



GC Consumables Quick Pick Guide

Choose By Your Instrument

- Agilent
- PerkinElmer
- Shimadzu
- Thermo Scientific
- Varian



Discover more about SGE's syringe range. [Page 1](#)



What to consider when choosing your Septum? [Page 2](#)



SiTite™ FingerTite GC Ferrules: the smart alternative. [Page 3](#)



Find out more about the advantages of using a FocusLiner™. [Page 4](#)



SGE Products are distributed by:

Greyhound Chromatography and Allied Chemicals

6 Kelvin Park, Birkenhead, Merseyside CH41 1LT United Kingdom

Tel: (+44) 0 151 649 4000 Fax: (+44) 0 151 649 4001 Email: sales@greyhoundchrom.com

www.greyhoundchrom.com

forte™ GC Capillary Columns

With 30 years of experience, GC capillary columns truly are SGE's strength, its forte.

SGE is the only independent manufacturer of GC capillary columns that has the skill and technology to control all critical processes from producing the fused silica capillary tubing, through the phase synthesis, to the validation of the performance of each column.

SGE offers a comprehensive range of forte™ GC capillary columns for almost any chromatographic application providing the best possible combination of Performance, Robustness, Reproducibility, Low Bleed and Inertness.

Use the table below to choose the column for your application.

RECOMMENDED COLUMN BY APPLICATION

| Application | PHASE | | | | | | | | | | | | | |
|------------------------------|----------------|---------------|----------|-----|-----|-------|---------------------|------|-------|------------------|------|-------|---------|-------|
| | SolGel-1ms BP1 | BPX1 BP1-PONA | BPX5 BP5 | HT5 | HT8 | BPX35 | BPX-Volatiles BP624 | BP10 | BPX50 | SolGel-WAX™ BP20 | BP21 | BPX70 | CYDEX-B | BPX90 |
| Acidic/Neutral Drugs | | | ● | | | ○ | | | | | | | | |
| Acids | | | ● | | | | | | | ● | ○ | | | |
| Alcohols | | | ● | | | | ● | | | ○ | ● | | | ● |
| Amines Aliphatic | | | ● | | | | ● | | | ● | | | | |
| Amines Aromatic | | | ● | | | ○ | ● | | | ● | | | | |
| Antidepressants | | | ● | | | ○ | | | | | | | | |
| Aromatic -PAH | ● | | ○ | | ● | ● | | | ● | | | | | ● |
| Aroclors | | | | | ○ | | | | | | | | | ● |
| Beverages -Alcohols | | | | | | | ○ | | | ● | | | | |
| Butter-Fat | | | ● | ○ | | | | | | | | | | |
| Chiral - Compounds | | | | | | | | | | | | | ○ | |
| Chlorinated Aromatics | ● | | ○ | | | ○ | | ● | | | | | | |
| Cigarette Lighter Fuel | | | ● | | | | ● | | | | | | | |
| Dioxins | | | ○ | | | | | | ● | | | | | |
| Essential Oils | | | ○ | | | | | | | ● | | | ○ | ● |
| Food - FAME | | | ● | | | | | | | ● | | ○ | | ○ |
| Glucose - Methylated | | | | | | | | | | | | ○ | | |
| Herbicides | ● | | ● | | | ● | | | ○ | | | | | |
| Industrial Solvents | | | | | | | ● | | | ○ | | | | |
| Ketones | | | | | | ● | ● | ● | ● | ○ | | | | |
| Monomers | | | ● | | | | | | | ○ | | | | |
| Nitroaromatics | ● | | ○ | | ● | ○ | | ● | ● | | | | | |
| Organochlorine Pesticides | ● | | ○ | | ● | ● | | ● | ○ | | | | | ● |
| Organophosphorous Pesticides | ● | | ○ | | | ● | | | ○ | | | | | ● |
| Paraffins | ● | ○ | ● | ○ | | | | | | | | | | |
| PCB's | | | ● | | ○ | | | | | | | | | ● |
| Petroleum | ● | ○ | ● | ○ | | | | | | | | | | |
| Phenols | | | ○ | | | ● | | | | ● | ● | | | |
| Phthalates | ● | | ○ | | | | | | | | | | | ● |
| Plant Sterols | | | ● | | | ● | | | ● | | | | | |
| Polymers | ○ | | | ○ | | | | | | | | | | |
| Polywax | ● | | ● | ○ | | | | | | | | | | |
| Pyrethroids | ● | | ○ | | | | | ● | ● | | | | | |
| Racehorse Doping Mixture | | | ○ | | | ○ | | | | | | | | |
| Sedatives | | | ● | | | ● | | | | | | | | |
| Semivolatiles | ● | | ○ | | | ○ | | | | | | | | ● |
| Silicon Oil | | | | ○ | | | | | | | | | | |
| Solvents | | | | | | | ○ | | | ○ | | | | ● |
| Sugars-Alditol Acetates | | | ● | | | | | | | ● | ○ | | | |
| Triglycerides | | | ○ | ○ | | | | | | | | | | |
| TRPH | | | ● | ○ | | | | | | | | | | |
| Volatiles | | | ● | | | | ○ | | | ○ | | | | |
| Xylenes | | ● | ● | ● | | | | | | ○ | | | | ○ |

○ Indicates recommended phases to be used for the application

● Indicates alternative phases that can be used for the application

Dear Customer,

SGE Analytical Science is pleased to provide you with this guide to our main GC consumables product offering. SGE has over 40 years experience supplying Gas Chromatography consumables for GC's around the world. All products come warranted for optimized performance with your instrument and in many cases have features that surpass many of the standard supplied items.

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Syringe Feature Guide



SGE's involvement in all areas of Chromatography provides a unique understanding of customers' requirements for optimum syringe design.

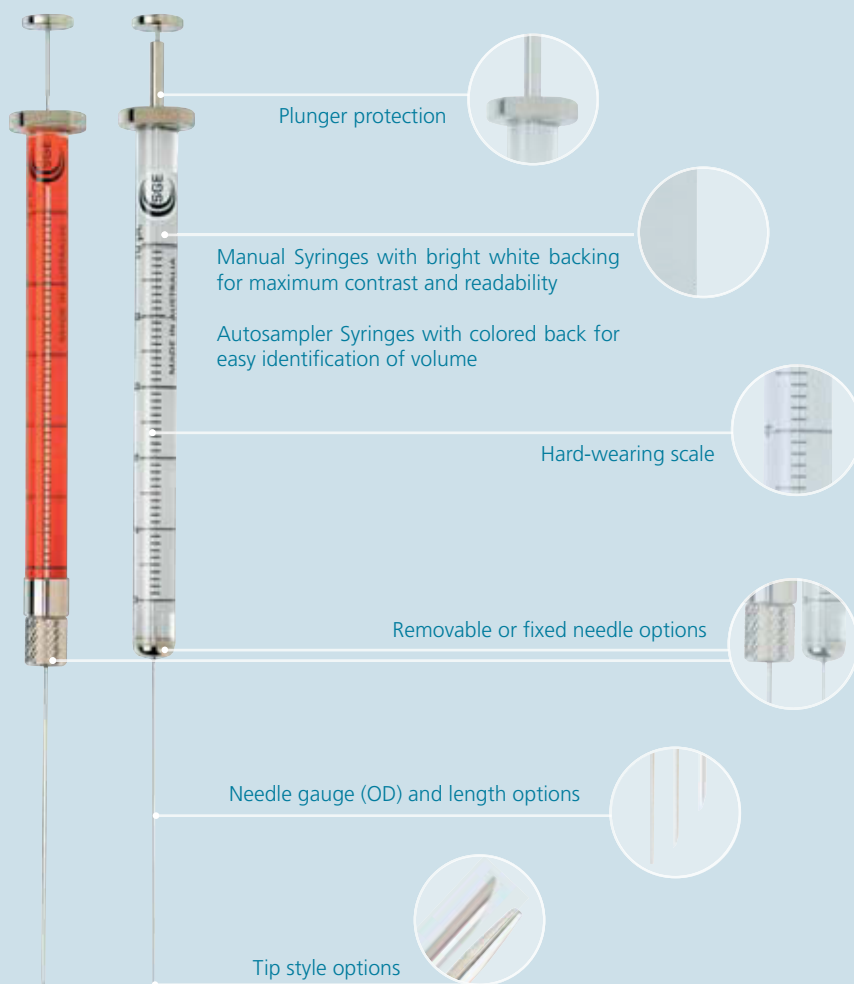
With over 40 years of syringe manufacturing experience, you can be sure that choosing SGE syringes will guarantee the results you need.

Choose our syringes for manual or autosampler use providing volume accuracy, reproducibility and user friendliness.

For more info on our syringe range visit www.sge.com

'Performance as Standard' at SGE:

- Borosilicate glass barrel for strength and inertness.
- Stainless steel needles for inertness, strength and corrosion resistance.
- Backing behind the scale aids quick and accurate reading of the syringe scale.
- Metal back flange provides stability and resists fracture.
- Metal needle cap on syringe barrel protects and improves syringe lifetime.
- Syringes are individually tested for quality ensuring reliability and conformance.
- Unique packaging design eliminates possible contamination in the syringe.



HANDY TIP 1

A syringe should be flushed with approx. 5-10 times its total capacity to eliminate carryover between samples.

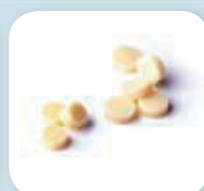
Follow the handy hint trail

When choosing a Septum consider the following:

- Which instrument and injection port
- What size
- Which material
- Injector temperature



Septa Selection



| | CS™ | TCS™ | Auto-Sep™ | Auto-Sep T™ | Enduro™ Blue |
|---------------------|--|-------------------------------------|---|---|---------------------------|
| Typical uses | Low cost, low temperature applications | Med/High temperature applications | High volume autosampler and manual use esp. for GC-MS | Temperature program injectors, high volume autosamplers, esp. for GC-MS | For Shimadzu GC's |
| Material | Teflon coated silicone | Teflon coated triple layer silicone | Silicone | Teflon coated silicone | High Temperature Silicone |
| Durability | Good | Good | Excellent | Excellent | Excellent |
| Resealing | Good | Very Good | Excellent | Excellent | Excellent |
| Solvent Resistance | Excellent | Excellent | Excellent | Excellent | Excellent |
| Tear Resistance | Good | Very Good | Excellent | Excellent | Excellent |
| Maximum Temperature | 200 °C | 280 °C | 320 °C | 350 °C | 350 °C |

HANDY TIP 2

To maximize septa life match septa temperature rating to your injector temperature.

Ferrules Selection



100 % Graphite

- Easy to use
- Forms a stable seal
- Soft material - can be squashed
- Porous to O₂ (not for GC- MS)
- High temperature limit 450 °C
- Forms 'soft' grip with column
- Re-useable



15 % Graphite 85 % Vespel®

- Mechanically robust
- Hard material, long lifetime
- Maximum temperature 350 °C
- Must re-tighten after initial temperature cycles
- Forms strong grip with capillary column
- Cannot be re-used with another capillary column
- For GC-MS interface

Their performance and cost-effectiveness also makes them ideal for connecting GC columns to injectors and detectors.

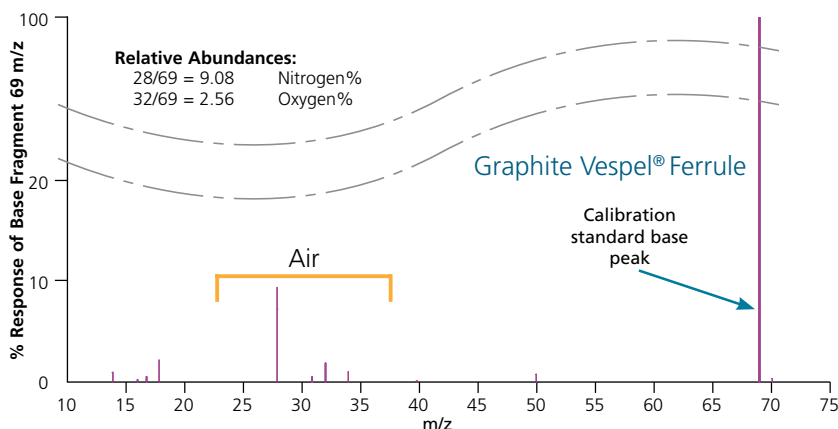


Figure 1. MS trace using a Vespel® ferrule after 5 temperature cycles.

SilTite™ - The Ultimate GC Ferrule

- Eliminates leaks
- Removes contamination caused by Vespel® or Graphite ferrules
- No need to re-tighten Vespel® ferrules after temperature cycling.
- Reduce air background (as can be seen from Figure 2)
- Cleaner Spectra for better library matches

SilTite™ ferrules deliver a leak free seal ideal for mass spec users. Easy to install. They eliminate the need to tighten after thermal cycling.

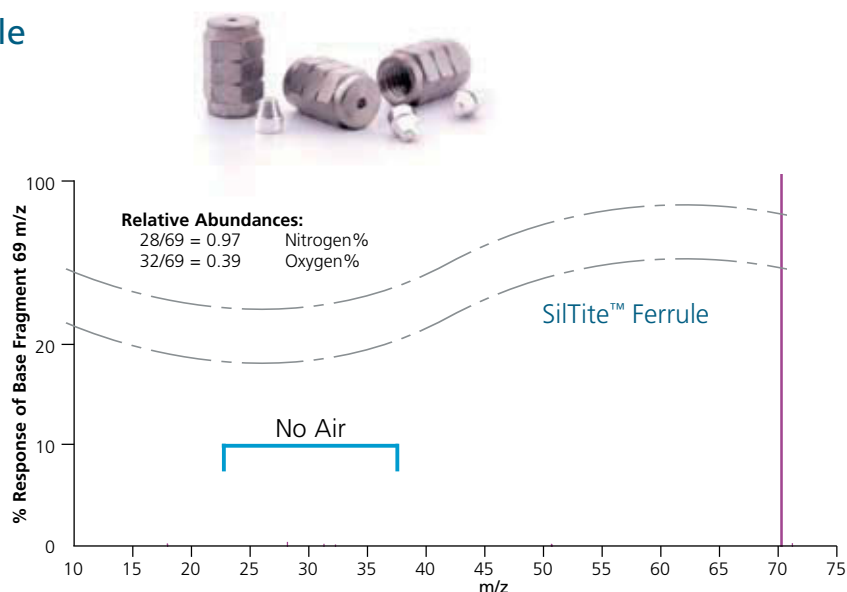


Figure 2. MS trace using a SilTite™ ferrule after 5 temperature cycles. (Using a MS no leaks can be detected, even after 400 temperature cycles between 70 °C and 400 °C)

SilTite™ FingerTite

What is SilTite™ FingerTite?

It's a GC ferrule that has been designed to be installed only with the force of your fingers (no tools required) delivering an easy, leak and maintenance free seal.



How is it a 'next generation' connection?

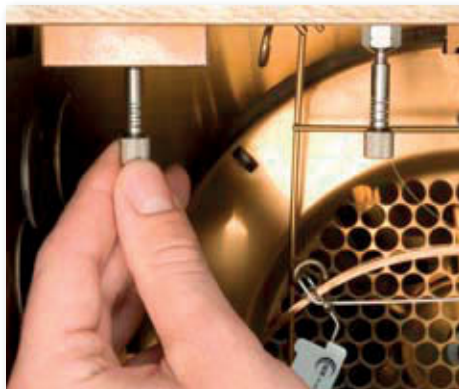
| | 100 % Graphite | Graphite Vespel® | SilTite™ FingerTite |
|--|----------------|------------------|---------------------------|
| Mechanical Strength | Soft | Hard | Hard |
| Temperature Limit | 450 °C | 350 °C | No practical limit |
| Grip strength on column | Soft | Moderate | Strong |
| Doesn't need retightening after installation | ✓ | x | ✓ |
| Ideal for GC-MS applications (minimal porosity) | x | ✓ | ✓ |
| No tools required for installation and removal | x | x | ✓ |
| Permanent positioning of ferrule | x | x / ✓ | ✓ |
| No deterioration | x | x | ✓ |
| Cannot break the capillary column with over-tightening | x | x | ✓ |
| No column creep | x | x | ✓ |
| Chemically inert | x | x | ✓ |

Who will benefit from this product?

If you are running a capillary column equipped gas chromatography system, SilTite™ FingerTite will simplify your column installation process giving you less hassle and more time for chromatography.

GCMS users

SilTite™ FingerTite has been developed with the unique, leak and air free properties of SilTite™ ferrules, resulting in superior air tightness to reduce background noise in sensitive MS applications meaning you can use them on your MS interface with confidence.



How do I install SilTite™ FingerTite?

The SilTite™ FingerTite ferrule requires a unique adapter to enable the finger force connection. Purchase one of the following starter kits with the corresponding adapters for your system, complete the once off 5 minute install using the instructions provided and you are ready to go!

The system requires no permanent instrument modifications, so if you need to switch back to conventional connections this can be done quickly and easily.

Frequently Asked Questions

Q1 Can I reuse the ferrules?

A1 Once the ferrule is crimped onto the tubing using the ferrule installation tool, the fitting is permanent. However, the column can be removed and reinserted multiple times without tools.

Q2 Can I break my column if overtighten the nut?

A2 No - with the SilTite™ FingerTite system you cannot generate enough force with your fingers to break the column. Never use pliers or any other tool on the nut or you will possibly damage the adapter as well as break the column.

Q3 Can I touch the nut even when the oven is at 200 °C?

A3 No - the nut will be at the oven temperature so it will be too hot to touch. However, the nut is designed to dissipate the heat from the injector/detector/transfer line, so that when the oven is cool you can change the column without waiting for the injector/detector to cool down. For Mass Spectrometers always follow the manufacturer's recommendations to vent the system.

Q4 Can I reuse the SilTite™ FingerTite nuts?

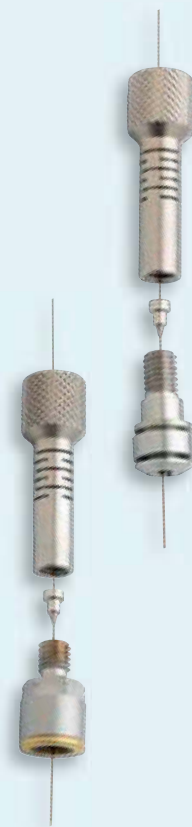
A4 Yes, the nuts can be reused although the nuts will be permanently fixed to the column when the ferrule is in place. Spare nuts can be purchased if more are required.

Q5 What's included in the starter kit?

A5 Each starter kit includes all the parts necessary to convert one GC system (one injector and one detector) to the SilTite™ FingerTite system suitable for installing 0.1 - 0.25 mm ID capillary columns. In addition there are 5 SilTite™ FingerTite nuts, one packet (10 ferrules) of 0.4 mm ID SilTite™ FingerTite ferrules and a ferrule install tool which allows you to seat the ferrule in the correct position on the capillary column.

Q6 Can I use any dimension of GC capillary column?

A6 SilTite™ FingerTite is suitable for any GC capillary column of nominal ID 0.1 - 0.25 mm (0.4 mm ID SilTite™ FingerTite ferrule) and 0.32 mm (0.5 mm ID SilTite™ FingerTite ferrule).



FocusLiner™

With conventional liners, the wool can be moved away from the optimum position after repetitive injections, despite correct insertion of the wool into the liner (as shown in Figure 1a below). This is especially true if using an autosampler due to the force of the injection.

The FocusLiner's unique design ensures the wool is securely positioned in the optimum position i.e. able to wipe the end of the syringe needle (Figure 2).



Figure 1. Conventional wool liner.
 (a) Wool plug is in the correct position to wipe needle tip
 (b) Wool plugs can be moved in either direction, preventing needle wiping

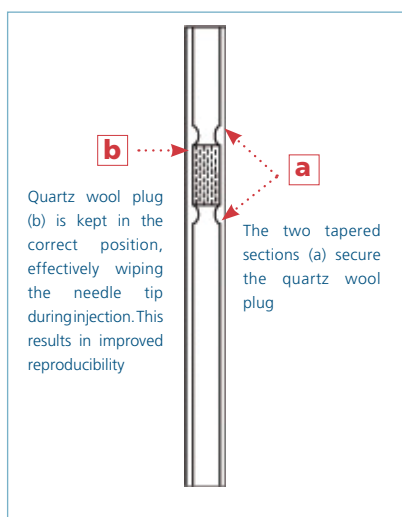


Figure 2. FocusLiner™ showing secured wool plug for excellent reproducibility. The wiping of the sample off the end of the syringe needle is important for reproducibility. Relative standard deviations of less than 1% are readily obtainable with the FocusLiner™.

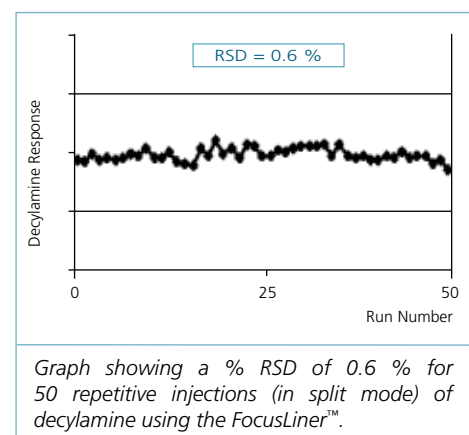


Figure 4. FocusLiner™ Reproducibility.

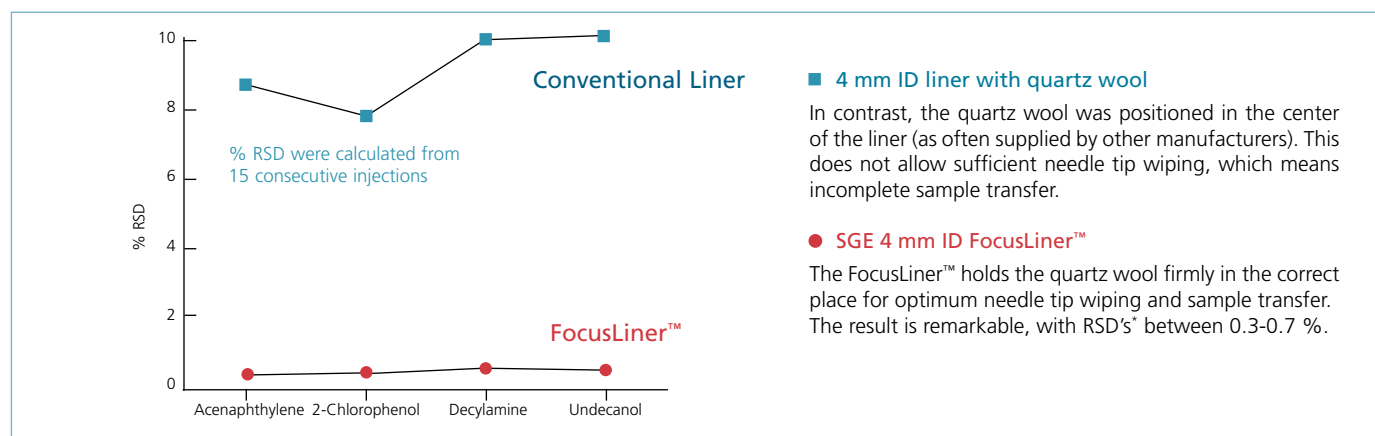


Figure 3. Sample Precision 10 ng/Component Level

Advantages of Tapered FocusLiner™

Advantages are the same as the standard FocusLiner™ PLUS

- Minimizes sample contact with the metal portion of the injection port
- Minimizes mass discrimination
- The taper allows for greater variance in column placement within the liner

HANDY TIP 3

Did you know that FocusLiner gives RSDs between 0.3 and 0.7%? That's up to 40 times better than other liners

Liner Selection

Linear Type/Feature: Liner use

| | |
|--|---|
| <p>Straight-through liner</p>  | <p>Universal liner</p> |
| <p>Taper at the top of the liner</p>  | <p>This design feature minimizes the effect of excess vapor expansion, thus reducing Flashback*.</p> |
| <p>Taper at the bottom of the liner</p>  | <p>Column installation into the liner becomes more robust because the taper “channels” analytes into the column. The distance the column is inserted into the liner is not so critical.</p> <p>The taper minimizes contact of analytes with the bottom of the injection port. Depending on the instrument type, the base of the inlet could be a metal seal, which can add activity to the injection process. The taper at the bottom of the liner is especially suited for active compounds.</p> |
| <p>Taper at the top and the bottom of the liner</p>  | <p>A liner with both tapers has all the features described above. However, with a double taper, no wool can be inserted into the liner by the user.</p> |
| <p>Wide ID liners (> 4mm ID)</p>  | <p>Suitable for split and splitless injections.</p> <p>Highest volume liners, thus minimizing Flashback*.</p> <p>Used for injection volumes > 2.0 µL.</p> |
| <p>Narrow ID liners (< 2.5 mm ID) - FAST Liners</p>  | <p>Especially suited for splitless injection.</p> <p>Is the most suitable liner to be used with FAST Capillary Columns (0.1 mm ID columns).</p> |
| <p>Quartz wool in liner</p>  | <p>Promotes mixing of analytes and results in better quantitation.</p> <p>Acts as a trap to collect non-volatile residue in the sample.</p> <p>Protects capillary column from dirty samples.</p> <p>Prevents sample hitting the bottom of the injector before volatilization.</p> |
| <p>Quartz wool in the liner located at the optimum</p>  | <p>Excellent reproducibility results from the wiping of the needle tip</p> <p>Results in lower mass discrimination.</p> <p>Glass wool prevents the sample hitting the bottom of the injector.</p> |
| <p>In-situ deactivation of quartz wool double glass baffling (FocusLiner™)</p>  | <p>Ensures there is no manual handling of glass wool after deactivation.</p> <p>Ensures glass wool remains in the correct position in the liner.</p> <p>Top baffle prevents glass wool shifting towards the septum.</p> <p>Bottom baffle prevents the glass wool being pushed down.</p> |

* Flashback will occur when on vaporization, the volume of the expanded gas sample expands to a greater volume than that of the inlet liner. The result of flashback is that solvent and sample can flow back into the inlet and purge gas lines causing contamination of your system.

HANDY TIP 4
 The splitless time should be approximately the same as the liner volume, e.g. 1.0 min or 1.0 mL volume.
 KEEP THE TIME AS SHORT AS POSSIBLE.

Technical Information

How often should I change my liner?

The short answer to this is when either quantitation or peak shape deteriorates, replace the liner. Laboratories injecting very dirty samples should change their liners daily. Laboratories injecting cleaner samples will only need to change their liner once a month. SGE recommends a change frequency of at least once a month.

Should I re-deactivate my liner?

NO! All SGE liners are deactivated using a proprietary glass deactivation process which is thermally stable and 'thin film' resulting in low bleed. This ensures the deactivation

of your liner is stable in your injection port at typical inlet temperatures. Users who choose to deactivate their own liners will usually do this at room temperature or temperatures lower than 400 °C. This can cause incomplete, or thermally unstable deactivation.

How to prevent flashback

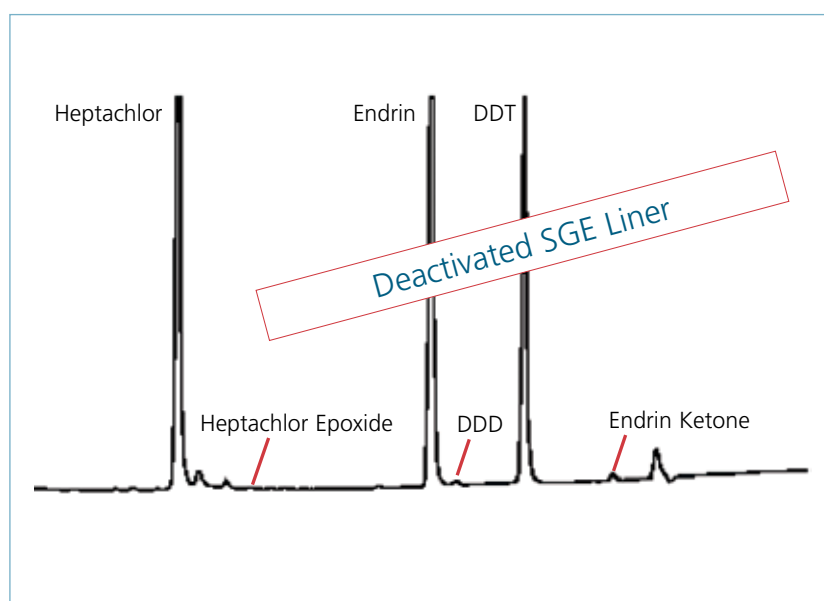
- Choose a solvent with a high molar mass
- Know the volume of your liner
- Know the expansion volume of the solvent
- Lower inlet temperature
- Increase inlet pressure

Liner ID Selection

- Halving liner ID will reduce total liner volume to one quarter of the volume.
- Wide ID liners are more suited to large volume (> 2.0 µL) injections and will minimize flashback
- Narrow ID liners are especially suited for splitless injection
- The Fast FocusLiner™ (ID = 2.3 mm) is ideal for 0.10mm ID capillary columns

For most instruments, there is a choice of liner inner diameter (ID). For example, a straight-through Agilent liner (p/n 092007) with an inner diameter of 4mm and a length of 78.5 mm will have an internal volume of approximately 1.0 mL. A 1.0 µL injection of methylene chloride at 250 °C and an inlet pressure of 10 psi will expand to 0.39 mL. Clearly this is OK if the total volume of the liner is 1.0 mL.

Water Injection: For a 1.0 µL injection of water, the gas expansion volume will be 1.41 mL which is obviously greater than the volume of the liner. If this quantity of water is injected under the above conditions, the vapor will expand beyond the liner and end up in the purge lines and the carrier gas inlet lines. Eventually, the vapor will work its way back into the inlet and the column and this effect is known as Flashback. Flashback will cause erratic quantitation, peak tailing and even ghost peaks.



Organochlorine pesticides are often used to evaluate the chemical inertness of inlet liners. In particular, the pesticides Heptachlor, Endrin and DDT, readily degrade to produce their corresponding degradation products Heptachlor Epoxide, Endrin Ketone and DDD. The chromatogram illustrates the efficiency of the SGE high temperature deactivation process, effectively no degradation of the probe compounds are observed.

SGE's high temperature gas phase in-situ process

- Eliminates activity due to handling of quartz wool
- High temperature process gives excellent lifetimes

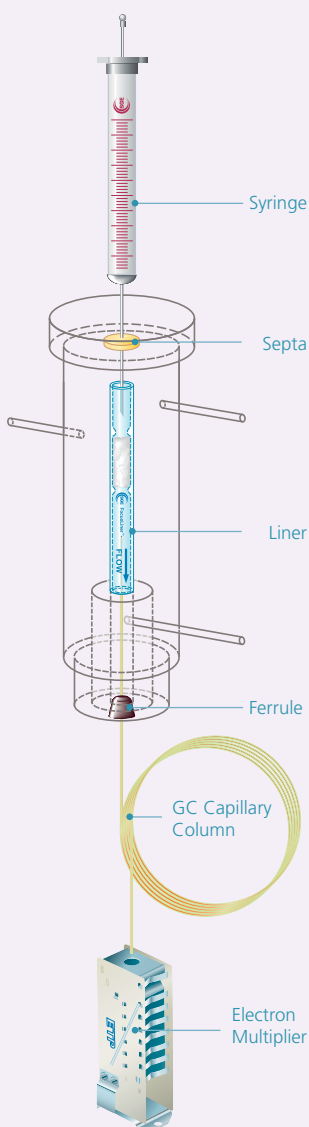
CHEMICAL INERTNESS 5 pg/Component Level

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Autosampler Syringes

All needles are 42mm long with a cone point.

SGE SUPPLIES
FROM
INJECTOR
TO
DETECTOR



| Volume | Needle Gauge (OD mm) | Syringe Code | Syringe Part No. | Pack Size | Spare Needle Part No. | Pack Size | Spare Plunger Part No. | Pack Size |
|--|----------------------|----------------------|------------------|-----------|-----------------------|-----------|------------------------|-----------|
| Agilent 7673, 7683 & 6850 ALS | | | | | | | | |
| Fixed Tapered Needle | | | | | | | | |
| 5µL | 23-26s (0.63/0.47) | 5F-HP-0.63/0.47C | 001821 | 1 | - | - | - | - |
| 10µL | 23-26s (0.63/0.47) | 10F-HP-0.63/0.47C | 002821 | 1 | - | - | - | - |
| 10µL <i>Gas Tight</i> | 23-26s (0.63/0.47) | 10F-HP-GT-0.63/0.47C | 002826 | 1 | - | - | 031808 | 2 |
| Fixed Straight Needle | | | | | | | | |
| 5µL | 26 (0.47) | 5F-HP-0.47C | 001800 | 1 | - | - | - | - |
| 5µL ^(M) | 23 (0.63) | 5F-HP-0.63C | 001810 | 1 | - | - | - | - |
| 10µL | 26 (0.47) | 10F-HP-0.47C | 002800 | 1 | - | - | - | - |
| 10µL ^(M) | 23 (0.63) | 10F-HP-0.63C | 002810 | 1 | - | - | - | - |
| 10µL ^(M) <i>Gas Tight</i> | 23 (0.63) | 10F-HP-GT-0.63C | 002812 | 1 | - | - | 031808 | 2 |
| Removable Tapered Needle | | | | | | | | |
| 0.5µL | 23-26s (0.63/0.47) | 0.5BR-HP-0.63/0.47C | 000415 | 1 | 033730 | 1** | - | - |
| 5µL | 23-26s (0.63/0.47) | 5R-HP-0.63/0.47C | 001825 | 1 | 036730 | 2 | - | - |
| 10uL | 23-26s (0.63/0.47) | 10R-HP-0.63/0.47C | 002825 | 1 | 037730 | 2 | - | - |
| 10µL <i>Gas Tight</i> | 23-26s (0.63/0.47) | 10R-HP-GT-0.63/0.47C | 002829 | 1 | 037730 | 2 | 031809 | 2 |
| Removable Straight Needle | | | | | | | | |
| 0.5µL | 26 (0.47) | 0.5BR-HP-0.47C | 000400 | 1 | 033708 | 1** | - | - |
| 0.5µL ^(M) | 23 (0.63) | 0.5BR-HP-0.63C | 000410 | 1 | 033715 | 1** | - | - |
| 1µL | 23 (0.63) | 1BR-HP-0.63C | 000610 | 1 | 034715 | 1** | - | - |
| 5uL | 26 (0.47) | 5R-HP-0.47C | 001805 | 1 | 036710 | 2 | - | - |
| 5uL ^(M) | 23 (0.63) | 5R-HP-0.63C | 001815 | 1 | 036720 | 2 | - | - |
| 10uL | 26 (0.47) | 10R-HP-0.47C | 002805 | 1 | 037715 | 2 | - | - |
| 10uL ^(M) | 23 (0.63) | 10R-HP-0.63C | 002815 | 1 | 037717 | 2 | - | - |
| 10uL <i>Gas Tight</i> | 26 (0.47) | 10R-HP-GT-0.47C | 002817 | 1 | 037715 | 2 | 031809 | 2 |
| 10uL ^(M) <i>Gas Tight</i> | 23 (0.63) | 10R-HP-GT-0.63C | 002818 | 1 | 037717 | 2 | 031809 | 2 |
| Wide Bore Needle | 23 (0.63) | | | | | | | |
| (For use with 10µL syringe only) | /0.15 ID) | N10-HP-0.63(0.15)C | - | | 037725 | 2 | - | - |

^(M)Suitable for use with the Merlin Microseal™ Injector.

**Denotes Spare Needle and Plunger kit.

Septa



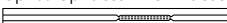
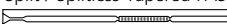
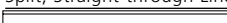
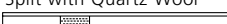

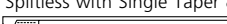
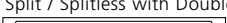
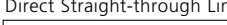
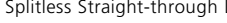

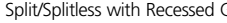

| Instrument | Diameter (mm) | Septum Type | Pack Size | Part No. |
|--|----------------|-------------|----------------|----------|
| 4890, 5880, 5890, 6850, 6890 & 7890 | 11 | CS | 50 | 041826 |
| | 11 | TCS | 50 | 041846 |
| | 11 | Auto-Sep™ | 25 | 041872 |
| | 11 | Auto-Sep T™ | 25 | 041882 |
| | 11 | Auto-Sep T™ | 100 | 041883 |
| 5700, 5800 & 5900 | 9.5 | CS | 50 | 0418240 |
| | 9.5 | TCS | 50 | 0418440 |
| | 9.5 | Auto-Sep™ | 25 | 041871 |
| | 9.5 | Auto-Sep T™ | 25 | 041880 |
| | 12.5 | CS | 50 | 041828 |
| 5750, 710, 720, 810 & 7610 | 12.5 | TCS | 50 | 041848 |
| | 12.5 | Auto-Sep T™ | 25 | 041884 |
| | 12.5 | Auto-Sep T™ | 25 | 041884 |
| 7620, 5790, 5880 & 5890 | 5 | CS | 50 | 041820 |
| | Cool On-Column | 5 | TCS Predrilled | 50 |

Electron Multipliers

| Instrument | Analyzer Type | Technique | Part No. |
|---|---------------|-----------|----------|
| Agilent Technologies | | | |
| 5970 (All) | Quadrupole | GC-MS | 14511 |
| 5971, 5972, GCD | Quadrupole | GC-MS | 14516 |
| 5973/5975 (Initial Installation – includes mount) | Quadrupole | GC-MS | 14617* |
| 5973/5975 (Replacement multiplier) | Quadrupole | GC-MS | 14616* |

*not for 5975C Triple Axis Detector

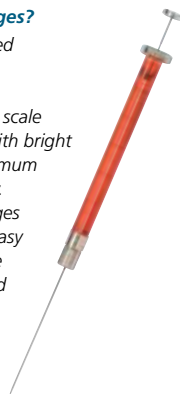
Inlet Liners

| Description | ID (mm) | OD (mm) | Length (mm) | Pack Size | Part No. |
|--|---------|---------|-------------|-----------|----------|
| Deactivated Liners for HP4890, Agilent 5890, 6850, 6890, & 7890 | | | | | |
| Split/Splitless FocusLiner™ | 4.0 | 6.3 | 78.5 | 5 | 092002 |
|  TOP | | | | 25 | 092219 |
| Split / Splitless Tapered FocusLiner™ | 4.0 | 6.3 | 78.5 | 5 | 092003 |
|  TOP | | | | 25 | 092011 |
| Split / Splitless FAST FocusLiner™ | 2.3 | 6.3 | 78.5 | 5 | 092005 |
|  TOP | | | | 25 | 092008 |
| Split / Splitless Tapered FAST FocusLiner™ | 2.3 | 6.3 | 78.5 | 5 | 092111 |
|  TOP | | | | 25 | 092115 |
| Split, Straight-through Liner | 4.0 | 6.3 | 78.5 | 5 | 092007 |
|  | | | | 25 | 092222 |
| Split with Quartz Wool | 4.0 | 6.3 | 78.5 | 5 | 092001 |
|  | | | | 25 | 092220 |
| Split / Splitless with Single Taper | 4.0 | 6.3 | 78.5 | 5 | 092017 |
|  TOP | | | | 25 | 092229 |
| Splitless with Single Taper & Quartz Wool | 4.0 | 6.3 | 78.5 | 5 | 092019 |
|  TOP | | | | 25 | 092218 |
| Split / Splitless with Double Taper | 4.0 | 6.3 | 78.5 | 5 | 092018 |
|  | | | | 25 | 092230 |
| Direct Straight-through Liner | 1.2 | 6.3 | 78.5 | 5 | 092016 |
|  | | | | 25 | 092224 |
| Splitless Straight-through Liner, Quartz | 2.0 | 6.1 | 78.5 | 5 | 092004 |
|  | | | | | |
| Splitless with Recessed Gooseneck | 2.0 | 6.3 | 78.5 | 5 | 092013 |
|  | | | | | |
| Split/Splitless with Recessed Gooseneck & Quartz Wool | 4.0 | 6.3 | 78.5 | 5 | 092010 |
|  | | | | 25 | 092223 |
| Packed Column Liner for Agilent 5880, 5890 & 6890 GCs | 1.8 | 3.0 | | 25 | 092234 |
|  | | | | 25 | 092235 |
| Viton O-Ring – Can be used at temperatures up to 300°C | | | | | |
| Suitable for all inlet liners above except 092234 & 092235. | | | | 10 | 0726532 |
| Graphite Sealing Ring – Can be used at temperatures up to 450°C | | | | | |
| Suitable for all inlet liners above except | | | | | |
| 092004, 092234 & 092235. | | 6.35 | | 10 | 0726005 |
| Suitable for use with 092004. | | 6.1 | | 10 | 0726006 |

For SGE's full range of products, visit www.sge.com

Why choose SGE Syringes?

- Feature individually fitted plungers
- Are leak tested
- Feature a hard wearing scale
- Use Manual Syringes with bright white backing for maximum contrast and readability.
- Use Autosampler Syringes with colored back for easy identification of volume
- Have removable or fixed needle options
- Needle gauge, length, style and tip options



Why choose SGE Septa?

- Low bleed
- Optimized for instruments and applications
- Wide range to suit your equipment



Why choose SGE deactivated Liners?

- Liners deactivated using a gas phase deactivation
- Supplied in blister packs to prevent contamination
- FocusLiners™ provide superior reproducibility compared to other liners



[Request a sample pack](#)

Why Choose SilTite™ Ferrules?

- Never needs re-tightening, even after temperature cycling
- No contamination from Vespel® or graphite materials - 100 % metal
- Ferrule remains permanently fixed to the column but does not adhere to the SilTite™ nut
- Ideal for high pressure applications
- Also available for injector interfaces
- > 500 °C maximum temperature
- Patent Pending



[Request a sample pack](#)

Ferrules

| Material | Column ID | Ferrule ID | Pack Size | Part No. |
|---|---------------------------------------|------------|-----------|----------|
| 15% Graphite / 85% Vespel® Ferrules | | | | |
| For Injectors & Detectors at atmospheric pressure e.g. FID | | | | |
| | 0.1-0.25mm | 0.4mm | 10 | 073109 |
| | 0.32mm | 0.5mm | 10 | 073111 |
| | 0.53mm | 0.8mm | 10 | 073113 |
| | for 1/8" OD Packed Columns | 1/8" | 10 | 072669 |
| | for 1/4" OD Packed Columns | 1/4" | 10 | 072667 |
| For GC-MS Interface Connection | | | | |
| | 0.1-0.25mm | 0.4mm | 10 | 072663 |
| | 0.32mm | 0.5mm | 10 | 072654 |
| | 0.53mm | 0.8mm | 10 | 072655 |
| 100% Graphite Ferrules | | | | |
| Injectors & Detectors at atmospheric pressure e.g. FID (Not for GC-MS) | | | | |
| | 0.1-0.32mm | 0.5mm | 10 | 072635 |
| | 0.45-0.53mm | 0.8mm | 10 | 072636 |
| | for 1/8" OD Packed Columns | 1/8" | 10 | 072602 |
| | for 1/4" OD Packed Columns | 1/4" | 10 | 072601 |
| SilTite™ Metal Ferrules | | | | |
| For GC-MS Interface Connection (Starter Kit) | | | | |
| | 0.1-0.25mm | 0.4mm | 10 | * 073200 |
| | 0.32mm | 0.5mm | 10 | * 073201 |
| | 0.53mm | 0.8mm | 10 | * 073202 |
| For Split / Splitless Injectors (Starter Kit) | | | | |
| | 0.1-0.25mm | 0.4mm | 10 | # 073270 |
| | 0.32mm | 0.5mm | 10 | # 073271 |
| | 0.45-0.53mm | 0.8mm | 10 | # 073272 |
| | 1/32" | 0.81mm | 10 | # 073273 |
| Replacement SilTite™ Metal Ferrules | | | | |
| For All Connections | | | | |
| | 0.1-0.25mm | 0.4mm | 10 | 073220 |
| | 0.32mm | 0.5mm | 10 | 073221 |
| | 0.53mm | 0.8mm | 10 | 073222 |
| | 1/32" | 0.81mm | 10 | 073219 |
| Replacement SilTite™ Nuts | | | | |
| | For GC-MS Interface Connection | – | 5 | 073224 |
| | For Split / Splitless Injector | – | 5 | 073226 |
| Replacement SilTite™ Base Seals | | | | |
| | For Split / Splitless Injector | – | 2 | 073400 |
| | | – | 10 | 073401 |

*Includes 10 ferrules, 2 SilTite™ nuts. # Includes 10 ferrules, 2 SilTite™ nuts and 2 SilTite™ Inlet Base Seals.

SilTite™ FingerTite Ferrules

| Description | Pack Size | Part No. |
|---|-------------------|----------|
| SilTite™ Fingertite Agilent INJ / FID Starter Kit | | 073610 |
| SilTite™ Fingertite Agilent INJ / MS Starter Kit | | 073612 |
| SilTite™ Fingertite Ferrule 0.4 mm | Replacement Items | 10 |
| SilTite™ Fingertite Ferrule 0.5 mm | Replacement Items | 10 |
| SilTite™ Fingertite Blanking Ferrule | Replacement Items | 2 |
| SilTite™ Fingertite Female Nut | Replacement Items | 5 |
| SilTite™ Fingertite Agilent INJ Base Seal | Replacement Items | 2 |

Autosampler Syringes

All needles are 70mm long with a cone point style.

| Volume | Needle Gauge (OD mm) | Syringe Code | Syringe Part No. | Pack Size | Spare Needle Part No. | Pack Size | Spare Plunger Part No. | Pack Size |
|--------------------------------|----------------------|----------------|------------------|-----------|-----------------------|-----------|------------------------|-----------|
| Autosystem Fixed Needle | | | | | | | | |
| 5µL | 26 (0.47) | 5F-PE-0.47C | 001953 | 1 | - | - | - | - |
| 5µL | 23 (0.63) | 5F-PE-0.63C | 001954 | 1 | - | - | - | - |
| 5µL <i>Gas Tight</i> | 26 (0.47) | 5F-PE-GT-0.47C | 001955 | 1 | - | - | 031807 | 2 |
| 5µL <i>Gas Tight</i> | 23 (0.63) | 5F-PE-GT-0.63C | 001957 | 1 | - | - | 031807 | 2 |
| 50µL | 23 (0.63) | 50F-PE-0.63C | 004670 | 1 | - | - | - | - |
| Removable Needle | | | | | | | | |
| 0.5µL | 26 (0.47) | 0.5BR-PE-0.47C | 000475 | 1 | 033750 | 1** | - | - |
| 0.5µL | 23 (0.63) | 0.5BR-PE-0.63C | 000478 | 1 | 033765 | 1** | - | - |

**Denotes spare Needle and Plunger kit.

Septa

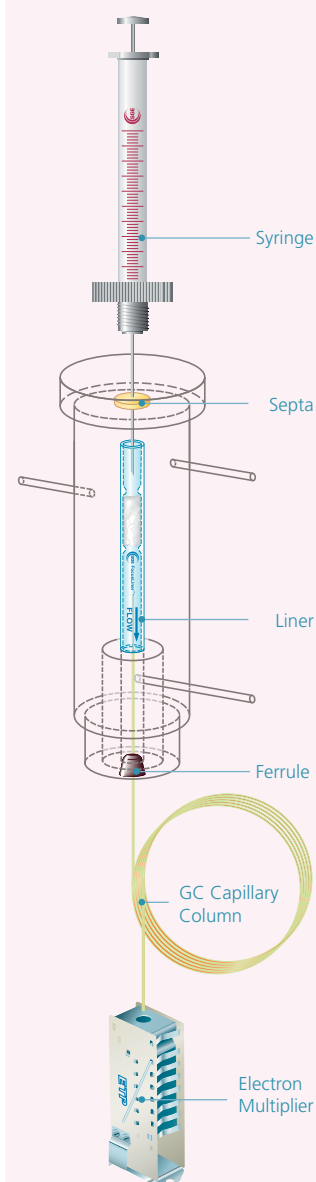
| Instrument | Diameter (mm) | Septum Type | Pack Size | Part No. |
|--|---------------|-------------|-----------|----------|
| Sigma, 900, 990, 3920, 8300, 8400, 8500, AutoSystem & Clarus 400, 500 & 600 | | | | |
| | 11 | CS | 50 | 041826 |
| | 11 | TCS | 50 | 041846 |
| | 11 | Auto-Sep™ | 25 | 041872 |
| | 11 | Auto-Sep T™ | 25 | 041882 |
| | 11 | Auto-Sep T™ | 100 | 041883 |

Ferrules

| Material | Column ID | Size of Nut | Ferrule ID | Pack Size | Part No. |
|---|------------------------|-------------|------------|-----------|----------|
| 15% Graphite / 85% Vespel® Ferrules | | | | | |
| For Injectors & Detectors at atmospheric pressure e.g. FID | | | | | |
| | 0.1-0.25mm | 1/16" | 0.4mm | 10 | 072663 |
| | 0.1-0.25mm | 1/8" | 0.4mm | 10 | 0726703 |
| | 0.32mm | 1/16" | 0.5mm | 10 | 072654 |
| | 0.32mm | 1/8" | 0.5mm | 10 | 0726702 |
| | 0.45-0.53mm | 1/16" | 0.8mm | 10 | 072655 |
| | 0.45-0.53mm | 1/8" | 0.8mm | 10 | 072671 |
| | 1/8" OD Packed Columns | 1/8" | 1/8" | 10 | 072669 |
| | 1/4" OD Packed Columns | 1/4" | 1/4" | 10 | 072667 |
| 100% Graphite Ferrules | | | | | |
| For Injectors & Detectors at atmospheric pressure e.g. FID (Not for GC-MS) | | | | | |
| | 0.1-0.32mm | 1/16" | 0.5mm | 10 | 072627 |
| | 0.1-0.32mm | 1/8" | 0.5mm | 10 | 072624 |
| | 0.45-0.53mm | 1/16" | 0.8mm | 10 | 072626 |
| | 0.45-0.53mm | 1/8" | 0.8mm | 10 | 0726280 |
| | 1/8" OD Packed Columns | 1/8" | 1/8" | 10 | 072622 |
| | 1/4" OD Packed Columns | 1/4" | 1/4" | 10 | 072621 |
| SilTite™ Metal Ferrules | | | | | |
| For GC-MS Interface Connection (Starter Kit) | | | | | |
| | 0.1-0.25mm | - | 0.4mm | 10* | 073200 |
| | 0.32mm | - | 0.5mm | 10* | 073201 |
| | 0.53mm | - | 0.8mm | 10* | 073202 |
| Replacement SilTite™ Ferrules | | | | | |
| For GC-MS Interface Connection | | | | | |
| | 0.1-0.25mm | - | 0.4mm | 10 | 073220 |
| | 0.32mm | - | 0.5mm | 10 | 073221 |
| | 0.53mm | - | 0.8mm | 10 | 073222 |
| | 1/32" | - | 0.81mm | 10 | 073219 |
| Replacement SilTite™ Nuts | | | | | |
| | | - | - | 5 | 073224 |

*Includes 10 ferrules, 2 SilTite™ nuts.

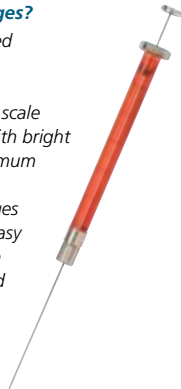
SGE SUPPLIES FROM INJECTOR TO DETECTOR



For SGE's full range of products, visit www.sge.com

Why choose SGE Syringes?

- Feature individually fitted plungers
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- Have removable or fixed needle options
- Needle gauge, length, style and tip options



Why choose SGE Septa?

- Low bleed
- Optimized for instruments and applications
- Wide range to suit your equipment



Why choose SGE deactivated Liners?

- Liners deactivated using a gas phase deactivation
- Supplied in blister packs to prevent contamination
- FocusLiners™ provide superior reproducibility compared to other liners



Request a sample pack




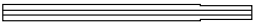







Why Choose SilTite™ Ferrules?

- Never needs re-tightening, even after temperature cycling
- No contamination from Vespel® or graphite materials - 100 % metal
- Ferrule remains permanently fixed to the column but does not adhere to the SilTite™ nut
- Ideal for high pressure applications
- Also available for injector interfaces
- > 500 °C maximum temperature
- Patent Pending



Request a sample pack

Inlet Liners

| Description | ID (mm) | OD (mm) | Length (mm) | Pack Size | Part No. |
|---|----------|---------|-------------|-----------|----------|
| AutoSystem™ & Clarus 400, 500 & 600 | | | | | |
| Split / Splitless FocusLiner™ | 4.0 | 6.2 | 92 | 5 | 092092 |
|  TOP | | | | 25 | 09209225 |
| Split / Splitless Tapered FocusLiner™ | 4.0 | 6.2 | 92 | 5 | 092095 |
|  TOP | | | | 25 | 09209525 |
| Split, Straight-through Liner | 4.0 | 6.2 | 92 | 5 | 092100 |
|  TOP | | | | | |
| Splitless, Straight-through Liner | 2.0 | 6.2 | 92 | 5 | 092103 |
|  TOP | | | | | |
| AutoSystem™ & Clarus 500/600 | | | | | |
| AutoSystem XL, Split/Splitless (PSS Injector) | 2.0 | 4.0 | 86.2 | 5 | 092098 |
|  | | | | | |
| Split / Splitless FocusLiner™, AutoSystem XL (PSS Injector) | 2.0 | 4.0 | 86.2 | 5 | 092101 |
|  | | | | | |
| Sintered Glass, Large Volume Injection (LVI) (PSS Injector) | 0.78/2.4 | 4.0 | 86.2 | 5 | 092244 |
|  | | | | | |
| Packed Column Liner | 3.0 | 6.0 | 112 | 5 | 092236 |
|  | | | | | |
| 8000 & Sigma Series | | | | | |
| Split / Splitless | 3.0 | 5.0 | 100 | 5 | 092091 |
|  | | | | | |
| Splitless with Single Taper | 2.0 | 5.0 | 100 | 5 | 092094 |
|  | | | | | |
| PTV Liner | | | | | |
| Recessed Gooseneck | 1.0 | 2.0 | 88 | 5 | 092097 |
|  | | | | | |
| Viton O-Ring – Can be used at temperatures up to 300°C For 6.2mm OD Inlet Liners. | | | | | |
| | | | | 10 | 0726536 |

Electron Multipliers

| MS Description | Analyzer Type | Technique | Part No. |
|----------------|---------------|-----------|----------|
| Ion Trap GC-MS | Ion Trap | GC-MS | 14138 |
| Q-Mass | Quadrupole | GC-MS | 14532 |

HANDY TIP 5

If you are having problems with solvent focusing, or early eluting peaks seem broad or lop sided in splitless injection, then try using a column with a thicker film.

Autosampler Syringes

| Volume | Needle Gauge (OD mm) | Syringe Code | Syringe Part No. | Pack Size | Spare Needle Part No. | Pack Size | Spare Plunger Part No. | Pack Size |
|-------------------------------|----------------------|---------------------|------------------|-----------|-----------------------|-----------|------------------------|-----------|
| AOC14, AOC17 and AOC20 | | | | | | | | |
| Fixed Needle | | | | | | | | |
| 5µL | 26 (0.47) | 5F-S-0.47C | 001987 | 1 | - | - | - | - |
| 5µL | 23 (0.63) | 5F-S-0.63C | 001988 | 1 | - | - | - | - |
| 250µL <i>Gas Tight</i> | 23 (0.63) | 250F-S-GT-0.63C | 006682 | 1 | - | - | 031828 | 1 |
| Removable Needle | | | | | | | | |
| 0.5µL | 26 (0.47) | 0.5BR-S-0.47C | 000440 | 1 | 033738 | 1** | - | - |
| 0.5µL | 23 (0.63) | 0.5BR-S-0.63C | 000445 | 1 | 033745 | 1** | - | - |
| 0.5µL | 23-26s (0.63/0.47) | 0.5BNR-S-0.63/0.47C | 000450 | 1 | 033730 | 1** | - | - |
| 10µL | 26 (0.47) | 10R-S-0.47C | 002897 | 1 | 037745 | 2 | - | - |
| 10µL | 23 (0.63) | 10R-S-0.63C | 002898 | 1 | 037747 | 2 | - | - |
| 10µL <i>Gas Tight</i> | 23 (0.63) | 10R-S-GT-0.63C | 002902 | 1 | 037747 | 2 | 031798 | 2 |

**Denotes spare Needle and Plunger kit. All needles are 42mm long with a cone point style.

Septa

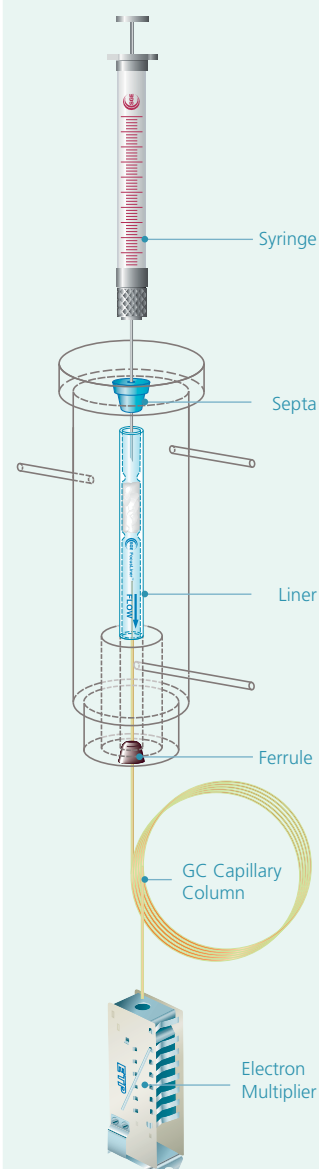
| Instrument | Septum Type | Pack Size | Part No. |
|--|-------------|-----------|----------|
| 9A, 14, 15A, 16, 17A, 2010 & 2014 | Enduro Blue | 50 | 041890 |

Ferrules

| Column ID | Description | Pack Size | Part No. |
|--|---|-----------|----------|
| GC14A, GC17A, GC2010 and GC2014 Detector / Injectors (Not for MS interfaces or QP2010 Injector) | | | |
| 0.10-0.32mm ID columns | 100% Graphite | 10 | 0726080 |
| 0.45-0.53mm ID columns | 100% Graphite | 10 | 0726082 |
| 5mm OD packed columns | 100% Graphite | 10 | 0726001 |
| 0.10-0.25mm ID columns | SilTite™ Metal - Initial Installation | 10* | 073350 |
| 0.10-0.25mm ID columns | SilTite™ Ferrules | 10 | 073227 |
| 0.32mm ID columns | SilTite™ Metal - Initial Installation | 10* | 073351 |
| 0.32mm ID columns | SilTite™ Ferrules | 10 | 073228 |
| 0.45-0.53mm ID columns | SilTite™ Metal - Initial Installation | 10* | 073352 |
| 0.53mm ID columns | SilTite™ Ferrules | 10 | 073229 |
| | SilTite™ Metal Nuts - Slotted | 5 | 073232 |
| QP5000/5050 Standard MS Interface | | | |
| QP5000-I 0.10-0.25mm ID columns | 15% Graphite/ 85% Vespel® Ferrules | 10 | 0726563 |
| QP5000-I 0.32mm ID columns | 15% Graphite/ 85% Vespel® Ferrules | 10 | 0726564 |
| QP5000-II & QP5050 0.10-0.25mm ID columns | 15% Graphite/ 85% Vespel® Ferrules | 10 | 0726561 |
| QP5000-II & QP5050 0.32mm ID columns | 15% Graphite/ 85% Vespel® Ferrules | 10 | 0726562 |
| 0.10-0.25mm ID columns | SilTite™ Metal - Initial Installation | 10* | 073204 |
| 0.10-0.25mm ID columns | SilTite™ Ferrules | 10 | 073227 |
| 0.32mm ID columns | SilTite™ Metal - Initial Installation | 10* | 073205 |
| 0.32mm ID columns | SilTite™ Ferrules | 10 | 073228 |
| 0.53mm ID columns | SilTite™ Metal - Initial Installation | 10* | 073206 |
| 0.53mm ID columns | SilTite™ Ferrules | 10 | 073229 |
| | SilTite™ Metal Nuts-QP5000/5050 Standard MS interface | 5 | 073233 |
| QP5000/5050 Wide Bore MS Interface, QP2010 Injector and QP2010 Standard MS Interface | | | |
| 0.10-0.25mm ID columns | 15% Graphite/ 85% Vespel® Ferrules | 10 | 072663 |
| 0.32mm ID columns | 15% Graphite/ 85% Vespel® Ferrules | 10 | 072654 |
| 0.45-0.53mm ID columns | 15% Graphite/ 85% Vespel® Ferrules | 10 | 072655 |
| 0.10-0.25mm ID columns | SilTite™ Metal - Initial Installation | 10* | 073200 |
| 0.10-0.25mm ID columns | SilTite™ Ferrules | 10 | 073220 |
| 0.32mm ID columns | SilTite™ Metal - Initial Installation | 10* | 073201 |
| 0.32mm ID columns | SilTite™ Ferrules | 10 | 073221 |
| 0.45-0.53mm ID columns | SilTite™ Metal - Initial Installation | 10* | 073202 |
| 0.45-0.53mm ID columns | SilTite™ Ferrules | 10 | 073222 |
| | SilTite™ Metal Nuts | 5 | 073224 |

* Includes 10 ferrules, 2 SilTite™ nuts.

SGE SUPPLIES FROM INJECTOR TO DETECTOR



Ferrules continued

| Material | Pack Size | Part No. |
|---|-----------|----------|
| Replacement SilTite™ Nuts | | |
| For 2010 GC-MS System | 5 | 073224 |
| For 2010 GC-MS System with QP5000 series MS | 5 | 073224 |
| For 2010/2014 GC Injectors and atmospheric detectors | 5 | 073224 |
| QP5000 Jet Separator MS Interface | 5 | 073224 |
| QP5000 Direct MS Interface | 5 | 073233 |
| For All Injectors Jet Separator (Starter Kit), except 2010/2014 | 5 | 073232 |

SilTite™ FingerTite Ferrules



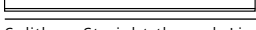
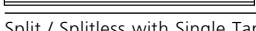
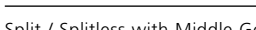



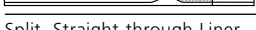
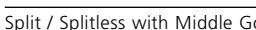
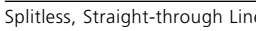
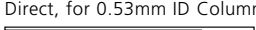

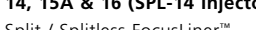
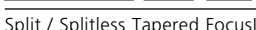
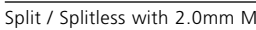

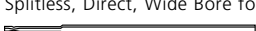

| Description | Pack Size | Part No. |
|---|----------------------|----------|
| SilTite™ Fingertite Shimadzu 2010 INJ / FID Starter Kit | | 073620 |
| SilTite™ Fingertite Shimadzu 2010 INJ / MS Starter Kit | | 073621 |
| SilTite™ Fingertite Ferrule 0.4 mm | Replacement Items 10 | 073630 |
| SilTite™ Fingertite Ferrule 0.5 mm | Replacement Items 10 | 073631 |
| SilTite™ Fingertite Blanking Ferrule | Replacement Items 2 | 073633 |
| SilTite™ Fingertite Female Nut | Replacement Items 5 | 073636 |

Electron Multipliers

| MS Description | Analyzer Type | Technique | Part No. |
|----------------|---------------|-----------|----------|
| QP5000 | Quadrupole | GC-MS | 14533 |

For SGE's full range of products, visit www.sge.com

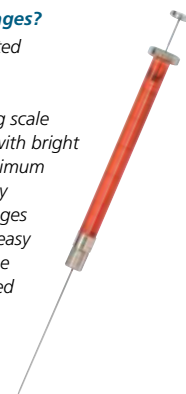
Inlet Liners

| Description | ID (mm) | OD (mm) | Length (mm) | Pack Size | Part No. |
|--|---------|---------|-------------|-----------|----------|
| 2010 (SPL-2010 Injector) | | | | | |
| Split / Splitless Tapered FocusLiner™  | 3.4 | 5.0 | 95 | 5 | 092058 |
| Split / Splitless FocusLiner™  | 3.4 | 5.0 | 95 | 5 | 092059 |
| Split, Straight-through Liner  | 3.4 | 5.0 | 95 | 5 | 092064 |
| Splitless, Straight-through Liner  | 2.6 | 5.0 | 95 | 5 | 0920861 |
| Split / Splitless with Single Taper  | 3.4 | 5.0 | 95 | 5 | 092071† |
| Split / Splitless with Middle Gooseneck  | 3.4 | 5.0 | 95 | 5 | 092077 |
| 17A (SP-17 Injector) & 2014 | | | | | |
| Split / Splitless FocusLiner™  | 3.4 | 5.0 | 95 | 5 | 092062 |
| Split / Splitless Tapered FocusLiner™  | 3.4 | 5.0 | 95 | 5 | 092068 |
| Split / Splitless with Recessed Gooseneck & Quartz Wool  | 3.4 | 5.0 | 95 | 5 | 092061 |
| Split, Straight-through Liner  | 3.4 | 5.0 | 95 | 5 | 092064 |
| Split / Splitless with Middle Gooseneck  | 3.4 | 5.0 | 95 | 5 | 092085 |
| Splitless, Straight-through Liner  | 2.6 | 5.0 | 95 | 5 | 0920861 |
| Direct, for 0.53mm ID Column  | 2.6 | 5.0 | 95 | 5 | 092087 |
| SPME Liner  | 0.75 | 5.0 | 95 | 5 | 092089 |
| 14, 15A & 16 (SPL-14 Injector) | | | | | |
| Split / Splitless FocusLiner™  | 3.4 | 5.0 | 99 | 5 | 092065 |
| Split / Splitless Tapered FocusLiner™  | 3.4 | 5.0 | 99 | 5 | 092066 |
| Split / Splitless with 2.0mm Middle Gooseneck  | 3.4 | 5.0 | 99 | 5 | 092082 |
| Split / Splitless with Single Taper  | 3.4 | 5.0 | 99 | 5 | 0920831 |
| Splitless, Direct, Wide Bore for 9A & 16A GCs  | 3.4 | 5.0 | 139 | 5 | 092084 |
| Graphite Sealing Ring – Can be used at temperatures up to 450°C | | | | | |
| For 14, 15A & 16 (SPL-14 Injector) | | | | 10 | 0726001 |
| For 17A (SPL-17 Injector) | | | | 10 | 0726007 |
| Viton O-Ring – Can be used at temperatures up to 300°C | | | | | |
| For 2010 & 2014 (SPL-2010 Injector & SPL-2014 Injector) | | | | 10 | 0726533 |

† = Can be used in 2014 injector.

Why choose SGE Syringes?

- Feature individually fitted plungers
- Are leak tested
- Feature a hard wearing scale
- Use Manual Syringes with bright white backing for maximum contrast and readability
- Use Autosampler Syringes with colored back for easy identification of volume
- Have removable or fixed needle options
- Needle gauge, length, style and tip options



Why choose SGE Septa?

- Low bleed
- Optimized for instruments and applications
- Wide range to suit your equipment



Why choose SGE deactivated Liners?

- Liners deactivated using a gas phase deactivation
- Supplied in blister packs to prevent contamination
- FocusLiners™ provide superior reproducibility compared to other liners



[Request a sample pack](#)

Why Choose SilTite™ Ferrules?

- Never needs re-tightening, even after temperature cycling
- No contamination from Vespel® or graphite materials - 100 % metal
- Ferrule remains permanently fixed to the column but does not adhere to the SilTite™ nut
- Ideal for high pressure applications
- Also available for injector interfaces
- > 500 °C maximum temperature
- Patent Pending



[Request a sample pack](#)

HANDY TIP 6

If you inject small volumes (1µL or less) you can greatly improve your peak shape by using a narrow bore inlet liner

Thermo Scientific / CE Instruments / Fisons Autosampler Syringes

All needles have a cone point style.

SGE SUPPLIES
FROM
INJECTOR
TO
DETECTOR

| Autosampler | | | | Needle Specifications | | | | | | |
|-------------|--------|--------|-----------|-------------------------|-------------|------------|--------------------|------------------|-----------------|-----------|
| TriPlus | AS3000 | AS2000 | AS200/800 | Volume | Length (mm) | Gauge (OD) | Syringe Code | Syringe Part No. | Needle Part No. | Pack Size |
| | | | | Fixed Needle | | | | | | |
| • | | | | 5µL | 50 | 26 (0.47) | 5FX-5C | 001105 | - | - |
| • | • | | | 10µL | 50 | 23 (0.63) | 10F-C/T-GT-5/0.63C | 002987 | - | - |
| • | • | • | | 10µL | 80 | 23 (0.63) | 10F-C/T-8/0.63C | 002989 | - | - |
| • | • | • | • | 10µL | 80 | 26 (0.47) | 10F-C/T-8/0.47C | 002992 | - | - |
| • | • | • | • | 10µL | 50 | 25 (0.50) | 10F-C/T-5/0.50C | 019050 | - | - |
| • | • | • | • | 10µL | 50 | 23 (0.63) | 10F-C/T-5/0.63C | 002981 | - | - |
| • | • | • | • | 10µL | 50 | 26 (0.47) | 10F-C/T-5/0.47C | 002980 | - | - |
| | | | | Removable Needle | | | | | | |
| • | • | • | | 10µL | 50 | 26 (0.47) | 10R-C/T-5/0.47C | 002982 | 037785 | 2 |
| • | • | • | • | 10µL | 50 | 23 (0.63) | 10R-C/T-5/0.63C | 002984 | 037787 | 2 |
| • | • | • | • | 10µL | 80 | 26 (0.47) | 10R-C/T-8/0.47C | 002993 | 031535 | 3 |
| • | • | • | | 5µL | 50 | 26 (0.47) | 0.5bnr-C/T-5/0.47C | 000490 | 033770 | - |
| • | • | • | | 5µL | 50 | 23 (0.63) | 0.2BNRC/T-5/0.63C | 000492 | 033772 | - |

Septa

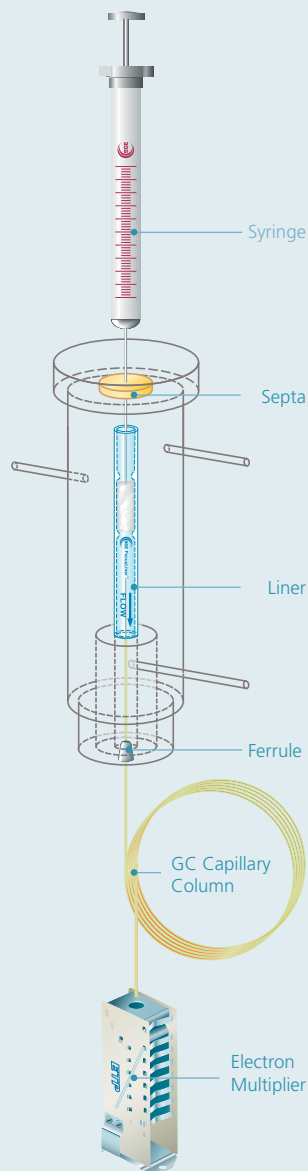
| Instrument | Diameter (mm) | Septum Type | Pack Size | Part No. |
|--|---------------|-------------|-----------|----------|
| 8000 Series, FOCUS, TRACE/ULTRA GC™ | | | | |
| | 17 | TCS | 50 | 0418491 |
| | 17 | Auto-Sep 1™ | 25 | 041886 |

Ferrules

| Material | Column ID | Ferrule ID | Pack Size | Part No. |
|--|------------------------|------------|-----------|----------|
| 15% Graphite / 85% Vespel® Ferrules | | | | |
| For All Injectors & Detectors (Not for 8000 Series, Focus, Trace/Ultra GC) | | | | |
| | 0.1-0.25mm | 0.4mm | 10 | 0726549 |
| | 0.32mm | 0.5mm | 10 | 0726557 |
| | 0.53mm | 0.8mm | 10 | 0726548 |
| | 1/8" OD Packed Columns | 1/8" | 10 | 072669 |
| | 1/4" OD Packed Columns | 1/4" | 10 | 072667 |
| For All Focus, Trace/Ultra Injectors & Detectors at atmospheric pressure e.g. FID (Not for GC-MS) | | | | |
| | 0.1-0.25mm | 0.4mm | 10# | 072696 |
| | 0.32mm | 0.5mm | 10# | 072697 |
| | 0.53mm | 0.8mm | 10# | 072698 |
| Brass Nut for Focus, Trace/Ultra GC Injectors & Non-MS Detectors | | | | |
| | | | 2 | 1034085 |
| 100% Graphite Ferrules | | | | |
| For Injectors & Detectors at atmospheric pressure e.g. FID (Not for GC-MS) | | | | |
| | 0.1-0.32mm | 0.5mm | 10 | 072619 |
| | 0.45-0.53mm | 0.8mm | 10 | 072614 |
| | 1/8" OD Packed Columns | 1/8" | 10 | 072622 |
| | 1/4" OD Packed Columns | 1/4" | 10 | 072621 |
| SilTite™ Metal Ferrules | | | | |
| For GC-MS Interface Connections (Starter Kit) | | | | |
| | 0.1-0.25mm | 0.4mm | 10* | 073450 |
| | 0.32mm | 0.5mm | 10* | 073451 |
| | 0.53mm | 0.8mm | 10* | 073452 |
| | 1/32" | 0.81mm | 10* | 073453 |
| Replacement SilTite™ Metal Ferrules | | | | |
| For All GC-MS Interface Connections | | | | |
| | 0.1-0.25mm | 0.4mm | 10 | 073330 |
| | 0.32mm | 0.5mm | 10 | 073331 |
| | 0.53mm | 0.8mm | 10 | 073332 |
| | 1/32" | 0.81mm | 10 | 073333 |
| Replacement SilTite™ Nuts | | | | |
| | | | 5 | 073230 |



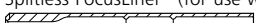
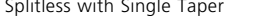
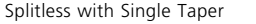

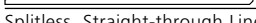
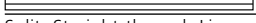
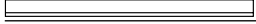

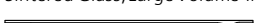


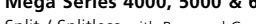


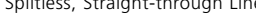

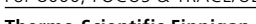



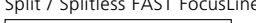

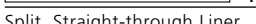

To be used in combination with brass nut (Part No. 1034085)

* Includes 10 ferrules, 2 SilTite™ nuts.



For SGE's full range of products, visit www.sge.com

Inlet Liners

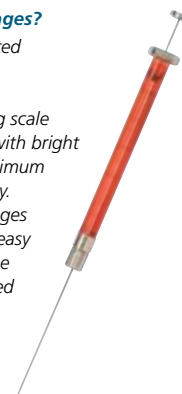
| Description | ID (mm) | OD (mm) | Length (mm) | Pack Size | Part No. |
|--|----------|---------|-------------|-----------|----------|
| ThermoQuest 8000, FOCUS & TRACE/ULTRA™ | | | | | |
| Splitless FocusLiner™ (for use with 70mm Needle) | 5.0 | 8.0 | 105 | 5 | 092045 |
|  TOP | | | | | |
| Split FocusLiner™ (for use with 50mm Needle) | 5.0 | 8.0 | 105 | 5 | 092048 |
|  TOP | | | | | |
| Splitless FocusLiner™ (for use with 50mm Needle) | 5.0 | 8.0 | 105 | 5 | 092049 |
|  TOP | | | | | |
| Splitless with Single Taper | 3.0 | 8.0 | 105 | 5 | 092141 |
|  TOP | | | | | |
| Splitless with Single Taper | 5.0 | 8.0 | 105 | 5 | 092144 |
|  TOP | | | | | |
| SPME Liner | 0.8 | 8.0 | 105 | 5 | 092148 |
|  TOP | | | | | |
| Splitless, Straight-through Liner | 3.0 | 8.0 | 105 | 5 | 092147 |
|  TOP | | | | | |
| Split, Straight-through Liner | 5.0 | 8.0 | 105 | 5 | 092150 |
|  TOP | | | | | |
| Splitless FocusLiner™ (for use with 70mm Needle) | 5.0 | 8.0 | 105 | 5 | 092046 |
|  TOP | | | | 25 | 09204625 |
| Sintered Glass, Large Volume Injection (LVI) Liner | 0.78/1.8 | 2.75 | 120 | 5 | 092155 |
|  TOP | | | | | |
| PTV Liner | | | | | |
| Trace 2000 PTV Liner | 1.75 | 2.75 | 120 | 5 | 092142 |
|  TOP | | | | | |
| Mega Series 4000, 5000 & 6000 | | | | | |
| Split / Splitless with Recessed Gooseneck & Quartz Wool | 3.0 | 5.0 | 79.5 | 5 | 092041 |
|  TOP | | | | | |
| Split, Straight-through Liner | 3.0 | 5.0 | 79.5 | 5 | 092044 |
|  TOP | | | | | |
| Splitless, Straight-through Liner | 2.0 | 5.0 | 79.5 | 5 | 092047 |
|  TOP | | | | | |
| Graphite Sealing Ring | | | | | |
| For 8000, FOCUS & TRACE/ULTRA™ GCs | 8.0 | | | 10 | 0726004 |
| Thermo Scientific Finnigan 9001 and GCQ | | | | | |
| Thermo Scientific Finnigan 9001 & GCQ GC's accept all Agilent Technologies 6.3mm OD Liners. | | | | | |
| Split/Splitless FocusLiner™ | 4.0 | 6.3 | 78.5 | 5 | 092002 |
|  TOP | | | | 25 | 092219 |
| Split / Splitless Tapered FocusLiner™ | 4.0 | 6.3 | 78.5 | 5 | 092003 |
|  TOP | | | | 25 | 092011 |
| Split / Splitless FAST FocusLiner™ | 2.3 | 6.3 | 78.5 | 5 | 092005 |
|  TOP | | | | 25 | 092008 |
| Split / Splitless Tapered FAST FocusLiner™ | 2.3 | 6.3 | 78.5 | 5 | 092111 |
|  TOP | | | | 25 | 092115 |
| Split, Straight-through Liner | 4.0 | 6.3 | 78.5 | 5 | 092007 |
|  TOP | | | | 25 | 092222 |
| Split with Quartz Wool | 4.0 | 6.3 | 78.5 | 5 | 092001 |
|  TOP | | | | 25 | 092220 |
| Split / Splitless with Single Taper | 4.0 | 6.3 | 78.5 | 5 | 092017 |
|  TOP | | | | 25 | 092229 |
| Splitless with Single Taper & Quartz Wool | 4.0 | 6.3 | 78.5 | 5 | 092019 |
|  TOP | | | | 25 | 092218 |
| Split / Splitless with Double Taper | 4.0 | 6.3 | 78.5 | 5 | 092018 |
|  TOP | | | | 25 | 092230 |
| Direct Straight-through Liner | 1.2 | 6.3 | 78.5 | 5 | 092016 |
|  TOP | | | | 25 | 092224 |
| Splitless with Recessed Gooseneck | 2.0 | 6.3 | 78.5 | 5 | 092013 |
|  TOP | | | | | |
| Split/Splitless with Recessed Gooseneck & Quartz Wool | 4.0 | 6.3 | 78.5 | 5 | 092010 |
|  TOP | | | | 25 | 092223 |

Electron Multipliers

| MS Description | Analyzer Type | Technique | Part No. |
|----------------------------|---------------|-----------|----------|
| Bench-top ion trap pre-GCQ | Ion Trap | GC-MS | 14138 |
| 4000 (PPINICI) Incos 50 | Quadrupole | GC-MS | 14139 |
| DSQ/Polaris | Quadrupole | GC-MS | 14633 |

Why choose SGE Syringes?

- Feature individually fitted plungers
- Are leak tested
- Feature a hard wearing scale
- Use Manual Syringes with bright white backing for maximum contrast and readability.
- Use Autosampler Syringes with colored back for easy identification of volume
- Have removable or fixed needle options
- Needle gauge, length, style and tip options



Why choose SGE Septa?

- Low bleed
- Optimized for instruments and applications
- Wide range to suit your equipment



Why choose SGE deactivated Liners?

- Liners deactivated using a gas phase deactivation
- Supplied in blister packs to prevent contamination
- FocusLiners™ provide superior reproducibility compared to other liners



Request a sample pack

Why Choose SilTite™ Ferrules?

- Never needs re-tightening, even after temperature cycling
- No contamination from Vespel® or graphite materials - 100 % metal
- Ferrule remains permanently fixed to the column but does not adhere to the SilTite™ nut
- Ideal for high pressure applications
- Also available for injector interfaces
- > 500 °C maximum temperature
- Patent Pending



Request a sample pack

HANDY TIP 7

Having problems with reproducibility? Try FocusLiner™. Its unique design ensures the tip of the needle is wiped every time you inject a sample. This makes the injection process more predictable and reproducible.

Quick Pick for Varian GC

Autosampler Syringes

| Volume | Length | Needle Gauge (OD mm) | Tip Style | Syringe Code | Syringe Part No. | Pack Size | Needle Part No. | Pack Size | Plunger Part No. | Pack Size |
|---|--------|----------------------|-----------|---------------------|------------------|-----------|-----------------|-----------|------------------|-----------|
| Varian 8035, 8100 and 8200 | | | | | | | | | | |
| Fixed Needle | | | | | | | | | | |
| 10µL Gas Tight | 53 | 25 (0.5) | S/Hole | 10F-GT-VA8X-II | 002923 | 1 | - | - | 031218 | 1 |
| Removable Needle | | | | | | | | | | |
| 1µL* | 51 | 26 (0.47) | Cone | 1BR-VA8X | 000655 | 1 | 034720 | 1** | - | - |
| 10µL Gas Tight | 53 | 25 (0.5) | S/Hole | 10R-GT-VA8X-II | 002924 | 1 | 037777 | 1 | 031218 | 1 |
| Needle Alternatives for P/N 002924 | | | | | | | | | | |
| | 50 | 25 (0.5) | Bevel | N10-VA8035-II | - | 1 | 037776 | 2 | - | - |
| | 105 | - | OC | N10-VA8035-0.17-II | - | 1 | 037778 | 2 | - | - |
| | 53 | 23 (0.63) | S/Hole | N10-VA8X00H-0.63-II | - | 1 | 037779 | 2 | - | - |
| | 53 | 25 (0.5) | S/Hole | N10-VA800H-II(0.2) | - | 1 | 037780 | 1 | - | - |
| 100µL Gas Tight | 53 | 25 (0.5) | S/Hole | 100R-GT-VA8X | 005921 | 1 | 038745 | 1 | 031824 | 1 |
| Varian CP-8400/8410, CP-9010/9050 | | | | | | | | | | |
| Fixed Needle | | | | | | | | | | |
| 10µL | 50 | 26 (0.47) | Bevel | 10F-VA8400-5/0.47 | 002950 | 1 | - | - | - | - |
| 10µL | 50 | 23 (0.63) | Cone | 10F-C/T-5/0.63C | 002981 | 1 | - | - | - | - |
| Removable Needle | | | | | | | | | | |
| 10µL | 50 | 26 (0.47) | Cone | 10R-C/T-5/0.47C | 002982 | 1 | 037785 | 2 | - | - |

*Not suitable for 8200 autosampler. **Denotes Plunger and Needle Kit.

Septa

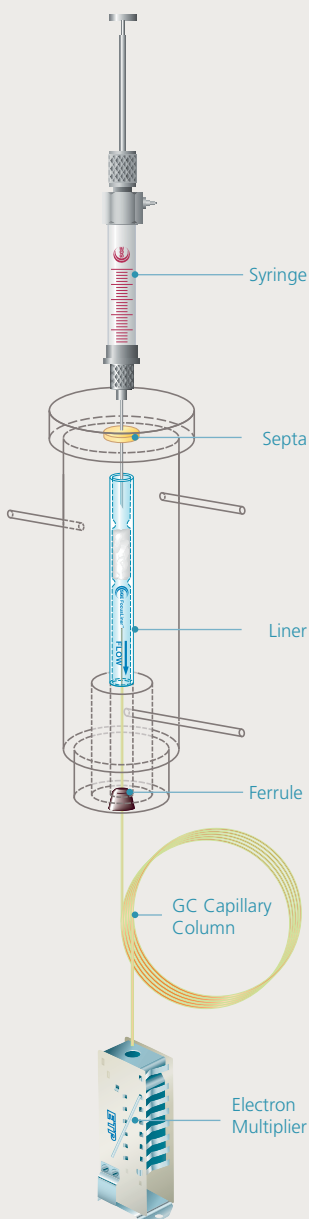
| Instrument | Diameter (mm) | Septum Type | Pack Size | Part No. |
|--|---------------|-----------------|-----------|----------|
| 1177 Injector | 9 | CS | 50 | 041824 |
| | 9 | TCS | 50 | 041844 |
| | 9 | TCS Pre-drilled | 50 | 041854 |
| | 9 | Auto-Sep T™ | 25 | 041879 |
| 1040, 1041, 1060 & 1061 Injectors | 9.5 | CS | 50 | 0418240 |
| | 9.5 | TCS | 50 | 0418440 |
| | 9.5 | Auto-Sep™ | 25 | 041871 |
| | 9.5 | Auto-Sep T™ | 100 | 041881 |
| 1075, 1077, 1078, 1079 Injectors & 1093, 1094 SPI Injectors | 11 | CS | 50 | 041826 |
| | 11 | TCS | 50 | 041846 |
| | 11 | Auto-Sep™ | 25 | 041872 |
| | 11 | Auto-Sep T™ | 25 | 041882 |
| | 11 | Auto-Sep T™ | 100 | 041883 |

Ferrules

| Material | Column ID | Ferrule ID | Pack Size | Part No. | |
|--|------------------------|------------|-----------|----------|---------|
| 15% Graphite / 85% Vespel® Ferrules | | | | | |
| For GC-MS & Detectors at atmospheric pressure e.g. FID | | | | | |
| | 0.1-0.25mm | 0.4mm | 10 | 072663 | |
| | 0.32mm | 0.5mm | 10 | 072654 | |
| | 0.53mm | 0.8mm | 10 | 072655 | |
| Packed Columns | | | | | |
| | 1/8" OD Packed Columns | 1/8" | 10 | 072669 | |
| | 1/4" OD Packed Columns | 1/4" | 10 | 072667 | |
| 100% Graphite Ferrules – For Injectors & Detectors at atmospheric pressure e.g. FID | | | | | |
| | 0.1-0.32mm | 0.5mm | 10 | 072627 | |
| | 0.45-0.53mm | 0.8mm | 10 | 072626 | |
| | 1/8" OD Packed Columns | 1/8" | 10 | 072622 | |
| | 1/4" OD Packed Columns | 1/4" | 10 | 072621 | |
| SilTite™ Metal Ferrules – For GC-MS Interface Connection (Starter Kit) | | | | | |
| | 0.1-0.25mm | 0.4mm | 10* | 073300 | |
| | 0.32mm | 0.5mm | 10* | 073301 | |
| | 0.53mm | 0.8mm | 10* | 073302 | |
| | 1/32" | 0.81mm | 10* | 073303 | |
| Nuts for Varian Injector | | | | 2 | 1034060 |
| Replacement SilTite™ Ferrules For GC-MS Interface Connection | | | | | |
| | 0.1-0.25mm | 0.4mm | 10 | 073220 | |
| | 0.32mm | 0.5mm | 10 | 073221 | |
| | 0.53mm | 0.8mm | 10 | 073222 | |
| | 1/32" | 0.81mm | 10 | 073219 | |
| Replacement SilTite™ Nuts | | | | 5 | 073231 |



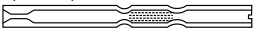
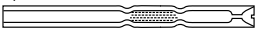
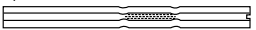
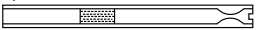
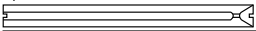



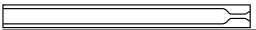








*Includes 10 ferrules, 2 SilTite™ nuts.

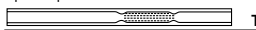
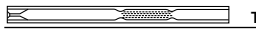
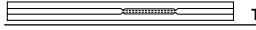
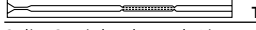
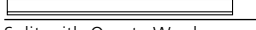
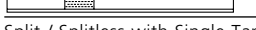
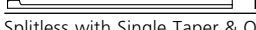
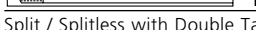

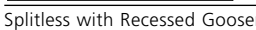


SGE SUPPLIES FROM INJECTOR TO DETECTOR



For SGE's full range of products, visit www.sge.com

Inlet Liners

| Description | ID (mm) | OD (mm) | Length (mm) | Pack Size | Part No. |
|---|---------|---------|-------------|-----------|----------|
| 1075 & 1077 Injectors | | | | | |
| Split FocusLiner™ | 4.0 | 6.3 | 72 | 5 | 092022 |
|  TOP | | | | | |
| Splitless FocusLiner™* | 4.0 | 6.3 | 74 | 5 | 092026 |
|  TOP | | | | | |
| Split, Tapered FocusLiner™ | 4.0 | 6.3 | 72 | 5 | 092025 |
|  TOP | | | | | |
| Split FocusLiner™* | 4.0 | 6.3 | 72 | 5 | 092028 |
|  TOP | | | | | |
| Split, FAST FocusLiner™ | 2.3 | 6.3 | 72 | 5 | 092113 |
|  TOP | | | | | |
| Split with Quartz Wool | 4.0 | 6.3 | 72 | 5 | 092021 |
|  TOP | | | | | |
| Splitless, Slots at Both Ends | 2.0 | 6.3 | 74 | 5 | 092024 |
|  TOP | | | | 25 | 092228 |
| *with Top-end Restriction | | | | | |
| 1078 & 1079 Injectors | | | | | |
| Split / Splitless FocusLiner™ | 3.4 | 5.0 | 54 | 5 | 092037 |
|  TOP | | | | | |
| Split / Splitless Tapered FocusLiner™ | 3.4 | 5.0 | 54 | 5 | 092036 |
|  TOP | | | | | |
| Straight-through Liner | 0.5 | 5.0 | 54 | 5 | 092031 |
|  | | | | | |
| Split / Splitless with Single Taper | 3.4 | 5.0 | 54 | 5 | 092038 |
|  TOP | | | | | |
| Splitless with Single Taper | 2.0 | 5.0 | 54 | 5 | 092039 |
|  TOP | | | | | |
| Sintered Glass** | 1.8/3.4 | 5.0 | 54 | 5 | 092245 |
|  TOP | | | | | |
| SPME liner | 0.75 | 5.0 | 54 | 5 | 092117 |
|  | | | | | |
| 1093 & 1094 Injectors | | | | | |
| SPI Liner, (Restriction=0.25mm) | 0.5 | 4.6 | 54 | 5 | 092027 |
|  | | | | | |
| SPI Liner, (Restriction=0.25mm) | 0.8 | 4.6 | 54 | 5 | 092030 |
|  | | | | | |
| SPI Liner, (Restriction=0.5mm)* | 0.8 | 4.6 | 54 | 5 | 092034 |
|  | | | | | |
| *for 0.53 mm ID On-column ** Large Volume Injection (LVI) Liner | | | | | |
| Viton O-Ring | | | | | |
| For 1177 injector, can be used at temperatures up to 300 °C | | | | 10 | 0726532 |
| Graphite Sealing Rings | | | | | |
| For 1075 & 1077 Injectors | | | | 10 | 072601 |
| For 1078 & 1079 Injectors | | | | 10 | 0726217 |
| Packed Column Injectors | | | | | |
| Packed Column Liner* | 3 | 6.3 | 72 | 1 | 092232 |
|  | | | | | |
| Packed Column Liner* | 3 | 6.3 | 72 | 5 | 092233 |
|  | | | | | |
| * for Varian Flash Injectors | | | | | |

| Description | ID (mm) | OD (mm) | Length (mm) | Pack Size | Part No. |
|--|---------|---------|-------------|-----------|----------|
| 1177 Injector | | | | | |
| 1177 injector accepts all Agilent Technologies 6.3mm OD liners. | | | | | |
| Split/Splitless FocusLiner™ | 4.0 | 6.3 | 78.5 | 5 | 092002 |
|  TOP | | | | 25 | 092219 |
| Split / Splitless Tapered FocusLiner™ | 4.0 | 6.3 | 78.5 | 5 | 092003 |
|  TOP | | | | 25 | 092011 |
| Split / Splitless FAST FocusLiner™ | 2.3 | 6.3 | 78.5 | 5 | 092005 |
|  TOP | | | | 25 | 092008 |
| Split / Splitless Tapered FAST FocusLiner™ | 2.3 | 6.3 | 78.5 | 5 | 092111 |
|  TOP | | | | 25 | 092115 |
| Split, Straight-through Liner | 4.0 | 6.3 | 78.5 | 5 | 092007 |
|  | | | | 25 | 092222 |
| Split with Quartz Wool | 4.0 | 6.3 | 78.5 | 5 | 092001 |
|  | | | | 25 | 092220 |
| Split / Splitless with Single Taper | 4.0 | 6.3 | 78.5 | 5 | 092017 |
|  TOP | | | | 25 | 092229 |
| Splitless with Single Taper & Quartz Wool | 4.0 | 6.3 | 78.5 | 5 | 092019 |
|  TOP | | | | 25 | 092218 |
| Split / Splitless with Double Taper | 4.0 | 6.3 | 78.5 | 5 | 092018 |
|  | | | | 25 | 092230 |
| Direct Straight-through Liner | 1.2 | 6.3 | 78.5 | 5 | 092016 |
|  | | | | 25 | 092224 |
| Splitless with Recessed Gooseneck | 2.0 | 6.3 | 78.5 | 5 | 092013 |
|  | | | | | |
| Split/Splitless* | 4.0 | 6.3 | 78.5 | 5 | 092010 |
|  | | | | 25 | 092223 |
| * with Recessed Gooseneck & Quartz Wool | | | | | |

Electron Multipliers

| MS Description | Part No. |
|--------------------------|----------|
| Saturn (Pre-2000) | 14138 |
| Saturn 2000, 2100 & 2200 | 14147 |

Why choose SGE deactivated Liners?

- Liners deactivated using a gas phase deactivation
- Supplied in blister packs to prevent contamination
- FocusLiners™ provide superior reproducibility compared to other liners



Request a sample pack

Why Choose SiITite™ Ferrules?

- Never needs re-tightening, even after temperature cycling
- No contamination from Vespel® or graphite materials - 100% metal
- Ferrule remains permanently fixed to the column but does not adhere to the SiITite™ nut
- Ideal for high pressure applications
- Also available for injector interfaces
- > 500 °C maximum temperature
- Patent Pending



Request a sample pack

HANDY TIP 8

Did you know that single tapered liners transfer high boiling point analytes more effectively to your column than straight through liners?

AUSTRALIA & PACIFIC REGION

SGE Analytical Science Pty Ltd
7 Argent Place, Ringwood
Victoria 3134 Australia
Toll Free: 1800 800 167
Tel: +61 (0) 3 9837 4200
Fax: +61 (0) 3 9874 5672
Email: support@sge.com

CHINA

SGE Shanghai Representative Office
Room 8221A, No. 808 Honqiao Road
Shanghai China
Tel: +86 21 6407 9382
Fax: +86 21 6407 9386
Email: china@sge.com

MIDDLE EAST

SGE Gulf
Y2 - 133, Sharjah Airport International
Free Zone (SAIF Zone)
P.O. Box 9377, Sharjah, UAE
Tel: +971 6 557 3341
Fax: +971 6 557 3541
Email: gulfsupport@sge.com

EUROPE

SGE Europe Ltd
European Head Office
1 Potters Lane
Kiln Farm Milton Keynes
MK11 3LA United Kingdom
Toll Free: 00800 2790 8999
Toll Free Fax: 00800 2626 2609
Tel: +44 1908 568 844
Fax: +44 1908 566 790
Tel France: +33 1 69 29 80 90
Fax France: +33 1 69 29 09 25
Tel Germany: +49 (0) 6155 / 60746 0
Fax Germany: +49 (0) 6155 / 60746 50
Email: europe@sge.com

INDIA

SGE Laboratory Accessories Pvt Ltd
209 Milan Industrial Estate
Abhudaya Nagar T. J. Road
Mumbai - 400 033 India
Tel: +91 22 24715896
Fax: +91 22 24716592
Email: sgeindia@vsnl.com

UNITED STATES OF AMERICA

SGE Incorporated
2007 Kramer Lane
Austin Texas 78758 USA
Toll Free: (800) 945 6154
Tel: +1 512 837 7190
Fax: +1 512 836 9159
Email: usa@sge.com

JAPAN

SGE Japan Inc
RK CUBE 3F 6-85, Ohta-machi
Naka-Ku, Yokohama-shi
Kanagawa 231-0011 Japan
Tel: +81 45 222 2885
Fax: +81 45 222 2887
Email: japan@sge.com



SGE Products are distributed by:

Greyhound Chromatography and Allied Chemicals

6 Kelvin Park, Birkenhead, Merseyside CH41 1LT United Kingdom

Tel: (+44) 0 151 649 4000 Fax: (+44) 0 151 649 4001 Email: sales@greyhoundchrom.com

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