

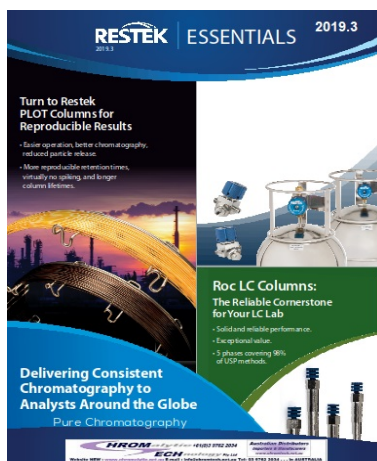
Restek Essentials

2009 vol4

vol 3

vol 2

vol 1



2018.1



2018.4

2017.5



2015.2

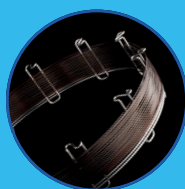
Dynamic Duo

Protect your instrument and improve data quality with this powerful pair from Restek.

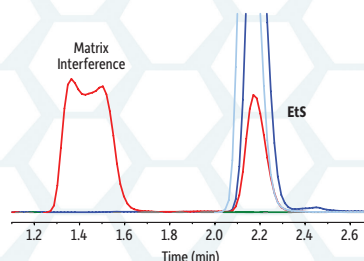
ProFLOW 6000
Flowmeter

Electronic
Leak Detector

MORE INSIDE!



Raptor[™] LC Columns



New Raptor LC Column Phase: EtG/EtS

All matrix interferences resolved in a fast, 4-minute, dilute-and-shoot method.

Add the Performance of Restek's RAVE Valves to Your Entech Air Cans

Easily retrofit your 3.2 L, 6 L, and 15 L Entech air sampling canisters.



Pure Chromatography

Purchase one of our new EtG/EtS columns and receive a free evaluation column.

Offer expires 31st January 2018. Please quote offer code JAN18.

- Higher efficiency for **drastically faster analysis times**.
- Better selectivity for **substantially improved resolution**.
- **Increased sample throughput** with existing HPLC instrumentation.
- Long-lasting ruggedness for **dependable reproducibility**.

Matrix Interference

Time (min)

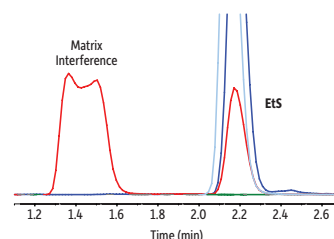


New Phase: Raptor EtG/EtS

All Matrix Interferences Resolved

How often are matrix interferences affecting your EtG/EtS analysis? Restek's EtG/EtS solution consistently resolves analytes away from matrix interferences in a fast, 4-minute, dilute-and-shoot method.

Reference Standards
EtG/EtS standards also available!



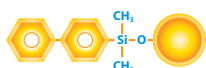
Description

cat.#

2.7 μ m Columns 100 mm, 2.1 mm ID

9325A12

The Raptor Suite of Innovative LC Columns:



Time-Tested Restek Biphenyl Phase:

The established choice for bioanalytical testing since 2005.



Reliably Versatile Restek FluoroPhenyl Phase:

Get the power of HILIC and RP modes in one LC column.



Acid-Resistant Restek ARC-18 Phase:

Ahead of the curve for large, multiclass lists by mass spec.



General-Purpose Restek C18 Phase:

Raptor speed, efficiency, and ruggedness are now in C18.



Rugged, MS-Friendly Restek HILIC-Si Phase:

Simplify the switch to HILIC on both HPLC and UHPLC systems.



Plumb Your LC Quickly and Reliably with Restek

Stainless Steel:

Top Quality Capillary Tubing

- 316 stainless in precut lengths.
- Clean and smooth finish.
- Color coded for easy identification.



		0.005" (0.127 mm) ID (red) max. 27,850 psi	0.007" (0.178 mm) ID (yellow) max. 26,610 psi	0.010" (0.254 mm) ID (blue) max. 25,160 psi	0.020" (0.508 mm) ID (orange) max. 20,230 psi
Length	qty.	cat.#	cat.#	cat.#	cat.#
1/16" OD Tubing					
5 cm	3-pk.	25813	25817	25821	25825
10 cm	3-pk.	25814	25818	25822	25826
20 cm	3-pk.	25815	25819	25823	25827
30 cm	3-pk.	25816	25820	25824	25828

EXP2 Reusable Fittings

- 20,000+ psi seals without wrenches.
- Patented titanium/PEEK ferrule allows repeated high-pressure seals.
- ZDV connection to any 10-32 port.



Description	qty.	cat.#
EXP2 Fitting (10 nuts, 10 ferrules, 1 driver)	10-pk.	25784

*Rated to 20,000+ psi (1,400 bar) and tested to 30,000 psi (2,068 bar).

PEEK:

Inert Tubing

Less oxygen permeable and more temperature resistant (to 100 °C) than PTFE or Tefzel.

Use tubing ≤ 0.007" to 7,000 psi; tubing ≥ 0.010" ID to 5,000 psi.



Description	OD	ID	Length	Color Code	qty.	cat.#
PEEK Tubing	1/16"	0.0025"	1 m	natural	3-pk.	25320
PEEK Tubing	1/16"	0.005"	3 m	red stripe	ea.	25065
PEEK Tubing	1/16"	0.007"	3 m	yellow stripe	ea.	25066
PEEK Tubing	1/16"	0.010"	3 m	blue stripe	ea.	25067
PEEK Tubing	1/16"	0.020"	3 m	orange stripe	ea.	25068

Universal 10-32 PEEK Column Connectors

Universal design compatible with all 1/16" tubing up to 5,000 psi.



Description	qty.	cat.#
PEEK Finger-Tight Fittings (blue, flat-sided)	10-pk.	25324

Learn more at www.restek.com/LCacc

Maximize uptime, increase productivity, and transfer methods across your lab.

- Long-lasting and reproducible - maintain stable retention times and peak shapes, even under the stress of elevated UHPLC pressures and rapid cycling.
- Fully scalable between HPLC and UHPLC - easily transfer and optimize methods without extensive calculations.

Force Biphenyl LC Columns (USP L11)

Length	2.1 mm	3.0 mm	4.6 mm
1.8 µm Columns			
30 mm	9629232		
50 mm	9629252	962925E	
100 mm	9629212	962921E	
3 µm Columns			
30 mm	9629332		
50 mm	9629352	962935E	
100 mm	9629312	962931E	9629315
150 mm	9629362	962936E	9629365
5 µm Columns			
50 mm	9629552	962955E	
100 mm	9629512	962951E	9629515
150 mm	9629562	962956E	9629565
250 mm			9629575

Force C18 LC Columns (USP L1)

Length	2.1 mm	3.0 mm	4.6 mm
1.8 µm Columns			
30 mm	9634232		
50 mm	9634252	963425E	
100 mm	9634212	963421E	
3 µm Columns			
30 mm	9634332		
50 mm	9634352	963435E	
100 mm	9634312	963431E	9634315
150 mm	9634362	963436E	9634365
5 µm Columns			
50 mm	9634552	963455E	
100 mm	9634512	963451E	9634515
150 mm	9634562	963456E	9634565
250 mm			9634575

Force Fluorophenyl LC Columns (USP L11)

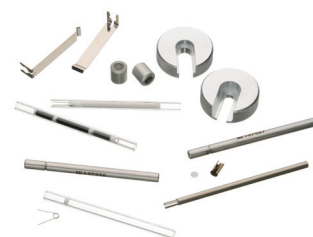
Length	2.1 mm	3.0 mm	4.6 mm
1.8 µm Columns			
30 mm	9639232		
50 mm	9639252	963925E	
100 mm	9639212	963921E	
3 µm Columns			
30 mm	9639332		
50 mm	9639352	963935E	
100 mm	9639312	963931E	9639315
150 mm	9639362	963936E	9639365
5 µm Columns			
50 mm	9639552	963955E	
100 mm	9639512	963951E	9639515
150 mm	9639562	963956E	9639565
250 mm			9639575

www.restek.com/force



Versatile Air Sampling for a Wide Range of VOCs with Thermal Desorption Tubes

- Individually etched with unique serial number for easy sample ID.
- Robust, reliable "code 128" barcode for recording and tracking.
- Corrosion-resistant glass for excellent inertness; allows monitoring of sorbent bed condition.
- Stainless steel for greater durability in the field; no sampling pump for passive sampling with diffusion caps.



Thermal Desorption (TD) Tubes (Unconditioned and Conditioned & Capped)

- Available unconditioned or preconditioned and ready to sample.
- Reusable after thermal desorption for most applications.

Sorbent Description	qty.	Unconditioned		Conditioned & Capped	
		Stainless Steel cat.#	Glass cat.#	Stainless Steel cat.#	Glass cat.#
Tenax TA (35/60 mesh)	10-pk.	24056	24062	24080	24086
Graphitized Carbon (20/40 mesh)	10-pk.	24057	24063	24081	24087
Tenax GR (35/60 mesh)/Carbopack B (60/80 mesh)	10-pk.	24058	24064	24082	24088
Carbopack B (60/80 mesh)/Carbosieve SIII (60/80 mesh)	10-pk.	24059	24065	24083	24089
Tenax TA (35/60 mesh)/Graphitized Carbon (40/60 mesh)/Carboxen 1000 (60/80 mesh)	10-pk.	24060	24066	24084	24090
Carbopack C (60/80 mesh)/Carbopack B (60/80 mesh)/Carbosieve SIII (60/80 mesh)	10-pk.	24061	24067	24085	24091



For calibration and empty TD tubes, as well as a range of accessories, visit www.restek.com/air

Two Sources of Pi-Marked Gas Calibration Standards – One Convenient Order

- Independently manufactured by two different sources; easily meet 2nd source lab requirements.
- Pi-marked cylinders available for the EU.
- Drop-shipped directly to you for maximum shelf life (min. 12 months).
- Each cylinder comes with a certificate of analysis and unique serial number.
- All cylinders are disposable.



Find your gas calibration standards at www.restek.com/2ndsource

Restek Air Valve Excellence

RAVEN Valves

RAVEN valves are now available for 3.2 L, 6 L, and 15 L Entech air canisters. Replace your TOV or TOV-2 valves without modification!

- Proven long life
- Leak-free performance
- Effortless operation
- Enhanced damage resistance

Also standard on Restek SilcoCan and TO-Can Sampling Canisters

Description	qty.	Siltek-treated cat.#	Stainless Steel cat.#
1/4" Replacement Valve, RAVEn (2-Port)	ea.	27377	27376
1/4" Replacement Valve, RAVEn (3-Port)	ea.	27379	27378
Diaphragm Rebuild Kit (includes: diaphragms (3))	kit	26390	26389

*Range of standard gauge is -30" Hg to 60 psi.

Do not exceed canister maximum pressure of 40 psig (2.75 bar).



Meet USP, ICH, and EP Residual Solvent Guidelines with Restek Reference Standards

- Filter product selection by United States Pharmacopeia USP <467> or European Pharmacopoeia/ICH.
- Choose from convenient mixes or single-compound standards.
- Certified reference materials (CRMs) manufactured and QC-tested in ISO-accredited labs satisfy your ISO requirements.

Restek is your complete supplier for world-class residual solvent analysis: standards, Rxi-624Sil MS (G43) and Stabilwax (G16) GC columns, inlet liners, accessories, applications, and more: www.restek.com/usp467



Gold Inlet Seals for Agilent GCs

We are currently offering Restek Gold Inlet Seals for Agilent GC's at a reduced price for packs of both 5 and 10.

- All seals include washer.
- Similar to Agilent part 5188-5367
- RRP £29.00 each*
- Gold-plated seals reduce breakdown and adsorption of active compounds

Part No.	Quantity	List price £	Equivalent to:
21317-5B	1 x 5 pack	60.00	ONLY £12.00 each
21317-10B	1 x 10 pack	109.00	ONLY £10.90 each

Light Up Your Analysis with Restek Replacement Lamps for Your Waters Detector

NEW! ACQUITY Long-Life (2,000 hours!) UV Lamp



Description	Model #	Similar to Waters Part #	qty	cat.#
Lamp, UV, Long Life (2,000 hours)	ACQUITY PDA/TUV 2489/2998	201000281	ea.	25775
Deuterium Lamp, Long Life (2,000 hours)	486	WAT080678	ea.	25410
Deuterium Lamp, Standard (1,000 hours)	996, 2996	WAT052586	ea.	25408
Deuterium Lamp, Standard (1,000 hours)	2487, 2488	WAS081142	ea.	25409
Xenon Lamp (without holder or mirror)	470		ea.	25404
Xenon Lamp	474		ea.	25405

Resprep VM-96 Vacuum Manifold

Designed by Restek with these simple things in mind...

- Performance
- Versatility
- Ergonomics
- Accuracy



Perfect for everyday SPE, SLE, PPT & filtration applications.

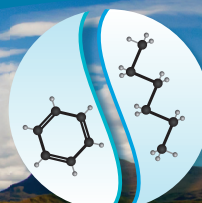
Description	qty.	cat.#
Resprep VM-96 vacuum manifold	ea.	25858

Resprep

Resprep EPH SPE Cartridges

These new SPE tubes offer complete extractable petroleum hydrocarbon (EPH) fractionation.

Description	Volume	15-pk. cat.#
Resprep EPH Fractionation SPE Cartridge	25 mL, 5 g	25859



Dynamic Duo

Restek's Leak Detector and ProFLOW 6000 Flowmeter: An Unbeatable Combination

Protect your instrument and improve data quality with this powerful pair from Restek. Checking for leaks and verifying flows before you start helps you avoid costly problems later.

Electronic Leak Detector

- Detects more gases than similar units (helium, nitrogen, argon, carbon dioxide, and hydrogen).
- Redesigned circuitry means longer battery life and less downtime.
- Optimized internal flow sweeps the sample path clean, permitting more sensitive detection.
- Audible feedback lets you determine the severity of a leak without looking at the LED display.

ProFLOW 6000 Flowmeter

- Ergonomic handgrip and extendable stand for benchtop use.
- Accurate to $\pm 2\%$ of flow reading or ± 0.2 mL/min, whichever is greater.
- Extended range lets you measure flows from 0.5 mL/min to 500 mL/min.
- Volumetric unit can measure the flow rate of any gas, even mixtures.
- NIST-traceable calibration assures accuracy.

Offer expires
31st January
2018. Please
quote offer
code JAN18.



ProFLOW 6000
Flowmeter

Electronic
Leak Detector

Learn more at
www.restek.com/dynamic-duo

Description	cat.#	List price £	Offer Price£
Leak Detector with 22655 1034.30 827.44	22655	1034.30	827.44
Universal Charger Set			
(US, UK, Euro, Aus) Soft-Side Case	22657	28.65	-
Small Probe Adaptor	22658	40.00	-
ProFLOW 6000	22656	789.80	631.84
Leak Detector and ProFLOW 6000 duo pack	22654	1699.05	1274.28

Branded vials and caps

Locally Sourced, High-Quality Vials offer exceptional value for European Analysts. In addition to providing reliability and quick delivery, these vials come with a competitive price that makes them an ideal choice for any lab.

Description	cat.#	List £	Offer £
Screw top vials with Marking Spot 2mL 12x32mm 9-425 pk/10022655	SR-0100902-C	7.40	5.55
Blue Screw Cap 9-425 with PTFE/silicone septa pk/100	SR-02009-TS-B	9.25	6.93
Crimp Vial clear with Marking Spot 11mm 2mL 12x32 pk/100	SR-01001102-C	7.35	5.51
Aluminium Crimp Cap 11mm with PTFE/rubber septa pk/100	SR-02011-TG-O/A	8.75	6.56

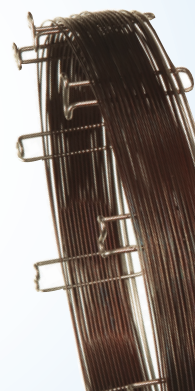


Guaranteed ASTM Method Performance with MXT-1HT SimDist Columns

- Lowest bleed for longest column lifetime.
- Individually tested for guaranteed performance.

ID	df	temp. limits	5-Meter cat.#	10-Meter cat.#
0.53 mm	0.10 µm	-60 to 430/450 °C	70112	
	0.20 µm	-60 to 430 °C	70115	
	0.21 µm	-60 to 430 °C		70118
	0.88 µm	-60 to 400/430 °C	70131	70134
	1.00 µm	-60 to 380/400 °C		70130
	1.20 µm	-60 to 380/380 °C		70119
	2.65 µm	-60 to 380/400 °C		70132
	5.00 µm	-60 to 380/400 °C		70133

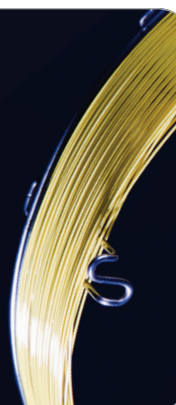
*Maximum temperature varies by cat.#; see column-specific temperatures.



Virtually Particle-Free Rt-Silica BOND GC PLOT Columns

- Qualitative results for light hydrocarbons, sulfur gases, halocarbons, and CO₂.
- Individually QC tested to ensure consistency.
- Reproducible retention times.

ID	temp. limits	15-Meter cat.#	30-Meter cat.#	60-Meter cat.#
0.32 mm	-80 to 260 °C	19784	19785	19786



Replacement Parts for your Mass Spec that Meet or Exceed OEM Performance

NEW! ETP Electron Multiplier for Shimadzu QP5000 MS

- Very high secondary electron emission.
- Air stable; two-year shelf life guarantee.

Electron Multipliers for Shimadzu GC-MS	qty.	cat.#
for Shimadzu QP5000 MS	ea.	23840



NEW! High-Temperature EI Filament for Agilent 5972, 5973, 5975, or 5977 GC-MS

- Every filament is subjected to QC tests, including heat, electrical current, and resistance.
- Samples from each lot are installed in an MSD for *in situ* testing.



Description	Similar to Agilent Part #	qty.	cat.#
High-Temperature EI Filament for Agilent 5972, 5973, 5975, or 5977 GC-MS	G7005-60061, G3170-60050 (obsolete)	ea.	23099

Mass spec, FID, ECD — www.restek.com/GCacc
has the replacement parts your detectors need.

Thermally Stable, High Polarity Stabilwax-MS GC Columns

for Flavor, Food, Fragrance, Industrial Chemical,
and Solvent Analyses

- High thermal stability and low bleed for lower detection limits and use with mass spec.
- Withstand repeated temperature cycles without retention time shifting.
- USP G14, G15, G16, G20, and G39 phases.

Description	temp. limits	qty.	cat.#
30 m, 0.25 mm ID, 0.25 µm	40 to 250/260 °C	ea.	10673
30 m, 0.32 mm ID, 0.25 µm	40 to 250/260 °C	ea.	10674



Revolutionary technology and
inertness deliver the next level of
True Blue Performance:

- **Deactivation**—unbelievably low breakdown for low-level GC analyses.
- **Reproducibility**—unbeatable manufacturing and QC for superior reliability.
- **Productivity**—unparalleled cleanliness for maximized uptime and throughput.



Patented

www.restek.com/topaz

Thermolite Plus Advanced Septa Technology



- Usable to 350 °C inlet temperature.
- Ultra-low bleed minimizes background signal.
- Plasma coating eliminates sticking.
- Precision molded for consistent, accurate fit.
- Preconditioned and GC-FID tested.

Septum Diameter	48-pk. cat.#	50-pk. cat.#	100-pk. cat.#
5 mm (3/16"), with CenterGuide, predrilled	—	23860	23861
6 mm (1/4")	—	23874	—
7 mm	—	23875	—
8 mm	—	23876	—
9 mm, with CenterGuide	—	23862	23863
9.5 mm (3/8")	—	23877	—
10 mm	—	23878	—
11 mm (7/16"), with CenterGuide	—	23864	23865
11.5 mm, with CenterGuide	—	23866	23867
12.7 mm (1/2"), with CenterGuide	23868	—	—
17 mm, with CenterGuide	23870	—	—
Shimadzu Plug	—	23872	23873



**Buy 1 Rxi column and get 10% off.
Buy 2 Rxi columns and get 20% off.**

**Want to buy 3 or more Rxi
columns? Contact us.**

Offer expires
31st January
2018. Please
quote offer
code JAN18.

Leverage the outstanding inertness,
low bleed, and high reproducibility
of Rxi 3-in-1 technology to gain:

- Accurate Data
- The Right Results Fast
- Maximized Instrument Uptime

Featured Rxi Phases:

For Hormones

Rxi-1ms Columns

Resolve 6 common steroid hormones in less than 6 minutes!

Description	temp. limits	qty.	cat.#	Price€
30 m, 0.25 mm ID, 0.25 μ m	-60 to 330/350 °C	ea.	13323	461.25

For Pesticides

Rxi-5ms Columns

Extremely robust, industry-standard column for GC-MS and
GC-MS/MS analysis of pesticides in food and environmental matrices.

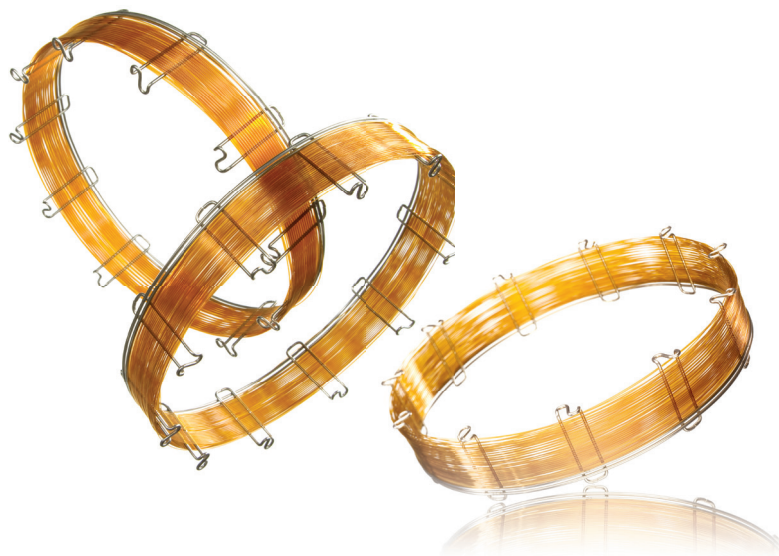
Description	temp. limits	qty.	cat.#	Price€
30 m, 0.25 mm ID, 0.25 μ m	-60 to 330/350 °C	ea.	13423	456.30
30 m, 0.25 mm ID, 0.25 μ m	-60 to 330/350 °C	6-pk	13423-600	2850.65

Extractables

Rxi-5Sil MS Columns

Analyze more extractables (a.k.a. semivolatiles)
per shift and increase your lab's productivity.

Description	temp. limits	qty.	cat.#	Price€
30 m, 0.25 mm ID, 0.25 μ m	-60 to 320/350 °C	ea.	13623	483.30
30 m, 0.25 mm ID, 0.50 μ m	-60 to 320/350 °C	ea.	13638	483.30
30 m, 0.25 mm ID, 0.25 μ m w/ 5 m Integra-Guard Column	-60 to 320/350 °C	ea.	13623-124	548.90
30 m, 0.25 mm ID, 0.50 μ m w/ 5 m Integra-Guard Column	-60 to 320/350 °C	ea.	13638-124	548.90



For Residual Solvents & Terpenes

Rxi-624Sil MS Columns

Full separate residual solvents and 38 terpenes via headspace
analysis without interference.

Description	temp. limits	qty.	cat.#	Price€
30 m, 0.25 mm ID, 1.40 μ m	-20 to 300/320 °C	ea.	13868	463.45

For Cannabinoids

Rxi-35Sil MS Columns

Achieve full resolution for all cannabinoids in 3 minutes
with an economical column suited for hydrogen carrier gas.

Description	temp. limits	qty.	cat.#	Price€
15 m, 0.25 mm ID, 0.25 μ m	50 to 340/360 °C	ea.	13820	303.10

Put Rxi columns to work in your lab.
Visit www.restek.com/rxi
and order yours today.



And for a full line of Restek
reference standards, visit
www.restek.com/standards

RESTEK
Pure Chromatography

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Lit. Cat.# GNES2624-UNV



Replace Liners Regularly to Optimize
Performance, Maximize Reproducibility,
and Minimize Downtime

And when you do, choose the
next level of *True Blue Performance*



**The Reliable,
Top-Quality Supplies
You Need to Maintain
Every GC and LC in Your Lab**

Pure Chromatography

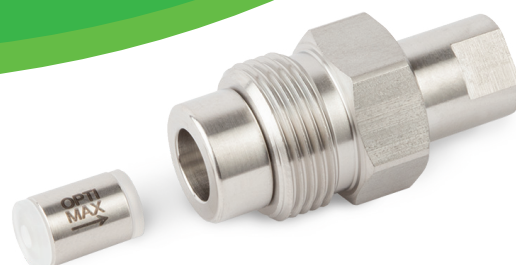
Protect Your Instruments and Avoid Downtime

Inexpensive and easy-to-use syringe filters
and patented Thomson SINGLE StEP filter
vials both provide fast, dependable
particulate removal.



Keep Your LC Running Smoothly with Opti-Max Check Valves

Exceptional performance
and reliability with super-fast
installation and replacement.



www.restek.com

Fast, Eco-Friendly Filtration with Just a Squeeze of Your Fingers

- Vials minimize sample loss by eliminating multiple transfers.
- Color-coded caps allow easy identification of 0.2 µm or 0.45 µm membranes in PVDF, PTFE, PES, or nylon.
- Low dead volume units feature rugged polypropylene vial and insert.
- Fit most standard 12x32 mm autosamplers, including UHPLC instruments.

Samples available! Contact your local Restek representative.



Thomson SINGLE StEP Standard Filter Vials

Porosity	Color	qty.	cat.#
Nylon			
0.2 µm	black pre-slit cap	100-pk.	25891
0.45 µm	pink pre-slit cap	100-pk.	25892
PES (polyethersulfone)			
0.2 µm	grey pre-slit cap	100-pk.	25897
PTFE (polytetrafluoroethylene)			
0.2 µm	green pre-slit cap	100-pk.	25893
0.45 µm	blue pre-slit cap	100-pk.	25894
PVDF (polyvinylidene difluoride)			
0.2 µm	red pre-slit cap	100-pk.	25895
0.45 µm	yellow pre-slit cap	100-pk.	25896

Also available in eXtreme, low-evaporation, and nano versions at www.restek.com/singlestep

Syringe Filtration with the Leak-Tight Security of a Luer Lock Inlet

- Color coded for easy identification.
- Rugged polypropylene housing.
- Autoclavable to 121 °C for 15 minutes.

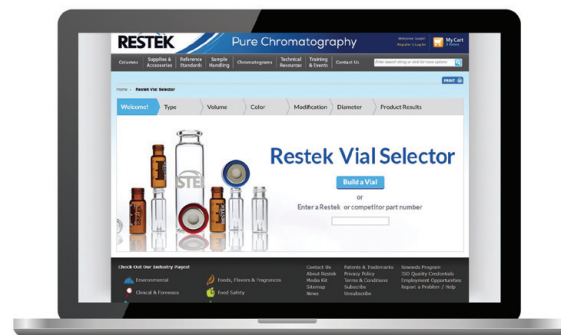
Quantity break pricing available!

Also available in 4 mm, 13 mm, and 30 mm options at www.restek.com/syringefilters



Restek Has Your Vial, and We'll Help You Find It

Use our online vial selector tool to choose your vial type, volume, color, modifications, and orifice size in just a few clicks—and then quickly order the vials, caps, and closures that meet your needs. You'll even see your vial being built as you make selections.



Get started at www.restek.com/vial-finder

Size	Porosity	Color	qty.	cat.#
Cellulose Acetate				
25 mm	0.22 µm	red	100-pk.	26158
25 mm	0.45 µm	red	100-pk.	26157
Nylon				
25 mm	0.22 µm	pink	100-pk.	26148
25 mm	0.45 µm	pink	100-pk.	26149
PES (polyethersulfone)				
25 mm	0.22 µm	green	100-pk.	23968
25 mm	0.45 µm	green	100-pk.	23969
PTFE (polytetrafluoroethylene)				
25 mm	0.22 µm	white	100-pk.	26144
25 mm	0.45 µm	white	100-pk.	26145
PVDF (polyvinylidene difluoride)				
25 mm	0.22 µm	blue	100-pk.	26152
25 mm	0.45 µm	blue	100-pk.	26153

Feed Your GC High-Purity Gas with Minimal Downtime for Filter Changeouts

- High-purity output ensures 99.9999% pure gas (at max. flow of 2 L/min).
- Designed for easy, hassle-free cartridge changes.
- Glass inside to prevent diffusion; polycarbonate housing outside for safety.

Description	qty.	cat.#
Carrier Gas Cleaning Kit		
Includes: Mounting Baseplate; 1/8" Inlet/Outlet Fittings; and Oxygen/Moisture/Hydrocarbon Triple Gas Filter	kit	22019
Fuel Gas Purification Kit		
Includes: Mounting Baseplate; 1/8" Inlet/Outlet Fittings; and Hydrocarbon/Moisture Fuel Gas Filter	kit	22021
Helium-Specific Carrier Gas Cleaning Kit		
Includes: Mounting Baseplate; 1/8" Inlet/Outlet Fittings; and Oxygen/Moisture/Hydrocarbon Helium-Specific Filter	kit	21983



Extend the Life of Your RAVE and RAVen Valves

Each rebuild kit contains everything you need to rebuild and restore the performance of your RAVE and RAVen valves.

Description	qty.	Siltek-treated cat.#	Stainless Steel cat.#
RAVE and RAVen Diaphragm Rebuild Kit (includes: diaphragms (3))	kit	26390	26389



Why Replace When You Can Rejuvenate?

Restek offers repair and recalibration services. Let us breathe new life into your:

- Air sampling canisters
- Air sampling kits
- Restek electronic leak detector
- ProFLOW 6000 flowmeter

Contact Restek Customer Service or your local Restek representative for details and availability.



Make a Strong and Lasting Connection in Your GC

Defined PressFit Connectors

ID-specific ends for better sealability. Deactivated borosilicate glass.

Fits Column ID	Color	5-pk. cat.#	25-pk. cat.#
For 0.18/0.25 mm to 0.18/0.25 mm ID Columns	Red to Red (end codes)	22159	22160
For 0.18/0.25 mm to 0.32 mm ID Columns	Red to Black (end codes)	22161	22162
For 0.18/0.25 mm to 0.53 mm ID Columns	Red to Blue (end codes)	22163	22164
For 0.32 mm to 0.32 mm ID Columns	Black to Black (end codes)	22165	22166
For 0.32 mm to 0.53 mm ID Columns	Black to Blue (end codes)	22167	22168
For 0.53 mm to 0.53 mm ID Columns	Blue to Blue (end codes)	22169	22170

Permanent SiLTite μ-Union Connectors

Easy installation and a permanent leak-tight connection. Deactivated metal is stable at extreme temps.

Description	Fits Column ID	qty.	cat.#
SiLTite μ-Union Connector Kit	0.32 mm to 0.32 mm	kit	23882
SiLTite μ-Union Connector Kit	0.32 mm to 0.53 mm	kit	23883
SiLTite μ-Union Connector Kit	0.53 mm to 0.53 mm	kit	23884
SiLTite μ-Union Connector Kit	0.18/0.25 mm to 0.18/0.25 mm	kit	23885
SiLTite μ-Union Connector Kit	0.18/0.25 mm to 0.32 mm	kit	23886
SiLTite μ-Union Connector Kit	0.18/0.25 mm to 0.53 mm	kit	23887



Protect Your GC Column from Sample Contamination with Rxi Guards



Nominal ID	Nominal OD	5-Meter cat.#	5-Meter/6-pk. cat.#	10-Meter cat.#
0.25 mm	0.37 ± 0.04 mm	10029	10029-600	10059
0.32 mm	0.45 ± 0.04 mm	10039	10039-600	10064
0.53 mm	0.69 ± 0.05 mm	10054	10054-600	10073

A Clean, Square Cut Makes for a Secure Guard Installation

Cuts fused silica tubing and MXT metal capillary columns. Millimeter markings assist in measuring column insertion distances.

Description	qty.	cat.#
Ceramic Scoring Wafers	5-pk.	20116





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for orders of
five or more
5-packs!



Revolutionary technology and inertness deliver the next level of

True Blue Performance:

- **Deactivation**—unbelievably low breakdown for low-level GC analyses.
- **Reproducibility**—unbeatable manufacturing and QC for superior reliability.
- **Productivity**—unparalleled cleanliness for maximized uptime and throughput.

Patented



Featured Topaz Liners:



Agilent

Split Injection: 23305 | 23300

Splitless Injection: 23303 | 23302



PerkinElmer

Split Injection: 23450 | 23449

Splitless Injection: 23451



Sciex/Agilent/Varian

Split Injection: 23328

Splitless Injection: 23332 | 23331



Shimadzu

Split Injection: 23319 | 23320

Splitless Injection: 23336 | 23322



Thermo Scientific

Split Injection: 23444 | 23267

Splitless Injection: 23447 | 23446

www.restek.com/topaz

Replacement Parts for your Mass Spec that Meet or Exceed OEM Performance

NEW! ETP Electron Multiplier for Shimadzu QP5000 MS

- Very high secondary electron emission.
- Air stable; two-year shelf life guarantee.

Electron Multipliers for Shimadzu GC-MS	qty.	cat.#
for Shimadzu QP5000 MS	ea.	23840



High-Temperature EI Filament for Agilent 5972, 5973, 5975, or 5977 GC-MS

- Every filament is subjected to QC tests, including heat, electrical current, and resistance.
- Samples from each lot are installed in an MSD for *in situ* testing.



Description	Similar to Agilent Part #	qty.	cat.#
High-Temperature EI Filament for Agilent 5972, 5973, 5975, or 5977 GC-MS	G7005-60061, G3170-60050 (obsolete)	ea.	23099

Mass spec, FID, ECD — www.restek.com/GCacc
has the replacement parts your detectors need.



Finished with Column Install or Maintenance?

Verify your column and detector performance by running a Restek test mix.

Restek offers a full line of column test mixes for GC and LC. Find yours at
www.restek.com/Test-Mixes

GC-MS Cleaning Kit

Poor sensitivity, loss of sensitivity at high masses, or high multiplier gain during an autotune are all indicators that your mass spectrometer source may need to be cleaned. These kits contain all of the necessary components for cleaning and polishing your ion source.



Description	qty.	cat.#
Mass Spec Cleaning Kit with Dremel Tool	kit	27194
Mass Spec Cleaning Kit without Dremel Tool	kit	27195
Mass Spec Cleaning Kit Replacement Parts Kit	kit	27196
Includes: cloths, micro mesh sheets, small and large gloves		

Promote Cleanliness and Convenience by Ordering O-Rings and Ferrules in Special Dial Packs



Capillary Ferrules



Ferrule ID	Fits Column ID	qty.	Vespel	Graphite	VG1 (85/15)	VG2 (60/40)
0.3 mm		10-pk.	22213	20233	27061	20275
0.4 mm	0.10/0.15/0.18/ 0.25/0.28 mm	10-pk.	22214	20200	27062	20211
0.4 mm	0.10/0.15/0.18/ 0.25/0.28 mm	50-pk.	—	20227	27063	20229
0.5 mm	0.32 mm	10-pk.	22215	20201	27064	20212
0.5 mm	0.32 mm	50-pk.	—	20228	27065	20231
0.6 mm	0.28 mm**	10-pk.	—	—	27066	20232
0.8 mm	0.45/0.53 mm	10-pk.	22216	20202	27067	20213
0.8 mm	0.45/0.53 mm	50-pk.	—	20224	27068	20230
1.0 mm	0.75 mm*	10-pk.	22217	21058	27069	24912
1.2 mm	0.75 mm*	10-pk.	22218	—	—	—
1.6 mm	1.00 mm*	10-pk.	—	21060	—	—

*For micropacked columns.

**For 0.28 mm MXT columns.

Viton O-Rings for Apex Liners



Description	Max. temp.	qty.	cat.#
Viton O-Rings for APEX liners	250 °C	25-pk.	22067

Viton O-Rings for Agilent GCs

Fit split (6.3 mm OD) or splitless (6.5 mm OD) liners.

Description	Max. Temp.	Similar to Agilent Part #	10-pk. cat.#	50-pk. cat.#
Viton O-Rings for Agilent GCs	300 °C	5188-5365	22241	22242

Viton O-Rings for Shimadzu 17A, 2010, and 2014 GCs



Description	Max. Temp.	Similar to Shimadzu Part #	qty.	cat.#
Viton O-Rings for Shimadzu 17A, 2010, and 2014 GCs	250 °C	036-11203-84	10-pk.	24899

Viton O-Rings for PerkinElmer PSS Injector



Fits 4 mm OD liners.

Description	Max. Temp.	Similar to PE Part #	qty.	cat.#
Viton O-Rings for PerkinElmer PSS Injector	250 °C	N6101747	10-pk.	20366

Switch to Advanced Thermolite PLUS Septa Technology for Optimal Inlet Performance

- Usable to 350 °C inlet temperature.
- Ultra-low bleed minimizes background signal.
- Plasma coating eliminates sticking.
- Precision molded for consistent, accurate fit.
- Preconditioned and GC-FID tested.



Need a higher-temp option for demanding GC and GC-MS applications? Check out Premium Non-Stick BTO Septa at www.restek.com/septa

Septum Diameter	48-pk. cat.#	50-pk. cat.#	100-pk. cat.#
5 mm (3/16"), with CenterGuide, predrilled	—	23860	23861
6 mm (1/4")	—	23874	—
7 mm	—	23875	—
8 mm	—	23876	—
9 mm, with CenterGuide	—	23862	23863
9.5 mm (3/8")	—	23877	—
10 mm	—	23878	—
11 mm (7/16"), with CenterGuide	—	23864	23865
11.5 mm, with CenterGuide	—	23866	23867
12.7 mm (1/2"), with CenterGuide	23868	—	—
17 mm, with CenterGuide	23870	—	—
Shimadzu Plug	—	23872	23873

Note: Due to differences in inlet design, the actual septum temperature for a given inlet setpoint can vary by manufacturer. Restek recommends using only BTO septa in Thermo TRACE and Focus GCs.

*For 17 mm inlets, the maximum temperature for Thermolite Plus septa is 300 °C.

Never Burn Your Fingers Again

The Claw safely and cleanly removes liners, O-rings, or other small objects from the injection port. You can then place the hot objects in a clean 4 mL vial situated in The Claw holder until ready for reuse.

Description	qty.	cat. #
The Claw	ea.	26261
The Claw Holder Kit (includes The Claw and holder)	kit	26262



Make Quick Work of Removing Septa, O-Rings, and Ferrules

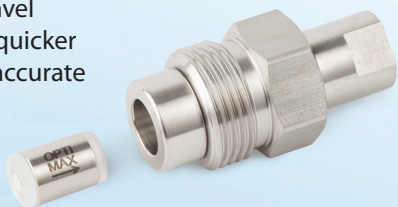
Keep several on hand in your lab for quick access and faster maintenance.



Description	qty.	cat.#
Septum Puller	ea.	20117

Upgrade Your LC's Check Valves for Enhanced Performance and Easier Replacement

- Free-Turn housings can be removed with the tubing still attached, making maintenance fast while reducing fitting wear.
- Rugged stainless steel cartridge bodies with ceramic ball and seat ensure longevity in harsh acetonitrile environments.
- Every cartridge is tested to 3 bubbles of nitrogen/minute (industry standard is 12).
- All balls and seats are individually matched.
- Minimized ball travel distance delivers quicker seating for more accurate pump metering.

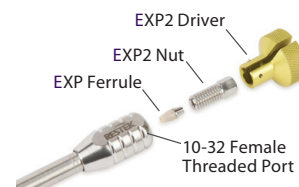


Description	For Instrument	qty.	cat.#
Opti-Max Outlet Check Valve (1 Free-turn housing, 1 cartridge)	Agilent 1050, 1100, 1200	kit	25786
Opti-Max Check Valve Cartridge (1/8" ceramic ball/seat, stainless steel body)	Agilent 1050, 1100, 1200	2-pk.	25787
Opti-Max Inlet Check Valve (1 Free-turn housing, 1 UHPLC cartridge*)	Shimadzu LC-20ADXR, LC-20ABXR	kit	25788
Opti-Max Outlet Check Valve (1 Free-turn housing, 1 UHPLC cartridge*)	Shimadzu LC-20ADXR, LC-20ABXR	kit	25789
Opti-Max Check Valve UHPLC Cartridge* (1/16" double ceramic ball/seat, stainless steel body)	Shimadzu LC-20ADXR, LC-20ABXR	2-pk.	25790
Opti-Max Inlet Check Valve (1 Free-turn housing, 1 cartridge)	Waters Alliance	kit	25791
Opti-Max Outlet Check Valve (1 Free-turn housing, 1 cartridge)	Waters Alliance	kit	25792
Opti-Max Check Valve Cartridge (1/16" ceramic ball/seat, stainless steel body)	Waters Alliance	2-pk.	25793

*UHPLC cartridges rated to 20,000 psi (1,400 bar)

Compact EXP2 Fitting Fits in Tight Spaces and Allows 20,000+ psi Seals without Wrenches

- Patented ferrule can be installed repeatedly without compromising seal.
- Zero-dead-volume (ZDV) connection to any 10-32 port.
- Perfect for small oven compartments and six-port injection valves.
- Non-swaged ferrules mean vendor-specific tubing is not required.
- Rated to 20,000+ psi (1,400 bar) and tested to 30,000 psi (2,068 bar).



Compact **EXP2 fitting** fits in tight spaces and allows 20,000+ psi seals without wrenches.

Note: EXP2 fittings are recommended for use with stainless steel tubing. For PEEK tubing, use original EXP fittings.

EXP2 Reusable Fittings for HPLC & UHPLC

for 10-32 fittings and 1/16" tubing

Description	qty.	cat.#
EXP2 Fitting (2 nuts, 2 ferrules, 1 driver)	2-pk.	25783
EXP2 Fitting (10 nuts, 10 ferrules, 1 driver)	10-pk.	25784
EXP2 Driver (driver only)	ea.	25785

WARNING: Do not use EXP ferrules with standard nuts. Failure to use EXP fittings according to the included instructions may result in unsafe UHPLC connections and/or non-ZDV connections.

Hybrid Ferrule U.S. Patent No. 8201854, Optimize Technologies. Optimize Technologies EXP Holders are Patent Pending. Other U.S. and Foreign Patents Pending. The Opti- prefix is a registered trademark of Optimize Technologies, Inc.

For hex-head fittings, hand-tight couplers, and replacement ferrules, visit www.restek.com/exp

Raptor Columns Live Even Longer with Quick-Change EXP LC Guard Columns

Patented Titanium Hybrid Ferrules

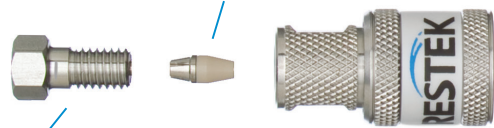
Can be installed repeatedly without compromising high-pressure seal.



Unidirectional Raptor Cartridge

Auto-Adjusting Connection

Provides ZDV (zero dead volume) connection to any 10-32 female port.



Flexible Design

Replace nut with longer or even tool-free EXP options to best suit your needs.

Free-Turn Architecture

Change cartridges without breaking connections—and without tools

Raptor EXP Guard Column Cartridges

Description	Particle Size	qty.	5 x 2.1 mm cat.#	5 x 3.0 mm cat.#	5 x 4.6 mm cat.#
Raptor ARC-18 EXP Guard Column Cartridge	2.7 µm	3-pk.	9314A0252	9314A0253	9314A0250
Raptor ARC-18 EXP Guard Column Cartridge	5 µm	3-pk.	9314S0252	9314S0253	9314S0250
Raptor Biphenyl EXP Guard Column Cartridge	2.7 µm	3-pk.	9309A0252	9309A0253	9309A0250
Raptor Biphenyl EXP Guard Column Cartridge	5 µm	3-pk.	9309S0252	9309S0253	9309S0250
Raptor C18 EXP Guard Column Cartridge	2.7 µm	3-pk.	9304A0252	9304A0253	9304A0250
Raptor C18 EXP Guard Column Cartridge	5 µm	3-pk.	9304S0252	9304S0253	9304S0250
Raptor FluoroPhenyl EXP Guard Column Cartridges	2.7 µm	3-pk.	9319A0252	9319A0253	9319A0250
Raptor FluoroPhenyl EXP Guard Column Cartridges	5 µm	3-pk.	9319S0252	9319S0253	9319S0250
Raptor HILIC-Si EXP Guard Column Cartridge	2.7 µm	3-pk.	9310A0252	9310A0253	9310A0250

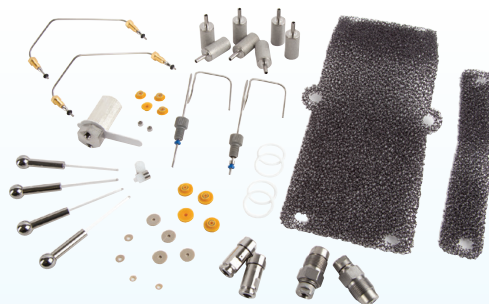
Maximum cartridge pressure: 600 bar/8,700 psi (2.7 µm) or 400 bar/5,800 psi (5 µm).

Raptor SPP LC columns combine the speed of SPP with the resolution of USLC technology.

Learn more at www.restek.com/raptor

Hybrid Ferrule U.S. Patent No. 8201854, Optimize Technologies. Optimize Technologies EXP Holders are Patent Pending. Other U.S. and Foreign Patents Pending. The EXP, Free-Turn, and the Opti- prefix are registered trademarks of Optimize Technologies, Inc.

Simplify Your Routine LC Maintenance with These Handy Kits



Description for Agilent LCs

Autosampler PM Kit

Includes: rotor seal, piston seals (2), needle assembly, needle seat, finger caps (3)

Pump PM Kit

Includes: PTFE frits (2); outlet cap; gold disk seal; active inlet cartridge; piston seals (4); glass solvent filters (2)

Pump Maintenance Kit

Includes: sapphire plunger (2); piston seals (2); outlet ball check valve; active inlet cartridge; PTFE frits (5)

Description for Waters LCs

ACQUITY BSM Pump Kit

Includes: in-line filter assembly, stainless steel frit; tube assembly, transducer to check valve; tube assembly, SSV to in-line filter; primary check valve (2); wash seal, float flanged, (2); head plunger seal kit (2); sapphire plungers (2); air filter, pump; air filter, pump handle; mixer assembly, 50 µl; accumulator check valve, double ball & seat (2); solvent bottle filter, stainless steel (7); pump O-ring, (PTFE)

ACQUITY I2V BSM Pump Kit

Includes: tube assembly, SSV to I2v; transducer to check valve, tube assembly, I2v; wash seal, float flanged (2); head plunger seal kit (2); sapphire plungers (2); air filter, pump; air filter, pump handle; mixer assembly, 50 µl; filter frit cartridge, stainless steel; accumulator check valve, double ball & seat (2); check valve cartridge (2); solvent bottle filter, stainless steel (7); pump O-ring, (PTFE)

ACQUITY H-Class QSM Pump Kit

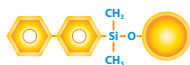
Includes: solvent bottle filter, stainless steel (5); 20 micron frit holder assembly; tube assembly, transducer to check valve; wash seal, float flanged (2); head plunger seal kit (2); sapphire plungers (2); check valve, double ball & seat (2); I2 check valve cartridge; air filter, door; pump O-ring, (PTFE); mixer assembly, 100 µl

Model #	Similar to Agilent part #	qty.	cat.#
1100, 1200	G1313-68709	kit	25271
1050, 1100, 1200	G1311-68710	kit	25270
1100, 1200	5065-4499	kit	25915
Model #	Similar to Waters part #	qty.	cat.#
ACQUITY UPLC BSM	201000173	kit	25797
ACQUITY UPLC I2V BSM	201000197	kit	25798
ACQUITY H-CLASS QSM	201000233	kit	25799

For more LC maintenance kits, visit www.restek.com/LCmaintenance

Raptor

LC Columns



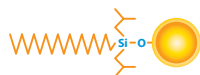
Time-Tested Restek Biphenyl Phase:

The established choice for bioanalytical testing since 2005.



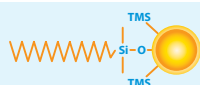
Reliably Versatile Restek FluoroPhenyl Phase:

Get the power of HILIC and RP modes in one LC column.



Acid-Resistant Restek ARC-18 Phase:

Ahead of the curve for large, multiclass lists by mass spec.



General-Purpose Restek C18 Phase:

Traditional end-capped C18 ideal for general-purpose use.



Rugged, MS-Friendly Restek HILIC-Si Phase:

Simplify the switch to HILIC on both HPLC and UHPLC systems.



Matrix-Eliminating Restek EtG/EtS Phase:

Resolve analytes in a fast, 4-minute dilute-and-shoot method.



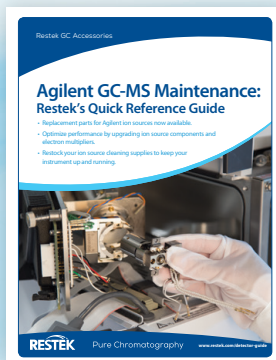
Experience *Selectivity*
Accelerated at
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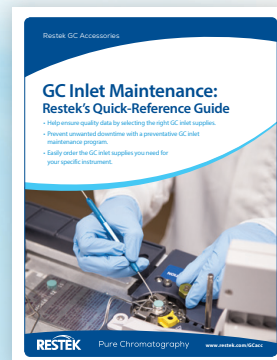
Not Sure Where to Start with Your GC Maintenance?

Download our quick-reference guides for GC inlet and Agilent GC-MS detector maintenance today!

Agilent GC-MS Detector Maintenance



GC Inlet Maintenance



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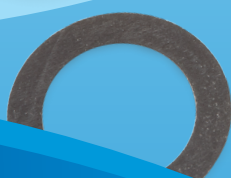
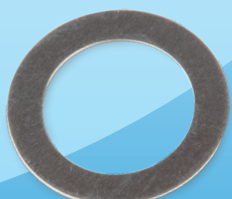
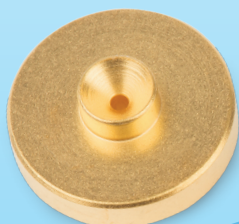
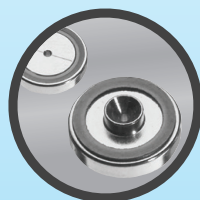
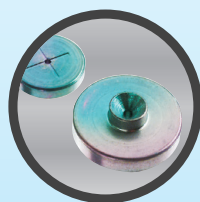
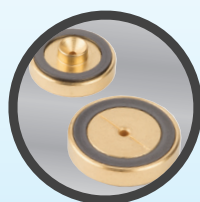
Lit. Cat.# GNES2842-UNV



Give Your Data Restek's Seals (of Approval)

Keep your data looking its best with top-quality Restek inlet seals.

- Gold-Plated
- Siltek-Treated
- Dual Vespel Ring



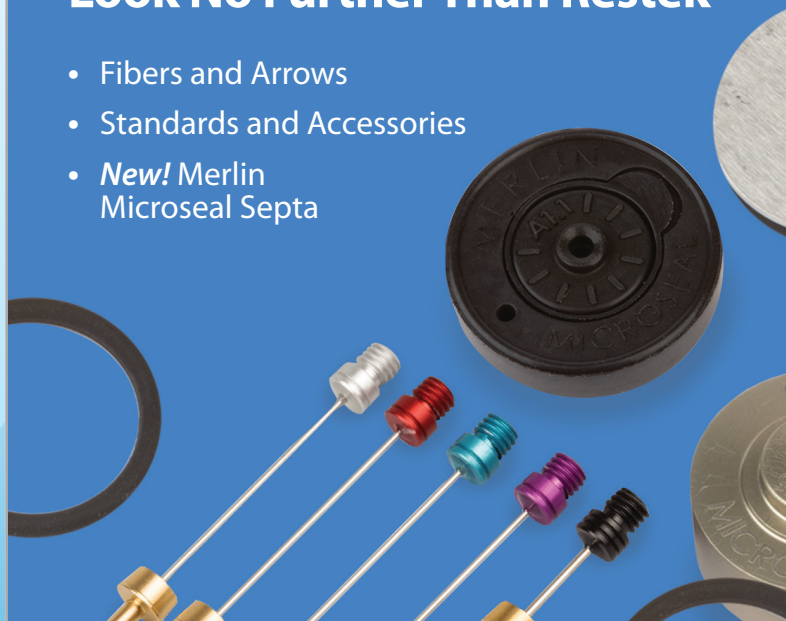
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Pure Chromatography

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Apply Force to Your LC Methods

- Long-lasting and reproducible
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- Premium quality





Revolutionary technology and inertness deliver the next level of

True Blue Performance

- Deactivation
- Reproducibility • Productivity

Learn more and find our full selection at
www.restek.com/topaz



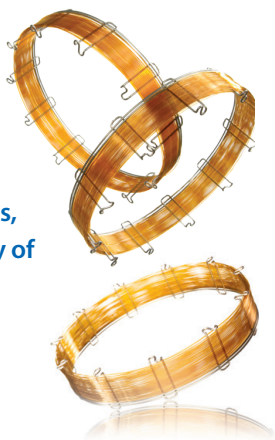
Featured Topaz Liners

For Agilent GCs			ID x OD x Length	qty.	cat.#
	Precision w/Quartz Wool	Split	4.0 mm x 6.3 mm x 78.5 mm	5-pk.	23305
	Straight w/Quartz Wool	Split	4.0 mm x 6.3 mm x 78.5 mm	5-pk.	23300
	Single Taper w/Quartz Wool	Splitless	4.0 mm x 6.5 mm x 78.5 mm	5-pk.	23303
	Single Taper	Splitless	4.0 mm x 6.5 mm x 78.5 mm	5-pk.	23302
For PerkinElmer GCs			ID x OD x Length	qty.	cat.#
	Precision w/Quartz Wool	Split	4.0 mm x 6.2 mm x 92.1 mm	5-pk.	23450
	Straight w/Quartz Wool	Split	4.0 mm x 6.2 mm x 92.1 mm	5-pk.	23449
	Straight w/Quartz Wool	Splitless	2.0 mm x 6.2 mm x 92.1 mm	5-pk.	23451
For Sciex/Bruker/Varian GCs			ID x OD x Length	qty.	cat.#
	Precision w/Quartz Wool	Split	4.0 mm x 6.3 mm x 78.5 mm	5-pk.	23328
	Single Taper w/Quartz Wool	Splitless	4.0 mm x 6.5 mm x 78.5 mm	5-pk.	23332
	Single Taper	Splitless	4.0 mm x 6.5 mm x 78.5 mm	5-pk.	23331
For Shimadzu GCs			ID x OD x Length	qty.	cat.#
	Straight w/Quartz Wool	Split	3.5 mm x 5.0 mm x 95 mm	5-pk.	23319
	Precision w/Quartz Wool	Split	3.5 mm x 5.0 mm x 95 mm	5-pk.	23320
	Single Taper w/Quartz Wool	Splitless	3.5 mm x 5.0 mm x 95 mm	5-pk.	23336
	Single Taper w/Quartz Wool	Splitless	3.5 mm x 5.0 mm x 95 mm	5-pk.	23322
For Thermo Scientific GCs			ID x OD x Length	qty.	cat.#
	Straight w/Quartz Wool	Split	4.0 mm x 6.3 mm x 78.5 mm	5-pk.	23444
	Precision w/Quartz Wool	Split	4.0 mm x 6.3 mm x 78.5 mm	5-pk.	23267
	Single Taper w/Quartz Wool	Splitless	4.0 mm x 6.5 mm x 78.5 mm	5-pk.	23447
	Single Taper	Splitless	4.0 mm x 6.5 mm x 78.5 mm	5-pk.	23446



Leverage the outstanding inertness, low bleed, and high reproducibility of Rxi 3-in-1 technology to gain:

- Accurate Data
- The Right Results Fast
- Maximized Instrument Uptime



NON-POLAR			POLARITY				POLAR +	
Rxi-1ms	Rxi-1HT	Rxi-5ms	Rxi-5Sil MS	Rxi-5HT	Rxi-XLB	Rxi-1301Sil MS	Rxi-624Sil MS	Rxi-35Sil MS
						Rxi-PAH	Rxi-17	Rxi-17Sil MS

Rxi columns span the polarity range, so you can select a column perfectly matched to your analysis.

Featured Rxi Columns

Rxi-17Sil MS

Ideal for active environmental compounds, such as PAHs, PCBs, and more.

Description	temp. limits	qty.	cat.#
15 m, 0.25 mm ID, 0.25 µm	40 to 340/360 °C	ea.	14120
30 m, 0.25 mm ID, 0.25 µm	40 to 340/360 °C	ea.	14123

Rxi-35Sil MS

Ideal for substituted polar compounds, such as drugs, pesticides, herbicides, PCBs, phenols, etc.; especially good for cannabinoids.

Description	temp. limits	qty.	cat.#
15 m, 0.25 mm ID, 0.25 µm	50 to 340/360 °C	ea.	13820

Rxi-624Sil MS

Ideal for volatile organics and residual solvents; a great choice for USP<467>.

Description	temp. limits	qty.	cat.#
30 m, 0.25 mm ID, 1.40 µm	-20 to 300/320 °C	ea.	13868

Rxi-1301Sil MS

Ideal for solvents, glycols, and other polar compounds.

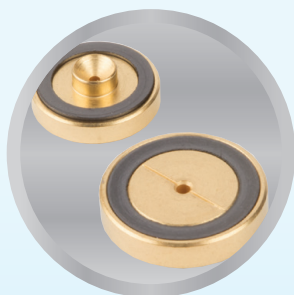
Description	temp. limits	qty.	cat.#
30 m, 0.25 mm ID, 0.25 µm	-60 to 320 °C	ea.	16094

Rxi-5Sil MS

Ideal for semivolatiles, PAHs, chlorinated hydrocarbons, phthalates, phenols, amines, organochlorine pesticides, organophosphorus pesticides, drugs, solvent impurities, and hydrocarbons.

Description	temp. limits	qty.	cat.#
30 m, 0.25 mm ID, 0.25 µm	-60 to 320/350 °C	ea.	13623
30 m, 0.25 mm ID, 0.25 µm w/5 m Integra-Guard Column	-60 to 320/350 °C	ea.	13623-124
30 m, 0.25 mm ID, 0.50 µm	-60 to 320/350 °C	ea.	13638
30 m, 0.25 mm ID, 0.50 µm w/5 m Integra-Guard Column	-60 to 320/350 °C	ea.	13638-124

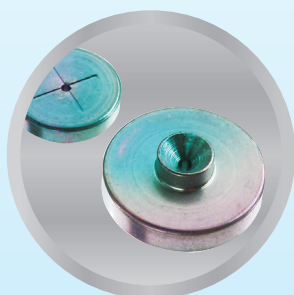
Give Your Data Restek's Seals (of Approval)



Inlet seals contact the sample, so they must be replaced frequently to prevent adsorption of active compounds. Septum fragments and sample residue also accumulate on the surface, affecting your results. *Keep your data looking its best with top-quality Restek inlet seals.*

Gold-Plated Inlet Seals

Gold-Plated Replacement Inlet Seals	2-pk. cat.#	10-pk. cat.#	50-pk. cat.#
0.8 mm ID Single-column	21317	21318	23415
1.2 mm ID 0.25/0.32 mm ID Dual-column	21305	21306	—
0.8 mm ID Cross-Disk Inlet Seal	20477	20476	—
1.2 mm ID Cross-Disk Inlet Seal	21009	21010	—



Siltek-Treated Inlet Seals

Siltek treatment provides enhanced inertness versus stainless steel.

Siltek-Treated Replacement Inlet Seals	2-pk. cat.#	10-pk. cat.#	50-pk. cat.#
0.8 mm ID Single-column	21319	21320	23416
1.2 mm ID 0.25/0.32 mm ID Dual-column	21307	21308	—
0.8 mm ID Cross-Disk Inlet Seal	20475	20474	—
1.2 mm ID Cross-Disk Inlet Seal	21011	21012	—



Dual Vespel Ring Inlet Seals

Washerless, Leak-Tight Seals for Agilent GCs

Gold-Plated Dual Vespel Ring Inlet Seals	2-pk. cat.#	10-pk. cat.#	50-pk. cat.#
0.8 mm ID Gold-Plated	21240	21241	23418
1.2 mm ID Gold-Plated	21246	21247	—
Siltek-Treated Dual Vespel Ring Inlet Seals	2-pk. cat.#	10-pk. cat.#	50-pk. cat.#
0.8 mm ID Siltek-Treated	21242	21243	23419
1.2 mm ID Siltek-Treated	21248	21249	—

Stock up on inlet seals at www.restek.com/GCacc

Switch to Advanced Thermolite PLUS Septa Technology for Optimal Inlet Performance

- Usable to 350 °C inlet temperature.
- Ultra-low bleed minimizes background signal.
- Plasma coating eliminates sticking.
- Precision molded for consistent, accurate fit.
- Preconditioned and GC-FID tested.

Need a higher-temp option for demanding GC and GC-MS applications?

Check out Premium Non-Stick BTO Septa at www.restek.com/septa



Septum Diameter	48-pk. cat.#	50-pk. cat.#	100-pk. cat.#
5 mm (3/16"), with CenterGuide, predrilled	—	23860	23861
6 mm (1/4")	—	23874	—
7 mm	—	23875	—
8 mm	—	23876	—
9 mm, with CenterGuide	—	23862	23863
9.5 mm (3/8")	—	23877	—
10 mm	—	23878	—
11 mm (7/16"), with CenterGuide	—	23864	23865
11.5 mm, with CenterGuide	—	23866	23867
12.7 mm (1/2"), with CenterGuide	23868	—	—
17 mm, with CenterGuide	23870	—	—
Shimadzu Plug	—	23872	23873

Note: Due to differences in inlet design, the actual septum temperature for a given inlet setpoint can vary by manufacturer. Restek recommends using only BTO septa in Thermo TRACE and Focus GCs.

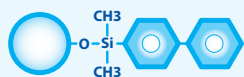
*For 17 mm inlets, the maximum temperature for Thermolite Plus septa is 300 °C.

Apply Force to your UHPLC Methods

- **Long-lasting and reproducible**—even with rapid cycling and elevated UHPLC pressures.
- **Fully scalable between HPLC and UHPLC**—easily transfer and optimize methods.
- **Premium quality**—Force LC columns are backed by our 100% Pure Satisfaction guarantee.

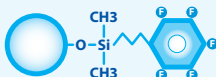
Time-Tested Restek Biphenyl Phase:

The established choice for bioanalytical testing since 2005.



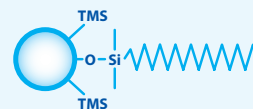
Reliably Versatile Restek FluoroPhenyl Phase:

Get the power of HILIC and reversed-phase modes in one LC column.



General-Purpose Restek C18 Phase:

Traditional end-capped C18 ideal for general-purpose use.



	30 mm Length	50 mm Length	100 mm Length
Force Biphenyl 1.8 µm Columns			
2.1 mm ID	9629232	9629252	9629212
3.0 mm ID	—	962925E	962921E
Force C18 1.8 µm Columns			
2.1 mm ID	9634232	9634252	9634212
3.0 mm ID	—	963425E	963421E
Force FluoroPhenyl 1.8 µm Columns			
2.1 mm ID	9639232	9639252	9639212
3.0 mm ID	—	963925E	963921E

Order your 1.8, 3, and 5 µm Force columns now at www.restek.com/force

Reliably Filter Out Particulates and Extend UHPLC Column Lifetime with UltraShield UHPLC PreColumn Filters

- Cost-effective protection for UHPLC systems.
- Minimize extra column volume.
- Maximize sample throughput with SPE, SLE, or other extensive sample preparations.
- Connect easily to any brand of column—including both Force and Raptor 1.8 µm columns.



Description	Filter Porosity	qty.	cat.#
UltraShield UHPLC PreColumn Filter	0.2 µm frit	ea.	25809
		5-pk.	25810
		10-pk.	25811

For 3 and 5 µm Force columns, use EXP guard column cartridges

Raptor[®] LC Columns

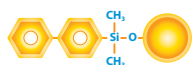
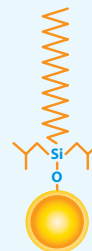
Selectivity Accelerated

- Drastically faster analysis times.
- Substantially improved resolution.
- Increased sample throughput.
- Dependable reproducibility.



Ahead of the Curve for Large, Multiclass Lists by Mass Spec

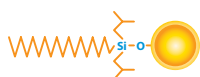
The Raptor ARC-18 phase is ideal for high-throughput LC-MS/MS with minimal sample prep. Its well-balanced retention profile offers better detection and integration of large, multiclass lists. And, it endures low-pH mobile phases without sacrificing data quality.



Time-Tested Restek Biphenyl Phase:
The established choice for bioanalytical testing since 2005.



Reliably Versatile Restek FluoroPhenyl Phase:
Get the power of HILIC and RP modes in one LC column.



Acid-Resistant Restek ARC-18 Phase:
Ahead of the curve for large, multiclass lists by mass spec.



General-Purpose Restek C18 Phase:
Traditional end-capped C18 ideal for general-purpose use.



Rugged, MS-Friendly Restek HILIC-Si Phase:
Simplify the switch to HILIC on both HPLC and UHPLC systems.



Matrix-Eliminating Restek EtG/EtS Phase:
Resolve analytes in a fast, 4-minute dilute-and-shoot method.

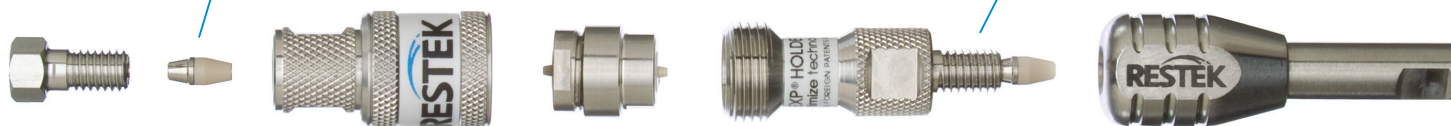
	2.1 mm cat.#	3.0 mm cat.#	4.6 mm cat.#
1.8 µm Columns			
30 mm	9314232	—	—
50 mm	9314252	931425E	—
100 mm	9314212	931421E	—
150 mm	9314262	—	—
2.7 µm Columns			
30 mm	9314A32	9314A3E	9314A35
50 mm	9314A52	9314A5E	9314A55
100 mm	9314A12	9314A1E	9314A15
150 mm	9314A62	9314A6E	9314A65
5 µm Columns			
30 mm	—	931453E	—
50 mm	9314552	931455E	9314555
100 mm	9314512	931451E	9314515
150 mm	9314562	931456E	9314565
250 mm	—	—	9314575

Raptor and Force Columns Live Even Longer with Quick-Change EXP Guards

Patented Reusable
Titanium Hybrid Ferrules

Tool-Free Cartridge
Changeouts

Auto-Adjusting
ZDV Connection



EXP Direct Connect Holder

Description	qty.	cat.#
EXP Direct Connect Holder for EXP Guard Cartridges (includes hex-head fitting & 2 ferrules)	ea.	25808

Maximum holder pressure: 20,000 psi (1,400 bar)

Force EXP Guard Column Cartridges

		5 x 2.1 mm cat.#	5 x 3.0 mm cat.#	5 x 4.6 mm cat.#
Description	qty.			
Force Biphenyl EXP Guard Column Cartridge	3-pk.	962950252	962950253	962950250
Force C18 EXP Guard Column Cartridge	3-pk.	963450252	963450253	963450250
Force FluoroPhenyl EXP Guard Column Cartridge	3-pk.	963950252	963950253	963950250

Maximum cartridge pressure: 600 bar/8,700 psi.

Raptor EXP Guard Column Cartridges (3-Packs)

		Particle Size	5 x 2.1 mm cat.#	5 x 3.0 mm cat.#	5 x 4.6 mm cat.#
Description					
Raptor C18	UHPLC	5 µm	9304U0252	9304U0253	—
Raptor C18	2.7 µm	5 µm	9304A0252	9304A0253	9304A0250
Raptor C18	5 µm	5 µm	930450252	930450253	930450250
Raptor ARC-18	UHPLC	5 µm	9314U0252	9314U0253	—
Raptor ARC-18	2.7 µm	5 µm	9314A0252	9314A0253	9314A0250
Raptor ARC-18	5 µm	5 µm	931450252	931450253	931450250
Raptor Biphenyl	UHPLC	5 µm	9309U0252	9309U0253	—
Raptor Biphenyl	2.7 µm	5 µm	9309A0252	9309A0253	9309A0250
Raptor Biphenyl	5 µm	5 µm	930950252	930950253	930950250
Raptor FluoroPhenyl	UHPLC	5 µm	9319U0252	9319U0253	—
Raptor FluoroPhenyl	2.7 µm	5 µm	9319A0252	9319A0253	9319A0250
Raptor FluoroPhenyl	5 µm	5 µm	931950252	931950253	931950250
Raptor HILIC-Si	2.7 µm	5 µm	9310A0252	9310A0253	9310A0250

Maximum cartridge pressure: 1,034 bar/15,000 psi* (UHPLC), 600 bar/8,700 psi (2.7 µm); 400 bar/5,800 psi (5 µm)

* For maximum lifetime, recommended maximum pressure for UHPLC cartridges is 830 bar/12,000 psi.

Hybrid Ferrule U.S. Patent No. 8,201,854; EXP Holders U.S. Patent No. 8,696,902; EXP2 Wrench U.S. Patent No. D766,055. Other U.S. and Foreign Patents Pending. The EXP, Free-Turn, and the Opti- prefix are registered trademarks of Optimize Technologies, Inc.

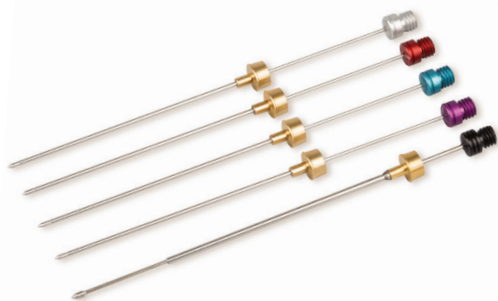




For Solid-Phase Microextraction (SPME),

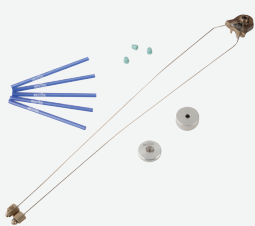
Set Your Sights on Superior Performance with Restek PAL SPME Arrow

- Rugged stainless steel construction ensures longer lifetimes.
- Faster extraction means higher sample throughput.
- Better sensitivity allows lower LODs.



Description	Material	Hub Color	Thickness (µm)	Needle Diameter (mm)	Recommended Analytes	qty.	cat.#
SPME Arrow	Polydimethylsiloxane (PDMS)	Red	100 µm	1.1 mm	Volatile, 60–275 g/mol*	ea.	27485
SPME Arrow	Polydimethylsiloxane (PDMS)	Black	250 µm	1.5 mm	Volatile, 60–275 g/mol (high capacity)*	ea.	27484
SPME Arrow	Polyacrylate	Gray	100 µm	1.1 mm	Polar, semivolatile, 80–300 g/mol*	ea.	27488
SPME Arrow	Carbon Wide Range (WR)/PDMS	Light Blue	120 µm	1.1 mm	Highly volatile, 30–225 g/mol*	ea.	27487
SPME Arrow	Divinylbenzene (DVB)/PDMS	Violet	120 µm	1.1 mm	Amines and polar compounds, 60–300 g/mol*	ea.	27486
SPME Arrow Method Development Kit						Set of 5	27489

*These molecular weight ranges are a reasonable approximation; however, end users should verify suitability for their specific application. All Restek PAL SPME Arrows have 20 mm of phase bonded onto stainless steel. Due to the relatively large diameter of Restek PAL SPME Arrows, you must modify the GC inlet using an instrument-specific conversion kit from Restek prior to use.



Restek PAL SPME Arrow GC-Specific Conversion Kits

Due to the relatively large diameter of Restek PAL SPME Arrows, you must modify the GC inlet using an instrument-specific conversion kit prior to use.

Description	Instrument	Includes	qty.	cat.#
Restek PAL SPME Arrow Conversion Kit	for Agilent GC 6890 Split/Splitless Injector (for canister-type filters)	Topaz 1.8 mm ID straight/SPME inlet liner, 5-pk. (cat.# 23280), Thermolite Plus septa, 3-pk. (cat.# 23864), Split/splitless weldment; large, canister-type filter (cat.# 27502), Septum nut for 6890 split/splitless weldments (cat.# 27503), Injector adaptor cup (cat.# 27496)	kit	27492

High-Performing SPME Fibers Now Available from Restek



Description*	Max. Temp.	Recommended Operating Temp.	Restek Hub Color	Similar to Supelco Hub Color	ea. cat.#	3-pk. cat.#	5-pk. cat.#
Polydimethylsiloxane (PDMS) Fiber, Nonpolar							
7 µm	340 °C	200–340 °C	Green	Green	27482.1	27482.3	27482.5
30 µm	280 °C	200–280 °C	Golden	Yellow	27481.1	27481.3	27481.5
100 µm	280 °C	200–280 °C	Red	Red	27480.1	27480.3	27480.5
Polyacrylate (PA) Fiber, Polar							
85 µm	280 °C	200–280 °C	Gray	White	27478.1	27478.3	27478.5
Carbon Wide Range (WR)/PDMS Fiber, Bipolar							
95 µm	300 °C	220–300 °C	Dark Blue	Black	27479.1	27479.3	27479.5

*All Restek PAL SPME fibers are 10 mm in length and are housed in a 23-gauge needle. The phase is bonded onto a fused silica fiber core.

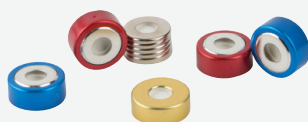


SPME Performance Test Mix (2 components)

Nitrobenzene (98-95-3)
2-Nitrotoluene (88-72-2)

1 µg/mL in water:methanol (99:1), 1 mL/ampul

cat.# 31015 (3-pk)



Cat.# 23850 and 23851 not for use with 20 mm caps.

SPME MicroCenter Caps and Septa

Micro-thin septum center pierces easily without bending needles or breaking SPME fibers.

Description	Type	Cap Size	Color	Septa Material	100-pk. cat.#	1,000-pk. cat.#
SPME Vial Cap	Screw-Thread	18 mm		MicroCenter PTFE/Silicone	23852	23853
SPME Vial Cap	Bi-Metal Crimp	20 mm	Blue	MicroCenter PTFE/Silicone	23854	23855
SPME Vial Cap	Bi-Metal Crimp	20 mm	Red	MicroCenter PTFE/Silicone	23856	23857
SPME Vial Cap	Steel Crimp	20 mm	Gold	MicroCenter PTFE/Silicone	23858	23859
SPME Vial Septa		18 mm		MicroCenter PTFE/Silicone	23850	23851

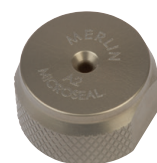
Look No Further Than Restek

Switch to the Longer Septum Life and Simplicity of Merlin Microseals for SPME

- Eliminates septum coring and prolongs septum life.
- Consistently low needle-insertion force.
- Simple installation with no injection port modification.
- Larger diameter to accept SPME Arrow (1.1 mm or 1.5 mm).

Merlin Microseals for SPME Arrow:

Description	Instrument	Includes	Merlin #	qty.	cat.#
SPME Arrow Application Nut (3 to 100 psi)	for Agilent GCs	nut (1)	1000AG	ea.	23228
SPME Arrow Application Adaptor Kit (3 to 100 psi)	for Shimadzu 2010, 2025, and 2030 GCs	nut (1); adaptor (1); O-rings (4)	1000SH	ea.	23229
SPME Arrow Application Nut (3 to 100 psi)	for Thermo TRACE 1300 and 1310 GCs	nut (1)	1000TS	ea.	23230
SPME Arrow Application Adaptor Kit (3 to 100 psi)	for Thermo TRACE Ultra GCs	nut (1); adaptors (3); O-rings (4)	1000TU	ea.	23231
Replacement Microseals for Merlin Microseal Septa					
Microseal for 1.1 mm SPME Arrow Applications (3 to 100 psi)			1100	ea.	23232
Microseal for 1.5 mm SPME Arrow Applications (3 to 100 psi)			1500	ea.	23233



23228

Merlin Microseals for SPME Fiber:

Merlin Microseal Kits

Type	Instrument	Similar to Part #	Merlin #	qty.	cat.#
General-Purpose Kit (3 to 100 psi), 2 Seals	for Agilent GCs	Agilent 5181-8833	404	kit	22810
General-Purpose Kit (3 to 100 psi), 1 Seal	for Agilent GCs	Agilent 5182-3442	405	kit	22811
Low-Pressure Kit (1 to 45 psi), 2 Seals	for Agilent GCs		304	kit	22813
Low-Pressure Kit (1 to 45 psi), 1 Seal	for Agilent GCs	Agilent 5181-8816	305	kit	22814
General-Purpose Kit	for Bruker/Varian 1078/1079 GCs		21-11	kit	22779
General-Purpose Kit	for Bruker/Varian 1177 GCs		22-11	kit	22780
General-Purpose Kit (3 to 100 psi)	for PerkinElmer GCs	PerkinElmer N9303344	51-12	kit	22781
General-Purpose Kit (3 to 100 psi)	for Shimadzu GCs		61-12	kit	22972
General-Purpose Kit (3 to 100 psi)	for Thermo 1300 and 1310 GCs		81-12	kit	22642
Merlin Microseal Adaptor	for Thermo TRACE Ultra GCs		85-10	kit	23239



22642

Replacement Microseals for Merlin Microseal Septa

Replacement Microseals	Merlin#	qty.	cat.#
Microseal for Traditional SPME Fiber Applications (3 to 100 psi)	21-01	ea.	22782



Restek PAL SPME Manual Injection Kit

Designed to house SPME Arrows and traditional SPME fibers during extraction and injection steps.

Description	Includes	qty.	cat.#
Restek PAL SPME Manual Injection Kit	SPME manual holder, SPME manual extraction guide, SPME manual injection guide	kit	27490



More of What You Need to Keep Your LC Flowing

NEW!

Restek has expanded our line of LC accessories to bring you even more of what you need to keep your LC flowing:

- Couplers, fittings, unions, tees, and crosses.
- PEEK and stainless steel tubing.
- Mobile phase maintenance and safety products.

And, that's on top of our already wide selection of instrument replacement parts and supplies.

Featuring: *New Filters to Preserve Your Mobile Phase Better than Ever*

Bottle Top Valves and Filters

- Inlet valves protect your lab from volatile compounds; use with a filter to protect your mobile phase from bacterial contamination.
- Outlet valve regulates pressure during helium sparging.



Description	Similar to VICI Part #	qty.	cat.#
Inlet Valve (no filter) for Bottle Tops	JR-S-20006	ea.	27838
Inlet Valve with 4 mm Filter for Bottle Tops	JR-S-20003	ea.	27839
Inlet Valve with 15 mm Filter for Bottle Tops	JR-S-20009	ea.	27840
Outlet Valve with 4 mm Filter for Bottle Tops	JR-S-20004	ea.	27841
Replacement 4 mm Filter for Bottle Tops	JR-S-20007	ea.	27843
Replacement 15 mm Filter for Bottle Tops	JR-S-20008	ea.	27842

Safety Exhaust Filter with Indicator

- Breakthrough indicator changes from light pink to dark pink to notify you when to change filter.
- Safety filter protects your lab from volatile compounds in waste bottles.



Description	Similar to VICI Part #	qty.	cat.#
Safety Exhaust Filter with Indicator for Bottle Tops	JR-S-20005	ea.	27833



Related New Products

Opti-Cap GL-45 Bottle Tops

Description	Type	qty.	cat.#
Opti-Cap for GL-45 Threaded Bottles	2-Port: holes for (1) 1/16" and (1) 1/8" OD tubing	ea.	27835
Opti-Cap for GL-45 Threaded Bottles	3-Port: holes for (1) 1/16" and (2) 1/8" OD tubing	ea.	27836
Opti-Cap for GL-45 Threaded Bottles	4-Port: holes for (1) 1/16" and (3) 1/8" OD tubing	ea.	27837

Hub-Cap Adaptors

Allow the use of the Opti-Cap Top with 4-liter solvent bottles.

Description	qty.	cat.#
Hub-Cap Adaptor (allows use of the Opti-Cap w/ 4 L solvent bottles)	ea.	26538
Hub-Cap Adaptor Multi-Pack	3-pk.	26539
Hub-Cap Adaptor and Opti-Cap (for use w/ GL-45 solvent bottles)	kit	26540

Don't stop at the column; outfit your entire LC system with Restek LC products at www.restek.com/LCacc

RESTEK
Pure Chromatography

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Lit. Cat.# GNE52950-UNV





Maximize GC Uptime with Unparalleled Cleanliness and Inertness

With Topaz liners, you can analyze more samples before you have to stop to change your liner. Blister packaging also keeps Topaz liners clean, so you spend less time conditioning after a changeout.



Designed with Productivity in Mind:
Keep Samples Flowing through Your Lab with Restek

Pure Chromatography

Facilitate Automation and Streamline Protein Precipitation Sample Prep

Speed up and simplify your workflow by turning to Restek's suite of 96-well plate products for protein precipitation.



Sample Filtration That's Economical, Eco-Friendly—and Fast!

Easy-to-use filter vials offer fast sample filtration and require only a quick squeeze of your fingers. No syringes or syringe filters!

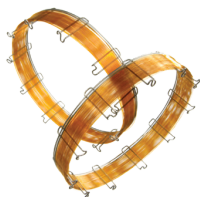


www.restek.com

Accelerate Your GC Analyses and Increase Your Lab's Throughput

1 Select a Scaled-Down Rxi Column

By selecting an Rxi column with a smaller ID, thinner film, and shorter length, you maximize your potential for lightning-fast GC runs.



Rxi GC Columns (Narrow Bore)

Phase	Description (length, ID, df)	temp. limits	qty.	cat.#
Rxi-1ms	10 m, 0.15 mm ID, 0.15 µm	-60 to 330/350 °C	ea.	43800
Rxi-1ms	20 m, 0.15 mm ID, 0.15 µm	-60 to 330/350 °C	ea.	43801
Rxi-1ms	20 m, 0.18 mm ID, 0.18 µm	-60 to 330/350 °C	ea.	13302
Rxi-5ms	20 m, 0.18 mm ID, 0.18 µm	-60 to 330/350 °C	ea.	13402
Rxi-XLB	20 m, 0.18 mm ID, 0.18 µm	30 to 340/360 °C	ea.	43702
Rxi-5Sil MS	10 m, 0.15 mm ID, 0.15 µm	-60 to 320/350 °C	ea.	43815
Rxi-5Sil MS	20 m, 0.15 mm ID, 0.15 µm	-60 to 320/350 °C	ea.	43816
Rxi-5Sil MS	20 m, 0.18 mm ID, 0.18 µm	-60 to 320/350 °C	ea.	43602
Rxi-17Sil MS	20 m, 0.18 mm ID, 0.18 µm	40 to 340/360 °C	ea.	14102
Rxi-17Sil MS	10 m, 0.15 mm ID, 0.15 µm	40 to 340/360 °C	ea.	43820
Rxi-17Sil MS	20 m, 0.15 mm ID, 0.15 µm	40 to 340/360 °C	ea.	43821

2 Use the EZGC Method Translator to Deliver the Same Separation in Less Time

Try it today at
www.restek.com/ezgc



3 Install a GC Accelerator Kit if Your GC Can't Handle Your New Programmed Ramp Rate

Retention times can vary wildly if your GC can't handle a programmed ramp rate and cause problems with peak ID and quantitation. But, aggressive ramp rates can reliably be achieved with a GC Accelerator kit.



Description	qty.	cat.#
GC Accelerator Oven Insert Kit for Agilent 6890 and 7890 instruments	kit	23849

Using scaled-down Rxi columns, the EZGC method translator, and the GC Accelerator kit to speed up your analyses is more involved than this quick overview. But, the full story is at www.restek.com/GCaccelerator

Sub-2 µm Columns for Lightning-Fast UHPLC

Featuring the Time-Tested Restek Biphenyl Phase: Improved selectivity and performance for LC-MS applications.

Raptor
LC Columns



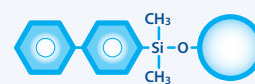
Superficially porous particles that boost UHPLC efficiencies further for high-throughput LC-MS/MS.

Raptor Biphenyl LC Columns (USP L11)

Description	cat.#
1.8 µm Columns	
30 mm, 2.1 mm ID	9309232
50 mm, 2.1 mm ID	9309252
100 mm, 2.1 mm ID	9309212
150 mm, 2.1 mm ID	9309262
50 mm, 3.0 mm ID	930925E
100 mm, 3.0 mm ID	930921E



FORCE
PERFORMANCE LC COLUMNS



Fully porous particles that easily and fully scale from HPLC to UHPLC.

Force Biphenyl LC Columns (USP L11)

Description	cat.#
1.8 µm Columns	
30 mm, 2.1 mm ID	9629232
50 mm, 2.1 mm ID	9629252
100 mm, 2.1 mm ID	9629212
50 mm, 3.0 mm ID	962925E
100 mm, 3.0 mm ID	962921E

For our full suite of phases, visit
www.restek.com/raptor and www.restek.com/force

Sample Filtration That's Economical, Eco-Friendly—and Fast!

Easy-to-use filter vials offer fast sample filtration and require only a quick squeeze of your fingers. No syringes or syringe filters! Fits most standard 12 x 32 mm autosamplers, including UHPLC instruments.



Thomson SINGLE StEP Standard Filter Vials

Recommended for samples containing less than 10% solid particulates.

Porosity	Color	qty.	cat.#
PTFE (polytetrafluoroethylene)			
0.2 µm	green preslit cap	100-pk.	25893
0.45 µm	blue preslit cap	100-pk.	25894



Thomson SINGLE StEP eXtreme Filter Vials

Multilayer filtration for viscous samples and samples containing up to 30% solid particulates.

Porosity	Color	qty.	cat.#
PTFE (polytetrafluoroethylene)			
0.2 µm	green preslit cap	100-pk.	25874
0.45 µm	blue preslit cap	100-pk.	25875



Thomson SINGLE StEP

Low Evaporation Filter Vials

Enhanced evaporation prevention technology ensures less than 0.4% evaporation over 24 hours.

Porosity	Color	qty.	cat.#
PTFE (polytetrafluoroethylene)			
0.2 µm	green cap	100-pk.	25868
0.45 µm	blue cap	100-pk.	25872



Thomson SINGLE StEP Nano Filter Vials

Ultra-low dead volume allows you to filter as little as 10 µL of sample and still obtain enough filtrate to make a 2 µL injection.

Porosity	Color	qty.	cat.#
PTFE (polytetrafluoroethylene)			
0.2 µm	green standard cap	100-pk.	25862
0.2 µm	green preslit cap	100-pk.	25882
0.45 µm	blue standard cap	100-pk.	25863
0.45 µm	blue preslit cap	100-pk.	25883



Also available in nylon, PES, and PVDF at www.restek.com/singlestep



QuEChERS Made Even Easier

Q-sep QuEChERS Sample Prep Extraction Salts & Tubes

Free-flowing salts in convenient slim packets fit perfectly into tubes and transfer easily and completely.

Description	Method	Material	qty.	cat.#
Q-sep QuEChERS Extraction Kit	original unbuffered	4 g MgSO ₄ , 1 g NaCl with 50 mL Centrifuge Tube	50 packets & 50 tubes	25848
Q-sep QuEChERS Extraction Kit	European EN 15662	4 g MgSO ₄ , 1 g NaCl, 1 g TSCD, 0.5 g DHS with 50 mL Centrifuge Tube	50 packets & 50 tubes	25850
Q-sep QuEChERS Extraction Kit	AOAC 2007.01	6 g MgSO ₄ , 1.5 g NaOAc with 50 mL Centrifuge Tube	50 packets & 50 tubes	25852



Q-sep QuEChERS dSPE Tubes for Extract Cleanup

Ready-to-use tubes packaged in foil for enhanced protection and storage stability.

Method	Material	Volume	qty.	cat.#
AOAC 2007.01	150 mg MgSO ₄ , 50 mg PSA	2 mL	100-pk.	26124
Original unbuffered, EN 15662, mini-multiresidue	150 mg MgSO ₄ , 25 mg PSA	2 mL	100-pk.	26215
Mini-multiresidue	150 mg MgSO ₄ , 25 mg PSA, 25 mg C18-EC	2 mL	100-pk.	26216
—	150 mg MgSO ₄ , 50 mg C18-EC	2 mL	100-pk.	26242
AOAC 2007.01	150 mg MgSO ₄ , 50 mg PSA, 50 mg C18-EC	2 mL	100-pk.	26125
Mini-multiresidue, EN 15662	150 mg MgSO ₄ , 25 mg PSA, 2.5 mg GCB	2 mL	100-pk.	26217
AOAC 2007.01	150 mg MgSO ₄ , 50 mg PSA, 50 mg GCB	2 mL	100-pk.	26123
Mini-multiresidue, EN 15662	150 mg MgSO ₄ , 25 mg PSA, 7.5 mg GCB	2 mL	100-pk.	26218
AOAC 2007.01	150 mg MgSO ₄ , 50 mg PSA, 50 mg C18-EC, 50 mg GCB	2 mL	100-pk.	26219
—	150 mg MgSO ₄ , 50 mg PSA, 50 mg C18-EC, 7.5 mg GCB	2 mL	100-pk.	26243



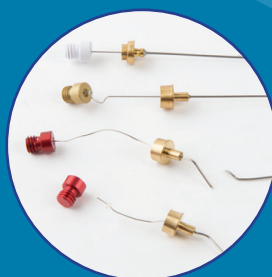
15 mL dSPE tubes also available at www.restek.com/quechers.



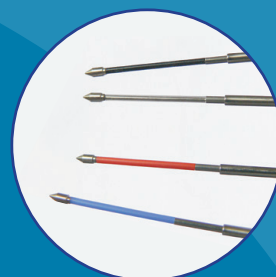
SPME Arrow: Up to 3x More Extractions before Replacing vs. Fibers

- Enjoy longer lifetimes: Arrow construction protects the phase and minimizes both damage and analyte loss.
- Avoid downtime due to breakage.
- Eliminate septa coring.

Learn more at www.restek.com/spme



Standard SPME Fibers



SPME Arrow

Description	Material	Hub Color	Thickness (µm)	Needle Diameter (mm)	Recommended Analytes	qty.	cat.#
SPME Arrow	Polydimethylsiloxane (PDMS)	Red	100 µm	1.1 mm	Volatile, 60–275 g/mol*	ea.	27485
SPME Arrow	Polydimethylsiloxane (PDMS)	Black	250 µm	1.5 mm	Volatile, 60–275 g/mol (high capacity)*	ea.	27484
SPME Arrow	Polyacrylate	Gray	100 µm	1.1 mm	Polar, semivolatile, 80–300 g/mol*	ea.	27488
SPME Arrow	Carbon Wide Range (WR)/PDMS	Light Blue	120 µm	1.1 mm	Highly volatile, 30–225 g/mol*	ea.	27487
SPME Arrow	Divinylbenzene (DVB)/PDMS	Violet	120 µm	1.1 mm	Amines and polar compounds, 60–300 g/mol*	ea.	27486
SPME Arrow Method Development Kit						Set of 5	27489

*These molecular weight ranges are a reasonable approximation; however, end users should verify suitability for their specific application. All Restek PAL SPME Arrows have 20 mm of phase bonded onto stainless steel. Due to the relatively large diameter of Restek PAL SPME Arrows, you must modify the GC inlet using an instrument-specific conversion kit from Restek prior to use.

Eliminate Septum Coring and Prolong Septum Life

Since the needle or probe tip moves through the Microseal septum ring seals without puncturing them, no coring occurs, so you prevent the bleed and ghost peaks—and the unexpected downtime—that can result from damaged septa.

Description	Instrument	Includes	Similar to Part #	Merlin #	qty.	cat.#
General-Purpose Kit (3 to 100 psi)	for Agilent GCs	nut (1); general-purpose (#410) Microseals (2)	Agilent 5181-8833	404	kit	22810
General-Purpose Kit (3 to 100 psi)	for PerkinElmer GCs	nut (1); adaptor (1); O-ring; general-purpose (#410) Microseals (2)	PerkinElmer N9303344	51-12	kit	22781
General-Purpose Kit (3 to 100 psi)	for Shimadzu GCs	nut (1); adaptor (1); O-ring (1); general-purpose (#410) Microseals (2)		61-12	kit	22972
General-Purpose Kit (3 to 100 psi)	for Thermo 1300 and 1310 GCs	nut (1); general-purpose (#410) Microseals (2)		81-12	kit	22642



Also available for SPME Arrow and fibers! Learn more at www.restek.com/merlin

Speed Up Your Routine UHPLC Pump Maintenance with These Handy Kits



Description	Model #	Similar to Waters Part #	qty.	cat.#
ACQUITY BSM Pump Kit Includes: in-line filter assembly, stainless steel frit; tube assembly, transducer to check valve; tube assembly, SSV to in-line filter; primary check valve (2); wash seal, float flanged, (2); head plunger seal kit (2); sapphire plungers, (2); air filter, pump; air filter, pump handle; mixer assembly, 50 µL; accumulator check valve, double ball & seat (2); solvent bottle filter, stainless steel (7); pump O-ring, (PTFE)	ACQUITY UPLC BSM	201000173	kit	25797
ACQUITY I2V BSM Pump Kit Includes: tube assembly, SSV to I2V; transducer to check valve, tube assembly, I2V; wash seal, float flanged (2); head plunger seal kit (2); sapphire plungers (2); air filter, pump; air filter, pump handle; mixer assembly, 50 µL; filter frit cartridge, stainless steel; accumulator check valve, double ball & seat (2); check valve cartridge (2); solvent bottle filter, stainless steel (7); pump O-ring, (PTFE)	ACQUITY UPLC I2V BSM	201000197	kit	25798
ACQUITY H-Class QSM Pump Kit Includes: solvent bottle filter, stainless steel (5); 20 micron frit holder assembly; tube assembly, transducer to check valve; wash seal, float flanged (2); head plunger seal kit (2); sapphire plungers (2); check valve, double ball & seat (2); I2 check valve cartridge; air filter, door; pump O-ring, (PTFE); mixer assembly, 100 µL	ACQUITY H-CLASS QSM	201000233	kit	25799

For more LC maintenance kits, visit www.restek.com/LCmaintenance

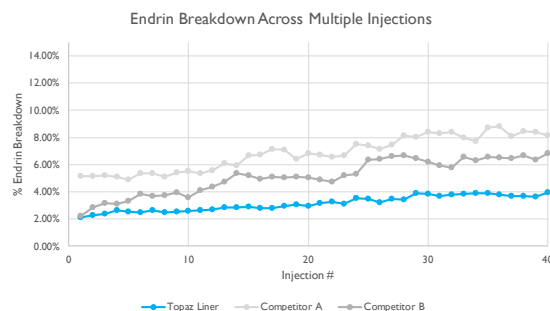


Maximize GC Uptime with Unparalleled Cleanliness and Inertness

With Topaz liners, you can analyze more samples before you have to stop to change your liner. As shown below, the inertness and stability of a Topaz liner shines compared to leading competitors. Breakdown of reactive compounds like endrin starts low and stays low, even after 40 injections.

Featured Topaz Liners

For Agilent GCs			ID x OD x Length	qty.	cat.#
	Precision w/Quartz Wool	Split	4.0 mm x 6.3 mm x 78.5 mm	5-pk.	23305
	Straight w/Quartz Wool	Split	4.0 mm x 6.3 mm x 78.5 mm	5-pk.	23300
	Single Taper w/Quartz Wool	Splitless	4.0 mm x 6.5 mm x 78.5 mm	5-pk.	23303
	Single Taper	Splitless	4.0 mm x 6.5 mm x 78.5 mm	5-pk.	23302
For PerkinElmer GCs			ID x OD x Length	qty.	cat.#
	Precision w/Quartz Wool	Split	4.0 mm x 6.2 mm x 92.1 mm	5-pk.	23450
	Straight w/Quartz Wool	Split	4.0 mm x 6.2 mm x 92.1 mm	5-pk.	23449
	Straight w/Quartz Wool	Splitless	2.0 mm x 6.2 mm x 92.1 mm	5-pk.	23451
For Scienc/Bruker/Varian GCs			ID x OD x Length	qty.	cat.#
	Precision w/Quartz Wool	Split	4.0 mm x 6.3 mm x 78.5 mm	5-pk.	23328
	Single Taper w/Quartz Wool	Splitless	4.0 mm x 6.5 mm x 78.5 mm	5-pk.	23332
	Single Taper	Splitless	4.0 mm x 6.5 mm x 78.5 mm	5-pk.	23331
For Shimadzu GCs			ID x OD x Length	qty.	cat.#
	Straight w/Quartz Wool	Split	3.5 mm x 5.0 mm x 95 mm	5-pk.	23319
	Precision w/Quartz Wool	Split	3.5 mm x 5.0 mm x 95 mm	5-pk.	23320
	Single Taper w/Quartz Wool	Splitless	3.5 mm x 5.0 mm x 95 mm	5-pk.	23336
	Single Taper w/Quartz Wool	Splitless	3.5 mm x 5.0 mm x 95 mm	5-pk.	23322
For Thermo Scientific GCs			ID x OD x Length	qty.	cat.#
	Straight w/Quartz Wool	Split	4.0 mm x 6.3 mm x 78.5 mm	5-pk.	23444
	Precision w/Quartz Wool	Split	4.0 mm x 6.3 mm x 78.5 mm	5-pk.	23267
	Single Taper w/Quartz Wool	Splitless	4.0 mm x 6.5 mm x 78.5 mm	5-pk.	23447
	Single Taper	Splitless	4.0 mm x 6.5 mm x 78.5 mm	5-pk.	23446



Blister packaging also keeps Topaz liners clean, so you spend less time conditioning after a changeout.

Learn more and find our full selection at www.restek.com/topaz

Faster Column Installs: Wrench-Free Fittings for Fast, Effortless HPLC and GC Connections

EXP Hand-Tight Fittings Achieve 8,700+ psi HPLC Seals

Description	qty.	cat.#
EXP Hand-Tight Fitting (Nut w/Ferrule)	ea.	25937
EXP Hand-Tight Fitting (Nut w/Ferrule)	10-pk.	25938

GC Capillary Column Fittings Cool Quickly and Prevent Overtightening

Description	qty.	cat.#
For use with "compact" Agilent-style ferrules.		
Finger-Tight Capillary Column Nuts	2-pk.	21040
For use with standard 1/16"-type ferrules.		
Finger-Tight Capillary Column Nuts	2-pk.	21041



Extended GC Capillary Fittings Install without Removing Inlet Insulating Cup

Description	qty.	cat.#
Extended Capillary Column Nut Kit for standard 1/16" ferrules	kit	22633
Includes: extended reducing nut and extended capillary column nut for standard 1/16" ferrules		
Extended Capillary Column Nut Kit for compact ferrules	kit	22634
Includes: extended reducing nut and extended capillary column nut for compact ferrules		

Don't Let a Small Leak Turn into a Costly Repair and Lost Time

Regularly check for leaks to find them early—and fix them—before they can damage your column, your data quality, or your throughput.



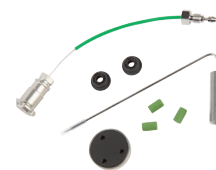
Description	qty.	cat.#
Leak Detector with Hard-Sided Carrying Case and Universal Charger Set (U.S., UK, European, Australian)	ea.	22655
Small Probe Adaptor for Leak Detector	ea.	22658
Dynamic Duo Combo Pack (Restek Leak Detector and ProFLOW 6000 Flowmeter)	kit	22654
Soft-Sided Storage Case for Leak Detector or ProFLOW 6000 Flowmeter	ea.	22657
Car Charger/Adaptor	ea.	22652
Universal AC Power Adaptor	ea.	22653

Maintenance is the Key to Reliable Autosampling

Autosampler Preventive Maintenance Kit

for Agilent 1100, 1200 HPLC Systems

Description	Model #	Similar to Agilent Part #	qty.	cat.#
Autosampler PM Kit Includes: rotor seal; piston seals (2); needle assembly; needle seat; finger caps (3)	1100, 1200	G1313-68709	kit	25271



Preventive Maintenance (PM) Kits

for Waters HPLC Systems

Description	Model #	Similar to Waters Part #	qty.	cat.#
2690/2695 Pump & Autosampler PM Kit Includes: sapphire plungers (2); seal wash plunger seals (4); head plunger seals (4); wash tube seals (4); sparge diffuser; filter insert; face seals (4); solvent reservoir 10 µm filters (4); 250 µL syringe; check valve cartridges (2); wash tube seal; seal wash tube; PTFE washer; filter retainer; lower wash seal frit; needle wash frit; TFE washer; needle assembly; gold injector seals (2); stainless steel ferrule; compression screw	Alliance 2690, 2695	WAT270944	kit	25143
717 Autosampler PM Kit Includes: seal pack assembly; tube assembly (0.020" ID); needle; needle compression screw; 0.062 stainless steel ferrule; precolumn filter assembly; filter insert; 250 µL WISP syringe	717 Autosampler	WAT052669	kit	25145



Seal Pack (Rebuilt - with Needle) for Waters 717 Autosampler

Description	Model #	Similar to Waters Part #	qty.	cat.#
Seal Pack with Needle Includes: seal pack assembly, precolumn filter assembly, needle, 0.020" ID tube assembly, compression screw, ferrule	717, LC Module 1	WAT015559	ea.	25496



Needle Assembly

for Agilent HPLC Systems

Description	Model #	Similar to Agilent Part #	qty.	cat.#
Needle Assembly	1100, 1200	G1313-87201	ea.	25278
Needle Assembly, 900 µL	1100, 1200	G1313-87202	ea.	25916



Needle Seat Assembly

for Agilent HPLC Systems

Description	Model #	Similar to Agilent Part #	qty.	cat.#
Needle Seat, PEEK	1100, 1200, 1220, 1260, G1313A, G1392A/B	G1329-87017, G1313-87017	ea.	25767



Turret Tray Assembly

for Agilent 7673 Autosamplers

Description	Model #	Similar to Agilent Part #	qty.	cat.#
Turret Tray Assembly for Agilent 7673 Autosamplers		07673-60605	ea.	22855



Rinse/Waste Vials

with Diffusion Caps
for use with Agilent 7673, 7683, and 7693 Autosamplers

Description	Volume	qty.	cat.#
Rinse/Waste Vials w/graduated marking spots and diffusion caps (2 each of 6 different colors)	4 mL	12-pk.	23096



Carriage Motor Belt

for Agilent 7673A, 7673B, and 7673C Autosamplers

Description	Similar to Agilent Part #	qty.	cat.#
Carriage Motor Belt for Agilent 7673A, 7673B, and 7673C Autosamplers	1500-0676	ea.	22692



Z-Belt for Agilent 7673B & 7683 Autosamplers

Description	Similar to Agilent Part #	qty.	cat.#
Z-Belt for Agilent 7673B & 7683 Autosamplers	1500-0803	ea.	22363



Autosampler Plunger Carrier Belt

for Agilent 7673A & 7673B Autosamplers

Description	qty.	cat.#
Autosampler Plunger Carrier Belt for Agilent 7673A & 7673B Autosamplers	ea.	22695



Facilitate Automation with Streamlined Protein Precipitation Sample Prep



Resprep PPT³ 96-Well Plates

Prepare serum, plasma, and other biological samples with 99% protein removal using the name you trust for quality, cleanliness, and performance.

3-way versatility—compatible with all common devices.

Description	Well Shape	qty.	cat.#
Resprep PPT ³ 96-Well Plate	2 mL square	2-pk.	26489.2
Resprep PPT ³ 96-Well Plate	2 mL square	5-pk.	26489.5

Resprep VM-96 Vacuum Manifold

Designed by Restek with simple things in mind: performance, versatility, ergonomics, and accuracy.



Perfect for SPE, SLE, PPT & filtration applications.

Description	qty.	cat.#
Resprep VM-96 vacuum manifold	ea.	25858

96-Well Plates

Polypropylene plates with round-bottom wells reduce liquid retention and are ideal for vortexing; conical bottom provides optimal recovery of reagents. Fits most autosamplers.



Description	Well Shape	Well Bottom	qty.	cat.#
0.45 mL 96-Well Plates	round	conical	20-pk.	26497
0.45 mL 96-Well Plates	round	conical	case of 120	26496
1.3 mL 96-Well Plates	round	round	5-pk.	26495
1.3 mL 96-Well Plates	round	round	case of 50	26494
2.0 mL 96-Well Plates	round	round	5-pk.	26493
2.0 mL 96-Well Plates	round	round	case of 60	26492

Universal Sealing Mats

Protect contents and prevent carryover with chemically resistant universal cap mats. Preslit mats pierceable by autosampler needle, pipette tip, or probe.

Description	qty.	cat.#
Universal Sealing Mat	10-pk.	26499
Universal Sealing Mat	case of 50	26498

Autosampler-Compatible Chromatography Vials

We offer 2 mL crimp-top and screw-top vials compatible with autosamplers from a variety of manufacturers.

Featured Vials:

Certified Autosampler Vial Kits

Certified 2.0 mL Screw-Thread Vials

Description	100-pk.
Assembled Clear 2.0 mL Vial w/Marking Spot, Cap, Bonded PTFE/Silicone Slit Septa	22789
Assembled Amber 2.0 mL Vial w/Marking Spot, Cap, Bonded PTFE/Silicone Slit Septa	22788
Unassembled Clear 2.0 mL Vial w/Marking Spot, Cap, Bonded PTFE/Silicone Septa	22792
Unassembled Amber 2.0 mL Vial w/Marking Spot, Cap, Bonded PTFE/Silicone Septa	22790
Unassembled Clear 2.0 mL High-Recovery Vial w/Marking Spot, Cap, Bonded PTFE/Silicone Slit Septa	22793
Unassembled Amber 2.0 mL Vial w/Marking Spot, Cap, Bonded PTFE/Silicone Slit Septa	22791

2.0 mL, 8 mm Autosampler Vial Convenience Kits

Description	100-pk.	1,000-pk.
Clear 2.0 mL Vial, Silcote Deactivated, Black Cap, Red PTFE/Silicone Septa, 0.065"	24638	24639
Amber 2.0 mL Vial, Silcote Deactivated, Black Cap, Red PTFE/Silicone Septa, 0.065"	24640	24641
Clear 2.0 mL Vial, Untreated, Black Cap, Red PTFE/Silicone Septa, 0.065"	21192	21193
Amber 2.0 mL Vial, Untreated, Black Cap, Red PTFE/Silicone Septa, 0.065"	21194	21195



Find the right vial fast with our
Online Vial Selector Tool

Try it now at www.restek.com/vial-selector



THE RESTEK ADVANTAGE

See What It Can Do for You and Your Lab

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Help Increasing Your Productivity is Just an Email Away

Restek's Technical Service team collectively represents hundreds of years of hands-on chromatography experience and specializes in providing information about Restek products, applications, instrument troubleshooting, method development, and more. For fast, personalized, and thorough answers to your most challenging technical questions, just send us an email!

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Customers Outside the U.S. | Contact your local representative or email support@restek.com



On-Demand Videos Offer 24/7 Education in Minutes

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Pure Chromatography

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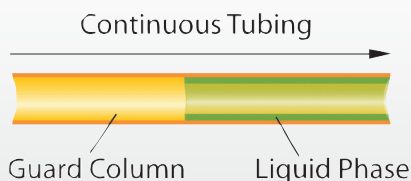


Lit. Cat.# GNES2990-UNV



Get the Protection without the Connection

Integra-Guard columns incorporate a guard and analytical column in one to eliminate the connection problems altogether.



**Restek GC & LC
Supplies: Easy to
Use, Easy to Choose**
Pure Chromatography

Hassle-Free Cartridge Changes, When They Need Changing

Easy-to-read indicators
on every trap, eliminate
confusion about when to
replace them.



Monitor a Wide Range of Chemicals with Versatile radiello Air Samplers

They're easy to use and are ideal
for environmental monitoring,
vapor intrusion, industrial hygiene,
and personal air sampling.



www.restek.com



Change GC-MS Columns in Minutes without Venting

- 100 µm transfer line maintains vacuum and eliminates the need to vent when changing columns.
- Easy to install and maintain—no special tools or plumbing required.

EZ No-Vent GC Column-Mass Spectrometer Connector

Description	qty.	cat.#/kit
for Agilent GCs with 5971/5972, 5973, 5975, or 5977 GC-MS	kit	21323
for Bruker/Varian Saturn 2000 Series MSs	kit	22423
for Shimadzu QP 2010 & QP 2010 Plus	kit	22431
for Thermo Scientific Focus DSQ GC Mass Spectrometers	kit	22454



Monitor a Wide Range of Chemicals with Easy-to-Use radiello Air Samplers

- Ideal for environmental monitoring, vapor intrusion, industrial hygiene, and personal air sampling.
- Higher uptake rates for excellent low-level sensitivity.
- Higher capacity for accurate sampling up to 30 days.
- Easy to use—no pump required.

Description	cat.#/kit
Starter kit: 1 complete sampler for BTEX/VOCs, CS ₂ desorption, white diffusive body, cartridge + blank, support plate, adaptor	RAD130S
Starter kit: 1 complete sampler for 1,3-butadiene & isoprene, thermal desorption, yellow diffusive body, cartridge + blank, support plate, adaptor	RAD141S
Starter kit: 1 complete sampler for BTEX/VOCs, thermal desorption, yellow diffusive body, cartridge + blank, support plate, adaptor	RAD145S
Starter kit: 1 complete sampler for H ₂ S, white diffusive body, cartridge + blank, support plate, adaptor	RAD170S

These are just our starter kits; visit www.restek.com/radiello for our full selection!

Swap Inlet Liners Faster and Easier without Broken Gas Lines

- Weldment removal tool allows for quick removal of hot weldment without fingers ever touching hot surfaces.
- Weldment stays secure in the tool for reattachment.
- Gas lines are attached to shell weldment bottom—won't interfere with routine maintenance.

EZ Twist Top Split/Splitless Injection Port

for Agilent 6850/6890 GCs with Large Canister-Type Filter	cat.#/kit
Injection Port Assembly Kit	22735
Injection Port Assembly Kit, Siltek-Treated	22736
for Agilent 6850/6890 GCs with Pencil Traps	cat.#/kit
Injection Port Assembly Kit	22721
Injection Port Assembly Kit, Siltek-Treated	22722
for Agilent 7890 GCs	cat.#/kit
Injection Port Assembly Kit	22177
Injection Port Assembly Kit, Siltek-Treated	22178
for Agilent 5890 GC	cat.#/kit
Injection Port Assembly Kit	22725
Injection Port Assembly Kit, Siltek-Treated	22726

Weldment Removal Tool for EZ Twist Top Split/Splitless Injection Ports

for Agilent GCs	cat.#/ea.
Weldment Removal Tool	22728



Get the Performance and Convenience of a Single-Piece Microvial at a Fraction of the Cost

- Limited volume; no time wasted adding inserts.
- Insert is pre-fused into a glass vial; one-piece design reduces the potential for contamination.

Interlock Vials

Description	Type	Volume	Color	Material	100-pk.	500-pk.
Interlock Vial	9 mm Thread	300 µL	Clear	Glass	22433	22434
Interlock Vial	9 mm Thread	300 µL	Amber	Glass	22435	22436
Interlock Vial	11 mm Crimp or Snap Ring	300 µL	Clear	Glass	22437	22438
Interlock Vial	11 mm Crimp or Snap Ring	300 µL	Amber	Glass	22439	22440

It's Fast and Easy for Anyone to Make Consistent, Quality Connections

- No wrenches mean no overtightening or cross-threading damage.
- Check status at a glance—if the parts are connected, the valve is open; if they're apart, it's closed.
- Great for attaching air canisters to the wide variety of devices used to sample and analyze air samples.

RAVEqc Quick-Connect Air Valves

Description	Material	Similar to Entech Part #	cat.#/ea.
Male RAVEqc Valve to 1/4" Male Compression Fitting	Stainless Steel	MQT-400	27367
Male RAVEqc Valve to 1/4" Male Compression Fitting	Siltek-Treated	MQT-400S	27368
Female RAVEqc Valve to 1/4" Male Compression Fitting	Stainless Steel	FQT-400	27369
Female RAVEqc Valve to 1/4" Male Compression Fitting	Siltek-Treated	FQT-400S	27370
Male RAVEqc Valve to 1/4" Tube End Fitting, Extended (1.58") (Note: requires a 1/4" nut and ferrule set, sold separately in 5 packs as cat.# 23161)	Stainless Steel	MQT-T400	27371
Male RAVEqc Valve to 1/4" Tube End Fitting, Extended (1.58") (Note: requires a 1/4" nut and ferrule set, sold separately in 5 packs as cat.# 23161)	Siltek-Treated	MQT-T400S	27372
Male RAVEqc Valve to 1/4" Tube End Fitting, Short (1.23") (Note: requires a 1/4" nut and ferrule set, sold separately in 5 packs as cat.# 23161)	Stainless Steel	MQT-ST400	27373
Male RAVEqc Valve to 1/4" Tube End Fitting, Short (1.23") (Note: requires a 1/4" nut and ferrule set, sold separately in 5 packs as cat.# 23161)	Siltek-Treated	MQT-ST400S	27374
Female RAVEqc Valve to 1/4" NPT Fitting	Stainless Steel		27365
Female RAVEqc Valve to 1/4" NPT Fitting	Siltek-Treated		27366



QuEChERS Made Even Easier

Q-sep QuEChERS Sample Prep Extraction Salts & Tubes

Free-flowing salts in convenient slim packets fit perfectly into tubes and transfer easily and completely.

Description	Method	Material	qty.	cat.#
Q-sep QuEChERS Extraction Kit	original unbuffered	4 g MgSO ₄ , 1 g NaCl with 50 mL Centrifuge Tube	50 packets & 50 tubes	25848
Q-sep QuEChERS Extraction Kit	European EN 15662	4 g MgSO ₄ , 1 g NaCl, 1 g TSCD, 0.5 g DHS with 50 mL Centrifuge Tube	50 packets & 50 tubes	25850
Q-sep QuEChERS Extraction Kit	AOAC 2007.01	6 g MgSO ₄ , 1.5 g NaOAc with 50 mL Centrifuge Tube	50 packets & 50 tubes	25852



For ready-to-use dSPE tubes and other QuEChERS products, visit www.restek.com/quechers

Make Life Easier (MLE) Capillary GC Tool Kits

Everything you need in one complete kit!

- Kits available for Agilent, Bruker/Varian, PerkinElmer, Shimadzu, and Thermo Scientific GCs.
- Kits include everything you need to perform general maintenance on your GC.
- Parts list makes reordering easy!

Description	cat.#/kit
MLE Capillary Tool Kit for Agilent GCs	22186
MLE Capillary Tool Kit for Bruker/Varian GCs	22184
MLE Capillary Tool Kit for PerkinElmer GCs	22185
MLE Capillary Tool Kit for Shimadzu GCs	22182
MLE Capillary Tool Kit for Thermo Scientific GCs	22183



More of What You Need to Keep Your LC Flowing

Restek has expanded our line of LC accessories to bring you even more of what you need to keep your LC flowing:

- Couplers, fittings, unions, tees, and crosses.
- PEEK and stainless steel tubing.
- Mobile phase maintenance and safety products.

And, that's on top of our already wide selection of instrument replacement parts and supplies.

Don't stop at the column; outfit your entire LC system with Restek LC products at www.restek.com/LCacc



Hassle-Free Cartridge Changes, When They Need Changing

- Easy-to-read indicators on every trap, eliminate confusion about when to replace them.
- High-purity output ensures 99.9999% pure gas (at max. flow of 2 L/min).

Restek Super Clean Gas Filter Kits

Description	cat.#/kit
Carrier Gas Cleaning Kit	22019
Fuel Gas Purification Kit	22021
Gas Filter Bundle Kit	22031
Super Clean Gas Filter Kit, 1/4" Brass	23844
Super Clean Gas Filter Kit, 1/8" Brass	23845
Super Clean Gas Filter Kit, 1/4" Stainless Steel	23846
Super Clean Gas Filter Kit, 1/8" Stainless Steel	23847
Helium-Specific Carrier Gas Cleaning Kit	21983



The Fast and Easy Way to Make Your Methods Faster

Use the EZGC method translator and flow calculator to easily optimize your analysis for speed so you can increase sample throughput!

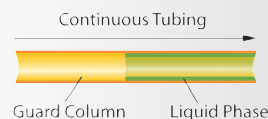
YOU NEED: To switch carrier gases, to change column dimensions or control parameters, or to optimize a method for speed or efficiency.

YOU HAVE: An existing method.

YOU GET: A full set of calculated GC method conditions that will provide similar chromatography. Results include oven program and run time as well as average velocity, flow rate, splitless valve time, and other control parameters—all in an easy-to-use, single-screen interface with seamless transfer between tools.

www.restek.com/ezgc-mtfc

Get the Protection without the Connection



Integra-Guard columns incorporate a guard column and analytical column in one to eliminate the problems associated with this connection altogether. Integra-Guard columns are available for Rxi-5Sil MS columns as well as a variety of Rtx columns. Protecting your analytical column has never been easier.

Description	qty.	cat.#
Rtx-1		
30 m, 0.25 mm ID, 0.25 µm Rtx-1 w/5 m Integra-Guard Column	ea.	10123-124
30 m, 0.53 mm ID, 1.00 µm Rtx-1 w/5 m Integra-Guard Column	ea.	10155-126
30 m, 0.53 mm ID, 5.00 µm Rtx-1 w/5 m Integra-Guard Column	ea.	10179-126
Rtx-5		
30 m, 0.25 mm ID, 0.25 µm Rtx-5 w/5 m Integra-Guard Column	ea.	10223-124
30 m, 0.25 mm ID, 0.25 µm Rtx-5 w/10 m Integra-Guard Column	ea.	10223-127
30 m, 0.25 mm ID, 1.00 µm Rtx-5 w/5 m Integra-Guard Column	ea.	10253-124
30 m, 0.32 mm ID, 0.25 µm Rtx-5 w/5 m Integra-Guard Column	ea.	10224-125
30 m, 0.32 mm ID, 1.00 µm Rtx-5 w/5 m Integra-Guard Column	ea.	10254-125
30 m, 0.53 mm ID, 5.00 µm Rtx-5/Rtx-G27 w/5 m Integra-Guard Column	ea.	10279-126
60 m, 0.32 mm ID, 0.25 µm Rtx-5 w/5 m Integra-Guard Column	ea.	10227-125
Rtx-5MS		
15 m, 0.25 mm ID, 0.25 µm Rtx-5MS w/5 m Integra-Guard Column	ea.	12620-124
15 m, 0.25 mm ID, 0.50 µm Rtx-5MS w/10 m Integra-Guard Column	ea.	12635-127
30 m, 0.25 mm ID, 0.10 µm Rtx-5MS w/5 m Integra-Guard Column	ea.	12608-124
30 m, 0.25 mm ID, 0.25 µm Rtx-5MS w/5 m Integra-Guard Column	ea.	12623-124
30 m, 0.25 mm ID, 0.25 µm Rtx-5MS w/10 m Integra-Guard Column	ea.	12623-127
30 m, 0.25 mm ID, 0.50 µm Rtx-5MS w/5 m Integra-Guard Column	ea.	12638-124
30 m, 0.25 mm ID, 0.50 µm Rtx-5MS w/10 m Integra-Guard Column	ea.	12638-127
30 m, 0.32 mm ID, 0.25 µm Rtx-5MS w/5 m Integra-Guard Column	ea.	12624-125
30 m, 0.32 mm ID, 1.00 µm Rtx-5MS w/5 m Integra-Guard Column	ea.	12654-125
Rxi-5Sil MS		
15 m, 0.25 mm ID, 0.25 µm Rxi-5Sil MS w/10 m Integra-Guard Column	ea.	13620-127
30 m, 0.25 mm ID, 0.25 µm Rxi-5Sil MS w/5 m Integra-Guard Column	ea.	13623-124
30 m, 0.25 mm ID, 0.25 µm Rxi-5Sil MS w/10 m Integra-Guard Column	ea.	13623-127
15 m, 0.25 mm ID, 0.50 µm Rxi-5Sil MS w/5 m Integra-Guard Column	ea.	13635-124
30 m, 0.25 mm ID, 0.50 µm Rxi-5Sil MS w/5 m Integra-Guard Column	ea.	13638-124
30 m, 0.25 mm ID, 0.50 µm Rxi-5Sil MS w/10 m Integra-Guard Column	ea.	13638-127
30 m, 0.32 mm ID, 0.50 µm Rxi-5Sil MS w/5 m Integra-Guard Column	ea.	13639-125
30 m, 0.32 mm ID, 1.00 µm Rxi-5Sil MS w/5 m Integra-Guard Column	ea.	13654-125
Rtx-624		
30 m, 0.25 mm ID, 1.40 µm Rtx-624 w/5 m Integra-Guard Column	ea.	10968-124
30 m, 0.32 mm ID, 1.80 µm Rtx-624 w/5 m Integra-Guard Column	ea.	10970-125
30 m, 0.53 mm ID, 3.00 µm Rtx-624 w/5 m Integra-Guard Column	ea.	10971-126
Rtx-1301		
30 m, 0.53 mm ID, 3.00 µm Rtx-1301 w/5 m Integra-Guard Column	ea.	16085-126
Rtx-1701		
30 m, 0.25 mm ID, 0.25 µm Rtx-1701 w/5 m Integra-Guard Column	ea.	12023-124
Stabilwax		
30 m, 0.25 mm ID, 0.25 µm Stabilwax w/5 m Integra-Guard Column	ea.	10623-124
30 m, 0.32 mm ID, 1.00 µm Stabilwax w/5 m Integra-Guard Column	ea.	10654-125
30 m, 0.53 mm ID, 1.00 µm Stabilwax w/5 m Integra-Guard Column	ea.	10655-126

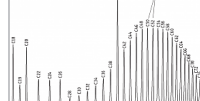
Running ASTM Methods?

Find Your GC Columns, Reference Standards, and Chromatograms in One Convenient Place.

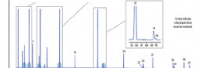
Quickly pick the perfect solution for common ASTM-method petroleum analyses with the help of Restek's petrochemical experts.

And this is just the beginning. For full solutions to SimDist, DHA, finished gasoline, biodiesel, natural gas, refinery gas, impurity, and sulfur analyses by ASTM methods, visit www.restek.com/ASTMguide

(High-Temperature) Simulated Distillation (SimDist)

Method #	Method Title	Restek Column(s)	Restek Reference Standard(s)	Chromatogram#
D7169	Standard Test Method for Boiling Point Distribution of Samples with Residues Such as Crude Oils and Atmospheric and Vacuum Residues by High-Temperature Gas Chromatography	MXT-1HT SimDist, Siltek-treated stainless steel 5 m x 0.53 mm x 0.10 µm - cat.# 70112 or MXT-1HT SimDist, Siltek-treated stainless steel 5 m x 0.53 mm x 0.20 µm - cat.# 70115	Polywax Standards - cat.# 36224–36227	GC_PC1308 

Detailed Hydrocarbon Analysis (DHA)

Method #	Method Title	Restek Column(s)	Restek Reference Standard(s)	Chromatogram#
D6730	Standard Test Method for Determination of Individual Components in Spark Ignition Engine Fuels by 100-Meter Capillary (with precolumn) High-Resolution Gas Chromatography	Rtx-DHA-100 100 m x 0.25 mm x 0.50 µm - cat.# 10148 and Rtx-5 DHA Tuning 5 m x 0.25 mm x 1.00 µm - cat.# 10165	DHA Standards - cat.# 33034 - cat.# 30725–30731	GC_PC1284 

You've Selected:

GC Syringes:
Autosampler
[Remove]

Instrument Manufacturer:
Agilent
[Remove]

Brand:
SGE
[Remove]

Volume Range:
0.5-5 microliter
[Remove]

You're a Few Clicks Away from the Exact Syringe You Need

Simply visit www.restek.com/syringe and use the filters on the left side of the page to quickly narrow our wide selection down to the perfect syringe for your application.

Standard Microliter Syringes (Hamilton)

for Agilent 7673, 7683, 7693A, and 6850 Autosamplers

Volume	Needle Term.	Needle Gauge	Needle Length	Point Style	Hamilton Model	cat.#	qty.	Restek cat.#
0.5 µL	ASRN	23s	1.71"	Agilent	7000.5	86276	ea.	24895
0.5 µL	ASRN	26s	1.71"	Agilent	7000.5	86274	ea.	21221
5 µL	ASRN	23s	1.71"	Agilent	75	87957	ea.	20172
5 µL	ASN	23s	1.71"	Agilent	75	87987	ea.	20168
5 µL	ASN	23s	1.71"	Agilent	75	87990	6-pk.	20170
5 µL	ASN	26s	1.71"	Agilent	75	87988	ea.	24592
5 µL	ASN	26s	1.71"	Agilent	75	87989	6-pk.	21230
5 µL	ASRN	23s–26s	1.71"	Agilent	75	87959	ea.	21223
5 µL	ASN	23s–26s	1.71"	Agilent	75	87993	ea.	24593
5 µL	ASN	23s–26s	1.71"	Agilent	75	87994	6-pk.	24594
10 µL	ASRN	23s	1.71"	Agilent	701	80357	ea.	20171
10 µL	ASN	23s	1.71"	Agilent	701	80387	ea.	20167
10 µL	ASN	23s	1.71"	Agilent	701	80390	6-pk.	20169
10 µL	ASRN	26s	1.71"	Agilent	701	80358	ea.	24597
10 µL	ASN	26s	1.71"	Agilent	701	80388	ea.	24595
10 µL	ASN	26s	1.71"	Agilent	701	80389	6-pk.	24599
10 µL	ASRN	23s–26s	1.71"	Agilent	701	80359	ea.	24598
10 µL	ASN	23s–26s	1.71"	Agilent	701	80393	ea.	24596
10 µL	ASN	23s–26s	1.71"	Agilent	701	80391	6-pk.	24600



Easily Hone in on the Perfect Liner for Any Application

There are so many options of inlet liner to choose from, and they differ in geometric configuration/design, volume, base material, deactivation, and the presence or absence of packing. Different styles of liners are used for different types of samples and injections, but fortunately, choosing the right GC inlet liner is easy when you consider the type of injection that will be used.

Learn more about how to choose a GC inlet liner based on injection type at www.restek.com/liner-choice

Featured Topaz Liners:

Agilent

Split Injection: 23305 | 23300
Splitless Injection: 23303 | 23302

PerkinElmer

Split Injection: 23450 | 23449
Splitless Injection: 23451

Sciex/Bruker/Varian

Split Injection: 23328
Splitless Injection: 23332 | 23331

Shimadzu

Split Injection: 23319 | 23320
Splitless Injection: 23336 | 23322

Thermo Scientific

Split Injection: 23444 | 23267
Splitless Injection: 23447 | 23446

RESTEK

RESTEK

Get Started with 1, 5, and Wax Columns

Save time and money by finding the right GC columns fast!

Featured Columns:

1-Type: Rxi-1ms Column: General-purpose option with excellent sensitivity.

Description	temp. limits	qty.	cat.#
30 m, 0.25 mm ID, 0.25 µm	-60 to 330/350 °C	ea.	13323

5-Type: Rxi-5Sil MS Column: Great for analyzing active compounds by GC-MS.

Description	temp. limits	qty.	cat.#
30 m, 0.25 mm ID, 0.25 µm	-60 to 320/350 °C	ea.	13623

Wax-Type: Stabilwax Column: Rugged enough to withstand repeated water injections.

Description	temp. limits	qty.	cat.#
30 m, 0.25 mm ID, 0.25 µm	40 to 250/260 °C	ea.	10623

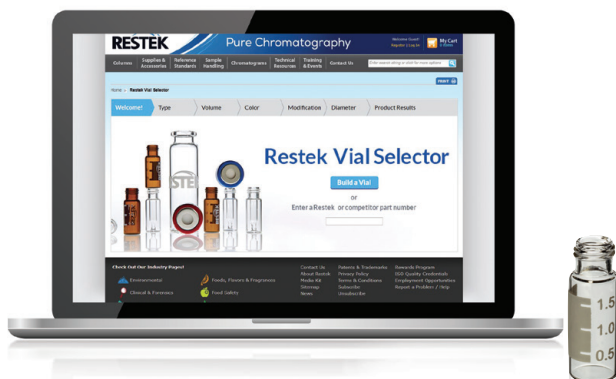
To order these and many more Restek 1, 5, and wax columns—along with guidance on picking the right phase, a convenient column cross-reference tool, and more—visit www.restek.com/15wax



Restek's Online Vial Selection Tool Gets You to the Right Vial Fast

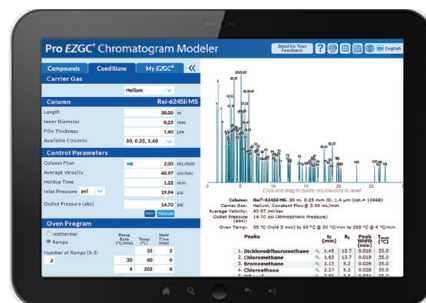
With just a few clicks you can choose the vial type, volume, color, modifications, and orifice size—and our selection tool will provide ordering information for the vial that meets your specifications. In just seconds, you'll find the vial that meets your requirements, as well as recommended caps and closures. And build-a-vial technology even shows you the vial configuration as you make your selections!

www.restek.com/vial-selector



Already know you need a vial for your 2.0 mL, 12 x 32 mm, crimp-top vial-based autosampler?

Description	Color	100-pk.	1,000-pk.
Short-Cap Vial w/White Graduated Marking Spot	Clear	21140	21141
Short-Cap Vial w/White Graduated Marking Spot	Amber	21142	21143
Short-Cap Vial without Graduated Marking Spot	Clear	21154	21155



Perform GC Method Development in Minutes Directly from Your Desk

Our EZGC chromatogram modeler makes it easy to tailor a perfect solution for your GC method development challenges.

YOU NEED: To perform GC method development from scratch, including the column and conditions.

YOU HAVE: An analyte list (and you may have a column in mind, too).

YOU GET: Customized, interactive model chromatograms that provide a specific phase, column dimension, and conditions. You can change columns, modify GC method conditions, zoom in, view chemical structures, and even overlay mass spectra of coeluting compounds.

www.restek.com/ezgc-cm

Take the Choice out of Column Selection with Application-Specific LC Columns

Column phases like our industry-leading Biphenyl are rightfully popular for their versatility and separation power, but sometimes, a particularly tricky analysis calls for an application-specific column. Here are a few of Restek's most popular LC columns specifically designed to tackle single applications. For more, visit www.restek.com/LC

Featured Application-Specific LC Columns

Raptor EtG/EtS LC Column

Description	cat.#
2.7 μ m Columns	
100 mm, 2.1 mm ID	9325A12

Allure Silica Column for MOSH/MOAH Analysis

Description	cat.#
5 μ m Columns	
250 mm, 2.1 mm ID	9160572

Allure Organic Acids Columns

Description	cat.#
5 μ m Columns	
150 mm, 3.0 mm ID	916556E
5 μ m Columns	
150 mm, 4.6 mm ID	9165565
5 μ m Columns	
250 mm, 4.6 mm ID	9165575
5 μ m Columns	
300 mm, 4.6 mm ID	9165585



Filtration with Just a Squeeze of Your Fingers, Chosen in a Snap

Switching over to fast, eco-friendly Thomson SINGLE StEP filter vials is easy with our compatibility chart featuring over 80 solvents/mobile phases. Simply visit www.restek.com/singlestep, select a filter vial, then click on the convenient link to determine which filter vial will work best for your application.

Also available in eXtreme, low-evaporation, and nano versions at www.restek.com/singlestep



Thomson SINGLE StEP Standard Filter Vials

Porosity	Color	qty.	cat.#
Nylon			
0.2 μ m	black preslit cap	100-pk.	25891
0.45 μ m	pink preslit cap	100-pk.	25892
PES (polyethersulfone)			
0.2 μ m	grey preslit cap	100-pk.	25897
PTFE (polytetrafluoroethylene)			
0.2 μ m	green preslit cap	100-pk.	25893
0.45 μ m	blue preslit cap	100-pk.	25894
PVDF (polyvinylidene fluoride)			
0.2 μ m	red preslit cap	100-pk.	25895
0.45 μ m	yellow preslit cap	100-pk.	25896



Find Stock Standards or Order the Perfect Customs with Ease

This tool will help you immediately determine whether a catalog reference standard will suit your needs. If so, a click will add it to your order or quote; if not, you can simply proceed through the form to request a custom reference standard for some or all of your compounds of interest.

Try it now at www.restek.com/solutions

Our Selection of Cannabis Standards Keeps Expanding

Here are *just a few* of the cannabis standards we offer:

Single-Component Cannabis Standards

Concentration is μ g/mL. Volume is 1 mL/ampul.

Compound	CAS #	Solvent	Conc.	T.K.#	cat.#
Cannabichromene (CBC)	20675-51-8	PTM	1,000	71-053	34092
Cannabidiol (CBD)	13956-29-1	PTM	1,000	71-047	34011
Cannabigerol (CBG)	25654-31-3	PTM	1,000	71-052	34091
Cannabigerolic Acid (CBGA)	25555-57-1	ACN	1,000	—	34112
Cannabinol (CBN)	521-35-7	PTM	1,000	71-046	34010
delta-8-Tetrahydrocannabinol (Δ^8 -THC)	5957-75-5	PTM	1,000	71-051	34090
delta-9-Tetrahydrocannabinol (Δ^9 -THC)	1972-08-3	M	1,000	71-049	34067
delta-9-Tetrahydrocannabinolic acid A (THCA-A)	23978-85-0	PTM	1,000	71-054	34093
Cannabidiolic Acid (CBDA)	1244-58-2	ACN	1,000	85-009	34099
Tetrahydrocannabivarin (THCV)	31262-37-0	M	1,000	85-010	34100

Certified reference materials (CRMs) manufactured and QC-tested in ISO-accredited labs satisfy your ISO requirements. ACN = acetonitrile; M = methanol; PTM = purge-and-trap grade methanol



Does Restek Have a Replacement for This Part?

5181-3316



Finding Restek replacements (or, in many cases, improvements) for your instrument parts, consumables, and other chromatography supplies is as painless as typing in your existing part number. Go to **www.restek.com** and enter your part number in the search box. Your results will feature Restek products that are similar to your specific part number.

Still can't find what you're looking for? Contact Restek Technical Support!

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Customers Outside the U.S. | Contact your local representative or email support@restek.com

THE RESTEK ADVANTAGE

See What It Can Do for You and Your Lab



The Restek Advantage is an e-publication from our in-house chromatography experts. Each issue features a variety of valuable technical material, tailored to you:

- technical deep dives
- quick-reference guides
- applications
- education
- troubleshooting
- product selection assistance
- videos
- and more!

Get quick access to Restek's years of chromatography knowledge—the current issue is live at **www.restek.com/advantage**

RESTEK
Pure Chromatography

Questions? Contact us or your local Restek representative (www.restek.com/contact-us).

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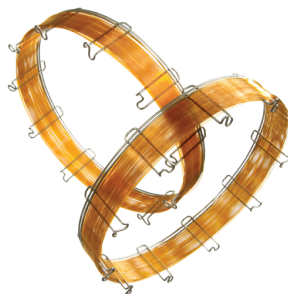
Lit. Cat.# GNES3037-UNV





The Best GC Column for Your Next Method Is an Rxi Column

With a wide range of stationary phases, there's an Rxi column that's perfectly matched with your application to give you the unbeatable results your customers deserve.



Unlock Your Lab's Potential—Restek Has the Keys to Higher Data Quality
Pure Chromatography



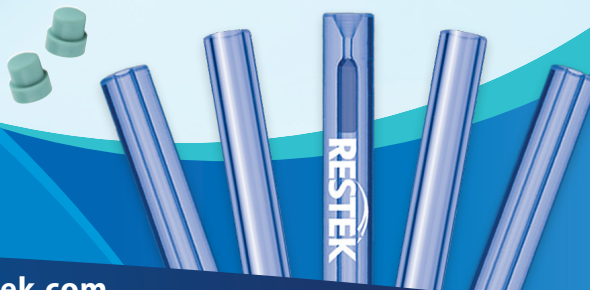
More Complete and Consistent Cleanup for Organochlorine Pesticides

- The same selectivity every time.
- Eliminate background interference.
- Remove nonvolatile matrix components.
- Upgrade easily from Florisil products.



Keep Your System Clean and Your Data Pure with Restek GC Supplies

From tubing to Topaz liners, Restek can outfit your GC for reliable, accurate performance with supplies specially cleaned for use in chromatography, then packaged to ensure they stay that way.



www.restek.com

Roc LC Columns:

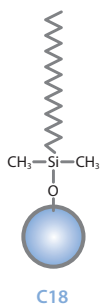
The Reliable Cornerstone for Your LC Lab

- Conventional HPLC columns pressure rated for any 400 bar HPLC system.
- Solid and reliable—delivers peak shape, reproducibility, ruggedness, and performance.
- Exceptional value for routine analyses and large-volume workflows—high-purity, fully porous silica backed by quality manufacturing.
- 5 phases cover 98% of USP methods.



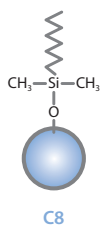
Roc C18 HPLC Columns (USP L1)

Length	3.0 mm cat.#	4.6 mm cat.#
3 μm Columns		
100 mm	953431E	9534315
150 mm	953436E	9534365
5 μm Columns		
100 mm	953451E	9534515
150 mm	953456E	9534565
250 mm	953457E	9534575



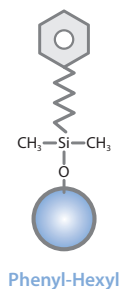
Roc C8 HPLC Columns (USP L7)

Length	3.0 mm cat.#	4.6 mm cat.#
3 μm Columns		
100 mm	953331E	9533315
150 mm	953336E	9533365
5 μm Columns		
100 mm	953351E	9533515
150 mm	953356E	9533565
250 mm	953357E	9533575



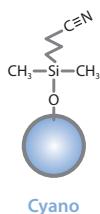
Roc Phenyl-Hexyl HPLC Columns (USP L11)

Length	3.0 mm cat.#	4.6 mm cat.#
3 μm Columns		
100 mm	953531E	9535315
150 mm	953536E	9535365
5 μm Columns		
100 mm	953551E	9535515
150 mm	953556E	9535565
250 mm	953557E	9535575



Roc Cyano HPLC Columns (USP L10)

Length	3.0 mm cat.#	4.6 mm cat.#
3 μm Columns		
100 mm	953631E	9536315
150 mm	953636E	9536365
5 μm Columns		
100 mm	953651E	9536515
150 mm	953656E	9536565
250 mm	953657E	9536575



Roc Silica HPLC Columns (USP L3)

Length	3.0 mm cat.#	4.6 mm cat.#
3 μm Columns		
100 mm	953031E	9530315
150 mm	953036E	9530365
5 μm Columns		
100 mm	953051E	9530515
150 mm	953056E	9530565
250 mm	953057E	9530575



Roc LC Guard Column Cartridges

- Protect your Roc LC columns with minimal effect on retention, peak shape, or efficiency.
- Guard column cartridges require Roc guard column holder (cat.# 25812).



Description	qty.	10 x 4.0 mm cat.#
Roc C8 Guard Cartridge	3-pk.	953350210
Roc C18 Guard Cartridge	3-pk.	953450210
Roc Cyano Guard Cartridge	3-pk.	953650210
Roc Phenyl-Hexyl Guard Cartridge	3-pk.	953550210
Roc Silica Guard Cartridge	3-pk.	953050210

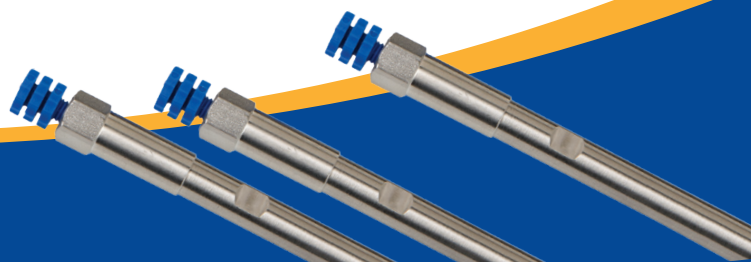
Roc LC Guard Column Holder



Requires separate guard column cartridges (available from Restek).

Description	qty.	cat.#
Roc LC Guard Column Holder for 10 x 4.0 mm Roc Guard Cartridges	ea.	25812

Get more of what you want, and less of what you don't, with Roc LC columns from Restek.

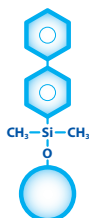


Apply Force to Your LC Methods

- Long-lasting and reproducible—maintain stable retention times and peak shapes, even with UHPLC pressures and rapid cycling.
- Fully scalable between 3 or 5 μm HPLC and 1.8 μm UHPLC—easily transfer and optimize methods.
- Premium quality ensured by strict manufacturing and QC procedures—backed by our 100% Pure Satisfaction guarantee.

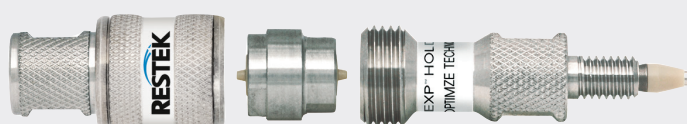
Force Biphenyl LC Columns (USP L11)

Length	2.1 mm	3.0 mm	4.6 mm
1.8 μm Columns			
30 mm	9629232	—	—
50 mm	9629252	962925E	—
100 mm	9629212	962921E	—
3 μm Columns			
30 mm	9629332	—	—
50 mm	9629352	962935E	—
100 mm	9629312	962931E	9629315
150 mm	9629362	962936E	9629365
5 μm Columns			
50 mm	9629552	962955E	—
100 mm	9629512	962951E	9629515
150 mm	9629562	962956E	9629565
250 mm	—	—	9629575



Meet today's workflow needs—and prepare for tomorrow's—by applying Force LC columns to all of your instrument platforms.

Force EXP Guard Cartridges — for 3 and 5 μm Force Columns



- Change cartridges by hand without breaking inlet/outlet fluid connections—no tools needed.
- Patented titanium hybrid ferrules can be installed repeatedly without compromising high-pressure seal.
- Guard column cartridges require EXP direct connect holder (cat.# 25808).

Description	qty.	5 x 2.1 mm cat.#	5 x 3.0 mm cat.#	5 x 4.6 mm cat.#
Force Biphenyl EXP Guard Column Cartridge	3-pk.	962950252	962950253	962950250
Force C18 EXP Guard Column Cartridge	3-pk.	963450252	963450253	963450250
Force FluoroPhenyl EXP Guard Column Cartridge	3-pk.	963950252	963950253	963950250

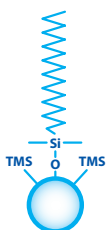
Maximum cartridge pressure: 600 bar/8,700 psi.

EXP Direct Connect Holder

Description	qty.	cat.#
EXP Direct Connect Holder for EXP Guard Cartridges (includes hex-head fitting & 2 ferrules)	ea.	25808

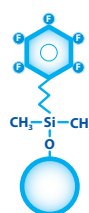
Force C18 LC Columns (USP L1)

Length	2.1 mm	3.0 mm	4.6 mm
1.8 μm Columns			
30 mm	9634232	—	—
50 mm	9634252	963425E	—
100 mm	9634212	963421E	—
3 μm Columns			
30 mm	9634332	—	—
50 mm	9634352	963435E	—
100 mm	9634312	963431E	9634315
150 mm	9634362	963436E	9634365
5 μm Columns			
50 mm	9634552	963455E	—
100 mm	9634512	963451E	9634515
150 mm	9634562	963456E	9634565
250 mm	—	—	9634575



Force FluoroPhenyl LC Columns (USP L43)

Length	2.1 mm	3.0 mm	4.6 mm
1.8 μm Columns			
30 mm	9639232	—	—
50 mm	9639252	963925E	—
100 mm	9639212	963921E	—
3 μm Columns			
30 mm	9639332	—	—
50 mm	9639352	963935E	—
100 mm	9639312	963931E	9639315
150 mm	9639362	963936E	9639365
5 μm Columns			
50 mm	9639552	963955E	—
100 mm	9639512	963951E	9639515
150 mm	9639562	963956E	9639565
250 mm	—	—	9639575



UltraShield UHPLC PreColumn Filter — for 1.8 μm Force Columns

- Cost-effective protection for UHPLC systems.
- Leak tight to 15,000 psi (1,034 bar).



Description	Filter Porosity	qty.	cat.#
UltraShield UHPLC PreColumn Filter	0.2 μm frit	ea.	25809
		5-pk.	25810
		10-pk.	25811

Keep Your System Clean and Your Data Pure with Restek GC Supplies

As detection limits continue to shrink, it's increasingly important to use supplies that are specially cleaned for use in chromatography, then packaged to ensure they stay that way. From tubing to Topaz liners, Restek can help you outfit your GC for reliable, accurate performance.

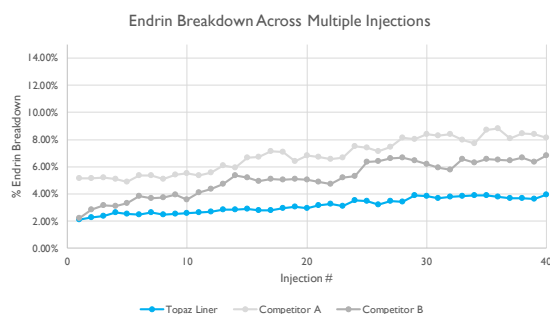


Maximize GC Uptime with Unparalleled Cleanliness and Inertness

With Topaz liners, you can analyze more samples before you have to stop to change your liner. As shown below, the inertness and stability of a Topaz liner shine compared to leading competitors. Breakdown of reactive compounds like endrin starts low and stays low, even after 40 injections.

Featured Topaz Liners

For Agilent GCs			ID x OD x Length	qty.	cat.#
	Precision w/Quartz Wool	Split	4.0 mm x 6.3 mm x 78.5 mm	5-pk.	23305
	Straight w/Quartz Wool	Split	4.0 mm x 6.3 mm x 78.5 mm	5-pk.	23300
	Single Taper w/Quartz Wool	Splitless	4.0 mm x 6.5 mm x 78.5 mm	5-pk.	23303
	Single Taper	Splitless	4.0 mm x 6.5 mm x 78.5 mm	5-pk.	23302
For PerkinElmer GCs			ID x OD x Length	qty.	cat.#
	Precision w/Quartz Wool	Split	4.0 mm x 6.2 mm x 92.1 mm	5-pk.	23450
	Straight w/Quartz Wool	Split	4.0 mm x 6.2 mm x 92.1 mm	5-pk.	23449
	Straight w/Quartz Wool	Splitless	2.0 mm x 6.2 mm x 92.1 mm	5-pk.	23451
For Scienc/Bruker/Varian GCs			ID x OD x Length	qty.	cat.#
	Precision w/Quartz Wool	Split	4.0 mm x 6.3 mm x 78.5 mm	5-pk.	23328
	Single Taper w/Quartz Wool	Splitless	4.0 mm x 6.5 mm x 78.5 mm	5-pk.	23332
	Single Taper	Splitless	4.0 mm x 6.5 mm x 78.5 mm	5-pk.	23331
For Shimadzu GCs			ID x OD x Length	qty.	cat.#
	Straight w/Quartz Wool	Split	3.5 mm x 5.0 mm x 95 mm	5-pk.	23319
	Precision w/Quartz Wool	Split	3.5 mm x 5.0 mm x 95 mm	5-pk.	23320
	Single Taper w/Quartz Wool	Splitless	3.5 mm x 5.0 mm x 95 mm	5-pk.	23336
	Single Taper w/Quartz Wool	Splitless	3.5 mm x 5.0 mm x 95 mm	5-pk.	23322
For Thermo Scientific GCs			ID x OD x Length	qty.	cat.#
	Straight w/Quartz Wool	Split	4.0 mm x 6.3 mm x 78.5 mm	5-pk.	23444
	Precision w/Quartz Wool	Split	4.0 mm x 6.3 mm x 78.5 mm	5-pk.	23267
	Single Taper w/Quartz Wool	Splitless	4.0 mm x 6.5 mm x 78.5 mm	5-pk.	23447
	Single Taper	Splitless	4.0 mm x 6.5 mm x 78.5 mm	5-pk.	23446



Blister packaging also keeps Topaz liners clean, so you spend less time conditioning after a changeout.



Learn more and find our full selection at www.restek.com/topaz

Preconditioned and GC-FID Tested Septa Packaged in Ultra-Clean Blister Packs

- Usable to 350 °C inlet temperature.
- Ultra-low bleed minimizes background signal.
- Plasma coating eliminates sticking.
- Precision molded for consistent, accurate fit.

Need a higher-temp option for demanding GC and GC-MS applications?

Check out Premium Nonstick BTO Septa at www.restek.com/septa



Septum Diameter	48-pk. cat.#	50-pk. cat.#	100-pk. cat.#
5 mm (3/16"), with CenterGuide, predrilled	—	23860	23861
6 mm (1/4")	—	23874	—
7 mm	—	23875	—
8 mm	—	23876	—
9 mm, with CenterGuide	—	23862	23863
9.5 mm (3/8")	—	23877	—
10 mm	—	23878	—
11 mm (7/16"), with CenterGuide	—	23864	23865
11.5 mm, with CenterGuide	—	23866	23867
12.7 mm (1/2"), with CenterGuide	23868	—	—
17 mm, with CenterGuide	23870	—	—
Shimadzu Plug	—	23872	23873

Note: Due to differences in inlet design, the actual septum temperature for a given inlet set point can vary by manufacturer. Restek recommends using only BTO septa in Thermo TRACE and Focus GCs.

*For 17 mm inlets, the maximum temperature for Thermolite Plus septa is 300 °C.

Promote Cleanliness and Convenience by Ordering O-Rings and Ferrules in Special Dial Packs



Capillary Ferrules

Ferrule ID	Fits Column ID	qty.	Vespel	Graphite	VG1 (85/15)	VG2 (60/40)
0.3 mm		10-pk.	22213	20233	27061	20275
0.4 mm	0.10/0.15/0.18/ 0.25/0.28 mm	10-pk.	22214	20200	27062	20211
0.4 mm	0.10/0.15/0.18/ 0.25/0.28 mm	50-pk.	—	20227	27063	20229
0.5 mm	0.32 mm	10-pk.	22215	20201	27064	20212
0.5 mm	0.32 mm	50-pk.	—	20228	27065	20231
0.6 mm	0.28 mm**	10-pk.	—	—	27066	20232
0.8 mm	0.45/0.53 mm	10-pk.	22216	20202	27067	20213
0.8 mm	0.45/0.53 mm	50-pk.	—	20224	27068	20230
1.0 mm	0.75 mm*	10-pk.	22217	21058	27069	24912
1.2 mm	0.75 mm*	10-pk.	22218	—	—	—
1.6 mm	1.00 mm*	10-pk.	—	21060	—	—

*For micropacked columns.

**For 0.28 mm MXT columns.

Viton O-Rings for Agilent GCs

Fit split (6.3 mm OD) or splitless (6.5 mm OD) liners.

Description	Max. Temp.	Similar to Agilent Part #	10-pk. cat.#	50-pk. cat.#
Viton O-Rings for Agilent GCs	300 °C	5188-5365	22241	22242

Find O-rings for other instruments at www.restek.com/GCacc

Rely on Our Proprietary Cleaning Process for Tubing Free of Residual Organics

For plumbing GC systems:



Cleaned Copper Tubing

ID	OD	Wall	Max Operating Pressure	qty.	cat.#
0.065"	1/8"	0.030"	2,800 psig	50 ft	22628
0.190"	1/4"	0.030"	1,000 psig	50 ft	22629

For carrier, fuel, make-up, and auxiliary gas lines:



Rinsed and Cleaned 304 Stainless-Steel Tubing

ID (in.)	OD (in.)	Length							
		6 Feet	10 Feet	15 Feet	20 Feet	25 Feet	50 Feet	100 Feet	>100 Feet
cat.#	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#*
0.01"	1/16"	29000	29001	29002	29003	21500	29004	29005	21502
0.02"	1/16"	29006	29007	29008	29009	21503	29010	29011	21505
0.03"	1/16"	29012	29013	29014	29015	21506	29017	29018	21508
0.04"	1/16"	29019	29020	29021	29022	21509	29023	29024	21511
0.085"	1/8"	29025	29026	29027	29028	21512	29029	29030	21514
0.21"	1/4"	29031	29032	29033	29034	21515	29035	29036	21517

*Pricing is on a per foot basis. Maximum continuous lengths are 2,000 ft (1/16" OD); 1,500 ft (1/8" OD); and 750 ft (1/4" OD). The availability of long lengths is subject to inventory constraints. Lead times may vary depending on the continuous length needed. Please inquire before ordering.

Note: While this tubing is ultra clean, it does not meet the requirements for oxygen service specifications (for example, CGA G-4.1, ASTM G93-03, and ASTM A380).

Turn to Restek PLOT Columns for Reproducible Results

Restek's next-generation PLOT columns show a constant flow behavior and have significantly improved mechanical stability, resulting in easier operation, better chromatography, and reduced particle release. Greater particle stability also means more reproducible retention times, virtually no spiking, and longer column lifetimes.

Go to www.restek.com/PLOT for our full selection!

Rt-Msieve 5A Columns (fused silica PLOT)

Description	temp. limits	qty.	cat.#
Rt-Msieve 5A 15 m, 0.25 mm ID, 20 µm	to 300 °C	ea.	19773

Rt-Q-BOND Columns (fused silica PLOT)

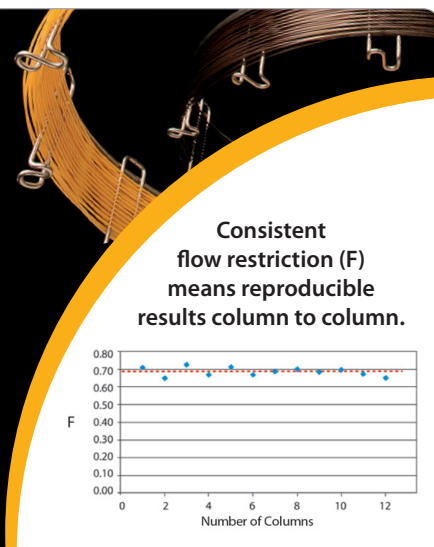
Description	temp. limits	qty.	cat.#
100% divinylbenzene			
Rt-Q-BOND 30 m, 0.25 mm ID, 8 µm	to 280/300 °C	ea.	19765

MXT-Msieve 5A Columns (Siltek-treated, stainless-steel PLOT)

Description	temp. limits	qty.	cat.#
MXT-Msieve 5A 30 m, 0.53 mm ID, 50 µm	to 300 °C	7" 11-pin cage ea.	79723
MXT-Msieve 5A 30 m, 0.53 mm ID, 50 µm	to 300 °C	3.5" Coil ea.	79723-273

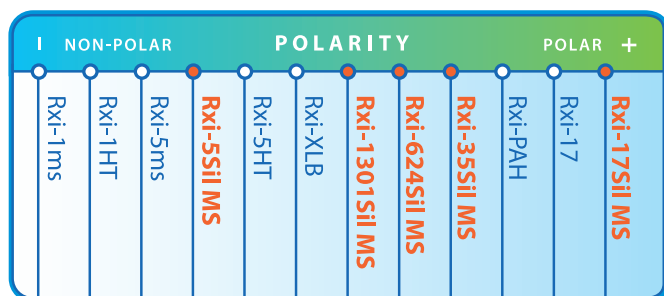
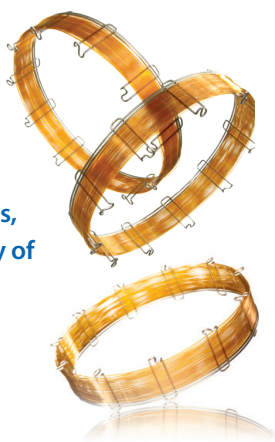
MXT-Q-BOND Columns (Siltek-treated, stainless-steel PLOT)

Description	temp. limits	qty.	cat.#
MXT-Q-BOND 30 m, 0.53 mm ID, 20 µm	to 280/300 °C	7" 11-pin cage ea.	79716
MXT-Q-BOND 30 m, 0.53 mm ID, 20 µm	to 280/300 °C	3.5" Coil ea.	79716-273



Leverage the outstanding inertness, low bleed, and high reproducibility of Rxi 3-in-1 technology to gain:

- Accurate Data
- The Right Results Fast
- Maximized Instrument Uptime



Rxi columns span the polarity range, so you can select a column perfectly matched to your analysis.

Featured Rxi Columns

Rxi-17SII MS

Ideal for active environmental compounds, such as PAHs, PCBs, and more.

Description	temp. limits	qty.	cat.#
15 m, 0.25 mm ID, 0.25 µm	40 to 340/360 °C	ea.	14120
30 m, 0.25 mm ID, 0.25 µm	40 to 340/360 °C	ea.	14123

Rxi-35SII MS

Ideal for substituted polar compounds, such as drugs, pesticides, herbicides, PCBs, phenols, etc.; especially good for cannabinoids.

Description	temp. limits	qty.	cat.#
15 m, 0.25 mm ID, 0.25 µm	50 to 340/360 °C	ea.	13820

Rxi-624SII MS

Ideal for volatile organics and residual solvents; a great choice for USP<467>.

Description	temp. limits	qty.	cat.#
30 m, 0.25 mm ID, 1.40 µm	-20 to 300/320 °C	ea.	13868

Rxi-1301SII MS

Ideal for solvents, glycols, and other polar compounds.

Description	temp. limits	qty.	cat.#
30 m, 0.25 mm ID, 0.25 µm	-60 to 320 °C	ea.	16094

Rxi-5SII MS

Ideal for semivolatiles, PAHs, chlorinated hydrocarbons, phthalates, phenols, amines, organochlorine pesticides, organophosphorus pesticides, drugs, solvent impurities, and hydrocarbons.

Description	temp. limits	qty.	cat.#
30 m, 0.25 mm ID, 0.25 µm	-60 to 320/350 °C	ea.	13623
30 m, 0.25 mm ID, 0.25 µm w/5 m Integra-Guard Column	-60 to 320/350 °C	ea.	13623-124
30 m, 0.25 mm ID, 0.50 µm	-60 to 320/350 °C	ea.	13638
30 m, 0.25 mm ID, 0.50 µm w/5 m Integra-Guard Column	-60 to 320/350 °C	ea.	13638-124

Simplify Your Workflow with RAVEqc Quick-Connect Air Valves

- Tool-free design makes consistent, quality connections fast and easy.
- No wrenches mean no overtightening or cross-threading damage.
- Use alone or pair with a bellows/diaphragm valve for sample security and convenience.
- Check status at a glance—if the parts are connected, the valve is open.
- Standard compression or tube end fittings accommodate a wide variety of devices.
- Leak-free performance—each and every valve is helium leak tested to 1x10⁻⁶ mL/sec.
- Compatible with Entech Micro-QT valves.

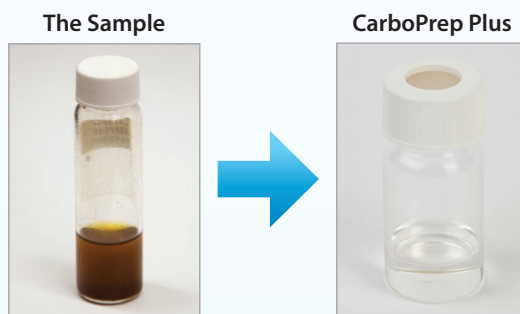
Description	Material	Similar to Entech Part #	qty.	cat.#
Male RAVEqc Valve to 1/4" Male Compression Fitting	Stainless Steel	MQT-400	ea.	27367
Male RAVEqc Valve to 1/4" Male Compression Fitting	Siltek-Treated	MQT-400S	ea.	27368
Female RAVEqc Valve to 1/4" Male Compression Fitting	Stainless Steel	FQT-400	ea.	27369
Female RAVEqc Valve to 1/4" Male Compression Fitting	Siltek-Treated	FQT-400S	ea.	27370
Male RAVEqc Valve to 1/4" Tube End Fitting, Extended (1.58") (Note: requires a 1/4" nut and ferrule set, sold separately in 5 packs as cat.# 23161)	Stainless Steel	MQT-T400	ea.	27371
Male RAVEqc Valve to 1/4" Tube End Fitting, Extended (1.58") (Note: requires a 1/4" nut and ferrule set, sold separately in 5 packs as cat.# 23161)	Siltek-Treated	MQT-T400S	ea.	27372
Male RAVEqc Valve to 1/4" Tube End Fitting, Short (1.23") (Note: requires a 1/4" nut and ferrule set, sold separately in 5 packs as cat.# 23161)	Stainless Steel	MQT-ST400	ea.	27373
Male RAVEqc Valve to 1/4" Tube End Fitting, Short (1.23") (Note: requires a 1/4" nut and ferrule set, sold separately in 5 packs as cat.# 23161)	Siltek-Treated	MQT-ST400S	ea.	27374
Female RAVEqc Valve to 1/4" NPT Fitting	Stainless Steel		ea.	27365
Female RAVEqc Valve to 1/4" NPT Fitting	Siltek-Treated		ea.	27366
RAVEqc Valve Bracket, for Attaching to Restek Canister			ea.	27375

Note: A RAVEqc valve bracket is required for use with Restek 1, 3, 6, and 15 L air sampling canisters when using the compression fitting mounted directly on the 1/4" canister tube stub. This bracket is not needed when using Restek miniature canisters or Entech canisters.



More Complete and Consistent Cleanup for Organochlorine Pesticides

Eliminate failed calibration checks, unscheduled instrument maintenance, rework, delays, and unexpected expenses by switching to CarboPrep Plus SPE cartridges. Florisil is excellent at removing polar matrix contaminants, but matrix-contaminating compounds pass through and end up in your instruments. To get consistent recoveries, while mitigating the risk that a dirty sample will take an instrument down, choose CarboPrep Plus SPE cartridges.



The Advantage Is Clear!

Resprep CarboPrep Plus SPE Cartridges

- Get the same selectivity every time and eliminate background interference.
- Remove nonvolatile matrix components that contaminate GC inlets and columns.
- Upgrade easily from Florisil products—use the same hardware, solvents, and solvent volumes.

Description	Volume	qty.	cat.#
Resprep CarboPrep Plus SPE Cartridges	3 mL, 95 mg	30-pk.	25845



Running Organochlorine Pesticides Analysis?

Topaz 4.0 mm ID Single Taper Inlet Liner w/ Wool

for Agilent GCs equipped with split/splitless inlets



ID x OD x Length	qty.	cat.#
Single Taper, Premium Deactivation, Borosilicate Glass with Quartz Wool 4.0 mm x 6.5 mm x 78.5 mm	5-pk.	23303

Topaz 3.5 mm ID Single Taper Inlet Liner w/ Wool

for Shimadzu 17A, 2010, 2014, and 2030 GCs equipped with split/splitless inlets



ID x OD x Length	qty.	cat.#
Single Taper, Premium Deactivation, Borosilicate Glass with Quartz Wool 3.5 mm x 5.0 mm x 95 mm	5-pk.	23336

Topaz 4.0 mm ID Single Taper Inlet Liner w/ Wool

for Thermo TRACE 1300/1310 GCs equipped with SSL inlets



ID x OD x Length	qty.	cat.#
Single Taper, Premium Deactivation, Borosilicate Glass with Quartz Wool 4.0 mm x 6.5 mm x 78.5 mm	5-pk.	23447

Rtx-CLPesticides Columns (fused silica)

Description	temp. limits	qty.	cat.#
Rtx-CLPesticides Column 30 m, 0.25 mm ID, 0.25 µm	-60 to 320/340 °C	ea.	11123
Rtx-CLPesticides Column 30 m, 0.32 mm ID, 0.32 µm	-60 to 320/340 °C	ea.	11141
Rtx-CLPesticides Column 30 m, 0.53 mm ID, 0.50 µm	-60 to 300/320 °C	ea.	11140

Rtx-CLPesticides2 Columns (fused silica)

Description	temp. limits	qty.	cat.
Rtx-CLPesticides2 Column 30 m, 0.25 mm ID, 0.20 µm	-60 to 320/340 °C	ea.	11323
Rtx-CLPesticides2 Column 30 m, 0.32 mm ID, 0.25 µm	-60 to 320/340 °C	ea.	11324
Rtx-CLPesticides2 Column 30 m, 0.53 mm ID, 0.42 µm	-60 to 300/320 °C	ea.	11340

Organochlorine Pesticide Mix AB #2 (20 components)

In hexane:toluene (1:1), 1 mL/ampul cat.# 32292 (ea.)

2,4,5,6-Tetrachloro-*m*-xylene

200 µg/mL in acetone, 1 mL/ampul cat.# 32027 (ea.)
200 µg/mL in acetone, 5 mL/ampul cat.# 32028 (ea.)

Decachlorobiphenyl, 508A

200 µg/mL in acetone, 1 mL/ampul cat.# 32029 (ea.)
200 µg/mL in acetone, 5 mL/ampul cat.# 32030 (ea.)
10 µg/mL in isooctane, 1 mL/ampul cat.# 32289 (ea.)

Hexachlorobenzene

1,000 µg/mL in acetone, 1 mL/ampul cat.# 32231 (ea.)

Resprep

Improve EPH Testing Accuracy and Efficiency with Restek

Starting with our method-specific Resprep SPE cartridges through analysis with a highly inert Rxi-5ms GC column, we have the solution you need for EPH analysis.

Resprep EPH Fractionation SPE Cartridge

- Complete separation of aliphatic and aromatic compounds into distinct fractions.
- Guaranteed background level under the strict reporting limits of MA and NJ EPH methods.
- Superior lot-to-lot reproducibility and storage stability ensured by rigorous QC testing and moisture-resistant packaging.
- Choose 5 g cartridges for higher loading capacity; use 2 g cartridges for automated systems, time-saving, and solvent reduction.

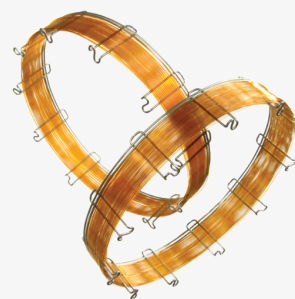


Description	Volume	qty.	cat.#
Resprep EPH Fractionation SPE Cartridge	15 mL, 5 g	15-pk.	23240
Resprep EPH Fractionation SPE Cartridge	6 mL, 2 g	30-pk.	25999

Rxi-5ms Columns (fused silica)

low-polarity phase; Crossbond diphenyl dimethyl polysiloxane

- General-purpose columns for semivolatiles, phenols, amines, residual solvents, drugs of abuse, pesticides, PCB congeners (e.g., Aroclor mixes), solvent impurities.
- Most inert column on the market.
- Tested and guaranteed for ultra-low bleed; improved signal-to-noise ratio for better sensitivity and mass spectral integrity.
- Equivalent to USP G27 and G36 phases.



Description	temp. limits	qty.	cat.#
Rxi-5ms 30 m, 0.32 mm ID, 0.25 µm	-60 to 330/350 °C	ea.	13424

Restek Reference Standards

NJDEP EPH 10/08 Rev. 2 Aliphatics Calibration Standard

(20 components)

2,000 µg/mL each in hexane:carbon disulfide (80:20), 1 mL/ampul cat.# 30540 (ea.)

NJDEP EPH 10/08 Rev. 2 Aromatics Calibration Standard

(18 components)

2,000 µg/mL each in methylene chloride, 1 mL/ampul cat.# 30541 (ea.)

NJDEP EPH 10/08 Rev. 2 Aliphatics Matrix Spike Mix

(18 components)

200 µg/mL each in pentane, 5 mL/ampul cat.# 30542 (ea.)

NJDEP EPH 10/08 Rev. 2 Aromatics Matrix Spike Mix

(18 components)

200 µg/mL each in acetone:toluene (50:50), 5 mL/ampul cat.# 30543 (ea.)

NJDEP EPH 10/08 Rev. 2 Aliphatics Fractionation Check Mix

(18 components)

400 µg/mL each in hexane, 5 mL/ampul cat.# 30544 (ea.)

NJDEP EPH 10/08 Rev. 2 Aromatics Fractionation Check Mix

(16 components)

400 µg/mL each in hexane:toluene (50:50), 5 mL/ampul cat.# 30545 (ea.)

MA EPH Surrogate Spike Mix

(2 components)

4,000 µg/mL each in acetone, 1 mL/ampul cat.# 31479 (ea.)

MA EPH Aromatic Hydrocarbon Standard

(17 components)

1,000 µg/mL each in methylene chloride, 1 mL/ampul cat.# 31458 (ea.)

MA EPH Aliphatic Hydrocarbon Standard

(14 components)

1,000 µg/mL each in hexane, 1 mL/ampul cat.# 31459 (ea.)



For additional accessories, reference standard compound lists, application data, and more, visit www.restek.com/eph

Questions? Contact us or your local Restek representative (www.restek.com/contact-us).

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Lit. Cat.# GNE53106-UNV

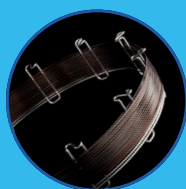
Dynamic Duo

Protect your instrument and improve data quality with this powerful pair from Restek.

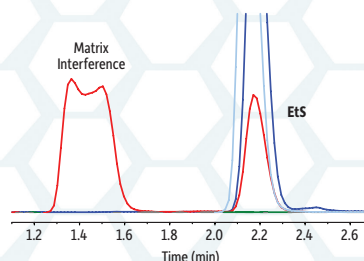
ProFLOW 6000
Flowmeter

Electronic
Leak Detector

MORE INSIDE!



Raptor[™] LC Columns



New Raptor LC Column Phase: EtG/EtS

All matrix interferences resolved in a fast, 4-minute, dilute-and-shoot method.

Add the Performance of Restek's RAVE Valves to Your Entech Air Cans

Easily retrofit your 3.2 L, 6 L, and 15 L Entech air sampling canisters.



Pure Chromatography

Purchase one of our new EtG/EtS columns and receive a free evaluation column.

Offer expires 31st January 2018. Please quote offer code JAN18.

- Higher efficiency for **drastically faster analysis times**.
- Better selectivity for **substantially improved resolution**.
- **Increased sample throughput** with existing HPLC instrumentation.
- Long-lasting ruggedness for **dependable reproducibility**.

Matrix Interference

Time (min)

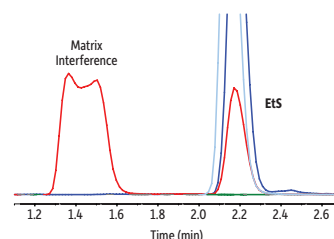


New Phase: Raptor EtG/EtS

All Matrix Interferences Resolved

How often are matrix interferences affecting your EtG/EtS analysis? Restek's EtG/EtS solution consistently resolves analytes away from matrix interferences in a fast, 4-minute, dilute-and-shoot method.

Reference Standards
EtG/EtS standards also available!



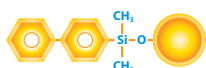
Description

cat.#

2.7 μ m Columns 100 mm, 2.1 mm ID

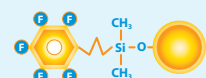
9325A12

The Raptor Suite of Innovative LC Columns:



Time-Tested Restek Biphenyl Phase:

The established choice for bioanalytical testing since 2005.



Reliably Versatile Restek FluoroPhenyl Phase:

Get the power of HILIC and RP modes in one LC column.



Acid-Resistant Restek ARC-18 Phase:

Ahead of the curve for large, multiclass lists by mass spec.



General-Purpose Restek C18 Phase:

Raptor speed, efficiency, and ruggedness are now in C18.



Rugged, MS-Friendly Restek HILIC-Si Phase:

Simplify the switch to HILIC on both HPLC and UHPLC systems.



Plumb Your LC Quickly and Reliably with Restek

Stainless Steel:

Top Quality Capillary Tubing

- 316 stainless in precut lengths.
- Clean and smooth finish.
- Color coded for easy identification.



		0.005" (0.127 mm) ID (red) max. 27,850 psi	0.007" (0.178 mm) ID (yellow) max. 26,610 psi	0.010" (0.254 mm) ID (blue) max. 25,160 psi	0.020" (0.508 mm) ID (orange) max. 20,230 psi
Length	qty.	cat.#	cat.#	cat.#	cat.#
1/16" OD Tubing					
5 cm	3-pk.	25813	25817	25821	25825
10 cm	3-pk.	25814	25818	25822	25826
20 cm	3-pk.	25815	25819	25823	25827
30 cm	3-pk	25816	25820	25824	25828

EXP2 Reusable Fittings

- 20,000+ psi seals without wrenches.
- Patented titanium/PEEK ferrule allows repeated high-pressure seals.
- ZDV connection to any 10-32 port.



Description	qty.	cat.#
EXP2 Fitting (10 nuts, 10 ferrules, 1 driver)	10-pk.	25784

*Rated to 20,000+ psi (1,400 bar) and tested to 30,000 psi (2,068 bar).

PEEK:

Inert Tubing

Less oxygen permeable and more temperature resistant (to 100 °C) than PTFE or Tefzel.

Use tubing ≤ 0.007" to 7,000 psi; tubing ≥ 0.010" ID to 5,000 psi.



Description	OD	ID	Length	Color Code	qty.	cat.#
PEEK Tubing	1/16"	0.0025"	1 m	natural	3-pk.	25320
PEEK Tubing	1/16"	0.005"	3 m	red stripe	ea.	25065
PEEK Tubing	1/16"	0.007"	3 m	yellow stripe	ea.	25066
PEEK Tubing	1/16"	0.010"	3 m	blue stripe	ea.	25067
PEEK Tubing	1/16"	0.020"	3 m	orange stripe	ea.	25068

Universal 10-32 PEEK Column Connectors

Universal design compatible with all 1/16" tubing up to 5,000 psi.



Description	qty.	cat.#
PEEK Finger-Tight Fittings (blue, flat-sided)	10-pk.	25324

Learn more at www.restek.com/LCacc

Maximize uptime, increase productivity, and transfer methods across your lab.

- Long-lasting and reproducible - maintain stable retention times and peak shapes, even under the stress of elevated UHPLC pressures and rapid cycling.
- Fully scalable between HPLC and UHPLC - easily transfer and optimize methods without extensive calculations.

Force Biphenyl LC Columns (USP L11)

Length	2.1 mm	3.0 mm	4.6 mm
1.8 µm Columns			
30 mm	9629232		
50 mm	9629252	962925E	
100 mm	9629212	962921E	
3 µm Columns			
30 mm	9629332		
50 mm	9629352	962935E	
100 mm	9629312	962931E	9629315
150 mm	9629362	962936E	9629365
5 µm Columns			
50 mm	9629552	962955E	
100 mm	9629512	962951E	9629515
150 mm	9629562	962956E	9629565
250 mm			9629575

Force C18 LC Columns (USP L1)

Length	2.1 mm	3.0 mm	4.6 mm
1.8 µm Columns			
30 mm	9634232		
50 mm	9634252	963425E	
100 mm	9634212	963421E	
3 µm Columns			
30 mm	9634332		
50 mm	9634352	963435E	
100 mm	9634312	963431E	9634315
150 mm	9634362	963436E	9634365
5 µm Columns			
50 mm	9634552	963455E	
100 mm	9634512	963451E	9634515
150 mm	9634562	963456E	9634565
250 mm			9634575

Force Fluorophenyl LC Columns (USP L11)

Length	2.1 mm	3.0 mm	4.6 mm
1.8 µm Columns			
30 mm	9639232		
50 mm	9639252	963925E	
100 mm	9639212	963921E	
3 µm Columns			
30 mm	9639332		
50 mm	9639352	963935E	
100 mm	9639312	963931E	9639315
150 mm	9639362	963936E	9639365
5 µm Columns			
50 mm	9639552	963955E	
100 mm	9639512	963951E	9639515
150 mm	9639562	963956E	9639565
250 mm			9639575

www.restek.com/force



Versatile Air Sampling for a Wide Range of VOCs with Thermal Desorption Tubes

- Individually etched with unique serial number for easy sample ID.
- Robust, reliable "code 128" barcode for recording and tracking.
- Corrosion-resistant glass for excellent inertness; allows monitoring of sorbent bed condition.
- Stainless steel for greater durability in the field; no sampling pump for passive sampling with diffusion caps.



Thermal Desorption (TD) Tubes (Unconditioned and Conditioned & Capped)

- Available unconditioned or preconditioned and ready to sample.
- Reusable after thermal desorption for most applications.

Sorbent Description	qty.	Unconditioned		Conditioned & Capped	
		Stainless Steel cat.#	Glass cat.#	Stainless Steel cat.#	Glass cat.#
Tenax TA (35/60 mesh)	10-pk.	24056	24062	24080	24086
Graphitized Carbon (20/40 mesh)	10-pk.	24057	24063	24081	24087
Tenax GR (35/60 mesh)/Carbopack B (60/80 mesh)	10-pk.	24058	24064	24082	24088
Carbopack B (60/80 mesh)/Carbosieve SIII (60/80 mesh)	10-pk.	24059	24065	24083	24089
Tenax TA (35/60 mesh)/Graphitized Carbon (40/60 mesh)/Carboxen 1000 (60/80 mesh)	10-pk.	24060	24066	24084	24090
Carbopack C (60/80 mesh)/Carbopack B (60/80 mesh)/Carbosieve SIII (60/80 mesh)	10-pk.	24061	24067	24085	24091



For calibration and empty TD tubes, as well as a range of accessories, visit www.restek.com/air

Two Sources of Pi-Marked Gas Calibration Standards – One Convenient Order

- Independently manufactured by two different sources; easily meet 2nd source lab requirements.
- Pi-marked cylinders available for the EU.
- Drop-shipped directly to you for maximum shelf life (min. 12 months).
- Each cylinder comes with a certificate of analysis and unique serial number.
- All cylinders are disposable.



Find your gas calibration standards at www.restek.com/2ndsource

Restek Air Valve Excellence

RAVEn Valves

RAVEn valves are now available for 3.2 L, 6 L, and 15 L Entech air canisters. Replace your TOV or TOV-2 valves without modification!

- Proven long life
- Leak-free performance
- Effortless operation
- Enhanced damage resistance

Also standard on Restek SilcoCan and TO-Can Sampling Canisters

Description	qty.	Siltek-treated cat.#	Stainless Steel cat.#
1/4" Replacement Valve, RAVEn (2-Port)	ea.	27377	27376
1/4" Replacement Valve, RAVEn (3-Port)	ea.	27379	27378
Diaphragm Rebuild Kit (includes: diaphragms (3))	kit	26390	26389

*Range of standard gauge is -30" Hg to 60 psi.

Do not exceed canister maximum pressure of 40 psig (2.75 bar).



Meet USP, ICH, and EP Residual Solvent Guidelines with Restek Reference Standards

- Filter product selection by United States Pharmacopeia USP <467> or European Pharmacopoeia/ICH.
- Choose from convenient mixes or single-compound standards.
- Certified reference materials (CRMs) manufactured and QC-tested in ISO-accredited labs satisfy your ISO requirements.

Restek is your complete supplier for world-class residual solvent analysis: standards, Rxi-624Sil MS (G43) and Stabilwax (G16) GC columns, inlet liners, accessories, applications, and more: www.restek.com/usp467



Gold Inlet Seals for Agilent GCs

We are currently offering Restek Gold Inlet Seals for Agilent GC's at a reduced price for packs of both 5 and 10.

- All seals include washer.
- Similar to Agilent part 5188-5367
- RRP £29.00 each*
- Gold-plated seals reduce breakdown and adsorption of active compounds

Part No.	Quantity	List price £	Equivalent to:
21317-5B	1 x 5 pack	60.00	ONLY £12.00 each
21317-10B	1 x 10 pack	109.00	ONLY £10.90 each

Light Up Your Analysis with Restek Replacement Lamps for Your Waters Detector

NEW! ACQUITY Long-Life (2,000 hours!) UV Lamp



Description	Model #	Similar to Waters Part #	qty	cat.#
Lamp, UV, Long Life (2,000 hours)	ACQUITY PDA/TUV 2489/2998	201000281	ea.	25775
Deuterium Lamp, Long Life (2,000 hours)	486	WAT080678	ea.	25410
Deuterium Lamp, Standard (1,000 hours)	996, 2996	WAT052586	ea.	25408
Deuterium Lamp, Standard (1,000 hours)	2487, 2488	WAS081142	ea.	25409
Xenon Lamp (without holder or mirror)	470		ea.	25404
Xenon Lamp	474		ea.	25405

Resprep VM-96 Vacuum Manifold

Designed by Restek with these simple things in mind...

- Performance
- Versatility
- Ergonomics
- Accuracy



Perfect for everyday SPE, SLE, PPT & filtration applications.

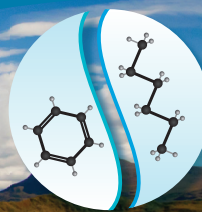
Description	qty.	cat.#
Resprep VM-96 vacuum manifold	ea.	25858

Resprep

Resprep EPH SPE Cartridges

These new SPE tubes offer complete extractable petroleum hydrocarbon (EPH) fractionation.

Description	Volume	15-pk. cat.#
Resprep EPH Fractionation SPE Cartridge	25 mL, 5 g	25859



Dynamic Duo

Restek's Leak Detector and ProFLOW 6000 Flowmeter: An Unbeatable Combination

Protect your instrument and improve data quality with this powerful pair from Restek. Checking for leaks and verifying flows before you start helps you avoid costly problems later.

Electronic Leak Detector

- Detects more gases than similar units (helium, nitrogen, argon, carbon dioxide, and hydrogen).
- Redesigned circuitry means longer battery life and less downtime.
- Optimized internal flow sweeps the sample path clean, permitting more sensitive detection.
- Audible feedback lets you determine the severity of a leak without looking at the LED display.

ProFLOW 6000 Flowmeter

- Ergonomic handgrip and extendable stand for benchtop use.
- Accurate to $\pm 2\%$ of flow reading or ± 0.2 mL/min, whichever is greater.
- Extended range lets you measure flows from 0.5 mL/min to 500 mL/min.
- Volumetric unit can measure the flow rate of any gas, even mixtures.
- NIST-traceable calibration assures accuracy.

Offer expires
31st January
2018. Please
quote offer
code JAN18.



Learn more at
www.restek.com/dynamic-duo

Description	cat.#	List price £	Offer Price£
Leak Detector with 22655 1034.30 827.44	22655	1034.30	827.44
Universal Charger Set			
(US, UK, Euro, Aus) Soft-Side Case	22657	28.65	-
Small Probe Adaptor	22658	40.00	-
ProFLOW 6000	22656	789.80	631.84
Leak Detector and ProFLOW 6000 duo pack	22654	1699.05	1274.28

Branded vials and caps

Locally Sourced, High-Quality Vials offer exceptional value for European Analysts. In addition to providing reliability and quick delivery, these vials come with a competitive price that makes them an ideal choice for any lab.

Description	cat.#	List £	Offer £
Screw top vials with Marking Spot 2mL 12x32mm 9-425 pk/10022655	SR-0100902-C	7.40	5.55
Blue Screw Cap 9-425 with PTFE/silicone septa pk/100	SR-02009-TS-B	9.25	6.93
Crimp Vial clear with Marking Spot 11mm 2mL 12x32 pk/100	SR-01001102-C	7.35	5.51
Aluminium Crimp Cap 11mm with PTFE/rubber septa pk/100	SR-02011-TG-O/A	8.75	6.56

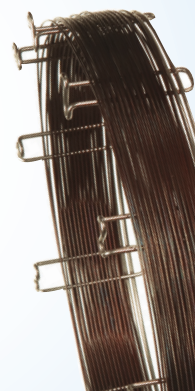


Guaranteed ASTM Method Performance with MXT-1HT SimDist Columns

- Lowest bleed for longest column lifetime.
- Individually tested for guaranteed performance.

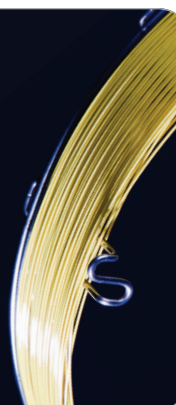
ID	df	temp. limits	5-Meter cat.#	10-Meter cat.#
0.53 mm	0.10 µm	-60 to 430/450 °C	70112	
	0.20 µm	-60 to 430 °C	70115	
	0.21 µm	-60 to 430 °C		70118
	0.88 µm	-60 to 400/430 °C	70131	70134
	1.00 µm	-60 to 380/400 °C		70130
	1.20 µm	-60 to 380/380 °C		70119
	2.65 µm	-60 to 380/400 °C		70132
	5.00 µm	-60 to 380/400 °C		70133

*Maximum temperature varies by cat.#; see column-specific temperatures.



- Qualitative results for light hydrocarbons, sulfur gases, halocarbons, and CO₂.
- Individually QC tested to ensure consistency.
- Reproducible retention times.

ID	temp. limits	15-Meter cat.#	30-Meter cat.#	60-Meter cat.#
0.32 mm	-80 to 260 °C	19784	19785	19786



Replacement Parts for your Mass Spec that Meet or Exceed OEM Performance

NEW! ETP Electron Multiplier for Shimadzu QP5000 MS

- Very high secondary electron emission.
- Air stable; two-year shelf life guarantee.

Electron Multipliers for Shimadzu GC-MS	qty.	cat.#
for Shimadzu QP5000 MS	ea.	23840

NEW! High-Temperature EI Filament for Agilent 5972, 5973, 5975, or 5977 GC-MS

- Every filament is subjected to QC tests, including heat, electrical current, and resistance.
- Samples from each lot are installed in an MSD for *in situ* testing.

Description	Similar to Agilent Part #	qty.	cat.#
High-Temperature EI Filament for Agilent 5972, 5973, 5975, or 5977 GC-MS	G7005-60061, G3170-60050 (obsolete)	ea.	23099

Mass spec, FID, ECD — www.restek.com/GCacc
has the replacement parts your detectors need.



Thermally Stable, High Polarity Stabilwax-MS GC Columns

for Flavor, Food, Fragrance, Industrial Chemical,
and Solvent Analyses

- High thermal stability and low bleed for lower detection limits and use with mass spec.
- Withstand repeated temperature cycles without retention time shifting.
- USP G14, G15, G16, G20, and G39 phases.

Description	temp. limits	qty.	cat.#
30 m, 0.25 mm ID, 0.25 µm	40 to 250/260 °C	ea.	10673
30 m, 0.32 mm ID, 0.25 µm	40 to 250/260 °C	ea.	10674



Revolutionary technology and
inertness deliver the next level of
True Blue Performance:

- **Deactivation**—unbelievably low breakdown for low-level GC analyses.
- **Reproducibility**—unbeatable manufacturing and QC for superior reliability.
- **Productivity**—unparalleled cleanliness for maximized uptime and throughput.



Patented

www.restek.com/topaz

Thermolite Plus Advanced Septa Technology



- Usable to 350 °C inlet temperature.
- Ultra-low bleed minimizes background signal.
- Plasma coating eliminates sticking.
- Precision molded for consistent, accurate fit.
- Preconditioned and GC-FID tested.

Septum Diameter	48-pk. cat.#	50-pk. cat.#	100-pk. cat.#
5 mm (3/16"), with CenterGuide, predrilled	—	23860	23861
6 mm (1/4")	—	23874	—
7 mm	—	23875	—
8 mm	—	23876	—
9 mm, with CenterGuide	—	23862	23863
9.5 mm (3/8")	—	23877	—
10 mm	—	23878	—
11 mm (7/16"), with CenterGuide	—	23864	23865
11.5 mm, with CenterGuide	—	23866	23867
12.7 mm (1/2"), with CenterGuide	23868	—	—
17 mm, with CenterGuide	23870	—	—
Shimadzu Plug	—	23872	23873



**Buy 1 Rxi column and get 10% off.
Buy 2 Rxi columns and get 20% off.**

**Want to buy 3 or more Rxi
columns? Contact us.**

Offer expires
31st January
2018. Please
quote offer
code JAN18.

Leverage the outstanding inertness,
low bleed, and high reproducibility
of Rxi 3-in-1 technology to gain:

- Accurate Data
- The Right Results Fast
- Maximized Instrument Uptime

Featured Rxi Phases:

For Hormones

Rxi-1ms Columns

Resolve 6 common steroid hormones in less than 6 minutes!

Description	temp. limits	qty.	cat.#	Price£
30 m, 0.25 mm ID, 0.25 µm	-60 to 330/350 °C	ea.	13323	461.25

For Pesticides

Rxi-5ms Columns

Extremely robust, industry-standard column for GC-MS and
GC-MS/MS analysis of pesticides in food and environmental matrices.

Description	temp. limits	qty.	cat.#	Price£
30 m, 0.25 mm ID, 0.25 µm	-60 to 330/350 °C	ea.	13423	456.30
30 m, 0.25 mm ID, 0.25 µm	-60 to 330/350 °C	6-pk	13423-600	2850.65

Extractables

Rxi-5Sil MS Columns

Analyze more extractables (a.k.a. semivolatiles)
per shift and increase your lab's productivity.

Description	temp. limits	qty.	cat.#	Price£
30 m, 0.25 mm ID, 0.25 µm	-60 to 320/350 °C	ea.	13623	483.30
30 m, 0.25 mm ID, 0.50 µm	-60 to 320/350 °C	ea.	13638	483.30
30 m, 0.25 mm ID, 0.25 µm w/ 5 m Integra-Guard Column	-60 to 320/350 °C	ea.	13623-124	548.90
30 m, 0.25 mm ID, 0.50 µm w/ 5 m Integra-Guard Column	-60 to 320/350 °C	ea.	13638-124	548.90



For Residual Solvents & Terpenes

Rxi-624Sil MS Columns

Full separate residual solvents and 38 terpenes via headspace
analysis without interference.

Description	temp. limits	qty.	cat.#	Price£
30 m, 0.25 mm ID, 1.40 µm	-20 to 300/320 °C	ea.	13868	463.45

For Cannabinoids

Rxi-35Sil MS Columns

Achieve full resolution for all cannabinoids in 3 minutes
with an economical column suited for hydrogen carrier gas.

Description	temp. limits	qty.	cat.#	Price£
15 m, 0.25 mm ID, 0.25 µm	50 to 340/360 °C	ea.	13820	303.10

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