.15/0.18/0.25/0.28mm	50-pk.	—	20227	20229
0.5mm	0.32mm	10-pk.	22215	20201	20212
0.5mm	0.32mm	50-pk.	—	20228	20231
0.6mm	0.28mm**	10-pk.	—	—	20232
0.8mm	0.45/0.53mm	10-pk.	22216	20202	20213
0.8mm	0.45/0.53mm	50-pk.	—	20224	20230
1.0mm	0.75mm*	10-pk.	22217	21058	24912
1.2mm	0.75mm*	10-pk.	22218	—	—
1.6mm	1.00mm*	10-pk.	—	21060	—

### Compact Ferrules for Agilent 5890/6890/6850/7890 GCs

Ferrule ID	Fits Column ID	qty.	Graphite	VespeL/Graphite
0.4mm	0.25/0.28mm	10-pk.	20250	20238
0.4mm	0.25/0.28mm	50-pk.	20251	20239
0.5mm	0.32mm	10-pk.	21007	20248
0.5mm	0.32mm	50-pk.	21008	20249
0.8mm	0.45/0.53mm	10-pk.	20252	20263
0.8mm	0.45/0.53mm	50-pk.	20253	20264
1.0mm	0.75mm*	10-pk.	21059	—
1.6mm	1.00mm*	10-pk.	21061	—

\*For micropacked columns. \*\*For 0.28 mm MXT columns.



# Introducing New Alumina MAPD PLOT Columns in Fused Silica and Metal!

Restek PLOT columns have set a new standard with better bonding and greater efficiency than similar columns from competitors. The superior stabilization technology and wide range of deactivations that are the foundation of our PLOT column line have now been used to develop **Rt<sup>®</sup>- and MXT<sup>®</sup>-Alumina BOND/MAPD PLOT columns**. These new columns, available in metal and fused silica, are **stable up to 250 °C** and provide better temperature stability than any other alumina MAPD PLOT column on the market!

## Rt<sup>®</sup>-Alumina BOND/MAPD Columns (fused silica PLOT)

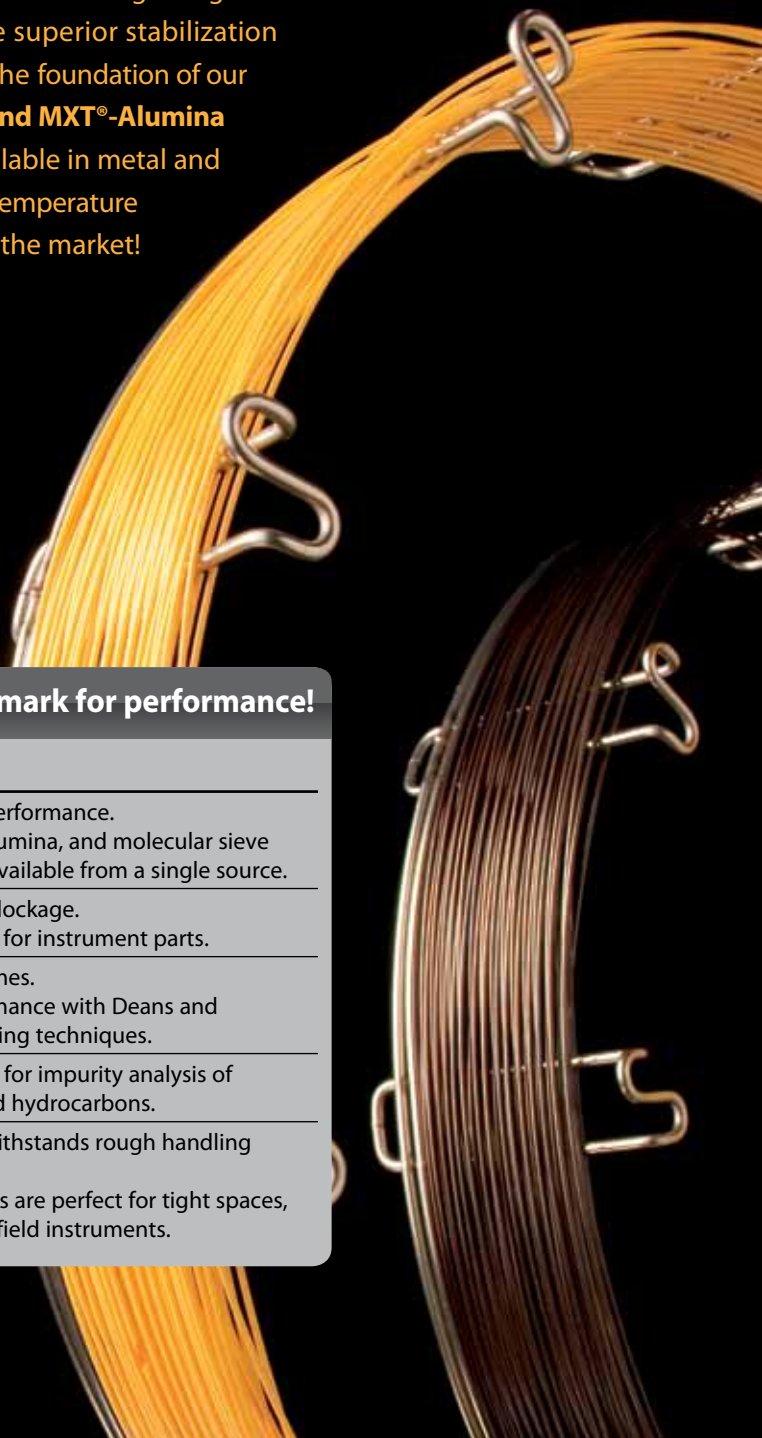
ID	df	temp. limits	30-Meter	50-Meter
0.32mm	5µm	to 250°C	19779	19780
0.53mm	10µm	to 250°C	19777	19778

## MXT<sup>®</sup>-Alumina BOND/MAPD Columns (Siltek<sup>®</sup>-treated stainless steel PLOT)

ID	df	temp. limits	3.5" coil 30-Meter	7" diameter 11-pin cage 30-Meter
0.53mm	10µm	to 250°C	79728-273	79728

## The Restek PLOT column family—a new benchmark for performance!

Feature	Benefit
Full product line based on next generation PLOT column technology.	<ul style="list-style-type: none"> <li>Superior column performance.</li> <li>Porous polymer, alumina, and molecular sieve PLOT columns all available from a single source.</li> </ul>
New bonding process minimizes particle release.	<ul style="list-style-type: none"> <li>Reduced column blockage.</li> <li>Reliable protection for instrument parts.</li> </ul>
Consistent flow characteristics.	<ul style="list-style-type: none"> <li>Stable retention times.</li> <li>Predictable performance with Deans and related flow switching techniques.</li> </ul>
Outstanding peak symmetry.	<ul style="list-style-type: none"> <li>Improved accuracy for impurity analysis of gases, solvents, and hydrocarbons.</li> </ul>
Many products also available in metal MXT <sup>®</sup> capillary column tubing.	<ul style="list-style-type: none"> <li>Rugged material withstands rough handling and shock.</li> <li>Small coil diameters are perfect for tight spaces, such as process or field instruments.</li> </ul>





# 3-IN-1 TECHNOLOGY

Highest Inertness • Lowest Bleed • Exceptional Reproducibility

## Lower Detection Limits with Ground-Breaking Column Technology

Rxi<sup>®</sup> technology unifies outstanding inertness, low bleed, and high reproducibility into a single high performance column line. Take variation out of the equation and get the most consistent results for trace level analysis with Rxi<sup>®</sup> columns.

### phases available

- Rxi<sup>®</sup>-1ms
- Rxi<sup>®</sup>-1HT
- Rxi<sup>®</sup>-5ms
- Rxi<sup>®</sup>-5Sil MS
- Rxi<sup>®</sup>-5HT
- Rxi<sup>®</sup>-XLB
- Rxi<sup>®</sup>-624Sil MS
- Rxi<sup>®</sup>-35Sil MS
- Rxi<sup>®</sup>-17
- Rxi<sup>®</sup>-17Sil MS
- Rxi<sup>®</sup> guard/retention gap columns
- Rxi<sup>®</sup> secondary columns for GCxGC (see page 10)



### Make the Switch to Rxi<sup>®</sup> columns!

Experience what Rxi<sup>®</sup> did for many others

- Lower detection limits
- Better peak shape
- Accurate results



# Simplify GC Analysis of Dioxins and Furans

Successfully monitoring chlorinated dioxins and furans requires the unbiased determination of 2,3,7,8-chlorine substituted congeners like highly toxic TCDDs and TCDFs. Fortunately, Restek offers proven solutions for both initial and confirmatory analyses.

## Initial Analysis — Rxi®-5Sil MS Column (fused silica)

- Provides isomer specificity for 2,3,7,8-TCDD, 2,3,7,8-TCDF, and 1,2,3,7,8-PeCDD—with one column!
- Resolves 15 of the 17 tetra- through octa-chlorinated 2,3,7,8-substituted dioxins and furans.
- Known elution orders for all tetra- through octa-chlorinated dioxin and furan congeners.
- Low bleed and high thermal stability up to 350 °C.

(low polarity Crossbond® silarylene phase; similar to 5% phenyl/95% dimethyl polysiloxane)

ID	df	temp. limits	60-Meter
0.18mm	0.10µm	-60 to 320/350°C	43607
0.25mm	0.25µm	-60 to 330/350°C	13626

## Confirmatory Analysis — Rtx®-Dioxin2 Column (fused silica)

- Low bleed and high thermal stability up to 340 °C for far greater life and reproducibility over cyano columns.
- Provides isomer specificity for 2,3,7,8-TCDD and 2,3,7,8-TCDF.
- Resolves 14 of the 17 tetra- through octa-chlorinated 2,3,7,8-substituted dioxins and furans.
- Known elution orders for all tetra- through octa-chlorinated dioxin and furan congeners.

(proprietary Crossbond® phase)

ID	df	temp. limits	40-Meter	60-Meter
0.18mm	0.18µm	20°C to 340°C	10759	
0.25mm	0.25µm	20°C to 340°C		10758



## Inventory available for immediate delivery!



### Ultra-Clean Resin

#### XAD-2 Equivalent

- For adsorbing semivolatiles in air.
- Cleaned, GC tested and certified.
- Available in 100 gram quantities.

Although resin is excellent for trapping PAHs, it requires extensive clean-up because many of its impurities are PAH compounds. To save time, we do the cleaning for you! We test each batch by capillary GC/flame ionization detector to ensure cleanliness. Additional cleaning may be needed for trace residue work.

Method:	Applications
EPA TO-13A:	PAHs in Ambient Air
ASTM D6209:	PAHs in Ambient Air
EPA Method 23:	Dioxins in Stationary Source Emissions
EPA Method 0010:	Semivolatiles in Stationary Source Emissions

Ultra-Clean Resin, 100 grams cat.# 24230



### SDVB Resin

#### XAD-2 Equivalent

- Styrene/divinylbenzene, equivalent to XAD-2 resin.
- Untreated, packaged in 1 kg plastic containers.
- Spherical, 20 to 60 mesh particles.

Description	qty.	cat.#
SDVB Resin	1kg	24053



Restek has supplies for all your air sampling needs!  
**Visit [www.restek.com/air](http://www.restek.com/air)**

## Fully Automated High-Capacity System Cleans Canisters With Ease!

- Twelve 6 L canister capacity; custom-built trays for different canister sizes.
- EPA Method TO-14A/15 compliant.
- Small footprint saves lab space.
- No computer needed—uses embedded touch screen controller.
- Save up to ten user defined methods.
- Automated system leak test.
- Isothermal oven cleans entire can AND valve more completely than band heaters.
- Includes Edwards RV-8 vacuum pump—no turbo pumps!
- One year limited warranty.

Description	qty.	cat.#
TO-Clean Oven, 120V, 60Hz	ea.	22916
TO-Clean Oven, 220/230V, 50/60Hz	ea.	22917
Optional Accessories (not included with TO-Clean Oven)		
Description	qty.	cat.#
Dewar, glass, 4300mL stainless steel u-tube trap	ea.	22918
Oven Cart, 29"H x 27"W x 49"D, 12 gauge steel, push handle and casters	ea.	22919
1L Option: includes tubing, fittings, and inserts for 24 1L canisters	ea.	22920
Humidification Chamber	ea.	24282

Note: Ovens are built on demand, therefore, a ten week lead time is required on all orders. A limited cancellation and return policy applies to TO-Clean ovens; contact your local Restek distributor for details.  
Shipping: FedEx Ground, unless otherwise requested. Costs vary depending on ship-to location.



Dimensions:  
44"H x 48"W x 27"L  
Weight: 525 lbs

CE

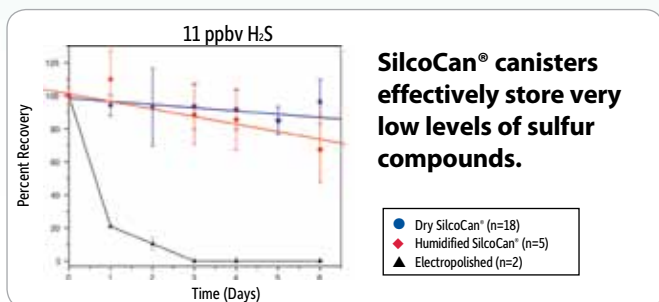


	Restek	Entech
Capacity	Twelve 6 L cans	Six 6 L cans
Software	Included	Separate

## Collect Air Samples With No Change in VOC Concentration

### SilcoCan® & TO-Can® Air Monitoring Canisters

- Siltek® deactivation offers excellent storage stability for sulfur VOCs at very low levels (1–20 ppbv), under dry or humid conditions.
- Variety of options, sizes, and pressure ranges available, including SUMMA can equivalent.
- Standard fittings compatible with all instrumentation and accessories.
- Repair service available to extend canister life.
- Ideal for ambient air (US EPA TO-14A, TO-15, ASTM D5466), indoor air, vapor intrusion, emergency response.



#### Canister Options

Sizes	1, 3, 6, 15 L
Valves	Parker® diaphragm, Swagelok® bellows
Interior Coating	Electropolished, Siltek® treated
Gauges	3 vacuum/pressure ranges

#### Applications

- Ambient Air (US EPA TO-14A, TO-15, ASTM D5466)
- Indoor Air
- Vapor Intrusion
- Emergency Response



# GCxGC Columns

Your One Source for 2D Gas Chromatography



- Wide range of stationary phases offers orthogonal separations.
- High thermal stability increases system ruggedness.
- Unrivaled column inertness for accurate analysis of active compounds.
- 0.15, 0.18, and 0.25 mm ID formats accommodate varying sample capacities, speeds, and detectors.
- Secondary columns come in convenient 2 m lengths for economical method development.

GCxGC is a powerful technique that allows you to accurately analyze highly complex samples. A first (primary) column performs a separation, and its effluent is continually focused and “injected” by a modulator onto a second (secondary) column, where another separation occurs. By choosing columns with differing (orthogonal) phases, it is possible to identify analytes that cannot be separated by a single column alone.

Restek has been performing comprehensive two-dimensional gas chromatography since its commercial inception. Our technical experts are ready to assist you with column selection and method development, so contact us or your Restek representative today!

## Columns

Restek GCxGC secondary columns can be matched with any Restek Rtx® or Rxi® primary column to create the perfect orthogonal separation for your application.

**Available Phases** (In order of increasing polarity):  
Rxi®-1ms • Rxi®-5Sil MS • Rxi®-XLB • Rxi®-17Sil MS  
Rtx®-200 • Stabilwax®

For help pairing columns, visit  
[www.restek.com/gcxgc-combo](http://www.restek.com/gcxgc-combo)

## Accessories



### Protect Your GC and Analytical Column!

Restek Electronic Leak Detector  
[www.restek.com/leakdetector](http://www.restek.com/leakdetector)



### Get a Leak-Tight Seal Between Columns

Press-Tight® Connector  
[www.restek.com/press-tight](http://www.restek.com/press-tight)



### Improve Trace Level Analysis

Sky™ Inlet Liners  
[www.restek.com/sky](http://www.restek.com/sky)



## Go Green!

Help Save the Environment and Save Time in the Lab With Q-sep™ QuEChERS Products

### REDUCE:

Easy-pour packets create far less waste than tubes of salts.



LIMITED TIME OFFER!

**FREE** 50-pack of salts!

[www.restek.com/gogreen](http://www.restek.com/gogreen)



### RECYCLE:

Recyclable boxes consist of at least 33% recycled cardboard.



### REUSE:

Teflon® FEP tubes are reusable indefinitely under normal use.

Available for European EN 15662, AOAC 2007.01, and Original Unbuffered Methods.

## Q-sep™ 3000 Centrifuge for QuEChERS



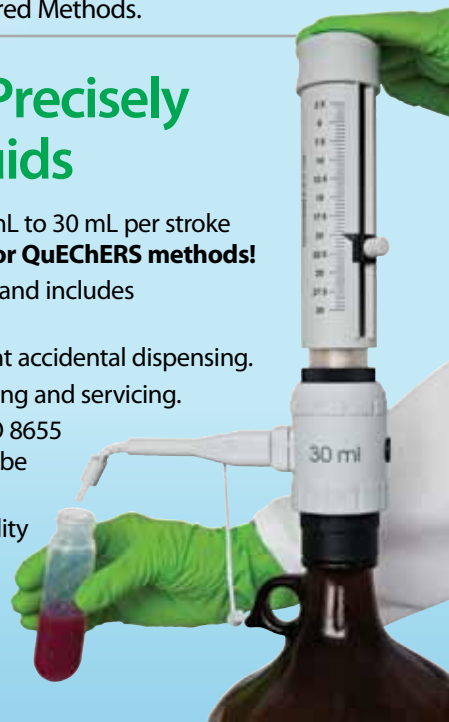
The economical Q-sep™ 3000 Centrifuge is the first specifically designed for QuEChERS methodology. This compact, quiet, yet powerful, unit spins at the 3,000 g force required by the European method. One-year warranty.

Description	qty.	cat.#
Q-sep 3000 Centrifuge, 110V	ea.	26230
Q-sep 3000 Centrifuge, 220V	ea.	26231
<b>Replacement Accessories</b>		
50mL Tube Carrier for Q-sep 3000 Centrifuge	2-pk.	26232
50mL Conical Tube Insert for Q-sep 3000 Centrifuge	6-pk.	26249
4-Place Tube Carrier for Q-sep 3000 Centrifuge	2-pk.	26233
2mL Tube Adaptors for Q-sep 3000 Centrifuge	4-pk.	26234

## Accurately & Precisely Dispense Liquids

- Set output volume from 2.5 mL to 30 mL per stroke (0.5 mL increments)—**ideal for QuEChERS methods!**
- Base features 30 mm threads and includes four adaptors.
- Safety discharge helps prevent accidental dispensing.
- Easy to disassemble for cleaning and servicing.
- Individually calibrated per ISO 8655 (certificate included) and can be recalibrated by user.
- Excellent chemical compatibility and 100% autoclavability.

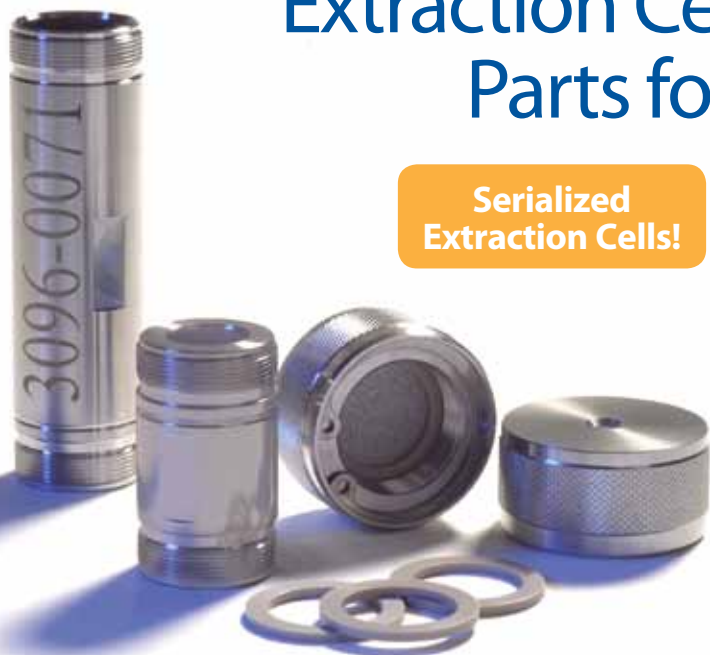
Description	qty.	cat.#
Q-sep Bottle Top Solvent Dispenser, 2.5 mL - 30 mL	ea.	23990





## Extraction Cells and Replacement Parts for ASE® Systems

**Serialized  
Extraction Cells!**



**Autoseal Tip Assembly** for ASE® 200 Systems

**Diatomaceous Earth**

**Extraction Cell Parts** for ASE® 200 Systems

**Extraction Cell Parts** for ASE® 300/100 Systems

**Filters** for ASE® 200 Extraction Cells, 20mm

**Filters** for ASE® 300/100 Extraction Cells, 30mm

**PEEK Washers** for ASE® 200 Systems

**PEEK Washers** for ASE® 300/100 Systems

**Resprep™ Tools** for ASE® Systems

**Retaining Ring Pliers** for ASE® 100/200/300 Systems

**Sample Collection Bottles** for ASE® 300/100 Systems, 250mL

**Sample Collection Vials** for ASE® 200 Systems, 60mL

**Tubing Assembly** for ASE® 200 Systems

**Valves for ASE®** 100/200/300 Systems

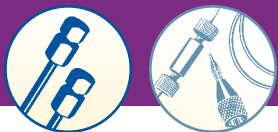
Visit [www.restek.com/ASE](http://www.restek.com/ASE) for a complete product listing

## **NEW!** High-Quality Lab Glassware at an Inviting Price

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## RESTEK USLC™

### Ultra Selective Liquid Chromatography™

- Unique 4-column set offers the widest range of reversed phase selectivity available:
  - Aqueous C18
  - IBD
  - Biphenyl
  - PFP Propyl
- Efficient and effective method development.
- Fits any HPLC or UHPLC instrumentation.

Download our new *LC Method Development Toolbox* application note at [www.restek.com/USLC](http://www.restek.com/USLC)

## Gain Superior LC Temperature Control With Sidewinder Products

### Sidewinder LC Column Heater

- Easy to set up!
- Operation range: 5 °C above ambient to 85 °C, ±1 °C.
- Lightweight, compact design fits in small spaces.
- Column holder can be placed in any orientation.
- Achieve optimum performance and efficiency when used in conjunction with a mobile phase pre-heater.

Description	Length	qty.	cat.#
Temperature Control Module and Column Holder	Long (25cm)	ea.	26516
Temperature Control Module and Column Holder	Short (10cm)	ea.	26517

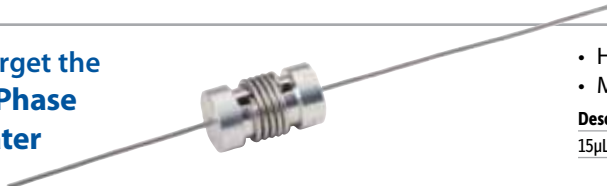


### Sidewinder LC Column Heater/Cooler

- Operation range: 5-55 °C, ±0.2 °C.
- Ability to program multiple temperature points.
- Accommodates columns up to 30 cm in length and 7.8 mm ID.
- Compact design.
- Achieve optimum performance and efficiency when used in conjunction with a mobile phase pre-heater.

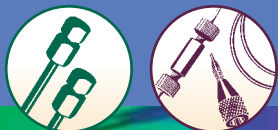
Description	qty.	cat.#
Sidewinder Heater/Cooler Temperature Control Module and Column Holder	ea.	26518

### Don't Forget the Mobile Phase Pre-Heater



- Heats mobile phase before it enters a heated column.
- Minimizes temperature changes to help keep analyte peaks sharp.

Description	qty.	cat.#
15µL Mobile Phase Pre-heater, 0.010" ID	ea.	22484



## Biphenyl

### Leading Resolution in LC for Clinical and Forensic Applications

- Optimized for a wider range of compound chemistries compared to a C18 or phenyl column.
- Perfect for drugs of abuse, pharmaceuticals, metabolites, and more.
- Ultra Biphenyl columns are lot tested with a comprehensive drug panel to ensure confidence in method reproducibility.

Find product lists, applications, and more at [www.restek.com/biphenyl](http://www.restek.com/biphenyl)

## Get Highly Stable Baselines From The Degasys In-Line Vacuum Degasser

- Prevents oxygen from causing flow rate instability and baseline noise.
- Prevents bubbles from forming in check valves, at connections, or in detector flow cells.
- More effective than sonication or helium sparging.



### Specifications:

Residual Oxygen <sup>1</sup>	0.9ppm
Pressure Loss <sup>1</sup>	0.24psi (1.65kPa)
Internal Volume	500µL
Wetted Parts	Teflon AF, PTFE, ETFE, PPS
Max Flow Rate	7mL/min./channel
<sup>1</sup> At a flow rate of 1mL/min.	

Description	Voltage	qty.	cat.#
Mobile Phase Degasser (4 Channel, 7mL/min./channel)	110V	ea.	25189
Mobile Phase Degasser (4 Channel, 7mL/min./channel)	220V	ea.	25194

To prevent system damage, do not use the Degasys system with solutions containing TFA at concentrations greater than 5%.

## Produce Vortex Shear Mixing Over a Wide Range of Flows

- Efficient cross-flow shearing mechanism.
- Interchangeable cartridges.
- Reduced baseline noise.
- Improved gradient accuracy, for more reproducible results.
- Increased reaction efficiency in post-column derivatization.
- Increased sensitivity.

### HyperShear Static In-Line Mixers

Choose stainless steel or PEEK construction.



Volume	Stainless Steel		PEEK	
	qty.	cat.#	qty.	cat.#
1µL	ea.	26409	ea.	26410
25µL	ea.	26411	ea.	26412
50µL	ea.	25341	ea.	26413
150µL	ea.	25342	ea.	26414
250µL	ea.	25343	ea.	26415

### Ternary Tee Mixers

Stainless steel construction.



Description	Volume	qty.	cat.#
Ternary Tee Mixer	25µL	ea.	25138



## Biodiesel Calibration Standards

Determining Free and Total Glycerin in B100 Biodiesel Methyl Esters by GC

Compound	Solvent	Conc.	cat.#	Compound	Solvent	Conc.	cat.#
(s)-(-)-1,2,4-butanetriol	pyridine	1,000	33024	monopalmitin	pyridine	5,000	33026
(s)-(-)-1,2,4-butanetriol (5mL)	pyridine	1,000	33032	tricaprin			
diolein (1,3-di[ <i>cis</i> -octadecenyl] glycerol)	pyridine	5,000	33022	(1,2,3-tricaprinol)glycerol)	pyridine	8,000	33025
glycerin	pyridine	500	33020	tricaprin (1,2,3-tricaprinol)glycerol (5mL)	pyridine	8,000	33033
monolein (1-mono[ <i>cis</i> -9-octadecenyl]-rac-glycerol)	pyridine	5,000	33021	triolein (1,2,3-Tri[ <i>cis</i> -octadecenyl] glycerol)	pyridine	5,000	33023

Volume is 1mL/ampul unless otherwise noted. Concentration is µg/mL unless otherwise noted.

Visit [www.restek.com/biodiesel](http://www.restek.com/biodiesel)



## QuEChERS Products

Quick, Easy, Cheap, Effective, Rugged and Safe!

### NEW Standards Available!

#### Standards for AOAC QuEChERS Method 2007.01

- AOAC IS Solution 31963
- AOAC TPP Solution 31964
- AOAC QC Spike Mix 31999

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# MegaMix<sup>®</sup>

## Time-Saving MegaMix<sup>®</sup> Environmental Reference Mixes

- Largest number of target analytes in one mix.
- Formulated for maximum stability.
- Available for a wide variety of methods.

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