Restek Sample Handling

High-Performing Restek PAL SPME Fibers

- Suitable for a wide range of analyte chemistries and sample matrices.
- Reliable performance meets or exceeds other brands.
- Optimized for PAL system autosamplers and compatible with most GC inlets.

Smart SPME Fibers now available!

RESTEK Pure Chromatography www.restek.com

High-Performing SPME Fibers from Restek

Restek PAL SPME fibers deliver results that consistently meet or exceed the performance of other solid phase microextraction fibers. Our reliable SPME fibers are optimized for PAL system autosamplers and are compatible with most GC inlets. Restek PAL SPME fibers are ideal for many applications in environmental, food, clinical, and other industries.

Typical Applications

- Trace analysis in food
- Drugs and pharmaceuticals
- Herbicides/pesticides
- Medical diagnostics
- Organics in water
- Trace impurities in polymers and solid samples
- Solvent residues in raw materials

Which fiber is best for my application?

Restek PAL SPME fibers are suitable for a wide range of analyte chemistries and sample matrices. Choose the best SPME fiber for your application based on the properties of your target compounds. You can easily confirm the fiber type by the color of the hub that connects it to the injector.

Target Analytes	Molecular Weight	Recommended Fiber	Hub Color
Nonpolar	125–600	7 µm polydimethylsiloxane (PDMS)	Green
Nonpolar, semivolatile	80–500	30 µm polydimethylsiloxane (PDMS)	Golden
Volatile	60–275	100 µm polydimethylsiloxane (PDMS)	Red
Polar, semivolatile	80–300	85 µm Polyacrylate	Gray
Highly volatile	30–225	95 µm Carbon wide range/Polydimethylsiloxane (Carbon-WR/PDMS)	Dark blue
Aromatic, semivolatile	50–300	65 µm Divinylbenzene/Polydimethylsiloxane (DVB/PDMS)	Violet
Volatile and semivolatile	40–275	80 µm Divinylbenzene/Carbon Wide Range/Polydimethylsiloxane (DVB/Carbon-WR/PDMS)	Dark Gray

Restek PAL SPME Fibers Are Proven to Perform

A quantitative comparison of Restek PAL SPME fibers to a popular brand proves that Restek PAL SPME fibers perform as well as or better than the competition. In this comparison of 80 µm DVB/Carbon WR/PDMS triple-phase fibers, it is clear that comparable results were obtained for residual solvents in cannabis extracts.

Residual solvents analysis in cannabis extracts may be analyzed with a USP <467> approach. The data below were obtained by headspace (HS)–solid phase microextraction (SPME) on a 6 mL sample, prepared as follows:

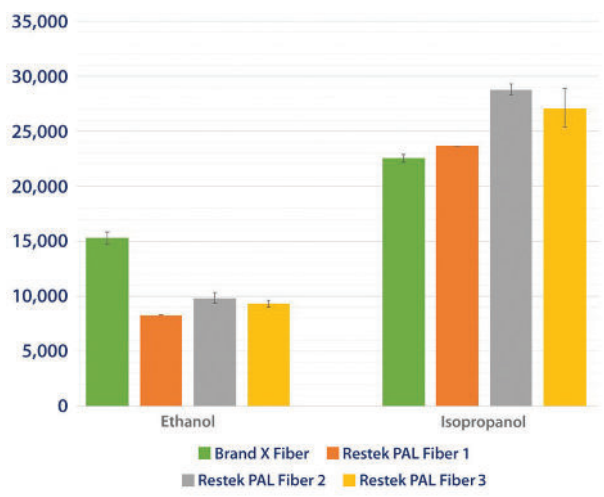
1. 3 g sodium chloride (NaCl) was measured into a 20 mL amber headspace vial (cat. # 23086) with screw top cap (cat. # 23090).
2. 6 mL of deionized (DI) water was then added to the vial.
3. Residual solvents (cat.# 34105) standard and *n*-propane, isobutane, *n*-butane (Emerald Scientific) standards were spiked at 10 µg/mL.
4. Everything was capped and vortexed at 3000 rpm for 10 seconds, inverted, then vortexed again for 10 seconds at 3000 rpm.

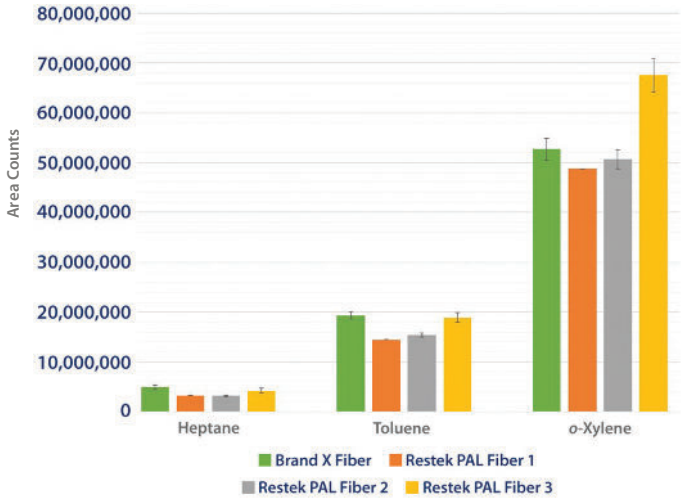
This sample was analyzed via the following parameters:

Test Parameters

- SPME Fibers: 80 µm DVB/Carbon WR/PDMS
- Extraction: 2 min in headspace at 30 °C with 1000 rpm agitation
- Thermal Desorption: 10 sec at 250 °C
- Column: Rxi-624 Sil MS, 30 m x 0.25 mm x 1.40 µm (cat. # 13868)
- Oven Program: 30 °C (hold 3 min) to 85 °C (hold 2 min) at 15 °C/min to 250 °C at 35 °C/min
- Autosampler: PAL CTC RTC
- GC-MS: 7890 with 5977B HES MS

Restek PAL SPME fibers meet or exceed the performance of other brands residual solvents in cannabis extracts.





High-Performing SPME Fibers from Restek

PAL SPME fibers are high-performing fibers that meet or exceed the performance of other brands. Our reliable SPME fibers are optimized for PAL system autosamplers and are compatible with most GC inlets. SPME fibers are suitable for a wide range of analyte chemistries and sample matrices.

PAL system compatibility: Non-smart SPME fibers are not compatible with PAL3 series II rails. Smart SPME Fibers are compatible with PAL3 Series I and newer. Check instrument manufacturer requirements. Check instrument manufacturer requirements.

Recommended maximum GC inlet pressure is 50 psi or less.

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

Catalog No.	Product Name	Material	Color	Units
27478-1	PAL SPME Fiber, PA, Fiber Thickness 85 um, Fiber Length 10 mm, 23 Gauge Needle	85 µm PA (Polyacrylate) Fiber, Polar	Gray	ea.
27478-3	PAL SPME Fiber, PA, Fiber Thickness 85 um, Fiber Length 10 mm, 23 Gauge Needle	85 µm PA (Polyacrylate) Fiber, Polar	Gray	3-pk.
27478-5	PAL SPME Fiber, PA, Fiber Thickness 85 um, Fiber Length 10 mm, 23 Gauge Needle	85 µm PA (Polyacrylate) Fiber, Polar	Gray	5-pk.
27479-1	PAL SPME Fiber, Carbon-WR/PDMS, Fiber Thickness 95 um, Fiber Length 10 mm, 23 Gauge Needle	95 µm Carbon-WR/PDMS (Carbon Wide Range/Polydimethylsiloxane) Fiber	Dark Blue	ea.
27479-3	PAL SPME Fiber, Carbon-WR/PDMS, Fiber Thickness 95 um, Fiber Length 10 mm, 23 Gauge Needle	95 µm Carbon-WR/PDMS (Carbon Wide Range/Polydimethylsiloxane) Fiber	Dark Blue	3-pk.
27479-5	PAL SPME Fiber, Carbon-WR/PDMS, Fiber Thickness 95 um, Fiber Length 10 mm, 23 Gauge Needle	95 µm Carbon-WR/PDMS (Carbon Wide Range/Polydimethylsiloxane) Fiber	Dark Blue	5-pk.
27480-1	PAL SPME Fiber, PDMS, Fiber Thickness 100 um, Fiber Length 10 mm, 23 Gauge Needle	100 µm PDMS (Polydimethylsiloxane) Fiber, Nonpolar	Red	ea.
27480-3	PAL SPME Fiber, PDMS, Fiber Thickness 100 um, Fiber Length 10 mm, 23 Gauge Needle	100 µm PDMS (Polydimethylsiloxane) Fiber, Nonpolar	Red	3-pk.
27480-5	PAL SPME Fiber, PDMS, Fiber Thickness 100 um, Fiber Length 10 mm, 23 Gauge Needle	100 µm PDMS (Polydimethylsiloxane) Fiber, Nonpolar	Red	5-pk.
27481-1	PAL SPME Fiber, PDMS, Fiber Thickness 30 um, Fiber Length 10 mm, 23 Gauge Needle	30 µm PDMS (Polydimethylsiloxane) Fiber, Nonpolar	Golden	ea.
27481-3	PAL SPME Fiber, PDMS, Fiber Thickness 30 um, Fiber Length 10 mm, 23 Gauge Needle	30 µm PDMS (Polydimethylsiloxane) Fiber, Nonpolar	Golden	3-pk.
27481-5	PAL SPME Fiber, PDMS, Fiber Thickness 30 um, Fiber Length 10 mm, 23 Gauge Needle	30 µm PDMS (Polydimethylsiloxane) Fiber, Nonpolar	Golden	5-pk.
27482-1	PAL SPME Fiber, PDMS, Fiber Thickness 7 um, Fiber Length 10 mm, 23 Gauge Needle	7 µm PDMS (Polydimethylsiloxane) Fiber, Nonpolar	Green	ea.
27482-3	PAL SPME Fiber, PDMS, Fiber Thickness 7 um, Fiber Length 10 mm, 23 Gauge Needle	7 µm PDMS (Polydimethylsiloxane) Fiber, Nonpolar	Green	3-pk.
27482-5	PAL SPME Fiber, PDMS, Fiber Thickness 7 um, Fiber Length 10 mm, 23 Gauge Needle	7 µm PDMS (Polydimethylsiloxane) Fiber, Nonpolar	Green	5-pk.
27873-3	PAL SPME Fiber, DVB/Carbon-WR/PDMS, Fiber Thickness 50/30 um, Fiber Length 10 mm	80 µm (50 DVB/30 Carbon-WR)/PDMS Fiber	Dark Gray	3-pk.
27873-5	PAL SPME Fiber, DVB/Carbon-WR/PDMS, Fiber Thickness 50/30 um, Fiber Length 10 mm	80 µm (50 DVB/30 Carbon-WR)/PDMS Fiber	Dark Gray	5-pk.
27873-1	PAL SPME Fiber, DVB/Carbon-WR/PDMS, Fiber Thickness 50/30 um, Fiber Length 10 mm	80 µm (50 DVB/30 Carbon-WR)/PDMS Fiber	Dark Gray	ea.
27874-3	PAL SPME Fiber, DVB/PDMS, Fiber Thickness 65 um, Fiber Length 10 mm	65 µm DVB/PDMS (Divinylbenzene/Polydimethylsiloxane) Fiber	Violet	3-pk.
27874-5	PAL SPME Fiber, DVB/PDMS, Fiber Thickness 65 um, Fiber Length 10 mm	65 µm DVB/PDMS (Divinylbenzene/Polydimethylsiloxane) Fiber	Violet	5-pk.
27874-1	PAL SPME Fiber, DVB/PDMS, Fiber Thickness 65 um, Fiber Length 10 mm	65 µm DVB/PDMS (Divinylbenzene/Polydimethylsiloxane) Fiber	Violet	ea.
27483	PAL Method Development SPME Fiber Kit, Fiber Length of 10 mm, 23 gauge needle Includes: one SPME fiber each: PDMS 7 µm, PDMS 30 µm, PDMS 100 µm, PA 85 µm, Carbon-WR/PDMS 95 µm			kit

PAL Smart SPME Fibers now available!

Catalog No.	Product Name	Material	Color	Units
28914-1	PAL Smart SPME Fiber, Carbon-WR/PDMS, Fiber Thickness 95 um, Fiber Length 10 mm, 23 Gauge Needle	95 µm Carbon-WR/PDMS (Carbon Wide Range/Polydimethylsiloxane) Fiber	Dark Blue	ea.
28914-3	PAL Smart SPME Fiber, Carbon-WR/PDMS, Fiber Thickness 95 um, Fiber Length 10 mm, 23 Gauge Needle	95 µm Carbon-WR/PDMS (Carbon Wide Range/Polydimethylsiloxane) Fiber	Dark Blue	3-pk.
28915-3	PAL Smart SPME Fiber, DVB/Carbon-WR/PDMS, Fiber Thickness 50/30 um, Fiber Length 10 mm	80 µm (50 DVB/30 Carbon-WR)/PDMS Fiber	Dark Gray	3-pk.
28915-1	PAL Smart SPME Fiber, DVB/Carbon-WR/PDMS, Fiber Thickness 50/30 um, Fiber Length 10 mm	80 µm (50 DVB/30 Carbon-WR)/PDMS Fiber	Dark Gray	ea.
28916-3	PAL Smart SPME Fiber, DVB/PDMS, Fiber Thickness 65 um, Fiber Length 10 mm	65 µm DVB/PDMS (Divinylbenzene/Polydimethylsiloxane) Fiber	Violet	3-pk.
28916-1	PAL Smart SPME Fiber, DVB/PDMS, Fiber Thickness 65 um, Fiber Length 10 mm	65 µm DVB/PDMS (Divinylbenzene/Polydimethylsiloxane) Fiber	Violet	ea.
28913-3	PAL Smart SPME Fiber, PA, Fiber Thickness 85 um, Fiber Length 10 mm, 23 Gauge Needle	85 µm PA (Polyacrylate) Fiber, Polar	Gray	3-pk.
28913-1	PAL Smart SPME Fiber, PA, Fiber Thickness 85 um, Fiber Length 10 mm, 23 Gauge Needle	85 µm PA (Polyacrylate) Fiber, Polar	Gray	ea.
28917-3	PAL Smart SPME Fiber, PDMS, Fiber Thickness 100 um, Fiber Length 10 mm, 23 Gauge Needle	100 µm PDMS (Polydimethylsiloxane) Fiber, Nonpolar	Red	3-pk.
28917-1	PAL Smart SPME Fiber, PDMS, Fiber Thickness 100 um, Fiber Length 10 mm, 23 Gauge Needle	100 µm PDMS (Polydimethylsiloxane) Fiber, Nonpolar	Red	ea.
28918-3	PAL Smart SPME Fiber, PDMS, Fiber Thickness 30 um, Fiber Length 10 mm, 23 Gauge Needle	30 µm PDMS (Polydimethylsiloxane) Fiber, Nonpolar	Golden	3-pk.
28918-1	PAL Smart SPME Fiber, PDMS, Fiber Thickness 30 um, Fiber Length 10 mm, 23 Gauge Needle	30 µm PDMS (Polydimethylsiloxane) Fiber, Nonpolar	Golden	ea.
28919-3	PAL Smart SPME Fiber, PDMS, Fiber Thickness 7 um, Fiber Length 10 mm, 23 Gauge Needle	7 µm PDMS (Polydimethylsiloxane) Fiber, Nonpolar	Green	3-pk.
28919-1	PAL Smart SPME Fiber, PDMS, Fiber Thickness 7 um, Fiber Length 10 mm, 23 Gauge Needle	7 µm PDMS (Polydimethylsiloxane) Fiber, Nonpolar	Green	ea.
28920	PAL Method Development Smart SPME Fiber Kit, Fiber Length of 10 mm, 23 gauge needle Includes: one SPME fiber each: PDMS 7 µm, PDMS 30 µm, PDMS 100 µm, PA 85 µm, Carbon-WR 95 µm			kit
28921	PAL Method Development Smart SPME Fiber Kit, Fiber Length of 10 mm, 23 gauge needle Includes: one SPME fiber each: PDMS 100 µm, DVB 65 µm, Carbon-WR 95 µm, PA 85 µm, DVB/Carbon-WR/PDMS 50/30 µm			kit

Restek PAL SPME Manual Injection Kits

Designed to house non-smart SPME Arrows (1.1 and 1.5 mm) and non-smart SPME fibers during extraction and injection steps. Kit is not compatible with Smart SPME Arrows or fibers.

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

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

27490

SPME Performance Test Mix (2 components)

- Essential mix for establishing the performance of SPME fibers and SPME Arrows.
- Verified composition and stability.

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

Conc. in Solvent	Certified Reference Material?	Min Shelf Life on Ship Date	Max Shelf Life on Ship Date	cat.#
SPME Performance Test Mix				
1 µg/mL in water:methanol (99:1), 1 mL/ampul	Yes	6 months	36 months	31015 (3-pk.)

Our product line is continually expanding!
Find rugged SPME Arrows and see
what's new at **www.restek.com/SPME**

Merlin Microseal Kits

22781

22972

22642

22810

22779

22812

Merlin Microseal Septa for PerkinElmer GCs*

Description	Includes	Instrument	Type	Vendor cat.#	qty.	cat.#
Merlin Microseal Septa	nut (1); adaptor (1); O-ring; general-purpose (#410) Microseals (2)	PerkinElmer	General-Purpose Kit (3 to 100 psi)	51-12	kit	22781

Merlin Microseal Septa for Shimadzu GC-2010, GC-2025, GC-2030*

Description	Includes	Instrument	Type	Vendor cat.#	qty.	cat.#
Merlin Microseal Septa	nut (1); adaptor (1); O-ring (1); general-purpose (#410) Microseals (2)	Shimadzu	General-Purpose Kit (3 to 100 psi)	61-12	kit	22972

Merlin Microseal Septa for Thermo TRACE 1300/1310, 1600/1610 GCs*

Description	Includes	Instrument	Type	Vendor cat.#	qty.	cat.#
Merlin Microseal Septa	nut (1); general-purpose (#410) Microseals (2)	Thermo	General-Purpose Kit (3 to 100 psi)	81-12	kit	22642

Merlin Microseal Septa for Agilent GCs*

Description	Includes	Instrument	Type	Vendor cat.#	qty.	cat.#
Merlin Microseal Septa	nut (1); general-purpose (#410) Microseals (2)	Agilent	General-Purpose Kit (3 to 100 psi), 2 Seals	404	kit	22810
	nut (1); general-purpose (#410) Microseal (1)	Agilent	General-Purpose Kit (3 to 100 psi), 1 Seal	405	kit	22811
	nut (1); low-pressure (#310) Microseals (2)	Agilent	Low-Pressure Kit (1 to 45 psi), 2 Seals	304	kit	22813
	nut (1); low-pressure (#310) Microseal (1)	Agilent	Low-Pressure Kit (1 to 45 psi), 1 Seal	305	kit	22814

Merlin Microseal Septa for Bruker/Varian 1078/1079 GCs*

Description	Includes	Instrument	Type	Vendor cat.#	qty.	cat.#
Merlin Microseal Septa	nut (1); adaptor (1); O-ring; general-purpose (#410) Microseal (1)	Scion/Bruker/Varian	General-Purpose Kit	21-11	kit	22779
	nut (1); adaptor (1); O-ring; general-purpose (#410) Microseal (1)	Scion/Bruker/Varian	General-Purpose Kit	22-11	kit	22780

*The Microseal septum uses a 23-gauge (0.63 mm, 0.025") needle or probe with a blunt, truncated conical tip. Because the syringe plunger end details are determined by manual or autosampler compatibility, often a removable needle syringe is an effective way to match both of these requirements. Installation is simple, requiring no modification of the injection port.

Replacement Microseals for general-purpose (3 to 100 psi), low-pressure (1 to 45 psi), and SPME fiber (3 to 100 psi) applications are available. For use in SPME Arrow applications, a different nut/adaptor kit must be used; see Related Products.

Replacement Merlin Microseal Septa†

Description	Type	Vendor cat.#	qty.	cat.#
Replacement Microseal	General-Purpose Microseal (most applications, 3 to 100 psi)	410	ea.	22812
	Low-Pressure Microseal (1 to 45 psi)	310	ea.	22815
	Microseal for Traditional SPME Fiber Applications (3 to 100 psi)	21-01	ea.	22782
	Microseal for 1.1 mm SPME Arrow Applications (3 to 100 psi)	1100	ea.	23232
	Microseal for 1.5 mm SPME Arrow Applications (3 to 100 psi)	1500	ea.	23233
	Microseal for 26 gauge or 23/26 gauge tapered needles (5 to 100 psi)	610	ea.	22264

†Merlin Microseal septa require the appropriate adaptor kit or nut for your GC. Choose standard Microseal kits/nuts for use with needles and traditional SPME fibers; choose SPME Arrow Microseal kits/nuts for use with SPME Arrow.

SPME Vials, Caps, and Septa

Magnetic Screw-Thread Caps, 18 mm

Description	Type	Cap Size	Septa Material	qty.	cat.#
Magnetic Caps and Septa for SPME	Screw-Thread	18-425	Blue PTFE/Silicone, 1.5 mm thick	100-pk.	23090
	Screw-Thread	18-425	Blue PTFE/Silicone, 1.5 mm thick	1000-pk.	23091
Magnetic Caps and Septa	Screw-Thread	18-425	Red PTFE/Silicone, 1.9 mm thick	100-pk.	23092
	Screw-Thread	18-425	Red PTFE/Silicone, 1.9 mm thick	1000-pk.	23093
	Screw-Thread	18-425	PTFE/Red Chlorobutyl	100-pk.	23094
	Screw-Thread	18-425	PTFE/Red Chlorobutyl	1000-pk.	23095

23091

SPME MicroCenter Caps and Septa

Description	Type	Cap Size	Color	Septa Material	qty.	cat.#
SPME Vial Cap	Screw-Thread	18-425		MicroCenter PTFE/Silicone, 0.040" (+/-0.005")	100-pk.	23852
	Screw-Thread	18-425		MicroCenter PTFE/Silicone, 0.040" (+/-0.005")	1000-pk.	23853
	Bi-Metal Crimp	20 mm	Blue	MicroCenter PTFE/Silicone, 0.065" (+/-0.005")	100-pk.	23854
	Bi-Metal Crimp	20 mm	Blue	MicroCenter PTFE/Silicone, 0.065" (+/-0.005")	1000-pk.	23855
	Bi-Metal Crimp	20 mm	Red	MicroCenter PTFE/Silicone, 0.065" (+/-0.005")	100-pk.	23856
	Bi-Metal Crimp	20 mm	Red	MicroCenter PTFE/Silicone, 0.065" (+/-0.005")	1000-pk.	23857
	Steel Crimp	20 mm	Gold	MicroCenter PTFE/Silicone, 0.065" (+/-0.005")	100-pk.	23858
	Steel Crimp	20 mm	Gold	MicroCenter PTFE/Silicone, 0.065" (+/-0.005")	1000-pk.	23859
SPME Vial Septa, 18 mm				MicroCenter PTFE/Silicone, 0.040" (+/-0.005")	100-pk.	23850
				MicroCenter PTFE/Silicone, 0.040" (+/-0.005")	1000-pk.	23851

23852

23854

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

Headspace Crimp Vials, 20 mm

Description	Modification	Type	Volume	Color	Deactivation	Size	qty.	cat.#
Headspace Vial Flat Bottom	Flat Bottom	20 mm Crimp-Top	6 mL	Clear		22 x 38 mm	100-pk.	21166
	Flat Bottom	20 mm Crimp-Top	6 mL	Clear		22 x 38 mm	1000-pk.	21167
	Flat Bottom	20 mm Crimp-Top	10 mL	Clear		23 x 46 mm	100-pk.	24683
	Flat Bottom	20 mm Crimp-Top	10 mL	Clear		23 x 46 mm	1000-pk.	24684
Headspace Vial Rounded Bottom	Rounded Bottom	20 mm Crimp-Top	10 mL	Clear		23 x 46 mm	100-pk.	21164
	Rounded Bottom	20 mm Crimp-Top	10 mL	Clear		23 x 46 mm	1000-pk.	21165
	Rounded Bottom	20 mm Crimp-Top	10 mL	Clear	Deactivated	23 x 46 mm	1000-pk.	21165-221
Headspace Vial Flat Bottom	Flat Bottom	20 mm Crimp-Top	20 mL	Clear		23 x 75 mm	100-pk.	24685
	Flat Bottom	20 mm Crimp-Top	20 mL	Clear		23 x 75 mm	1000-pk.	24686
Headspace Vial Rounded Bottom	Rounded Bottom	20 mm Crimp-Top	20 mL	Clear		23 x 75 mm	100-pk.	21162
	Rounded Bottom	20 mm Crimp-Top	20 mL	Clear		23 x 75 mm	1000-pk.	21163
Headspace Vial Flat Bottom	Flat Bottom	20 mm Crimp-Top	27 mL	Clear		30 x 60 mm	100-pk.	21160
	Flat Bottom	20 mm Crimp-Top	27 mL	Clear		30 x 60 mm	1000-pk.	21161

21166

Vial-to-instrument compatibility is designated in instrument reference chart.

Headspace Screw-Thread Vials, 18 mm

Description	Modification	Type	Volume	Color	Size	qty.	cat.#
Headspace Vial Rounded Bottom	Rounded Bottom	18-425 Screw-Thread	20 mL	Clear	22 x 75 mm	100-pk.	23082
	Rounded Bottom	18-425 Screw-Thread	20 mL	Clear	22 x 75 mm	1000-pk.	23083
	Rounded Bottom	18-425 Screw-Thread	20 mL	Amber	22 x 75 mm	100-pk.	23086
	Rounded Bottom	18-425 Screw-Thread	20 mL	Amber	22 x 75 mm	1000-pk.	23087
	Rounded Bottom	18-425 Screw-Thread	10 mL	Clear	22 x 45 mm	100-pk.	23084
	Rounded Bottom	18-425 Screw-Thread	10 mL	Clear	22 x 45 mm	1000-pk.	23085
	Rounded Bottom	18-425 Screw-Thread	10 mL	Amber	22 x 45 mm	100-pk.	23088
	Rounded Bottom	18-425 Screw-Thread	10 mL	Amber	22 x 45 mm	1000-pk.	23089

23082

Caps not included (sold separately).

GC Inlet Liners for SPME

Topaz 0.75 mm ID Straight/SPME Inlet Liner

for Bruker/Varian GCs w/1078/1079 Inlets

Geometry	Deactivation	Material	ID x OD x Length	qty	cat.#
Straight/SPME	Premium	Borosilicate Glass	0.75 mm x 5.0 mm x 54 mm	5-pk.	23465

Topaz 0.75 mm ID Straight/SPME Inlet Liner

for PerkinElmer Clarus 590/690 GCs

Geometry	Deactivation	Material	ID x OD x Length	qty	cat.#
Straight/SPME	Premium	Borosilicate Glass	0.75 mm x 6.35 mm x 78.5 mm	5-pk.	23803

Topaz 0.75 mm ID Straight/SPME Inlet Liner

for Agilent GCs

Geometry	Deactivation	Material	ID x OD x Length	qty	cat.#
Straight/SPME	Premium	Borosilicate Glass	0.75 mm x 6.35 mm x 78.5 mm	5-pk.	23434

Topaz 1.8 mm ID Straight/SPME Inlet Liner

for Shimadzu GCs 17A, 2010, 2014, and 2030 GCs

Geometry	Deactivation	Material	ID x OD x Length	qty	cat.#
Straight/SPME	Premium	Borosilicate Glass	1.8 mm x 5.0 mm x 95 mm	5-pk.	23279

Topaz 1.8 mm ID Straight/SPME Inlet Liner

for Agilent GCs

Geometry	Deactivation	Material	ID x OD x Length	qty	cat.#
Straight/SPME	Premium	Borosilicate Glass	1.8 mm x 6.5 mm x 78.5 mm	5-pk.	23280

Topaz 1.8 mm ID Straight/SPME Inlet Liner

for Thermo TRACE 1300/1310, 1600/1610 GCs w/SSL Inlets

Geometry	Deactivation	Material	ID x OD x Length	qty	cat.#
Straight/SPME	Premium	Borosilicate Glass	1.8 mm x 6.5 mm x 78.5 mm	5-pk.	23278

More GC inlet liners for SPME are available at **www.restek.com**

Our product line is continually expanding!
Find rugged SPME Arrows and see what's new at **www.restek.com/SPME**

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Pure Chromatography

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

www.restek.com

Lit. Cat.# GNSS2443E-UNV