

**Make Life Easier (MLE) Capillary Tool Kits**

Everything you need in one complete kit!

**All kits include these components:**

- 1/8", 3/16", 1/4" nylon brushes
- 1/4", 3/8", 3/16" stainless steel wire tube brushes
- Stainless steel surface brush
- 6 stainless steel jet reamers (0.25–0.65 mm OD)
- 1/4" x 5/16" open end wrench
- 3/8" x 7/16" open end wrench
- Rubber-tipped slide-lock tweezers
- Scoring wafers
- Inlet liner removal tool
- Septum puller
- Mini wool puller/insertor tool
- 4-inch tapered needle file
- Swivel head flashlight
- Mini hand drill set
- 15 cm compact steel ruler
- Pocket magnifier
- High temperature string (1 meter)
- Pipe cleaner (12-inch)
- Cotton tip swabs (pk. of 25)



22186



22185

**MLE Capillary Tool Kit for Agilent GCs (cat.# 22186) also includes:**

- Capillary installation gauge for Agilent GCs
- Injector wrench for Agilent GCs
- Septum nut removal tool
- 7/16" x 1/2" open end wrench
- 1/2" x 9/16" open end wrench

**MLE Capillary Tool Kit for Bruker/Varian GCs (cat.# 22184) also includes:**

- Capillary installation gauge for Varian GCs
- 7/16" x 1/2" open end wrench
- 1/2" x 9/16" open end wrench

**MLE Capillary Tool Kit for PerkinElmer GCs (cat.# 22185) also includes:**

- 7/16" x 1/2" open end wrench
- 1/2" x 9/16" open end wrench

**MLE Capillary Tool Kit for Shimadzu GCs (cat.# 22182) also includes:**

- Capillary installation gauge for Shimadzu GCs
- Injector wrench for Shimadzu GCs
- 6 mm x 7 mm open end wrench
- 8 mm x 10 mm open end wrench
- 16 mm x 17 mm open end wrench



22184



22182

**MLE Capillary Tool Kit for Thermo Scientific GCs (cat.# 22183) also includes:**

- Capillary installation gauge for Thermo Scientific GCs
- Liner cap removing tool for Thermo Scientific GCs
- 6 mm x 7 mm open end wrench
- 8 mm x 10 mm open end wrench
- 16 mm x 17 mm open end wrench



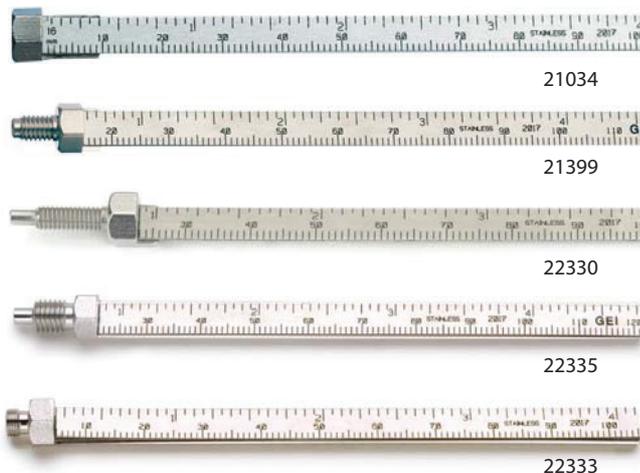
22183



MLE tool kits conveniently provide the tools that make it easier to install and maintain capillary columns at a discounted price compared to buying the tools individually!

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

Easily seat ferrules for consistent installations!



### Capillary Installation Gauge

- Seats ferrules onto column for consistent installations.\*
- Prevents crushed column ends.
- Made from high-quality stainless steel.

Using the Capillary Installation Gauge for Agilent-Style Fittings



Install the column nut and ferrule onto the column. Slide the column into the installation gauge to the recommended insertion distance. Finger-tighten the nut.



Tighten the assembly to ensure a properly seated ferrule. Loosen the assembly and remove the column and column nut.



The ferrule will be properly seated, and should remain in place when light force is applied. If it slides loosely on the column, repeat procedure.

Description	qty.	cat.#
Capillary Installation Gauge for Agilent-style fittings (compact ferrules)	ea.	21034
Capillary Installation Gauge for 1/16" fittings (1/16" ferrules)	ea.	21399
Capillary Installation Gauge for Bruker/Varian GCs for use with 1/16" ferrules	ea.	22335
Capillary Installation Gauge for Shimadzu 17A, 2010, and 2014 GCs	ea.	22333
Capillary Installation Gauge for Thermo Scientific TRACE & Focus SSL (M4 ferrules)	ea.	22330

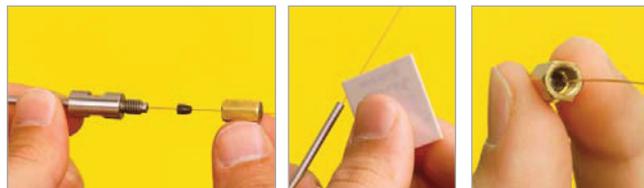
\*For use with graphite ferrules only.

Restek innovation!



### Capillary Installation Gauge for Agilent 5973/5975 MS

- Seats ferrules onto column for consistent installations.
- Made from high-quality stainless steel.



Install the nut and ferrule onto the column, then insert the column through the installation tool, exposing several centimeters at the exit end. Tighten the nut (not depicted).

Score and remove the exposed end of the column.

Loosen the nut.

Description	Similar to Agilent Part #	qty.	cat.#
Capillary Installation Gauge for Agilent 5973/5975 MS	G1099-20030	ea.	21894



### Capillary Column Caps

- Attach to the column in seconds to form an airtight seal.
- Increase column lifetime—prevent moisture and air from entering the column during storage.
- Two styles to choose from: glass or silicone material.
- Glass caps are color-coded for identifying detector and injector ends.
- Not recommended for reuse.

Description	Material	qty.	cat.#
Capillary Column Caps	Glass	10-pk.	21044
Capillary Column Caps	Silicone	10-pk.	22858



23015

**Scoring Wafer With Handle**

- Ceramic wafer is straight-edged for cutting fused silica tubing cleanly.
- Unique, ergonomic handle is made of soft, comfortable rubber.

Description	qty.	cat.#
Scoring Wafer with Handle	2-pk.	23015



23027

**Shortix® Capillary GC Column Cutter**

- Consistently make precise, clean, square cuts with a diamond blade.
- Built-in magnifier to verify square cut.
- Use with 0.25 mm ID to 0.53 mm ID tubing (0.78 mm OD maximum).



23026

Description	qty.	cat.#
Shortix Capillary GC Column Cutter	ea.	23026
Maintenance Kit for Shortix Capillary GC Column Cutter (Includes: diamond cutting wheel, O-rings, and a tool to open the column cutter)	kit	23027

**Ceramic Scoring Wafer**

Four straight scoring edges for cutting fused silica tubing and four serrated edges for cutting MXT® metal capillary columns.



20116

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

**Sapphire Scribe**

- Cuts fused silica tubing.
- Produces a clean, square cut.



20182



One quick stroke...



and just a tap leaves a clean, square end.

Description	qty.	cat.#
Sapphire Scribe	ea.	20182

**Reference Standards Documentation Search**

Locate SDSs, certificates, and data packs by cat. # or lot #

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



### Inlet Liner Removal Tool

- Easily remove liner from injector—no more burned fingers.
- Made from high-temperature silicone.
- Won't chip or crack the liner.



No more burned fingers!



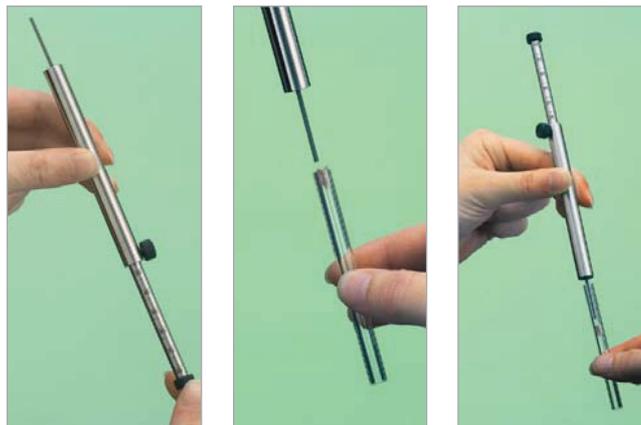
Description	qty.	cat.#
Inlet Liner Removal Tool	3-pk.	20181



Eliminates user variation!

### Inlet Liner Packing Tool

- Position wool reproducibly every time.
- Accurate to a specific, measured depth.
- Can be used with all manufacturers' liners.



Loosen the nut on the side of the tool and adjust the gauge to the manufacturer's recommended depth.

Place a plug of loosely bound wool at the top of the inlet liner.

Insert the liner packing tool into the liner until the tool bottoms out. Remove the tool. The wool is now positioned correctly in the liner and the liner is ready for use.

Description	qty.	cat.#
Inlet Liner Packing Tool	ea.	20339

Recommended for inlet liners with an ID  $\geq$  2 mm.

### The Claw and The Claw Holder Kit

- Easily removes hot liners from injection ports.
- 4 mL vials (not included) can be replaced when dirty.

Never again will you burn your fingers removing a hot injection port liner. 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
WISP 48 Snap Seal Vial	100-pk.	24658



### Inlet Wrench for Agilent 5890/6850/6890 GCs

- Use to remove the septum nut and weldments during GC maintenance.
- Use the smaller end to remove the septum nut.
- Use the larger end to tighten the split/splitless weldment nut.
- High-quality stainless steel construction.
- Meets original equipment performance.



Description	Similar to Agilent Part #	qty.	cat.#
Inlet Wrench for Agilent 5890/6850/6890 GCs	19251-00100	ea.	22065



21159

**Inlet Wrench** for Shimadzu 17A, 2010, and 2014 GCs

- Designed specifically for removing Shimadzu injection ports.
- High-quality stainless steel construction.

Description	Similar to Shimadzu Part #	qty.	cat.#
Inlet Wrench for Shimadzu 17A, 2010, and 2014 GCs	221-46977-00	ea.	21159



22997

**Metric Wrench Set**

High-quality 6 x 7 mm, 8 x 10 mm, and 16 x 17 mm wrenches for tightening a wide variety of fittings.

Description	qty.	cat.#
Metric Wrench Set	set	22997



22334

**Open-End Wrench Set** for use with Shimadzu 17A, 2010, and 2014 Capillary Installation Gauge

Description	qty.	cat.#
1/4" x 5/16" and 10 mm x 11 mm Open-End Wrench Set for use with Shimadzu 17A, 2010, and 2014 Capillary Installation Gauge	ea.	22334



22999

**Metric 9-Piece, Ball-Point Hex Key Set**

Includes nine metric hex keys (Allen wrenches): 1.5, 2, 2.5, 3, 4, 5, 6, 8, and 10 mm.

Description	qty.	cat.#
Metric 9-Piece, Ball-Point Hex Key Set	set	22999



20387

**Open-End Wrench Set**

High-quality 1/4" x 5/16", 3/8" x 7/16", 7/16" x 1/2", and 1/2" x 9/16" wrenches for tightening a wide variety of chromatography fittings.

Description	qty.	cat.#
Open-End Wrench Set	set	20387



20110

**Open-End Wrenches**

High-quality wrenches for tightening capillary fittings.

Description	Size	qty.	cat.#
Open-End Wrenches	1/4" x 5/16"	2-pk.	20110
Open-End Wrenches	3/8" x 7/16"	2-pk.	22455



22998

**12-Piece, Ball-Point Hex Key Set**

Includes twelve hex keys (Allen wrenches): 0.050", 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 3/16", 7/32", 1/4", and 5/16".

Description	qty.	cat.#
12-Piece, Ball-Point Hex Key Set	set	22998



23034

**Torx® Screwdriver Set**

- Set includes TR-10, TR-15, and TR-20.
- Ideal for performing routine maintenance on Agilent 6890 and 7890 GCs.

Description	qty.	cat.#
Torx Screwdriver Set	set	23034

Torx® is a registered trademark of Textron Inc.



20109

### High-Temperature String

Use to restring capillary columns, attach column connectors to column cages, or hold the column in the GC oven. Capable of withstanding temperatures to 400 °C.

Description	qty.	cat.#
High-Temperature String	10 m	20109
High-Temperature String	450 m	20618



20101

### Slide-Lock Tweezers and 15 cm Compact Steel Ruler

- “Lock” capillary columns to the correct insertion distance recommended by the instrument manufacturer during installation.
- Useful for many laboratory tasks.

This duo provides an alternative way to install capillary columns to the correct insertion distance recommended by the instrument manufacturer.

Description	qty.	cat.#
Slide-Lock Tweezers and 15 cm Compact Steel Ruler	set	20101



20112

### Stainless Steel Tube Brushes/Surface Brush

Unlike brass brushes that can leave a metal residue, these stainless steel tube brushes ( $3/8$ -,  $3/16$ -, and  $1/4$ -inch) work well for cleaning dirty collectors, injector ports, and detector ports. The surface brush can be used to remove residue that builds up on metal detector jets and electronic contacts.

Description	qty.	cat.#
Stainless Steel Tube Brushes/Surface Brush	4-piece set	20112



20108

### Nylon Tube Brushes and Pipe Cleaner

Use to remove small septum fragments and residue from dirty glass inlet liners. Brushes are  $1/8$ -,  $3/16$ -, and  $1/4$ -inch in diameter; pipe cleaner is one foot (30 cm) long.

Description	qty.	cat.#
Nylon Tube Brushes and Pipe Cleaner	4-piece set	20108



20106

### 4" Tapered Needle Files

These files can be used for many purposes. They are especially useful for removing ferrules that are lodged in injector or detector ports.

Description	qty.	cat.#
4" Tapered Needle Files	2-pk.	20106



21601

### MXT® Needle Files

Multi-purpose files especially useful for cutting Siltek® treated stainless steel columns.

Description	qty.	cat.#
MXT Needle Files	2-pk.	21601



20122

### Mini Hand Drill Set

Drill ferrules to the proper ID in seconds! Includes three drills, for use with 0.25, 0.32, and 0.53 mm ID (0.4, 0.5, and 0.8 mm OD) capillary columns.

Description	qty.	cat.#
Mini Hand Drill Set	3-piece set	20122



20113

### Stainless Steel Jet Reamers / Ferrule Removers

A great tool for cleaning detector jets or removing stuck ferrules from other small orifices. Serrated design is optimal for removing silica deposits and other contaminants.

Description	qty.	cat.#
Stainless Steel Jet Reamers / Ferrule Removers	6-piece set	20113



20124

### Pocket Magnifier

- Small and easy to handle.
- 10x magnification makes it easy to see the column end to verify a square cut.

Description	qty.	cat.#
Pocket Magnifier	ea.	20124

### GC Oven Thermometer

- Verify GC oven temperature.
- Quick measurements via sensor in the measuring tip.
- Swivel head can turn 180°.
- Wide measuring range: -50 °C to +350 °C.

Description	qty.	cat.#
GC Oven Thermometer	ea.	22066



22066



22187

### Flashlight with Swivel Head

- Ideal for tight spaces—like inside a GC oven.
- Uses two AA batteries (included).

Description	qty.	cat.#
Flashlight with Swivel Head	ea.	22187

### Septum Puller

- Use hooked end for removing septa and O-rings; pointed end works well for removing stuck ferrules or debris.
- Keep several on hand in your laboratory for other uses, too.



Dislodge a stuck ferrule quickly and easily—without scoring the fitting.



Remove a septum without damaging an expensive weldment.

Description	qty.	cat.#
Septum Puller	ea.	20117



20117